



PREPARED ESPECIALLY FOR:

CITY OF LODI FIRE DEPARTMENT



One (1) Pierce Manufacturing, Inc.
Enforcer Type 1 Fire Engine



**GOLDEN
STATE**
FIRE APPARATUS

7400 Reese Road, Sacramento, CA 95828
3615 Mars Way, Tracy, CA 95377

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1 PRODUCT PROPOSAL



OPTION A

100% PRE-PAYMENT

This will be the price of the Product(s) contingent upon the Customer paying the Grand Total Purchase Price to GSFA within thirty (30) calendar days of the Executed Date pursuant to the Payment Terms

**IF YOU ELECT THIS OPTION,
IT RESULTS IN A SAVINGS OF**

(\$181,505.34) OFF

OF THE GRAND TOTAL OF OPTION B

Please note this discount is also available contingent upon a Third Party (Leasing Company) paying 100% of the Grand Total Purchase Price on behalf of the Customer to GSFA within thirty (30) calendar days of the Executed Date pursuant to the Payment Terms



PRODUCT PROPOSAL FOR:

City of Lodi Fire Department

210 W Elm Street
Lodi, CA 95240

SALES CONSULTANT

Brad Hansen
brad@goldenstatefire.com
Mobile: (916) 869-6072

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #
02/05/2026	03/27/2026	10205-26A
MANUFACTURER BID #	MANUFACTURER	CONSORTIUM
989	Pierce Manufacturing Inc.	HGAC Contract FS12-23, Product Code 23P-105

Golden State Fire Apparatus, Inc. (“GSFA”) is pleased to provide this proposal for the fire apparatus(es) and equipment identified below (the “**Product**”) to CITY OF LODI (“**Customer**”) for consideration. This proposal (this “**Product Proposal**”) includes the following exhibits attached hereto: the Standard Terms and Conditions attached as Exhibit A (the “**Terms and Conditions**”); the Product Specifications attached as Exhibit B (the “**Specifications**”); the Product Warranties attached as Exhibit C (the “**Warranties**”); and the Dealer Supplied Products and/or Services attached as Exhibit D (the “**Dealer Supplied Products/Services List**”) (all of the foregoing, collectively, the “**Agreement**”). Through its signature below or other Acceptance (as defined on page 2), Customer acknowledges having received and read, and agrees to be bound by, the Agreement. The Agreement shall be effective as of the latest date appearing the signature blocks below (the “**Executed Date**”).

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
A	One (1) Pierce Manufacturing, Inc. Enforcer Type 1 Fire Engine	1,123,685.00
B	Discount for 100% Payment at Time of Order (“Prepayment Discount”)	(170,089.00)
C	SUBTOTAL	953,596.00
D	8.25% State Sales Tax	78,671.67
E	California Tire Fee	10.50
F	100% Performance Bond	2,616.00
G	GRAND TOTAL PURCHASE PRICE	1,034,894.17

[Terms Page Follows]

PAYMENT TERMS – Customer shall pay the total purchase price set forth directly above (the “Grand Total Purchase Price”) to GSFA within thirty (30) calendar days of the Executed Date. If payment of the Grand Total Purchase Price is late, a late fee as specified in section 6 of the Terms and Conditions may be applied, and the Prepayment Discount may be adjusted, and the Grand Total Purchase Price increased in accordance with section 2.c of the Terms and Conditions. Customer shall pay any balance due as a result of Change Orders as described in the Terms and Conditions.

MANUFACTURER – Customer acknowledges that GSFA is not an agent of the Product manufacturer identified above (“**Manufacturer**”) and is not capable of binding Manufacturer. Within five (5) business days of the Executed Date, GSFA shall submit an order form to Manufacturer for the Product. GSFA’s further performance under the Agreement is contingent upon Manufacturer’s acceptance of such order form at the price and on the terms GSFA believed to be available when submitting this Product Proposal to Customer. If Manufacturer rejects such order as submitted or fails to respond to GSFA within a reasonable amount of time, GSFA shall notify Customer in writing, and unless GSFA and Customer otherwise agree in writing the Agreement shall then terminate and have no further force or effect.

PRODUCT COMPLETION – The Product shall be ready for final inspection by Customer at the manufacturing facility within approximately **48 – 51 MONTHS** after the Executed Date. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal, and is subject to the Terms and Conditions.

PREDELIVERY SERVICE – If applicable, after transportation from the manufacturing facility and prior to final delivery or pick up, the Product shall receive those additional Products and/or services identified on the Dealer Supplied Products/Services List. It is estimated that such service will add approximately **0.5 – 1 MONTH(S)** to the above Product completion estimate. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal, and is subject to the Terms and Conditions.

PROPOSAL EXPIRATION – This Product Proposal supersedes any previous proposal(s) presented to Customer by GSFA and its employees and may be accepted by Customer on or before the Expiration Date identified above. Unless accepted by the Expiration Date, GSFA reserves the right to withdraw this Product Proposal or to alter its terms (including by providing updated Product pricing) prior to an order being accepted.

PURCHASE ORDER – Any PO shall be made out to:
Golden State Fire Apparatus, Inc. – 7400 Reese Road – Sacramento, CA 95828.

ACCEPTANCE – ACCEPTANCE OF THIS PROPOSAL CREATES AN ENFORCEABLE BINDING AGREEMENT BETWEEN GSFA AND CUSTOMER. “**ACCEPTANCE**” MEANS THAT THE CUSTOMER DELIVERS TO GSFA: (A) A SIGNED COPY OF THIS PRODUCT PROPOSAL, OR (B) A SIGNED COPY OF A PURCHASE ORDER INCORPORATING THE AGREEMENT IN ITS ENTIRETY. ANY ADDITIONAL OR DIFFERENT TERMS, WHETHER CONTAINED IN CUSTOMER’S FORMS OR OTHERWISE PRESENTED BY CUSTOMER AT ANY TIME, ARE HEREBY REJECTED AND OF NO EFFECT UNLESS APPROVED IN WRITING SIGNED BY GSFA.

COUNTERPARTS - This Product Proposal may be executed in multiple counterparts, each of which shall be deemed an original (including copies sent to a party by electronic transmission) as against the party signing such counterpart, but which together shall constitute one and the same instrument. A signed copy of this Product Proposal delivered by facsimile, email or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Product Proposal. If this Product Proposal is returned to GSFA with the signature of Customer’s authorized representative but without an attestation or co-signers signature, then absent Customer’s written notice to the contrary, GSFA shall be entitled to rely on such single signature as sufficient evidence of the signatory’s authority to execute the Agreement and bind Customer thereby.

[Signature Page Follows]



INTENDING TO CREATE A BINDING AGREEMENT, Customer and GSFA have each caused this Product Proposal dated 02/05/2026, GSFA Proposal Number 10205-26A to be executed by their duly authorized representatives effective as of the Executed Date.

**ACCEPTED AND AGREED
TO BY CUSTOMER**

**ACCEPTED AND AGREED
TO BY GSFA**

Signature of Authorized Customer Representative

Signature of Authorized GSFA Representative

Print Name

Print Name

Title

Title

Date

Date

Approved as to Form:

KATIE O. LUCCHESI
City Attorney



OPTION B

PAYMENT AT TIME OF DELIVERY OR PICKUP

This will be the price of the Product(s) contingent upon the Customer paying the Grand Total Purchase Price to GSFA at time of delivery or pickup pursuant to the Payment Terms



PRODUCT PROPOSAL FOR:

City of Lodi Fire Department

210 W Elm Street
Lodi, CA 95240

SALES CONSULTANT

Brad Hansen
brad@goldenstatefire.com
Mobile: (916) 869-6072

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #
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ITEM	PRODUCT DESCRIPTION	UNIT PRICE
A	One (1) Pierce Manufacturing, Inc. Enforcer Type 1 Fire Engine	1,123,685.00
B	8.25% State Sales Tax	92,704.01
C	California Tire Fee	10.50
D	GRAND TOTAL PURCHASE PRICE	1,216,399.51

[Terms Page Follows]

PAYMENT TERMS – Customer shall pay the total purchase price set forth directly above (the “**Grand Total Purchase Price**”) to GSFA no later than the time of GSFA’s delivery of the applicable Product to Customer’s address listed above (or Customer’s pick up of such Product at GSFA’s facilities, if approved by GSFA). GSFA shall have no obligation to deliver, or permit pick up of the Product if the Customer does not have full payment ready when the Product is complete and ready to deliver or pick up, as applicable. Customer shall pay any balance due as a result of Change Orders as described in the Terms and Conditions.

MANUFACTURER – Customer acknowledges that GSFA is not an agent of the Product manufacturer identified above (“**Manufacturer**”) and is not capable of binding Manufacturer. Within five (5) business days of the Executed Date, GSFA shall submit an order form to Manufacturer for the Product. GSFA’s further performance under the Agreement is contingent upon Manufacturer’s acceptance of such order form at the price and on the terms GSFA believed to be available when submitting this Product Proposal to Customer. If Manufacturer rejects such order as submitted or fails to respond to GSFA within a reasonable amount of time, GSFA shall notify Customer in writing, and unless GSFA and Customer otherwise agree in writing the Agreement shall then terminate and have no further force or effect.

PRODUCT COMPLETION – The Product shall be ready for final inspection by Customer at the manufacturing facility within approximately **48 – 51 MONTHS** after the Executed Date. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal, and is subject to the Terms and Conditions.

PREDELIVERY SERVICE – If applicable, after transportation from the manufacturing facility and prior to final delivery or pick up, the Product shall receive those additional Products and/or services identified on the Dealer Supplied Products/Services List. It is estimated that such service will add approximately **0.5 – 1 MONTH(S)** to the above Product completion estimate. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal, and is subject to the Terms and Conditions.

PROPOSAL EXPIRATION – This Product Proposal supersedes any previous proposal(s) presented to Customer by GSFA and its employees and may be accepted by Customer on or before the Expiration Date identified above. Unless accepted by the Expiration Date, GSFA reserves the right to withdraw this Product Proposal or to alter its terms (including by providing updated Product pricing) prior to an order being accepted.

PURCHASE ORDER – Any PO shall be made out to:
Golden State Fire Apparatus, Inc. – 7400 Reese Road – Sacramento, CA 95828.

ACCEPTANCE – ACCEPTANCE OF THIS PROPOSAL CREATES AN ENFORCEABLE BINDING AGREEMENT BETWEEN GSFA AND CUSTOMER. “**ACCEPTANCE**” MEANS THAT THE CUSTOMER DELIVERS TO GSFA: (A) A SIGNED COPY OF THIS PRODUCT PROPOSAL, OR (B) A SIGNED COPY OF A PURCHASE ORDER INCORPORATING THE AGREEMENT IN ITS ENTIRETY. ANY ADDITIONAL OR DIFFERENT TERMS, WHETHER CONTAINED IN CUSTOMER’S FORMS OR OTHERWISE PRESENTED BY CUSTOMER AT ANY TIME, ARE HEREBY REJECTED AND OF NO EFFECT UNLESS APPROVED IN WRITING SIGNED BY GSFA.

COUNTERPARTS - This Product Proposal may be executed in multiple counterparts, each of which shall be deemed an original (including copies sent to a party by electronic transmission) as against the party signing such counterpart, but which together shall constitute one and the same instrument. A signed copy of this Product Proposal delivered by facsimile, email or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Product Proposal. If this Product Proposal is returned to GSFA with the signature of Customer’s authorized representative but without an attestation or co-signers signature, then absent Customer’s written notice to the contrary, GSFA shall be entitled to rely on such single signature as sufficient evidence of the signatory’s authority to execute the Agreement and bind Customer thereby.

[Signature Page Follows]

INTENDING TO CREATE A BINDING AGREEMENT, Customer and GSFA have each caused this Product Proposal dated 02/05/2026, GSFA Proposal Number 10205-26B to be executed by their duly authorized representatives effective as of the Executed Date.

**ACCEPTED AND AGREED
TO BY CUSTOMER**

**ACCEPTED AND AGREED
TO BY GSFA**

Signature of Authorized Customer Representative

Signature of Authorized GSFA Representative

Print Name

Print Name

Title

Title

Date

Date



TERMS AND CONDITIONS

EXHIBIT A

STANDARD TERMS AND CONDITIONS

1. Definitions.

- a. **“Agreement”** has the meaning given in the Product Proposal.
- b. **“Customer”** means the customer identified in the Product Proposal.
- c. **“Dealer Preparation,”** if applicable, means additional product(s) and/or services added or provided by GSFA after Manufacturer’s completion of the Product and transportation to GSFA’s premises prior to delivery to Customer, in accordance with the Dealer Supplied Products/Services List and/or a valid Change Order(s).
- d. **“Dealer Supplied Products/Services List”** means the Dealer Supplied Products and/or Services List attached to the Product Proposal as Exhibit D, which reflects all Dealer Preparation under the Agreement absent a valid Change Order(s).
- e. **“Grand Total Purchase Price”** means the total purchase price for the Product identified in the Product Proposal (subject to any adjustments required or permitted by these Terms and Conditions, including by the execution of a valid Change Order(s)).
- f. **“GSFA”** means Golden State Fire Apparatus, Inc., a California corporation.
- g. **“Manufacturer”** means the person or persons, company, firm, corporation, partnership, or other organization identified in the Product Proposal as responsible for manufacturing the Product.
- h. **“Party”** or **“Parties”** means GSFA and/or Customer, as applicable.
- i. **“Prepayment Discount”** means a discount to the purchase price for the Product granted to Customer in connection with Customer’s advance payment of the Grand Total Purchase Price (or portion thereof, as specified in the Product Proposal), if applicable.
- j. **“Product”** means the fire apparatus(es) and any associated equipment listed in the Product Proposal and further described in the Specifications.
- k. **“Product Proposal”** means the GSFA proposal executed by Customer to which these Terms and Conditions are attached.
- l. **“Product Warranties”** means the Manufacturer warranties for the Product attached to the Product Proposal as Exhibit C.
- m. **“Specifications”** means the specifications for the Product attached to the Product Proposal as Exhibit B.
- n. **“Terms and Conditions”** means these Standard Terms and Conditions, which are attached to the Product Proposal as Exhibit A.

2. Purchase and Payment.

a. Purchase. Customer agrees to purchase the Product at the Grand Total Purchase Price (as such amount may be adjusted in accordance with these Terms and Conditions), pursuant to the payment terms set forth in the Product Proposal. The Grand Total Purchase Price is payable in U.S. dollars.

b. Contingency Reserve Fund. The Grand Total Purchase Price may include an amount to be set aside for the purpose of funding any future costs or financial obligations incurred by Customer under the Product Proposal or any valid Change Order(s) (the **“Contingency Reserve Fund”**). If applicable, the amount of any required Contingency Reserve Fund will be set forth in either the Product Proposal or Exhibit D. The Contingency Reserve Fund may be withdrawn against by Customer or GSFA for the purpose of satisfying Customer’s payment obligations under the initial Product Proposal or any valid Change Order(s) (including, without limitation, a Change Order submitted by GSFA pursuant to Section 8.b). If a Contingency Reserve Fund is required under the Agreement, the amount of such fund is not intended as an estimate of the actual additional costs of contingencies, Change Orders, unforeseen items or other required work that may be incurred under the Agreement after submission of the Product Proposal to Customer, which amounts Customer acknowledges may exceed the Contingency Reserve Fund amount. The balance of any Contingency Reserve Fund will be credited against Customer’s payment obligations, or otherwise returned to Customer within thirty (30) calendar days of delivery of all Products under the Agreement (provided that Customer has paid all amounts owed under the Agreement as of such date).

c. Prepayment Discount. If GSFA has granted Customer a Prepayment Discount, Customer must provide each associated prepayment (each, a “**Prepayment**”) within the time frame specified in the Product Proposal in order to receive such discount. Customer’s failure to timely make any Prepayment may result in: (i) GSFA’s termination of the Agreement; and/or (ii) Customer’s loss of the Prepayment Discount for the portion of the Grand Total Purchase Price represented by such outstanding Prepayment and the application of a late fee as set forth in Section 6, in each case in GSFA’s sole discretion.

d. State Sales Tax. Customer shall be responsible for the cost of state sales tax associated with, or attributable to, the Product. The taxes stated in the Product Proposal are subject to adjustment for the applicable state sales tax rate in effect at the time of delivery. Therefore, the sales tax set forth on the Product Proposal is only an estimate of such taxes and will be increased or decreased at the time of delivery if a change in the applicable sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the difference in the applicable sales tax.

3. Product Completion Date. Within thirty (30) calendar days of the date on which the last required signatory executes the Product Proposal (such date, the “**Executed Date**”), GSFA shall submit to Customer a tentative Product completion date based on the then-estimated time to complete the manufacturing of the Product(s) and for the Product(s) to be ready for inspection and final approval by Customer at the manufacturing facility (which may differ from the Product completion estimate contained in the Product Proposal). Due to global supply chain constraints, any Product completion date contained herein, or in the Product Proposal, or otherwise provided to Customer, is a good faith estimate only as of the date provided to Customer, and merely an approximation based on current information available to GSFA and Manufacturer. Customer shall not be entitled to rely on any such estimate, and GSFA shall have no liability to Customer for a failure by GSFA or Manufacturer to meet any such estimate. All Product completion estimates are subject to modification and, if applicable, GSFA will provide updates to such estimates to Customer when available.

4. Stock / Demo Units. Notwithstanding any other provision contained in the Agreement (including Section 12 hereof concerning warranties), any Products constituting stock/demo unit(s) are sold to Customer on an as-is, first-come and first-served basis and GSFA makes no further representation or warranty to any customer with respect to such unit(s). Regardless of the terms of the Product Proposal, GSFA shall only be obligated to sell such stock/demo unit(s) to the first customer to enter into a purchase agreement with GSFA identifying such unit(s), and after the execution by GSFA of such agreement any subsequent purchase agreement (including the Agreement, as applicable) shall have no further force or effect with respect to such unit(s).

5. Multiple Unit Purchase. If the Grand Total Purchase Price includes pricing for multiple Products, the Product price stated in the Product Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Agreement. GSFA shall have no obligation to offer the same price for any Product if purchased by Customer pursuant to a later purchase agreement.

6. Late Fee; Storage Fee. A late fee equal to 0.033% of the outstanding portion of the Grand Total Purchase Price will be charged per calendar day for overdue payments beginning ten (10) calendar days after the payment is due and continuing for the first thirty (30) calendar days thereafter. After such thirty (30) calendar day period, the late fee shall increase to 0.044% per calendar day until payment of the outstanding portion of the Grand Total Purchase Price is received; provided that if Customer is a public agency, the foregoing late fees shall not exceed the statutory limit set forth in Section 926.10 of the California Government Code. If Customer is unable to satisfy the delivery requirements hereunder or is unwilling to take delivery of the Product, then GSFA shall be entitled to a storage charge running from the earlier of: (i) the date of delivery agreed to between GSFA and Customer (provided GSFA is willing and able to deliver the Product on such date), or (ii) twenty-one (21) calendar days after GSFA notifies Customer that the Product is available for delivery. The storage charge is equal to: (i) \$175.00 per calendar day per apparatus stored, or (ii) the actual charges incurred by GSFA with a third party for storage of the Product, whichever is greater. Such storage charge shall continue until the actual time of delivery and Customer’s possession of the Product, and any such storage by GSFA or such third party shall be at the sole risk of Customer.

7. Delivery; Inspection and Acceptance.

a. Delivery. Subject to Section 5 hereof, the Product is scheduled to be delivered to the location and within the time period specified in the Product Proposal. Such delivery date is an estimate, and GSFA is, notwithstanding this Section 7.a, not bound to such date unless it otherwise agrees in a separate writing to complete delivery by a date certain. For the avoidance of doubt, GSFA is not responsible for delivery delays caused by or because of actions, omissions or conduct of Customer, the Manufacturer, or their respective employees, affiliates, suppliers, contractors, and carriers. Risk of loss for the Product shall pass to Customer at the point and time of delivery (which shall include an attempted delivery by GSFA which cannot be completed due to any act or omission of Customer). However, title to the Product shall only pass to Customer upon delivery if Customer has then fully paid GSFA all amounts due hereunder (including additional amounts due under any valid Change Order). Absent GSFA's separate written agreement, which it may or may not provide in its sole and absolute discretion, delivery of the Product will not occur before Customer has fully paid all amounts due under the Agreement and provided proof of insurance reasonably satisfactory to GSFA. If GSFA permits Customer to take possession of the Product prior to such payment, Customer may not mount equipment, conduct training, or place the Product into service until all amounts due under the Agreement have been paid. If Customer has ordered multiple Products, GSFA reserves the right to deliver such Products in installments and to separately invoice Customer for such Products.

b. Inspection and Acceptance. Upon delivery, Customer shall have ten (10) calendar days within which to inspect the Product for substantial conformance to the Specifications, and in the event of substantial non-conformance to the Specifications to furnish GSFA with written notice sufficient to permit GSFA to evaluate such non-conformance ("**Notice of Nonconformance to Specifications**"). Contingent upon part availability and Customer's cooperation, any Product not in substantial conformance to material Specifications shall be remedied by GSFA (by repair or replacement, at GSFA's election) within thirty (30) calendar days from GSFA's receipt of the Notice of Nonconformance to Specifications. In the event GSFA does not receive a Notice of Nonconformance to Specifications within ten (10) calendar days of delivery, the Product will be deemed to be in conformance with Specifications and accepted by Customer.

8. Changes to Agreement Terms.

a. Change Orders. The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product, or GSFA may submit changes to the Agreement required or permitted to be made by GSFA (pursuant to Section 8.b or otherwise), by delivering a written Change Order to the other party hereto, which shall include a description of the proposed change sufficient to permit the receiving party to evaluate such change (either, a "**Change Order**"). For any Change Order submitted by Customer, GSFA will provide Customer a written response (a "**Response**") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion); and (ii) the terms of the modification to the order, including any increase or decrease in the Grand Total Purchase Price resulting from such Change Order, a date on which any increase in the Grand Total Purchase Price must be paid, and an estimate of any effect on production scheduling or delivery resulting from such Change Order. Customer shall have seven (7) calendar days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer countersigns GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Grand Total Purchase Price by the date specified in the Response. GSFA may also send Customer a Change Order to account for any changes to the Agreement required or permitted to be made by GSFA (including those changes required pursuant to Section 8.b hereof), and such Change Order shall be effective upon delivery to Customer unless Customer elects to terminate the applicable Product order under the Agreement in accordance with Section 9.

b. Additional Changes.

i. Component Price Volatility; Increases Imposed by Manufacturer. GSFA shall not be responsible for (i) any unforeseen price increase or surcharge enacted by suppliers of major components of the Product (including but not limited to commercial chassis, engine, transmission, and fire pump); or (ii) price increases imposed on GSFA by Manufacturer pursuant to Manufacturer's terms and conditions for sale of the Product (a "**Manufacturer**

Price Increase”), after Customer becomes bound by the Agreement. Customer shall be responsible for all amounts arising from any price increases for major components of the Product (including all associated taxes and fees thereon) or any Manufacturer Price Increases occurring after the execution of the Agreement which increase the cost of the Product to GSFA, and such amounts will be documented on a Change Order adjusting the Grand Total Purchase Price accordingly. Customer shall pay any such price increase prior to Product delivery. A Manufacturer Price Increase may include, but shall not be limited to, an increase in Product price resulting from an increase in the Producer Price Index of Components for Manufacturing (see www.bls.gov Series ID: WPUID6112) in excess of a compounded annual growth rate of five percent (5%), as measured between the month Manufacturer accepts the applicable Product order and the month that is fourteen (14) months prior to the then-current estimated Product completion date (the foregoing, a **“PPI-Based Price Increase”**). If, upon Customer’s receipt of a Change Order reflecting a PPI-Based Price Increase, Customer elects to terminate the applicable Product order in accordance with Section 8.b.iii rather than pay such increase, then in lieu of the cancellation fees described in Section 9.a hereof GSFA shall be entitled to recover and Customer shall pay GSFA’s actual non-reimbursable costs incurred in connection with the Product order through the date of Customer’s termination of such Product order.

ii. New Legal Standards. In the event the Product design, materials or specifications require an alteration arising from new regulations issued by any governmental entity or trade association, including, but not limited to, the NFPA, DOT, and EPA, and such alteration increases the cost of the Product to GSFA, Customer shall be responsible for changes to the Grand Total Purchase Price arising from such alteration. GSFA shall promptly notify Customer when it becomes aware of any potential or required change in regulations occurring prior to delivery that would impact the Product purchased.

iii. Change Orders. Customer shall execute any Change Order submitted by GSFA documenting any of the changes required or permitted by Sections 8.b.i and 8.b.ii above (which shall, to the extent practicable, itemize any increases in the Grand Total Purchase Price and specify a commercially reasonable date by which Customer must pay such increase), unless Customer instead elects to terminate the applicable Product order under the Agreement within fifteen (15) calendar days of Customer’s receipt of such Change Order and in accordance with Section 9. Absent such a termination, failure or refusal to execute a Change Order does not alter Customer’s obligations under this Section 8.b.

c. Changes in Commercial Specifications. Specifications for all components of the Product manufactured by companies other than the Manufacturer are subject to change without notice. Specifications for such components will be as available at the time of manufacture of the Product. GSFA shall not be liable for any deviations in such specifications arising from a substitution of components or changes in the design of any component by their original manufacturer.

9. Termination.

a. By Customer. Customer may terminate a Product order identified in the Product Proposal or a Change Order by providing written notice to GSFA in accordance with Section 16 hereof. If Customer elects to terminate a Product order, Customer shall pay GSFA a cancellation fee as follows: (a) after the Product order is accepted and entered by GSFA, 10% of the portion of the Grand Total Purchase Price applicable to such Product (including all associated taxes, fees and costs) (such amount, the **“Product Purchase Price”**); (b) after completion of the pre-construction phase of the order process, 20% of the Product Purchase Price; and (c) after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or Manufacturer but before substantial completion of such Product, 50% of the Product Purchase Price. Customer shall not be permitted to terminate a Product order after substantial completion of manufacturing and assembly of such Product (excluding any Dealer Preparation or other pre-delivery services or untypical Product customization, if applicable). Notwithstanding the foregoing, if the applicable tier of cancellation fee is not sufficient to cover all actual costs and fees incurred by GSFA with Manufacturer in connection with Customer’s termination of the Product order (**“Manufacturer Termination Fees”**), then in addition to such cancellation fee Customer shall pay the balance of all Manufacturer Termination Fees. If Customer received a Prepayment Discount, such discount shall not be considered for the purpose of calculating the above cancellation fee. The tier of cancellation fee applicable to any cancellation,

as well as the determination of whether a Product has reached substantial completion, shall be in the sole and absolute discretion of GSFA. Customer may request a fee waiver, and GSFA, in its sole discretion, may agree to waive and/or adjust such fee. GSFA will return the balance of the Grand Total Purchase Price or Product Purchase Price, as applicable, within thirty (30) calendar days of the effective date of the cancellation of the Product order or termination of the Agreement.

Customer may terminate the Agreement for an Event of Default by GSFA after providing GSFA with written notice in accordance with Section 16 (which notice shall describe with reasonable particularity the Event of Default justifying such termination) if such Event of Default remains uncured (if capable of cure) thirty (30) days following GSFA's receipt of such notice; provided, however, that the foregoing cure period shall continue if and for so long as GSFA has commenced and is continuing to undertake commercially reasonable efforts to cure such Event of Default as promptly as reasonably practicable.

b. By GSFA. GSFA may terminate the Agreement for an Event of Default by Customer after providing Customer with written notice in accordance with Section 16 (which notice shall describe with reasonable particularity the Event of Default justifying such termination) if such Event of Default remains uncured (if capable of cure) thirty (30) days following Customer's receipt of such notice; provided, however, that the foregoing cure period shall continue if and for so long as Customer has commenced and is continuing to undertake commercially reasonable efforts to cure such Event of Default as promptly as reasonably practicable. Notwithstanding the foregoing, GSFA may terminate the Agreement effective immediately upon written notice to Customer for Customer's failure to pay any amount owed under the Agreement when due.

Notwithstanding any other provision of this Agreement, if Customer terminates a Product order in accordance with Section 9.a above, GSFA may elect to instead terminate the Agreement upon notice to Customer in accordance with Section 16 hereof. If GSFA terminates the Agreement in accordance with this Section 9.b, Customer shall pay the applicable tier of cancellation fee for all Products pursuant to Section 9.a above as if Customer had elected to terminate each applicable Product order.

c. Based on Discontinuation or Cancellation by Manufacturer. In the event that Manufacturer cancels a Product order (provided that such cancellation is not the result of an act by Customer in violation of the Agreement) or discontinues the manufacture of a Product prior to its completion and delivery: (i) if such Product is the only Product contemplated under the Agreement, then the Agreement shall terminate; or (ii) if additional Products are contemplated under the Agreement, then only the Product order for the applicable cancelled or discontinued Product shall be terminated. Such Agreement termination or Product termination, as applicable, shall be effective upon GSFA's written notice to Customer of such cancellation or discontinuance in accordance with Section 16 hereof. GSFA's only obligation to Customer in such event shall be the return of any Prepayment paid by Customer for the cancelled or discontinued Product. For the avoidance of doubt, the cancellation fees contemplated in Section 9.a hereof shall not apply in the event of a termination pursuant to this Section 9.c.

10. Customer's Obligations. Customer shall provide its timely and best efforts to cooperate with GSFA and Manufacturer during the Product manufacturing and Dealer Preparation process. Reasonable and timely cooperation includes, without limitation, Customer's providing timely information in response to any requests from Manufacturer or GSFA and the participation of Customer's authorized representatives in traveling to Manufacturer's facility for inspections and approval of the Product, including a final approval before the Product leaves Manufacturer's facility.

11. Representations and Warranties. Customer hereby represents and warrants to GSFA as of the Executed Date that the execution of the Agreement and the purchase of the Product(s) and performance of the other obligations of Customer under the Agreement have been approved by Customer in accordance with applicable general laws and, as applicable, Customer's charter, ordinances, purchasing policies, and other governing documents, and executed by the appropriate Customer employees, officials, and/or representatives, and funding for Customer's performance of its obligations under the Agreement has been duly budgeted and appropriated by Customer.

12. Standard Warranty. All applicable Manufacturer warranties are contained in the Product Warranties. Any additional warranties must be expressly approved in a writing signed by GSFA, and Customer acknowledges and agrees that Manufacturer will not be liable for any such additional warranties.

a. Disclaimer. OTHER THAN AS EXPRESSLY SET FORTH IN THE AGREEMENT, GSFA, ITS AFFILIATES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, SHAREHOLDERS, AGENTS, OR REPRESENTATIVES, DO NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCT (WHETHER RELATING TO THE CONDITION OR QUALITY OF THE PRODUCT, OR OTHERWISE) PROVIDED HEREUNDER OR OTHERWISE REGARDING THE AGREEMENT (INCLUDING, WITHOUT LIMITATION, WITH RESPECT TO ANY APPLICABLE DEALER PREPARATION), WHETHER ORAL OR WRITTEN, EXPRESS, IMPLIED OR STATUTORY. WITHOUT LIMITING THE FOREGOING, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE ARE EXPRESSLY EXCLUDED AND DISCLAIMED BY GSFA. STATEMENTS MADE BY SALES CONSULTANTS OR IN PROMOTIONAL MATERIALS DO NOT CONSTITUTE WARRANTIES.

b. Exclusions of Incidental and Consequential Damages. In no event shall GSFA be liable for special, consequential, incidental, indirect or punitive damages incurred by Customer in connection with any matter arising out of or relating to the Agreement, or the breach thereof, even if GSFA has been advised of the possibility of such damages, and regardless of whether such damages arise out of breach of warranty, the Agreement, indemnity, whether resulting from non-delivery or from GSFA's own negligence, or otherwise, except and solely to the extent such damages arise from the gross negligence or willful misconduct of GSFA.

13. Default. The occurrence of one or more of the following events (each, an "Event of Default") shall constitute a default under the Agreement: (a) Customer's failure to pay any amounts due or to perform any of its obligations under the Agreement; (b) GSFA's failure to perform any of its obligations under the Agreement; (c) either Party becoming insolvent or becoming subject to bankruptcy or insolvency proceedings; (d) any representation made by either Party under the Agreement which is false in any material respect; (e) any action by Customer to dissolve, merge, consolidate or transfer a substantial portion of its property to another entity during the term of the Agreement; (f) any other material breach of the terms of the Agreement by a Party; or (g) a default or breach by Customer under any other agreement with GSFA or its affiliates.

14. Customer Responsible for Post-Delivery Use of Product. Except as expressly provided in Section 7.b above (with respect to remedying non-conforming Products), GSFA shall have no liability for the Product following delivery to Customer. Customer shall be solely responsible for, and shall indemnify, defend, and hold harmless GSFA, its agents, servants, successors and assigns from and against all losses, damages, injuries, claims, demands and expenses, including attorneys' fees and other legal expenses, of whatever nature, arising out of or in connection with Customer's use, storage, or operation of the Product following delivery, regardless of where, how, and by whom operated (except to the extent such losses are caused by any negligence or willful misconduct in connection with GSFA's own operation of the Product (e.g. in connection with servicing or maintenance of the Product)). The provisions of this Section shall continue in full force and effect notwithstanding the termination of the Agreement, whether by expiration of time, by operation of law or otherwise. This provision is not intended to and shall not constitute the exclusive remedy of the Parties under the Agreement.

15. Force Majeure. GSFA shall not be responsible nor deemed to be in default of any provision of the Agreement on account of delays in performance due to causes which are beyond GSFA's or Manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes or labor unrest, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of federal, state or local government, failure or delays in transportation, inability to obtain necessary labor, supplies or manufacturing facilities, supply chain issues, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, disease, pandemics or epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their agreements or labor troubles causing cessation, slowdown, or interruption of work.

16. Notice. Any notices, requests, consents, claims, demands, waivers and other communications required or permitted to be given hereunder must be given in writing at the address of each Party set forth below, or to such other address as either Party may substitute by written notice to the other in accordance with this Section 16, by one of the following methods: hand delivery; registered, express, or certified mail, return receipt requested, postage prepaid; or nationally recognized private express courier. All such communications will be deemed to have been given: (i) when delivered by hand (with written confirmation of receipt); (ii) on the third (3rd) calendar day after the date mailed, by registered, express or certified mail; or (iii) when delivered by the addressee if sent by a nationally recognized private express courier.

GSFA:

Golden State Fire Apparatus Inc.
7400 Reese Road
Sacramento, CA 95828

CUSTOMER:

To the address listed in the Product Proposal

17. Contradictions. In the event of a conflict between the Agreement and any Change Order, or between Change Orders, the terms of the latest executed Change Order shall control.

18. Manufacturer's Statement of Origin. It is agreed that the manufacturer's statement of origin ("**MSO**") for the Product covered by the Agreement, if applicable, shall be retained and remain in the possession of GSFA per California Department of Vehicles (DMV) directives. Notwithstanding the foregoing, GSFA shall provide Customer with the original MSO if the Customer is self-registering, and Customer shall comply with all good-faith Process of Duty and other DMV requirements applicable to the Product and retain its own MSO.

19. Assignment. The relationship of the Parties established under the Agreement is that of independent contractors and neither Party is a partner, employee, agent, or joint venturer of or with the other. Neither Party may assign its rights and obligations under the Agreement unless it has obtained the prior written approval of the other Party.

20. Governing Law; Jurisdiction; Disputes. Without regard to any conflict of laws provisions, the Agreement is to be governed by and under the laws of the state of California. Prior to taking any legal action that may and/or can arise out of the Agreement, the Parties shall first attempt mediation with an agreed upon mediator. If the Parties cannot agree upon a mediator within thirty (30) calendar days of the submission of written notice of a dispute in accordance with Section 16 hereof, if any disputed matter remain unresolved within thirty (30) calendar days of the commencement of discussions, or if any party refuses to meet, then either party may submit any remaining disputes concerning and/or claim regarding the Agreement and/or the terms and conditions herein to the Superior Court, County of Sacramento (and the parties expressly consent to exclusive personal jurisdiction and venue before such court).

21. Entire Agreement; Amendments. The Agreement, including the Product Proposal, its exhibits and all valid Change Orders, is the exclusive agreement between the Parties regarding the subject matter contained herein and therein. No change in, modification of, or revision of the Agreement shall be valid unless in writing and signed by duly authorized representatives of both Parties with authority to sign such amendments to the Agreement.

END OF STANDARD TERMS AND CONDITIONS



3 SPECIFICATIONS

EXHIBIT B



Proposal Details Report

2/5/2026

Customer: Lodi FD
Representative: Hansen, Brad
Requirements Manager:
Description: Lodi Type 1 (similar #36314)
Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen

Bid Number: 989
Job Number:
Organization: Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
0766611		Boiler Plates, Pumper	<p>GOLDEN STATE FIRE APPARATUS, INC. is pleased to submit a proposal to LODI, CA for a Pierce® triple combination pumper per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.</p> <p>PIERCE MANUFACTURING was founded in 1913. Since then, we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.</p> <p>Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.</p> <p>Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.</p> <p>In accordance with the current edition of applicable NFPA standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.</p> <p>Images and illustrative material in this proposal are as accurate as known at the time of publication but are subject to change without notice. Images and illustrative material are for reference only and may include optional equipment and accessories and may not include all standard equipment.</p> <p>GENERAL DESIGN AND CONSTRUCTION</p> <p>To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.</p> <p>QUALITY AND WORKMANSHIP</p> <p>Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American Welding Society codes upon hire and every three (3) years thereafter. Pierce also employs an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.</p> <p>Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.</p> <p>In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to ensure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.</p> <p>To demonstrate the quality of our products and services, a list of at least five (5) fire departments/municipalities that have purchased vehicles for a second time is provided.</p> <p>DELIVERY</p> <p>The apparatus will be delivered under its own power to ensure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.</p> <p>MANUAL AND SERVICE INFORMATION</p> <p>At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p> <p>SAFETY VIDEO</p> <p>At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. A link to the video is also available on the Pierce Training website. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.</p> <p>PERFORMANCE TESTS</p> <p>A road test will be conducted with the apparatus fully loaded and a continuous run of no less than</p>

ten (10) miles. During that time the apparatus will show no loss of power, nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet the current edition of applicable NFPA standards acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by GOLDEN STATE EMERGENCY VEHICLE SERVICE, INC. by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within fifty (50) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of \$5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operator's manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

Commercial General Liability Insurance

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence:

\$1,000,000

Products/Completed Operations Aggregate:

\$1,000,000

Personal and Advertising Injury:

\$1,000,000

General Aggregate:

\$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

Commercial Automobile Liability Insurance

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:

\$1,000,000

Umbrella/Excess Liability Insurance

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:

\$3,000,000

Each Occurrence:

\$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

Product Liability Insurance

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence:

\$1,000,000

Products/Completed Operations Aggregate:

\$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

Umbrella/Excess Liability Insurance

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:

\$25,000,000

Aggregate:

\$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

0661794 Single Source Compliance

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

0584456 Manufacture Location, Appleton, Wisconsin

Your apparatus will be manufactured in Appleton, Wisconsin.

0584452 RFP Location: Appleton, Wisconsin

0588609 Vehicle Destination, US

0670275 Unit to be Similar in some Aspects, Excluding Pump Panel

SPECIAL INSTRUCTIONS

The apparatus being proposed will be designed and built to match the previous unit, job #34413. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.

0816491 Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions

NFPA 2024 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2024, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

0533347 Pumper/Pumper with Aerial Device Fire Apparatus

0588611 Vehicle Certification, Pumper

0661778	Agency, Apparatus Certification, Pumper/Tanker, U.L.	<p>NFPA COMPLIANCY Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".</p> <p>PUMP TEST Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.</p> <p>GENERATOR TEST If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery.</p> <p>BREATHING AIR TEST If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>.</p>
0816495	Certification, Vehicle Inspection Program, NFPA 1900	<p>VEHICLE INSPECTION PROGRAM CERTIFICATION To assure the vehicle is built to current NFPA 1900 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus. A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.</p>
0620362	Consortium, HGAC	
0537375	Unit of Measure, US Gallons	
0030006	Bid Bond Not Requested	<p>BID BOND NOT REQUESTED A bid bond will not be included. If requested, the following will apply: All bidders will provide a bid bond as security for the bid in the form of a 5 percent bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.</p>
0816571	Performance Bond, 100% with 25% Warranty Bond, 1 Yr, and Payment Bond, PPI Terms	<p>PERFORMANCE BOND, 1 YEAR The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter. Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible. If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month. The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.</p>

000007	Approval Drawing	<p>APPROVAL DRAWING A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc. A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.</p>
0002928	Electrical Diagrams	<p>ELECTRICAL WIRING DIAGRAMS Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.</p>
0649754	Enforcer Chassis	<p>ENFORCER CHASSIS The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.</p>
0000110	Wheelbase	<p>WHEELBASE The wheelbase of the vehicle will be 191.50".</p>
0000070	GVW Rating	<p>GVW RATING The gross vehicle weight rating will be 46,500.</p>
0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	<p>FRAME The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x 0.375". Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.</p>
0648354	Frame Liner, Internal "C", 9.38" x 3.13" x .25", Saber FR/Enf, 26" Qval	<p>FRAME REINFORCEMENT A full-length mainframe "C" liner will be provided. The liner will be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member will have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.</p>
0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	<p>FRONT NON DRIVE AXLE The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb. Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron. The center cross members and side plates will be constructed out of 80,000-psi yield strength steel. Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations. There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension. The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load. Camber at load will be zero degrees for optimum tire life. The ball joint bearing will be of low friction design and be maintenance free. Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided. The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle. The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase. The axle will have a turning angle of up to 45 degrees.</p>

0030264	Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Enf/SFR	FRONT SUSPENSION Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb. The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment. Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension. The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms. The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side. The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/Enf	FRONT SHOCK ABSORBERS KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.
0000322	Oil Seals, Front Axle	FRONT OIL SEALS Oil seals with viewing window will be provided on the front axle.
0899438	Tires, Front, Goodyear, Armor MAX MSA, 425/65R22.50, 20 ply	FRONT TIRES Front tires will be Goodyear 425/65R22.50 radials, 20 ply Armor Max MSA, rated for 22,800 lb maximum axle load and 68 mph maximum speed.
0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot	The tires will be mounted on Alcoa 22.50" x 12.25" polished aluminum disc type wheels with a ten (10) stud, 11.25" bolt circle.
0530459	Axle, Rear, Meritor RS25-160, 27,000 lb, Saber/Enforcer	REAR AXLE The rear axle will be a Meritor™, Model RS-25-160, with a capacity of 27,000 lb.
0544253	Top Speed of Vehicle, 68 MPH /109 KPH	TOP SPEED OF VEHICLE A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph / 109 kph.
0565380	Suspen, Rear, Single Slipper Spring, 27,000 lb, Saber/Enforcer	REAR SUSPENSION The rear suspension will be Standens, semi-elliptical, 3.00" wide x 52.50" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings. The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.
0000485	Oil Seals, Rear Axle	REAR OIL SEALS Oil seals will be provided on the rear axle(s).
0791544	Spacer Kit, Rear Spring, 1.00" Additional Frame Height	
0782552	Tires, Rear, Goodyear, Endurance RSA, 12R22.50, LRH, Single	REAR TIRES Rear tires will be four (4) Goodyear 12R22.50 radials, load range H, Endurance RSA highway tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.
0019625	Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	TIRE BALANCE All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.

0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	<p>TIRE PRESSURE MANAGEMENT</p> <p>There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires.</p> <p>The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.</p> <p>Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.</p>
0003245	Axle Hub Covers w/center hole, S/S, Front Axle	<p>FRONT HUB COVERS</p> <p>Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.</p>
0002045	Mud Flap, Front and Rear, Pierce Logo	<p>MUD FLAPS</p> <p>Mud flaps with a Pierce logo will be installed behind the front and rear wheels.</p>
0767032	Valve, Extension Stabilizer System, Single Axle	<p>VALVE STEM STABILIZER SYSTEM</p> <p>A valve stem stabilizer system will be provided on the rear inside tires.</p>
0818775	Chocks, Wheel, Pumper, Provided by Fire Department, NFPA/ULC 2024	<p>WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT</p> <p>NFPA 1900, 2024 edition, section 8.15.1 and CAN/ULC S515:2024 edition, section 5.2 requires wheel chocks mounted in a readily accessible location. Each wheel chock will hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 10 percent grade for the length of the apparatus with the transmission in neutral and the parking brake released.</p> <p>The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.</p>
0544690	Mounting Brackets, Chocks, Provided by Fire Department	<p>Wheel Chock Brackets Provided by Fire Department</p> <p>The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.</p>
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA 1900/ULC	<p>ELECTRONIC STABILITY CONTROL</p> <p>A vehicle control system will be provided as an integral part of the ABS brake system from Meritor Wabco.</p> <p>The system will monitor and update the lateral acceleration of the vehicle and compare it to a critical threshold where a side roll event may occur. If the critical threshold is met, the vehicle control system will automatically reduce engine RPM, engage the engine retarder (if equipped), and selectively apply brakes to the individual wheel ends of the front and rear axles to reduce the possibility of a side roll event.</p> <p>The system will monitor directional stability through a lateral accelerometer, steer angle sensor and yaw rate sensor. If spinout or drift out is detected, the vehicle control system will selectively apply brakes to the individual wheel ends of the front and rear axles to bring the vehicle back to its intended direction.</p> <p>ANTI-LOCK BRAKE SYSTEM</p> <p>The vehicle will be equipped with a Wabco 4S4M, anti-lock braking system. The ABS will provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any wheel begins to lockup, a signal will be sent to the control unit. This control unit will then reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.</p> <p>AUTOMATIC TRACTION CONTROL</p> <p>An anti-slip feature will be included with the ABS. The Automatic Traction Control will be used for traction in poor road and weather conditions. The Automatic Traction Control will act as an electronic differential lock that will not allow a driving wheel to spin, thereby supplying traction at all times. The ABS electronic control unit (ECU) will work with the engine ECU, sharing information concerning wheel slip. Engine ECU will use information to control engine speed, allowing only as much throttle application as required for the available traction, regardless of how much the driver is asking for. An "off road traction" switch will be provided on the instrument panel. Activation of the switch will allow additional tire slip to let the truck climb out and get on top of deep snow or mud.</p>
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	<p>BRAKES</p> <p>The service brake system will be full air type.</p> <p>The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance.</p> <p>The brake system will be certified, third party inspected, for improved stopping distance.</p>
0509206	Brakes, Meritor, EX225, Disc Plus, Rear, Single Axle	<p>The rear brakes will be Meritor™, Disc Plus, Model EX225, disc operated with automatic slack adjusters and a 17.00" ventilated rotor for improved stopping distance.</p>

0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	BRAKE SYSTEM AIR COMPRESSOR The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.
0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	BRAKE SYSTEM The brake system will include: Brake treadle valve Heated automatic moisture ejector on air dryer Total air system minimum capacity of 4,272 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valves on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. The air tanks will be painted same as frame color. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, 10" Frame, Standen, SFR/Enf	BRAKE SYSTEM AIR DRYER The air dryer will be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.
0000790	Brake Lines, Nylon	BRAKE LINES Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.
0000854	Air Inlet, w/Disconnect Coupling	AIR INLET One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located forward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.
0643363	Outlet, Air, with Shut Off Valve, Location	AIR OUTLET One (1) air outlet will be installed with a female coupling located DS pump panel. This system will tie into the "wet" tank of the brake system, include an 85 psi pressure protection valve in the outlet line to prevent the brake system from losing all air, and include a quarter turn shut off valve mounted at the tank. The valve and hoses will be mounted to the tank as high as possible to ensure maximum clearance and protect the lines from being damaged by brush and rocks during off-road operations.
0000845	Air Tank, Additional for Extra Capacity	ADDITIONAL AIR TANK An additional air tank with 1454 cubic inch displacement will be provided to increase the capacity of the main air brake system. This tank will be plumbed into the rear half of the brake system. The air tank will be primed and painted to meet a minimum 750 hour spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets. The air tank(s) will be painted same as frame color. The output flow of the engine air compressor will vary with engine rpm. Full compressor output will only be achieved at governed engine speed. Engine speed will be limited by generators, pumps and other PTO driven options.
0055486	Drain, Remote Air Tank, w/Pull Cable, All Tanks	REMOTE AIR TANK DRAIN There will be a remote cable controlled drain valve installed on each air supply reservoir. The drain valve will be actuated from the side of the vehicle and be a vinyl covered stainless steel cable, firmly attached to the underside of the vehicle. A loop will be provided at the cable end for ease of pulling the drain.

0808535	Engine, Cummins X10, 450 hp, 1250 lb-ft, W/OBD, EPA 2027, Saber FR/Enforcer	<p>ENGINE The chassis will be powered by an electronically controlled engine as described below: Make: Cummins Model: X10 Power: 450 hp at 2100 rpm Torque: 1250 lb-ft at 1200 rpm Governed Speed: 2200 rpm Emissions Level: EPA 2027 Fuel: Diesel Cylinders: Six (6) Displacement: 604 cubic inches (9.9L) Starter: Delco 39MT™ Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected. The engine will be filled with FA-4 10W30 oil as required by Cummins.</p>
0000000	STF Engine Contingency Adjustment	
0001244	High Idle w/Electronic Engine, Custom	<p>HIGH IDLE A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."</p>
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine	<p>ENGINE BRAKE A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver. The driver will be able to turn the engine brake system on/off and have a high, medium and low setting. The engine brake will activate when the system is on and the throttle is released. The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine. The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated. The ABS system will automatically disengage the auxiliary braking device, when required.</p>
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	<p>CLUTCH FAN A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.</p>
0001332	Fuel/Water Separator, Racor Inline, IAT	<p>FUEL SEPARATOR The engine will be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.</p>
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	<p>ENGINE AIR INTAKE The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille. A stainless steel metal screen will be installed at the inlet of the air intake system that will meet current edition of applicable NFPA standards. The air cleaner and stainless steel screen will be easily accessible by tilting the cab.</p>

0814375	Exhaust System, Horizontal, Right Side	<p>EXHAUST SYSTEM</p> <p>The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device. The exhaust system will include an aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipe between the turbo and the aftertreatment device to minimize the transfer of heat to the cab.</p> <p>The exhaust will terminate horizontally ahead of the right side rear wheels and will extend 2.00" past the body rub rail. The exhaust pipes will be aluminized steel.</p> <p>There will be an aluminized steel exhaust diffuser with a standard straight tip on the end provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p>
0788765	Radiator, Saber FR/Enforcer	<p>RADIATOR</p> <p>The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards.</p> <p>For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.</p> <p>The radiator core will have a minimum front area of 1060 square inches.</p> <p>Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be made of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability.</p> <p>The radiator will be compatible with commercial antifreeze solutions.</p> <p>The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.</p> <p>The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.</p> <p>A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>
0001090	Cooling Hoses, Rubber	<p>COOLANT LINES</p> <p>Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.</p> <p>Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.</p>
0001125	Fuel Tank, 65 Gallon, Left Side Fill	<p>FUEL TANK</p> <p>A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.</p> <p>A 0.75" drain plug will be located in a low point of the tank for drainage.</p> <p>A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."</p> <p>A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.</p> <p>The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.</p>
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0662965	DEF Tank, 4.5 Gallon, DS Fill, Rear of Axle, Common Air Bottle Door	<p>DIESEL EXHAUST FLUID TANK</p> <p>A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body rearward of the rear axle.</p> <p>A 0.50" drain plug will be provided in a low point of the tank for drainage.</p> <p>A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located adjacent to the air bottle storage behind a common door on the driver side of the vehicle.</p> <p>The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.</p> <p>The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.</p>
0723716	Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	<p>FUEL PRIMING PUMP</p> <p>A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.</p>
0552712	Not Required, Shutoff Valve, Fuel Line	
0699437	Cooler, Chassis Fuel, Not Req'd.	

0019441	Drain Plug, Fuel Tank, Magnetic, In Place Of Standard	FUEL TANK DRAIN A fuel tank drain, magnetic plug, will be installed on the under side of the fuel tank.
0817935	SP System, Automated Fuel Management, Syn-Tech AIM Titanium	AUTOMATED FUEL MANAGEMENT SYSTEM An AIM Titanium™ fuel data collection system will be provided on the apparatus for use with the city's fuel management unit. The on-board AIM module transmits vehicle data to the fuel management unit when the driver inserts the fuel nozzle into the tank fill. The RFID module will be mounted to the outside of the frame rail with the module and wiring connections accessible.
0690880	No Selection Required From This Category	
0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	TRANSMISSION An Allison 6th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided. The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due. Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear. A transmission temperature gauge with amber light and audible alarm will be installed on the cab dash.
0625329	Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	TRANSMISSION SHIFTER A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be: 1st 3.49 to 1.00 2nd 1.86 to 1.00 3rd 1.41 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 R 5.03 to 1.00
0684459	Transmission Oil Cooler, Modine, External	TRANSMISSION COOLER A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.
0090176	Mode, Downshift, Aggressive downshift to 3rd, w/engine brake, 5 speed	DOWNSHIFT MODE (w/engine brake) The transmission will be provided with an aggressive downshift mode. This will provide earlier transmission downshifts to 3rd gear, resulting in improved engine braking performance.
0801878	Fluid, 3000 Series Trans, Allison Approved TES-668 Synthetic, IPOS, Custom	TRANSMISSION FLUID The transmission will be provided with TranSynd, or other Allison approved TES-668 heavy duty synthetic transmission fluid.
0001370	Driveline, Spicer 1710	DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.
0669988	Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	STEERING Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braided lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.
0605356	Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	STEERING WHEEL The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.

0690274	Logo/Emblem, on Dash	<p>LOGO AND CUSTOMER DESIGNATION ON DASH The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: LODI The second row of text will be: FIRE The third row of text will be: DEPARTMENT</p>
0624298	Bumper, 16" Extended, Saber FR/Enforcer	<p>BUMPER A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper will be extended 16.00" from front face of cab. Gravel Pan A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.</p>
0640199	Tray, Hose, Center, 16" Bumper, Outside Air Horns	<p>CENTER HOSE TRAY A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.75" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.</p>
0626469	Cover, Aluminum Treadplate, Two (2) Flush Lift and Turn, Hose Tray, Notched	<p>Center Hose Tray Cover A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be "notched" allowing the hose to be pre connected to hose connection. The cover will be attached with a stainless steel hinge. Two (2) flush lift and turn latch will secure the cover in the closed position and a mechanical stay arm will hold the cover in the open position.</p>
0614646	No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	
0002270	Tow Hooks, Chrome, Below Deck	<p>TOW HOOKS Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.</p>

CAB

The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder.

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.13" firewall plate, covered with a minimum 0.090" front skin thickness, and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.375" thick cross-floor support providing a total thickness of 0.50" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The centerline of front axle to the rear of the cab will be 70.00" long.

The overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed. The floor to ceiling height inside the crew cab will be 54.50" in the center and outboard positions. The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers.

The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure between 45.00" and 51.50" to the rear wall, depending on the engine.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab will be a full tilt cab style.

A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

CAB ROOF DRIP RAIL

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

FENDER LINERS

Full circular inner fender liners in the wheel wells will be provided.

PANORAMIC WINDSHIELD

A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS

Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

0647919

Engine Tunnel, ISL, Spray Insulation, Saber FR/Enforcer

ENGINE TUNNEL

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current edition of applicable NFPA standards.

The engine tunnel will be no higher than 17.00" off the crew cab floor.

0887601

Cab Insulation, Enforcer/Saber FR

INTERIOR CAB INSULATION

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, a minimum of 1.00" insulation in the crew cab floor, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

0610508

Rear Wall, Interior, Adjustable Seating, Not Available

0632103	Rear Wall, Exterior, Cab, Saber FR/Enforcer	CAB REAR WALL EXTERIOR COVERING The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.
0644201	Cab Lift, Elec/Hyd, Saber FR/Enforcer	CAB LIFT A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Lift controls will be located on the right side pump panel or front area of the body in a convenient location. The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position. The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered. Cab Lift Interlock The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.
0695930	Grille, Bright Finished, Front of Cab, Enforcer	GRILLE A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.
0752555	Scuffplate, S/S, Striker Side, Cabinet Door(s), Each	DOOR FRAME SCUFFPLATE There will be two (2) polished stainless steel scuffplate(s) provided for the latch side of the door frame located DS & PS cab EMS cabinets. Each scuffplate will be stainless steel with a .38" lip down.
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	DOOR JAMB SCUFFPLATES All cab door jambs will be furnished with a 1.00" polished stainless steel scuffplate, mounted on the striker side of the jamb.
0012226	Scuffplates, S/S Corner Guard, Polished, Rear Cab Corners	SCUFFPLATES, REAR CAB CORNER GUARDS Both rear cab corners will be furnished with a full height, polished stainless steel corner guard scuffplate. The guard will extend 1.00" from the corner to protect paint from damage when pulling items (such as booster hose) around the cab.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	
0015440	No Chrome Molding, On side of cab	
0032189	Mirrors, Ramco, 8000PCHR, Heated/Remote, w/Heated/Remote Convex, Door Mount	MIRRORS One (1) Ramco, Model 8000-PCHR, polished aluminum mirror will be mounted on each of the cab doors. The mirrors will be 9.25" wide x 13.50" high with a convex section. The mirror head will have a highly polished aluminum finish. The flat glass in each mirror will be heated and adjustable, with remote controls that are convenient to the driver. The convex section in each mirror will be heated and adjustable, with remote controls that are convenient to the driver.
0807672	SP Mirror, Special Mounting, Ramco 8000, 9000, 1350 or 1750	Mirror Mounting Location The mirrors will be mounted higher than standard. The top of the mirror mount will align with the chassis logo mounted on the cab doors.

0648171	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	<p>DOORS</p> <p>To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 63.37" high.</p> <p>The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The finish of the door handle will be chrome/black. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.</p> <p>Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.</p> <p>The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.</p> <p>A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.</p> <p>A chrome handle will be provided on the inside of each cab door for ease of entry.</p> <p>A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.</p> <p>The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.</p>
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	<p>Door Panels</p> <p>The inner cab door panels will be constructed out of brushed stainless steel.</p>
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	<p>ELECTRIC OPERATED CAB DOOR WINDOWS</p> <p>All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.</p> <p>Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.</p>
0638310	Steps, 4-Door Cab, Saber FR/Enforcer	<p>CAB STEPS</p> <p>The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 10.00" minimum depth. The inside cab steps will not exceed 16.50" in height.</p> <p>The vertical surfaces of the step well will be aluminum treadplate.</p>
0770200	Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, 4-Door Cab	<p>CAB EXTERIOR HANDRAILS</p> <p>A Hansen knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. Each handrail will be provided with blue LED lights. The lights will be activated when the parking brake is applied and when the cab or crew cab doors are opened. The LED lights may be load managed.</p>
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	<p>STEP LIGHTS</p> <p>There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps.</p> <p>One (1) light for the left side cab access steps.</p> <p>Two (2) lights for the left side crew cab access steps.</p> <p>Two (2) lights for the right side crew cab access steps.</p> <p>One (1) light for the right side cab access step.</p> <p>In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The lights will be activated when the battery switch is on and the adjacent door is opened.</p>
0583698	Fenders, S/S on cab, Extra Wide, Saber/Enf	<p>FENDER CROWNS</p> <p>Stainless steel fender crowns will be installed at the cab wheel openings.</p>
0611614	Handrails, 10", Below Cab Windshield, Hansen Knurled Alum, LED, Backlit, Pair	<p>LIGHTED HANDRAIL BELOW CAB WINDSHIELD</p> <p>A 10.00" long Hansen aluminum knurled handrail will be mounted below the front cab windshield, one (1) on each side.</p> <p>Each handrail will be provided with blue LED lights.</p> <p>The lights will be activated when the parking brake is applied and when the cab doors are opened.</p>

0042105	No Windows, Side of Crew Cab	
0786279	Window Tint, Crew Cab Door, Right Side, Privacy Dark Gray	RIGHT SIDE ROLLUP CREW CAB DOOR WINDOW TINT The rollup window in the right side crew cab door will be tinted privacy dark gray.
0786290	Window Tint, Crew Cab Door, Left Side, Privacy Dark Gray	LEFT SIDE ROLLUP CREW CAB DOOR WINDOW TINT The rollup window in the left side crew cab door will be tinted privacy dark gray.
0898696	Compt, Transverse C/C, Dbl Pan, 70" SFR/Enf	STORAGE COMPARTMENT Provided under the forward facing crew cab seats will be a transverse compartment. The compartment will be divided into upper and lower sections by a removable divider located at the cab floor. The upper section will be 16.25" wide x 9.00" high x full width (transverse) of the crew cab. The lower section will be 16.50" wide x 25.50" high x 15.00" deep on both sides. The compartment will extend from the bottom of the cab to top of the seat riser. There will be two (2) double pan doors painted to match the cab exterior with a non-locking D-Ring latch, one (1) on each side of the cab with a web strap for each exterior door provided as a door stop. The clear door opening of each compartment door will be 10.25" wide x 32.00" high. The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame. There will be one (1) drop down door, painted to match the cab interior with two (2) non-locking flush lift and turn latches with no louvers on the forward face of the seat riser. The exterior of the compartment will be painted to match the cab interior color. The interior of the compartment will be D/A finished. Compartment Light There will be four (4) white Amdor LED strip lights, one (1) horizontally mounted in each lower and upper exterior compartment. The lights will be controlled by an automatic door switch.
0618351	Glove Box, Front of Officer, Saber FR/Enforcer	GLOVE BOX A glove box with a drop-down door will be installed above the recessed area of the dash panel in front of the officer's position. The glove box will be 31.00" wide at the top and 24.75" at the bottom x 5.50" high x 6.25" deep. The clear door opening will be 14.25" wide x 3.95" high.
0894089	Dash, Heavy Duty Metal, Enforcer	CAB DASH The driver side dash, switch panel located to the right of the driver, and center console will be constructed of metal and painted to match the cab interior. The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior. The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster.
0607217	Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer	MOUNTING PLATE ON ENGINE TUNNEL Equipment installation provisions will be installed on the engine tunnel. A 0.188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel .75" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.
0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	CAB INTERIOR The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum. The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling. The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs. All wiring will be placed in metal raceways. CAB INTERIOR UPHOLSTERY The cab interior upholstery will be 36 oz dark silver gray vinyl.
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	CAB INTERIOR PAINT The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint. The rear heater panels will be painted black, vinyl textured paint.

0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	<p>CAB FLOOR The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler. The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p>
0891411	HVAC, Heavy-Duty, Enforcer, CARE	<p>DEFROST/AIR CONDITIONING SYSTEM A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.</p> <p>Cab Defroster A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following: One (1) adjustable outlet directed towards the left side cab window. One (1) adjustable outlet directed towards the right side cab window. Six (6) fixed outlets directed at the windshield. The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.</p> <p>Cab/Crew Auxiliary Heater There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure to be used to transfer heat to the forward positions.</p> <p>Air Conditioning A 19.10 cubic inch compressor will be installed on the engine. A roof-mounted condenser with a 78,000 BTU output at 2,400 SCFM that meets and exceeds the performance specification will be installed on the cab roof. Mounting the condenser below the cab or body would reduce the performance of the system and will not be acceptable. The condenser cover to be painted to match the cab roof. The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours. The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum will be covered with a formed plastic cover. The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications. Adjustable air outlets will be strategically located on the forward plenum cover per the following: Four (4) outlets directed towards the seating position on the left side of the cab. Four (4) outlets directed towards the seating position on the right side of the cab. Adjustable air outlets will be strategically located on the rear plenum cover per the following: Minimum of five (5) outlets directed towards crew cab area. A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be hinged with two (2) thumb latches. The air conditioner refrigerant will be R-134A and will be installed by a certified technician.</p> <p>Climate Control An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control. The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature. The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position. The system controller will be located within panel position #12.</p> <p>Gravity Drain Tubes Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.</p>
0639675	Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf	<p>SUN VISORS Two (2) smoked Lexan™ sun visors will be provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab. There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.</p>
0634328	Grab Handles, Driver and Officer Door Posts, SFR/Enf	<p>GRAB HANDLES A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.</p>

0583938	Lights, Engine Compt, Custom, Auto Sw, W/in 3SC0CDCR, 3" LED, Trim	<p>ENGINE COMPARTMENT LIGHTS</p> <p>There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.</p> <p>These light(s) will be activated automatically when the cab is raised.</p>
0631830	Fluid Check Access, Saber FR/Enforcer, Arrow XT	<p>ACCESS TO ENGINE DIPSTICKS</p> <p>For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface.</p> <p>The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.</p> <p>The door will have a rubber seal for thermal and acoustic insulation. One (1) flush lift and turn latch will be provided on the access door.</p>
0828042	Side Roll and Frontal Impact Protection, SRS	<p>CAB SAFETY SYSTEM</p> <p>The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following:</p> <p>A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.</p> <p>A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.</p> <p>A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.</p> <p>A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.</p> <p>Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.</p> <p>Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.</p> <p>Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.</p> <p>Frontal Impact Protection</p> <p>The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected.</p> <p>The SRS system will deploy the following components in the event of a frontal or oblique impact event:</p> <ul style="list-style-type: none"> Driver side front air bag Passenger side knee bolster air bag Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place <p>Side Roll Protection</p> <p>The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints.</p> <p>The SRS system will deploy the following components in the event of a side roll:</p> <ul style="list-style-type: none"> Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place
0622619	Seating Capacity, 4 Belted Seats	<p>SEATING CAPACITY</p> <p>The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be four (4).</p>
0632959	Seat, Driver, Bostrom, Sierra, Air Ride, High Back, Safety, PRIMARY, SFR/Enf	<p>DRIVER SEAT</p> <p>A H.O. Bostrom, Sierra, air suspension seat will be provided in the cab for the driver. For increased convenience, the seat will include a manual control to adjust the horizontal position (5.50" travel). To provide flexibility for multiple driver configurations, the seat will have a high back reclining back, adjustable from 5 degrees back to 40 degrees forward.</p> <p>The seat will include the following features incorporated into the side roll protection system:</p> <ul style="list-style-type: none"> Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position. The seat will include no additional zip clean covers. <p>The seat will be furnished with a 3-point, shoulder type seat belt.</p>

0632914	Seat, Officer, Bostrom 450, Fixed, SCBA, Safety, PRIMARY, SFR/Enf	<p>OFFICER SEAT A H.O. Bostrom, Tanker 450, SCBA fixed seat will be provided in the cab for the officer. For optimal comfort, the seat will be provided with 17.00" deep cushion. The seat back will be an SCBA back style with a 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.50" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A seat safety system will be included. When activated, this system will pretension the seat belt. The seat will include no additional zip clean covers. The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0620420	Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	<p>RADIO COMPARTMENT A radio compartment will be provided under the officer's seat. The inside compartment dimensions will be 14.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure. A drop-down door with one (1) flush lift and turn latch will be provided for access. The compartment will be constructed of smooth aluminum and painted to match the cab interior.</p>
0806192	SP Cabinet, Rr Fcng, LS, 22 W x 24 H x 22 D, Chamf, Ext Acc Only, Sp Mtg, SFR/Enf	<p>REAR FACING LEFT SIDE CABINET A rear facing cabinet will be provided in the crew cab at the left side outboard position. The cabinet will be mounted off the edge of the seat riser so that it is even with the crew cab door frame. The cabinet will be 22.00" wide x 24.00" high x 22.00" deep. The inboard corner on the rear facing side will be chamfered. The chamfered corner will begin 6.00" from the corner on the inboard and rear facing sides and extend the entire height of the cabinet. The cabinet will include no adjustable shelves or trays in the cabinet interior. The cabinet will include no louvers. The cabinet will provide access only from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a non-locking D-ring latch. A pneumatic stay arm will be provided as a door stop. The clear door opening will be 17.00" wide x 20.50" high. The exterior access will be provided with a polished stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum and painted to match the cab interior. Cabinet Light There will be one (1) white Amdor LED strip light installed horizontally above the exterior cabinet door opening. The lighting will be controlled by an automatic door switch.</p>
0102783	Not Required, Seat, Rr Facing C/C, Center	
0806194	SP Cabinet, Rr Fcng, RS, 22 W x 24 H x 22 D, Chamf Corner, Ext Acc Only, Sp Mtg, SFR/Enf	<p>REAR FACING RIGHT SIDE CABINET A rear facing cabinet will be provided in the crew cab at the right side outboard position. The cabinet will be mounted off the edge of the seat riser so that it is even with the crew cab door frame. The cabinet will be 22.00" wide x 24.00" high x 22.00" deep. The inboard corner on the rear facing side will be chamfered. The chamfered corner will begin 6.00" from the corner on the inboard and rear facing sides and extend the entire height of the cabinet. The cabinet will include no adjustable shelves or trays in the cabinet interior. The cabinet will include no louvers. The cabinet will provide access from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a non-locking D-ring latch. A pneumatic stay arm will be provided as a door stop. The exterior clear door opening will be 17.00" wide x 20.50" high. The exterior access will be provided with a polished stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior. Cabinet Light There will be one (1) white Amdor LED strip light installed horizontally above the exterior cabinet door opening. The lights will be controlled by an automatic door switch.</p>
0632939	Seat, Fwd Fcng C/C, LS Otbrd, Bostrom 400CT, SCBA, Foldup, Safety, SECON DARY, SFR/Enf	<p>FORWARD FACING DRIVER SIDE OUTBOARD SEAT There will be one (1) forward facing, HO Bostrom Tanker 400CT foldup SCBA seat provided at the driver side outboard position in the crew cab. For optimal comfort, and to maximize accessibility to the crew cab, the seat will be provided with 15.00" deep cushion. The seat back will be an SCBA back style with a 0 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.50" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A seat safety system will be included. When activated, this system will pretension the seat belt. The seat will include no additional zip clean covers. The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0103319	Not Required, Seat, Forward Facing C/C, Center	

0632869	Seat, Fwd Fcng C/C, RS Otbrd, Bostrom 400CT,SCBA,Foldup,Safety,SECON DARY,SFR/Enf	<p>FORWARD FACING PASSENGER SIDE OUTBOARD SEAT</p> <p>There will be one (1) forward facing, HO Bostrom Tanker 400CT foldup SCBA seat provided at the passenger side outboard position in the crew cab. For optimal comfort, and to maximize accessibility to the crew cab, the seat will be provided with 17.00" deep cushion. The seat back will be an SCBA back style with a 0 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.50" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.</p> <p>The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A seat safety system will be included. When activated, this system will pretension the seat belt. The seat will include no additional zip clean covers. The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0651182	Scuffplate, Cabinet, Interior Door Pan, Cab	<p>DOOR PAN SCUFFPLATE</p> <p>There will be a polished stainless steel scuffplate on the interior door pan of two (2) cabinet door (s) located DS and PS EMS cabinets on the side of the cab.</p>
0752005	Lip, Top of Interior Cabinet, All Sides	<p>LIP ON CABINET</p> <p>There will be a 1.00" lip provided around the top perimeter of the cabinet. There will NOT be anything stored on the top portion without restraints. There will be two (2) cabinets(s) provided with the lip DS & PS inside the cab.</p>
0042359	Upholstery, Seats In Cab, All Vinyl, Bostrom, CARE	<p>SEAT UPHOLSTERY</p> <p>All seat upholstery will be leather grain black vinyl resistant to oil, grease and mildew. The cab and tiller cab (if applicable) will have four (4) seating positions.</p>
0543991	Bracket, Air Bottle, Hands-Free II, Cab Seats	<p>AIR BOTTLE HOLDERS</p> <p>All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G. There will be a quantity of three (3) SCBA brackets.</p>
0603866	Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	<p>SEAT BELTS</p> <p>All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of applicable NFPA and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position. The 3-point shoulder type belts will also include the ReadyReach® D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only. To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.</p>
0817557	Helmet Storage, Provided by Fire Department, NFPA/ULC 2024	<p>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</p> <p>NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC 515:2024 edition, section 5.2, requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.</p>
0647647	Lights, Dome, FRP Dual LED 4 Lts	<p>CAB DOME LIGHTS</p> <p>There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white. The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch. All dome lights on the apparatus will be illuminated per the current edition of applicable NFPA standards per seating position.</p>
0896451	Enhanced Software for Cab and Crew Cab Dome Lts	<p>ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS</p> <p>The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed. The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.</p>

The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.

CAB INSTRUMENTATION

The cab instrument panel include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

Gauges

The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

Voltmeter gauge (volts):

Low volts (11.8 VDC)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

High volts (15.5 VDC)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Very low volts (11.3 VDC)

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Very high volts (16.0 VDC)

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Engine Tachometer (RPM)

Speedometer MPH (Major Scale), KM/H (Minor Scale)

Fuel level gauge (Empty - Full in fractions):

Low fuel (1/8 full)

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Very low fuel (1/32 full)

Red caution indicator on the information center with steady alarm

Amber caution light on gauge assembly

Engine Oil pressure Gauge (PSI):

Low oil pressure to activate engine warning lights and alarms

Red caution indicator on the information center with steady alarm

Amber caution light on gauge assembly

Front Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Rear Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red warning indicator on the information center with a steady alarm

Amber caution light on gauge assembly

Transmission Oil Temperature Gauge (Fahrenheit):

High transmission oil temperature activates warning lights and alarm

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Engine Coolant Temperature Gauge (Fahrenheit):

High engine temperature activates an engine warning light and alarms

Amber caution indicator on the information center with intermittent alarm

Amber caution light on gauge assembly

Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):

Low fluid (1/8 full)

Amber indicator light in gauge dial

All gauges will perform prove out at initial power-up to ensure proper performance.

Indicator Lamps

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

Low coolant

Trac cntl (traction control) (where applicable)

Check engine

Check trans (check transmission)

Aux brake overheat (Auxiliary brake overheat)

Air rest (air restriction)

Caution (triangle symbol)

Water in fuel

DPF (engine diesel particulate filter regeneration)

Trailer ABS (where applicable)

Wait to start (where applicable)

HET (engine high exhaust temperature) (where applicable)

ABS (antilock brake system)

MIL (engine emissions system malfunction indicator lamp) (where applicable)

Side roll fault (where applicable)

Front air bag fault (where applicable)

The following red telltale lamps will be present:

Warning (stop sign symbol)

Seat belt

Parking brake

Stop engine
Rack down
The following green telltale lamps will be provided:
Left turn
Right turn
Battery on
The following blue telltale lamp will be provided:
High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch will be provided on the instrument panel or on the steering column.

Heater, defroster, and air conditioning control panel.

Turn signal arm: A self-canceling turn signal with high beam headlight controls will be provided.

Windshield wiper control will have high, low and intermittent modes.

Parking brake control: An air actuated push/pull park brake control valve will be provided.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A momentary rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

Engine diagnostic port
Transmission diagnostic port
ABS diagnostic port
Roll sensor diagnostic port
Command Zone USB diagnostic port

		<p>ABS diagnostic switch (blink codes flashed on ABS telltale indicator) Diesel particulate filter regeneration switch (where applicable) Diesel particulate filter regeneration inhibit switch (where applicable) Cab LCD Display A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature. The upper right section will display the following, along with other configuration specific information: Odometer Trip mileage PTO hours Fuel consumption Engine hours The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.</p>
0509511	Air Restriction Indicator, Imp/Vel, AXT, Enf MUX	<p>AIR RESTRICTION INDICATOR A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.</p>
0543751	Light, Do Not Move Apparatus	<p>"DO NOT MOVE APPARATUS" INDICATOR A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.</p>
0509042	Messages, Open Dr/DNMT, Color Dsply,	<p>DO NOT MOVE TRUCK MESSAGES Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): Do Not Move Truck DS Cab Door Open (Driver Side Cab Door Open) PS Cab Door Open (Passenger's Side Cab Door Open) DS Crew Cab Door Open (Driver Side Crew Cab Door Open) PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open) DS Body Door Open (Driver Side Body Door Open) PS Body Door Open (Passenger's Side Body Door Open) Rear Body Door Open DS Ladder Rack Down (Driver Side Ladder Rack Down) PS Ladder Rack Down (Passenger Side Ladder Rack Down) Deck Gun Not Stowed Lt Tower Not Stowed (Light Tower Not Stowed) Fold Tank Not Stowed (Fold-A-Tank Not Stowed) Aerial Not Stowed (Aerial Device Not Stowed) Stabilizer Not Stowed Steps Not Stowed Handrail Not Stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.</p>
0611683	Switching, Cab Instrument Lower Console & Overhead, Membrane, Enforcer WiFi MUX	<p>SWITCH PANELS The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliques. The built-in switch panels will be located in the lower console or overhead console of the cab. Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout. The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.</p>
0802940	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	<p>WIPER CONTROL Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located on the left side of the center instrument panel.</p>

0834416	USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC	<p>CAB USB</p> <p>There will be four (4) USB terminations with a combination USB type A & C, wired to switched battery power, provided per the following:</p> <p>One (1) within reach of the driver One (1) within reach of the passenger Two (2) on the rear of the engine tunnel, one (1) each side. This circuit may be load managed.</p>
0836750	Wiring, Spare, (1) 20A 12V DC, Multi Loc, Cab, B+, 1st, NFPA1900/ULC	<p>SPARE CIRCUITS</p> <p>There will be one (1) shared 20 amp circuit, including a positive and a negative wire, dropped out in multiple locations on the apparatus. All dropout locations will be wired in a parallel configuration.</p> <p>The wires will have the following features: The positive wire will be connected directly to the battery power The negative wire will be connected to ground The spare wiring circuit will be located and terminated as follows: Spare circuit drop #1 will be located in the cab behind the left side seat and termination with 3/8" studs and plastic covers Spare circuit drop #2 will be located in the cab behind the right side seat and termination with 3/8" studs and plastic covers Spare circuit drop #3 will be located high on the left side rear wall of the crew cab and termination with 3/8" studs and plastic covers Spare circuit drop #4 will be located high on the right side rear wall of the crew cab and termination with 3/8" studs and plastic covers Spare circuit drop #5 will left/driver side crew cab side wall (behind crew cab door) at lowest level with 10" coil (to wire up customer provided TIC charger) and termination with 3/8" studs and plastic covers Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. Battery Direct loads cannot be Load Managed.</p>
0836752	Wiring, Spare, (1) 20A 12V DC, Multi Loc, LS Bdy/Rear, B+,1st NFPA1900/ULC	<p>SPARE CIRCUITS</p> <p>There will be one (1) shared 20 amp circuit, including a positive and a negative wire, dropped out in multiple locations on the apparatus. All dropout locations will be wired in a parallel configuration.</p> <p>The wires will have the following features: The positive wire will be connected directly to the battery power The negative wire will be connected to ground The spare wiring circuit will be located and terminated as follows: Spare circuit drop #1 will be located in the left side compartment LS1 high on the rear wall and termination with a 10-place bus bar with screws and removable cover Spare circuit drop #2 will be located in the rear compartment B1 high on the rear wall and termination with a 10-place bus bar with screws and removable cover Spare circuit drop #3 will RS1 Location TBD at Approval Visit and termination with a 10-place bus bar with screws and removable cover Spare circuit drop #4 will not be required and termination is not required with no location Spare circuit drop #5 will not be required and termination is not required with no location Wires will be protected to meet NFPA Fire Automotive Apparatus standard. Battery Direct loads cannot be Load Managed.</p>
0636439	Wiring, Spare, 37.5 A 12V DC, Cust Install Radio, 30A Bat Dir, 7.5A Ign & Grnd	<p>CUSTOMER SUPPLIED RADIO WIRING</p> <p>There will be one (1) 12 volt combination wiring leads of which each will include one (1) direct battery, one (1) ignition and one (1) negative for use with radio equipment. Each lead will be 18.00" long and be provided from distribution to Loc. 14 as that is where the CTF radio will be installed.. The leads will be clearly marked in a coil and terminate with butt splices.</p> <p>A breaker rated for 30 amps will be provided for circuit protection of the direct battery lead with a minimum of 10 gauge wire. A breaker rated for 7.5 amps will be provided for circuit protection of the ignition lead. The wires will be colored coded as follows: red for direct battery yellow for ignition black for ground</p>
0819994	Radio, Jensen, AM/FM/WB, Bluetooth	<p>STEREO RADIO</p> <p>There will be one heavy duty AM/FM / Weatherband / Bluetooth stereo radio. The radio will be installed within reach of the driver. There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof.</p> <p>The following Jensen features will be included: 180 watts max power (45W x 4); 100 watts RMS (25W x 4) Bluetooth® streaming audio (A2DP/AVRCP) Weatherband AM/FM tuner with 30 presets Audio settings (volume/bass/treble/balance/fade) Toggle switch between day and night display Daylight-readable, segmented LCD Two-wire power with non-volatile memory and clock support Low battery alert</p>
0814201	Vehicle Information Center, 7" Color	<p>INFORMATION CENTER</p>

Display, Touchscreen, MUX, CL714 An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing.

The information center will have the following specifications:

Operate in temperatures from -40 to 158 degrees Fahrenheit

LCD optically bonded to hardened AR glass lens

Five weather resistant user interface switches

Grey with black accents

Sunlight Readable

Linux operating system

Minimum of 1000nits rated display

Display can be changed to an available foreign language

A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.

Programmed to read US Customary

General Screen Design

Where possible, background colors will be used to provide "At a Glance" vehicle information. If

information provided on a screen is within acceptable limits, a green background will be used.

If a caution or warning situation arises the following will occur:

An amber background/text color will indicate a caution condition

A red background/text color will indicate a warning condition

The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.

A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.

Home/Transit Screen

This screen will display the following:

Vehicle Mitigation (if equipped)

Water Level (if the water level system includes compatible communications to the information center)

Foam Level (if the foam level system includes compatible communications to the information center)

Seat Belt Monitoring Screen

Tire Pressure Monitoring (if equipped)

Digital Speedometer

Active Alarms

On Scene Screen

This screen will display the following and will be auto activated with pump engaged (if equipped):

Battery Voltage

Fuel

Oil Pressure

Coolant Temperature

RPM

Water Level (if equipped)

Foam Level (if equipped)

Foam Concentration (if equipped)

Water Flow Rate (if equipped)

Water Used (if equipped)

Active Alarms

Virtual Buttons

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

Page Screen

The page screen will display the following and allow the user to progress into other screens for further functionality:

Diagnostics

Faults

Listed by order of occurrence

Allows to sort by system

Interlock

Throttle Interlocks

Pump Interlocks (if equipped)

Aerial Interlocks (if equipped)

PTO Interlocks (if equipped)

Load Manager

A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.

The screen will indicate if a load has been shed (disabled) or not shed.

"At a glance" color features are utilized on this screen.

Systems

Command Zone

Module type and ID number

Module Version

Input or output number

Circuit number connected to that input or output

Status of the input or output

Power and Constant Current module diagnostic information

Foam (if equipped)

Pressure Controller (if equipped)

Generator Frequency (if equipped)

Live Data

General Truck Data

Maintenance

Engine oil and filter
 Transmission oil and filter
 Pump oil (if equipped)
 Foam (if equipped)
 Aerial (if equipped)
 Setup
 Clock Setup
 Date & Time
 12 or 24 hour format
 Set time and date
 Backlight
 Daytime
 Night time
 Sensitivity
 Unit Selection
 Home Screen
 Virtual Button Setup
 On Scene Screen Setup
 Configure Video Mode
 Set Video Contrast
 Set Video Color
 Set Video Tint
 Do Not Move

The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated

Driver Side Cab Door
 Passenger's Side Cab Door
 Driver Side Crew Cab Door
 Passenger's Side Crew Cab Door
 Driver Side Body Doors
 Passenger's Side Body Doors
 Rear Body Door(s)
 Ladder Rack (if applicable)
 Deck Gun (if applicable)
 Light Tower (if applicable)
 Hatch Door (if applicable)
 Stabilizers (if applicable)
 Steps (if applicable)

Notifications

View Active Alarms

Shows a list of all active alarms including date and time of the occurrence is shown with each alarm

Silence Alarms - All alarms are silenced

Timer Screen

HVAC (if equipped)

Tire Information (if equipped)

Ascendant Set Up Confirmation (if equipped)

Button functions and button labels may change with each screen.

0816633

Collision Mitigation, HAAS Alert (R2V), HA7

COLLISION MITIGATION

There will be a HAAS Alert®. Model HA7 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA7 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degrees Celsius to 85 degrees Celsius.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA7 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA7 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA7 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

0606247	Vehicle Data Recorder w/CZ Display Seat Belt Monitor	<p>VEHICLE DATA RECORDER There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line. The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs: Vehicle Speed - MPH Acceleration - MPH/sec Deceleration - MPH/sec Engine Speed - RPM Engine Throttle Position - % of Full Throttle ABS Event - On/Off Seat Occupied Status - Yes/No by Position Seat Belt Buckled Status - Yes/No by Position Master Optical Warning Device Switch - On/Off Internal clock syncs the time and date when a laptop is connected.</p>
		<p>Seat Belt Monitoring System A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following: Seat Occupied & Buckled = Green LED indicator illuminated Seat Occupied & Unbuckled = Red LED indicator with audible alarm No Occupant & Buckled = Red LED indicator with audible alarm No Occupant & Unbuckled = No indicator and no alarm FAULT = Blue LED indicator illuminated The seat belt monitoring screen will become active on the Command Zone color display when: The home screen is active: and there is any occupant seated but not buckled or any belt buckled with an occupant. and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated. The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.</p>
0727255	SP Intercom, David Clark, Up to 4 Wireless, (D,O,RPTT), 2obC Wired	<p>INTERCOM SYSTEM A David Clark intercom system with wireless single radio interface capability for up to four (4) users will be provided. The driver, and officer positions will have wired single radio interface capable stations with remote radio push to talk buttons located Per intercom layout. Two (2) at both forward facing seats, outboard crew cab seating positions will have radio listen / intercom only. The following components will be supplied with this system: One (1) U3805 Radio Cord Junction Module One (1) U9922-G38 Radio Gateway Module Two (2) U3815 Radio Interface Modules (Driver, Officer) Two (2) Remote Radio Push To Talk One (1) A99-14CRG 12VDC four (4) Bay Battery Charger One (1) C99-14DC1 12VDC battery charger cord One (1) U3800 Intercom Unit (1 outboard Crew) One (1) U3801 Remote Intercom Station (1 outboard Crew) One (1) C3820 Power Cable All necessary cables and connectors</p>
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	<p>RADIO / INTERCOM INTERFACE INCLUDED All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to from behind the captain's seat to on top of dog house / center console where the radio control head(s) will be customer installed. .</p>
0602239	SP Headset, David Clark, H3332 Over The Head, Chrome boom Mic	<p>OVER THE HEAD HEADSET There will be four (4) under the helmet headset(s) provided D, O, 2C. Each David Clark, Model H3332, headset will feature: 5' Coiled cord M1/DC microphone Chrome microphone boom rotates 200 degrees for left or right dress Microphone on/off button Foam ear-seals 24 dB noise reduction</p>

0690646	Headset, David Clark w/ Wireless Radio Belt Station, Under Helmet	<p>WIRELESS UNDER THE HELMET HEADSET</p> <p>There will be one (1) under the helmet, marine grade headset(s) with wireless radio push-to-transmit belt station(s) provided pump panel. There will be one (1) user replaceable, rechargeable, Li-polymer battery included with each belt station.</p> <p>Each David Clark, Model H9940, headset will feature:</p> <ul style="list-style-type: none"> 6' Coiled cord with military grade belt station connector M-87 type dynamic noise cancelling microphone Hinged/flex microphone boom rotates 280 degrees for left or right dress Dual volume controls <p>Each, David Clark, Model U9910-BSW, belt station will feature:</p> <ul style="list-style-type: none"> Marine grade, water-tight, impact resistant enclosure with rubberized skin Hands free, full duplex, voice activation Voice prompts to ensure wireless link status Water-tight battery compartment
0723430	SP Antenna, Panorama, 5 in 1, Low Profile Dome Antenna	<p>COMBO ANTENNA</p> <p>There will be one (1), Panorama bolt on, low profile 5 in 1 dome antenna(s).</p> <p>The antenna kit contains a complete set of 5 extension cables;</p> <ul style="list-style-type: none"> Cellular: 2 x 16' CS29 (double shielded RG58) with SMA/Male WiFi: 2 x 16' RG174 with RP-SMA/Male GPS: 1 x 16' RG174 with SMA/Male <p>Cable 1 & 2 (cellular): 2.3db at 698-960MHz, 5db at 1700-2700MHz Cable 3 & 4 (WiFi): 2db at 2.3-2.7GHz, 2db at 4.9-6GHz Cable 5 (GPS): 26db at 1575MHz</p> <p>The antenna will be white. The cables will be routed within the cab to Behind officer's seat.</p>
0653519	Camera, Pierce, LS Mux, RS, LS, R, Cameras, SD	<p>VEHICLE CAMERA SYSTEM</p> <p>There will be a color vehicle camera system provided with the following:</p> <ul style="list-style-type: none"> One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse. One (1) camera located on the right side of the apparatus, pointing rearward, displayed automatically with the right side turn signal. One (1) camera located on the left side of the apparatus, pointing rearward, displayed automatically with the left side turn signal. <p>The camera images will be displayed on the left side vehicle information center display. Audio from the microphone on the rear camera will be emitted by an amplified speaker with volume control located behind the driver seat.</p> <p>The following components will be included:</p> <ul style="list-style-type: none"> One (1) SV-CW134639CAI Rear Camera Two (2) CS134404CI Side Cameras <p>All necessary cables</p>
0814861	Camera, Switcher, Pierce, 4 channel, AHD, CVBS	<p>Camera Switcher</p> <p>There will be one (1), HMU318 HD Image Processor multiplexer, 4 channel camera video switcher with remote control provided to allow single, dual, triplex, quad, trefoil, Y split and PIP view display modes on the vehicle information center display provided. The switcher will have one (1) CVBS, Composite Video Blanking and Sync, standard Definition video output and one (1) AHD, Analog High Definition video output for High Definition cameras.</p>
0523921	Recess, Rear Vision Camera	<p>RECESS REAR CAMERA</p> <p>A rear camera recess will be provided on the driver side rear bulkhead.</p>
0772846	Key Storage, Knox-Box, KeySecure 5, KSM-200K2, WiFi, Cab Surface Mt	<p>KNOX-BOX</p> <p>There will be a Knox-Box® KeySecure® 5, Model KSM-200K2 with key pad access provided. The system will allow all administration functions to be performed via WiFi, Ethernet cable or USB port. The box will hold two (2) keys. The box will be installed to be shipped loose and mounted @ final inspection. Customer knows that it will most likely end up on the mounting plate on the engine tunnel PS forward most corner area. They may have us fabricate a surround around the Knox Box w/ GO LIGHT controller.</p>
0890416	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	<p>ELECTRICAL POWER CONTROL SYSTEM</p> <p>The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.</p> <p>Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.</p> <p>Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.</p> <p>Solid-State Control System</p>

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include a see through housing, a power indicator, a status indicator and circuit indicators located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices. The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

Green LED indicator light for module power

Red LED indicator light for network communication stability status

Control system self test at activation and continually throughout vehicle operation

No moving parts due to transistor logic

Software logic control for NFPA mandated safety interlocks and indicators

Integrated electrical system load management without additional components

Integrated electrical load sequencing system without additional components

Customized control software to the vehicle's configuration

Factory and field programmable to accommodate changes to the vehicle's operating parameters

To assure long life and operation in a broad range of environmental conditions, the solid-state

control system modules will meet the following specifications:

Module circuit board will meet SAE J771 specifications

Operating temperature from -40 degrees Celsius to +70 degrees Celsius (-40 degrees Fahrenheit to +158 degrees Fahrenheit)

Storage temperature from -40 degrees Celsius to +70 degrees Celsius (-40 degrees Fahrenheit to +158 degrees Fahrenheit)

Vibration to 50g

IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

Operating voltage from eight (8) volts to 32 volts DC

The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

Circuit Protection and Control Diagram

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

On-Board Electrical System Diagnostics

The on-board information center will include the following diagnostic information:

Text description of active warning or caution alarms

Simplified warning indicators

Amber caution indication with intermittent alarm

Red warning indication with steady tone alarm

Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

TCU Module with WiFi

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a white WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU information and update software in the device.

Indicator Light and Alarm Prove-Out System

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

Voltage Monitor System

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

Dedicated Radio Equipment Connection Points

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

12-volt 40-amp battery switched power

12-volt 60-amp ignition switched power

12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

EMI/RFI Protection

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found

in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself. EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0896456 Prognostics, Electrical System

ELECTRICAL SYSTEM PROGNOSTICS

There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.

Prognostics will include the following:

Engine oil and filter

Transmission oil and filter

0624253 Electrical System, Enforcer MUX

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal.

Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment will be installed utilizing the following guidelines:

All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.

Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.

Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.

Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).

All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.

All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

0079211 Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud

BATTERY SYSTEM

There will be six (6) 12 volt Stryten/Exide®, Model 31S950X3W, batteries that include the following features will be provided:

950 CCA, cold cranking amps

190 amp reserve capacity

High cycle

Group 31

Rating of 5700 CCA at 0 degrees Fahrenheit

1140 minutes of reserve capacity

Threaded stainless steel studs

Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

0008621 Battery System, Single Start, All Custom Chassis

BATTERY SYSTEM

There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

MASTER BATTERY SWITCH

There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.

0002698	Battery Compartment, Saber/Enforcer	<p>BATTERY COMPARTMENTS Batteries will be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab and bolted directly to the chassis frame. The battery boxes will have reinforced sides. The battery compartments will be constructed of 0.188" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The battery hold-downs will be of a non-corrosive material. All bolts and nuts will be stainless steel. Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.</p> <p>JUMPER STUDS One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>
0812586	Charger, Sngl Sys, Kussmaul, Chief 091-266-12-60, 60 Amp	<p>BATTERY CHARGER There will be a Kussmaul™, Chief Series Smart Charger 6012, product code 091-266-12-60, 60 amp battery charger with build-in touch screen display provided. The battery charger will be wired to the AC shoreline inlet through a junction box located near the battery charger.</p>
0814893	Location, Body, Charger, Front Side Compartment, LS	The battery charger will be located in the left front body compartment mounted on the left wall as high as practical.
0811943	Panel, Remote Control, Kussmaul, Chief 091-266-RCP	<p>REMOTE CONTROL PANEL - BATTERY CHARGER There will be a Kussmaul™, Chief Series Smart Charger remote control panel, product code 091-266-RCP included.</p>
0814939	Location, Cab, Ind/Remote, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.
0811952	Not Required, Indicator/Remote Status	
0824337	Not Required, Location Ind/Remote	
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	<p>AUTO EJECT FOR SHORELINE There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency</p>
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side of pump panel.
0008740	Cover, Protection over Battery Charger	<p>BATTERY CHARGER COVER A cover will be fabricated and installed over the battery charger for protection. DS forward most compartment.</p>
0029142	Jumper Studs, w/Location Feature	<p>JUMPER STUDS There will be one (1) set of battery jumper studs with plastic color coded covers provided in the DS step well. However they need to be as far forward as possible. On previous job #34413 they were mounted rearward and have been damaged by personnel stepping on them..</p>
0647729	Alternator, 320 amp, Delco Remy 40SI	<p>ALTERNATOR A Delco Remy®, Model 40SI, alternator will be provided. It will have a rated output current of 320 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p>

ELECTRONIC LOAD MANAGER

An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.

For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.

The system will include the following features:

System voltage monitoring.

A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.

Sixteen available electronic load shedding levels.

Priority levels can be set for individual outputs.

High Idle to activate before any electric loads are shed and deactivate with the service brake.

If enabled:

"Load Man Hi-Idle On" will display on the information center.

Hi-Idle will not activate until 30 seconds after engine start up.

Individual switch "on" indicator to flash when the particular load has been shed.

The information center indicates system voltage.

The information center, where applicable, includes a "Load Manager" screen indicating the following:

Load managed items list, with priority levels and item condition.

Individual load managed item condition:

ON = not shed

SHED = shed

SEQUENCER

A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.

For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.

Emergency light sequencing will operate in conjunction with the emergency master light switch.

When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.

When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.

Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:

Cab Heater and Air Conditioning

Crew Cab Heater (if applicable)

Crew Cab Air Conditioning (if applicable)

Exhaust Fans (if applicable)

Third Evaporator (if applicable)

0780484

Headlights, Rect LED, HiViz FT-4X6-4KIT, AXT/Enf/Imp/Sab/Vel

HEADLIGHTS

There will be a HiViz, P/N FT-4X6-4KIT, that includes four (4) 4.00" high x 6.00" long rectangular LED lights with parking lamp illumination around the outside of the lamps mounted in the front quad style, chrome housing on each side of the cab grille:

The outside lamp on each side will contain P/N FT-4X6-HL with low beam LEDs.

The inside lamp on each side will contain P/N FT-4X6-H with high beam LEDs.

The lights will be controlled through the headlight switch.

0804651

Light, Directional, Wln M62T* LED, Above Headlights, Sab/Enf

FRONT DIRECTIONALS

The front directional lights will be Whelen®, Model M62T*, 4.31" high x 6.75" wide x 1.37" deep directional lights with amber LEDs. The lens color(s) to be clear. The directional lights will be provided with chrome trim and located above the headlights.

The flash pattern of the directional lights will be Steady On (Arrow).

0620054

Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts

INTERMEDIATE LIGHT

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

0647802

Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer

CAB CLEARANCE/MARKER/ID LIGHTS

There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:

Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.

Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.

0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS There will be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab. The lights will activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	REAR CLEARANCE/MARKER/ID LIGHTING There will be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0804514	Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw For Hsg	REAR FMVSS LIGHTING The rear stop/tail and directional lighting included in the rear tail light housing will include the following: Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs Two (2) Whelen, Model M62T, 4.30" high x 6.70" wide x 1.40" deep directional lights with amber LEDs. The directional lights will be set to Steady On (Arrow) flash pattern. The lens color(s) to be the same as the LEDs.
0806466	Lights, Backup, WIn M62BU, LED, For Tail Lt Housing	There will be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing.
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	LICENSE PLATE BRACKET One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0556842	Bezels, WIn, (2) M6 Chrome Pierce, For mtg (4) WIn M6 lights	LIGHTING BEZEL There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.
0589905	Alarm, Back-up Warning, PRECO 1040	BACK-UP ALARM A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	CAB PERIMETER SCENE LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following: one (1) under the driver's side cab access step one (1) under the passenger's side cab access step one (1) under the passenger's side crew cab access step one (1) under the driver's side crew cab access step The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.

0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	<p>PUMP HOUSE PERIMETER LIGHTS</p> <p>There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side.</p> <p>The lights will be controlled by the same means as the body perimeter lights.</p>
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	<p>BODY PERIMETER SCENE LIGHTS</p> <p>There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.</p> <p>The perimeter scene lights will be activated when a switch within reach of the driver is activated and the parking brake is applied.</p>
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	<p>ADDITIONAL PERIMETER LIGHTS</p> <p>There will be three (3) TecNiq, Model T10-LC00-1, 1.25" high x 15.00" long white LED light(s) provided under front bumper, under LS1 and RS1.</p> <p>These additional lights will be controlled with the other body perimeter lights.</p>
0896454	Enhanced Software for Perimeter Lts	<p>ENHANCED SOFTWARE FOR PERIMETER LIGHTS</p> <p>All perimeter lights will be deactivated when the parking brake is released unless alternate control is selected.</p> <p>The cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors closed.</p>
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	<p>STEP LIGHTS</p> <p>Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.</p> <p>These step lights will be actuated with the pump panel light switch.</p> <p>All steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.</p>
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	<p>12 VOLT LIGHTING</p> <p>There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered.</p> <p>The housing(s) painted parts of this light assembly to be white.</p> <p>The light(s) will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.</p> <p>These light(s) may be load managed when the parking brake is applied.</p>
0768059	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 2nd	<p>12 VOLT DC SCENE LIGHTS</p> <p>There will be one (1) Whelen® Model PCPSM2*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, RS of cab above EMS compartment centered over front axle.</p> <p>The surface mount housing(s) will be provided with a chrome cover.</p> <p>The light(s) will be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel.</p> <p>The light(s) may be load managed when the parking brake is applied.</p>
0768061	Lights, Wln, PCPSM2* Pioneer, 12 VDC, 1st	<p>12 VOLT DC SCENE LIGHTS</p> <p>There will be one (1) Whelen® Model PCPSM2*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, LS of cab above EMS compartment centered over front axle.</p> <p>The surface mount housing(s) will be provided with a chrome cover.</p> <p>The light(s) will be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel.</p> <p>The light(s) may be load managed when the parking brake is applied.</p>
0766906	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st	<p>12 VOLT LIGHTING</p> <p>There will be two (2) Whelen® Model PCPSM1*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, High rear body one each side of rear bulkhead.</p> <p>The light(s) will include black housing(s) with a chrome cover.</p> <p>The light(s) will be controlled by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch in a stainless steel cup located on the driver's side at the rear of the apparatus no more than 72.00" from the ground.</p> <p>The light(s) may be load managed when the parking brake is applied.</p>

0748793	Lights, WIn, S44M** 44" 12VDC, RS Body	<p>12 VOLT LIGHTING</p> <p>There will be one (1) Whelen® Model S44M**, 19,440 lumens 44.00" 12 volt DC light(s) with white LEDs provided on the right side of the body located, RS body catwalk, centered over rear axle outboard of the HSH trough. The painted parts of this light assembly to be white.</p> <p>The light(s) will include the following: 10 scene light modules with white LEDs Three (3) amber LEDs as marker lights Two (2) additional LED modules. The additional modules to be two (2) scene light modules with white LEDs.</p> <p>The lights will be activated per the following: The amber marker lights not activated. The scene LEDs will be controlled by a switch at the left side pump panel and by the same control that has been selected for the passenger's side scene light(s). There will be a switch in the cab on the switch panel to control the flashing warning LED modules when selected. The light(s) may be load managed when the parking brake is applied.</p>
0748795	Lights, WIn, S44M** 44" 12VDC, LS Body	<p>12 VOLT LIGHTING</p> <p>There will be one (1) Whelen® Model S44M**, 19,440 lumens 44.00" 12 volt DC light(s) with white LEDs provided on the left side of the body located, LS body catwalk, centered over rear axle outboard of the HSH trough. The painted parts of this light assembly to be white.</p> <p>The light(s) will include the following: 10 scene light modules with white LEDs Three (3) amber LEDs as marker lights Two (2) additional LED modules. The additional modules to be two (2) scene light modules with white LEDs.</p> <p>The lights will be activated per the following: The amber marker lights not activated. The scene LEDs will be controlled by the same control that has been selected for the driver's side scene light(s). There will be a switch in the cab on the switch panel to control the flashing warning LED modules when selected. The light(s) may be load managed when the parking brake is applied.</p>
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	<p>HOSE BED LIGHTS</p> <p>There will be white 12 volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights will meet the photometric levels listed in the current edition of applicable NFPA standards for Hose Bed lighting requirements.</p> <p>Light strip(s) will be installed along the upper edge of the left side of the hose bed. Light strip(s) will be installed along the upper edge of the right side of the hose bed. The lights will be activated by a cup switch at the rear of the apparatus no more than 72.00" from the ground and when the hosebed cover is raised.</p>
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	
0709438	Lights, Walk Surf, FRP Flood, LED	<p>WALKING SURFACE LIGHT</p> <p>There will be Model FRP, 4.00" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body. The light(s) will be activated when the body step lights are on.</p>
0030383	Switch, Emergency Master To Be Red	<p>EMERGENCY MASTER SWITCH</p> <p>The Emergency Master switch(es) will be red.</p>
0060111	Pumper, Medium, Galvanneal, 2nd Gen	
0554271	Body Skirt Height, 20"	

0013303	Tank, Water, 500 Gallon, Poly, Med, New York Style	<p>SPECIAL WATER TANK Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. The Special tank will be T-shaped to provide for deep side compartments and to serve as a large sump to limit the amount of undraftable water. The tank will be designed to achieve a low hose bed. Tank design will be a stepped design with the forward section of the tank higher than the section of the tank that is below the hose bed. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with the current edition of applicable NFPA standards. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank bottom and sides. Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank. Sump will include a drain plug and the tank outlet. Tank will have a combination vent and 14.00" fill tower. Tank will be installed in a special size fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel flat bar or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system to be approved by the tank manufacturer.</p>
0003405	Overflow, 4.00" Water Tank, Poly	<p>Fill tower will be constructed of 0.50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.</p>
		<p>Fill tower will be furnished with a 0.25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p>
0028104	Foam Cell Required	
0633066	Sleeve, Through Tank	<p>SLEEVE PLUMBING THROUGH TANK One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.</p>
0553725	Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	<p>WATER TANK RESTRAINT A heavy-duty water tank restraint will be provided.</p>
0003429	Not Required, Direct Tank Fill	
0003424	Not Required, Dump Valve	
0048710	Not Required, Jet Assist	
0030007	Not Required, Dump Valve Chute	
0514778	Not Required, Switch, Tank Dump Master	

0556226	Hose Bed, Galv, Pumper, New York Style, Fill In The Blank Height	<p>SPECIAL HOSE BED</p> <p>The hose bed will be fabricated of 12-gauge galvanized steel. The sides will not form any portion of the fender compartments. Upper and rear edges of side panels will have a double break for rigidity. The upper area at the rear of the hose bed will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation. A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating. The hose load will be carried behind the water tank. The hose bed floor will be As low as possible over rear compartment and above ladders" from the ground when the truck is fully loaded.</p>
0723549	Painted Hose Bed	The hose bed interior walls will be painted to match the lower body color.
0003481	Hose Bed Capacity, Special	Hose bed will accommodate DS to PS: 200' x 1.75" / 200' x 2.50" / 600' x 5.00" / 600' x 2.50" / 600' x 2.50" Lil Giant Ladder (model 10102).
0837613	Divider, Hose Bed, .25" Unpainted, w/Handhold(s)	<p>HOSE BED DIVIDER</p> <p>Four (4) hosebed dividers will be furnished for separating hose. Each divider will be constructed of a .25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance, or constructed of brushed aluminum. Near the rear of the divider, oval opening(s) will be provided to be used as a hand hold and aid in accessing the hose bed. One (1) handhold cutout provided along the rear vertical edge, in the center of the divider. Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening bolts, at each end. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.</p>
0815208	Cover, Hose Bed, Alum Treadplate, Bolted T-Bar, 4-Section	<p>HOSE BED COVER</p> <p>A four (4) section hose bed cover, constructed of 0.125" bright aluminum treadplate will be furnished. The cover will be split into front and rear with each section having a left and right side. Each section will be attached with a full length stainless steel piano hinge. The sides will be slanted down with the center of the cover supported by a stationary modular bridgework support. An additional bridge support will be required at the middle of the cover where the front and rear sections are divided. All sections of the cover will be reinforced so that it can support the weight of a man walking on the cover. The cover will be designed with the left cover opening first. If access to water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that tank may be filled without raising cover doors. Chrome grab handles and gas filled cylinders will be provided to assist in opening and closing the cover. Rubber latches will be provided to hold the cover in the stowed position. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover. A DuraSurf™ center strip will be supplied to prevent chaffing at the center of the cover. The hose bed cover will be connected to the Do Not Move Truck indicator. The light will be activated if the cover is not in the stowed position and the parking brake is released.</p>
0807414	Hose Restraint, Hose Bed, Vinyl, Rear, Separate From Top, Split 2-Sec, Seat Belt	<p>HOSE RESTRAINT REAR</p> <p>At the rear of the hose bed, a black vinyl flap will be provided. The vinyl flap will be split into two sections Center. The vinyl flap will be provided with quarter turn at the bottom of the hose bed. The top of the vinyl flap will be attached to the top of the hosebed with seat belt buckles. The seat belt buckles will be provided with no tether release. The vinyl flap will be provided with no fasteners between each section. The bottom of the flap will be not weighted. If a strap is provided, the color of the strap will be N/A.</p>
0010133	Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.
0048556	Cross-Divider, Front of Hose Bed, w/Reinforced Aluminum Treadplate Floor	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheets. A reinforced aluminum treadplate floor will be provided between the front of the hose bed and the cross-divider. Cross structure will be provided below the hose bed floor.
0013512	Running Boards, 12.75" Deep	<p>RUNNING BOARDS</p> <p>Running boards will be fabricated of 0.125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced 0.50" away from the pump panel. A splash guard will be provided above the running board treadplate.</p>

0681365	Tailboard, 10" Deep, Full Width, Extended Substructure, Angled Corners	<p>TAILBOARD</p> <p>The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.</p> <p>The tailboard area will be 10.00" deep and full width of the body.</p> <p>The outboard sides of the tailboard will be angled at 45 degrees beginning at the point where the body meets the tailboard at the forward outboard edge angling rearward to the rear edge of the tailboard.</p> <p>The exterior side will be flanged down and in for increased rigidity of tailboard structure.</p>
0815881	Wall, Rear, Smooth Aluminum/Body Material, Flush Rear Wall	<p>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</p> <p>The rear facing surfaces of the center rear wall will be smooth aluminum.</p> <p>The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.</p> <p>The rear wall will be flush.</p>
0889214	Tow Eyes, w/Tow Bar, 2G Pumper	<p>REAR TOW EYES</p> <p>Two (2) tow eyes, which are an integral part of the body mounting substructure, will be installed below the rear of the truck.</p> <p>The tow eyes will be of adequate strength to allow the truck to be pulled from the eyes.</p> <p>REAR TOW BAR</p> <p>One (1) tow bar will be installed under the tailboard.</p> <p>The tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.</p> <p>The tow bar design will have been tested and evaluated using finite element analysis techniques.</p>
0623362	Hose Restraint, Running Board, Straps, S/S Seat Belt Buckle Style Latch	<p>RUNNING BOARD HOSE RESTRAINT</p> <p>A pair of 2.00" wide black nylon straps with stainless steel seat belt buckle style latches will be provided for each hose tray to secure the hose during travel. There will be Two (2) hose trays located one (1) in each side running board.</p>
0003634	Tray, Hose, Running Board, 25' of 5.00", Soft Suction Hose	<p>HOSE TRAY</p> <p>Two (2) hose trays will be recessed one (1) in each side running board.</p> <p>Capacity of the tray will be 25.00' of 5.00" soft suction hose.</p> <p>Rubber matting will be installed on the floor of the tray to provide proper ventilation. Drain holes will be provided.</p>

COMPARTMENTATION

Body and compartments will be fabricated of galvaneal steel.

Side compartments will be an integral assembly with the rear fenders.

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be 12-gauge and of the sweep out design, with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear, and outward side. These covers will have the corners TIG welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads.

The support system will include 0.375" thick steel vertical angle supports bolted to the chassis frame rails with 0.625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure, which results in a 500 lb equipment support rating per lower compartment.

The steel frames as well as the steel vertical angles will be treated with an epoxy E-coat or equivalent to provide resistance to corrosion and chemicals as standard.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

A design with body compartments hanging on the chassis, unsupported, will not be acceptable.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.

LOUVERS

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

TESTING OF BODY DESIGN

Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis, strain gauging, and model analysis will be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

The body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

Raising opposite corners of the vehicle tires 9.00", simulating the twisting a truck may experience when driving over a curb.

Making a 90 degree turn while at 20 mph, simulating aggressive driving conditions.

Driving the vehicle at 35 mph on a washboard road.

Driving the vehicle at 55 mph on a smooth road.

Accelerating the vehicle fully, until reaching the approximate speed of 45 mph, on rough pavement.

Evidence of actual testing techniques will be made available upon request.

LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three (3) rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. **The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.**

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

0063658	RS 152" Rollup, Full Height Compts, FDLER	<p>RIGHT SIDE COMPARTMENTATION</p> <p>The right side compartmentation will consist of three (3) rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p>
0594005	Doors, Rollup, Amdor, Side Compartments	<p>SIDE COMPARTMENT ROLLUP DOOR(S)</p> <p>There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors. Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement. Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress. The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 1250 for all compartment doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals. All injection molded rollup door wear components will be constructed of Type 6 nylon. Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>
0073668	Rear, Double Door, 30.75" F-F, 31.88" D	<p>REAR COMPARTMENTATION</p> <p>A vertically hinged, double door compartment above the rear tailboard will be provided. The interior dimensions of this compartment will be 40.00" wide x 33.63" high x 31.88" deep. The clear door opening of this compartment will be 32.00" wide x 28.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame. A louvered, removable access panel will be furnished on the back wall of the compartment. The rear compartment will be open into the rear side compartments. Each of the vertically hinged compartment doors will be provided with a positive door holder. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p>
0073910	Doors, Lap w/"D" Handles-Rear Compt	<p>REAR COMPARTMENT DOORS</p> <p>All hinged compartment doors will be lap style with double panel construction and will be a minimum of 1.50" thick. To provide additional door strength, a "C" section reinforcement will be installed between the outer and interior panels. Doors will be provided with a closed cell rubber gasket around the surface that laps onto the body. A second heavy-duty automotive rubber molding with a hollow core will be installed on the door framing that seals onto the interior panel, to ensure a weather resisting compartment. All compartment doors will have polished stainless steel continuous hinge with a pin diameter of 0.25", that is bolted or screwed on with stainless steel fasteners. (Hinges which are welded on will not be acceptable.) A strip of dielectric isolation tape will be provided between the hinge and door jamb. All door lock mechanisms will be fully enclosed within the door panels to prevent fouling of the lock in the event equipment inside shifts into the lock area. Doors will be latched with recessed, polished stainless steel "D" ring handles and FMVSS approved door latching mechanisms. To prevent corrosion caused by dissimilar metals, compartment door handles will not be attached to outer door panel with screws. A rubber gasket will be provided between the "D" ring handle and the door.</p>

0554995		No Body Modification Required	
0650792		Scuffplate, S/S Around Air Bottle Compt Openings, Qty	<p>SCUFFPLATE</p> <p>Four (4) scuffplates will be furnished around the opening for the air bottle compartment(s). The scuffplate(s) will be constructed of polished stainless steel and provided for the on the left side forward of the rear wheels, on the left side rearward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels air bottle compartment(s).</p>
0625184		Guard, Drip Pan, S/S, Rollup Door, Pumper	<p>DOOR GUARD</p> <p>There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.</p>
0659353		Lights, Compt, Amdor AY-9220 LED, Dual Lt Strip	<p>COMPARTMENT LIGHTING</p> <p>There will be seven (7) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners.</p> <p>There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.</p> <p>The lights will be activated when the battery switch is on and the respective compartment door is opened.</p>
0730092		Not Required	
0722037	SP	Lights, Hatch Compt, Not Req'd, No Top Doors	
0760868		Lights, Cargo/Dunnage, Dual LED Light Strips, Each Side	<p>CARGO/DUNNAGE AREA LIGHTING</p> <p>There will be two (2), 12 volt DC strips lights with white LEDs and stainless steel protective cover, provided to illuminate the cargo area.</p> <p>One (1) light strip will be installed the entire length of the left side of the cargo area.</p> <p>One (1) light strip will be installed the entire length of the right side of the cargo area.</p> <p>The light(s) will be activated by the same control that has been selected for the pump panel illumination.</p>
0687146		Shelf Tracks, Painted	<p>MOUNTING TRACKS</p> <p>There will be six (6) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2 and RS3. These tracks will be installed vertically to support the adjustable shelf(s). The tracks will be painted to match the compartment interior.</p>
0600350		Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	<p>ADJUSTABLE SHELVES</p> <p>There will be 13 shelves with a capacity of 500 lb provided.</p> <p>The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts.</p> <p>The location(s) will be in LS1 at the depth transition point, in RS1 at the transition point, in RS2 centered between the floor and the ceiling, in RS1 in the lower third, in RS3 in the upper third, in RS1 in the upper third, in RS1 in the upper third, in LS2 centered between the floor and ceiling, in LS3 in the upper third, in LS3 in the upper third, in LS1 in the upper third, in LS1 in the upper third and in LS3 at the depth transition point.</p>
0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	<p>SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be three (3) floor mounted slide-out tray(s) provided.</p> <p>Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.</p> <p>Each tray will be constructed of aluminum painted spatter gray.</p> <p>There will be two undermount-roller bearing type slides rated at 250 lb each provided. The pair of slides will have a safety factor rating of 2.</p> <p>To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition.</p> <p>Proof of compliance will be provided upon request.</p> <p>Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p> <p>The location(s) will be RS1, B1 and LS3.</p>

0028026	Matting, Turtle Tile, Compartment Shelving Only	MATTING, COMPARTMENT SHELVING Turtle Tile compartment matting will be provided in 16 shelves. The locations are, all shelves and trays. The color of the Turtle Tile will be black.
0659383	Matting, Turtle Tile w/Ramp, Compartment Floors	MATTING, COMPARTMENT FLOOR Turtle Tile compartment matting will be provided in six (6) compartments on the compartment floor. The locations are, LS4, LS2, LS1, RS4, RS3 and RS2. The Turtle Tile will be black and the leading edge of the matting will include the beveled edge. The beveled edge will be yellow.
0004016	Rub Rail, Aluminum Extruded, Side of Body	RUB RAIL Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity. The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.
0784811	Fender Crowns, Rear, Stainless, w/Removable Liner	BODY FENDER CROWNS Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion. The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown. BODY FENDER LINER An aluminum painted to match the lower body color fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0602222	Hose, Hard Suction, 6.0", 10.0', Clear Corrugated, Kochek	HARD SUCTION HOSE Two (2) lengths of 6.00" Kochek Fire Grade clear corrugated hard suction hose, reinforced with a black spiral helix, 10' in length, will be provided. The hose will be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings will be black anodized hard coated aluminum.
0094095	Troughs, HSH, (1), Each Side, S/S	HOSE TROUGHES Hard suction hose will be carried in two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps. Troughs will be constructed of stainless steel.
0621021	Handrails, Side Pump Panels, Per Print, Hansen Knurled Alum Tubing, LED Backlit	HANDRAILS The handrails will be Hansen LED backlit knurled aluminum. The handrails will be lit with a blue LED light. The handrails will be activated by the same means as the cab handrail light controls. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet current edition of applicable NFPA standards. The handrails will be installed as noted on the sales drawing.
0625975	Handrails, Beavertail, Hansen Tubing, Knurled Aluminum, LED Backlit	HANDRAILS One (1) Hansen LED lit knurled aluminum vertical handrail will be located on each rear beavertail. The handrail will be lit with a blue LED light. The hand rail will be activated by the same means as the cab handrail light controls. Stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.
0625966	Handrail, Rear, Below Hose Bed, Full Width, Hansen, Knurled Aluminum LED Backlit	HANDRAIL There will be one (1) full width horizontal handrail provided below the hose bed at the rear of the apparatus. The handrail will be Hansen LED backlit knurled aluminum. The handrail will be lit with a blue LED light. The handrail will be activated by the same means as the cab handrail light controls. Stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.
0614589	Handrail, Extra - 10" Long, Hansen Tubing, Knurled Aluminum LED Backlit	ADDITIONAL HANDRAIL One (1) handrail, 10.00" long, will be mounted on top of the body, PS, front body mounted horizontally to match DS (to assist in firefighter gaining access to top of body).. The handrails will be Hansen LED backlit knurled aluminum. The handrails will be lit with a blue LED light. The handrails will be activated by the same means as the cab handrail light controls. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails.

0622393		Compt, Air Pack Fender Panel	<p>AIR PACK STORAGE</p> <p>A total of one (1) air pack compartment(s) will be provided and located on the left side forward of the rear wheels. The air pack compartment(s) will be tapered to match the profile of the space available in the fender. The compartment(s) will be approximately 15.50" wide at the top and 5.00" wide at the bottom for the wheel cutout. The compartment(s) will be 15.50" tall at the body side compartment and 6.00" tall at the wheel cutout. The compartment(s) will be 26.00" deep and have a drain hole.</p> <p>Inside the compartment, black Dura-Surf friction reducing material will be provided.</p> <p>A painted stainless steel hinged door with a Southco raised trigger C2 black lever latch will be provided to contain the air pack. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p>
0746942	SP	Compt, Air Bottle, Triple, Fender Panel, Bolt-In Partitions	<p>AIR BOTTLE STORAGE (Triple)</p> <p>A quantity of two (2) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the right side forward of the rear wheels and on the right side rearward of the rear wheels. A painted stainless steel door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p>Inside the compartment, black Dura-Surf friction reducing material will be provided.</p> <p>AIR BOTTLE COMPARTMENT STRAP</p> <p>A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0654143		Compt, Air Bottle, Single, Tri Door (DEF/Fuel), Fender Panel	<p>AIR BOTTLE STORAGE (Single)</p> <p>A quantity of one (1) air bottle compartment, approximately 7.50" wide x 7.50" tall x 26.00" deep, will be provided on the driver side rearward of the rear wheels. The triangular door will cover the air bottle opening, the DEF tank access, and fuel fill. The compartment will be square with angled corners. A painted stainless steel door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p>Inside the compartment, black Dura-Surf friction reducing material will be provided.</p> <p>Air Bottle Compartment Strap</p> <p>A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0004225		Ladder, 24' Duo-Safety 900A 2-Section	<p>EXTENSION LADDER</p> <p>There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.</p>
0004230		Ladder, 14' Duo-Safety 775A Roof	<p>ROOF LADDER</p> <p>There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.</p>
0730784	SP	Ladders Btwn Tank & S.Sht, RS, Ext'd Rr, RPH, Spcl Mounting	<p>LADDER STORAGE</p> <p>The ladders will be stored between the water tank and the right side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides.</p> <p>If the apparatus does not have a flush rear wall, an aluminum enclosure will be provided at the rear of the body to properly contain the ladders. This enclosure will extend to the rear of the side body compartments.</p> <p>The ladders will be mounted Customer requires the following orientation for the ladders in the ladder storage compartment, from DS (inboard) to PS (outboard): Roof Ladder Fly section of extension ladder Backboard Trough.</p> <p>The enclosure will also include a vertically hinged aluminum treadplate door with a D-handle latch to access the ladders.</p>
0733387		Ladder, 10' Duo-Safety Folding 585A	<p>FOLDING LADDER</p> <p>One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.</p>
0761364		Compt, w/Trough, Folding Ladder, Long Tool Storage Btwn Tank & S.Sht, LS	<p>FOLDING LADDER STORAGE</p> <p>One (1) folding ladder will be stored in a compartment on the left side between the tank and side sheet in a stainless steel U-shaped trough.</p> <p>A door constructed of aluminum treadplate and hinged on the bottom will be provided at the rear with a lift and turn latch.</p>
0893098		Trough, Backboard, In Ladder Storage Compartment	<p>BACKBOARD STORAGE</p> <p>One (1) trough for storage of a backboard will be provided in the existing ladder storage compartment.</p> <p>The size of the backboard to be stored will be 72.00" long x 16.00" wide x 3.00" high.</p>

0807241	SP Little Giant Storage, Trough, Top of Water Tank	LITTLE GIANT LADDER STORAGE An open top storage trough constructed of smooth aluminum will be provided on the top of the water tank on the center of the truck, Over the water tank in the area below the forward portion of the 4 section hose bed cover. Match Cosumnes 38277. The trough will be sized for a Little Giant Revolution 2.0 Model 17 - 13117. The ladder will be held in place by Velcro® straps.
0816920	Pike Pole, Provided by Fire Department, NFPA/ULC 2024	PIKE POLE PROVIDED BY FIRE DEPARTMENT The pike poles are not on the apparatus as manufactured. The fire department will provide and mount the pike poles. There will be one (1) pike pole(s) provided. The pike pole(s) will be a Fire Hooks Unlimited 10' pike pole.
0733148	Tube, Pike Pole 8' or Longer, Btwn Tank & S.Sht Long Tool Storage	PIKE POLE STORAGE There will be storage designated on the left side for One (1) pike pole, 8' or longer, stored in a tube with 0.75" standard notch for the head of a pike pole. This will be located between the side sheet and tank in the folding ladder storage compartment.
0816918	Pike Pole, 6', Provided by Fire Department, NFPA/ULC 2024	6' PIKE POLE PROVIDED BY FIRE DEPARTMENT The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike poles. There will be one (1) 6' pike pole(s) provided. The pike pole(s) will be a Fire Hooks Unlimited 6 foot and 8 foot roof hook.
0733150	Tube, Pike Pole 6', Btwn Tank & S.Sht Long Tool Storage	PIKE POLE STORAGE There will be storage designated on the left side for One (1) pike pole stored in a tube between the side sheet and tank in the folding ladder storage compartment. The tube(s) will have a 0.75" standard notch.
0004379	Bell, 12" Chrome w/Eagle, Mounted on Cab Corner	BELL A chrome plated, 12.00" bronze cast bell, complete with an eagle, will be mounted on the passenger side radiused corner of cab face. The cab will be properly reinforced to support the weight of the bell. A rope pull, for the bell, will be installed inside the cab.
0611189	Label, Indicator Lamp Symbols, Sun Visor	INDICATOR LAMP LABEL There will be a label provided on the back side of the sun visor located DS. The label will provide brief descriptive text for each indicator lamp that may become visible in the driver side gauge cluster.
0785100	Steps, Folding, Front of Body, Cargo Bed Access, Trident	FOLDING STEPS FRONT OF BODY Folding steps will be provided full height on the left side and one (1) step on the right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a luminescent tread coating, that is rechargeable from any light source and can hold a charge for up to 24 hours, on the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0592994	Steps, Folding, Rear of Body, w/LED, Trident	REAR FOLDING STEPS Bright finished, non-skid folding steps with a black tread coating on the stepping surface will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0724154	Step, Folding - Extra, Body Only, Trident	Four (4) additional folding steps will be located two (2) - PS front bulkhead two (2) - PS rear body on the inboard side of the ladder storage compartment to help access hosebed bays 5 & 6 . The step(s) will be bright finished, non-skid, with a luminescent tread coating, that is rechargeable from any light source and can hold a charge for up to 24 hours, on the stepping surface. The step (s) can be used as a hand hold with two openings wide enough for a gloved hand.

0007590

Pump House, Side Control, 52",
Control Zone

PUMP COMPARTMENT

The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. It will be a fabricated assembly made of the same material as the rear body using tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.

PUMP MOUNTING

Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.

LEFT SIDE PUMP CONTROL PANELS

All pump controls and gauges will be located at the left side of the apparatus and properly identified.

Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance:

The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges.

The lower section of the panel will contain all inlets, outlets, and drains.

All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position.

The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding.

IDENTIFICATION TAGS

The identification tag for each valve control will be recessed in the face of the tee handle.

All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag.

All remaining identification tags will be mounted on the pump panel in chrome plated bezels.

The pump panel on the right side will be removable with lift and turn type fasteners.

Trim rings will be installed around all inlets and outlets.

0053227

Raised Pump House Structure, Side
Control Vert Up-Right Moved Inboard
For Ladder

PUMPHOUSE STRUCTURE

A special pumphouse structure is required to accommodate the ladders stored between the tank and the sidesheet. The vertical upright support will need to be moved inboard.

0014441	Pump, Hale, QMAX-150, 1500 GPM, Single Stage	<p>MIDSHIP FIRE PUMP Midship fire pump will be a Hale QMAX-150, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharges at the pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Entire pump and both suction and discharge passages will be hydrostatically tested to a pressure of 500 psi. Pump will be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current edition of applicable NFPA standards and will be free from objectionable pulsation and vibration. Pump body and related parts will be of fine grain, alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). All moving parts in contact with water will be of high quality bronze or stainless steel. Pump body will be horizontally split, on a single plane in two (2) sections, for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump, without disturbing pump piping or the mounting of the pump in the chassis. Pump will have one (1) double suction impeller. The pump body will have two (2) opposed discharge volute cutwaters to eliminate radial unbalance. Pump impeller will be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes will be hand-ground and polished to a sharp edge. They will be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings will be bronze and easily renewable without replacing impeller or pump volute body. They will be of the wrap-around double labyrinth design for maximum efficiency. Pump shaft will be electric furnace heat-treated, corrosion resistant stainless steel. It will be super-finished under packing with galvanic corrosion (zinc separators in packing) protection for longer shaft life. Pump shaft will be sealed with double oil seal to keep road dirt and water out of drive unit. Pump shaft will be rigidly supported by three (3) bearings for minimum deflection. A high lead bronze sleeve bearing will be located immediately adjacent to the impeller (on the side opposite of the drive unit). The sleeve bearing will be automatically oil lubricated and pressure balanced to exclude foreign material. The remaining bearings will be heavy-duty, deep groove ball bearings in the gearbox and will be splash lubricated.</p>
0014482	Seal, Mechanical, Hale	<p>MECHANICAL SEAL ON PUMP Only one (1) mechanical seal will be used on the suction (inboard) side of the pump. The mechanical seal will be 2.00" in diameter and will be spring loaded, maintenance-free, and self-adjusting. The mechanical seal construction will be a carbon sealing ring, stainless steel coil spring, Viton® rubber boot, and a tungsten carbide seat with a Teflon backup seal.</p>
0014477	Trans, Pump, Hale, Gear	<p>PUMP TRANSMISSION The drive unit will be cast and completely manufactured and tested at the Hale Products, Inc. factory. The pump drive unit will be of sufficient size to withstand up to 16,000 foot/ pounds of torque from the engine in both the road and pump operating conditions. The drive unit is will be designed with ample lubrication reserve to maintain the proper operating temperature. The gearbox drive shafts will be of heat treated chrome nickel steel and 2.75" in diameter on both the input and output drive shafts. They will be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, will be of the highest quality, electric furnace, chrome nickel steel. Bores will be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design will be provided to eliminate all possible end thrust. Pierce Manufacturing will select the pump ratio to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights will be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights will be located in the truck driving compartment and one (1) light on pump operator's panel adjacent to the throttle control.</p>
0635600	Pumping Mode, Stationary Only	<p>PUMPING MODE An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.</p>
0604308	Pump Shift, Air w/o Manual Override, Split Shaft, Interlocked, Hale	<p>AIR PUMP SHIFT Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged and the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.</p>

0003148	Transmission Lock-up, EVS	<p>TRANSMISSION LOCK-UP The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.</p>
0004547	Auxiliary Cooling System	<p>AUXILIARY COOLING SYSTEM A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.</p>
0014486	Not Required, Transfer Valve, Single Stage Pump	
0746501	Valve, Relief Intake, Elkhart	<p>INTAKE RELIEF VALVE - PUMP One (1) Elkhart Style 40 relief valve(s) will be installed on the suction side of the pump preset at 125 psig. The relief valve(s) will have a working range of 75 psi to 250 psi. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag. The relief valve pressure control will be located behind the right side pump panel with a stainless steel access door.</p>
0826104	Controller, Pressure, FRC, Pump Boss Max, PBA500	<p>PRESSURE CONTROLLER A FRC Pump Boss 500 electronic pressure controller with one (1) 600 PSI transducer on the pump discharge will be provided. All readouts will be standard PSI. When a single 300 psi or single 600 psi pressure transducer is selected the transducer is installed in the discharge side of the water pump. The transducer continuously monitors pump pressure sending a signal to the electronic pressure controller. When a dual 600 psi pressure transducer is selected the transducer are installed in the discharge side and intake side of the water pump. The discharge transducer continuously monitors pump pressure sending a signal to the electronic pressure controller. The intake transducer continuously monitors the pump intake sending a signal to the electronic pressure controller. The pressure controller can be used in two (2) modes of operation, RPM mode and pressure modes. The controller will be programmed to turn on/default to RPM Setting mode. In RPM mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will maintain the set engine speed, regardless of engine load (within engine operation capabilities). In pressure mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow. A 2.00" diameter throttle control knob with no mechanical stops, a serrated grip, and a red idle push button in the center will be a integrated/part of the pressure controller. The throttle control knob will be programmed for Clockwise rotation to increase engine speed. Individual LED indicators for ok to pump, throttle ready, pressure mode and rpm mode will be located on the pressure controller for easy viewing. Safety features include recognition of low water and no water conditions with an automatic programmed response and a push button to return the engine to idle. An additional audible alarm will NOT BE provided. The pressure controller screen will be LCD. The LCD screen and LED intensity will be automatically adjust for day and nighttime operation. The LCD screen intensity can also be manually adjusted if needed. The following information will be provided/displayed on the LCD screen: Engine RPM Check engine and stop engine warning indicators Engine oil pressure Engine coolant temperature Transmission Temp Battery voltage Operating mode (RPM or pressure) Pressure or RPM setting On screen messaging show diagnostic and warning messages as they occur. It will show apparatus information, stored data, and program options when selected by the operator. It will monitor inputs outputs and support audible and visual warning alarms for the following conditions: High battery voltage Low battery voltage/engine off Low battery voltage/engine running High water pump temperature Low engine oil pressure High engine coolant temperature No engine response (visual alarm only) The pressure controller will store the accumulated operating hours for the pump and engine. These items are to be displayed within the pressure controller menu. The pressure controller will include a USB port on the back of the controller for easy software upgrades if needed.</p>
0024541	Primer, Hale, ESP Motor, (1) PVG Valve, (1) T-Handle Control	<p>HALE ESP PRIMING PUMP Priming pump will be a positive displacement vane type, electrically driven, and conforming to the current edition of applicable NFPA standards. One (1) priming control will both open the priming valve and start the priming motor. Primer will be environmentally safe, self lubricating style.</p>

0658552	Thermal Relief Valve, TRV120-L w/Red Warning Light, Hale Pump	<p>THERMAL RELIEF VALVE</p> <p>A Hale TRV120-L thermal protection device will be included on the pump that monitors pump water temperature and opens to relieve water to cool the pump when the temperature of the pump water exceeds 120 Degrees F (49 C). The thermal protection device will include a red warning light. The warning light with a test switch will be mounted on the pump operator panel. The discharge line will be 3/8 inch diameter tubing plumbed to ground.</p>
0780364	Manuals, Pump, (2) Total, Electronic Copies	<p>PUMP MANUALS</p> <p>There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.</p>
0602512	Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	<p>PLUMBING, STAINLESS STEEL AND HOSE</p> <p>All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.</p>
0795135	Plumbing, Stainless Steel, w/Foam System	<p>FOAM SYSTEM PLUMBING</p> <p>All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.</p>
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	<p>MAIN PUMP INLETS</p> <p>A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p>
0895457	Valve, w/Relief, RS Side Pump Inlet, Hale MIV 2.0, Handwheel Cntrl	<p>INLET VALVE/DUMP</p> <p>One (1) butterfly valve type Hale MIV 2.0 will be provided on the right side main pump inlet. The inlet valve will be a combination butterfly valve and pressure relief valve with a bleeder valve located near the inlet valve control. The pressure relief valve will have a range of 75 to 250 PSI and will be factory set to 125 PSIG. The valve, less relief valve, will be rated for 600 PSI of hydrostatic pressure and 26 inHg of vacuum. The valve will cycle from full open to full closed in ten (10) turns of the handwheel. An indicator light will be provided to show when the valve is in the closed position. The valve will be fully recessed behind the pump panel. A chrome plated handwheel will be provided next to the inlet valve.</p>
0895474	Valve, w/Relief, LS Side Pump Inlet, Hale MIV 2.0, Handwheel Cntrl	<p>INLET VALVE/DUMP</p> <p>One (1) butterfly valve type Hale MIV 2.0 will be provided on the left side main pump inlet. The inlet valve will be a combination butterfly valve and pressure relief valve with a bleeder valve located near the inlet valve control. The pressure relief valve will have a range of 75 to 250 PSI and will be factory set to 125 PSIG. The valve, less relief valve, will be rated for 600 PSI hydrostatic pressure and 26 inHg of vacuum. The valve will cycle from full open to full closed in approximately ten (10) to twelve (12) turns of the handwheel. An indicator light will be provided to show when the valve is in the closed position. The valve will be fully recessed behind the pump panel. A chrome plated handwheel will be provided next to the inlet valve.</p>
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	<p>MAIN PUMP INLET CAP</p> <p>The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p>
0084610	Valves, Akron 8000 series- All	<p>VALVES</p> <p>All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a ten (10) year warranty.</p>
0004685	Valve, Inlet(s) - Outside Panel	<p>Inlet valve location will be outside the pump panel.</p>

0004700	Control, Inlet, at Valve	INLET CONTROL The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0055600	Not Required, Auxiliary Inlet, Left Side	
0029147	Not Required, Inlet, Right Side	
0034720	Anode, Zinc, Pair, Pump Inlets	ANODE, INLET A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.
0092569	No Rear Inlet (Large Dia) Requested	
0064116	No Rear Inlet Actuation Required	
0092696	Not Required, Cap, Rear Inlet	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	INLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0044750	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing, Electric Control	TANK TO PUMP The booster tank will be connected to the intake side of the pump with heavy duty piping and an electrically controlled 3.00" full flow inline valve. An open/close switch and a lighted position indicator will be remotely located at the operator's panel. The tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.
0004910	Outlet, Tank Fill, 2"	TANK REFILL A 2.00" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0062133	Control, Outlets, Manual, Pierce HW if applicable	DISCHARGE OUTLET CONTROLS The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.90" diameter stainless steel handwheel with a dial position indicator built into the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve to meet current edition of applicable NFPA standards.
0004940	Outlet, Left Side, 2.50"	LEFT SIDE DISCHARGE OUTLETS Two (2) discharge outlets with a 2.50" valve will be provided on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	LEFT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

0092570		Not Required, Outlets, Left Side Additional	
0035094		Not Required, Elbow, Left Side Outlets, Additional	
0004945		Outlet, Right Side, 2.50"	RIGHT SIDE DISCHARGE OUTLET One (1) discharge outlet with a 2.50" valve will be provided on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0025091		Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	RIGHT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0836167	SP	Outlet, Right Side, 3" w/3" Plumbing, Akr 9333 Elec Controller	RIGHT SIDE DISCHARGE OUTLET(S), ADDITIONAL There will be One (1) discharge outlet, with a 3.00" electric valve installed on the right side of the apparatus, terminating with 3.00" MNST threads. There will be an Akron 9333 electric valve controller provided on the pump operators panel. The electric control must be of a true position feedback design, requiring no clutches in the motor or current limiting. The unit must be completely sealed with momentary open, close as well and an optional one touch full open feature to operate the valve actuator. The controller will provide position indication on a full color, backlit LCD display. It will have manual adjustment of the brightness as well as an auto dimming option.
0035096		Elbow, Right Side Outlets, 45 Degree, 3.00" FNST x 3.00" MNST, VLH, Additional	ADDITIONAL RIGHT SIDE OUTLET ELBOWS The 3.00" discharge outlets, located on the right side pump panel, will be furnished with a 3.00" (F) National Standard hose thread x 3.00" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0029137		Not Required, Outlet, Large Diameter	
0007308		Not Required, Elbow, Large Diameter Outlet	
0649939		Outlet, Front, 1.50" w/2" Plumbing	FRONT DISCHARGE OUTLET There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the left side of the front bumper. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel. There will be Class 1 quarter turn round handle drains provided at all low points of the piping.
0004995		Outlet, Rear, 2.50"	REAR DISCHARGE OUTLET There will be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.
0045091		Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	REAR OUTLET ELBOWS The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092574		Not Required, Outlet, Rear, Additional	
0085695		Not Required, Elbow, Rear Outlets, Large, Additional	
0004990		Outlet, Front HB, 2.50" w/2.50" Plumbing	FRONT OF HOSE BED DISCHARGE OUTLET There will be One (1) discharge outlet discharge(s) piped to the front of the hose bed and located bed #2. Plumbing will consist of 2.50" piping with a 2.50" full-flow ball valve controlled at the pump operator's panel. The discharge(s) will terminate with a 2.50" (M) National Standard hose thread adapter.

0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	<p>DISCHARGE CAPS/ INLET PLUGS Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.</p>
0723042	Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	<p>OUTLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.</p>
0837531	Outlet, 3.00" Deluge, Elec, Dual Akron 9343 Controllers, w/TFT XG18	<p>DELUGE RISER A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be installed securely so no movement develops when the line is charged. This outlet will be located in the cargo area. The riser will be gated with an electrically actuated 3.00" valve. The valve will be controlled by two (2) Akron 9343 electric valve controllers. One (1) will be provided on the pump operators panel and one (1) will be located near the deluge riser in the cargo area. The electric controls must be of a true position feedback design, requiring no clutches in the motor or current limiting. The units must be completely sealed with momentary open, close as well and an optional one touch full open feature to operate the valve actuator. The controllers will provide position indication on a full color, backlit LCD display. They will have manual adjustment of the brightness as well as an auto dimming option.</p> <p>TELESCOPIC PIPING The deluge riser piping will include a manual Task Force Tips XG18 extend-a-gun extension. This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.</p>
0770359	No Monitor Requested, Customer/Dealer Furnished and Installed	<p>MONITOR A customer/dealer supplied and installed make and model CUSTOMER SUPPLIED MONITOR monitor will be properly installed on the deluge riser.</p>
0029304	No Nozzle Req'd	
0005070	Deluge Mount, NPT	The deluge riser will have male National Pipe Threads for mounting the monitor.
0723726	Speedlay Module Not Required	
0722432	Hose Restraint Not Required, No Speedlay Module	
0723395	Speedlays, Not Required	
0723394	Speedlays, Not Required	
0029210	Crosslays Sngl Sheet, (2+) 1.50", Spl. Cap/Arrangement	<p>CROSSLAY HOSE BEDS, 1.50" Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying Each Crosslay bay to be 10.5" inside dimension with the capacity of 200' of 1.5" hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. Vertical scuffplates, constructed of polished stainless steel, will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.</p>

0029196		Not Required, 2.50" Crosslay	
0591138		Hose Restraint, Crosslay/Deadlay, Vinyl, Strap Fasteners, Each Side, Ends	<p>CROSSLAY/DEADLAY HOSE RESTRAINT</p> <p>There will be black vinyl end flap provided across each end of two (2) crosslay/deadlay opening (s) to secure the hose during travel. Each vinyl end flap will be permanently attached at the bottom of the crosslay/deadlay opening(s). 1.00" web straps will loop through footman loops at the opposite end of the permanently attached vinyl. They will be attached with bungee cord and hook fasteners.</p>
0029260		Not Required, Speedlays	
0750536		Hose Restr, Spdly, Not Required, No Spdly	
0836103	SP	Cover, Crosslay, Two (2) Individual, 3/16" Alum Treadplate	<p>CROSSLAY/DEADLAY COVERS</p> <p>Two (2) individual .19" aluminum treadplate covers will be installed over the crosslay/deadlay hose beds. One (1) cover will be located over the over the rear crosslay and hinged at rear of crosslay area. One (1) cover will be located over the Over front crosslay hinged at front of crosslay area. A stainless steel, full width hinge will be provided on each cover. The covers will overlap with the top cover formed to accept the bottom cover edge. The rearward hinged cover will lay on top of the forward hinged cover. A butterfly latch will be provided on each side to hold the covers shut.</p> <p>The 2.00" overlap will be located over the rearward deadlay divider with a 1.00" overlap towards the front and a 1.00" overlap towards the rear.</p> <p>A chrome grab handle will be provided at each end of both covers for ease of opening and closing. A foam rubber gasket will be provided where the cover comes into contact to a painted surface.</p> <p>The covers will be provided with rubber latch hold open device.</p>
0783052	SP	Crosslays, 14.00" Lower Than Standard - Control Zone with Raised PH	<p>CROSSLAY 14.00" LOWERED</p> <p>The crosslays will be lowered 14.00" from standard.</p>
0019853		Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	<p>CROSSLAY 8.00" LOWER THAN STANDARD</p> <p>The crosslays will be lowered 8.00" from standard.</p>
0015180		Roller, Horizl/Vertical, (2) Crosslays	<p>CROSSLAY ROLLER</p> <p>A stainless steel roller will be mounted horizontally and vertically at each crosslay opening to aid in hose removal. The vertical rollers will be installed on the dividers and to the front and rear of the crosslays.</p>
0005221		Reel, Booster, Two (2) - Over Pump, Alum	<p>BOOSTER HOSE REELS</p> <p>Two (2) Hannay electric rewind aluminum booster hose reels will be installed over the pump in a recessed open compartment, one each side.</p> <p>A polished stainless steel roller and guide assembly will be mounted on each side of the apparatus.</p> <p>Discharge controls will be provided at the pump operator's panel. Plumbing to the reels will consist of 1.50" Aeroquip hose and a 1.50" valves.</p>
0005285		Switches, Reel Rewind - Two Reels/Two Push Button Switches	<p>Reel motors will be protected from overload with a circuit breaker rated to match the motors.</p> <p>Electric rewind control will be two (2) rubber covered buttons, one (1) mounted on each pump panel adjacent to the hose reel.</p>
0025305		Hose, Booster - (2) Reels W/200' of 1.00"/800 PSI	<p>Booster hose, 1.00" diameter and 200 feet long, with chrome plated Barway, or equal couplings will be provided on each reel.</p> <p>Working pressure of the booster hose will be a minimum of 800 psi.</p>
0017858		Capacity, Hose Reel 150' of 1"	<p>Capacity of the hose reel will be 150 feet of 1.00" booster hose.</p>
0007428		Nozzle for Booster Reel Not Req'd	
0836118	SP	Cutout for Reel Access, (2), w/ S/S Trim, Size	<p>HOSEREEL ACCESS</p> <p>Two (2) cutouts will be provided in the side sheet next to each booster hose reel. Each cutout will allow access to the hose and provide a window to view the reel. Stainless steel trim will be mounted horizontally and vertically around each cutout.</p> <p>Each cutout will be sized Minimum of 6", match 36314.</p>

NOZZLE CUP AND BRACKET

A Zico nozzle cup and chrome plated mounting bracket will be provided for storage of the booster reel nozzle.

There will be two (2) provided. The nozzle cup(s) will have a 3-1/2" inside diameter and will be located Ship loose and install @ final inspection.

FOAM PROPORTIONER

A foam proportioning system will be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operations will be based on direct measurement of water flow and remain consistent within the specified flows and pressures. The system will automatically proportion foam at rates from 0.1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system will allow operation from draft, hydrant, or relay operation.

System capacity

The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.

100 gpm @ 3 percent

300 gpm @ 1 percent

600 gpm @ 0.5 percent

Class A foam setting in 0.1 percent increments from 0.1 percent to 3 percent. Typical settings of 1 percent, 0.5 percent and 0.3 percent (maximum capacity will be limited to the plumbing and water pump capacity).

The percentage of injection will have a preset. This preset can be changed by the end user as desired. The percentage of foam injected will be changed through the display screen.

Hydraulic Drive System

The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit.

Foam Concentrate Pump

The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless-steel piston.

A relief system is provided to protect the drive system components and prevent over pressurizing of the foam concentrate pump.

One (1) check valve will be installed in the foam discharge plumbing to prevent foam from contaminating the water pump.

The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluor protein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrates back to the storage tank can cause agitation and premature foaming of the concentrate resulting in system failure.

The foam concentrate pump will be self-priming with the ability to draw foam concentrate from external sources, such as drums or pails.

Control System**Control System**

The system will be equipped with an LCD display located on the pump operator's panel and a control. Both the display and control will use a can network. The display will use a USB interface for software updates. The LCD display will have adjustment for screen brightness.

The control will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate.

Push button controls will be integrated into the LCD control for.

System On/Off

Foam Percentage Control

Foam Pump Prime

Paddle Wheel Auto/Manual Mode

The LCD control will display

Foam Pump Stroke Position

Foam Inject Percentage

Tank or Draft Mode Selection

Foam Tank Low Level

Inject/Fill Mode Selection

Tank Refill

The display will have access to menu options for calibration and diagnostic needs.

External Foam Concentrate Connection

A 0.75" male connection GHT (garden hose thread) external foam pick-up will be provided on the pump panel to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam which is different than that stored in the foam tank.

Panel mounted valved manifold

A valved manifold (with an instruction plaque) will be mounted to the pump panel. The valved manifold will function as the foam system draft/tank foam inject source and inject/foam tank fill mode.

Pick-up hose

A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose.

Discharges

The foam system will be plumbed to left side of front bumper, hose reel in left side of dunnage area, hose reel in right side of dunnage area, left rear outlet, front crosslay and rear crosslay discharge(s).

System Electrical Load

The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.

0592527	Refill, Foam Tank, Integral, Husky 3	SINGLE FOAM TANK REFILL	The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), the display will indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided		
0005446	Foam Cell, 20 Gallon, Not Reduce Water	FOAM TANK	The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0697589	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	FOAM TANK DRAIN	The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2		
0091112	Not Required, Foam Tank #2 Drain		
0746447	Approval Dwg, All Pump Panel(s), Includes Color And Label Tags		<p>The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up One (01) Truck apparatus and/or similar Pierce job number.</p> <p>PUMP OPERATOR'S PANEL DRAWING</p> <p>A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents.</p> <p>Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion.</p> <p>REMAINING PUMP PANEL(S)</p> <p>Detailed drawing(s) to scale of the remaining pump panel(s) will be provided for the customer to review. The drawing(s) will include all of the gauges, controls, switching, etc., located on the pump panel(s). The customer will be allowed to make changes and/or mark-ups to these approval drawing(s). The fire apparatus manufacturer will make revisions (If needed) to the drawing(s) per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved pump panel drawing(s) will become part of the contract documents.</p> <p>Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion.</p> <p>COLOR CODED TAGS</p> <p>A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents.</p> <p>SPECIAL TEXT/VERBIAGE TAGS</p> <p>A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.</p>
0032479	Pump Panel Configuration, Control Zone	PUMP PANEL CONFIGURATION	The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.

0635355	Material, Pump Panels, Side Control Painted FormCoat Black	PUMP AND GAUGE PANEL The pump and gauge panels will be constructed of aluminum with a painted FormCoat black finish. A polished aluminum trim molding will be provided around each panel.
0723303	Panel, Pump Access - RS Only, Split Above Main Inlet, Side Control	PUMP ACCESS Right Side Panel The right side upper pump panel will be hinged on the top. The panel will extend down to the main inlet. Panel Fastener The right side upper hinged panel will be secured with chrome flush lift and turn latch . The left side pump panels will be attached with screws. The remaining right side lower pump panels will be attached with screws.
0583824	Light, Pump Compmt, WIn 3SC0CDCR LED White	PUMP COMPARTMENT LIGHT There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment.
0586382	Gauges, Engine, Included With Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller. Also provided at the pump panel will be the following: - Master Pump Drain Control
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle, Green	THROTTLE READY GREEN INDICATOR LIGHT There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333	Indicators, Engine, Included with Pressure Controller	
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	OK TO PUMP INDICATOR LIGHT There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0069390	Control, Air Horn At Pmp Pnl, Red Button	AIR HORN BUTTON An air horn control button will be provided at the pump operator's control panel. This button will be red in color and properly labeled and put within easy reach of the operator.
0777838	Speaker, Atkinson Dynamics ADSF- 25-Z , W/ Volume Control, Pmp Pnl	RADIO SPEAKER A Atkinson Dynamics ADSF-25-Z, radio speaker will be provided and mounted at the pump panel. There will be a weatherproof off/on/volume control provided on the pump panel. Wiring will be provided from the control to the below officer's seat where customer will ultimately install radio (s). for the customer's connection.
0005689	Gauges, 4.50" Master, Class 1, 30"-0 -600psi	VACUUM AND PRESSURE GAUGES The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated. The gauges will be a minimum of 4.50" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They will be marked with a label.
0038070	Gauge, 2.50" Pressure, Class 1, 30"- 0-400psi	PRESSURE GAUGES The individual "line" pressure gauges for the discharges will be intertube filled and manufactured by Class 1©. They will be a minimum of 2.50" in diameter and will have white faces with black lettering. Gauges will be compound type with a vacuum/pressure range of 30.00"-0-400#. The individual pressure gauge will be installed as close to the outlet control as practical.

0604123	Gauge, Water Level, FRC, WLA 300-A00, TankVision Pro, w/Remote Light Driver	<p>WATER LEVEL GAUGE A Fire Research TankVision Pro model WLA300-A00 water tank indicator gauge will be installed on the pump operators panel. The gauge kit will include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The gauge will show the volume of water in the tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The gauge case will be waterproof, manufactured of Polycarbonate/Nylon material, and have a distinctive blue label.</p> <p>The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low water warnings will include flashing LEDs at 1/4 tank and down chasing LEDs when the tank is almost empty.</p> <p>The gauge will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the water tank near the bottom. No probe will be placed on the interior of the tank. Wiring will be weather resistant and have automotive type plug-in connectors.</p> <p>REMOTE LIGHT DRIVER A Fire Research TankVision model WLA290-A00 remote light driver will be installed. The driver will provide four (4) separate outputs to control additional water level lights around the apparatus. The lights will show 1/4, 1/2, 3/4, and full tank. When power is applied the driver will run a test and cycle each remote light on and off. When the tank is less than 1/4 full the 1/4 tank light will blink.</p>
0750438	Water Level Gauge, WIn PSTANK2, LED 1-Light, 4-Level	<p>WATER LEVEL GAUGE There will be two (2) additional water level indicator(s), Whelen®, Model PSTANK2, LED module with chrome trim, installed one (1) each side rearward of crew cab doors.</p> <p>This light module(s) will include four (4) colored levels, and function similar to the water level indicator located at the operators panel:</p> <p>First green module indicates a full water level Second blue module indicates a water level above 3/4 full Third amber module indicates a water level above 1/2 full Last red module indicates a water level above 1/4 full and empty Above 1/4 this light will be steady burning At empty this light will be flashing The flash rate will be determined by the main water level tank sensor. This module will be activated when the pump is in gear.</p>
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"	<p>CLASS "A" FOAM LEVEL GAUGE A Fire Research TankVision Pro, Model WLA360-A00, cell/tank level indicator kit will be installed on the pump operator's panel. The kit will include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator will show the volume of Class "A" foam concentrate in the cell/tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The indicator case will be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green label.</p> <p>The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings will include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tank is almost empty.</p> <p>The indicator will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the foam cell/tank near the bottom. No probe will be placed on the interior of the cell/tank. Wiring will be weather resistant and have automotive type plug-in connectors.</p>
0763675	Light Shield/Step 8", P25 Undr Crs, LED w/P25 LED Step Light	<p>STEP/LIGHT SHIELD There will be a white LED installed under the crosslays.</p> <p>The light will be activated when the battery switch is on and the pump panel light switch is on.</p> <p>There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators main panel.</p> <p>There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.</p> <p>One (1) pump panel light will come on when the pump is in ok to pump mode.</p> <p>The switch panel will be lit when the parking brake is set. This is to afford the operator illumination when first approaching the control panel.</p> <p>All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards.</p>
0536590	Light Shield/Step 8", PS, OSS LED, P25 LED Step Lt	<p>An additional step/light shield will be provided above passenger's side pump panel. The pump panel will be illuminated by one (1) On Scene Solutions Night Stick LED light installed under a bright aluminum treadplate step.</p> <p>The step will have a minimum of an 8.00" stepping surface and it will be properly reinforced to support a man's weight.</p> <p>The lights will be operated from a switch on the pump panel.</p> <p>All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards.</p>

0508020	Air Horn, (1) Hadley, 6" Round, eTone, In Bumper	AIR HORN SYSTEM One (1) Hadley round air horn with 6.00" bell will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.
0606842	Location, Air Horn, Bumper, Right Side, Outside Frame, Inboard (Pos #2)	Air Horn Location The air horn will be located on the right side of the bumper, just outside of the frame rail.
0757092	Control, Air Horn, Multi Select	Air Horn Control The air horn(s) will be activated by the following:
0757084	Control, Air Horn, Horn Ring	Steering wheel horn ring with electric/air horn selector switch
0825456	Siren, Federal PA300-100, 100-Watt, w/Microphone	ELECTRONIC SIREN A Federal, Model PA300-100, electronic siren will be provided with noise cancelling microphone. This siren will be active when the battery switch is on and that emergency master switch is on.
0790527	Location, Electronic Siren, Center Dash Switch Panel, Saber FR, Enf	The electronic siren head will be located in switch panel # 13 area of the center dash switch panel.
0076156	Control, Elec Siren, Head Only	The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.
0601330	Speaker, (1) Federal, ES100C w/ESFMT-EF Recess Mnt & S/S Grille	SPEAKER There will be one (1) Federal Signal DynaMax®, Model ES100, 100 watt speaker provided. The speaker will use a Federal Signal, Model ESFMT-EF, recess mount with stainless steel grille. The speaker will be connected to the siren amplifier.
0601551	Location, Speaker, Frt Bumper, Recessed, Right Side, Outside Frame, Outbrd(Pos 1)	The speaker will be recessed in the right side of the front bumper, towards the outside.
0895310	Siren, Federal Q2B	AUXILIARY MECHANICAL SIREN There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B will be chrome finish. The siren will have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on. The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery.
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper on the left side. The siren will be properly supported using the bumper framework.
0748305	Control, Mech Siren, Multi Select	MECHANICAL SIREN CONTROL The mechanical siren will be activated by the following:
0748282	Control Mech Siren, Ft Sw LS	Left side foot switch.
0740392	Sw, Siren Brake, Momentary Red, RS Overhead Sw Pnl	A momentary red switch will be included in the right side overhead switch panel to activate the siren brake.
0740834	Sw, Siren Brake, Momentary Red, LS Overhead Sw Pnl	A momentary red switch will be included in the left side overhead switch panel to activate the siren brake.
0746353	Not Required, Warning Lights Intensity	

0790151	SP Lightbar, WIn, Freedom IV-Q, 72", RRRRWRROptsrRWRRRR	<p>FRONT ZONE UPPER WARNING LIGHTS</p> <p>There will be one (1) 72.00" Whelen® Freedom™ IV lightbar mounted on the cab roof. The lightbar will include the following:</p> <ul style="list-style-type: none"> One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. One (1) red flashing LED module in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. One (1) white flashing LED module in the driver's side third front position. One (1) red flashing LED module in the driver's side fourth front position. One (1) red flashing LED module in the driver's side fifth front position. One (1) 795 LED traffic light controller sent to national standard high priority in the center positions. One (1) red steady burning LED module in the passenger's side fifth front position. One (1) red flashing LED module in the passenger's side fourth front position. One (1) white flashing LED module in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. One (1) red flashing LED module in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position. <p>There will be clear lenses included on the lightbar.</p> <p>The following switches may be installed in the cab on the switch panel to control the lightbar:</p> <ul style="list-style-type: none"> a switch to control the flashing LED modules. the traffic light controller will be activated by a cab switch with emergency master control, and there will be no momentary switch to activate the traffic light controller. The two (2) white flashing LED modules and the traffic light controller will be disabled when the parking brake is applied. The seven (7) red flashing LED modules in the front positions may be load managed when the parking brake is applied.
0737406	Lights, Front Zone, WIn M6** LED, Color Features, Above Headlts 2lts	<p>FRONT ZONE LOWER LIGHTS</p> <p>There will be two (2) Whelen®, Model M6**, 4.62" high x 6.75" long x 1.38" deep flashing LED warning lights with chrome trim, installed on the cab face above the headlights.</p> <ul style="list-style-type: none"> The driver's side front warning light to be red The passenger's side front warning light to be red The color of the lenses will be clear There will be a switch in the cab on the switch panel to control both lights.
0653937	Flasher, Headlight Alternating	<p>HEADLIGHT FLASHER</p> <p>The high beam headlights will flash alternately between the left and right side.</p> <p>There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on.</p> <p>The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.</p>
0746667	Lights, Side Zone Lower, WIn M6**, M6**, 4Lts	<p>SIDE ZONE LOWER LIGHTING</p> <p>There will be four (4) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following:</p> <ul style="list-style-type: none"> Two (2) lights located, one (1) each side on the bumper extension. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs. Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs. The warning light lens color(s) to be clear. There will be a switch in the cab on the switch panel to control the lights.
0743910	Lights, Side, WIn M6** LED, Trm Fet 1st	<p>SIDE WARNING LIGHTS</p> <p>There will be two (2) Whelen®, Model M6**, 4.31" high x 6.75" wide x 1.37" deep flashing LED warning light(s) with chrome trim provided, on the sides of the cab, behind the crew cab doors, one (1) on the left side and one (1) on the right side, each mounted as high as possible.</p> <ul style="list-style-type: none"> The light(s) to include red flashing LEDs. The warning light lens color(s) to be clear. There will be a switch in the cab on the switch panel to control the lights. White LEDs will be deactivated when the parking brake is applied. Amber, blue, green and red LEDs may be load managed when the parking brake is applied.
0564655	Lights, Rear Zn Lwr, WIn M6°C LED, Clear Lens, For Tail Lt Housing	<p>REAR ZONE LOWER LIGHTING</p> <p>There will be two (2) Whelen®, Model M6°C, LED flashing warning lights located at the rear of the apparatus.</p> <ul style="list-style-type: none"> The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is clear. There will be a switch located in the cab on the switch panel to control the lights.

0596586	Lights, Rear/Side Up Zone, WIn M9* Side, M6* Rear, Lens Feature, 4 Lts	<p>REAR AND SIDE ZONE UPPER WARNING LIGHTS</p> <p>There will be two (2) Whelen, Model M6* LED warning lights provided at the rear of the apparatus, facing the rear, one (1) light provided on each side with Whelen, Model M6FC chrome flanges.</p> <p>The rear upper light(s) on the passenger's side to be red.</p> <p>The rear upper light(s) on the driver's side to be red.</p> <p>There will be one (1) Whelen, Model M9* LED warning light provided on the driver side of the vehicle, located at the rear and facing the side, mounted high with Whelen, Model M9FC chrome flanges.</p> <p>The side rear upper light(s) on the driver's side to be red.</p> <p>There will be one (1) Whelen, Model M9* LED warning light provided on the passenger side of the vehicle, located at the rear and facing the side, mounted high Whelen, Model M9FC chrome flanges.</p> <p>The side rear upper light(s) on the passenger's side to be red.</p> <p>The color of the lenses will be clear.</p> <p>There will be a switch located in the cab on the switch panel to control the lights.</p>
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0537807	Mtg, Rear Warn Lts, Side Sheets & On Rear Bulkheads	<p>REAR LIGHT MOUNTING</p> <p>The rear warning lights will be mounted on the rear side sheet flange and rear bulkhead of the body as high as possible with all wiring totally enclosed.</p>
0791467	Light, Traffic Directing, WIn TAM83, 30.87" Long LED	<p>TRAFFIC DIRECTING LIGHT</p> <p>There will be one (1) Whelen®, Model TAM83, 30.87" long x 1.75" high x 2.18" deep, amber LED traffic directing light installed at the rear of the apparatus.</p> <p>The Whelen, Model TACTL5, control head will be included with this installation.</p> <p>The controller will be energized when the battery switch is on.</p> <p>The auxiliary flash to be activated when the emergency master switch is on.</p>
0534126	Location, TDL, Recessed with Treadplate Trim	<p>This traffic directing light will be recessed with a treadplate trim plate at the rear of the apparatus as high as practical.</p>
0530288	Location, Traf Dir Lt Controller, Overhead Recessed Console, above Eng Tnl DS	<p>The traffic directing light controller will be located within the overhead recessed console above the engine tunnel on the driver's side.</p>
0519934	Not Required, Brand, Hydraulic Tool System	
0649753	Not Required, PTO Driven Hydraulic Tool System	
0007150	Bag of Nuts and Bolts	<p>LOOSE EQUIPMENT</p> <p>The following equipment will be furnished with the completed unit:</p> <p>One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.</p>

0816508	NFPA Required Loose Equipment, Pumper, NFPA/ULC 2024, Provided by Fire Dept	<p>NFPA LOOSE EQUIPMENT NFPA Required Loose Equipment Provided by Fire Department The following loose equipment as outlined in NFPA 1900, 2024 edition, table 8.1 and CAN/ULC 515:2024 edition, section 5.2 will be provided by the fire department: One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. NFPA Loose Equipment That Should be Considered The following loose equipment as outlined in NFPA 1900, 2024 edition, appendix table A.8.4 (a) and CAN/ULC 515:2024 edition, section 5.2 should be considered: 800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smooth bore or combination nozzle with shutoff and with 2.50" (65 mm) inlet that flows a minimum of 250 gpm (950 L/min). Four (4) SCBA apparatus Four (4) SCBA spare cylinders One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with national hose (NH) threads. One (1) double male 2.50" (65 mm) adapter with national hose (NH) threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 18 ft (3.7 m x 5.5 m). One (1) automatic external defibrillator (AED).</p>
0816941	Soft Suction Hose, Provided by Fire Department, NFPA/ULC 2024	<p>SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.</p>
0821565	Strainer, Provided by Fire Department, Pumper NFPA/ULC 2024 Classification	<p>STRAINER PROVIDED BY FIRE DEPARTMENT NFPA 1900, 2024 edition, section 8.3 and CAN/ULC S515:2024 edition, section 5.2 requires a suction strainer when suction hose is provided. The strainer is not on the apparatus as manufactured. The fire department will provide the suction strainer.</p>
0816939	Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department	<p>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0816937	Extinguisher, 2.5 Gal. Pressurized Water, NFPA/ULC 2024, Provided by Fire Dept	<p>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0816998	Axe, Flathead, Provided by Fire Department	<p>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0817000	Axe, Pickhead, Provided by Fire Department	<p>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>

PAINT PROCESS

The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:

Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include: chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.

Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion.

Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.

Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.

Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.

Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.

Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer.

After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim will be removed and painted separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. The manufacturer's written paint standards will be available upon request.

Environmental Impact

Contractor will meet or exceed all current state regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

Topcoats and primers will be chrome and lead free.

Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.

Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor.

Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient.

Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.

Paint wastes are disposed of in an environmentally safe manner.

Empty metal paint containers will be recycled to recover the metal.

Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations.

0709567

Paint, Single Color, Enforcer

CAB PAINT

The cab will be painted 860 red.

0709845

Paint, Single Color, Body

BODY PAINT

The body will be painted to match the lower section of the cab.

0646901	Paint Chassis Frame Assy, With Liner, E-Coat, Standard	<p>PAINT CHASSIS FRAME ASSEMBLY The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components that are included with the chassis frame assembly that will be painted (unless otherwise stated in a secondary option) are: Frame rails Frame liners Cross members Axles Suspensions Steering gear Battery boxes Bumper extension weldment Frame extensions Body mounting angles Rear Body support substructure (front and rear) Pump house substructure Steel fuel tank Castings Individual piece parts used in chassis and body assembly Components treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails Two (2) frame liners The E-coat process will meet the technical properties shown.</p>
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0733739	Paint, Axle Hubs	<p>AXLE HUB PAINT All axle hubs will be painted to match lower job color.</p>
0007230	Compartment, Painted, Spatter Gray	<p>COMPARTMENT INTERIOR PAINT The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.</p>
0544099	Reflective Band, 8"	<p>REFLECTIVE BAND An 8.00" white reflective band will be provided across the front of the vehicle and along the sides of the cab and body.</p>
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0820120	Stripe, Chevron, Rear, Diamond Grade, NFPA/ULC 2024, Pumper	<p>REAR CHEVRON STRIPING There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The entire rear surface, excluding the rear compartment door, will be covered. The colors will be Red 983-72 and White 983-10 diamond grade. Each stripe will be 6.00" in width.</p>
0065687	Stripe, Reflective, Cab Doors Interior	<p>CAB DOOR REFLECTIVE STRIPE A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel. This stripe will meet the current edition of applicable NFPA standards.</p>
0679822	Stripe, Sign Gold, Two-Tone Paint Break with Shield, IPO Chrome Molding	<p>CAB STRIPE There will be a Sign Gold stripe provided on both sides of the cab in place of the chrome molding and on the cab face with shield.</p>
0679825	Stripe, Sign Gold, Side of Cab, Over Fender Only	<p>CAB STRIPE There will be a Sign Gold stripe on each side of the cab over the fender.</p>
0594559	Lettering Specifications, (Sign Gold Process)	<p>LETTERING The lettering will be 22 karat gold vinyl.</p>
0679866	Stripe, Sign Gold, Side of Body, Over Fender Only, Single Axle	<p>BODY STRIPE There will be a Sign Gold stripe provided on each side of the body, over the fender.</p>

0685930	Lettering, Sign Gold, 3.00", (81-100)	LETTERING Eighty-one (81) to one hundred (100) Sign Gold lettering, 3.00" high, with outline and shade will be provided.
0685978	Lettering, Reflective, 18.00", Each	LETTERING There will be reflective lettering, 18.00" high, with no outline or shade provided. There will be four (4) letters provided.
0685998	Lettering, Reflective, 9.00", Each	LETTERING There will be reflective lettering, 9.00" high, with no outline or shade provided. There will be four (4) letters provided.
0686018	Lettering, Reflective, 5.00", Each	LETTERING There will be reflective lettering, 5.00" high, with no outline or shade provided. There will be six (6) letters provided.
0686084	Lettering, Reflective, 3.00", Each	LETTERING There will be reflective lettering, 3.00" high, with no outline or shade provided. There will be four (4) letters provided.
0685745	Lettering, Sign Gold, 10.00", Each	LETTERING There will be sign gold lettering, 10.00" high, with highlight and shade provided. There will be 16 letters provided.
0778135	SP Laminate Lettering on Entire unit for Protection with Goldstar cut	LAMINATE LETTERING ON ENTIRE UNIT WITH GOLDSTAR CUT The lettering on the entire unit will be completely covered with a clear plastic laminate material to protect it and with a goldstar cut.
0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	FIRE APPARATUS PARTS MANUAL There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. Service Parts Internet Site The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0772037	Manual, Chassis Service, USB Flash Drive, Custom	CHASSIS SERVICE MANUALS There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom, English	CHASSIS OPERATION MANUAL The chassis operation manual will be provided on one (1) USB flash drive. The manual will be in the English language.

0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	ONE (1) YEAR MATERIAL AND WORKMANSHIP A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	ENGINE WARRANTY A Cummins five (5) year limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953	Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	STEERING GEAR WARRANTY A Sheppard three (3) year limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with this proposal.
0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	FIFTY (50) YEAR STRUCTURAL INTEGRITY The Pierce custom chassis frame only (does not include crossmembers) limited warranty certificate, WA0013, is included with this proposal.
0595698	Warranty, Axle, 3 Year, TAK-4, WA0050	FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.
0733306	Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0744240	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	FIVE (5) YEAR MATERIAL AND WORKMANSHIP The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	CAMERA SYSTEM WARRANTY A Pierce fifty four (54) monthwarranty will be provided for the camera system.
0708760	Warranty, Not Applicable, LED Strip Lights	COMPARTMENT LIGHT WARRANTY The compartment lights will not offer an extended warranty.
0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	TRANSMISSION WARRANTY The transmission will have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	TRANSMISSION COOLER WARRANTY The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed \$10,000 per occurrence. A copy of the warranty certificate will be included with this proposal.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	WATER TANK WARRANTY A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.

0693126	Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	<p>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of ten (10) years. A five (5) year limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.</p>
0892410	Warranty, Pump, Hale, 5 Year Parts, 2 Year Labor, WA0388	<p>PUMP WARRANTY A Hale pump limited warranty certificate, WA0388, is included with this proposal.</p>
0648675	Warranty, 10 Year S/S Pumping, WA0035	<p>TEN (10) YEAR PUMP PLUMBING WARRANTY The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.</p>
0657990	Warranty, Foam System, Husky 3, WA0231	<p>FOAM SYSTEM WARRANTY The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.</p>
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	<p>TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.</p>
0595412	Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168	<p>ONE (1) YEAR MATERIAL AND WORKMANSHIP The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.</p>
0819254	Certification, Vehicle Stability, CD0196	<p>VEHICLE STABILITY CERTIFICATION The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1900, current edition, section 7.14, Vehicle Stability. The certification is included with this proposal.</p>
0808582	Certification, Engine Installation, Saber FR/Enf, Cummins X10, 2027	<p>ENGINE INSTALLATION CERTIFICATION The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.</p>
0686786	Certification, Power Steering, CD0098	<p>POWER STEERING CERTIFICATION The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification is included with this proposal.</p>
0892691	Certification, Cab Integrity, Saber FR/Enforcer, CD0189	<p>CAB INTEGRITY CERTIFICATION The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. European Occupant Protection Standard ECE Regulation No.29. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.</p> <p>Side Impact The cab will be subjected to dynamic preload where a 14,320-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.</p> <p>Frontal Impact The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.</p> <p>Additional Frontal Impact The same cab will withstand a frontal impact of 65,098 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)</p> <p>Roof Crush The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.</p> <p>Additional Roof Crush The same cab will be subjected to a roof crush force of 110,000 lbs. (Four and a half times the load criteria of ECE 29) The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p>

0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	<p>CAB DOOR DURABILITY CERTIFICATION Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.</p>
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	<p>WINDSHIELD WIPER DURABILITY CERTIFICATION Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.</p>
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	<p>ELECTRIC WINDOW DURABILITY CERTIFICATION Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.</p>
0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	<p>SEAT BELT ANCHOR STRENGTH Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p>SEAT MOUNTING STRENGTH Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p>
0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	<p>PERFORMANCE CERTIFICATIONS</p> <p>Cab Air Conditioning Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.</p> <p>Cab Defroster Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. <i>The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</i></p> <p>Cab Auxiliary Heater <i>Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.</i></p>
0545073	Amp Draw Report, NFPA Current Edition	<p>AMP DRAW REPORT The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Current edition of applicable NFPA standards. The minimum continuous load of each component that is specified per: Current edition of applicable NFPA standards. Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the current edition of applicable NFPA standards.</p>
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000018	PUMPER, 2ND GEN	

000012	PIERCE CHASSIS
0004713	ENGINE, OTHER
0046395	EVS 3000 Series TRANSMISSION
0020012	HALE PUMP
0020009	POLY TANK
0028048	FOAM SYSTEM
0020006	SIDE CONTROL
0020007	AKRON VALVES
0020015	ABS SYSTEM
0658751	PUMPER BASE



Electrical Analysis

2/5/2026

Bid #: 989 **Job #:**
Desc: Lodi Type 1 (similar #36314) **Sales Rep:** Hansen, Brad
Customer: Lodi FD **Organization:** Golden State Fire Apparatus, Inc
Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT **Type:** Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0005221	Reel, Booster, Two (2) - Over Pump, Alum		0.00	72.00	0.00
0024541	Primer, Hale, ESP Motor, (1) PVG Valve, (1) T-Handle Control		0.00	275.00	0.00
0032189	Mirrors, Ramco, 8000PCHR, Heated/Remote, w/Heated/Remote		0.00	0.00	8.00
0069390	Control, Air Horn At Pmp Pnl, Red Button		0.00	0.16	0.00
0079211	Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud		0.00	3.00	0.00
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0583824	Light, Pump Compt, WIn 3SC0CDCR LED White		0.00	0.36	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3"		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class		0.00	0.00	1.23
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0644201	Cab Lift, Elec/Hyd, Saber FR/Enforcer		0.00	180.00	0.00
0653519	Camera, Pierce, LS Mux, RS, LS, R, Cameras, SD		0.00	1.20	0.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0727255	Intercom, David Clark, Up to 4 Wireless, (D,O,RPTT), 2obC Wired		0.00	0.00	0.50
0743910	Lights, Side, WIn M6** LED, Trm Fet 1st		0.00	2.70	1.80
0748793	Lights, WIn, S44M** 44" 12VDC, RS Body		0.00	0.00	10.80
0748795	Lights, WIn, S44M** 44" 12VDC, LS Body		0.00	0.00	10.80
0766906	Lights, WIn, PCPSM1*, Pioneer, 12 VDC, 1st		0.00	0.00	12.00
0768059	Lights, WIn, PCPSM2* Pioneer, 12 VDC, 2nd		0.00	0.00	12.00
0768061	Lights, WIn, PCPSM2* Pioneer, 12 VDC, 1st		0.00	0.00	12.00
0772846	Key Storage, Knox-Box, KeySecure 5, KSM-200K2, WiFi, Cab		0.00	0.00	0.00
0804651	Light, Directional, WIn M62T* LED, Above Headlights, Sab/Enf		0.00	0.00	0.00
0806466	Lights, Backup, WIn M62BU, LED, For Tail Lt Housing		0.00	3.20	0.00
0817935	System, Automated Fuel Management, Syn-Tech AIM Titanium		0.00	6.00	0.00
0819994	Radio, Jensen, AM/FM/WB, Bluetooth		0.00	0.00	2.00
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA		0.00	6.00	0.00
0834416	USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC		0.00	0.00	10.00
0836582	Foam Sys, Husky 3 LCD, Single Agent, Multi Select Feature		0.00	55.00	0.00
0836750	Wiring, Spare, (1) 20A 12V DC, Multi Loc, Cab, B+, 1st,		0.00	0.00	20.00
0836752	Wiring, Spare, (1) 20A 12V DC, Multi Loc, LS Bdy/Rear, B+, 1st		0.00	0.00	20.00
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0636439	Wiring, Spare, 37.5 A 12V DC, Cust Install Radio, 30A Bat Dir,	Load Managed	0.00	0.00	37.50
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st	Load Managed	0.00	0.00	13.00
0891411	HVAC, Heavy-Duty, Enforcer, CARE	Load Managed	0.00	0.00	136.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0023650	LS 152" Rollup, Full Height Compts, FDLER	NFPA	4.50	0.00	4.50
0063658	RS 152" Rollup, Full Height Compts, FDLER	NFPA	4.50	0.00	4.50
0073668	Rear, Double Door, 30.75" F-F, 31.88" D	NFPA	0.90	0.00	0.90
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0536590	Light Shield/Step 8", PS, OSS LED, P25 LED Step Lt	NFPA	1.58	0.00	3.22
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0564655	Lights, Rear Zn Lwr, WIn M6*C LED, Clear Lens, For Tail Lt	NFPA	1.80	2.70	0.00
0586382	Gauges, Engine, Included With Pressure Controller	NFPA	0.30	0.00	0.00
0596586	Lights, Rear/Side Up Zone, WIn M9* Side, M6* Rear, Lens	NFPA	4.20	6.30	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



Electrical Analysis

2/5/2026

Bid #: 989 **Job #:**
Desc: Lodi Type 1 (similar #36314) **Sales Rep:** Hansen, Brad
Customer: Lodi FD **Organization:** Golden State Fire Apparatus, Inc
Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT **Type:** Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0604123	Gauge, Water Level, FRC, WLA 300-A00, TankVision Pro,	NFPA	1.23	0.00	0.00
0604308	Pump Shift, Air w/o Manual Override, Split Shaft, Interlocked, Hale	NFPA	0.11	0.00	0.00
0611614	Handrails, 10", Below Cab Windshield, Hansen Knurled Alum,	NFPA	0.20	0.00	0.00
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	NFPA	2.34	0.00	0.00
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	NFPA	0.80	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29	NFPA	0.10	0.90	0.00
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	NFPA	1.26	0.00	0.00
0625650	Cab, Enforcer, 7000	NFPA	6.80	10.20	0.00
0625966	Handrail, Rear, Below Hose Bed, Full Width, Hansen, Knurled	NFPA	0.50	0.50	1.00
0625975	Handrails, Beavertail, Hansen Tubing, Knurled Aluminum, LED	NFPA	1.00	1.00	2.00
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear	NFPA	0.80	0.00	0.00
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	NFPA	1.60	0.00	0.00
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	NFPA	1.75	0.00	0.00
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, 10" Frame,	NFPA	7.81	0.00	0.00
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	NFPA	2.52	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber	NFPA	0.35	0.00	0.00
0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29	NFPA	0.80	0.00	0.00
0653937	Flasher, Headlight Alternating	NFPA	0.08	0.00	0.00
0662965	DEF Tank, 4.5 Gallon, DS Fill, Rear of Axle, Common Air Bottle	NFPA	0.60	11.40	0.00
0709438	Lights, Walk Surf, FRP Flood, LED	NFPA	2.00	0.00	0.00
0737406	Lights, Front Zone, Wln M6** LED, Color Features, Above Headlts	NFPA	1.80	2.70	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0746667	Lights, Side Zone Lower, Wln M6**, M6**, 4Lts	NFPA	3.60	5.40	0.00
0750438	Water Level Gauge, Wln PSTANK2, LED 1-Light, 4-Level	NFPA	1.60	0.00	0.00
0760868	Lights, Cargo/Dunnage, Dual LED Light Strips, Each Side	NFPA	0.30	0.00	0.00
0763675	Light Shield/Step 8", P25 Undr Crs, LED w/P25 LED Step Light	NFPA	5.00	0.00	0.00
0770200	Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, 4-Door	NFPA	0.80	0.00	0.00
0780484	Headlights, Rect LED, HiViz FT-4X6-4KIT, AXT/Enf/Imp/Sab/Vel	NFPA	7.66	7.66	0.00
0790151	Lightbar, Wln, Freedom IV-Q, 72", RRRRWROptsrRWRRRR	NFPA	7.72	2.68	8.68
0791467	Light, Traffic Directing, Wln TAM83, 30.87" Long LED	NFPA	1.60	1.60	0.00
0804514	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0806192	Cabinet, Rr Fcng, LS, 22 W x 24 H x 22 D, Chamf, Ext Acc Only,	NFPA	0.35	0.35	0.00
0806194	Cabinet, Rr Fcng, RS, 22 W x 24 H x 22 D, Chamf Corner, Ext Acc	NFPA	0.28	0.28	0.00
0808535	Engine, Cummins X10, 450 hp, 1250 lb-ft, W/OBD, EPA 2027,	NFPA	1.00	0.00	0.00
0814201	Vehicle Information Center, 7" Color Display, Touchscreen, MUX,	NFPA	1.20	0.00	0.00
0825456	Siren, Federal PA300-100, 100-Watt, w/Microphone	NFPA	0.78	7.02	0.00
0826104	Controller, Pressure, FRC, Pump Boss Max, PBA500	NFPA	1.80	0.00	0.00
0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0898696	Compt, Transverse C/C, Dbl Pan, 70" SFR/Enf	NFPA	0.65	0.65	0.00
0647729	Alternator, 320 amp, Delco Remy 40SI	S	0.00	0.00	0.00
Load Totals:			98.03	801.38	332.43

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

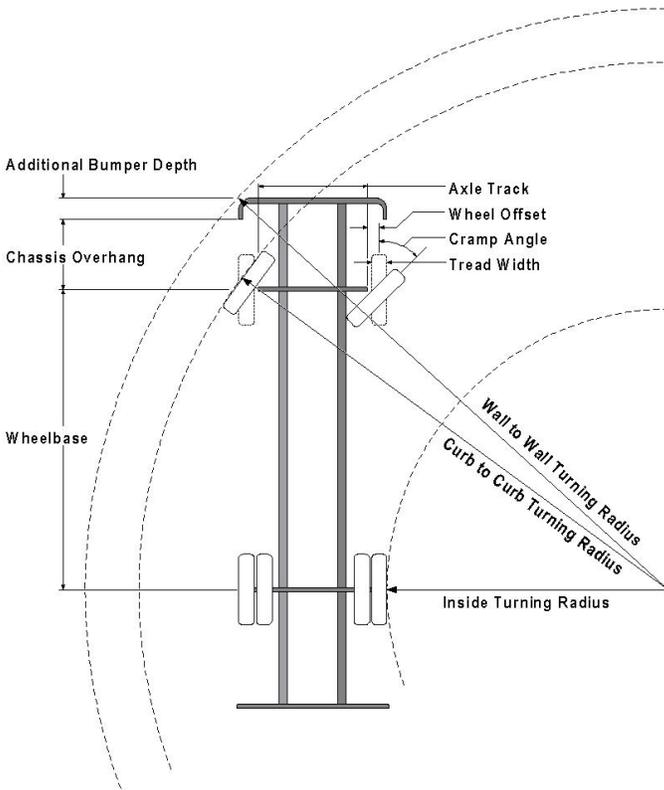


Turning Performance Analysis

02/05/2026

Bid Number: 989
Department: Lodi FD

Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	16.3 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	16 in.
Front Overhang:	81.95 in.
Wheelbase:	191.5 in.

Calculated Turning Radii:

Inside Turn:	14 ft. 11 in.
Curb to curb:	28 ft. 11 in.
Wall to wall:	33 ft. 1 in.

Category	Option	Description
Bumpers	0624298	Bumper, 16" Extended, Saber FR/Enforcer
Axle, Front, Custom	0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer
Wheels, Front	0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot
Tires, Front	0899438	Tires, Front, Goodyear, Armor MAX MSA, 425/65R22.50, 20 ply

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:

Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.



4

WARRANTIES

EXHIBIT C



Fire and Rescue Apparatus

One (1) Year Material and Workmanship Basic Apparatus

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	Twelve (12) months.
Conditions and Exclusions: See Also Paragraphs 2 thru 4	No specific exclusions apply

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

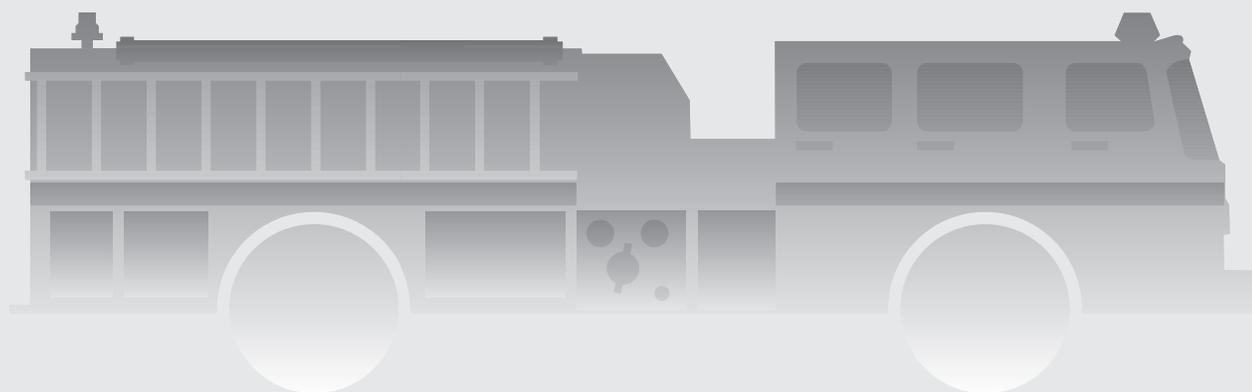
Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Cummins Warranty

Worldwide

Fire Apparatus/Crash Trucks



Coverage

Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck* applications Worldwide.

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a \$100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel



exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States** in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

**CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL
OR CONSEQUENTIAL DAMAGES.**

* Airport operated crash trucks and fire department operated trucks employed to respond to fires, hazardous material releases, rescue and other emergency-type situations.

** United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

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R. H. SHEPPARD CO., INC.
101 Philadelphia St.
Hanover, PA 17331
Pierce Manufacturing Inc.
2600 American Drive
Appleton, WI 54912

LIMITED WARRANTY: The R. H. Sheppard Co. Inc., (“Sheppard”) warrants all M110PKG1 and M110SAU1 steering gears manufactured and sold to Pierce Manufacturing Inc. (“Pierce”) for application on Pierce TAK-4 equipped vehicles to be free from defects of workmanship and material under normal use and service for a period of thirty six months from the in service date of the vehicle to its original owner.

Vehicle applications where Sheppard product is used require an application approval before production build. If Pierce uses Sheppard product for any purpose or application which has not been approved by Sheppard in advance, including aftermarket devices (defined as a device added to the steering system directly or indirectly affecting the performance or operation of the Sheppard product in its approved application) not tested and approved by Sheppard this limited warranty **SHALL NOT APPLY AND SHALL BE VOID. SHEPPARD MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SHEPPARD EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.** **SHEPPARD SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PRODUCT.** Pierce expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

CONDITIONS: Claims under this Limited Warranty may only be made by Pierce. In no event shall Sheppard be held liable for warranty charges by unauthorized persons. No allowance will be made for repairs or alterations, unless made with the written consent of Sheppard. Authorized Pierce dealers shall be the only authorized repair facility for Sheppard products applied to Pierce vehicles. Any warrantable repair made under this Limited Warranty must be made on or before 36 months of the in-service date for the Product to which the claim relates. Sheppard shall not be liable for claims made after such date. Sheppard product fitted to Pierce vehicles that are repaired at a repair facility other than an authorized Pierce dealer within the warranty period will be considered for payment under the guidelines of this agreement only by joint written consideration of Sheppard and Pierce warranty departments. It shall be the responsibility of the Pierce warranty department to notify Sheppard if and when this situation occurs. Sheppard will not be held responsible for damage to other steering components such as but not limited to pumps and reservoirs due to improper adjustment of steering gear relief plungers. Vehicle downtime and towing will not be considered under warranty.

REMEDIES: The sole and exclusive remedy of Pierce for Sheppard’s breach of the foregoing warranty is limited to the return and repair or reimbursement as follows:

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
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Warranty Support: In support of the Pierce dealer network, Sheppard will provide a toll-free "Hotline" service to assist in the diagnosis and troubleshooting of steering problems. The R. H. Sheppard Co., Inc. Field Service Department can be reached at 1-800-274-7437 for assistance. Sheppard will require that Pierce dealers contact this toll-free "Hotline" for approval before product is removed from a vehicle in a warranty situation. When contacted regarding a warranty situation, the Sheppard representative will provide an authorization number for removal of the product. This Returned Goods Authorization (RGA) number must be included in all warranty correspondence and attached to all returned goods.

Procedure: In the event of a warranty situation, the servicing dealer shall contact the Sheppard Hotline and receive an RGA number before replacing any steering gear. For M110PKG1 and M110SAU1 steering gear models, the dealer will first obtain an RGA number from Sheppard, and then order the replacement gear from Pierce. Replacement M110PKG1 and M110SAU1 steering gears shall be shipped from Pierce once those models are in full production. A warranty claim for both parts and labor will then be generated by the dealer and sent to Pierce. After reviewing the claim, Pierce will submit it to Sheppard for reimbursement.

Parts Reimbursement: Sheppard agrees to reimburse Pierce at Pierce's purchase price plus 30% mark-up for parts found to be defective within the warranty period. Parts being returned for warranty consideration shall be sent to the R. H. Sheppard Company, 447 E. Middle St., Hanover, PA 17331 ATTN: Warranty Dept. Sheppard's determination as to whether the part is covered by the foregoing warranty is final and conclusive. Sheppard requires the return of complete steering gears only. Individual seals replaced under warranty **should not** be returned unless specifically requested by Sheppard. All parts being returned for warranty consideration must be clearly tagged with all pertinent warranty information including, but not limited to (1) Returned Goods Authorization number (RGA); (2) claim number; (3) date in service; (4) date of failure; (5) mileage; (6) part number; (7) labor hours; (8) dealer labor rate and; (9) dollar amount claimed. Claims submitted without prior authorization are subject to rejection under this agreement.

Labor: Labor to repair Sheppard product found to be defective within the warranty period will be reimbursed at not more than 10 hours per vehicle. Labor shall be reimbursed at the rate of \$85.00 USD per hour for M110PGK1 and M110SAU1 steering gears.

Freight: Pierce will collect M110PGK1 and M110SAU1 warranty material at a designated collection point. Inbound freight to the Pierce collection point will be the responsibility of Pierce. All warranty material should be returned from the Pierce collection point to R. H. Sheppard Co. Freight Collect by a Sheppard-specified common carrier based on location of the Pierce collection point. Sheppard does not require the return of failed seals. Any freight charges incurred for the return of seals will be the responsibility of Pierce. Parts returned for warranty consideration without prior authorization are subject to rejection under this agreement and may be subject to a charge back of inbound freight charges. Parts rejected under this warranty will be returned to Pierce Freight Collect or scrapped by Sheppard at Pierce's discretion.

R. H. SHEPPARD CO., INC. WARRANTY

Pierce Manufacturing Inc.

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Outside Purchases: Pierce authorized dealers shall be the only outlet for repair, warranty service and parts for Sheppard products applied to Pierce vehicles. Sheppard will not be responsible for consumables such as hoses, belts, fluids, fittings or miscellaneous shop material that may be required for the repair of the product.

Warranty Documentation: Warranty credit memos will be issued monthly to the Pierce Warranty Department. Monthly credit memos will include (1) claim number; (2) part number; (3) parts reimbursement; (4) labor reimbursement; (5) any applicable Pierce reference number and; (6) reason for rejection or acceptance of the claim. Credit memos will be issued in U.S. funds. Debits for warranty claims will not be accepted under this agreement. Claim disposition will constitute the final and conclusive resolution of warranty claims.

Parts Retention: Sheppard will retain parts submitted for warranty consideration for a period of sixty (60) days for any material found to be rejected for warranty. Sheppard will notify Pierce within sixty (60) days of receipt of Sheppard's determination as to whether any such part is covered by this warranty. Warranty reimbursement will be issued within thirty days of receipt of material at Sheppard.

Good-Will Requests: Good-Will requests will be considered jointly between Sheppard and Pierce for equitable compensation.

RECALLS: Sheppard retains the right to review information regarding federal motor vehicle recall and /or product repair programs if Sheppard products fitted to Pierce vehicles are alleged to be non-compliant with federal motor vehicle safety standards. Sheppard retains the right to review any claims of product defect or non-compliance before participating in reimbursement of expenses incurred as a result of alleged non-compliance or defect of its products. Sheppard agrees to negotiate in good faith for the reimbursement of expenses incurred by Pierce for all administrative, material and labor cost and expense associated with any recall where Sheppard product is found to be defective or non-compliant with federal motor vehicle standards.

MISCELLANEOUS: This writing constitutes the full complete and final statement of Sheppard's limited warranty for M110PKG1 and M110SAU1 products sold to Pierce. All prior oral or written correspondence, test data, negotiations, representations, understandings and the like regarding products are merged in this writing and extinguished by it. This limited warranty may not be altered, amended extended or modified except by a writing signed by the President or Vice President of Sheppard. No employee, vendor, dealer, distributor or other representative of Sheppard has authority to make statements to extend, expand, alter or amend the terms of this Limited Warranty. Sheppard expressly disclaims any statements contrary to the Limited Warranty. Sheppard's failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any provisions herein. This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 4

Any legal actions which may arise as a result of disputes, controversies or claims arising out of or related to this limited warranty shall be in such forum as Sheppard and Pierce shall agree, or, in the absence of agreement, in a court of appropriate jurisdiction other than in the county in which either party is located. This Limited Warranty shall not be assigned by Pierce.

COOPERATIVE EFFORT: Sheppard and Pierce agree to work cooperatively toward expanding this warranty coverage to a period of sixty months from the in service date. These cooperative efforts shall focus on examining the effects of increased heat generated by 2007 model engines and its impact on the entire power steering system.

AGREEMENT: This agreement is effective April 3, 2006 and may be modified by mutual agreement between Sheppard and Pierce of a signed amendment to be attached to the original Limited Warranty. There are no third party beneficiaries to this Limited Warranty. This warranty agreement applies to Pierce authorized dealers only. It does not encompass any special arrangements that Pierce may now have or that Pierce may enter into, with any other segments of the trucking industry. This warranty agreement does not apply to non-conforming product removed at Pierce assembly plants.

This Limited Warranty agreement between the R. H. Sheppard Co., Inc and Pierce Manufacturing Inc. may be terminated by either party with thirty days written notice prior to termination.

Signed at Pierce Manufacturing Inc., Appleton, WI this _____ day of _____, 2006.

R. H. SHEPPARD CO., INC.

PIERCE MANUFACTURING INC.

Authorized Signature

Authorized Signature

Title

Title



Fire and Rescue Apparatus

Lifetime Fifty (50) Year Structural Integrity Custom Chassis Frame *Limited Warranty*

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	Custom chassis frame rail manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Fifty (50) Years (Expected Life of Apparatus)
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies to the frame rails only, crossmembers are excluded. This warranty does not apply to damage caused by corrosion.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship TAK-4 Independent Front Suspension

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The TAK-4 Front Independent Suspension and Steering Gears shall be free from defects in material and workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Years -or- 30,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty excludes brake pads, brake rotors, seal boots and shock absorbers.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus



SUPPLIER

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

CUMMINS-MERITOR COMMERCIAL VEHICLE SYSTEMS WARRANTY

COVERAGE FOR THE
UNITED STATES AND CANADA
MODEL YEAR 2024 VEHICLES



Meritor

WARRANTY INFORMATION TABLE OF CONTENTS

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How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl = Unlimited	P = Parts Only P&L = Parts and Labor
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Notice:

Models or components that are approved for use by Cummins-Meritor’s vocational guidelines contained in Cummins-Meritor publication TP-9441 for axles, SP-8320 for trailer axles and TP-12126 for drivelines, or any other products that have an application approval completed with Cummins-Meritor which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles, parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting meritor.com or by contacting Cummins-Meritor at **866-OnTrac1 (866-668-7221)**.

LINEHAUL WARRANTY INFORMATION

Vocational Definition of Linehaul

- Long distance hauling of food, goods and finished materials
- Not included are raw ferrous materials, minerals (except oil), sand, gravel, stone, rocks, topsoil, waste or logs
- Linehaul includes turnpike and hub & spoke

Linehaul Vehicles

- Auto Hauler¹
- Bulk Hauler¹
- Chip Hauler^{1,2}
- Doubles
- Flatbed
- General Freight
- Grain Hauler¹
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker¹
- Triples

¹ Cummins-Meritor classifies these vehicle types as high center of gravity, which require special axle housing considerations.

² Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is:

- High mileage operation (over 60,000 miles/year)
- Greater than 30 miles between starts and stops
- Maximum grades of 12%
- Well maintained highways of concrete or asphalt construction (100% on-road)
- Category A job sites, terminals, docks and transfer sites (defined as pavement, concrete or maintained and hard packed gravel).

Note: Category B job sites, terminals, docks, transfer sites (defined as loose or unmaintained sand, dirt or gravel; landfill; farm field; mud; or other similar surfaces) are **NOT** approved for certain linehaul axle models.

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	MFS-10-144A-N	MFS-12-143A-N	MFS-13B-132B-N	MFS-14G-132B-N
FF-941	MFS-12-122A-N	MFS-12E-143A-N	MFS-13B-132C-N	MFS-14-132C-N
FF-942	MFS-12-122B-N	MFS-12-144A-N	MFS-14-122A-N	MFS-14F-132C-N
FF-943	MFS-12-122C-N	MFS-13-122A-N	MFS-14-122B-N	MFS-14G-132C-N
FF-944	MFS-12E-122A-N	MFS-13-122B-N	MFS-14F-122B-N	MFS-14-142B-N
FF-961	MFS-12E-122B-N	MFS-13-122C-N	MFS-14G-122B-N	MFS-14F-142B-N
FF-966	MFS-12E-122C-N	MFS-13-132B-N	MFS-14-122C-N	MFS-14G-142B-N
FF-967	MFS-12-124A-N	MFS-13-132C-N	MFS-14F-122C-N	MFS-14-142C-N
FG-941	MFS-12-132B-N	MFS-13-143A-N	MFS-14G-122C-N	MFS-14F-142C-N
FG-943	MFS-12-132C-N	MFS-13-144A-N	MFS-14-124A-N	MFS-14G-142C-N
MFS-10-122A	MFS-12E-132B-N	MFS-13B-122B-N	MFS-14-132B-N	MFS-14-143A-N
MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-122C-N	MFS-14F-132B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

MS-19-14X	MS-23-17H ^{1,2}	RS-23-160	RS-23-185
RS-21-160	MS-23-17X ²	RS-23-161	RS-23-186

¹ Not approved for use in any Category B job sites, terminals, docks or transfer sites.

² Recommend 11 mm minimum wall thickness for these models used in combination with high center of gravity vehicles and trailing arm suspensions or vehicles operating mainly in Canada.

LINEHAUL WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-40-160/P ^{1,2}	RZ-166 ²	MA-40-17H ³	MT-34-14X/P ⁴	MT-40-14X/P ⁴
RT-46-160/P ^{1,2}	RT-50-160/P ^{1,2}	RZ-188	MT-40-14T/P	MT-40-14H/E ^{3,4}
RT-46-164/P ^{1,2}	MA-40-165	MA-40-175	MT-40-14X/P ⁴	

¹ These models required for Chip Hauler and Linehaul warranty consideration.

² Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

³ Not approved for use in any Category B job sites, terminals, docks or transfer sites.

⁴ Recommend 11 mm minimum wall thickness for these models used in combination with high center of gravity vehicles and trailing arm suspensions or vehicles operating mainly in Canada.

Trailer Axles¹

Beam and Brackets	5/500/P, 1/100/L
TPX3000 Axle Series ²	10/Unl/P, 1/Unl/L
Wheel End Systems ³	
Standard System ⁴	1/100/P&L
AxlePak5	5/Unl/P&L
AxlePak7 ⁵	7/Unl/P&L

¹ For brake components and ABS coverage, refer to appropriate product warranties.

² Structural components only excluding spindle wear. Spindle wear is 5/Unl/P, 1/Unl/L.

³ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁴ When installed by Cummins-Meritor.

⁵ When specified with AxlePak7 wheel end system, coverage on Meritor Tire Inflation System (MTIS) thru-tee and stator is 7/Unl/P, 1/Unl/L.

TAG/Pusher Axles¹

TQ, TR Beam and Brackets	5/750/P&L
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¹ For brake components and ABS coverage, refer to appropriate product warranties.

Trailer Mechanical Suspension Systems¹

IMS40 (Integrated Mechanical Suspension – Tandem) ²	1/Unl/P&L
IMS20 (Integrated Mechanical Suspension – Single) ²	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² All other suspension components refer to appropriate manufacturer's warranty.

Trailer Air Suspension Systems

MPA40 (Tandem Axle Parallelogram) ¹	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty ²	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/Unl/P, 3/Unl/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/Unl/P, 3/Unl/L
MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L
Shock Absorbers	2/200/P&L
Lift Kit System	1/100/P&L

¹ Fastener torque coverage is limited to 2/Unl/P&L when torqued by Cummins-Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

² "Curbing damage" is defined as deformation (bending, buckling or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding sub-frame consisting of the frame rails, cross-members and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferable to another trailer VIN and coverage does not apply if the trailer is deemed to be a total loss, scrapped or otherwise not salvageable.

LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™ ¹	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ²	12-Years or Wearable Life/P
EX+ L and EX+LS Air Disc Brake™ ³	5/500/P, 1/Unl/L
EX+L Air Disc Brake Extended Standard Warranty ^{3,4}	5/500/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III.

² Based on stamped wear diameter max.

³ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

⁴ Applies only to calipers using friction: MA9300 (EX225LXXXCGXXX).

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
92N	1/Unl/P

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is:

- Typically, moderate mileage operation (less than 60,000 miles/year)
- An average of 3 to 30 miles between starts and stops
- Maximum grades of 12%
- Generally, on-road service (less than 10% off-road allowed)
- Category A job sites, terminals, docks and transfer sites (defined as pavement, concrete or maintained and hard packed gravel) or Category B job sites, terminals, docks and transfer sites (defined as loose or unmaintained sand, dirt or gravel; landfill; farm field; mud, or other similar surfaces)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Uni/P&L

FD-965	MFS-7-113C-N	MFS-12-132C-N	MFS-14G-122B-N	MFS-16-122A-N
FF-941	MFS-7-153C-N	MFS-12E-132C-N	MFS-14-122C-N	MFS-16-133A-N
FF-942	MFS-7-163C-N	MFS-12-143A-N	MFS-14F-122C-N	MFS-16-135A-N
FF-943	MFS-8-113B-N	MFS-12-144A-N	MFS-14G-122C-N	MFS-16-143A-N
FF-944	MFS-8-143A-N	MFS-12E-143A-N	MFS-14-124A-N	MFS-18-133A-N
FF-946	MFS-8-153B-N	MFS-13-122A-N	MFS-14-132B-N	MFS-18-135A-N
FF-961	MFS-8-163B-N	MFS-13-122B-N	MFS-14F-132B-N	MFS-18-193A-N
FF-966	MFS-10-122A	MFS-13B-122B-N	MFS-14G-132B-N	MFS-20-133A-N
FF-967	MFS-10-143A-N	MFS-13-122C-N	MFS-14-132C-N	MFS-20-135A-N
FG-941	MFS-10-144A-N	MFS-13B-122C-N	MFS-14F-132C-N	MFS-20-192A-N
FH-941	MFS-12-122A-N	MFS-13-132B-N	MFS-14G-132C-N	MFS-20-193A-N
FH-946 ¹	MFS-12E-122A-N	MFS-13-132C-N	MFS-14-142B-N	MFS-22-135A-N
FL-941	MFS-12-122B-N	MFS-13B-132B-N	MFS-14F-142B-N	MFS-22H-135A-N
FL-943	MFS-12E-122B-N	MFS-13B-132C-N	MFS-14G-142B-N	MFS-22-193A-N
MFS-6-151A-N	MFS-12-122C-N	MFS-13-143A-N	MFS-14-142C-N	MFS-22H-193A-N
MFS-6-153B-N	MFS-12E-122C-N	MFS-13-144A-N	MFS-14F-142C-N	
MFS-6-162B-N	MFS-12-124A-N	MFS-14-122A-N	MFS-14G-142C-N	
MFS-6-153C-N	MFS-12-132B-N	MFS-14-122B-N	MFS-14-143A-N	
MFS-6-162C-N	MFS-12E-132B-N	MFS-14F-122B-N	MFS-14-144A-N	

¹ Can also be used with reduced steer angles in tag position in Coach applications.

GENERAL SERVICE WARRANTY INFORMATION

Rear Drive Single Axles – 2/Unl/P&L

MS-17-13X	MS-21-14X	RC-23-162 ¹	RS-23-186	MS-26-616-SP
MS-17-14X	MS-23-17X	RC-23-165 ¹	RS-24-160	RS-30-185
MS-19-13X	RS-21-160	RS-23-160	RC-25-160	MS-30-616
MS-19-14X	RC-23-160	RS-23-161	RS-26-185	MS-30-616-SP
MS-21-13X	RC-23-161	RS-23-185	MS-26-616	RS-35-380

¹ 3/Unl/P&L if PreSet by Cummins-Meritor.

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-44-14X/P	RT-52-185 ¹	MT-70-380
MT-40-14T/P	RT-46-169	MT-58-616	RZ-188
MT-40-14X/P	MT-52-616	RT-58-185 ¹	

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem – 3/Unl/P&L

RT-40-160/P	RT-46-160/P	RT-46-164/P	RT-50-160/P	RZ-166
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Rear Drive Axles – 1/Unl/P&L

RND-14H	RND-16A
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Brake Components

Cam Q Series Trailer Brakes ¹	3/Unl/P, 1/Unl/L
Cam P ²	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ ^{1,2}	2/200/P&L
ASA	3/Unl/P
ASA ²	2/200/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ³	12-Years or Wearable Life/P
EX+ Air Disc Brake™ ⁴	2/Unl/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III or Chassis Protect.

² Applies to Tour Bus and Cross Country Coach only.

³ Based on stamped wear diameter max.

⁴ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Drivelines

RPL	4/400/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
92N	1/Unl/P

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

GENERAL SERVICE WARRANTY INFORMATION

Trailer Axles¹

Beam and Brackets ²	5/Unl/P, 1/Unl/L
TPX4000 Axle Series ³	10/Unl/P, 1/Unl/L
Wheel End Systems ⁴	
Standard System ⁵	1/Unl/P&L
AxlePak5	5/Unl/P&L
AxlePak7 ⁶	7/Unl/P&L
AxlePak10 ⁷	10/Unl/P&L

¹ For brake components and ABS coverage, refer to appropriate product warranties.

² 9000 Series is 3/Unl/P, 1/Unl/L

³ Structural components only excluding spindle wear. Spindle wear 5/Unl/P, 1/Unl/L.

⁴ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁵ When installed by Cummins-Meritor.

⁶ When specified with AxlePak7 wheel end system, coverage on Meritor Tire Inflation System (MTIS) thru-tee and stator is 7/Unl/P, 1/Unl/L.

⁷ AxlePak10 is limited to Intermodal Chassis applications equipped with TPX4000 series axles.

TAG/Pusher Axles¹

TQ, TR Beam and Brackets	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946 ²	2/Unl/P&L

¹ For brake components coverage, refer to appropriate product warranties.

² 3/Unl/P&L if sold with PreSet by Cummins-Meritor.

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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Trailer Mechanical Suspension Systems¹

IMS40 (Integrated Mechanical Suspension – Tandem) ²	1/Unl/P&L
IMS20 (Integrated Mechanical Suspension – Single) ²	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² All other suspension components refer to appropriate manufacturer's warranty.

Trailer Air Suspension Systems¹

MPA40 (Tandem Axle Parallelogram) ²	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty ³	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings ⁴	5/Unl/P, 3/Unl/L
Shock Absorbers	2/Unl/P&L
Lift Kit System	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² Fastener torque coverage is limited to 2/Unl/P&L when torqued by Cummins-Meritor.

³ "Curbing damage" is defined as deformation (bending, buckling or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding sub-frame, consisting of the frame rails, cross-members and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferable to another trailer VIN and coverage does not apply if the trailer is deemed to be a total loss, scrapped or otherwise not salvageable.

⁴ Raw wood applications 3/Unl/P, 1/Unl/L

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicles

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle¹
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Train
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus¹
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

¹ Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is:

- Moderate mileage operation (less than 60,000 miles per year)
- On/off-road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)
- An average of three (3) miles between starting and stopping

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Uni/P&L

FD-965	MFS-7-113C-N	MFS-12E-132C-N	MFS-14G-122B-N	MFS-16-122A-N
FF-941	MFS-7-153C-N	MFS-12-143A-N	MFS-14-122C-N	MFS-16-133A-N
FF-942	MFS-7-163C-N	MFS-12-144A-N	MFS-14F-122C-N	MFS-16-135A-N
FF-943	MFS-8-113B-N	MFS-12-155	MFS-14G-122C-N	MFS-16-143A-N
FF-944	MFS-8-153B-N	MFS-13-122	MFS-14-124A-N	MFS-18-133A-N
FF-946	MFS-8-163B-N	MFS-13-122B-N	MFS-14-132B-N	MFS-18-135A-N
FF-961	MFS-10-122A	MFS-13B-122B-N	MFS-14F-132B-N	MFS-18-192A-N
FF-966	MFS-10-143A-N	MFS-13-122C-N	MFS-14G-132B-N	MFS-18-193A-N
FF-967	MFS-10-144A-N	MFS-13B-122C-N	MFS-14-132C-N	MFS-20-133A-N
FG-941	MFS-12-122	MFS-13-132B-N	MFS-14F-132C-N	MFS-20-135A-N
FG-943	MFS-12E-122	MFS-13B-132B-N	MFS-14G-132C-N	MFS-20-192A-N
FH-941	MFS-12-122B-N	MFS-13-132C-N	MFS-14-142B-N	MFS-20-193A-N
FH-946	MFS-12E-122B-N	MFS-13B-132C-N	MFS-14F-142B-N	MFS-22-135A-N
FL-941	MFS-12-122C-N	MFS-13-143A-N	MFS-14G-142B-N	MFS-22H-135A-N
FL-943	MFS-12E-122C-N	MFS-13-144A-N	MFS-14-142C-N	MFS-22-193A-N
MFS-6-151A-N	MFS-12-124A-N	MFS-13-155	MFS-14F-142C-N	MFS-22H-193A-N
MFS-6-153B	MFS-12-132B-N	MFS-14-122	MFS-14G-142C-N	RF-16-145
MFS-6-162B	MFS-12E-132B-N	MFS-14-122B-N	MFS-14-143A-N	RF-21-160
MFS-6-162C	MFS-12-132C-N	MFS-14F-122B-N	MFS-14-144A-N	

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Front Drive Steer Axles – 2/Uni/P&L

MX-10-120	MX-12-120 EVO	MX-16-120	MX-19-140	MX-23-160
MX-10-120 EVO	MX-14-120	MX-18-120	MX-21-140	MX-23-810
MX-12-120	MX-14-120 EVO	MX-17-140	MX-21-160	

Front Drive Steer Axles – 1/Uni/P&L

MX-08-130-FV (FSD-08A)	MX-14-130-FV (FSD-14A)	MX-20-130-FV (FSD-20A)	MX-23-130-SD (SDA-2300)
MX-10-130-FV (FSD-10A)	MX-16-130-FV (FSD-16A)	MX-21-130-FV (FSD-21A)	
MX-12-130-FV (FSD-12A)	MX-18-130-FV (FSD-18A)	MX-21-130-SD (SDA-2100)	
MX-13-130-FV (FSD-13A)	MX-18-130-SD (SDA-1800)	MX-23-130-FV (FSD-23A)	

Rear Drive Axles – 2/Uni/P&L

MS-17-14X	RH-23-160	RS-23-186/380	MS-26-616-SP	RS-30-185/380
MS-19-14X	RS-23-160	RS-24-160	RS-26-185/380	MS-35-380
MS-21-14X	RC-23-161	RC-25-160	RC-26-633	RS-38-380
RS-21-160	RS-23-161	RS-25-160	MS-30-616	MT-58-616
RC-23-160	RS-23-185	MS-26-616	MS-30-616-SP	MT-58-616-SP

Rear Drive Axles – 1/Uni/P&L

RND-14H	RND-16A
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Rear Drive Tandem/Tridem Axles – 2/Uni/P&L

MT-34-14X/P	MT-44-14X/P	MT-52-616	MT-58-616	RT-70-380
MT-40-14T/P	RT-46-169	MT-52-616-SP	MT-58-616-SP	MT-70-380
MT-40-14X/P	RT-58-160	RT-52-185/380 ^{1,2}	RT-58-185/380 ^{1,2}	RZ-188

¹ Axle model designated will vary according to options and variations specified on these axles. Contact Cummins-Meritor Axle Applications Engineering for details.

² Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem – 3/Uni/P&L

RT-40-160/P/A ³	RT-46-160/P/A ^{1,3}	RT-46-164/P ^{2,3}	RT-50-160/P/A ³	RZ-166
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¹ U.S. only. Canadian warranty = 1/Uni/P for combination vehicles only.

² Axle model designated will vary according to options and variations specified on these axles. Contact Cummins-Meritor Axle Applications Engineering for details.

³ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

PTO – 1/Uni/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Transmission – 1/Unl/P&L

FAT 30

Brake Components

Cam P	3/Unl/P
Cam P	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™ ¹	3/Unl/P&L
Q+ Drum Brake™ ²	2/100/P&L
ASA	3/Unl/P
ASA ²	2/100/P
Hubs/Cast Drums and Other Wheel-End Components ³	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake ⁴	2/100/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III.

² Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

³ Based on stamped wear diameter max.

⁴ Warranty coverage for boots, seals, caps, bushings and pins is 2/100/P. Warranty coverage for pads is 1/100/P.

Gearboxes – 1/Unl/P&L

MGX-402	MGX-450	MGX-466	MGX-538
MGX-423	MGX-451	MGX-479	

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3124 (T-2119)	MTC-3312-FV (TC-270)
MTC-3106-FV (TC-137)	MTC-3203	MTC-3220-FC (TC-142)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/RTC-25)	MTC-4206-FV (TC-38)
MTC-3112-CV (548C)	MTC-3206-FV (TC-237)	MTC-4208
MTC-3116 (T-2111 through-shaft)	MTC-3206-CS (544)	MTC-4210
MTC-3118-FV (TC-180 and TC-180-23)	MTC-3208-GV (RTC-50)	MTC-4213
MTC-3118-CV (358)	MTC-3209-GV (MTC-60/RTC-60)	
MTC-3120-FV (TC-143)	MTC-3212-CV (315 and 548B)	

Trailer Axles¹

Beam and Brackets ²	5/Unl/P, 1/Unl/L
Wheel End Systems ³	
Standard System ⁴	1/Unl/P&L

¹ For brake components coverage, refer to appropriate product warranties.

² 9000 Series is 3/Unl/P, 1/Unl/L

³ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁴ When installed by Cummins-Meritor.

Trailer Air Suspension Systems¹

MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components ²	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Air Springs	2/200/P, 1/100/L
Bushings ²	5/500/P, 3/300/L
Shock Absorbers	2/200/P&L
Lift Kit System	1/100/P&L

¹ For axle coverage, refer to appropriate product warranties.

² Raw wood applications 3/Unl/P, 1/Unl/L

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

Fire and Emergency Typically Is:

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-135A-N	MFS-20-135A-N	MFS-22H-135A-N
FL-943	MFS-18-193A-N	MFS-20-193A-N	MFS-22-193A-N
MFS-18-133A-N	MFS-20-133A-N	MFS-22-135A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19-140	MX-21-140	MX-21-160	MX-23-160	MX-23-810
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Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-185	RC-25-160	RS-35-185 ¹
RS-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-161	RS-24-160	RS-30-185	

¹ 2/Unl/P&L if PreSet by Cummins-Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-46-160/P	RT-50-160/P	MT-58-616
RT-40-160/P	RT-46-164/P	MT-52-616	RT-58-185 ¹
MT-44-14X/P	RT-46-169	RT-52-185 ¹	MT-70-380 ²

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

² 2/Unl/P&L

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3124 (T-2119)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3206-FV (TC-237)	MTC-4206-FV (TC-38)
MTC-3111 (T-2111 through-shaft)	MTC-3206-CS (544)	MTC-4208
MTC-3112-CV (548C)	MTC-3208-GV (RTC-50)	MTC-4210
MTC-3118-FV (TC-180 and TC-180-23)	MTC-3209-GV (MTC-60/RTC-60)	MTC-4213
MTC-3118-CV (358)	MTC-3212-CV (315 and 548B)	
MTC-3120-FV (TC-143)	MTC-3312-FV (TC-270)	

FIRE AND EMERGENCY WARRANTY INFORMATION

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™ ¹	2/Unl/P&L

¹ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P.
Warranty coverage for pads is 1/100/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
92N	1/Unl/P

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

Transit Bus Typically Is:

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/300/P&L

FH-946 FH-941¹ MFS-12-155 MFS-13-155

¹ Commuter coach only – 2/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160 71163 RC-23-162¹ RS-21-160
 RC-23-161 79163 RC-23-165¹

¹ Commuter coach only – 2/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002 MC-16003 FH-946

Center Non-drive Axles – 5/300/P&L

MC-26000 71063 79063

Gearboxes – 1/Unl/P&L

MGX-450 MGX-451 MGX-538

Brake Components

Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™ ¹	2/100/P&L
ASA ¹	2/100/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake ²	2/100/P&L

Drivelines

RPL	3/Unl/P, 1/Unl/L
92N	1/Unl/P&L
MXL	1/Unl/P&L

¹ Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

² Warranty coverage for boots, seals, caps, bushings and pins is 2/100/P. Warranty coverage for pads is 1/100/P.

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Industrial and Off-Highway Service Vehicles

- Load-On/Load-Off
- Port Tractor
- Rail Yard Spotter
- Roll-On/Roll-Off
- Stevedoring Tractor
- Trailer Spotter
- Yard Jockey
- All and Rough Terrain Cranes
- Forestry
- Material Handling
- Specialized Heavy Haul
- Excavator
- Compactor
- Fertilizer Spreader
- Snow Blower
- Mining and Specialized Mining
- Rail Car Mover
- Loader
- Tow Tractor
- Pushback Tractor

Industrial and Off-Highway Service Typically Is:

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are not typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	FG - 941	FN - 951	MFS-20-192A-N	MFS-22-193A-N
FF - 943	FG - 943	FS-25	MFS-20-193A-N	MFS-22H-193A-N
FF - 961	FL - 941	MFS-20-133A-N	MFS-22-135A-N	MON-ZO FAMILY
FF - 966	FL - 943	MFS-20-135A-N	MFS-22H-135A-N	

Rear Drive Axles – 1/Unl/P

MT-14X ¹	RS-23-380	RS-30-185	RT-145 ¹
RS-23-186	RS-24-160	RS-30-380	RT-160 ¹

¹ 2/Unl/P for LO/LO Terminal Tractor applications

Planetary Axles – 1/Unl/P

MOB	MOE	MOH	MOT	MOZ
MOC	MOF	MOR	MOX	
MOD	MOG	MOS	MOY	

Gearboxes – 1/Unl/P&L

MGX-402	MGX-450	MGX-466	MGX-538
MGX-423	MGX-451	MGX-479	

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3118-FV (TC-180 and TC-180-23)	MTC-3208-GV (RTC-50)
MTC-3106-FV (TC-137)	MTC-3118-CV (358)	MTC-3209-GV (MTC-60/RTC-60)
MTC-3111 (T-2111 through-shaft)	MTC-3120-FV (TC-143)	MTC-3220-FC (TC-142)
MTC-3112-CV (548C)	MTC-3124 (T-2119)	
MTC-3116 (T-2111)	MTC-3206-FV (TC-237)	

Drivelines – 1/Unl/P

RPL MXL

Transmission – 1/Unl/P&L

FAT 30

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All

The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Cummins-Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Cummins-Meritor with suspension and interface brackets designed and/or attached by non-Cummins-Meritor parties, Cummins-Meritor warranty coverage does not apply to the brackets, bracket attachment methods and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles¹

Linehaul – King Pin Bushings 1yr/Unl P&L
All Other Vocations – King Pin Bushings Excluded

¹ King Pin Bushing wear excluded for all vocations.

Rear Axles

Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA

Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake

Brake lining wear and brake shoe “rust-jacking.”

Disc Brake

Pad wear, rotor wear.

Coverage Limitations

Product Description

All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Cummins-Meritor representative for specific details.

Front Axles

Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Cummins-Meritor.

Rear Axles

Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Cummins-Meritor. If yoke is not installed by Cummins-Meritor, then Cummins-Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Cummins-Meritor.

Rear Axles

The Cummins-Meritor breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake

Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30

Wearable life is up to the discard diameter of the drum.

Terms and Conditions

(1) What is Covered by this Commercial Warranty?

Meritor Heavy Vehicle Systems, LLC warrants to the owner (“Owner”) that the components listed in this publication, which have been installed by an Original Equipment Manufacturer (“OEM”) as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM’s vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner or the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Cummins-Meritor publication Maintenance Manual Number 1 and the applicable Cummins-Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

TERMS AND CONDITIONS

(2) Designation of Vocational Use Required

To obtain warranty coverage, each Owner must notify Cummins-Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Cummins-Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Cummins-Meritor directly. Failure to notify Cummins-Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Cummins-Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Cummins-Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Cummins-Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?

This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage or vocation from that which was originally approved by Cummins-Meritor), (II) accident, natural disaster, abuse or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity) or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals or lube levels). This warranty does not cover any component or part that is not branded by Cummins-Meritor. **For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.**

(5) Remedy

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Cummins-Meritor's option. Cummins-Meritor reserves the right to require that all applicable failed materials are available and/or returned to Cummins-Meritor for review and evaluation.

(6) Disclaimer of Warranty

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies

In no event shall Cummins-Meritor be liable for special, incidental, indirect or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Cummins-Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Cummins-Meritor service location. The dealer will inspect the vehicle and contact Cummins-Meritor for an evaluation of the claim. When authorized by Cummins-Meritor, the dealer will repair or replace during the term of this warranty any defective Cummins-Meritor component covered by this warranty.

(9) Entire Agreement

This is the entire agreement between Cummins-Meritor and the Owner about warranty and no Cummins-Meritor employee or dealer is authorized to make any additional warranty on behalf of Cummins-Meritor. This agreement allocates the responsibilities for component failure between Cummins-Meritor and the Owner.



Cummins Inc.
Box 3005
Columbus, IN 47202-3005
U.S.A.

cummins.com



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship Meritor Wabco ABS Brake System Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor Wabco warranty description shall apply.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

WARRANTY

MODEL YEAR 2021 VEHICLES



Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well-maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well-maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

How to Read Warranty Coverage (Example)

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
3	300	P

- The standard aftermarket warranty for WABCO products - including WABCO Original parts, WABCO Reman Solutions, ProVia quality aftermarket parts and WABCO retrofit solutions - is one year, parts only from in-service date when purchased from ZF distributor networks or its affiliates and/or subsidiaries.

WABCO

WARRANTY - MODEL YEAR 2021 VEHICLES

LINEHAUL/GENERAL SERVICE WARRANTY INFORMATION

LINEHAUL/GENERAL SERVICE VEHICLES

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler (Truck)
- Cross Country Coach
- Doubles
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Pipe Hauler
- Platform Auto Hauler
- Pumper
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Truck
- Triples
- Tour Bus
- Wrecker

LINEHAUL TYPICALLY IS

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction

GENERAL SERVICE TYPICALLY IS

- Moderate mileage operations (less than 60,000 miles/year)
- Well maintained public roads (less than 10% off-road)
- Less than three (3) stops per mile

WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Trailer Lift Axle Control Valve	
Trailer Control Line Filter ³	
Air Compressors (ALL) ²	2/200/P&L
Air Dryers (ALL)	3/300/P&L
Aerodynamics	
OptiFlow [®] TrailerSkirt	2/UnU/P
OptiFlow [®] Trailer Tail and AutoTail	2/UnI/P
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Electronic Braking System (EBS)	
Electronic Stability Control (ESC)	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Trailer ABS (Anti-Lock Braking System) ³	
Driveline Suspension Control	
Clutch Controls	2/200/P&L
Leveling Valves	1/100/P&L
OptiRide [®] Automated Manual Transmission (AMT)	
OptiRide [®] Electronically Controlled Air Suspension (ECAS)	3/300/P&L

WABCO Components ¹ (cont.)	
Safety	
OnGuardACTIVE [®]	3/300/P&L
OnLane [®]	
OnLaneALERT [®]	
OnSide [®]	
Trailer SafeStart [™]	
Trailer TailGUARD [™]	
Telematics	
TrailerCAST [™] Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit [™] Slack Adjuster	6/600/P
MAXXUS [™] Truck Air Disc Brake	5/500/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 17 and 19 Air Disc Brake	2/UnI/P and 1/UnI/L
Pan 22 Air Disc Brake	5/500/P and 1/L
TRISTOP [™] D Actuator w/ IBV or IRB	6/600/P
TRISTOP [™] D Actuator	3/300/P
UNISTOP [™] Actuator	2/200/P
Trailer MAXX22T [™] Air Disc Brake	5/500/P and 1/L

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

HEAVY SERVICE VEHICLES

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

HEAVY SERVICE TYPICALLY IS

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile



WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Air Compressors (ALL) ²	
Air Dryers (ALL)	
Trailer Control Line Filter ³	
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	
Trailer ABS Valve ³	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Driveline Suspension Control	
OptiRide [®] Electronically Controlled Air Suspension (ECAS)	2/200/P&L
Leveling Valves	1/100/P&L
Clutch Controls	2/200/P&L
Safety	
OnGuardACTIVE [®]	3/300/P&L
OnLane [®]	
OnLaneALERT [®]	
OnSide [®]	
Trailer SafeStart [™]	
Trailer TailGUARD [™]	
Telematics	
TrailerCAST [™] Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit [™] Slack Adjuster	2/200/P
MAXXUS [™] Air Disc Brake	1/Unl/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
Trailer MAXX22T [™]	1/Unl/P&L
TRISTOP [™] D Actuator w/ IBV	3/Unl/P
TRISTOP [™] D Actuator	2/200/P
UNISTOP [™] Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

WARRANTY - MODEL YEAR 2021 VEHICLES

INDUSTRIAL/OFF-HIGHWAY SERVICE WARRANTY INFORMATION

INDUSTRIAL AND OFF-HIGHWAY SERVICE TYPICALLY IS

- Low mileage operation³
- Vehicles are not typically licensed for highway use

Market	Common Application Types
Agriculture	Fertilizer Spreader, Tractor, Heavy Duty Ag Trailers, Harvester, Sprayer, Skid Loader, Silage Bagger, Slurry Wagons, Grain Cart
Airport Support	Pushback Tractor, Towing Tugs, Aircraft Tow Tractor, Refueling Trucks, Food Service Trucks, Baggage Tractors, De-Icing Equipment, Runway Clearing Equipment
Construction	All-Terrain Crane, Rough Terrain Crane, Excavator, Compactor, Wheel Loader, Road Roller, Motor Grader, Articulated Dump Truck, Rubber Tire Road Roller, Backhoe Loaders, Haul Trucks, Scraper Rough Terrain Forklifts, Trenchers, Drills
Forestry	Logging Forwarder, Kidder, Loaders, Yard Forklifts, Harvesters Fellers
Material Handling	Port Tractor, Rail Yard Spotter, Stevedoring Tractor, Trailer Spotter, Yard Jockey, Scissor Lift, Straddle Carrier, Manlift, Forklift, Boom Lift Telehandlers, Aerial Work Platforms
Mining	Specialized Mining, Excavator, Haul Truck, Underground Loader, Service Trucks, Wheel Loaders, Scrapers, Load Haul Dumps, Personnel Transports, Bolters, Scalars
Municipal	Street Sweeper, Utility Tractor, Utility Trucks, Tree Trimmers, Dump Trucks, Tow Trucks, Flat Bed Trucks, Winch Applications
Oil & Gas	Fracturing Trailer, Injector Heads, Top Drives, Jack/Lift Boats, Wireline Trucks, Load-On / Load-Off
Rail	Railcar Mover, Track Layers, Grinders, Platform Crane, Locomotive Railcars, Ballast Equipment, Winch Applications



WABCO Components ¹	
Air Management	
Air Brake Valves	2/Unl/P
Air Compressors (ALL) ²	
Air Dryers (ALL)	
Brake Actuation	
Air/Hydraulic Actuators	2/Unl/P
Master Cylinders	
Remote Actuators	
Slave and Wheel Cylinders	
Two Fluid Actuators	
Brake Locks	
Brake Locks (ALL)	2/Unl/P
Electric Brake Locks	
Lever Locks	
Braking Systems	
ABS (Anti-Lock Braking System) Air	1/100/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Driveline Suspension Control	
Clutch Controls	1/100/P&L
Leveling Valves	
Electrohydraulics & Controls	
Electronic Pedals	2/Unl/P
Electrohydraulic Brake Valves (EBV)	
Pressure Switches	
Hydraulic Braking Solutions	
Accumulator Charging Valves	2/Unl/P
Hydraulic Throttle Controls and Switches	
Modulating Brake Valves	
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
Caliper Disc Brakes	2/Unl/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
Multiple Disc Brakes	2/Unl/P
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ Equivalent hours of service limit: 2,000 hours for all components.

TERMS AND CONDITIONS

COVERAGE EXCLUSIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

This Warranty shall not apply to the following, but not limited to: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, damaged threads, cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (b) sensors damaged during removal when seized in block, or associated with sensor adjustments/ alignments, and (c) damage resulting from the use or installation of non-genuine WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or WABCO name plate, serial numbers or label identifying the device as a ZF product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

AIR DRYERS

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

AIR SYSTEM COMPONENTS

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

ABS, ELECTRONIC STABILITY CONTROL (ESC), ROLL STABILITY CONTROL (RSC), OPTIRIDE®, ONGUARD® AND ONLANE®, COLLECTIVELY “ELECTRONICS”

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues. Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

HYDRAULIC COMPONENTS

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

COVERAGE LIMITATIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

TOOLBOX PLUS™ DIAGNOSTIC SOFTWARE

Proper diagnostics of WABCO Electronics may require the latest version of TOOLBOX PLUS™. Additional labor due to use of an outdated version of TOOLBOX™ software and/or the time to purchase or install the latest version of TOOLBOX PLUS™ are not covered under product warranty.

WARRANTY - MODEL YEAR 2021 VEHICLES

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?

ZF CV Systems North America LLC and its North American subsidiaries and affiliates (ZF) warrant to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any distribution agreements and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/or service contract shall supersede ZF's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the ZF warranty has not expired under the terms stated above, the ZF warranty will be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized ZF distributor networks and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

(2) Designation of Vocational Use Required. To obtain warranty coverage, each Owner must notify ZF through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with ZF directly. Failure to notify ZF of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date. A second Owner and each subsequent Owner must also notify ZF as to the intended vocational use of the vehicle. This notification can be sent directly to ZF or through

the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use. Coverage under ZF's warranty requires that the application of products be properly approved pursuant to OEM and ZF, approvals.

- (3) What is the Cost of this Warranty? There is no charge to the Owner for this warranty.
- (4) What is not Covered by this Warranty? In addition to the items listed on "Coverage Exclusions," this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of (a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by ZF, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by ZF.
- (5) To obtain service. If the owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either ZF or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM dealer or ZF distributor networks' servicer. The dealer or ZF authorized servicer will inspect the vehicle and contact ZF for an evaluation of the claim. When authorized by ZF, the dealer or ZF authorized servicer will repair or replace during the term of this warranty any defective WABCO component covered by this warranty.
- (6) Disclaimer of Warranty and Limitation of remedies. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE LIMITED WARRANTY SET FORTH HEREIN IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR WARRANTY FOR HIDDEN OR LATENT DEFECTS, AND IN NO EVENT WILL ZF OR ANY OF ITS AFFILIATES BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, PROGRESSIVE, SPECIAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

- (7) Legal action. Any legal action or claim arising from or related to this Warranty, in contract or otherwise, must be commenced within one year from the accrual of that cause of action, or be barred forever. Any dispute arising in connection with this agreement shall be governed by and construed according to the laws of the State of Michigan and be brought, heard and determined exclusively in either the Circuit Court for the County of Oakland, State of Michigan or the United States District Court for the Eastern District of Michigan. The parties stipulate that the referenced venues are convenient.
- (8) Remedy. The exclusive remedy under this warranty shall be the repair or replacement of the defective component at ZF's option. ZF reserves the right to require that all applicable covered components are available and/or returned to ZF for review and evaluation. THE MAXIMUM LIABILITY, IF ANY, OF ZF FOR ALL DAMAGES, INCLUDING WITHOUT LIMITATION CONTRACT DAMAGES, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORT, IS LIMITED TO AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE OF THE PRODUCT and where indicated in the product and application warranty information above, the inclusion of labor is limited to the standard repair time. THE PARTIES ACKNOWLEDGE AND AGREE THAT THE LIMITATION OF DAMAGES PROVISION SET FORTH IN THIS PARAGRAPH SURVIVES BETWEEN THE ORIGINAL END USER AND ZF EVEN IF THE EXCLUSIVE REMEDY SET FORTH ABOVE IS DEEMED TO FAIL OF ITS ESSENTIAL PURPOSE. ZF may change the design or make improvements to its Products without incurring any warranty obligation for previously manufactured Product .
- (9) Entire Agreement. This is the entire agreement between ZF and the Owner about warranty and no, ZF employee, or dealer is authorized to make any additional warranty on behalf of ZF unless in writing and signed by an authorized representative of ZF.





**For further product details contact your distributor or the
WABCO Customer Care Center at 855-228-3203.**

About ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and \$3.4 billion (WABCO). For more information, visit: www.wabco-na.com



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity

Custom Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus. This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship

Command Zone Electronics

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Command Zone control modules shall be free from failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

54 Months Material and Workmanship

Camera System

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Sharpvision camera system installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of delivery.
Warranty Period Ends After:	Fifty - Four (54) months
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

NEW PRODUCT WARRANTY



**PARTICIPATING OEM SALES
DISTRIBUTOR SALES**

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES** — This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED** — The warranty covers repairs or replacement, at Allison Transmission’s option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section “APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE.”
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION** — Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

Demonstration Service - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0-24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0-24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0-36	No Limit	No Charge	No Charge
HT with Electronic Controls	0-60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0-60	No Limit	No Charge	No Charge

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
 - Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
 - Misuse of the vehicle;
 - Installation into unapproved applications and installations;
 - Alterations or modification of the transmission or the vehicle, and
 - Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
 - Anything other than defects in Allison Transmission material or workmanship

NOTE: This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.

- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
 - Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
 - Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship - Transmission Oil Cooler Three (3) Year Collateral Damage Coverage

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to \$10,000 per occurrence is available for the first three (3) years.
Warranty Begins:	The date of delivery to the first retail purchaser.
Warranty Period Ends After:	Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p> <p>Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.</p> <p>Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.</p> <p>Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of \$700 to remove, replace, or repair the oil cooler.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



UNITED PLASTIC FABRICATING
Limited Lifetime Warranty

Effective as of January 1, 2024

1. General. United Plastic Fabricating, Inc. (the "Company") warrants to the owner (the "Owner") that the products set forth on Exhibit A, attached hereto (the "Product") will be reasonably free from defects in materials and workmanship for the service life of the Product. This Limited Lifetime Warranty (the "Warranty") only applies to Company Products that are: (a) owned by a federal, state, county or local government, a volunteer fire department or dedicated commercial fire service operation; (b) continuously and actively used in emergency response and/or fire suppression vehicles; and (c) used, stored, handled and installed in the manner recommended by Company.

2. Warranty Obligations. Subject to the exclusions and limitations set forth in this Warranty, Company will, at its option, repair or offer a one (1) time replacement of the Product without charge, if the Product fails or does not perform as warranted during the warranty period due to a manufacturing defect or a defect in materials. Repair or replacement shall include reasonable labor charges necessary to repair or replace the defective Product but shall not include: (a) the costs associated with removal of the Product from the vehicle or the cost to otherwise provide access to the Product in the vehicle; (b) the cost associated with any required upgrades the vehicle (including, without limitation, upgrades required to strengthen the vehicle's frame); or (c) travel costs, except as provided by Section 3. Company's obligation as to repair or replacement shall further be limited to repair or replacement with the models of the Product that are available at the time of the repair or replacement, and shall be limited to the repair or replacement of only the specific Product that fails due to a manufacturing defect. In the event a Product becomes unavailable or cannot be supplied by Company for any reason a substitute Product of equal quality and functionality of the subject Product may be substituted by Company. Any repaired Product shall remain subject to this Warranty and any repair shall not extend the warranty period in any manner or start a new warranty period. Any Product that is replaced by Company shall be excluded from this Warranty. In no

event shall Company be required to expend, in any one (1) or series of expenditures, more than the purchase price of the Product to repair or replace a defective Product. Amounts expended by Company shall include all amounts paid by Company in connection the repair or replacement, including without limitation, amounts paid to third-parties, material costs, incidental costs and travel costs (except as provided by Section 3).

3. Travel; Expenses; Product Access. Company shall be responsible for any travel costs incurred to repair or replace the Product provided that: (a) the Product is located in the continental United States or Canada; and (ii) the warranty claim is initiated prior to the date on which NFPA 1912 Standards (Annex D) recommends replacement of the Product. All other travel costs incurred by Company or its agents to repair or replace the Product shall be the responsibility of the party asserting the warranty claim. Company reserves the right to require, as a condition to undertaking any repair or replacement: (y) pre-payment of its anticipated travel costs; and (z) satisfactory arraignments concerning scheduling and access to the Product. If the subject Product is located in an area of the world considered, in Company's sole discretion, to be unsafe Company may refuse to process the claim or require relocation of the Product, at no expense to Company, to an area where such repairs can be performed safely by Company or its agents. In the event Company or Company's agents are dispatched to repair or replace a defective Product and the vehicle in which the Product has been installed is not available or the Product is not readily accessible, for any reason, Company or Company's agents, as the case may be, shall be immediately reimbursed for all expenses incurred therewith.

4. Exclusions: Products must be stored, handled, installed, used and maintained in accordance with instructions provided by Company, and this Warranty is conditioned upon compliance with all such instructions. This Warranty does not cover defects caused by: (a) improper installation; (b) modification, alteration or repair of the Product by any unauthorized third-party; (c) misuse, including, without limitation, improper

storage or handling of the Product (e.g. excessive exposure to UV rays); chemical abuse (e.g. harsh cleansers and solvents), thermal abuse or shock (e.g. excessive heat or cold); (d) damage not resulting from manufacturing defects that occur while the Product is not in Company's possession (e.g. accidents); or (e) unreasonable or unintended use of the Product. Copies of the Company's operation and maintenance instructions are available on the Company's website <https://www.unitedplastic.com/upf-documents/>

5. Disclaimer. THE WARRANTIES SET FORTH HEREIN ARE THE ONLY WARRANTIES MADE BY COMPANY IN CONNECTION WITH THE PRODUCT. COMPANY CAN NOT AND DOES NOT MAKE ANY IMPLIED OR EXPRESS WARRANTIES WITH RESPECT TO THE PRODUCT, AND DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PRODUCTS SOLD BY COMPANY ARE SOLD ONLY TO THE SPECIFICATIONS SPECIFICALLY SET FORTH BY COMPANY IN WRITING. OTHER THAN THE LIMITED WARRANTY SET FORTH HEREIN, COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. COMPANY'S SOLE OBLIGATION UNDER THIS WARRANTY SHALL BE REPAIR OR REPLACEMENT OF NON-CONFORMING PRODUCT. BUYER ASSUMES ALL RISK WHATSOEVER AS TO THE RESULT OF THE USE OF THE PRODUCT PURCHASED, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCTS OR SUBSTANCES.

6. Limitation of Liability. NO CLAIM BY OWNER OF ANY KIND, INCLUDING CLAIMS FOR INDEMNIFICATION, SHALL BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT IN RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL COMPANY BE LIABLE TO OWNER IN TORT, CONTRACT OR OTHERWISE, FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, ANY OBLIGATION OF COMPANY TO REPAIR OR REPLACE ANY CHASSIS, SUB-FRAMES, BODIES, VALVES, DUMPS, HOSES, PRESSURE VACUUM VENTS OR OTHER SIMILAR COMPONENTS), RELIANCE, STATUTORY, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOSS OF USE, LOSS OF TIME,

LOSS OF REVENUES, INCONVENIENCE, LOSS BUSINESS OPPORTUNITIES, OR DAMAGE TO GOOD WILL OR REPUTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR SUCH DAMAGES COULD HAVE BEEN REASONABLY FORESEEN, IN CONNECTION WITH, ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS SOLD HEREUNDER, OR FOR ANY LIABILITY OF BUYER TO ANY THIRD PARTY WITH RESPECT THERETO.

7. Reformation. If any term or provision of this Warranty shall be held or deemed to be, or shall in fact be, invalid, inoperative, illegal or unenforceable as applied in any case or in any jurisdiction or jurisdictions because of the conflicting nature of any provision with any constitution or statute or rule of public policy or for any other reason, then: (a) such circumstance shall not have the effect of rendering the provision or provisions in question invalid, inoperative, illegal or unenforceable in any other jurisdiction or in any other case or circumstance or of rendering any other provision or provisions herein contained invalid, inoperative, illegal or unenforceable to the extent that such other provisions are not themselves actually in conflict with such constitution, statute or rule of public policy; and (b) any such invalid, inoperative, illegal or unenforceable provision shall be reformed and construed in any such jurisdiction or case so that such provision would be valid, operative and enforceable to the maximum extent permitted in such jurisdiction or case.

8. Headings. The headings contained herein are for convenience and reference only, and shall be given no effect in the interpretation of any term or condition of this Warranty.

9. Submitting a Warranty Claim. To request coverage under this Warranty you must submit a claim through Company's website:
<https://www.unitedplastic.com/contact/product-support/>

10. Transferability. This Warranty is transferable and entitles the transferee to coverage for the remainder of the original warranty period.

11. Modification. This Warranty may be modified (a) as set forth on a binding sales order for the Product or (b) by a written agreement between Company and the Owner.

Exhibit A

Covered Product List

- Poly-Tanks®
- PolySide® Wetside Tanks
- Defender™ Skid Tanks
- Ellip-T™ Elliptical Tanks
- ARFF Tanks



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity Apparatus Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The apparatus body shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus. This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION

Warranty:

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is \$ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

Limited Wet Paint Match Adhesion Warranty

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of \$ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

- 1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.
- 2./ Corrosion of the substrate due to paint system failure.
- 3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

- 1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.
- 2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.
- 3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.
- 4./ Scratches, chips, abrasions, or dents from any source.

This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.



Warranty Statement

Effective May 30, 2020

Subject to the following general and specific terms and conditions, Hale Products, Inc. ("Seller") hereby warrants to the original Purchaser¹ that Products sold under Hale and Class 1 brands will be free of defects in material and workmanship for the applicable Warranty Period. General terms and conditions applicable for all Products are set forth under the heading **General Terms and Conditions** below. Product specific terms and conditions, including Warranty Periods and Warranty Coverages, are set forth in the Tables following the **General Terms and Conditions**.

General Terms and Conditions

The following limitations, exclusions, procedures, and other terms and conditions shall apply for all Products: Warranty is voided if:

- Product is used for an application, with products or in a manner other than the application, products, and manner for which such Product is designed and intended
- Product is subjected to a use, service, condition or environment other than a use, service, condition or environment for which such Product is designed and intended
- Product is not properly installed
- Product is not properly tested and maintained in accordance with Seller's product manuals and supplemental instructions and guidelines, applicable industry standards and guidelines, and applicable legal and regulatory requirements
- Product is altered, modified, serviced (except routine maintenance performed in accordance with Seller's instruction manual for Product and Industry accepted standards and guidelines), or repaired by a person other than Seller or a person authorized by Seller to make such alteration or modification or perform such service or repair
- Seller is not paid the full amount of the purchase price for Product when due.

No Warranty covers:

- Ordinary wear and tear
- Failure due to compliance with a specification or design provided or required by Purchaser
- Failure due to improper operation, excess pressure, excess voltage or other similar cause
- Failure due to operator error
- Damage during or after shipment and failure attributable thereto or resulting there from
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any part, component or equipment not supplied by Seller
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any third party (e.g., not Hale or Class 1 brand) part, component, Product or equipment, whether or not combined, packaged, incorporated, installed or used with a Hale or Class 1 brand part, component, Product or equipment.

Seller shall have no obligation under any Warranty unless Purchaser promptly notifies Seller of the failure giving rise to the Warranty claim, such notice is received by Seller within the applicable Warranty Period, and Seller is provided with such information, data and records (including, but not limited to, in service date, run hours, and service and repair records) as Seller may reasonably request in evaluating the Warranty claim. The notice of failure must be given in writing, identify the Product claimed to be defective (including serial number, if any), and describe in reasonable detail the circumstances surrounding the failure.

Repaired Product and replacement Product shall be warranted only for the remainder of the original Warranty Period.

¹ The "original Purchaser" is the original purchaser from Hale Products, whether the original purchaser is a distributor, dealer or other reseller, an OEM, or an end user.

Seller reserves the right to use reconditioned parts for Warranty repairs and to use reconditioned Products for Warranty replacements



Warranty Statement

Effective May 30, 2020

Seller shall have the right to physically inspect Product claimed to be defective. If requested by Seller, Purchaser shall deliver the Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. In such event, Seller shall issue to Purchaser a Return Materials Authorization (RMA) for the Product to be delivered. The Product must be delivered to Seller within 30 days of issuance of the RMA. The RMA number must be included with the Product when delivered to Seller. Failure to make timely delivery to Seller of the Product claimed to be defective shall void any Warranty.

Purchaser or its customer shall be responsible for all freight and shipping charges in connection with the delivery of Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. Product claimed to be defective must be shipped by Purchaser freight prepaid, and Purchaser shall bear all risk of loss or damage during shipment.

Repaired and replacement Product and parts will be shipped to Purchaser freight collect, unless a determination is made prior to shipment that the warranty claim is valid, in which case Product and parts will be shipped to Purchaser freight prepaid from Supplier. Repaired or replacement Product will be shipped back to purchaser via UPS ground or IDEX approved standard freight. If Purchaser requires expedited UPS shipment, Purchaser will cover the difference between ground and service selected costs. Purchaser shall bear all risk of loss or damage for all freight collect shipments.

When a warranty claim is confirmed by Hale's Quality department, Hale will issue a credit for freight costs under the following conditions:

- Product was shipped by Purchaser freight prepaid to Supplier. Purchaser to provide a copy of paid freight bill upon Hale's request.
- Repaired or replacement Product was shipped to Purchaser freight collect. If Purchaser required expedited shipment, the difference between ground and expedited service costs will be deducted from total credit.

If requested to do so by Purchaser, Seller may, at its sole option and in its sole discretion, supply a replacement Product or part to Purchaser prior to making a final determination as to whether Warranty Coverage is available. If Seller ultimately determines that no Warranty Coverage is available for the Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser or its customer will be required to purchase the replacement Product or part that has been supplied to it by Seller at the price at which Purchaser is then entitled to purchase such Product or part under the Supply Agreement.

If Seller ultimately determines that no Warranty Coverage is available for a Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser shall have the option of either (i) having the Product returned to it freight collect, without repair or replacement, or (ii) if Seller determines that the Product is repairable, have the Product repaired by Seller or another party designated by it on a time and materials basis at Seller's then current standard charges for non-warranty repairs and then returned to Purchaser freight collect.

SELLER'S WARRANTY AS SET FORTH HEREIN IS SELLER'S SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT ALL OF WHICH OTHER WARRANTIES ARE EXPRESSLY EXCLUDED.

THE RIGHTS AND REMEDIES SET FORTH HEREIN ARE THE SOLE AND EXCLUSIVE RIGHTS AND REMEDIES AGAINST SELLER. EXCEPT FOR THE SPECIFIC LIABILITIES AND OBLIGATIONS



Warranty Statement

Effective May 30, 2020

PROVIDED HEREIN, SELLER SHALL HAVE NO LIABILITY OR OBLIGATION WITH RESPECT TO ANY PRODUCT CLAIMED TO BE DEFECTIVE IN ANY MANNER.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, LOST OR UNREALIZED SALES, REVENUES, PROFITS, INCOME, COST SAVINGS OR BUSINESS, LOST OR UNREALIZED CONTRACTS, LOSS OF GOODWILL, DAMAGE TO REPUTATION, LOSS OF PROPERTY, LOSS OF INFORMATION OR DATA, LOSS OF PRODUCTION, DOWNTIME, OR INCREASED COSTS, IN CONNECTION WITH ANY PRODUCT, EVEN IF SELLER IS ADVISED OR PLACED ON NOTICE OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ANY ESSENTIAL PURPOSE OF ANY PRODUCT.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*	Warranty Period	Coverage**	
Pumps Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units)	Non-Marine Fire Service Applications	Earlier of (i) 5 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 5-1/2 years from date of shipment of Product to original Purchaser. Labor is only covered for the first two (2) years of this warranty coverage.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			At time pump is ordered, original Purchaser may take Standard Warranty at no charge or purchase Extended Warranty for an additional charge which will be quoted by Seller at original purchaser's request at time of order. Under Standard Warranty, Seller will cover parts and labor for first 2 years of Warranty Period and parts only (no labor) for remainder of the Warranty Period. Under Extended Warranty (if purchased by original Purchaser), Seller will cover parts and labor for the full Warranty Period. When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Pump Accessories Labor Warranty Guide for details on issues covered and fees paid.
	Marine and Other Application	Earlier of (i) 2 years from the date of shipment of Product to original Purchaser, or (ii) 2,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Engine Driven Units (Excluding Engines ***)	Pump Ends Backpacks Floats	If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. Repair labor is included but any other labor (including removal and re- installation) and mileage are excluded. Original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller). Seller's approval of repair estimate is required prior to performance of repair work.
		If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	HP Portables	If not used for rental or contracting, 3 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. See Hale Portable Pump Labor Warranty Guide for details on issues covered and fees paid
		If used for rental or contracting, earlier of (i) 6 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Cross-Chassis Skids Trailer Units	Earlier of (i) 12 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
Pump Modules	Pump Body Weldments, Stainless Manifolds, and Fabricated <u>non-painted</u> or powder coated panels	10 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed (including cracks resulting from stress and rust through of panels) during Warranty Period due to a defect in material or workmanship. No labor is included. Pump modules are built to original Purchaser's specification or design. Although individual Hale and Class 1 brand components used for pump modules comply with NFPA standards, pump modules are not NFPA compliant. Original Purchaser is solely responsible for (i) ensuring finished pump houses are NFPA complaint and adhere to industry accepted standards and guidelines, and (ii) supplying manuals that include appropriate directions, instructions and warnings concerning pump house operation.
	Fabricated painted or powdered coated panels	2 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed from paint, finish, and corrosion during Warranty Period due to a defect in material or workmanship. No labor is included.
Foam SmartFoam, SmartCAFS, CAFS Systems, SmartATP, and EZ Fill		3 years from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. Datalogger download from Product may be requested to determine cause of defect.
Foam FoamLogix Systems		1 year from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pump Repair & Replacement Parts	Ordered for service and repair	90 days from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pressure Gauges		3 years from date of shipment of Product to the original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Plumbing		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Valves	Akron Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Class 1 Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Hale Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
	SVS Torrent Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. 2 years from date of shipment of Product to original Purchaser on seal.	Repair or replacement of Product that Hale determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Electronics		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Monitors	Akron	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
SafeBuy Modules Bundles	QMAX/QMAX-XS Pump Non-Marine Fire Service Applications	Earlier of (i) 8 years from in service date of Safebuy QMAX/QMAX-XS bundle in the vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser. This is predicated on the end user supplying Hale with their yearly service and pump testing records by the end of each calendar year.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			Under Safebuy Warranty, Seller will cover parts and labor for earlier of (i) 8 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser. When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Gearbox Labor Warranty Guide for details on issues covered and fee paid.
SAM Bundles- Pump with Loose Valves, Kits or Modules	Pumps-Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units) Non-Marine Fire Service Applications	Earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			Under SAM Warranty, Seller will cover parts and labor for earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.		
Product Specific Warranty Terms and Conditions		
Product*	Warranty Period	Coverage**
SAM Bundles- Pump with Loose Valves, Kits or Modules		When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Labor Warranty Guides for details on issues covered and fee paid.
Akron Electric Valve Actuators and Navigator Pros	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Electronics	4 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.

*When Products are combined to form a module or package, each Product will have its own separate Warranty Period and Warranty Coverage

** For each Product, Seller will have the option to refund to Purchaser (in cash or by credit) the purchase price Seller was paid for such Product, less depreciation determined on a straight line basis over the Warranty Period, in lieu of repair or replacement (including, when applicable, labor). The decision whether to repair, replace or refund (and, if there is a refund, whether to refund in cash or by credit) shall be made by Seller in its sole discretion.

*** Seller makes no warranty with respect to engines. Any warranty with respect to engines is limited to whatever warranty may be provided by the engine manufacturer.



Ten (10) Year Material and Workmanship
Stainless Steel Piping
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Table with 2 columns: Label (Coverage, Warranty Begins, Warranty Period Ends After, Conditions and Exclusions) and Description (Stainless steel piping shall be free from structural failures... The date of the original purchase invoice... Ten (10) Years - or - 100,000 Miles... Pierce's obligation under this warranty is limited to repairing or replacing without charge... This warranty does not cover the use of fluoroprotein (FP) type foam...)

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

- (a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce...
(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions...
(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce...
(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period...

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use.



One (1) Year Material and Workmanship Foam System & Five (5) Year Material and Workmanship Control Head

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Limited warranty 1 year parts and labor for the foam system and 5 years parts and labor for the control head.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	One (1) Year & Five (5) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p>

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Custom Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

One (1) Year Material and Workmanship Graphics Fading and Deterioration

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Each graphic lamination shall be free from defects in material workmanship, fading, and deterioration.
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	One (1) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



DEALER SUPPLIED PRODUCT / SERVICES LIST

EXHIBIT D

PROPOSAL INTRODUCTION

With over three decades of industry expertise, Golden State Fire Apparatus, Inc. (GSFA) proudly stands as the premier authorized dealership for top-tier fire apparatus in Central and Northern California. Our steadfast commitment to detail and customer satisfaction has earned us a trusted reputation among first responders.

We sincerely appreciate the opportunity to present this comprehensive proposal for a PIERCE MANUFACTURING, INC. ENFORCER TYPE 1 FIRE ENGINE. Your consideration of this proposal is greatly valued, and we are eager for the opportunity to support your department with the highest level of excellence and professionalism.

DEALER-SUPPLIED PRODUCTS AND SERVICES

Golden State Fire Apparatus Inc. (GSFA) will furnish the following items and/or services before final delivery so that all necessary components and support are in place, contributing to an efficient final delivery process. Please refer to the detailed list below for a comprehensive overview of the products and/or services included:

AUTHORIZED MANUFACTURER

In accordance with the State of California Vehicle Code, specifically Section 11701, it is mandated that "every manufacturer of a vehicle subject to registration shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number." The manufacturer, as of the proposal submission, holds a valid license in compliance with this requirement and is prepared to furnish a copy upon request. This adherence to regulatory standards ensures that the manufacturer maintains a current and official status, promoting transparency and compliance with legal requirements throughout the duration of the proposal and subsequent processes.

AUTHORIZED DEALERSHIP

In compliance with the State of California Vehicle Code, specifically Section 11701, it is mandated that "a dealer in vehicles of a type subject to registration shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number." Golden State Fire Apparatus, Inc. possesses a valid license at the time of the bid, as detailed above, and can promptly provide a copy upon request. This adherence to regulatory standards ensures that the dealership maintains a current and official status, promoting transparency and compliance with legal requirements throughout the duration of the proposal and subsequent processes.

AUTHORIZED SALES REPRESENTATIVE

In accordance with the State of California Vehicle Code, specifically Section 11800, it is expressly prohibited for any individual to function as a vehicle salesperson without obtaining a license issued by the Department of Motor Vehicles (DMV). The representative, at the time of

proposal, holds a valid vehicle salesperson's license and is ready to furnish a copy upon request. This adherence to regulatory standards ensures that the sales representative maintains a current and official status, promoting transparency and compliance with legal requirements throughout the bidding process and subsequent phases.

VEHICLE REGISTRATION

In adherence to the State of California Vehicle Code Section 11739, it is mandated that the "dealer of a new motor vehicle sale is responsible for applying for the title, securing vehicle registration, and obtaining license plates for the Customer" through the Department of Motor Vehicles (DMV). Being a factory-authorized dealer of the vehicle being sold, Golden State Fire Apparatus, Inc. is duly authorized to register the vehicle with the State of California as a new vehicle manufacturer.

GSFA is committed to facilitating an excellent vehicle ownership experience for the customer. As such, we will manage all necessary applications and complete all transfer papers, including the application for California Exempt "E" license plates. This approach ensures compliance with regulatory requirements and a hassle-free registration process for our valued customers.

WEEKLY PROGRESS PHOTOGRAPHS

GSFA is committed to ensuring transparency and comprehensive reporting throughout the construction process of the apparatus. To achieve this, GSFA will provide weekly photographs capturing various stages of the apparatus or major components under construction.

Commencing from the initiation of the manufacturing process, the photographic documentation will extend throughout the entire production phase by the manufacturer. These weekly reports will offer a visual representation of the ongoing progress of the apparatus, highlighting key milestones and showcasing unique features and aspects as construction unfolds.

Our focus is to provide customers with a clear and detailed insight into the evolution of the apparatus, fostering a deeper understanding of the craftsmanship and distinct elements incorporated during the construction process. This commitment to regular, visual updates aims to enhance communication and transparency regarding the progress of the apparatus.

PRE-CONSTRUCTION, FACTORY VISIT

A pre-construction trip to the manufacturing facility is included for three (3) Customer representatives. The primary objective of review and finalize, in detail, the specifications prior to the start of production. The pre-construction trip is anticipated to span three (3) days and two (2) nights, with scheduling details collaboratively determined between GSFA and the Customer.

GSFA will cover the costs associated with airfare, lodging, meals, and ground transportation during the stay at the manufacturer's location. Air travel will be arranged from one of the following airports: Sacramento, San Francisco, or San Jose.

It is important to note that certain costs, including Customer ground transportation within California, airport parking, luggage fees, and incidental expenses during travel to the factory, fall within the responsibility of the Customer. Furthermore, flight reservations are non-refundable, and in the event of a cancellation post-booking, the Customer will bear all associated costs, encompassing not only the original ticket cost but also any change or cancellation fees levied by the airline and/or travel agency. Additionally, flight reservations are non-transferable. This delineation aims to establish clarity and transparency regarding the allocation of responsibilities and potential costs associated with the pre-construction trip.

FINAL INSPECTION, FACTORY VISIT

A final inspection trip to the manufacturing facility is included for three (3) Customer representatives. The primary objective of this visit is to ensure the adherence of the apparatus to specifications and promptly identify any potential deficiencies. The final inspection trip is anticipated to span three (3) days and two (2) nights, with scheduling details collaboratively determined between GSFA and the Customer.

GSFA will cover the costs associated with airfare, lodging, meals, and ground transportation during the stay at the manufacturer's location. Air travel will be arranged from one of the following airports: Sacramento, San Francisco, or San Jose.

It is important to note that certain costs, including Customer ground transportation within California, airport parking, luggage fees, and incidental expenses during travel to the factory, fall within the responsibility of the Customer. Furthermore, flight reservations are non-refundable, and in the event of a cancellation post-booking, the Customer will bear all associated costs, encompassing not only the original ticket cost but also any change or cancellation fees levied by the airline and/or travel agency. Additionally, flight reservations are non-transferable. This delineation aims to establish clarity and transparency regarding the allocation of responsibilities and potential costs associated with the final inspection trip.

DELIVERY TO AUTHORIZED SERVICE FACILITY

GSFA will deliver the apparatus to our Northern California facility located in Sacramento for a comprehensive dealer preparation inspection. This service, conducted at the expense of GSFA, aims to have the apparatus in optimal condition at the time of final delivery.

To ensure the proper break-in of all components while still under warranty, the apparatus will be delivered under its own power. The use of rail or truck freight for transportation is deemed unacceptable in order to uphold the highest standards of quality assurance during the delivery

process. This approach not only aligns with warranty considerations but also emphasizes the commitment to delivering a fully operational apparatus to our valued customers.

PRE-DELIVERY SERVICE

Before reaching its final destination, the apparatus undergoes a pre-delivery service conducted by Golden State Emergency Vehicle Service, Inc. This service is designed to tap into the expertise of an external source, providing an experienced perspective that enhances the thoroughness of your final inspection. Our pre-delivery service covers the following areas:

1. Engine Compartment and Undercarriage:
 - Inspect for broken mounting brackets.
 - Inspect and identify locations of any fluid leaks.
 - General inspection of hoses, wiring, and linkage, focusing on potential wear points.
 - Verify correct fluid capacities for engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear-end fluid, pump transmission oil, and primer oil if applicable.
 - Re-torque U-bolts to OEM specifications if equipped with leaf spring suspension (Pierce Custom chassis only).

2. Interior:
 - Confirm proper operation of doors, windows, and locks, ensuring accurate adjustment.
 - Confirm proper operation of seatbelt alarms.
 - Confirm proper operation of all compartment door alarms, as well as hose bed cover, ladder rack, light tower, and deck gun alarms.
 - Ensure functionality of auxiliary power points, interior lighting, mirror, and seat controls, and if applicable - headsets and radios.
 - Inspect upholstery for quality and condition.

3. Exterior:
 - Address reasonable paint scratches or chips.
 - Tighten any loose hardware.
 - Inspect tires and wheels, ensure proper pressure.
 - Check compartment doors for proper operation and latch fit.
 - Lubricate compartment door locks if applicable.

4. Road Test:
 - Conduct a road test with a full water tank (if applicable), covering approximately twenty miles on both city and highway roads.
 - Perform a DOT compliant brake test to verify the system is holding air.

- Inspect brake condition, wheel seals, and ensure drive train components reach optimal operating temperatures.
 - Conduct an Allison Transmission self-diagnostic to verify fluid level, fluid and filter life, and check for fault codes.
5. Electrical:
- Verify the operation of all lights, sirens, and other electrical accessories.
6. Pump:
- Operate the Pressure Governor or Relief Valve, transfer valve, and check pump shift.
 - Inspect water tank, pump and plumbing for leaks and calibrate the water level gauge.
 - Ensure smooth operation of all discharge, suction, and drain valves.
7. Pierce Husky™ Foam System:
- If applicable, draft and inject clean water to ensure proper operation of the foam pump.
8. Fuel and DEF Tanks:
- Fill the fuel tank and DEF tank prior to final delivery.
9. Wash:
- Thoroughly wash the apparatus prior to final delivery.

This pre-delivery service assists the apparatus to meet our high standards of quality and operational efficiency before reaching its final destination.

FINAL DELIVERY (CUSTOMER LOCATION)

GSFA will deliver the completed Product, inclusive of any relevant equipment, spare parts, and supplies, to the Customer's specified address at GSFA's expense.

In preparation for the Product's delivery, the Customer is required to furnish GSFA with proof of liability and physical damage insurance. GSFA will withhold the release of the Product until such proof of insurance is provided.

To ensure a timely delivery process, it is incumbent upon the Customer to settle any outstanding balance owed to GSFA before or at the time the Product is completed and ready for delivery. In the event of delayed payment or delivery, GSFA reserves the right to impose a late fee and daily storage charge as outlined in the Standard Terms and Conditions until payment is received.

For compliance with insurance liability considerations, the Product will only be delivered upon full acceptance and full payment, or through a prior written agreement mutually reached between the Customer and GSFA. This ensures a secure and efficient finalization of the delivery process, aligning with both parties' obligations and safeguarding against potential liabilities.

COMPREHENSIVE SALES AND SERVICE SUPPORT

At GSFA, we understand that immediate response is essential - and the service and support of your apparatus should be no different. Since our founding in 1989, our mission has been to provide first responders with the highest quality, most reliable fire and emergency apparatus from top-tier manufacturers. We specialize in guiding our customers through the entire process - from apparatus evaluation and customization to final inspection - and ensuring years of reliable service through our Golden State Emergency Vehicle Service (GSEVS) division.

Golden State Emergency Vehicle Service (GSEVS)

Established in 2014, GSEVS is committed to building long-term, collaborative relationships by providing exceptional warranty and technical support. Our services cover a wide range of needs, including chassis, electrical systems, pump, aerial, routine maintenance, equipment mounting, and pump testing - with priority given to new units sold by GSFA. Our goal is to deliver prompt, professional service and unwavering support for your apparatus.

Sacramento Facility

Our Sacramento location features a 33,814-square-foot facility with 14 working bays and a 4,500-square-foot, two-story parts distribution department. Conveniently located near Highway 99 with easy access to Interstates 80 and 50, we are positioned to serve you efficiently.

Tracy Facility (Opening Spring 2026)

Our second location in Tracy will expand our service capacity with a 49,634-square-foot facility featuring 21 working bays and a parts department equal in size to our Sacramento facility. Strategically located within the "Tracy Triangle" - bordered by I-580, I-205, and I-5 - this facility will enhance our ability to serve customers in the Bay Area and beyond.

Certified and Experienced Technicians

Our service team includes factory-trained professionals certified by Pierce, ASE, and EVT. They undergo regular training to stay current on chassis, electrical systems, and aerial devices, ensuring expert handling of any challenge. Whether it's routine maintenance or complex diagnostics, you can count on expert care and precision with every visit.

Parts

At Golden State, we're dedicated to keeping your apparatus fully operational and mission-ready. That's why we maintain a robust inventory of both Pierce and non-Pierce parts—ready for immediate deployment when you need them most. If a part isn't in stock, we expedite orders directly from the manufacturer to minimize downtime and get your unit back in service without delay.

To make the process even more efficient, our digital Parts Request Portal offers a streamlined, user-friendly experience. It provides 24/7 access to submit requests, monitor order status, and communicate directly with our team—ensuring transparent updates and quicker turnaround times every step of the way.

Mobile Service

To minimize emergency apparatus downtime, we offer a robust mobile service program for on-site repairs and maintenance.

Pre-Delivery Inspection (PDI) Process

We employ a dedicated team of Pre-Delivery Inspection (PDI) technicians solely focused on ensuring your apparatus arrives in peak condition. Before your new custom unit is delivered, it undergoes a thorough, multi-point inspection to verify quality, performance, and compliance with all specifications. Our team handles every detail of the acceptance and delivery process—so you can take ownership with complete confidence and peace of mind.

Your Single Source for Sales and Service

With Golden State Fire, you have a single point of contact for sales, service, and support - all under one roof, with two strategically located facilities to serve you better. We are confident that our combination of expertise, customer service, and product support is unmatched by any other fire and emergency apparatus dealership in California.

END OF EXHIBIT “D”