



# UKIAH VALLEY FIRE DISTRICT

## AGENDA

(to be held both at the physical and virtual locations below)

Civic Center Council Chambers ♦ 300 Seminary Avenue ♦ Ukiah, CA 95482

To participate, go to the following link: <https://us06we.zoom.us/j/97717635120>  
To view the meeting (without participating) go to: <http://www.cityofukiah.com/meetings/>

Call (toll-free) 1-669-444-9171 <Enter the access code: 977 1763 5120  
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Tap Mobile (for easy connection on Smartphones)  
US: +16699009128..97717635120# or +12532158782..97717635120#

February 27, 2025

6:00 PM

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1. CALL TO ORDER AND ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENT ON NON-AGENDA ITEMS

If you wish to speak on a matter that is not on this agenda that is within the subject matter jurisdiction of the Ukiah Valley Fire District Board, you may do so at this time. Please limit your comments to 3 minutes per person and a total of 10 minutes per subject. The Brown Act regulations do not allow action to be taken on audience comments in which the subject is not listed on the agenda.

4. NEW BUSINESS - DISCUSSION/ACTION

4.a. District Board Consideration of Additional Funding Allocation for Water Tender Acquisition.  
**Recommended Action: Approve the use of additional Measure B reserve funds in the amount of \$201,355 to fully fund the water tender purchase.**

Attachments:

1. Pierce-GSFA Proposal - IHC 2100 Gallon Water Tender - 2-23-25

5. ADJOURNMENT

Please be advised that the Ukiah Valley Fire District complies with ADA requirements and needs to be notified 72 hours in advance of a meeting if any specific accommodations or interpreter services are needed in order for you to attend. Materials related to an item on this Agenda submitted to the Ukiah Valley Fire District after distribution of the Agenda Packet, are available for public inspection at the front counter at the Ukiah Valley Fire District Office, 1500 South State Street, Ukiah, CA 95482, during normal business hours Monday through Friday, 8:00 am to 4:00 pm.

I hereby certify under penalty of perjury under the laws of the State of California that the foregoing agenda was posted at the following location: Ukiah Valley Fire District Office - 1500 South State Street; Ukiah, California; and online not less than 72 hours prior to the meeting set forth on this agenda. To view the meeting, click on the name of the meeting at: [www.cityofukiah.com/meetings](http://www.cityofukiah.com/meetings).

Kristine Lawler, CMC/CPMC

Dated: 2/25/25



# AGENDA SUMMARY REPORT

**SUBJECT:** District Board Consideration of Additional Funding Allocation for Water Tender Acquisition.

<b>DEPARTMENT:</b> <u>Fire</u>	<b>PREPARED BY:</b> <u>Eric Singleton, Battalion Chief</u>
	<b>PRESENTER:</b> <u>Doug Hutchison, Fire Chief</u>

**ATTACHMENTS:**

1. Pierce-GSFA Proposal - IHC 2100 Gallon Water Tender - 2-23-25

**Summary:**The Ukiah Valley Fire District Board of Directors will consider approving an additional allocation of Measure B (2003 voter-approved tax to fund fire suppression equipment and personnel) reserve funds to support the purchase of a new water tender. The requested funding increase of \$201,355 will supplement the existing budget, bringing the total available funds to \$605,000 to complete the acquisition.

**Background:**The Ukiah Valley Fire Authority (UVFA) is replacing its existing water tender, a 2004 Peterbilt single-axle 2,500-gallon unit originally designed for construction use and later adapted for fire service. However, the current unit lacks a fire-rated pump, making it non-compliant with National Fire Protection Association (NFPA) standards for frontline apparatus.

Per NFPA guidelines, fire apparatus should serve a primary operational role for 10 years, followed by up to 10 years in reserve status. Given these recommendations and the limitations of the existing unit, UVFA has prioritized its replacement with a fully fire-rated water tender. Once replaced, the current tender will be repurposed as a reserve unit and made available for use by other City departments, including Streets and Sewer, reducing the need for an additional purchase.

**Discussion:**The replacement of the water tender was originally budgeted in the Fiscal Year 2021-22 Capital Improvement Plan; however, procurement efforts were delayed due to supply chain disruptions, including chassis shortages and the broader impacts of the pandemic.

**Initial Funding Sources:**

\$342,233 – City general revenues

\$82,000 – Mitigation Funds\*\*. However, this amount is subject to the allowable usage limit of 10.5% for replacement vehicles and is limited to \$61,412

These funds were approved and allocated in the 2021-22 fiscal year through authorization from both the Ukiah Valley Fire District Board and the Ukiah City Council.

Despite extensive efforts by Staff to secure a cost-effective unit, escalating costs have necessitated additional funding. A suitable stock-model water tender has been identified at a base purchase price of \$584,874, funded through a combination of City revenue funds (\$342,233) and Mitigation Funds (\$61,412, in accordance with the 10.5% cap for replacement vehicles).

An estimated \$20,000 is required for additional equipment and outfitting, given that this is a stock model. Retrofitting the unit is essential to ensure operational readiness while preserving the existing water tender as a reserve asset

available for use by additional departments.

**Required equipment includes:**

- Radios – \$4,500
  - Portable water tank – \$3,000
  - Hard suction hose – \$1,200
  - Trash pump & small suction hose – \$1,200
  - Remote fire nozzle – \$6,500
  - Rear road spray bars – \$800
  - Fire hose & various hose appliances – \$2,800
- This brings the total project cost to \$605,000.

To bridge the funding gap, Staff proposes allocating up to \$201,355 from Measure B reserve funds. Based on current budget projections, sufficient funds are expected to be available within the account without impacting other priorities. If the current budget model is maintained, Measure B reserves are projected to reach \$435,000 by the end of this fiscal year. Should this funding request be approved, the remaining balance would be approximately \$374,692.

Measure B, approved by voters in 2003, is a special parcel tax levied by the Ukiah Valley Fire Protection District (UVFD) to fund fire protection and emergency medical services. This tax imposes an additional \$10 per unit on properties within the district, supplementing the \$50 per unit tax established by Measure J in 1997. The revenue generated from Measure B is allocated specifically for obtaining, furnishing, operating, and maintaining fire suppression equipment, as well as training of firefighting personnel. These funds are essential for ensuring that the Ukiah Valley Fire Authority (UVFA), which operates under a Joint Powers Agreement between the City of Ukiah and the UVFD, can effectively manage and provide all-risk fire, emergency medical, and rescue services to both the city and the surrounding unincorporated areas. This Measure B is separate and distinct from the County of Mendocino Measure B for mental health services.

It is important to note that although the Measure B fund is in a positive fund balance, the District's operating fund is in a negative fund balance due to persistent deficit spending over the last several years. The City, through a combination of subventions and Interagency loans, has ensured the UVFA has the appropriate resources while the District rebuilds its general reserves.

The current budget estimate is an increase to fund balance, district-wide, of \$235,956 to end the year at a negative \$387,774. With this recommended amendment, the projected change to fund balance, district-wide, would be a decrease of \$61,044, with an estimated ending fund balance of negative \$448,817.

The water tender is being purchased under a Sourcewell cooperative contract (Attachment 1). City Staff researched and vetted the Request for Proposal process of the Sourcewell contract to verify that it met all requirements of the City and the District. After careful consideration, Staff can confirm that this cooperative contract meets all necessary criteria for procurement. It is therefore the Staff's recommendation to approve the purchase of the Pierce International 2100 Gallon Water Tender for the total amount of \$605,000.

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**Recommended Action:** Approve the use of additional Measure B reserve funds in the amount of \$201,355 to fully fund the water tender purchase.

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**BUDGET AMENDMENT REQUIRED:** Yes

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**CURRENT BUDGET AMOUNT:** 10021210.80100.V2543: \$424,233; 10021210.47110.V2543: \$82,000; 91821400.59105.V2543: \$82,000; 91721400.59105.V2543: \$0

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**PROPOSED BUDGET AMOUNT:** 10021210.80100.V2543: \$605,000; 10021210.47110.V2543: \$61,412; 91821400.59105.V2543: \$61,412; 91721400.59105.V2543: \$201,355

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**FINANCING SOURCE:** 91721400 (Measure B) Reserve Funds

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**PREVIOUS CONTRACT/PURCHASE ORDER NO.:** N/A

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**COORDINATED WITH:** Finance Department; Myles Fisette, Purchasing Manager; Fleet Management: Dave Kirch, Fire Chief: Doug Hutchison

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Approved:   
Doug Hutchison, Fire Chief



# GOLDEN STATE

FIRE APPARATUS

PREPARED ESPECIALLY FOR:

## UKIAH VALLEY FIRE AUTHORITY

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One (1) Pierce Manufacturing, Inc.  
International 2100 Gallon Water Tender



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    - Reference Drawing
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# **1 PRODUCT PROPOSAL**



## PRODUCT PROPOSAL FOR:

**Ukiah Valley Fire Authority**  
**300 Seminary Ave.**  
**Ukiah, CA 95482**

## Sales Consultant

Jon Bauer  
[jbauer@goldenstatefire.com](mailto:jbauer@goldenstatefire.com)  
 Mobile: 530.351.2151

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #	MANUFACTURER BID #	MANUFACTURER	CONSORTIUM
2/23/25	3/15/25 OR UNTIL VEHICLE IS SOLD – WHICHEVER IS FIRST	50223-25A	1098	Pierce Mfg.	Sourcewell (Ukiah Member ID# 60937)

Golden State Fire Apparatus, Inc. (“GSFA”) is pleased to provide this proposal for the fire apparatus(es) and equipment identified below (the “Product”) to **Ukiah Valley Fire Authority** (“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; 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 in the signature blocks below (the “Executed Date”).

### 100% PRE-PAYMENT AT TIME OF ORDER

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
<b>A</b>	One (1) Pierce - International 2100 Gallon Water Tender – Stock Job #42701	\$541,286.93
<b>B</b>	<i>Discount for Sourcewell Consortium Purchase (Product ID #273)</i>	<i>(\$5,359.27)</i>
<b>C</b>	<i>Pre-Payment Discount for 100% Payment at Time of Order (the “Prepayment Discount”)</i>	<i>(\$9,094.57)</i>
<b>D</b>	SUBTOTAL	\$526,833.09
<b>E</b>	8.875% State Sales Tax	\$46,756.44
<b>F</b>	California Tire Fee	\$10.50
<b>G</b>	100% Performance Bond	\$1,348.00
<b>H</b>	<b>GRAND TOTAL PURCHASE PRICE</b>	<b>\$574,948.03</b>

**PAYMENT TERMS** – Customer shall pay the total purchase price set forth directly above (the “Grand Total Purchase Price”) to GSFA within fifteen (15) 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 to GSFA at 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, as applicable and if approved by GSFA).

**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 the 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 **5 - 6 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 **1 - 2 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** – If the Customer elects to issue a Purchase Order (PO) it 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 A SEPARATE 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 2/23/25, GSFA Proposal Number: 50223-25A**, to be executed by their duly authorized representatives as of the Executed Date.

**ACCEPTED AND AGREED TO BY CUSTOMER**

AUTHORIZED CUSTOMER REPRESENTATIVE:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**ACCEPTED AND AGREED TO BY GSFA**

AUTHORIZED GSFA REPRESENTATIVE:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**PRODUCT PROPOSAL FOR:**

**Ukiah Valley Fire Authority**  
**300 Seminary Ave.**  
**Ukiah, CA 95482**

**Sales Consultant**  
 Jon Bauer  
[jbauer@goldenstatefire.com](mailto:jbauer@goldenstatefire.com)  
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**PAYMENT AT TIME OF COMPLETION**

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
<b>A</b>	One (1) Pierce - International 2100 Gallon Water Tender – Stock Job #42701	\$541,286.93
<b>B</b>	<i>Discount for Sourcewell Consortium Purchase (Product ID #273)</i>	<i>(\$5,359.27)</i>
<b>C</b>	SUBTOTAL	\$535,927.66
<b>D</b>	8.875% State Sales Tax	\$47,563.58
<b>E</b>	California Tire Fee	\$10.50
<b>F</b>	100% Performance Bond	\$1,372.00
<b>G</b>	<b>GRAND TOTAL PURCHASE PRICE</b>	<b>\$584,873.74</b>

**PAYMENT TERMS** – Customer shall pay the total purchase price set forth directly above (the “**Grand Total Purchase Price**”) (as such amount may be adjusted by Change Order in accordance with the Terms and Conditions) to GSFA at the time of vehicle completion at the manufacturers facility (or Customer’s pick up of such Product, 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.

**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 the 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 **5 - 6 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 **1 - 2 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** – If the Customer elects to issue a Purchase Order (PO) it shall be made out to: *Golden State Fire Apparatus, Inc. – 7400 Reese Road – Sacramento, CA 95828.*

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**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 2/23/25, GSFA Proposal Number: 50223-25B**, to be executed by their duly authorized representatives as of the Executed Date.

**ACCEPTED AND AGREED TO BY CUSTOMER**

AUTHORIZED CUSTOMER REPRESENTATIVE:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**ACCEPTED AND AGREED TO BY GSFA**

AUTHORIZED GSFA REPRESENTATIVE:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

# **2 STANDARD 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 by GSFA after Manufacturer’s completion of the Product and prior to delivery, in accordance with the Dealer Supplied Products/Services List.
- d. **“Delivery Date”** means the Product Completion timeframe plus the Predelivery Service timeframe equals the Delivery Date.
- e. **“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).
- f. **“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)).
- g. **“GSFA”** means Golden State Fire Apparatus, Inc., a California corporation.
- h. **“Manufacturer”** means the person or persons, company, firm, corporation, partnership, or other organization identified in the Product Proposal as responsible for manufacturing the Product.
- i. **“Party”** or **“Parties”** means GSFA and/or Customer, as applicable.
- j. **“Predelivery Service”** means the Products and/or Services that will be provided by GSFA after transportation of the Product(s) from the manufacturing facility and prior to Final Delivery or Pick-Up.
- k. **“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).
- l. **“Product”** means the fire apparatus(es) and any associated equipment listed in the Product Proposal and further described in the Specifications.
- m. **“Product Completion”** means the fire apparatus(es) in the Product Proposal and further described in the Specifications being ready for final inspection by Customer at the manufacturing facility.
- n. **“Product Proposal”** means the GSFA proposal executed by Customer to which these Terms and Conditions are attached.
- o. **“Product Warranties”** means the Manufacturer warranties for the Product attached to the Product Proposal as Exhibit C.
- p. **“Specifications”** means the specifications for the Product attached to the Product Proposal as Exhibit B.
- q. **“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 such 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 (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. 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 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, 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) for the Product or any Manufacturer Price Increases occurring after the execution of the Agreement which increases 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](http://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 Grant 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 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 reasonably 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 reasonably 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 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. 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 consequential, incidental, 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. Indemnification of GSFA. Customer 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 ("**Damages**"), to the extent Damages arise out of or in connection with: (i) Customer's breach of the Agreement, or (ii) Customer's use, storage, or operation of the Product following delivery, regardless of where, how, and by whom operated (excluding any negligent operation by GSFA). The indemnification and assumptions of liability and obligation herein provided 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; the Parties may seek indemnity from one another under other legal principles, whether based in equity or law, so long as they do not nullify or cancel the effects of this paragraph.

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 (3<sup>rd</sup>) 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** **PRODUCT SPECIFICATIONS**

**Exhibit "B"**



UKIAH VALLEY FIRE AUTHORITY  
Specifications For: One (1) Pierce-International 2100 Gallon Water Tender – Stock Job 42701  
February 23, 2025 (Proposal #50223-25)

**NFPA 2024 STANDARDS**

This apparatus specification includes a commercial chassis that has not been certified to meet the requirements of NFPA 1900 by the chassis manufacturer. Although this chassis may comply with certain aspects of the standard, Pierce has not received certification from this chassis manufacturer that all criteria have been met. The body as built by the manufacturer must comply with the NFPA standards effective January of 2024.

Certification of slip resistance of all stepping, standing and walking surfaces must 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.

Your apparatus will be manufactured in Bradenton, Florida.

**NFPA COMPLIANCY**

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the 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."

**PUMP TEST**

The rated water pump will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details will be forwarded to the Fire Department.

UKIAH VALLEY FIRE AUTHORITY  
Specifications For: One (1) Pierce-International 2100 Gallon Water Tender – Stock Job 42701  
February 23, 2025 (Proposal #50223-25)

**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.

**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.

**ELECTRICAL WIRING DIAGRAMS**

Two (2) electrical wiring diagrams, prepared for the body as it interfaces with the commercial chassis, will be provided.

UKIAH VALLEY FIRE AUTHORITY  
Specifications For: One (1) Pierce-International 2100 Gallon Water Tender – Stock Job 42701  
February 23, 2025 (Proposal #50223-25)

**CHASSIS**

The chassis will be an International HV (Heavy Vocational) supplied with the following equipment:

**WHEELBASE**

The wheelbase of the vehicle will be 195".

**GVW RATING**

The gross vehicle weight rating will be 47,000#.

**FRAME**

The frame rails will be formed from 120,000 psi yield, heat treated alloy steel.

**FRAME LINER**

An outer "C" channel frame liner constructed of heat treated alloy steel will be provided.

**FRONT AXLE**

Front axle will be an "I" beam type, made of forged steel. It will have a ground rating capacity of 16,000 pounds.

**FRONT SUSPENSION**

Taper leaf spring

Capacity at Ground: 16,000 lb

Shock absorbers will be provided on the front axle.

**FRONT BRAKES**

The front brakes will be S-Cam, 16.50" x 6.00". The front brakes will be provided with automatic slack adjusters.

**TIRE BRAND**

The default brand of tire for the commercial chassis manufacturer for this apparatus is Michelin.

However, the commercial chassis manufacturer reserves the right to substitute brands and models of tire as may be available at the factory on the date of manufacture. They will provide the proper tread style and weight rating for the position in which the tire is installed.

Pierce Manufacturing and the chassis manufacturer are working to provide the brand of tire specified. However, due to shortages (and even model changes by the tire manufacturers), if the chassis manufacturer substitutes other tires, they will not be changed by Pierce.

**TIRES, FRONT**

Front tires will be 315/80R22.50, radial tires with a tread pattern suitable for the steering axle position. The maximum capacity of the tires will be 18,180 lbs. and a maximum top speed per the requirements described elsewhere in this proposal, up to 65 MPH.

**WHEELS, FRONT**

Wheels for the front axle will be 22.50" x 9.00" polished aluminum disc.

**REAR AXLE**

The rear axle will have a ground rating capacity of 31,000 pounds.

**PARKING BRAKE**

The parking brake will be spring set and located on the rear axle service brake.

Rear axle brakes will be 16.50" x 7.00", S-Cam drum type brakes. Automatic slack adjusters will be provided.

**REAR AXLE RATIO**

A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 60 MPH.

**REAR SUSPENSION**

The rear suspension will be leaf spring type with a capacity at ground level of 31,000 lbs. Auxiliaries will be included.

**LOCKING DIFFERENTIAL**

The rear axle will be equipped with a driver controlled differential lock.

**TIRES, REAR**

Rear tires will be 315/80R22.50 radial tires with a traction tread pattern suitable for the drive axle position. The maximum single axle capacity of the tires will be 33,080 lbs. Tires will be rated for a maximum top speed per the requirements described elsewhere in this proposal, up to 65 MPH.

**WHEELS, REAR**

The rear wheels will be aluminum 22.50" x 9.00" disc.

**TIRE PRESSURE MANAGEMENT**

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.

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.

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.

**CHROME LUG NUT COVERS**

Chrome lug nut covers will be supplied on front and rear wheels.

**WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT**

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.

The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.

**Wheel Chock Brackets Provided by Fire Department**

The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.

**ANTI-LOCK BRAKE SYSTEM**

The vehicle will be equipped with an anti-lock braking system. The ABS will provide anti-lock braking control on both the front and rear wheels. It will be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will 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.

The system will include Automatic Traction Control (ATC).

The system will include Electronic Stability Control (ESC). When instability is detected, the ESC system will automatically apply brakes to individual wheels (with no intervention from the driver) and may also reduce engine torque to help keep the vehicle on track.

**AIR COMPRESSOR, BRAKE SYSTEM**

The air compressor will have an output of 18.7 cubic feet per minute.

**AIR DRYER**

An air dryer with a heater will be provided. Other features of this air dryer include:

- Desiccant style filter
- In-line filtration system
- Automatic purge valve

**AIR INLET**

A single air inlet with 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 on the driver side pump panel. 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 coupling will also be provided with the loose equipment.

UKIAH VALLEY FIRE AUTHORITY  
Specifications For: One (1) Pierce-International 2100 Gallon Water Tender – Stock Job 42701  
February 23, 2025 (Proposal #50223-25)

**ENGINE**

- Model: Electronic Cummins L9-450
- Number of Cylinders: Six (6)
- Displacement: 8.9 L
- Rated Brake Horsepower: 450 at 2100 rpm
- Peak Torque: 1250 at 1400 rpm
- Governed rpm: 2100
- Turbocharger

**ENGINE ACCESSORIES**

- Air Cleaner: Dry type
- Governor: Limiting speed type
- Lube Oil Filter: Full flow
- Starting Motor: 12-volt

**RADIATOR**

- Pressurized System, Tube and Fin
- Deaeration Tank
- Anti-Freeze Protection -30 Degrees Fahrenheit

**HIGH IDLE**

A high idle switch will be provided on the instrument panel inside the cab. Activating the switch will cause the vehicle to automatically maintain a preset engine rpm.

The high idle switch 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 be labeled "OK To Engage High Idle."

**ENGINE BRAKE**

An engine compression brake is to be installed with the controls located within easy reach of the driver. The driver will be able to turn the brake system "On" or "Off" and have at least a "High & Low" setting.

When the engine brake is engaged it will activate the brake lights.

**AIR INTAKE, W/EMBER SEPARATOR**

The air inlet will be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.

This will comply with current NFPA standards.

**EXHAUST SYSTEM**

The exhaust system will include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The DPF and SCR will be mounted horizontally outside of the frame rails in the right side front step area.

**EXHAUST MODIFICATIONS**

The exhaust will terminate with a horizontal tailpipe and diffuser ahead of the right side rear wheels.

A heat deflector shield will be provided where the tail pipe is routed under any side compartmentation.

All modifications will be approved by the chassis engine manufacturer and/or the chassis OEM.  
Exhaust treatment devices will not be altered.

**COOLANT LINES**

Premium rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.

Hose clamps will be the 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.

**FUEL TANK**

A 50 gallon fuel tank will be provided and mounted at the left-hand cab step. The tank will be constructed of aluminum.

**DIESEL EXHAUST FLUID TANK**

A diesel exhaust fluid (DEF) tank will be provided and mounted on the left side, below the cab.

The tank will be sized by the chassis manufacturer based on the engine provided. It will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

**FUEL PRIMING PUMP**

A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.

**COOLER, CHASSIS FUEL**

A fuel cooler will be provided by the chassis manufacturer.

**TRANSMISSION**

An Allison, model 3000 EVS, electronic torque converting automatic transmission will be provided. To qualify for the EVS rating, the transmission will be filled with synthetic transmission fluid.

Two (2) PTO openings will be located on left and right side of the converter housing (positions 8 o'clock and 4 o'clock).

A transmission temperature gauge or warning light will be installed on cab instrument panel.

**TRANSMISSION SHIFT CONTROL**

A column mounted stalk shifter will be provided. It will electronically control the gear selection in either a manual or automatic mode.

The transmission will be a five (5)-speed.

**TRANSMISSION COOLER**

A transmission oil cooler will be provided in a tank of the radiator.

**DRIVELINE**

Drivelines will be a heavy duty metal tube equipped with universal joints properly sized for the application. A splined slip joint will be provided in each driveshaft.

**STEERING**

The steering system will be hydraulically driven. The steering column will have an adjustable tilt and telescope feature.

**BUMPER**

A one (1) piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 19.00" from the face of the cab. The bumper will have 45 degree corners. The bumper will be metal finished and painted job color.

To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel.

**GRAVEL PAN**

A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face and front wheel wells. The pan will be properly supported from the underside to prevent flexing and vibration.

**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 125' 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.

**Center Hose Tray Restraint**

There will be one (1) pair of hose tray restraint straps located over the center mounted tray.

The restraints will be a pair of 2.00" wide black nylon straps with Velcro® fasteners provided. The strap(s) will be used to secure the hose in the tray.

**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.

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**SIGHT RODS**

Two (2) Bores, Model 848-211, lighted sight rods will be mounted to the outside corners of the front bumper extension. The rods will be polished stainless steel with amber lens and LED bulbs.

**HOOD**

The hood will be a three-piece Fiberglass construction. It will tilt forward and include splash panel and under hood insulation for sound abatement.

**CAB**

Type: Conventional (engine forward)

Construction: Welded Steel and Fiberglass

Accessories:

- Tinted Glass in all Windows
- Black Rubber Floormats
- Dual Sun-Visors
- Dome Light with Map Light
- Fresh Air Heater and Defroster
- Fiberglass Front End, Three (3) Piece Construction
- Hood Mounted Chrome Grille
- Long Life Halogen, Two Light System Headlights
- Air suspension

**CAB INTERIOR, IHC, GRAY**

Gray Vinyl Upholstery

**CAB GRILLE - STATIONARY**

The cab grille will be a chrome plated high impact plastic with a vertical channel design, and will include chrome headlight bezels. The grille will be attached to the radiator core support structure and will not tilt with the hood.

**MIRRORS**

Mirrors with 14.10" x 7.55" flat rear view with integral convex mirrors will be provided on both sides of the cab. The mirror housings will have a bright finish with integral LED clearance lights. Both sides will be remote controlled with thermostatically controlled heated glass.

**CAB ACCESS STEPS**

The cab steps will be provided by the chassis manufacturer. The steps will meet the requirements of NFPA 1900, 2024 edition, Section 12.6.1.2.

No modifications of any type will be required by the apparatus manufacturer.

**STEP LIGHTS**

There will be four (4) white LED step lights provided. There will be one (1) light installed at each cab door, one (1) light per doorstep.

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 adjacent door is opened.

**DAYTIME RUNNING LIGHTS**

The chassis will be provided with daytime running lights.

**AIR CONDITIONING**

An air conditioner will be provided that is integral with heater and defroster system.

**ENGINE COMPARTMENT LIGHTS**

Two (2) engine compartment lights will be installed under the engine hood, of which the switches are an integral part.

**CAB CONSOLE**

There will be a console located between the front seats with room for radio installation, the electrical and emergency switches and a siren. Auxiliary pump controls (if the truck is so equipped) will also be positioned on the console. The area for the siren, radio and electrical/ emergency switches will be located toward the front of the console, and the top/rear will have a storage tray for miscellaneous items or equipment.

The console will be constructed of smooth aluminum and painted black.

**SEATING CAPACITY**

The seating capacity in the cab will be two (2).

**SEATING**

Seating inside the cab will consist of a high back air-suspension driver seat and a high back non-suspension officer seat.

**SEAT BELT WEB LENGTH**

The chassis seat belt web length as supplied by the commercial chassis manufacturer will be compliant to NFPA 11.1.3.2 and 11.1.3.3.

**SEAT BELTS**

All seating positions in the cab and crew cab (if applicable) will have red seat belts.

**HELMET STORAGE PROVIDED BY FIRE DEPARTMENT**

NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC S515:2024 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.

**PORTABLE HAND LIGHTS PROVIDED BY FIRE DEPARTMENT**

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

**CAB INSTRUMENTS**

- Engine Temperature Gauge and Warning Buzzer
- Engine Oil Pressure Gauge and Warning Buzzer
- Speedometer with Odometer
- Engine Tachometer
- Engine Hourmeter
- Fuel Level Gauge
- DEF Level Gauge and Warning Lamp
- Voltmeter: Low voltage red warning light and audible alarm
- Air Brake Pressure Gauge
- Air Restriction Indicator
- Circuit Breakers: For overload protection of electric circuits
- Ignition Switch: Keyless type

**EMERGENCY SWITCH PANEL**

An emergency switch panel will be provided in the cab. The switch panel will be located within reach of the driver.

References within this proposal to a "switch in the cab" for zone specific options may be combined with other lighting controls.

**"DO NOT MOVE APPARATUS" INDICATOR**

A flashing red indicator light (located in the driving compartment) will be illuminated automatically per the current edition of NFPA. 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 not activate any alarm when the parking brake is released.

**OPEN DOOR INDICATOR LIGHT**

A red "open door" indicator light will be provided inside the cab, in clear view of the driver, to warn of an open compartment door.

**WIPER CONTROL**

Wiper control will include an intermittent feature and windshield washer controls.

**SPARE CIRCUIT**

There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus.

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.
- Wires will be capable of carrying 15 amps.
- Power and ground will terminate in the console between the seats.
- Termination will be with a 10-place bus bar with screws and removable cover.
- Wires will be protected to meet the NFPA Automotive Fire Apparatus standard.

Battery direct loads cannot be Load Managed.

**SPARE CIRCUIT**

There will be one (1) dual USB fast charge socket mounts installed on the apparatus.

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.
- Wires will be capable of carrying 4.8 amps.
- The USB socket mount will be Center console.
- Termination will be a Blue Sea Systems, part number 1045, dual USB charger socket.
- Wires will be protected to meet the NFPA Automotive Fire Apparatus standard.

Battery direct loads cannot be Load Managed.

**VEHICLE DATA RECORDER**

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

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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
- Time - 24 Hour Time
- Date - Year/Month/Day

**Seat Belt Monitoring System**

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to six (6) 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 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.

**RADIO ANTENNA MOUNT**

There will be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the console. A weatherproof cap will be installed on the mount.

**VEHICLE CAMERA SYSTEM**

There will be a color vehicle camera system provided with the following:

- One (1) Analog High Definition (AHD) white camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image will be displayed on a 7.00" High Definition (HD) display located centered overhead between the sun visors. The display will include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) HD700136DC, display
- One (1) 1080p AHD rear camera
- All necessary cables

**Camera Switcher**

A camera switcher is not required.

**VEHICLE CAMERA GUARD**

There will be one (1) aluminum treadplate guard(s) fastened over the vehicle camera(s) located rear.

**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:

- (1) All holes made in the roof will be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
- (2) 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.
- (3) 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.
- (4) 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).

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

(6) All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. All emergency light switches will be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches will be "rocker" type with an internal indicator light to show when switch is energized. All switches will be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches will be done by either printing or etching on the switch panel. The switches and identification will be illuminated.

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.

**BATTERY SYSTEM**

A single starting battery system will be provided consisting of three (3) 12 volt, 660 CCA, maintenance-free, batteries.

The batteries system will have a total of 1980 CCA with a minimum reserve capacity of 540 minutes.

**BATTERY LOCATION - BODY COMPARTMENT**

The batteries will be relocated by the apparatus manufacturer. They will be installed in the front right body compartment. The batteries will be placed in a stainless steel tray with hold-down mechanisms to keep the batteries in position. A latched cover constructed from bright aluminum treadplate will be provided to protect the batteries and prevent other equipment from contacting them.

No other electrical components are to be installed in this same compartment due to potential explosive fumes from the batteries.

**MASTER BATTERY SWITCH**

A master battery switch, to activate the battery system, will be provided inside the cab within easy reach of the driver.

The master battery disconnect switch will be wired between the starter solenoid and the remainder of the electrical loads on the apparatus.

A green "battery on" indicator light, visible from the driver's position, will be provided.

**BATTERY CHARGER**

There will be a Kussmaul™, Chief Series Smart Charger 4012, product code 091-266-12-40, 40 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.

The battery charger will be located in the left front body compartment mounted on the back wall as high as practical towards the left side.

**REMOTE CONTROL PANEL - BATTERY CHARGER**

There will be a Kussmaul™, Model 091-94-12 universal display panel included. It will be wired directly to the chassis batteries.

The battery charger indicator will be located in the driver's step area.

**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

The shoreline receptacle will be located on the driver side of pump panel.

**ALTERNATOR**

The alternator will be a 12V, 325 Amp, Leece Neville pad mount alternator.

**ELECTRONIC LOAD MANAGEMENT**

Included with the apparatus manufacturer's electrical system will be a programmable load management system.

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This system will monitor the vehicle's 12-volt electrical system, and automatically reduce the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

**EXTERIOR LIGHTING**

Exterior lighting will meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal.

Front headlights will be halogen type and comply to all FMVSS requirements.

Five (5) LED clearance and marker lights will be installed across the leading edge of the cab.

**TURN SIGNALS, FRONT**

Halogen front turn signals will be provided. Side LED turn signals which include LED side marker lights will be mounted on the fender.

**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) Truck-Lite®, Model 33050R, 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) Truck-Lite, Model 33050R, LED lights installed on the side of the apparatus used as marker lights located 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

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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.

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.

**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 lights will be provided with lens color(s) to be clear.

There will be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing.

**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.

**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.

**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.

**WARNING LIGHT FLASH PATTERN**

The flash pattern of all the exterior warning lights will be set to meet the certified California, Title XIII flash pattern by either the light manufacturer's default flash pattern or by a conversion change to the certified flash pattern.

**CAB PERIMETER SCENE LIGHTS**

There will be two (2) Truck-Lite, Model 6060C, white LED lights with grommets provided, one (1) for each cab door.

These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

**PUMP HOUSE PERIMETER LIGHTS**

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side.

If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed.

The lights will be controlled by the same means as the body perimeter lights.

**BODY PERIMETER SCENE LIGHTS**

There will be two (2) Truck-Lite, Model 6060C, white LED lights with grommets provided under at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights will be activated when the parking brake is applied.

**STEP LIGHTS**

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.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

These step lights will be actuated with the pump panel light switch.

All other steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.

**REAR WORK/SCENE LIGHT(S) - PAIR**

There will be one (1) pair of Whelen, Model PEL\*C, 2.25" high x 7.88" wide x 1.63" deep LED scene light(s) with 45 degree chrome housing installed at the rear of the apparatus.

There will be one (1) light each side on the rear of the apparatus.

A control for the lights selected above will be the following: a switch at the driver's side switch panel.

These pair(s) of light(s) may be load managed when the parking brake is applied.

**12 VOLT LIGHTING**

There will be one (1) Whelen®, Model P\*H2\*, 17,750 lumens light(s) with white LEDs and a combination of flood and spot optics, mounted on a special bracket painted exterior cab roof color, provided on the front of the cab roof, centered.

The painted parts of this light assembly to be white.

The scene light(s) will be activated by a switch in a center console switch panel between the driver and officer.

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The light(s) may be load managed when the parking brake is applied.

**12 VOLT LIGHTING**

There will be two (2) Whelen® PCPSM1\*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, passenger side front and rear upper body corners.

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by a switch in a center console switch panel between the driver and officer.

The light(s) may be load managed when the parking brake is applied.

**12 VOLT LIGHTING**

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, drivers side front and rear upper body corners.

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by a switch at the driver's side switch panel.

The light(s) may be load managed when the parking brake is applied.

**HOSE BED LIGHTS**

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.

- 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.

**REAR SCENE LIGHT(S)**

There will be two (2) Whelen®, Model M6ZC, LED scene light(s) with chrome flange(s) installed at the rear of the apparatus, one (1) each side high on rear body bulkhead.

The light(s) will be controlled by a switch at the driver's side switch panel.

The light(s) may be load managed when the parking brake is applied.

**WALKING SURFACE LIGHT**

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.

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**WATER TANK**

The tank will have a minimum capacity of 2100 U.S. gallons built by United Plastics Fabricating, Inc. The tank will be of a specified configuration and designed to be completely independent of the compartment and/or fender modules. When placed on the chassis, the tank will meet or exceed all federal DOT regulations regarding weight distribution, axle loading and horizontal and vertical center of gravity locations.

The tank will incorporate a manual fill tower with a 6.00" combination vent/overflow pipe. The fill tower will be constructed of polypropylene and will be large enough to provide filling by means of a conventional 2.50" hose nozzle. The tower will be located near the center of the tank to minimize water surge during vehicle operation. The tower will have a removable polypropylene screen and a polypropylene hinged cover. The vent/overflow pipe will run through the tank and exit through the floor of the tank behind the rear axle.

The sides of the tank will be painted to match the remainder of the unit. Each side of the tank will include equipment mounting tracks and a panel for mounting light or graphics. The right side tank tee will be raised 4.00" to provide clearance for option defined elsewhere in this proposal.

The rear of the tank will provide provision for two (2) tank fill ports with a Fire Programs bolt pattern, a 10.00" square dump valve, and mounting an access ladder on the left side.

The tank and hose bed (if provided) will be removable as a unit and will be a separate component from the body compartmentation.

**WATER TANK RESTRAINT**

A heavy-duty water tank restraint will be provided to keep the water tank in position.

**TOP OF TANK, ACCESS LADDER**

An access ladder constructed of aluminum tubing will provided for access to the hosebed and/or tank dome. The ladder will have a flexible mount attached to the tailboard. The ladder will be located on the left side of the truck at the rear.

**TANK OVERFLOW/VENT**

A 6.00" tube will be installed through the shell of the tank. This tube will function as an overflow to discharge water to the ground once the tank is filled to capacity. It will also function as a vent to allow air to enter the tank when water is being dumped or pumped from the tank.

The tube will be positioned to drain at the bottom of the truck near the center, behind the rear axle.

**REAR TANK FILL**

A 2.50" gated external tank fill will be installed and properly labeled at the rear of the water tank, located on the right side.

Piping, for the fill, will be routed through the rear wall of the tank and include a flow deflector to break up the stream of water entering the water tank.

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A 2.50" full flow ball valve with 2.50" piping and a 2.50" (F)NST chrome swivel will be located at the inlet.

A 2.50" chrome plated 30 degree elbow and plug with VLH automatic pressure relieving thread technology will be provided for the tank fill.

**EXTENSION BRACKET**

In order to accommodate the length of the portable tank rack, a reinforced extension bracket constructed of aluminum treadplate will be provided on the body.

**PORTABLE TANK RACK**

A portable tank rack constructed of stainless steel tubing will be installed on the left side of the truck on top of the catwalk. The rack will be hinged to allow the entire rack to fold down to a position adjacent to the side of the body where two (2) people can easily remove the tank. Two (2) heavy-duty latches will be installed, one (1) on the front and one (1) on the rear, to lock the rack in the stored position. The rack will be designed to carry a 2100 gallon aluminum framed Fol-Da-Tank (w/closed dimensions of 135" x 9" x 30") Fol-Da-Tank brand portable tank.

When the rack is in the lowered position, it will activate the "Do Not Move Apparatus" light in the cab.

The rack will have a covering constructed of bright finish aluminum treadplate .

**REAR TANK DUMP VALVE**

One (1) 10.00" stainless steel Newton Quick Dump will be installed at the rear of the tank. The valve will be operated manually by a lever control located on top of the valve.

A 180 degree, Newton 6012SW-34 swivel dump chute will be provided.

The chute will include a Newton 4036-34 telescopic extension to allow the chute to extend past the body side for dumping.

The water tank design will include additional support for this chute.

**HOSE BED**

Hose bed side sheets constructed from smooth polypropylene will be provided around the perimeter of the top of the tank. These side sheets will be painted to match the body.

Polypropylene hose bed grating will be installed on a top section of the water tank. This area can be utilized for hose or equipment storage. The area not covered by grating will have a traction material applied to provide a safe walking surface.

**HOSE BED HOSE RESTRAINT**

The hose in the hose bed will be restrained by a two (2) pairs of black nylon Velcro® straps at the top of the hose bed. One (1) pair of straps will be approximately one third of the distance from the front of the hose bed and one (1) pair of straps will be approximately one third of the distance from the rear of the hose bed.

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A heavy duty 2" black nylon webbing will be installed at the rear of the hose bed and wrap over the top of the hose bed with 2.00" cam buckle at the top. At the bottom of the webbing, 2.00" cam buckle will be provided.

**RUNNING BOARDS**

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.

**TAILBOARD**

A tailboard approximately 16.00" deep and covered with bright aluminum treadplate will be provided at the rear of the truck.

**TOW EYES**

There will be a total of two (2) painted tow eyes provided and mounted directly to the chassis frame rails at the rear of the apparatus. The inner and outer edges of the tow eyes will have a radius.

**COMPARTMENTATION**

Body and compartments will be fabricated of .125", 5052-H32 aluminum.

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.

Compartment flooring will be of the sweep out design with the floor higher than the compartment door lip.

Drip protection will be provided above the doors.

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

**BODY SUPPORT SYSTEM**

Due to the loading requirements of this tanker, 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 is designed for sustaining maximum loads.

**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.

**LEFT SIDE COMPARTMENTATION**

A lap door compartment in the lower area, ahead of the rear wheels will be provided. The interior dimensions will be 53.50" wide x 27.00" high x 24.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of the compartment will be 51.25" wide x 31.00" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. A positive door holder will be furnished with this compartment.

A lap door compartment in the lower area, behind the rear wheels will be provided. The interior dimensions of this compartment will be 21.50" wide x 27.00" high x 24.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 19.25" wide x 31.00" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. A positive door holder will be furnished with this compartment.

**RIGHT SIDE COMPARTMENTATION**

A lap door compartment in the lower area, ahead of the rear wheels will be provided. The interior dimensions will be 53.50" wide x 27.00" high x 24.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of the compartment will be 51.25" wide x 31.00" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. A positive door holder will be furnished with this compartment.

A lap door compartment in the lower area, behind the rear wheels will be provided. The interior dimensions of this compartment will be 21.50" wide x 27.00" high x 24.50" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 19.25" wide x 31.00" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. A positive door holder will be furnished with this compartment.

**DOORS, SIDE COMPARTMENT**

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 .1875", that is bolted or screwed on with stainless steel fasteners. 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.

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Doors will be latched with recessed, polished stainless steel "D" ring handles and Eberhard 106 locks.

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.

**COMPARTMENT LIGHTING**

There will be four (4) compartments with LED compartment light strips. There will be three (3) pairs of lights required - one pair in each forward compartment and a single light in each rear compartment.

Each strip will be centered vertically along the door framing. All body compartments with roll-up doors will have these strip lights.

Any remaining compartments will include 6.00" diameter Truck-Lite, Model: 79384 light in each enclosed compartment. Each light will have a number 1076 one filament, two wire bulb.

Opening the compartment door will automatically turn the compartment lighting on.

**MOUNTING TRACKS**

There will be four (4) sets of tracks for mounting shelf(s) in LS1, LS2, RS1 and RS2 . These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be unpainted with a natural finish.

**ADJUSTABLE SHELVES**

There will be four (4) shelves with a capacity of 215 lb provided. The shelf construction will consist of .18" aluminum with 2.00" sides. Each shelf will be painted to match the compartment interior. 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.

The location will be in RS1 centered between the floor and the ceiling, in RS2 centered between the floor and the ceiling, in LS1 centered between the floor and ceiling and in LS2 centered between the floor and ceiling .

**BODY FENDER CROWNS**

Stainless steel fender crowns will be provided around the rear wheel openings.

A rubber welting will be provided between the body and the crown to seal the seam and restrict moisture from entering.

A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.

**HARD SUCTION HOSE**

Hard suction hose will not be required.

**HOSE TROUGHS**

A total of two (2) trough(s) for hard suction hose will be installed on the on the right side of the tank.

Troughs will be constructed of aluminum, painted job color and will have a nylon retaining strap at the rear. A Nylatron or similar material will be provided on the bottom of the trough to aid in the removal and reinstallation of the hose.

Hose troughs will be adjustable up and down.

**HANDRAILS**

The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface.

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.

**LADDER BRACKETS**

The ladders will be installed on the right side of the tank, on the catwalk, in lined brackets and held in place by chrome plated, quarter-turn spring loaded clamps. The clamps will be such that when the roof ladder is removed, the clamps can be moved a half-turn to hold the extension ladder in place. The ladder brackets will be adjustable up and down.

The ladders to be carried on these brackets are a 14' Duo-Safety 775-A roof and a 24' Duo-Safety 900-A, two (2) - section extension.

**STEPS - DELUGE ACCESS**

A pair of folding steps will be provided on the right side front body bulkhead. The 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,. 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.

An additional step constructed from aluminum treadplate will be installed on the right side of the cargo compartment above the pump to provide access to the deluge riser. This step will also be illuminated with an LED light.

**STEP, ADDITIONAL**

One (1) additional folding step additional folding step will be provided one (1) on the left side front bulkhead. The step 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,. Each step will incorporate an LED light to illuminate the stepping surface. The step can be used as a hand hold with two openings wide enough for a gloved hand.

**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 of steel 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.

**PUMP CONTROL PANELS (SIDE CONTROL)**

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

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

The control panels will be 34.00" wide.

The gauge and control panels will be two (2) separate panels for ease of maintenance.

Polished stainless steel trim collars will be installed around all inlets and outlets.

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.

All line pressure gauges will be mounted in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. Mounting of the castings and identification bezels will be done with a threaded peg cast on the back side of the bezel or screws.

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**PUMP**

Pump will be a Waterous CXPA, 1250 gpm, single (1) stage, power take off (PTO) driven midship mounted centrifugal type.

Pump will be the class "A" type.

Pump will deliver the percentage of rated discharge at pressures indicated below:

- 100 percent of rated capacity at 150 psi net pump pressure.
- 70 percent of rated capacity at 200 psi net pump pressure.
- 50 percent of rated capacity at 250 psi net pump pressure.

Pump casting will be a two (2) piece, vertically split design and will be constructed of high tensile, close grain gray iron.

Impeller shaft will be stainless steel, heat treated, accurately ground to size, and polished under the shaft seal. It will be supported by oil lubricated ball bearings.

Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals.

**MECHANICAL SEAL ON PUMP**

Pump will be equipped with a self-adjusting, maintenance-free, mechanical shaft seal.

The mechanical seal will consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring will press against a highly polished stainless steel stationary ring that is sealed within the pump body.

In addition, a throttling ring will be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance will not deteriorate, nor will the pump lose prime, while drafting if the seal fails during pump operation.

Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

**PUMP TRANSMISSION**

The pump transmission will be made of light weight aluminum casing. Power transfer to pump will be through a pressure lubricated, Morse HY-VO drive chain.

Drive shafts will be a minimum of 1.50" diameter hardened and ground alloy steel. All shafts will be ball bearing supported. The case will be designed as to eliminate the need for water cooling.

The water pump will be driven by a special heavy duty ten (10)-bolt hot shift PTO. It will be located on the left side of the chassis transmission. This PTO will be designed specifically for the torque required to drive a 1250 gpm or larger water pump.

**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 and the truck to be in motion while pumping.

A digital pump pressure gauge will be supplied in the cab.

**PUMP SHIFT**

A pump shift will be provided within easy reach of the driver for engagement of the PTO driven pump. The shift will include the indicator lights as mandated by NFPA. The pump shift control will be illuminated to meet NFPA requirements.

**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.

**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.

**PRESSURE CONTROLLER**

A Pierce Pump Boss Model PBA300 pressure governor will be provided.

A pressure transducer will be installed in the water discharge manifold on the pump.

The display panel will be located at the pump operator's panel.

**PRIMING PUMP**

The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of applicable NFPA standards.

All wetted metallic parts of the priming system are to be of brass and stainless steel construction.

One (1) priming control will open the priming valve and start the pump primer.

**PUMP MANUALS**

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.

**PLUMBING, STAINLESS STEEL AND HOSE**

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.

**FOAM SYSTEM PLUMBING**

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.

**MAIN PUMP INLETS**

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.

**MAIN PUMP INLET CAP**

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.

**VALVES**

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.

Inlet valve location will be outside the pump panel.

**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.

**LEFT SIDE INLET**

There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet will be provided with a strainer, chrome swivel and plug.

**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.

**TANK TO PUMP**

The booster tank will be connected to the intake side of the pump with heavy duty 4.00" piping and a quarter turn 3.00" valve with the control remotely located at the operator's panel. 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.

**TANK REFILL**

A 2.00" combination tank refill and pump bypass line will be provided using a quarter-turn full flow ball valve, controlled from the pump operator's panel.

**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 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

**LEFT SIDE DISCHARGE OUTLETS**

There will be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

**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.

**RIGHT SIDE DISCHARGE OUTLETS**

There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

**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.

**FRONT DISCHARGE OUTLET**

There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray.

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.

**REAR DISCHARGE OUTLET**

There will be one (1) discharge outlet piped to the rear of the body on the right 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.

**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.

**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.

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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.

**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.

**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 rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 13.7.5.3.

**MONITOR**

A customer supplied and installed make and model no monitor requested or required monitor will be properly installed on the deluge riser.

The deluge riser will have male National Pipe Threads for mounting the monitor.

**CROSSLAY HOSE BEDS**

Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed 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.

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The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish.

Vertical scuffplates constructed of 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.

**CROSSLAY/DEADLAY HOSE RESTRAINT**

A black 1.00" nylon webbing design with 2.00" box pattern will be provided across each end of two (2) crosslay/deadlay(s) to secure the hose during travel. The webbing will be permanently attached at the top of the crosslay/deadlay opening(s). 1.00" web straps will loop through footman loops located at the opposite end of the permanently attached webbing. The straps will attach with a pair of 1.00" side release fasteners.

**CROSSLAY COVER**

A hinged .19" aluminum treadplate cover will be installed over the crosslay hose beds. It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface.

The cover will be provided with rubber latch hold open device.

The hinge will be to the front of the hose beds.

**HUSKY 3/12 FOAM SYSTEM PLUMBING (FUTURE INSTALLATION)**

Foam manifold/piping will be provided for the future installation of a Husky 3/12 foam system. The foam system will be plumbed to 2-Crosslays 1- Front Bumper Outlet 1 - Rear Discharge discharges.

A foam manifold will be provided for the foam ready discharges. The plumbing from the water pump to the foam manifold will be designed to allow a Husky 3 or Husky 12 foam system to be added without much unnecessary rework.

Space will be provided on the pump panel for the possible addition of the foam system controls.

**FOAM TANK**

The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 30 gallons of foam with the intended use of Class A foam. The brand of foam stored in this tank will be TBD. The foam cell will reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.

**FOAM TANK DRAIN**

The foam tank drain will be a 1.00" drain valve located inside the pump compartment accessible through a door on the right side pump panel.

**PUMP PANEL CONFIGURATION**

The pump panel configuration will be neat and orderly.

**PUMP AND GAUGE PANEL**

The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.

**PUMP ACCESS**

**Right Side Panel**

The right side upper pump panel will be removable.

**Panel Fastener**

The removable panels will be secured with black swell latch.

The left side pump panels will be attached with screws.

The right side lower pump panel (drain bank) will be attached with screws.

**CAB / PUMP MODULE GAP**

Due to certain chassis components that extend rearward of the back of the cab, a cab to pump module gap that is larger than typical will be required. The distance between the cab and the pump module will be indicated on the approval drawing supplied by the apparatus manufacturer.

This cab to pump module gap will be acceptable as constructed .

**PUMP COMPARTMENT LIGHT**

A pump compartment light will be provided inside the right side pump enclosure and accessible through a door on the pump panel.

A 0.125" weep hole will be provided in each light lens, preventing moisture retention.

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

**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.

**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.

**VACUUM AND PRESSURE GAUGES**

The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated.

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The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

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 (1) 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 non-corrosive polished stainless steel or brass plugs. They will be marked with a label.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

**PRESSURE GAUGES**

The individual "line" pressure gauges for the discharges will be Class 1 interlube filled.

They will be a minimum of 2.00" in diameter and have white faces with black lettering.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges will have a pressure range of 30"-0-400#.

The individual pressure gauge will be installed as close to the outlet control as practical.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

**WATER LEVEL GAUGE**

An electronic water level gauge will be provided on the operator's panel, that registers water level by means of five colored LED lights. The lights will be durable, ultra-bright five LED design viewable through 180 degrees. The water level indicators will be as follows:

- 100% = Green
- 75% = Yellow
- 50% = Yellow
- 25% = Yellow
- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty.

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The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.

**FUTURE FOAM LEVEL GAUGE**

Provision will be provided in the foam cell for the future addition of a foam system and level gauge.

**LIGHT SHIELD**

There will be a polished, 16 gauge stainless steel light shield installed over the pump operator's panel.

- There will be 12 volt DC white LED lights installed under the stainless steel light shield 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.
- One (1) pump panel light will come on when the pump is in ok to pump mode.

There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

**AIR HORN SYSTEM**

Two (2) Hadley®, eTone, chrome air horns 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.

**Air Horn Location**

The air horns will be located on each side of the bumper, towards the outside.

**Air Horn Control**

The air horn(s) will be activated by the following:

- Right side foot switch
- Steering wheel horn ring with electric/air horn selector switch

**ELECTRONIC SIREN**

There will be a Federal, Model EQ2B-200, electronic siren with noise canceling microphone provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Siren head will be located in the center console.

The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.

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**SPEAKERS**

There will be two (2) Federal Signal DynaMax®, Model ES100, 100 watt speakers provided. The speakers will use a Federal Signal, Model ESFMT-EF, recess mount with stainless steel grille. Each speaker will be connected to the siren amplifier.

The speakers will be recessed in each side of the front bumper, just outside of the frame rails.

**FRONT ZONE UPPER WARNING LIGHTS**

There will be one (1) 60.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar will include the following:

- One (1) red flashing LED module in the driver's side rear corner position.
- Open 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.
- Open in the driver's side second front position.
- Open in the driver's side third front position.
- Open in the driver's side fourth front position.
- One (1) red flashing LED module in the driver's side fifth front position.
- One (1) red flashing LED module in the passenger's side fifth front position.
- Open in the passenger's side fourth front position.
- Open in the passenger's side third front position.
- Open 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.
- Open in the passenger's side end position.
- One (1) red flashing LED module in the passenger's side rear corner position.

There will be clear lenses included on the lightbar.

There will be a switch in the cab on the switch panel to control this lightbar.

The four (4) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

**FRONT WARNING LIGHT**

There will be two (2) Whelen, Model M6\*\* LED flashing lights provided at the front of the truck.

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.

The lights will be mounted with chrome trim.

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The lights will be activated by a switch on the cab instrument panel.

**FRONT WARNING LIGHT**

There will be a pair of Whelen, Model LIN3 steady burn red LED lights with clear lens mounted on the front of the truck, on the front grille . The lights will be provided with a deep chrome plated ABS flange.

The lights will be activated with the emergency master.

**SIDE ZONE LOWER LIGHTING**

There will be four (4) Whelen®, flashing LED warning lights with with a flange installed per the following:

- Two (2) Model M2\*, 2.50" high x 4.00" wide lights one (1) each side on the engine hood under 62.00".
- The driver's side, side front light to include red warning LEDs .
- The passenger's side, side front light to include red warning LEDs .
- Two (2) Model M6\*, 4.31" high x 6.75" wide lights one (1) each side on the rear fender panel.
- The driver's side, side rear light to include red warning LEDs .
- The passenger's side, side rear light to include red warning LEDs .
- The lenses will be lens color(s) to be clear .

There will be a switch in the cab on the switch panel to control the lights.

**REAR ZONE LOWER LIGHTING**

Two (2) Whelen, Model M6\* LED flashing warning lights will be located at the rear of the apparatus.

The driver's side rear light to be red.

The passenger's side rear light to be red.

Both lights will include lens color(s) to be clear .

There will be a switch located in the cab on the switch panel to control the lights.

**WARNING LIGHTS (REAR AND SIDE UPPER ZONES)**

Four (4) Whelen, model M6\* LED flashing warning lights will be provided at the rear of the apparatus with with a flange .

The side rear upper light(s) on the driver's side to be red.

The rear upper light(s) on the driver's side to be red.

The rear upper light(s) on the passenger's side to be red.

The side rear upper light(s) on the passenger's side to be red.

These lights will include lens color(s) to be clear .

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There will be a switch located in the cab on the switch panel to control the lights.

**LOOSE EQUIPMENT**

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

**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 S515:2024 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, *Standard for High Visibility Public Safety Vests*, 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 S515:2024 edition, section 5.2 should be considered:

- 200 ft (60 m) of 2.50" (65 mm) or larger fire hose
- 100 ft (30 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose (if equipped with a pump)
- One (1) handline nozzle, 95 gpm (360 L) min (if equipped with a pump)
- One (1) first aid kit
- Two (2) combination spanner wrenches
- 100 ft (30 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose (if equipped with a pump)
- 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, suitable for use on suction hose connections
- One (1) automatic external defibrillator (AED)

**SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT**

Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.

**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.

**WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT**

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

**FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT**

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

**AXE, PICKHEAD, NOT REQUIRED BY NFPA 2016**

NFPA 1901, 2016 edition, Section 7.9.4 does not require a pickhead axe to be provided under the miscellaneous equipment.

**PAINT PROCESS**

The exterior custom cab and/or body painting procedure will consist of a seven (7) step finishing process. A commercial chassis paint process will follow similar processes as determined by the chassis manufacturer. The following procedure will be used by Pierce:

1. 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.
2. 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. A final pure water rinse will be applied to all metal surfaces.
3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer will be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. 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.
5. Sealer Primer - The sealer primer is applied prior to the base coat 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 top coated.

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6. Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat will be applied. The Base coat will be applied to a thickness that will achieve the proper color match. The Base coat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of clear coat will be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style 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.

Our specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.

Each batch of base coat color will be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again 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 are 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 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.

**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 will be 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.

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

**PAINT**

The chassis will be painted by the chassis manufacturer, and will remain the commercial grade finish as provided. The body will be painted the matching color by Pierce.

To ensure a good color match between the body and chassis, Pierce has a mutually pre-approved paint color program with the chassis manufacturer. The apparatus will be painted Pierce #90 candy apple red .

**COMMERCIAL CHASSIS PAINT**

The chassis will be painted by the chassis manufacturer. It will remain the color and commercial quality finish as provided. The primary color will be Pierce #90 candy apple red .

**PAINT CHASSIS FRAME ASSEMBLY**

The chassis frame assembly will be painted black by the chassis manufacturer. It will remain the commercial grade finish as provided.

**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.

**REFLECTIVE STRIPES**

Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" gold stripe at the top with a 1.00" gap then a 4.00" black stripe with a 1.00" gap and a 1.00" gold stripe on the bottom.

**REFLECTIVE VINYL ON FRONT BUMPER**

There will be a reflective vinyl band provided across the front bumper.

**REAR CHEVRON STRIPING**

There will be alternating chevron striping located on the upper rear-facing vertical surface of the apparatus. The surface above the body / tank seam in the rear sheet metal will be covered.

The colors will be red and 18 yellow (gold color) .

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

**REFLECTIVE STRIPE, CAB DOORS**

black reflective striping will be provided on the interior of each cab door.

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This striping will total a minimum of 96.00 square inches and will meet the current edition of applicable NFPA standards.

**LETTERING**

There will be reflective lettering, 4.00" high, with no outline or shade provided. There will be 12 letters provided.

**LETTERING**

There will be reflective lettering, 6.00" high, with no outline or shade provided. There will be 12 letters provided.

**LETTERING**

There will be non-reflective vinyl lettering, 14.00" high, with no outline or shade provided. There will be six (6) letters provided.

**MALTESE CROSS INSTALLATION**

There will be one (1) pair of maltese crosses, comprised of printed effect gold leaf material, provided and installed cab doors.

**MANUAL, BODY PARTS ONLY**

A custom parts manual for the Pierce® installed parts only will be provided in USB flash drive format with the completed unit.

The manual 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

The manual will be specifically written for the body model being purchased. It will not be a generic manual for a multitude of different bodies.

**SERVICE PARTS INTERNET SITE**

The service parts information included in this manual 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.

**MANUALS, SERVICE**

A USB flash drive format service manual supplement containing parts and service information on Pierce® installed components will be provided with the completed unit.

The manual will be specifically written for the unit being purchased. It will not be a generic manual for a multitude of different units.

**MANUAL, CHASSIS OPERATION**

One (1) chassis operation manual will be provided with the completed unit.

**ONE (1) YEAR MATERIAL AND WORKMANSHIP**

Each new piece of apparatus will be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty will cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate will be submitted with the bid package.

**CHASSIS WARRANTY**

The chassis warranty will be for a total of **two (2) years / 100,000 miles**.

**PAINT WARRANTY**

The commercial chassis manufacturer's paint warranty will apply to the paint on the chassis only.

**CAMERA SYSTEM WARRANTY**

A Pierce fifty four (54) month warranty will be provided for the camera system.

**COMPARTMENT LIGHT WARRANTY**

The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.

**TRANSMISSION WARRANTY**

The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty to be provided by Allison Transmission and not apparatus builder.

**TEN (10) YEAR STRUCTURAL INTEGRITY**

The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.

**ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY**

A Gortite roll-up door limited warranty will be provided. The mechanical components of the roll-up door will be warranted against defects in material and workmanship for the lifetime of the vehicle. A **six (6) year** limited warranty will be provided on painted and satin roll up doors.

The limited warranty certificate, WA0190, is included with this proposal.

**PUMP WARRANTY**

The Waterous pump will be provided with a seven (7) year material and workmanship limited warranty.

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A copy of the warranty certificate will be included with this proposal.

**TEN (10) YEAR PUMP PLUMBING WARRANTY**

The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.

**LIFETIME MATERIAL AND WORKMANSHIP**

A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.

**TEN (10) YEAR PRO-RATED PAINT AND CORROSION**

A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

**ONE (1) YEAR MATERIAL AND WORKMANSHIP**

The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.

**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.

**CAB INTEGRITY**

The cab has been tested to and passed the following standards:

- ECE Regulation No.29
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.

**STEPPING, STANDING & WALKING AREAS, SLIP RESISTANCE CERTIFICATION**

Pierce Manufacturing certifies that samples of the interior and exterior stepping, standing and walking surfaces used in the manufacture of Pierce custom and commercial fire apparatus will conform to the requirements of NFPA 1900, 2024 edition paragraphs 12.6.4.1 and 12.6.4.2 when tested using an English XL Variable Incidence Tribometer.

**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.

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- 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.

END OF SPECIFICATION



# Electrical Analysis

2/21/2025

**Bid #:** 1098  
**Desc:** IHC 607 Wet Side Tanker 2100 Gallon Low Sides/ Lap Doors  
**Customer:** Ukiah FD  
**Option:** MUX, Electrical System, Commercial Chassis, Wet Side

**Job #:**  
**Sales Rep:** Bauer, Jon  
**Organization:** Golden State Fire Apparatus, Inc  
**Type:** Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001247	High Idle w/Electronic Engine, Commercial		0.00	1.20	0.00
0005937	Light, Do Not Move Apparatus, Commercial Chassis		0.00	0.62	0.00
0005940	Lights, Engine Compt, (2) Commercial Chassis		0.00	3.20	0.00
0005945	Light, Pump Compt		0.00	1.80	0.00
0062847	Gauge, Water Level, Class 1, Pierce Std.		0.00	0.00	1.23
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.00	0.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0645687	Lights, Rear Scene, WIn, M6ZC LED, 1st		0.00	0.00	4.00
0653961	Light, Front, WIn LIN3, RED, Steady Burn, 1 Pair, Commercial		0.00	0.00	0.80
0659235	Provision for Gauge, Foam Level, (1) Tank, Class 1, Future Foam		0.00	0.00	1.00
0739010	Plumbing for Future Foam Sys, Husky 3/12 Single Agent		0.00	0.00	0.00
0760730	Single Start, (3) Grp 31, 660 CCA each, 2 Door Cab, International		0.00	3.00	0.00
0766905	Lights, WIn, PCPSM1*, Pioneer, 12 VDC, 2nd		0.00	0.00	12.00
0766906	Lights, WIn, PCPSM1*, Pioneer, 12 VDC, 1st		0.00	0.00	12.00
0773943	Air Conditioning, Commercial		0.00	3.00	0.00
0775282	Light, Visor, WIn, 12V P*H2* Pioneer, Commercial		0.00	0.00	13.00
0806466	Lights, Backup, WIn M62BU, LED, For Tail Lt Housing		0.00	3.20	0.00
0808099	Camera, Pierce, 7" HD, R, Camera, AHD		0.00	1.20	0.00
0820894	Wiring, Spare, 15 A 12V DC, Batt Dir, 1st NFPA1900/ULC		0.00	0.00	15.00
0820921	Wiring, Spare, 4.8 A 12V DC, USB Term, Blue Sea 1045, Batt Dir,		0.00	0.00	4.80
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0005926	Light, Open Door - Commercial Std	NFPA	0.95	0.00	0.00
0072620	Wiper control, intermittent feature Commercial	NFPA	1.20	4.80	0.00
0509487	Lights, Cab Access Steps, P25, LED, 4Lts	NFPA	0.50	0.00	0.50
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0586382	Gauges, Engine, Included With Pressure Controller	NFPA	0.30	0.00	0.00
0593161	Light Shield, S/S LED	NFPA	3.00	0.00	0.00
0606721	Lightbar, WIn, Freedom IV-V, 60", R_RR__RR__RR_R	NFPA	9.60	0.00	4.96
0627281	Lights,Clearance/Marker/ID, ear,FRP LED Bar & Truck-Lite	NFPA	0.50	0.00	0.00
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	NFPA	2.52	0.00	0.00
0683575	Lights, Perimeter Body, Truck-Lite 6060C LED 2ts, Rear Step	NFPA	0.50	0.00	0.00
0687610	Lights, Perimeter Cab, Truck-Lite 6060C LED 2Dr, Grommet Mt	NFPA	0.50	0.00	0.00
0688049	Siren, Federal EQ2B-200, 200 Watt	NFPA	2.01	18.13	0.00
0695922	Lights, Front Zone, WIn M6** LED, Lens Choice, Commercial	NFPA	1.00	1.00	0.00
0709438	Lights, Walk Surf, FRP Flood, LED	NFPA	2.00	0.00	0.00
0720717	Lights, Rear Zn Lwr, WIn M6*, Lens Choice,For Tail Light Housing,	NFPA	1.80	2.70	0.00
0720722	Lights, Rear/Side Up Zone, WIn M6* LED, Lens Choice, 4lts,	NFPA	4.00	0.00	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
0758523	Engine, Cummins L9, 450 hp, IHC HV607 Only	NFPA	6.00	0.00	0.00
0762588	Cab Lighting, LED Clearance/Marker/Fender Turn Signals,	NFPA	14.48	7.79	0.00
0769572	Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	NFPA	0.58	0.00	0.00
0772170	Cab, 2-Door, International MV/HV	NFPA	25.32	7.48	24.75
0773913	Fuel Tank, 50 Gallon, Left Side, Aluminum, Commercial	NFPA	0.08	0.00	0.00
0773950	Trans, Automatic, Allison 3000 EVS, w/(2) PTO Provsions,	NFPA	2.00	2.00	0.00
0773967	ABS, Anti-Lock Braking, w/Electronic Stability Pgm w/ATC,	NFPA	0.60	5.40	0.00

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



# Electrical Analysis

2/21/2025

**Bid #:** 1098 **Job #:**  
**Desc:** IHC 607 Wet Side Tanker 2100 Gallon Low Sides/ Lap Doors **Sales Rep:** Bauer, Jon  
**Customer:** Ukiah FD **Organization:** Golden State Fire Apparatus, Inc  
**Option:** MUX, Electrical System, Commercial Chassis, Wet Side **Type:** Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0773985	Air Dryer, Brake, w/Heater, Commercial	NFPA	4.70	0.00	0.00
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	NFPA	1.80	0.00	0.00
0805623	Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0807141	LS Compartments, LOW Compts, Lap, Single Axle, Wet Side	NFPA	0.90	0.00	0.90
0807846	Vehicle Data Recorder w/Seat Belt Monitor, Commercial, Wet Side	NFPA	0.50	0.00	0.00
0807894	Load Manager, Inc w/MUX Electrical System , Wet Side	NFPA	0.56	0.56	0.00
0810569	RS Compartments, Lap, Single Axle, Wet Side	NFPA	0.90	0.00	0.90
0811770	Lights, Side Zone Lower, WIn M2* Frnt & M6* Rear LED,Lens	NFPA	3.00	4.50	0.00
0813791	Panel, Charger Display, Kusmaul, 091-94-12, Batt Dir	NFPA	0.03	0.00	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0607607	Alternator, 325 amp Leece-Neville, International	S	0.00	0.00	0.00
<b>Load Totals:</b>			<b>98.93</b>	<b>74.92</b>	<b>95.84</b>

Note: Minimum Continuous Load is in "Blocking Right of Way" mode.(Reference current edition of NFPA 1901)  
 Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)  
 Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

**Alternator Output at Idle: 168.00**

Minimum Continuous Load	
Supply:	168.00
Demand:	98.93
Variance:	69.07

**Alternator Output at Governed Speed: 282.00**

Total Connected Load	
Supply:	282.00
Demand:	194.77
Variance:	87.23

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





## Certification Document CD0196 Statement of Compliance to NFPA 1900-2024 Vehicle Stability

NFPA 1900 Section 7.14 states “all apparatus shall be equipped with a stability control system in any configuration for which it is commercially available.”

For apparatus that cannot be equipped with a stability control system, Pierce fire apparatus comply with NFPA 1900 Section 7.14.3.1 through usage of the tilt table method. As prescribed by the standard, the apparatus is compared to a substantially similar apparatus that has been loaded as required and tested on a tilt table per the SAE J2180 test procedure. A listing of all tested apparatus is maintained by the Research and Development lab and is available for inspection at the Appleton factory.



**VALIDATION TEST: Multiple Tests**

Pierce Manufacturing, Inc.

David W. Archer  
Vice President of Engineering  
November 1, 2023

<b>7.14.1* Stability Control System</b>	
7.14.1.1	The apparatus shall be equipped with a stability control system in any configuration for which it is commercially available.
7.14.1.2	The stability control system shall have, at a minimum, a steering wheel position sensor, a vehicle yaw sensor, a lateral accelerometer, and
7.14.2	Apparatus completed in two or more stages shall not exceed the incomplete vehicle manufacturer’s maximum allowable vertical center of
<b>7.14.3 Rollover Stability.</b>	
Structural fire apparatus not equipped with a stability control system and all wildland fire apparatus shall meet either of the following: (1)*The apparatus shall remain stable in both directions in accordance with Table 7.14.3.1 when tested on a tilt table in accordance with SAE J2180, A Tilt Table Procedure for Measuring the Static Rollover Threshold for Heavy Trucks. (2)The calculated or measured vertical center of gravity (VCG) divided by the rear axle track width shall not exceed the applicable criterion in Table 7.14.3.1.	
7.14.3.1	Certification shall be by one of the following methods: (1)Performing a tilt-table test on the completed apparatus (2)Calculating the point at which the apparatus will tip based on centers of gravity, suspension geometry, suspension compliance, and tire compliance (3)Comparing the apparatus design to a previously certified substantially similar apparatus (4)Demonstrating that the calculated or measured center of gravity (CG) divided by the rear axle track width does not exceed the value in Table 7.14.3.1
7.14.3.2	Certification shall be delivered with the fire apparatus.
7.14.3.3	A previously certified apparatus shall be considered substantially similar if it includes a chassis with the same or higher CG height, the same or narrower rear axle track width, the same or greater water tank size and CG height, the same type of front and rear suspension, and the same type and size of aerial device.
7.14.3.4	For purposes of certification the apparatus shall be loaded with fuel, water, firefighting agents, hose, ladders, a weight of 250 lb in each seating position, and weight equivalent to the miscellaneous equipment allowance.
7.14.3.5	If the apparatus is designed to meet a specified higher equipment loading or larger hose bed capacity or to carry additional ground ladders, these greater loads shall be accounted for in the testing, calculating, or measuring.
7.14.3.6	The weight added to the fire apparatus for certification, calculation, or measurement shall be distributed to approximate typical in-service use of
7.14.3.7	the fire apparatus while not exceeding the manufacturer’s published

Vehicle	Tilt Criteria (degrees)	VCG/Track (percentage)
Wildland fire apparatus ≤33,000 lb (15,000 kg) GVWR	30	75
Wildland fire apparatus >33,000 lb (15,000 kg) GVWR	27	80
Structural fire apparatus not equipped with a stability control system	26.5	80




## Certification Document CD0025 International Truck Cab Integrity Certification

International Truck certifies the integrity of their cab relative to occupant protection.

International Truck

4201 Winfield Road  
Warrenville, IL 60555 USA

P : 630-753-5000  
W : Navistar.com

  
A NAVISTAR COMPANY

**Sales Information Letter G-6151**  
October 7, 2008

**All U.S. Dealers**

**SUBJECT: International® Trucks Pass Tough Cab Tests**

Many truck customers already recognize International® trucks for their quality, durability and high performance, but they also have an added feature that has not been talked about – cab strength. The purpose of this letter is to provide our sales professionals a clear direction on the importance of this information and how to use this information to our advantage in competitive bid situations.

Occupant protection is a key objective for vehicle body design. Federal Motor Vehicle and Safety Standards for the US and Canada (FMVSS / CMVSS) govern several aspects of occupant safety and cab design as shown in the list below:

- FMVSS / CMVSS 103 Windshield Defrosting and Defogging Systems
- FMVSS / CMVSS 104 Windshield Wiping and Washing Systems
- FMVSS / CMVSS 206 Door Locks and Door Retention Components
- FMVSS / CMVSS 207 Seating Systems
- FMVSS / CMVSS 208 Occupant Crash Protection
- FMVSS / CMVSS 209 Seat Belt Assemblies
- FMVSS / CMVSS 210 Seat Belt Assembly Anchorages
- FMVSS / CMVSS 302 Flammability of Interior Materials

These standards are mandatory for on-highway trucks and should be requirements in any North American truck purchase bid situation.

Navistar designs their cabs to meet additional requirements and standards with the focus being on frontal collision and rollover accident scenarios.

**Cab and Component Mounting**

International truck models are designed and analyzed to retain the cab and its contents in the event of frontal crash scenarios. The cab mounting structure is designed to withstand a forward pull of twenty times the weight of the cab without separating from the chassis. This simulates the forces of a crash and combined with the FMVSS seat and seat belt restraint compliance, is designed to keep the occupant in the cab, in the proper location and orientation on the chassis.

In addition, vehicles with cabinets (sleeper cabs) are designed to retain the cabinets and their contents under the same loading conditions to minimize the hazard of flying objects during crash scenarios.

**Roll Over Protection – Why SAE J2422?**

The International cab structure was developed to meet the roof strength requirements of the SAE J2422. These requirements were developed with Navistar engineers working with the Society of Automotive Engineers to develop a test to promote occupant protection in the event of a rollover accident scenario.

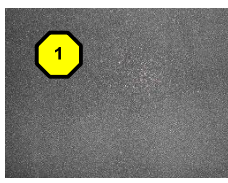
SAE J2422 was chosen over the European standard roof strength test (ECE 29) for two main reasons. First, the SAE test procedure recognizes the forces that can compromise the structural integrity as a truck rolls onto its side, before it comes to rest on its roof. The ECE 29 test only applies a vertical load. Second, the ECE 29 also applies the load to the roof uniformly by a preformed platen, where the SAE test requires a rigid flat platen which results in a more severe test. See page 3 for additional information on SAE J2422 versus ECE 29 testing.

The International crew cab, extended cab and standard cab have been tested to meet the roof strength requirements of SAE J2422. Please see page 4 for Statement of Compliance.

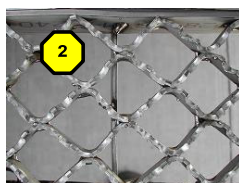


## Certification Document CD0197 Stepping, Standing & Walking Areas Slip Resistance Certification

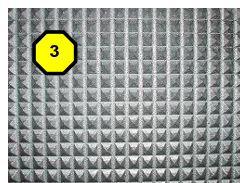
Pierce Manufacturing certifies that samples of the following interior and exterior stepping, standing and walking surfaces used in the manufacture of Pierce custom and commercial fire apparatus conform to the requirements of NFPA 1900, 2024 edition paragraphs 12.6.4.1 and 12.6.4.2 when tested using an English XL Variable Incidence Tribometer.



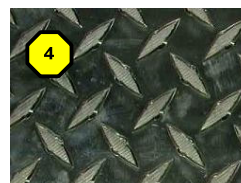
1  
Anti-Slip Adhesive Tape



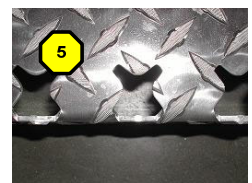
2  
Bustin Firm-Grip



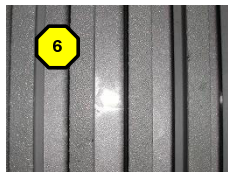
3  
Cast Pyramids



4  
Diamond Plate (Aluminum)



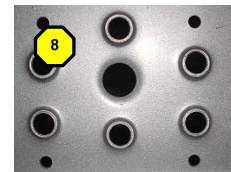
5  
Diamond Plate Edge Punch



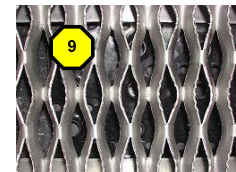
6  
Duradek



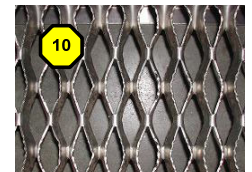
7  
Eberhard Folding Step



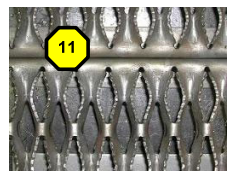
8  
Freightliner Step



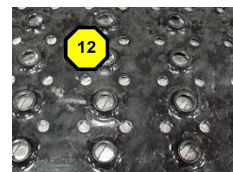
9  
Grip Strut (Aluminum .080)



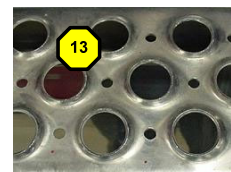
10  
Grip Strut Aluminum 12 Ga



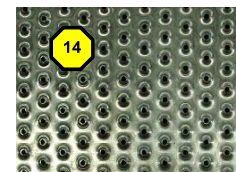
11  
Grip Strut (Steel 12 Ga)



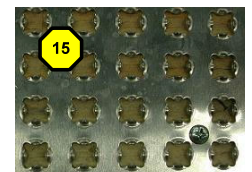
12  
International Step



13  
Kenworth Step



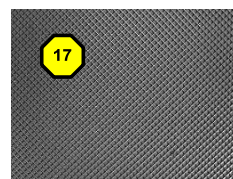
14  
Morton Cass



15  
Octagonal Punch



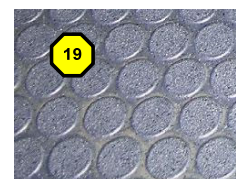
16  
OverKrete Coating



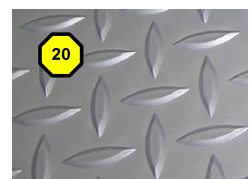
17  
Rubber Mat



18  
Serration and Knurl



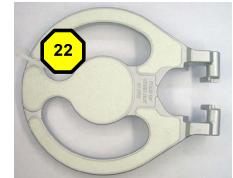
19  
Loncoin II



20  
Lonplate I



21  
Thermach  
(Stainless Coating)



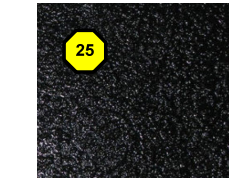
22  
Trident Luminescent  
Folding Step



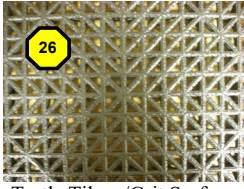
23  
Interior Only  
Line-X  
(Spray-On Coating)



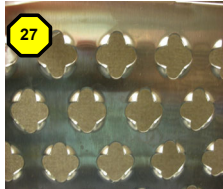
24  
Interior Only  
Rhino Lining  
(Spray-On Coating)



25  
Durabak SSV 170



Turtle Tile w/Grit Surface



Step Slot



Gortite Stepping Surface



FormCoat on Smooth Aluminum



FormCoat on Diamond Plate



Safe-Stride

### VALIDATION TESTS:

<b>RD1008</b>	<b>Surfaces</b>	<b>1 – 18</b>
<b>RD1153</b>	<b>Surfaces</b>	<b>19 – 20</b>
<b>RD1195</b>	<b>Surface</b>	<b>21</b>
<b>RD1219</b>	<b>Surface</b>	<b>22</b>
<b>RD1232</b>	<b>Surface</b>	<b>23</b>
<b>RD1227</b>	<b>Surface</b>	<b>24</b>
<b>RD1633</b>	<b>Surface</b>	<b>25</b>
<b>RD1942</b>	<b>Surface</b>	<b>26</b>
<b>RD1948</b>	<b>Surface</b>	<b>27</b>
<b>RD2027</b>	<b>Surface</b>	<b>28</b>
<b>RD2817</b>	<b>Surfaces</b>	<b>29-30</b>
<b>RD1625</b>	<b>Surface</b>	<b>31</b>

Pierce Manufacturing, Inc.

David W. Archer  
Vice President of Engineering  
June 1, 2017

# **4** **PRODUCT** **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:

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

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.



# Fire and Rescue Apparatus

## Ten (10) Year Material and Workmanship

### Pierce 12V LED Strip Light

### Limited Warranty

#### 1. LIMITED WARRANTY

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

<b>Coverage:</b>	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Pierce 12V LED strip lights installed on the apparatus occurring during the warranty period.
<b>Warranty Begins:</b>	The date of the original purchase invoice (issued when the product ships from the factory).
<b>Warranty Period Ends After:</b>	Ten (10) Year
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	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

## 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:

<b>Coverage:</b>	<b>The apparatus body shall be free from structural failures caused by defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years - or - 100,000 Miles</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>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.</b>  <b>This warranty does not apply to damage caused by corrosion.</b>

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.*

# Waterous Seven-Year Limited Warranty

WATEROUS warrants, to the original Buyer only, that products manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of seven (7) years from the date the product is first placed in service, or seven and one-half (7-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS' plant at South St. Paul, Minnesota, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax, email, or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

- (a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, use in non-firefighting applications, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;
- (b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;
- (c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent;
- (d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation; and
- (e) normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

**ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER CAUSE OF ACTION, SHALL WATEROUS BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR PERSONAL INJURY OR PROPERTY DAMAGES.**

The exclusive remedy of Buyer and the sole liability of WATEROUS, whether based on contract, warranty, tort or any other basis of recovery whatsoever, is expressly limited at the election of WATEROUS to:

- (a) the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or
- (b) the repair of such product or part, or
- (c) the refund or crediting to Buyer of the net sales price of the defective product or part.

**BUYER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE OF ANY OTHER REMEDY OTHERWISE AVAILABLE TO BUYER.**

Waterous Company  
125 Hardman Avenue South  
South St. Paul, MN 55075 USA  
[www.waterousco.com](http://www.waterousco.com)





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, 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.

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.

 **UNITED PLASTIC FABRICATING, INC.**  
**WARRANTY**  
**FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™**

## LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (<http://www.state.gov>), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products through alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime



# UNITED PLASTIC FABRICATING, INC.

# WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

**UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.**

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

**THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.**

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# 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:

<b>Coverage:</b>	<b>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.</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<p><b>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</b></p> <p><b>Topcoat Durability &amp; Appearance: Gloss, Color Retention &amp; Cracking</b>  0-72 months 100%  73-96 months 50%  97-120 months 25%</p> <p><b>Integrity of Coating System: Adhesion, Blistering/Bubbling</b>  0-36 months 100%  37-84 months 50%  85-120 months 25%</p> <p><b>Corrosion: Dissimilar Metal and Crevice</b>  0-36 months 100%  37-48 months 50%  49-72 months 25%  73-120 months 10%</p> <p><b>Corrosion Perforation</b>  0-120 months 100%</p> <p><b>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.</b></p> <p><b>Items not covered by this warranty include:</b>  (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.

# **5 DEALER SUPPLIED PRODUCTS AND /OR SERVICES**

**Exhibit "D"**

### **DEALER SUPPLIED EQUIPMENT and/or SERVICES**

The following items and/or services will be provided by Golden State Fire Apparatus Inc. (GSFA) prior to final delivery:

### **LICENSED MANUFACTURER**

The State of California Vehicle Code, section 11701 requires “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 has a current license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

### **LICENSED DEALERSHIP**

The State of California Vehicle Code, section 11701 requires 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. has a current license at time of bid as outlined above and is available upon request. Temporary licenses are not acceptable.

### **LICENSED SALES REPRESENTATIVE**

The State of California Vehicle Code, section 11800 requires that it shall be “unlawful for any person to function as a vehicle salesperson without having first procured a license issued by the Department of Motor Vehicles (DMV)”. The representative has a current vehicle salespersons license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

### **VEHICLE REGISTRATION**

The State of California Vehicle Code section 11739 requires 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). Golden State Fire Apparatus, Inc. is a factory-authorized dealer of the vehicle being sold and is authorized to register with the State of California as a new vehicle manufacturer.

GSFA will make all necessary applications and complete all transfer papers, including applying for California Exempt “E” license plates.

### **WEEKLY PROGRESS PHOTOGRAPHS**

GSFA will provide weekly photographs of the apparatus or the major components as they are being constructed. The photographs will commence at the start of the manufacturing process and will continue through production by the manufacturer. The reports will show the progress of the apparatus through the course of each week. Special attention will be given to show the unique features and aspects of the apparatus as construction progresses.

### **FINAL INSPECTION FACTORY TRIP**

A final inspection trip to the manufacturing facility will be provided for two (2) Customer representative(s). The intent of this trip is to ensure that the apparatus is built to specification and to detect any deficiencies that require correction. The final inspection trip will have a duration of three (3) days and two (2) nights and be scheduled at times mutually agreed upon between the Golden State Fire Apparatus Sales Consultant and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturer’s location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose. Cost of transportation to and from the airport shall be the responsibility of the purchaser.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

### **DELIVERY TO AUTHORIZED SERVICE FACILITY**

GSFA will, at their expense, deliver the apparatus (including any applicable equipment, spare parts, and supplies) to their Northern California facility in Sacramento for a dealer preparation inspection.

To ensure proper break in of all components while still under warranty, the apparatus shall be delivered under its own power - rail or truck freight shall not be acceptable.

### **PRE-DELIVERY SERVICE**

After transportation from the factory and prior to delivery, the apparatus will receive a pre-delivery service to confirm proper operation and correction of any issues found as a result of said inspection. The Golden State Fire Apparatus, Inc. pre-delivery service consists of the following:

- Engine Compartment and Undercarriage – Check for any broken mounting brackets and inspect for correct capacities of the following (if applicable): engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear end fluid, pump transmission oil, and primer oil.
- Interior – Operate all doors, windows, and locks for proper adjustment. Check upholstery.
- Exterior – Repair reasonable paint scratches or chips. Tighten any loose hardware and inspect tires and wheels for proper pressure and lug torquing.
- Road Test – With the water tank (if applicable) full, the apparatus will be driven approximately twenty miles which allows the drive train components to get up to operating temperature. Road test will be on both city and highway roads. A DOT compliant brake test will be conducted to ensure the system is holding air. The brake condition and wheel seals will also be inspected.
- Electrical - Operate all lights, sirens, and other electrical accessories to verify operation.
- Pump - If applicable, vacuum test the pump to hold for 15 minutes. After vacuum test, operate the relief valve, transfer valve and check pump shift. Check water tank for leaks and inspect water level gauge for calibration. With discharge caps loose, rapid test all individual gauges and main gauges for calibration. Lubricate valve rods.
- Foam System – If applicable, tighten caps and connect foam lines. Test selector, valves, metering valve and operation of foam system (including flush).
- Fuel Tank - Fuel tank will be filled at the dealership location prior to final delivery.
- DEF Tank - DEF tank will be filled at the dealership location prior to final delivery.
- Wash - The apparatus will be thoroughly washed at the dealership location prior to final delivery.

**FINAL DELIVERY (CUSTOMER LOCATION)**

GSFA will, at their expense, deliver the Product (including any applicable equipment, spare parts, and supplies) to the Customer specified address once completed. Prior to delivery of the Product, Customer agrees to provide proof of liability and physical damage insurance to GSFA. GSFA will not release the Product to the Customer until such proof of insurance is provided.

It is the responsibility of the Customer to have any outstanding balance due, paid in full to GSFA, prior to or at the time that the Product is complete and ready to deliver. If payment is late or delivery is delayed pending payment, a daily finance charge of \$150.00 and a daily storage fee of \$50.00 may apply until such payment is received.

Due to insurance liability, the Product will not be delivered without full acceptance and full payment (or prior written agreement between the Customer and GSFA).

**DEALER PROVIDED LOOSE EQUIPMENT**

Prior to final delivery of the specified vehicle to the customer location, the following items will be provided by the dealer:

- One (1) red 2100 gallon, FoldATank brand, aluminum frame, portable water tank

**END OF EXHIBIT "D"**