ROSENBAUER CUSTOM PUMPER

Overall Height Restriction, NONE

OVERALL HEIGHT

An overall height restriction has not been specified for this apparatus.
Overall Length Restriction, NONE

OVERALL LENGTH

An overall length restriction has not been specified for this apparatus.
Overall Width Restriction, NONE

OVERALL WIDTH

An overall width restriction has not been specified for this apparatus.
Wheelbase Restriction, NONE

WHEELBASE

A wheelbase restriction has not been specified for this apparatus.
Angle of Approach, NFPA Minimum, 8 Degrees

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than eight (8) degrees as specified by the current edition of the NFPA 1901 Guideline.
Angle of Departure, NFPA Minimum, 8 Degrees

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than eight (8) degrees as specified by the current edition of the NFPA 1901 Guideline.
Contract Change Notice

CONTRACT CHANGE NOTICE

The quoted delivery time is based upon our receipt of the specified materials required to produce the apparatus in a timely manner. "Delivery" means the date company is prepared to make physical possession of vehicle available to the customer.

The Company shall not be responsible nor deemed to be in default on account of delays in performance due to causes which are beyond the Company's control which make the Company's performance impracticable, including but not limited to civil wars, insurrections, strikes, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of government, delays in transportation, inability to obtain necessary labor supplies or manufacturing facilities, 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, pandemics, epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their contracts or labor troubles causing cessation, slowdown, or interruption of work.

After execution and acceptance of this Purchase Process, the Buyer may request that the Company incorporate a change to the Products or the Specifications for the Products by delivering a Change Order to the Company; provided, however, that any such Change Order must be in writing and include a description of the proposed change sufficient to permit the Company to evaluate the feasibility of such Change Order. Within seven (7) working days of receipt of a Change Order, the Company will inform the Buyer in writing of the feasibility of the Change Order, the earliest possible implementation date for the Change Order, of any increase or decrease in the Purchase Price resulting from such Change Order, and of any effect on production scheduling or delivery resulting from such Change Order. The Company shall not be liable to the Buyer for any delay in performance or delivery arising from any such Change Order. Purchase Price may be modified only by mutual written agreement of the Parties because of changes to the Apparatus required or requested by the Buyer during the construction process pursuant to Appendix C, Change Order Policy. Any changes in the Purchase Price resulting from changes to the Apparatus required or requested by the Buyer during the construction process shall be stated in the Change Order signed by both parties. Additional Changes: If various state or federal regulatory agencies (e.g., NFPA, DOT, EPA) require changes to the specification and/or the product that result in a cost increase to comply therewith this cost will be added to the Purchase Price to be paid by the customer.

Financial Stability Response

FINANCIAL STABILITY SPECIFICATIONS

With high-profile instances of fire apparatus manufacturers encountering financial difficulties, it is imperative that fire departments be diligent in evaluating the financial position of the companies they solicit to build on their emergency response vehicles. A contract entered into with a company on shaky ground is a dangerous prospect, since conducting business with a manufacturer in such condition could open the department to monumental problems.

Take, for instance, the growing theme of manufacturers *requiring* as opposed to *offering* pre-payment and progressive payment options with a corresponding discount off the price of a vehicle. Such offers are made with an ulterior motive in mind, as it can be generally inferred that manufacturers requiring pre-payments and progressive payments do so because they need your cash *today* to fund production of other vehicles already in the backlog.

Should problems arise, as has been the case in situations too numerous to mention, your department risks losing any down payments already made or even the entire cost of a piece of equipment should certain pre-pay discount situations go awry.

While pre-payment discounts may be enticing, it is important to know just how stable the manufacturer seeking your funds is before you make that commitment. If you enter into one of these agreements and the manufacturer hits a rough patch, it is you that will be hurting, because your funds may not be recoverable. However, if you enter into a contract with a financially sound manufacturer, you will reap all of the benefits of a well-built truck at a lower cost. You may equally, by taking advantage of the time-value of money, be able to afford more truck than initially thought, because funds saved by leveraging pre-payment options could allow you get some added features that you might not necessarily have been able to afford.

With this in mind, it must be noted that Rosenbauer is a company with rock-solid financial stability. This is a statement not made lightly, as we can prove it to you. We can provide language that you can insert into your bid specifications that stipulates that in order for bids to be accepted by a fire department, the company bidding must meet several fiscal criteria.

The first criteria call for the successful bidder to meet a debt-to-equity ratio not exceeding a 2.0 rating. Rosenbauer presently stands at a 1.51 rating, which is well-below the accepted rating. This low number results from Rosenbauer owning more assets with a marginal debt service. This means we are not using lenders to fund our operations, nor our growth.

The second requirement is that the debt coverage ratio of the successful body builder exceeds a 100 rating. The higher the number, the better able a company is to meet its payment obligations with banks and creditors. Rosenbauer's number is at 279.6, which is nearly three times the required amount. The higher the debt coverage ratio, the easily and more fluidly a company is positioned to pay its monthly obligations and operating costs.

The third criteria require that the equity ratio of the successful bidder must exceed .30 rating. A higher equity ratio indicates that the body builder has increased flexibility to meet its financial obligations which translates into greater financial stability. Rosenbauer currently has an equity ratio of .387 which is well above the accepted rating and an excellent indicator of financial strength.

When exploring and evaluating various manufacturers to consider for building your apparatus, there is little doubt you will find one that stands on as firmly a financial ground as Rosenbauer. While others are experiencing stressful issues that raise doubts as to the company's long-term viability, Rosenbauer continues to demonstrate a strengthening of its financial position in the apparatus manufacturing industry. Because Rosenbauer meets and exceeds all the above-stated financial bid requirements, we are best positioned to ensure customers of a strong relationship with the company, which cannot be claimed by most of our competitors in this volatile market.

The Rosenbauer America Dun and Bradstreet number is 02-447-3584. To acquire a Dun and Bradstreet report, telephone them at 1-800-234-3867 (in Canada 800-463-6362) or visit their web site address at www.dnb.com. Dun and Bradstreet is nationally recognized, independent financial analysis company.
Electronic Stability Control

ELECTRONIC STABILITY CONTROL

Electronic stability control shall be supplied on the chassis.
Technical Drawings, Representative Drawings (3-View) (Left/Right/Rear)

ENGINEERING BLUEPRINTS

ROSENBAUER has submitted "proposal" blueprints which are “representative” of the vehicle being proposed and these have been generated on computer-aided-design (CAD) equipment.

The blueprints are provided as follows:

Sheet No. 1:

- Left side exterior view
- Right side exterior view
- Rear exterior view

ROSENBAUER shall provide construction drawings for approval prior to actual construction of the vehicle.

The design of the equipment is in accordance with the best engineering practices. The equipment design and accessory installation shall permit accessibility for use, maintenance and service. All components and assemblies shall be free of hazardous protrusions, sharp edges, cracks or other elements, which might cause injury to personnel or equipment.

All oil, hydraulic, and air tubing lines and electrical wiring shall be located in protective positions properly attached to the frame or body structure and shall have protective loom or grommets at each point where they pass through structural members, except where a through-frame connector is necessary.

Parts and components will be located or positioned for rapid and simple inspection and recognition of excessive wear or potential failure. Whenever functional layout of operating components determines that physical or visual interference between items cannot be avoided, the item predicted to require the most maintenance shall be located for best accessibility.
Change Orders

CHANGE ORDERS

To ensure the proper engineering and construction of the purchaser's custom fire apparatus in a timely manner, the contractor shall consider the order final and complete after any changes made during the pre-construction

conference are mutually approved. Change orders requested after the pre-construction conference are discouraged. It shall be understood and agreed that any changes, if approved, after the order has been released to Engineering, shall constitute a valid cause for production delay and without penalty to the contractor.
== RSD Timberwolf Warranties - 4212.023 04/21/23 ==

Warranty, Apparatus, Body Warranty, 1 Year

BODY WARRANTY

We warrant each new motorized fire apparatus manufactured by ROSENBAUER AMERICA, LLC for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of ROSENBAUER AMERICA, LLC, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by ROSENBAUER AMERICA, LLC.
Warranty, Body, Alum, 5 Years

ALUMINUM BODY WARRANTY - FIVE YEAR

Rosenbauer America, LLC warrants to the original purchaser only, that the all-aluminum body, fabricated by Rosenbauer America, LLC, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

ROSENBAUER AMERICA, LLC MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this body, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Rosenbauer America, LLC will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Rosenbauer America, LLC will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

Note: *Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.*

Warranty, Subframe, Lifetime Galv

GALVANIZED SUBFRAME WARRANTY

Subject to the provisions, limitations and conditions set forth in this warranty, Rosenbauer America, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that each new hot dip galvanized body subframe (exclusive of paint finish and hardware) is structurally sound and free of all structural defects of both material and workmanship and further warrants that it will maintain such structural integrity for the duration of ownership by the original purchaser. This warranty terminates upon transfer of possession or ownership by the original purchaser.

This warranty is conditioned upon normal use and reasonable maintenance of such subframe; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Rosenbauer America, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF ROSENBAUER AMERICA, LLC OR ANY OF ITS DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.

Note: *Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.*

Warranty, Paint, AkzoNobel, 5 Years

PAINT WARRANTY - FIVE YEAR

The AkzoNobel paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) year beginning the day the vehicle is delivered to the purchaser.

The full apparatus body, manufactured and painted by Rosenbauer America, LLC, shall be covered for the following paint failures as outlined on the guarantee certificate:

- Peeling or delaminating of the topcoat and/or other layers of paint.
- Cracking or checking.
- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective AkzoNobel finishes, which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

Note: *Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.*

Warranty, Lettering and Striping, 1 Year

LETTERING WARRANTY

Rosenbauer America, LLC warrants to the original purchaser only, that the lettering and striping, installed by Rosenbauer America, LLC, will remain free from defects for a period of one (1) year under normal use.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this item, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.
Pump Warranty, Rosenbauer, 5 Year

PUMP WARRANTY

The fire pump manufacturer shall provide a five (5) year warranty. The manufacturer shall supply details of their warranty information with their bid submission.
Plmbg Warranty, Stainless Steel, 10 Years

STAINLESS STEEL PLUMBING WARRANTY

The manufacturer shall provide a ten (10) year warranty on the stainless steel plumbing components and installation. The manufacturer shall supply details of their warranty information with their bid submission.
Warranty, Foam Tank, UPF

FOAM TANK WARRANTY

UNITED PLASTIC FABRICATION INC. Warrants each UPF POLY-TANK IIE Booster/Foam tank to be free from manufacturing defects in material and workmanship for the service life of the vehicle (vehicle must be actively used in fire suppression). The UPF POLY-TANK IIE must be installed in accordance with the United Plastic Fabricating installation manual. Every UPF POLY-TANK IIE is thoroughly inspected and tested for leaks before leaving our facility. Should any problems develop with your UPF POLY-TANK IIE booster/foam tank and will not meet performance criteria during the service life of the vehicle, notify UPF in writing or call our TOLL-FREE SERVICE HOT LINE 1-800-USA-POLY. Provide UPF with the serial number and a description of the problem. If the tank problem would render the truck out of service, UPF will dispatch a service technician WITHIN 48 HOURS (2 DAYS) to repair the tank. (This time period is for North America only). If the vehicle can remain in service, UPF will dispatch a service technician within a mutually agreed upon time period.

We will repair, or at our option, replace the tank with a new UPF POLY-Tank IIE. UPF will cover customary and reasonable costs to remove and install the UPF POLY-TANK IIE. This warranty will not cover tanks that have been improperly installed, misused or abused, and the serial number must not have, been altered, defaced

or removed. UPF will not cover any unauthorized third-party repairs or alterations. Any of these actions may void the warranty.

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 OBLIGATIONS OR LIABILITIES ON THE PART OF UNITED PLASTIC FABRICATION, INC.

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. UNITED PLASTIC FABRICATION, INC. 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.

IN NO EVENT WILL UNITED PLASTIC FABRICATION, INC BE LIABLE FOR AN AMOUNT IN EXCESS OF THE PRESENT RETAIL, PURCHASE PRICE PLUS INSTALLATION AND REMOVAL COST OF THE BOOSTER TANK, FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE ARISING OUT OF FAILURE OF ITS PRODUCT.

This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow exclusion or limitation of incidental of incidental or consequential damage, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.
Warranty, Water Tank, UPF

WATER TANK WARRANTY

UNITED PLASTIC FABRICATION INC. Warrants each UPF POLY-TANK IIE Booster/Foam tank to be free from manufacturing defects in material and workmanship for the service life of the vehicle (vehicle must be actively used in fire suppression). The UPF POLY-TANK IIE must be installed in accordance with the United Plastic Fabricating installation manual. Every UPF POLY-TANK IIE is thoroughly inspected and tested for leaks before leaving our facility. Should any problems develop with your UPF POLY-TANK IIE booster/foam tank and will not meet performance criteria during the service life of the vehicle, notify UPF in writing or call our TOLL-FREE SERVICE HOT LINE 1-800-USA-POLY. Provide UPF with the serial number and a description of the problem. If the tank problem would render the truck out of service, UPF will dispatch a service technician WITHIN 48 HOURS (2 DAYS) to repair the tank. (This time period is for North America only). If the vehicle can remain in service, UPF will dispatch a service technician within a mutually agreed upon time period.

We will repair, or at our option, replace the tank with a new UPF POLY-Tank IIE. UPF will cover customary and reasonable costs to remove and install the UPF POLY-TANK IIE. This warranty will not cover tanks that

have been improperly installed, misused or abused, and the serial number must not have, been altered, defaced or removed. UPF will not cover any unauthorized third-party repairs or alterations. Any of these actions may void the warranty.

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 OBLIGATIONS OR LIABILITIES ON THE PART OF UNITED PLASTIC FABRICATION, INC.

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. UNITED PLASTIC FABRICATION, INC. 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.

IN NO EVENT WILL UNITED PLASTIC FABRICATION, INC BE LIABLE FOR AN AMOUNT IN EXCESS OF THE PRESENT RETAIL, PURCHASE PRICE PLUS INSTALLATION AND REMOVAL COST OF THE BOOSTER TANK, FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE ARISING OUT OF FAILURE OF ITS PRODUCT.

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

Manuals, Body Complete, 1 Set Printed

BODY MANUAL - PRINTED

Rosenbauer shall provide with the vehicle upon delivery, one (1) complete delivery manual. This manual shall be in a notebook type binder, with reference tabs for each section of the vehicle.

Within each section shall be:

- Individual component manufacturer instruction and parts manuals
- Warranty forms for the body
- Warranty forms for all major components
- Warranty instructions and format to be used in compliance with warranty obligations
- Wiring diagrams
- Installation instruction and drawings for major parts
- Visual graphics and electronic photos for the installation of major parts

- Necessary normal routine service forms, publications and components of the body portion of the apparatus
- Technical publications for training and instruction on major body components
- Warning and safety related notices for personnel protection
- Cab and chassis manuals on parts, service and maintenance shall be provided

Chassis, Freightliner 108SD 4 Dr

FREIGHTLINER CHASSIS

A Freightliner 4-door chassis per the attached specifications shall be furnished:
== Use Drop Down For Chassis Options - 7282.022 07/28/22 ==

== RSD Timberwolf Pumper DC Electrical System - 4212.023 04/21/23 ==

Elecal, Base, Standard, W/Load Mgmt

LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest Federal DOT standards, and the requirements of the applicable NFPA standards.

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards . The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

The wiring between the cab and body shall be joined using Deutsche type connectors or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants and damage. Wiring shall be uniquely identified every three-inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

The electrical circuits shall be provided with low voltage over current protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The over current protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

The electrical system shall include the following:

- Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative compound shall be applicable to all terminal plugs located outside of the cab or body.
- The electrical wiring shall be harnessed or be placed in a protective loom.
- Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. Individual rocker switches shall be provided only for warning lights provided over the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. The warning light switches shall be of the rocker type. For easy nighttime operation, an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

1. Reserve capacity test:

The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for ten (10) minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a failed test.

2. Alternator performance test at idle:

The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.

3. Alternator performance test at full load:

The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed. The test duration shall be a minimum of two (2) hours. Activation of the load management system is permitted during this test. However, if an alarm sounds due to excessive battery discharge, as detected by the system requirements in the NFPA standards, or a system voltage of less than 11.7 volts dc for more than 120 seconds is present, the test has failed.

4. Low voltage alarm test:

Following the completion of the above tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates. The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts dc for a 12 volt system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

a. Documentation of the electrical system performance tests required above.

b. A written load analysis, including:

1. The nameplate rating of the alternator.

2. The alternator rating under the conditions.

3. Each specified component load.

4. Individual intermittent loads.

Electrical Jct Box, Weather Resistant

WEATHER RESISTANT ELECTRICAL JUNCTION BOX

The electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required. The main body junction panel shall be located in the pump compartment.

Load Manager, KUSS, Load Manager 2

LOAD MANAGER 2

The apparatus shall be equipped with a Kussmaul model 091-79 Automatic Load Shedding System for performing continuous electrical load management. The Load Manager shall have the following features:

- Monitor 12-volt system and detect low voltage.
- Capability to control two (2) loads.
- Automatic reset when voltage rises.
- Adjustable voltage setpoint.

The load manager shall be protected against reverse polarity and shorted outputs, and be enclosed in an enclosure to enhance EMI/RFI protection. The manufacturer shall provide for all electrical loads in excess of the NFPA minimum electrical requirements that exceed the alternator output.

Swtch Panel/Elecal Console, Angled, Btwn Cab Seats, Ntrl Fnsh (4 Dr Chassis)

ANGLED ELECTRICAL CONSOLE WITH EMERGENCY LIGHT SWITCH PANEL

An angled electrical console shall be constructed of .125" smooth aluminum material and mounted in the cab of the truck chassis. The console will have a black bedlined finish on the exterior of the console. Console shall be designed and installed between the driver and passenger seats. The top face of the console shall be designed as the switch panel for all emergency light switches. The switch panel shall be bolted in place for easy access to the switch connections.

COMPARTMENT

A compartment shall be provided at the rear of the switch console, a drop down door with latch and a light in

the compartment shall be provided.

All emergency light switches shall be lighted, rocker style. Switches shall be internally lit when the switch circuit is in the on position. A plug-in identification label is to be provided and installed adjacent to each rocker switch with backlighting provided behind the label.

SWITCHES

A rocker style internally lighted switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights. The emergency lights shall be activated by a single "MASTER SWITCH" on the electrical console.

Batteries, With Supl'd Chs

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

Battery Tray Liner, SST

BATTERY TRAY LINER

A stainless steel tray liner shall be provided for the chassis battery system.

Battery Swtch, Mstr Disconnect , Chs Sppld

MASTER ELECTRIC SWITCH

A battery disconnect switch shall be located conveniently to the driver of the apparatus. The switch shall disconnect the 12 volt power supply from the battery system.

Ignition Swtch, Disable Cntrl

DISABLE CONTROL

The ignition switch shall be provided with a hidden disable switch for security purposes or use by mechanic.

Battery, Indicator Lt

BATTERY SYSTEM INDICATOR LIGHT

A red battery "on" light shall be located on the front center of the cab.

Battery Chrgr/Comp, KUSS, Pump Plus 1000 PLC 51-21-1100

BATTERY CHARGER AND AIR COMPRESSOR

A Kussmaul Pump Plus 1000 PLC model #51-21-1100 battery charger and air compressor system shall be installed. The 12 volt compressor system shall be designed to maintain the air pressure in the chassis brake system whenever the pressure drops below a predetermined level.

The battery charger shall be supplied from the 12 volt shore power receptacle and be a fully automatic high output charging system. The unit shall be mounted in a clean dry area and will be accessible for service and/or maintenance.
Display, Bar Graph, Sngl Battery Bank 091-199-001

BATTERY CHARGER DISPLAY

A Kussmaul 091-199-001 single battery bank voltage display shall be supplied with the charger.
Shore Power Inlet, KUSS Super Auto-Eject 20A

AUTO-EJECT

A Kussmaul "Super Auto-Eject" 20-amp automatic disconnect device shall be provided and installed on the 110-volt shoreline connection complete with weatherproof cover and matching plug. The Auto-Eject shall be activated by the chassis starter switch to disconnect the plug. The Super Auto-Eject shall be completely sealed to prevent contamination of the mechanism by inclement weather and road conditions. The Super Auto-Eject shall have an internal switch to open and close the AC circuit after the mating connector is inserted and before the connector is removed.
Shore Power Inlet, Left Front Cab Dr

SHORE POWER PLUG

The shore power plug shall be located at the left front cab door.
Block Heater, Coolant Type, Sprte Shoreline

COOLANT HEATER

A 1000 watt coolant heater shall be supplied for the chassis engine to assist with cold weather starting. The 110 volt heater power cord shall be connected to a separate dedicated shoreline receptacle.
Air Horns, Two (2) Hood Mntd, 24.5" Chrome

AIR HORNS

Two (2) chrome plated air horns shall be mounted on the side of the hood of the commercial chassis. An air protection valve shall be provided in the air horn piping that will not allow the chassis air brake system to drop below 90 PSI.
Air Horn Cntrl, Dual Lanyard Pull Cord

AIR HORN LANYARD

A dual roof mounted pull cord shall be installed to activate the air horn system. The pull cord shall be installed within easy reach of the driver and officer.
12V Power/Ground, 30A, Radio Lctn

12 VOLT POWER SOURCE

One (1) 12 volt power and ground connection rated at 30 amps shall be provided on the apparatus for the installation of a mobile two-way radio.
Switched Power, Thru Master

The power source shall be run through the chassis master battery switch and shall be deactivated when the master switch is in the "OFF" position.
12V Dual USB Power Outlet, 5V 2.1A Output, Center Console

12 VOLT USB POWER SOURCE

One (1) 12 volt dual USB power outlet with 5 volt 2.1 amp output shall be provided in the center cab console.
Switched Power, Thru Master

The power source shall be run through the chassis master battery switch and shall be deactivated when the master switch is in the "OFF" position.
Light, Engine Compt, 12 Volt LED, w/Switch

ENGINE COMPARTMENT LIGHT

One (1) 12 volt LED light with switch shall be mounted in the engine enclosure.
Switch on Light Head

The control switch shall be mounted on the light head.
Light, Pump Compt, 12 Volt LED With Switch

PUMP ENCLOSURE LIGHTS

One (1) LED work light shall be provided in the pump enclosure.
Switch on Light Head

The control switch shall be mounted on the light head.
Back Up Alarm

BACK-UP ALARM

An automatic electric back-up alarm shall be wired to the back-up light circuit, and mounted under the rear of the apparatus body.
Back Up Alarm, Over-Ride Swtch , Auto Reset, Swtch Pnl

OVER-RIDE SWITCH

An over-ride switch, auto reset shall be provided in the switch panel for the specified back up alarm. The switch shall be labeled for identification.
S.O.R. / Back Up Camera, ASA, Color

BACKUP CAMERA

An ASA color rear camera system shall be mounted on the rear of the vehicle. All system components shall be installed by the apparatus body manufacturer.
Hand Lights, NFPA Compliance - Spl'd/Instl'd by DEPT

HAND LIGHTS

All NFPA required portable hand lights supplied by the Customer must be installed before the apparatus is placed into service.
Radio Antenna Base, Supply and Install, Ea

RADIO ANTENNA BASE

One (1) radio antenna base shall be supplied and installed on the apparatus, the antenna coax terminating in the cab. The location shall be determined by the customer.
Recorder, Vehicle Data Recorder, Class I

VEHICLE DATA RECORDER

Apparatus shall be equipped with a Class1 "Vehicle Data Recorder (VDR) that is connected to the power train CAN (Controller Area Network) bus consisting of transmission (TCM), engine control (ECM) and anti-lock brake (ABS) modules mounted on the apparatus. The VDR will function per NFPA 1901-2009 sections 4.11 (Vehicle Data Recorder) utilizing the power train s J1939 data.

The VDR data shall be downloadable by USB cable to a computer using either Microsoft ™ or Apple ™ Operating Systems using Class 1/ O.E.M. supplied reporting software.

NOTE: The VDR shall only be provided as long as the chassis options include provisions to access vehicle data information.
Seat Belt Warning System, Class I

SEAT BELT WARNING SYSTEM

Apparatus shall be equipped with a Class1 Seat Belt Warning System" (SBW) that is connected to the power train CAN (Controller Area Network) bus consisting of transmission (TCM), engine control (ECM) and anti-lock brake (ABS) modules mounted on the apparatus. The SBW will function per NFPA 1901-2009 14.1.3.10 (Seat Belt Warning) using the Class1 "Seat Belt Input Module" for seat occupied and belt status information.

The SBW system shall have the ability to use either normally open (NO) or normally closed (NC) switches (user selectable by “dip switches” at ground potential) for operation.

NOTE: The SBW system shall only be installed, as long as the chassis manfacturer provides the correct provisions for the installation of the SBW system by the body manufacturer.
Display, Seat Belt Warning (small), Class I

SEAT BELT WARNING DISPLAY

A small rocker style display shall be installed in the chassis cab for the seat belt warning system.
Marker Lts, LED, DOT Requirements

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements.
License Plate Bracket, SST, No Light, Rear

LICENSE PLATE BRACKET

A stainless steel license plate bracket shall be provided at the rear of the apparatus.
Tail/Brake Lights, Whelen, 600's 4"x6" (Pair) 604BTT

TAIL LIGHTS

One (1) pair of Whelen 604BTT LED tail/brake lights shall be provided on the rear of the apparatus. The rectangular lights shall be 4" x 6" LED with a red lens.
Turn Signals, Whelen, 600's LED w/ Arrow, 4"x6" (Pair) 604T

TURN SIGNALS

One (1) pair of Whelen, 604T turn signals with populated arrow shape shall be provided. The rectangular LED lights shall be 4" x 6" in dimension and shall have an amber lens.
Backup Lights, Whelen, 600's LED, 4"x6" (Pair) 604BU

BACKUP LIGHTS

One (1) pair of Whelen 604BU LED backup lights shall be installed on the rear of the apparatus body. The dimensions shall be 4" x 6" and the lens color shall be clear.
Turn Signals, Mid Body, LED Marker Light (Pair)

MID BODY LED TURN SIGNALS

One (1) pair of mid body LED turn signals shall be provided. The location of the turn lights shall be at mid-body near the rear wheel axle.
Ground Lts, Cab, 2 Door, LED Pair

CAB GROUND LIGHTS

Two (2) LED ground lights shall be installed on the chassis cab, one under each cab door.

Ground Lts, Pump Panel, LED, Pair

PUMP PANEL GROUND LIGHTS

Two (2) LED ground lights shall be installed under the pump panel running boards. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.
Ground Lts, Rr Step, LED, Pair

REAR STEP GROUND LIGHTS

Two (2) LED ground lights shall be installed under rear step of the apparatus.
Lt Swtch , Ground Lts w/ Park Brake

The ground lights shall automatically activate when the parking brake is applied.
Step Lt, Fxd /Fldg Step, LED, Ea

STEP LIGHT

Two (2) LED step light(s) with clear lens shall be installed.
Step Lt, Rr Tailboard, LED, Ea

REAR TAILBOARD LIGHTS

Two (2) LED step lights with clear lens shall be installed to illuminate the step surfaces at the rear of the apparatus body.
Lt Swtch , Step/Wlkwy Lts Wired Park Brake Swtch

The step/walkway light switch shall be installed and wired to the parking brake.
Deck Lts, Rr Of Hosebed

DECK LIGHTS - REAR

The deck lights shall be installed at the rear of the hose bed.
Deck Lts, Code 3, LED, 1-Spot #CW2450 & 1-Flood #CW2451, Black

One (1) 12 volt Code 3 Model CW2450 spotlight and one (1) 12 volt Code 3 Model CW2451 floodlight, each with nine (9) LED's, shall be installed. The lights shall have an "on-off" switch, handle and swivel base.
Deck Lt Swtch , Wired Park Brake Swtch

A deck light switch shall be installed and wired to the parking brake.
S.O.R. / Fldlt, Whelen Pioneer Summit S091MB 9.37" (Floodlights), Black

LED FLOOD LIGHT

Whelen Pioneer™ Summit™ series Model # S091MB shall be provide. The 95 watt duel voltage +10v and 30v DC Pioneer Summit light array configuration shall incorporate two flood light modules installed in a die-cast aluminum black powder coated housing. Each module will consist of three white Super-LED® with module specific Proclera™ silicone optics and a single continuous clear non optic lens. The Pioneer Summit has the ability for individual control of each set of optics. The S091MB will include one single Super-LED amber marker lights. The S091MB will include two standard universal bail mount bracket. The S091MB light shall have 3,240 usable lumens.
S.O.R. / MUST Choose Mtg/Switch Locations - Click on box w/green +

Scene Lt, Whelen, M6ZC LED, W/Chr. trim ring

SCENE LIGHT

One (1) Whelen M6ZC Series Super-LED 6-3/4" x 4-5/16" gradient scene light(s) shall be provided. The steady burn scene light shall incorporate Linear Super-LED and Smart LED technology.

The M6ZC shall be furnished with a chrome trim ring, a rubber gasket, screws, and screw grommets for installation. The M6ZC shall have the ability to be installed as a surface mount scene light.

Voltage: +12v
Size: H=4.31",W=6.70", D=1.40"
Amp Draw: 2.0 Amps
Lens Color: Clear
Dr Open/Hazard Wrn Lt, Flashing Red Lens

DOOR OPEN/HAZARD WARNING LIGHT

A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing rectangular incandescent marker light with a red lens and shall be properly marked and identified.
Dr Open/Hazard Wrn Alarm, Buzzer

DOOR OPEN/HAZARD WARNING ALARM

A door open/hazard warning alarm shall be installed. The audible alarm shall activate when an open door is detected upon release of the parking brake. The alarm shall have a distinct noise to avoid conflict with other cab mounted alarms.

Siren, Elect, Whelen 295SLSA1

ELECTRIC SIREN AND CONTROL

A Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall feature an electronic air horn, wail, yelp, hi-lo and shall have a hard wired PA microphone.
Siren Control, Electronic, Foot Switch , Driver's Side

SIREN CONTROL

One (1) electronic foot switch shall be provided on the driver's side of the cab floor to activate the siren.
Siren Control, Electronic, Foot Switch , Officer's Side

SIREN CONTROL

One (1) electronic foot switch shall be provided on the officer's side of the cab floor to activate the siren.
Lt Bar, Whelen, Justice, LED, 56" JE2NFPA

LIGHTBAR

One (1) Whelen Justice series light bar shall be included with the apparatus cab. The light bar shall be a model JE2NFPA and shall be mounted on the roof of the cab, towards the front, above the windshield.

The light bar shall feature:

- A 56" light bar designed for high performance
- Four (4) red Linear Super LED corner modules
- Four (4) red CON3 LED hinged modules
- Two (2) white CON3 LED hinged modules with exterior clear optic lenses
- Clear hard coated lenses to provide extended life/luster protection against UV & chemical stresses
- Designed in accordance with NFPA Zone A requirements

Lightbar Cntrl, with Master Warning Switch

LIGHTBAR ACTIVATION

The front upper light bar shall be activated through the master warning switch.
Wrn Lts, Whelen, Low Frnt, (2) M6 LED

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model M6 LED warning lights shall be installed, one each side one the front of the chassis cab. The dimensions of the lights shall be 4-5/16" x 6-3/4".
Wrn Lt, Drvr, Whelen, M6, Red LED, Clear Lens, Ea

The driver side warning light shall be a Whelen Model M6RC red Super-LED™ with clear lens.

Wrn Lt, Offcr, Whelen, M6, Red LED, Clear Lens, Ea

The officer side warning light shall be a Whelen Model M6RC red Super-LED™ with clear lens.

Flange, Chrome, Wrn Lt, Whln, M6, Ea

Each light shall be mounted with a Whelen Model M6FC chrome flange.
== RSD Timberwolf Chassis Modifications - 4212.023 04/21/23 ==

Label, Data, Fluid Levels

FLUID DATA PLAQUE

A fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Drive axle lubricant
- Power steering fluid
- Pump transmission lubrication fluid
- Other NFPA applicable fluid levels or data as required

Location shall be in the driver's compartment or on driver's door.
Label, Data, Height x Length, Weight

HEIGHT LENGTH & WEIGHT WARNING LABEL

A highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.
Label, Data, "No Ride" Rr Step

NO RIDE LABEL

A "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.
Label, Indicating Number of Seats

CAB SEATING POSITION LIMITS

A label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.
Label, "Caution: Do Not Wear Helmet While Seated"

HELMET WARNING TAG

A label shall be installed in the cab, visible from each seating position. The label shall read "CAUTION: DO NOT WEAR HELMET WHILE SEATED." Helmets must be properly stowed while the vehicle is in motion according to the current edition of NFPA 1901.
Chassis Preparation, Comm, 4 Door, Tmbrwlf/Airwlf

CHASSIS PREPARATION

Prior to installation of the fire pump, apparatus body, or cab steps, all components which extend out beyond the chassis frame rails shall be removed and relocated to the area within the frame rails allowing for maximum side depth compartmentation.
Battery Compartment, Driver Bumper, Timberwolf/Airwolf

FRONT BUMPER COMPARTMENT

A recessed battery compartment constructed from smooth aluminum shall be installed in the driver side of the front bumper extension. Two (2) batteries shall be relocated from under the chassis cab and installed in this compartment. An aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment. Water drain holes shall be provided in the bottom.
Hosewell Compartment, Center Bumper

FRONT BUMPER COMPARTMENT

A recessed fire hose compartment constructed from smooth aluminum shall be installed in the center of the front bumper extension. Water drain holes shall be provided in the bottom.
Aluminum T/P Door, Flat Style, Front Bumper Compartment

BUMPER COMPARTMENT DOOR

One (1) aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment.
Compartment LED Strip Light, (1) Each Compartment (approx 30")

COMPARTMENT LIGHT

One (1) vertically mounted LED strip light shall be installed inside the compartment. The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up and be approximately 30" in length.
Compartment Light, Mounting Door Jamb

MOUNTING

The compartment light shall be mounted in the door jamb to illuminate the compartment interior.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Gas Shock, Bumper Compartment Door

BUMPER COMPARTMENT DOOR SHOCK

A gas shock shall be supplied to hold the front bumper compartment door in the open position.
Hosewell Compartment, Passenger Bumper

FRONT BUMPER COMPARTMENT

A recessed fire hose compartment constructed from smooth aluminum shall be installed in the passenger side of the front bumper extension. Water drain holes shall be provided in the bottom.
Bumper, Heavy Duty Steel Flat, Painted

HEAVY DUTY FRONT BUMPER

The chassis shall feature a heavy duty bumper constructed from ASTM A36, 1/4" thick steel and painted primary job color. The bumper shall be 12" high by 102" wide with two inch (2") flanges and chamfered corners.

Integral heavy duty steel bumper "wings" shall extend from the bumper to the cab.

A contoured apron/gravel shield fabricated from NFPA compliant, slip-resistant polished aluminum shall enclose the area between the bumper and the cab.

The bumper shall be painted to match the chassis color.
Bumper Extension, 20", By Body Builder

BUMPER EXTENSION

The chassis frame shall be extended forward approximately 20" with reinforced steel angle and structural channel by the body builder. The extension shall be designed to support the bumper and other equipment to be installed.
Bumper Gravelshield, 20", By Body Builder

FRONT BUMPER GRAVELSHIELD

A 20" front to rear filler panel constructed from NFPA compliant, slip resistant .190" aluminum tread plate material shall be provided on the front chassis frame extension. The extension shall be covered on the top and sides, up to the level of front bumper and shall be reinforced to support one (1) firefighter (approximately 250

pounds) and the equipment specified to be installed. Aluminum fabrications are to be completely bolted in place and removable using stainless steel threaded fasteners with Ny-Lok nut fasteners.
Batteries, Relocate Chassis Supplied, Recessed in L1/R1 Compartment Floor

CHASSIS BATTERY RELOCATE - RECESSED IN COMPARTMENT

The chassis supplied batteries shall be relocated to the front body compartment, on either the left or right side and recessed into the floor of the compartment. The batteries shall be accessible thru an easily removable cover.
Battery Jump Start Lugs, Studs and Caps, Near Driver's Door

BATTERY JUMP START LUGS

A method for quickly connecting jumper cables shall be installed on the apparatus. The system shall be internally wired to the 12 volt chassis batteries and terminate with positive and negative lugs located near the driver's door. The lugs shall be covered with color-coded rubber plugs, red for positive and black for negative. An identification label shall be applied.
Tire Pressure Indicator, Single Axle, Commercial, RWTG1235

TIRE PRESSURE INDICATOR

There shall be a tire pressure indicator, p/n RWTG1235, at each tire’s valve stem on the vehicle that shall indicate if there is insufficient pressure in the specific tire.
Exhaust, Vertical, With Chassis

VERTICAL EXHAUST SYSTEM

The vertical exhaust system shall be supplied with the commercial chassis.
Mud Flaps, Rear Wheels, Black, w/ Body

REAR MUD FLAPS

A pair of black mud flaps shall be installed behind the rear wheels.
Cab Step Overlay, 4 Door Driver Side

CAB STEPS

The driver's side cab step area on the 4 door chassis shall be covered with slip resistant aluminum tread plate for compliance to applicable NFPA standards.
Cab Step Enclosure, Grating

CAB STEP ENCLOSURE GRATING

The cab step enclosure shall be provided with a multi-directional aggressive gripping surface incorporated into the aluminum diamond plate and shall comply with NFPA #1901 standards.
Cab Step Overlay, 4 Door Passenger Side

CAB STEPS

The passenger's side cab step area on the 4 door chassis shall be covered with slip resistant aluminum tread plate for compliance to applicable NFPA standards.
Cab Step Enclosure, Grating

CAB STEP ENCLOSURE GRATING

The cab step enclosure shall be provided with a multi-directional aggressive gripping surface incorporated into the aluminum diamond plate and shall comply with NFPA #1901 standards.
SCBA Bracket, Cab Seat, Zico "NFPA" Restraint, Ea HZ-KD-ULLH

SCBA BRACKET

Three (3) Zico SCBA bracket, HZ-KD-ULLH, shall be provided for installation in the cab mounted SCBA seat. An NFPA approved cylinder retention strap shall be supplied.
Air Inlet, Mnl, Cab Exterior, Driver Step

AIR SHORELINE CONNECTION

One (1) compressed air inlet fitting shall be provided for connection to an external air source to maintain the air brake pressure. The air inlet shall have a check valve installed to prevent air from escaping from the air storage tanks on the chassis.

The air inlet fitting shall be located in the driver's side step or door area.
== RSD Timberwolf Pumper Pump & Plumbing - 4212.023 04/21/23 ==

Pump, Rosenbauer, NH 1500 GPM, NPHP, Rr Mt PTO

ROSENBAUER NH FIRE PUMP

A Rosenbauer Model NH-1500 fire pump shall be mounted and installed. The rear mount combination normal and high pressure pump system shall have a rated capacity of 1500 GPM and shall meet all applicable sections of NFPA standards. The pump shall be constructed and mounted in accordance with the following specifications.

PUMP PERFORMANCE

Normal Pressure
100% of rated capacity at 150 pounds net pressure
70% of rated capacity at 200 pounds net pressure
50% of rated capacity at 250 pounds net pressure
100% of rated capacity at 165 pounds net pressure

High Pressure
100 GPM at 600 PSI

The pump shall be capable of normal volume and high pressure flows simultaneously. Multiple discharge outlets shall be designed to flow both normal volume and high pressure at the same time.

PUMP BODY

The pump shall incorporate a single stage normal pressure 1500 GPM impeller assembly.
The pump shall incorporate a high pressure, four-stage pump with a 100 GPM rating at 600 PSI.

Both the normal pressure and high pressure impellers shall be housed in the same pump body. A single impeller shaft shall support both the normal and high pressure impellers. Separate normal and high pressure pumps will not be acceptable.

The main pump body shall be easily removable without disturbing setting of the pump on the chassis or engine.

The pump manufacturer shall test the pump for 10 minutes hydrostatically at a pressure of 500 PSIG. Hydrostatic certification by the pump manufacturer shall be provided.

IMPELLER AND SHAFT

The high-grade light alloy impellers shall be accurately balanced and mounted on a stainless steel pump shaft. The shaft shall be supported by three roller bearings; two located in the gearbox and one in the suction inlet. Bearings shall be protected from water and sediment by maintenance free self-adjusting mechanical seals.

Both the normal pressure and high pressure impellers will be installed in an oppositely imposed manner to balance the thrust load and to increase bearing and seal life.

PUMP DRIVE SYSTEM

Fire pump shall incorporate high strength helical gear drive single stage transmission. Pump drive system shall be with a heavy-duty PTO system bolted directly to the chassis transmission. There shall be a heavy-duty drive shaft furnished from the PTO to the rear mount pump transmission.
Rosenbauer Pump Body, Light Alloy

PUMP BODY MATERIAL

The pump body is to be of high quality seawater resistant light alloy. All parts that come into contact with water shall be special treated light alloy or stainless steel. Heavy cast iron pumps are not acceptable.

Pressure Gvrnr, FRC, In-Cntrl, w/Bdy, TGA300

PRESSURE GOVERNOR AND ENGINE-PUMP MONITORING

A Fire Research InControl series TGA300 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 5 1/2" high by 10 1/2" wide by 2" deep. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.

The following continuous displays shall be provided:

- Pump discharge; shown with four daylight bright LED digits more than 1/2" high
- Pump Intake; shown with four daylight bright LED digits more than 1/2" high
- Pressure / RPM setting; shown on a dot matrix message display
- Pressure and RPM operating mode LEDs
- Throttle ready LED
- Engine RPM; shown with four daylight bright LED digits more than 1/2" high
- Check engine and stop engine warning LEDs
- Oil pressure; shown on a dual color (green/red) LED bar graph display
- Engine coolant temperature; shown on a dual color (green/red) LED bar graph display
- Transmission Temperature: shown on a dual color (green/red) LED bar graph display
- Battery voltage; shown on a dual color (green/red) LED bar graph display.

The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. All LED intensity shall be automatically adjusted for day and night time operation.

The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

- High Battery Voltage
- Low Battery Voltage (Engine Off)
- Low Battery Voltage (Engine Running)
- High Transmission Temperature
- Low Engine Oil Pressure
- High Engine Coolant Temperature
- Out of Water (visual alarm only)
- No Engine Response (visual alarm only).

The program features shall be accessed via push buttons located on the front of the control panel. There shall be an USB port located at the rear of the control module to upload future firmware enhancements.

Inputs to the control panel from the pump discharge and intake pressure sensors shall be electrical. The discharge pressure display shall show pressures from 0 to 600 psi. The intake pressure display shall show pressures from -30 in. Hg to 600 psi.

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.

The pressure governor, monitoring and master pressure display shall be programmed to interface with a specific engine.

Pump Shift, Rosenbauer, PTO, Pump and Roll

PTO PUMP SHIFT SPECIFICATIONS -- PUMP AND ROLL

An electric powered PTO pump shift shall be installed in the cab driver's area where not subject to accidental engagement.

An electric powered locking rocker switch for PTO pump engagement shall be installed in the cab driver's area. The pump shift system shall permit "pump and roll" operations, as well as stationary pumping operations.

The following indicator lights shall be included with pump shift.

- A green indicator light, labeled "PUMP ENGAGED" shall indicate pump PTO has successfully been engaged.
- A green indicator light, labeled "OK TO PUMP" shall indicate the PTO is engaged and parking brake is activated. Pump control is through the pressure governor.
- A red indicator light, labeled "PUMP & ROLL" shall indicate the PTO is engaged and parking brake is released. Pump control is through the driver's throttle pedal.
- Pump shift and interlocks shall comply with applicable sections of the NFPA standards.
- An instruction label and nameplate shall be provided to indicate proper pump engagement instructions.

Gauge, Dschg, 2-1/2" (0-400 PSI), In Cab, Pump and Roll

IN-CAB PUMP AND ROLL DISCHARGE PRESSURE GAUGE

One (1) 2-1/2" diameter discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located in the chassis cab for pump and roll operations.

High Pressure Plumbed to Bumper Turret

PLUMBING - HIGH PRESSURE SIDE

The high pressure side of the Rosenbauer pump shall be plumbed to the front bumper turret.
High Pressure Plumbed to Hose Reel

PLUMBING - HIGH PRESSURE SIDE

The high pressure side of the Rosenbauer pump shall be plumbed to the hose reel.
Primer, Trident Air Primer, Automatic

TRIDENT PRIMER – AUTOMATIC

An automatic fire pump priming system shall be provided and installed. The system shall be oil-less type and environmentally safe. Once engaged, the system shall be fully automatic and not require any action from the pump operator/engineer when pump draft is lost. This feature provides an additional safety margin by maintaining pump flow from the available water source automatically during drafting operations. When air is introduced during a drafting operation from conditions such as whirlpools or turbulence from porta-tank refill operations, the priming system shall automatically engage to remove the air and stabilize water flow and pump pressure. For additional safety, the entire system shall operate at less than 70dBA of ambient noise.

The priming system shall engage automatically whenever the pump discharge falls below five (5) psi and shall remain engaged until a pump prime has been achieved. The priming system shall automatically disengage when a positive pump discharge pressure has been established. The electrical current draw from the chassis batteries shall not exceed four (4) amps at any given time of operation and allow for unlimited run time without causing an overheat condition for of any of the system components.

A single engagement switch shall be provided on the pump control panel that will allow the operator to engage the automatic pump priming system. There shall be a light provided on the pump control panel to indicate when the system is engaged. The pump shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 30 seconds with the pump dry, through 20 feet of suction hose of appropriate size. The priming system shall comply with applicable sections of NFPA standards.
Primer Control - Main Pump Rocker Switch

PRIMER CONTROL

A rocker switch control shall be provided on the pump operator's panel, for the main pump primer control.
Screens/Anodes, Pump

PUMP ANODES

There shall be sacrificial, zinc anodes in the pump steamer ports which shall protect the pump and piping from electrolysis. These anodes shall also act as screens.
Piping, SST - 1250 GPM & Up

PUMP PLUMBING SYSTEM

The fire pump plumbing system shall be of rigid stainless steel pipe or flexible piping with stainless steel fittings. Mechanical grooved couplings shall be installed to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Flexible hose couplings shall be threaded stainless steel or mechanical grooved coupling connections.

The fire pump and plumbing shall be hydrostatically tested in compliance to applicable sections of NFPA standards. The test results shall be included in the delivery documentation.
Pump Drain, Master, Manifold, Push Pull Type

FIRE PUMP MASTER DRAIN

The fire pump plumbing system and fire pump shall be piped to a single push-pull type master pump drain assembly.

ADDITIONAL LOW POINT DRAINS

The plumbing system shall be equipped with additional low point manually operated drain valves to allow total draining of the fire pump plumbing system. These valves shall be accessible from the side of the vehicle and labeled.
Intk Manifold, SST

STAINLESS STEEL INTAKE MANIFOLD

The suction manifold assembly shall be fabricated with Schedule #10 type 304 stainless steel. All threaded fittings shall be a minimum of Schedule 10 stainless steel. The suction manifold assembly shall have radiused sweep elbows to minimize water turbulence into the suction volute. The suction manifold shall be welded and pressure tested prior to installation. The stainless steel manifold assembly shall be attached to the pump intake volute with a heavy-duty, flexible Victaulic coupling.

The stainless steel manifold assembly shall have a ten (10) year warranty.
Dschg Manifold, SST

STAINLESS STEEL DISCHARGE MANIFOLD

The discharge manifold assembly shall be fabricated with minimum of Schedule #10 Type 304 stainless steel. All threaded fittings shall be a minimum of Schedule #40 stainless steel. The discharge manifold assembly shall have radiused sweep elbows to minimize water turbulence. The manifold shall be welded and pressure tested prior to installation. The stainless steel manifold inlet shall be attached to the pump discharge and have additional brackets as required to support the discharge manifold, valves and related components.

The stainless steel manifold assembly shall have a ten (10) year warranty.

Painting, Pump & Piping, Silver

FIRE PUMP & PLUMBING SYSTEM PAINTING

The fire pump and plumbing system shall be painted by the fire apparatus manufacturer. The fire pump and the plumbing shall be painted metallic silver.
Threads, National Hose (NST)

HOSE THREADS

The hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intakes and discharges.
Intk, Ungated, 6", Rr Center - Rr Mt

REAR CENTER -- 6" UNGATED INTAKE

One (1) 6" ungated suction intake shall be installed on the rear center to supply the rear mounted fire pump from an external water supply. The intake shall be provided with a removable screen and 6" NH male threads.
Cap, 6", Chrome Long Hndl

A 6" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped long handles.
Tank-To-Pump, Water Tank, 3" Vlv/4" Piping, Rr Mt

WATER TANK TO PUMP LINE

A 3" water tank to the rear mounted fire pump line shall be provided with a full flow quarter turn ball valve, 4" piping, and with flex hose and stainless steel hose clamps. The tank to pump line shall be equipped with a check valve to prevent pressurization of the water tank.

The line shall be flow tested during the fire pump testing and shall meet applicable requirements of NFPA standards.
Single Tank to Pump Control - Pump Operator's Panel

The tank to pump valve shall be controlled at the pump operator's panel.
Vlv Mfger, AKR, 8000, (3")

The valve shall be an Akron 8000 Series three-inch (3") valve with a stainless ball.
Intk Vlv Cntrl, Pull Rod, 1/4 Turn, AKR - IC

An Akron valve equipped with a manually operated pull rod, with quarter-turn locking feature shall be provided on the intake. The handle shall be equipped with a color-coded name plate.
Tank Fill/Cooling Line, Water Tank, 2"

FIRE PUMP TO WATER TANK FILL LINE

A 2" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be a full flow quarter turn ball valve with 2" piping and flex hose to tank. The valve control handle shall have a nameplate located near the valve control.
Vlv Mfger, AKR, 8000, (2")

The valve shall be an Akron 8000 Series two-inch (2") valve with a stainless ball.
Intk Vlv Cntrl, Pull Rod, 1/4 Turn, AKR - IC

An Akron valve equipped with a manually operated pull rod, with quarter-turn locking feature shall be provided on the intake. The handle shall be equipped with a color-coded name plate.
Foam System, RBA HP, Fix Mix, Pump Panel Cntrl

ROSENBAUER FOAM SYSTEM -- PUMP PANEL CONTROLLED

A built in Rosenbauer Fix Mix foam system, suitable for all commercially available foaming agents, shall be incorporated into the construction of the Rosenbauer pump. The system shall provide a constant proportioning regardless of water pressure and volume. The Rosenbauer Fix Mix system shall be capable of providing foam at high pressure.

The foam system shall be controlled from the pump panel.
HP-FIXMIX, Foam Supply

The system shall be capable of providing a constant foam proportioning independent of pump output and pump pressure. The system shall have a control switch at the pump operator's panel for controlling the foam proportioner foam supply.
Proportioning Rate, HP-FIXMIX, 1%

The system shall deliver foam at a proportioning rate of 1%.
Foam Plmbg, Sngl Class A Tank, 1" Mnl Vlv

1" FOAM TANK CONTROL -- CLASS A

A Class A foam tank shall be plumbed with 1" valve and corrosion resistant hose from the foam tank to the foam inlet of the foam system. The manually opened valve shall be provided behind the pump panel with a label.
Foam Plmbg, Strainer, Removable, 1"

FOAM LINE STRAINER

A strainer with 304 stainless steel #20 mesh screen shall be installed in the foam line ahead of the foam concentrate pump. The strainer shall be easily accessible and removable for cleaning. The strainer screen shall be suitable for all types of Class A and B foam concentrates.
Foam Tank, Intgrl Poly, 30 Gal, Class A

INTEGRAL CLASS A FOAM TANK -- 30 GALLON

A thirty (30) gallon Class A foam tank shall be installed within the water tank. The non-corrosive foam tank shall meet applicable sections of NFPA standards. The foam concentrate tank shall be provided with sufficient wash partitions so that the maximum dimension perpendicular to the plane of any partition shall not exceed 36 inches. The swash partition(s) shall extend from wall to wall and cover at least 75 percent of the area of the plane of the partition.

The foam concentrate tank shall be provided with a fill tower or expansion compartment having a minimum area of 12 square inches and having a volume of not less than 2 percent of the total tank volume. The fill tower opening shall be protected by a completely sealed air-tight cover. The cover shall be attached to the fill tower by mechanical means. The fill opening shall be designed to incorporate a 1/4 inch removable screen and shall be located so that foam concentrate from a five (5) gallon container can be dumped directly to the bottom of the tank to minimize aeration without the use of funnels or other special devices.

The foam tank fill tower shall be equipped with a pressure/vacuum vent that enables the tank to compensate for changes in pressure or vacuum when filling or withdrawing foam concentrate from the tank. The pressure/vacuum vent shall not allow atmospheric air to enter the foam tank except during operation or to compensate for thermal fluctuations. The vent shall be protected to prevent foam concentrate from escaping or directly contacting the vent at any time. The vent shall be of sufficient size to prevent tank damage during filling or foam withdrawal.

A color coded label or visible permanent marking that reads "FOAM TANK FILL" shall be placed at or near any foam concentrate tank fills opening. A label shall be placed at or near any foam concentrate tank fill opening that specifies the type of foam concentrate the system is designed to use. Any restrictions on the types of foam concentrate that can be used with the system shall also be stated, and a warning message that reads "WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM."

The foam concentrate tank outlet connection shall be designed and located to prevent aeration of the foam concentrate and shall allow withdrawal of 80 percent of the foam concentrate tank storage capacity under all operating conditions with the vehicle level.

Foam Tank Drain, 1" Gate Vlv, Under Tank

FOAM TANK DRAIN -- UNDER TANK

The foam tank shall have a 1" gate valve drain provision installed.

Foam Tank Gauge, FRC TankVision Pro 300, Class A, Pump Panel #WLA360-A00

CLASS A FOAM TANK GAUGE

A Fire Research TankVision Pro model WLA360-A00 foam tank indicator kit shall be installed at the operator's panel. The kit shall include an electronic indicator module, a pressure sensor, a 10-ft sensor cable and a tank

vent. The indicator shall show the volume of Class A foam concentrate in the tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of Polycarbonate/Nylon, and have a distinctive green label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display tank volume, adjustable brightness control levels and a datalink to connect remote indicators. Low foam warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the foam tank near the bottom. No probe shall be placed on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors. The foam tank vent shall be installed on the foam fill tower.

Pump Instln, Rr Mt PTO, By Bdy Bldr

PTO FIRE PUMP DRIVESHAFTS AND INSTALLATION

The rear mounted PTO fire pump shall be installed and shall include installation of the fire pump, modification and/or fabrication of new drivelines and all pump-mounting brackets. The PTO drive shaft(s) shall be spin balanced prior to final installation.

Dump-Relief Vlv, Suction Side, TFT A18

INTAKE RELIEF/DUMP VALVE

A TFT A18 series, 2-1/2" intake relief/dump valve preset at 125 psi shall be permanently installed on the suction side of the fire pump. The valve shall have an adjustment range of 75 psi to 250 psi, and shall be designed to automatically self-restore to a non-relieving position when excessive pressure is no longer present.

Discharge side of the intake relief valve shall be plumbed away from the pump operator.

Pump Cooler, Bypass-To-Tank, 3/8"

FIRE PUMP COOLING

The fire pump shall be equipped with 3/8" cooling line from the pump to the water tank. This re-circulation line shall be controlled by a pump panel control valve with nameplate label noting it as the "fire pump bypass cooler". There shall be a check valve installed in the pump cooler line to prevent tank water from back flowing into the pump when it is not in use.

Heat Exchanger, Engine, Complete

CHASSIS ENGINE HEAT EXCHANGER COOLING SYSTEM

The apparatus shall be equipped with a heat exchanger for supplementary chassis engine cooling during fire pump operations. A manually opened valve, mounted at the operator's panel, shall direct water from the fire pump to the heat exchanger that is mounted in the engine radiator cooling hose. The system shall provide cooling water from the fire pump to circulate around the engine radiator coolant without mixing or coming in direct contact with the engine coolant. The complete installation shall be done by the fire apparatus manufacturer.

A nameplate label shall be installed on the pump panel noting "engine cooling system" with "on-off" opening directions noted.

Pump Test, Pumper, UL

UNDERWRITERS LABORATORIES FIRE PUMP TEST

The pump shall undergo an Underwriters Laboratories Incorporated test per applicable sections of NFPA standards, prior to delivery of the completed apparatus.

The UL acceptance certificate shall be furnished with the apparatus on delivery.

Pump Test, Label

FIRE PUMP TEST LABEL

A fire pump performance and rating label shall be installed on the fire apparatus pump panel. The label shall denote levels of pump performance and testing completed at factory. These shall include GPM at net pump pressure, RPM at such level, and other pertinent data as required by applicable NFPA standards. In addition, the pressure control device, tank to pump flow tests, and other required testing shall be completed.

In addition, the entire pump, suction and discharge passages shall be hydrostatically tested to a pressure as required by applicable NFPA standards. The pump shall be fully tested at the pump manufacturer's factory to the performance specifications as outlined by applicable NFPA standards. Pump shall be free from objectionable pulsation and vibration.

If applicable, the fire pump shall be tested and rated as follows:

- 100% of rated capacity at 150 pounds net pressure.
- 70% of rated capacity at 200 pounds net pressure.
- 50% of rated capacity at 250 pounds net pressure.
- 100% or rated capacity at 165 pounds net pressure.

Intk, Gtd, 2-1/2", Rr Left Side, Rr Mt

REAR LEFT SIDE 2-1/2" GATED INTAKE

A 2-1/2" gated suction intake shall be installed on rear left side of apparatus to supply the fire pump from an external water supply. The control valve shall be a quarter turn ball valve and shall have 2-1/2" NST female

thread of brass, chrome plated, or stainless steel material. The intake shall be provided with a removable screen and equipped with a ¾" drain and bleeder valve, controlled at the base of the pump panel or rear panel of apparatus.
Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn - Spec Only

An Innovative Controls ¾" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift to open and push down to close.
Plug, 2-1/2", Chrome Rocker Lug, w/Chain

A 2-1/2" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain or cable securement.
Vlv Mfger, AKR, 8000, (2-1/2")

The valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Intk Vlv Cntrl, AKR, Mnl Swing Type-Adjacent

The valve shall be equipped with a manually operated, swing-type manual control located adjacent the intake. The valve shall be equipped with a color-coded name plate.
Dschg, 1-1/2" Frnt Bmpr Crosslay, NST

FRONT BUMPER -- 1-1/2" CROSSLAY DISCHARGE

One (1) 1-3/4" front bumper crosslay installed at the bumper deck area. The discharge shall be supplied by a 2" quarter turn full flow ball valve at the pump panel. The discharge shall terminate with a swivel with 2" NPT female x 1-1/2" male NST hose threads. The swivel shall be mounted in the floor of hosebed.

The plumbing shall be flexible hose with abrasion resistant support mountings. Auxiliary low point drains shall be provided on the discharge line.

The crosslay hose bed shall be constructed of smooth aluminum with a minimum capacity of 200 feet of fire department supplied 1-3/4" diameter double jacket hose and nozzle.

The hosebed shall be constructed with slots integrated into the hosebed floor. The hose bed openings shall be equipped with hose and nozzle securement devices to comply with applicable NFPA standards.
Drain/Bleeder, Class 1, Automatic

A Class 1 automatic type 3/4" bleeder valve shall be installed.
Crosslay Cvr, Alum T/P, Sngl, W/Vinyl End Flaps (Non NFPA Walking Surface)

CROSSLAY HINGED COVER WITH END FLAPS

The crosslay hosebed shall be equipped with a single aluminum diamond plate hinged cover with vinyl end flaps with hook & loop fasteners. The cover shall have rubber bumpers, latching devices, and lift up handle on each end of the cover.

The hosebed cover shall be labeled, "Not a Standing or Walking Surface", per NFPA.
Vinyl Cover, Color, RED

The vinyl cover shall be red in color.
Vlv Mfger, AKR, 8000, (2")

The specified valve shall be an Akron 8000 Series two-inch (2") valve with a stainless ball.
Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, AKR - IC w/Gauge

For valve actuation, the specified discharge shall be equipped with a side mount valve control. The ergonomically designed 1/4 turn push-pull T-handle shall be chrome plated zinc with recessed labels for color coding and signage. The gear-control rod, double laminated locking clips, and rod housing shall be stainless steel and provide true positive lock that will eliminate valve drift. Bronze and Teflon impregnated stainless steel bushings in both ends of rod housing shall eliminate rod deflection, never need lubrication and ensure consistent long-term operation.

The control assembly shall include a decorative chrome-plated zinc panel mounted bezel with recessed color-coded label.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Dschg, 1", Frnt Bmpr, Spray Bar, (3) 3/4 KZCO vlvs 10GPM@40PSI, 2"Akr Dschg vlv

FRONT BUMPER SPRAY BAR

There shall be a spray bar furnished on the front bumper of the chassis. Front spray bar shall be supplied with two (2") inch flexible hose with stainless steel fittings and a 2" Akron discharge valve. The discharge valve shall be controlled with a KZCO on/off controller located in the chassis cab.

The spray bar shall be equipped with three nozzles: one on driver's side, one on passenger's side, and one in the center. The spray bar nozzles shall be individually controlled with three (3) 3/4" KZCO valves. The controls for the nozzle valves shall be located in the chassis cab. The nozzles shall have a flow rate of 10GPM at 40 PSI. All spray bar controls shall have identification labels. There shall be an auto drain installed in the supply line to the front spray bar.
Drain/Bleeder, Class 1, Automatic

A Class 1 automatic type 3/4" bleeder valve shall be installed.
Dschg, 1", Ground Sweeps, Plumbed Normal Pressure

The ground sweep or front bumper "spraybar" discharges shall be piped to the normal pressure side of the fire pump.
Vlv Mfger, AKR, 8000, (2"), Electric

The specified valve shall be an Akron 8000 Series two-inch (2") valve with a stainless ball.
Dschrg Vlv Cntrl, AKR, 2" Elec, #9333

One (1) Akron valve equipped with an Akron Navigator 9333 controller and a 12 volt electric motor actuator shall be provided on the specified 2" discharge. The controller shall be push button type and provide position indication through a full color backlit LCD display. It shall have manual adjustment of the brightness as well as an auto-dimming option. A color-coded name plate shall be installed over the valve control.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Speedlay Dschgs, (2) 2-1/2", Front of Bdy, NST

FRONT OF BODY SPEEDLAYS -- 2-1/2" DISCHARGES

Two (2) 2-1/2" pre-connect hose speedlays shall be installed at the front of body, controlled with quarter turn 2-1/2" diameter ball valves at the rear mount pump panel. The outlets shall be equipped 2-1/2" NPT female swivels x 2-1/2" male NST hose threads.

Each speedlay hosebed shall have smooth aluminum sides and slots integrated into the hosebed floor. Each hosebed shall have a minimum capacity of 150 feet of 2-1/2" diameter double jacket hose with hose and nozzle provided by fire department.

The hose bed openings shall be equipped with hose and nozzle securement devices to comply with applicable NFPA standards.
Drain/Bleeder, Class 1, Automatic - Spec Only

A Class 1 automatic type 3/4" bleeder valve shall be installed.
Speedlay Rollers, "U" Shaped, Both Sides

ROLLERS FOR PRE-CONNECTED SPEEDLAY HOSE BED

The pre-connect speedlay hosebed shall be equipped stainless steel "U" shaped roller system, one on each end of the hosebed.
Speedlay, 2-1/2", Removable Hose Tray, Alum

SLIDE OUT TRAY FOR PRE-CONNECTED HOSE BEDS

The 2-1/2" pre-connect hosebed(s) shall be equipped with a "U" shaped aluminum hose tray. The unit shall be equipped with pull out hand holes and retaining devices to secure the tray, nozzle, and hose in transit.
Adptr, Reducing, 2-1/2" NST F x 1-1/2" NST M, Chrome

Two (2) chrome plated reducing adapter with rocker lugs shall be provided with 2-1/2" NST rigid female x 1-1/2" NST male hose threads.
Vlv Mfger, AKR, 8000, (2-1/2")

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, AKR - IC w/Gauge

For valve actuation, the specified discharge shall be equipped with a side mount valve control. The ergonomically designed 1/4 turn push-pull T-handle shall be chrome plated zinc with recessed labels for color coding and signage. The gear-control rod, double laminated locking clips, and rod housing shall be stainless steel and provide true positive lock that will eliminate valve drift. Bronze and Teflon impregnated stainless steel bushings in both ends of rod housing shall eliminate rod deflection, never need lubrication and ensure consistent long-term operation.

The control assembly shall include a decorative chrome-plated zinc panel mounted bezel with recessed color-coded label.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

Two (2) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Dschg, 2-1/2", Rr Cntr Pmp Pnl, Left Side, Tmbrwlf/Airwlf

REAR CENTER PUMP PANEL LEFT SIDE -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the left side of the rear center pump panel and shall be controlled by a quarter turn ball valve on the rear mount pump control panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be installed adjacent the valve control handle.
Drain/Bleeder, Class 1, Mnl 1/4 Turn - Spec Only

A Class 1 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.
Elbow, Flange x 2-1/2"M, Chrome

One (1) chrome plated elbow bolted directly to the valve body shall be provided with 2-1/2" NST male hose threads.
Cap, 2-1/2", NST Chrome, Rocker Lug, w/Chain

One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.
Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, TS-7

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long). The valve shall be equipped color-coded name plate.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Dschg, 2-1/2", Rr Cntr Pmp Pnl, Right Side, Tmbrwlf/Airwlf

REAR RIGHT SIDE -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the right side of the rear center pump panel and shall be controlled by a quarter turn ball valve on the rear mount pump control panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be installed adjacent the valve control handle.
Drain/Bleeder, Class 1, Mnl 1/4 Turn - Spec Only

A Class 1 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.
Elbow, Flange x 2-1/2"M, Chrome

One (1) chrome plated elbow bolted directly to the valve body shall be provided with 2-1/2" NST male hose threads.
Cap, 2-1/2", NST Chrome, Rocker Lug, w/Chain

One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.
Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, TS-7

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long). The valve shall be equipped color-coded name plate.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Dschg, 2-1/2", Left Rear Upper Face, Tmbrwlf/Airwlf

LEFT REAR UPPER FACE -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the left side upper rear face of the body just below the hosebed area and controlled by a quarter turn ball valve on the pump panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be provided adjacent the control handle.
Drain/Bleeder, Class 1, Mnl 1/4 Turn - Spec Only

A Class 1 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.
Adptr, Reducing, 2-1/2" NST F x 1-1/2" NST M, Chrome

One (1) chrome plated reducing adapter with rocker lugs shall be provided with 2-1/2" NST rigid female x 1-1/2" NST male hose threads.
Cap, 1-1/2", NST Chrome, Rocker Lug, w/Chain

One (1) 1-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.
Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, TS-7

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long). The valve shall be equipped color-coded name plate.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Dschg, 2-1/2", Right Rear Upper Face, Tmbrwlf/Airwlf

RIGHT REAR UPPER FACE -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the right side upper rear face of the body just below the hosebed area and controlled by a quarter turn ball valve on the pump panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be provided adjacent the control handle.
Drain/Bleeder, Class 1, Mnl 1/4 Turn - Spec Only

A Class 1 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.
Adptr, Reducing, 2-1/2" NST F x 1-1/2" NST M, Chrome

One (1) chrome plated reducing adapter with rocker lugs shall be provided with 2-1/2" NST rigid female x 1-1/2" NST male hose threads.
Cap, 1-1/2", NST Chrome, Rocker Lug, w/Chain

One (1) 1-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.

Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, TS-7

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.
Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long). The valve shall be equipped color-coded name plate.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Monitor Dschg, 3", Top of Bdy, Tmbrwlf

3" MONITOR DISCHARGE

One (1) 3" discharge shall be piped to the top of the body with 3" NPT male threads provided. The pipe shall be equipped with Victaulic couplings (if necessary) and shall be properly secured to prevent movement when a monitor is attached. The quarter turn ball valve shall be controlled on pump panel.

A color coded nameplate label shall be provided adjacent the valve control handle.
Drain/Bleeder, IC Lift-Up, Mnl 1/4 Turn

An Innovative Controls ¾" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.
Vlv Mfger, AKR, 8000, (3")

The specified valve shall be an Akron 8000 Series three-inch (3") valve with a stainless ball.
Dschg Vlv Cntrl, Pull Rod, 1/4 Turn, SM, AKR Slow Close - IC w/Gauge

One (1) Akron valve equipped with a manually operated pull rod, with quarter-turn locking feature and a manual slow-close device shall be provided on the specified discharge. The handle shall be equipped with color-coded name plate.
Gauge, Dschg, IC, 2-1/2" (0-400 PSI), WF

One (1) 2-1/2" IC discharge pressure gauges (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.
Mntr, ELK, Stinger #1, Lift-Off/Truck Mt Only

MONITOR

One (1) Elkhart Stinger 2.0 Model 8297-98F monitor with top mount adapter shall be provided. The lightweight Elk-O-Lite monitor shall have a 3" waterway for flows up to 1250 GPM. The monitor shall be painted red urethane enamel.

The monitor shall have a handwheel driven vertical worm gear that shall be fully enclosed and protected from the elements. The monitor shall be capable of vertical travel from 75 degrees above to 15 degrees below horizontal in the deck mount mode. The monitor shall be capable of 360 degree travel while in the deck mode with a positive lever lock for positioning.

This monitor shall be capable of being removed from the Elkhart Model 8297-98F with 3" 150# ANSI top mounting flange adapter and used as a portable monitor. The monitor shall be equipped with a carrying handle that shall also act as a quick release mechanism. The unit shall have greased fittings for easy lubrication.

This monitor shall be equipped with a 200 PSI liquid filled pressure gauge with 3" 150# ANSI mounting flange.
Stacked Tips w/ Stream Shaper, ELK ST-194 w/ 282-A

MASTER STREAM STACKED TIPS

An Elkhart Model #ST-194, quad stacked handline tips and Elkhart Model #282-A stream shaper shall be provided. The set shall consist of four (4) tips with the base tip having a 2-1/2" female NH swivel inlet and 2" outlet. The other tip sizes shall be 1-3/4", 1-1/2" and 1-3/8". Each tip shall be laser engraved with orifice size and thread size.
Mntr, Tele Ext, ELK, Elec, 3", Vic x NPT, #8598

MONITOR EXTENDER

An Elkhart Extender model #8598, part number 08598001, monitor riser shall be provided. The 18" Extender shall be compatible with the Elkhart Vulcan Series monitor's and the range of other compact monitors. The unit shall be designed for use with monitor and nozzle flow at 1250 GPM maximum with 100 PSI nozzle pressure with a maximum inlet pressure rating at 200 PSI.

The unit shall have a push button panel mounted control. The Extender package shall include a variety of wire harnesses in lengths from 5 to 40 feet. The installation shall have an in-cab warning light that shall alert unit is not retracted. The pressure switch shall not allow the Extender to move when internal pressure exceeds 10 PSI.

The unit shall have a 3" Victaulic base by a 3" NPT male outlet for attachment to apparatus piping.
S.O.R. / Hose Reel, HAN, LH Under Cab Cmpt, Elec, Stl Pntd - Tmbrwlf

ELECTRIC REWIND HOSE REEL

One (1) Hannay painted steel hose reel with leak proof ball bearing swing joint, adjustable friction brake, electric rewind shall be installed. The reel shall be plumbed with wire reinforced, high-pressure hose coupled. The reel shall be bolted to a mounting system for easy service or removal.

The hose reel is to be mounted in left side cab step compartment area.
Battery Compartment, Driver Bumper, Timberwolf/Airwolf

FRONT BUMPER COMPARTMENT

A recessed battery compartment constructed from smooth aluminum shall be installed in the driver side of the front bumper extension. Two (2) batteries shall be relocated from under the chassis cab and installed in this compartment. An aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment. Water drain holes shall be provided in the bottom.
Battery Compartment, Passenger Bumper, Timberwolf/Airwolf

FRONT BUMPER COMPARTMENT

A recessed battery compartment constructed from smooth aluminum shall be installed in the passenger side of the front bumper extension. One (1) battery shall be relocated from under the chassis cab and installed in this compartment. An aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment. Water drain holes shall be provided in the bottom.
Hose Reel, Rwnd Cntrl, Weatherproof Push Button

A push button hose reel rewind switch shall be installed to control the electric rewind hose reel. The exact location shall be determined at construction.
Dschg, Hose Reel, 1", Class 1 Valve

A Class 1, 1" ball valve gated discharge line shall be furnished with the valve located adjacent to the booster reel and plumbed using 1" I.D. wire reinforced, high pressure hose. The valve shall be operated using a Class One quarter-turn chrome plated handle attached directly to the valve complete with 1" x 1 1/2" ID label.
Dschg, Hose Reel, Plmbd to High Pressure

The specified hose reel shall be piped to the high pressure side of the fire pump.
Hose, Water, 800#, 3/4-in x 150-ft, Three (3) 50-ft Lengths

Three (3) 50-foot lengths (150') of 3/4" water hose with pin lug couplings and 800 PSI working pressure shall be provided and mounted on the specified hose reel.
Nzl, Rosenbauer, Servo-Nepiro, High Pres, 1" NST

A Rosenbauer Servo-Nepiro 'high pressure' nozzle with detachable foam tube shall be furnished and installed on the specified booster hose reel. The nozzle shall have a 1" NST female connection.
Nzl, Mtg, Hose Reel

The specified booster reel nozzle shall be mounted adjacent the hose reel area in secure clip or clamp type mountings.
Roller, Hose Reel, Captive, Four Sided

One (1) stainless steel four sided captive type roller assembly shall be provided. The location of the captive rollers shall be:
S.O.R. / Hose Reel, HAN, RH Under Cab Cmpt, Elec, Stl Pntd - Tmbrwlf

ELECTRIC REWIND HOSE REEL

One (1) Hannay painted steel hose reel with leak proof ball bearing swing joint, adjustable friction brake, electric and crank rewind shall be installed. The reel shall be plumbed with wire reinforced, high-pressure hose coupled. The reel shall be bolted to a mounting system for easy service or removal.

The hose reel is to be mounted in right side cab step compartment area.
Hose Reel, Rwnd Cntrl, Weatherproof Push Button

A push button hose reel rewind switch shall be installed to control the electric rewind hose reel. The exact location shall be determined at construction.
Dschg, Hose Reel, 1", Class 1 Valve

A Class 1, 1" ball valve gated discharge line shall be furnished with the valve located adjacent to the booster reel and plumbed using 1" I.D. wire reinforced, high pressure hose. The valve shall be operated using a Class One quarter-turn chrome plated handle attached directly to the valve complete with 1" x 1 1/2" ID label.
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Nzl, Mtg, Hose Reel

The specified booster reel nozzle shall be mounted adjacent the hose reel area in secure clip or clamp type mountings.
Roller, Hose Reel, Captive, Four Sided

One (1) stainless steel four sided captive type roller assembly shall be provided. The location of the captive rollers shall be:
Painting, Hose Reel, Silver Grey

HOSE REEL PAINTING

The hose reel(s) shall be painted silver grey.
== RSD Timberwolf Pumper Pump Compt - 4212.023 04/21/23 ==

Pump Enclsr, Specs, RrMt, Compt C/S

REARMOUNT PUMP ENCLOSURE

The rearmount pump enclosure, rear pump, and plumbing installation shall be contained entirely in the rear compartment and shall be supported from the rear body sub-structure. The pump, plumbing, and controls shall be totally enclosed in the rear compartment to contain the system inside the body.

Nameplates labels shall be furnished for the discharges and intakes and for other controls and indicators.

Located within the module shall be:

- Electric primer.
- Pump area service lights.
- All gauge piping and hoses.
- Intake dump valve.
- Pressure control device and throttle control.
- Pump engagement lights.
- Engine instruments.
- Master intake and discharge gauges
- Tank fill control.
- Tank-to-pump control.

Pump Panel Lctn, Rr Mt, Rr Center

PUMP PANEL LOCATION -- REAR CENTER

The operator's instrument panel for the rear mount pump shall be located at the rear center of the apparatus body.

Pump Cntrl Panel, Rr Mt, Line-X Ctng

PUMP CONTROL PANEL -- REAR MOUNT

The pump operator's instrument panel for the rearmount pump shall be constructed of Line-X material applied to smooth aluminum and be fastened to the pump enclosure with 1/4" stainless steel bolts.

Pump Access Panel, Rr Mt, Uppr Rr, Alum T/P

REARMOUNT PUMP ACCESS PANEL -- UPPER REAR

A pump access panel shall be provided on the upper rear of the rearmount pump enclosure that allows access to the fire pump and plumbing. The door shall be constructed of aluminum tread plate.

The access panel shall be as large as practical and bolted in place.

Pump Access Panels, Rr Mt, Side Cmpts Bhnd Rr Whls

REARMOUNT PUMP AND PLUMBING ACCESS

The rearmount pump enclosure and plumbing area shall be accessible through removable panels, with stainless steel bolts in rear side compartment walls.
Heater, Pump Enc, 30,000BTU, w/Swtch on Pmp Oprtr's Pnl

PUMP COMPARTMENT HEATER SYSTEM

The interior of the pump enclosure shall be equipped with a minimum of 30,000 BTU hot water heater system. The unit shall be piped to the chassis radiator system with standard heater hose. The hose shall be properly clamped and secured in place, and be properly protected from engine exhaust or mechanical damage.

The heater unit shall be equipped with a 12-volt blower fan with control located on the pump operator's panel.
Heat Pan, Pump Enc, Midship, Slide Out Panel, Glvnzd Stl

PUMP ENCLOSURE HEAT PAN

A removable casing constructed of galvanized steel, completely enclosing the underside of the pump compartment and heated by the engine exhaust shall be provided. The heat pan assembly shall include individual panels that can be easily removed from their mounting locations. The two outer slide-out panels shall be bolted in place.
Labels, Test Data and Safety Placards

LABELS

Safety, information, data, and instruction labels for apparatus shall be provided and installed at the operator's instrument panel.

The labels shall include rated capacities, pressure ratings, and engine speeds as determined by the certification tests. The no-load governed speed of the engine, as stated by the engine manufacturer, shall also be included.

The labels shall be provided with all information and be attached to the apparatus prior to delivery.
Labels, Innovative Controls Color Coded

COLOR CODED PUMP PANEL LABELING AND NAMEPLATES

Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards.

Innovative Controls permanent type nameplates and instruction panels shall be installed on the pump panel for safe operation of the pumping equipment and controls.
Pump Panel Lts (3) Weldon #2025, Rr Mt, w/ Swtch

REARMOUNT PUMP PANEL LIGHTS

Three (3) Weldon #2025 or equal lights with clear lenses shall be installed on the pump panel light hood. The lights shall be controlled by a switch located on the operator's instrument panel.
Pump Panel Lt (1), Actuated w/Pump Engagement

PUMP ENGAGED LIGHT

One (1) pump panel light shall be illuminated at the time the fire pump is engaged into operation. The remaining lights shall be controlled by a switch located on the operator's instrument panel.
Mstr Gauges, IC, 4" PSI, Pr

MASTER DISCHARGE AND INTAKE GAUGES

Two (2) 4" diameter IC discharge pressure and intake gauges (30"-0-600 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

The master gauges shall have clear scratch resistant molded crystals with captive O-ring seals shall be used to ensure distortion free viewing and to seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from –40°F to +160°F. Each gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy. A polished chrome-plated brass bezel shall be provided to prevent corrosion and protect the lens and gauge case.
Gauge, Test Taps

TEST TAPS

Test taps for pump intake and pump pressure shall be provided on the pump instrument panel and be properly labeled.
Water Tank Gauge, FRC, TankVision Pro 300, Pump Panel WLA300-A00

WATER TANK GAUGE

A Fire Research TankVision Pro model WLA300-A00 tank indicator kit shall be installed on the pump panel. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the volume of water in the tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of Polycarbonate/Nylon material, and have a distinctive blue label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display tank volume, adjustable brightness control levels and a datalink to connect remote indicators. Low water warnings

shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall place on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.
Water Tank Gauge, FRC, TankVision, Mini, In-Cab

CAB MOUNTED WATER TANK GAUGE

A Fire Research TankVision model WLA205-A00 miniature tank indicator shall be installed in the chassis cab. The indicator shall show the volume of water in the tank on five (5) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be manufactured of Polycarbonate material with an integrated lens and have a distinctive blue label.

The miniature indicator shall receive input information over a single wire from a Fire Research TankVision primary indicator model, WLA300-A00 or WLA400-A00.
Water Tank Gauge, FRC, Max Vision Remote Tank Display, (3 Lts)

WATER TANK VOLUME REMOTE INDICATOR

Three (3) Fire Research MaxVision model WLA280-A00 tank remote indicators shall be installed, one remote indicator on each side of the apparatus and one remote indicator on the rear of the apparatus. The indicator shall show the volume of water in the tank on ninety six (96) easy to see super bright tri-color LEDs. The indicator case shall be waterproof, manufactured of polycarbonate material with an integrated lens. The package includes a rubber gasket.

The remote indicator shall receive input information over a datalink from a Fire Research TankVision model WLA300-A00 or WLA400-A00 tank primary indicator. The remote indicator shall indicate the level as a single color in Red for 25% or less, Amber color for up to 50% volume, Blue color for up to 75% volume and Green color for up to 100% volume. When the level reaches 25%, the red LEDs will begin flashing. When the level is empty, the red LEDs will scroll in a down-chasing motion and then flash three times. It shall have the program capability to adjust the brightness level for day time and nighttime viewing.
Mntng Location, Front Body Corners

MOUNTING LOCATION

The tank level gauges shall be mounted, one each side of the front of the body.
Mntng Location, Rear Body

MOUNTING LOCATION

The tank level gauge shall be mounted, on the rear of the body.
== RSD Timberwolf Single Axle Pumper - 4212.023 04/21/23 ==

S.O.R. / Water Tank, 750 Gal, Pmpr/Tnkr , Poly

WATER TANK - 750 GALLON

The apparatus shall be equipped with a seven-hundred-fifty (750) gallon polypropylene water tank. The tank shall be equipped with a four-inch (4") overflow pipe (a six-inch (6") overflow pipe shall be provided if required by dump valve installation).
Water Tank, "T" Tank

WATER TANK

The apparatus shall be equipped with a "T" shaped tank.
Water Tank, Fill Tower, 10" x 10", <1500 Gals

WATER TANK FILL TOWER

A fill tower measuring approximately 10” x 10” square shall be provided on the water tank up to and including 1500 gallons total capacity.
Water Tank, Base Specs, Poly

The apparatus shall be equipped with a polypropylene water tank. The tank body and end bulkheads shall be constructed of .75" thick, polypropylene, nitrogen-welded and tested inside and out. Tank construction shall conform to applicable NFPA standards. The tank shall carry a lifetime warranty.

The transverse and longitudinal .375" thick swash partitions shall be interlocked and welded to each other as well as to the walls of the tank. The partitions shall be designed and equipped with vent holes to permit air and liquid movement between compartments.

The .5" thick cover shall be recessed .375" from the top of the side walls. Hold down dowels shall extend through and be welded to both the covers and the transverse partitions, providing rigidity during fast fill operations. Drilled and tapped holes for lifting eyes shall be provided in the top area of the booster tank.

A combination vent/water fill tower shall be provided at front of the tank. The 0.5" thick polypropylene fill and overflow tower shall be equipped with a hinged lid and a removable polypropylene screen. The overflow tube shall be installed in fill tower and piped with a minimum schedule 40 PVC pipe through the tank.

The water tank sump shall be located in the forward area of the tank. There will be a schedule 40 polypropylene tank suction pipe from the front of the tank to the tank sump. The tank drain and clean out shall be located in the bottom of the tank sump. The sump shall have a minimum 3" threaded outlet on the bottom to be used for a combination clean out and drain.

The pump to tank refill connection shall be a sized to mate with tank fill discharge line. A deflector shield inside the tank will also be provided.

The tank shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area.

The tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of 1/4” x 1” and a hardness of approximately 60 durometer. The rubber must be installed so it will not become dislodged during normal operation of the vehicle. Additionally, the tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to prevent tank from shifting during vehicle operation.

A picture frame type cradle mount with a minimum of 2" x 2" x 1/4” mild steel, stainless steel, or aluminum angle shall be provided or the use of corner angles having a minimum dimension of 4" x 4" x 1/4” by 6” high are permitted for the purpose of capturing the tank.

Although the tank is designed on a free floating suspension principle, it is required that the tank have adequate vertical hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on top of the tank, half way between the front and the rear on each side of the tank. These stops can be constructed of steel, stainless steel or aluminum angle having minimum dimensions of 3" x 3" x 1/4” and shall be approximately 6” to 12” long. These brackets must incorporate rubber isolating pads with a minimum thickness of 1/4” inch and a hardness of 60 durometer affixed on the underside of the angle. The angle should then be bolted to the body side walls of the vehicle while extending down to rest on the top outside edge of the upper side wall of the tank.

Hose beds floors must be so designed that the floor slat supports extend full width from side wall to side wall and are not permitted to drop off the edge of the tank or in any way come in contact with the individual covers where a puncture could occur. Tank top must be capable of supporting loads up to 200 lbs per sq. foot when evenly distributed. Other equipment such as generators, portable pumps, etc. must not be mounted directly to the tank top unless provisions have been designed into the tank for that purpose. The tank shall be completely removable without disturbing or dismantling the apparatus structure.
Water Tank, Manufacturer, No Preference, Poly

The water tank shall be certified for the capacity of the water tank prior to delivery of the apparatus. This capacity shall be recorded on the manufacturer's record of construction and the certification shall be provided to the purchaser when the apparatus is delivered.
Hosebed, Grating, Extrd Alum, <180" Long

HOSEBED SINGLE AXLE

The hose bed compartment deck shall be constructed entirely from maintenance-free, extruded aluminum slats. The slats shall have an anodized, radiused ribbed top surface. The slats shall be of widths approximately 3/4" high x 6" wide and shall be welded into a one-piece grid system to prevent the accumulation of water and allow ventilation to assist in drying hose.

The apparatus hose body shall be properly reinforced without the use of angles or structural shapes and free from all projections that might injure the fire hose.

The main apparatus hose body shall run the full length of the apparatus body from behind the pump panel area to the rear face of the body.

The upper rear interior of the hose body on the right and left sides shall be overlaid with brushed stainless steel to protect the painted surface from damage by hose couplings.
Hosebed, Strge Cpcty, 55 Cubic Feet, Minimum

HOSE BED STORAGE CAPACITY

The hose bed shall be designed to have a storage capacity for a minimum of 55 cubic feet of fire department supplied fire hose.
Hosebed, Divider, 1/4" Alum

ALUMINUM HOSEBED DIVIDER

One (1) adjustable hosebed divider constructed of .250" aluminum shall be installed on the apparatus.
Hosebed, Divider, Handhole Cutouts

Each hosebed divider installed on the apparatus shall be provided with a hand hole cut-out approximately 3" wide x 8" long.
Alum Box Around Fill Towers

ALUMINUM BOX

There shall be a full width smooth aluminum box fabricated around the fill tower(s).
Hosebed Cvr, Alum T/P, <180" L, 49-74" W, Ctr Open (NFPA Walking Surface)

ALUMINUM HOSEBED COVER

The hosebed shall be equipped with a reinforced hinged .125" aluminum diamond plate cover. The covers shall be of the sloped design for proper water runoff. Positive hold-open devices shall be provided to hold the door in the open position.

The cover, approximately 49” to 74” wide with a center opening, shall be installed the full length of the hose bed.

The walking surface on the cover shall be a NFPA #1901 compliant surface, with a 1" wide yellow or orange strip designating the outside perimeter of the walking or standing area.
(1) Main Hosebed Divider (Stationary)

MAIN HOSEBED DIVIDER

One (1) stationary hosebed divider shall be provided in the main hosebed.

The hosebed divider shall be fabricated of 1/4" smooth aluminum sheet stock, pressed into a "T" shaped aluminum extrusion for added strength along the bottom and front edges of the divider.

Divider shall be bolted in place, front and rear, to allow for ease of removal or relocation.
Mnl Operation, Hosebed Cvr, Alum T/P

MANUALLY OPERATED ALUMINUM HOSEBED COVER

The polished aluminum treadplate hosebed covers extending the full-length and width of the main hosebed shall have lift up handles installed on each hose cover to manually open the hosebed covers.
Rr Vinyl Flaps for Alum Cvr

REAR VINYL FLAPS FOR ALUMINUM COVER

There shall be a vinyl flaps attached to each aluminum hosebed cover. The vinyl flaps shall cover the area on the rear of the hosebed from top to bottom. The flaps shall be independent of each other but attachable with velcro in the center. The bottom edge of the flap shall be shall be secured utilizing a hook and loop fastening system.
Vinyl Cover, Color, RED

The vinyl cover shall be red in color.
BODY CONSTRUCTION

Bdy Const - Rosenbauer FX - 3/16" Alum - SA Timberwolf

3/16" ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.

The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing, 1-3/4" x 3" aluminum tubing and 3" x 3" aluminum angle and specially designed extrusions, up to .250" wall thickness where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32, and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

The aluminum treadplate alloy shall be 3003 with a temper rating of H22, and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, hosebeds, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartment floors shall be of the sweep out design with the floor higher than the compartment door lip and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity. To ensure maximum storage space, the apparatus shall be constructed without any void spaces between the body and the compartment walls. Double wall construction does not meet this requirement.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be formed aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

The rear wheel wells shall be radius cut for a streamlined appearance. A fenderette shall be furnished at each rear wheel well opening, held in place with stainless steel fasteners.

FASTENERS

All aluminum and stainless steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc.

Smooth Alum Compt Floors

COMPARTMENT FLOORS

The compartment floors shall be constructed of smooth aluminum material, to match the compartment interior walls.

Sub Frame, Hot-Dip Galv

GALVANIZED SUB-FRAME

The apparatus body subframe shall be constructed entirely of heavy steel structural channel material.

Two full frame lengths, three-inch (3") 3.4 pound per foot longitudinal steel channels shall form the sides of the body subframe and sides of the water tank cradle. Subframe crossmembers shall be fabricated with three inch (3") 3.4 pound per foot heavy steel channel cross members welded to the longitudinal body subframe sides and the full length frame pads.

Two full frame length 1/2" x 3" flat steel frame pads shall be attached to the body subframe and rest on top of the chassis frame rails for proper frame weight distribution.

The steel frame pads, longitudinal steel channels and subframe crossmembers shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the subframe and body assembly from the chassis. There shall be a barrier provided between the subframe and body to prevent electrolysis.

The rear subframe and lower body platform support members shall be of the "two piece" design, fabricated of 3.4 lb. per foot heavy channel and welded to the full length subframe channel liners at the rear.

A minimum of two rear platform support channels shall be provided and constructed of 3.4 lb. Per foot heavy steel material. Each support channel shall have welded in gusset where the support meets the rear subframe rails.

After fabrication the entire subframe assembly shall be hot dip galvanized to prevent corrosion. p The hot dip galvanized subframe shall have a lifetime warranty against failure due to corrosion.

This steel subframe shall carry the weight of the apparatus body, tank, water and equipment. This method of apparatus construction gives an excellent strength/weight ratio.

Bdy, Frmd Alum, Pmpr/Tnkr , 160"

BODY CONFIGURATION

The formed apparatus body shall be 160" long, reference the drawing for actual body length.

Whl Well Panel, Alum Pntd, Sngl Axle - Alum

SINGLE AXLE WHEEL AREA

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.
Fenderette, Polished Aluminum

FENDERETTES

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.
100" OAW, 14-26" Half Dpth Both Sides, SA HL/HR

BODY WIDTH

The overall width of the pumper body shall not exceed 100".

COMPARTMENT DEPTH

The side compartments on the pumper body shall have the following dimensions:

Lower portion depth of 26"
Upper portion depth of 14"
Hosebed, Pmpr, <180" L, 74" Wide

HOSEBED WIDTH

The width of the pumper body hosebed shall be 74".
Cmpt Height, 79" High Left

COMPARTMENT HEIGHT

The left side body compartments shall be 79".
Cmpt Height, 79" High Right

COMPARTMENT HEIGHT

The right side body compartments shall be 79" high.
Roll-Up Drs - ROM Mfg

ROLL UP DOOR CONSTRUCTION

The roll up door(s) shall be fabricated from aluminum extrusions and be manufactured and assembled in the United States.

The door slats shall be double-wall extrusions with dimensions of 1.366" high x .315" thick. The exterior surface shall be flat and the interior surface concave to deflect loose equipment to prevent the door from

jamming. Each slat shall have interlocking end shoes to prevent the slat from moving side to side resulting in binding of the door. Each slat shall be separated by a co-extruded PVC and rubber inner seal to prevent metal to metal contact and minimize dirt and moisture from entering the compartment. The inner seal shall not be visible from the exterior to maintain a clean appearance of door. The slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.

The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low profile side seal shall be utilized to maximize usable compartment space.

A drip rail designed to prevent water from dripping into the compartment shall be provided. The drip rail shall have a built in replaceable non-contacting seal to eliminate scratching of the surface of the door.

Bottom rail extrusion must have smooth back to prevent loose equipment from jamming the door and have “V” shaped double seal to prevent water and debris from entering the compartment. The door latch system shall be a full width one (1) piece lift bar that enables the user to operate with one hand.

The roll mechanism shall have a clip system that connects the curtain slats to the operator drum to allow for easy tension adjustment without tools. A four (4) inch diameter counterbalanced operator drum to shall be incorporated to assist in lifting the door.
Dr Strap, Pull Down

PULL DOWN STRAPS

Nylon straps shall be provided and installed on each roll up door . The straps shall be secured to the side wall of the interior compartment in a way that will allow the strap to automatically tuck inside the compartment when closed to prevent the strap from dangling and hindering closing of the door. The straps shall be black in color.
Dr Roll Up, Drip Pans, Alum

DOOR DRIP PANS

An aluminum drip pan shall be provided on the roll up door.
Ahd Rr Whls - Full Ht Comp't - Roll Up Door - Natural Finish

LEFT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.

Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Shelf, Adjust, Alum 1/8"

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125” smooth aluminum plate with 1.5” formed vertical lip front & back. Shelf supports on each side to be constructed of .188” aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8” bolts and spring-loaded cam locks. If shelf is longer than 40” a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.
Turtle Tile, Shelves/Trays, (each)

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 1/2" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Upr Hgh Sde - Sgle Comp't - Roll Up Dr - Natural Finish

LEFT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Bhnd Rr Whls - Full Ht Comp't - Roll Up Door - Natural Finish

LEFT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Shelf, Adjust, Alum 1/8"

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125” smooth aluminum plate with 1.5” formed vertical lip front & back. Shelf supports on each side to be constructed of .188” aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8” bolts and spring-loaded cam locks. If shelf is longer than 40” a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.
Turtle Tile, Shelves/Trays, (each)

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 1/2" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Drop Down Door/Step, Alum T/P, with Compartment, LH

DROP DOWN DOOR/STEP -- LEFT SIDE

A heavy-duty drop-down safety step shall be provided on the left side body, below the rear compartment.

An aluminum NFPA compliant treadplate stepping surface shall be provided full width of the pump compartment and no less than 16" in depth. Each drop-down safety step shall have a minimum static load capacity of 500 pounds. Gas-filled springs shall assist in opening and closing the drop-down safety step.
Cmpt Lt, Wall, OSS Access, LED Tube Lt, (1) Ea Cmpt

COMPARTMENT LIGHTS

One (1) OnScene Solutions Access LED light shall be installed on one side of the door opening. The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Ahd Rr Whls - Full Ht Comp't - Roll Up Door - Natural Finish

RIGHT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Shelf, Adjust, Alum 1/8"

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125” smooth aluminum plate with 1.5” formed vertical lip front & back. Shelf supports on each side to be constructed of .188” aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8” bolts and spring-loaded cam locks. If shelf is longer than 40” a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.
Turtle Tile, Shelves/Trays, (each)

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 1/2" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Upr Hgh Sde - Sgle Comp't - Roll Up Door - Natural Finish

RIGHT HIGH SIDE COMPARTMENTS

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Bhnd Rr Whls - Full Ht Comp't - Roll Up Door - Natural Finish

RIGHT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Shelf, Adjust, Alum 1/8"

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .125” smooth aluminum plate with 1.5” formed vertical lip front & back. Shelf supports on each side to be constructed of .188” aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8” bolts and spring-loaded cam locks. If shelf is longer than 40” a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.
Turtle Tile, Shelves/Trays, (each)

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 1/2" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.
Cmpt LED Lt, Luma Bar, (1) Ea Cmpt

COMPARTMENT LIGHT

One (1) LUMA BAR vertically mounted roll-up compartment LED door light shall be installed on one side of the door opening. The compartment light shall be integrated into the roll-up door track with the light actuation with the door opening.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Drop Down Door/Step, Alum T/P, with Compartment, RH

DROP DOWN DOOR/STEP -- RIGHT SIDE

A heavy-duty drop-down safety step shall be provided on the right side body, below the rear compartment.

An aluminum NFPA compliant treadplate stepping surface shall be provided full width of the pump compartment and no less than 16" in depth. Each drop-down safety step shall have a minimum static load capacity of 500 pounds. Gas-filled springs shall assist in opening and closing the drop-down safety step.
Cmpt Lt, Wall, OSS Access, LED Tube Lt, (1) Ea Cmpt

COMPARTMENT LIGHTS

One (1) OnScene Solutions Access LED light shall be installed on one side of the door opening. The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Rr Bdy, Flat Back

REAR BODY CONFIGURATION

The rear of the apparatus body shall be of the flat back design.
Rr Cntr Comp't - Full Ht Roll Up/Trans- Natural Finish

REAR CENTER COMPARTMENT

There shall be one (1) full height compartment located at the rear of the apparatus. The compartment shall be equipped with a full height natural finish roll up door. The compartment shall be open to the rear side compartments, providing a transverse compartment at the rear of the truck.

The compartment shall be equipped with the following:
Vents, Compts, Louvers, Includes Filters (Ea)

One (1) louver with filter shall be installed in the compartment.
Shelving Tracks, (2) Unistrut, Alum

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.
Cmpt LED Lt, Luma Bar, (2) Ea Cmpt

COMPARTMENT LIGHTS

Two (2) LUMA BAR vertically mounted roll-up compartment LED door lights shall be installed one each side of the door opening. The compartment lights shall be integrated into the roll-up door tracks with the light actuation with the door opening.

The lights shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat build up.
Cmpt Lt, Dr Swtch, Auto, Ea

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.
Rr Bdy, High Angle of Departure, Rr Mt Pumper

REAR BODY

The apparatus body, behind the rear wheels shall be raised to allow for a high angle of departure.
Ladder Strge, In Hosebed, With Dr

SLIDE OUT LADDER MOUNTINGS IN HOSEBED WITH DOOR

The ladders shall be stored in the hosebed in a full width enclosed compartment. The area shall house three (3) sets of dual ladder slide in tracks to store specified ladders in a horizontal position. The mounting system shall be equipped with fiberglass angles and stop at front of ladders.

A full width aluminum diamond plate swing up door, with dual gas operators, shall be installed to enclose the ladder storage area.
Ladder Mtg, Fldg Attic , External

EXTERIOR FOLDING ATTIC LADDER MOUNTING

An exterior mounting shall be provided for the specified folding attic ladder.
Ladders, Ground, Provd'd By Bdy Bldr, SD

LADDER SOURCE

New ground ladders shall be provided by the body builder.
Pike Pole Mtg, In Ladder Tunnel, Ea

PIKE POLE MOUNTING BRACKET

Two (2) tube shall be provided for pike pole mounting. The tube shall have a 2" interior diameter and shall be mounted in the ladder tunnel.
Suction Hose Tray, Driver Side Over Cmpts (Ea)

HARD SUCTION MOUNTING

One (1) horizontally mounted aluminum hard suction hose tray with velcro straps shall be provided above the driver side body compartments.
Suction Hose Tray, Passenger Side Over Cmpts (Ea)

HARD SUCTION MOUNTING

One (1) horizontally mounted aluminum hard suction hose tray with velcro straps shall be provided above the passenger side body compartments.
Suction Hose Provd'd By, Bdy Bldr, SD

SUCTION HOSE SOURCE

New suction hose shall be provided by the body builder.
== RSD Timberwolf Pumper Common Body Parts - 4212.023 04/21/23 ==

Bdy Trim, Frnt Cmpt, Ht of Side Cmpts, Alum T/P

FRONT BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the front of the body compartment from the lower edge to the top of the compartment doors.
Catwalks Top of Side Cmpts, Alum Treadplate

CATWALKS

Aluminum tread plate catwalks shall be installed on the top of the compartments.

Bdy Trim, Entire Rr Bdy, Smooth for Chevron Stripe

REAR BODY PROTECTION PANELS

The rear body panels of the body shall be a smooth material, to allow for the proper application and installation of a "Chevron" stripe on the rear.
Roof Access Ladder, Alum Tubing, Fold-Up, Left Rr

ACCESS LADDER

An access ladder constructed of rectangular aluminum tubing and round extruded aluminum non-slip rungs shall be installed on the left rear of the apparatus. The bottom portion of the ladder shall fold up in a secured position when not in use to maintain a high angle of departure. The ladder shall provide access to the top of the body.
Handrails, Rr Step, Vert, 48", Pair

HANDRAIL REAR STEP

Two (2) extruded aluminum non-slip handrails, approximately 48" in length, shall be provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.
Handrails, Pmpr, Below Hosebed, Horz, 48"

HANDRAIL BELOW HOSEBED

One (1) extruded aluminum non-slip handrail, approximately 48” in length, shall be provided and horizontally mounted below the hosebed on the rear of the apparatus.
Rub Rails, Lwr Bdy, Extrd Alum

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the lower right and left body sides. The side rub rails shall be a heavy extruded aluminum "C" channel.
Rub Rails, Spacers, Nylon

NYLON SPACERS FOR RUB RAILS

There shall be nylon spacers provided between the rub rail and the body. This shall allow wash out and replacement in the event of damage.
Whl Well Cmpt, Ahd of Whls Left Side, Tmbrwlf/Airwlf

WHEEL WELL COMPARTMENT LEFT SIDE AHEAD OF WHEELS

A wheel well compartment shall be located on the left side in the rear wheel well panel ahead of the rear wheels of the type specified herein.
Whl Well Cmpt, Sngl SCBA, Poly Tube, SST Dr, (Fire Shopp)

A Fire Shopp Inc. breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of black polymer. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed stainless steel door shall be provided.
Whl Well Compt, SCBA Compt Straps

An one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.
Whl Well Cmpt, Bhnd Whls Left Side, Tmbrwlf/Airwlf

WHEEL WELL COMPARTMENT LEFT SIDE BEHIND WHEELS

A wheel well compartment shall be located on the left side in the rear wheel well panel behind the rear wheels of the type specified herein.
Whl Well Cmpt, Sngl SCBA, Poly Tube, SST Dr, (Fire Shopp)

A Fire Shopp Inc. breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of black polymer. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed stainless steel door shall be provided.
Whl Well Compt, SCBA Compt Straps

An one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.
Whl Well Cmpt, Ahd of Whls Right Side, Tmbrwlf/Airwlf

WHEEL WELL COMPARTMENT RIGHT SIDE AHEAD OF WHEELS

A wheel well compartment shall be located on the right side in the rear wheel well panel ahead of the rear wheels of the type specified herein.
Whl Well Cmpt, Sngl SCBA, Poly Tube, SST Dr, (Fire Shopp)

A Fire Shopp Inc. breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of black polymer. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed stainless steel door shall be provided.
Whl Well Compt, SCBA Compt Straps

An one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.
Whl Well Cmpt, Bhnd Whls Right Side, Tmbrwlf/Airwlf

WHEEL WELL COMPARTMENT RIGHT SIDE BEHIND WHEELS

A wheel well compartment shall be located on the right side in the rear wheel well panel behind the rear wheels of the type specified herein.
Whl Well Cmpt, Sngl SCBA, Poly Tube, SST Dr, (Fire Shopp)

A Fire Shopp Inc. breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of black polymer. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed stainless steel door shall be provided.
Whl Well Compt, SCBA Compt Straps

An one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.
== RSD Timberwolf - AC Electrical System - 4212.023 04/21/23 ==

== RSD Timberwolf Equipment Systems - 4212.023 04/21/23 ==

Rcv'r, Frnt, Winch/Rope, 12,000#

WINCH RECEIVER - FRONT

The front of the chassis shall be equipped with a receiver assembly for high or low angle rescue or winch applications. The receiver shall be a square steel tube, same size as that of a trailer hitch. The unit shall be attached to the chassis frame assembly.
NO 12V Winch Power Receptacle

Rcv'r, Rr, Winch/Rope/Trailer, 12,000#

WINCH RECEIVER - REAR

The rear of the apparatus body shall be equipped with a receiver assembly for high or low angle rescue or winch applications. The receiver shall be a square steel tube, same size as that of a trailer hitch. The unit shall be attached to the body sub-frame assembly.
NO 12V Winch Power Receptacle

NO 12V Trailer Hitch Power Plug

== RSD Timberwolf Pumper Single Axle - Pnt/Ltr/St - 4212.023 04/21/23 ==

Bdy Paint, Sngl Axle, Pmpr/Tnkr - Sngl Color

BODY PAINT PROCESS

Facility Certification

The paint facility shall be in current compliance with 40 CFR (code of federal regulations) part 63 subpart HHHHHH national emission standards for hazardous air pollutants: Paint stripping and miscellaneous surface coating operations at area sources (6H-NESHAP). Spray guns shall also be compliant certified by paint gun manufacturer.

Cab / Module Prep

Prior to assembly, all joints and seams are to be mechanically etched. All welds shall be ground smooth prior to priming. The bare substrate of the module is first cleaned with a strong surface cleaner to remove fabrication and pneumatic tool oils. *The reason? Cleaning the surface prior to sanding prevents oils and contaminants from being imbedded into the substrate.* After sanding process, a mild surface cleaner removes any sanding dust residue along with pneumatic tool oil. A waterborne surface cleaner is available in case substrate was touched with bare hands or skin.

The following steps must be followed in sequence to properly apply paint to the Fire truck cab, chassis or module.

SURFACE PREP

- Clean entire modular body with Sikkens OTO using the two-cloth method, wipe on wet, wipe dry. *Reason: Wiping our surface cleaners on wet, contaminants loosen and float to the top. Those floating*

contaminants then get wiped off with an absorbent towel.

- Using an orbital sander, (where polyester filler will be applied) 80-grit is used to provide a mechanical tooth for optimal adhesion. 180-grit is then used surrounding the 80-grit area. Sikkens M600 surface cleaner is then used to remove sanding dust and pneumatic tool oil. If bare hands or skin accidentally touched the surface, Sikkens Autoprep waterborne cleaner is used to remove natural oils. *Again: All surface cleaners are applied wet with one towel and wiped dry with another.*
- Rosenbauer approved polyester body filler is then applied over the 80-grit ground areas to cover the imperfections from welds. When body filler dries, it's first sanded with 80-grit then finish sanded with 180-grit to remove all 80-grit sand scratches. Blow off surface dust using approved air wand.
- After body work has been completed, the rest of the aluminum substrate on module gets sanded with 80-grit sandpaper until the surface is bright and sand scratches are consistent. Module gets blown off again to remove all sanding dust.
- Step 1 is essential in achieving proper adhesion.

EPOXY PRIMER and HIGH BUILD primer surfacer APPLICATION PROCESS:

- First, if sanded aluminum substrate has not been primed within 8 hours, aluminum substrate gets re-abraded to remove oxidation that may have begun on aluminum surface. Aluminum substrate gets cleaned with Sikkens M600 surface cleaner using the 2-towel method. Surface cleaners do not get applied over body filler due to polyester filler being absorbent.
- One (1) coat of AkzoNobel LV262 Epoxy primer is applied. This epoxy primer slows down corrosion from happening if in case the unit (once out in the field) has stone chips or scratches down to aluminum. This product is a 2-component epoxy primer meaning it mixes with a hardener. Paint technicians are trained to properly apply this product to achieve a minimum of 1 mil DFT (Dry film thickness) required by AkzoNobel. A blank module schematic showing specific areas to measure dry film thickness is completed on each module /unit.
- Allow LV262 25 minutes minimum dry time prior to applying AkzoNobel LV650 primer surfacer. Apply two to three wet coats of AkzoNobel LV650 two component low VOC high build primer surfacer. A dry film thickness of up to 8 mils can be achieved prior to sanding. Minimum flash between coats is 30 seconds to 5 minutes. LV650 surfacer dries 3 different ways. 8 hour dry without accelerator, bake for 1 hour at 140-degrees or accelerate which allows technicians to sand in 45 minutes @70-degrees.

SANDING:

- Block sand entire module with 320-grit sandpaper minimizing any accidental cut throughs on edges. Blow off body with air gun and move module into paint booth.

PRE TOPCOAT PREPARATION

- Clean areas where Rosenbauer approved seam sealer is applied with Sikkens M600 surface cleaner. If by accident, bare hands or skin touched surface on cab or module, Autoprep waterborne cleaner is used on these areas prior to using M600 cleaner. Both cleaners are used with the 2-towel method.
- Seam seal with Rosenbauer approved non-shrinking moisture cured urethane seam sealer. Technicians follow seam sealer technical data sheets pertaining to application and dry times prior to applying AkzoNobel BT650 basecoat or 650 Topcoat single stage paint.

- Clean module with M600 surface cleaner. If by accident, bare hands or skin touched surface on module, Autoprep waterborne cleaner is used on these areas prior to using M600 cleaner. Both cleaners are used with the 2-towel method.
- If there are any visible cut throughs, paint techs first use a pre-treatment Alodine wipe followed by one coat of reduced LV262 epoxy primer over these areas and give a 20-minute flash prior to applying BT650 basecoat or Topcoat.
- Tack rag unit to remove any lint or dust that could have landed on surface.

TOPCOAT PROCEDURE

- Mix BT650 basecoat or Topcoat (single stage) polyurethane paint.
- Fluid and spray pattern checks are done prior to applying BT650 base, Topcoat and Clear coat.
- Apply BT650 basecoat until complete coverage is achieved. If Topcoat is applied, a minimum of 1.8 mils is recommended after cut and buff procedure. Note: Topcoat doesn't get clear coated.
- Allow solid color BT650 basecoat to flash 20 minutes prior to applying 3 coats Sikkens LV651 Glamour Clear coat.
- If a metallic color, allow BT650 basecoat to flash 45 minutes prior to applying 3 coats LV651
- Glamour Clear coat. Bake body for 45 minutes once surface temp has reached 140-degrees.
- The mil thicknesses are as follows:
  - Autocoat BT LV262 Epoxy Primer 1.0 to 1.5 mils
  - Autocoat BT LV650 2K Primer Surfacer 1.0 to 3.0 mils
  - Autocoat BT LV650 Basecoat color 1.0 to 1.8 mils
  - Autocoat LV651 Clearcoat 2.0 to 3.0 mils
  - Combined total: 5.0 to 9.3 mils

Apparatus Color

APPARATUS COLOR

Compt Finish, Spatter Coat, Up to 8 Cmpts

INTERIOR COMPARTMENT FINISH

Eight (8) apparatus side compartment interiors are to be painted with a spatter finish material. The compartments shall be cleaned with a grease remover, and then the surface sanded and prepared for painting. The compartment shall be provided with two (2) coats of white epoxy. The compartments are then coated with a splatter paint top coat.

Paint, Chs Whls, Sngl Axle (Outer Only)

WHEEL PAINTING

The exterior faces of the front wheels and outer rear wheels only, shall be finish painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and top coats as specified.

Bdy Paint, Touch Up, 2 oz. Bttl, One Color

TOUCH-UP PAINT

One (1) two (2) ounce bottle of touch-up paint shall be furnished with the completed truck at final delivery.
Lettering, 4" Mylar Gold Leaf, 50 Letters

SIMULATED GOLD LEAF LETTERING

The lettering shall be applied in simulated gold leaf material, shaded in black and encapsulated in clear Mylar.

A quantity of fifty (50), four (4) inch letters are to be placed on the cab and on the body as directed by the customer.
Stripe, Triple Reflective, 1" x 4" x 1" Large "Z" Design

REFLECTIVE STRIPING

A 1" x 4" x 1" wide 3M brand Scotchlite reflective multi-stripe shall be affixed to the perimeter of the vehicle. There shall be a 1" gap between each of the stripes. Striping shall conform to applicable NFPA requirements. At least 50% of the perimeter length of each side and width of the rear, and at least 25% of the perimeter width of the front of the vehicle shall have reflective striping.

The striping shall be applied in a large "Z" pattern.
Reflective Stripe Material, Blue

COLOR OF STRIPING MATERIAL

The color of the 3M brand striping material shall be blue.
Reflective Stripe Material, White

COLOR OF STRIPING MATERIAL

The color of the 3M brand striping material shall be white.
Stripe, Reflective 3M, Chevron Pattern Entire Rear Red/Yellow

CHEVRON STRIPING

The entire rear portion of the body shall have 3M reflective red and yellow striping installed. The chevron style striping shall be applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel.
NFPA Standing / Walking Surfaces Yellow Safety Tape (NFPA 15.7.1.6)

YELLOW SAFETY TAPE - STANDING & WALKING SURFACES

The apparatus shall meet NFPA standard 15.7.1.6 designating any horizontal standing or walking surface higher than 48-in (1220 mm) from the ground and not guarded by railing or structure at least 12-in (300 mm) high shall

have at least a 1-in (25 mm) wide safety yellow line delineation that contrasts with the background to mark the outside perimeter of the designated standing or walking surface area, excluding steps and ladders.
== Pumper/Tanker - Loose Equipment - 4212.023 04/21/23 ==

Wheel Chocks, Aluminum, (2) Standard

WHEEL CHOCKS

Two (2) standard aluminum wheel chocks shall be provided.
Wheel Chock Brackets, (2) In Body

WHEEL CHOCK MOUNTINGS

Two (2) wheel chock holders shall be mounted in the apparatus body.
Ladder, Roof, Duo-Safety, 12' Alum 775-A

ROOF LADDER

One (1) Duo Safety Model 775-A, 12 foot aluminum roof ladder with folding steel roof hooks on one end and steel spikes on the other end shall be provided on the apparatus. The ladder shall meet or exceed all latest NFPA Standards.
Ladder, Ext, Duo-Safety, 28' Alum, 3 Sect 1225-A

EXTENSION LADDER

One (1) Duo-Safety Model 1225-A, 28 foot three (3) section aluminum extension ladder shall be provided on the apparatus. The ladder shall meet or exceed all the latest NFPA standards.
Ladder, Attic, Duo-Safety, 10' Alum, Fold 585-A

FOLDING LADDER

One (1) Duo Safety Model 585-A, 10 foot folding aluminum ladder shall be provided on the apparatus. The ladder shall meet or exceed all the latest NFPA Standards.
Pike Pole, 8' Fbgls, Round Hndl

PIKE POLE

One (1) 8' pike pole with round handle shall be provided. The pike pole shall be of fiberglass construction.
Pike Pole, 10' Fbgls, Round Hndl

PIKE POLE

One (1) 10' pike pole with round handle shall be provided. The pike pole shall be of fiberglass construction.
Suction Hose, Flex, PVC, 6"x10'

SUCTION HOSE

Two (2) 6.0" x 10 foot length of PVC flexible suction hose shall be supplied. The suction hose shall have light weight couplings provided.
Suction Hose Cplgs, Alum, LH FM x RLM

HOSE COUPLINGS

Light weight aluminum couplings shall be provided on the suction hose. A long handle female swivel shall be provided on one end and a rocker lug male shall be provided for the other end.