



Velocity Fire Equipment Sales

One (1) == Bid Prep Forms - 4212.023 04/21/23 ==

One (1) Fire Department Name
00-00-1300

BID SPECIFICATIONS

FOR

ROSENBAUER CUSTOM FIRE APPARATUS

One (1) Overall Height Restriction, NONE
00-00-1499

10105-0005



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OVERALL HEIGHT

One (1)
00-00-1509 An overall height restriction has not been specified for this apparatus.
Overall Length Restriction, NONE

OVERALL LENGTH

One (1)
00-00-1519 An overall length restriction has not been specified for this apparatus.
Overall Width Restriction, NONE

OVERALL WIDTH

One (1)
00-00-1529 An overall width restriction has not been specified for this apparatus.
Wheelbase Restriction, NONE

WHEELBASE

One (1)
00-00-1539 A wheelbase restriction has not been specified for this apparatus.
Angle of Approach, NFPA Minimum, 8 Degrees

ANGLE OF APPROACH

One (1)
00-00-1549 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

One (1)
00-00-3220 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



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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

One (1)
00-12-1100

FINANCIAL STABILITY SPECIFICATIONS



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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



Velocity Fire Equipment Sales

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.

One (1)
01-06-0500

Calculated Center of Gravity

CENTER OF GRAVITY

The apparatus, prior to acceptance, will be required to meet the vehicle stability of the applicable NFPA Automotive Fire Apparatus Standard.

A calculated center of gravity shall be provided. The calculated or measured center of gravity (CG) shall be no higher than 80-percent of the rear axle track width. If so, a tilt table test at the apparatus body builder's facility or Electronic Stability Control (ESC) must be provided on the chassis meeting the requirement of the NFPA 1901 Guideline.

One (1)
01-07-0060

Technical Drawings, Representative Drawings (3-View) (Left/Right/Rear)

ENGINEERING BLUEPRINTS

10105-0005



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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

One (1)
01-07-1100

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.



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One (1) Manuals, Body Complete, Electronic Internet Service
01-33-3409

"ON-LINE" SERVICE MANUAL SUPPORT

As part of the standard delivery manual, **ROSENBAUER** shall give a password-protected link to the end user, allowing access to the manufacturers' database on service parts. The internet-based system shall allow the end user to access the major component supplier's service parts listing such as Hale, Waterous, Akron, etc. This shall be accomplished with simplistic point and click features on the manufacturer line item within the "stripper" or "line item sheet". This will include, automatic updates, printable schematics and manufacturer's web links and is available in the commercially available format of Adobe Acrobat Reader to access these documents. Rosenbauer America, LLC shall submit with the bid proposal, a sample set of on line Adobe formatted material that has been printed from the manufacturer's website.

Parts Listings within Manuals

The manuals will include cross-reference part numbers from the **ROSENBAUER** part number to the vendor parts. Example: **ROSENBAUER Hydraulic Ladder Rack, Part #LR-MN-0002** cross-referenced to Ziamatic Corporation Part 098-MN2345. This will allow for reference between individual parts and complete installation assemblies as completed by the body builder. The manuals will list all components of the vehicle that includes a vendor part utilized in a complete installation via the manufacturer's "line item sheet" or "stripper" utilized to manufacture the completed vehicle. These are "As Built" and proposals with "typical" or "generic" manuals will be rejected.

Illustrative Schematics within Manuals

ROSENBAUER shall include installation diagrams and drawings of all major sub assemblies. This will include components such as hydraulic ladder rack assemblies, pump panels, tanks, fire pumps, etc. The drawings shall be linked via an Internet based service program, in an electronic format from the manufacturers "stripper" (line item listing) of the manufacturing document. **ROSENBAUER** shall submit, upon request, a sample schematic.

Digital Images within Manuals

In addition to two and three-dimensional installation drawings, **ROSENBAUER** shall make accessible, via an internet based link, the actual photos of the installed components listed within



Velocity Fire Equipment Sales

the "stripper" or line sheet. This will include, but not limited to wiring terminals, main body distribution strips, fire pump shifting, auxiliary components, etc. **ROSENBAUER** shall submit a sample of these upon request.

Installation Instructions within Manuals

ROSENBAUER "work instructions" or "installation instructions" shall be included with the service manuals. These documents shall be accessible via a web-based link to the individual vehicle manufactured. The work instructions shall give systematic instructions of the component installation process. **ROSENBAUER** shall submit, upon request, a sample set of instructions.

Automatic Updates of Manuals and Parts Listings

The online manuals will include automatic updates that are accessible via the web link. When clicking on the part within the manufacturer's stripper or line sheet, it will allow the end user to access the component manufacturer website for updated information. This will allow for latest parts and service components from the individual part manufacturer or vendor.

Electrical Schematics

To maintain the vehicles electrical systems, the manufacturer shall provide to the purchaser the instructional manuals, complete electrical information and schematics on the vehicle. The electrical information shall be provided as follows:

Wiring Systems 12 and 120 Volt:

- Graphic symbols for electrical diagrams.
- Wire labeling, imprinting codes and index.
- Computer generated electrical schematics indicating the circuit number, wire size, switches, circuit breaker and terminals on the vehicle.

ROSENBAUER shall submit, upon request, a sample set of diagrams.

One (1) == Warranties - Tandem Axle Tanker - 4212.023 04/21/23 ==

One (1) Warranty, Apparatus, Body Warranty, 1 Year
01-16-0150

BODY WARRANTY



Velocity Fire Equipment Sales

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, Aluminum, 5 Years

One (1)
01-19-0250

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.



Velocity Fire Equipment Sales

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 Galvanized

One (1)
01-19-2700

GALVANIZED STEEL SUBFRAME WARRANTY

The manufacturer shall provide a lifetime warranty for the galvanized steel subframe of the apparatus body. The manufacturer shall supply details of their warranty information with their bid submission.

One (1)
01-20-1005

Warranty, Paint, AkzoNobel, 5 Years



Velocity Fire Equipment Sales

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.*

Pump Warranty, Darley, 10 Years

One (1)
01-17-0160

FIRE PUMP WARRANTY

A ten (10) year warranty for the Darley fire pump shall be provided.

Plmbg Warranty, Stainless Steel, 10 Years

One (1)
01-17-1050

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.

Freightliner M2 2-door W/450HP Engine 56000GVW

S One (1)
09-01-0450

FREIGHTLINER M2 CONVENTIONAL CHASSIS

Hzntnl Chassis Exhaust (Front of Rr wheel)

One (1)
09-01-6100

10105-0005



Velocity Fire Equipment Sales

HORIZONTAL CHASSIS EXHAUST

One (1) The chassis exhaust system shall be extended to the front of the right rear wheel.
== R Series DC Electrical System TANKER - 4212.023 04/21/23 ==

One (1) Whelen Light Package - Commercial
50-01-9014

One (1) Siren, Electronic, Whelen 295SLSA1
56-01-1602

ELECTRIC SIREN AND CONTROL

One (1) A Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall
56-02-1750 feature an electronic air horn, wail, yelp, hi-lo and shall have a hard wired PA microphone.
Speaker, Whelen SA315P, 100 Watt

SPEAKER

One (1) Whelen model #SA315P, nylon composite speaker shall be installed. The speaker shall
56-03-1800 be wired to the electric siren located in the cab.
Speaker Location, To Be Determined by Body Mfg

SPEAKER LOCATION

One (1) The siren speaker shall be installed on the apparatus bumper extension, as determined by the
57-02-2504 body manufacturer.
Light Bar, Whelen, Ultra Freedom IV, #F4N7QLED-RRS, LED, 72" (fully populated)

LIGHTBAR

One (1) Whelen Ultra Freedom IV fully populated light bar shall be included with the apparatus
cab. The light bar shall be a model F4N7QLED-RRS and shall be mounted on the roof of the
cab, towards the front, above the windshield.

The light bar shall feature:



Velocity Fire Equipment Sales

- A 72" light bar designed for high performance
 - Two (2) red Linear Super LED corner modules
 - Two (2) red 400 series Linear Super LED endcap lights
 - Ten (10) red 400 series Linear Super LED lights
 - Two (2) white 400 series Linear Super LED lights with 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
- One (1)
Light Bar Control, with Master Warning Switch

57-10-0600

LIGHTBAR ACTIVATION

The front upper light bar shall be activated through the master warning switch.
Warning Lights, Whelen, Upper Rear Body (2) S-LED Rotary L31 P/N L31*F

One (1)
58-71-1820

UPPER REAR WARNING LIGHTS

One (1) pair of Whelen Super LED, rotating beacons, P/N L31H*F, shall be installed, one each side on the upper rear of the apparatus body. The unit shall have dimensions of 4" high x 7-9/16" deep.

One (1)
Warn Light, Driver, Whelen, L31 LED Rotator Red Color Lens, Ea
57-20-8100

The driver side warning light shall be a Whelen LED rotator, model L31HRF with a red lens.
Warn Light, Officer, Whelen, L31 LED Rotator Red Color Lens, Ea

One (1)
57-20-8101

The officer side warning light shall be a Whelen LED rotator, model L31HRF with a red lens.
Stanchions, Rear Warning Light, Cast Alum

One (1)
58-74-5100

REAR WARNING LIGHT MOUNTING

The upper rear lights shall be mounted on cast aluminum stanchions attached to the apparatus body, one on each side.

One (1)
Warning Lights, Whelen, Low Front, (2) LINZ6 LED
58-03-3020

LOWER FRONT WARNING LIGHTS

10105-0005



Velocity Fire Equipment Sales

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side one the front of the chassis cab. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

One (1)
57-20-2109 Warn Light, Driver, Whelen, LINZ6, Red LED, Clear Lens, Ea

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

One (1)
57-20-2110 Warn Light, Officer, Whelen, LINZ6, Red LED, Clear Lens, Ea

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

One (1)
58-09-4109 Warning Lights, Whelen, Intersection, (2) LINZ6 LED

INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the chassis cab. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

One (1)
57-20-2109 Warn Light, Driver, Whelen, LINZ6, Red LED, Clear Lens, Ea

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

One (1)
57-20-2110 Warn Light, Officer, Whelen, LINZ6, Red LED, Clear Lens, Ea

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

One (1)
58-26-4109 Warning Lights, Whelen, Lower Mid Body (2) LINZ6 LED

LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side one of the apparatus, mid body. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

One (1)
57-20-2109 Warn Light, Driver, Whelen, LINZ6, Red LED, Clear Lens, Ea



Velocity Fire Equipment Sales

One (1)
57-20-2110 The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Warn Light, Officer, Whelen, LINZ6, Red LED, Clear Lens, Ea

One (1)
58-36-4109 The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Warning Lights, Whelen, Lower Rear Side (2) LINZ6 LED

LOWER REAR SIDE WARNING LIGHTS

One (1)
57-20-2109 One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the apparatus body, towards the rear of the body. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".
Warn Light, Driver, Whelen, LINZ6, Red LED, Clear Lens, Ea

One (1)
57-20-2110 The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Warn Light, Officer, Whelen, LINZ6, Red LED, Clear Lens, Ea

One (1)
58-81-4109 The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Warning Lights, Whelen, Lower Rear Body (2) LINZ6 LED

LOWER REAR WARNING LIGHTS

One (1)
57-20-2109 One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side on the lower rear portion of the apparatus body. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".
Warn Light, Driver, Whelen, LINZ6, Red LED, Clear Lens, Ea

One (1)
57-20-2110 The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Warn Light, Officer, Whelen, LINZ6, Red LED, Clear Lens, Ea

One (1)
10105-0005 The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.
Electrical, Base, Standard, W/O Load Management



Velocity Fire Equipment Sales

50-03-1000

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.

Any 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.

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



Velocity Fire Equipment Sales

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 overcurrent protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The overcurrent 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



Velocity Fire Equipment Sales

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:



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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.

One (1)
50-05-1510

Electrical Junction 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.

One (1)
50-12-5200

Electrical Dash Console, In Cab

ROCKER SWITCH CONSOLE

A switch console with individual rocker switches to control electrical equipment and emergency lighting shall be installed in the chassis cab dash area.

One (1)
50-15-1100

Batteries, With Supl'd Chs



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BATTERY SYSTEM

The battery system shall be supplied with the chassis.

One (1)
50-15-3100 Battery Switch, Master Disconnect , Chassis 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.

One (1)
50-15-7600 Battery Charger Kussmaul

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.

One (1)
50-15-7800 Battery Charger/Compressor, KUSS, Pump Plus 1200 52-05-1100

BATTERY CHARGER AND AIR COMPRESSOR

A Kussmaul Pump Plus 1200 model 52-05-1100 battery charger and air compressor system shall be installed. The 120 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 120 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.

One (1)
50-16-1100 Display, Bar Graph, Single Battery Bank 091-199-001

BATTERY CHARGER DISPLAY

A Kussmaul 091-199-001 single battery bank voltage display shall be supplied with the charger.



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One (1) Shore Power Inlet, Officer Seat, Lower Left Front
50-20-1102

SHORE POWER PLUG

One (1) The shore power plug shall be located in the cab, lower left front corner of the officer's seat.
50-20-1500 20 Shore Power Inlet, KUSS Super Auto-Eject 20 Amp

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.

One (1) Air Horns, Two (2) Hood Mounted, 24.5" Chrome
50-42-2002

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.

One (1) Air Horn Control, Driver, Single Foot Switch
50-43-2100

AIR HORN FOOT SWITCH

A foot switch shall be installed to activate the air horn system on the driver's side of the floor.
Air Horn Control, Officer, Single Foot Switch

One (1)
50-43-2200

AIR HORN FOOT SWITCH

A foot switch shall be installed to activate the air horn system on the officer's side of the floor.
Light, Pump Compt, 12 Volt LED With Switch

One (1)
51-05-6400



Velocity Fire Equipment Sales

PUMP ENCLOSURE LIGHTS

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

One (1)
51-05-9000

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

One (1)
52-01-1200

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.

Marker Lts, LED, DOT Requirements

One (1)
53-01-1200

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements.

License Plate Bracket, SST w/ LED Light, Rear

One (1)
53-02-1200

LICENSE PLATE BRACKET

A stainless steel license plate bracket shall be provided at the rear of the apparatus. The bracket shall have a LED light.

Tail/Brake Lights, Whelen, 600 LED, 4"x6" (Pair) 604BTT

One (1)
53-03-2609

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

One (1)
53-04-2609

TURN SIGNALS



Velocity Fire Equipment Sales

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.

One (1)
53-06-3509 Backup Lights, Whelen, 600's LED, 4"x6" (Pair) 604BU

BACKUP LIGHTS

One (1) pair of Whelen Series 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.

One (1)
53-05-1800 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.

One (1)
54-02-1600 Ground Lights, Cab, 2 Door, LED, TecNiq Pair

CAB GROUND LIGHTS

Two (2) TecNiq E10 LED ground lights shall be installed on the chassis cab, one under each cab door.

One (1)
54-03-1280 Ground Lights, Pump Panel , LED, TecNiq Pair

PUMP PANEL GROUND LIGHTS

Two (2) TecNiq LED #LED E10 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.

One (1)
54-03-1680 Ground Lights, Rear Step , LED, TecNiq Pair

REAR STEP GROUND LIGHTS

Two (2) TecNiq LED #LED E10 ground lights shall be installed under the rear step. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

One (1)
54-04-1999 Light Switch , Ground Lights w/ Park Brake



Velocity Fire Equipment Sales

Two (2)
54-10-1300 The ground lights shall automatically activate when the parking brake is applied.
Step Light, Fixed /Folding Step, LED, Ea

STEP LIGHT

Two (2)
54-10-1450 Two (2) LED step light(s) with clear lens shall be installed.
Step Light, Rear Tailboard, LED, Ea

REAR TAILBOARD LIGHTS

One (1)
54-11-2100 Two (2) LED step lights with clear lens shall be installed to illuminate the step surfaces at the rear of the apparatus body.
Light Switch , Step/Walkway Lights Wired Park Brake Switch

One (1)
54-12-1520 The step/walkway light switch shall be installed and wired to the parking brake.
Deck Lights, Code 3, LED, 2-Spotlights #CW2450, Black

DECK LIGHTS

One (1)
54-12-3010 Two (2) 12 volt Code 3 Model CW2450 spotlights each with nine (9) LED's, shall be installed.
The lights shall have an "on-off" switch, handle and swivel base.
Deck Light Switch , Wired Park Brake Switch

One (1)
54-15-0050 A deck light switch shall be installed and wired to the parking brake.
Scene Light Package R Series FX Pumper

SCENE LIGHT

One (1) Whelen M9 Series Model # M9LZC scene light(s) shall be provided. The steady burn scene light shall incorporate Linear Super-LED® and Smart LED® technology.

The M9LZC shall be furnished with a chrome trim ring, a rubber gasket, screws, and screw grommets for installation. The M9LZC shall have the ability to be installed as a surface mount scene light.



Velocity Fire Equipment Sales

Voltage: +12v
Size: H=6.51", W=10.34", D=1.892"
Amp Draw: 6.0 Amps
Lens Color: Clear
Scene Light, Whelen, M9LZC LED, w/Chrome Bezel

Six (6)
54-15-1292

SCENE LIGHT

Six (6) Whelen M9 Series Model # M9LZC scene light(s) shall be provided. The steady burn scene light shall incorporate Linear Super-LED® and Smart LED® technology.

The M9LZC shall be furnished with a chrome trim ring, a rubber gasket, screws, and screw grommets for installation. The M9LZC shall have the ability to be installed as a surface mount scene light.

Voltage: +12v
Size: H=6.51", W=10.34", D=1.892"
Amp Draw: 6.0 Amps
Lens Color: Clear
SceneWarn Light, Mounting Plate, Tread Plate

Six (6)
54-15-1460

The scene light shall be installed on a treadplate mounting plate.
Scene Light Location, Left Side Of Body

Two (2)
54-15-5502

SCENE LIGHT LOCATION

Two (2) scene light shall be located on the left side of the apparatus body.
Scene Light Location, Right Side Of Body

Two (2)
54-15-5602

SCENE LIGHT LOCATION

Two (2) scene light shall be located on the right side of the apparatus body.
Scene Light Location, Rear Of Body

Two (2)
54-15-5700

SCENE LIGHT LOCATION



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One (1)
54-15-6400 Two (2) scene light shall be located on the rear of the apparatus body.
Scene Light Switch , Left Scene Lights, Cab Switch Panel

SCENE LIGHT SWITCHING

One (1)
54-15-6500 One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the left side scene light(s). The switch shall be labeled "LEFT SCENE".
Scene Light Switch , Right Scene Lights, Cab Switch Panel

SCENE LIGHT SWITCHING

One (1)
54-15-6600 One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the right side scene light(s). The switch shall be labeled "RIGHT SCENE".
Scene Light Switch , Rear Scene Lights, Cab Switch Panel

SCENE LIGHT SWITCHING

One (1)
54-15-6700 One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the rear scene light(s). The switch shall be labeled "REAR SCENE".
Scene Light Switch , Rear Scene Lights, Auto w/ Reverse

SCENE LIGHT SWITCHING

One (1) The rear scene lights shall activate automatically upon placing the transmission into reverse.
== Pumper/Tanker-Chassis Modifications - 4212.023 04/21/23 ==

One (1)
10-02-1100 10 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



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- 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.

One (1)
10-02-1200 10
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.

One (1)
10-02-1300 10
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.

One (1)
10-02-2100 10
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.

One (1)
10-02-2500 10
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.

One (1)
Tow Plates (2), Rear Frame Rail, Under Step



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10-03-6000

REAR TOWING PROVISIONS

There shall be two tow eyes furnished under the rear of the body and attached directly to the chassis frame rails. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

One (1)
80-43-2400

Painting, Tow Plates, Black

The tow plates shall be painted black.

One (1)
10-06-1110

Wheel Trim, SST Hub/Lug Covers, Front/Rear, Single Axle

HUB AND LUG NUT COVERS

The apparatus shall have chrome or stainless steel hub and lug nut covers on the front and single rear axles.

One (1)
10-06-1650

Tire Pressure Indicator, Tandem 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.

One (1)
10-08-2100

Mud Flaps, Rear Wheels, Black, w/ Body

REAR MUD FLAPS

A pair of black mud flaps shall be installed behind the rear wheels.

One (1)
10-10-1440

Cab Step Enclosure, Freightliner, 2 Door Driver Side

CAB STEP ENCLOSURE

The driver side of the Freightliner chassis shall be equipped with a modular step/fuel tank enclosure constructed from slip resistant aluminum tread plate to conform with applicable NFPA standards. The entire step/enclosure is to be of a one piece design, bolted in place for ease of removal.

10105-0005



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Heavy steel supports shall be provided to support the driver and passenger side cab entrance steps. Supports shall be attached directly to the chassis frame rails, and shall provide adequate support to the steps to minimize flex and distortion.

One (1)
10-10-1460

Cab Step Enclosure, Freightliner, 2 Door Passenger Side

CAB STEP ENCLOSURE

The passenger side of the Freightliner chassis shall be equipped with a modular step enclosure constructed from slip resistant aluminum tread plate to conform with applicable NFPA standards. The entire step/enclosure is to be of a one piece design, bolted in place for ease of removal.

Heavy steel supports shall be provided to support the driver and passenger side cab entrance steps. Supports shall be attached directly to the chassis frame rails, and shall provide adequate support to the steps to minimize flex and distortion.

One (1)

== Midship Pumper/Tanker Pump & Plumbing - 4212.023 04/21/23 ==

One (1)
20-04-2910

Pump Flow Rtnng, Darley, HM, 500 GPM

500 GPM FIRE PUMP SPECIFICATIONS

The centrifugal type fire pump shall be a Darley model HM with a rated capacity of 500 GPM. The pump shall meet NFPA 1901 requirements.

The pump shall be certified to meet the following deliveries:

- 500 GPM @ 150 PSI
- 500 GPM @ 165 PSI
- 350 GPM @ 200 PSI
- 250 GPM @ 250 PSI

All Pump Manufactures recommend that their Pumps are drained after every use and be stored dry. End user is responsible to follow this recommendation.

One (1)
22-03-1350

Intake, Ungated, 4", LH Side

LEFT SIDE -- 4" UNGATED INTAKE



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One (1) 4" un gated suction intake shall be installed on the left side pump panel to supply the fire pump from an external water supply. The threads shall be 4" NST male threads.

The intake shall be provided with a removable screen.
Cap, 4", Chrome Long Handle

One (1)
22-41-6100

A 4" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped long handles.

One (1)
20-30-3200
Pump Instln, Midship PTO, By Bdy Bldr

MIDSHIP FIRE PUMP DRIVESHAFTS AND INSTALLATION

The midship 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.

One (1)
20-31-1100
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

One (1)
20-31-1500

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



Velocity Fire Equipment Sales

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

One (1)
20-31-4100

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.

One (1)
20-31-5100

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.

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

One (1)
22-12-1100

Intake, Auxiliary, Gated, 2-1/2", NST, Left Side

LEFT SIDE -- 2-1/2" GATED INTAKE

One (1) 2-1/2" gated suction intake shall be installed on left side pump panel 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 chrome plated brass.



Velocity Fire Equipment Sales

The intake shall be equipped with a 3/4" drain and bleeder valve. A nameplate label and removable screen shall be installed.

One (1)
21-01-2502 Drain/Bleeder, IC Lift-Up, Manual 1/4 Turn - Spec Only

An Innovative Controls 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 recessed ID label provision. The handle shall lift to open and push down to close.

One (1)
22-41-1100 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.

One (1)
24-62-1250 Valve, 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.

One (1)
22-55-4050 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.

One (1)
23-09-4102 Dschg, 2-1/2", Left Side, Pump Panel, NST

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

One (1) 2-1/2" discharge shall be installed on the left side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 2-1/2" NST male hose threads. A color coded nameplate label shall be provided adjacent the control handle.

One (1)
21-01-2502 Drain/Bleeder, IC Lift-Up, Manual 1/4 Turn - Spec Only

An Innovative Controls 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



Velocity Fire Equipment Sales

complete with a recessed ID label provision. The handle shall lift to open and push down to close.

One (1)
24-02-1200 Elbow, 2-1/2"F x 2-1/2" NST M, Chrome

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NST male hose threads.

One (1)
24-03-1400 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.

One (1)
24-61-1254 Valve, 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.

One (1)
24-53-0020 Discharge Valve Control, 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.

One (1)
27-02-1500 Gauge, Discharge, 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.

One (1)
23-10-4102 Dschg, 2-1/2", Right Side, Pump Panel, NST

RIGHT SIDE PUMP PANEL -- 2-1/2" DISCHARGE



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One (1) 2-1/2" discharge shall be installed on the right side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 2-1/2" NST male hose threads. A color coded nameplate label shall be provided adjacent the control handle.

One (1)
21-01-2502 Drain/Bleeder, IC Lift-Up, Manual 1/4 Turn - Spec Only

An Innovative Controls 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 recessed ID label provision. The handle shall lift to open and push down to close.

One (1)
24-02-1200 Elbow, 2-1/2"F x 2-1/2" NST M, Chrome

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NST male hose threads.

One (1)
24-03-1400 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.

One (1)
24-61-1254 Valve, 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.

One (1)
24-53-0020 Discharge Valve Control, 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.

One (1)
27-02-1500 Gauge, Discharge, IC, 2-1/2" (0-400 PSI), WF



Velocity Fire Equipment Sales

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.

One (1) == Tanker-Side Mount Pump Compt - 4212.023 04/21/23 ==

One (1) Pump Enclosure, Side Mount, Front Compt Tanker Style
26-02-4100

SIDE MOUNT PUMP ENCLOSURE

All pump suction and discharge controls are to be mounted on the driver side pump operator's panel so as to permit operation of the pump from a central location. The control panel shall be located in front of the left side lower compartment of the apparatus. Panel shall house pressure gauge and controls for the pump, including throttle. Panel shall have an anodized aluminum shield with adequate illumination for nighttime operation. The lights shall be controlled by the operator's panel light switch. The valve controls shall be neatly arranged for access and visibility. All controls shall be clearly marked with permanent type labels and color-coded. The electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines.

The following controls and equipment as specified in the specifications, shall be provided on the pump panel or within the pump enclosure:

- Primer.
- Pump and plumbing area service lights.
- Pressure control device and throttle control.
- Fire pump and engine instruments.
- Pump intakes and discharge controls.
- Master intake and discharge gauges.
- Tank fill control.
- Tank suction control.
- Water tank level gauge.
- Pump panel lights.

One (1) Pump Panel, Black LineX, LH, SM
26-35-7400

PUMP PANEL -- SIDE MOUNT



Velocity Fire Equipment Sales

The left hand pump panel shall be constructed of black LineX coating aluminum material and be fastened to the pump enclosure with 1/4" stainless steel bolts.

The instrument area shall have a stainless steel continuous hinge that shall swing for easy access to gauges.

One (1)
26-35-1100
Pump Panel, Bolted, LH

LEFT SIDE PUMP PANEL -- BOLTED

The pump panel installed on the left hand side of the pump enclosure shall be fastened to the pump enclosure with 1/4" stainless steel bolts.

One (1)
26-55-1100
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.

One (1)
26-55-2050
Labels, 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.

Permanent type nameplates and instruction panels shall be installed on the pump panel for safe operation of the pumping equipment and controls.

One (1)
26-56-2000
Pump Panel Light (1), Actuated w/Pump Engagement

PUMP ENGAGED LIGHT



Velocity Fire Equipment Sales

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. Pump Panel LED Lights, (3) Tecniq E10-W0001-1, Midship LH Switch Operator Panel

One (1)
26-56-5600

MIDSHIP PUMP PANEL LIGHTS -- LEFT SIDE

Three (3) Tecniq E10-W0001-1 or equal LED lights with clear lenses shall be installed under an instrument panel light hood on the left side pump panel. The lights shall be controlled by a switch located on the operator's instrument panel.

One (1)
27-01-4150

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.

One (1)
27-35-1102

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



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interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

One (1) == LL/LR Tandem Axle Tanker - 4212.023 04/21/23 ==

One (1) Water Tank, 3000 Gallon, Tanker, Poly
25-25-0850

WATER TANK - 3000 GALLON

The apparatus shall be equipped with a three thousand (3000) gallon polypropylene water tank. The tank shall be equipped with a six-inch (6") overflow pipe.

One (1) Water Tank, Fill Tower, 10" x 10", <3500 Gals
25-44-1400

WATER TANK FILL TOWER

A fill tower measuring approximately 10" x 10" square shall be provided on the water tank up to and including 3500 gallons total capacity.

One (1) Quick Dump, Rear 10", External Mount w/Swivel
25-62-7465

QUICK DUMP - REAR

A Newton 10" quick dump valve shall be provided and externally mounted. The location shall be at the center rear of the apparatus.

One (1) Quick Dump, Rear 10", Single Elec Open/Close Control
25-62-7420

A single electric operated control shall be provided to open and close the rear dump valve. The switch shall be conveniently located on the apparatus body near the valve.

One (1) Quick Dump, Rear 10", Painted Steel
25-62-7610

The Newton dump valve installed on the water tank shall be painted grey.

One (1) Quick Dump, Rear, Swivel Dump
25-62-7700

A swivel dump shall be fabricated with .125" aluminum and attached to the Newton Quick Dump.



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The swivel dump shall have the ability to dump water from the driver's side or the officer's side and any point in between. The swivel dump is 70 inches long when fully extended. The swivel dump shall have an extension that is hinged and can be folded up when the dump is not in use. The dump shall have the ability to be stowed on either the driver's side or the officer's side of the truck. The latch that holds the extension in the stowed position shall also help support the swivel dump extension.

When the extension is in the down and extended position, there shall be no less than a 34 inch clearance from level ground to the bottom of the dump to ensure that there is enough clearance for the swivel dump to offload into all portable drop tanks.

The dump shall meet NFPA requirements for water delivery on three sides of the vehicle.
Direct Tank Fill, 4" Butterfly Valve, Rear, 4"NSTM Adapter and Cap

One (1)
25-50-3000

DIRECT TANK FILL

A 4.0" diameter direct tank fill inlet shall be provided. The inlet shall have a 4.0" diameter slow-close gear operated valve and shall include a 4" NSTM male adapter and cap.

The valve and control handle shall be located at the rear of the apparatus body. The fill line shall have an "in-tank" slow fill safety protection system to protect the tank during filling for high flow conditions.

One (1)
29-10-1000
Hosebed, Grating, Extruded 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.



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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.

One (1)
29-10-5100

Hosebed, Storage Capacity, 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.

One (1)
29-20-2000

Hosebed Cover, Vinyl, <180" L, <74" W, Velcro

VINYL HOSEBED COVER

The apparatus shall be equipped with a vinyl hosebed cover.

The cover, approximately 74" wide, shall be secured utilizing a velcro fastening system at the front and sides of the hosebed body.

One (1)
29-20-5600

Vinyl Cover, Color, RED

The vinyl cover shall be red in color.

One (1)
30-00-0000

BODY CONSTRUCTION

One (1)
30-01-1898

Body Construction - Rosenbauer FXR - 1/8" Alum - TA Pumper/Tanker

1/8" 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.



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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

One (1)
30-02-2200



Velocity Fire Equipment Sales

COMPARTMENT FLOORS

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

Sub-Frame, Hot-Dip Galv

One (1)
30-10-1100

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.



Velocity Fire Equipment Sales

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.

One (1)
31-01-1300

Body, Formed Alum, Pumper/Tanker , Up to 220"

BODY CONFIGURATION

The aluminum apparatus body shall be up to 220" long, reference the drawing for actual body length.

One (1)
44-06-3109

Whl Well Panel, Alum Pntd, Tndm Axle - Alum

TANDEM 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.

Two (2)
44-06-4100

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.

One (1)
31-01-2108

102" OAW, 26" Lower Depth Both Sides, SA LL/LR

BODY WIDTH

The overall width of the pumper body shall not exceed 102".

COMPARTMENT DEPTH

The lower portion of the side compartments on the pumper body shall be 26" deep. Hosebed, Pumper, <180" L, 74" Wide

One (1)
29-00-1300



Velocity Fire Equipment Sales

HOSEBED WIDTH

The width of the pumper body hosebed shall be 74".
Compt Height, 39" High Left

One (1)
32-03-0040

COMPARTMENT HEIGHT

The left side body compartments shall be 39" high.
Compt Height, 39" High Right

One (1)
32-03-1040

COMPARTMENT HEIGHT

The right side body compartments shall be 39" high.
Roll-Up Doors - ROM Mfg

Four (4)
30-02-1150

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.



Velocity Fire Equipment Sales

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.

One (1)
32-05-1039

Ahead Rear Wheels - Low Comp't - Roll Up Door - Natural Finish

LEFT FRONT COMPARTMENT

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

One (1)
44-40-1100

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

One (1)
45-01-1050

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.

One (1)
55-01-4009

Strip Light, LED Light (2) Ea Compartment (approx 12")

COMPARTMENT LIGHT

Two (2) vertically mounted LED strip lights shall be installed inside the compartment. The lights shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup and each light shall be approximately 12" in length.



Velocity Fire Equipment Sales

One (1)
55-06-1409 Compartment Light, Door Switch, Magnetic, Ea

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)
32-05-1639 Behind Rear Wheels - Low Comp't - Roll Up Door - Natural Finish

LEFT REAR COMPARTMENT

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

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

One (1)
44-40-1100

One (1) louver with filter shall be installed in the compartment.
Strip Light, LED Light (2) Ea Compartment (approx 12")

One (1)
55-01-4009

COMPARTMENT LIGHT

Two (2) vertically mounted LED strip lights shall be installed inside the compartment. The lights shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup and each light shall be approximately 12" in length.

One (1)
55-06-1409 Compartment Light, Door Switch, Magnetic, Ea

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)
32-06-1039 Ahead Rear Wheels - Low Comp't - Roll Up Door - Natural Finish

RIGHT FRONT COMPARTMENT

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

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

One (1)



Velocity Fire Equipment Sales

44-40-1100

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

One (1)
45-01-1050
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.

One (1)
55-01-4009
Strip Light, LED Light (2) Ea Compartment (approx 12")

COMPARTMENT LIGHT

Two (2) vertically mounted LED strip lights shall be installed inside the compartment. The lights shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup and each light shall be approximately 12" in length.

One (1)
55-06-1409
Compartment Light, Door Switch, Magnetic, Ea

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)
32-06-1639
Behind Rear Wheels - Low Comp't - Roll Up Door - Natural Finish

RIGHT REAR COMPARTMENT

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

The compartment shall be equipped with the following:

One (1)
44-40-1100
Vents, Compts, Louvers, Includes Filters (Ea)

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

One (1)
55-01-4009
Strip Light, LED Light (2) Ea Compartment (approx 12")

COMPARTMENT LIGHT

10105-0005



Velocity Fire Equipment Sales

Two (2) vertically mounted LED strip lights shall be installed inside the compartment. The lights shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup and each light shall be approximately 12" in length.

One (1)
55-06-1409
Compartment Light, Door Switch, Magnetic, Ea

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)
33-60-1109
Rear Body - Flat Back

REAR BODY CONFIGURATION

The rear of the apparatus body shall be of the flat back design.
No Rear Compt

One (1)
32-08-0600

REAR COMPARTMENT

There shall be no compartment located on the rear of the body.
Rear Step - Pumper/Tanker Body - Bolt-On - 12"

One (1)
33-61-1300

REAR STEP - 12" BOLT-ON

A 12" deep step surface shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The tailboard shall be constructed of .188" aluminum diamond plate or equal non-slip surface in compliance with NFPA #1901 standards.

A label shall be provided warning personnel that riding on the rear step while the apparatus is in motion is prohibited.

One (1)
90-25-7609
Suction Hose Compt, Through Tank

HARD SUCTION MOUNTING RACK

One (1) hard suction hose compartment shall be provided in the booster tank. The design shall allow the hose to be individually removed from the rear of the apparatus. The hard suction hose compartment shall have a hinged door with push to latch door catches.

One (1)
90-02-2921
Compartment Door, Smooth, With Chevron

10105-0005



Velocity Fire Equipment Sales

The hinged door shall be constructed of smooth material, with chevron striping applied to match the rear of the apparatus body.

One (1)
90-25-9115 Suction Hose Provided By, Body Builder, SD

SUCTION HOSE SOURCE

New suction hose shall be provided by the body builder.
Folding Tank Mounting, Thru Booster Tank - 3000 Gallon Tank

One (1)
90-30-3249

PORTABLE WATER TANK MOUNTING BRACKET

A horizontal storage area shall be provided through the booster tank designed to carry a portable folding tank. The compartment shall be provided with poly slides on each side to hold the folding tank in position. There shall be a hinged door with latch on rear for ease in loading and removing the folding tank.

sleeve in tank to hold 3000 gallon folding tank

One (1) == Tanker - Common Body Parts - 4212.023 04/21/23 ==

One (1)
44-01-1450 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.

One (1)
44-01-4000 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.

One (1)
33-70-1300 Handrails - Rear Step - Vertical - 48" - Pair

HANDRAIL REAR STEP

10105-0005



Velocity Fire Equipment Sales

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.

One (1)
33-70-2100

Handrails - Below Hosebed - Horizontal - 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.

One (1)
38-90-2050

Access Ladder, Rosenbauer EZ Climb, Left Rr

ACCESS LADDER EZ CLIMB - LEFT REAR

There shall be a swing out and down access ladder supplied and installed on the apparatus, for accessing the top of the apparatus. It shall be of an all aluminum design and shall incorporate treads six (6") inches deep and no more than eighteen (18") inches apart. The ground to the first step dimension, on level ground, shall be no more than twenty-four (24") inches.

The access ladder shall have integrated hand holds in the steps, to aid in the ascent/descent of the ladder.

When in the deployed position the ladder shall have an angle of approximately 75-degrees to facilitate ascending and descending the ladder. The ladder shall be retained in the stowed and deployed position by two (2) gas cylinders and shall not require the use of latches to hold it in position.

One (1)
44-02-1100

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.

One (1)
44-02-2000

Rub Rails, Spacers, Nylon

NYLON SPACERS FOR RUB RAILS



Velocity Fire Equipment Sales

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.

One (1) == Paint / Stripe - Tanker Body - Tandem Axle - 4212.023 04/21/23 ==

One (1) Body Paint, Tandem Axle, Pumper/Tanker - Single Color
80-05-1300

BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating. If applicable, any and all accessory times shall be removed from the body prior to cleaning and painting. Any accessory items that are to be painted, shall be painted separately and installed after the body is painted and cured.

All seams shall be caulked, both inside and along the exterior edges, with a urethane automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with a grease cutting solvent (PPG CFX436) prior to any sanding. After the body has been sanded and the weld marks and minor imperfections are filled and sanded, the body shall be washed again with (PPG CFX436) to remove any contaminants on the surface.

The next two to four coats (depending on need) shall be a PPG DelFleet F4936 High Solids Epoxy Gray Primer. The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG DelFleet polyurethane FBC-color, the film build being 2-3 mils dry. Followed by three coats PPG DelFleet F3906 high build clear, the film build being 2-3 mils dry. This shall provide a UV barrier to prevent fading and chalking.

All products and technicians are certified by PPG every two (2) years.
Apparatus Color

One (1)
80-06-1100

APPARATUS COLOR

Match chassis



Velocity Fire Equipment Sales

One (1)
80-42-1500 Body Paint, Touch Up, 2 oz. Bottle, 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.

One (1)
80-30-1100 Compt Finish, Spatter Coat, Up to 6 Compts

INTERIOR COMPARTMENT FINISH

Six (6) 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.

One (1)
80-40-1500 Paint, Chassis Wheels, Tandem Axle (All)

WHEEL PAINTING

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

One (1)
80-70-1300 Stripe, Single Reflective, 4", Straight Design

CAB AND BODY STRIPE

A straight Scotchlite reflective stripe, 4" in width, shall be applied horizontally around the cab and body in compliance with applicable NFPA 1901 standards. The purchaser shall specify the color and location of the stripe.

One (1)
80-75-1600 Reflective Stripe Material, White

COLOR OF STRIPING MATERIAL

The color of the 3M brand striping material shall be white.

One (1)
80-72-1108 Stripe, Reflective, Oralite V98, Chevron Pattern Entire Rear Red/Yellow

CHEVRON STRIPING



Velocity Fire Equipment Sales

The entire rear portion of the body shall have Oralite V98 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.

One (1)
80-79-1000

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.

One (1)

== Loose Equipment - Tanker - 4212.023 04/21/23 ==

Two (2)
90-62-1100

Suction Hose, Flex, 4"x10'

SUCTION HOSE

Two (2) 4.0" x 10 foot length of flexible suction hose shall be supplied. The suction hose shall have light weight couplings provided.

Two (2)
90-25-6100

Suction Hose Couplings, Aluminum, 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.

One (1)
90-62-2100

Suction Strainer, Barrel Type, 4"

STRAINER

One (1) barrel strainer shall be provided. The strainer shall be constructed from aluminum with chrome finish and include a tie off loop on the end plate. The strainer shall be provided with a 4.0" NST female rocker lug coupling.

One (1)
90-63-3000

Folding Water Tank, 3000 Gallon Steel Frame, 22 Oz Vinyl



Velocity Fire Equipment Sales

FOLDING PORTABLE WATER TANK

A 3000 gallon, 22 oz vinyl, portable water tank shall be provided. The tank shall include a steel support frame.