

PURCHASE CONTRACT
OHIO DEPARTMENT OF COMMERCE
BETWEEN:

Buyer: Ohio Department of Commerce ("COM")
Division: State Fire Marshal
Contract Manager: Carol Cook
77 South High Street
Columbus, Ohio 43215
Phone: 614-644-2005
Email: carol.cook@com.ohio.gov

AND

Seller: The Sutphen Corporation ("Seller")
Contact Name: Harry B. Sutphen
Street Address: 6450 Eiterman Road
City, State, Zip: Dublin, Ohio 43016
Phone: 740-819-5440
Email:
OAKS Number and Address Code:

In consideration of the covenants and agreements herein contained and in further consideration of Three Hundred Ninety-Five Thousand, Three Hundred Seventy Dollars (\$395,370.00) paid to it by COM ("COM"), The Sutphen Corporation, an Ohio corporation ("Seller"), does hereby transfer and convey to COM all of Seller's right, title and interest in and to the Commercial Pumper on Freightliner Chassis M2 112 per specifications described in Schedule 1-4, attached hereto and made a part hereof ("Deliverable").

TO HAVE and TO HOLD unto Buyer and Buyer's representatives, heirs, devisees, successors, and assigns forever.

COM acknowledges that Seller is selling only such right, title, or interest in the Property as Seller may have without Seller representing or warranting the extent of Seller's right, title, or interest therein.

Title

All risk of loss, regardless of the cause, will remain with the Seller until title to the Deliverable passes to COM.

Estimated delivery of the completed deliverable is 20-22 months from the date of final signature of this Contract. Upon delivery, COM shall inspect the Deliverable within ten (10) business days to determine any nonconformance to specifications, shortages, defects, and/or damage in transit. COM shall notify Seller in writing of any such claims within seven (7) business days after COM discovers or should reasonably have discovered facts upon which the claim is based, but in no event more than thirty (30) days after delivery for purpose of acceptance only.

Title to any Deliverable will pass to COM on Acceptance of the Deliverable. For purposes of this Bill of Sale, "acceptance" is the approval and retention by the COM of the Deliverable beyond thirty (30) days.

Warranty

The Seller warrants that:

1. The performance of the Seller under this Contract will be in accordance with the industry's professional standards, the requirements of this Contract and without any material defect.
2. No Deliverable will infringe on the intellectual property rights of any third party.
3. All warranties, as further described in Schedule 2 attached hereto and made part hereof, are in accordance with the Seller's standard business practices.
4. The Deliverable are merchantable and fit for the particular purpose described in this Contract and will perform substantially in accordance with its user manuals, technical materials, and related writings.
5. The Deliverable complies with all governmental, environmental and safety standards.
6. The Seller has the right to enter into this Contract.
7. The Seller has good and marketable title to any Deliverable delivered under this Contract for which title passes to the COM.

8. The Seller must notify COM in writing immediately upon the discovery of any breach of the warranties given above, or if any work of the Seller or any Deliverable fails to comply with these warranties, and the Seller is so notified in writing, the Seller will correct such failure in a commercially reasonable time or as specified in the Contract. If the Seller fails to comply, the Seller will refund the amount paid for the Deliverable. The Seller will also indemnify COM for any direct damages and claims by third parties based on breach of these warranties.
9. Any other express warranties offered by the Seller shall be a minimum of one year from acceptance or the Seller's standard warranty whichever is longer.

Payment

Unless otherwise stated in this Contract and in accordance with Section 126.30 of the Ohio Revised Code payments under this Contract will be due on the 30th calendar day after the date of actual receipt of a proper invoice in the office designated to receive the invoice. The date payment is issued by COM will be considered the date payment is made. Payment of an invoice by COM will not prejudice the State's right to object to or question that or any other invoice or matter in relation thereto. The COM's preferred method of payment is by electronic funds transfer. However, COM may also make payment by State of Ohio payment card or by warrant issued by the Auditor of State. At the time of Contract award, Seller must be able to accept all forms of payment from the State and COM.

IN WITNESS WHEREOF, this Purchase Contract has been duly executed by the undersigned, having first read and understood the terms contained herein and the purpose, intent, and effects hereof.

OHIO DEPARTMENT OF COMMERCE

Sheryl Maxfield, Director of Commerce

Date

CONTRACTOR

Harrison Sutphen

[Signature]

Harry B. Sutphen and Owner

Printed Name and Title

08/03/2022

Date

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INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the purchaser a complete apparatus equipped as hereinafter specified. With a view of obtaining the best results and the most acceptable apparatus for service in the fire department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features. The apparatus shall conform to the requirements of the current (at the time of bid) National Fire Protection Association Pamphlet #1901 for Motor Fire Apparatus unless otherwise specified in these specifications.

Bids shall only be considered from companies which have an established reputation in the field of fire apparatus construction and have been in business for a minimum of ten (10) years.

Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed and to which the apparatus furnished under contract must conform. Computer run-off sheets are not acceptable as descriptive literature.

The specifications shall indicate size, type, model and make of all component parts and equipment.

STATEMENT OF EXCEPTIONS TO NFPA 1901

If, at the time of delivery, the apparatus manufacturer is not in compliance, a statement of exceptions must be provided as follows:

- The specific standard affected.
- A statement describing why the manufacturer is not in compliance.
- A description of the remedy, and who the responsible party is.

The document must be signed by an officer of the company, and an authorized agent of the purchaser. NO EXCEPTIONS

QUALITY AND WORKMANSHIP

The design of the apparatus must embody the latest approved automotive engineering practices.

The workmanship must be the highest quality in its respective field. Special consideration shall be given to the following points: Accessibility to various areas requiring periodic maintenance, ease of operation (including both pumping and driving) and symmetrical proportions.

Construction must be rugged and ample safety factors must be provided to carry loads as specified and to meet both on and off road requirements and speed as set forth under "Performance Test and Requirements."

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be documented with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall be approximately 66% on the rear axle. The successful bidder shall furnish a weight certification showing weight on the front and rear axle, and the total weight of the completed apparatus at the time of delivery.

- a. The apparatus must be capable of accelerating to 30 MPH from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed engine RPM.
- b. The service brakes shall be capable of stopping the fully loaded vehicle within 35 feet from a speed of 25 MPH on a level concrete highway.
- c. The apparatus, fully loaded, shall be capable of obtaining a speed of 50 MPH on a level highway with the engine not exceeding 95% of its governed RPM (full load).
- d. The apparatus shall be tested and approved by a qualified testing agency in accordance with their standard practices for pumping engines.
- e. The contractor shall furnish copies of the Pump Manufacturer's Certification of Hydrostatic Test (if applicable), the Engine Manufacturer's current Certified Brake Horsepower Curve and the Manufacturer's Record of Construction Details.

FAILURE TO MEET TESTS

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, a second trial may be made at the option of the bidder within thirty (30) days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for

rejection. Permission to keep and/or store the apparatus in any building owned or occupied by the purchaser shall not constitute acceptance of same.

EXCEPTIONS TO SPECIFICATIONS

The following specifications shall be strictly adhered to. Exceptions shall be considered if they are deemed equal to or superior to the specifications, provided they are fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS." Exceptions shall be listed by page and paragraph.

Failure to denote exceptions in the above manner shall result in immediate rejection of the proposal. In addition a general statement taking "TOTAL EXCEPTION" to the specifications shall result in immediate rejection of bid.

GENERAL CONSTRUCTION

The apparatus shall be designed and the equipment mounted with due consideration to distribution of load between the front and rear axles so that all specified equipment, including filled water tank, a full complement of personnel and fire hose shall be carried without injury to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of the International Association of Fire Chiefs and National Fire Association (or American Insurance Association). Certified Laboratories certificate shall be submitted by the manufacturer. Weight of apparatus shall meet all federal axle load laws.

DELIVERY REQUIREMENTS

The apparatus shall be completely equipped as per these specifications upon arrival and on completion of the required tests shall be ready for immediate service in the fire department of the purchaser. Any and all alterations required at the scene of delivery to comply with these specifications must be done at the contractor's expense.

PURCHASER RIGHTS

The Purchaser reserves the right to accept or reject any bid. The purchaser also reserves the right to award in their best interest and reserves the right to waive any formalities.

U.S.A. MANUFACTURER

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service, as well as protecting the purchaser should legal action ever be required.

MANUFACTURER'S EXPERIENCE

Each manufacturer shall have been in business making similar apparatus for a minimum of seventy-five (75) years and must have had single ownership for more than fifty (50) years.

FAMA COMPLIANCE

Manufacturer must be a current member of the Fire Apparatus Manufacturer's Association.

PROPOSAL DRAWING

A general layout drawing depicting the apparatus layout and appearance shall be provided with the bid. The drawing shall consist of left side, right side, frontal and rear elevation views. Apparatus equipped with a fire pump, shall have a general layout view of the pump operators panel scaled the same as the elevation views. The drawing shall be a depiction of the actual apparatus proposed and not of a generic similar product.

APPROVAL DRAWING

After the award of bid and pre-construction conference, a detailed layout drawing depicting the apparatus layout and appearance including any changes agreed upon shall be provided for customer review and signature. The drawing will become part of the contract documents. The drawing shall consist of left side, right side, frontal and rear elevation views. Apparatus equipped with a fire pump, shall have a general layout view of the pump operators panel scaled the same as the elevation views.

CHASSIS

An International Model 4400 4 door crew cab chassis shall be provided. The chassis shall be designed and manufactured for heavy-duty service with adequate strength and capacity of all components for the intended load to be sustained and the type of service required.

CAB

The cab shall be a four-door 5-person crew cab. The cab shall be constructed from welded pressed steel plates with a composite fiberglass three-piece hood. The hood shall be equipped with a stationary steel grill. Insulation and splashguards shall be provided under the hood for increased sound abatement.

The cab shall be supported in the rear by an airbag type suspension.

FRAME RAILS

The main chassis frame rails shall consist of 120,000 PSI Yield heat-treated alloy steel. 10.125" x 3.580" x 0.312".

TOW HOOK, FRONT

Two (2) painted tow hooks shall be mounted inside the chassis frame rail.

CHASSIS PREPARATION

The commercial chassis shall be specifically converted for Fire/Rescue applications and shall meet the most current NFPA standards at time of bid.

GENERATOR

The apparatus will be supplied with a generator that will be provided and mounted in the engine compartment.

This will supply power to the apparatus when the vehicle is running and any electrical outlets or components for charging.

BATTERIES

The battery system shall be a single system consisting of three negative ground, 12 volt batteries, capable of supporting the electrical system. The batteries shall be wired directly to starter motor and alternator.

120V SHORELINE INLET & AUTO EJECT

The apparatus shall be equipped with a 120V shoreline inlet to provide power to the battery charger from an external source. The inlet shall include a Kussmaul 091-55-120 Super 20 Auto Eject featuring a 12 volt solenoid which shall eject the shoreline cord away from vehicle path upon sensing engine start. After ejection, a weatherproof cover shall snap into position over inlet.

A 20 amp connector shall be provided and shipped loose for connecting the external shoreline cord to the inlet.

BATTERY CHARGER / INVERTER

A Kussmaul Auto Power 1500W 55 amp inverter charger shall be provided and installed in the cab. The unit shall include a built-in high output 3 stage charger (1-hr boost) for rapid battery replenishment-programmable for various battery types; Gel, Lead Acid, or AGM battery. The charger shall be wired to the 120V shoreline inlet. The charger shall include a remote battery charger monitor display model #091-200-IND with location to be determined at pre-con.

TOP SPEED

The top speed shall be approximately 68 MPH.

TIRE PRESSURE MONITOR

An ACC tire pressure sensor shall be provided for each wheel. The pressure sensor shall indicate if a tire is not properly inflated. A total of six (6) indicators shall be provided.

WHEELS

The front wheels shall be steel, disc type, hub piloted, 22.5 x 9.00 10 stud 11.25 bolt circle.

The rear shall be steel, disc type, hub piloted, 22.5 x 8.25 10 stud with 11.25" bolt circle.

The wheels shall be painted truck color.

HUB COVERS

Polished stainless steel hub covers shall be provided for the front and rear axle.

LUG NUT CAPS

Chrome plated lug nut caps shall be provided for the front and rear wheels.

FRONT MUD FLAPS

Hard rubber mud flaps shall be provided for front tires.

REAR MUD FLAPS

Hard rubber mud flaps shall be provided for the rear tires.

ELECTRONIC STABILITY CONTROL SYSTEM

An Arvin Meritor / Wabco Electronic Stability Control (ESC) system shall be provided and installed. The ESC system continually monitors the vertical acceleration, and yaw (horizontal plain rotation) of the vehicle, and compares it to a critical threshold where vehicle rollover may occur. When the critical threshold is met, the ESC shall intervene by reducing engine torque and engaging the engine retarder, while automatically applying both the steering and drive axle brakes as needed. In many cases, activation occurs before the driver is even aware it is needed.

CHASSIS TRIM PACKAGE

A chassis trim package shall consist of custom fabricated, full length fuel tank and battery box covers, with integral steps for all four cab entry doors. The covers shall be constructed from 3/16" polished aluminum tread plate with a slip resistant surface meeting current NFPA requirements.

Fuel cap and battery access shall be provided below the cab entry doors.

FRONT BUMPER

A full width, aerodynamic, chrome plated steel bumper with a 0.142" material thickness shall be provided.

ELECTRONIC SIREN

One (1) Whelen 295SLSA1 electronic siren shall be installed at the cab instrument panel complete with noise canceling microphone.

SIREN SPEAKERS

Two (2) Whelen SA315P 100 watt weatherproof aluminum siren speaker with black epoxy-coated finish shall be provided and wired to the electronic siren.

SPEAKER MOUNTING

The electronic siren speaker(s) shall be installed behind perforations in the front bumper.

Exterior Lighting

The following lighting shall be provided to comply to current FMVSS requirements:

- Five (5) flush mounted clearance/marker lights
- Parking lights integral with the front turn signals and rear tail lights
- Front turn signals.

The chassis headlights shall consist of two (2), halogen composite, aero designed light housings, with daytime running lights. The headlights shall automatically activate if the windshield wipers are turned on.

Cab Handrails

There shall be a handrail provided and installed, at each cab entrance. The handrails shall be constructed of anodized, heavy wall extruded aluminum, with a rubber insert. Each handrail shall provide sufficient space to allow for a gloved hand to grip the rail.

CAB INTERIOR

The deluxe cab interior shall consist of the following:

- Cloth covered molded plastic trim panels, shall cover all exposed interior sheet metal. A soft padded cloth headliner shall cover the roof.
- A molded plastic overhead console with dual storage pockets and retainer nets and radio pocket.
- Molded plastic door trim panels and armrests, shall be provided for all doors. The driver's door shall be provided with a full-length storage pocket.
- No less than 96 square inches of reflective material on each interior cab door.
- Black rubber floor matting.
- Two (2) padded vinyl sun visors shall be provided integral with the overhead console.
- A rectangular, door activated, timed theater dimming, center mounted, dome light shall be provided and integral to console
- A 2-spoke, 18" diameter, black, steering wheel.

CENTER CONSOLE

A center console shall be provided, between the driver's and officer's seat to mount radio's, a siren head etc. The console will be provided with a map pocket in the front and a space to hold latex EMS gloves in the rear. The console shall be fabricated from aluminum plate and be sprayed with light gray Zolatone.

CAB INSTRUMENTATION & CONTROLS

Gauge Cluster

- The gauge cluster shall consist of the following gauges:
- Electronic speedometer with odometer, trip miles, trip hours, and engine hours
- Tachometer
- Engine Oil Pressure
- Engine Oil Temperature
- Water Temperature
- Fuel Level
- Voltmeter
- Allison Transmission Temperature

A fault code warning system that shall audibly and visually indicate low fuel, low oil pressure, high engine coolant temp, low engine coolant level, and low battery voltage, shall be provided for each function.

An air cleaner restriction gauge {filter-minder} with black bezel shall be mounted on the instrument panel.

Switches & Controls

The following switches and controls shall be provided:

- Keyless Starter Switch
- Emissions System Regeneration Switch
- Hazard Warning Light Switch
- Headlight Dimmer Switch
- Electric DOT Horn Switch
- Parking Light Switch
- Self-Canceling Turn Signal Switch
- Emergency Master
- Siren/Horn Ring Selector Switch
- One (1) 12-volt Power Point

The windshield wipers shall be equipped with a 2-speed switch with wash and intermittent feature (5 pre-set delays).

Heat /Air Conditioner / Defroster

A heater / defroster with air conditioning shall be provided. The controls shall be located near the center dash, within reach of the driver or passenger.

PUMP SHIFT MODULE

An electronic pump shift module with yellow knob toggle switch for shifting road mode/none/pump mode shall be within easy reach of the driver. The module shall be constructed of an aluminum composite panel and flush mount LED indicators with backlit verbiage. A gear lockup will be provided interlocked with park brake to hold the transmission in direct drive for pump operation.

LOAD MANAGER

Load management shall be a function of the Navistar Diamond Logic electrical system. The system shall have the ability to sequence loads on and off, and It shall also be able to shed loads when the vehicle is stationary, starting at 12.4 volts. Any load that has been shed shall be off for a minimum of five minutes, and then if voltage has rebounded above shed voltage, the shed load shall automatically return.

AUTOMATIC HIGH IDLE ACTIVATION

The load management system shall be capable of activating the apparatus high idle system when the system voltage drops below 12.4 volts DC. The system shall raise engine speed for a minimum of five minutes until voltage exceeds 13.0 volt DC. The automatic high idle system shall be deactivated whenever the brake pedal is pressed, and shall remain inactive for two minutes thereafter to allow an operator to override the high idle function and return the engine to idle before PTO engagement.

HIGH IDLE

The engine shall have a "high idle" switch on the dash that shall maintain an engine RPM of 1,000. The switch shall be installed at the cab instrument panel for activation/deactivation. The "high idle" mode shall become operational only when the parking brake is on and the truck transmission is in neutral.

VEHICLE DATA RECORDER

An Akron / Weldon vehicle data recorder as required by the 2009 edition of NFPA 1901 shall be installed. Vehicle data shall be sampled at the rate of 1 second per 48 hours, and 1 minute per 100 engine hours.

Free software is available to allow the fire department to collect the data as needed.

POWER RECEPTACLES

There will be two (2) power receptacles located in the dash provided by the chassis manufacturer.

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HELMET STORAGE

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

HELMET STORAGE

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

HELMET STORAGE

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

SCBA BRACKETS

Each SCBA seat in the cab shall feature an H.O. Bostrom SecureAll self contained breathing apparatus (SCBA) locking system. The seat back shall include a bracket which shall be capable of storing most U.S. and international SCBA brands and sizes while in transit or for storage. The bracket shall be easily adjustable for all SCBA brands and cylinder diameters; adjustment points shall utilize similar hardware and adjustments shall be made with one tool.

The bracket shall be adjustable to compensate for different cylinder lengths without the use of tools. The adjustment shall be made by raising a lever and moving the top clamp vertically.

The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.

The locking system shall include a release handle integrated into the seat cushion for quick and easy release and to eliminate the need for straps or pull cords which might interfere with other SCBA equipment.

SEAT BELT WARNING SYSTEM

An Akron / Weldon seat belt warning system shall be provided, and shall monitor each seating position. Each seat shall be supplied with a sensor that, in conjunction with the display module located on the dash, shall determine when the seat belt was fastened and if the seat is occupied. An icon shall represent that the seat is properly occupied. An audible and visual alarm shall be activated if the seat is occupied and/or the belt is not fastened in the proper sequence.

REAR VISION CAMERA SYSTEM, SINGLE CAMERA

A Fire Research inView™ TrueSight™ model BCA111-A00 kit shall include: (1) one 130° camera with 18 infrared illuminators and (1) one 7" digital monitor.

The 130° Camera shall include the following features: 1/3" SONY® Color CCD Sensor, 250,000 pixels for Picture Elements and Gamma Correction with R=0.45 to 1.0. Camera shall have Mirror Image capability. (1) One 66 ft. Extension Cable shall be included for the camera. (1) One Screw Kit shall be provided for camera installation. The camera shall have a built-in high gain microphone. The Image Sensor shall provide 600 TV Lines PAL: 500(H) *582(V), NTSC: 510(H) *492(V). The 2.1MM Lens shall have a 130° Viewing Angle. The Waterproof rating shall be IP69K. The 130° Camera shall include an Internal Synchronization Sync System. Infrared Distance shall be 50 Ft. (18 Infrared IR). The Usable Illumination shall be 0 Lux (with IR ON). The Power Source shall be DC 12V (+/-10%). Signal-to-Noise ratio (S/N Ratio) shall be rated for higher than 48DB. The Electronic Iris rating shall be 1/50, 1/60-1/100,000 seconds. Video Output rating shall be 1VP.P 75 Ω. The IR Switch Control shall have a CDS Automatic Control. Vibration and Impact Rating shall be 20G/100G.

TWO WAY RADIO ACCOMADATION PKG

One set of 12 volt wire leads will be provided for future installation of a two (2) way radio . These will consist of one (1) 30 Amp direct circuit one (1) 10 amp battery switched circuit and one (1) ground circuit 6' long located in the console.

POWER RECEPTACLES

There will be two (2) power receptacles located in the dash provided by the chassis manufacturer.

FIRE PUMP HALE XS-1500

Fire pump shall be midship mounted. The fire pump shall be of the double suction single stage centrifugal type, carefully designed in accordance with good modern practice.

The pump shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI.

The pump body shall be horizontally split, on a single plane, casing type with removable lower casing for easy removal of the entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in the chassis.

All moving parts in contact with water shall be of high quality bronze or stainless steel. Easily replaceable bronze labyrinth wear rings shall be provided. Discharge passage shall be designed to accomplish uniform pressure readings as the actual pump pressure. The rated capacity of the fire pump shall be 1500 gallons per minute in accordance with NFPA# 1901.

The pump shaft shall be rigidly supported by three bearings for a minimum deflection. One high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite the drive unit). The sleeve bearing shall be lubricated by a force fed, automatic lubrication system, pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty type, deep groove ball bearings and shall be splash lubricated.

PUMP TRANSFER CASE – G SERIES

The drive unit shall be designed of ample capacity for lubricating reserve and to maintain the proper operating temperature. Pump drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. torque of the engine in both road and pump operating conditions.

The gearbox drive shafts shall be heat treated chrome nickel steel input and output shafts shall be at least 2-3/4" in diameter, on both the input and output shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.

The engagement of the pump transmission shall be of such design so as to permit transfer of power from road to pump operation only after vehicle is completely stopped. The pump shift shall be air actuated from the cab and have both a green "Pump Engaged" light, and a green "O.K.-To-Pump" light. A third green light shall be provided on the pump operator's panel for "Throttle Ready".

The pump drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory.

PUMP SEAL

The pump shaft shall have only one packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland must be a full circle threaded design to exert uniform pressure on the packing to prevent "cocking" and uneven packing load when it is tightened. It shall be easily adjustable by hand with a rod or screwdriver and requiring no special tools or wrenches. The packing rings

shall be of a unique combination of braided graphite filament and braided synthetic packing and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion.

PUMP ANODE

A Hale pump anode kit shall be provided and installed in the pump body. A minimum of two (2) anodes shall be installed, one (1) in the suction side and one (1) in the discharge side of the pump.

PUMP TEST & CERTIFICATION

The pump shall be tested and certified by a third party independent testing agency, in accordance with NFPA 1901. A 3 hour pumping test from draft shall be conducted consisting of 2 hours of continuous pumping at 100% of rated capacity at 150PSI net pump pressure, followed by ½ hour of continuous pumping at 70% of rated capacity at 200PSI net pump pressure, and ½ hour of continuous pumping at 50% of rated capacity at 250PSI net pump pressure). The testing shall also include a pressure control system test, priming system test, vacuum test, a gauge/flowmeter test, and a pumping engine overload test. If the apparatus is equipped with a water tank, the water tank-to-pump test shall also be included.

AUXILIARY COOLER

An auxiliary cooler shall be furnished to provide additional cooling to the engine under extreme pumping conditions. Water from the pump is to be piped to the coils of the heat exchanger allowing the engine fluid to be cooled as required.

PUMP CONNECTIONS

All suction and discharge lines (except pump manifolds) 1" and larger shall be heavy-duty stainless steel pipe. Where vibration or chassis flexing may damage or loosen piping or where a coupling is necessary for servicing, a flexible connection shall be furnished. All lines shall be drained by a master drain valve or a separate drain provided at the connection. All individual drain lines for discharges shall be extended with a 90 degree fitting in order to drain below the chassis frame. All water carrying gauge lines shall utilize nylon tubing.

TANK TO PUMP

The booster tank shall be connected to the intake side of the pump with a check valve. The 3" tank to pump line shall run from a bottom sump into the 3" valve. To prevent damage due to chassis flexing or vibration, a short 3" flexible rubber hose coupling shall be used to connect the tank to the intake valve.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

TANK FILL

A 2" tank fill line shall be provided, using a quarter turn full flow ball valve controlled from the pump operator's panel.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

PRESSURE GOVERNOR / MONITORING DISPLAY

Fire Research PumpBoss model PBA400-A00 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, two (2) 600 psi pressure sensors, and cables. The control module case

shall be waterproof and have dimensions not to exceed 6 3/4" high by 4 5/8" wide by 1 3/4" deep. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.

The following continuous displays shall be provided:

CHECK ENGINE and STOP ENGINE warning LEDs

Engine RPM; shown with four daylight bright LED digits more than 1/2" high

Engine OIL PRESSURE; shown on an LED bar graph display in 10 psi increments

Engine TEMPERATURE; shown on an LED bar graph display in 10 degree increments

Transmission TEMPERATURE; shown on an LED bar graph display in 10 degree increments

BATTERY VOLTAGE; shown on an LED bar graph display in 0.5 volt increments

PSI / RPM setting; shown on a dot matrix message display

PSI and RPM mode LEDs

THROTTLE READY LED.

A dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator.

The program shall store the accumulated operating hours for the pump and engine, previous incident hours, and current incident hours in a non-volatile memory. Stored elapsed hours shall be displayed at the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

High Engine RPM

High Transmission Temperature

Low Battery Voltage (Engine Off)

Low Battery Voltage (Engine Running)

High Battery Voltage

Low Engine Oil Pressure

High Engine Coolant Temperature

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A control knob that uses optical technology shall adjust pressure or RPM settings. It shall be 2" in diameter with no mechanical stops, a serrated grip, and have a red idle push button in the center.

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

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

INTAKE RELIEF

There shall be a Task Force Tips A1860 intake relief valve installed on the intake side of the pump. The surplus water shall be discharged away from the pump operator and terminate with Male NST hose thread. System is field adjustable.

6" PUMP INLET

A 6" diameter suction port with 6" NST male threads shall be provided, on the left side of vehicle. The inlet shall extend through the side pump panels and come complete with removable strainer and long handle chrome-plated cap.

2.5" LEFT SIDE INLET

One 2.5" gated inlet valve shall be provided on the left side pump panel. The valve shall be supplied with chrome plate female swivel, plug, chain, and removable strainer. The valve shall attach directly to the suction side of the pump with the valve body behind the pump panel.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90 degree movement.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

6" PUMP INLET

A 6" diameter suction port with 6" NST male threads shall be provided, on the right side of vehicle. The inlet shall extend through the side pump panels and come complete with removable strainer and long handle chrome-plated cap.

DISCHARGE #1 - LEFT

The discharge in position #1 on the left side of the apparatus shall include the following features.

A 2.5" discharge shall be provided on the left side of the apparatus.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a rack and sector with a Class 1 push pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm

located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

One (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.

DISCHARGE #2 - LEFT

The discharge in position #2 on the left side of the apparatus shall include the following features.

A 2.5" discharge shall be provided on the left side of the apparatus.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a rack and sector with a Class 1 push pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

One (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.

DISCHARGE #3 - RIGHT

The discharge in position #3 on the right side of the apparatus shall include the following features.

A 3" discharge shall be provided on the right side of the apparatus.

VALVE, SLOW CLOSE

The valve shall be an Akron slow close type Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed

flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts.

The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

One (1) Task Force Tips #AA3ST-NL 3" NST female x 5" Storz adapter with #A01ST 5" Storz cap and chain shall be provided for the above discharge.

DISCHARGE #4 - RIGHT

The discharge in position #4 on the right side of the apparatus shall include the following features.

A 2.5" discharge shall be provided on the right side of the apparatus.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

One (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.

TWO (2) 2.5" LEFT REAR DISCHARGE

There shall be a 2.5" gated discharge piped to the left rear. The discharge shall be installed with proper clearance for spanner wrenches or adapters.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a straight termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

Two (2) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above left side rear discharges.

2.5" REAR DISCHARGE

There shall be two (2) 2.5" gated discharges piped to the right rear, adjacent to the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.5" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.

VALVE

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DISCHARGE TERMINATION

The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DELUGE RISER

A 3" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be rigidly braced. The riser shall be gated and controlled from the pump operators panel.

VALVE, SLOW CLOSE

The valve shall be an Akron slow close type Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts.

The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a Class 1 push/pull handle located at the operator's panel.

2.5" PRESSURE GAUGE

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

DECK GUN TERMINATION

The deck gun piping shall terminate with NPT threads.

SAFE-TAK PORTABLE MONITOR AND EXTEND-A-GUN PACKAGE

Task Force Tips Crossfire model # XFC-42-01 portable lightweight monitor package consisting of monitor top, Safe-Tak portable ground base, stacked tips, stream straightener, Master Stream 1250 series nozzle, and base storage bracket, Extend-A-Gun and installation bracket set shall be supplied.

Task Force Tips Crossfire, model portable monitor top shall be provided. This top only portion with quick release swivel joint shall be designed for use on truck mounted risers and TFT Safe-Tak 1250 series portable bases. The monitor shall include safety devices that include a locking button which locks the quick release lever when monitor is pressurized, and a 1/4 turn rotational lever lock that secures the horizontal rotation and provides a visual indication that the monitor rotation is locked. For corrosion resistance the monitor shall be constructed from hard coat anodized aluminum with a red powder coat interior and exterior finish.

The monitor shall have a 3-1/4" waterway for delivery of up to 1250 GPM with low friction loss. Vertical elevation shall be controlled through use of a handwheel controlled stainless steel worm gear which allows full travel to the safety stop point of 35 degrees above horizontal with seven rotations of the wheel. When positioned on a truck mounted riser the monitor shall be able to be used below the 35 degree stop point through release of the spring loaded safety pin. An automatic drain to remove remaining water and avoid freezing shall be included. Integral stream straightener and pressure gauge shall be included.

Task Force Tips Safe-Tak 1250, portable monitor base shall be provided. The monitor base shall include a Safe-Tak, spring loaded butterfly valve designed to rapidly reduce the water flow by 90 percent in the event that contact with the ground is lost. The device shall include an integral carrying handle, four folding stainless-steel legs with replaceable tungsten carbide spikes and an anchoring strap attached to a protective cap designed to be stored inside the waterway. The butterfly valve shall have a reset handle located near the inlet to allow the water flow to be reestablished once the base is properly stabilized.

The base shall be constructed from hard coat anodized aluminum and have a red powder coat interior and exterior finish. The base shall have a single inlet 5" Storz fitting.

Task Force Tips Master Stream 1250 series nozzle shall be provided. For corrosion resistance the nozzle shall be constructed for lightweight hard coat anodized aluminum. The nozzle shall have a UV resistant rubber bumper with integral teeth designed to produce a finger free fog pattern. A halo ring shall be included to assist with stream shape control. The nozzle shall be suitable for foam solution application. The nozzle shall be configured with a female swivel rocker lug coupling. The nozzle flow range shall be 300-1250 gpm at a user selectable 70-120 psi operating pressure.

Task Force Tips smooth bore stacked tip set shall be provided. For corrosion resistance the tip set shall be constructed from hard coat anodized aluminum alloy. The set shall consist of four (4) tips with the base tip having a 2-1/2" female NH swivel inlet and 2" outlet. The other tip sizes shall be 1-3/4", 1-1/2" and 1-3/8". Each tip shall be laser engraved with a flow/pressure chart, orifice size, and thread size.

Task Force Tips model # XF-SS10 stream straightener shall be supplied. The straightener shall be constructed from extruded aluminum with internal vanes designed to reduce turbulence and increase the reach of smooth bore water streams. The device shall have 2-1/2" female NH rigid inlet and 2-1/2" male NH rigid outlet.

Task Force Tips manually telescoping waterway model # XG18VL-PL shall be installed. The waterway shall be capable of being lowered to deck level (or into a monitor well) for storage and transportation and shall be capable of being raised to an extended height by lifting a quick release latch located at the base of the extension tube. This latching device shall be capable of locking the waterway in either the raised or lowered position while maintaining the ability to horizontally rotate the monitor device 360 degrees.

A sensor shall be located on the waterway that signals a 12-volt indicator light installed in the cab to illuminate to indicate that the monitor is raised. The aluminum riser shall have a 3" waterway; hard coat anodized finish and be furnished with a 3" inlet and a Task Force Tips Crossfire coupling outlet.

Task Force Tips model # XF-B storage bracket set shall be installed. The set shall be designed to securely mount the Extend-A-Gun telescoping waterway. The primary components shall have unique serial numbers and all components shall be covered by a five-year warranty.

EXTEND-A-GUN

A Task Force Tips model XG18 manually telescoping waterway shall be provided and installed. The Extend-a-gun shall be capable of being raised to an extended height of 18" by lifting a quick release latch located at the base of the extension tube. The aluminum riser shall have a 3" waterway; hardcoat anodized finish and be furnished with a 3" NPT or 3" Victaulic inlet and a 3" male NPT outlet. The unit shall have a unique serial number and be covered by a five-year warranty.

FOG NOZZLE

Task Force Tips Master Stream 1250 series nozzle shall be provided. For corrosion resistance the nozzle shall be constructed for lightweight hard coat anodized aluminum. The nozzle shall have a UV resistant rubber bumper with integral teeth designed to produce a finger free fog pattern. A halo ring shall be included to assist with stream shape control. The nozzle shall be suitable for foam solution application. The nozzle shall be configured with a female swivel rocker lug coupling. The nozzle flow range shall be 300-1250 gpm at a user selectable 70-120 psi operating pressure.

MASTER PUMP DRAIN

A multiport master drain valve shall be provided and plumbed to multiple locations on the main pump body. The valve assembly shall be clearly marked as the Master Drain.

DRAIN VALVES LIFT UP STYLE

Vertical lift up style, quarter turn style drain valves shall be provided for each suction inlet, or discharge outlet as specified. Each drain shall be clearly marked and color coded to match the corresponding suction or discharge.

PUMP AND GAUGE PANELS

The pump controls and gauges shall be located at the left side of the apparatus. The pump and gauge panels shall be flush mounted on the aluminum extruded pump module framework.

Pump panels on both sides shall be easily removable. The gauge and control panels shall be two separate panels for ease of maintenance. The upper gauge panel shall be hinged with a full-length stainless steel hinge held closed with a 1/4-turn latch. There shall be an access door located over the right side pump panel. This door shall have a stainless steel hinge and latching mechanisms.

The right side pump panel shall be vertically hinged to allow the panel to move away providing complete access to the pump compartment.

The control panel shall be laid out in a user-friendly manner. All valve controls shall have the corresponding discharge gauge located immediately adjacent to control handle to allow operator to view the discharge pressure without searching the panel.

PANEL FINISH

The panels shall be constructed of 14 gauge brushed stainless steel for maximum protection against abrasion caused during normal use.

COLOR CODING

Each discharge valve control, outlet, and corresponding line gauge shall be color-coded.

PUMP MODULE FRAMEWORK

The pump module framework shall be finished with a swirl pattern.

PUMP FINISH

The fire pump shall not be painted. The pump shall remain in its natural finish.

PLUMBING FINISH

The plumbing shall not be painted. All fittings, pipe, and valves shall remain in their natural finish.

EXTERIOR DUNNAGE AREA

The exterior dunnage panels shall be constructed of brushed stainless steel.

PUMP PANEL LIGHTS LED

The driver's side pump panel controls and gauges shall be illuminated by LED lights, controlled at the pump panel.

PUMP PANEL LIGHTS LED

The officer's side pump panel shall be illuminated by LED lights, controlled at the pump panel.

PUMP PANEL GAUGES AND CONTROLS

The following shall be provided at the pump operator's panel:

Two (2) certified laboratory test gauge outlets.

Push/pull pump primer control.

Master drain control and additional drains as needed.

Tank fill and pump cooler valve controls.

Tank to pump valve control.

Pump capacity rating plate.

All discharge controls.

Two (2) master 4-1/2" pump gauges.

2-1/2" Gauges for all 1-1/2" and larger discharge lines.

PRIMING SYSTEM

The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multi-stage, venturi based AirPrime System. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. A single panel mounted control will activate the priming pump and open the priming valve to the pump. The priming system shall have a five year warranty.

(1) PRIMER BUTTON - MAIN SUCTION

A single panel mounted control will activate the priming pump and open the priming valve to the pump.

COMPRESSION FITTINGS ON AIR SYSTEM

Compression style fittings shall be provided for the following locations within the pump module:

- Front Suction Drain (if applicable)
- Pump Shifter (standard)
- Pump Panel Air Outlet (if applicable)

All other air line fittings within the pump module shall be push-on style.

AIR HORN BUTTON

A push button switch shall be provided on pump operators panel to activate the air horns.

4.5" MASTER GAUGES

Two (2) 4-1/2" Class 1 master gauges shall be provided. Each gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40-degrees Fahrenheit. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating

diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauges shall be mounted next to each other adjacent to crosslay area at the right upper section of the pump operator's panel. The intake gauge shall be to the left of the discharge gauge.

WATER TANK GAUGE

A Class1 ITL-40 Intelli-Tank water level gauge shall be provided. The gauge shall feature a 180-degree viewable display with all RED ultra-bright LED's for high visibility even in direct sunlight. Water level sensing shall be through a pressure transducer, and capable of indicating nine (9) accurate levels.

WATER TANK GAUGES

Two (2) Whelen PSTANK2 LED strip lights shall be provided. The lights shall be steady burn green, blue, amber and flashing red to indicate water level in the booster tank.

WATER TANK

The water tank shall be constructed of polypropylene sheet stock. This material shall be non-corrosive, stress relieved thermoplastic, black in color and U.V. stabilized for maximum protection. The tank shall be of a special configuration and is so designed to be completely independent of the body and compartments.

The tank shall be constructed with transverse and longitudinal swash partitions. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA rules. All swash partitions shall interlock with one another and welded to each other as well as to the walls and floor of the tank.

The tank shall have a combination vent and fill tower. The fill tower shall be constructed of ½" thick polypropylene and shall be a minimum dimension of 8"x 8" outer perimeter. The tower shall have a ¼" thick removable screen and a hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum I.D. of 4" that is designed to run through the tank, and shall be piped behind the rear wheels where specified by the purchaser so as to maximize traction.

There shall be one (1) sump standard per tank. The sump shall be constructed of ½" black polypropylene and located in the left front corner of the tank, unless specified otherwise. On all tanks that require a front suction, a schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3" FNPT threaded outlet on the bottom for a drain plug. This shall be used as a combination cleanout and drain. The tank shall have an anti-swirl plate above the dip tube.

There shall be two (2) standard tank outlets: one for tank to pump suction line and one for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank. All auxiliary outlets and inlets must meet N.F.P.A. 1900 guidelines in effect at the time of manufacture.

The tank shall rest on the body cross members to adequately support the water tank per the tank manufacturer's specifications.

The tank shall be isolated from the cross members through the use of hard rubber strips with a minimum thickness ¼". Additionally, the tank shall be supported around the entire bottom outside perimeter and captured front and rear as well as side to side to prevent tank from shifting during vehicle operation.

The tank shall be completely removable without disturbing or dismantling the apparatus structure.

The tank shall come with a lifetime warranty. The tank manufacturer shall mark the tank and furnish notice that indicates proof of warranty.

WATER TANK SIZE

The water tank shall have a capacity of 750 U.S. gallons.

BODY SUB-FRAME

The chassis shall be fitted with a sub-frame system consisting of a series of steel plate gusseted legs, extending down and out from the chassis frame rails on each side. This system will provide additional structural support to the running boards and side compartments. A heavy-duty rear platform shall be constructed of the same material to support the rear compartments and rear step. The entire assembly will be attached to the chassis frame by a series of heavy-duty U-bolts. Self-supporting bodies will not be acceptable. NO EXCEPTIONS

APPARATUS BODY

The body shall be constructed of 3/16" #5052 aluminum sheet, #3003 bright aluminum diamond plate and structural aluminum extrusions. The body shall be of the modular design to allow for proper flexing of the truck chassis. The body shall be custom built and engineered for proper load distribution on the chassis. An insulator material shall be used where aluminum and steel are in contact to prevent corrosion.

The ceilings, sidewalls and floors of the body compartments shall be constructed of 3/16" 5052-H32 smooth aluminum plate with a tensile strength range of 32,000 to 44,000 psi. Continuous 4043 fill welding shall seal compartment panels.

The body framework shall be constructed of custom-designed aluminum alloy 6063-T5 extrusions with a tensile strength of 35,000 psi.

To eliminate "dead space" and to maximize compartment interior space, there shall be no more than 1/4" between outer and inner walls.

The compartment extrusions shall be slotted full-length on backside for uniform fitting of the aluminum plate work that forms the compartment interiors.

The aluminum extrusion profiles shall incorporate 1" x 1-3/4" recessed continuous door seal at the bottom of the compartment. The extrusions shall be designed to allow unobstructed, sweep-out floors in all compartments.

The front, top, and rear surfaces of body shall be covered with .125" bright aluminum diamond treadplate. The forward and rear recessed surfaces shall be flush with the corner extrusions.

The compartment tops shall extend downward over the extrusions and form a drip molding. The material shall be .125 aluminum treadplate with approved aerated service for walking.

The compartment assemblies are to be fastened to the sub-frame with mechanical Huck-type bolts.

The apparatus body shall be a separate module from the pump enclosure and shall not be fastened together in any manner.

Each compartment shall be properly vented with louvers.

REAR STEP COMPARTMENTATION

A1 - There shall be a compartment provided at the rear step. The compartment shall be approximately 40" wide x 40" high x 29.5" deep inside. The compartment shall be provided with a roll-up door.

COMPARTMENTATION LEFT SIDE

The compartment will be outfitted with up to 10 Sensible Products® fitting holders for securing hose fittings, adapters, and connectors and an SCBA mounting bracket and collision securing device for the driver's SCBA.

L1- There shall be a compartment ahead of the rear wheels approximately 43" wide x 66" high x 27-1/4" deep.

L2- There shall be a compartment above the rear wheels, approximately 61-1/2" wide x 36-1/2" high x 27-1/4" deep.

L3- There shall be a compartment behind the rear wheels approximately 53" wide x 66" high x 27-1/4" deep.

COMPARTMENTATION RIGHT SIDE

R1- There shall be a compartment ahead of the rear wheels approximately 43" wide x 66" high x 27-1/4" deep. The upper portion of the compartment shall be 10-1/2" deep to accommodate ladder storage.

R2- There shall be a compartment above the rear wheels approximately 61-1/2" wide x 36-1/2" high x 10-1/2" deep.

R3- There shall be a compartment behind the rear wheels approximately 53" wide x 66" high x 27-1/4" deep. The upper portion of the compartment shall be 10-1/2" deep to accommodate ladder storage. The location of the shelf in LS1, LS3, RS1, and RS3 will be at the transition point between the compartment depth. In compartment RS2 the shelf will be centered between the floor and the ceiling, Compartment LS2 will be outfitted with a Sensible Products® Chanl Panl Mounting System mounted on the rear wall with a second unit hinged on the front edge that swings away to allow access to tools mounted on the rear wall. System will also include up to 12 pairs of mounting brackets for hand tools.

COMPARTMENT INTERIOR - L1

The L1 compartment on the left side of the apparatus shall include the following features:

ADJUSTABLE SHELVES

There shall be five (5) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.

250# ADJUSTABLE SWING-OUT TOOL BOARDS

Two (2) swing-out tool boards with 250# rating shall be provided and mounted in a compartment. The tool board shall be constructed of a 1" square aluminum tubing framework with a 3/16" aluminum mounting surface on each side. The tool board shall be adjustable within the depth of the compartment. It shall be held in the open position with a pneumatic strut and in the closed position with a positive latching mechanism.

L2 compartment will have a Sensible products Channel Mounting System installed on back wall of the compartment. In addition there will be channel panel mounted to both sides of swinging tool board.

BRACKETS

There will be in L1 provided Ten (10) sensible products fitting holders for securing adapters.

One (1) SCBA brackets for drivers SCBA provided and mounted.

There will be twelve (12) mounting brackets PAC brand provided for the L2 compartment to mount to the three provided channel panel boards.

COMPARTMENT INTERIOR - L2

The L2 compartment on the left side of the apparatus shall include the following features:

No compartment options were selected for L2.

COMPARTMENT INTERIOR - L3

The L3 compartment on the left side of the apparatus shall include the following features:

No compartment options were selected for L3.

COMPARTMENT INTERIOR - R1

The R1 compartment on the right side of the apparatus shall include the following features:

No compartment options were selected for R1.

COMPARTMENT INTERIOR - R2

The R2 compartment on the right side of the apparatus shall include the following features:

No compartment options were selected for R2.

COMPARTMENT INTERIOR - R3

The R3 compartment on the right side of the apparatus shall include the following features:

No compartment options were selected for R3.

COMPARTMENT INTERIOR - A1

The A1 compartment on the rear of the apparatus shall include the following features:

No compartment options were selected for A1.

UNISTRUT

Each compartment shall come equipped with 1.625" x .875" x .125" aluminum Unistrut channel. The Unistrut shall be securely fastened to the interior walls of the compartment.

ROLL-UP COMPARTMENT DOORS

The apparatus body shall be equipped with R.O.M Robinson Shutter doors. The door slats shall be double wall box frame, manufactured from anodized aluminum. The doors shall have the following features:

- Manufactured wholly in the United States.
- Concave individual slat design to prevent loose equipment from hindering door operation.
- Co-Extruded stretch resistant inner seal between slats to prevent metal-to-metal contact and inhibit moisture and dust penetration.
- Interlocking swaged/dimpled end shoes shall be utilized to provide a tight fitting assembly and allow for easy removal in the event of damage.
- Effective counter balancing for ease of lifting and lowering the doors.
- One-piece side rail and track to provide an unobstructed slide area and reduce the risk of binding.
- Non-abrasive replaceable water and dust barrier to keep compartment equipment clean and dry.
- A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation.

- A full width positive latch bar shall be operable with one hand, even with heavy gloves.

A door open indicator light shall be provided in the cab.

PAINTED ROLL-UP DOORS

The doors shall be wet painted before assembly by the door manufacturer. The paint shall be the same as the apparatus to achieve an exact match of paint color and have the look and durability same as on the rest of the truck.

REAR COMPARTMENT DOOR

The rear compartment door shall be equipped with ROM brand roll-up door. The door shall be wet painted before assembly by the door manufacturer. The paint shall be the same as the apparatus to achieve an exact match of paint color and have the look and durability same as on the rest of the truck.

COMPARTMENT INTERIOR FINISH

The interior of all compartments will be painted with gray bedliner (Rhinolining® or equivalent)

COMPARTMENT LIGHTING

Each compartment shall be equipped with two (2) white Tecniq E44 LED light strips which shall provide a consistent pattern to illuminate to entire compartment.

The interior of all compartments will be painted with gray bedliner (Rhinolining® or equivalent)

HOSE BED

The hose bed shall be provided with aluminum slatted flooring radiused at the edges to prevent hose damage from sharp edges. Each hose bed floor section shall be removable for easy access to the water tank. The hose shall be capable of holding the following minimum loads and maximum distance from the ground:

500-gallon tank - 2000 feet of 5" LDH

750-gallon tank - 1500 feet of 5" LDH

1000-gallon tank - 1000 feet of 5" LDH

HOSE BED COVER

There shall be a nylon/vinyl hose bed cover for the main hose bed. The cover shall be capable of being securely fastened at the front, sides and rear.

COVER FASTENERS

The hose bed cover shall be secured with black bungee cords with red pull tabs.

HOSE BED DIVIDERS

The hose bed shall be divided by five (5) 3/16" aluminum partitions that are fully adjustable by sliding in tracks located at the front and rear of the hose bed. The dividers shall be located as needed.

HOSEBED SUPPORT

A removable rear hosebed support bar shall be provided to help support the rear hosebed cover.

SIDE HOSEBED LIGHTING

TecNiq E44 LED light strips shall be provided on the interior hosebed walls, one each side. There will be a switch at rear of the apparatus to activate the hose bed lights.

BODY HANDRAILS

Handrails shall be constructed of type 304 stainless steel 1.25 inch diameter tubing with bright finish and knurled gripping surface. Mounting flanges shall be constructed from 7 gauge, .180 thick, stainless sheet. Each grab rail shall have 90 degree returns to flanges. The ends of grab rail shall pass through the flanges and be welded to form one structural unit. The handrails, shall be mounted using 1.25" SS Hex bolts, with a barrier rubber gasket at each flange. Sufficient space shall allow for a gloved hand to firmly grip the rail. The rails shall be located in the following areas:

(Note: These are in addition to those previously mentioned in the cab section):

There shall be one (1) vertical handrail at rear of the body one each side of the rear compartment.

There shall be two (2) handrails mounted horizontally, above the pump panel, one (1) on each side as large as possible.

FRONT BODY STEPS

There shall be up to three (3) Innovative Control fold-down steps with integrated step lights mounted on each side of the front face of body to provide access to the top of the pump module and dunnage area.

The quantity and location of steps and handrails shall meet the Current NFPA 1901 pamphlet in effect at the time the apparatus is ordered.

REAR STEPS

The rear of the body shall be equipped with up to six (6) fixed steps. Each step shall measure 8" x 8" for clearance while climbing. Each step shall be offset from the one below. Thinly fabricated aluminum steps shall not be utilized.

The quantity and location of steps and handrails shall meet the Current NFPA 1901 pamphlet in effect at the time the apparatus is ordered.

RUB RAILS

The body shall be equipped with anodized aluminum channel style rub rails at the sides. Rub rails shall be spaced away from the body by 1/2" polymer spacers. The rub rails shall be polished to a bright finish.

ALUMINUM TREADPLATE

All load bearing aluminum treadplate running boards shall be .155 thick bright-annealed finish. Running boards and rear step edges shall be flanged down for added strength. Running boards shall also be flanged up to form kick plates. All non-load bearing aluminum shall be .125" thick bright annealed finish. In areas where aluminum treadplate shall function as a load-bearing surface, there shall be a heavy steel sub-structure. This structure shall consist of 3" channel and 1-1/2" angle welded support. This shall assure that there shall be no flexing or cracking of running boards. The aluminum shall be insulated from the steel by closed cell foam body barrier material.

Treadplate locations:

1. Skirting around front bumper.
2. The step at the cab entrance.
3. The jump seat steps.
4. The body header.
5. The running boards.
6. The rear step.
7. The top of the compartments.

8. The rear of the apparatus.

REAR STEP CORNERS

The rear step/tailboard corners shall be fully mitered starting from the body on each side of the rear step, and taper inward at a 45 degree angle to the rear edge. The depth of the tailboard will be 12".

AIR BOTTLE COMPARTMENTS

There shall be four (4) SCBA bottle compartments located in the fender wells of the apparatus body, two (2) each side.

DOOR FINISH

The single or double SCBA compartments shall have a brushed stainless door equipped with a weather resistant flush fitting thumb latch. The interior of the door shall incorporate a rubber seal to keep the compartment free of road debris and moisture.

SUCTION HOSE

Two (2) 10 ft. lengths of 6" lightweight (KOCHEK) fire department hard suction hose with lightweight long handle couplings and pin lug male couplings shall be provided.

SUCTION HOSE MOUNTING

The suction hose shall be mounted in diamond plate troughs and held in position by a Velcro strap. Stainless steel scuff plates shall be provided on the body side metal where the long handle couplings would otherwise hit the body sides.

DRAFTING EQUIPMENT

The following drafting equipment will be provided:

- Task Force Tips Model # A03HNX-JET-F low-level suction strainer w/ float, 6" female NH threaded swivel connection
- Kochek low profile, w/ 1.5" jet siphon, 6" female NH threaded swivel connection
- Fol-Da-Tank self-leveling float doc strainer w/ 4" riser, 1.5" jet siphon, 6" female NH threaded swivel connection

FENDER PANELS

The rear side fenders shall be removable aluminum treadplate panels. The wheel liners shall be constructed of pre-formed material to provide a maintenance free, damage resistant surface.

LADDER EQUIPMENT

The apparatus shall be equipped with the following ladders:

One (1) Duo-Safety Series 900A 24 ft. two-section aluminum extension ladder.

One (1) Duo-Safety Series 775A 14 ft. aluminum roof ladder.

One (1) Duo-Safety Series 585A 10 ft. folding attic ladder with mounting.

LADDER CHUTE

The ground ladders shall be mounted behind the right upper compartments in an area accessible from the rear of the apparatus. The ladders shall be individually located in holders lined with anti-wear strips. There shall also be storage for a 2" backboard and two (2) pike poles in the ladder chute compartment.

An aluminum diamond plate door shall enclose the ladders at the rear.

LADDER CHUTE DOOR

A smooth aluminum door shall enclose the ladders at the rear.

LICENSE PLATE BRACKET

A Cast Products LP0013 cast aluminum license plate bracket with LED light shall be provided at the rear of the apparatus.

ELECTRIC SYSTEM

All body electrical wiring in the chassis will be XLP cross link-insulated type. Wiring is to be color-coded and include function codes every three (3) inches. Wiring harnesses will be routed in protective, heat resistant loom, securely and neatly installed. Two power distribution centers will be provided in central locations for greater accessibility. The power distribution centers contain automatic thermal self-resetting breakers, power control relays, flashers, diode modules, daytime driving light module, and engine and transmission data links. All breakers and relays are utilized in circuits which amp loads are substantially lower than the

respective component rating thus ensuring long component life. Power distribution centers will be composed of a system of interlocking plastic modules for ease in custom construction. The power distribution centers are function oriented. The first is to control major truck function and the second controls overhead switching and interior operations. Each module is single function coded and labeled to aid in troubleshooting. The centers also have accessory breakers and relays for future installations. All harnesses and power distribution centers will be electrically tested prior to installation to ensure the highest system reliability.

All external harness interfaces will be of a triple seal type connection to ensure a proper connection. The cab/chassis and the chassis/body connection points will be mounted in accessible locations. Complete chassis wiring schematics will be supplied with the apparatus.

The wiring harness contained on the chassis shall be designed to utilize wires of stranded copper or copper alloy of a gauge rated to carry 125% of maximum current for which the circuit is protected without exceeding 10% voltage drop across the circuit. The wiring shall be uniquely identified by color code or circuit function code, labeled at a minimum of every three (3) inches. The identification of the wiring shall be referenced on a wiring diagram. All wires conform to SAEJ1127 (Battery Cable), SAEJ1128 (Low Tension Primary Cable), SAEJ1560 (Low Tension Thin Wall Primary Cable).

All harnesses shall be covered with moisture resistant loom with a minimum rating of 300 Degrees Fahrenheit and a flammability rating of VW-1 as defined in UL62. The covering of jacketed cable has a minimum rating of 289 degree Fahrenheit.

All harnesses are securely installed in areas protected against heat, liquid contaminants and damage. The harness connections and terminations use a method that provides a positive mechanical and electrical connection and are in accordance to the device manufacturer's instructions. No connections within the harness utilize wire nut, insulation displacement, or insulation piercing.

All circuits conform to SAE1292. All circuits are provided with low voltage over current protective devices. These devices are readily accessible and protected against heat in excess of component rating, mechanical damage, and water spray. Star washers are not used for ground connections.

ICC lights shall be provided to meet D.O.T. requirements.

BACK-UP ALARM

An Ecco model SA917 automatic self-adjusting electronic back-up alarm producing 87-112 db shall be installed at the rear between the frame rails. It shall operate whenever the transmission's reverse gear is selected.

STOP/TAIL/TURN/REVERSE LIGHTS

The rear stop/tail/turn/reverse lights shall be Whelen 600 series lights installed in quad housings one (1) each side on the rear of the apparatus body. The stop/tail lights shall be LED model 60BTT located in the top position of the housing. The amber arrow turn signals shall be LED model 60A00TAR located below the stop/tail lights. The reverse lights shall be LED model 60C00WCR (maximum intensity) located below the turn signals. The bottom position of the housing shall accommodate a Whelen 600 series warning light.

LED ICC/MARKER LIGHTS

LED type ICC/marker lights shall be provided to meet D.O.T. requirements.

STEP LIGHTS

The pump module running board area shall be illuminated by Whelen 2G 4" diameter LED lights mounted one each side on the front of the body in chrome flanges.

LED strip lighting or individually mounted lights shall be provided at the rear of the body to illuminate all stepping surfaces based on the body style.

GROUND LIGHTING

The apparatus shall be equipped with lighting capable of illumination to meet NFPA requirements. Lighting shall be provided at areas under the driver and crew riding area exits and shall be automatically activated when the exit doors are opened. The ground lights shall be Truck-lite® model #6060C LED. Lighting required in other areas such as work areas, steps and walkways shall be activated when the parking brake is applied, provided the ICC lights are on.

REAR WORK LIGHTS

Two (2) FireTech WL-2000-F-B LED flood lights shall be provided. One (1) shall be mounted on each side on the upper rear of the apparatus body. The lights shall be activated by a switch inside the cab near the driver.

We proposed a NFPA package with larger lights then specified.

OPTICAL WARNING SYSTEM

The optical warning system shall be capable of two separate signaling modes during emergency operations. One mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right-of-way and the other mode shall signal that the apparatus is stopped and is blocking the right-of-way.

A momentary rocker switch shall be provided near the driver and labeled Master Emergency to energize all of the optical warning devices provided. A secondary momentary rocker switch shall be provided near the officer. All lights shall operate at not less than the minimum flash rate per minute as specified by NFPA.

UPPER LEVEL WARNING DEVICES

The upper level shall be divided into zones A (front), B (officer's side), C (rear) and D (driver's side).

Zone A (front) shall have one (1) Whelen Freedom IV 60" Model F4N0QLED light bar, with fourteen (14) LED modules. The light bar shall have two (2) end red LED modules, two (2) corner red LED modules, eight (8) forward-facing red LED modules and two (2) forward-facing white LED modules. The light bar shall have all clear outer lenses. The light bar shall be installed on the cab roof as far forward as possible with two (2) MK8H 5" cast aluminum risers.

Zone B (officer's side) shall be covered by the module from the light bar and the side-facing warning light.

Zone C (rear) shall have four (4) Whelen M9 series model M9* LED warning lights installed on the upper rear of the apparatus. The lights shall be installed one (1) each side on the upper rear surface of the body (rear-facing) and one (1) each side on the driver and officer sides of the body in the upper rear corners (side-facing).

Zone D (driver's side) shall be covered by the module from the light bar and the side-facing warning light.

LOWER LEVEL WARNING DEVICES

The lower level shall be divided into zones A (front), B (officer's side), C (rear) and D (driver's side).

Zone A (front) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights.

The lights shall be installed one (1) each side on the front of the cab on the grille.

Zone B (officer's side) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights and one (1) Whelen ION T-Series TLI* Super LED warning light.

The lights shall be installed one (1) near the front corner of the apparatus, one (1) near the rear axle, and one (1) near the rear corner of the apparatus.

Zone C (rear) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights installed one (1) each side on the lower rear of the apparatus.

Zone D (driver's side) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights and one (1) Whelen ION T-Series TLI* Super LED warning light.

The lights shall be installed one (1) near the front corner of the apparatus, one (1) near the rear axle, and one (1) near the rear corner of the apparatus.

SURFACE MOUNTED LED SCENE LIGHT

six (6) Whelen PCPSM1* surface mounted LED scene light shall be provided. The lamp head shall operate at 12 volts DC, draw 6 amps, and generate 7,800 lumens of light. The light shall be mounted at a fire department specified location and shall be controlled from a switch in the cab.

Need locations on these determined at pre construction.

Two (2) additional PFH1 12 V LED Brow lights provided on the front of the cab.

GENERATOR

The apparatus shall be equipped with a complete electrical power generation system.

PAINTING

All exposed metal surfaces not chrome plated, polished stainless steel or bright aluminum tread plate shall be thoroughly cleaned and prepared for painting. All irregularities in painted surfaces shall be rubbed down and all seams shall be caulked before the application of the finish coat.

All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure finish paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. Both aluminum and steel surfaces to be painted shall be primed with a two (2)-component primer which is compatible with the finish coat. The apparatus shall be finish painted with a polyurethane base/clear system. "No Exception"

A barrier gasket/washer of "High Density Closed Cell Urethane Foam" shall be used behind all lights, handrails, door hardware and any miscellaneous items such as stainless steel snaps, hooks, washers and acorn nuts. The gaskets/washers shall be coated with pressure sensitive acrylic adhesive. All screws used to penetrate painted surfaces shall be pre-treated/coated under the head with nylon and the threads shall have

pre-coat #80. This procedure shall be strictly adhered to for corrosion prevention and damage to the finish painted surfaces.

The following paint process shall be utilized:

Surface Preparation:

1. Wash surface thoroughly with mild detergent.
2. Clean and de-grease with Prep-Sol 3812S.
3. Sand and feather edge using 400 grit or finer on a dual action sander.
4. Remove sanding dust with a cleaner compatible with polyurethane base coat/clear coat final finish.

Substrate treatment:

1. Use a Metal Conditioner followed with a Conversion Coating product.

Priming:

1. Use a priming 615S pretreatment.
2. Use a self etching primer applied to achieve a 1.5 mil dft minimum.
3. Use Prime N Seal sealer compatible with polyurethane base coat.

Color Coat:

1. Apply polyurethane base coat 1-2 mil dft minimum.

Clear coat:

1. Apply polyurethane clear coat 2 mil dft minimum.

SINGLE TONE PAINT

A single paint color shall be provided for the apparatus.

GRAPHICS; (customer to provide photos)

Reflective Striping, $\frac{3}{4}$ belt line, Color; gold/white/gold, 1"-6"-1", with each stripe outlined in $\frac{1}{4}$ " black and spaced to provide $\frac{1}{2}$ " of red between each stripe

- Striping on cab to run along bottom of doors and top of rear cabinet doors
- "Engine 2" in 6" red vinyl letters, located in white stripe on crew cab door, both sides
- "Ohio Fire Academy located in white stripe on compartment doors
- Driver and Officer's door: Above the reflective band will be the Ohio State Fire Marshal Maltese cross.
- Front: "Vinyl, 4" white lettering will be located on bumper: "State Fire Marshal".

CHEVRON STRIPING, REAR BODY OUTBOARD, ORAFOL REFLEXITE

The apparatus shall have 6" red and yellow reflective Orafol Reflexite Chevron style striping affixed to the outboard rear body panels. The striping will be set in a manner to have the effect of an inverted "V" shape. The stripe will travel low to high from the outside to the inside.

CHEVRON STRIPING, LADDER CHUTE DOOR, ORAFOL REFLEXITE

The ladder chute door shall have 6" red and yellow reflective Reflexite Chevron style striping affixed to it. The striping will be set in a manner to have the effect of an inverted "V" shape. The stripe will travel low to high from the outside to the inside.

MISCELLANEOUS EQUIPMENT FURNISHED

1 pt. touch-up paint

A bag of stainless steel nuts and bolts, as used in the construction of the apparatus.

WHEEL CHOCKS

Two (2) Ziamatic #SAC-44 folding wheel chocks with SQCH-44H holders shall be provided. The wheel chocks shall be located in an area close to the rear axles easily accessible from the side of the apparatus.

OPERATION AND SERVICE MANUALS

Complete "Operation and Service" manuals shall be supplied with the completed apparatus, one (1) printed copy and one (1) USB flash drive. Service manual instructions shall include service, maintenance and troubleshooting for major and minor components of the truck. The apparatus manufacturer shall supply part numbers for major components (i.e. Engine, Axles, Transmission, Pump, etc.). A table of contents, hydraulic, air brake and overall apparatus wiring schematics shall be included.

A video demonstration DVD on the operation of the truck shall be supplied with the manuals.

WARRANTIES

The following warranties shall be supplied. See warranty documents for complete coverage details of each warranty provided.

The apparatus shall be warranted to be free from mechanical defects in workmanship for a period of one (1) year. The apparatus shall be covered for parts and labor costs associated with repairs for a period one (1) year.

Ten (10) body structural warranty.

Ten (10) year warranty on paint.

The OEM warranties shall be applied for all major components.

MANUFACTURING & LOCATIONS

The apparatus will be manufactured in facilities wholly owned and operated by the company. A complete stock of service parts, and service shall be provided on a 24 hours around the clock basis. The company shall maintain parts and service for a minimum period of twenty (20) years on each apparatus model manufactured.

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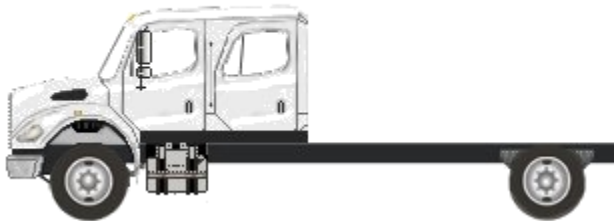
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A proposal for
Sutphen – Ohio Dept Commerce

Prepared by
TRACEY ROAD EQUIPMENT, INC.
Dave Holzwarth

Jun 13, 2022

Freightliner M2 112



Components shown may not reflect all spec'd options and are not to scale

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S P E C I F I C A T I O N P R O P O S A L

Data Code	Description	Weight Front	Weight Rear
Price Level			
PRL-26M	M2 PRL-26M (EFF:7/26/21)		
Data Version			
DRL-048	SPECPRO21 DATA RELEASE VER 048		
Vehicle Configuration			
001-175	M2 112 CONVENTIONAL CHASSIS	8,244	6,126
004-223	2023 MODEL YEAR SPECIFIED		
002-004	SET BACK AXLE - TRUCK		
019-002	STRAIGHT TRUCK PROVISION		
003-001	LH PRIMARY STEERING LOCATION		
General Service			
AA1-002	TRUCK CONFIGURATION		
AA6-002	DOMICILED, USA (EXCLUDING CALIFORNIA AND CARB OPT-IN STATES)		
A85-020	FIRE SERVICE		
A84-1EV	EMERGENCY VEHICLES BUSINESS SEGMENT		
AA4-002	LIQUID BULK COMMODITY		
AA5-002	TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS		
AB1-008	MAXIMUM 8% EXPECTED GRADE		
AB5-001	SMOOTH CONCRETE OR ASPHALT PAVEMENT - MOST SEVERE IN-TRANSIT (BETWEEN SITES) ROAD SURFACE		
995-1AE	FREIGHTLINER LEVEL II WARRANTY		
A66-99D	EXPECTED FRONT AXLE(S) LOAD : 12000.0 lbs		
A68-99D	EXPECTED REAR DRIVE AXLE(S) LOAD : 26000.0 lbs		
A63-99D	EXPECTED GROSS VEHICLE WEIGHT CAPACITY : 38000.0 lbs		
Truck Service			

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Data Code	Description	Weight Front	Weight Rear
AA3-027	FIRE TANK/PUMPER - MAIN DRIVELINE DRIVEN SPLIT-SHAFT PTO/PUMP		
AF3-2E5	SUPERIOR TRUCK EQUIPMENT		
AF7-99D	EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME "XX" INCHES : 32.0 in		

Engine

101-3B2	CUM L9 380EV HP @ 2200 RPM, 2200 GOV RPM, 1150 LB-FT @ 1200 RPM, R/F/E	-850	-70
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Electronic Parameters

79A-065	65 MPH ROAD SPEED LIMIT
79B-000	CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT
79K-002	PTO MODE ENGINE RPM LIMIT - 700 RPM
79M-001	PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED
79P-002	PTO RPM WITH CRUISE SET SWITCH - 700 RPM
79Q-002	PTO RPM WITH CRUISE RESUME SWITCH - 700 RPM
79S-001	PTO MODE CANCEL VEHICLE SPEED - 5 MPH
79U-007	PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND
80G-002	PTO MINIMUM RPM - 700
80J-002	REGEN INHIBIT SPEED THRESHOLD - 5 MPH

Engine Equipment

99C-021	2010 EPA/CARB/GHG21 CONFIGURATION
99D-010	NO 2008 CARB EMISSION CERTIFICATION
13E-001	STANDARD OIL PAN
105-001	ENGINE MOUNTED OIL CHECK AND FILL
014-1BX	SIDE OF HOOD AIR INTAKE WITH NFPA COMPLIANT EMBER SCREEN AND FIRE RETARDANT DONALDSON AIR CLEANER
124-1G1	DR 12V 300 AMP 40-SI BRUSHLESS PAD MOUNT ALTERNATOR WITH REMOTE BATTERY VOLTAGE SENSE
292-236	(3) DTNA GENUINE, FLOODED STARTING, MIN 3000CCA, 555RC, THREADED STUD BATTERIES
290-017	BATTERY BOX FRAME MOUNTED
281-001	STANDARD BATTERY JUMPERS
282-001	SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB

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Data Code	Description	Weight Front	Weight Rear
291-017	WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN		
289-001	NON-POLISHED BATTERY BOX COVER		
293-060	POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH WITH LOCKING PROVISION MOUNTED OUTBOARD DRIVER SEAT	10	
295-029	POSITIVE AND NEGATIVE POSTS FOR JUMPSTART LOCATED ON FRAME NEXT TO STARTER	2	
107-032	CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE		
108-002	STANDARD MECHANICAL AIR COMPRESSOR GOVERNOR		
131-013	AIR COMPRESSOR DISCHARGE LINE		
152-039	GVG, FIRE AND EMERGENCY SERVICE VEHICLES ENGINE WARNING		
128-032	C-BRAKE BY JACOBS WITH LOW/OFF/HIGH BRAKING DASH SWITCH	80	
016-1DC	RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE EXITING FORWARD OF REAR TIRES	10	5
28F-007	ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD ACTIVE REGENERATION AND DASH MOUNTED SINGLE REGENERATION REQUEST/INHIBIT SWITCH		
239-001	STANDARD EXHAUST SYSTEM LENGTH		
237-022	RH HORIZONTAL TAILPIPE, EXIT FORWARD OF REAR TIRES	20	20
23U-001	6 GALLON DIESEL EXHAUST FLUID TANK		
30N-003	100 PERCENT DIESEL EXHAUST FLUID FILL		
43X-002	LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION		
23Y-001	STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING		
43Y-001	STANDARD DIESEL EXHAUST FLUID TANK CAP		
273-060	HIGH SPEED AIR POWERED ON/OFF ENGINE FAN CLUTCH		
276-001	AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED		
110-003	CUMMINS SPIN ON FUEL FILTER		
118-008	COMBINATION FULL FLOW/BYPASS OIL FILTER		
266-017	1300 SQUARE INCH ALUMINUM RADIATOR	-20	

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Data Code	Description	Weight Front	Weight Rear
103-039	ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT		
171-007	GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT		
172-001	CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES		
270-008	AUXILIARY ENGINE COOLING USING WATER FROM FIRE PUMP	10	
134-001	ALUMINUM FLYWHEEL HOUSING		
132-004	ELECTRIC GRID AIR INTAKE WARMER		
155-058	DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH	-10	
Transmission			
342-1KD	ALLISON 3000 EVS AUTOMATIC TRANSMISSION WITH PTO PROVISION	-80	-20
Transmission Equipment			
343-330	ALLISON VOCATIONAL PACKAGE 197 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODEL EVS		
84B-003	ALLISON VOCATIONAL RATING FOR FIRE TRUCK/EMERGENCY VEHICLE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES		
84C-022	PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
84D-022	SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
84E-013	S1 PERFORMANCE PRIMARY SHIFT SCHEDULE, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
84F-012	S1 PERFORMANCE SECONDARY SHIFT SCHEDULE, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY		
84G-013	2100 RPM PRIMARY MODE SHIFT SPEED		
84H-013	2100 RPM SECONDARY MODE SHIFT SPEED		
* 84J-003	2ND GEAR ENGINE BRAKE PRESELECT RANGE WITH AGGRESSIVE DOWNSHIFT STRATEGY		
	3RD GEAR ENGINE BRAKE PRESELECT RANGE WITH AGGRESSIVE DOWNSHIFT STRADAGY 84J-005		
84K-000	ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND ALLISON, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE		

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Data Code	Description	Weight Front	Weight Rear
84N-200	FUEL SENSE 2.0 DISABLED - PERFORMANCE - TABLE BASED		
84U-000	DRIVER SWITCH INPUT - DEFAULT - NO SWITCHES		
353-023	VEHICLE INTERFACE WIRING CONNECTOR WITHOUT BLUNT CUTS, AT END OF FRAME		
34C-001	ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED		
341-018	MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN		
345-003	PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED		
97G-004	TRANSMISSION PROGNOSTICS - ENABLED 2013		
370-015	WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK	15	
346-003	TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK		
35T-001	SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)		

Front Axle and Equipment

400-1A6	DETROIT DA-F-12.0-3 12,000# FF1 71.5 KPI/3.74 DROP SINGLE FRONT AXLE		
402-049	MERITOR 16.5X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES		
403-026	FIRE AND EMERGENCY SEVERE SERVICE, NON-ASBESTOS FRONT LINING		
419-001	CAST IRON OUTBOARD FRONT BRAKE DRUMS		
427-001	FRONT BRAKE DUST SHIELDS	5	
409-006	FRONT OIL SEALS		
408-001	VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL		
416-022	STANDARD SPINDLE NUTS FOR ALL AXLES		
405-002	MERITOR AUTOMATIC FRONT SLACK ADJUSTERS		
536-050	TRW THP-60 POWER STEERING		
539-003	POWER STEERING PUMP		
534-003	4 QUART POWER STEERING RESERVOIR	5	
40T-002	CURRENT AVAILABLE SYNTHETIC 75W-90 FRONT AXLE LUBE		

Front Suspension

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Data Code	Description	Weight Front	Weight Rear
620-1F0	12,000# DUAL TAPERLEAF FRONT SUSPENSION	42	
619-005	MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION		
410-001	FRONT SHOCK ABSORBERS		

Rear Axle and Equipment

420-022	RS-26-185 26,000# T-SERIES SINGLE REAR AXLE		-2,210
421-489	4.89 REAR AXLE RATIO		
424-001	IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING		
386-073	MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES	20	20
452-001	DRIVER CONTROLLED TRACTION DIFFERENTIAL - SINGLE REAR AXLE		20
878-018	(1) DRIVER CONTROLLED DIFFERENTIAL LOCK REAR VALVE FOR SINGLE DRIVE AXLE		
87B-004	BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH		
423-039	MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR HEAVY DUTY BRAKE AND SHOES		50
433-025	FIRE AND EMERGENCY SEVERE SERVICE NON- ASBESTOS REAR BRAKE LINING		
434-011	BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S)		
451-030	WEBB HEAVY WEIGHT CAST IRON REAR BRAKE DRUMS		80
425-002	REAR BRAKE DUST SHIELDS		5
440-006	REAR OIL SEALS		
426-100	WABCO TRISTOP D LONGSTROKE 1-DRIVE AXLE SPRING PARKING CHAMBERS		-20
428-003	HALDEX AUTOMATIC REAR SLACK ADJUSTERS		
41T-002	CURRENT AVAILABLE SYNTHETIC 75W-90 REAR AXLE LUBE		

Rear Suspension

622-1DC	26,000# FLAT LEAF SPRING REAR SUSPENSION WITH HELPER AND RADIUS ROD		130
621-001	SPRING SUSPENSION - NO AXLE SPACERS		
431-001	STANDARD AXLE SEATS IN AXLE CLAMP GROUP		
623-005	FORE/AFT CONTROL RODS		

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Data Code	Description	Weight Front	Weight Rear
Brake System			
018-002	AIR BRAKE PACKAGE		
490-101	WABCO 4S/4M ABS WITH TRACTION CONTROL, WITH ATC OFF-ROAD SWITCH		
871-001	REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES		
904-001	FIBER BRAID PARKING BRAKE HOSE		
412-001	STANDARD BRAKE SYSTEM VALVES		
46D-001	STANDARD AIR SYSTEM PRESSURE PROTECTION AND 85 PSI PRESSURE PROTECTION FOR AIR HORN(S)		
413-002	STD U.S. FRONT BRAKE VALVE		
432-003	RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE		
480-088	WABCO SYSTEM SAVER HP WITH INTEGRAL AIR GOVERNOR AND HEATER		
483-004	WABCO OIL COALESCING FILTER FOR AIR DRYER		
* 479-003	AIR DRYER MOUNTED INBOARD ON LH RAIL PLEASE MOUNT UNDER THE CAB - 4DR CAB - INSIDE LH FRAME RAIL		
460-007	ALUMINUM AIR BRAKE RESERVOIRS	-10	-10
477-006	BW DV-2 AUTO DRAIN VALVE WITHOUT HEATER ON ALL TANK(S)		
Trailer Connections			
335-004	UPGRADED CHASSIS MULTIPLEXING UNIT		
32A-002	UPGRADED BULKHEAD MULTIPLEXING UNIT		
Wheelbase & Frame			
545-617	6175MM (243 INCH) WHEELBASE		
546-102	7/16X3-9/16X11-1/8 INCH STEEL FRAME (11.11MMX282.6MM/0.437X11.13 INCH) 120KSI	400	280
547-001	1/4 INCH (6.35MM) C-CHANNEL INNER FRAME REINFORCEMENT	250	430
552-063	2550MM (100 INCH) REAR FRAME OVERHANG		
55W-009	FRAME OVERHANG RANGE: 91 INCH TO 100 INCH	-70	300
AC8-99D	CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 130.32 in		
AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 127.32 in		
AE4-99D	CALC'D FRAME LENGTH - OVERALL : 373.63 in		

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Data Code	Description	Weight Front	Weight Rear
FSS-0LH	CALCULATED FRAME SPACE LH SIDE : 140.88 in		
FSS-0RH	CALCULATED FRAME SPACE RH SIDE : 77.77 in		
553-001	SQUARE END OF FRAME		
550-001	FRONT CLOSING CROSSMEMBER		
559-001	STANDARD WEIGHT ENGINE CROSSMEMBER		
561-001	STANDARD CROSSMEMBER BACK OF TRANSMISSION		
562-001	STANDARD MIDSHIP #1 CROSSMEMBER(S)		
572-001	STANDARD REARMOST CROSSMEMBER		
565-001	STANDARD SUSPENSION CROSSMEMBER		

Chassis Equipment

556-1A5	THREE-PIECE 14 INCH CHROME STEEL BUMPER WITH COLLAPSIBLE ENDS AND LH AND RH WING CUTOUTS FOR CAST PRODUCTS SA3502 SPEAKERS		
558-070	REMOVABLE FRONT TOW/RECOVERY DEVICE, STORED ON CHASSIS FRAME	15	
586-024	FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS		
551-007	GRADE 8 THREADED HEX HEADED FRAME FASTENERS		
* 601-017	2D DXF/PDF VEHICLE DRAWING ATT jakob@sutpheneast.com		
970-038	TANK BODY 0 TO 1500 GALLONS		
607-001	CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD		

Fuel Tanks

204-215	50 GALLON/189 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK - LH	-10	
218-005	RECTANGULAR FUEL TANK(S)		
215-005	PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS		
212-007	FUEL TANK(S) FORWARD		
664-001	PLAIN STEP FINISH		
205-001	FUEL TANK CAP(S)		
122-1H3	DETROIT FUEL/WATER SEPARATOR WITH WATER IN FUEL SENSOR	10	
216-020	EQUIFLO INBOARD FUEL SYSTEM		

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Data Code	Description	Weight Front	Weight Rear
202-016	HIGH TEMPERATURE REINFORCED NYLON FUEL LINE		
Tires			
093-1VM	MICHELIN X LINE ENERGY Z 315/80R22.5 20 PLY RADIAL FRONT TIRES	50	
094-1C1	MICHELIN XDN2 GRIP 315/80R22.5 20 PLY RADIAL REAR TIRES		240
Hubs			
418-060	CONMET PRESET PLUS PREMIUM IRON FRONT HUBS		
450-060	CONMET PRESET PLUS PREMIUM IRON REAR HUBS		
Wheels			
502-445	ACCURIDE 29300 22.5X9.00 10-HUB PILOT 6.38 INSET 5-HAND STEEL DISC FRONT WHEELS	82	
505-445	ACCURIDE 29300 22.5X9.00 10-HUB PILOT 5- HAND STEEL DISC REAR WHEELS		164
496-011	FRONT WHEEL MOUNTING NUTS		
497-011	REAR WHEEL MOUNTING NUTS		
Cab Exterior			
829-080	160 INCH BBC HIGH-ROOF ALUMINUM CONVENTIONAL CREW CAB	500	150
650-008	AIR CAB MOUNTING		
648-002	NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE		
754-017	BOLT-ON MOLDED FLEXIBLE FENDER EXTENSIONS	10	
678-018	LH AND RH EXTERIOR GRAB HANDLES WITH SINGLE RUBBER INSERT		
646-023	HOOD MOUNTED CHROMED PLASTIC GRILLE		
65X-003	CHROME HOOD MOUNTED AIR INTAKE GRILLE		
644-004	FIBERGLASS HOOD		
727-1B1	DUAL 25 INCH ROUND STUTTER TONE HOOD MOUNTED AIR HORNS WITH DUAL LANYARDS	8	
726-002	DUAL ELECTRIC HORNS		
728-002	DUAL HORN SHIELDS		
* 575-998	NO REAR MOUNTING - LICENSE PLATE		
312-038	INTEGRAL HEADLIGHT/MARKER ASSEMBLY WITH CHROME BEZEL		
302-047	LED AERODYNAMIC MARKER LIGHTS		

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Data Code	Description	Weight Front	Weight Rear
294-094	OMIT STOP/TAIL/BACKUP LIGHTS AND PROVIDE WIRING WITH SEPARATE STOP/TAIL WIRES TO 7 FEET BEYOND END OF FRAME		-5
300-015	STANDARD FRONT TURN SIGNAL LAMPS		
469-014	AUTOMATIC ON/OFF, ENGINE COMPARTMENT, HOOD ACTIVATED WORK LIGHT WITH MANUAL OVERRIDE	1	
744-1BC	DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE		
797-001	DOOR MOUNTED MIRRORS		
796-001	102 INCH EQUIPMENT WIDTH		
743-204	LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS		
729-001	STANDARD SIDE/REAR REFLECTORS		
768-998	NO REAR WINDOW	-20	
661-003	TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS		
654-003	MANUAL DOOR WINDOW REGULATORS		
663-013	1-PIECE SOLAR GREEN GLASS WINDSHIELD		
659-019	2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, FRAME MOUNTED		

Cab Interior

707-1AK	OPAL GRAY VINYL INTERIOR	
706-026	MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR	
708-026	MOLDED PLASTIC DOOR PANEL WITHOUT VINYL INSERT WITH ALUMINUM KICKPLATE LOWER DOOR	
772-006	BLACK MATS WITH SINGLE INSULATION	
785-998	NO DASH MOUNTED ASH TRAYS AND LIGHTER	
694-010	IN DASH STORAGE BIN	
742-007	(2) CUP HOLDERS LH AND RH DASH	
680-006	GRAY/CHARCOAL FLAT DASH	
860-004	SMART SWITCH EXPANSION MODULE	
720-003	5 LB. FIRE EXTINGUISHER	10
700-002	HEATER, DEFROSTER AND AIR CONDITIONER	
701-001	STANDARD HVAC DUCTING	
703-005	MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH	

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Data Code	Description	Weight Front	Weight Rear
170-015	STANDARD HEATER PLUMBING		
130-041	VALEO HEAVY DUTY A/C REFRIGERANT COMPRESSOR		
702-002	BINARY CONTROL, R-134A		
739-034	PREMIUM INSULATION		
285-013	SOLID-STATE CIRCUIT PROTECTION AND FUSES		
280-007	12V NEGATIVE GROUND ELECTRICAL SYSTEM		
324-047	DOOR ACTIVATED DOME/RED MAP LIGHTS, FORWARD LH AND RH AND REAR LH, RH AND CENTER		
* 657-1BW	ALL UNIT(S) KEYED ALIKE WITH CUSTOMER SPECIFIED KEY NUMBER FT1040 PLEASE USE KEY CODE FT1041 - THANK YOU		
78G-002	KEY QUANTITY OF 2		
655-001	CAB DOOR LATCHES WITH MANUAL DOOR LOCKS		
284-045	(2) 12 VOLT POWER RECEPTACLES MOUNTED IN DASH		
722-028	TRIANGULAR REFLECTORS KIT WITHOUT FLARES SHIPPED LOOSE IN CAB	10	
756-1E7	SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION DRIVER SEAT WITH NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR	50	
760-1E8	SEATS INC 911 UNIVERSAL SERIES SCBA HIGH BACK AIR SUSPENSION PASSENGER SEAT WITH NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR	40	15
* 762-1E9	SEATS INC 911 UNIVERSAL SERIES SCBA NON SUSPENSION LH, RH AND CENTER REAR PASSENGER SEATS WITH UNDER SEAT STORAGE AND NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR 762-1BP SEATS INC 911 UNIVERSAL SCBA NON SUSPENSION LH AND RH REAR PASSENGER SEATS WITH UNDER SEAT STORAGE	60	25
711-004	LH AND RH INTEGRAL DOOR PANEL ARMRESTS		
758-036	VINYL WITH VINYL INSERT DRIVER SEAT		
761-036	VINYL WITH VINYL INSERT PASSENGER SEAT		
755-036	VINYL WITH VINYL INSERT REAR PASSENGER SEAT		
763-105	NFPA 1901-2009 HIGH VISIBILITY ORANGE SEAT BELTS		
532-002	ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN	10	

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Data Code	Description	Weight Front	Weight Rear
540-015	4-SPOKE 18 INCH (450MM) STEERING WHEEL		
765-002	DRIVER AND PASSENGER INTERIOR SUN VISORS		
Instruments & Controls			
732-004	GRAY DRIVER INSTRUMENT PANEL		
734-004	GRAY CENTER INSTRUMENT PANEL		
87L-001	ENGINE REMOTE INTERFACE WITH PARK BRAKE INTERLOCK		
870-001	BLACK GAUGE BEZELS		
486-001	LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM		
840-002	2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES		
198-029	INTAKE MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS, 20 INCH H2O CALIBRATION		
721-003	1040 87 DECIBELS TO 112 DECIBELS AUTOMATIC SELF-ADJUSTING BACKUP ALARM		3
149-013	ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL		
156-020	IGNITION SWITCH WITH NON REMOVABLE KEY		
811-042	ICU3S, 132X48 DISPLAY WITH DIAGNOSTICS, 28 LED WARNING LAMPS AND DATA LINKED		
160-038	HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE CONNECTOR LOCATED BELOW LH DASH		
844-001	2 INCH ELECTRIC FUEL GAUGE		
148-073	ENGINE REMOTE INTERFACE FOR REMOTE THROTTLE		
163-004	ENGINE REMOTE INTERFACE CONNECTOR IN ENGINE COMPARTMENT		
856-001	ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE		
864-001	2 INCH TRANSMISSION OIL TEMPERATURE GAUGE		
830-017	ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY		
49B-004	ELECTRONIC STABILITY CONTROL		
852-002	ELECTRIC ENGINE OIL PRESSURE GAUGE		
679-001	OVERHEAD INSTRUMENT PANEL		
35M-005	SMARTPLEX HUB MODULE WITH OVERHEAD SWITCH MOUNTING, DRIVER AND PASSENGER SIDES (12 SWITCH SLOTS)	44	

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	Data Code	Description	Weight Front	Weight Rear
	786-119	NFPA VEHICLE DATA RECORDER AND SEATBELT DISPLAY		
	746-136	AM/FM/WB WORLD TUNER RADIO WITH AUXILIARY INPUT, J1939	10	
	747-001	DASH MOUNTED RADIO		
	750-002	(2) RADIO SPEAKERS IN CAB		
	753-040	24 INCH AM/FM ANTENNA MOUNTED ON LH SIDE MIRROR, RG-62	2	
	810-027	ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER		
	817-008	STANDARD VEHICLE SPEED SENSOR WITH ADDITIONAL SIGNAL FOR CUSTOMER USE LOCATED BETWEEN DRIVER AND PASSENGER SEATS		
	812-001	ELECTRONIC 3000 RPM TACHOMETER		
	162-002	IGNITION SWITCH CONTROLLED ENGINE STOP		
	329-010	TWO ON/OFF ROCKER SWITCHES IN THE DASH WITH INDICATOR LIGHTS AND WIRE ROUTED TO CHASSIS AT BACK OF CAB, LABEL OPT		
N	264-032	(2) OVERHEAD MOUNTED LANYARD CONTROLS: (1) OFFICER AIR HORN AND (1) DRIVER AIR HORN		
	836-015	DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY		
	660-008	SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY		
	304-003	MARKER LIGHT/HEADLIGHT SWITCH WITH SEPARATE INTERRUPTER FOR CLEARANCE LIGHTS		
	882-009	ONE VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR		
	299-013	SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE		
	298-039	INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS		

Design

* 065-902 TWO COLOR CUSTOM PAINT

Color

* 980-UEP CAB COLOR A: BLACK ELITE 00891779 EY
N 981-6D6 CAB COLOR B: L4663EY RED PIERCE #70 ELITE EY

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Data Code	Description	Weight Front	Weight Rear
986-020	BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT		
962-4D6	FRONT WHEEL PAINT: N4663EA RED PIERCE #70 LOW GLOSS ELITE SS		
966-4D6	REAR WHEEL PAINT: N4663EA RED PIERCE #70 LOW GLOSS ELITE SS		
963-003	STANDARD E COAT/UNDERCOATING		

Certification / Compliance

996-001	U.S. FMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS
---------	---

Secondary Factory Options

48Q-998	NO TIRE INFLATION DEVICE/SYSTEM
---------	---------------------------------

Raw Performance Data

AE8-99D	CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 127.32 in
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TOTAL VEHICLE SUMMARY

Weight Summary

	Weight Front	Weight Rear	Total Weight
Factory Weight ⁺	8955 lbs	5728 lbs	14683 lbs
Total Weight ⁺	8955 lbs	5728 lbs	14683 lbs

(+) Weights shown are estimates only.

If weight is critical, contact Customer Application Engineering.

(***) All cost increases for major components (Engines, Transmissions, Axles, Front and Rear Tires) and government mandated requirements, tariffs, and raw material surcharges will be passed through and added to factory invoices.

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Q U O T A T I O N

M2 112 CONVENTIONAL CHASSIS

SET BACK AXLE - TRUCK
CUM L9 380EV HP @ 2200 RPM, 2200 GOV RPM, 1150
LB-FT @ 1200 RPM, R/F/E
ALLISON 3000 EVS AUTOMATIC TRANSMISSION WITH
PTO PROVISION
RS-26-185 26,000# T-SERIES SINGLE REAR AXLE
26,000# FLAT LEAF SPRING REAR SUSPENSION WITH
HELPER AND RADIUS ROD
DETROIT DA-F-12.0-3 12,000# FF1 71.5 KPI/3.74 DROP
SINGLE FRONT AXLE

12,000# DUAL TAPERLEAF FRONT SUSPENSION
160 INCH BBC HIGH-ROOF ALUMINUM CONVENTIONAL
CREW CAB
6175MM (243 INCH) WHEELBASE
7/16X3-9/16X11-1/8 INCH STEEL FRAME
(11.11MMX282.6MM/0.437X11.13 INCH) 120KSI
2550MM (100 INCH) REAR FRAME OVERHANG
1/4 INCH (6.35MM) C-CHANNEL INNER FRAME
REINFORCEMENT

			PER UNIT		TOTAL
VEHICLE PRICE	TOTAL # OF UNITS (1)	\$	125,063	\$	125,063
EXTENDED WARRANTY		\$	0	\$	0
DEALER INSTALLED OPTIONS		\$	0	\$	0
CUSTOMER PRICE BEFORE TAX		\$	125,063	\$	125,063

TAXES AND FEES

TAXES AND FEES	\$	0	\$	0
OTHER CHARGES	\$	15	\$	15

TRADE-IN

TRADE-IN ALLOWANCE	\$	(0)	\$	(0)
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BALANCE DUE	(LOCAL CURRENCY)	\$	125,078	\$	125,078
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COMMENTS:

Projected delivery on ____ / ____ / ____ provided the order is received before ____ / ____ / ____.

APPROVAL:

Please indicate your acceptance of this quotation by signing below:

Customer: X_____ Date: ____ / ____ / ____.

Daimler Truck Financial

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Daimler Truck Financial offers a variety of finance, lease and insurance solutions to fit your business needs. For more information about our products and services, visit our website at www.daimler-truckfinancial.com.



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SCHEDULE 3

 Sutphen Component Report Dealership: Heritage Fire Equipment	HS- Ohio Department of Commerce, OH C-Series Pumper
	Order#: SQB014314_1 Contact: Position: Phone: Mobile: Email:

Bill To	Ship To
Customer: Ohio Department of Commerce Contact: , Address: Accounting Office Reynoldsburg, OH 43068	Customer: State Fire Marshal Contact: , Address: 8895 E Main Street Reynoldsburg, OH 43068

Comments
Project Coordinator: Sales Person: Revision Level: Truck Type: Body Facility:

Quote Line Number 1

Line	Item #	Qty	Item Description/Comments
CHASSIS			
1	10090035	1	CHASSIS, FREIGHTLINER M2 112 - 4DR
2	10190005	1	COMMERCIAL CHASSIS PREP
3	15030430	1	120V SHORELINE INLET, KUSSMAUL SUPER 20 AUTO EJECT, 90° OPENING COVER 091-55-20-120
4	15031545	1	BATTERY INVERTER CHARGER, KUSSMAUL AP1500W INVERTER W/REMOTE BAR GRAPH DISPLAY
5	14530100	1	TOP SPEED, 68 MPH
6	42980000	1	TIRE PRESSURE MONITOR, ACC
7	44270100	1	HUB COVERS, FRONT & REAR, POLISHED STS (Single Axle)
8	44270300	1	CHROME LUG NUT CAPS, FRONT & REAR (Single Axle)
9	44271100	1	MUD FLAPS, FRONT (PAIR)
10	44271200	1	MUD FLAPS, REAR (PAIR)
11	18289000	1	ELEC STABILITY CONTROL SYST (COMM)
CAB			

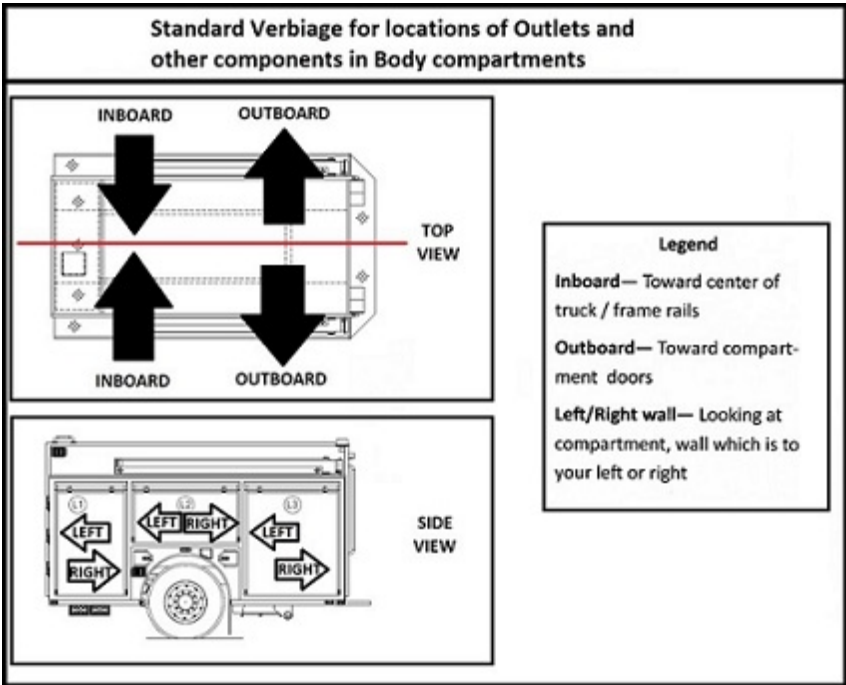
Line	Item #	Qty	Item Description/Comments
12	11028800	1	CAB COMMERCIAL CHASSIS
13	10190010	1	DELUXE TRIM PACKAGE (4-DR) AROUND LOWER CAB AREA ENTRANCE STEPS
14	12510111	1	ELEC SIREN, WHELEN 295SLSA1
15	12628888	1	WHELEN MODEL SA315 P 100WATT (PAIR)
16	12670120	1	SIREN SPEAKER(S) INSTALLED IN BUMPER BEHIND PERFORATIONS
17	11080100	1	CENTER CONSOLE
18	30080000	1	INSTRUMENTATION & CONTROLS
19	30010610	1	CAB PUMP SHIFTER, ELECTRIC W/ROUND KNOB (FOR HALE G-SERIES / WATEROUS C20 PUMP TRANSMISSION)
20	30031100	1	HIGH IDLE SWITCH
21	30189100	1	VEHICLE DATA RECORDER, AKRON/WELDON (COMM)
22	30088888	1	POWER RECEPTACLES IN CAB
23	38320000	1	HELMET STORED IN COMPARTMENT
24	38320000	1	HELMET STORED IN COMPARTMENT
25	38320000	2	HELMET STORED IN COMPARTMENT
26	39610000	4	SCBA BRACKETS, BOSTROM, SECURE ALL (4)
27	38489000	1	SEAT BELT WARNING SYSTEM, AKRON / WELDON (COMM)
28	84561010	1	CAMERA SYSTEM, FRC, INVIEW TRUEVIEW, SINGLE CAMERA (WIRED)
29	11088888	1	TWO WAY RADIO ACCOMADATION PKG
30	11088888	1	TWO (2) RADIO MNO MOBILE RADIO ANTENNAS
31	10310200	1	PUMP & PLUMBING
PUMP & PLUMBING			
32	60080003	1	PUMP, HALE QMAX-1500 GPM SINGLE STAGE
33	60025000	1	GEARBOX, HALE, G-SERIES, REAR MOUNTED
34	60026000	1	PUMP PACKING, HALE
35	60031005	1	ALLOY ANODES, HALE (2)
36	60035123	1	PUMP TEST, THIRD PARTY TESTING

Line	Item #	Qty	Item Description/Comments
37	61510000	1	AUXILIARY COOLER (HEAT EXCHANGER)
38	62010002	1	STAINLESS STEEL PIPING
39	66090010	1	3" TANK-TO-PUMP W/CHECK VALVE
40	61729120	1	VALVE, AKRON, HEAVY DUTY
41	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
42	73090001	1	TANK FILL 2"
43	61729120	1	VALVE, AKRON, HEAVY DUTY
44	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
45	61090009	1	PRESSURE GOVERNOR, FIRE RESEARCH, PUMP BOSS
46	61290020	1	INTAKE PRESSURE CONTROL, TFT A1860
47	63021500	1	6" MAIN SUCTION, LEFT SIDE
48	65090000	1	2.5" LEFT SIDE INLET
49	61729120	1	VALVE, AKRON, HEAVY DUTY
50	61770905	1	ACTUATOR, VALVE, SWING CONTROL
51	60036010	1	THREADS, NST
52	63025500	1	6" MAIN SUCTION, RIGHT SIDE
53	70525900	1	2.5" DISCHARGE, LEFT - POSITION 1
54	61729120	1	VALVE, AKRON, HEAVY DUTY
55	61770915	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1 W/ RACK & SECTOR
56	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
57	61810150	1	DISCHARGE TERMINATION, 30 DEGREE ELBOW
58	60036010	1	THREADS, NST
59	61840100	1	ADAPTER, 2.5"NST FE X 1.5" NST M W/CAP & CHAIN
60	70525900	1	2.5" DISCHARGE, LEFT - POSITION 2
61	61729120	1	VALVE, AKRON, HEAVY DUTY
62	61770915	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1 W/ RACK & SECTOR


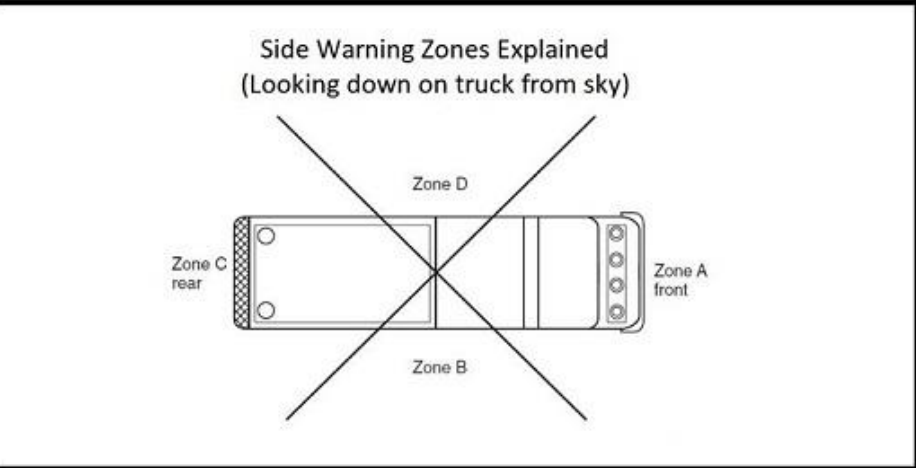

Line	Item #	Qty	Item Description/Comments
63	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
64	61810150	1	DISCHARGE TERMINATION, 30 DEGREE ELBOW
65	60036010	1	THREADS, NST
66	61840100	1	ADAPTER, 2.5"NST FE X 1.5" NST M W/CAP & CHAIN
67	71025905	1	3" DISCHARGE, RIGHT - POSITION 3
68	61729160	1	VALVE, AKRON, SLOW CLOSE
69	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
70	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
71	61810150	1	DISCHARGE TERMINATION, 30 DEGREE ELBOW
72	60036010	1	THREADS, NST
73	61840260	1	ADAPTER, 3" NST FE X 5" STORZ W/CAP & CHAIN, TFT
74	71025900	1	2.5" DISCHARGE, RIGHT - POSITION 4
75	61729120	1	VALVE, AKRON, HEAVY DUTY
76	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
77	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
78	61810150	1	DISCHARGE TERMINATION, 30 DEGREE ELBOW
79	60036010	1	THREADS, NST
80	61840100	1	ADAPTER, 2.5"NST FE X 1.5" NST M W/CAP & CHAIN
81	71590000	2	DISCHARGES, 2.5" LEFT REAR
82	61729120	1	VALVE, AKRON, HEAVY DUTY
83	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
84	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
85	61810160	1	DISCHARGE TERMINATION, STRAIGHT
86	60036010	1	THREADS, NST
87	61840100	1	ADAPTER, 2.5"NST FE X 1.5" NST M W/CAP & CHAIN
88	71890000	2	DISCHARGES 2.5" RIGHT REAR

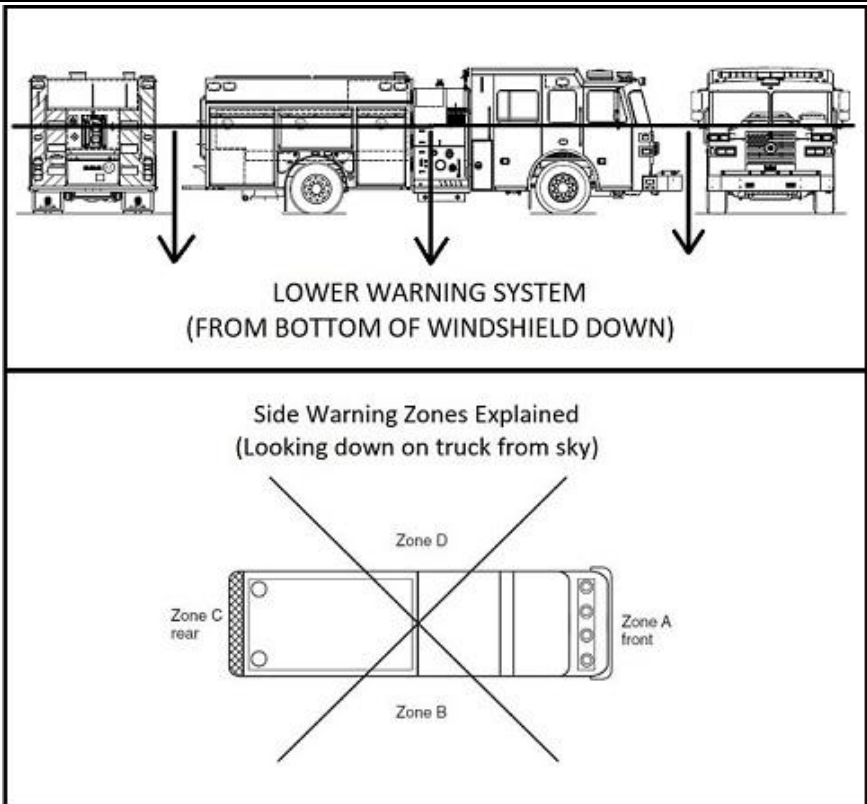
Line	Item #	Qty	Item Description/Comments
89	61729120	1	VALVE, AKRON, HEAVY DUTY
90	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
91	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
92	61810150	1	DISCHARGE TERMINATION, 30 DEGREE ELBOW
93	60036010	1	THREADS, NST
94	72590002	1	DECK GUN DISCHARGE 3"
95	61729160	1	VALVE, AKRON, SLOW CLOSE
96	61770900	1	ACTUATOR, VALVE, PUSH/PULL, CLASS 1
97	77090000	1	GAUGE, DISCH, CLASS 1 2.5"
98	72570100	1	DECK GUN TERMINATION, THREADED
99	72555845	1	MONITOR, TFT XFC-42 CROSSFIRE W/SAFETY FLOW W/QUAD STACK TIPS & STREAM SHAPER
100	72570200	1	EXTEND-A-GUN, TASK FORCE TIPS XG18, MANUAL
101	72588888	1	TASK FOR TIPS MASTER STREAM 1250 SERIES NOZZLES SHALL BE PROVIDED
102	72890000	1	CROSSLAYS, TWO 2" W/1.5" SWIVEL
103	61729120	2	VALVE, AKRON, HEAVY DUTY (2)
104	61770900	2	ACTUATOR, VALVE, PUSH/PULL, CLASS 1 (2)
105	77090000	2	GAUGE, DISCH, CLASS 1 2.5" (2)
106	60036010	2	THREADS, NST (2)
107	61742000	1	MASTER PUMP DRAIN, MULTIPOINT
108	61790510	9	DRAIN VALVES, HALE, LIFT-UP (9)
109	10310220	1	PUMP PANEL
PUMP PANEL			
110	74914110	1	PRG SM1 - SIDE MOUNT PUMP PANEL (CROSSLAYS)
111	74928100	1	PUMP MODULE LENGTH, 44"
112	74929110	1	HALE PUMP MODULE CONFIGURATION, SIDE MOUNT
113	74930710	1	PANEL FINISH, BRUSHED STS 14 GAUGE (PRG)

Line	Item #	Qty	Item Description/Comments
114	74931055	1	COLOR CODING (PRG)
115	74931290	1	PUMP MODULE FRAMEWORK, SWIRL FINISH
116	74931390	1	PUMP FINISH, PAINTED BY PUMP MFG
117	74931590	1	PLUMBING FINISH, NON-PAINTED
118	74931690	1	EXTERIOR DUNNAGE AREA PANEL, BRUSHED STS
119	75590010	1	PUMP OPERATOR LIGHTS, LED (PRG)
120	75590110	1	PUMP PANEL LIGHTS OFFICER'S SIDE, LED (PRG)
121	76090002	1	PUMP PANEL GAUGES & CONTROLS (PRG)
122	60090030	1	PUMP PRIMER, TRIDENT, AIR
123	60028310	1	(1) PRIMER BUTTON - MAIN SUCTION
124	76025110	1	COMPRESSION FITTINGS ON AIR SYSTEM (PRG PUMP MODULE)
125	76031900	1	AIR HORN PUSH BUTTON SWITCH ON PUMP PANEL
126	76590000	1	GAUGES, MASTER, CLASS 1 4.5" (PRG)
127	77590001	1	GAUGE, WATER LEVEL, CLASS 1, INTELLI-TANK ITL-40
128	77532112	1	GAUGE, WATER LEVEL, WHELEN PSTANK2 LED (2)
WATER TANK			
129	83525000	1	WATER TANK BRAND, UNSPECIFIED
130	83590004	1	WATER TANK, 750 GAL, POLY
BODY			
131	80029900	1	BODY SUBFRAME, PUMPER/TANKER
132	80180020	1	BODY C2 - 43/53 LAD CHUTE
133	10310302	1	BODY COMPARTMENTS
BODY COMPARTMENTS			

Line	Item #	Qty	Item Description/Comments
			<p>Standard Verbiage for locations of Outlets and other components in Body compartments</p>  <p>Legend</p> <p>Inboard— Toward center of truck / frame rails</p> <p>Outboard— Toward compartment doors</p> <p>Left/Right wall— Looking at compartment, wall which is to your left or right</p>
134	81130200	5	ADJUSTABLE SHELVES (5)
135	81150050	1	250# ADJUSTABLE SWING-OUT TOOL BOARD [L2] (1)
136	80588888	1	SUPPLIED BRACKETS (10) SENSIBLE, SCBA HOLDER, 12 PAC HANDLOCK THREE (3) CHANNEL PANEL BOARDS & INSTALLED
137	81165705	1	UNISTRUT TRACK IN COMPTS
138	80290012	1	COMPT DOORS, ROM ROLL-UP, PAINTED
139	80230600	1	DOOR SILL PROTECTION, BODY COMPTS, PROTEC, CLEAR FILM
140	80225025	1	REAR COMPT DOOR (A1) ROM ROLL-UP, PAINTED
141	80230650	1	DOOR SILL PROTECTION, REAR COMPT, NOT PROVIDED
142	80230350	1	COMPT INTERIOR FINISH, DA
143	84531215	1	COMPT LIGHTING, TECNIQ LED E44 LIGHT STRIPS, 2 PER COMPT
144	80288888	1	COMPARTMENT INTERIOR RAPTORT COATING GREY
BODY EXTERIOR			
145	81380000	1	HOSEBED W/REMOVABLE ALUMINUM FLOORING
146	81330100	1	STANDARD HOSEBED HEIGHT
147	81410000	1	COVER, VINYL, MAIN HOSE BED
148	81440201	1	COVER FASTENERS, BUNGIE CORDS WITH RED TAB

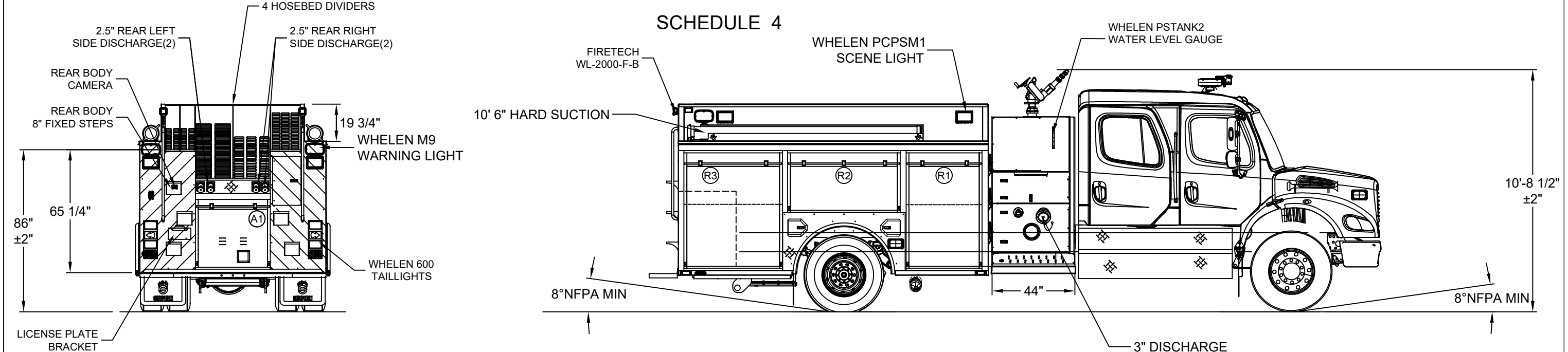
Line	Item #	Qty	Item Description/Comments
149	81330304	1	HOSE BED DIVIDERS, ADJ (4)
150	81331115	1	REMOVABLE SUPPORT BAR FOR REAR HOSEBED COVER
151	81332115	1	HOSEBED LIGHTING, SIDES, TECNIQ E44 LED LIGHT STRIPS
152	81388888	1	SWITCH FOR HOSEBED LIGHTS REAR OF APPARATUS
153	81388888	1	, FIFTH HOSE BED DIVIDER
154	81910100	1	HANDRAILS, KNURLED STS
155	82290010	1	STEPS, FRONT BODY, IC FOLD DOWN W/LIGHT
156	82390000	1	STEPS, REAR BODY (8x8)
157	82510000	1	RUB RAILS, ANODIZED ALUM
158	83010050	1	ALUMINUM TREADPLATE (ALUM PPR, PRG1, C-SER, TANKER)
159	83030315	1	REAR STEP/TAILBOARD CORNERS, 45 DEGREE
160	80290013	1	4 SCBA CYLINDER COMPTS (2 RIGHT, 2 LEFT)
161	80290310	4	DOOR FINISH, BRUSHED STAINLESS, SINGLE/DOUBLE SCBA COMPT (4)
162	88520100	1	SUCTION HOSE, (2) 10' SECT 6" KOCHER LIGHTWEIGHT
163	88540100	1	SUCTION HOSE MOUNTING, DIAMOND PLATE TROUGHS
164	88558888	1	SPECIAL Suction Hose Strainer DRAFTING EQUIPMENT
165	83030705	1	REAR FENDERS, ALUMINUM TREADPLATE
166	89010000	1	DUO-SAFETY 900A 24'2-SEC & 775A 14' ROOF & 10' FOLDING
167	89590002	1	LADDER CHUTE W/BACKBOARD STORAGE & PIKE POLE STORAGE
168	89520220	1	LADDER ENCLOSURE, SMOOTH ALUM DOOR
ELECTRICAL			
169	84550110	1	LICENSE PLATE BRACKET W/ LIGHT, LED
170	84589999	1	ELECTRICAL DESCRIPTION (COMM)
171	84520000	1	BACK UP ALARM, ECCO SA917
172	85010302	1	TAILLIGHTS, WHELEN 600 SERIES, LED STOP/TAI/TURN/REVERSE, QUAD HOUSING (PAIR)
173	85110100	1	ICC LIGHTS, LED

Line	Item #	Qty	Item Description/Comments
174	85510200	1	STEP LIGHTS, LED, REAR BODY & WHELEN 2G AT PUMP PANEL
175	85710010	1	UNDERCARRIAGE GROUND LIGHTS, TRUCK-LITE #44042C LED
176	86520300	1	REAR WORK LIGHTS, (2) FIRETECH WL-2000-F-B, LED
177	86600000	1	OPTICAL WARNING SYSTEM, UPPER (PUMPER)
			<p>UPPER WARNING SYSTEM (FROM BOTTOM OF WINDSHIELD UP)</p>  <p>Side Warning Zones Explained (Looking down on truck from sky)</p> 
178	86610056	1	UPPER WARNING LIGHTS, ZONE A (FRONT), WHELEN FREEDOM IV 60" LED LIGHT BAR, F4N0QLED, 14 MODULES
			
179	86920100	1	UPPER ZONE A LIGHTBAR, STANDARD CONFIGURATION
180	86699998	1	UPPER WARNING LIGHTS, ZONE B (OFFICER'S SIDE), COVERED BY ZONES A & C (Surface Mount)
181	86710305	1	UPPER WARNING LIGHTS, ZONE C (REAR), WHELEN LED, M9 SERIES SURFACE MOUNT, M9* (QTY 4)

Line	Item #	Qty	Item Description/Comments
182	86899998	1	UPPER WARNING LIGHTS, ZONE D (DRIVER'S SIDE), COVERED BY ZONES A & C (Surface Mount)
183	87100000	1	OPTICAL WARNING SYSTEM, LOWER (PUMPER)
			 <p>LOWER WARNING SYSTEM (FROM BOTTOM OF WINDSHIELD DOWN)</p> <p>Side Warning Zones Explained (Looking down on truck from sky)</p> <p>Zone D</p> <p>Zone C rear</p> <p>Zone B</p> <p>Zone A front</p>
184	87110100	1	LOWER WARNING LIGHTS, ZONE A (FRONT), WHELEN 600 SUPER LED, 60*02F*R (QTY 2)
185	87811140	1	LOWER, ZONE A - MOUNTING LOCATION (COMM)
186	87210100	1	LOWER WARNING LIGHTS, ZONE B (OFFICER'S SIDE), WHELEN 600 SUPER LED, 60*02F*R (QTY 2), ION T-SERIES LED, TLI* (QTY 1)
187	87812110	1	LOWER, ZONE B - MOUNTING LOCATION (PUMPERS, TANKERS, RESCUES)
188	87310100	1	LOWER WARNING LIGHTS, ZONE C (REAR), WHELEN 600 SUPER LED, 60*02F*R (QTY 2)
189	87410100	1	LOWER WARNING LIGHTS, ZONE D (DRIVER'S SIDE), WHELEN 600 SUPER LED, 60*02F*R (QTY 2), ION T-SERIES TLI* (QTY 1)
190	87814110	1	LOWER, ZONE D - MOUNTING LOCATION (PUMPERS, TANKERS, RESCUES)
191	88391300	6	SCENE LIGHT, WHELEN PIONEER PCPSM1*, 12V LED, SURFACE MOUNT (6)
192	86588888	1	SCENE LIGHTS, WHELEN PIONEER PFH1 12V LED BROW (PAIR OF BROW LIGHTS)
PAINT & FINISH			
193	90010020	1	PAINT SCHEME
194	90680120	1	CHEVRON STRIPING, REAR BODY OUTBOARD, REFLEXITE

Line	Item #	Qty	Item Description/Comments
195	90684120	1	CHEVRON STRIPING, LADDER ENCLOSURE DOOR, REFLEXITE
EQUIPMENT			
196	91010000	1	MISC EQUIP - (1) PINT TOUCH-UP PAINT, STAINLESS STEEL NUTS & BOLTS
197	91030700	1	ZIAMATIC SAC-44 FOLDING WHEEL CHOCKS (PAIR) MTD W/ SQCH-44H HOLDERS
198	10310600	1	COMPLETION & WARRANTY
COMPLETION & WARRANTY			
199	99010000	1	MANUALS (1-PRINTED & 1-USB) WITH DVD
200	99031195	1	DEALER DELIVERY
201	99520110	1	WARRANTY, ONE YEAR
202	99521300	1	WARRANTY, BODY STRUCTURAL, 10 YR.
203	99521400	1	WARRANTY, PAINT, 10 YR.
204	99521900	1	WARRANTIES, MAJOR VENDOR COMPONENTS
SUPPLIED			
205	PDB001646	1	- GRAPHICS (ALL LETTERING AND STRIPING MINUS REAR BODY CHEVRONS)

FINAL SELLING PRICE PROPOSED COMPLETE AND DELIVERED \$395,370.00



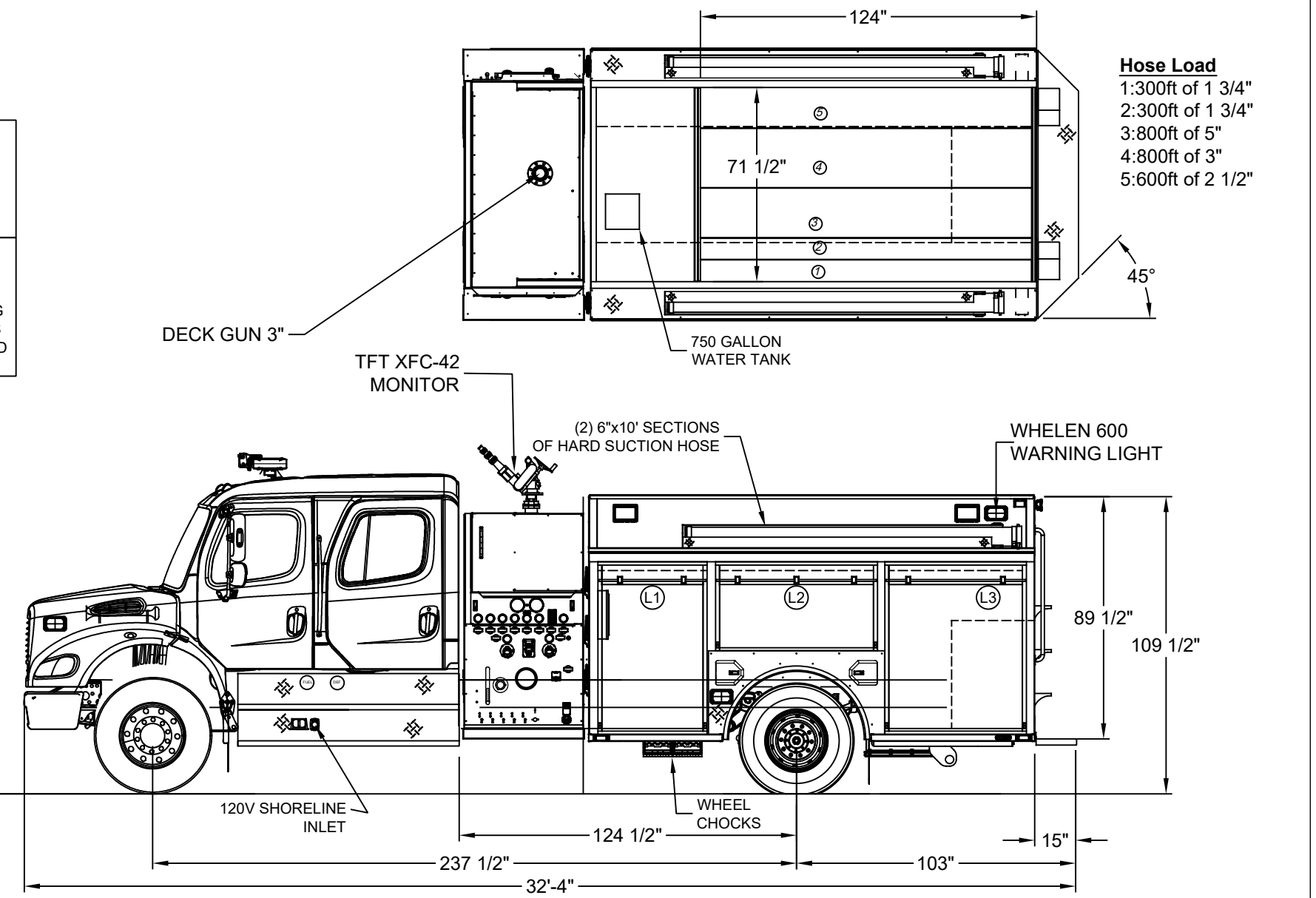
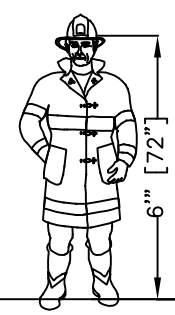
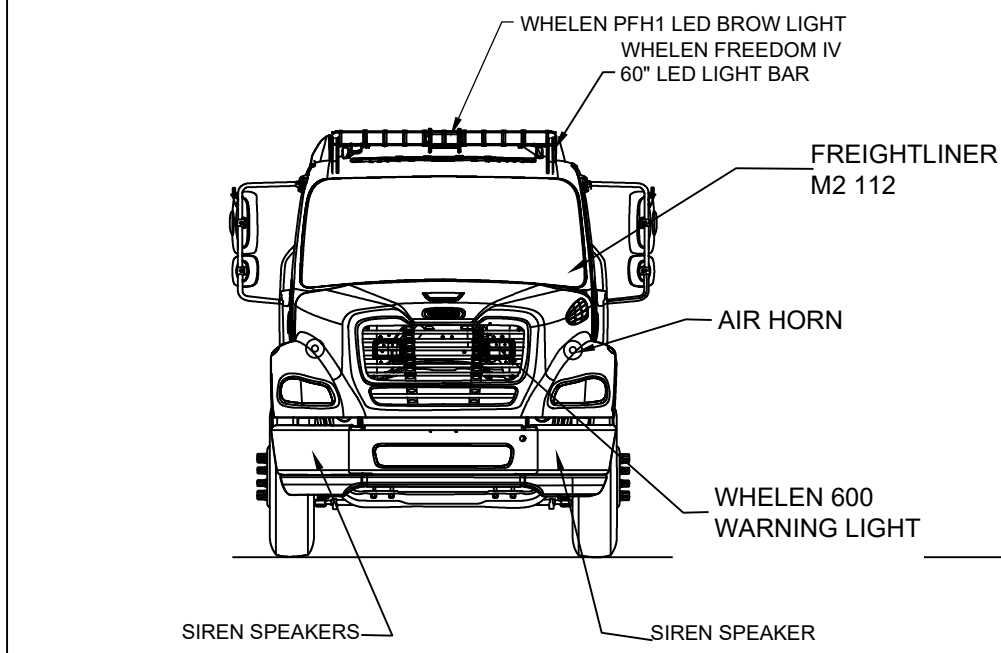
LEFT SIDE COMPARTMENTS				
COMPT	DOORS	OPENING DIMENSIONS	INSIDE DIMENSIONS	VOLUME
L1	ROLL-UP	37.5"w X 56.5"h	40"w X 66"h X 26"d	37.4 CU. FT.
L2	ROLL-UP	56.25"w X 27"h	59"w X 31.5"h X 26"d	28.4 CU. FT.
L3	ROLL-UP	48.75"w X 56.5"h	51.5"w X 66"h X 26"d	47.4 CU. FT.

RIGHT SIDE COMPARTMENTS				
COMPT	DOORS	OPENING DIMENSIONS	INSIDE DIMENSIONS	VOLUME
R1	ROLL-UP	37.5"w X 56.5"h	40"w X 66"h X 26"d	28.5 CU. FT.
R2	ROLL-UP	56.25"w X 27"h	59"w X 31.5"h X 11"d	13.7 CU. FT.
R3	ROLL-UP	48.75"w X 56.5"h	51.5"w X 66"h X 26"d	36.0 CU. FT.

REAR STEP COMPARTMENT				
COMPT	DOORS	OPENING DIMENSIONS	INSIDE DIMENSIONS	VOLUME
A1	ROLL-UP	36.75"w X 34.25"h	44"h X 39.5"w X 31"d	31.2 CU. FT.
TOTAL:				222.6 CU.FT.

HALE Q-MAX XS 1500 GPM SS, 750 GAL WATER

- SCBA
LFF:SINGLE
LRF:SINGLE
RFF:SINGLE
RRF:SINGLE
- LADDERS
(1) 14' ROOF
(1) 24' 2-SEC
(1) 10' FOLDING
(3) PIKE POLES
(1) BACKBOARD



- Hose Load**
1:300ft of 1 3/4"
2:300ft of 1 3/4"
3:800ft of 5"
4:800ft of 3"
5:600ft of 2 1/2"

DIMENSIONS SHOWN ON THIS DRAWING ARE APPROXIMATE AND ARE SUBJECT TO MINOR DEVIATIONS DURING CONSTRUCTION.	CUSTOMER APPROVAL						DRAWN BY:	 OHIO DEPARTMENT OF COMMERCE REYNOLDSBURG, OH COMMERCIAL PUMPER - C2
	NAME:						RAGHU	
	TITLE:						DATE:	
	DATE:						04/07/22	
IN THE EVENT OF A DISCREPANCY BETWEEN THE SUTPHEN SPECIFICATIONS AND DRAWING, THE SUTPHEN SPECIFICATIONS SHALL PREVAIL.			REV A	QMAX-1500 GPM SS PUMP		RAGHU	6-16-22	MFG. FACILITY:
DRAWING IS FOR REFERENCE ONLY. SOME ITEMS PROPOSED MAY NOT BE SHOWN OR NOTED.			REV.	DESCRIPTION		BY	DATE	SUTPHEN EAST LAKE ARIEL, PA
THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF SUTPHEN CORPORATION.							DWG. NO.: HS-####	