



**TOWN OF WESTWOOD
COMMONWEALTH OF MASSACHUSETTS**

**FIRE SQUAD TRUCK
Contract Specification
Bid # FIRE-24-B-019**

GENERAL CONSTRUCTION

The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject.

All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service.

All parts of the apparatus shall be strong enough to withstand general service under full load.

The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair.

Contractor specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901 and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.

The apparatus shall be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters shall be carried without overloading or injuring the apparatus.

APPROVAL DRAWING

A detailed drawing of the apparatus shall be provided to the Town for approval before apparatus construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon Town approval, the finalized drawing shall become a part of the total contract.

The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suction, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.

DELIVERY

Delivery of the apparatus to the customer shall be the contractor's responsibility.

On initial delivery of the fire apparatus, a qualified and responsible representative of the contractor shall demonstrate the apparatus and provide initial instruction to representatives of the customer regarding the operation, care, and maintenance of the apparatus and equipment supplied.



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FAMA MEMBERSHIP

The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturer's Association (FAMA).

MANUFACTURED IN UNITED STATES

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.

WARRANTY, STARTING ON DELIVERY DATE

Warranty coverage by Contractor will begin on the date of delivery to the customer.

INSPECTION TRIPS

The Contractor shall provide two (2) factory inspection trips to the apparatus manufacturer's facility. Transportation, meals, lodging, and other requisite expenses shall be Contractor responsibility.

TRIP ONE (1) AT PRE CONSTRUCTION

Pre-construction / blueprint review.

TRIP TWO (2) AT FINAL COMPLETION

Final inspection upon completion.

FMVSS REQUIREMENT

The chassis shall be certified by the apparatus manufacturer as conforming to all applicable Federal Motor Vehicle Safety Standards (FMVSS) in effect at the date of contract.

This shall be attested to by the attachment of an FMVSS certification label on the vehicle by the contractor who shall be recognized as the responsible final manufacturer.

GENERAL INFORMATION - NFPA 1900

The apparatus will be constructed to withstand the severe and continuous use encountered during emergency firefighting services. The apparatus will be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.

This proposal details the general design criteria of cab and chassis components, fire pump and related components (if applicable), water tank (if applicable), fire body, electrical components, painting, and equipment.



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All items of these specifications will conform to the fullest extent possible with the National Fire Protection Association Pamphlet No. 1906, latest edition, except as noted in the Statement-of-Exceptions. The contract MUST identify any exceptions in their bid.

Contractor will furnish satisfactory evidence of our ability to construct, supply service parts and technical assistance for the apparatus specified.

NFPA TREAD PLATE STEPPING/STANDING/WALKING SURFACE CERTIFICATION

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards.

Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be NFPA embossed compliant.

VERTICAL TREAD PLATE

The following vertical surfaces on the vehicle (if applicable) shall have non-embossed tread plate:

To include but not limited to:

- Rear of cab overlay
- Rear body overlay
- Front of body overlay
- Custom cab step well
- Fender overlay
- Fender compartment doors
- Interior cab trim
- Upper body walkway walls
- Rescue body interior

INITIAL ATTACK FIRE APPARATUS

The unit shall be designed to conform fully to the "Initial Attack Fire Apparatus" requirements as stated in the NFPA 1900 Standard (2024 Revision), which shall include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 6 Initial Attack Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Devices
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting
- Chapter 16 Fire Pumps and Associated Equipment
- Chapter 18 Water Tanks



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THIRD PARTY TESTING

If required by the specific chapters of NFPA-1900, the proposed unit shall be tested and certified by independent third party inspectors.

All test work for fire pumps outlined in NFPA 1900, Edition shall be conducted. The third party inspectors shall provide the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility.

This report specifies the points of inspection and results of such examinations and tests.

The inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

The actual person(s) performing the inspection shall present for review proof of Level II Certification in the required NDT methods.

The apparatus manufacturer shall designate, in writing, who is qualified to witness and certify these test results.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report shall be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program.

When the unit successfully meets all the requirements outlined in NFPA 1900, current edition, the third-party inspector shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with NFPA- 1900.

COMMERCIAL CHASSIS

Model Profile

2025 HV507 SFA (HV507)

MISSION:
GCWR: 80000

Requested GVWR: 35000. Calc. GVWR: 42000. Calc.

Calc. Start / Grade Ability:
46.45% / 5.34% AT 55 MPH
Calc. Geared Speed: 67.8
MPH

DIMENSION:
ENGINE, DIESEL:

Wheelbase: 209.00, CA: 90.10, Axle to Frame: 75.00
{Cummins L9 450} EPA 2024, 450HP AT 2100 RPM, 1250
lb-ft Torque AT 1200 RPM, 2100 RPM Governed Speed,
450 Peak HP (Max), (RATED FOR EMERGENCY
VEHICLES ONLY)

TRANSMISSION, AUTOMATIC: {Allison 3000 EVS} 6th Generation Controls, Close Ratio, 6-
Speed with Double Overdrive, with PTO Provision, Less
Retarder, Includes Oil Level Sensor



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	: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel
	: PARKING BRAKE VALVE for Truck
	: QUICK RELEASE VALVE on Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4
	: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4/8x6
4732	DRAIN VALVE {Berg} with Pull Chain, for Air Tank
4AZS	AIR BRAKE ABS {Bendix AntiLock Brake System} 4-Channel (4 Sensor/4 Modulator) Electronic Stability Program, with Automatic Traction Control
4EBT	AIR DRYER {Bendix AD-IP} with Heater
4ERD	BRAKE CHAMBERS, POSITION Rotated Forward and Up for Maximum Ground Clearance with 4x4
4ETG	BRAKE CHAMBERS, FRONT AXLE {MGM} 24 Sqli
4EXU	BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 Sqli Spring Brake
4GBM	BRAKE, PARKING Manual Push-Pull Pneumatic Parking Brake
4LAA	SLACK ADJUSTERS, FRONT {Haldex} Automatic
4LGA	SLACK ADJUSTERS, REAR {Haldex} Automatic
4SPA	AIR COMPRESSOR {Cummins} 18.7 CFM
4VDU	AIR TANK LOCATION (2) Mounted Left Side BOC Under Battery Box
4VGG	AIR DRYER LOCATION Mounted Inside Left Rail, Behind Transfer Case Mounting
4WBX	DUST SHIELDS, FRONT BRAKE for Air Cam Brakes
4WDM	DUST SHIELDS, REAR BRAKE for Air Cam Brakes
4XDA	BRAKES, REAR {Meritor 16.5X8.625 CAST PLUS} Air S-Cam Type, Cast Spider, Cast Shoe, Double Anchor Pin, Size 16.5" X 8.625", 38,000-lb Capacity per Axle
4XDT	BRAKES, FRONT {Meritor 16.5X6 Q-PLUS CAST} Air S-Cam Type, Cast Spider, Fabricated Shoe, Double Anchor Pin, Size 16.5" X 6", 23,000-lb Capacity
5710	STEERING COLUMN Tilting and Telescoping
5CAW	STEERING WHEEL 4-Spoke; 18" Dia., Black
5PSL	STEERING GEAR {Sheppard M110} Power
6DHK	DRIVELINE SYSTEM {Dana Spicer} SPL170 Main Driveline, 1710 Driveline to Transfer Case, SPL140 Driveline to Front Axle, for 4x4
7BEU	AFTERTREATMENT COVER Aluminum
7BMH	EXHAUST SYSTEM Horizontal Aftertreatment System, Frame Mounted Right Side Under Cab, for Single Short Horizontal Tail Pipe, Frame Mounted Right Side Back of Cab, for All-Wheel Drive
7SDP	ENGINE COMPRESSION BRAKE {Jacobs} for Cummins ISL/L9 Engines; with Selector Switch and On/Off Switch
7WEC	TAIL PIPE (1) Horizontal, Short, Exits Right Side Located Next to Transfer Case
7WZX	SWITCH, FOR EXHAUST 3 Position, Momentary, Lighted Momentary, ON/CANCEL, Center Stable, INHIBIT REGEN, Mounted in IP Inhibits Diesel Particulate Filter Regeneration When Switch is Moved to ON While Engine is Running, Resets When Ignition is Turned OFF



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8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment <u>Includes</u> : DATA LINK CONNECTOR for Vehicle Programming and Diagnostics In Cab : HAZARD SWITCH Push On/Push Off, Located on Instrument Panel to Right of Steering Wheel : HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever : PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light : STARTER SWITCH Electric, Key Operated : STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector : TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature : WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever : WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted : WIRING, CHASSIS Color Coded and Continuously Numbered
8541	HORN, ELECTRIC (2) Disc Style
8585	FOG LIGHTS Prewire; Includes Auxiliary Switch and Wiring to Front Bumper, for Driving Lights or Fog Lights Mounted by Customer
8630	IGNITION SWITCH Keyless
8718	POWER SOURCE Cigar Type Receptacle without Plug and Cord
8GXX	ALTERNATOR {Leece-Neville BLP4006HN} Brushless, 12 Volt, 325 Amp Capacity, Pad Mount, with Remote Sense
8HAB	BODY BUILDER WIRING Back of Day Cab at Left Frame or Under Sleeper, Extended or Crew Cab at Left Frame; Includes Sealed Connectors for Tail/Amber Turn/Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn
8MSG	BATTERY SYSTEM {Fleetrite} Maintenance-Free, (3) 12-Volt 1980CCA Total, Top Threaded Stud
8RMZ	SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars
8RPR	ANTENNA for Increased Roof Clearance Applications
8RPS	RADIO AM/FM/WB/Clock/Bluetooth/USB Input/Auxiliary Input
8THB	BACK-UP ALARM Electric, 102 dBA
8TPA	DATA RECORDER Includes Display Mounted in Overhead Console
8VTV	STOP-LIGHT WIRING MODIFIED Stop-Lights Turned on When Engine Compression Brake, Exhaust Brake or Retarder is Activated
8WDB	BATTERY BOX Steel, with Plastic Cover, 30" Wide, 2-4 Battery Capacity, Mounted Left Side Back of Fuel Tank
8WGB	SOLENOID, AIR for Customer Use; Provides (2) Normally Closed Pilot Air Source, Approx. 4 CFM, Includes Latched Switch in Cab; Air Available Only with Key in "Ignition" or "Accessory" Position; Air Will Exhaust with Key in "Off" Position
8WGL	WINDSHIELD WIPER SPD CONTROL Force Wipers to Slowest Intermittent Speed When Park Brake Set and Wipers Left on for a Predetermined Time
8WHE	HORN, AIR Accommodation Package, Less Horn
8WPH	CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade



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8WPZ	TEST EXTERIOR LIGHTS Pre-Trip Inspection will Cycle all Exterior Lamps Except Back-up Lights
8WRB	HEADLIGHTS ON W/WIPERS Headlights Will Automatically Turn on if Windshield Wipers are turned on
8WSK	SWITCH, BODY CIRCUITS, REAR with Remote Power Module Mounted at Rear on Frame, Up to 6 Outputs & 6 Inputs, Max 20 amp per Channel, Max 80 amp Total, Includes 1 Switch Pack with Momentary Switches
8WTR	COURTESY LIGHT (4) Mounted In Front & Rear Map Pocket Left and Right Side
8WWJ	INDICATOR, LOW COOLANT LEVEL with Audible Alarm
8WXG	STARTING MOTOR {Mitsubishi Electric Automotive America 105P} 12-Volt, with Soft-Start
8WZP	INDICATOR, BATTERY WARNING Green BATTERY ON Indicator, Mounted on Left Side of Instrument Panel, To be Used with Factory Installed or Customer Mounted Battery Disconnect Switch
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III with Trip Indicators, Replaces All Fuses
8XGT	TURN SIGNALS, FRONT Includes LED Side Turn Lights Mounted on Fender
8XHV	BATTERY DISCONNECT SWITCH for Cab Power Disconnect Switch, Disconnects Power to Power Distribution Center (PDC) and Body Builder Through Solenoid, Does Not Disconnect Charging Circuits, Locks with Padlock, Cab Mounted
8XKG	DOME LIGHT, CAB with Red Reading Lights
8XKM	SWITCH, AIR HORN, PASSENGER Fire Truck Application; Momentary Switch Located in Instrument Panel Close to Passenger, Driver Also To Activate Switch with Lanyard
8XNZ	HEADLIGHTS Halogen, with Daytime Running Lights
8XPL	POWER SOURCE, ADDITIONAL Two Auxiliary Power Outlets (APO) with Two USB-A Ports and Two USB- C Ports, Located in the Instrument Panel
9585	FENDER EXTENSIONS Rubber
9AAB	LOGOS EXTERIOR Model Badges
9AAE	LOGOS EXTERIOR, ENGINE Badges
9HAN	INSULATION, UNDER HOOD for Sound Abatement
9HBM	GRILLE Stationary, Chrome
9HBN	INSULATION, SPLASH PANELS for Sound Abatement
9WAC	BUG SCREEN Mounted Behind Grille
9WBC	FRONT END Tilting, Fiberglass, with Three Piece Construction, for WorkStar/HV
10209	PAINT SCHEMATIC, PT-1 Two Tone, Design 209.
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone
10771	PAINT CLASS Single Custom Color
10AGB	COMMUNICATIONS MODULE Telematics Device with Over the Air Programming; Includes Five Year Data Plan and International 360
10BAE	LABEL, DEF "DEF ONLY"
10WCY	SAFETY TRIANGLES
10WKJ	KEYS - ALL ALIKE, ID I-1003 Compatible with Z-001



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11001	CLUTCH Omit Item (Clutch & Control)
12703	ANTI-FREEZE Red, Extended Life Coolant; To -40 Degrees F/ -40 Degrees C, Freeze Protection
12849	BLOCK HEATER, ENGINE 120V/1000W, for Cummins ISB/B6.7/ISL/L9 Engines <u>Includes</u> : BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door
12EZE	ENGINE, DIESEL {Cummins L9 450} EPA 2024, 450HP AT 2100 RPM, 1250 lb-ft Torque AT 1200 RPM, 2100 RPM Governed Speed, 450 Peak HP (Max), (RATED FOR EMERGENCY VEHICLES ONLY)
12THT	FAN DRIVE {Horton Drivemaster} Two-Speed Type, Direct Drive, with Residual Torque Device for Disengaged Fan Speed <u>Includes</u> : FAN Nylon
12UYH	RADIATOR Aluminum, Cross Flow, Front to Back System, 1469 SqIn, with 1172 SqIn Charge Air Cooler <u>Includes</u> : DEAERATION SYSTEM with Surge Tank : HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps : RADIATOR HOSES Premium, Rubber
12VBB	AIR CLEANER Dual Element
12VJS	EMISSION, CALENDAR YEAR {Cummins L9} EPA, OBD and GHG Certified for Calendar Year 2024
12VXU	THROTTLE, HAND CONTROL Engine Speed Control for PTO; Electronic, Stationary Pre-Set, Two Speed Settings; Mounted on Steering Wheel
12WBR	FAN OVERRIDE Manual; with Electric Switch on Instrument Panel, (Fan On with Switch On)
12WVG	EPA IDLE COMPLIANCE Low NOx Idle Engine, Complies with EPA Clean Air Regulations; Includes "Certified Clean Idle" Decal on Hood
12WZE	CARB IDLE COMPLIANCE Does Not Comply with California Clean Air Idle Regulations
12XBM	ENGINE CONTROL, REMOTE MOUNTED Provision for; Includes Wiring for Body Builder Installation of PTO Controls and Starter Lockout, with Ignition Switch Control, for Cummins B6.7 and L9 Engines
12XCS	CARB EMISSION WARR COMPLIANCE Does Not Comply with CARB Emission Warranty
13BCU	TRANSMISSION, AUTOMATIC {Allison 3000 EVS} 6th Generation Controls, Close Ratio, 6-Speed with Double Overdrive, with PTO Provision, Less Retarder, Includes Oil Level Sensor
13TKA	TRANSFER CASE {Meritor MTC-4210} 2-Speed, 10,000 lb-ft Torque Rating, with PTO Provision, Electric Over Air Control, with Lube Pump
13WAW	OIL COOLER, TRANSMISSION {Modine} Water to Oil Type
13WDB	TRANSFER CASE LUBE {EmGard 50W} Synthetic; 1 thru 14.99 Pints
13WET	TRANSMISSION SHIFT CONTROL Column Mounted Stalk Shifter, Not for Use with Allison 1000 & 2000 Series Transmission
13WGC	OIL COOLER, TRANSFER CASE with Oil Coolant Lines Routed to Oil Cooler



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13WLP	TRANSMISSION OIL Synthetic; 29 thru 42 Pints
13WUZ	ALLISON SPARE INPUT/OUTPUT for Emergency Vehicle Series (EVS), Fire/Pumper, Tank, Aerial/Ladder, Package Number 198, Includes J1939 Based Auto Neutral
13WYU	SHIFT CONTROL PARAMETERS {Allison} 3000 or 4000 Series Transmissions, Performance Programming
13XAL	PTO LOCATION Customer Intends to Install PTO at Left Side of Transmission
14ASA	AXLE, REAR, SINGLE {Meritor RS-26-185} Single Reduction, 26,000-lb Capacity, Driver Controlled Locking Differential, R Wheel Ends . Gear Ratio: 6.14 <u>Notes</u> : Axle Lead Time is 60 Days
14VAJ	SUSPENSION, REAR, SINGLE 31,000-lb Capacity, Vari-Rate Springs, with 4500-lb Capacity Auxiliary Rubber Springs
14WAP	SHOCK ABSORBERS, REAR (2)
15924	FUEL TANK STRAPS Bright Finish Stainless Steel
15LNS	FUEL/WATER SEPARATOR {Racor 400 Series} 12 VDC Electric Heater, Includes Pre-Heater, with Primer Pump, Includes Water-in-Fuel Sensor, Mounted on Engine
15SRE	FUEL TANK Top Draw, Non-Polished Aluminum, D-Style, 19" Tank Depth, 50 US Gal (189L), Mounted Left Side, Under Cab
15WCS	FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module
15WDG	DEF TANK 7 US Gal (26L) Capacity, Frame Mounted Outside Left Rail, Under Cab
15WTM	AUXILIARY FUEL DRAW TUBE Located at Auxiliary Port on Fuel Tank
16196	CAB Conventional 6-Man Crew Cab
16BAM	AIR CONDITIONER with Integral Heater and Defroster
16GEG	GAUGE CLUSTER Premium Level; English with English Electronic Speedometer <u>Includes</u> : GAUGE CLUSTER DISPLAY: Base Level (3" Monochromatic Display), Premium Level (5" LCD Color Display); Odometer, Voltmeter, Diagnostic Messages, Gear Indicator, Trip Odometer, Total Engine Hours, Trip Hours, MPG, Distance to Empty/Refill for : GAUGE CLUSTER Speedometer, Tachometer, Engine Coolant Temp, Fuel Gauge, DEF Gauge, Oil Pressure Gauge, Primary and Secondary Air Pressure : WARNING SYSTEM Low Fuel, Low DEF, Low Oil Pressure, High Engine Coolant Temp, Low Battery Voltage (Visual and Audible), Low Air Pressure (Primary and Secondary)
16GHV	GRAB HANDLE, CAB INTERIOR (4) Safety Yellow, Crew Cab
16HCL	SEATBELT WARNING PREWIRE Includes Seat Belt Switches and Seat Sensors for all Belted Positions in the Cab and a Harness Routed to the Center of the Dash for the Aftermarket Installation of the Data Recorder and Seatbelt Indicator Systems, for 4 to 6 Seat Belts
16HGH	GAUGE, OIL TEMP, AUTO TRANS for Allison Transmission
16HHE	GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} Mounted in Instrument Panel
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in



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	Gauge Cluster
16JAJ	SEAT, PASSENGER {H.O. Bostrom Tanker 450} for SCBA with SecureAll Locking System, Non-Suspension, High Back, Vinyl, Adjusters, 7-Degree Back Angle, with Covered Back, International Logo on Headrest
16JJG	SEAT, DRIVER {H.O. Bostrom Sierra Air 100} NFPA Compliant, Air Suspension, High Back, Vinyl with Covered Back and International Logo on Headrest, for Fire Truck
16REA	SEAT, REAR {H.O. Bostrom Tanker 400CT} for SCBA with Secure All Locking System, Two Individual Seats on One Riser, Non Suspension, High Back, Vinyl, with Covered Back and International Logo on Headrest
16SDC	GRAB HANDLE, EXTERIOR (2) Chrome, Towel Bar Type, with Anti-Slip Rubber Inserts, for Cab Entry Mounted Left and Right Side at B-Pillar
16SNR	MIRRORS (2) C-Loop, Power Adjust, Heated, LED Clearance Lights, Bright Heads and Arms, 7.5" x 14" Flat Glass, Includes 7.5" x 7" Convex Mirrors, for 102" Load Width
	<u>Notes</u> : Mirror Dimensions are Rounded to the Nearest 0.5"
16VCA	SEAT BELT All Red; 4 to 6
16VHX	CAB MOUNTING HEIGHT EFFECTS High Cab in Lieu of Mid High Cab Mounting (Approx. 4.5")
16VKD	CAB INTERIOR TRIM Classic, for Crew Cab
	<u>Includes</u> : CONSOLE, OVERHEAD Molded Plastic with Dual Storage Pockets, Retainer Nets and CB Radio Pocket; Located Above Driver and Passenger : DOME LIGHT, CAB Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Overhead Console, Center Mounted : SUN VISOR (2) Padded Vinyl; 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Toll Ticket Strap
16VLV	MONITOR, TIRE PRESSURE Omit
16WJV	WINDOW, POWER (4) And Power Door Locks, Front and Rear Doors, Left and Right, Includes Express Down Feature
16WSK	CAB REAR SUSPENSION Air Bag Type
16XJN	INSTRUMENT PANEL Flat Panel
16ZBU	ACCESS, CAB Steel, Driver & Passenger Sides, Two Steps per Door, for use with Crew Cab
27DUS	WHEELS, FRONT {Accuride 41730} DISC; 22.5x9.00 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs
28DUS	WHEELS, REAR {Accuride 41730} DUAL DISC; 22.5x9.00 Rims, Extra Polish Aluminum, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs
60AAB	BDY INTG, REMOTE POWER MODULE (2) Mounted Under Cab or On Battery Box, Up to 6 Outputs & 6 Inputs Each, Max 20 amp per Channel, Max 80 amp Total; Includes 2 Switch Packs with Latched Switches
60ACW	BDY INTG, I/O EXP HARNESS {for Diamond Logic Builder} In-Cab wire harness (DLB) program only, Includes a harness with five blunt cut wires



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7682543212 routed on lower left of instrument panel. Two ground active inputs and two (.5Amp) relay drivers outputs are provided
(2) TIRE, FRONT 315/80R22.5 Load Range L XZU-S2 (MICHELIN), 488 rev/mile, 65 MPH, All-Position

7682543212 (4) TIRE, REAR 315/80R22.5 Load Range L XZU-S2 (MICHELIN), 488 rev/mile, 65 MPH, All-Position

Services Section:
40128 WARRANTY Standard for HV507, HV50B, HV607 Models, Effective with Vehicles Built July 1, 2017 or Later, CTS-2025A

CENTER CONSOLE – GRAY TEXTURE PAINT

A center console fabricated from 1/8" aluminum shall be provided and mounted between the driver and officer's seats. The console shall be designed with a brush pewter upper and lower panel. The upper panel shall be the mounting surface for optional switches (all emergency switches will utilize switching provided in the chassis dash), applicable indicator lights and electronic siren control boxes. The lower panel shall be used for mount of applicable radios, joysticks, pump controls, etc. all controls will be within reach of the driver or officer.

In addition, the console shall be equipped with two (2) map/notebook storage pockets at the rear of the console. The console dimensions are based on the available space in the cab. A Blue Sea model #4363 multi-use power point with built in two (2) USB ports, and one (1) 12-volt socket shall be installed on the console.

A Blue Sea model #5032 split 12 space fuse block shall be installed in the center console. Side "A" shall be battery power and side "B" shall be battery disconnect. The fuse block shall be limited to 60 amps per load group and 30 amps per circuit with a total amperage capacity of 100 amps.

The console will be painted with gray texture paint.

VEHICLE TOP SPEED

The rear axle shall be geared for a vehicle top speed in accordance with NFPA sections 4.15.2 and 4.15.3.

Units with GVWR over 26,000 pounds shall be limited to 68 mph. If the combined tank capacity is over 1250 gallons of foam and water or the GVWR is over 50,000 pounds, the vehicle top speed shall be limited to 60 mph or the fire service rating of the tires, whichever is lower.

INTERNATIONAL SAE J2433 ROLLOVER TESTING

The International chassis shall comply with SAE J2422 Cab Roof Strength Evaluation. The Cab to Chassis Mounting System shall remain attached to the vehicle chassis and in an orientation similar to its original position when subjected to 20g deceleration load in the forward direction.



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Components in the mounting system may become distorted or broken but never dislodge from the original mounting location.

OFFICER SIDE UNDER CAB STORAGE COMPARTMENT

A weatherproof tool storage compartment shall be mounted under the officer side rear cab door.

The compartment shall be constructed of 3/16" aluminum plate.

This compartment shall utilize the maximum amount of space available with approximate interior dimensions of 34" wide by 15" high by 21" deep.

The door opening shall be as large as possible while still maintaining NFPA step height requirements.

The doors shall be flush D-ring slam latch style and made from tread plate.

The interior of the compartments shall remain unpainted.

DRIVER SIDE CAB STEP OVERLAY

The entire driver side front and rear cab step area shall be overlaid with aluminum tread plate.

OFFICER SIDE CAB STEP OVERLAY

The entire officer side front and rear cab step area shall be overlaid with aluminum tread plate.

EXHAUST ADAPTER

The exhaust outlet shall be a straight pipe, forward of the rear axle. It shall be terminating minimum 6" forward of rear tire, minimum 2.5" below rub rail/body, and flush with outboard of rub rail/body to connect with a *magnetic* Plymovent ventilation system.

STANDARD #MATM ANTENNA

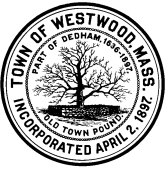
Three (3) antenna mounting base model #MATM with 17' of coaxial cable shall be provided and installed on the cab roof.

The attached antenna wire shall run to the center console.

The Fire Department is responsible to have the correct antenna whip and termination installed once the apparatus is delivered.

CAB STEP LIGHTS

Tecniq E-03 step lights shall be provided. There should be one (1) placed next to each cab door to illuminate the cab stepping surfaces. The step lights shall be mounted in a convenient location to provide appropriate illumination to the cab stepping surfaces. The step lights shall automatically activate when the parking brake is applied and marker lights are activated.



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REAR CAB EMS COMPARTMENT

A storage compartment shall be mounted against the rear wall of the cab crew area. The compartment shall be approximately 53" high (depending on roof height) x 36" wide x 20" deep. The door opening shall be approximately 49" high x 32" wide.

The compartment shall be constructed of smooth aluminum and shall be equipped with a roll-up door. The compartment shall be painted to match the interior color of the cab.

One (1) adjustable shelf shall be provided in the EMS compartment. The shelf shall be constructed from 3/16" brush aluminum mounted to uni-strut tracking material.

The EMS compartment shall be equipped with the noted quantity On Scene Solutions, Access Series, LED interior light. The light shall be wired to automatically activate when the compartment door is open and the master battery switch is in the "on" position.

One (1) Blue Sea 5025B, 6 circuit fuse block shall be installed in the cab EMS compartment. The block has a maximum amperage of 60 Amps per block and 30 Amps per circuit.

COMMERCIAL CHASSIS ELECTRICAL SYSTEM DESCRIPTION

The commercial chassis electrical system shall be provided as furnished by the original manufacturer. A customized interface shall be provided and designed, so as not to disturb any of the required chassis functions. The necessary interfaces shall only be provided in areas where load management is allowed or with accessory components provided on the chassis.

FRONT BUMPER

A 12" high, 96" wide, two (2) ribbed, bright finish stainless steel front bumper shall be provided.

The bumper shall be extended 16" with an aluminum tread plate gravel shield.

CENTER WELL

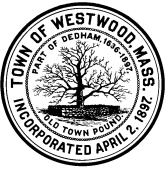
One (1) storage well-constructed of 1/8" aluminum shall be installed in the gravel shield. This storage well shall be center mounted between the chassis frame rails. The bottom of the storage well shall have a minimum of four (4) drain holes.

CENTER WELL COVER

One (1) hinged, latched, aluminum, tread plate cover shall be installed on the storage well located in the center of the bumper extension.

CENTER WELL - GENERAL STORAGE

The center storage well shall be utilized the winch specified below.



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The well shall be as large as space allows.

DRIVER SIDE BUMPER STORAGE WELL

One (1) storage well, constructed of 1/8" aluminum shall be installed in the gravel shield. This storage well shall be located on the driver side of the bumper extension. The bottom of the storage well shall have a minimum of four (4) drain holes.

The storage well will extend to the bottom of the front bumper tow hooks.

DRIVER SIDE STORAGE WELL COVER

One (1) hinged, latched, tread plate cover shall be installed on the storage well located in the driver side of the bumper extension.

DRIVER WELL- GENERAL STORAGE

The driver storage well shall be utilized for general storage of tools or equipment, the well shall be as large as space allows.

OFFICER SIDE BUMPER STORAGE WELL

One (1) storage well, constructed of 1/8" aluminum shall be installed in the gravel shield. This storage well shall be located on the officer side of the bumper extension. The bottom of the storage well shall have a minimum of four (4) drain holes.

The storage well will extend to the bottom of the front bumper tow hooks.

OFFICER SIDE STORAGE WELL COVER

One (1) hinged, latched, aluminum, tread plate cover shall be installed on the storage well located in the officer side of the bumper extension.

The specified cover shall be notched for pre-connected hose.

OFFICER WELL – HOSE STORAGE

The officer storage well shall have a hose capacity of 100' of 1 3/4" with nozzle.

ELECTRIC WINCH MOUNTED IN BUMPER EXTENSION

A Warn Series 12 A-1 D model #30289, 12000 lb. electric planetary winch shall be mounted between the frame rails at the front bumper extension. The winch shall be equipped with an automatic disk brake, heavy duty, thermally protected, series wound, industrial electric motor, and a hardened steel, 3-stage, planetary, gear train. A 32' industrial remote-control head shall be provided with the remote plug mounted directly on the winch housing. The winch shall be equipped with 125' of 3/8" EIPS industrial grade wire rope, model #23674, that includes a hook. A four-way, fair lead, roller assembly, model #24336, shall be provided at the winch opening in



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the front bumper. A hinged, tread plate lid shall be provided on the bumper extension to access the winch for service and to plug the remote control into the winch. The winch shall meet all SAE J 706 requirements as outlined in the latest revision of NFPA 1901.

TOW EYES

Two (2) painted steel tow eyes shall be fastened directly to the bumper support structure that extends below the bumper.

The tow eyes shall be fastened with grade 8 bolts and nuts.

TIRE PRESSURE MONITORING

Each tire shall be equipped with an LED tire alert pressure management system (Vecsafe equal) that shall monitor tire pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire.

The sensor shall calibrate the tire pressure when installed on the valve stem for pressures between 20 and 120 psi.

The sensor shall activate an integral battery-operated LED when the pressure of that tire drops 8 psi.

AIR EJECT

A Kussmaul Auto Air Eject #091-28 inlet shall be provided. The Air Eject shall be mounted using a Kussmaul Weatherproof Adapter Kit #091-28AK.

The Kussmaul air-eject connection shall be equipped with a Red weatherproof cover.

The air eject shall be located in the driver's cab step well in a pre-determined location.

TRANSMISSION LOCK-UP

The automatic transmission furnished in the chassis shall have a lock-up assembly which brings the transmission to direct drive and prevents the transmission from shifting gears while in the pumping mode.

A positive braking system shall be provided to prevent vehicle movement during pumping operations.

The air brakes furnished must satisfy this requirement.

12 VOLT ELECTRICAL SYSTEM TESTING

The apparatus' low voltage electrical system shall be tested and certified by the manufacturer. The certification shall be provided with the apparatus. All tests shall be performed with the air temperature between 0°F and 100°F.



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The following three (3) tests shall be performed in order. Before each test, the batteries shall be fully charged.

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

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

The total continuous electrical load shall be activated with the engine running up to the engine manufacturers governed speed. The test duration shall be a minimum of 2 hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of fewer than 11.7 volts DC for a 12-volt system, for more than 120 seconds, shall be considered a test failure.

Following completion of the preceding tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm is activated.

The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of fewer than 11.7 volts shall be considered a test failure. The battery system shall then be able to restart the engine.

At the time of delivery, documentation shall be provided with the following information:

- Documentation of the electrical system performance test
- A written load analysis of the following;
- Nameplate rating of the alternator
- Alternator rating at idle while meeting the minimum continuous electrical load
- Each component load comprising the minimum continuous electrical load.
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

DIRECT BATTERY GROUNDING STRAP

If the electrical system requires, direct grounding straps shall be mounted to the following areas; frame to cab, frame to body and frame to pump enclosure.

All exposed electrical connections shall be coated with "Z-Guard 8000" to prevent corrosion.



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BATTERY DISCONNECT SWITCH

The chassis batteries shall be wired in parallel to a single 12-volt electrical system, controlled through a heavy-duty master disconnect switch.

The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab.

SHORELINE INLET

One (1) Kussmaul "Super" Auto Eject automatic, 120-volt, 20-amp shoreline disconnect shall be provided for the on board, 110-volt battery charging systems.

The disconnect shall be equipped with a NEMA 5-20 P male receptacle, which shall automatically eject the shoreline when the vehicle starter is energized.

The mating connector shall be included with the auto eject and shall be provided as loose equipment.

A label shall be provided indicating voltage and amperage ratings.

SHORELINE INLET COVER

The Kussmaul auto-eject connection shall be equipped with a Yellow weatherproof cover.

SHORELINE INLET LOCATION

The shoreline receptacle shall be located in the driver's cab step well in a pre-determined location by KME.

SHORELINE INLET LABEL

A shoreline power receptacle information plate shall be permanently affixed at or near the power inlet. The plate shall indicate the following:

- Type of Line Voltage
- Current Rating in Amps Power Inlet Type (DC or AC).

BATTERY CHARGER/INVERTER

The chassis shall be equipped with A Mastervolt, PowerCombi 12/2000-100, fully automatic battery inverter/charger.

The unit shall contain a 100 amp, fully automatic battery charger to re-charge and maintain the chassis batteries when the shoreline connection has been made.

The unit shall also contain a built-in inverter capable of providing 2,000 watts of continuous AC power and a 4,000-watt surge capacity.



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The unit shall have a built in 30-amp transfer switch capable of diverting AC power to AC loads during shoreline connection.

The inverter/charger shall also have a cab dash mounted PowerCombi used for setting up the inverter / charger operation, as well as viewing current status of fault messages.

12 VOLT POWER AND GROUND CIRCUIT

One (1) dedicated circuit; 12-volt, 40 Amp, power and ground on 3/8 stud and fused at battery shall be located in the center console.

The circuit shall be for future installation of radios or accessories.

BLUE SEA FUSE BLOCK – BODY COMPARTMENTS

Four (4) Blue Sea 5025B, 6 circuit fuse block, shall be installed in the specified body compartments as required.

- One (1) located in the L3 compartment
- One (1) located in the R1 compartment
- One (1) located in the R2 compartment
- One (1) located in the R3 compartment

IGNITION STUD - REAR CREW AREA

An ignition stud shall be installed in the center console for items needing an ignition circuit.

This stud has a maximum amperage of 20 Amps.

SHORELINE BODY RECEPTACLES

Two (2) 120 volt 5-20 R household type receptacles shall be located in the specified body compartments. The receptacles shall be wired into the shoreline receptacle to provide a 120-volt power source for fire department equipment.

- One (1) located in the L3 compartment
- One (1) located in the R3 compartment

WHELEN 6" ROUND WHITE/RED LED INTERIOR LIGHTS

A Whelen # 60CREGCS, 6" round, interior LED combination red/white dome lights shall be furnished in the forward section of the cab.

Each dome light shall have individual switches to control the red or white LEDs.

WHELEN 6" ROUND WHITE/RED LED INTERIOR LIGHTS

A Whelen # 60CREGCS, 6" round, interior LED combination red/white dome lights shall be furnished in the rear section of the cab.

Each dome light shall have individual switches to control the red or white LEDs.



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ENGINE COMPARTMENT WORK LIGHTS - TECNIQ LED

Two (2) Tecniq model #E18 LED lights shall be provided inside the engine enclosure that will provide 800 lumens each.

Each light shall have their own independent switch incorporated into the light head.

CAMERA SYSTEM

An FRC InView TrueSight rear vision camera system model BCA111-A00 shall be provided to allow the driver to visually see the rear of the apparatus while in the cab. The system shall include an FRC 7" color monitor mounted adjacent to the driver and an FRC color camera that shall be mounted at the rear of the vehicle.

The rear vision camera shall be wired to automatically activate when the chassis transmission is placed in reverse.

CAMERA MONITOR

The monitor for the rear vision system shall be mounted to the ceiling of the cab in easy view of the driver.

COMMERCIAL CHASSIS MARKER LIGHTS AND REFLECTORS

Cab marker lights and signaling devices shall be as provided on the commercial chassis cab from the original chassis manufacturer. FMVSS reflectors shall also be provided as required.

CAB STEP LIGHTS, TECNIQ EON 3 LED, ALL DEVICES

Polished, stainless steel, TecNiq Eon, 3-LED, horizontal surface mounted chassis step lights shall be provided and controlled with marker light actuation and park brake application.

Step lights shall be located to properly illuminate all chassis access steps and walkway areas and shall include a mounting gasket to provide a watertight seal.

FRONT BROW LIGHT

One (1) Whelen Pioneer Summit scene light, model S72W shall be provided.

The light instrument shall be low in profile with a mounting bracket allowing installation at the top edge of the windshield.

The housing color shall be White.

A control switch shall be provided in the cab switch console.



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DRIVER SIDE CAB SCENE LIGHT

One (1) Whelen Pioneer Summit scene light, model S30W shall be provided on the driver side cab roof.

The light instrument shall be low in profile with a mounting bracket allowing installation on the cab roof.

A control switch shall be provided in the cab switch console.

OFFICER SIDE CAB SCENE LIGHT

One (1) Whelen Pioneer Summit scene light, model S30W shall be provided on the officer side cab roof.

The light instrument shall be low in profile with a mounting bracket allowing installation on the cab roof.

A control switch shall be provided in the cab switch console.

NFPA COMPLIANT WARNING LIGHT PACKAGE

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1900 Fire Apparatus Standard.

The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

WARNING LIGHT FLASH PATTERN - NFPA FLASH PATTERN

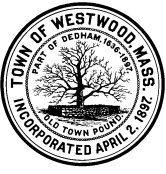
All of the perimeter warning lights shall be set to a default NFPA compliant flash pattern as provided by the light manufacturer.

LIGHT PACKAGE ACTUATION/CONTROLS

The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

LIGHT PACKAGE NFPA CERTIFICATION

The warning light system(s) specified above shall not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.



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The warning light system(s) shall be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1900 Fire Apparatus Standard as noted in the General Requirements section of these specifications.

The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.

Any large truck as defined by NFPA shall have the lower zone warning lights mounted no higher than 62" to the optical center of the warning light from ground level.

LIGHT BAR

A Whelen #F4N0QLED "Freedom Series IV", 60" LED cab roof warning light bar shall be furnished and rigidly mounted on top of the cab roof.

The light bar shall be equipped with the following:

- Clear Lenses
- Two Front Corner Red Linear LEDs
- Two Red Forward Facing Linear LEDs
- Two White Forward Facing Linear LEDs
- Two Red End Linear LEDs

If equipped, the forward-facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.

UPPER ZONE C WHELEN M9 SUPER LEDS

Two (2) Whelen, M9* super LED light heads shall be furnished and mounted one (1) on each side on the upper rear face of the body, facing rear.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

UPPER ZONE B/D FRONT WHELEN M9 SUPER LEDS

Two (2) Whelen, M9*, super LED light heads shall be furnished and mounted one (1) on each side on the upper side face, towards the front of the body, facing to each side of the unit.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

UPPER ZONE B/D REAR WHELEN M9 SUPER LEDS

Two (2) Whelen, M9*, super LED light heads shall be furnished and mounted one (1) on each side on the upper side face, towards the rear of the body, facing to each side of the unit.

The lights shall be equipped with a red led, colored lens, and chrome bezel.



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LOWER ZONE A FRONT WHELEN M6 SUPER LEDS

Two (2) Whelen, M6* super LED light heads shall be provided and installed one (1) each side. The lower zone A warning lights shall be mounted in the commercial chassis grille no higher than 62" from ground level.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

LOWER ZONE C REAR WHELEN M6 SUPER LEDS

Two (2) Whelen M6* super LED light heads shall be provided and installed with one (1) on each side directly below the DOT stop, tail, turn and backup lights.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

LOWER ZONE B/D FRONT WHELEN M6 SUPER LEDS

Two (2) Whelen, M6* super LED light heads shall be provided and installed with one (1) on each side. The lower zone B/ D warning lights shall be mounted on the sides of the commercial chassis bumper.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

LOWER ZONE B/D REAR WHELEN M6 SUPER LEDS

Two (2) Whelen M6* super LED light heads shall be provided and installed with one (1) on each side.

The lights shall be equipped with a red led, colored lens, and chrome bezel.

GROUND LIGHTS

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each side cab door entrance step, four (4) total.

The ground lights shall turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.

Each light shall illuminate an area at a minimum 30" outward from the edge of the vehicle.

GROUND LIGHTS UNDER FRONT BUMPER

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each side of the front bumper facing forward, two (2) total.

GROUND LIGHTS BELOW PUMP PANEL RUNNING BOARD

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each side pump panel running board, two (2) total.



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GROUND LIGHTS BELOW TAILBOARD

Two (2) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under the tailboard facing rear.

GROUND LIGHTS L3/R3 COMPARTMENT

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each L3/R3 compartment, two (2) total.

CAB AND BODY GROUND LIGHTS ACTIVATE WITH PARK BRAKE

The cab and body ground lights shall activate by engaging the parking brake.

DIAMOND LOGIC MULTI-PLEX SYSTEM

The electrical system for the entire apparatus shall feature the International® Diamond Logic® Electrical System. This industry leading solution is built on a multiplexed architecture containing technologies in components such as solid state power switches, self-calibrating gauges and low current switch devices used for driver controls, like rocker switches and HVAC controls. The low current system and solid state switching results in maximum reliability and durability.

At the heart of International® Diamond Logic™ electrical system is the Electronic System Controller (ESC) which functions as the gatekeeper or central processor. The ESC continually monitors the vehicles electrical system and controls, including the engine, transmission, cab and customer installed truck equipment, so that they all communicate and work together.

In addition, the Diamond Logic® Electrical system consists of International factory installed, Remote Power Modules (RPMs) and factory installed switches and warning lights. This combination of factory installed equipment eliminates the need to cut into the chassis wiring and central wiring to one point outside the cab.

The Diamond Logic® Electrical System allows fully customizable logic to carry out functions which up until now required hard-wired circuits and component. The use of the system shall enable the manufacturer to reduce; if not eliminate; conventional circuit interlock and power supply components for all body builder installed functions as specified by the customer. The programmable system allows for automation of tasks, custom features and safety interlocks to meet complex application requirements resulting in increasing functionality and reducing wiring the wiring used in equipment by up to 70%.

Each vehicle shall be programmed by engineering and not only stored in engineering database, but also uploaded to International which shall enable any International Dealer location to maintain, troubleshoot or repair the entire system installed on the apparatus and NOT only the chassis.

This multiplex system controls both chassis and body functions including but not limited to emergency lighting, scene lighting, compartment lighting, and door ajar circuitry. Systems that



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utilize a multiplexed chassis with a hard wired body, or two different multiplex systems, shall not be considered. {No Exceptions}

CHASSIS DIAGNOSTICS SYSTEM

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

The diagnostic system shall include the following:

- A single port to monitor the engine, transmission and ABS system and diagnostics of the roll sensor (if applicable)
- Engine diagnostic switch (blink codes)
- ABS diagnostic switch (blink codes)
- Allison Transmission Codes (through touch pad shifter)

BODY ELECTRICAL SYSTEM

All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service.

Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers.

All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram.

A complete wiring diagram shall be supplied with the apparatus.

Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length.

Grommets shall be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1900.

DOOR OPEN INDICATOR WITH INTEGRAL AUDIBLE ALARM

An indicator light with an audible alarm, shall be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.



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This light shall be activated through the parking brake switch to signal when the parking brake is released.

DUNNAGE AREA LIGHTING

Two (2) stainless steel, TecNiq Eon 3-LED horizontal surface mounted lights shall be provided in the dunnage area to provide adequate illumination of this area.

These lights shall be switched in the same manner as the step lights.

COMPARTMENT LIGHT ACTIVATION

Compartment lighting shall be switched either from an integral switch as provided by the roll up door manufacturer or a magnetic proximity switch if it is a KME manufactured door.

COMPARTMENT LIGHTS

Each individual, equipment storage compartment shall be equipped with the AMDOR, Luma Bar, LED light fixture, mounted on each side of the forward (and rear) vertical door frame.

MARKER/TURN LIGHTS AT EACH SIDE OF BODY

Red, LED marker lights with integral reflectors shall be provided at the lower side rear, having one (1) on each side.

Yellow, LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle that puts one (1) on each side, if the apparatus is 30' long or longer. *The marker/turn lights will be located in the rear fender area.*

DOT MARKER LIGHTS AT REAR OF BODY

Red, LED clearance lights shall be provided on the apparatus rear upper having one (1) on each side at the outermost practical location.

Red, LED, 3-lamp identification bar will be provided on the apparatus rear center.

DOT AMBER REFLECTORS AT SIDE OF BODY

Yellow reflectors shall be provided on the apparatus body lower side, as far forward and low as practical with one (1) on each side if the apparatus is 30' long or longer.

DOT RED REFLECTORS AT REAR OF BODY

Red reflectors shall be provided on the apparatus rear with one (1) on each side at the outermost practical location.



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LICENSE PLATE LIGHT

One (1) Tecniq model #L10 LED license plate light shall be provided above the mounting position of the license plate. The license plate shall be located on the driver's side rear of body.

The light shall be clear in color and shall have a chrome finish.

REAR DOT/WARNING LIGHTS

Two (2) Whelen M6 series, 4-5/16" x 6-3/4", LED red combination tail and stop lights, shall be mounted one each side at the rear of the body.

Two (2) Whelen M6 series, 4-5/16" x 6-3/4", LED amber arrow turn signal lights, shall be mounted one each side, on a vertical plane with the tail/stop lights.

Two (2) Whelen M6 series, 4-5/16" x 6-3/4", LED white back-up lights, shall be mounted, one each side on a vertical plane with the turn/tail/stop signals.

These lights shall activate when the transmission is placed in reverse gear.

Two (2) Whelen M6FCV4 mounting flanges, installed one (1) on each side, shall be provided to mount the lights described above in one common mounting flange.

The fourth opening shall be for the lower rear warning lights.

The lights shall be mounted in order, from top to bottom, as described above.

BODY STEP LIGHTS, TECNIQ EON 3 LED

Polished, stainless steel, TecNiq Eon 3-LED, horizontal surface, mounted body step lights shall be provided and controlled with marker light actuation and park brake application.

Step lights shall be located to properly illuminate all body access steps and walkway areas and shall include a mounting gasket to provide a watertight seal.

PUMP ENCLOSURE WORK LIGHTS

Two (2) Tecniq, model #E18 lights shall be provided inside the pump enclosure, providing 800 lumens each.

Each light shall have their own independent switch incorporated into the light head.

REAR BODY SCENE LIGHTS

Two (2) Whelen Pioneer model # PCPSM1C surface mounted flood/spotlights shall be installed on the rear face of the body, one (1) on each side, each using a chrome plated flange.

Each lamp head shall draw 6 amps and generate 8,000 lumens.



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DRIVER SIDE BODY SCENE LIGHT

One (1) Whelen Pioneer model # PCPSM2C surface mounted flood/spotlight shall be installed, centered on the driver side of the body, using a chrome plated flange.

Each lamp head shall draw 12 amps and generate 16,000 lumens.

OFFICER SIDE BODY SCENE LIGHT

One (1) Whelen Pioneer model # PCPSM2C surface mounted flood/spotlight shall be installed, centered on the officer side of the body, using a chrome plated flange.

Each lamp head shall draw 12 amps and generate 16,000 lumens.

BACK-UP ALARM

An ECCO # 505, 87dBA back-up alarm, shall be provided and installed at the rear of the apparatus under the tailboard.

The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on."

DUAL CHROME AIR HORNS

Two (2) chrome plated, Hadley air horns shall be at the front of the vehicle on the commercial chassis hood.

The air horns shall be mounted in full compliance with NFPA-1900.

The supply lines shall be dual 1/4" lines with equal distance from each horn.

HORN BUTTON - THREE WAY SWITCH

A three (3) position rocker switch shall be installed on the cab dash to activate from the steering wheel horn button one of the following:

- DOT horn
- air horn
- electronic/mechanical siren.

AIR HORN CONTROL

The air horn(s) shall be controlled by the steering wheel horn button for the driver.

AIR HORN CONTROL

The air horn(s) shall be controlled by a pull chain/cable for the officer.



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ELECTRONIC SIREN

A Federal EQ2B electronic siren amplifier/DSP with a digital output controller shall be mounted in the cab.

The EQ2B siren not only recreates the traditional "Q" siren sound but it also able to Q-Wail, Yelp, Priority, Air Horn, PA, and radio rebroadcast.

ELECTRONIC SIREN SPEAKER

One (1) Federal, model # BP200-EF siren speaker shall be provided, recessed in the front bumper and wired to the electronic siren.

HALE DSD-150, 1500 GPM SINGLE STAGE PUMP

- HALE DSD-150
- 1500 G.P.M.
- SINGLE STAGE

The pump must deliver the percentage of rated capacity at the pressure listed below:

- 100% of rated capacity at 150 P.S.I. net pump pressure
- 100% of rated capacity at 165 P.S.I. net pump pressure
- 70% of rated capacity at 200 P.S.I. net pump pressure
- 50% of rated capacity at 250 P.S.I. net pump pressure.

The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis and have the capacity of 1500 gallons per minute (U.S. GPM), NFPA-1900 rated performance.

The entire pump shall be manufactured and tested at the pump manufacturer's factory. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI (41.3 BAR). The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Standard 1901. Pump shall be free from objectionable pulsation and vibration. This DSD 150 model shall include the Custom Rams Horn suction manifold. The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2069 BAR). All moving parts in contact with water shall be of high-quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron are not acceptable. Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings.

Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated. The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel. Pump shaft must be sealed with double lip oil seal to keep road dirt and water out of gearbox.



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Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eye shall be hand-ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings shall be bronze, easily renewable without replacing impellers or pump volute body.

PUMP RATIO

The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.

The manufacturer shall supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.

PUMP MOUNTS

Extra heavy-duty pump mounting brackets shall be furnished.

These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft.

This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.

HALE MECHANICAL PUMP SEAL

The mid ship pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions.

This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.

The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring,

Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.

Only one (1) mechanical seal shall be required, located on the first stage suction (inboard) side of the pump and be designed to be compatible with a one piece pump shaft.

A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.

HALE DSD PUMP DRIVE UNIT

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



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The drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in both road and pump operating conditions.

The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2-3/4 inches in diameter on both the input and output drive shafts.

They shall withstand the full torque of the engine in both road and pump operating conditions.

All gears, drive and pump shall be of the highest quality electric furnace chrome nickel steel.

Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability.

An accurately cut spur design shall be provided to eliminate all possible end thrust.

PUMP SHIFT

The drive unit shall be equipped with a power shift. The shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder with stainless steel shaft.

The pump shift control, pump engaged light and ok to pump indicator light shall be provided utilizing the International multi-plex system. They shall be located in the lower left switch panel. Switch to be YELLOW in color to denote being for a strategic type switch function. A standard International air solenoid pack shall be utilized to lock the transfer case in road or pump.

This control shall be electronically interlocked through the International multi-plex system to prevent inadvertent activation or de-activation. This allows the control to be interlocked with engine rpm, transmission gear status and park brake state. The switch positions and indicator lights shall be clearly marked. The pump shift switch shall also serve as the manual lockup switch; in case of air pressure loss.

PUMP SHIFT MANUAL OVERRIDE

An emergency manual pump shift control shall be furnished on the left side pump panel which may be utilized if the air shift control does not operate.

MANIFOLD - DISCHARGE & SUCTION

A custom-made suction and discharge manifold shall be constructed from stainless steel and/or flexible tubing. The manifold shall be designed to provide maximum efficiency for the suction inlets and the discharges. {No Exceptions}.

HALE ANODE BLOCKS

Two (2) Hale Alloy Anode blocks shall be provided and located one (1) on the suction side and one (1) on the discharge side of the pump to protect the pump from corrosion.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

The Anodes shall be painted Safety Yellow for identification purposes.

HALE THERMAL RELIEF VALVE

A Hale Model TRV120 Thermal Relief Valve shall be provided on the pump.

If water temperature in the pump exceeds 120 degrees Fahrenheit, the thermal relief valve shall automatically open and discharge pump water to the ground, through a 3/8" discharge line, routed below the pump module. The TRV shall include no alarm lamp or buzzer.

The thermal relief valve shall automatically close when the water temperature is lowered.

AUXILIARY ENGINE COOLER

An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator.

The cooler shall permit the use of water from the pump for cooling the engine. The water supply line will be equipped with a strainer.

The cooling shall be done without mixing engine and pump water.

FIRE RESEARCH "PUMP BOSS" PBA500 PRESSURE GOVERNOR

Fire Research PumpBoss Max series PBA500-A00 pressure governor and control module kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module housing shall be waterproof and have dimensions not to exceed 7 1/2" high by 3 5/8" wide. The control knob shall be 2" in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center. It shall not extend more than 2" from the front of the control module.

The control LCD shall be 3.5" in size with a minimum brightness of 1000 nits and optically bonded to 3mm Borofloat Glass. Inputs for monitored engine information shall be from a J1939 data bus or independent sensors. Outputs for engine control shall be on the J1939 data bus or engine specific signal wiring. Inputs from the pump discharge and intake pressure sensors shall be electrical.

The following continuous displays shall be provided:

- Engine RPM; shown on LCD screen
- Check engine and stop engine warning; shown on LCD screen
- Engine oil pressure; shown on LCD screen
- Engine coolant temperature; shown on LCD screen
- Transmission Temperature; shown on LCD screen
- Battery voltage; shown on LCD screen
- Pressure and RPM operating mode LEDs
- Pressure / RPM setting; shown on LCD screen
- Throttle ready / Ok to Pump LEDs.



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On screen (LCD) 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. LCD Screen and LED's intensity shall be automatically adjusted for day and nighttime operation.

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

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

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

The pressure governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready and Ok to Pump LED shall light when the interlock signal is recognized.

The pressure governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the pressure 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 pressure governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of low water and no water conditions with an automatic programmed response and a push button to return the engine to idle.

The pressure governor control module shall be programmed at installation for a specific engine.

TASK FORCE TIPS #A18 SERIES INTAKE RELIEF VALVE

A Task Force Tips relief valve shall be provided.

The valve shall be adjustable from 50 to 300 psi (3 to 14 bar) with easy to see 25 psi (2 bar) increments.

The aluminum casting shall be hardcoat anodized, and powder coat finished inside and out for maximum corrosion protection.

TRIDENT "MANUAL" AIR PRIMING SYSTEM

The priming pump will be a Trident air primer system.



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A push in primer handle will open the priming valve and prime the pump.

ROTARY MASTER DRAIN VALVE

A rotary type, 12 port, master drain valve shall be provided and controlled at the lower portion of the side pump panel.

The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories.

Water shall be drained below the apparatus body and away from the pump operator.

DRAINS/BLEEDER "INNOVATIVE CONTROLS" LIFT UP AT ALL

All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible, and labeled.

One (1) individual "Innovative Control" lift up drain valve shall be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.

Drain/bleeder valves shall be located at the bottom of the side pump module panels. All drains and bleeders shall discharge below the running boards.

SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES

Small lines within the pump enclosure shall be constructed from Synflex hose.

Uses include but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush, and air bleeder valves.

SUCTION INLETS - 6" INLETS

Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel.

A removable strainer shall be installed on each inlet.

SHORT NECK MAIN PUMP SUCTION INLETS

The main pump suction inlets shall be furnished with a short suction end, terminating with only the suction threads protruding through the side panel to minimize the distance an exterior appliance protrudes beyond the pump panel.

BEHIND PANEL MOUNT

All side gated inlet valves shall be recess mounted behind the side pump panels or body panels. There will be no exceptions.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

6" NST INTAKE CAP – DRIVER SIDE

A 6" NST chrome plated long handle pressure vented cap shall be installed on driver side intake.

6" NST INTAKE CAP – OFFICER SIDE

A 6" NST chrome plated long handle pressure vented cap shall be installed on officer side intake.

DRIVER SIDE MIV

The fire pump shall be fitted with a Hale Master Intake Valve (MIV), on the driver side main suction inlet.

The valve shall be mounted between the suction tube extension and the suction tube, and shall be recessed behind the operator's panel.

The valve body and all related components that are in contact with water shall be manufactured of fine grained, corrosion resistant bronze.

The valve shall have a bore of 6.40".

The valve shall incorporate a pressure relief valve, set at the pump manufacturer's facility to a rating of 125 PSI.

The pressure relief valve shall provide protection for the suction hose even with the valve in the closed position.

The valve shall incorporate NFPA-1901 compliant, large diameter hose air bleed valve, controlled at the operator's panel.

The valve shall be operated by a twelve (12) volt DC motor, as standard. It shall also incorporate a knob control manual override, mounted at the suction inlet.

The electric control shall incorporate a placard with status lights to indicate whether the valve is in the closed, open or throttled position.

The valve shall not be able to move from fully open to fully closed in under three (3) seconds, in compliance with NFPA-1901.

OFFICER SIDE MIV

The fire pump shall be fitted with a Hale Master Intake Valve (MIV), on the officer side main suction inlet.

The valve shall be mounted between the suction tube extension and the suction tube, and shall be recessed behind the operator's panel.



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The valve body and all related components that are in contact with water shall be manufactured of fine grained, corrosion resistant bronze.

The valve shall have a bore of 6.40".

The valve shall incorporate a pressure relief valve, set at the pump manufacturer's facility to a rating of 125 PSI.

The pressure relief valve shall provide protection for the suction hose even with the valve in the closed position.

The valve shall incorporate NFPA-1901 compliant, large diameter hose air bleed valve, controlled at the operator's panel.

The valve shall be operated by a twelve (12) volt DC motor, as standard.

It shall also incorporate a knob control manual override, mounted at the suction inlet.

The electric control shall incorporate a placard with status lights to indicate whether the valve is in the closed, open or throttled position.

The valve shall not be able to move from fully open to fully closed in under three (3) seconds, in compliance with NFPA-1901.

2-1/2" DRIVER SIDE AUXILIARY SECONDARY SUCTION INLET REAR OF MAIN INLET

One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the rear of the main inlet (if space and other components allow).

The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.

2-1/2" AKRON #8800 STAINLESS STEEL BALL VALVE

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side rear auxiliary suction.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

SWING CONTROL AT VALVE

A 1/4 turn swing control handle shall be provided on the driver side rear auxiliary suction valve.

TANK TO PUMP

One (1) 4" tank to pump line shall be piped through the front bulkhead of the tank with a 90-degree elbow down into the tank sump.



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This line shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.

A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection.

Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.

3" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 3" Generation II Swing-Out Valve shall be provided between the pump suction manifold and the water tank.

The valve shall have an all-brass body with flow optimizing, stainless steel ball and dual polymer seats.

3" PUSH/PULL CONTROL FOR TANK TO PUMP

A push/pull control handle shall be located on the operator's panel with function plate.

TANK FILL LINE 2" FROM PUMP

One (1) 2" gated full flow pump to tank refill line controlled at the pump panel shall be provided. A deflector shield inside the tank shall be furnished. Tank fill plumbing shall utilize 2" high pressure hose for tank connection to accommodate flexing between components. There will be no exceptions.

2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2" Generation II Swing-Out Valve shall be provided between the pump discharge manifold and the water tank.

The valve shall have an all-brass body with flow optimizing, stainless steel ball, and dual polymer seats.

PUSH/PULL CONTROL

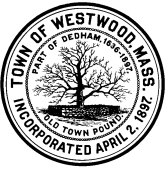
A push/pull control handle shall be located on the operator's panel with function plate.

DRIVER SIDE MAIN DISCHARGE #1

A discharge shall be provided and located at the driver's side pump panel.

The driver's side discharges # 1 shall terminate with NST threads, through the left panel above the main pump intake.

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

2-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side #1 discharge.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

2-1/2" STRAIGHT NST & 30-DEGREE NST

The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

2-1/2" NST PRESSURE VENTED CAP

A 2 1/2" NST, chrome plated pressure vented cap shall be installed on driver's side #1 discharge.

PUSH/PULL CONTROL

The driver's side # 1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The driver's side # 1 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free stainless-steel case and clear scratch resistant molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

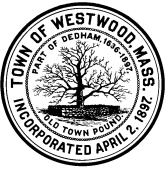
The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze, bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

OFFICER SIDE MAIN DISCHARGE #1

A discharge shall be provided and located at the officer's side pump panel.



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The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

3" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass, 3" Generation II, Swing-Out Valve shall be provided for the officer's side #1 discharge.

The valve shall have an all-brass body with flow optimizing, stainless steel ball, and dual polymer seats.

3" STRAIGHT NST & 30-DEGREE NST ELBOW

The discharge valve shall be equipped with a straight, 3" NST adapter that shall be equipped with a 3" NST, 30-degree, chrome plated elbow.

PUSH/PULL CONTROL

The officer's side, # 1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The officer's side, # 1 discharge shall be equipped with a 2.5", Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free, stainless-steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

OFFICER SIDE MAIN DISCHARGE #2

A discharge shall be provided and located at the officer's side pump panel.



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The officer's side discharges #2 shall terminate with NST threads, through the officer's side panel above the main pump intake.

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

2-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass, 2 1/2" Generation II, Swing-Out Valve shall be provided for the officer's side #2 discharge.

The valve shall have an all-brass body with flow optimizing, stainless steel ball, and dual polymer seats.

2-1/2" STRAIGHT NST & 30-DEGREE NST

The discharge valve shall be equipped with a straight, 2 1/2" NST, adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

2-1/2" NST PRESSURE VENTED CAP

A 2 1/2" NST, chrome plated, pressure vented cap shall be installed on officer's side #2 discharge.

PUSH/PULL CONTROL

The officer's side, #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The officer's side, #2 discharge shall be equipped with a 2.5", Innovative Controls, pressure gauge.

The gauge shall have a rugged, corrosion free, stainless-steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation, and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

DRIVER SIDE HOSE BED DISCHARGE 2-1/2"



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A 2 1/2" rear hose bed discharge shall be plumbed to the upper front body panel, extending into the front of the hose bed.

DRIVER SIDE HOSE BED DISCHARGE TERMINATE AT FLOOR LEVEL FRONT

The rear hose bed discharge shall terminate just above the hose bed floor, in the driver side front of the hose bed.

2-1/2" NST MALE THREADS

The driver side hose bed discharge pipe shall be equipped with a 2 1/2" NSTM thread adapter.

2-1/2" STAINLESS STEEL PLUMBING

The driver side hose bed discharge shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping, 45-degree elbows and a limited number of 90-degree sweep elbows in an assembly from the pump to the rear of the vehicle.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

2-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side hose bed rear discharge. The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

PUSH/PULL CONTROL

The driver side hose bed discharge valve shall be controlled by a push/pull handle located on the operator's panel.

2-1/2" NST DRIVER SIDE HOSE BED DISCHARGE PRESSURE VENTED CAP

A 2 1/2" NST chrome plated pressure vented cap shall be installed on the driver's side hose bed discharge.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The driver's side hose bed discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

#1 FRONT DISCHARGE 2-1/2"

A 2 1/2" front #1 discharge shall be plumbed to the front bumper of the vehicle.

2-1/2" NST CHICKSAN SWIVEL

The front #1 discharge shall terminate on the top officer's side of the front bumper extension gravel shield with a chrome 2 1/2" NST chicksan swivel adapter.

2-1/2" STAINLESS STEEL PLUMBING

The front #1 discharge shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping, flexible hosing, 45-degree elbows, and a limited number of 90 degree sweep elbows in an assembly from the pump to the front of the vehicle.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

Automatic discharge drains shall be provided at all low points in the plumbing.

2-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the front #1 discharge.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seat.

PUSH/PULL CONTROL

The front #1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

2-1/2" NST FRONT PRESSURE VENTED CAP

A 2 1/2" NST chrome plated pressure vented cap shall be installed the front #1 discharge.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The front #1 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

CROSSLAY #1

A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment. The crosslay hose bed flooring shall be designed to be removable and constructed from brushed finish, perforated aluminum material.

CROSSLAY #1 CAPACITY

Crosslay #1 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1900 to accommodate a minimum of 200 feet of 1-3/4" fire hose.

CROSSLAY #1 DESIGN

Crosslay #1 hose bed shall be designed to accommodate the fire hose in a double stack configuration.

1-1/2" NST CHICKSAN SWIVEL

The crosslay discharge shall terminate below the hosebed floor with a 1 1/2" NSTM chicksan swivel adapter.

The crosslay hose bed floor shall be slotted to allow the swivel to extend up through the floor, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

2" STAINLESS STEEL PLUMBING

The crosslay #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to crosslay hose bed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly, if necessary, to allow for flex and serviceability.



TOWN OF WESTWOOD COMMONWEALTH OF MASSACHUSETTS

2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the crosslay #1 discharge.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

PUSH/PULL CONTROL

The crosslay #1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The crosslay #1 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

CROSSLAY #2 1-3/4"

A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment.

The crosslay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

CROSSLAY #2 CAPACITY - 200 FEET OF 1-3/4" HOSE

Crosslay #2 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA-1900 to accommodate a minimum of 200 feet of 1-3/4" fire hose.

CROSSLAY #2 - DOUBLE STACK HOSE DESIGN

Crosslay #2 hose bed shall be designed to accommodate the fire hose in a double stack configuration.



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1-1/2" NST CHICKSAN SWIVEL

The crosslay discharge shall terminate below the hose bed floor with a 1 1/2" NSTM chicksan swivel adapter. The crosslay hose bed floor shall be slotted to allow the swivel to extend up through the floor, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

2" STAINLESS STEEL PIPING

The crosslay #2 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90-degree sweep elbows in an assembly from the pump to crosslay hose bed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly, if necessary, to allow for flex and serviceability.

2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the crosslay #2 discharge.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

PUSH/PULL CONTROL

The crosslay #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.

INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

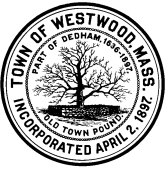
The crosslay #2 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless-steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.



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CROSSLAY #3 2-1/2"

A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment. The crosslay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

CROSSLAY #3 CAPACITY - 200 FEET OF 2-1/2" HOSE

Crosslay #3 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1900 to accommodate a minimum of 200 feet of 2 1/2" fire hose.

CROSSLAY #3 - DOUBLE STACK HOSE DESIGN

Crosslay #3 hose bed shall be designed to accommodate the fire hose in a double stack configuration.

2-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the crosslay #3 discharge.

The valve shall have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

2-1/2" NST CHICKSAN SWIVEL

The crosslay discharge shall terminate below the hosebed floor with a 2 1/2" NSTM chicksan swivel adapter.

The crosslay hose bed floor shall be slotted to allow the swivel to extend up through the floor, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

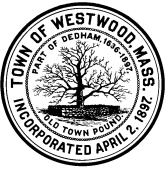
2-1/2" STAINLESS STEEL PLUMBING

The crosslay #3 discharge shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping and/or flexible hose, 45-degree elbows and a limited number of 90-degree sweep elbows in an assembly from the pump to crosslay hosebed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly, if necessary, to allow for flex and serviceability.

PUSH/PULL CONTROL

The crosslay #3 discharge valve shall be controlled by a push/pull handle located on the operator's panel.



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INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESSURE GAUGE

The crosslay #3 discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless-steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

VINYL END FLAPS FOR ALUMINUM TREADPLATE CROSSLAY COVER

Vinyl flaps shall be provided at each side of the transverse cross lay compartment secured to the tread plate cross lay cover by quarter turn fasteners and equipped with a strap to each end.

END FLAP COVER RED IN COLOR

The crosslay end flap shall be red in color.

FRONT HINGED CROSSLAY HOSE BED COVER

A 3/16" tread plate cross lay cover shall be provided with a full-length stainless-steel hinge at the front of the cover.

BOOSTER REEL #1 DISCHARGE

A 1 1/2" booster reel discharge shall be plumbed from the pump to the booster reel.

BOOSTER REEL #1 DISCHARGE, PLUMBING, 1" HOSE

The booster reel discharge shall be plumbed from the valve to the hose reel utilizing 1" hose. The end of the hose connected to the hose reel shall be equipped with a swivel end for ease in hose replacement.

1-1/2" AKRON #8800 SERIES – STAINLESS STEEL BALL VALVE

A 1 1/2" Akron, #8800 series, full flow, stainless steel ball valve shall be provided for the booster reel #1 discharge.



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PUSH/PULL CONTROL

The booster reel discharge valve shall be controlled by a push/pull handle located on the operator's panel.

BOOSTER REEL #1- PAINTED STEEL

One (1) painted steel electric rewind booster reel shall be furnished.

The reel shall be equipped with a one (1) inch 90 full flow swivel joint and an adjustable brake for freewheeling, drag or full lock operation.

Color shall be graphite.

BOOSTER REEL #1 REEL - MOUNTED UNDER CAB - OS - BELOW DS REAR CAB ENTRY

The booster reel #1 shall be mounted under the officer side cab.

HOSE REEL #1 REWIND MOUNTED NEAR REEL

Booster reel rewind shall be controlled by a push button near the reel.

The booster reel circuit shall be equipped with a shielded toggle switch to act as a booster reel disconnect to avoid accidental actuation of the booster reel rewind button.

BOOSTER REEL #1 REEL TO ACCOMMODATE 150' OF 1" HOSE

Each booster reel shall be designed to accommodate 150' of 1" booster hose. *Note: The booster hose for the reel will be customer supplied.*

TWO (2) BOOSTER REEL HOSE ROLLERS

A captive roller arrangement shall be provided around the perimeter of the opening.

DRY FORESTRY HOSE REEL

One (1) Hannay model EPC 67-23-24-10.5 LT painted steel electric rewind booster reel shall be furnished.

The reel shall be equipped with an adjustable brake for freewheeling, drag or full lock operation.

The color shall be graphite.

FORESTRY REEL MOUNTING

The booster reel #1 shall be mounted in the rear body, above the rear step compartment.



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FORESTRY REEL REWIND MOUNTED NEAR REEL

Booster reel rewind shall be controlled by a push button near the reel.

The booster reel circuit shall be equipped with a shielded toggle switch to act as a booster reel disconnect to avoid accidental actuation of the booster reel rewind button.

FORESTRY REEL HOSELOAD

Each booster reel shall be designed to accommodate 2000' of 1" booster hose.

FORESTRY HOSE

Twenty (20) 100' sections of 1" Key Hose Type II lightweight forestry hose shall be provided.

Note: 2000' total.

FORESTRY HOSE CAPTIVE ROLLER

A captive roller arrangement shall be provided around the perimeter of the opening.

SIDE MOUNT PUMP MODULE

The pump module shall be a self-supported structure mounted independently from the body and chassis cab.

The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards. The pump module shall be securely mounted to the chassis frame rails.

PUMP MODULE MATERIAL

The pump module shall be a welded frame work utilizing structural aluminum components properly braced to withstand the rigors of chassis frame flex.

SIDE MOUNT DUNNAGE AREA

A dunnage area shall be provided above the pump enclosure for equipment mounting and storage. This area shall be furnished with a removable 3/16" tread plate floor and shall be enclosed on the sides.

NOTE: The size of this storage area may vary when top mounted crosslays, booster reel(s), etc., are specified and located in this area.

RUNNING BOARD STEPS

The driver and officer running board steps shall be fabricated of 3/16" tread plate.

The outside edge on each step shall be fabricated with a double break, return flange.



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The steps shall be rigidly reinforced with a heavy-duty support structure.

The running boards shall not form any part of the compartment design and shall be bolted into place with a minimum 1/2" clearance gap between any panel to facilitate water runoff.

DRIVER SIDE RUNNING BOARD STORAGE WELL

A floating storage well, constructed of 1/8" aluminum, shall be recessed into the driver's side running board.

The storage well shall measure 9" deep x 9" wide x as long as possible between the running board support members.

Drain holes shall be located in the bottom corners to allow water to drain from the storage well.

The front and rear bottom corners of the well shall have an angled face to help the well slide up if it strikes an object.

The entire well shall be a "floating" style that can easily shift up if an object is struck.

DRIVER SIDE WELL - VELCRO STRAPS

The driver's side running board hose well shall be furnished with Velcro straps to secure the hose stored in the well.

The straps shall be attached to each side of the hose well with stainless steel footman loops.

DRIVER'S SIDE WELL - GENERAL STORAGE

The driver's side storage well shall be utilized for general storage of tools or equipment, the well shall be as large as space allows.

SIDE MOUNT PUMP PANEL

The pump operator's control panel shall be located on the driver side of the apparatus.

The pump enclosure side panels shall be completely removable and designed for easy access and servicing.

SIDE MOUNT PANELS

The left side operator's panel, gauge panel, right side pump panel and right side access door shall be fabricated from 12-gauge 304L stainless steel with a #4 (150/180 grit) standard brushed finish.

VERTICALLY HINGED GAUGE PANEL

A full width, vertically hinged gauge access panel shall be provided at the operator's position.



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Chrome plated positive locks shall be provided along with chain holders to prevent the front of the gauge panel from coming in contact with other panels when open.

OFFICER SIDE VERTICALLY HINGED PUMP ACCESS DOOR

The officer's side pump panel shall be split and vertically hinged to provide complete access to the pump and plumbing on the officer's side of the pump enclosure.

The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed.

The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.

PANEL FASTENERS

Stainless steel machine screws and lock washers shall be used to hold these panels in position.

The panels shall be easily removable to provide complete access to the pump for major service.

CAPS AND ADAPTERS SAFETY TETHER

All applicable discharge and suction caps, plugs and adapters shall be equipped with tether cables and secured to the vehicle.

PUMP PANEL DISCHARGE/SUCTION TRIM PLATES

A high polished trim plate shall be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.

DISCHARGE GAUGE TRIM BEZELS

Each individual discharge gauge shall be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels, unless manufacturer supplied otherwise.

IDENTIFICATION PLATES

Color coded identification tags shall be provided for all gauges, controls, connections, switches, inlets and outlets.

PUMP OPERATOR'S PANEL LIGHT SHIELD

The pump operator's panel shall be equipped with a light shield that shall be the full available width of the control panel, and shall be positioned to cover the lights and prevent glare. (Note: On apparatus with lowered style crosslays, the light shield shall be from the back of the crosslays to the rear of the pump house).

The light shield shall be equipped with the following lights:



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TECNIQ 6" LED LIGHTS - LIGHT SHIELD

Four (4) TecNiq 6" long LED lights.

One (1) light under the operator's panel light shield shall be actuated when fire pump is engaged in addition to the pump engaged light.

TECNIQ EON 3 LED LIGHTS

Four (4) TecNiq Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets.

The lights shall be switched with the main pump panel lights.

3/8" PUMP BY-PASS COOLER ON PUMP PANEL

3/8" Pump cooler (Bypass Line).

PUMP PRESSURE & VACUUM TEST PORTS AT PANEL

The pump panel shall be equipped with Vacuum Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels.

Chrome plugs and labels shall be provided for the test ports.

4" INNOVATIVE CONTROLS MASTER PRESSURE AND COMPOUND GAUGES

One (1) 4" diameter pressure gauge (labeled: "PRESSURE") and one (1) 4" diameter compound vacuum gauge (labeled: "INTAKE") shall be provided.

The master gauges shall be Innovative Controls glycerin filled.

The gauge faces shall be white with black numerals.

PRESSURE & COMPOUND GAUGE RANGES

All applicable pressure gauges shall have a range of 0 - 400 P.S.I., and the compound gauge shall have a range of -30" - 0 - 400 P.S.I.

PUMP CERTIFICATION - 750 GPM & UP

The pump shall be third party performance tested to meet the requirements of NFPA-1900. There will be no exceptions.

WATER TANK

The water tank shall have a capacity of 500 gallons, constructed from Poly material.



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WATER TANK CONSTRUCTION POLY

The Poly water tank shall be constructed of polypropylene material.

This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from 1/2 to 1" as required. Internal baffles are generally 3/8" in thickness. The tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments.

Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" polypropylene. 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. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank.

All partitions and spacing shall comply with NFPA 1900.

The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.

All tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each tank is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.

WATER TANK LID

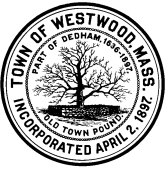
The tank cover shall be constructed of 1/2" thick polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary.

The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity.

Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart.

These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions.

A minimum of two lifting dowers shall accommodate the necessary lifting hardware.



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FILL TOWER

The tank shall have a combination vent and manual fill tower.

The fill tower shall be constructed of 1/2" polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter.

The fill tower shall be blue in color indicating that it is a water-only fill tower.

The tower shall have a 1/4" thick removable polypropylene screen and a polypropylene hinged cover.

The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe.

The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.

WATER TANK

The fill tower shall be fitted with an integral 4" I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.

WATER TANK SUMP

The tank sump shall be a minimum of 10" wide x 10" long x 3" deep.

An anti-swirl plate shall be mounted inside the sump, approximately 1" above the bottom of the sump.

WATER TANK SUMP CONNECTIONS

The front bulkhead of the water tank shall be fitted with one (1) tank sump connection.

WATER TANK

A 3" drain plug shall be provided.

WATER TANK FLANGES/OUTLETS

There shall be two (2) standard tank outlets; one for tank-to-pump suction line which shall be a minimum of 4" coupling and one for a tank fill line which shall be a minimum of a 2" NPT coupling.

All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.



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WATER TANK MOUNTING

The tank shall rest on the body cross members spaced a maximum of 22" apart, and shall be insulated from these cross members with a minimum of 3/8" nylon webbing or 1/2" rubber, 2-1/2" wide. The tank shall sit cradle-mounted using four (4) corner angles of 6 x 6 x 4 x 0.250 welded directly to the body cross members.

The angles shall keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principle and shall not require the use of hold downs.

The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The body or hose bed cross braces shall act as water tank retainers.

WATER TANK LEVEL GAUGE

A Fire Research, model #WLA300-A00, "TANKVISION" gauge that shows the actual volume of water in the tank shall be provided on the pump operator's panel. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra bright multi color LEDs for sunlight readability and also uses 2 specially designed wide-viewing lens for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge shall be equipped with a self-calibration feature that allows the LEDs TANKVISION gauge to be used on tanks of different shapes and sizes.

Features:

- Flashes warning when the volume is less than 25%. Rapid down scrolling LEDs alert the operator when the tank is almost empty. Remote audio warning available.
- One size fits all'. The self-calibration feature allows for easy calibration of any shape or size tank.
- Multiple displays are possible with a single sender through the FRC data bus.
- Rugged waterproof cast aluminum housing.
- No fitting needed for poly tank.
- Special fittings available for other tank materials.
- Connector disconnects at back of display.

WATER TANK LEVEL GAUGE

The gauge shall use a pressure transducer installed near the bottom of the water tank to determine the correct volume in the tank.

DIRECT TANK FILL

One (1) 2-1/2" NST direct tank fill shall be provided at the rear of the body, on the officer side, as low as possible.

The direct tank fill shall be gated with a 2-1/2" Fireman's Friend (TTMA 6-bolt attachment pattern) check-type fill valve.



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The fill valve shall be capable of flowing at a rate in excess of 1,000 gallons per minute and will be of a self deflecting design, requiring no additional diffusion device.

The fill valve shall be constructed of stainless steel, with a spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of the valve.

The fill shall be equipped with a 30 degree elbow terminating with a 2-1/2" NST female swivel connection.

APPARATUS BODY GENERAL DESCRIPTION

The body side and compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions. Special attention shall be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on components shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion.

The body design shall also incorporate removable panels to access spring hangers, rear body mounts and fuel tank sending units. The body assembly shall be an all-welded configuration. The body shall be completely isolated from the cab and pump module structure.

Dimensions used in this specification shall be the general outer dimension taken from a typical line diagram of the apparatus. These dimensions shall not take into account items like material thickness, access panels, doors, and other installed options.

SUPER STRUCTURE

The body sub structure shall be an all-welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.

This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.

The sub structure shall be bolted to the sides of the chassis frame at four (4) points.

The two (2) forward mounting points shall utilize a spring mount to help isolate the body from chassis deflection.

This design shall provide storage capacity in each side compartment for a minimum of 500 lbs of equipment, and a minimum of 1000 lbs of equipment in the rear step compartment.

BODY MOUNTING

The apparatus body frame shall be mounted to the chassis frame with a minimum of four spring mount assemblies. Each spring mount assembly shall be constructed from a minimum of 1/4 inch flat steel.

The rear assemblies shall consist of two parts. The two parts shall interlock to form a single assembly that prevents forward, aft, and sideways movement of the body while the apparatus is



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in motion. The two sections shall further be connected by minimum grade 8 bolts centered in springs. These springs shall allow vertical movement of the body to prevent any "twist" from being transferred from the chassis frame into the body frame. The springs shall allow a minimum lift of 1 inch of vertical movement at all corners of the body.

As proof of the effectiveness of this design, the unit must pass a "twist" test in which opposing tires on opposite corners of the body are lifted a minimum of 12". While in this position, all body doors shall be able to be opened and shut without any sign of binding.

SWEEP-OUT COMPARTMENTS

Compartment floors shall be welded to the compartment walls and have a sweep out design for easy cleaning.

Compartment with hinged doors shall have the door opening flanges bend down to produce the sweep-out design.

Compartment with roll-up style doors shall have the external floor flange stepped down to produce a sealing surface for the roll-up doors below the compartment floor.

The sweep out design shall also permit easy cleaning.

FASTENERS

All exterior fasteners shall be stainless steel screws.

COMPARTMENT LOUVERS

Ventilation between compartments to atmosphere shall be provided and located to avoid water entry into compartments.

ACCESS PANELS

Removable access panels shall be provided (if applicable) to access fuel tank sender, electrical junction compartment and rear body mounts.

Protective panels shall be located in the rear compartments providing access to the lights and associated wiring.

The covers shall also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

3/16" ALUMINUM BODY

All compartment panels and body side sheets shall be fabricated entirely of 3/16" aluminum (5052-H32). Each side compartment assembly shall be both plug welded and stitch welded to ensure proper weld penetration on all panels, while avoiding the possible warping caused by a full seam weld.



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The side compartments shall be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and the reinforcement plates are inserted, allowing the compartment panels to become an integral component of the body support structure.

A full seam weld shall not be used due to the applied heat which shall distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams shall be caulked prior to the paint being finished to ensure proper compartment sealing.

96" WIDE BODY

The fire body shall be 96" wide.

FENDER STORAGE COMPARTMENTS - POLISHED DOORS

The fender storage area(s) shall be enclosed by a hinged door fabricated from mirror finish stainless steel.

Each door shall be tied into the compartment door ajar/do not move apparatus warning system.

Each fender storage compartment door will be equipped with 3M model #1333 rubber "D" style door seal.

59" WIDE FENDER

The body fender shall be 59" long. This shall allow for the suspension and related components to be contained within the fender, which prevents any intrusion into the body compartment storage area. Bodies with notches in the front or rear compartment for suspension components are not acceptable.

SCBA CYLINDER STORAGE

A total of four (4) SCBA air bottle storage compartments shall be inserted into the body fender area.

The compartments shall be located with two (2) on the driver side and two (2) on the officer side of the rear body fender panels.

The lower portion of the compartments shall be non-abrasive to absorb shock and help secure the bottle.

Each storage compartment shall be equipped with a polished stainless-steel door that shall be tied to the "Do Not Move Apparatus" warning system along with a retention strap to limit bottle travel while secured inside the compartment.



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DRIVER SIDE COMPARTMENTS

One (1) full height compartment shall be provided forward of the rear wheels. The internal dimensions of this compartment shall be approximately 68" high x 24" wide. The compartment shall be 26" deep in the lower 30", and 12" deep in the upper 38" area.

One (1) equipment compartment shall be provided above the rear wheels. The internal dimensions of this compartment shall be approximately 37" high x 59" wide x 12" deep.

One (1) full height compartment shall be provided to the rear of the rear wheels. The internal dimensions of this compartment shall be approximately 68" high x 36" wide. The compartment shall be 26" deep in the lower 30", and 14" deep in the upper 38" area.

OFFICER SIDE COMPARTMENTS

One (1) full height compartment shall be provided forward of the rear wheels. The internal dimensions of this compartment shall be approximately 68" high x 24" wide. The compartment shall be 26" deep in the lower 30", and 12" deep in the upper 38" area.

One (1) equipment compartment shall be provided above the rear wheels. The internal dimensions of this compartment shall be approximately 37" high x 59" wide x 12" deep.

One (1) full height compartment shall be provided to the rear of the rear wheels. The internal dimensions of this compartment shall be approximately 68" high x 36" wide. The compartment shall be 26" deep in the lower 30", and 14" deep in the upper 38" area.

REAR STEP COMPARTMENT

An equipment storage compartment shall be provided on the rear of the body, located at the rear step area.

The rear step compartment shall be 44" wide x 30" high x 29" deep.

REAR STEP COMPARTMENT - OPEN THROUGH SIDE WALLS

The rear step compartment shall be designed to have an open storage space leading to the side body compartments.

This open storage area shall be in the lower section of the side body compartments only.

REAR STEP COMPARTMENT - HINGED DOOR - PAINTED ALUMINUM

The rear step compartment shall be equipped with a hinged style compartment door. The door shall be a double door configuration.

The finish shall be painted job color aluminum.



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BRUSHED FINISHED DOOR PANS - 2" THICK DOORS

Each inner door pan shall be constructed from 1/8" aluminum material which shall be provided with a brushed finish and bolted to the internal side of the door. The inner door pan on 2" thick doors shall enclose the latch and reinforcements completely. The inner door pan shall be easily removable to access the enclosed latch mechanism.

DOOR HINGE FOR FLUSH HINGED DOORS

The hinges shall be full length polished stainless steel piano type. The hinges shall be mounted with stainless steel hardware.

DOOR SEAL FOR FLUSH HINGED DOORS

Enclosed body compartment doors shall be equipped with a closed cell gasket.

The gasket material shall be EPDM to provide a gasket resistant to weather, temperature extremes, and aging.

ROTARY LATCHES WITH D-RING HANDLES

Externally latched body doors shall be equipped with stainless steel D-ring handles.

Rotary door latches shall be provided for all full height body doors, which shall incorporate rotary latches at the top and bottom of all externally latched single or double doors.

Linkages shall be provided between the actuation handle and the latch mechanisms.

The blank door of a double door configuration shall have rotary latches at the top and bottom of each door with the latch release lever accessible through the door frame, which eliminates the need to reach inside the compartment to release the door.

Linkages shall be provided between the actuation handle and the latch mechanisms.

Horizontally hinged doors shall be equipped with a single rotary door latch.

CLEVELAND SPRING DOOR SPRINGS

Stay arms shall be "Cleveland" double acting style, to be used on all vertically hinged storage compartment doors.

All horizontally hinged compartment doors shall be furnished with two (2) Eberhard gas shock type door stay arms.

14" WIDE COFFIN COMPARTMENTS, SPLIT DEPTH 100" BODY, DRIVER SIDE

Roof hatch style compartments shall be provided the full length of the body, on the officer's side of the body hose bed area and shall be designed as an integral extension of the lower side



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compartments with a painted exterior finish. Drain tubes shall be provided at each end of each side compartment which shall extend down through the lower compartments.

Each side roof compartment shall extend the length of the body, which shall be evenly divided into two (2) individually accessed areas, which shall be open through from the front to the rear. The compartment depth shall extend from the ceiling area of the upper side compartments to the top of the body. The interior compartment width of each side roof compartment shall be a minimum of 12" inside width with a 10" wide access door at the top.

Each roof compartment shall be equipped with an overlapping, hinged lift up tread plate door. These doors shall be constructed of 3/16" tread plate with a 15 degree break on all sides. Each door shall have two (2) gas shock style stay open devices which shall also retain the door in the closed position.

Protective panels shall be applied inside the compartments to cover any exposed wiring or recessed side body lighting, provided on the unit. These panels shall reduce the overall usable compartment area in the compartments.

COFFIN COMPARTMENT LIGHTING

Two (2) On Scene Solutions, Access Series LED compartment light(s) shall be provided, to ensure proper compartment illumination.

The lights shall be mounted underneath the roof compartment door opening and shall be activated with a magnetic door switch that shall be connected to the door ajar warning circuit.

The lights shall come with a five (5) year warranty.

COMPARTMENT TOPS

Compartment ceilings shall be of a fully welded design as part of the body construction process.

Compartment designs that do not have a welded in ceiling shall not be acceptable.

There will be no exceptions.

REAR BODY PANEL

The rear body panel shall extend the full width between the body side compartments.

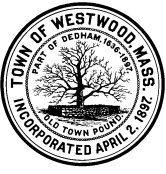
This panel shall be full height from the rear step to the hose bed floor.

No part of the rear panel shall be attached to the booster tank.

The rear body panel material shall be tread plate as standard.

If Chevron striping is specified for the rear of the body then smooth aluminum shall be utilized.

FRONT BODY OVERLAY



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The front face of the side compartments, next to the driver and officer pump panels shall be overlaid with full height tread plate protection panels.

The overlays shall cover the front face of the compartments only, they shall not wrap around to the door opening.

RUB RAILS

Sacrificial extruded aluminum C-Channel style, rub rails shall be mounted at the base of the body, extending outward from the body. The rub rails shall extend the full length of the main body.

WHEEL WELL LINERS

The body wheel wells shall be provided with fully removable bolt-in aluminum fender liners. The wheel well liners shall extend from the outer wheel well body panel into the truck frame. The completely washable wheel well liners shall be designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation and corrosion.

FENDERETTES

The rear fenders shall be equipped with easily replaceable bolt-in polished aluminum fenderettes. The fenderettes shall be equipped with a rubber gasket molding between the body panel and the fender.

REAR MUD FLAPS

Heavy duty mud flaps shall be provided behind the rear wheels.

REAR STEP

The extended rear step shall be 12" deep and extend beyond the body compartments. The step shall be 96" wide and have tapered corners. The step shall be fabricated from 3/16" tread plate and shall be rigidly reinforced. The rear edge of the step shall be designed to accommodate the rear clearance lights. The rear step overlay shall be bolted in place with an approximate 1/2" clearance gap between the step and rear body panel.

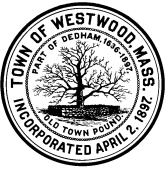
HANSEN KNURLED STAINLESS STEEL GRAB RAILS

All hand rails shall be Hansen 1-1/4" outer diameter, knurled stainless steel, designed to meet NFPA 1901 requirements.

Molded gaskets shall be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.

Grab rails shall be provided at the following specified locations.

Additional grab rails shall be provided adjacent to any additional steps specified to comply with NFPA 1901.



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TWO (2) VERTICAL RAILS ON REAR

Two (2) vertical rails shall be mounted on the rear edge of the beavertails, one (1) each side.

ONE (1) HANDRAIL, BELOW HOSE BED LEVEL

One (1) horizontal, full width handrail shall be installed at the rear, below the level of the hose bed.

HANDRAIL ABOVE PUMP PANEL, EACH SIDE

Two (2) horizontal handrails shall be mounted above each pump panel, (1) each side.

FRONT OF BODY LARGE LIGHTED FOLDING STEPS – DRIVER SIDE

Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on driver side body front to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

FRONT OF BODY LARGE LIGHTED FOLDING STEPS – OFFICER SIDE

Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on officer side body front to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

REAR OF BODY LARGE LIGHTED FOLDING STEPS – DRIVER SIDE

Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

REAR OF BODY LARGE LIGHTED FOLDING STEPS – OFFICER SIDE

Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on officer side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

PAINTED REAR TOW EYES, BELOW BODY

Two (2) painted tow eyes shall be furnished on the rear of the vehicle. The tow eyes shall be made from plate steel and shall be bolted directly to the chassis frame rails with grade 8 bolts. The tow eyes will extend below the body. The tow eyes shall be smooth and free from sharp edges. They will have a minimum eyelet hole of 2-1/2". The tow eyes shall be painted.



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HOSEBED FLOORING

Flooring is to be constructed from extruded aluminum and have proper spaces for ventilation purposes. The flooring shall be smooth and free from sharp edges to avoid any hose damage. The hose bed floor shall be removable, providing access to the inner body framework.

HOSEBED PARTITIONS

Two (2) fully adjustable 1/4" aluminum hose bed partitions shall be provided. The partition shall be easily adjustable by channels, located at the front and rear of the hose bed. The partition shall be removable for access to the booster tank.

HOSEBED PARTITION REINFORCEMENT

The top and rear edge of each of the hose bed partitions shall have a 3/4" integral tubing reinforcement welded on for additional support.

HOSE PARTITION HANDHOLD CUTOUTS

Each hose bed partition shall have a vertical handhold cutout at upper rear edge of the partition.

FILL TOWER DIVIDER

An "L" shaped divider will be provided to block off the fill tower from the hose bed. The fill tower divider will match the hose bed divider material.

HOSEBED LIGHTING

Two (2) Amdor, LED strip surface mounted lights shall be mounted in the hose bed on the side walls to illuminate the hose bed area.

The hose bed lighting shall be switched at the rear of the body.

HOSEBED COVER

A tread plate hose bed cover shall be mounted on the side body flanges, utilizing a full length, stainless steel hinge on each side. The cover shall be constructed of 3/16" tread plate with an aluminum extrusion frame. The cover shall be supported by a fixed partition which shall be 1-1/2" higher than the side body flanges allowing for water to run off. The handles shall be provided at the rear for lifting. Both gas springs and cables shall be provided at the front to hold open the doors. The switches shall be provided on each side cover, which shall be tied to the "Do Not Move Apparatus When Light Is On" warning light inside the cab. A hinged access door shall be provided over the water tank fill tower area allowing access to the fill tower when the hose bed cover is closed. The access door shall be hinged to the front to prevent the door from opening when the apparatus is in motion.

The specified fixed partition will be located approximately 2 1/2" off center to the officer side. This will allow 38" from the fixed partition and officer side hose bed wall.



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VINYL FLAPS AT REAR EDGE OF TREADPLATE COVER

Two (2) vinyl flaps at the rear of the tread plate hose bed cover. They shall be secured to the hose bed cover with quarter turn fasteners and to the rear body with bungee cords.

VINYL MATERIAL COLOR - RED

The vinyl material shall be red in color.

HOSEBED COVER LETTERING

Material backed, 7-1/2" tall, Scotchlite Letters shall be sewn onto the hose bed cover rear flap(s).

The color of the letters shall be determined at the pre-construction conference.

The lettering verbiage will be determined at the pre-construction conference.

HOSEBED

The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose. The approximate overall dimensions of the hosebed shall be approximately 122" long x 81" wide x 24" tall.

HOSEBED CAPACITY

The hose bed will be designed to accommodate the following customer supplied hose load:

- 250' 2 1/2" – Pre-Connected
- 1000' of 4"
- 1000' of 3"
- 100' of 1 3/4" Over 300' of 2 1/2"

Note: The hose load is listed from driver side to officer side.

GROUND LADDER STORAGE

The ground ladder storage compartment will be at the rear of the body below the hose bed. The ground ladders will be stored horizontally below the hose bed. The ladder storage will be as wide as possible between the side compartments. A divider will be provided to separate the ladder and pike pole storage area from the remaining area of the compartment.

The driver side area of the compartment will be for long handled tools. A stop will be provided at 96" from the rear of the body.

The ladder storage compartment will be equipped with a hinged drop-down door and D-ring latch.



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EXTENSION LADDER

Alco-Lite model PEL3-24; 24', aluminum, three (3) section extension ladder shall be provided.

ROOF LADDER

Alco-Lite model PRL-10; 10', aluminum, straight roof ladder with folding hooks shall be provided.

ATTIC LADDER

Alco-Lite model FL-08; 8', folding, aluminum, attic ladder shall be provided.

PIKE POLE TUBES

Four (4) pike pole tube(s) shall be provided.

Each holder shall be accessible from the rear of the apparatus.

Each pike pole holder shall be labeled to indicate the pike pole length.

The pike pole tubes will be notched for NY roof hooks.

LOCATION PIKE POLE TUBES

Each pike pole tube shall be mounted in the ladder storage compartment.

SUCTION HOSE STORAGE

A storage area shall be provided in the body hose bed area to accommodate suction hose storage. The storage area will be located at the officer side of the hose bed. It will incorporate a fixed partition to isolate the suction hose from the remainder of the hose bed. The suction hose storage will be equipped with a vertically hinged door with thumb latches.

SUCTION HOSE

Two (2) 10' sections of six (6) inch Kochek (PVC) suction hose with lightweight hard coat couplings shall be furnished. Couplings shall include a long handle with a female swivel on one end and a rocker lug male on the other. All threads shall be six (6) inch N.S.T.

1/2 DEPTH ADJUSTABLE SHELF DESCRIPTION

Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.

Half depth adjustable shelves shall be located as indicated at each compartment description.



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1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED L-1

Three (3) Located in the left side compartment #1

1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED L-2

One (1) Located in the left side compartment #2

1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED L-3

One (1) Located in the left side compartment #3

1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-1

One (1) Located in the right side compartment #1

1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-2

One (1) Located in the right side compartment #2

1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-3

One (1) Located in the right side compartment #3

ADJUSTABLE SHELF DESCRIPTION

Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.

Adjustable shelves shall be located as indicated at each compartment description.

ADJUSTABLE SHELF(S) LOCATED L-1

One (1) Located in the left side compartment #1

ADJUSTABLE SHELF(S) LOCATED R-1

One (1) Located in the right side compartment #1

250#, FLOOR MOUNTED, ROLLOUT TRAY DESCRIPTION

Slide out floor mount compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports attached to #250 rated slides. Slide out floor mount shelving shall have gas shocks to hold the tray in and out.

Slide out floor mount shelving shall be as indicated at each compartment description.



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ROLLOUT TRAY, LOCATED L-3

One (1) Located in the left side compartment #3

ROLLOUT TRAY, LOCATED R-3

One (1) Located in the right side compartment #3

250# ROLLOUT TRAY, LOCATED REAR COMPARTMENT

One (1) Located in the rear compartment

GENERAL PAINT DESCRIPTION

The apparatus body shall be painted with Sikkens paint product. The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. The contractor shall, upon demand, provide evidence that the manufacturing facility is compliant with State EPA rules and regulations.

The exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces of the body. Any vertically or horizontally hinged smooth-plate compartment doors shall be painted separately to assure proper paint coverage on body, door jambs and door edges.

Paint process shall feature Sikkens high solid LV products and be performed in the following steps:

- Corrosion Prevention - all aluminum surfaces shall be pre-treated with the Alodine 5700 conversion coating to provide superior corrosion resistance and excellent adhesion of the base coat.
- Sikkens Sealer/Primer LV - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color.
- Sikkens High Solid LVBT650 (Base coat) - a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.
- Sikkens High Solid LVBT650 (Clear coat) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied.

Any location where the material is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment (ECK Corrosion Control).

The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.



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After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device.

GENERAL FINISH PAINT DESCRIPTION

The body shall be finished sanded and prepared for final paint.

Upon completion of final preparation, the body shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint.

Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

COMMERCIAL CHASSIS PAINT

The commercial cab exterior shall be finish painted in a two-tone color scheme by the chassis manufacturer with Purchaser's choice of colors as available.

COMMERCIAL CAB PAINT FINISH

The chassis shall be painted and detailed as provided from the chassis OEM and shall meet their quality guidelines.

WHEEL AND HUB PAINT

The chassis wheels shall be painted as provided by the commercial chassis manufacturer.

INSIDE/UNDERSIDE BODY PAINT

The inside and underside areas of the complete body assembly shall be painted black using a Sikkens paint system, prior to the installation of the body on the chassis or torque box.

COMPARTMENT INTERIOR FINISH

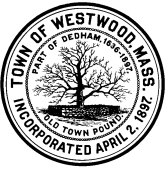
The interior of the compartments shall be finish painted with Multispec #7251 Gray Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.

FENDER COMPARTMENT INTERIOR

The interior of the fender storage compartments (if fender compartments are specified) shall be finish painted job color.

PUMP PAINTED / UNPAINTED PLUMBING

The pump shall be painted per the pump manufacturer's standard. The stainless steel plumbing will remain unpainted. The pump area interior will match the body underside finish as described elsewhere in these specifications.



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SINGLE COLOR BODY PAINT SCHEME

The body paint finish shall be Sikkens paint system in a single color to match customer furnished paint codes and requirements.

PINT OF TOUCH-UP PAINT

One (1) pint of each exterior color paint for touch-up purposes shall be supplied when the apparatus is delivered to the end user.

SCOTCH-LITE STRIPE

A four (4) inch high "Scotch-Lite" stripe shall be provided.

The stripe shall be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit.

The Scotch-Lite stripe layout shall be determined by the Fire Department.

WHITE SCOTCH-LITE

The Scotch-Lite shall be white in color.

DUAL 1" SCOTCH-LITE ACCENT ON MAIN STRIPE

A 1" high Scotch-Lite material accent stripe shall be incorporated into the Scotch-Lite scheme to border the primary Scotch-Lite stripe on the top and bottom edges.

Final layout of this configuration shall be determined by the Fire Department.

REAR CHEVRON STRIPING

At least 50% of the rear facing vertical surface shall be covered with alternating strips of reflective striping.

6" 50% REAR ORALITE CHEVRON STRIPING

The striping shall be 6" Oralite reflective striping.

RED & YELLOW ORALITE V98

The Oralite V98 reflective tape shall be #12 red and #18 yellow in color.

MISCELLANEOUS EQUIPMENT

The following equipment shall be mounted as specified or as loose equipment provided with the completed apparatus at the time of delivery:



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ROAD SAFETY KITS

A road safety kit shall be furnished with the following equipment:

- 2 1/2 lb. B-C fire extinguisher
- Triangle safety reflectors.

WHEEL CHOCKS

Two (2) ZICO #SAC-44 folding wheel chocks shall be mounted forward of the rear wheels on the driver side below the side running board compartments.

GENERAL ONE (1) YEAR WARRANTY

The purchaser shall receive a General One (1) Year or 24,000 Miles limited warranty.

ELECTRICAL ONE (1) YEAR WARRANTY

The purchaser shall receive a Electrical One (1) Year or 18,000 Miles limited warranty.

BODY STRUCTURE (ALUMINUM) TEN (10) YEAR WARRANTY

The purchaser shall receive a Body Structure (Aluminum) ten (10) Years or 50,000 Miles limited warranty.

WARRANTY, BODY PAINT / PERFORATION

The purchaser shall receive a paint and finish (Exterior Clear coated) five (5) years, pro-rated warranty.

5 YEAR STAINLESS STEEL PIPING WARRANTY

The proposed stainless-steel plumbing will be warranted for a period of five (5) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

LIFETIME POLY TANK WARRANTY - ALL TANKS

The proposed water tank will be warranted by the water tank manufacturer for the "Lifetime" of the unit. A copy of the manufacturer's warranty will be supplied to define additional details of the warranty provisions.

HALE FIRE PUMP LIMITED STANDARD WARRANTY

Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale shall be free of defects in material and workmanship for a period of five (5) years from the date product is first placed into service or five and one-half (5 1/2) years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period,



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Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).

AKRON HEAVY DUTY VALVE - 10 YEAR WARRANTY

Akron Brass warrants Heavy Duty Swing-Out Valves for a period of ten (10) years after purchase against defects in material or workmanship. Akron Brass shall repair or replace any Heavy Duty Swing Out Valve which fails to satisfy this warranty.

CORROSION TREATMENT

Upon apparatus completion, underside of the apparatus, from the pump enclosure-back, shall have anti corrosion film applied to help inhibit rust and the corrosion process. The semi-firm wax film shall be applied by air spray method. The film shall be applied as a minimum to the following areas: body substructure, underside of all body compartments, running board supports and rear step supports. No film shall be applied directly to the exhaust system or wheel wells.