

# HME, Inc.

One (1) == International Chassis for Model 34E - 4.001 ==

One (1)  
00-00-0040 Side Hill Performance Requirement - Type III

## **SIDE HILL PERFORMANCE**

Upon completion of the apparatus, the department requires that the apparatus be "Tilt Table" tested in a fully loaded condition with the engine not running. Fully loaded condition shall be defined as stated in NFPA 1901, Section 4.12, Vehicle Stability. The apparatus must meet the minimum required side hill performance requirement of 30 degrees tilt in a fully loaded condition before lifting a front or rear tire. The tilt table test must be conducted and certified by a third party.

If the completed apparatus fails to meet the minimum side hill performance requirements, the contractor shall have no more than a total of 30 business days to correct all deficiencies and re-submit a compliant apparatus. If the contractor cannot deliver a compliant apparatus within the 30 business day time frame, the State shall initiate termination for default.

One (1)  
00-00-90SF Vocation and Basic Attributes - Apparatus

## **APPARATUS VOCATION AND BASIC ATTRIBUTES**

When completed this HME Ahrens-Fox fire apparatus shall have the following attributes:

### **Order Information:**

Apparatus Builder: **HME, Incorporated**  
Sales Representative: \_

### **User Information:**

End User: \_  
Mailing Address: \_  
City: \_  
State: \_  
Zip Code: \_  
F.D. Contact: \_  
Phone Number: \_  
Fax Number: \_  
Contacts email: \_

### **Hose well options:**

Indicate the hose that shall be installed in the well.  
Hosewell Location:  
\_X\_ - Officer's  
X\_ - Center  
\_X\_ - Driver's  
Hose Brand: \_

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Hose Model: \_  
Hose Size: \_\_\_\_\_ inch  
Number of feet required: \_

If more than one hosewell is ordered indicate on a separate piece of paper the information for the other well.

## Is there an overall height restriction?

\_N/A\_ - Inches ground to the top of the highest part of apparatus when fully loaded

## Are there minimum angle of approach or departure angle requirements? If so fill in the blank.

Minimum angle of approach - \_\_30\_\_ degrees  
Minimum angle of departure - \_\_24\_\_ degrees

One (1)  
00-00-92SE

Paint Codes - Apparatus

### PAINT CODES AND BASIC ATTRIBUTES

#### Paint Information

Paint Manufacturer: PPG is HME Standard Paint

#### BODY PAINT

Color Body Panels Color:\* Red

Color Body Panels Code:\*\_ NAV 2303

If the hosebed sides are painted are they the same color as the body panels?: Yes

One (1)  
00-00-940A

Details of Construction - Type III

### CONSTRUCTION DETAILS

Details of construction such as, but not limited to mounting positions for siren heads, grab handles, switches, labeling and materials where not otherwise specifically detailed in the written specifications at time of order, shall be left to the discretion of the manufacturer who shall be solely responsible for the design, construction and placement of the components.

One (1)  
00-10-0228

Commercial Chassis, International - Model 34 - ISL Engine - Interface

### COMMERCIAL CHASSIS DESCRIPTION

The following International/Navistar chassis shall be provided:

|         |                                                                                         |
|---------|-----------------------------------------------------------------------------------------|
| HV50700 | Base Chassis, Model HV507 SFA with 183.00 Wheelbase, 64.10 CA, and 41.00 Axle to Frame. |
| 1ANB    | AXLE CONFIGURATION {Navistar} 4x4                                                       |

23682-0003

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| 1CBU | FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.125" x 3.580" x 0.312" (257.2mm x 90.9mm x 8.0mm); 480.0" (12192) Maximum OAL                                                                                                                                                                                                                                                                                                                                                                               |
| 1GBP | FRAME REINFORCEMENT Full Outer C-Channel, Heat Treated Alloy Steel (120,000 PSI Yield), 10.813" x 3.892" x 0.312" (274.6mm x 98.8mm x 7.9mm), 480.0" (12192mm) OAL                                                                                                                                                                                                                                                                                                                                                       |
| 1MBP | BUMPER, FRONT Swept Back 15-Degrees, Steel, for use with Front Frame Extensions, Heavy Duty                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1WDS | FRAME EXTENSION, FRONT Integral; 20" In Front of Grille                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1WGG | WHEELBASE RANGE 181" (460cm) Through and Including 205" (520cm)                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2GAB | AXLE, FRONT DRIVING {Meritor MX-12-120 EVO} Single Reduction, 12,000-lb Capacity, with Hub Piloted Wheel Mounting                                                                                                                                                                                                                                                                                                                                                                                                        |
|      | <u>Notes</u><br>: Axle Lead Time is 90 Days                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 2WLC | AXLE, FRONT DRIVING, LUBE {EmGard FE-75W-90} Synthetic Oil; 1 thru 29.99 Pints                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3ADC | SUSPENSION, FRONT, SPRING Parabolic Taper Leaf, Shackle Type, 12,000-lb Capacity, with Shock Absorbers                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4091 | BRAKE SYSTEM, AIR Dual System for Straight Truck Applications<br><u>Includes</u><br>: BRAKE LINES Color and Size Coded Nylon<br>: DRAIN VALVE Twist-Type<br>: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster<br>: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel<br>: PARKING BRAKE VALVE For Truck<br>: QUICK RELEASE VALVE On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4<br>: 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4AZA | AIR BRAKE ABS {Bendix AntiLock Brake System} 4-Channel (4 Sensor/4 Modulator) Full Vehicle Wheel Control System                                                                                                                                                                                                                                                                                                                                                                                                          |
| 4EBT | AIR DRYER {Bendix AD-IP} with Heater                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4ERD | BRAKE CHAMBERS, POSITION Rotated Forward and Up For Maximum Ground Clearance with 4x4                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4ETD | BRAKE CHAMBERS, FRONT AXLE {MGM} 20 SqiIn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4EXU | BRAKE CHAMBERS, REAR AXLE {Bendix EverSure} 30/30 SqiIn Spring Brake                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4LAA | SLACK ADJUSTERS, FRONT {Haldex} Automatic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4LGA | SLACK ADJUSTERS, REAR {Haldex} Automatic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4SPA | AIR COMPRESSOR {Cummins} 18.7 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4VGG | AIR DRYER LOCATION Mounted Inside Left Rail, Behind Transfer Case Mounting                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| 4VKG | AIR TANK LOCATION (2) Mounted Under Battery Box, Outside Left Rail, Under Cab                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4WBX | DUST SHIELDS, FRONT BRAKE for Air Cam Brakes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4WDM | DUST SHIELDS, REAR BRAKE for Air Cam Brakes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4XDP | BRAKES, FRONT {Meritor 16.5X5 Q-PLUS CAST} Air S-Cam Type, Cast Spider, Fabricated Shoe, Double Anchor Pin, Size 16.5" X 5", 14,600-lb Capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4XDR | BRAKES, REAR {Meritor 16.5X7 Q-PLUS CAST} Air S-Cam Type, Cast Spider, Fabricated Shoe, Double Anchor Pin, Size 16.5" X 7", 23,000-lb Capacity per Axle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5708 | STEERING COLUMN Tilting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5CAW | STEERING WHEEL 4-Spoke; 18" Dia., Black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5PSA | STEERING GEAR {Sheppard M100} 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 8000 | ELECTRICAL SYSTEM 12-Volt, Standard Equipment<br><u>Includes</u><br>: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab<br>: HAZARD SWITCH Push On/Push Off, Located on Instrument Panel to Right of Steering Wheel<br>: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever<br>: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light<br>: STARTER SWITCH Electric, Key Operated<br>: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector<br>: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature<br>: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever<br>: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted<br>: WIRING, CHASSIS Color Coded and Continuously Numbered |
| 8518 | CIGAR LIGHTER Includes Ash Cup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8718 | POWER SOURCE Cigar Type Receptacle without Plug and Cord                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 8GXK | ALTERNATOR {Leece-Neville BLP4006HN} Brushless, 12 Volt, 325 Amp Capacity, Pad Mount, with Remote Sense                                                                                                                   |
| 8HAE | BODY BUILDER WIRING Rear of Frame; Includes Sealed Connectors for Tail/ Amber Turn/Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn                                                               |
| 8MJU | BATTERY SYSTEM {Fleetrite} Maintenance-Free, (3) 12-Volt 2850CCA Total, Top Threaded Stud                                                                                                                                 |
| 8NAA | TAIL LIGHT WIRING MODIFIED Includes: Wiring for Standard Lt & Rt Tail Lights; Separate 8.0' of Extra Cable Wiring for Lt & Rt Body Mounted Tail Lights                                                                    |
| 8REA | 2-WAY RADIO Wiring Effects; Wiring with 20 Amp Fuse Protection, Includes Ignition Wire with 5 Amp Fuse, Wire Ends Heat Shrink and 10' Coil Taped to Base Harness                                                          |
| 8RMZ | SPEAKERS (2) 6.5" Dual Cone Mounted in Both Doors, (2) 5.25" Dual Cone Mounted in Both B-Pillars                                                                                                                          |
| 8RPT | RADIO AM/FM/WB/Clock/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                                                                                                    |
| 8WHE | HORN, AIR Accommodation Package, Less Horn                                                                                                                                                                                |
| 8WNH | RUNNING LIGHT (2) Daytime                                                                                                                                                                                                 |
| 8WPH | CLEARANCE/MARKER LIGHTS (5) {Truck Lite} Amber LED Lights, Flush Mounted on Cab or Sunshade                                                                                                                               |
| 8WTK | STARTING MOTOR {Delco Remy 38MT Type 300} 12 Volt, Less Thermal Over-Crank Protection                                                                                                                                     |
| 8WTR | COURTESY LIGHT (4) Mounted In Front & Rear Map Pocket Left and Right Side                                                                                                                                                 |
| 8WWJ | INDICATOR, LOW COOLANT LEVEL with Audible Alarm                                                                                                                                                                           |
| 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                                                                                                                          |
| 8XGJ | BATTERY BOX Steel, with Plastic Cover, 30" Wide, 2-4 Battery Capacity, Mounted Left Side Under Cab                                                                                                                        |
| 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 |
| 8XKZ | USB PORT (2) Located in the Instrument Panel                                                                                                                                                                              |

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| 9593  | FENDER EXTENSIONS Omit                                                                                                                                                                                                                                                                                                 |
| 9AAD  | LOGOS EXTERIOR Omit Model Badges                                                                                                                                                                                                                                                                                       |
| 9AAH  | LOGOS EXTERIOR, ENGINE Badge Shipped Loose                                                                                                                                                                                                                                                                             |
| 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                                                                                                                                                                                                                                          |
| 9WBT  | GRILLE EMBER SCREEN Mounted to Grille and Cowl Tray to Keep Hot Embers out of Engine and HVAC Air Intake System                                                                                                                                                                                                        |
| 10060 | PAINT SCHEMATIC, PT-1 Single Color, Design 100<br><u>Includes</u><br>: PAINT SCHEMATIC ID LETTERS "WK"                                                                                                                                                                                                                 |
| 10506 | TOOL KIT Rim Wrench and Handle Only                                                                                                                                                                                                                                                                                    |
| 10646 | PAINT IDENTITY, PT-2 Two Tone, Instruction No. 946. Frame/Running Gear and Wheels, Less Fuel Tank<br><u>Includes</u><br>: NOTE: Battery Box, Air Tanks, Fuel Tanks, Steps and Straps NOT Painted                                                                                                                       |
| 10761 | PAINT TYPE Base Coat/Clear Coat, 1-2 Tone                                                                                                                                                                                                                                                                              |
| 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<br><u>Includes</u><br>: BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door                                                                                                                                                           |
| 12ESP | ENGINE, DIESEL {Cummins L9 360} EPA 2021, 360HP @ 2200 RPM, 1150 lb-ft Torque @ 1200 RPM, 2200 RPM Governed Speed, 359 Peak HP (Max)                                                                                                                                                                                   |
| 12THT | FAN DRIVE {Horton Drivemaster} Two-Speed Type, Direct Drive, with Residual Torque Device for Disengaged Fan Speed<br><u>Includes</u><br>: FAN Nylon                                                                                                                                                                    |
| 12UWZ | RADIATOR Aluminum, Cross Flow, Front to Back System, 1228 SqIn, with 1167 SqIn Charge Air Cooler, Includes In-Tank Oil Cooler<br><u>Includes</u><br>: DEAERATION SYSTEM with Surge Tank<br>: HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps<br>: RADIATOR HOSES Premium, Rubber |
| 12VBB | AIR CLEANER Dual Element                                                                                                                                                                                                                                                                                               |

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| 12VHR | FEDERAL EMISSIONS {Cummins L9} EPA, OBD and GHG Certified for Calendar Year 2021                                                                                                               |
| 12VXT | THROTTLE, HAND CONTROL Engine Speed Control; Electronic, Stationary, Variable Speed; Mounted on Steering Wheel                                                                                 |
| 12WBR | FAN OVERRIDE Manual; with Electric Switch on Instrument Panel, (Fan On with Switch On)                                                                                                         |
| 12WYK | ENGINE WATER COOLER {Sen-Dure} Auxiliary, For Use with Fire Trucks                                                                                                                             |
| 12WZD | EMISSION COMPLIANCE Engine Shutdown System Exempt Vehicles, Complies with California Clean Air 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 |
| 13AUL | TRANSMISSION, AUTOMATIC {Allison 3000 EVS} 5th Generation Controls, Close Ratio, 5-Speed with Overdrive, with PTO Provision, Less Retarder, Includes Oil Level Sensor, Max, GVW N/A            |
| 13TKC | TRANSFER CASE {Meritor MTC-4208} 2-Speed, 8,300 lb-ft Torque Rating, with PTO Provision, Electric Over Air Control, with Lube Pump                                                             |
| 13WDB | TRANSFER CASE LUBE {EmGard 50W} Synthetic; 1 thru 14.99 Pints                                                                                                                                  |
| 13WDV | OIL COOLER, TRANSFER CASE Remote Mounted Back of Cab                                                                                                                                           |
| 13WET | TRANSMISSION SHIFT CONTROL Column Mounted Stalk Shifter, Not for Use with Allison 1000 & 2000 Series Transmission                                                                              |
| 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                                                                                                  |
| 13XAK | PTO LOCATION Customer Intends to Install PTO at Right Side of Transmission                                                                                                                     |
| 14051 | AXLE, REAR, SINGLE {Meritor RS-23-160} Single Reduction, 23,000-lb Capacity, 200 Wheel Ends . Gear Ratio: 4.89                                                                                 |
| 14SAN | SUSPENSION, REAR, SINGLE 23,500-lb Capacity, Vari-Rate Springs                                                                                                                                 |
| 14SZB | SPRINGS, REAR AUXILIARY Multileaf; 4,500-lb Capacity                                                                                                                                           |
| 14WAP | SHOCK ABSORBERS, REAR (2)                                                                                                                                                                      |
| 14WMG | AXLE, REAR, LUBE {EmGard FE-75W-90} Synthetic Oil; 30 thru 39.99 Pints                                                                                                                         |
| 15DYR | DEF TANK 9.5 US Gal (36L) Capacity, Frame Mounted Outside Left Rail, Back of Cab                                                                                                               |
| 15LLY | LOCATION FUEL/WATER SEPARATOR Mounted Outside Left Rail, 66" Back of Cab                                                                                                                       |
| 15LMR | FUEL/WATER SEPARATOR {Racor 400 Series,} with Primer Pump, Includes Water-in-Fuel Sensor                                                                                                       |

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| 15SVN | FUEL TANK Top Draw, Non-Polished Aluminum, 26" Dia, 70 US Gal (265L), Mounted Left Side, Back of Cab                                                                                                                                                                 |
| 15WCS | FUEL COOLER Less Thermostat; Mounted in Front of Cooling Module                                                                                                                                                                                                      |
| 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                                                                                                                                                                                                                   |
| 16GDC | GAUGE CLUSTER Base Level; English with English Speedometer and Tachometer, for Air Brake Chassis, Includes Engine Coolant Temperature, Primary and Secondary Air Pressure, Fuel and DEF Gauges, Oil Pressure Gauge, Includes 3 Inch Monochromatic Text Display       |
| 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} with Black Bezel, Mounted in Instrument Panel                                                                                                                                                                         |
| 16HKT | IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster                                                                                                                                                                                      |
| 16KAV | SEAT, DRIVER {National} Non-Suspension, High Back with Integral Head Rest, Vinyl, with Fixed Back                                                                                                                                                                    |
| 16LUM | SEAT, PASSENGER {National} Non Suspension, High Back with Integral Headrest, Vinyl, with Fixed Back, with Under Seat Storage                                                                                                                                         |
| 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                                                                                                                               |
| 16SDD | GRAB HANDLE, ADDITIONAL EXT (2) Chrome, Towel Bar Type, with Anti-Slip Rubber Inserts, Mounted Left and Right Side, Rear of Rear Doors, for Crew Cab                                                                                                                 |
| 16SMT | SEAT, REAR {National} BENCH; Full Width; Vinyl, with Fixed Back and Two Integral Outboard Headrests                                                                                                                                                                  |
| 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><br>: Mirror Dimensions are Rounded to the Nearest 0.5"                                                                                                                                                                                                  |
| 16VCA | SEAT BELT All Red; 4 to 6                                                                                                                                                                                                                                            |
| 16VKD | CAB INTERIOR TRIM Classic, for Crew Cab                                                                                                                                                                                                                              |



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## Includes

: 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

16WEE CAB SOUND INSULATION Includes Dash Insulator and Engine Cover Insulator

16WLM HOURMETER, PTO for Customer Provided PTO; with Indicator Light and Hourmeter in Gauge Cluster Includes Return Wire for PTO Feedback Switch

16WSK CAB REAR SUSPENSION Air Bag Type

16XCL WINDOW, MANUAL (4) and Manual Door Locks, Front and Rear Doors, Left and Right

16XJN INSTRUMENT PANEL Flat Panel

16ZBU ACCESS, CAB Steel, Driver & Passenger Sides, Two Steps per Door, for use with Crew Cab

27DUW WHEELS, FRONT {Accuride 51408} DISC; 22.5x8.25 Rims, Powder Coat Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

28DUW WHEELS, REAR {Accuride 51408} DUAL DISC; 22.5x8.25 Rims, Powder Coat Steel, 2-Hand Hole, 10-Stud, 285.75mm BC, Hub-Piloted, Flanged Nut, with Steel Hubs

7382135423 (2) TIRE, FRONT 11R22.5 Load Range H HDR2 (CONTINENTAL), 491 rev/mile, 75 MPH, Drive

7382135423 (4) TIRE, REAR 11R22.5 Load Range H HDR2 (CONTINENTAL), 491 rev/mile, 75 MPH, Drive

Cab schematic 100WK  
Location 1: 2303, Red (Std)

Chassis schematic 946WK

Frame: 2303, Red (Std)

Wheel: 2303, Red (Std)

**Services Section:**

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

One (1) Paint Codes - Cab & Chassis  
00-00-92SD

## **PAINT CODES AND BASIC ATTRIBUTES**

### **CAB EXTERIOR**

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Cab schematic  
Location 1: Red 2303  
Chassis schematic  
Frame: Red 2303  
Steel Wheel: Red 2303

One (1)  
40-S0-5200 Forward Facing Crew Seating

The crew seating shall be International option 16SMT, SEAT, rear bench seat vinyl, w/fixed back and two integral outboard headrests.

One (1)  
00-14-0012 Mud Flaps, Hood - Type III

## **HOOD MUDFLAPS**

Mud flaps shall be installed on the bottom of the hood in front of the front tires. These mud flaps shall be provided to protect the front extension from excessive road debris.

One (1)  
00-14-0180 Fuel Tank Vent Modification - Type III

## **FUEL TANK VENT EXTENSION**

The OEM fuel tank vent line shall be extended from the fuel tank check valve and vented to the atmosphere. The vent line shall extend vertically from the tank to the bottom of the cab rear window and then bend 180 degrees towards the ground. A vent plug orifice (#60 drill size) shall be installed into the upper end of each line. No fuel tank roll over protection check valves shall be removed from the fuel system.

Any chassis fuel system modifications shall be fully compliant with the California Air Resources Board (CARB) standards.

One (1)  
00-14-0258 Lower Compt, One (1), Below Rt Rr Cab Door - Type III

## **UNDER CAB COMPARTMENT DESIGN AND CONSTRUCTION**

All compartments shall be manufactured from 12-gauge stainless steel shall be of sweep out design and shall be bolted together. Stainless recessed round head bolts and stainless aircraft style "ESNA" nuts shall be applied with proper torque rating for each fastener. This type of construction shall greatly enhance the strength and ease of parts replacement in the event of damage and future modifications.

## **HINGED DOOR CONSTRUCTION**

The lower cab compartments shall be provided with hinged doors. The hinged compartment doors shall be flush style so that the entire door fits flush against the apparatus body sides. All doors shall be provided with a high quality, continuous double seal type weather stripping to prevent moisture and dust from entering the exterior compartments.

Each door shall be double pan design with the outer door material being 12-gauge stainless steel with a 1/8" aluminum removable inner liner that shall have a natural finish to provide reflective qualities during night operations.

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The vertically hinged doors shall have gas shocks. A polished stainless steel 1/4" piano hinge shall be provided for each door. The door latches shall be Austin Hardware locking slam latches, with a chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

The exterior of the doors shall be painted to match the main job color.

## **RIGHT (OFFICER'S SIDE) COMPARTMENT UNDER REAR CAB DOOR**

There shall be a brushed stainless steel compartment mounted beneath the crew door on the right (officer's) side of the cab. The compartment shall have approximate dimensions of 26" wide x 13" high x 22" deep.

A heavy duty pullout tray shall be installed in the compartment equipped with slides and a positive mechanical lock to hold the tray in the in position and shall be made from stainless steel.

## **COMPARTMENT LIGHTING**

LED strip lights shall be provided for the under cab compartment. The under compartment shall have an automatic compartment light switch.

## **COMPARTMENT STEPS**

The top of the compartment shall be equipped with the original equipment steps from the chassis. The lower steps on the compartment shall be the original equipment steps from the chassis.

The original equipment steps in the front officer's and crew areas shall be reinstalled on the apparatus.

One (1)  
00-14-0512 Cab Lower Stainless Trim - Type III

## **CAB LOWER STAINLESS TRIM**

The lower edge of the cab shall have a brushed stainless steel trim edge. The trim shall be broken to form an angle for stiffness.

One (1)  
00-14-2212 Ember Screens, Cab Heater and Engine Air Intake - Type III

## **EMBER SCREENS**

Stainless steel wire cloth screens shall be installed on the apparatus fresh air intake system, air filter housing and outside cab vent. The air intake and outside cab vent shall be protected so to prevent particulate matter greater than .039 inches in diameter from entering the intake system. Particular attention is required on screening of the remote through the hood style intake systems. The wire cloth specification shall be as follows: .014 inch, 304 stainless steel, 20 meshes per lineal inch.

One (1)  
00-14-2302 Exhaust Tailpipe Modification - Type III

## **EXHAUST TAILPIPE MODIFICATION**

The exhaust system on the chassis shall be removed from the DOC back. A four (4) inch horizontal tailpipe shall be installed terminating ahead of the rear tires on the right side of the vehicle.

# HME, Inc.

The area over the right side under cab compartment shall have the tailpipe wrapped to prevent excessive heat in the compartment and from beneath the cab. The tailpipe shall terminate with an exhaust gas diffuser that is five (5) inches in diameter with a 20 degree angle cut. A "CAUTION HOT EXHAUST" labeling will be placed directly over the exhaust outlet on the apparatus body.

The apparatus body on the right side ahead of the rear tires shall be modified to allow the exhaust system to be no lower than the running board on the pump.

One (1)  
00-14-2402 Brake Hose Protection, Fire Wrap Lagging

## **BRAKE HOSE PROTECTION**

All Synflex air hose that is routed below the frame rails shall be wrapped with a fire wrap lagging capable of withstanding flame and heat impingement of a minimum of 250°C (482°F).

One (1)  
00-16-0114 Ground Lights, (4) LED Cab Mtd - Type III

## **CAB GROUND LIGHTING**

One (1) LED light shall be mounted beneath the step on the driver and one on the officer's side, as well as beneath each crew cab step. These lights shall be designed to provide illumination on areas under the cab for entry/egress. Light activation shall occur when any cab door is open.

One (1)  
00-16-0202 Cab / Apparatus Electrical Interface - Type III

## **ELECTRICAL INTERFACE**

The apparatus shall be equipped with a state of the art electrical interface utilizing the chassis multiplexing system as the foundation for the design. Integration of analog devices and hard wiring with logic devices shall be kept to a minimum. All wiring shall be color coded and labeled to correspond to the electrical manual provided with the completed apparatus.

One (1)  
13-P0-2302 Low Voltage Hi Idle - Type III

## **LOW VOLTAGE HIGH IDLE**

The Hi Idle shall be activated if the system voltage drops to 12.4 volts or less for 30 seconds and the following interlocks are engaged:

- Transmission in neutral
- Parking Brake Set
- Service Brake Released
- No other feature has control of the engine speed (ex. pressure governor operation)

Hi Idle shall be maintained until system voltage has reached 13.3 volts or greater for 120 seconds or if any of the interlocks change state.

One (1)  
00-16-0810 Auxiliary Engine Cooler Supplied in Commercial Chassis

## **AUXILIARY ENGINE COOLER**

# HME, Inc.

The cooling system shall have one (1) auxiliary engine cooler mounted in the radiator water piping. The apparatus shall have the fire pump water circulated to the cooler from a valve located on the apparatus pump panel.

One (1)  
00-16-1502

Under Seat Storage Compt, Driver - Type III

## **DRIVER UNDER SEAT STORAGE COMPARTMENT**

The driver seat shall be provided with under seat storage compartment. There shall be a door on the compartment facing the outside of the cab. The door shall be equipped with a horizontal piano hinge on the bottom of the door and a push button lever type latch on the top of the door. The seat compartment shall be 14 gauge steel powder coated black to match the interior cab coloring.

## SHOP NOTE

Note: Rear seat frame structure - tubular

One (1)  
00-16-1550

Cab Console / Mapbox, Between Cab Front Seats - Type III

## **CAB CONSOLE**

A center console fabricated from minimum 14 gauge steel, with a black powder coat finish shall be mounted to the cab floor between the front bucket seats mounted to the cab floor with bolts and nylon lock nuts. The console shall have a removable top and front panel. The console shall be the maximum size that will fit between the front bucket seats, while ensuring allowances for seat belt access, engine doghouse removal and rear seat leg room. The overall height shall not exceed the height of the front seat cushions.

The console shall have a form/map box with the following dimensions - 13-1/2" deep x 20-3/4" wide x 14" front to back. This box is sized to utilize the maximum space available and that is deep enough to house 8 1/2" X 11" binders. The mapbox shall include a black powder coated 14-gauge steel lid hinged at the rear with a push button lever type latch. Two (2) full length adjustable dividers shall be installed in the console.

The console shall be vented to allow heat dissipation from the electrical components mounted within. A pancake fan shall be installed in the console, powered when the ignition is in the "on" position. The electrical fuse/breaker panel shall be mounted to the front side of the console and be provided with a protective lid that contains a legend for the breaker functions.

A four (4) position "handi-talki" holder shall be mounted on the rear side of the center console. This holder shall be powder coated black to match the console. The holder shall be mounted low enough so the "handi-talki" body does not protrude above the top surface of the center console.

The following components shall be recessed mounted in the cab console top panel:

- PTO Pump Shift Control, switch guard, indicator light and identification tag
- Fire Research TankVision mini water tank level gauge model WLA205-A000
- Tomar 948 Siren / Lightstick Controller
- Foam System Remote Control
- Diesel Pump Remote Control Panel

Mounted to the center of the console on the front side shall be the Intercom Control

There shall be six (6) 20 amp fused spare circuits connected to a terminal strip inside the console for use by the end user.

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## SHOP NOTE

Note: Modified water gauge  
Note: Tomar Siren / Lighting Controller

One (1)  
40-H0-2152      Electronic Siren - Tomar Model 948 - Type III

### **ELECTRONIC SIREN**

A Tomar 948 electronic siren / lighting control with microphone, shall be provided.

The siren shall be wired and programmed to provide the following:

Emergency Lighting Master  
Light Bar Functions  
Scene Lighting  
Rear Traffic Director

One (1)  
40-X0-1401      Dual Port USB Charging Port

### **DUAL PORT USB CHARGING PORT**

A Kussmaul 4.8 amp Dual USB charging port shall be installed in the center console. The charging port shall have a built-in LED indicator to show that the device is powered.

The USB charging port shall be powered with the battery power switch in the cab.

## SHOP NOTE

Note: Modified location

One (1)  
40-Z0-0182      12 VDC Power Point Sockets - Type III

### **12VDC POWER POINTS**

Six (6) 12 volt, socket (cigarette lighter) type, receptacles shall be provided each with a protective rubber plug with strap. The sockets shall be mounted one (1) each side of the rear of the cab console beside the handi-talkie holder and four (4) on the front of the console above the fuse blocks on either side of the intercom.

One (1)  
01-VC-3016      Front Bumper Ext - 16" - Three (3) Hosewells - Type III

### **BUMPER EXTENSION**

The front frame extension shall be integral to the truck frame. Add-on frame extensions are not acceptable.

The front bumper face shall extend 16 inches ahead of the front face of the engine hood.

One (1)  
01-W0-1002      Front Tow Plate and Hose Roller Fixture - Type III

### **FRONT TOW PLATE**

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A 3/4" plate tow eye shall be provided mounted directly to the truck chassis frame rails. The plate is to have a center tow eye opening with dimensions of 3" x 4". The tow plate shall be attached to the truck chassis with Grade 8 bolts with hardened washers and Grade "C" distorted thread locknuts. The bumper tow eye, top with grip type material, shall be treated with an epoxy type nonskid material. (Black in Color) The nonskid material shall be applied in accordance with the manufacturer's recommendation. Epoxy or equal.

## **HOSE ROLLER FIXTURE**

A 2 inch by 2 inch receiver is to be bolted in place, offset to the right (officer's) side for use as a hose roller fixture.

One (1)  
01-Z0-8016

Front Gravelshield - Type III

## **GRAVELSHIELD**

A gravelshield shall be installed filling the area above the extension rails. This gravelshield shall be constructed of .125" thick NFPA non-skid, bright, non-skid, aluminum treadplate. The gravelshield shall be supported at the front by the top flange of the bumper. At the rear, the gravelshield shall be supported by a steel substructure.

One (1)  
01-Z0-8602

Three (3) Front Bumper Hosewells, Three (3) Treadplate Lids - Type 3

## **BUMPER HOSEWELLS**

There shall be three (3) hosewells in the front extended bumper. Each hosewell shall be constructed of .125" smooth aluminum and contain drain holes.

On the right (officer's) side of the bumper extension the hosewell shall be approximately 27.25" wide x 11.5" deep x 7" front to back with a tapered side to the right side of the hosewell (1.38 cubic foot). The right hosewell shall include a diamond plate hinged cover. The cover shall be manufactured with bevel style ends. A "D-Ring" handle shall be used to open the lid with a gas shock to hold the lid in the open position. The left forward corner of the lid shall have a cutout with trim guard to allow a preconnected hose to be stored with the hosewell cover closed.

The center hosewell (mounted between the frame rails) shall be 26" wide x 11.5" deep x 9.5" front to back (1.65 cubic foot). The center hosewell shall include a diamond plate hinged cover. The cover shall be manufactured with bevel style ends. A "D-Ring" handle shall be used to open the lid with a gas shock to hold the lid in the open position. The left and right forward corners of the lid shall have a cutout with trim guard to allow a preconnected hose to be stored with the hosewell cover closed.

On the left (driver's) side of the bumper extension the hosewell shall be approximately 27.25" wide x 11.5" deep x 7" front to back with a tapered side to the right side of the hosewell (1.38 cubic foot). The right hosewell shall include a diamond plate hinged cover. The cover shall be manufactured with bevel style ends. A "D-Ring" handle shall be used to open the lid with a gas shock to hold the lid in the open position. The right forward corner of the lid shall have a cutout with trim guard to allow a preconnected hose to be stored with the hosewell cover closed.

## SHOP NOTE

Note: Treadplate lids

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One (1)  
01-Z0-8804      Open Grate Mat, Hosewell

## **OPEN GRATE MAT - HOSEWELL**

The floor of the center hosewell shall be covered with black colored, open grate mat for improved ventilation.

One (1)  
40-HA-2042      Siren Spkr - One - Tomar 100W - Behind Bumper - Type III

## **SIREN SPEAKER**

There shall be one (1) Tomar 100 watt speaker provided. The speaker shall be centered, mounted behind the front bumper.

One (1)  
09-B0-0220      Accessory Air Reservoir - 2181 in<sup>3</sup>

## **ACCESSORY AIR RESERVOIR**

One (1) 2181 cu. in. additional reservoir shall be connected to the chassis air system to provide an air supply for accessories such as air powered tools. This reservoir shall include a pressure protection valve on the inlet side to allow full use of this tank without draining air from the chassis air system.

One (1)  
09-F0-0104      Air Inlet/Outlet Beneath Driver's Door-Commercial Chassis

## **AIR INLET / OUTLET**

An outside air system inlet/outlet connection shall be provided and mounted in an area beneath the driver's door. This connection shall be clearly labeled as to the function. A pipe thread frame coupling shall be provided with 1/4" npt threads. The fire department shall install the appropriate female hose quick connect fitting for proper operation.

One (1)  
09-F0-0202      Air Auto Eject - Kussmaul w/Cover - Commercial Chassis

## **AIR AUTO-EJECT**

The chassis shall be equipped with a KUSSMAUL automatic air line disconnect. The Air Eject shall be wired so that when the vehicle is started the Air Eject automatically disconnects the air line thus preventing the vehicle from being driven away with the air line connected.

A Kussmaul weatherproof adapter kit shall provide a recessed mounting for the Air Eject. A self closing, yellow, weatherproof cover shall be used to provide a water-tite seal for the Air Eject.

The air auto-eject shall be piped through a check valve to the "wet" air reservoir of the chassis. This connection shall maintain the apparatus air system from a shop air source.

One (1)  
09-F0-0216      Exterior Mounted - Beneath the Driver's Door - Comm

The Auto Air Eject assembly shall be mounted on the exterior of the cab beneath the driver's door.

One (1)  
10-GW-0122      Tire Pressure Monitoring Device - 2 Axles - LED Alert

## **TIRE PRESSURE MONITORING DEVICE**

23682-0003



# HME, Inc.

Each tire installed on the apparatus shall be equipped with a tire pressure monitoring device. The device shall consist of a valve stem cap with an LED tire alert to indicate tire pressure conditions. The LED will flash when the tire drops 8 psi below the factory setting.

One (1)  
14-T0-6102 Heavy Duty 10-Bolt PTO - 3000EVS Trans - Type III

## **TRANSMISSION PTO**

A clutched drive Chelsea, model 278SMFJP-B3XD, 10-bolt heavy duty engine driven power take off shall be installed by the apparatus manufacturer. The pump transmission shall be engaged by a guarded toggle switch. The pump shift controls shall be located in the cab within easy reach of the operator and shall include indicator lights as mandated by NFPA # 1901 latest editions.

## **PUMP DRIVESHAFTS**

Spicer 1410 Series driveshafts shall be provided for the power from the PTO to the water pump. The fire pump and gear case shall be mounted in such a manner that the PTO driveline angles do not exceed the manufacturer's recommended angles for the u-joints and shall be of the proper series and type specified by the pump and PTO manufacturer's.

One (1)  
40-DE-3021 Cab Door Reflective Material - White - Type III

## **REFLECTIVE MATERIAL - INTERIOR CAB DOOR**

The cab and crew doors shall have white reflective material affixed to the bottom inside edge inside of each door.

One (1)  
40-H0-1114 Single Stutter Tone Air Horn - Type III

## **AIR HORN**

A 21" Hadley stutter tone air horn shall be mounted on the right frame rail along side the engine. The air horn shall be controlled by the commercial chassis air horn accommodation package.

One (1)  
40-LC-0116 OCL - Whelen OS LED w/buzzer - Type III

## **COMPARTMENT OPEN LIGHT**

A Red Open Compartment Flashing Light, Whelen OS Series LED shall be mounted on the face of the dash to the right of the instrument cluster. A chrome flange is to be supplied with the light. A label shall be applied adjacent to the light '**OPEN COMPARTMENT**'.

An audible buzzer shall be provided and activate when the Open Compartment Light circuit is activated.

The compartment open light circuit shall be wired to all compartment doors including the hose bed covers. The open compartment circuit is deactivated when the parking brakes of the apparatus are applied.

One (1)  
40-LE-1004 Engine Maintenance Light LED - Type III

# HME, Inc.

## **ENGINE MAINTENANCE LIGHT**

One (1) LED engine maintenance light shall be supplied beneath the hood. The light shall illuminate automatically when the hood is tilted.

One (1)  
40-LM-1022      Maplight - Federal Signal 18" - Type III

## **OFFICER MAPLIGHT**

A Federal Signal maplight with an 18" long gooseneck and base mounted rheostat shall be mounted on the center of the dash to the right of the heater controls and above the parking brake release valve.

One (1)  
40-LS-1030      Roof Mounted Remote Spotlight - Golight - Single

## **ROOF MOUNTED SPOTLIGHT**

A GOLIGHT spotlight shall be mounted on the cab roof, above the driver's door, behind the light bar and outboard as far as practical.

The remote on/off toggle control panel shall be mounted in the overhead panel one each side.

One (1)  
40-LS-1044      LED

The model 20204 spotlight shall incorporate the use of LED's and shall be capable of 370 degrees of horizontal rotation and 120 degrees of vertical elevation/depression.

One (1)  
40-Y0-2100      David Clark 3800 Intercom System

## **DAVID CLARK INTERCOM SYSTEM**

There shall be a David Clark intercom system installed in the chassis cab. The intercom system shall be installed and have all wiring and components to render the system operational as follows:

One U3800 Master Station. The U3800 will accommodate two headsets and should be placed where radio transmit function is not required. Contains system on/off, master volume control, two headset jacks with listen level controls, power input connector, and two remote output connectors. Draws less than 600 milliamperes current. Other installed components include:

One (1) C3820 Power Cord

One (1)  
40-Y0-2112      Driver Position

## **DRIVER'S POSITION**

The following headset shall be installed adjacent to the driver's seating position in the cab.

One (1)  
40-Y0-2176      U3811 Remote Headset Station - Radio PTT - Driver

# HME, Inc.

One (1) David Clark U3811 Radio Interface Module shall be provided to provide isolated radio transmit function for one headset and radio receive function for all users. Contains one radio PTT switch, one headset jack and listen level control, one system input connection, and one radio input connection.

A C38 jumper cord will be provided to connect the modules and a C3821 radio interface cable will be provided to connect the U3815 to the U3805 Radio Interface.

One (1)  
40-Y0-2208

Headset - David Clark H3441 - Dual Ear Slotted Dome - Drvr

One (1) David Clark H3442 headset shall be provided with the following attributes:

Microphone: M-7A Electret (nominal 50 ohm).

Exclusive, patented flex/wire boom for easy, precise microphone placement.

Rotates 200° for left or right side placement.

Earphone: Lightweight Dynamic (nominal 300 ohm) wired in series.

Cord: 4 conductors, 5' Coil. Plug: PJ-051.

Microphone on/off button.

Slotted dome with no noise reduction / canceling.

One (1)  
40-Y0-0330

Headset Installation Cables

One (1) cables will be required for the headset installation.

One (1)  
40-Y0-2114

Officer Position

## **OFFICER'S POSITION**

The following headset shall be installed adjacent to the officer's seating position in the cab.

One (1)  
40-Y0-2178

U3815 Remote Headset Station - Radio PTT

One (1) David Clark U3815 Radio Interface Module shall be provided to combine the transmit/receive functions of a mobile radio with the David Clark 3800 Intercom System. This module has one headset jack with listen level control, one PTT switch, one radio input connector, two intercom connectors.

A C38 jumper cord will be provided to connect the modules and a C3821 radio interface cable will be provided to connect the U3815 to the U3805 Radio Interface.

One (1)  
40-Y0-2210

{QTY} Headsets - David Clark H3442 - Dual Ear Noise Red

One (1) David Clark H3442 headset(s) shall be provided with the following attributes:

Designed to be worn under helmets or safety caps.

Microphone: M-7A Electret (nominal 50 ohm).

Exclusive, patented flex/wire boom for easy, precise microphone placement.

Rotates 200° for left or right side placement.

Earphone: Lightweight Dynamic (nominal 300 ohm) wired in series.

# HME, Inc.

Cord: 4 conductors, 5' Coil.  
Plug: PJ-051.  
Microphone on/off button.  
NRR: 23dB.

One (1)  
40-Y0-0330 Headset Installation Cables

One (1) cables will be required for the headset installation.

One (1)  
40-Y0-2122 Crew Headsets - First Pair

## **CREW POSITIONS**

The headset(s) shall be installed adjacent to the crew seating positions in the cab. These headsets are wired to the U3800 master station.

Two (2)  
40-Y0-2210 {QTY} Headsets - David Clark H3442 - Dual Ear Noise Red

Two (2) David Clark H3442 headset(s) shall be provided with the following attributes:

Designed to be worn under helmets or safety caps.  
Microphone: M-7A Electret (nominal 50 ohm).  
Exclusive, patented flex/wire boom for easy, precise microphone placement.  
Rotates 200° for left or right side placement.  
Earphone: Lightweight Dynamic (nominal 300 ohm) wired in series.  
Cord: 4 conductors, 5' Coil.  
Plug: PJ-051.  
Microphone on/off button.  
NRR: 23dB.

Two (2)  
40-Y0-0330 Headset Installation Cables

Two (2) cables will be required for the headset installation.

One (1)  
40-Y0-2128 Pump Panel - Operator Location

## **PUMP OPERATOR'S POSITION**

The following shall be installed at the pump operators panel:

One (1)  
40-Y0-2182 Exterior Connector Kit - 18352G

A David Clark 18352G-16 connector kit with 13238P-01 weather cap shall be installed for this location.

One (1)  
40-Y0-2444 Headset Extension Cable - C3019

A David Clark C3019 Utility Radio Adapter shall be provided for radio interface at this location. Has radio PTT switch and listen level control. A 15-foot (extended) coil cord allows increased mobility.

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One (1)  
40-Y0-2344 U3805 - Radio Interface Module

## **SINGLE RADIO INTERFACE**

A David Clark U3805 Radio Cord Junction Module shall be provided. The U3805 is a passive module that permits multiple Series 3800 Radio Interface Modules (a maximum of four) to be connected to one radio. The U3805 provides one output to a mobile radio, one primary input from a Series 3800 Radio Interface Module, and three secondary inputs from Series 3800 Radio Interface Modules.

A C3821 radio interface cable shall be provided to connect the intercom system to the mobile radio.

The radio interface will be provided for the following radio:

One (1)  
40-Z0-0394 Two Way Radio Prep - Type III

## **RADIO POWER CIRCUIT**

A battery switched 15 amp power circuit shall be provided looped inside the cab console. Additionally, an OEM chassis ignition and battery circuits shall be run from the chassis power panel to the console for use by the end customer.

One (1)  
40-Z0-0914 Radio Antenna and Antenna Wiring - Type III

## **RADIO ANTENNA MOUNT WIRING**

Four (4) NMO mounts shall be roof mounted, on the cab in the following locations:

one (1) left side of the roof in line with the post between the driver's and rear doors  
a weather cap shall be installed on this mount - the unterminated coax from this mount is to be run to the center of the dash behind the AM/FM radio.

one (1) right side of the roof in line with the post between the officer's and rear doors  
a weather cap shall be installed on this mount - the unterminated coax from this mount is to be run to the center of the dash behind the AM/FM radio.

one (1) left side of the roof ahead of the rear of the cab  
a weather cap shall be installed on this mount - the unterminated coax from this mount is to be run to the officer's seat box.

one (1) right side of the roof ahead of the rear of the cab  
a weather cap shall be installed on this mount - the unterminated coax from this mount is to be run to the officer's seat box.

One (1)  
45-T0-0104 30 Amp - Battery Charger - ProMariner - Type III

## **BATTERY CHARGER**

# HME, Inc.

A PRO MARINER / ON BOARD SOLUTIONS, ProNauticP 1230 series, 30 amp battery charger shall be mounted on rear wall left side, behind the bench seat.

## SHOP NOTE

Note: Modified location

One (1)  
45-Z0-1202

Kussmaul 20 AMP - 120v - Super Auto Eject - Commercial

### **SHORELINE AUTO-EJECT**

A KUSSMAUL Super Auto Eject, model 091-55-20-120, with weatherproof cover shall be provided.

The Super Auto Eject is to be completely sealed to prevent internal contamination of the working components.

The internal switch arrangement of the Super Auto Eject shall be designed to close and open the 120-volt AC circuit after the mating connector is inserted and before the connector is removed. This design shall prevent arcing at the connector contacts to provide long life.

The electrical connection shall be provided as a 120-volt AC - 20 amp type using a NEMA 5-20P connector.

One (1)  
45-Z0-1302

Yellow Auto-Eject Cover

The Auto-Eject cover shall be yellow in color.

One (1)  
45-Z0-1314

Plain Cover

The Auto-Eject cover shall be a Kussmaul 091-55.

One (1)  
45-Z0-1322

Cab Exterior Mounted - Below the Driver's Door

The Auto Eject assembly shall be mounted on the exterior of the cab below the driver's door.

One (1)  
57-80-1104

High Beam Alternating Headlights - Type III

### **ALTERNATING HEADLIGHT WARNING**

The headlights shall be provided with an alternating headlight feature.

When the High Beam is selected the headlights shall become a standard high beam.

One (1)

== Pump & Body - Model 34E (4x4 Chassis) - 6.001 ==

One (1)

HydraTechnology, Pump House Design - Type III

# HME, Inc.

20-02-0102

## **HYDRA TECHNOLOGY**

The pump module must employ Hydra Technology. Due to the design a pump module manufactured with Hydra Technology is compact in size; massive in performance.

Each component in the module must undergo a selection and placement analysis staff engineers. Utilizing advanced 3D software the engineers goals must provide component placements for ergonomics with a completed module that produces maximum water flow with optimum versatility. Only after the complete analysis and build of the module in the computer can the build of the hardware in the shop begin.

Pump module design beginning with a foundation; cage framework assemblies that are precision manufactured from strong corrosion free heavy wall stainless steel tubing. This framework mounts to the truck frame through a mounting design complimented with iso-mount elastomer cushions. The result shall be a mounting system that allows for the twisting movement of the truck frame without undue stress loading of the pump module.

Next assembled shall be the stainless side panels. Brushed, mirror polished or power coated the stainless steel side panels provide strength and durability. Precise engineering allows each panel to be laser machined before assembly; instead of drilling holes technicians shall spend their time on assembly techniques that provide installations that breeze through strict quality assurance.

A thorough review of the valve control placements on a control module shall result in a neat and orderly layout. Open the access door on a side control module and peer inside. The horizontal control rods appear neat and orderly. The appearance is only a portion of the requirement. The same neat and orderly appearance after countless hours of engineering design and ergonomic study provide a smooth trouble free linkage for valve operation.

The gauge panel door shall be an expansive double wall stainless door supported by a 3/8 inch diameter hinge pin. The double wall door provides unsurpassed strength and gauge protection while thwarting the casual attempt of tinkering. Authorized servicing of the components within the door is simplified with a bolt on access panel.

Inside the access door; there shall be a clean well build appearance. Stainless steel piping, stainless steel panels, and a stainless steel framework all to provide years of trouble free service. Pipe threads are not allowed on plumbing larger than 1-1/2 inch in diameter. The pump module design shall employ Victaulic coupling connections in the pump module to save time when servicing a component. Installation of components without the use of pipe threads allows for "drop-out" maintenance of critical components without disassembly of entire piping systems. Drop in valves and manifolds with Victaulic couplings are only the start of the serviceability designed into this pump module.

Apparatus taking exception to any portion of this requirement will not be acceptable.

One (1)  
20-02-0202

Pump Enclosure, Side Mount, 27" Wide - Type III

## **PUMP COMPARTMENT**

The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of stainless steel tubing and angles, which does not support the fire pump. The pump compartment shall be mounted onto the chassis through rubber biscuits in a four point pattern to allow for chassis frame twist.

23682-0003

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The pump compartment shall be a modular design allowing removal from the chassis in an assembly complete with pump, plumbing and gauges with an approximate width of 27".

One (1)  
20-04-0204 Running Boards, w/Laser Grip S/S Surface - Type III

## **RUNNING BOARDS**

The running boards shall be an integral component of the pump compartment spaced down from the bottom of the pump module side panels to allow water to flow freely away from the running board area.

The steel running board supports shall be welded directly to the pump frame structure to provide proper support. The running board step surface shall be covered in Laser Grip stainless steel meeting the current revision of NFPA 1901 for step requirements.

One (1)  
20-06-0802 Pumphouse Dunnage Compartment - Type III

## **DUNNAGE COMPARTMENT OVER PUMP**

There shall be a dunnage compartment furnished on top of the pump module. This compartment shall be utilized for the installation of a hose reel and diesel pump. The right side and rear panels shall have laser cut grills to provide adequate air flow for cooling the diesel pump.

One (1)  
20-06-1280 Dunnage Cover, R/S Hinged - Type III

## **DUNNAGE COMPARTMENT COVER**

A .125" polished aluminum treadplate cover shall be provided over the right side of the dunnage compartment where the diesel pump is installed. The cover shall be hinged on the far right side of the dunnage opening to provide service access to the diesel pump and cooling system from the top side. The cover shall have a cable to prevent opening over 90° and a push button latch to secure the cover in the closed position. The cover shall have a laser cut grill to assist in cooling of the diesel pump.

One (1)  
20-06-1612 Grabrails, (2) L/R Side of Pump House - Type III

## **PUMP HOUSE GRABRAILS**

Two (2) bright anodized extruded aluminum grab rails shall be provided, one (1) each side of the pump house on the rear (body) side of the module just below the light hood. Molded rubber gaskets shall be installed under the grab handles to protect the surface of the pump house.

One (1)  
20-08-0802 Air Outlet Connection, Mtd L/S PPanel - Type III

## **AIR OUTLET**

A truck air system outlet connection shall be provided and mounted in the left side pump panel. This connection shall be clearly labeled as to its function. A pipe thread frame coupling shall be provided with 1/4" NPT threads, terminating with a pipe plug.



# HME, Inc.

One (1)  
20-10-1225 Work Light, (1) LED, Strip Light, Mtd Pump Compt w/Switch

## **PUMP COMPARTMENT WORK LIGHT**

The pump compartment shall have one (1) white LED strip light across the pump panel to provide illumination of the pump compartment. The light strip shall be mounted transverse at the rear of the pump module with the light directed to the front. The light shall have a weather resistant, toggle style on/off switch located inside the pump compartment adjacent to the door hinge area. The power for the pump module light shall be switched thru the battery master switch.

One (1)  
20-14-0102 Pump Service Access Requirements - Type III

## **PUMP SERVICE ACCESS REQUIREMENTS**

It is the opinion that service access to the pump, valves, gauges and controls are of the utmost importance. Special consideration shall be taken when evaluating the pump module design of the offerer. Pump panels that offer little to no access without the use of tools shall not be considered compliant with this requirement.

One (1)  
20-14-0302 Control Panel, Side Mount - Type III - JMP-500 - 500 GPM

## **PUMP CONTROL PANELS**

All pump controls and gauges shall be located at the left (street) side of the apparatus and properly identified. The layout of the pump control panel shall be ergonomically efficient and systematically organized. The pump operator's panel shall be removable in two (2) main sections for ease of maintenance. The pump and gauge panels shall be constructed of 12-gauge stainless steel. The gauge panel shall contain a panel for mounting of all instruments, engine monitoring system and pressure control system.

The gauge panel shall be a double panel door design to protect in the enclosed door all gauge tubing, switch, and control wiring. The gauge panel exterior shall be made of 12-gauge stainless steel. The inner pan shall bolt onto the stainless exterior panel. There shall be an access panel in the inner panel easily removable for control or gauge service or replacement.

The gauge panel door shall be designed as an opening pump house service door on the street (left) side of the pump house. This gauge panel door shall provide an opening minimum size of 21 inches wide by 14 inches in height.

The lower section of the panel shall contain all inlets, outlets and drains. All push-pull valve controls shall have quarter-turn locking control rods with chrome plated zinc tee handles. Guides for the push-pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push-pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

One (1)  
20-15-0112 Identification Labels - Metal Tags - Type III

## **NOMENCLATURE PLATES**

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5/8" X 3" metal, Vision Mark (or equal) individual nomenclature plates shall readily identify all switches, valves, and controls. The lettering shall be deeply etched, enamel paint filled or anodized aluminum-etched color-coded tags and shall describe the function of all the pump panel controls, switches, discharge and suction valves. The plates shall be attached with stainless steel nylock nuts and machine screws. (Plastic I.D. plates, rivets, adhesive backed plates, and/or self-tapping screws are unacceptable).

All intake and discharge labels to be labeled as to their size and function.

One (1)  
20-16-0802

Pump Panel Finish, Powder Coat, Black

## **PUMP PANEL FINISH**

The side gauge access door, side middle horizontal support panel, inlet/discharge panel, gauge and switch and side drain panels on the left side of the pump module shall have a black powder coat finish. The right side of the pump panel intake valve area shall be brushed stainless.

The dunnage compartment side walls, module vertical uprights and light bar shall have a brushed stainless steel finish.

One (1)  
20-18-1024

Controls & Gauges, Side Mount - Type III

## **CONTROLS AND GAUGES**

The following shall be provided on the pump and gauge panels in a neat and orderly fashion. The gauge panel shall include the following:

One (1)  
20-18-1403

FRC Pump Boss Monitoring Display - High Pressure

## **PRESSURE GOVERNOR AND MONITORING DISPLAY**

Fire Research PumpBoss pressure governor and monitoring display kit shall be installed. The kit shall include a control module, 600 psi pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 6 3/4" high by 4 5/8" wide by 1 3/4" deep. Inputs for monitored information shall be from a J1939 data bus or independent sensors. Outputs for engine control shall be on the J1939 data bus or engine specific wiring.

The following continuous displays shall be provided:

CHECK ENGINE and STOP ENGINE warning LEDs

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

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

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

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

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

PSI and RPM mode LEDs

THROTTLE READY LED.

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

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

- High Engine RPM
- High Transmission Temperature
- Low Battery Voltage (Engine Off)
- Low Battery Voltage (Engine Running)
- High Battery Voltage
- Low Engine Oil Pressure
- High Engine Coolant Temperature

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

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

## **PRESSURE GOVERNOR and MONITORING DISPLAY BUZZER**

Fire Research PumpBoss Z1 option for an audible alarm buzzer shall be installed. The buzzer shall sound when a signal from the PumpBoss activates it.

One (1)  
20-18-1503

4-1/2" Master Pump Gauges, -30-0-600 psig

## **MASTER GAUGES**

The pump master vacuum and pressure gauges shall be 4-1/2" in diameter with white dial face gauges with black lettering and markings.

The master vacuum gauge shall be a compound style gauge with a vacuum/pressure range of -30" - 0 - 600 psig with the dial face of the gauge labeled in black INTAKE.

The master pressure gauge shall be provided with a range of 0-600 psig and the dial face of the gauge labeled in black DISCHARGE.

The gauges shall be liquidless with dash-pot shock and vibration resistant movement. The cases shall be temperature compensated with an internal breathing diaphragm. The gauge accuracy for the gauge shall be plus or minus 1% of full scale per ANSI B40.1, Grade 1A.

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

## **MASTER GAUGE TEST PORTS**

Adjacent to each gauge there shall be a pressure tap to provide simultaneous reading of the vacuum and pressure exerted on the individual gauge and supplied with the proper identification label.

One (1)  
20-18-1550

2-1/2" Pressure Gauges, 0-400 psig - English

## **PRESSURE GAUGES**

Each line pressure gauge shall be mounted immediately above the control for the corresponding valve. The individual line pressure gauges for the discharges shall be 2-1/2" in diameter with white dial face gauges with black lettering and markings. The gauges shall be a compound style gauge with a vacuum/pressure range of 0 - 400 psig.

The gauges shall be fluid filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to -40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. The gauge accuracy for the gauge shall be plus or minus 2% mid-scale, plus or minus 3% balance, per ANSI B40.1, Grade 1A.

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

All line pressure gauges shall be mounted adjacent to the corresponding discharge control tee handles.

One (1)  
20-18-1558

2-1/2" Pressure Gauge LED Lighting

## **LED GAUGE LIGHTING**

The 2-1/2" pressure gauges shall be equipped with LED back lighting.

One (1)  
20-18-1574

Pump Panel LED Lighting - WHITE/RED

## **PUMP PANEL LIGHTING**

The pump operator's panel shall be supplied with a LED light system. LED strip lights with a stainless steel hood shall be mounted across the top of the pump panel gauges and controls.

LED strip lights with a stainless steel hood shall be provided on each side of the pump module above the side panels.

The pump module lighting shall illuminate by a switch on the pump panel. There shall be a white/red color selector switch in the cab that controls the color of this lighting.

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One (1)  
20-18-2040 Drain Discharges - 90° Ports

## **DRAIN DISCHARGES**

The 3/4 inch drain valves shall be equipped with 90-degree fittings to direct the discharge water beneath the pump module away from the pump operator's panel.

One (1)  
20-18-2404 Switch, Air Horn Activation, Mtd PPanel, Push Button w/Lbl

## **AIR HORN ACTIVATION SWITCH**

A switch shall be located on the pump panel to activate the chassis air horn. The switch shall be a momentary pushbutton type switch with a red cover. The switch shall be supplied with the proper identification label.

One (1)  
30-26-0410 Gauge, (1) Water Tank Level - FRC Tank Vision

## **WATER TANK INDICATOR**

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

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, and a data link to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

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

One (1)  
20-21-2100 Pump, Midship, Darley "JMP-500", 500 GPM PTO - Type III

## **MAIN FIRE PUMP**

The contractor shall provide and install Darley JMP-500 a PTO operated 500 G.P.M. fire service rated 2-stage centrifugal pump that provides water pressure to all discharges.

The pump unit shall be fully capable of meeting the National Fire Protection Association (NFPA) # 1901, latest editions, standards for initial attack fire apparatus. The fire pump that the bidder is proposing must be prior to bid PREQUALIFIED submission by virtue of a CAL FIRE approved 100 hour Certification Test. Currently, the Waterous CPK3-500 and Darley JMP 500 are PREQUALIFIED.

The fire pump must be provided with the OEM pump manufacturer's transfer valve air cylinder assembly or electric transfer valve actuator assembly, bracketing and wiring harness. **NO EXCEPTIONS**

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The main pump shall be a two stage, centrifugal type, designed for use in the fire service and supply water pressure to all discharge valves. It shall be designed so repairs can be made by replacement of normal repair parts, i.e., seals, bearings, impeller and wear rings. The impeller and wear rings shall be made of bronze material. The pump pressure shall be tested to a minimum of 600 psi.

The impeller shaft seal shall be a mechanical, self-adjusting type.

The pump shall be painted to match the color of the chassis.

One (1)  
20-14-5002

Pump House Storage Compartments - Type III - JMP Pump

## **PUMP HOUSE STORAGE COMPARTMENTS**

### **EQUIPMENT STORAGE COMPARTMENT**

There shall be one (1) equipment compartment located on the upper right (curb) side of the pump house. It shall have dimensions of 22" wide x 26" high. The clear door compartment dimensions shall be 20-1/2" wide x 23" high x 12" deep with the door closed. A four (4) inch diameter light mounted in rubber grommets shall illuminate the interior of the compartment when the door is open.

The equipment compartment shall be provided with a flush style hinged door. The door shall be provided with a high quality, continuous double seal type weather stripping to prevent moisture and dust from entering the exterior compartment. The door shall be double pan design with the outer door material being 12 gauge stainless steel with a 1/8" aluminum removable inner liner that shall have a natural finish to provide reflective qualities during night operations. The vertically hinged door shall have a gas shock and polished stainless steel 1/4" piano hinge.

The door latch shall be a Hansen locking slam latch, with a chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

The exterior of the door shall be painted to match the main job color.

There shall be two large removable panels provided on the inside of the compartment. These panels shall provide an opening for service access to the right side of the interior of the pump module and to the bottom side of the diesel pump.

There shall be one (1) fully adjustable shelf. There shall be red/white conspicuity tape applied along the length of the front face of the adjustable shelf.

### **WHEEL CHOCK COMPARTMENT**

Beneath the equipment storage compartment there shall be a wheel chock compartment. This compartment shall be equipped with a plate lap style stainless steel door mounted on a piano hinge with a push latch. The compartment shall have clear door dimensions of 8-1/4" wide x 13-1/2" high x 13" deep with the door closed.

One (1)  
20-26-0302

Pump Rating, 500 GPM

## **PUMP RATING AND TEST REQUIREMENTS**

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The pump shall have the capacity of 500 gallons per minute (U.S. GPM), NFPA 1901 rated performance. The entire pump shall be assembled, and tested at the pump manufacturer's factory.

One (1)  
20-27-0100 Altitude Requirements, 0' to 2000 Feet Above Sea Level

## **ALTITUDE REQUIREMENTS**

The apparatus shall be designed to meet the specified rating at 0 to 2000' altitude.

One (1)  
22-06-0904 Primer, Air Primer, Trident, On Darley Pump

## **FIRE PUMP PRIMING SYSTEM**

A Trident air operated priming system shall be installed. The unit shall be of all brass and stainless steel construction. Due to corrosion exposure no aluminum or vanes shall be used in the primer design. The primer shall be three-barrel design. The primer shall automatically drain when the panel control actuator is not in operation. The connection to the pump shall have a strainer.

### Performance, Safety, and NFPA Compliance

The priming system shall be capable to a vertical lift to 22 inches of mercury and shall be fully compliant to applicable NFPA standards for vertical lift. The system shall create vacuum by using air from the chassis air brake system through a three-barrel multi-stage internal "venturi nozzles" within the primer body. The noise level during operation of the primer shall not exceed 75 Db.

### Air Flow Requirements

The primer shall require a minimum of 15.6 cubic foot per minute air compressor and shall be capable of meeting drafting requirements at high idle engine speed. The air supply shall be from a chassis supplied 'protected' air storage tank with a pressure protection valve. The air supply line shall have a pressure protection valve set between 70 to 80 PSIG.

### Power Requirements

To reduce the electrical power requirements on the fire apparatus the priming system shall be air powered. The system shall not require annual tear-down and maintenance, an electric motor or solenoid, electrical wiring, lubrication, belt drive, or clutch assembly.

One (1)  
22-06-0930 Manual Primer Control Valve

### Primer Control

The primer control shall have a manually operated, panel mounted "push to prime" air valve; which will direct air pressure from the air brake storage tank to the primer body. To prevent freezing, no water shall flow to and from the panel control.

One (1)  
Trident Warranty, 5 Year Parts

# HME, Inc.

22-06-0970

## Warranty

The primer shall be covered by a five (5) year parts warranty by Trident.

One (1) PTO Pump Mounting System  
20-28-0100

## **PUMP MOUNTING**

The PTO pump shall be mounted in a manner that the pump and gear case can be completely removed from beneath the truck for repair or replacement in a minimal amount of time. All pump mounting brackets shall be powdercoated to match the color of the chassis.

One (1) PTO Pump Shift, Cab Mounted  
22-08-0202

## **PUMP SHIFT**

The pump shift shall be air operated and shall incorporate an air double action piston to shift from road to pump and back. A manual or electric operated pump shift mechanism is not acceptable. The pump shift switch shall be mounted in the cab and identified as "PTO PUMP SHIFT" and include instructions permanently inscribed on the pump shift switch plate. The in-cab operating switch shall have a protective cover to prevent it from accidentally being moved.

The pump shift control assembly shall incorporate an indicating light system, which will notify the operator when the pump has been engaged and is ready to pump. PTO pump operation shall be interlocked to provide pumping only in stationary mode when the parking brakes are set and the transmission is in neutral.

One (1) Magnesium Anode, Water Pump - Type III  
22-11-0204

## **ANODE SYSTEM**

To reduce the effect of galvanic action the pump shall be equipped with two (2) easily replaceable sacrificial catalytic action  $\frac{3}{4}$ " magnesium anodes. One anode is to be installed on the inlet (suction) side of the system and one anode is to be installed on the pressure (outlet) side of the PTO pump.

One (1) Thermal Relief Valve, TRV-L, Automatic  
22-14-1000

## **THERMAL PROTECTION**

The pump shall be equipped with a TRV-L, thermal protection device, which monitors the water temperature of the pump and relieves water when the temperature inside the pump exceeds the preset value of the relief valve (120 degrees F / 49 degrees C).

The TRV shall automatically dump a controlled amount of water to the atmosphere when the pump water temperature exceeds the preset value. The valve shall automatically close when the water temperature cools to below the preset value.



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An aluminum composite panel placard with a visual warning lamp and test button shall be provided on the operator's panel. The warning light shall illuminate when the Thermal Relief Valve is open and discharging water.

One (1)  
22-14-1702 Intake Pressure Relief Valve, TFT

## **SUCTION PRESSURE RELIEF VALVE**

Task Force Tips model #A1820 pressure relief valve shall be provided. The valve shall have an easy to read adjustment range from 90 to 300 PSI in 90, 125, 150, 200, 250, 300 PSI increments. For corrosion resistance the cast aluminum valve shall be hardcoat anodized with a powder coat interior and exterior finish. The valve shall be configured for either a Waterous or Hale pump, and have a 2" male NPT threaded discharge outlet. The unit shall be covered by a five-year warranty.

One (1)  
22-18-0400 Master Drain, Class 1, Manual Mtd Pump Panel

## **MASTER DRAIN**

The apparatus shall be equipped with a Class 1 Manual Master Pump Drain for draining of the lower pump cavities, volute and selected water-carrying lines and accessories. The all brass and stainless steel construction allows for operation up to 600 psi.

One (1)  
22-20-0100 Certified NFPA Pump Test, Completed Apparatus Certificate

## **PUMP CERTIFICATION TEST**

The pump shall undergo pump test with line and/or low voltage requirements of NFPA 1901 prior to delivery of the completed apparatus. The certificate shall be furnished with the apparatus on delivery.

One (1)  
24-02-1302 Single Steamer Inlet, 4" NST, L/S w/Strainer

## **LEFT SIDE STEAMER INLET**

There shall be one (1) steamer inlet furnished on the left side pump panel. The suction inlet shall have an NPT thread. At the intake connection there shall be a chrome plated adapter 4" female NPT to 4" male NH with a removable strainer provided.

One (1)  
30-40-1040 Cap, 4" Long Handle - Chrome

## **LARGE DIAMETER CAP**

A four (4) inch chrome plated cap with long handles shall be supplied. The cap shall be capable of withstanding 500 PSI.

One (1)  
24-21-0040 Pump Side Intake, Left Side

## **LEFT SIDE INTAKE**

There shall be an intake located on the left (street) side of the pump and shall contain:

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A 2-1/2" intake with a 2-1/2" quarter-turn swing-out valve. The inlet valve shall have a swing type control handle located adjacent to the valve.

The inlet shall be provided with a 2-1/2" NST female swivel that extends through the pump panel. A chrome plated intake plug with plug retention chain shall be installed on the inlet to the valve.

The valve shall be able to be removed from the operator's side of the pump panel by removing a brushed stainless steel trim panel.

The valve shall also include a push pull type valve piped to the inlet to bleed off pressure from the connection on the outlet side of the valve.

One (1)  
24-21-0240

Pump Side Intake, Right Side

## **RIGHT SIDE INTAKE**

There shall be an intake located on the right (curb) side of the pump and shall contain:

A 2-1/2" intake with a 2-1/2" quarter-turn swing-out valve. The inlet valve shall have a swing type control handle located adjacent to the valve.

The inlet shall be provided with a 2-1/2" NST female swivel that extends through right side lower compartment. A chrome plated intake plug with plug retention chain shall be installed on the inlet to the valve.

The valve shall also include a push pull type valve piped to the inlet to bleed off pressure from the connection on the outlet side of the valve.

One (1)  
26-03-0024

Discharge, Left Side - Side Operated

## **LEFT SIDE DISCHARGE**

There shall be a discharge located on the left (street) side of the pump and shall contain:

A 2-1/2" discharge shall be provided with a swing type control handle adjacent to the valve. The discharge outlet shall have a 2-1/2" quarter-turn swing-out valve. The discharge shall be provided with painted brass straight discharge with 2-1/2" NH male threads that extends through the pump panel. A pressure cap is not provided.

The valve shall be able to be removed from the operator's side of the pump panel by removing a brushed stainless steel trim panel.

One (1)  
26-06-6010

Rear Discharges - 2-1/2 Left / 1-1/2 Right

## **REAR DISCHARGES**

Piping to the rear discharges shall be accomplished through a sleeve in the water tank. for each discharge.

### **REAR DISCHARGE - LEFT SIDE**

There shall be one (1) 2-1/2" discharge outlet located on the left side rear of the body below the hose bed. The discharge outlet shall be plumbed with 2-1/2" high pressure hose and have a 2-1/2" quarter-turn,

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swing out valve with direct control on outside rear of the apparatus body. There shall be a 30° brass painted 2-1/2" NST male thread on the end of the valve for hose connections.

## **REAR DISCHARGE - RIGHT SIDE**

There shall be one (1) 1-1/2" discharge outlet located on the right side rear of the body below the hose bed. The discharge outlet shall be plumbed with 2" high pressure hose and have a 2" quarter-turn, swing out valve with direct control on outside rear of the apparatus body. There shall be a chrome plated 2" to 1-1/2" NST male thread adapter on the end of the valve for hose connections.

## **CAPS**

Pressure caps shall be provided for both discharges.

One (1)  
26-08-0604

Front Jumpline, Dual 1-1/2" w/2" Plumbing, - Type III

## **FRONT DISCHARGES**

Two (2) 1-1/2" discharges shall be located at the front bumper. The front discharges shall be plumbed using a single feed of 2" stainless steel pipe and wire reinforced high pressure hose coupled with stainless steel fittings. The front discharge outlet shall have two (2) 2" quarter-turn swing out valves. Each front discharge shall be provided with a 1-1/2" painted brass, 90-degree swivel adapter with 1-1/2" NH male threads.

The valve for the center and left front bumper hose wells shall be located on the left side of the front bumper outboard of the frame rail, be vertically mounted behind the bumper and controlled at the valve.

The valve for the right side hose well shall be located outboard of the frame rail, be vertically mounted behind the bumper and controlled at the valve.

The discharge swivel locations shall provide adequate clearance for the use of 1½" gated wye's and be designed so as not to interfere with the opening and closing of the hood. The swivels shall feature stops to prevent them from rotating 360 degrees and impacting the hood.

An inline 1/4 turn valve shall be mounted easily accessible beneath the cab on the left side to turn off the water supply to the front discharges. Drains shall be provided in the low points in the plumbing to drain water.

## **CAPS**

Two (2) discharge caps are required.

One (1)  
28-11-0710

Pump House Hose Lay, (2) Beds - Type III

## **PUMP HOSE LAY BEDS**

The hose storage areas shall be mounted on top of the pump module. They shall be arranged in a single stack design with a divider in the center of the storage area. Each storage area shall extend from the side of the pump module to the center of the storage with dimensions of 4-1/2" wide x 36" deep x 32" tall. The floor of the hose storage area shall contain drain holes to allow drainage.

## **CROSSLAY HOSE GUIDES**

23682-0003

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Brushed stainless steel hose guides shall be provided on the left and right side of each hose bed.

## **DISCHARGE VALVES**

One (1) discharge outlet on each side shall be located adjacent to the pump house hose lay, set back from the panel edge, on the left and right side.

The discharge outlet shall have a 2" quarter-turn swing-out valve with a swing type control handle adjacent to the valve. The discharge shall be provided with painted brass straight discharge with 1-1/2" NH male threads that extends through the pump panel. A pressure cap is not to be provided.

The valves shall be able to be removed from the outside of the pump panel.

One (1)  
28-12-2804

Cover, Crosslay, Aluminum w/Vinyl Flaps - Type III

## **CROSSLAY HOSEBED COVER**

A .125" polished aluminum treadplate hinged cover shall be provided over the crosslay hosebeds, complete with full-length stainless steel piano hinge. Stops shall be provided to protect cab or other adjacent body components. The hinge shall be located on the forward section of the cover, closest to the chassis cab.

## **VINYL FLAPS**

The aluminum treadplate crosslay cover shall be supplied with weighted vinyl end flaps. Each flap shall have a means of securing the flap to prevent hose from falling off the truck.

One (1)  
28-14-0800

Vinyl End Flap Color, Crosslay, Vinyl, Brilliant Red

The vinyl crosslay end flaps shall be Brilliant Red in color. Each flap shall have a means of securing the flap to prevent hose from falling off the truck.

One (1)  
28-22-0546

Booster Reel, Hannay, 150' - 3/4" Hardline - Type III

## **BOOSTER HOSE REEL**

A Hannay model SBSEPF17-28-29 RT booster hose reel with leak proof ball bearing swing joint, adjustable friction brake, and electric rewind shall be furnished. The reel shall have an all aluminum frame and drum, polished aluminum discs, and plated drive chain, sprocket, hub assembly, swivel joints and fasteners. The reel capacity shall be at least 150' of 3/4" hardline hose. The reel shall be plumbed with wire reinforced, high pressure hose coupled with reusable stainless steel fittings, and shall have a 1" valve in the plumbing preceding the reel.

The booster hose reel shall be mounted in the left side of the dunnage compartment over the pump. The friction brake control shall protrude through the dunnage wall with the hand knob on the outside of the wall for operation.

The hose reel shall include one lower horizontal and two vertical chrome fairlead rollers. The rollers shall be backed up with the left side dunnage wall to prevent the roller mounts from spreading. Two (2) additional sets of fair lead rollers shall be located on the auxiliary pump cover for guiding the hose across the top of the apparatus.

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One (1)  
28-24-0302 Hose, Booster, 150'3/4" Rbr Cvrdr, 800 Lb Test - Type III

## **BOOSTER HOSE**

Three (3) fifty foot sections of 3/4" rubber covered booster hose shall be provided on the booster reel. The hose shall be high pressure type, 800 pounds test, coupled with 1" NPSH threads.

One (1)  
28-28-0100 Switches, Pump Dunnage Booster Reel

## **SWITCHES, REWIND BOOSTER REEL**

Two (2) hose reel rewind switches shall be located, one (1) each side of the pump module. The switches shall be marine style momentary switches with a red weatherproof cover.

One (1)  
28-30-3010 Back Pack Pump Filler System

## **BACK PUMP FILLER SYSTEM**

A Class 1 brass, 3/4", quarter turn ball valve with chrome handle shall be supplied and labeled "Back Pump Filler". The valve shall be installed on the left lower forward side of the pump panel with the discharge hose terminating at the outside of the pump panel. The valve plumbing shall be 3/4" I.D. hose properly routed and clamped from the tank sump to the filler valve.

One (1)  
30-00-0202 Ball Valves, Akron Heavy Duty

## **AKRON BALL VALVES**

All ball valves shall be Akron heavy duty valves with stainless steel ball unless specified otherwise.

The valves shall have an all cast brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing brass ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of eight bolts.

All exposed brass valves shall be painted body color, the front bumper discharge valves shall be painted silver.

One (1)  
30-20-0602 Piping, Tank To Pump, 3" Air Operated

## **TANK TO PUMP**

The tank to pump piping shall be capable of delivering water to the pump at a rate of five hundred (500) gallons per minute. This flow shall be sustained while pumping to a minimum of 80% of the certified tank capacity with the apparatus on level ground.

The tank to pump line shall run from the pump to the front face of the water tank and down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing. The tank to pump line shall be 3" I.D. piping with a 3" ball valve.

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A check valve shall be provided in the tank to pump supply line to prevent unintentional back filling of the water tank.

A guarded air toggle switch and indicator lights shall be located on the pump operator's panel for tank to pump operation. A red indicator light shall be provided when the valve is closed and a green indicator light when the valve is opened.

One (1)  
30-22-0406

Tank Refill, 2" Line w/ 1/4 Turn Valve

## **TANK REFILL**

A 2" tank refill line shall be provided using a 2" quarter-turn full flow ball valve controlled from the pump operator's panel with a push pull manual locking handle. The tank refill shall be plumbed with high pressure flexible piping and high pressure flexible piping stainless steel couplings.

The tank filler valve shall be plumbed to flow water from both the main and auxiliary pumps.

One (1)  
30-23-0110

Direct Tank Fill, Left Rear - Type III

## **LEFT REAR DIRECT TANK FILL**

There shall be a direct tank fill located on the left (street) side of the rear compartment and shall contain:

A 2-1/2" intake with a 2-1/2" quarter-turn swing-out valve mounted direct on the rear of the apparatus body. The inlet valve shall be painted body color and have a swing type control handle located adjacent to the valve.

The inlet shall be provided with a 2-1/2" NST female swivel. A chrome plated intake plug with plug retention chain shall be installed on the inlet to the valve.

One (1)  
20-32-0410

Foam System, Foam Pro #1600/2.0 Class A, Auto, Type III

## **FOAM SYSTEM**

A Foam Pro model 1600/2.0 built in foam injection system shall be provided with the controls at the operator's panel. The foam system shall be a fully automatic, electronic, direct injection foam proportioning system. The system shall be capable of handling Class A foam concentrate. The foam proportioning operation shall be based on an accurate direct measurement of water flows with no water flow restriction. The foam system shall be installed in accordance with the manufacturer's recommendations.

The foam system shall have a 12 volt, 1/3 hp electric motor driven positive displacement piston type foam concentrate pump with a rated capacity of .01 to 1.7 GPM at 200 psi with a maximum operating pressure of 400 psi.

One (1)  
20-19-1010

Foam Manifold Pressure Relief on Shutdown

## **FOAM SYSTEM PRESSURE RELIEF ON SHUTDOWN**

For firefighter safety a time delayed solenoid valve and TDI Series interval timer with time delay ranges (1-1023 seconds) shall be installed in the 2" discharge manifold after the foam system check valve to

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discharge trapped manifold water pressure upon pump shut down. **NO EXCEPTIONS TO THIS REQUIREMENT**

One (1)  
20-32-5052 Class 'A' Foam Operation Only

## **FOAM SYSTEM**

The foam system will operate as a Class A system.

One (1)  
20-32-7025 Foam Tank Refill System, Hale, EZ-Fill, Single Tank

## **FOAM TANK REFILL SYSTEM**

A Hale truck mounted "EZ-Fill" foam tank fill system shall be provided and installed on the apparatus. The refill system shall provide the ability to automatically refill a single foam tank from the ground without carrying foam solution up to the fill towers in the hosebed.

The refill system shall be activated by a switch provided on a control panel with indicator lights mounted on the pump panel and will automatically shut off when the foam tank is full. The refill system shall be equipped with fresh water flush capabilities and a cam lock pickup tube connection located on the pump panel.

One (1)  
20-34-0190 Foam Syst Outlets - Type III

## **FOAM SYSTEM OUTLETS**

The foam system shall be distributed into the following discharge outlets:

- Front bumper discharges
- Pump house hose beds
- Pump house mounted booster hose reel
- Rear 1-1/2" discharge

One (1)  
20-36-0256 Controls, Foam System, Foam Pro 1600 - Type III

## **FOAM SYSTEM CONTROLS**

The Foam Pro system shall be equipped with an electronic control unit, suitable for installation on the pump operator's panel. The control module shall provide the following functions:

- Activate the foam proportioning system.
- Provide selectable control of foam proportioning rates from 0.1% to 1.0%, in 0.1% increments.
- Flash a "low concentrate" warning when the foam concentrate tank(s) runs low.

There shall be a remote start - stop button located on the in cab console and on the pump panel to allow operation from inside the cab.

One (1)  
23682-0003 Diesel Pump, Darley 1-1/2AGE 150 GPM Type III

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20-38-1162

## **PORTABLE PUMP**

A Darley 1-1/2AGE 24K portable pump shall be provided on the apparatus.

### Pump Performance

150 gpm @ 100 psi

150 gpm @ 130 psi

80 gpm @ 210 psi

### Diesel Engine

Kubota, model D902, in-line 3 cylinder, EPA tier 4, water-cooled, overhead valve (OHV) delivering a maximum output of 24.8 hp @ 3600 RPM, 54.8 cu. in. displacement, 4-cycle, diesel fueled. The engine shall be piped to the chassis fuel system with provisions to prevent fuel drainback to the tank when the engine is shutdown. A spark arrestor is to be provided on the engine exhaust system. A fuel reprime pump is to be provided to assist in fuel delivery to the diesel engine from the chassis tank.

A 1/2" crankcase oil drain extension line shall be provided and routed to facilitate an efficient and clean oil change. An Aeroquip or equal style hose, threaded fittings and drain plug shall be used. The hose will be permanently marked "Aix Oil Drain".

## **PUMP PANEL CONTROL**

The auxiliary pump shall have a control panel located on the midship pump module operator's position.

This panel shall contain the following:

- Auxiliary pump water pressure gauge
- Vernier throttle cable
- Pump ignition on / off / start switch
- Low Oil Pressure indicator light
- Engine Overheat indicator light
- Glow Plug operational light
- Primer Button

## **CAB PANEL CONTROL**

The auxiliary pump shall have a control panel located on the in cab console. This panel shall contain the following:

- Auxiliary pump water pressure gauge back-lighted red
- Vernier throttle cable
- Pump ignition on / off / start switch
- Low Oil Pressure indicator light
- Engine Overheat indicator light
- Glow Plug operational light
- Primer Button

## **PUMPHOUSE DOOR**

The backer on the pumphouse door shall contain the following:



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Electric hourmeter to log auxiliary pump operation

One (1)  
20-43-5060

Diesel Pump Piping - Type III

## **PORTABLE PUMP PIPING**

The inlet to the diesel pump shall be connected to the 4" intake manifold for the PTO pump with 2" stainless steel pipe and wire reinforced high pressure hose coupled with stainless steel fittings. There shall be a 2" check valve at the connection to the 4" intake manifold to prevent back flow from the 2" line with the 4" line under vacuum.

The discharge of the diesel pump shall be piped with 2" stainless steel pipe and wire reinforced high pressure hose coupled with stainless steel fittings to a double check valve. The other inlet to the double check valve shall be connected to the PTO pump pressure side. The double check valve shall prevent water from the PTO pump and the diesel pump from back feeding under pressure. The check valve outlet shall feed the foam manifold upstream of the foam system check valve.

One (1)  
22-02-1002

Heat Exchanger w/Non-Gated Line, Comm

## **HEAT EXCHANGER**

A heat exchanger shall be provided on the chassis cooling system. The heat exchanger shall not allow mixing of the chassis coolant and water from the fire pump. A discharge line shall be installed to provide water from the fire pump to the chassis heat exchanger to assist in engine cooling during pumping operations. The cooler return line shall pass through a check valve into the water tank.

One (1)  
30-02-0312

Water Tank Construction - Type III

## **WATER TANK CONSTRUCTION**

The tank shall have a rated capacity in U.S. gallons, complete with lifetime warranty. The tank manufacturer shall mark the tank and furnish notice that indicates proof of warranty. The purpose of the notice is to inform department personnel who store or use the tank that the unit is under warranty.

The tank shall be constructed of 1/2" thick Polyprene & Mac226 sheet stock. This material shall be non-corrosive stress relieved thermoplastic, black in color and UV stabilized for maximum protection. The tank shall be of a special configuration and is so designed to be completely independent of the body and compartments. All exterior tank joints and seems shall be extrusion welded and/or contain the Bent Edge™ and tested for maximum strength and integrity. The top of the tank is fitted with removable lifting eyes designed with a 3-to-1 safety factor to facilitate easy removal.

The transverse and longitudinal swash partitions shall be manufactured of Polyprene & Mac226 material. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA rules. All swash partitions interlock with one another and are welded to each other as well as to the walls and floor of the tank.

## **TANK SUMP AND CONNECTIONS**

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There shall be one (1) sump standard per tank. The sump shall be constructed of black Polyprene & Mac226 and be located as close as possible to the longitudinal center of the tank. The sump shall have a 3" FNPT threaded outlet on the bottom for a drain plug. This shall be used as a combination clean out and drain. All tanks shall have an anti-swirl plate located above the tank to pump connection.

There will be two (2) standard tank outlets: one for tank to sump suction line, and one for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 GPM. The addition of rear suction fittings, nurse valve fittings, dump valve fittings, and through tank sleeves to accommodate rear discharge piping must be specified. All auxiliary outlets and inlets must meet NFPA guidelines in effect at the time of manufacture.

One (1)  
30-14-3012

Foam Tank, (1) 20 Glns, Cls A, External-Bolt On, Type III

## **EXTERNAL FOAM TANK**

A twenty (20) gallon polypropylene foam concentrate tank shall be furnished as an external component of the booster tank. The foam tank shall have an anti-foaming fill stack and removable screen located in an accessible area. The foam tank fill tower shall be equipped with a latch, pressure/vacuum vent and have a sealed airtight cover.

The foam tank shall be plumbed to the on board "Class A" foam system. A drain valve connection shall be provided at the lowest point of the foam tank. The foam tank shall drain shall have a 1/4 turn 3/4" valve mounted on the pump panel. The following labels shall be attached to the foam tank:

"CLASS A FOAM TANK FILL"

"WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM"

One (1)  
34-04-0800

Hosebed Bulkhead, (1), Stainless Steel

## **HOSEBED BULKHEAD**

A stainless steel bulkhead shall be installed between the out of county storage area and the hose storage area of the hosebed. The bulkhead shall be the same height and design as the hosebed side walls.

No hosebed flooring shall be provided in the space between the bulkhead and the front wall of the hosebed.

One (1)  
30-18-0204

Tank Mounting, Cradle - Type III

## **TANK MOUNTING**

A tank mounting cradle shall be supplied. The tank mounting cradle shall consist of a minimum of five (5) crossmembers and four (4) full tank length longitudinal members. The tank shall rest on the tank mounting sub frame, and shall be insulated from the sub-frame with a 2-1/2" wide rubber insulator. The tank shall sit cradle-mounted using four (4) corner angles of 8" x 8" x 4" x .250" welded directly to the tank sub-frame. The angles shall keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principal and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The hosebed cross-braces shall act as water tank retainers. The water tank cradle shall be designed to be completely

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independent of the apparatus body to eliminate torsional stress loading in the body. The tank cradle shall be mounted with captivated die springs on the four corners to allow the cradle to move independent of the twist of the truck chassis. No exception will be permitted to the tank mounting requirements.

One (1)  
30-18-0600 Tank Cradle - Painted to Match Axles Color

The tank cradle shall be finish painted to match the chassis axles.

One (1)  
30-21-0200 Booster Tank Drain, 2" w/1/4 Turn Valve

## **TANK DRAIN**

A 2" tank drain shall be provided for the booster tank below the tank sump. The drain shall be provided with a 2" 1/4 turn PVC valve with a manual control on the valve.

One (1)  
34-06-1022 Hosebed Dunnage Cover, Alum, Hinged - Type III

## **HOSEBED DUNNAGE HINGED ALUMINUM COVER**

A one-piece polished aluminum treadplate cover shall be supplied and shall extend the length and width of the hosebed dunnage area. The hosebed covers shall be constructed of .125" polished aluminum treadplate with cross bracing to provide maximum strength and rigidity to support the weight of a firefighter standing on the covers when closed. The aluminum treadplate shall meet the current revision of NFPA 1901 for step requirements.

The cover shall be equipped with a full length stainless steel piano hinge and diamond plate handle integral to the rear of the cover. There shall be a gas shock installed on each side the cover to assist in opening.

One (1)  
32-02-0210 Body Design and Construction, Type III

## **PURCHASE INTENT**

The apparatus being purchased is expected to have an 18 to 20 year service life. Based on this requirement, the department is extremely concerned that the apparatus remains structurally sound and the outward appearance remains in a "like new" condition, with minimal maintenance and upkeep, throughout the intended service life.

Aluminum apparatus bodies and differing construction designs will be reviewed and considered ONLY if the builder / manufacture provides in the respondent specifications adequate proof that procedures and materials employed in the design prevent corrosion over the intended service life. Burden of proof is on the bidder and final determination of acceptability will be solely determined by the department.

The entire body design shall be of a laser machined, bolted design to allow for ease of removal for repair or replacement, without cutting welds.

## **APPARATUS BODY DESIGN AND CONSTRUCTION**

The apparatus body shall be built of stainless steel and shall be designed exclusively for Fire Service use. The overall body width shall be 98 inches wide and shall be constructed in accordance with current NFPA requirements. All metal work shall be free of sharp edges, objects or corners. No exceptions are allowed to this requirement.

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The body design shall be fully tested with proven engineering and test techniques such as finite element analysis, stress coating, and strain gauging. Engineering and test techniques shall have been performed with special attention given to fatigue life and structural integrity of compartments and body support system.

The apparatus body shall be designed with the use of parametric modeling engineering software to ensure proper design of panel cuts and alignment of holes in mating parts. The entire apparatus body shall be a precision laser machined, bolted construction, properly reinforced with integral flanges eliminating the need for additional structural shapes. Hose body fabrications shall be free of all internal projections which might injure personnel or fire hose.

The pump module is to be completely separate from the main body to prevent damage due to flexing.

## **MODULAR BODY REQUIREMENTS**

The body shall be completely modular in design allowing transfer of body components to a new chassis in the event of an accident or wear. Body components shall be removable from chassis without cutting or bending. The modular design shall also facilitate ease of repair or replacement of major or minor body parts. The mounting of the apparatus body shall be separate and distinct from the water tank mounting and the pump module mounting.

All body panels are to be laser machined on a CAM controlled laser to ensure accuracy (+/- .010"). This shall greatly enhance assembly and matching of repair parts. The body compartment floors, rear walls and roof areas shall be constructed of 12-gauge austenitic stainless steel. The vertical front and rear walls are designed with 14-gauge stainless steel. These front and rear walls are designed as a structural beam with the inclusion of the design encompassing a front and rear design that allows for installation of telescoping lights.

Interior and unexposed stainless steel panels shall be #4B finish to eliminate the need for high maintenance painted surfaces in the compartments. All exterior non-painted stainless steel panels shall have #4B finish.

The entire body shall be fabricated using precision holding fixtures to ensure accurate dimensions. Body front and rear vertical flanges shall be triple broken, providing a mounting area for rear hand rails. Major body components shall consist of right and left body sides, and rear facing compartments.

The front and rear vertical corners of the apparatus body shall be recessed to provide a mounting area for vertical hand rails and/or telescoping light poles.

## **COMPARTMENT ROOF CONSTRUCTION**

Each compartment top shall have a bolt in 12-gauge stainless roof section for supporting roof loads of up to 500 pounds per square foot without permanent roof deformation. The stainless roof sections shall attach the compartment rear wall and compartment vertical sides through a fastened joint creating a full perimeter compartment attachment of the stainless roof section.

## **BODY MOUNTING SYSTEM**

The front body support system shall be an integral design with .250" thick steel deep section cross member across the top of the chassis frame. The deep section cross member shall be attached to the right side and the left side lower front compartment weldments with grade 8; 3/8 inch diameter bolts on

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each side of the apparatus. The front cross member shall be attached to the chassis by means of an elastomer spring with extended travel captivated die spring mounting system with limited travel.

The lower portion of this spring mounting system shall be an integral part of the pump module frame mounting system. This design allows for maximum chassis flexing without undue stress transfer to the apparatus body.

The right and left side rear compartments shall be attached to a steel rear body support. The stainless steel support shall be attached to the chassis frame extensions by means of an elastomer spring mounting system with extended travel captivated die spring to form a modular integral body support system.

The apparatus body shall not rest upon the chassis truck rails and must be separated entirely from the steel frame of the chassis to prevent galvanic action.

Loose fitting u-bolt body mounting systems are not acceptable due to the likeliness of the apparatus body shifting or becoming detached from the chassis upon rear end impact.

One (1)  
32-02-9000

Compartment Interior Finish

## **COMPARTMENT INTERIOR FINISH**

For better interior visibility, to reflect light better, ease of maintenance and prevent the masking of poor welds and questionable workmanship the interior of the body compartments shall remain uncoated.

One (1)  
32-05-0100

Brushed Stainless Compartment Roof - Not a Stepping Surface

## **EXTERIOR ROOF FINISH**

The top of the compartments shall be brushed stainless steel. The roof shall contain 'Not a Stepping Surface' labeling.

One (1)  
46-18-1200

Rear Tailboard, LaserGrip Stainless Steel - Type III

## **REAR TAILBOARD**

The tailboard shall be constructed of stainless steel in a three-piece design to allow severe twist of the apparatus without damage to the apparatus body or tailboard. The surface material of the tailboard shall be "Laser Grip" to provide optimum gripping in the environment found in wildland fire operations. The tailboard shall be 10 inches measured from the body to the rear edge.

The center section of the tailboard shall have a pivot design to allow access to the apparatus rear toe eye for vehicle recovery. The pivot shall be held in place by a detent handle, providing locking positions in up half-down and down.

In the center section of the tailboard there shall be a secondary flip-down step provided to reduce the stepping height from the ground to the rear tailboard. The secondary step shall have slotted legs allowing it to drop down in the up position which shall allow the RR1 doors to be opened without any interference. These slots will also lock the step in the up position and shall require the user to lift up the step to swing it down to the lowered position.

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The flip-down step shall have a break-away stop in the lowered position in the event the apparatus is backed into an object with the step in the down position.

The tailboard shall provide recessed mounting for the rear ICC marker lights.

One (1)  
40-01-2120

Frame Extension, Rear, Type III

## **CHASSIS FRAME EXTENSION**

There shall be a rear five (5) inch x three (3) inch x 1/4 inch wall ASTM A-500 grade B rectangular tubing frame extension to provide frame support for the rear of the apparatus body.

Two 5/8 inch ASTM 572 Grade 50 vertical mounting plates are to be welded to the tubing to provide a drop frame connection to the truck chassis. This extension assembly is to be bolted to the truck chassis with eight (8) 1/2 grade 8 bolts with hardened flat washers to form an integral part of the truck frame assembly.

Two 1/2 inch thick by 43 inch long cross support stabilizer bars are to be bolted horizontally in place from the rear tow eye plate to beneath the vertical mounting plate chassis attachment point.

## **REAR TOW EYE**

A 3/4 inch thick rail width by nine (9) inch deep rear horizontal tow eye plate with a four (4) inch diameter rear tow eye in the plate.

## **HOSE ROLLER FIXTURE**

A 2 inch by 2 inch receiver is to be bolted in place, offset to the left (driver's) side for use as a hose roller fixture.

## **EXTENSION PAINT FINISH**

The rear frame extension assembly and tow eye plate is to be painted the color of the truck chassis frame rails.

One (1)  
40-01-2200

Rear Frame Extension - Painted to Match Frame Color

The rear frame extension shall be finish painted to match the chassis frame.

One (1)  
40-02-0190

Ext Compartment Design and Construction, Type III

## **COMPARTMENT DESIGN AND CONSTRUCTION**

All compartments shall be manufactured from 12-gauge stainless steel with the vertical front and rear corner walls from 14-gauge, shall be of sweep out design and shall be bolted together. Stainless recessed round head bolts and stainless aircraft style "ESNA" nuts shall be applied with proper torque rating for each fastener. This type of construction shall greatly enhance the strength and ease of parts replacement in the event of damage and future modifications.

One (1)  
40-02-0208

Compartment Ventilation w/Filtration - Type III

## **COMPARTMENT VENTILATION**

23682-0003

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The body shall be provided with a laser cut louvers to provide ventilation.

## **VENT FILTRATION**

There shall be filters provided for compartments. The protective louver covering the filter shall be removable to allow for filter changing.

The filter shall be 100% virgin nylon fiber in an open web design that is USDA approved. The filter shall be chemically treated with Dimethyl Benzyl Ammonium Saccharinate to aid in the reduction of bacteria and fungi.

One (1)  
30-04-0480

Water Tank Capacity, 500 US Gallons - Type III

## **WATER TANK CAPACITY**

The water tank shall be rectangular shaped and shall have a minimum capacity of 500 US gallons.

One (1)  
30-02-1014

Tank Fill Tower, 10" x 14", w/4" Vent - Type III

## **TANK LID & FILL TOWER**

The tank shall have a combination vent and fill tower. The fill tower shall be constructed of 1/2" thick Polypropylene & Mac226 and shall be a minimum dimension of 10"x 14" outer perimeter. The tower shall be located in the center of the tank. The tower shall have a 1/4" thick removable Polypropylene & Mac226; screen and a Polypropylene & Mac226 hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum ID of 4" that is designed to run through the tank, and shall be piped behind the rear axle beneath the tank.

The tank cover shall be constructed of recessed 1/2" thick Polypropylene & Mac226, stress relieved, UV stabilized material. A minimum of two lifting dowels shall be drilled and tapped to accommodate the lifting eyes.

## **OVERFLOW AND VENT PIPE**

The fill tower shall be fitted with an integral 4" ID, Schedule 40 PVC 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 beneath the chassis.

One (1)  
30-12-4120

Cubic Ft, Body / Hosebed 48, 101.5" OAL - Type III

## **BODY MODULE AND HOSEBED CAPACITIES**

The total capacity of the body module exterior compartments shall be 103-1/2 cubic feet excluding the pump body compartment.

The length from the rear of the hosebed to the headboard shall be 80".

The total capacity of the body hosebed shall be approximately 48 cubic feet.

The hosebed height shall be approximately 51-3/4" from the top of the rear tailboard.

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The body shall have an overall length of 101.5".

One (1)  
34-02-0300

Hosebed w/Top Loading Equipment Compartment - Type III

## **APPARATUS BODY HOSEBED**

The hosebed shall be constructed in such a manner that will prevent damage to fire hose. The hosebed shall comply with the current NFPA requirements. The interior of the hosebed shall be free of projections such as nuts, sharp edges or brackets that may damage hose. The hosebed and walls shall be manufactured from stainless steel.

An aluminum extrusion shall be installed over the rear opening of the hosebed to protect the body from wear. The hosebed floor shall be fitted with removable slatted, ribbed heavy-duty extruded aluminum floorboards.

## **HOSEBED TOP LOADING EQUIPMENT COMPARTMENT**

In the front of the hosebed a top loading equipment compartment that runs the width of the hosebed shall be installed. The compartment shall be constructed of stainless steel with a total volume of 16.6 cubic feet. Inside dimensions shall be 21" long x 19" deep and 72" wide.

The top of the coffin compartment is to be provided with a single lift up door. The lift up door shall be a 'double wall' design overlapping the top of the compartment to reduce the possibility of rain entering the compartment.

The door shall be constructed of aluminum with smooth finished inside panels and NFPA compliant treadplate on the exterior. The door is to be attached to the compartment top with a continuous stainless steel hinge along the outer edge. The compartment door opened shall provide one clear space area of 68" x 18" for access into the compartment.

The compartment floor shall be formed with a recess ribbed design for strength and to create a depressed area that will allow any accumulated debris or moisture to collect without the equipment resting in the contaminant. The depressed area is to be covered with open grating material. There shall be large diameter drain holes with removable plugs placed in the depresses area of the compartment floor for cleaning out the compartment.

The compartment door shall be wired into the door open warning circuit. Inside the compartment there shall be one (1) LED light activated when the door is open for low ambient light operating conditions.

The compartment shall be bolted in place and removable for water tank service.

## **HOSEBED CAPACITY**

The hosebed design shall provide two separate hosebeds, one on the left and one on the right side of the fill tower/foam cell compartment. Each hosebed shall have internal dimensions of 28" wide x 18-1/2" tall x 80" from the front of the truck to the rear providing a total hosebed capacity of 48 cubic foot for hose storage.



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Two (2)  
34-04-0600 Dividers, (Qty) Hosebed, Adjustable, Smth Alum w/Radius Crnr

## **ADJUSTABLE HOSE BED DIVIDERS**

Two (2) adjustable hosebed dividers shall be provided. Each divider shall be fabricated from .250" thick smooth aluminum plate, 5052-H32 alloy. The rear end of each divider shall have a 3" radius corner and shall be sanded and deburred to prevent damage to hose.

There shall be two hand hold openings provided. One (1) at the rear in a vertical position and one (1) approximately 24 inches in from the rear in a horizontal position.

One (1)  
34-06-1020 Hosebed Covers, Alum, Dual, Hinged - Type III

## **HINGED ALUMINUM HOSEBED COVERS**

Two (2) one-piece polished aluminum treadplate hosebed covers shall be supplied and shall extend the full length and width of the main hosebed. The hosebed covers shall be constructed of .125" polished aluminum treadplate with cross bracing to provide maximum strength and rigidity to support the weight of a firefighter standing on the covers when closed. The aluminum treadplate shall meet the current revision of NFPA 1901 for step requirements.

The covers shall be equipped with a full length stainless steel piano hinge and a grab handle installed at the rear of each cover. There shall be a gas shock installed on each cover to assist in opening. The hosebed covers shall include a heavy duty positive mechanical stop at the rear of the hosebed to support them when placed in the open position.

An additional chrome handle shall be installed at the front of each hosebed cover. The handles shall be mounted on the top flat surface cover along the welded brace at the front of the covers.

### SHOP NOTE

Note: One piece covers

One (1)  
34-06-1404 Vinyl Flaps, Red, Mtd Each Alum Hsbd Cover - Type III

## **REAR VINYL FLAPS FOR ALUMINUM COVER**

There shall be one (1) red vinyl flap attached to each aluminum hosebed cover. The vinyl flaps shall cover the area at the rear of the hosebed from top to bottom. The flaps shall be independent of each other. The bottom edge of each flap shall be weighted with a powder coated steel bar.

Each hosebed flap shall have two (2) red webbed straps with quick release adjustable clips to meet the requirements of NFPA.

One (1)  
46-10-1000 Lights, Aluminum Hosebed Cover, (4) LED w/Auto Swtch

## **HOSEBED COMPARTMENT LIGHTING**

Four (4) weather proof LED lights shall be provided on the underneath side of the aluminum hosebed covers. Two (2) lights shall be provided for each side cover. Each side of the hosebed cover shall have an automatic compartment light switch.

One (1)  
Left Side Compartments - Type III

# HME, Inc.

40-12-0300

## **LEFT SIDE COMPARTMENT DIMENSIONS**

### **ABOVE WHEEL WELL**

There shall be one (1) high side full depth compartment centered over the rear wheels. It shall have dimensions of 51-1/2" wide x 42-1/2" high. The clear door compartment dimensions shall be 49-1/2" wide x 37" high x 23-1/4" deep with the door closed.

### **REAR OF WHEEL WELL - RAISED FLOOR**

There shall be one (1) rescue style, full height, and full depth compartment behind the rear wheels. It shall have approximate dimensions of 38-1/2" wide x 60" high. The clear door compartment dimensions shall be 34" wide x 54-1/2" high x 23-1/4" deep.

The rear compartment is raised to meet the 20° angle of departure critical to the mission of this equipment.

The rear floor shall be reinforced for the rigors of off-road. The body compartment doors shall have a bright finished drip rail.

One (1)  
40-15-0118

Hinged Doors, L/S, Flsh Mnt, Dbl Pan S/S - Type III

### **HINGED DOOR CONSTRUCTION - LEFT SIDE**

All left side compartments shall be provided with hinged doors.

One (1)  
40-16-0300

Door Latches, L/S, Hansen, Slam w/"D" Ring, Locking

The left side door latches shall be Hansen locking slam latches, with a "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

One (1)  
41-00-0382

Wheel Area, Single Axle, - Rr SCBA Tubes - Type III

### **FENDER SIDE SKIRTS**

There shall be stainless steel fender side skirts located in the area of the rear wheels. The design of the fender sides shall be a minimal length to provide maximum compartment space in the apparatus.

One (1)  
46-06-0404

Fenderettes and Wheel Well Liners - Stainless - Type III

### **BODY FENDERS - POLISHED**

The apparatus body fenders shall be made from 16 gauge polished stainless steel and shall be rolled, die stamped and fully removable. The stainless steel fenders and stainless fender liners shall be fastened with stainless bolts and ESNA nuts to the outer fender panel.

One (1)  
46-08-0204

Mud Flaps, Rear - Type III

### **REAR AXLE MUD FLAPS**

Two (2) black, anti-sail, mud flaps shall be mounted behind the rear wheels.

23682-0003

# HME, Inc.

One (1)  
46-28-0402 SCBA Tubes, (4) Rear Wheelwell, (2) L/S - (2) R/S, Type III

## **SCBA BOTTLE COMPARTMENTS**

Four (4) SCBA bottle tube compartments shall be provided, two (2) in each side rear wheel well area. These tubes shall be located rear of the single axle tire. Each compartment shall be constructed of gray roto molded storage compartment to provide SCBA scuff protection. A door seal shall be provided at the perimeter of the SCBA compartment. The doors shall be stainless steel with a stainless finger latch.

One (1)  
46-28-0680 SCBA Bottle Retention Strap(s)

## **SCBA BOTTLE RETENTION STRAP**

One (1) one-inch (1") wide loop of red webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in the event the door is not latched for travel. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.

One (1)  
42-02-0300 Right Side Compartments - Type III

## **RIGHT SIDE COMPARTMENT DIMENSIONS**

### **ABOVE WHEEL WELL**

There shall be one (1) high side reduced depth compartment centered over the rear wheels. It shall have dimensions of 51-1/2" wide x 42-1/2" high. The clear door compartment dimensions shall be 49-1/2" wide x 37" high x 11-1/4" deep with the door closed.

### **REAR OF WHEEL WELL - RAISED FLOOR**

There shall be one (1) rescue style, full height, and reduced depth compartment behind the rear wheels. It shall have approximate dimensions of 38-1/2" wide x 60" high. The clear door compartment dimensions shall be 34" wide x 54-1/2" high x 11-1/4" deep in the upper section and 23-1/4" deep in the lower section with the door closed.

The rear compartment is raised to meet the 20° angle of departure critical to the mission of this equipment.

The rear floor shall be reinforced for the rigors of off-road. The body compartment doors shall have a bright finished drip rail.

One (1)  
42-07-0118 Hinged Doors, R/S, Flsh Mnt, Dbl Pan S/S - Type III

## **HINGED DOOR CONSTRUCTION - RIGHT SIDE**

All right side compartments shall be provided with hinged doors.

One (1)  
42-08-0300 Door Latches, R/S, Hansen, Slam w/"D" Ring, Locking

# HME, Inc.

The door latch(es) shall be Hansen locking slam latch(es), with a "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

One (1)  
42-12-0304

RR1, Rear Compartment - Type III

## **REAR COMPARTMENT DIMENSIONS**

There shall be one (1) storage compartment at the rear of the body. It shall have approximate dimensions of 48" wide x 48-1/2" high. The clear door compartment dimensions shall be 30" wide x 34" high x 26-1/2" deep with the door closed.

The rear compartment floor is raised to meet the 20° angle of departure critical to the mission of this equipment.

One (1)  
42-25-0118

Hinged Doors, Rear, Fish Mnt, Dbl Pan S/S - Type III

## **HINGED DOOR CONSTRUCTION - REAR COMPARTMENT**

The rear compartment shall be provided with hinged doors.

One (1)  
42-12-0900

Door Latches, Rear, Hansen, Slam w/"D" Ring, Locking

The door latch shall be Hansen locking slam latch, with a chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

One (1)  
42-20-0240

RR2, Ladder Storage Compt, R/S, On Beam - Type III

## **LADDER STORAGE - ON BEAM**

The ladder shall be mounted on the right side of the body to the right of the water tank. The ladders shall be placed into the body from the rear of the apparatus sliding into the compartment on beam. A single plate vertically hinged door shall be provided.

The compartment shall be capable of storing one (1) 20' three-section ladder, one (1) backboard, one (1) 5' digger bar, one (1) 8' pike pole and one (1) 8' rubbish hook.

One (1)  
42-08-0500

Door Latches, Rotary "D" Ring, Locking

The door latch shall be provided with a rotary locking chrome "D" ring with a 5-degree bend for easier grasping of each door handle with gloved hands. The latch shall be provided with a keyed lock.

One (1)  
72-00-0004

Type III Ladder Group, 20-3 Section

One (1)  
72-08-0920

Ladder, 20' Three-Sect Ext, Duo-Safety

## **EXTENSION LADDER**

One (1) 20' three-section Duo-Safety model 912, aluminum extension ladder shall be provided with the apparatus.

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One (1) Suction Hose Storage Compt, Stainless, Painted W/Rear Door  
42-20-1250

## **SUCTION HOSE STORAGE**

Two (2) suction hose storage compartments shall be located above the side storage compartments on both sides of the apparatus. The compartments shall hold a combined total of three (3) eight (8) foot sections of four (4) inch hard suction hose and strainer. Both compartments shall be capable of holding two (2) eight (8) foot sections of hose if needed. The compartments shall be constructed of stainless steel, and painted job color. Each compartment shall have a stainless steel vertically hinged door on the rear of the compartment. Each compartment door shall have a positive latching door latch.

## SHOP NOTE

Note: 4" Suction

Two (2) Hard Suction, 8' x 4", Lightweight PVC w/4" NH Cplngs  
76-02-5780

## **HARD SUCTION HOSE**

Two (2) 8' long x 4" diameter, lightweight PVC flexible suction hose shall be provided. It shall be first quality, non-collapsible type and designed for having a low friction loss which will not collapse under a vacuum of 23". The hard suction hose shall be equipped with a 4" NH long handle female end and 4" NH rocker lug male end couplings.

One (1) Strainer, (1) 4" Kocheck, Barrel Type, Chrome Plated  
76-06-0700

## **BARREL TYPE SUCTION STRAINER**

One (1) Kocheck, 4" NST K-Brite plated, barrel type suction hose strainer shall be provided with the apparatus.

One (1) Rubrail, Body, LED Strip, Armor Guard, Warning/Ground - Rat  
46-05-0610

## **BODY RUBRAIL / LIGHTING SYSTEM**

The apparatus body shall have a bolt on extruded, bright anodized aluminum rub rail affixed to the side beneath each door area. Each rub rail shall be attached to the apparatus body with stand off spacers made from 1" diameter UHMW Polyethylene bar stock.

The rubrail shall be designed with an integral white LED strip light. The white LED shall be downward facing and activated with the ground light circuit.

The rubrail design shall also include a red LED strip light. The red LED strip light shall face outward and activate as a red flashing warning light when the warning lights are active.

One (1) Painted Apparatus Body - Type III  
46-06-0472

## **APPARATUS BODY PAINT**

The following apparatus body components shall be painted job color.

The rear wheel fender panels.

The compartment side doors.

# HME, Inc.

The hosebed side walls.

The rear panel of the top loading hosebed equipment compartment.

The area between the side doors.

The rear of the apparatus body on each side of the RR1 compartment.

The rear ladder and suction hose compartment doors. (exterior surface and door edges only)

Note: No paint required on the rear corners of the hosebed or coffin compartment. No paint on the inside of the lower rear compartment doors.

One (1)  
46-10-0210

Lights, Compartment, LED Strip, Armor Protected - Type III - White/Red

## **APPARATUS COMPARTMENT LIGHTING**

Two (2) LED, armor protected, strip lights shall be provided one (1) each side of the compartment at the door frame for each body compartment. Each body door shall have an automatic compartment light switch.

There shall be a white/red color selector switch in the cab that controls the color of this lighting.

One (1)  
46-14-0210

Lights, Underbody - Type III

## **UNDERBODY LIGHTING**

Underbody ground lights shall be provided under the apparatus body. Two (2) Hella Picador flood lights shall be provided at the rear of the apparatus body, one (1) each side, to illuminate under the rear compartments.

There shall also be two (2) LED ground lights provided under the pump panel running boards, one (1) each side, to illuminate the area under the pump panel areas. These lights are activated by a switch on the pump panel.

One (1)  
46-20-0600

Fixed Steps with Hand Hold, Body Rear - Type III

## **REAR BODY STEPS**

There shall be six (6) Cast Products fixed steps with integral hand hold installed on the rear of the apparatus body. The step shall have an open grate design for self cleaning. The lower steps shall be mounted one (1) each side beneath the thru storage compartment doors. There shall be two (2) steps mounted each side inboard between the thru compartment and rear compartment doors.

A stainless steel scuff plate shall be provided behind each step and extend upward in the toe kick area to protect the rear body finish.

One (1)  
46-08-1012

Interface (I-Zone) Brackets, Mounted Rear Body - Type III

## **INTERFACE (I-ZONE) BRACKETS**

Two (2) extruded aluminum handrail sections shall be provided, with brackets. The brackets shall be designed to hold the handrails in position with a quick pin to hold in place for operation. Inside the right rear door of the RR1 compartment there shall be a storage bracket to hold the handrails when not in use. The I-Zone brackets are provided to lace hose between when moving from house to house during structure fire protection operations.

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One (1)  
46-26-0600 Handrails, Rear, Type III

## **REAR HANDRAILS**

Four (4) ribbed, solid stock 1-1/4" diameter, aluminum handrails with chrome plated stanchions shall be supplied and installed at rear of the apparatus body. There shall be two vertical handrails installed, one (1) each side on the rear area of the body in line with the rear of the hosebed side walls. These handrails shall begin at the top of the hosebed side walls and extend down to the bottom of the ladder and suction hose storage compartments. One (1) handrail shall be installed horizontally along the lower edge of the hosebed. One (1) handrail shall be installed at the top of the rear panel of the top loading fill tower/foam cell compartment.

One (1)  
55-02-2002 Body - LED - ICC Lighting - Type III

## **APPARATUS ICC MARKER LIGHTING**

Five (5) red LED clearance lights shall be supplied, mounted in the rear of the apparatus.

Two (2) red LED clearance lights shall be supplied, mounted facing the side of the apparatus.

ICC lighting utilized and lighting positions shall be in conformance with FMVSS 108.

One (1)  
55-03-0144 Tomar Rectangular Driving Lights - Type III TRX 06WC

## **BUMPER MOUNTED SCENE LIGHTS**

Two (2) rectangular Tomar TRX-06W-C 6" Off-Road Scene Lights with clear lens shall be mounted recessed in the front bumper.

One (1)  
55-05-0124 Rear Stop/Tail/Turn/Reverse with NFPA Lower Zone C Warning - Tomar ICC Lights

## **REAR STOP/TAIL/TURN/BACKUP LIGHTS**

There shall be a chrome plated light housing provided on the rear of the apparatus that includes the stop/tail/turn and lower zone C warning lights.

The rear of the apparatus shall be equipped with Tomar R-46 Series light heads.

- The top light in the assembly shall be a red R46L STT LED with red lens stop/tail light.
- The middle light set shall be an amber R46L TURN LED lamp with an amber lens with an arrow mask.
- The lower lights shall be combination white or red R46D W-RW LED backup/warning lamps with clear lens. The lower lights shall be NFPA warning lamps.

One (1)  
55-06-1000 License Plate Bracket w/LED Light

One (1) license plate mounting and LED light shall be provided. The light and bracket shall be located on the rear of the apparatus.

One (1)  
23682-0003 Lightbar, Frt, Tomar -Scorpion 58" LED Type III

# HME, Inc.

57-04-3308

## **ROOF MOUNTED LIGHTBAR**

A Tomar Scorpion Model 970-581-0601-1 NFPA, 58" lightbar system shall be supplied and permanently mounted on the cab roof, as far forward as possible. This lightbar system shall be supplied with:

- Twelve (12) Red LED lighthoods, with two front outboard pods, programed for "steady burn".
- Ten (10) White LED lighthoods
- Two (2) Foward Facing Scene lights
- Two (2) Side Facing Scene lights

This lightbar fulfills the requirements for Upper Zone A and in combination with the upper rear warning devices fulfills the requirements for Upper Zones B, C, and D. Any clear warning light(s) in the lightbar shall be disabled automatically for the "Blocking Right of Way" mode.

One (1)  
57-20-3404 Lower Front Warning, Tomar - LED - Type III

## **LOW LEVEL WARNING LIGHTS**

Two (2) Tomar, R-37-W-R-series Red LED lighthoods with red lenses shall be surface mounted to the face of the grille in a chrome bezel. The lights shall be 18 inches from the top of the bumper gravelshield.

These lights fulfill the requirements for Lower Zone A lower level warning devices.

SHOP NOTE

Chrome Bezel

One (1)  
57-30-3402 Bumper Side, Tomar- LED - Type III

## **FRONT INTERSECTION LIGHTS**

Two (2) Tomar, RSDH-RW series Red/White LED lighthoods, surface mounted with a chrome bezel, shall be mounted in each side of the front bumper.

These two (2) lights fulfill the requirements for Lower Zone B & D lower level warning devices.

SHOP NOTE

Chrome Bezel

One (1)  
57-34-3416 Body Side Over Wheel, Tomar - LED - Type III

## **BODY SIDE WARNING LIGHTS**

Two (2) Tomar, R-37-W-R-series Red LED lighthoods shall be mounted one (1) on each side of the body over the rear wheels in a chrome bezel.

These two (2) lights fulfill the requirements for Lower Zone B & D lower level warning devices.

SHOP NOTE

Chrome Bezel

One (1)  
57-40-3416 Upper Rear, Tomar - LED - Type III

23682-0003



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## **REAR UPPER LEVEL WARNING LIGHTS**

Two (2) Tomar, model R46L-W-R LED warning lights over (2) Tomar R46L-13 LED scene lights shall be mounted on the upper rear of the apparatus in a chrome bezel.

Two (2) Tomar, model R37-W-R-02 red LED warning lights shall be mounted on the upper rear sides of the apparatus in a chrome bezel.

These lights fulfill the requirements for Upper Zone B, C & D upper level warning devices.

### SHOP NOTE

Chrome Bezel

One (1)  
57-44-3404 Tomar - LED - Traffic Director Type III

## **LED TRAFFIC ADVISOR**

One (1) Tomar amber LED traffic director, LSTICK-14TD6-B, with cable, shall be mounted on the upper rear of the apparatus. The device shall consist of six independent LED heads.

The switch control box is to be mounted in the cab console allowing for easy operation by the driver.

One (1)  
58-09-3010 Scene Lights Tomar LED Type III

## **SIDE SCENE LIGHTING**

A total of four (4) Tomar Model R37L-13 Clear tilt-down scene lights shall be provide. The lights will be mounted two (2) each side, on the upper corners of the body in a chrome bezel. The lights will be controlled from switches in the cab, labled Left Scene and Right Scene.

### SHOP NOTE

Added Chrome Bezels

One (1)  
58-09-3026 Side Work Lighting - Type III

## **BODY SIDE WORK LIGHTING**

The side of the apparatus shall be provided with two (2) Hella Picador flood lights. The flood lights shall be mounted one (1) each side of the pumphouse to the rear of the crosslay preconnect valve. The light shall have a stainless steel trim handle to allow easy position adjustment of the light.

One (1)  
48-03-2340 L1 Accessories, two (2) Adj. Shelves

## **ALUMINUM SHELVES - ADJUSTABLE**

Two (2) adjustable aluminum shelves shall be installed and have flanges that are 2" deep with a material thickness of .188". A channel strong back shall be provided along the center, bottom of each shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

## **CONSPICUITY TAPE**

# HME, Inc.

Conspicuity tape with a red/white reflective stripe shall be applied along the length of the front face of all adjustable shelves.

## **FLOOR MATTING**

The following locations shall be furnished with Turtle Tile:

L1 compartment floor the edge of the floor shall be provided with a yellow wedge ramp  
L1 middle shelf  
L1 upper shelf

One (1)  
48-03-2342

L2 Accessories, three (3) Adj. Shelves, one (1) pull-out tray

## **ALUMINUM SHELVES - ADJUSTABLE**

Three (3) adjustable aluminum shelves shall be installed and have flanges that are 2" deep with a material thickness of .188". A channel strong back shall be provided along the center, bottom of each shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

## **ALUMINUM TRAYS - PULL OUT**

One (1) heavy duty pullout trays shall be installed and shall be equipped with Grant slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum with a maximum capacity of 250 pounds.

## **CONSPICUITY TAPE**

Conspicuity tape with a red/white reflective stripe shall be applied along the length of the front face of all adjustable shelves and trays.

## **FLOOR MATTING**

The following locations shall be furnished with Turtle Tile:

L2 upper shelf  
L2 mid shelf  
L2 pull out tray

One (1)  
48-03-2344

RR1 Accessories, one (1) Adj. Shelf, one (1) pull out tray

## **ALUMINUM SHELVES - ADJUSTABLE**

An adjustable aluminum shelf shall be installed and have flanges that are 2" deep with a material thickness of .188". A channel strong back shall be provided along the center, bottom of each shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

A deep shelf is to be mounted in the rear compartment (RR1). This shelf shall have flanges that are 2" deep with a material thickness of .188". Two channel strong backs shall be provided along the bottom of each deep shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

## **ALUMINUM TRAYS - PULL OUT**

# HME, Inc.

One (1) heavy duty pullout trays shall be installed and shall be equipped with Grant slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum with a maximum capacity of 250 pounds.

## **CONSPICUITY TAPE**

Conspicuity tape with a red/white reflective stripe shall be applied along the length of the front face of all adjustable shelves and trays.

## **FLOOR MATTING**

The following locations shall be furnished with Turtle Tile:

RR1 shelf  
RR1 pull-out

One (1)  
48-03-2346

R2 Accessories, three (3) Adj. Shelves, one (1) pull-out tray

## **ALUMINUM SHELVES - ADJUSTABLE**

Three (3) adjustable shallow aluminum shelves shall be installed and have flanges that are 2" deep with a material thickness of .188". A channel strong back shall be provided along the center, bottom of each shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

## **ALUMINUM TRAYS - PULL OUT**

One (1) heavy duty pullout trays shall be installed and shall be equipped with Grant slides and a gas shock to hold the tray in both the in and out positions and shall be made from .190" aluminum with a maximum capacity of 250 pounds.

## **CONSPICUITY TAPE**

Conspicuity tape with a red/white reflective stripe shall be applied along the length of the front face of all adjustable shelves and trays.

## **FLOOR MATTING**

The following locations shall be furnished with Turtle Tile:

R2 all shelves  
R2 pull out tray

One (1)  
48-03-2348

R1 Accessories, two (2) Adj. Shelves

## **ALUMINUM SHELVES - ADJUSTABLE**

Two (2) shallow adjustable aluminum shelves shall be installed and have flanges that are 2" deep with a material thickness of .188". A channel strong back shall be provided along the center, bottom of each shelf. Each shelf shall be fully adjustable in height and held in place by extruded uprights.

## **CONSPICUITY TAPE**

# HME, Inc.

Conspicuity tape with a red/white reflective stripe shall be applied along the length of the front face of all adjustable shelves.

## **FLOOR MATTING**

The following locations shall be furnished with Turtle Tile:

R1 all shelves  
R1 pull out tray

One (1)  
70-24-1012

Wheel Chocks, (2) Worden 7HY HD, Yellow Alum - Type III

## **WHEEL CHOCKS**

One pair of heavy duty, extruded aluminum wheel chocks measuring 8" high x 7" wide x 11.8" long shall be provided with the apparatus. Worden 7HY HD Yellow Handled Extrusions are the requested chocks. The wheel chocks shall have a bright yellow powder coat finish for high visibility, safety and corrosion resistance. No exception shall be allowed to these requirements.

Wheel chocks are to be stored in the wheel chock compartment in the right side of the pump module.

One (1)  
84-02-2000

Striping, 1"x4" Scotchlite, Reflective, Vhcl Prmtr

## **REFLECTIVE SAFETY STRIPE**

A 1" x 4" wide 3M brand Scotchlite reflective stripe shall be affixed to the perimeter of the vehicle. The striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 25% of the perimeter width of the front of the vehicle shall have reflective stripe.

One (1)  
84-04-3010

Base Stripe Color, White Reflective

## **REFLECTIVE STRIPE COLOR**

The apparatus body striping shall be white reflective.

One (1)  
84-04-3110

Accent Stripe Color, White Reflective

The smaller accent stripe(s) shall be white reflective.

One (1)  
84-04-2760

Chevron, Rear Door(s), 4" Red/Yellow - Type III

## **REAR DOOR REFLECTIVE CHEVRON STRIPING**

Red and yellow reflective chevron striping shall be provided and applied to the rear door(s). The stripes shall be 4" wide and shall alternate red and yellow. The chevron pattern shall angle up from the outer edges toward the center of the rear body.

One (1)  
90-03-1000

Water Tank Warranty - Service Life

## **WATER TANK WARRANTY**

# HME, Inc.

The water tank is to be free from defects in material and workmanship for the normal service life of the apparatus in which the water tank is installed.

If a tank has a defect in material or workmanship covered by the warranty, the tank manufacturer shall repair at their cost, by authorized personnel or authorized third parties. The tank manufacturer shall make an effort to effectuate repair within 48 hours following initial notification of a covered defect. The tank manufacturer shall make a reasonable effort to repair tank at most convenient location to end user.

The tank manufacturer shall reimburse all reasonable costs associated with rendering the tank accessible for repair, including, but not limited to, removal and reassembly of the hose bed floor.

One (1) == Limited Warranty - Use For Contracts - 4.001 ==

One (1) Limited Warranty  
10-00-0030

## **HME, INC.** **LIMITED WARRANTY**

Thank you for purchasing our products!

This book specifies the limited warranty offered by HME, Inc. (“**HME**”) for HME products. Please note that the applicable limited warranty depends on what product you, the original purchaser, bought. As such, not all terms contained in this book will be applicable to you. Please review the coverage(s) appropriate for your HME product before proceeding through the rest of this book.

This book is divided as follows:

Section A, General Provisions

Section B, Limited Warranties

Section C, Exclusions

Section D, Additional Provisions Applicable to All Products.

HME’s limited warranty set forth in this book will be referred to collectively as this “**Limited Warranty**” or “**HME’s Limited Warranty**”. In this Limited Warranty, the term “**you**” and “**Customer**” will refer to the original purchaser/owner of the HME products and not to any subsequent purchaser or owner.

### **A. GENERAL PROVISIONS**

*This Section A constitutes part of the Limited Warranty for all HME products.*

#### **Who and What HME’s Limited Warranty Covers**

# HME, Inc.

HME's Limited Warranty only covers you, the original purchaser/owner of new HME product(s). Subsequent owners or purchasers are not covered by this Limited Warranty.

Subject to the limitations and exclusions set forth in this Section A as well as Sections B, C, and D below, HME's Limited Warranty generally covers repair, refinish, or replacement, at the sole option of HME, of your new HME cab, chassis, apparatus, aerial or any components thereof (hereinafter "**Covered Part(s)**") in which a defect in materials or workmanship appears during normal use, maintenance or service within the Warranty Period (as "**Warranty Period**" is defined in each part of this Limited Warranty).

If HME determines there is warranty coverage for a Covered Part, HME shall, at its sole option, repair, refinish, or replace (or have repaired or refinished), at HME's factory, by HME's representative at the location of the Covered Part, or at HME's authorized service facility (whichever location HME designates), any Covered Part not otherwise excluded from HME's Limited Warranty if the Covered Part proves, in HME's opinion, to be defective and if all other terms of this Limited Warranty are complied with. The repair, refinish, or replacement of a Covered Part does not extend the life of this Limited Warranty. This Limited Warranty is valid only in the United States and Canada.

## **What This Limited Warranty DOES NOT Cover**

This Limited Warranty is limited by the limitations and exclusions in this Section A and is also limited by the limitations and exclusions set forth in Sections B, C, and D below. The limitations and exclusions set forth in the most specific Section of this Limited Warranty shall supersede the warranty provisions in all other Sections. For example, if there is a potential paint defect, then subject to the other limitations and exclusions in this Limited Warranty, the paint limited warranty would apply in Section B(3) below rather than the general warranty in Section B(1) below.

No Replacement or Repurchase of Fire Apparatus. IF HME DETERMINES THERE IS WARRANTY COVERAGE, REPAIR, REFINISH, OR REPLACEMENT OF COVERED PARTS BY HME IS THE EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY. **HME WILL NOT UNDER ANY CIRCUMSTANCES REPLACE A FIRE APPARATUS OR REPURCHASE THE FIRE APPARATUS FROM YOU.**

## **B. LIMITED WARRANTY**

### **1. General Warranty**

The Limited Warranty under this Section B(1) (the "**General Warranty**") for Covered Parts is limited to chassis systems and components such as the driveline, cooling system, hydraulic system, suspension, air system, and climate control system, (but excludes the engine, transmission and axles); apparatus systems and components; and the aerial device and system.

#### **Warranty Period for General Warranty**

The General Warranty is in effect for a Warranty Period that continues until 36 months from the date of delivery of the new fire apparatus to the original owner, or the first 36,000 actual miles (or 57,900 actual kilometers) from the delivery date, whichever occurs first. At the time of purchase, you as the original purchaser have an option at an additional cost to extend the

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Warranty Period for the General Warranty for additional years up to a maximum period of 5 years from the delivery date, 100,000 miles from the delivery date, or 3,000 engine hours from the delivery date, whichever occurs first. The General Warranty is not valid if the odometer is disconnected, or its reading has been altered, or mileage cannot be determined.

## 2. Structural Warranty

The Limited Warranty under this Section B(2) (the “**Structural Warranty**”) for Covered Parts is limited to the cab structure, body structure, and structural failures of aerials.

### Warranty Period for Cab Structural Warranty

The Structural Warranty is in effect for a Warranty Period that continues until 10 years from the date of delivery of the completed new fire apparatus to the original purchaser, or the first 100,000 actual miles (or 161,290 actual kilometers) from the delivery date, whichever occurs first. The Structural Warranty is not valid if the odometer is disconnected, or its reading has been altered, or mileage cannot be determined.

## 3. Paint Warranty

The Limited Warranty under this Section B(3) (the “**Paint Warranty**”) specifically covers Paint Defects on a cab exterior finish, apparatus body panel exterior finish, or the aerial ladder assembly manufactured by HME. A Covered Part shall be considered to have “**Paint Defects**” if it is found by HME to have any loss of gloss, color retention, cracking, blistering, bubbling or flaking under normal use and with normal maintenance and cleaning. For Paint Defects, you as the original purchaser must notify HME in writing within 30 days after any claimed Paint Defect has appeared. In the case of a warranty claim, the refinish or repair of all non-warranty blemishes, if any, shall be negotiated prior to the warranty refinish or repair.

### Warranty Period for Paint Warranty

The Paint Warranty is in effect for a Warranty Period that continues until the period specified below or the date of the first 36,000 actual miles (or 57,900 actual kilometers) from the delivery date. The Paint Warranty is not valid if the odometer is disconnected, or its reading has been altered, or mileage cannot be determined. At the time of purchase, you as the original purchaser have an option for an extra cost to extend the Warranty Period for the Paint Warranty for additional years up to a maximum of 5, 7, or 10 years. The Paint Warranty only covers the cost to refinish or repair Paint Defects for the specific defect and at the percentages set forth below:

| Top Coat and Appearance Gloss, Color Retention, Cracking |      | Coating System, Adhesion, Flaking, Blistering, Bubbling |      |
|----------------------------------------------------------|------|---------------------------------------------------------|------|
| 0 to 72 months                                           | 100% | 0 to 36 months                                          | 100% |
| 73 to 120 months                                         | 50%  | 37 to 84 months                                         | 50%  |
|                                                          |      | 85 to 120 months                                        | 25%  |

Note: To clarify, the chart above does not extend the Warranty Period for the Paint Warranty beyond the first 36,000 actual miles (or 57,900 actual kilometers) from the delivery date. If you

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purchase the 5 year extended Warranty Period, then the chart above should be limited to 5 years from the delivery date and there will be no warranty after that date.

## 4. Chassis Frame Rail Warranty

The Limited Warranty under this Section B(4) (the “**Frame Warranty**”) is limited to the chassis frame rail. It does not cover support brackets and hardware, such as those used for fuel tank mounting and cab mounting.

### **Warranty Period for Chassis Frame Rail Warranty**

The Frame Warranty is in effect for a Warranty Period that continues until the date that is the expected lifetime of a new vehicle. For purposes of this Frame Warranty, the expected lifetime is 20 years from the original delivery date. This Frame Warranty is not valid if the odometer is disconnected, or its reading has been altered, or mileage cannot be determined.

## 5. Frame Rail & Crossmember Corrosion Protection Warranty

The Limited Warranty under Section B(5) of this Limited Warranty (the “**Corrosion Protection Warranty**”) specially covers galvanized steel corrosion on the chassis frame and crossmembers. The Corrosion Protection Warranty covers parts and labor to correct the affected area as set forth below. Annual inspections at an authorized HME service provider must be performed to keep the warranty in effect.

Upon any claim made under the Corrosion Protection Warranty, the affected area must be inspected, reviewed and approved by HME or its designated repair personnel or facility prior to any work being completed. Any authorized warranty work shall be performed only by HME or its designated repair personnel or facility. Any repairs completed by an unauthorized repair shop or personnel shall cause this Corrosion Protection Warranty to be invalid. The obligations of HME under this Corrosion Protection Warranty are limited to the cost of bringing the affected area into compliance with HME’s specifications or of removing any defects in materials or workmanship.

### **Warranty Period for Corrosion Protection Warranty**

This Corrosion Protection Warranty is in effect for the original owner for a Warranty Period that continues until 20 years from the date of delivery of the new fire apparatus to the original owner.

## 6. Stainless Piping Warranty

The Limited Warranty under Section B(6) of this Limited Warranty (the “**Stainless Piping Warranty**”) includes Covered Parts that are limited to the stainless steel piping used in the construction of the fire apparatus water/foam plumbing systems.

### **Warranty Period for Stainless Piping Warranty**

The Stainless Piping Warranty is in effect for a Warranty Period that continues until 10 years from the original delivery date, or the first 36,000 actual miles (or 57,900 actual kilometers) from the delivery date, whichever occurs first.



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## 7. Waterway Warranty

The warranty for the waterway component is a pass-through warranty from the original manufacturer. HME does not provide a warranty for the waterway.

## C. EXCLUSIONS

The following exclusions apply to this Limited Warranty. Additional exclusions may be listed in other Sections of this Limited Warranty.

### 1. General Exclusions

As to all HME products, items not covered by this Limited Warranty include:

- Normal maintenance activities/items and wear parts such as lubrication, batteries, tires, filter and oil replacement, belts and hoses, brake lining and adjustment, door check strap adjustment, vehicle alignments, electrical accessories, voltage regulator, flashers, windshield wipers, etc.
- Damage caused by, but not limited to, failure to follow the required or recommended maintenance schedule, failure to maintain proper fluid and lubricant levels, failure to ensure operating parameters are maintained and failure to follow operating instructions.
- Damage caused by, but not limited to, misuse, abuse or neglect (e.g. overloading, driving over curbs, or exposure to corrosive, including but not limited to salt and/or acidic exposure, or flooded environments).
- Damage that arises outside of normal use.
- Damage caused by collision, fire, theft, vandalism, civil unrest, acts of terrorism, acts of war, acts of God, or similar casualties.
- Damage or defects with respect to Covered Parts in a vehicle that is leased or rented to a second party for compensation.
- Incidental expenses such as, but not limited to loss of use, inconvenience, loss of time, vehicle rental, towing, lodging or travel costs, etc.
- Additions or accessions not originally installed by HME, including ancillary equipment used in firefighting, and any problems resulting from such additions or accessions.
- Installation of any “aftermarket” devices or the modification of any existing system or component originally installed by HME without HME’s prior express written approval and any problems resulting from such installation or modification.
- Covered Parts that have been sold by an owner other than HME before the Covered Parts become a complete vehicle.
- Any alteration of a Covered Part not authorized in writing by HME prior to alteration.
- Other specific exclusions listed in each part in this book.

### 2. Exclusions for General Warranty

Items not covered by the General Warranty include:

- The frame, cab structure, body structure, aerial structure, stainless piping, and paint, but each is covered by specific warranty terms as defined in their individual warranties.

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- The engine, transmission, axles or components added to the chassis by another party; however, the engine, transmission, axles and/or components added to the chassis by another party may be covered by warranties issued to you from the respective component manufacturers.
- The components added to the apparatus by another party; however, these items may be covered by warranties issued to you from the respective component manufacturers.

### **3. Exclusions for Structural Warranty**

Items not covered by the Structural Warranty include:

- All hardware, seats, mechanical items, electrical items and paint finishes.
- Covered Parts damaged as a result of corrosion, including, but not limited to salt and/or acidic exposure.

### **4. Exclusions for Paint Warranty**

Items not covered by the Paint Warranty include:

- Damage caused by lightning, earthquake, windstorm, hail, flood or use in a corrosive or acidic environment.
- Damage from lack of poor maintenance and cleaning.
- Gold leaf or striping except that which is affected by repair. (Gold leaf or striping affected by repair must have been installed during the manufacture of a cab to be covered under the Paint Warranty for the cab.)
- Time, loss of use of the vehicle, inconvenience, vehicle rental, lodging, food or other consequential or incidental loss that may result from a Paint Defect.
- UV paint fade.
- Cab underside
- Chassis frame rails, crossmembers and suspension
- Aerial Ladder torque box and outrigger assemblies.
- Components not painted by HME may be covered by the respective manufacturer's warranty.

### **5. Exclusions for Frame Warranty**

Items not covered by the Frame Warranty include:

- Damage caused as a result of corrosion, including but not limited to salt, chlorides and/or acidic exposure.

### **6. Exclusions for Corrosion Protection Warranty**

Items not covered by the Corrosion Protection Warranty include:

- Parts that have not been galvanized, including but not limited to, suspension hangers, fuel tank and mounting, and air system components.
- Transportation costs.

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- Damage due to lack of specified normal maintenance and service as outlined and required in the service and operating manuals provided with the apparatus.
- Damage from accidents, abuse, physical and mechanical damage, and all other conditions not considered as “normal” operating conditions.

## **D. ADDITIONAL PROVISIONS APPLICABLE TO ALL HME PRODUCTS**

*This Section D applies to all HME products.*

### **Exclusive Warranty**

THE LIMITED WARRANTY SET FORTH IN THIS BOOK IS THE ONLY WARRANTY APPLICABLE TO HME PRODUCTS AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTY BY HME, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS LIMITED WARRANTY IS FURTHER LIMITED BY THE TERMS AND CONDITIONS STATED IN THE PROVISIONS BELOW:

**LIMITATION ON DAMAGES:** HME shall not be liable for incidental, consequential, direct, indirect or other damages (such as, but not limited to, lost wages, attorney’s fees, or lost vehicle rental expenses) that result from any breach or claim related to or arising out of (a) this Limited Warranty, (b) other warranties, if any, (c) any agreement between HME and the Customer, or (d) the HME products or any actual or alleged defect related to the HME products.

**LIMITATION ON IMPLIED WARRANTIES:** Any implied warranties that arise by way of applicable state or provincial law, including any implied warranty of merchantability or fitness for a particular purpose, are limited in duration to the applicable Warranty Period and are limited in scope of coverage to the Covered Parts covered by this Limited Warranty.

### **Third Party Representations**

HME does not authorize any person to create for HME any other obligations or liability in connection with its products, and HME is not responsible for any representation, promise or warranty made by an HME Sales Representative, component or vehicle manufacturer, or other person beyond what is expressly stated in this Limited Warranty.

### **How to Obtain the Limited Warranty**

In order to be eligible under this Limited Warranty, you **MUST** return a completed “Limited Warranty Registration” form to HME within 60 days of the date of delivery. The original purchaser/owner is responsible for submitting, either directly or with the assistance of the HME Sales Representative, a “Limited Warranty Registration” form to HME within 60 days of the date of delivery.

The “Limited Warranty Registration” form is located in both the HME Chassis Owner’s Manual supplied with your new vehicle, and at the end of this Limited Warranty document. **THIS LIMITED WARRANTY IS NOT VALID IF THE LIMITED WARRANTY REGISTRATION FORM IS NOT SENT TO HME WITHIN 60 DAYS AFTER THE DATE OF DELIVERY TO THE ORIGINAL PURCHASER/OWNER.**

### **How to Get Service**

To obtain warranty service, the original owner shall call HME Monday through Friday from 7:30 a.m. to 5:00 p.m. (Eastern Time) at 1-616-534-1463. Our customer service technicians can help answer questions regarding our products and services, provide information about warranty coverage and maintenance issues,

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help you arrange for service under third party warranties, and locate HME authorized service centers in your area. ALL LIMITED WARRANTY WORK MUST BE AUTHORIZED BY HME BEFORE REPAIRS ARE MADE. When you call for service, please have the following information available so that we may expedite your service:

- Your HME Job Number (Found on VIN Tag)
- Original owner date of purchase
- The current actual mileage
- The current actual engine hours

If service is needed on a Covered Part, you shall be responsible for all cost associated with transporting the Covered Part to the service location HME identifies at the time HME arranges for service. NO WARRANTY CLAIM WILL BE PROCESSED OR PAID WITHOUT PROOF OF ACTUAL MILEAGE AND THE DATE OF DELIVERY TO THE ORIGINAL PURCHASER/OWNER.

## **Legal Remedies**

Any claim or controversy arising out of or relating to this Limited Warranty, or breach thereof, shall be settled by arbitration administered by the American Arbitration Association in the State of Michigan in accordance with the Commercial Arbitration Rules of the American Arbitration Association. The determination of the arbitrator(s) shall be in writing and shall include an explanation of the basis for the determination. The determination of the arbitrator(s) shall be final and binding and judgment upon such determination may be entered in any court having jurisdiction.

One (1) General Warranty Period - 3 Years Total  
20-02-0030

### **COVERAGES**

General Warranty - Three (3) Years Total

One (1) Cab & Body Paint Warranty Period - 5 Years  
40-00-0005

Cab & Body Paint Warranty - 5 Years