



Shop Order

Raymond Fire Department
 Chief Bruce D. Tupper
 401 Webbs Wills Road
 Raymond, ME 04017

Sales Rep:	Terms: Chassis and Body COD
Drawing #: FT-11004	
Est. Delivery Date: / /	
Customer PO #:	Penalty:
Customer #: 1606	None
QPF #:	

Quote No: E-Raymond-ME-0010
Job/Order No: 20068
 09/12/2018

PART NO	QTY	DESCRIPTION
	1	== <i>Metalfab Pumper - ULC 05/13 - 0.000</i> ==
	1	CHANGE ORDER B
<i>00-00-0010</i>	1	<i>Exceptions to Request for Bid Proposal and optional pricing</i>
00-10-1500	1	Metalfab Pumper E
00-20-1000	1	Company Profile E
00-20-1500	1	Standard Body Warranty
00-20-1550	1	Metalfab Limited Ten (10) Year Paint and Corrosion Warranty
<i>00-20-1600</i>	1	<i>Waterous Pump Warranty - 5 years</i>
<i>00-20-1900</i>	1	<i>UPF Polytank Lifetime Warranty</i>
00-20-2000	1	Plant Visits - unlimited at customer expense
<i>00-20-3000</i>	1	<i>No Bonding</i>
00-20-3500	1	Certification for Fusion Welding of Aluminum
00-20-4000	1	Quality System registered to ISO 9001:2008
00-20-4500	1	Fire Apparatus Manufacturers' Association Membership
	1	GENERAL INFORMATION
10-11-0000	1	Intent E
<i>10-11-0110</i>	1	<i>Vehicle data recorder included with chassis</i>
<i>10-11-1101</i>	1	<i>NFPA 1901-2016 Compliance E</i>
<i>10-11-1500</i>	1	<i>UL Testing - Pumper</i>
<i>10-11-2100</i>	1	<i>Maximum length - 352"</i>
<i>10-11-2200</i>	1	<i>Maximum height - 138" to top of body</i> <i>Maximum height 138" to top of body, plus 6" for grab handles on top.</i>
<i>10-11-2250</i>	1	<i>Maximum width - 132" (including chassis mirrors)</i>
10-11-2300	1	Overall length is less than 30'
10-11-2500	1	General Construction
<i>10-11-2600</i>	1	<i>Preconstruction Meeting</i>
10-11-3000	1	Manuals - two copies ***Two copies of chassis manuals are required.
<i>10-11-3600</i>	1	<i>Delivery - FOB Fire Department -by K&T</i>
<i>10-11-4200</i>	1	<i>Payment Terms - Chassis and Body COD</i>
<i>10-20-1400</i>	1	<i>Hose capacity exceeding NFPA requirements</i> LDH hose bed capacity to hold a minimum of 1500 feet of 5" supply hose in 50 foot sections

PART NO	QTY	DESCRIPTION
10-20-2000	1	Equipment carrying capacity - standard NFPA Pumper
	1	CHASSIS INFORMATION
20-11-1000	1	Chassis supplied by Metalfab - Freightliner M2 112 64,000 lb GVW 18,000 lb front axle 64,000 lb rear axle 200" wheelbase, approximately 154.45" cab to axle Cummins L9 450 hp @ 2100 rpm, 2200 governed rpm 1250 lb/ft torque @ 1400 rpm Allison 3000 EVS automatic transmission, 320 amp alternator 60 US gallon fuel tank, LH, 25" diameter 17T drive lines ESC, VDr and seat/seatbelt display 767226 EB Tallahassee red ***Ensure vertical center of gravity is within chassis specifications (found in the incomplete vehicle document)
20-11-1500	1	2013 Emission chassis modifications
20-11-1600	1	Chassis Motor Vehicle Inspection as provided by the chassis dealership
20-21-0500	1	Fluid capacity plate
20-21-0600	1	Pumping test plate
20-21-1000	1	Maximum riders sign - 2 persons
20-21-1500	1	Seat belt warning labels - 2 door chassis
20-21-1520	1	Helmet warning label - do not wear helmet
20-21-1540	1	Tire Pressure Indicators - Tandem Axle
20-21-1600	1	Apparatus Information Label An information label is provided in the chassis cab, visible to the driver, stating: "When manufactured, this vehicle was: ** m high ** m long ** kg GVW Changes in height since the apparatus was manufactured shall be noted on this plate by the Fire Department"
20-21-2000	1	Non removable key
20-21-2500	1	Shifter lock not required E
20-21-3500	1	Rear step warning label
20-21-3810	1	Front mudflaps provided with chassis E
20-21-4000	1	Rear mudflaps - Metalfab Logo
20-31-0200	1	Fuel fill label -Ultra Low Sulfur Diesel only
20-31-0500	1	Alum tread fuel tank trim, Conv - 2 door Vertical trim only, OEM cab steps remain
20-31-1900	1	Chassis cab painted single color by chassis OEM
20-31-7500	1	Console in cab Install switch panel, siren, door ajar light, and pump shift in console. Include wiring for radio's and Knox box (ref 50-35-0510) Storage area with hinged cover and lift and turn latch provided at rear of console. Gray Zolatone finish
20-41-0600	1	Intake air shutoff for engine not requested
20-41-0900	1	Auxiliary braking system disabled when pumping
20-41-1100	1	Transmission programming - Allison WT ***Includes "Pump Engaged" light next to pump shift on chassis instrument panel.
20-41-1500	1	Extend exhaust pipe - RS front of rear wheels E Engineering to specify exhaust pipe material as required by the chassis manufacturer. Engineering to sign off on the exhaust configuration to make sure it meets the chassis manufacturer's emission specifications. ***Provide provisions for a Plymovent tail pipe connection; A clamp on flange, 6" OD on tailpipe will be installed (using a muffler clamp so adjustable in and out). Ensure to leave enough clearance under rubrail for this flange.

PART NO	QTY	DESCRIPTION
20-41-1900	1	Battery boost terminals with chassis E
20-41-2200	1	Chassis batteries relocated to body compartment E In pump house if possible, otherwise right side front compartment.
20-41-2510	1	Fuel fill at step fuel tank under cab
20-41-2600	1	Chassis fuel tank remains in OEM location
20-41-5000	1	Rear Tow Hooks - under body *** Flat bar tow hooks under rear step (2)
20-41-5500	1	ON SPOT Automatic traction chains Install for front tandem axle. Control will be within easy rear of driver
20-51-0710	1	Master Battery Disconnect included with Freightliner chassis
20-51-2500	1	Back up alarm included with chassis
20-51-3000	1	Air inlet with matching fitting - LS
20-51-3400	1	Protection valve installed for air operated accessories
20-51-6500	1	Kussmaul Autocharge 1000 battery conditioner w/battery saver
20-51-7100	1	Electric System Manager
20-51-7500	1	Super Auto eject for 120 v - 20 A with sealed enclosure
20-51-8500	1	Engine compartment lighting - LED
20-51-9001	1	Air horns on cab hood, controlled by dual lanyards Air horns are shipped loose with the chassis. Metalfab will install air horns on the chassis hood and plumb them to the factory prepped lanyard controls
20-52-3000	1	Chassis steering wheel lined up by others
20-60-0400	1	Chassis wheelbase does not change
20-90-1810	1	Extend air tank moisture ejectors to rubrail and tag
20-99-20AA	1	Reverse sensing system - Echomaster EMPV-7
	1	PUMP AND PLUMBING
30-11-3800	1	Waterous CXSC20 midship pump - 1500 USGPM
30-15-0303	1	Plumbing - non manifold pump SM E
30-20-0500	1	Valves and controls - side mount panel
30-20-1002	1	Akron valves specified
30-20-1640	1	Piping galvanized steel - MG/DSD pump
30-20-1700	1	1-1/2" thread specifications - NPSH
30-20-1800	1	2-1/2" thread specifications - NST
30-20-2000	1	Piping hydrostatic test
30-20-2505	1	Anodes in suction and discharge piping not requested
30-21-5510	1	Tank to Pump 3" w/ check valve non manifold pump
30-22-0500	1	Tank Fill valve 2"
30-31-4000	1	Suction - 6" not gated each side non manifold pump 6" header
30-32-7520	1	Suction - 2-1/2" left side, bleeder, non manifold pump
30-32-8020	1	Suction - 2-1/2" right side, bleeder, non manifold pump
30-40-2006	1	5" right discharge, plumbed 3", bleeder, non manifold pump 5" Storz connection
30-40-2500	1	2-1/2" left discharge, plumbed 3", bleeder, non manifold pump A 3" NSTF x 2-1/2" NSTM adapter required with cap
30-41-2006	1	2-1/2" RS discharge, bleeder, non manifold pump
30-41-2506	1	2-1/2" LS discharge, bleeder, non manifold pump
30-44-0500	2	1-1/2" crosslay (each), 2" valve, bleeder Hose bed capacities: 200' x 1-3/4" single stack 200' x 1-3/4" single stack Add a vertical slot 12" from each end of each divider to allow reaching in to push hose down.

PART NO	QTY	DESCRIPTION
30-44-3500	1	2-1/2" crosslay, plumbed 2-1/2", bleeder Hose bed capacity: 200' x 2-1/2" single stack Add a vertical slot 12" from each end of each divider to allow reaching in to push hose down.
30-51-0500	1	Pump shift-Midship air ***Includes "Pump Engaged" and "OK to Pump" indicator lights on chassis instrument panel ***Includes "Throttle Ready" indicator light on Pump operating panel
30-51-0700	1	Pump Gearbox mounted manual over ride for pump shift E
30-51-6640	1	Class One "TPG Plus" Governor/Throttle
30-51-7002	1	Suction side relief V/V, non manifold pump
30-51-7700	1	Primer Hale oil less ESP with oil tank Hale Indicator light on panel to show when primer is operating
30-51-8200	1	Heat Exchanger not required - NFPA does not require
30-52-1000	1	Master drain V/V, 12 port
30-52-3001	1	Foam system not requested E
	1	WATER AND FOAM TANKS
40-11-2100	1	UPF water tank
40-11-2200	1	Water tank capacity certification (tank manufacturer)
40-11-7600	1	Tank capacity 3000 US Gallons
40-13-0100	1	Through the tank tunnel for portable tank
40-21-1000	1	4" tank to pump connection
40-22-0500	1	2" tank fill connection
40-23-0500	1	1" water level gauge connection
40-23-1050	1	4" Fireman's Friend connection
40-23-1060	3	10" Newton dump connection
40-30-0400	1	3" plug in sump box
40-30-1100	1	Water Fill Box middle center Minimum 6" overflow/vent to prevent water in hose bed
40-31-45AA	1	Three Newton dumps - electric, with manual telechutes Electric dumps are switched at the rear and in the cab. Manual telechutes shall be installed on each dump There will be a handle extension supplied for the manual override of the dump valve.
40-31-8030	1	Rear fill, 4" Fireman's Friend with 5" Storz connection
	1	ELECTRICAL
50-11-0500	1	Base electrical system ***Includes green "Battery On" indicator light on chassis instrument panel.
50-11-0600	1	Warning Light Certification
50-11-0700	1	Low Voltage Electrical system test
50-11-0800	1	Low Voltage Electrical System Documents As required by ULC and NFPA standards
50-11-0900	1	Rocker switch panel with master warning switch ***Rocker switch assignments: MASTER -LIGHT BAR RED -LIGHT BAR CLEAR -FLASHING WARNING -LEFT SCENE -RIGHT SCENE -REAR SCENE -SIREN BRAKE -MINI WATER LEVEL GAUGE

PART NO	QTY	DESCRIPTION
50-11-1400	1	Federal PA300 100 watt siren
50-11-1620	1	Siren speaker, 100 watt, in front bumper
50-11-2010	1	Federal Q2B mechanical siren - through front bumper Mounted in right side bumper wing. Cannot extend beyond front of bumper. ***Controlled by foot switch at both driver and officer positions. Siren brake momentary switch is installed in console 20-31-7500.
50-11-2600	1	Siren to be accessible to driver and officer
50-11-6100	1	Whelen F4N0QLED LED light bar NFPA
50-11-6501	1	Rear Directional Light not requested
50-11-8001	1	Rear beacons not required E
50-12-8500	1	Front LED flashers (pr)-Whelen red LED 400
50-12-8600	1	Rear LED flashers (pr)-Whelen red LED 400
50-12-8620	1	Rear LED flashers (pr)-Whelan red LED 900 with integral flasher Upper corners above scene lights as shown on the proposal drawing
50-12-8700	1	Front side inter lts (pr) - Whelen red LED 400
50-12-8800	1	Body side inter lts (pr)-Whelen red LED 400
50-12-8820	1	Body side inter lts (pr)-Whelan red LED 900 with integral flasher Upper rear corners as shown on the proposal drawing
50-21-5100	1	Compartment lighting - LED tube lights in each compartment (rollup doors)
50-21-5500	1	Door Ajar warning light Warning label in cab to read: "Do Not Move Apparatus when Light is on"
50-21-8001	1	Step lights for body steps - 4" LED Energized when park brake is set
50-21-8200	1	Step lights for chassis steps - LED Energized when park brake is set
50-21-83AA	1	LED lighting for rear platform/Step
50-21-8600	1	LED clearance lts and reflectors
50-21-8800	1	LED intermediate turn signal/clearance/reflector length >30' There will be a marker light and turn signal light installed in the rub rail ahead of the rear fender well.
50-22-0700	1	Whelen 64 LED tail/brake-turn-backup module (pr)
50-31-6015	1	Whelen 9SC0ENZR LED Scene lights (pr) - Left side
50-31-6016	1	Whelen 9SC0ENZR LED Scene lights (pr) - Rear Switched in cab and at rear of body and with reverse gear of transmission These lights cannot shed - required for NFPA compliance
50-31-6017	1	Whelen 9SC0ENZR LED Scene lights (pr) - Right side
50-31-6550	1	Ground lighting (LED Lumabar) - 2 door chassis Energized when park brake is set
50-31-6570	1	Ground lighting (LED Lumabar) - side mount body Energized when park brake is set
50-31-65AA	1	Hose bed lighting - LED on front partition to meet UL Energized when park brake is set
50-35-0510	1	Provisions for installation of customer mobile radio (installation by Customer) Power and ground to Console 20-31-7500. Include 12-volt bussbar for Customer use (30 amp) for radio and Knox box.
50-35-0600	1	VHF antenna base with weather cap - commercial chassis Route lead to console 20-31-7500.

PART NO	QTY	DESCRIPTION
	1	BODY
60-10-1600	1	Tandem axle extruded aluminum body
60-10-4100	1	No "beavertail" rear step supports
60-10-4600	1	Painted fender surround E
60-10-4700	1	Integral aluminum fender trim
60-10-5400	1	Diamondback pumphouse steps
60-10-5450	1	Diamondback 8" rear step
60-10-6000	1	Extruded rub rail
60-11-0100	1	Front left side compartment to top of wheel well
60-11-0500	1	Front right side compartment to top of wheel well
60-11-0800	1	Rear left side compartment to top of wheel well
60-11-1800	1	No rear right side compartments
60-11-3100	1	No rear compartment E
60-11-4500	1	Surface mount aluminum door - single with "D" handle For left side rear compartment Wired to door ajar warning light
60-11-5500	2	Rollup door - standard height Natural aluminum finish Includes magnetic door switch, LED tube lights, rubber bumpers to prevent pinch point
60-31-4100	2	Extruded aluminum handrails Minimum 2" clearance from handrail to any surface Install extra 16" handrails on top of top rails front and rear
60-31-5500	1	Steps at rear of body (folding) with LED lights Maximum height between steps is 18" 10 total
60-31-5600	1	Steps and grab handles at front of body next to pump panel Maximum height between steps is 18" Top step on right side to be LED type - all other steps are illuminated by the panel lights
60-31-6500	1	Compartment matting - Interlocking tile
60-31-8003	1	Cast Products Double SCBA bottle holder (ea) Right side rear fender - rearward Wired to door ajar warning light
60-31-8700	2	Sliding tray (ea) - 400 pound capacity with gas strut Located at floor level in front left side compartment and front right side compartment. K&T to install divider in one sliding tray as directed by the Customer. Reflective stripe is applied on the exposed edge for visibility when the compartment door is open
60-31-9600	2	Adjustable shelf (ea) Located in front left side compartment and front right side compartment. Reflective stripe is applied on the exposed edge for visibility when the compartment door is open
60-32-3550	1	Two adjustable hose divider (each) Hand hold required in end
60-32-7500	1	Hose bed - aluminum Include an angled diverter forward of the water fill box so that hose can be stored ahead of the fill box. Note that the hose bed volume between the side wall and the tower is 64.75 cubic feet and 1500 feet of 5" hi vol takes 60 cubic feet so there is adequate space.
60-33-0000	1	Paint exterior - Imron Elite *** Paint code and colour 76722EB Tallahassee Red

PART NO	QTY	DESCRIPTION
60-33-0200	1	Undercoat vehicle with KROWN rust protection ***Chassis frame as well***
60-33-0500	1	Paint chassis wheels job colour with silver trim E
60-33-1000	1	Paint pump and plumbing job colour
60-33-1500	1	Buffed finish compartment interior
60-33-2000	1	Lettering - no lettering provided
60-33-3000	1	Reflective stripe - 4" white 50% of perimeter each side and 25% of perimeter front
60-33-3310	1	Reflective stripe - red and yellow chevron at rear Minimum 50% of rear vertical surface
60-33-3500	1	Tarp over hose bed - black
60-33-4600	1	Aluminum cover over crosslays - with end tarps (black)
60-40-5500	2	Suction hose tube (each) with door Wired to door ajar warning light
60-40-9500	1	Tube for portable tank storage, with rear door Wired to door ajar warning light There will be a roller installed under the porta tank tube to assist in the storage and deployment of the porta tank. There will also be a piece of UHMW installed on the bottom of the tube opening for the porta tank to slide easier.
60-41-1015	2	Pike Pole tube in suction hose tube
	1	INSTRUMENTATION
70-11-0000	1	Warning Label on Pump Operator's Panel
70-11-0500	1	Side mount instrument panel No gauge or visual display can be higher than 84" above the operator's standing position Midpoint of any control cannot be higher than 72" above the operator's standing position
70-11-1500	1	Stainless steel instrument panels No gauge or visual display can be higher than 84" above the operator's standing position Midpoint of any control cannot be higher than 72" above the operator's standing position
70-11-3200	1	Colour coded tags
70-11-3210	1	Class 1 chrome tag bezels
70-11-4100	1	Stainless steel side panel hood left side
70-11-4500	1	Diamondback grip type panel hood step right side
70-11-46AA	1	Additional Pump panel lighting - Vertical 20" Lumabars each side Four total (two left side and two right side).
70-11-5100	1	Open storage at rear top of pump house
70-11-52AA	1	Bi-fold hinged cover over dunage behind crosslays
70-11-5500	1	Right side tread plate pump access door No opening dimension less than 18" Slot required for Primer level viewing
70-11-7500	1	Heat pan-aluminum
70-11-8000	1	Heater in pump compartment
70-20-0500	2	4-1/2" compound gauge - face 0-400 To be within 8" of each other - edge to edge
70-20-1500	7	2-1/2" pressure gauge - face 0-400 Gauge to be no more than 6" from edge of the gauge to the center of the control.
70-20-2500	1	Primer control
70-20-3100	1	Class One Governor Control Throttle can be no lower than 42" and no higher than 72" from operator's standing position.

