



## Shop Order

Carrier Truck Centers Inc. O/A Carrier Centers 645 Athlone Place Woodstock, ON N4S 7V8	Front of Yonge Fire Department Mallorytown, ON
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**Exp. Date:** 10/04/2019  
**Quote No:** Front of Yonge, ON-0223  
**Job/Order No:** 21300  
**BODY:** 00-10-15 Metalfab Pumper - ULC 05/13

04/26/2021

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PART NO	S	DESCRIPTION	QTY	ID
		<b>== Metalfab Pumper - ULC 05/13 - 0.000 ==</b>	<b>1</b>	<b>MTL</b>
	S	<b>CHANGE ORDER G</b>	<b>1</b>	<b>MTL</b>
00-05-00AA	U	Dealer - Carrier Centers Emergency Vehicles - Rod	<b>1</b>	
00-10-1520	U	Metalfab Pumper - Ontario unit	<b>1</b>	
00-20-1000		Company Profile E	<b>1</b>	MTL
00-20-1501	S	Extended Body Warranty - 20 year ***KROWN rust proofing has to be maintained for this warranty to remain in effect***	<b>1</b>	MTL
00-20-1551	S	Extended Paint and Corrosion Warranty - 10 Year non Pro-rated This warranty applies only to the exterior body paint. Paint on the vehicles body interior is warranted only under the manufacturers standard body warranty. ***All warranty is FOB Metalfab's factory at 847 Central Street, Centreville, NB or the nearest Metalfab approved warranty centre.*** ***KROWN rust proofing has to be maintained for this warranty to remain in effect***	<b>1</b>	MTL
00-20-1700		Hale Pump Warranty - 5 years	<b>1</b>	MTL
00-20-1800		Polypropylene Tank Lifetime Warranty	<b>1</b>	MTL
00-20-2100	S	Plant Inspection Visit for final inspection - Costs covered by CCEV	<b>1</b>	MTL
00-20-3000	S	No Bonding Requested	<b>1</b>	MTL
00-20-3500		Certification for Fusion Welding of Aluminum	<b>1</b>	MTL
00-20-4000	S	Quality System registered to ISO 9001:2015	<b>1</b>	MTL
00-20-4500		Fire Apparatus Manufacturers' Association Membership	<b>1</b>	MTL
		<b>GENERAL INFORMATION</b>	<b>1</b>	<b>MTL</b>
10-11-0000		Intent E	<b>1</b>	MTL
10-11-0110		Vehicle data recorder included with chassis	<b>1</b>	MTL
10-11-1101	S	ULC S515-13 and NFPA 1901-2016 Compliance Include NFPA labels as required	<b>1</b>	MTL
10-11-1500		> ULC Testing - Pumper - Imperial units of measure <b>ENG. NOTE:</b> Note in the shop note if the Fire Department wishes to witness the test	<b>1</b>	MTL
10-11-2100	S	Maximum length - 389 +/- 2 as shown on drawing The overall length shall be 389" +/- 2" as shown on the drawing FT-11233 dated 02.06.2020	<b>1</b>	MTL
10-11-2200	S	Maximum height - 120" The door opening is 120" as advised by Rod Harris by e-mail on 01.30.2020	<b>1</b>	MTL
10-11-2400		Overall length is 30' or more	<b>1</b>	MTL
10-11-2500		General Construction	<b>1</b>	MTL
10-11-3000	S	Manuals - two copies Hard copy and digital copy A certification shall be provided outlining the result of the road test which will be the Standard ULC road test as advised by Rod Harris by e-mail on 01.30.2020	<b>1</b>	MTL

PART NO	S	DESCRIPTION	QTY	ID
10-11-3600	S	> <b>Delivery - FOB Fire Department - by CCEV</b> <b>ENG. NOTE:</b> Note in the shop note if more than 4 hours of training is required	1	MTL
10-11-37AA	U	<b>Orientation video</b> There will be orientation videos supplied with the completed unit as requested by Rod Harris by e-mail on 03.22.2021	1	
10-11-4000	S	<b>Payment Terms - Chassis Net 10 days, Balance COD</b>	1	MTL
10-20-1000		Hose bed capacity - standard ULC Pumper	1	MTL
10-20-2000		<b>Equipment carrying capacity - standard ULC Pumper</b> This vehicle is designed to carry the standard ULC miscellaneous equipment load of 2000 pounds.	1	MTL
<b>CHASSIS INFORMATION</b>			1	MTL
20-11-1000	S	<b>Chassis - Freightliner M2 106 two door</b> 41,600 lb GVWR 14,600 lb front axle 27,000 lb rear axle 234" wheelbase 168.35" cab to axle Cummins L9 350hp @ 2000 rpm 2200 governed rpm 1000 Lb/ft torque at 1400 rpm Allison 3000 EVS automatic transmission 275 amp alternator Cummins exhaust brake - activates stop lights 68 MPH vehicle top speed 189 Litre Fuel tank, LH LED Marker lights Hood mounted air horns with shield ESC, VDR and seat belt display Color and paint code to be determined to match GM A83:72 Spray out sent to customer 02.05.2020 and approved by Rod Harris by e-mail on 02.12.2020 Changes to chassis: Auxiliary air tank not required Add front shocks for front suspension Add heater to automatic moisture ejectors Add power windows Fixed seat for air officer seat Air horn control to be driver side lanyard only Rear tires to be Michelin XDS Changes approved by Rod Harris by e-mail on 02.05.2020	1	MTL
20-11-1500		2013 Emission chassis modifications	1	MTL
20-11-1700	S	<b>Chassis Motor Vehicle Inspection required - by CCEV</b>	1	MTL
20-21-0500		<b>Fluid capacity plate</b>	1	MTL
20-21-0600	S	<b>Pumping test plate - Test to be 1050 IGPM</b> The ULC test will be done for 1050 IGPM as advised by Rod Harris by e-mail on 01.30.2020	1	MTL
20-21-1000		<b>Maximum riders sign - 2 persons</b>	1	MTL
20-21-1500		<b>Seat belt warning labels - 2 door chassis</b>	1	MTL
20-21-1520		<b>Helmet warning label - do not wear helmet</b>	1	MTL
20-21-1560		<b>LED Tire Pressure Indicators - Single Axle</b>	1	MTL
20-21-1600		<b>Apparatus Information Label</b> An information label is provided in the chassis cab, visible to the driver, stating in both metric and imperial units of measure: "When manufactured, this vehicle was: ** m/ft high ** m/ft long ** kg/lb GVW Changes in height since the apparatus was manufactured shall be noted on this plate by the Fire Department"	1	MTL
20-21-2000		Non removable key	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
20-21-2500		Shifter lock not required E	1	MTL
20-21-3500		Rear step warning label	1	MTL
20-21-3800		Front mudflaps	1	MTL
20-21-4000		Rear mudflaps - Metalfab Logo	1	MTL
<b>20-21-4510</b>	<b>U</b>	<b>Transportation Safety Kit</b>	<b>1</b>	
		Basic First Aid Kit		
		Safety Triangle		
		5 pound Fire Extinguisher		
		Supplied with chassis		
20-31-0200		Fuel fill label -Ultra Low Sulfur Diesel only	1	MTL
<b>20-31-0500</b>	<b>S</b>	<b>Alum tread fuel tank trim, Conv - 2 door</b>	<b>1</b>	<b>MTL</b>
		Vertical trim only, OEM cab steps remain		
		The bottom chassis step will be even with the body rub rail to match the top view drawing provided to the customer for approval on 01.04.2021.		
<b>20-31-1900</b>	<b>S</b>	<b>Chassis cab painted single color by chassis OEM</b>	<b>1</b>	<b>MTL</b>
<b>20-31-4700</b>	<b>S</b>	<b>&gt; Extend front bumper, gravshld with preconnected hosewell</b>	<b>1</b>	<b>MTL</b>
		ENG. NOTE:		
		Note location of preconnect elbow		
		Note special capacity requirements _____		
		<b>***Bumper to be extended approximately 20" ahead of cab.</b>		
		A hose well shall be installed (min capacity of 150' x 1-1/2" rubber hose and nozzle), complete with notched cover with gas strut and "D" handle latch as confirmed by Rod Harris by e-mail on 01.30.2020.		
		Chrome swivel elbow on top LS gravelshield.		
		Plastic interlocking tile shall be installed on the floor.		
		Drain holes required.		
<b>20-31-7500</b>	<b>S</b>	<b>Console in cab</b>	<b>1</b>	<b>MTL</b>
		Install switch panel (50-11-0900), siren (50-11-14AA), pump shift (30-51-0500) and a cutout for a Carrier supplied DIN mount in console as advised by Rod Harris by e-mail on 01.30.2020. It arrived at Metalfab on 09.02.2020 and was given to Inventory Control.		
		The console shall be an angled design making it easier to access the emergency controls (siren, switches, pump shift, etc.) . The top of the console shall be easily removable for maintenance and service.		
		The console shall have a 14"w x 15"l x 12"d raised storage bin with a hinged lid.		
		Console shall be textured gray painted finish (Zolatone).		
		One (1) divider shall be installed in the console bin orientated front to back as advised by Rod Harris by e-mail on 01.30.2020		
<b>20-41-0900</b>		<b>Auxiliary braking system disabled when pumping</b>	<b>1</b>	<b>MTL</b>
20-41-1100		Transmission programming - Allison WT	1	MTL
<b>20-41-1500</b>	<b>S</b>	<b>Extend exhaust pipe - RS front of rear wheels</b>	<b>1</b>	<b>MTL</b>
		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.		
		Where the chassis exhaust piping passes under or near a body compartment, the exhaust piping shall be shielded utilizing a heat shield manufactured from 1/8" 3003-H22 aluminum checker plate to prevent compartment exposure to radiant heat.		
		The heat shield shall be mounted to the tail pipe with suitably sized muffler clamps.		
		Rod Harris has confirmed that the department does not have an exhaust extraction system in the fire hall - Advised by e-mail on 01.30.2020		
20-41-1900		Battery boost terminals with chassis E	1	MTL
20-41-2000		Chassis batteries remain in OEM location	1	MTL
20-41-2510		Fuel fill at step fuel tank under cab	1	MTL
20-41-2600		Chassis fuel tank remains in OEM location	1	MTL
<b>20-41-5010</b>	<b>S</b>	<b>Rear Tow Hooks - through rear of body,inside rear compartment</b>	<b>1</b>	<b>MTL</b>
		Two (2) heavy duty steel painted tow hooks shall be bolted directly to the rear frame rails.		

PART NO	S	DESCRIPTION	QTY	ID
		The tow hooks shall be easily accessible from the rear of the apparatus body through a removable panel. The panel shall have lift and turn paddle latches. The door shall be manufactured from 3/16" 5052 - H32 aluminum. Painted to match compartment interior finish.		
20-51-0700		<b>Master Battery Disconnect included with chassis</b>	1	MTL
20-51-2600		Back up alarm	1	MTL
20-51-3100	S	<b>Air inlet not requested</b>	1	MTL
20-51-3400		Protection valve installed for air operated accessories	1	MTL
20-51-5600	S	<b>Flashing headlights w/ daytime running lights, order w/chassis</b>	1	MTL
20-51-6200		> <b>120 volt 20 A shore line connection in chassis cab</b> <b>ENG. NOTE:</b> Requires 20-51-75 120 volt auto eject or 20-51-80 120 volt inlet	1	MTL
		For battery conditioner to plug into. Minimum 12" from floor level to meet ULC.		
20-51-65AA	U	<b>Kussmaul Pump Plus 1200 - Model #52-21-1100</b> Location of battery conditioner will be behind console/seat area in cab. Location of 12 Volt air compressor will be in pump house - easily accessible from the Right side pump access door. Part number for pump plus - 1030897 SOPT #547 (Truck specific)	1	
20-51-7101	S	<b>Electric System Management - VMUX</b>	1	MTL
20-51-7500		<b>Super Auto eject for 120 v - 20 A with sealed enclosure</b> Located in left side cab step area. To have a weatherproof rubber boot behind receptacle.	1	MTL
20-51-8510	S	<b>Engine compartment light LED - supplied with chassis</b> Switched when park brake is set. The engine compartment light is supplied with the Freightliner chassis.	1	MTL
20-51-9001	S	<b>Air horns on hood, driver side lanyard, supplied with chassis</b> The air horn controls were changed from foot switches to a driver side only lanyard control as approved by Rod Harris by e-mail on 02.05.2020	1	MTL
20-52-3500		> <b>Chassis steering wheel lined up by Metalfab E</b> <b>ENG. NOTE:</b> Freightliner, Sterling, and Spartan only	1	MTL
20-60-0400		Chassis wheelbase does not change	1	MTL
		<b>PUMP AND PLUMBING</b>	1	MTL
30-11-3800	S	<b>Hale DSD midship pump - 1050 IGPM</b> Order DSD pump with Hale's "Rams Horn" suction tee.	1	MTL
30-15-0302		<b>Plumbing - non manifold pump TM SS E</b>	1	MTL
30-20-1000		<b>Valves and controls - top mount panel</b>	1	MTL
30-20-1002		<b>Akron valves specified</b>	1	MTL
30-20-1620		<b>Piping stainless steel - non manifold Pumper</b>	1	MTL
30-20-1700	S	<b>1-1/2" thread specifications - NPSH</b>	1	MTL
30-20-1800	S	<b>2-1/2" thread specifications - CSA</b>	1	MTL
30-20-2000		<b>Piping hydrostatic test</b>	1	MTL
30-20-2510		<b>Anodes in suction and discharge piping - non manifold pump</b> Install one anode on discharge side of pump, one anode on suction side of pump - do not use teflon tape or thread sealant. Paint flange silver and mask brass anode before painting for visibility.	1	MTL
30-21-5550		<b>Tank to Pump TM SS 3" w/ check valve non manifold pump</b>	1	MTL
30-22-0530		<b>Tank Fill valve 2" TM SS</b>	1	MTL
30-31-4020	S	<b>Suction - 6" each side SS non manifold pump 6" header</b> The suction manifold shall be bolted to the pump utilizing heavy duty grade 8 bolts for firm vibration free installation. A victaulic coupler is not acceptable. (Mandatory Requirement). Order DSD pump with Hale's "Rams Horn" suction tee.	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
30-31-7100		> <i>Hale master intake suction valve - handwheel control</i> <b>ENG. NOTE:</b> Not available for top mount panels Hale pumps only Note location in Shop Note  The left side and right side 6" inlets will be gated. The controls for the gates will be adjacent to the inlets on the left and right side panels.	2	MTL
30-32-8050	S	<i>Suction - 2-1/2" right side SS, bleeder, non manifold pump</i> The control for this curb side inlet will be by the valve on the side panel. Rod Harris has approved this location by e-mail on 01.20.2020	1	MTL
30-32-8550	S	<i>Suction - 2-1/2" left side SS, bleeder, non manifold pump</i> The control for this road side inlet will be by the valve on the side panel. Rod Harris has approved this location by e-mail on 01.20.2020	1	MTL
30-41-2030	S	<i>2-1/2" RS discharge TM SS, bleeder, Hale non manifold pump</i>	2	MTL
30-41-2530	S	<i>2-1/2" LS discharge TM SS, bleeder, Hale non manifold pump</i>	2	MTL
30-44-0530		<i>1-1/2" crosslay (each) TM SS, 2" valve, bleeder</i> Capacity for minimum 200' x 1-3/4" hose and nozzle in each hose lay. Equipped with stainless steel rollers on each end for easier hose removal. Bleeder valve provided on pump panel.	2	MTL
30-44-1030		> <i>1-1/2" front trash line TM SS, plumbed 2", hosewell</i> <b>ENG. NOTE:</b> Requires extended front bumper, gravelshield  Capacity for minimum 150' x 1-1/2" hose and nozzle. Bleeder or auto drain(s) provided in low parts of plumbing for complete drainage.	1	MTL
30-44-6530		<i>Piping for monitor TM SS, plumbed 3", bleeder</i> Piping is capped. No monitor is provided. Piping will be centered right to left and centered front and back between transverse panel and crosslay hose lays.	1	MTL
30-51-0500		<i>Pump shift-Midship air</i> ***Includes "Pump Engaged" and "OK to Pump" indicator lights in cab. ***Includes "Throttle Ready" indicator light on Pump operating panel	1	MTL
30-51-0700		Pump Gearbox mounted manual over ride for pump shift E	1	MTL
30-51-6630	S	<i>Class One "TPG" Governor/Throttle</i> The governor will be a Class 1 TPG as requested by Rod Harris by e-mail on 02.06.2020	1	MTL
30-51-7005	U	<i>Suction side relief V/V, non manifold pump</i> One for left side MIV One for right side MIV	2	
30-51-7700		<i>Primer Hale oil less ESP with oil tank Hale</i> Indicator light on panel to show when primer is operating. Locate fluid tank inside right side pump access door opening easily accessible for re-filling.	1	MTL
30-51-8100		<i>Heat exchanger included with chassis</i>	1	MTL
30-51-8500	S	<i>Pump cooler with control valve, check valve, Plumbed to Fill Tower</i>	1	MTL
30-52-1000		Master drain V/V, 12 port	1	MTL
30-52-2000		<i>Drain valve for foam system header</i>	1	MTL
30-52-5510	S	<i>Foam system-Hypro FoamPro 2001 Single Tank</i> Discharges that are to be plumbed for foam will be the front trashline, the forward crosslay and the 2.5" right side discharge as advised by Rod Harris by e-mail on 01.30.2020	1	MTL
30-52-9100		<i>Foam concentrate label at foam tank fill</i>	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
30-52-9200		<b>Foam System Instruction Plates</b>	1	MTL
30-52-9400		<b>NFPA Foam System certification test</b>	1	MTL
		<b>WATER AND FOAM TANKS</b>	1	MTL
40-11-2100		Polypropylene water tank (Imperial gallons)	1	MTL
40-11-2200		Water tank capacity certification (tank manufacturer)	1	MTL
40-11-5000	S	<b>Tank capacity 975 Imperial Gallons</b>	1	MTL
40-12-5000	S	<b>Foam cell - 25 Imperial gallon</b>	1	MTL
40-21-1000		<b>4" tank to pump connection</b>	1	MTL
40-22-0500		<b>2" tank fill connection</b>	1	MTL
40-23-0500		<b>1" water level gauge connection</b>	1	MTL
40-23-1000	S	<b>1" foam level gauge connection</b>	1	MTL
		There will be a foam level gauge supplied and installed as requested by Rod Harris by e-mail on 01.30.2020		
40-30-0500		<b>Sump drain valve (3" gate valve) with linkage E</b>	1	MTL
40-30-1000		Water Fill Box front left corner	1	MTL
40-31-0400		Rear dump valve not requested E	1	MTL
40-31-6050		Rear fill not requested E	1	MTL
		<b>ELECTRICAL</b>	1	MTL
50-11-0300		<b>Base electrical system - multiplex E</b>	1	MTL
50-11-0600		<b>Warning Light Certification</b>	1	MTL
50-11-0700		<b>Low Voltage Electrical system test</b>	1	MTL
50-11-0800		<b>Low Voltage Electrical System Documents</b>	1	MTL
		As required by ULC and NFPA standards		
50-11-0900		<b>Rocker switch panel with master warning switch</b>	1	MTL
		***Rocker switch assignments:		
		MASTER		
		-LIGHT BAR RED		
		-LIGHT BAR CLEAR		
		-REAR BEACONS		
		-FLASHING WARNING		
		-REAR FLOODS		
		-FLASHING HEADLIGHTS		
50-11-1470	U	<b>Whelen 295SL101 siren with detachable mic</b>	1	
		The siren will be a Whelen 295SL101 with detachable mic as requested by Rod Harris by e-mail on 01.30.2020		
50-11-1632	U	<b>Whelen siren speaker - SA315P in front bumper</b>	1	
		Part number 1570803		
		SOPT #6		
50-11-2600		<b>Siren to be accessible to driver and officer</b>	1	MTL
50-11-6131	U	<b>Whelen Justice JE2NFPA LED light bar</b>	1	
		Flash pattern will change and white light will be disabled when park brake is set. Customer to approve WECAD which was received on 05.27.2020 from Rod Harris by e-mail. Purchasing was given the approved WeCad layout.		
50-11-6501	S	<b>Rear Directional Light not requested</b>	1	MTL
50-11-8670	U	<b>Whelen L31HRFN LED rear beacons - red left side, blue right side</b>	1	
50-11-86BB	U	<b>Cast aluminum stanchions for rear beacons (pr)</b>	1	
		CPI # LB0019		
		Part number 1560369		
		SOPT# 1091		
50-12-8522	U	<b>Front LED flashers (pr)-Whelen LED 600 with integral flasher - Red LS, Blue RS</b>	1	
50-12-86AA	U	<b>Rear LED flashers (pr)-Whelen LED 600 with integral flasher - Red LS, Blue RS</b>	1	
50-12-8710	S	<b>Front side inter lts (pr) - Whelen red LED 600 with integral flasher</b>	1	MTL
		Located in bumper tails		

PART NO	S	DESCRIPTION	QTY	ID
50-12-8810	S	Body side inter lts (pr)-Whelen red LED 600 with integral flasher	1	MTL
50-21-1120	U	Hand held cab spot light - Sho-Me 06.0300	1	
		One (1) Sho-Me P/N 06.0300 hand held spot light P/N 1521034, with a momentary type control switch and 12' coiled cord shall be provided and mounted on the right side in the cab and wired into the 12 volt electrical system.		
		The light shall be secured in the chassis cab with a stainless steel NFPA compliant hook/bracket (on side or front of the 20-31-7500 console where room permits).		
50-21-1505	U	Unity LED rear flood lights (pr)	1	
		Switched in cab and on the light head.		
		These lights cannot be managed as they are required for ULC.		
50-21-5100	S	> Compartment lighting - LED tube lights in each compartment (rollup doors)	1	MTL
		ENG. NOTE:		
		Rollup doors only		
		A 4" grommet mounted LED light will be installed on each end in the compartment over the right rear wheel in the front wall as requested by Rod Harris by e-mail on 01.30.2020.		
50-21-5500		Door Ajar warning light	1	MTL
		Located in the overhead console over the drivers seating position		
		Bilingual warning label in cab to read:		
		"Do Not Move Apparatus when Light is on"		
50-21-5550		Equipment rack not stowed warning light	1	MTL
		Located in the overhead console over the drivers seating position		
		Bilingual warning label in cab to read:		
		"Do Not Move Apparatus when Light is on"		
50-21-8001	S	Step lights for body steps - 4" LED	1	MTL
		Switched with park brake.		
50-21-8110		Step lights for walkway - 4" LED	1	MTL
		Switched with park brake.		
50-21-8200	S	Step lights for chassis steps - LED	1	MTL
		Switched with park brake.		
50-21-83AA	U	12" LED Lumabar for rear step/platform lighting	1	
		There will be Lumabar supplied and installed to illuminate the rear intermediate step under the hose bed as required by ULC. The lights will be activated by the park brake.		
		SOPT 307b		
50-21-8600		LED clearance lts and reflectors	1	MTL
50-21-8605	U	Cast Products license plate holder c/w LED light	1	
50-21-8800		LED intermediate turn signal/clearance/reflector length >30'	1	MTL
50-22-0700	S	Whelen 64 LED tail/brake-turn-backup module (pr)	1	MTL
50-31-6550		Ground lighting (LED Lumabar) - 2 door chassis	1	MTL
		Switched with park brake.		
50-31-6580		Ground lighting (LED Lumabar) - top mount body	1	MTL
		Switched with park brake.		
50-31-65AA	U	Hose bed lighting - LED on front partition	1	
		Switched with park brake.		
50-31-7000	S	> LED work light for crosslay hose beds	1	MTL
		ENG. NOTE:		
		Required if there is no permanent cover over the crosslays		
		Switched with park brake.		
		Install 40" H2O Lumabar, P/N 1562591		

PART NO	S	DESCRIPTION	QTY	ID
50-35-0500	S	<b>Installation of customer supplied radio power cable</b> Metalfab will install the radio power cable supplied by Carrie as requested by Rod Harris by e-mail on 01.30.2020. It arrived at Metalfab on 09.02.2020 and was given to Inventory control.	1	MTL
50-35-0559	S	<b>Mobile radio antenna provided by Carrier</b> Metalfab will install the antenna cable kit provided by Carrier as requested by Rod Harris by e-mail on 01.30.2020. It arrived at Metalfab on 09.02.2020 and was given to inventory control	1	MTL
50-99-05AA	U	<b>Hose bed access ladder step lights - Whelen PELCC</b> The hose bed access ladder and rear step/platform area shall be illuminated by Whelen PELCC LED lights. 5 lights required. Switched with park brake. SOPT #1214 (truck specific)	1	
50-99-10AA	U	<b>FRC pull up style 12 volt telescopic light - FCA510-V20-ON-SW (ea)</b> Two (2) Fire Research Evolution II LED top mount pull up 12 Volt telescopic light shall be installed. These lights are switched on the light head and the hazard switch will be wired to the equipment not stowed warning light in cab. These lights can be managed to shed. Location of floodlights shall be on the rear of the cab and will have non slip surface where possible to allow them to be used as additional grab handles. As requested by Rod Harris by e-mail on 01.30.2020	2	
		<b>BODY</b>	1	MTL
60-10-1400		Single axle extruded aluminum body	1	MTL
60-10-15AA	U	<b>1" drop on lower edge of compartment floor - sweep out type</b>	1	
60-10-4100		No "beavertail" rear step supports	1	MTL
60-10-4500		<b>Aluminum tread plate fender surround - single axle</b>	1	MTL
60-10-46AA	U	<b>Price Adjustment</b>	1	
60-10-4700		Integral aluminum fender trim	1	MTL
60-10-5400	S	<b>&gt; Diamondback pumphouse steps</b> <b>ENG. NOTE:</b> Maximum height of step is 24" from ground	1	MTL
		<b>The pump house step will be longer than usual in order to extend to the chassis step to minimize the gap between both. To match the drawing sent to the customer on 01.04.2021.</b>		
60-10-5430		<b>&gt; Diamondback 19" rear step</b> <b>ENG. NOTE:</b> Maximum height of rear step is 24" from ground	1	MTL
60-10-6500		<b>Bolt on extruded aluminum rub rail E</b> <b>No reflective in rub rails requested</b>	1	MTL
60-11-0300		<b>&gt; Front left side compartments full height E</b> <b>ENG. NOTE:</b> Specify critical dimensions in shop note	1	MTL
60-11-0600		<b>&gt; Front right side compartments intermediate height</b> <b>ENG. NOTE:</b> Specify critical dimensions in shop note	1	MTL
60-11-1000		<b>&gt; Rear left side compartments full height E</b> <b>ENG. NOTE:</b> Specify critical dimensions in shop note	1	MTL
60-11-1300		<b>&gt; Rear right side compartments intermediate height</b> <b>ENG. NOTE:</b> Specify critical dimensions in shop note	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
60-11-2000		> <b>High side compartment (over 18") each</b> <b>ENG. NOTE:</b> Specify critical dimensions in shop note Specify type of door Specify flip up or drop down Specify which side of body	2	MTL
60-11-3200		> Full Height Rear compartment <b>ENG. NOTE:</b> Specify critical dimensions in shop note	1	MTL
60-11-4535	U	<b>Flush mount aluminum door - single with "D" handle - drop down for R2</b>	1	
60-11-5500	S	<b>Rollup door - standard height - L2</b> Natural aluminum finish Includes magnetic door switch, LED tube lights, rubber bumpers to prevent pinch point The doors will be unpainted standard finish as requested by Rod Harris by e-mail on 01.30.2020	1	MTL
60-11-5510	S	<b>Rollup door - intermediate height - R1 and R3</b> Natural aluminum finish Includes magnetic door switch, LED tube lights, rubber bumpers to prevent pinch point The doors will be unpainted standard finish as requested by Rod Harris by e-mail on 01.30.2020	2	MTL
60-11-5520	S	<b>Rollup door - full height - L1, L3 and B1</b> Natural aluminum finish Includes magnetic door switch, LED tube lights, rubber bumpers to prevent pinch point The doors will be unpainted standard finish as requested by Rod Harris by e-mail on 01.30.2020	3	MTL
60-11-5655	U	<b>Amdor pull straps - Flex-HD - L2</b>	1	
60-11-5660	U	<b>Amdor pull straps - Flex-HD - L1, L3 and B1</b>	1	
60-31-4100		Extruded aluminum handrails Minimum 2" clearance from handrail to any surface	1	MTL
60-31-5000	S	<b>Zico access Ladder at rear of unit</b> There shall be a 15" wide Zico Quic-Ladder provided on the rear of the apparatus for access to the main hose bed. Minimum 7" clearance between rung and any obstruction Switch required - wired to the equipment not stowed warning light in cab. Proposed 15" wide Zico access ladder was approved by Rod Harris by e-mail on 01.30.2020	1	MTL
60-31-5500	S	<b>Steps at rear of body (folding) with LED lights - RS only</b> Maximum height between steps is 18"	1	MTL
60-31-5600		Steps and grab handles at front of body next to pump panel Maximum height between steps is 18"	1	MTL
60-31-5800	S	<b>Special step over rear compartment</b> There will be a step between the back compartment and the hose bed as requested by Rod Harris by e-mail on 01.30.2020	1	MTL
60-31-6500	S	<b>Compartment matting - plastic interlocking tile</b>	1	MTL
60-31-8006	U	<b>BA bottle comp (ea) - fender well</b> Retaining loop included Customer to specify make and model of cylinder to be stored Make - Scott Model - 2216 Diameter - Circumference of 21" on the carbon fibre and 22" on the aluminum Overall length - 24" long on the carbon fibre and 25" long on the aluminum Both bottles currently fit in a square box measuring 7-1/8" x 7-1/8" Photo of valve/cap to ensure the retaining loop will slip over properly saved in	4	

PART NO	S	DESCRIPTION	QTY	ID
		<b>F:/Data/Jacques/Current Project/Front of Younge/Pictures</b>		
		<b>As advised by Rod Harris by e-mail on 05.27.2020</b>		
<b>60-31-8400</b>	<b>S</b>	<b>Fixed vertical partition</b> There will be a fixed partition in the R1 compartment 14" from the forward end of the compartment to carry customer supplied traffic cones. It will stop at the depth change of the compartment. As requested by Rod Harris by e-mail on 06.11.2020	<b>1</b>	<b>MTL</b>
<b>60-31-8700</b>	<b>S</b>	<b>&gt; Sliding tray (ea) - 400 pound capacity with open/close latch</b> <b>ENG. NOTE:</b> Specify location  Reflective stripe is applied on the exposed edge for visibility when the compartment door is open Location: B1 - full width L1 - full width R1 - rearward of fixed vertical partition (60-31-8400) As requested by Rod Harris by e-mail on 06.11.2020	<b>3</b>	<b>MTL</b>
<b>60-31-9600</b>	<b>S</b>	<b>&gt; Shelf (ea)</b> <b>ENG. NOTE:</b> Specify location  Reflective stripe is applied on the exposed edge for visibility when the compartment door is open Shelf #1 - Lower R3 - full depth Shelf #2 - Upper B1 - full depth Shelf #3 - L1 at depth change - shallow Shelf #4 - L3 at depth change - shallow Shelf #5 - R1 at depth change - shallow Shelf #6 - R3 at depth change - shallow As requested by Rod Harris by e-mail on 06.11.2020	<b>6</b>	<b>MTL</b>
<b>60-32-3560</b>		<b>Three adjustable hose divider (each)</b> Hand hold required in end	<b>1</b>	<b>MTL</b>
<b>60-32-8000</b>	<b>S</b>	<b>Hose bed - plastic interlocking tile</b>	<b>1</b>	<b>MTL</b>
<b>60-33-0100</b>	<b>S</b>	<b>Paint exterior - Imron Elite and clearcoat</b> <b>*** Paint code and colour - to match cab</b>	<b>1</b>	<b>MTL</b>
<b>60-33-0200</b>		Undercoat vehicle with KROWN rust protection	<b>1</b>	<b>MTL</b>
<b>60-33-0600</b>		<b>Chassis wheels not painted</b> <b>Polished aluminum wheels</b>	<b>1</b>	<b>MTL</b>
<b>60-33-1000</b>		Paint pump and plumbing job colour	<b>1</b>	<b>MTL</b>
<b>60-33-1600</b>		<b>Special paint compartment interior - gray zolatone E</b> The compartment interiors are finished with a gray textured paint for chip resistance. Shelves, trays and hardware are left natural aluminum.	<b>1</b>	<b>MTL</b>
<b>60-33-2000</b>	<b>S</b>	<b>Lettering - no lettering provided</b> There will be no lettering supplied as requested by Rod Harris by e-mail on 01.18.2021	<b>1</b>	<b>MTL</b>
<b>60-33-3200</b>	<b>S</b>	<b>Reflective stripe - 4" -1" white</b> The reflective stripe will be 4" white reflective with 1" white reflective below with an elongated "Z" pattern on the L1/R1 compartment as requested by Rod Harris by e-mail on 01.18.2021 and shown on the approval drawing.	<b>1</b>	<b>MTL</b>
<b>60-33-3310</b>	<b>S</b>	<b>Reflective stripe - red and yellow chevron at rear - 3M Diamond Grade material</b> Minimum 50% of rear vertical surface	<b>1</b>	<b>MTL</b>
<b>60-33-3500</b>	<b>S</b>	<b>Tarp over hose bed - red</b> One (1) vinyl hose bed tarp shall be provided with shock cord fasteners or depending on hose bed obstructions, a combination of shock cord fasteners and	<b>1</b>	<b>MTL</b>

PART NO	S	DESCRIPTION	QTY	ID
		nickel plated quarter turn fasteners for the main hose bed. The hose bed tarp shall have an end flap with Velcro fasteners and footman's loops provided to cover the rear of the hose bed. The tarp shall be red in color. If shock cord fasteners are used instead of the Velcro fasteners, then install stainless steel caps on sides as required.		
60-33-3600	S	<b>White reflective stripe - inside entry doors</b> 96 square inches minimum inside each cab entry door	1	MTL
60-33-4000	S	<b>Tarp over crosslays - red with shock cord fasteners</b> A heavy duty vinyl tarp cover shall be provided over the cross lay compartments and held in position with a combination of shock cord fastener and 1/4 turn fasteners. The vinyl tarp shall be red in color.	1	MTL
60-40-4500	U	<b>Price Adjustment</b>	2	
60-40-5500	S	<b>Suction hose tube (each) with door</b> For the storage of the 6" x 10' suction hoses 80-11-5000 The tubes will be fully enclosed and the doors will be wired to the door ajar system 50-21-5500 The LS tube will be long enough to accept a customer supplied barrel strainer connected to the suction hose. Customer to provide the following: Make and model of strainer: Kocheck BS60 Length of barrel strainer: OAL 14" Diameter of barrel strainer: Diameter 7.75" As requested by Rod Harris by e-mail on 01.30.2020	2	MTL
60-41-1015	S	<b>Pike Pole tube in suction hose tube</b> There will be 2" tubes installed to hold customer supplied pike poles as requested by Rod Harris by e-mail on 01.30.2020	2	MTL
60-41-7500		<b>&gt; Drop down ladder rack - 2 section, roof - manual operation</b> <b>ENG. NOTE:</b> Specify mounting location desired. If ladder(s) are customer supplied, specify overall length and width, width between side rails, rung spacing; also specify ladder brand and model  <b>Located on the right side</b> <b>For storage of the 24' two section ladder 80-14-0505, the 14' roof ladder 80-14-5510, and the 10' folding attic ladder 80-14-8510 in the attic ladder brackets 80-14-9010.</b>	1	MTL
60-41-7520		<b>Assist handles for manual drop down ladder rack</b>	1	MTL
60-99-10AA	U	<b>Hose storage dividers</b> There will be two (2) slots on the L1 tray (60-31-8400) for customer supplied hoses: One (1) 50' length of 1.75" with coupling One (1) 50' length of 2.5" with coupling As requested by Rod Harris by e-mail on 06.11.2020	1	
		<b>INSTRUMENTATION</b>	1	MTL
70-11-0000		<b>Warning Label on Pump Operator's Panel</b>	1	MTL
70-11-1500		<b>Stainless steel instrument panels</b> 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	1	MTL
70-11-2000		<b>Top mount instrument panel</b> 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. Panel lights, side panel lights & interior pump house lights controlled by switch on pump operator's panel.	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
70-11-2500	S	<b>Transverse walkway</b> The pump house step will be longer than usual in order to extend to the chassis step to minimize the gap between both. To match the drawing sent to the customer on 01.04.2021.	1	MTL
70-11-2600		<b>Tread plate overlay on back of chassis cab</b> The exterior back wall of the cab shall be covered 0.125" aluminum checker plate. Isolation tape (UHMW) shall be installed between the checker plate and the chassis cab prior to installation. The trim shall be secured using stainless steel bolts. ***Industrial grade caulking shall be applied to the top surface of the trim.	1	MTL
70-11-3000	S	<b>Mansaver bars</b> Engineering will specify length	1	MTL
70-11-3200		<b>Colour coded tags</b> Tags will be in Imperial units unless otherwise specified	1	MTL
70-11-3500	S	> <b>Compartments in ends of walkway</b> <b>ENG. NOTE:</b> Flush mount doors with quarter turn "D" handle latches and tread plate overlays  There will be compartments supplied and installed on each end of the walkways. The doors will be wired to the door ajar system 50-21-5500, the compartment will be illuminated and there will be interlocking tiles on the floor. Final dimensions will depend on space available when chassis is received and design is complete. As requested by Rod Harris by e-mail on 01.30.2020	2	MTL
70-11-4506	U	<b>Diamondback grip type panel hood step right side</b>	1	
70-11-4606	U	<b>Diamondback grip type panel hood step left side</b>	1	
70-11-5630	U	<b>Side pump access door - horizontally hinged, push to release latches, Gas strut</b> Aluminum tread plate material Door ajar switch required. Latches will be lift and turn type.	2	
70-11-5700		<b>Transverse tread plate pump access door</b> No opening dimension less than 18"	1	MTL
70-11-7500	S	<b>Heat pan-aluminum extreme weather type</b>	1	MTL
70-11-80AA	U	<b>Heater in pump compartment</b> The heaters shall be mounted low in the pump house so that the heat will be distributed evenly in the pump house and will keep the drain lines from freezing in winter. A two speed switch shall be mounted on the pump panel for operation of the heaters.	2	
70-11-8200	U	<b>Rubber seal around suction and discharge openings on side pump panels</b> The main pump inlet shall come with a stainless steel trim ring and all discharges and auxiliary inlets shall be sealed with rubber grommets for maximum heat retention.	1	
70-11-82AA	U	<b>Rubber seal(s) around openings in transverse pump operators panel</b>	1	
70-20-1120	U	<b>4-1/2" compound gauge - dual face 0-400</b> To be within 8" of each other - edge to edge	2	
70-20-2160	U	<b>2-1/2" pressure gauge - dual face 0-400</b> Gauge to be no more than 6" from edge of the gauge to the center of the control. ***Color coded rings on pressure gauges required***	8	
70-20-2500		<b>Primer control</b>	1	MTL
70-20-3100	S	<b>Class One Governor Control</b> Throttle can be no lower than 42" and no higher than 72" from operator's standing position. The governor will be a Class 1 TPG as requested by Rod Harris by e-mail on	1	MTL

PART NO	S	DESCRIPTION	QTY	ID
		02.06.2020		
70-20-3500	S	<b>Electric water level gauge on pump panel, Class One</b> There will be a Class One water level gauge supplied and installed on the pump panel as requested by Rod Harris by e-mail on 01.30.2020	1	MTL
70-20-3670	U	<b>Price Adjustment</b>	1	
70-20-6500		Test gauge panel Mount below the compound gauges for proper draining	1	MTL
70-20-7500		<b>Heat exchanger control valve</b>	1	MTL
70-20-7600		<b>Pump cooler control valve</b>	1	MTL
70-21-1500	S	<b>Electric Foam Level gauge</b> There will be a foam level gauge supplied and installed as requested by Rod Harris by e-mail on 01.30.2020 Include access to and room for sender in front of body and back of pump house	1	MTL
70-21-5500		<b>Panel readout for Battery Conditioner</b> Located in left side cab step area.	1	MTL
		<b>ACCESSORIES</b>	1	MTL
80-11-5000	S	<b>6" x 10' lightweight suction hose (ea)</b> Mounted on suction hose tubes - one on left side, one on right side - as requested at accessories meeting. Kochek brand required - no substitute as advised by Rod Harris by e-mail on 05.27.2020	2	MTL
80-12-2500	U	<b>Price Adjustment</b>	1	
80-13-0500		<b>Rubber mallet</b> Shipped loose, not mounted. Customer will mount in Customers bracket.	1	MTL
80-14-0505	U	<b>Duo Safety 24' extension ladder</b> Stored on right side ladder rack	1	
80-14-5510	U	<b>Duo Safety 14' roof ladder</b> Stored on right side ladder rack	1	
80-14-8510	U	<b>Duo-Safety 10' folding attic ladder</b> Stored on right side ladder rack in 80-14-9010 bracket	1	
80-14-9010	U	<b>Attic ladder bracket (Zico)</b> Mounted on right side ladder rack	1	
80-18-055A	U	<b>Zico QSD - quick swing down unit c/w Firefighter SCBA bracket and strap</b> P/N TBD - QSD bracket 1560812 - SCBA bracket 1560813 - yellow strap for SCBA bracket Customer to specify mounting location - Two (2) in L2 and two (2) in L3 Customer to specify Make and model of SCBA to be stored Make - Scott Model - 2216 Overall height - 25" Overall width - 11" Overall depth - 11" Circumference of cylinder - 22" As advised by Rod Harris by e-mail on 06.11.2020	4	
80-20-5015	U	<b>Price Adjustment</b>	2	
80-99-10AA	U	<b>Snap cover, cap for rear exposed unistrut in hose bed</b> The rear track shall come with 10' of snap cover to prevent the hose couplings from catching the track. The snap cover shall be shipped loose for customer installation after the hose bed dividers have been set up. Part number 1100360 SOPT #1150	1	

PART NO	S	DESCRIPTION	QTY	ID
80-99-20AA	U	Price Adjustment	1	