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**NEW HOPE FIRE DEPARTMENT**

**Front Axle & Steering**

- ✓ A) Replace both front springs with new springs; also replace the U-bolts.
- ✓ B) Replace all six spring pins with new pins, replaced 4 reused 2
- ✓ C) Replace the spring hangers, if needed. If there is any wear this will be replaced, if not they will be reused, all OK
- ✓ (2) A) Disassembly both front wheel hubs in order to check the bearings, bearing race, and replace if needed, also the seal will be replaced, bearing and race ok
  - ✓ B) Check all the tie-rod ends, drag link ends and replace if needed, OK
  - ✓ C) Check the steering box for wear and or damage, replace if needed, OK
  - ✓ D) Check the power steering pump for wear and or leaks, replace as needed, replaced gasket where pump bolts to engine
  - ✓ E) Check the power steering hoses and fittings, replace as needed, replaced one hose
  - ✓ F) Check the king pins, replace if there is any wear.
  - ✓ G) Align the front axle after all repairs are complete.
- Found a leak on the hydraulic steering assist cylinder, removed and rebuilt



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**NEW HOPE FIRE DEPARTMENT**

**OnSpot Chains**

- ✓ (3) Supply and install a new set of Onspot automatic chains on the rear axle. The operations switch will be installed in the dash area in easy reach of the driver. Fabricate and install a support plate from stainless in order to prevent the chains touching the ground while in the stored position.



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**NEW HOPE FIRE DEPARTMENT**

**Frame**

- ✓ (1) Check the frame for cracks along with cross members, pump mount bolts, spring hanger bolts, engine supports, transmission supports, radiator supports and replace or repair as needed. We will allow up to \$1,000.00 for section. If we find any problem that would run over this \$1,000.00 we will contact your Department and inform you of the problem and the estimated cost of repairs before any more work is performed. **Replace the front engine isolator**



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**NEW HOPE FIRE DEPARTMENT**

**Brakes**

- ✓ (1) Check all air tanks for the air brake system and replace as needed. OK
- ✓ (2) Check all the rubber air hoses and plastic air lines for wear and or damage and will be replaced as needed. Also check all the air valves for leaks and or damages, replace as needed.
- ✓ (3) Replace the air dryer with new.
- ✓ (4) Replace all four service brake cambers and the two rear park brake chambers with new 36 square inch chambers. (This unit now has 30 square inch chambers) This includes new diaphragms. After I did research on this, I was advised that we should stay with the 30 square inch chambers-we replaced both rear park and service chambers and both front diaphragms
- ✓ (5) Replace all four brake automatic slack adjusters.
- ✓ (6) Replace the bushings on the control arm from the slack adjuster to the brake shoes on both front and rear axles.
- ✓ (7) A) Replace the front brake shoes with factory specified brake shoes.  
B) Replace the front brake drum.
- ✓ (8) A) Replace the rear shoes with factory specified brake shoes.  
B) Replace the rear brake drums.





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**NEW HOPE FIRE DEPARTMENT**

**Rear Axle**

- ✓ (1) A) Replace both rear springs with new spring set, also replace the U-bolts.
- ✓ B) Replace six spring pins with new, **did not replace all were good**
- ✓ C) Replace the spring hangers if there is any wear, if not these will be reused. **OK**
- ✓ (2) Disassemble the rear wheel hubs in order to check bearings, bearing race and replace if needed, also replace the wheel seal with new. **All bearings and race OK**



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**NEW HOPE FIRE DEPARTMENT**

**Engine**

- ✓ (1) A) Replace all coolant fluids.
  - ✓ B) Replace all coolant system hose.
  - ✓ C) Check fan and hub for any visible damage, replace if needed. **OK**
- ✓ (2) Replace the after cooler for the air intake of the engine with a new cooler.
- ✓ (3) A) R & I the alternator in order to have check for wear and or damage, replace as needed.  
**Remove and had checked @ Hickory Starter, OK**
  - ✓ B) Replace the alternator belts.
- ✓ (4) A) Check A/C systems for leaks at compressor, hose, valves, coils and replace if needed.  
**Replaced drier, repaired leak and changed over to R134 system**
  - ✓ B) Replace A/C belts.
- ✓ (5) Replace the exhaust system as needed. **OK**



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**NEW HOPE FIRE DEPARTMENT**

**Pump (Waterous)**

- ✓ (1) Replace oil in the pump transmission.
- ✓ (2) A) Replace both front and rear oil seals on the pump transmission at end yokes.
  - ✓ B) Also replace Pinion seal in the rear axle gear.
- ✓ (3) Replace all piping with new stainless 304 piping and fittings.
- ✓ (4) Rebuild all Akron and Waterous valves. We will use stainless steel balls in the Akron valves and Waterous valves that are available.
- ✓ (5) Replace all drain valves with quarter turn vales CLA#34BVR or lift handle type CLA#115639. **Note:** The space available will determine which valve is to be used.
- ✓ (6) Replace the existing primer with a Trident air three barrel primer. Check the size of the air compressor before ordering this to be sure there is enough CFM , 3 barrel require 10 CFM.
- ✓ (7) R & I the tank valve in order to replace the flapper valve with new updated flapper valves.
- ✓ (8) Perform a third party pump test when all repairs and updates are completed.
- (9)
  - ✓ **Option 1:Used this option**  
Change out the deluge system valve from a push/pull valve to a hand wheel control valve, Akron. The hand wheel will be mounted in the driver's side pump panel. If this hand wheel system will not work in the space available, we will contact Chief Matt Young in order to work out how to proceed; possibly with Option 2 Electric Valve.
  - ✗ **Option 2:**  
Change out the deluge system valve from a push/pull valve to an electric control Akron valve with the switch panel complete with indicator lights for open/close at the driver's pump panel.

**Note:** While replacing the Pinion seal on the pump we also replaced the bearings on the through shaft on the pump transmission.





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### NEW HOPE FIRE DEPARTMENT

#### **Cab & Chassis**

- ✓ (1) Replace the dash board section that houses the S.O.M, tack and gauges in front of the steering wheel. **Ordered and installed a newly designed function indicator light assembly for the engine and turn indicators that replaced the existing dash panel.**
- ✓ (2) Repair all headliner panels by replacing with black plastic material.
- ✓ (3) Check all gauges and repair or replace as needed. The Department said the transmission and fuel gauge were not working for sure. We may need to replace the sending unit on both.  
**Replaced gauge and sending unit.**  
**Note:** While the fuel tank is removed for the generator pickup tube installation, replace the fuel sending unit and check to be sure the gauge is in working order.
- ✓ (4) Check all cab mounts and bushings and replace as needed. **OK**
- ✓ (5) Check the cab lift system, repair or replace any hoses, cylinders, latches and jack system that is needed. **Replaced both latches, all others OK**
- ✓ (6) Check for leaks at the heater coil and replace if needed. **OK**
- ✓ (7) Replace both windshields and windshield rubber.
- ✓ (8) Replace all cab door seal rubbers on all four doors.
- ✓ (9) Replace aluminum tread plate on the back exterior wall of the cab.
- ✓ (10) Replace and add LED light in the interior of the cab as follows:
  - A) Supply and install four step lights LED (1) per step.
  - B) Supply and install four Weldon model #8081 (1) over the inside shoulder of the driver's and officer's side and (2) in the crew area of the cab. These lights will be controlled by the door switch and a lens switch.
  - C) Replace the existing red interior light with red LED controlled by the lens switch only.
  - D) After the new headliner was in place, the dept. requested to remove the center front interior lights and install a headliner in that area.**
- ✓ (11) Replace the aluminum thread plate bumper filler. Reuse the existing hose storage compartment. **The hose storage compartment was damaged. Fabricated and installed a new storage compartment.**
- ✓ (12) Move the siren down and mount the radio in place where the siren now is mounted.  
**Fabricate and install a new base in order for this to work.**



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- ✓ (13) Replace all four door window regulators in both front and both rear cab doors. This will have a new window crank handle that is a new design.
- ✓ (14) Check the drive line and U-joints for wear and or damage, replace as needed. **Replaced all four (4) u-joints.**





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**NEW HOPE FIRE DEPARTMENT**

**Body**

- ✓ (1) Replace all door operator switches with new switches.
- ✓ (2) Replace all compartment lights with an LED strip light vertically, one on each side of the compartment door opening.
- ✓ (3) Replace all compartment door seals on both the door opening and the doors.
- ✓ (4) Replace all gas shock and or door stops on all compartment doors.
- ✓ (5) Add more vents to both end and rear walls of the curb side front compartment in order to help vent fumes from gas powered equipment that is in this compartment.
- ✓ (6) Replace all aluminum tread plate on the body as follows: **ALL**
  - A) Replace both drivers and curb side running board at the pump panels, this will be anti-slip ATP.
  - B) Fabricate and install two hose tubes, one in each running board as large as possible complete with two containment straps on each hose tube.
  - C) Replace both ATP trim panels at the bottom of the pump panels on the drivers and curb side.
  - D) Replace both ATP cover panels at the top of the pump panels on both sides of the pump house.
  - E) Replace both ATP cover panels on the front end wall of the compartment at the pump panel. The curb side is 43" high and the driver's side is 65" high.
  - F) Replace both ATP cat walk covers on top of the drivers and curb side compartments.
  - G) Replace the ATP tail board and clean, polish and reuse the existing stainless grid panel. The ATP on this is anti-slip ATP.
  - H) Replace both ATP panels on the inside of the lower section of the dove tail.
  - I) Replace all three ATP cover steps at the rear of the body inside the dove tail.
  - J) Replace both ATP panels beside the center rear compartment door that will be a rollout door.
  - K) Replace the ATP step area above the center lower door with anti-slip ATP.
  - L) Replace both ATP panels beside the top center compartment.
  - M) Replace the ATP panel across the top of the rear of the body above the top center compartment.
  - N) Replace the ATP cover panel on the top center compartment door.
  - O) Replace the ATP trim at the bottom of the dove tail and end walls of the compartment.
  - P) Replace the ATP panel that is the axe containment at the lower section of the dove tails.
  - Q) Replace the mirror stainless panels at the top of the dove tails interior.
  - R) Clean and polish the rear mirror stainless stanchions for the top warning light on the rear of the body.



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- S) Replace all four ATP panels below the compartment door opening on the sides of the body.
  - T) Clean and polish the existing ATP trim of the cab door openings. This is the part that can be seen when the doors are closed.
  - U) Replace the mirror stainless on both rear cab doors interior.
  - V) Replace the mirror stainless on both rear cab doors interior.
  - S) Clean and polish both driver's and curb side mirror housing and arms.
- ✓ (7) Remove the Cascade system and access door and cover the area in the rear wall of the front high side compartment with a 1/8" thick aluminum panel painted to match the compartments interior.
- ✓ (8) A) Remove the rear reel from the center rear compartment in order to create space for a pullout tray in order for the Department to store hydraulic pump and tools in this compartment. **NOTE:** Department wants old reel.  
B) Supply and install a new Hannay aluminum reel that will be mounted in the top storage area above the pump on the pump house. This reel will have two stainless roller guides, one mounted on top of each side walls of the pump house. The rewind button will be installed in the driver's side pump panel with all the necessary ID tags. This new reel will be plumbed to the existing hose reel valve with a new high pressure flex hose with crimped on stainless ends.
- ✓ (9) A) Supply and install a new ROM rollup door in the center rear compartment opening after the existing fold down door is removed. This will have a natural aluminum finish.  
B) Supply and install LED strip lights in this compartment, one on each side of the door opening, it will activate when the door is raised. The dump system electrical operation will be wired through the door activation switch.  
C) Fabricate and install a pullout tray that will mount to the floor of this compartment as large as possible. This tray will have a 500 lb capacity with gas shock operators to hold tray when in the stored and deployed position.
- ✓ (10) Relocate both cross lay discharge and both pre-connect discharge outlet to the front of the hose bed. All of the piping will be stainless 304. Supply and install all of the necessary chrome adapters at the rear of the body as needed, all of these new locations of the pre-connects will have the necessary ID tags.
- ✓ (11) Rework the area of the crosslays in order to create more space for storage area above the pump house and front transverse compartments. This will included added walls on both sides and an ATP floor panel.  
**Note:** The side walls will be covered with the new ATP cover panels that are in the ATP replacement section of this quote.





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- ✓ (12) A) Fabricate and install two new hose bed dividers for the hose bed area that will be adjustable from side to side.  
B) Supply and install the necessary adjustable track for these new dividers.
- ✓ (13) Supply and install a pullout tray in the curb side front lower compartment. This tray will be mounted to the floor of this compartment and will be as large as possible. This tray will have 500 lb capacity tracks, 3/16" smooth aluminum tray 2" deep and a gas shock operator that holds this tray in place when in the stored position and out when in the deployed position. The tray will have a natural aluminum finish.
- ✓ (14) Supply and install an adjustable tray in the front transverse compartment that will be able to be removed in order to remove the pump access door for service on repairs of the pump.
- ✓ (15) Remove the existing compartment under the driver's side front compartment and supply and install two wheel chocks with mounting brackets mounted under compartment L-3. These will be SAC-44-E large folding style with SQCH-44H mounting brackets.
- ✓ (16) A) Fabricate and install approximately 6" high ATP walls around the perimeter of the hose bed area in order to create more hose load space. These walls will be approximately 6" high X 195" long and will have a 2" turn out lip with a 1" turn down lip at the top of this new wall. This wall will extend to the front of the body in order to make the storage area above the pump deeper for the new Onan generator.  
B) Don't reinstall the existing grab bars on top of the new high side walls.

**Note:** The height of the side walls was increased to 13" due to the height of the generator.

**Note:** After these ATP walls were in place, the department asked that they be replaced with a painted smooth aluminum wall. After the new painted walls were in place, the department requested a cover for the area where the painted walls meet the front ATP wall around the storage area above the pump. We did this with mirrored stainless steel materials.



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**NEW HOPE FIRE DEPARTMENT**

**Completed all items on this list**

**Paint & Stripes as follows:**

- (1) Remove all 10 1/8" white reflective stripes.
- (2) Remove the gold leaf stripes and letters in areas of repair of the paint.
- (3) Prepare for paint, removing oxidation at the windshield prime and paint as needed all white between windshields and red on front panel.
- (4) Spot paint the passenger side front cab door and clear as needed.
- (5) Repair the cracked filler back of the bumper and paint as needed, passenger side.
- (6) Repair two scratches on the passenger side rear cab door.
- (7) Repair the passenger side rear corner of the cab (nicks) and also the bottom corner at the ATP at the bottom of the door.
- (8) Repair the nicks on the passenger side transverse compartment door.
- (9) Repair the front door on the passenger side front compartment. Paint red between reflective stripe and bottom of the door.
- (10) Repair and paint red below white reflective front lower corner of the body at the amber reflector replace amber reflector.
- (11) Repair and spot paint the passenger side upper compartment door as needed.
- (12) Repair and spot paint the passenger side rear lower compartment door at the top and bottom.
- (13) Sand and polish the passenger side rear fender flare.
- (14) Repair and spot paint the rear corner of the passenger side rear compartment.
- (15) Repair and spot paint the passenger's side dove tail as needed.
- (16) Repair and spot paint the driver's side dove tail as needed.
- (17) Repair and spot paint the driver's side rear corner of the compartment.
- (18) Repair and spot paint as needed on the driver's side rear lower compartment door.



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- (19) R & I the upper rear compartment door and repair and paint as needed.
- (20) Repair and spot paint on the driver's side lower front compartment doors.
- (21) R & I the driver's side transverse compartment door, repair and paint as needed.
- (23) Compound and wax all cab and body in all areas, not in Items 1-21.
- (24) Supply and install up to 42 ft of 10 1/8" white reflective stripe.
- (25) Supply and install up to 15 ft of 1/2" gold leaf stripe.
- (26) Supply and install up to 15 ft of white pinstripe.












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## NEW HOPE FIRE DEPARTMENT

### Scene Lights




- ✓ (1) A) Supply and install three Whelen Pioneer Plus scene lights as follows:
  - (1) Remove both the existing clear scene lights above the pump panels.
  - (2) One brow light PFP-2 mounted above the center of the windshield. Anchor-Richey will fabricate and mount a bracket for this light.
  - (3) Install two PFR-2 with PBA203 semi-recessed chrome flange lights in the area where the existing lights were removed.
- B) Supply and install two SPA700-K20 120 VAC 20 KIM LED lights with two Spectra Spa Option 703 mounting brackets.

### Warning Lights

- ✓ (1) A) Replace the bar light with a Whelen Freedom model FN LED with the following:
  -  93" long
  -  Ten red flashing forward LED modules
  -  Two clear flashing forward LED modules
  -  Two red flash front corner LED modules
  -  One red flashing driver's side LED module
  -  One red flashing officer side LED module
  -  Lights and lens are to be red and controlled by the existing light bar switch in the cab switch panel.

**Note:** All clear lights will be wired on a separate switch and also wired through a park brake relay switch in order to turn the clear lights off while this unit is on a scene in a parked position.

- B) Replace both rear bar lights with two Whelen Freedom mini LED bar lights. These will be mounted in a new location toward the rear of the cab in order to create more space for the light tower. Both of these lights will have the following:


-  Two red flashing corner LED modules
-  Two red flashing LED modules
-  Light and lens are to be red and controlled by the existing switch on the switch panel

- ✓ (2) Replace the existing front strobes with two Whelen M6 LED red controlled by existing switch in the cab.
- ✓ (3) Supply and install six Whelen M6 LED side lower zone lights as follows:
  - A) Two lights, one on each side of the bumper extension
  - B) Two lights, one on each side over the front wheels
  - C) Two lights, one on each side over the rear wheels
  - D) All six lights and lens are to be red controlled by the existing switch on the cab.




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- ✓ (4) A) Supply and install rear lower zone:  
 Two Whelen M6 LED lights mounted on the rear of the body, one on each side.  
Both lights and lens to be red and wired to an existing switch in the cab.

B) Rear upper zone.

-  Two 10" Whelen mini LED light bars mounted on the stainless steel stanchions.  
These will be wired to the existing switch in the cab.

### **DOT Rear Lights**

Supply and Install the following:

- ✓ A) Two Whelen model M6BTT red LED stop/tail lights  
B) Two Whelen model M6BT amber LED  
C) Two Whelen clear halogen lights for back up  
D) One LED tag light  
E) Replace all the marker lights on the body and cab with LED lights.

**Note:** Department wants all lights that are removed.

### **Tank Gauge**

- ✓ (1) Replace the existing tank gauge system with a MC Product read out and tank sending unit.  
There will be a small light that is red that indicates tank empty and blue that indicates tank is full.
- ✓ (2) Supply and install an mini MC Product readout in cab.





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### NEW HOPE FIRE DEPARTMENT

#### Generator

#### Option 1 (Dept. selected this option – all completed)

- (1) A) Supply and install an Onan Commercial Quiet Diesel series QD 10,000 with 60HZ-10,000 watts, 120/240 volts, 83 3/41.7 amps what will mount in the area of the pump house top area where the cross lays now exist. This system will have all the safety features and warning ID tags installed in the control switch panel for the start of the generator and will be mounted in the driver's side pump panel.
  - B) The fuel supply for the diesel engine for the generator will come from the chassis fuel tank. We will supply and install all the necessary tank to engine connections that includes fuel hose and pickup tubes in the chassis fuel tank that will be shorter than the chassis engine pickup tube in order to prevent the chassis engine running out of the fuel from the generator engine. This also includes a fuel pump with all of the safety features.
  - C) Supply and install a 12 space breaker panel in the driver's side front high side compartments and wired to the generator.
  - D) Supply and install the necessary size breakers on the new breaker panel for the new light tower. (NOTE: The department deleted the light tower)
  - E) Supply and install two 120 volt 20 amp duplex household type outlets with weather seal covers and ID tags. These will be wired to the breaker panel through the ground fault breakers. The exact location of these outlets will be determined at time of application.
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- (2) A) Supply and install a Hannay cord reel ECR-1618-17-18-RT in the storage area above the pump on the curb side. This reel will have 200 ft. of 10-3 yellow cord. This reel will be wired to the breaker panel through a 30 AMP ground fault breaker. There will be a containment roller system mounted on the side wall of the storage area. The rewind button will be on the curb side pump panel with the necessary ID tags.
  - B) The cord will have a ball stop in order to not to allow the end of the cord to retract through the roller system.
  - C) Supply and install a twist lock female plug on the end of the cord to match the Department's existing plug.
  - D) Fabricate and install an ATP protective wall to the rear and sides in order to prevent equipment that may be stored in this area from contacting the reel. Supply and install a holder clip for the cord above the pump panel.

#### Option 2 (DID NOT DO THIS OPTION)

- (1) A) Supply and install an Onan Commercial Quiet Diesel QD5000 with 60 HZ-5000 watts 120/240 volts, 41.7/20.8 amps that will mount in the area of the pump house top area where the cross lays now exist. This system will have all the safety functions and warning ID tags installed in the control switch panel for the start of the generator and will be mounted in the driver's side pump panel.
- B) The fuel supply for the diesel engine for the generator will come from the chassis fuel tank. We will supply and install all the necessary tank to engine connections that includes fuel hose and pickup tubes in the chassis fuel tank that will be shorter than the



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chassis engine pickup tube in order to prevent the chassis engine running out of the fuel from the generator engine. This also includes a fuel pump with all of the safety features.

- C) Supply and install a 12 space breaker panel in the driver's side front high side compartments and wired to the generator.
  - D) Supply and install the necessary size breakers on the new breaker panel for the new light tower.
  - E) Supply and install two 120 volt 20 amp duplex household type outlets with weather seal covers and ID tags. These will be wired to the breaker panel through the ground fault breakers. The exact location of these outlets will be determined at time of application.
- (2) A) Supply and install a Hannay cord reel ECR-1618-17-18-RT in the storage area above the pump on the curb side. This reel will have 200 ft. of 10-3 yellow cord. This reel will be wired to the breaker panel through a 30 AMP ground fault breaker. There will be a containment roller system mounted on the side wall of the storage area. The rewind button will be on the curb side pump panel with the necessary ID tags.
- B) The cord will have a ball stop in order to not to allow the end of the cord to retract through the roller system.
  - C) Supply and install a twist lock female plug on the end of the cord to match the Department's existing plug.
  - D) Fabricate and install an ATP protective wall to the rear and sides in order to prevent equipment that may be stored in this area from contacting the reel.





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**NEW HOPE FIRE DEPARTMENT**

**Extra Work (ALL ITEMS COMPLETED)**

- (1) Replace the pressure gauge on the No. 3 discharge on the pump panel on the driver's side.
- (2) The Department is to supply the roof hook that we are to fabricate mounts on the curb side rear of the cab.
- (3) Supply and install a double household outlet in the cab area of the Kussmaul charger that is to be wired to the auto eject shore line and the breaker panel.
- (4) Make repairs as needed for unit to build air.
- (5) Check and repair as needed door switch on center high side door, driver's side – is sticking.
- (6) Remove bracket on driver's side of front bumper for rod for the drain valve.
- (7) Add screws in headliner at the rear wall.
- (8) Install Pierce logo, driver's side front.
- (9) Adjust front door on driver's side front lower compartment in order to shut better.
- (10) Supply and install two lug covers, one on each side front lugs.
- (11)
  - a) Install rubber bumpers on rear center fold down door
  - b) Replace rubber bumpers on four spare air bottle doors.
  - c) Replace rubber bumper on the pike pole door on the curb side rear
- (12) Check door open alarm, not going off – repair as needed.
- (13) Fabricate a containment wall for the deluge gun base with a strap.
- (14) Fabricate a bracket for a gated Y at the rear of the body.
- (15) Replace all pump panel lights with LED
- (16) Supply and install a clip for cord reel plug.
- (17) Replaced ATP high side walls with painted (red) smooth aluminum material.