



**S-Series™**  
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# Service Kit Bulletin

## 2.0 Water Pump Service Kit

**Date:** June 28, 2021  
**Bulletin Name:** FDM-SVC-002  
**Model:** Oshkosh S-Series  
**Units Affected:** 2.0 Front Discharge Mixers

### Purpose:

This bulletin provides instruction for replacing the water pump impeller due to corrosion. Oshkosh has received reports of non-working water pumps due to the pump impeller becoming corroded and seized, causing the pump not to spin. A new impeller made of an improved alloy was developed to eliminate corrosion issues.

### Notice:

- This bulletin should be read and understood in its entirety before performing this procedure.
- All procedures outlined in the bulletin must be performed by skilled service personnel. Refer to the product service manual for descriptions of maintenance procedures.

**SAFETY NOTICE**

Perform your company’s Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.

**SAFETY NOTICE**

Use appropriate Personal Protective Equipment (PPE) as required by your company.

**WARNING**

Hydraulic systems operate under high pressure—only experienced persons should attempt repairs or troubleshooting on hydraulic systems.

**WARNING**

Never remove hydraulic pipes/tubing, fittings, and adapters until all pressure has been relieved from the hydraulic system.

**WARNING**

All hydraulic pressures must be relieved from the hydraulic system prior to removing any components from the system to prevent oil from spraying or functions and systems from failing.

**WARNING**

Hydraulic systems are hot. **DO NOT TOUCH!** Serious personal injury may result from hot oil. When you have completed working on the hydraulic systems, thoroughly clean any spilled oil from the equipment. Do not spill any hydraulic fluids on the ground. Clean any hydraulic fluids from your skin as soon as you have completed your maintenance and repairs. Dispose of used oil and filters as required by law.

## **Tools and Equipment Required:**

Customer to supply:

- Socket wrench 5/16 and 9/16"
- Phillips head screw driver
- Pipe wrench
- Straight jaw tongue pliers
- Torch
- Pulley remover
- Impact wrench
- Penetrating oil
- Flat bar (1/8 x 1/2 x 24")
- Graphite spray

## **Parts Required:**

Item	Part Number	Description	Qty.
1	1634530	Impeller	1
2	A000D937	Straight Fitting	1
3	35386AXW	90° Elbow Fitting	1
4	HH-01300-001	Nut	1
5	1467830	Washer (for shimming)	0-4
6	HH-00291-104	Key Stock, 1/8 x 3/4 Square SS	1

## **Procedure:**

### ***Lockout/Tagout***

1. Place unit on a flat surface, block truck tires, and perform your company's Lockout/Tagout procedure. If your company does not have a Lockout/Tagout procedure, follow OSHA 1910.147 and 1910.146 Confined Space as appropriate.
2. The vehicle's BATTERY DISCONNECT switch is located on the left-hand side of the battery box. Use the battery disconnect switch when performing any maintenance so the vehicle cannot accidentally be started.
  - a. Turn the battery disconnect switch (Figure A, Item 1) counterclockwise so the hole on the switch aligns with the hole in the bracket (Figure A, Item 2).
  - b. Install the safety lockout device ring (Figure B, Item 1) through the holes on the battery disconnect switch and the bracket.
  - c. Install a padlock (Figure B, Item 2) onto the safety lockout device ring, lock it, and put the key in your pocket. If more than one person is working on the vehicle, each person must install his or her own padlock.

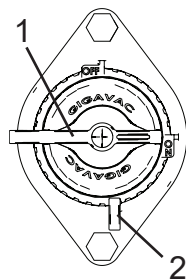


Figure A

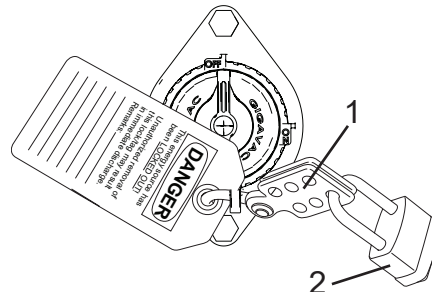


Figure B

### **Impeller Removal**

3. Disconnect the hydraulic lines connected to the water pump motor, see Figure 1. Cap the ends of hydraulic lines to keep them clean and prevent system contamination.
4. Loosen the hose clamp securing the pump water outlet hose and remove the hose from the water pump assembly, see Figure 1.
5. Loosen and remove the six 0.38-16 x 1.25" cap screws with flat washers securing the water pump assembly mounting plate to the water tank, see Figure 1.

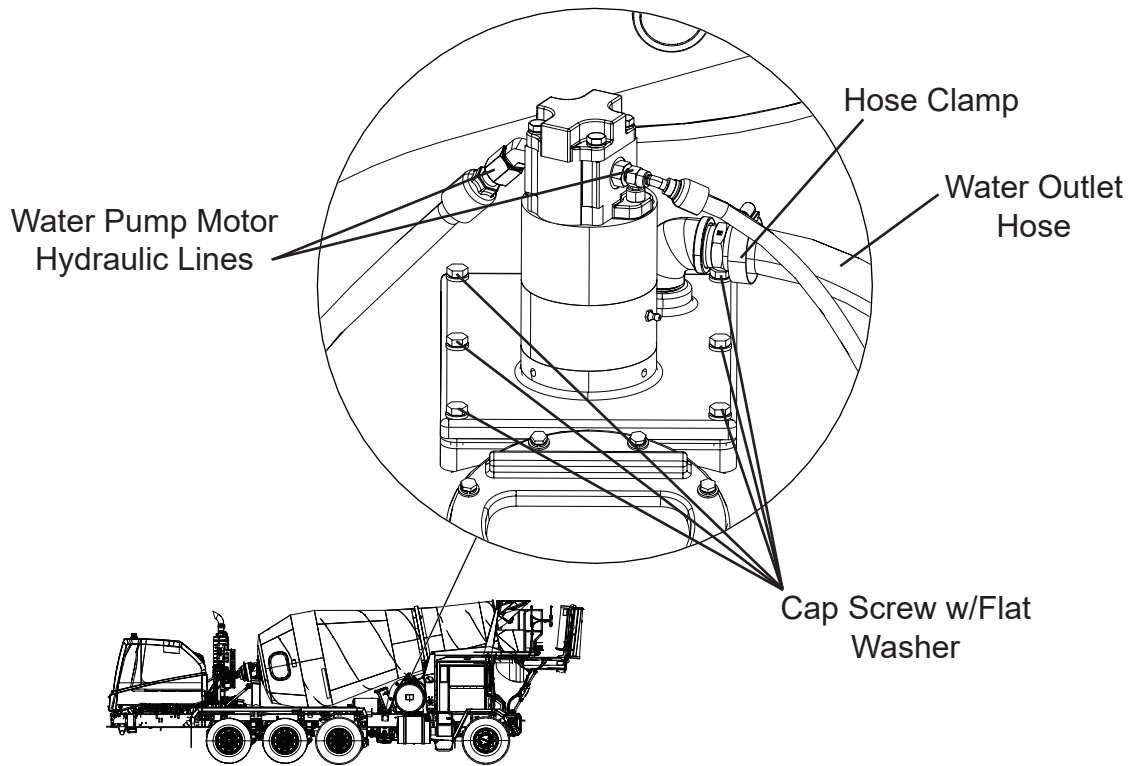


Figure 1

6. Remove water pump assembly from water tank and place pump assembly on workbench.

### **NOTE**

Newer model pump assemblies require a 5/16" socket wrench to remove the constant tension clamps from the hose.

7. Loosen hose clamps on the top and bottom of rubber hose and remove hose, See Figure 2.

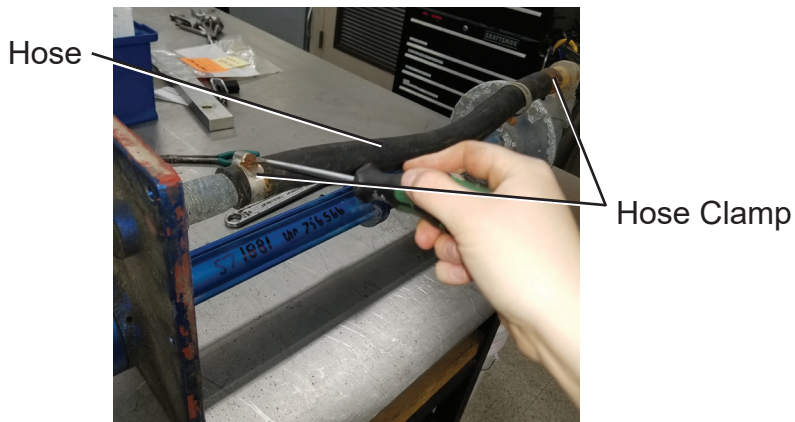


Figure 2

8. Remove straight fitting from the bottom of pump assembly mounting plate, see Figure 3. Straight fitting will not be reused.

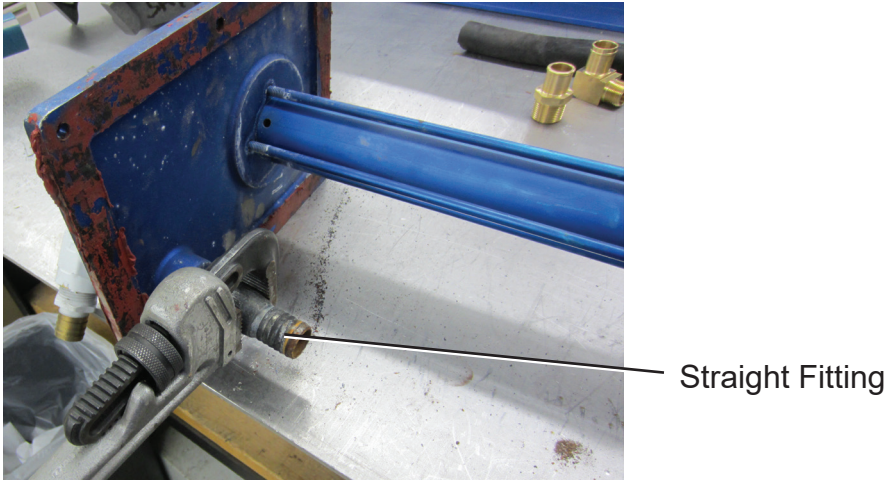


Figure 3

9. Remove the 4 cap screws from pump assembly impeller housing, see Figure 4.

10. Separate the two parts of pump assembly impeller housing.

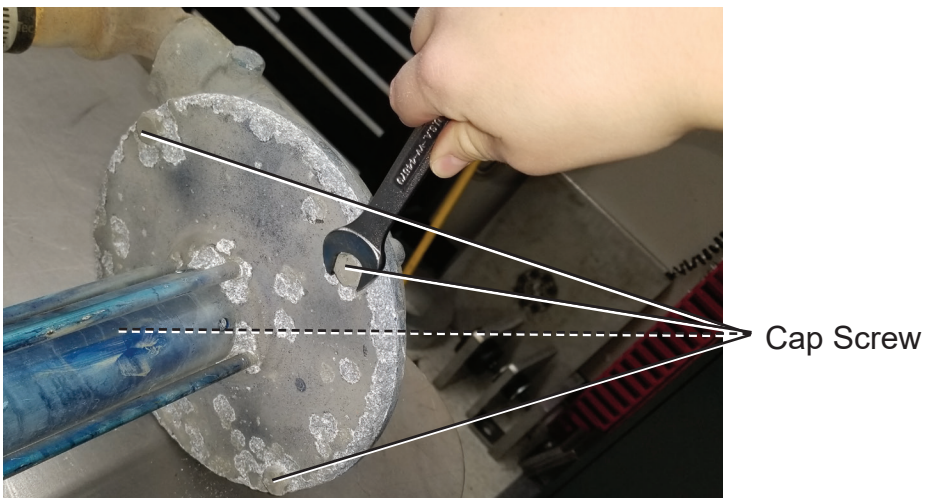


Figure 4

11. Remove elbow assembly from lower impeller housing, see Figure 5.

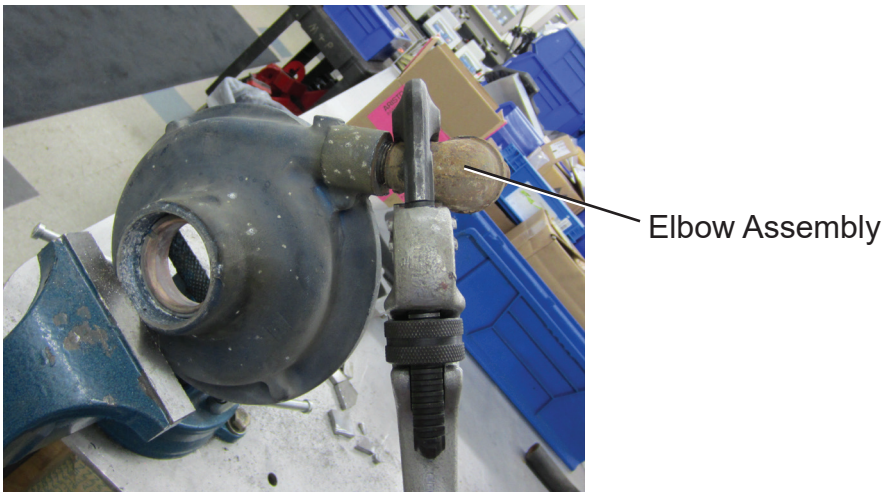
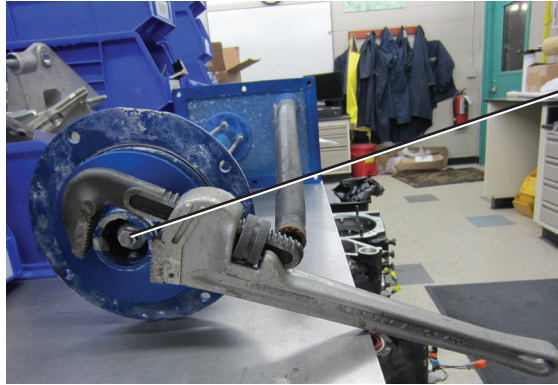
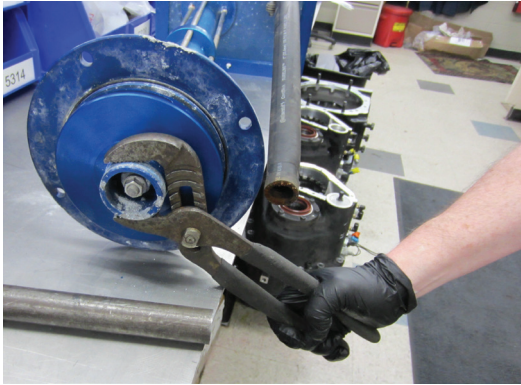


Figure 5

12. Secure main pump shaft using a pipe wrench or straight jaw tongue pliers, see Figure 6.
13. Apply penetrating oil to main shaft nut, see Figure 6.



or

Main Shaft  
Nut

Figure 6

14. Loosen main shaft nut, see Figure 7. Leave the nut on end of main shaft after loosening.



Figure 7

15. Install pulley remover around pump assembly impeller, see Figure 8.

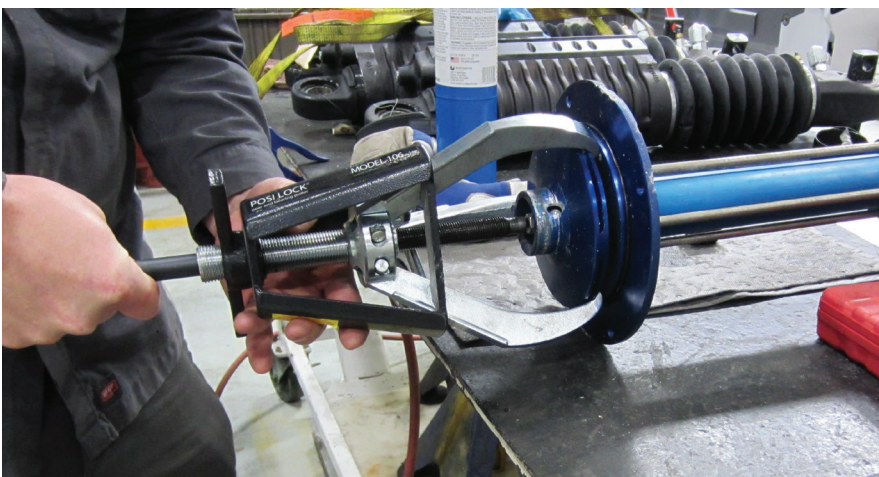


Figure 8

16. Heat area of impeller that surrounds pump assembly main shaft, see Figure 9.



Figure 9

17. Tighten pulley remover with an impact wrench to slightly pull impeller off pump assembly main shaft, see Figure 10.



Figure 10

18. Remove pulley remover from impeller.

19. Remove main shaft nut with an impact wrench.

20. Reinstall pulley remover on impeller and tighten with an impact wrench to pull impeller off pump assembly main shaft, see Figure 11.



Figure 11

21. Remove impeller and key from the main shaft. These parts will not be reused. If there are washers on the main shaft between the housing and impeller, leave the washers on the main shaft.

### ***Impeller Installation***

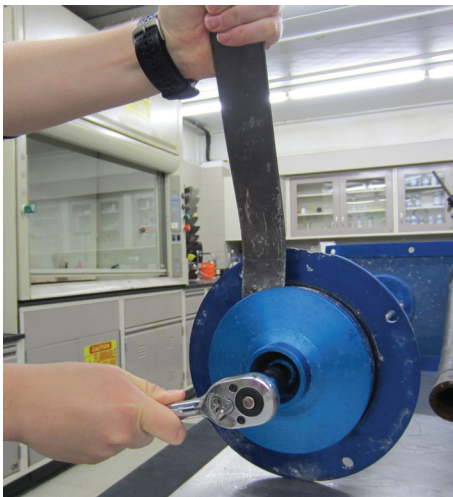
22. Install key (HH-00291-104) in main shaft and slide impeller (1634530) onto main shaft making sure to align the impeller slot with the main shaft key.

23. Install nut (HH-01300-001) on main shaft, see Figure 12.



*Figure 12*

24. Insert a flat bar between veins of impeller and tighten main shaft nut, see Figure 13. Final tighten main shaft nut to 17 ft. lbs.



*Figure 13*

25. Install new 90° elbow fitting (35386AXW) in lower impeller housing, see Figure 14. Final tighten fitting to hand-tight plus 2-3 turns.

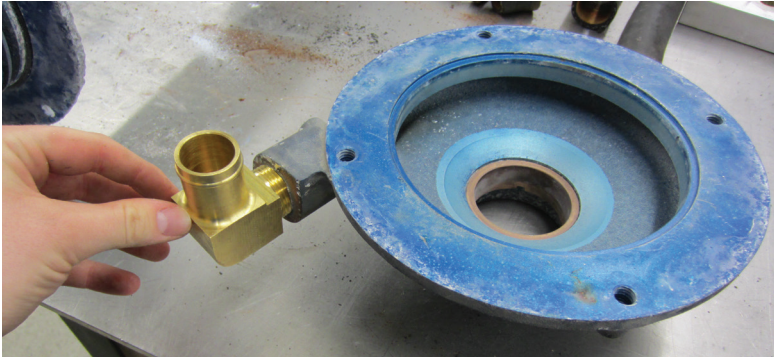


Figure 14

26. Install new straight fitting (A000D937) into bottom of pump assembly mounting plate, see Figure 15. Final tighten fitting to hand-tight plus 1.5-2.5 turns.



Figure 15

27. Apply a coating of graphite spray to lower impeller housing brass wear ring and end of impeller, see Figure 16.

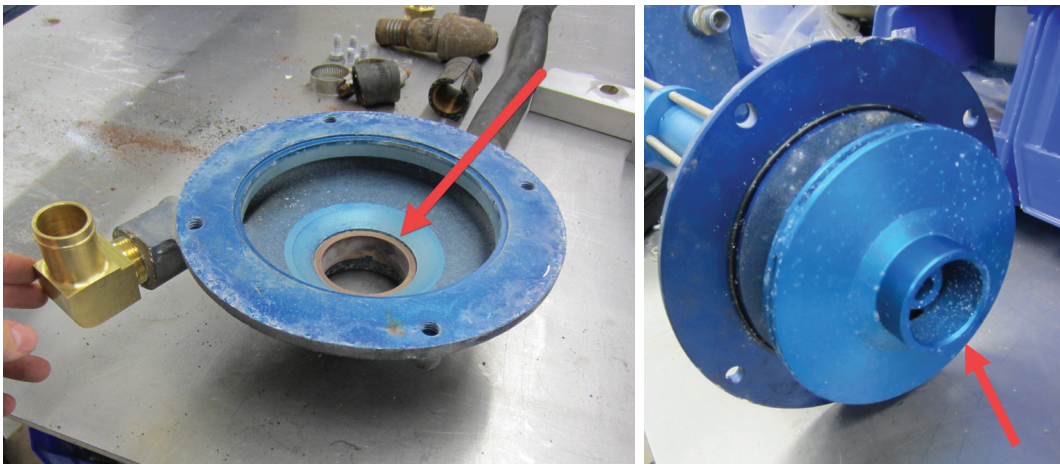


Figure 16



- 28. Reinstall lower impeller housing onto pump assembly, see Figure 17.
- 29. Reinstall the 4 cap screws removed in Step 9. Final tighten cap screws to 17 ft. lbs.

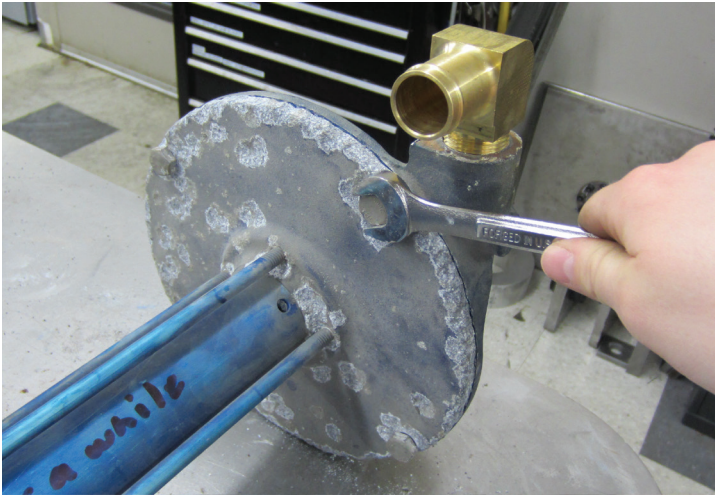
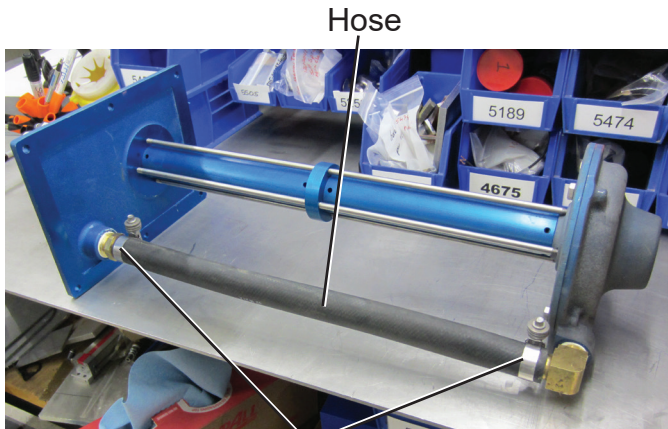


Figure 17

- 30. Install hose between impeller housing fitting and pump assembly mounting plate fitting, see Figure 18.
- 31. Secure hose to fittings with hose clamps loosened in Step 7. If pump assembly uses constant torque style clamps, final tighten constant torque clamps to 30-45 in. lbs.



Hose Clamp

Figure 18

32. Reinstall water pump assembly in water tank, see Figure 19.
33. Apply Loctite #242 to threads of the six 0.38-16 x 1.25" mounting cap screws.
34. Install the six 0.38-16 x 1.25" cap screws with flat washers to secure water pump assembly mounting plate to water tank, see Figure 19. Final tighten cap screws to 17 ft. lbs.
35. Reconnect water outlet hose. Tighten hose clamp to secure outlet hose to pump outlet fitting, see Figure 19.
36. Reconnect water pump motor hydraulic input line, see Figure 19. Final tighten line to 12 ft. lbs.
37. Reconnect water pump motor hydraulic output line, see Figure 19. Final tighten line to 45 ft. lbs.

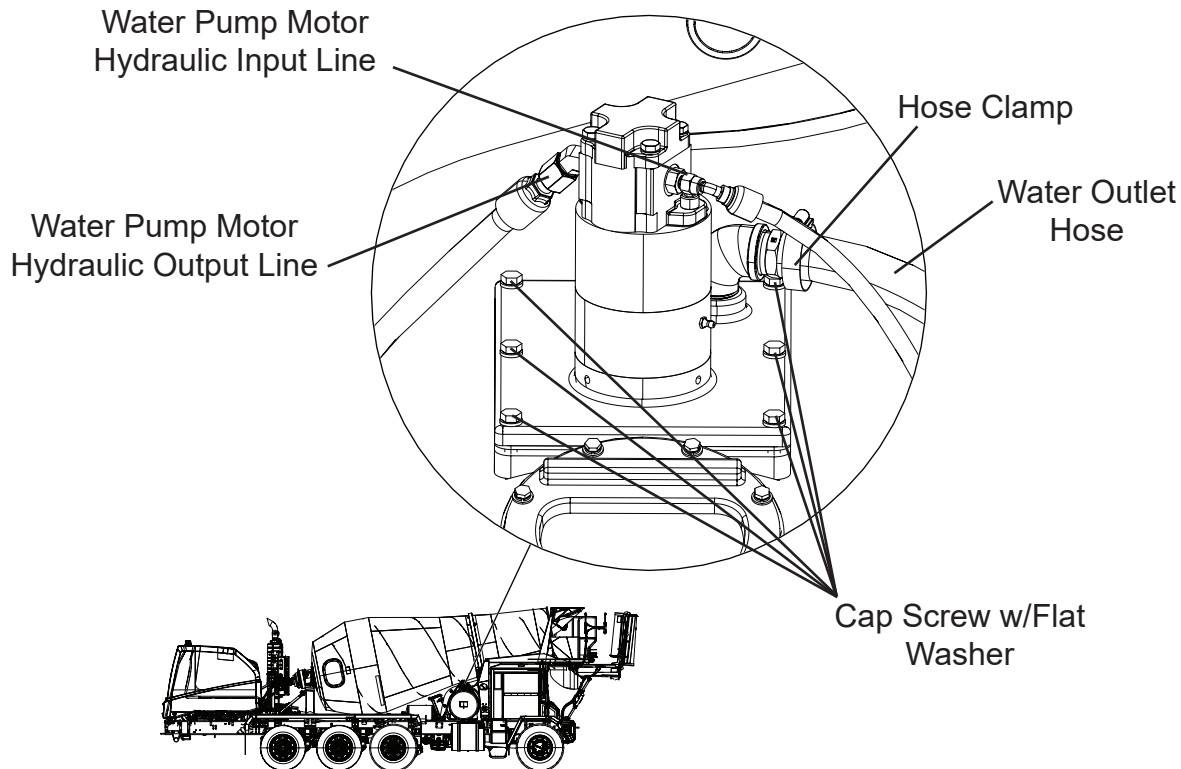


Figure 19

38. Remove lockout/tagout.

### Continuous Improvement:

The change included in this document is part of the McNeilus Continuous Improvement Process.

*McNeilus's quality policy is providing customer satisfaction through innovative products, dedicated service, and a constant focus on continuous improvement.*



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