



S-Series
BACKED BY McNEILUS

SAFETY NOTICE

VSR-TSB-033

NHTSA Campaign Number: 21V-851

Vehicle Safety Recall - Technical Service Bulletin

PROMPT ACTION REQUIRED

Attention: Oshkosh Product Owner
Subject: Power Steering Pump
Models Affected: Oshkosh S-Series Front Discharge Mixer
Model Year: 2020-2021 (VIN 801358 - 809179)
Date: December 2021

Purpose:

A concern affecting safety exists in some Oshkosh S-Series Front Discharge Mixers. Trucks have been identified that may be equipped with a ZF power steering pump that might contain an internal pump rotor machining defect. The defect may cause the pump's pressure to build and cause the pump's shaft seal to leak, resulting in a loss of power steering assist. The leaking shaft seal can also allow hydraulic oil to enter the engine oil. This bulletin provides instruction on inspecting the power steering pump serial number and steps required if power steering pump requires replacement.

Affected Vehicles:

The affected vehicle population is Oshkosh S-Series Front Discharge Mixers produced in 2020-2021.

Units Affected: VIN 801358 - 809179

Please refer to the attached VIN list of affected vehicles.

Time Completion:

Complete the enclosed procedure for each affected truck. The time of accomplishment may vary due to a number of factors; however, the estimated time for pump inspection is 0.5 hours and the time for pump replacement is 2.5 hours.

Required Action:

Review and verify your ownership of all affected serial numbers of Oshkosh vehicles. Oshkosh records indicate that you are the owner of one or more affected trucks, a Serial Number List is enclosed. **Please be reminded that it is a violation of Federal law for you to sell or lease the vehicles covered by this notification until this recall has been performed on these vehicles. Substantial civil penalties apply to violations of this law.**

Reimbursement of Costs:

Affected trucks can be inspected using the customer's own qualified service technicians - at no cost to the owner. The inspection should take approximately 0.5 hours and the time for pump replacement is 2.5 hours.

Customers can also choose to have an Oshkosh/McNeilus service center perform the inspection and repair work free of charge.

Parts/Labor Reimbursement:

In order to receive credit, claims are to be submitted through the normal warranty claim system. Claims must be received within 30 days of the repair. Claims must include the Oshkosh VIN of the vehicle, the customer asset number, and the number of this bulletin.

Contacts:

If you have questions or need further information, please contact S-Series Service Support at 888-686-7278

Enclosures:

Procedure

VIN List of Affected Vehicles

Parts Required:

Item	Part Number	Description	Qty.
1	A000H951	PUMP, VANE SGL 1.95 F CCW A	1
2	1694630	GASKET, STEERING PUMP	1

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 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.

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.

Procedure

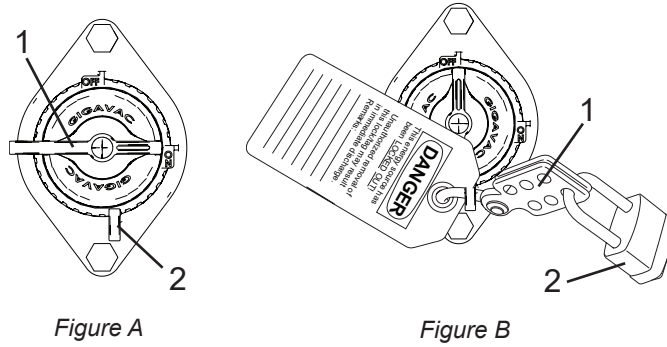
Preparation and Inspection

1. Park truck on flat, level surface, engage parking brake, chock 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. Battery Disconnect Switch

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.



d. Allow truck to cool before inspecting/replacing power steering pump.

Pump Inspection

3. Locate power steering pump on right-hand side of engine, see Figure 1. The pump serial number is stamped on pump body, closest to the engine block. Use a mirror to verify pump serial number on pump body.

If the pump serial number matches one of the serial numbers in Table 1 continue to Step 4.

If the pump serial number does not match one of the serial numbers in Table 1 pump inspection is complete and no further action is required.

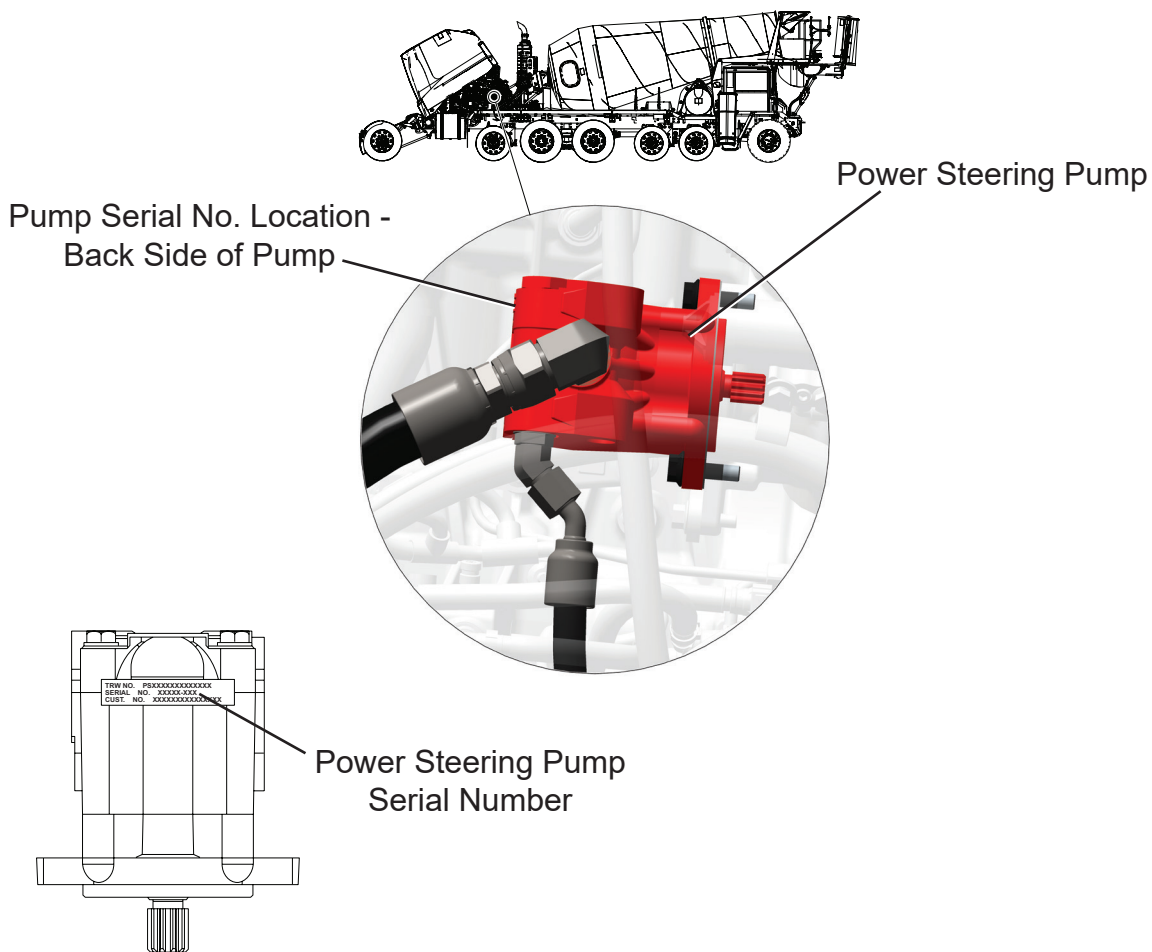


Figure 1

Table 1

Pump Serial Numbers					
P3201981823	P4201271406	P4201431316	P4201570287	P4201981815	P4201981844
P3201981832	P4201271407	P4201431317	P4201570294	P4201981816	P4201982016
P4201271356	P4201271408	P4201431318	P4201570295	P4201981817	P4201982017
P4201271357	P4201271409	P4201431319	P4201570296	P4201981818	P4201982018
P4201271358	P4201271410	P4201431320	P4201570297	P4201981819	P4201982019
P4201271360	P4201271412	P4201483226	P4201570298	P4201981820	P4201982020
P4201271361	P4201271413	P4201483227	P4201570299	P4201981824	P4201982021
P4201271362	P4201271414	P4201483228	P4201570300	P4201981825	P4201982022
P4201271363	P4201271415	P4201483229	P4201570301	P4201981826	P4201982023
P4201271364	P4201431300	P4201483230	P4201570302	P4201981827	P4201982024
P4201271365	P4201431301	P4201483231	P4201570303	P4201981828	P4201982025
P4201271366	P4201431302	P4201483232	P4201570304	P4201981829	P4201982026
P4201271367	P4201431303	P4201483233	P4201570305	P4201981830	P4201982027
P4201271368	P4201431304	P4201483234	P4201570306	P4201981831	P4201982028
P4201271369	P4201431305	P4201483235	P4201570307	P4201981833	P4201982029
P4201271370	P4201431306	P4201483236	P4201981802	P4201981834	P4201982030
P4201271371	P4201431307	P4201483237	P4201981803	P4201981835	
P4201271372	P4201431308	P4201483260	P4201981804	P4201981836	
P4201271399	P4201431309	P4201483261	P4201981805	P4201981837	
P4201271400	P4201431310	P4201483262	P4201981807	P4201981838	
P4201271401	P4201431311	P4201483263	P4201981808	P4201981839	
P4201271402	P4201431312	P4201483264	P4201981809	P4201981840	
P4201271403	P4201431313	P4201483265	P4201981812	P4201981841	
P4201271404	P4201431314	P4201483266	P4201981813	P4201981842	
P4201271405	P4201431315	P4201570274	P4201981814	P4201981843	

Pump Removal and Installation

CAUTION

Cap or cover ends of hydraulic lines after disconnecting lines from power steering pump. Failure to comply could result in hydraulic system contamination and component damage.

4. Loosen and remove power steering pump suction line from power steering pump, see Figure 2. Cap line and temporarily secure to side of engine near pump.
5. Loosen and remove power steering pump pressure line from power steering pump, see Figure 2. Cap line and temporarily secure to side of engine near pump.

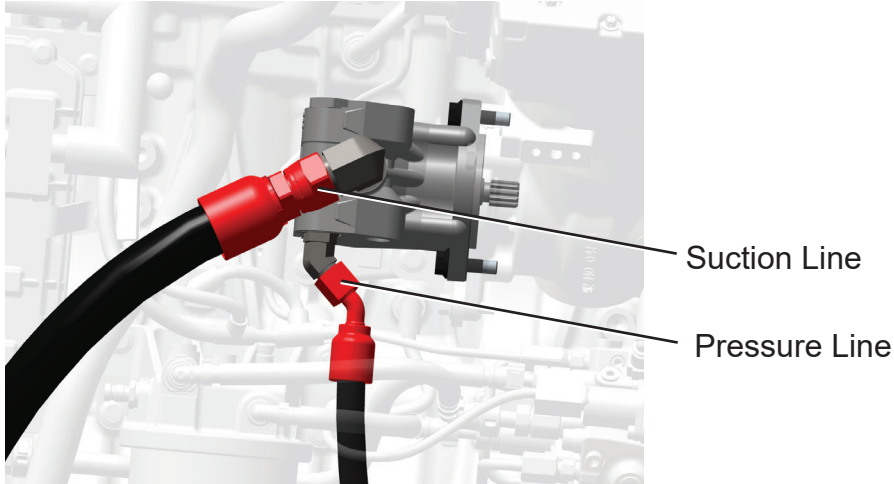


Figure 2

6. Loosen and remove two M10-1.5 flanged hex screws securing power steering pump to engine air compressor, see Figure 3. Save hardware for installation of new pump.
7. Remove power steering pump and gasket from engine air compressor, see Figure 3.

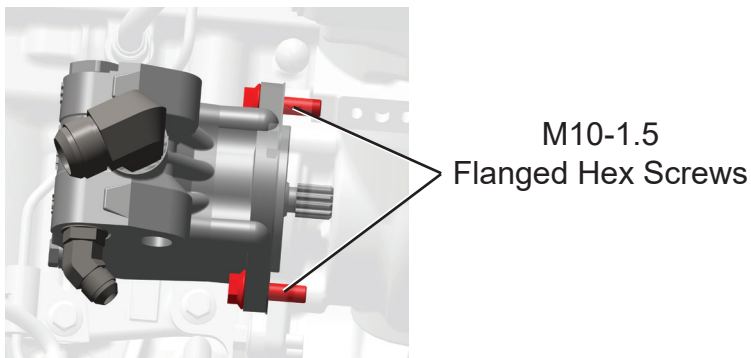


Figure 3

8. Place pump on a bench and remove suction line 90° fitting from power steering pump, see Figure 4. Save fitting for reinstallation on new pump.
9. Remove pressure line 45° fitting from power steering pump, see Figure 4. Save fitting for reinstallation on new pump.

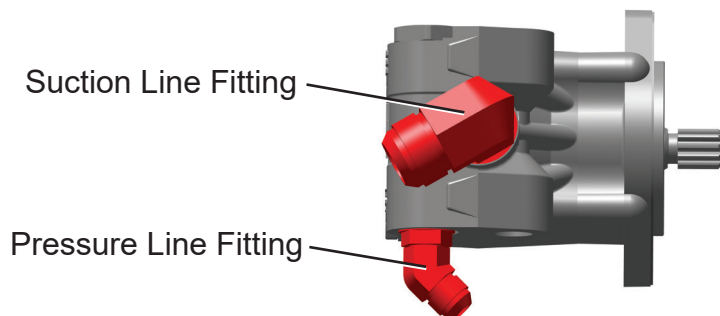


Figure 4

10. Apply lube to pump pressure line 45° fitting O-ring removed in Step 9.
11. Install pump pressure line 45° fitting in new pump (A000H951). Final tighten fitting to 36 ft. lbs. and orient fitting as shown in Figure 5.

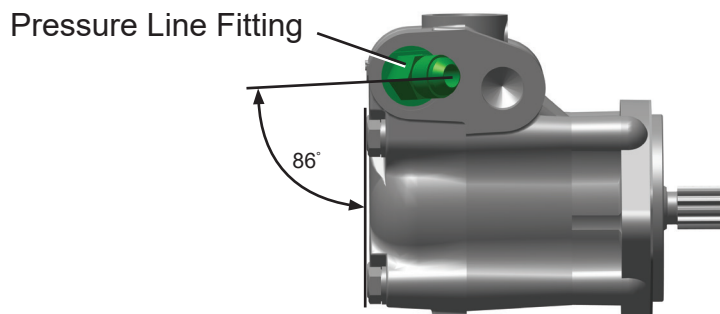


Figure 5

12. Apply lube to pump suction line 90° fitting O-ring removed in Step 8.
13. Install pump suction line 90° fitting in new pump (A000H951). Final tighten fitting to 93 ft. lbs. and orient fitting as shown in Figure 6.

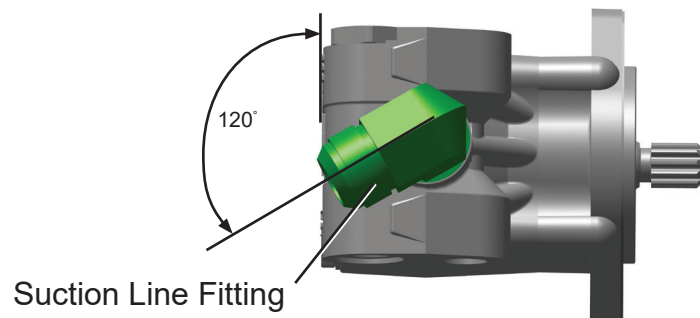


Figure 6

14. Clean any old gasket material from engine air compressor pump mounting surface.

15. Install new pump (A000H951) with gasket (1694630) on engine air compressor, see Figure 7.
16. Apply Loctite® #242 to threads of two M10-1.5 flanged hex screws removed in Step 6.
17. Secure pump to air compressor with two M10-1.5 flanged hex screws, see Figure 7. Final tighten screws to 35 ft. lbs.
18. Reconnect pump pressure line to power steering pump, see Figure 7. Final tighten to 45 ft. lbs.
19. Reconnect pump suction line to power steering pump, see Figure 7.

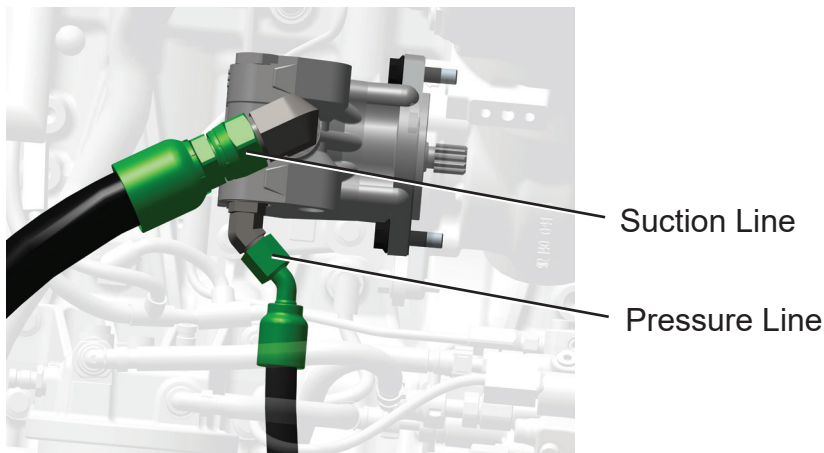


Figure 7

20. Check engine oil level. If engine oil level is high, hydraulic oil may have entered engine from power steering pump. Change engine oil per engine manufacturer's manual.
21. Remove lockout/tagout and tire chocks. Continue to Hydraulic System Priming Procedure to prime the new power steering pump and remove any air that may have entered the hydraulic system.

Hydraulic System Priming Procedure

22. Remove hydraulic reservoir fill cap and fill reservoir to full mark with clean, new hydraulic oil, see Figure 8. Do not reinstall fill cap at this time.

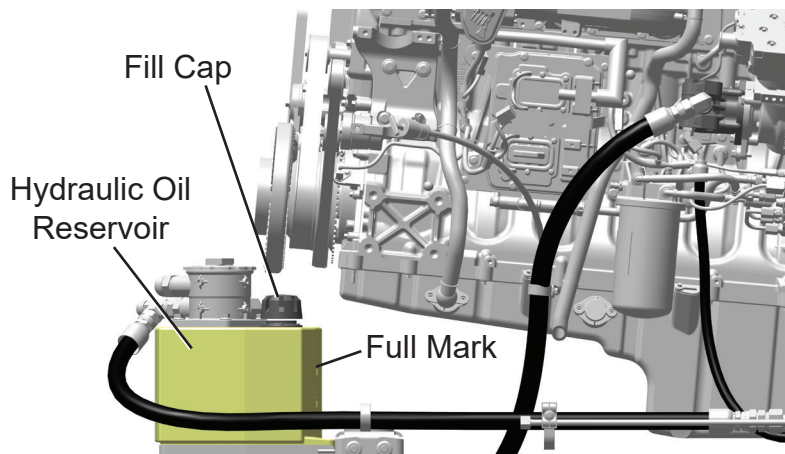


Figure 8

23. Slightly loosen power steering pump pressure line, see Figure 9.
24. Using pressurized air, slowly pressurize hydraulic tank until fluid is pushed through steering pump and seeps out pump pressure line connection.
25. Retighten power steering pump pressure line, see Figure 9.

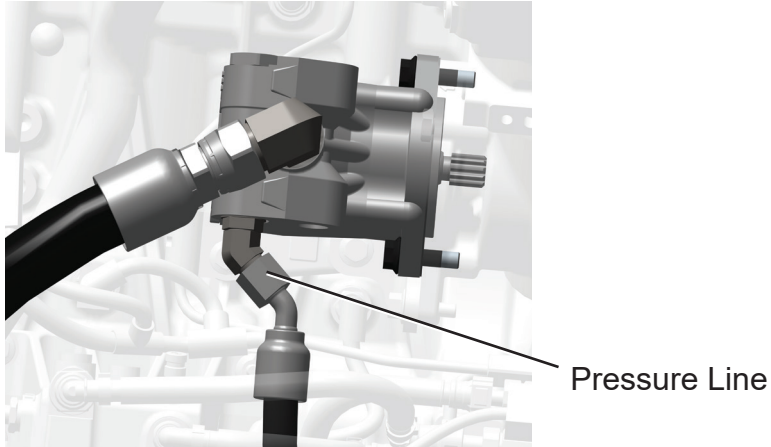


Figure 9

NOTE
Perform Steps 27 - 35 with the truck's engine operating.

26. Start truck while keeping pressure in hydraulic reservoir.
27. Operate all vehicle hydraulic circuits, i.e. chutes, water pump, drum. If hydraulic oil level gets low during operation of hydraulic circuits, remove pressure and add hydraulic oil to reservoir.
28. Remove pressure from hydraulic reservoir and reinstall original fill cap.
29. Let truck idle for 2 minutes without steering the front wheels.
30. Steer the truck's front wheels from full left to full right 4-5 times.
31. Point the truck's wheels in the straight ahead position.
32. Check hydraulic oil level in hydraulic reservoir. Add clean, new hydraulic oil as required.

33. Locate primary steering gear bleeder screw, see Figure 10.

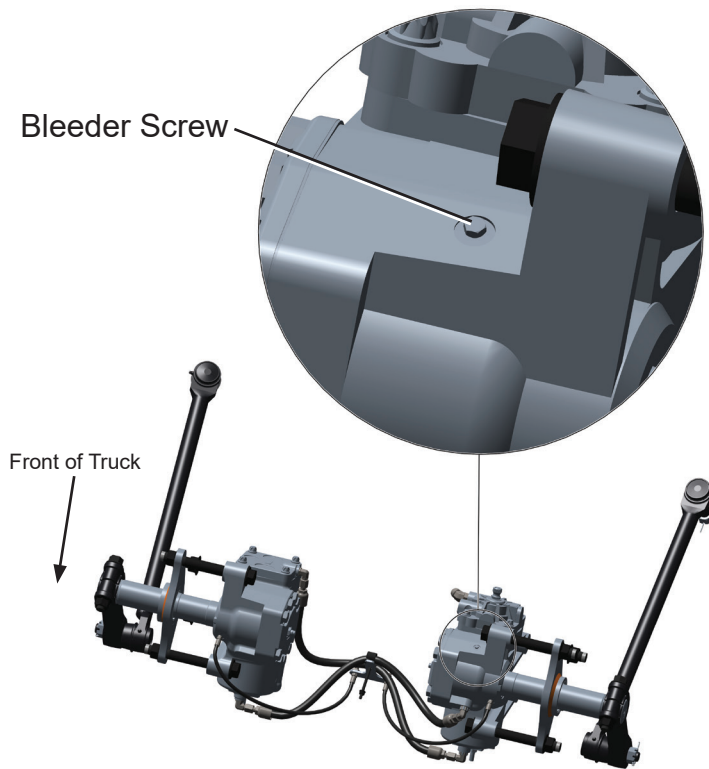


Figure 10

34. Loosen steering gear bleeder screw and allow air and aerated fluid to bleed out until fluid appears without bubbles. If the bleeder screw is not visible, allow the system to bleed until fluid drains from the bleeder screw.
35. Close bleeder screw and final tighten to 45 in. lbs.
36. Turn the truck's engine OFF.
37. Refill the hydraulic reservoir as required with clean, new hydraulic oil.
38. Clean any spilled hydraulic oil from the truck and area.

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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