



**S-Series™**  
BACKED BY McNEILUS

# Technical Service Information Bulletin

## Bleeding Air from the Steering System

**Date:** September 3, 2020

**Bulletin Name:** FDM-TSIB-013

**Model:** Oshkosh S-Series

**Units Affected:** Model Year 2020 and newer

### Purpose:

There may be air trapped in the steering system if the steering wheel is turned from full left to full right and the steering doesn't feel consistently smooth through the process. This bulletin provides instruction on how to bleed air from the steering system.

### 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.

### **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.

## **Tools Required:**

Customer to supply:

- Torque wrench (inch pounds)
- 5/16" Hex socket

## **Procedure:**

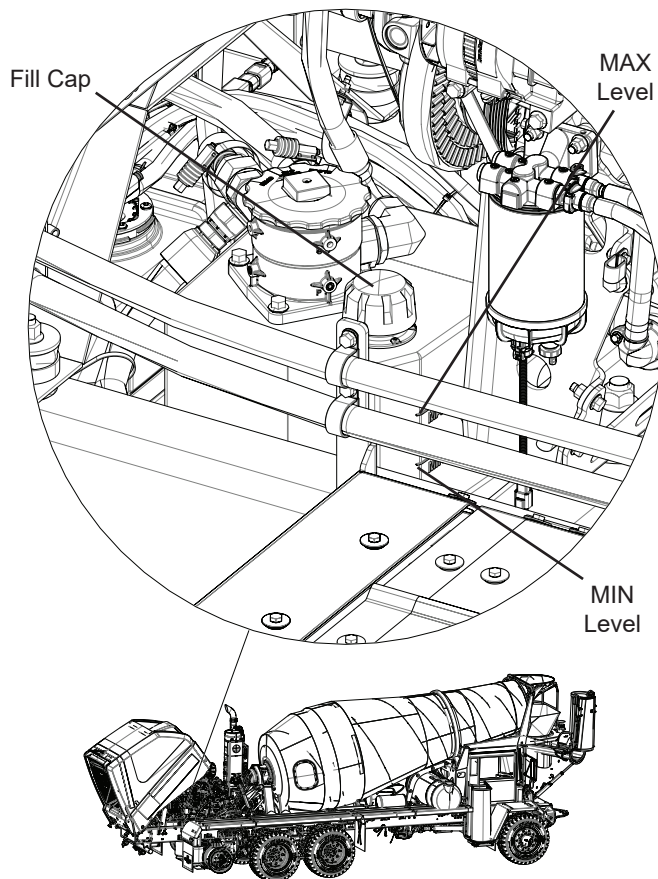
### **NOTE**

**Do not turn the steering wheel with bleed screw loosened.**

### **NOTE**

**Do not allow the hydraulic reservoir fluid level to drop significantly as this may introduce additional air into the system.**

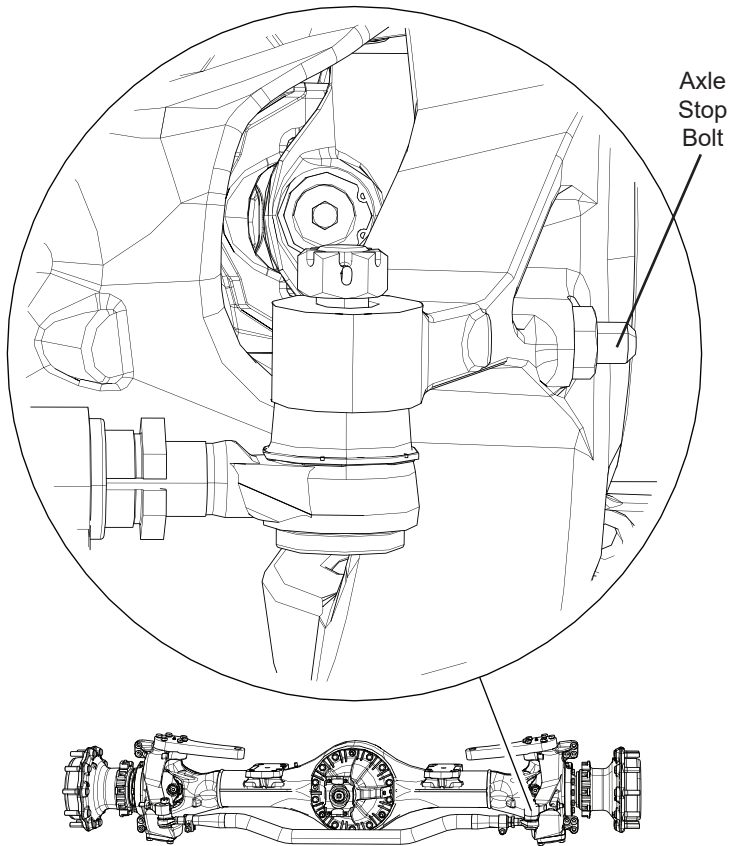
1. Place the truck on a flat surface and make sure the vehicle's parking brake is applied.
2. Block the truck's tires.
3. Check the hydraulic reservoir oil level, see Figure 1. Add hydraulic oil as required to bring the level to the MAX level mark.



*Figure 1 - Hydraulic Reservoir*

4. Start the vehicle's engine, let it idle for two minutes without steering the steering wheel, then shut the engine off.

5. Check the steering hard stops are in place, see Figure 2. Replace hard stop(s) if missing.



*Figure 2 - Steering Hard Stop*

6. Start the vehicle's engine and steer the steering wheel from full left to full right several times.
7. Point the vehicle's wheels in the straight ahead position
8. Locate the manual bleed screw on top of the primary steering gear, see Figure 3.

9. Loosen the manual bleed screw 2-3 turns to allow air and aerated fluid to bleed out until the fluid appears without bubbles. If the bleed screw is not visible, allow the system to bleed until fluid drains from the bleed screw.

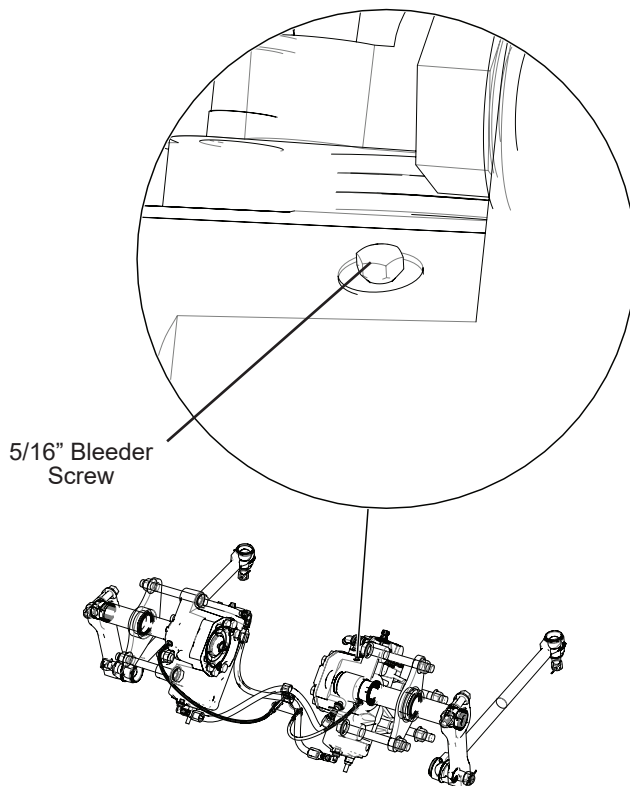


Figure 3 - Manual Bleed Screw

10. Close the bleed screw. Torque the bleed screw to 45 in lbs.
11. Check the hydraulic reservoir fluid level and refill if required.
12. Steer the steering wheel from full left to right several times as the engine idles to verify smooth operation. Repeat steps 9 - 14 if needed until the steering feels smooth through the full left to right cycle.
13. Turn the vehicle's engine off.
14. Remove blocks from the truck's tires.

### 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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