

MERITOR®
an **ArvinMeritor** brand

Technical Bulletin

Inspecting Meritor Four-Piston Quadraulic™ Disc Brake Calipers for Brake Fluid Leaks

Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

How to Obtain Additional Maintenance and Service Information

Refer to Maintenance Manual MM-2075, Four-Piston Quadraulic™ Disc Brake Caliper. To access this publication, visit Literature on Demand at arvinmeritor.com.

ArvinMeritor OnTrac Performance Plus Center

Contact ArvinMeritor's OnTrac Customer Service Center at 866-668-7221 in the United States and Canada between 8:00 AM and 8:00 PM ET Monday through Friday, and between 9:00 AM and 6:00 PM ET on Saturday.

Determine if Brake Fluid is Leaking from the Caliper

This technical bulletin provides procedures to inspect Meritor's four-piston Quadraulic™ disc brake calipers to help you determine if brake fluid is leaking from the caliper. You can use information obtained from this inspection to submit a warranty claim if you find a brake fluid leak.

Conditions That Do Not Conclusively Indicate Brake Fluid is Leaking

The following conditions do not conclusively indicate brake fluid is leaking from the caliper. Follow the steps in this technical bulletin to verify a fluid leak exists.

- You find fluid at a wheel end.
- You find a low brake fluid level in the reservoir. Fluid level in the reservoir lowers as the brakes adjust from the initial fill and further as the linings wear.

Inspection Procedures

ASBESTOS AND NON-ASBESTOS FIBERS WARNING

Some brake linings contain asbestos fibers, a cancer and lung disease hazard. Some brake linings contain non-asbestos fibers, whose long-term effects to health are unknown. You must use caution when you handle both asbestos and non-asbestos materials.

WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

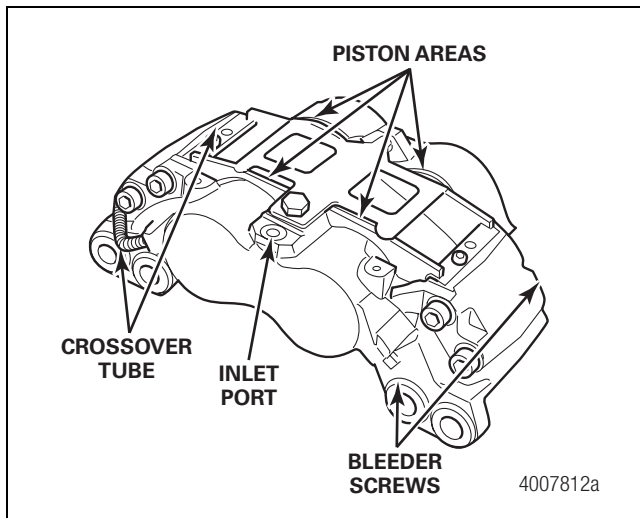
Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands.
2. Determine the reason the vehicle is in for service; for example, the warning light is on, brake pedal effort, poor stopping performance, or brake fluid is found at a specific location.
3. Determine the specific wheel ends to inspect.
 - **If you are not sure which wheel ends to inspect:** Inspect all of the wheel ends.
4. Remove the wheel and tire assembly from the wheel end you are inspecting. Refer to the wheel end and tire manufacturers' instructions.

⚠ WARNING

Solvent cleaners can be flammable, poisonous and cause burns. Examples of solvent cleaners are carbon tetrachloride, and emulsion-type and petroleum-base cleaners. Read the manufacturer's instructions before using a solvent cleaner. Carefully follow the instructions. Also follow the procedures below.

- Wear safe eye protection. Wear safe clothing that protects your skin.
 - Work in a well-ventilated area.
 - Do not use gasoline or solvents that contain gasoline. Gasoline can explode.
 - You must use hot solution tanks or alkaline solutions correctly. Read the manufacturer's instructions before using hot solution tanks and alkaline solutions. Carefully follow the instructions.
5. Use a cloth and approved brake cleaning solvent to clean and dry the brake caliper in the fluid path areas shown in the figure below.



6. Remove the brake pads to clean the piston area. Clean the brake pad backing plates. Refer to Maintenance Manual MM-2075 for the correct procedures.
7. Reinstall the brake pads and brake pad retaining springs. Refer to Maintenance Manual MM-2075 for the correct procedures.

⚠ CAUTION

Only apply the brakes with the brake pads installed. If you apply the brakes without pads installed, damage to the pistons can occur.

8. Start the vehicle. With the brake pads installed, apply heavy force to the brake pedal and hold it for one minute. Note any change in pedal effort; for example, the pedal feels hard, or the pedal drops.
9. Release the pedal. Turn the vehicle off.
10. Inspect the wheel end for evidence that brake fluid is leaking.
- **If you find a leak at the wheel end:** Repair the caliper as necessary.
 - **If the caliper still leaks after repairing it:** Rebuild or replace the caliper as required. Refer to Maintenance Manual MM-2075 for the correct procedures.
 - **If you find evidence of a leak at the inlet, bleeder screws or crossover tube:** Clean the fittings. Verify they are tightened to the torque specifications in the table below. Repeat Steps 8 and 9. Inspect for fluid leakage again.
 - **If you do not detect a change in pedal effort or see any evidence of a brake fluid leak from any part of the caliper:** Another vehicle issue exists. Contact the ArvinMeritor OnTrac Performance Plus Center at 866-668-7221 for additional diagnostic assistance.

Torque Specifications

Description	Torque Value
Inlet Port with Banjo Bolt	30-40 lb-ft (40.8-54.4 N•m)
Inlet Port with Inverted Flair Tube	17-22 lb-ft (23-30 N•m)
Bleeder Screw	17-22 lb-ft (23-30 N•m)
Crossover Tube Nut	10-17 lb-ft (14-23 N•m)

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