

**MERITOR WABCO**

## Technical Bulletin

# Troubleshooting and Repairing System Saver 1200 Plus Air Dryers with Turbo Cut-off Valves on Vehicles with Cummins Engines

## 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.

### **⚠ 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.

Release all air from the air systems before you remove any components. Pressurized air can cause serious personal injury.

## How to Obtain Additional Maintenance, Service and Product Information

Refer to Maintenance Manual 34, Meritor WABCO System Saver Series Single Cartridge Air Dryers. To obtain this publication, visit Literature on Demand at [meritor.com](http://meritor.com). Meritor WABCO publications are also available on our website:

[www.meritorwabco.com](http://www.meritorwabco.com)

## Air Dryer Troubleshooting and Repair Procedures

This technical bulletin provides information for troubleshooting and correcting issues that may be found on System Saver 1200 Plus Air Dryers used on vehicles with Cummins engines.

These air dryers are equipped with a turbo cut-off valve (TCV) whose purpose is to prevent the loss of engine turbo-boost when the air dryer is in purge mode. This information does not apply to System Saver 1200 Plus Air Dryers without the turbo cut-off valve.

## Troubleshoot the Air Dryer

1. Wear safe eye protection. Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Set the parking brake.
2. Pump the air system down by making brake applications until the system pressure gauge shows just below cut-in pressure, typically 100 psi (6.89 bar).
3. Start the vehicle.
4. While the compressor is pumping, inspect for air coming out of the bottom of the air dryer. Figure 1.
  - If air is coming out of the bottom of the TCV or the governor exhaust vent: Replace the TCV using the procedure in this technical bulletin.

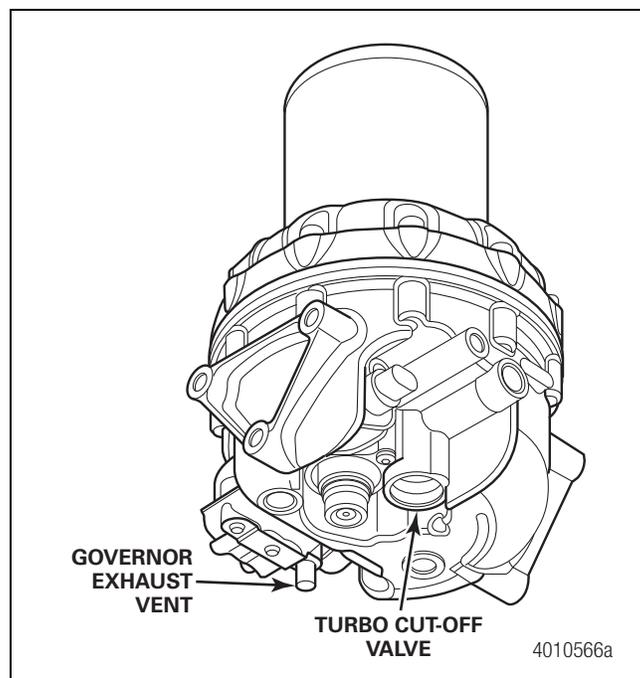


Figure 1

5. If the TCV is not leaking, continue to run the engine until the compressor builds the system to cut-out pressure, typically 130 psi (8.96 bar).

6. When cut-out pressure is reached, verify that the air dryer purges. There will be a loud blast of air from the purge valve followed by a gentle flow of air lasting about 30 seconds. After 30 seconds, all flow of air from the purge valve should stop.

- **If air continues coming out of the bottom of the TCV:**  
Replace the TCV using the procedure in this technical bulletin.
- **If the compressor and air dryer constantly cycle several times before cut-out pressure is reached:**  
Replace the TCV using the procedure in this technical bulletin. If the compressor and the air dryer continue to cycle frequently after you replace the TCV, replace the governor.

## Replace the Turbo-Cutoff Valve

When replacing the TCV, be sure to grease all sliding surfaces, O-ring grooves and O-rings using the grease (1) provided in the kit. Figure 2.

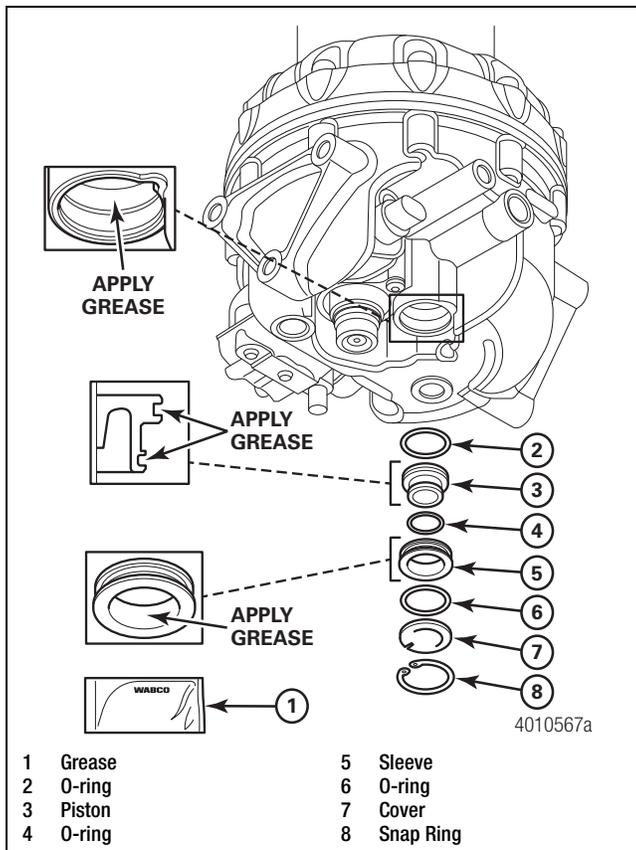


Figure 2

1. Remove the snap ring (8).
2. Remove the cover (7).
3. Remove and discard the piston (3) and sleeve (5), including O-rings (2), (4) and (6).
4. Clean and inspect the valve bore in the dryer housing.
  - **If the bore is damaged so that a tight seal cannot be maintained:** Replace the air dryer. Refer to Maintenance Manual 34 for correct procedures.
5. Thoroughly grease the O-ring grooves in the piston and sleeve, the sliding surfaces in the valve bore and sleeve (5), and the new O-rings.
6. Install the correct size O-rings on the piston (3) and sleeve (5).
7. Reassemble the piston (3) into the sleeve (5).
8. Press the piston-sleeve assembly into the air dryer.
9. Install the cover (7) and snap ring (8), making sure that the snap ring is fully seated in its groove.
10. Before putting the vehicle back into service, check to ensure there are no air leaks from the bottom of the air dryer using the checks described in the troubleshooting procedure.

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