### System Saver TWIN Cartridge Air Dryers

#### Meritor WABCO

**Condition**
- Outlet check valve not seating.
- Regeneration valve not shutting off regeneration airflow.
- Regeneration cycle too short (less than 10 seconds).

**Possible Cause**
- Quick check valve not seating.
- Regeneration valve not seating, airflow uncontrolled.
- Regeneration cycle not existing.

**Solution**
- Inspect and replace outlet check valve as needed.
- Replace regeneration valve.
- Replace one-way check valve. Make sure pressured check valve is installed correctly.
- Increase regeneration rates and check flow diagrams. If low or erratic flow conditions are found, replace regeneration valves and check diagrams.

#### Air Dryer System

- Air dryer purge valve not operating as frequently as required (less than 10 seconds).

- **Solution**
  - Increase air system capacity or reduce air demand.
  - Inspect and replace outlet check valve as needed.
  - Replace regeneration valve.

#### Air Dryer System

- Air dryer does not purge compressor output. Repair/replace per manufacturer's instructions.

- **Solution**
  - Increase air system capacity or reduce air demand.
  - Repair/replace per manufacturer's instructions.
  - Repair or replace per manufacturer's instructions.

#### Air Dryer System

- Air governor not working properly.

- **Solution**
  - Inspect air governor. Repair/replace per manufacturer's instructions.
  - Check for air leaks in system and repair as needed.
  - If no leaks in system, check short (less than 10 seconds).

#### Air Dryer System

- Air dryer not plumbed correctly (connections reversed).

- **Solution**
  - Ensure compressor discharge line is plumbed to air dryer port 1, and air dryer port 21 is connected to vehicle's supply tank.
  - Ensure dryer port 4 line is connected to the "UNL" port of the air governor.
  - Inspect governor per manufacturer's instructions. Repair or replace as needed. Locate leak(s) and repair.

#### Air Dryer System

- Pressure-controlled check valve not in line.

- **Solution**
  - Install pressure-controlled check valve in secondary tank.
  - Remove one-way check valve so that only the pressure-controlled check valve is installed between the secondary tank and supply tank.

#### Air Dryer System

- Water in system tanks, everything else checks out okay.

- **Solution**
  - Review application guidelines. For assistance, call Meritor Customer Support Center at 1-800-535-5560.

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**Diagram**

[Diagram of air dryer system]

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**Note:**
- Inlet air temperature must not exceed 175°F.
- Air leak at turbo cut-off valve vent.
- Hole burned in piston.
- Valve bore worn excessively.
- Compressor not completely unloading when cut-out pressure is reached.

**For more information, see Maintenance Manual No. 35 or dial our toll-free number:**

**800-535-5560**

**TP 97100**

**Revised:** 9/98

**16579/24240**

**TP 97100**

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See Maintenance Manual No. 35 or dial our toll-free number: 800-535-5560

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**For more information, see Maintenance Manual No. 35**
LEFT PISTON COVER
R955041 (SEALS AND SPRINGS), R955042 (HARD PARTS)

HEATER
12 VOLT – R950015
24 VOLT – R950016

OUTLET CHECK VALVE
R955048

PURGE VALVE
R955047

DESICCANT CARTRIDGE
R950011

PRESSURE RELIEF VALVE
Use for dryer build dates at 1096 or earlier. Slide cutter from 1796 has an integral pressure relief valve at the back of the dryer.

LEFT PISTON
R955040

RIGHT PISTON COVER
R955054

SYSTEM SAVING TWIN AIR DRYER
MERITOR WABCO

ORIFICE KIT
R955067 (0.8 mm Orifice)
R955066 (1.0 mm Orifice)
R955065 (1.3 mm Orifice)

ORIFICE
SOLENOID AND ARMATURE ASSEMBLY
R955058 (Solenoid/Mtg. Sleeve – 12 volt)
R955045 (Solenoid/Mtg. Sleeve – 24 volt)
R955046 (All other solenoid parts)

PRESSURE RELIEF VALVE
S2206-D-1226
Use for dryer build dates of 1096 or earlier. Date codes from 1196 have an integral pressure relief valve at the back of the dryer.

DATE CODE INFORMATION
Date Code
First 2 Digits = Build Week
Last 2 Digits = Build Year
Manufacturing Location CodePart Number
1696
WABCO

SOLUTION POSSIBLE CAUSE
CONDITION
Dryer leaks from purge valve during compressor loaded cycle. The leak may cause excessive compressor cycling or prevent the system from building air pressure.
Check heater. Repair/replace if necessary. Make sure governor to dryer port 4 line is free of water/oil. Remove and inspect purge valve and clean water/oil from top of piston.
Disassemble and clean purge valve. Remove cartridge and clean dryer sump area.
Ensure lip on aluminum washer faces down, away from dryer.
Verify correct air line installation and correct as needed. Seat snap ring fully into groove.

Purge valve frozen open (cold weather operation).
Debris under purge valve seat, such as particles from fittings or air inlet line.
Purge valve washer installed upside-down.
Purge valve snap ring not fully seated in groove.

Outlet check valve not seating or regeneration valve not shutting off regeneration airflow.
Slight leak from purge valve. After several hours, the supply tank may be empty.

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**Condition**
- Air line between governor and air dryer port 4 kinked or plugged.
- Air flows out of purge valve entire time compressor is unloaded.

**Possible Cause**
- Air leak at turbo cut-off valve vent.
- Air governor not working properly.

**Solution**
- Repair all one-way check valves.
- Inspect valve bore for wear. If a new turbo cut-off valve does not seal in a clean, dry tank, inspect for water in the tank.
- Repair or replace turbo cut-off valve as needed.
- No regeneration cycle. No airflow from purge valve after initial purge blast (dryer decompression). Rapid "spitting" of air from dryer outlet, perhaps as frequently as every 15 seconds, accompanied by excessive cycling of the compressor.

**Condition**
- Air dryer does not purge compressor intake stream of air at normal purge rate.
- No air pressure build-up in system.
- Water in tanks, everything else checks out okay.

**Possible Cause**
- Desiccant contaminated with oil.
- Water, oil, or sludge in air system tanks.

**Solution**
- Verify proper dryer installation per system diagram.
- Repair and replace outlet check valve as needed.
- Replace one-way check valves. Make sure pressure-controlled check valve is not installed between the secondary tank and supply tank.