SB-10055460-7810

1 3 25-14

Service Information Bulletin

[redacted]	DATE
Symptom Diagnostics - Air Compressor	March 2014

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform	Oil at Purge Valve, Dryer Cartridge or Reservoir	New symptom-based diagnostics for air compressors.
		Will Not Build Air Pressure or Slow to Build Air Pressure	
DDC-SVC-MAN-0184	EuroIV DD Platform	Oil at Purge Valve, Dryer Cartridge or Reservoir	
		Will Not Build Air Pressure or Slow to Build Air Pressure	

13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone: 313-592-5000
www.demanddetroit.com

 Copyright © 2014 DETROIT DIESEL CORPORATION

2 Oil at Purge Valve, Dryer Cartridge or Reservoir

Check as follows:

NOTE: Compressors normally pass a small amount of oil and oil vapor into the discharge line.An air compressor operating within the normal operating range has a duty cycle at or below 25%.

The following can lead to oil and/or excessive moisture in the chassis air system:

- Restrictive air filter
- High duty cycle
- Chassis or trailer air system leaks
- Incorrect sized air compressor and/or air dryer
- Air compressor discharge line too short
- Air dryer maintenance
- Leaks in the air compressor air intake causing non filtered air to enter the compressor

1. Check for air system leaks. Refer to section " Air Brake System and Accessory Leakage Test". Were air system leaks found?
   a. Yes; repair air system leak as necessary.
   b. No; Go to step 2.
2. Check for a blocked, folded, or punctured discharge line. Is there any damage to the discharge line?
   a. Yes; repair is necessary.
   b. No; Go to step 3.

NOTE: For high duty cycle applications a 5/8 inch inner diameter, 12 foot length line is recommended.

3. Is the air compressor discharge line at least nine feet long between the air compressor and air dryer?
   a. Yes; Go to step 4.
   b. No; refer to Freightliner Service Bulletin 42-69 or the OEM manual to increase the size of the discharge line.
4. Measure the Air Inlet Restriction with a manual gauge under 100% load (do not use the gauge on the air filter assembly). Is the Air Inlet Restriction greater than 18 H_2 O"?
   a. Yes; repair cause of high inlet restriction. For EPA10 units, Refer to section "Inspection of the Diesel Exhaust Fluid Compressed Air Flow System after Air Compressor Failure" for a list of Diesel Exhaust Fluid (DEF) air system components that will have to be replaced.
   b. No; Go to step 5.
5. Check for restriction in the compressor air intake tube from the turbo compressor inlet pipe to the compressor inlet. Were any intake restrictions found?
   a. Yes; repair as necessary. For EPA10 units, Refer to section "Inspection of the Diesel Exhaust Fluid Compressed Air Flow System after Air Compressor Failure" for a list of Diesel Exhaust Fluid (DEF) air system components that will have to be replaced.
   b. No; Go to step 6.
6. Test the air compressor governor system. Refer to section "Governor System Leakage and Function Test". Is the governor functioning correctly?
   a. Yes; Go to step 7.
   b. No; repair as necessary.
7. Check the condition of the air dryer desiccant cartridge. Has the cartridge exceeded its service life?
   a. Yes; replace air dryer cartridge. For EPA10 units, Refer to section "Inspection of the Diesel Exhaust Fluid Compressed Air Flow System after Air Compressor Failure" for a list of Diesel Exhaust Fluid (DEF) air system components that will have to be replaced.
   b. No; Go to step 8.

NOTE: PuraGuard Coalescing Cartridges are required for all EPA10 DD13 and DD15 engines.

8. Does the air dryer have the correct desiccant cartridge installed?

Copyright © 2014 DETROIT DIESEL CORPORATION

a. Yes; replace the air compressor. For EPA10 units, Refer to section "Inspection of the Diesel Exhaust Fluid Compressed Air Flow System after Air Compressor Failure" for a list of Diesel Exhaust Fluid (DEF) air system components that will have to be replaced.
b. No; install the correct cartridge. For EPA10 units, Refer to section "Inspection of the Diesel Exhaust Fluid Compressed Air Flow System after Air Compressor Failure" for a list of Diesel Exhaust Fluid (DEF) air system components that will have to be replaced.

 Copyright © 2014 DETROIT DIESEL CORPORATION

3 Will Not Build Air Pressure or Slow to Build Air Pressure

Check as follows:

1. Check for air system leaks. Refer to section " Air Brake System and Accessory Leakage Test". Were air system leaks found?
   a. Yes; repair as necessary.
   b. No; Go to step 2.
2. Is the air compressor the correct size for the current application? Refer to Table A of the Bendix Advanced Troubleshooting Guide for usage guidelines.
   a. Yes; Go to step 3.
   b. No; install a larger capacity compressor. (Note this may require a change in the air dryer assembly).
3. Check for a blocked, folded, or punctured discharge line. Is there any damage to the discharge line?
   a. Yes; repair is necessary.
   b. No; Go to step 4.
4. Check the condition of the air dryer desiccant cartridge. Has the cartridge exceeded its service life?
   a. Yes; replace cartridge.
   b. No; Go to step 5.
5. Measure the Air Inlet Restriction with a manual gauge under 100% load. **Do not use the gauge on the air filter assembly.** Is the Air Inlet Restriction greater than 18 H_2 O"?
   a. Yes; repair the cause of high inlet restriction.
   b. No; Go to step 6.
6. Check for restriction in the air intake from the turbo compressor inlet pipe to the compressor inlet. Were any intake restrictions found?
   a. Yes; repair as necessary
   b. No; Go to step 7.
7. Check for the presence of metallic debris in the compressor intake port. Was metallic debris present?
   a. Yes; replace air compressor, clean compressor intake pipe and turbo compressor inlet pipe.
   b. No; Go to step 8.
8. Is the compressor unloader mechanism functioning properly? Refer to section "Air Compressor Unloader Leakage Test".
   a. Yes; replace the air compressor.
   b. No; replace the unloader valve. Refer to section "Removal of the Air Compressor Unloader Valve".

Copyright © 2014 DETROIT DIESEL CORPORATION