



Commercial Vehicle Safety Alliance

North American Standard Inspection Program

I N S P E C T I O N B U L L E T I N

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MCI Buses with Detroit Diesel Engines

Summary

Certain Motor Coach Industries MCI buses are designed with naturally aspirated air compressors on models with Detroit Diesel engines in order to comply with EPA requirements. Inspectors may hear this leak and consider it an OOS condition as an audible air leak.

Background

MCI models D4000, D4500, E4500, J4500, and G4500 manufactured prior to 2003 use a Bendix Tu-Flo750 dual cylinder compressor. These coaches use a turbo-cut-off valve system in the air dryer purge valve. After pressure cut off at 125psi the purge valve closes but the compressor continues to pump air until next purge cycle.

MCI models D4000, D4500, E4500, J4500, and G4500 manufactured after 2003 use a Bendix BA921 single cylinder compressor. When the pressure has been reached, the purge valve opens the line from the compressor at the same time it purges the desiccant cartridge. The compressor continues to pump air through the discharge line and out the bottom of the purge valve on the bottom of the air dryer.

While the engine is running and not charging the air reservoirs, an air flow noise will be heard at the bottom of the air dryer. This may mistakenly be identified as an air leak.

Inspection Guidance

By design, this is normal and should not be considered an OOSC condition. To confirm that the system is functioning properly, shut off engine and noise will cease. If noise continues or other sounds are heard further investigation is required.



Service Bulletin No. 2878

<i>MODEL</i> D4000 / D4500 / E4500 / G4500 / J4500 Series Coaches	<i>TYPE</i> Service Information	<i>SECTION/GROUP</i> 4–Air System	<i>DATE</i> Feb. 9, 2004
<i>SUBJECT</i> AIR SYSTEM OPERATION ON EGR EQUIPPED ENGINES			
<i>CONDITIONS</i>			

Description:

Effective with unit number 55606 on D4000 / D4500 model coaches, unit number 62098 on E4500 / J4500 model coaches and unit number 62536 on G4500 model coaches, Motor Coach Industries (MCI) made changes in the air system to comply with Detroit Diesel's requirement that the new EGR equipped engines have naturally aspirated air compressors. This change was made by Detroit Diesel in order to meet the EPA requirements for 2002 / 2003 compliant engines.

Coaches Built Prior to the Affected Unit Numbers

These coaches utilize a "turbo cut–off valve" system in the air dryer purge valve. When the governor reached the cut–off pressure of 125 psi/862 kp, it signals the air dryer to purge, the turbo cut–off valve then shuts off all air flow to the air dryer.

After this initial purge, no air is released from the purge valve assembly until the next purge cycle. The air compressor used on these coaches is a two cylinder Bendix Tu–Flo 750 compressor. During the time the governor is cut–out, the compressor continues to pump air. A valve located between the two cylinders allows air to flow back and forth between the cylinders, thus no air is pumped to the dryer.

Current Coach Design

These coaches utilize a Bendix BA 921 single cylinder compressor. The circuit employed in these coaches is a discharge line unloading circuit. In this circuit, when the governor signals the purge valve that sufficient pressure has been reached, the purge valve opens the line from the compressor at the same time it purges the desiccant cartridge. The compressor then continues to pump air through the discharge line and out the bottom of the purge valve. During the entire time that the engine is running and the air system is not charging the reservoirs, an air flow noise will be heard emanating from the purge valve on the bottom of the air dryer that may be mistakenly identified as an air leak. By design, this situation is normal and should not be interpreted as a malfunction.

To confirm that in fact the system is functioning correctly, shut off the engine and this noise will cease. If it continues or other air sounds are heard, investigate further.

If you have further questions or concerns, please contact the MCI Fleet Support Technical Center at 1–800–241–2947.