



**** SOLUTION ****

Title	Electronically Controlled Air Dryer (ECAD) Diagnostic Procedures And Information
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Mack Models

Mack Model	LEU , LR , MRU - TerraPro , TE - TerraPro , AN - Anthem , CHU - Pinnacle, Axle back , CXU - Pinnacle, Axle front , GR - Granite , GU - Granite , PI - Pinnacle , TD - Titan
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Volvo Models

Volvo Model	VN , VNL , VNM , VNR , VNX , VAH , VHD , VT
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**** SOLUTION ****

Cause	Diagnostic procedures and information for electronically controlled air dryers.
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S Refer to the PDF files below to assist in diagnosing an Electronically Controlled Air Dryer (ECAD) system.

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l Need to look at transferring the diagnostic guide directly into solution and properly formatting the steps.

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ECAD Diagnostic Guide

The dryer has an inlet port an outlet port and an unloader port (which send air to the com
The spin on cartridge appears the same (part number not verified by me)
The purge valve looks the same as other dryers (from the outside)
The heater looks the same (from the outside) and has the same function and spec.
The outlet check valve looks the same (from the outside)
There is no turbo cut-off valve

Purge unload and regeneration are all controlled by the solenoid pack on the side of the di
Round connector with the following pin locations:

2 4
3 1

Pin 4 = Ignition power for both solenoids

Pin 3 = Ground control solenoid that opens the purge valve and sends system air to port 4

Pin 1 = Ground control solenoid then opens the regeneration valve allowing controlled out

Pin 2 = Not Used

Resistance Specs.



Pin 1 to Pin 4: 11-16 ohms

Pin 3 to Pin 4: 15-23 ohms

ECAD trouble shooting:

- 1) Disconnect the dryer inlet (port 1), signal (port 4), and outlet (port 2) lines.
- 2) Disconnect the solenoid electrical connector.
- 3) Connect shop air with a closed valve to the inlet.
- 4) Connect an air gauge on the signal line.
- 5) Connect a 1 gallon or larger air tank to the Dryer outlet.
- 6) Open the inlet valve supplying shop air to the dryer, and verify:
 - a. There are no air leaks from the dryer
 - b. The air tank fills with air
 - c. The signal gauge does not move
- 7) Close the inlet valve and supply 12 volts to pin 4 of the solenoid and ground pin 3 i
 - a. The dryer purges then stops leaking
 - b. The signal gauge rises to the tank pressure
- 8) Remove the ground from pin 3 then verify:
 - a. The signal gauge falls to 0 PSI
- 9) Ground pin 3 and pin 1 of the solenoid connector (12 volts on pin 4 still in place) a
 - a. The tank drains through the purge valve slowly (desiccant regeneration)
- 10) If the dryer passes the above tests then the dryer is functioning correctly. If the dr
then record results and call OnTrac at (866) 668-7221.



	ECAD Diagnostic Guide
	Meritor Wabco Technical Bulletin
	Meritor Wabco System Saver Series Single Cartridge Air Dryers

Solution visibility [Dealer distribution](#)

Function(s)/component(s) affected

Function affected Air Dryer

Function Group

Function Group 561 compressor, regulator, anti-freeze unit

Customer effect

Main customer effect noise , efficiency/abnormal behavior

Noise hissing noise

Fluid problem leak

Fluid implicated Air

Administration

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Last modified by A241298

Creation date 01-08-2019 15:08

Date of last update 14-08-2019 14:08

Status Published
