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Diagnosis: Replace compressor?
Test the control valve first

Variable displacement compressors are used in newer vehicles to reduce fuel consumption, and require new testing methods

Clutchless.
Electronically controlled.
Variable drive.

The new A/C system compressors have several names, and one thing in common: they can easily be misdiagnosed and require special testing.

Traditional compressor testing doesn't account for the variable electronic signal sent/received by the compressor, and can lead to a wrong diagnosis, increased cost and unhappy customers.

The clutch is replaced by a thermistor, transducer and solenoid, all controlled by an ECM, PCM, TIPM or a separate A/C controller. The control module varies the compressor duty cycle.

Testing a variable compressor can lead to a correct diagnosis of an issue with the command or control system, saving time, money and customer frustration with unnecessary repairs.

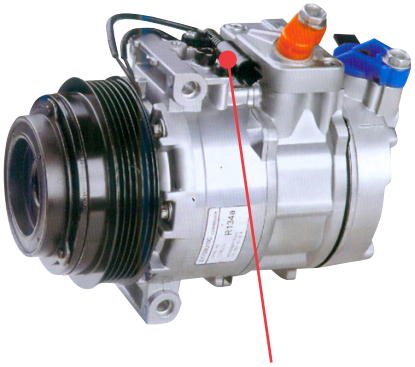
Customer complaint: A/C blows hot, worse gas mileage, vehicle has reduced power with A/C running. In hybrids, battery temperature fault caused by lack of cooling.

Why use the EVDC100 to diagnose?

The always-on compressor helps save fuel but varied voltage makes it hard to diagnose

Why do I need EVDC100?

- Eliminate misdiagnosing customer vehicles and performing unnecessary work
- Correctly diagnose and verify control valve and compressor function, saving time and cost
- Adjustable tester dial mimics variable voltage signal to compressor for wide-range testing
- Variable compressors are used in vehicles from GM, Ford, Toyota, FCA, BMW and more
- Variable compressor manufacturers include Denso, Valeo and Hanon
- Use of variable compressors is likely to increase as they reduce tailpipe emissions, increase fuel economy and eliminate A/C system engagement “bump” and power reduction



Variable displacement compressor example shown

How to use the EVDC100:

- Identify the type of compressor. Look for a control valve at the rear of the compressor to confirm it’s a variable displacement compressor
- Disconnect the compressor’s wiring harness
- Connect the EVDC100 test module to the compressor. This places the EVDC100 between the compressor control valve and the wiring harness, to isolate and diagnose system issues
- Connect a manifold gauge set or A/C machine to the vehicle’s high and low side connectors. This is to watch system pressure and monitor compressor function. A scan tool can also be used to monitor high and low side pressures
- Connect the EVDC100 to the vehicle battery
- Use the EVDC100 dial to raise and lower voltage supply to the compressor’s control valve

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