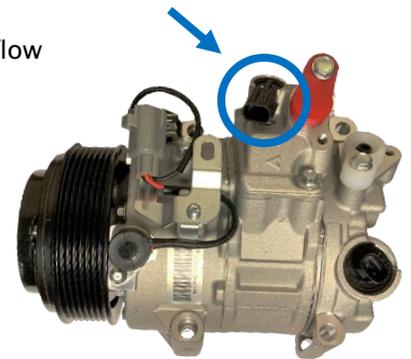


Variable Displacement Control Valve Compressors with Refrigerant Flow Sensor

As described in gpd Tech Tip #9, “Electronically Controlled Clutchless/Variable Drive Compressors”, late model A/C systems with an electronic control valve rely on a series of signals between the compressor, thermistor, pressure transducer, ECU, and interrelated sensors. Late model system can rely on confirmation signals from over 20 different sensors prior to turning on the compressor.

Some late model compressors now feature a refrigerant flow sensor, generally located on the discharge side of the compressor. It communicates with the ECU to confirm proper refrigerant flow. The ECU relies on the refrigerant flow sensor to confirm the programmed flow rate based on the engine speed, angle of the compressor swash plate and environmental factors. Any fault in the system that hinders refrigerant flow will signal the ECU to turn off the compressor. Whether the compressor and/or sensor is defective or not, the ECU will prevent the compressor from pumping if it does not receive the programmed readings.

Refrigerant Flow Sensor
* Location may vary by application



Take note if the original compressor features a refrigerant flow sensor.

- If the A/C system operates when the engine is turned on, but stops cooling after 15 minutes, try restarting the vehicle. If the fault occurs again, it could be the flow sensor causing the compressor to turn off.
- Some aftermarket compressor options may be listed as the correct fit for an application but not feature the flow sensor. If the original compressor features a flow sensor, make sure the replacement compressor also features a flow sensor.

gpd compressors are designed as direct fit replacement to meet/exceed OE fit, form, and function.

| gpd Replacement Compressors with Refrigerant Flow Sensor (TSE and TSE17C Styles) <i>*Not all available compressors with refrigerant flow sensor shown</i> | |
|--|--------------------------|
| Compressor No. | Application |
| 6513069 | 2011–2016 Scion tC |
| 6513068 | 2010–2016 Subaru Outback |
| 6512920 | 2010–2016 Subaru Legacy |
| 6512815 | 2011–2013 Toyota Corolla |

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