

KJ: Supercharger Bypass Control

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KJ1 CHECK FOR DTCS

Note: DTCs P1227 and P1228 are for informational purposes only and are usually accompanied by other DTCs. If concerns are present with the mass air flow (MAF) sensor, the exhaust gas recirculation (EGR) valve, or the manifold absolute pressure (MAP) sensor, DTCs P1227 or P1228 may be set. Diagnose all other DTCs before diagnosing DTCs P1227 or P1228.

Are DTCs P1227, or P1228 present?

Yes	No
GO to KJ2 .	For lack/loss of power, GO to KJ3 . For all other symptoms without DTCs, GO to KJ2 .

KJ2 DTCS P1227 OR P1228: VERIFY THE DTC

- Record and clear the DTCs.
- Drive the vehicle at normal operating temperature with the engine exceeding 2,000 RPM.
- Check for DTCs.

Are any other DTCs present?

Yes	No
DISREGARD the current diagnostic trouble code (DTC) at this time. DIAGNOSE the next DTC. GO to Section 4, Diagnostic Trouble Code (DTC) Charts and Descriptions .	GO to KJ4 .

KJ3 CHECK THE IAT2 PID



WARNING: TO AVOID PERSONAL INJURY DO NOT UNSCREW THE COOLANT PRESSURE RELIEF CAP WHILE THE ENGINE IS OPERATING OR HOT. THE COOLING SYSTEM IS UNDER PRESSURE. STEAM AND HOT LIQUID CAN COME OUT FORCEFULLY WHEN THE CAP IS LOOSENED SLIGHTLY. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

- Ignition ON, engine running.
- Access the PCM and monitor the IAT2 PID.

Is the temperature greater than 110°C (230°F)?

Yes	No
CHECK for low fluid level in the charge air cooler (CAC) system. CHECK for damaged CAC lines. REFER to the Workshop Manual Section 303-03B, Supercharger Cooling, to DIAGNOSE a loss of coolant.	GO to KJ4 .

KJ4 CHECK THE SUPERCHARGER BYPASS ACTUATOR VACUUM HOSES

Note: For vehicle specific vacuum hose routing, refer to the VECI label located in the front of the engine compartment.

- Check for holes, cracks, bends or kinks in the vacuum lines going to the supercharger bypass actuator.
- Check for any disconnected hoses at the supercharger bypass actuator.

Are any concerns present?

Yes	No
REPAIR or INSTALL new vacuum lines as necessary. CLEAR the DTCs. REPEAT the self-test.	GO to KJ5 .

KJ5 CHECK THE BYPASS VALVE ACTUATOR

Note: Additional DTCs may set as a result of disconnecting the vacuum line in this step.

- Visually inspect the bypass valve actuator for damage.
- Ignition OFF.
- Note the position of the supercharger bypass actuator linkage.
- Ignition ON, engine running.
- Note the position of the supercharger bypass actuator linkage.
- Disconnect the supercharger bypass actuator upper vacuum hose.

Does the supercharger bypass actuator linkage move when the engine is started, and return to the original position when the supercharger bypass actuator vacuum line is disconnected?

Yes	No
The concern is not present at this time. RETURN to Section 3, No Diagnostic Trouble Codes (DTCs) Present Symptom Chart Index , to DIAGNOSE lack/loss of power concerns.	INSTALL a new supercharger bypass actuator. CLEAR the DTCs. REPEAT the self-test.
