P0299

P0299-BOOST IN RANGE LOW

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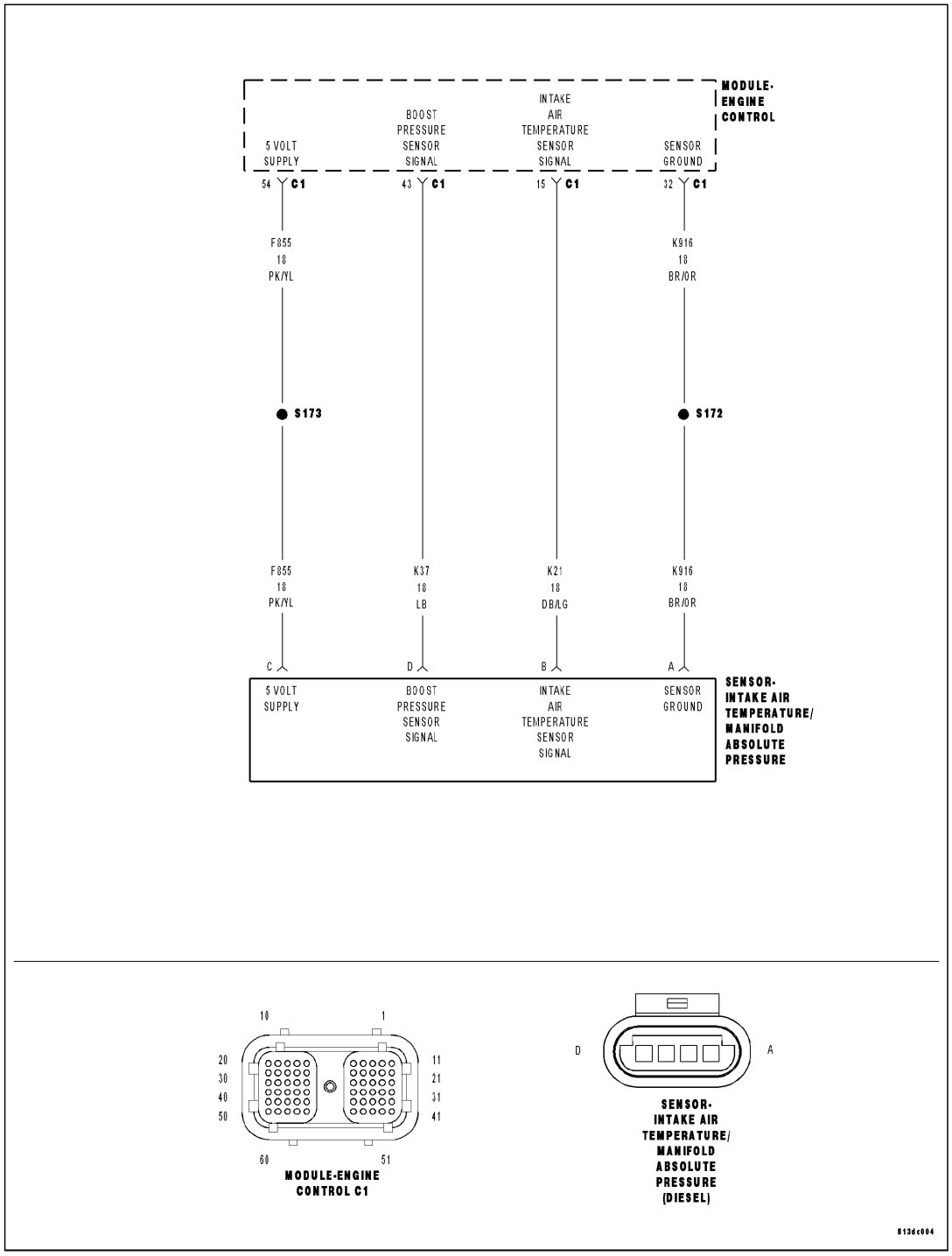

WHEN MONITORED

While engine is running.

SET CONDITION

The boost pressure is lower than the expected boost pressure based on engine operating conditions.

POSSIBLE CAUSES

- Other DTC's
- Intake air system restriction
- Turbo charger damaged
- Intake air system leak
- Boost pressure sensor
- Boost pressure sensor
- Turbocharger
- Intermittent condition

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding.

Diagnostic Test

1. OTHER DTC'S

Turn the ignition on.
With the scan tool, read the Engine DTC's.

Q: Do you have other DTC's?

YES: Repair other boost related DTC's first. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1
NO: Go To 2

2. INTAKE AIR SYSTEM RESTRICTION

Inspect the air filter and intake air system for signs of restriction.

Q: Were any restrictions found?

YES: Replace the Air Filter or repair the Intake air system for restriction. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1
NO: Go To 3

3. TURBO CHARGER DAMAGED

Disconnect the air cleaner connection to the turbo charger.
Visually inspect the turbo charger blades and turbo housing for signs of damage.

Q: Was any damaged found?

YES: Replace The Turbo charger. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1

NO: Go To 4

4. INTAKE AIR SYSTEM LEAK

Using Miller Special tool # 9022, pressurize the intake air system and inspect for leakage.

Q: Were any leaks detected?

YES: Repair leaking intake air system. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1

NO: Go To 5

5. BOOST PRESSURE SENSOR

Using the scan tool, compare the boost pressure sensor reading with the ambient air pressure sensor with the ignition turned on.

Q: Are the boost pressure and ambient air pressure sensors within 6 in Hg of each other?

YES: Go To 6

NO: Replace the Boost pressure sensor. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L l Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1

6. BOOST PRESSURE SENSOR

Turn the ignition off.

Install Miller special tool #9022.

Ignition on, engine not running.

Use the scan tool and compare boost pressure reading to the regulated air pressure for tool #9022.

NOTE: The reading on the boost pressure sensor may be slightly lower than the regulated pressure.

Q: Does the boost pressure sensor reading increase with the regulated air pressure?

YES: Go To 7

NO: Replace the Boost Pressure sensor. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L l Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1

7. TURBOCHARGER

Disconnect the exhaust outlet connection.

Visually inspect the Wastegate flap in the turbocharger turbine housing

Q: Is the Wastegate seized in the open position?

YES: Replace the Turbocharger. Perform the POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test - Ver 1

NO: Test Complete.