

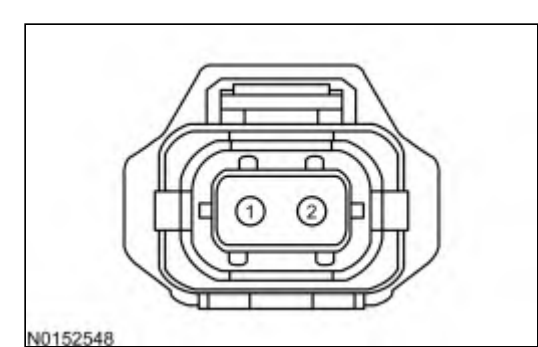
RE: Reductant Purge Valve

Note: Regeneration may occur during normal operation. During regeneration, diagnostic procedures may display biased values. If a regeneration occurs during diagnostic procedures, allow the process to complete before continuing diagnostics.

This pinpoint test is intended to diagnose the following:

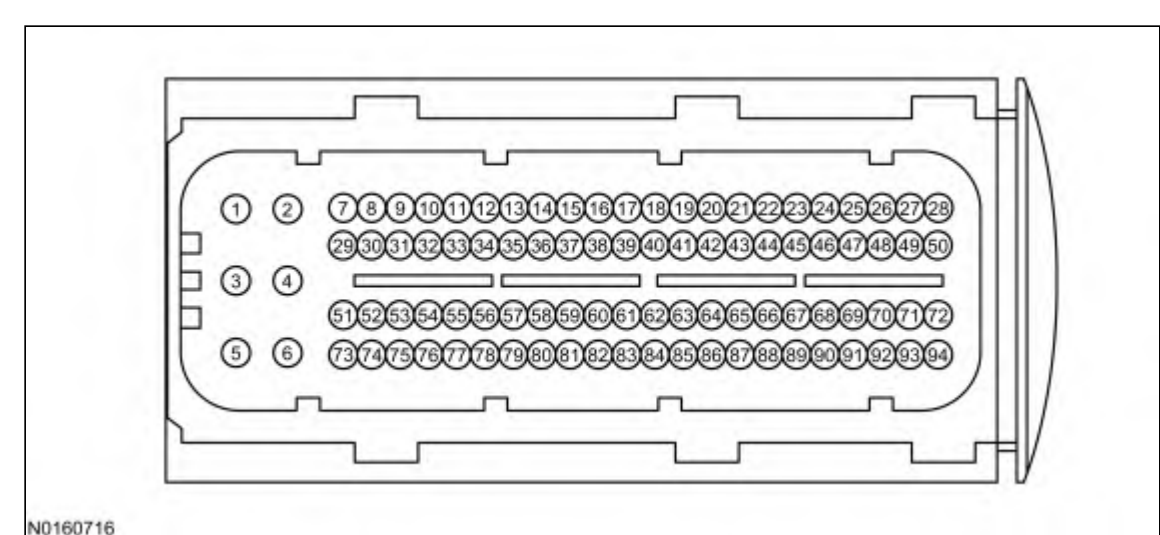
- reductant purge valve
- harness circuits: RDPGC and VPWR
- reductant dosage control module (5H298)

Reductant Purge Valve Connector



Vehicle	Connector	Pin	Circuit
Transit Connect	A	1	VPWR
		2	RDPGC
All other vehicles	A	2	VPWR
		1	RDPGC

Reductant Dosage Control Module Connector



Vehicle	Connector	Pin	Circuit
Transit	A	94	RDPGC
Transit Connect	A	50	RDPGC

RE1 PRELIMINARY DIAGNOSIS

Are DTCs P20A0, P20A2 or P20A3 present?

Yes	GO to RE2 .
No	Unable to duplicate the condition. CHECK for a loose connection, and damaged or corroded terminals. WIGGLE the harness attempting to recreate the concern. REPAIR as necessary. RETURN to Section 3, Symptom Charts for further direction.

RE2 CHECK THE REDUCTANT PURGE VALVE SOLENOID RESISTANCE

- Ignition OFF.
- For Transit Connect,
- Reductant Pump Assembly connector disconnected.
- Measure the resistance between:

(+) Reductant Pump Assembly Connector, Component Side	(-) Reductant Pump Assembly Connector, Component Side
RDPGC	RDPGPWR

- For all others,
- Reductant Purge Valve connector disconnected.
- Measure the resistance between:

(+) Reductant Purge Valve Connector, Component Side	(-) Reductant Purge Valve Connector, Component Side
RDPGC	VPWR

Is the resistance between 9.72 - 11.88 ohms?

Yes	GO to RE3 .
No	INSTALL a new Reductant Pump assembly. REFER to the Workshop Manual Section 303-08, Engine Emission Control. Clear the RDCM and PCM DTCs. REPEAT the self-test.

RE3 CHECK THE REDUCTANT PURGE VALVE SOLENOID FOR INTERNAL SHORTS

- For Transit Connect,
- Measure the resistance between:

(+) Reductant Pump Assembly Connector, Component Side	(-)
RDPGC	Ground

- For all others,
- Measure the resistance between:

(+) Reductant Purge Valve Connector, Component Side	(-)
RDPGC	Ground

Is the resistance greater than 10K ohms?

Yes	GO to RE4 .
No	INSTALL a new Reductant Pump assembly. REFER to the Workshop Manual Section 303-08, Engine Emission Control. Clear the RDCM and PCM DTCs. REPEAT the self-test.

RE4 CHECK THE VPWR CIRCUIT FOR VOLTAGE

- Ignition ON, engine OFF.
- For Transit Connect,
- Measure the voltage between:

(+) Reductant Pump Assembly Connector, Harness Side	(-)
RDPGPWR	Ground

- For all others,
- Measure the voltage between:

(+) Reductant Purge Valve Connector, Harness Side	(-)
VPWR	Ground

Is the voltage greater than 10 V?

Yes	GO to RE5 .
No	REPAIR the open circuit. Clear the RDCM and PCM DTCs. REPEAT the self-test.

RE5 CHECK THE RDPGC CIRCUIT FOR AN OPEN

- Ignition OFF.
- Reductant Dosage Control Module connector disconnected.
- For Transit Connect,
- Measure the resistance between:

(+) Reductant Pump Assembly Connector, Harness Side	(-) Reductant Dosage Control Module Connector, Harness Side
RDPGC	RDPGC

- For all others,
- Measure the resistance between:

(+) Reductant Purge Valve Connector, Harness Side	(-) Reductant Dosage Control Module Connector, Harness Side
RDPGC	RDPGC

Is the resistance less than 5 ohms?

Yes	GO to RE6 .
No	REPAIR the open circuit. Clear the RDCM and PCM DTCs. REPEAT the self-test.

RE6 CHECK THE RDPGC CIRCUIT FOR A SHORT TO GROUND

- For Transit Connect,
- Measure the resistance between:

(+) Reductant Pump Assembly Connector, Component Side	(-)
RDPGC	Ground

- For all others,
- Measure the resistance between:

(+) Reductant Purge Valve Connector, Harness Side	(-)
RDPGC	Ground

Is the resistance greater than 10K ohms?

Yes	GO to RE7 .
No	REPAIR the short circuit. Clear the RDCM and PCM DTCs. REPEAT the self-test.

RE7 CHECK THE RDPGC CIRCUIT FOR A SHORT TO VOLTAGE

- Ignition ON, engine OFF.
- For Transit Connect,
- Measure the voltage between:

(+) Reductant Pump Assembly Connector, Harness Side	(-)
RDPGC	Ground

- For all others,

- Measure the voltage between:

(+) Reductant Purge Valve Connector, Harness Side	(-)
RDPGC	Ground

Is any voltage present?

Yes	REPAIR the short circuit. Clear the RDCM and PCM DTCs. REPEAT the self-test.
No	GO to RE8 .

RE8 CHECK FOR CORRECT REDUCTANT PURGE VALVE OPERATION

- Reductant Pump Assembly connector connected.
- Reductant Purge Valve connector connected.
- Reductant Dosage Control Module connector connected.
- Ignition ON, engine OFF.
- Carry out the SCR Leak Test on the scan tool to pressurize the system.
- Access the DCU and monitor the REDUCT_TNK_P (PRESS) PID.
- Record the REDUCT_TNK_P PID value.
- Access the DCU and control the (PER) PID.
- Command the PID duty cycle to 100%.
- Access the DCU and monitor the REDUCT_TNK_P (PRESS) PID.

Does the REDUCT_TNK_P PID value decrease?

Yes	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.
No	INSTALL a new Reductant Pump assembly. REFER to the Workshop Manual Section 303-08, Engine Emission Control. Clear the RDCM and PCM DTCs. REPEAT the self-test.