

DTC P0796 or P0797**Diagnostic Instructions****DTC Descriptors****DTC P0796:** Clutch Pressure Control (PC) Solenoid 3 - Stuck Off**DTC P0797:** Clutch Pressure Control (PC) Solenoid 3 - Stuck On**Diagnostic Fault Information**

The following fault table will help determine if a hydraulic circuit or an incorrect position of a valve train component affects the transmission operation.

Component	Cause	DTCs
Automatic Transmission Fluid Filter Assembly	Oil filter loose or damaged	P0796
Control Solenoid (w/body and TCM) Valve Assembly	<ul style="list-style-type: none"> • Clutch Pressure Control Solenoid 3: <ul style="list-style-type: none"> - Always exhausting (Stuck On) - Not exhausting (Stuck Off) - Needle piston or armature pin binding - Control signal fluid supply leak - valve body filter plate assembly cracked or damaged gasket seal - O-ring seals leaking • Valve body filter plate assembly cracked, blocked or damaged gasket seal 	P0796 P0797
Lower Control Valve Body Assembly	Clutch select valve stuck off - debris, sediment, binding or scored bore	P0796 P0797
Fluid Pump Cover Assembly	<ul style="list-style-type: none"> • Fluid pump cover vanes and fluid pump rotor broken - wrong pump rotor installed • Fluid pump or torque converter overstressed because of high temperatures 	P0796
1-2-3-4 and 3-5-R Clutch Housing Assembly	1-2-3-4 clutch backing plate retaining ring not seated, causing the piston to over-travel and cut 1-2-3-4 clutch piston seal	P0796
4-5-6 Clutch Housing	4-5-6 housing broken hub weld	P0796

<u>Transmission Gear Range to PC Solenoid Valve Operation</u>	1-2-3-4 CL PC SOL 5	2-6 CL PC SOL 4	3-5 REV CL PC SOL 2	LOW REV 4-5-6 CL PC SOL 3
Gear				
Park	OFF	OFF	OFF	ON
Reverse	OFF	OFF	ON	ON
Neutral	OFF	OFF	OFF	ON
1st Braking	ON	OFF	OFF	ON
1st	ON	OFF	OFF	OFF
2nd	ON	ON	OFF	OFF
3rd	ON	OFF	ON	OFF
4th	ON	OFF	OFF	ON
5th	OFF	OFF	ON	ON
6th	OFF	ON	OFF	ON

Circuit/System Description

The clutch pressure control (PC) solenoid 3 is integral to the control solenoid (w/body and TCM) valve assembly and has no serviceable parts. The PC solenoid 3 is a normally high-pressure control solenoid which provides fluid pressure to the BR1 and 456 clutch regulator valve. The TCM controls the solenoid pressure by regulating the exhaust fluid. When the TCM commands the solenoid off, the exhausting fluid is stopped and the BR1 and 456 pressure is high. When commanded on, the clutch PC solenoid 3 regulates the amount of exhausting transmission fluid. Solenoid power is supplied by the TCM through a high side driver (HSD). The HSD protects the circuits and components that the TCM powers. Should the circuit overload the driver will shutdown. After the overload is removed the HSD reset.

Conditions for Running the DTC

- No DTCs P0716 or P0717.
- No DTCs P0722 or P0723.
- No DTCs P1825 or P1915.

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- The transmission input shaft speed is greater than 60 RPM.
- Low and reverse/4-5-6 clutch is commanded ON.

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- The transmission output shaft speed is greater than 200 RPM.
- Low and reverse/4-5-6 clutch is commanded OFF.

Conditions for Setting the DTC

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The TCM detects an incorrect on-coming clutch gear ratio, or flare, when the low and reverse/4-5-6 clutch is commanded OFF for 0.5 seconds and the transmission input shaft speed is greater than 75 RPM from the anticipated input shaft speed.

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The TCM detects an incorrect off-going clutch gear ratio, or tie-up, when the low and reverse/4-5-6 clutch is commanded ON for 0.5 seconds and the transmission input shaft speed is greater than 40 RPM from the anticipated input shaft speed.

Action Taken When the DTC Sets

- DTCs P0796 and P0797 are Type A DTCs.
- The TCM commands maximum line pressure.
- The TCM inhibits TCC.
- The TCM freezes transmission adaptive functions.

Conditions for Clearing the DIC/DTC

DTCs P0796 and P0797 are Type A DTCs.

Diagnostic Aids

When attempting to set transmission performance DTCs, observe the Freeze Frame and Failure Records to assist in duplicating the failure conditions.

Reference Information

Schematic Reference

- [Drive Range - Fourth Gear](#)
- [Drive Range, Fifth Gear](#)
- [Drive Range, Sixth Gear](#)

Special Tools

- [DT-47825](#) Control Solenoid Test Plate
- [DT-47825-10](#) Jumper Harness

Circuit/System Verification

1. Perform the [Transmission Fluid Check](#) .
2. Turn ON the ignition, with the engine OFF.

Important: Before clearing the DTC, use the scan tool in order to record the Freeze Frame and Failure Records.

3. Record the DTC Freeze Frame and Failure Records.
4. Clear the DTC.

- Operate the vehicle in DRIVE with the calculated throttle position greater than 15 percent to obtain 72 km/h (45 mph) and achieve 5th gear. Perform this maneuver 2 times.
⇒ If the DTC resets, go to Circuit/System Testing.

Circuit/System Testing

- Perform the [Line Pressure Check](#) .
⇒ If the pressure is out of specification, correct this concern first.
- Perform the [Control Solenoid Valve and Transmission Control Module Assembly Cleaning](#) and retest the DTC as outlined in the Circuit/System Verification steps.
⇒ If the DTC resets, continue on with testing.
- Perform the [Control Solenoid Valve and Transmission Control Module Assembly Inspection](#) .
⇒ If a concern is found, repair or replace the control solenoid (w/body and TCM) valve assembly.
- Perform the [Control Solenoid Valve and Transmission Control Module Assembly Solenoid Performance Test](#) .
⇒ If the solenoid is found to be leaking or stuck closed, replace the control solenoid (w/body and TCM) valve assembly.
- Inspect the control valve upper body assembly for sticking valves, damage, scored bores, or debris.
⇒ If a concern is found in the valve body, repair or replace the valve body as necessary.
- Inspect the low and reverse/4-5-6 clutch assembly for damage.
⇒ If a concern is found in the low and reverse/4-5-6 clutch assembly, repair or replace as necessary.

Component Testing

Perform the [Control Solenoid Valve and Transmission Control Module Assembly Inspection](#) .

PC Sol 3 Operation	Normal Operation	Stuck OFF	Stuck ON
Steady State Gears 1st Braking 4, 5, 6	1st Braking, 4, 5, 6	1st Free Wheel, Neutral	1st Braking, 4, 5, 6
Steady State Gears, 1 Free Wheel 2, 3	1st Free Wheel, 2, 3	1st Free Wheel, 2, 3	1st Braking, 4, 5, 6
Garage Shift	Park/Neutral to Reverse/Drive	Neutral 1st Free Wheel	Drive Gear
Downshift from gears 4, 5, 6 to 1, 2, 3	1st Free Wheel, 2, 3	1st Free Wheel, 2, 3	1st Braking, 4, 5, 6
Upshift from gears 1, 2, 3 to 4, 5, 6	4, 5, 6	Neutral	4, 5, 6

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- Control valve body replacement. Refer to [Control Valve Lower Body and Upper Body Replacement](#) .
- Low and reverse/4-5-6 clutch assembly repair or replace. Refer to [Low and Reverse Clutch Overhaul](#) and [4-5-6 Clutch Overhaul](#) .
- Control solenoid (w/body and TCM) valve assembly replacement. Refer to [Control Module References](#) for replacement, setup, and programming.
- Perform the [Service Fast Learn Adapts](#) if internal transmission repairs are performed.