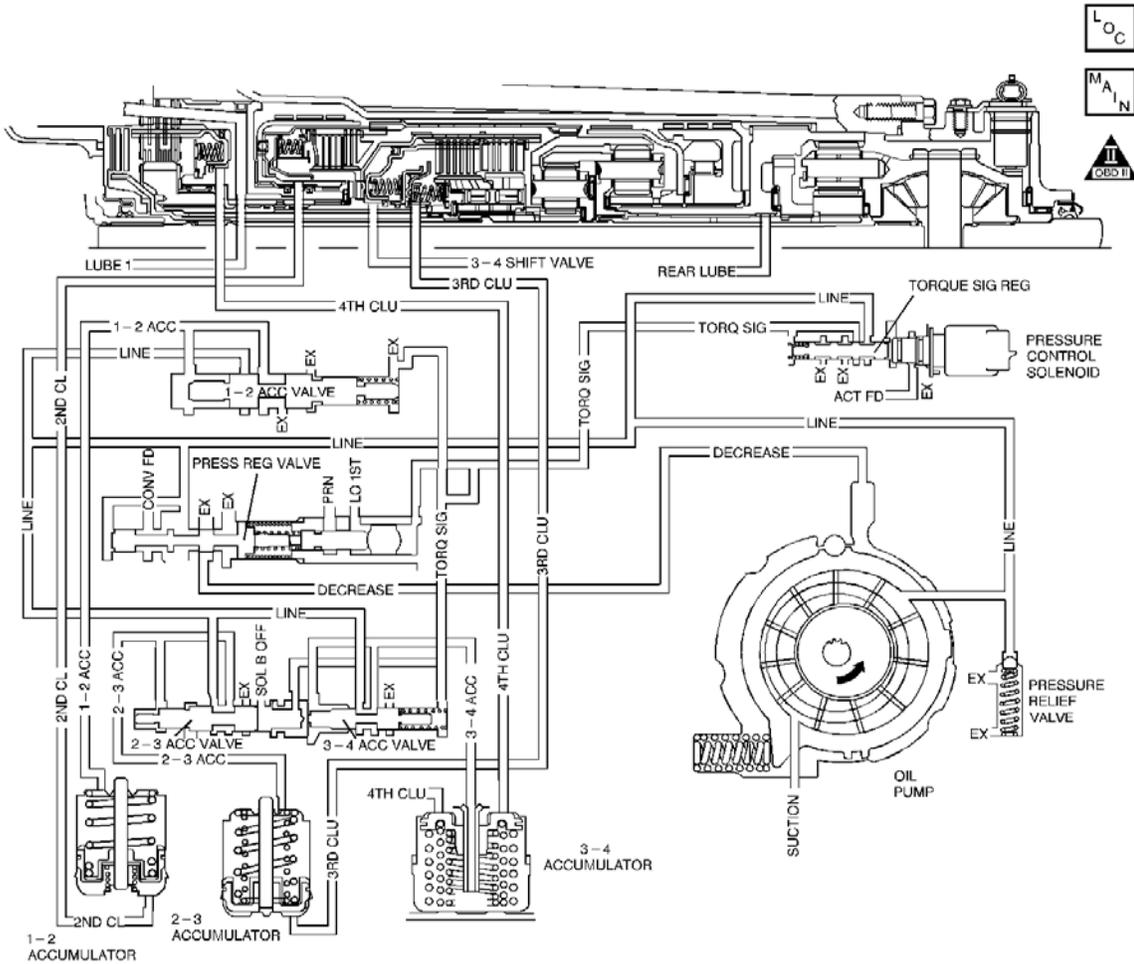


DTC P1811 Maximum Adapt and Long Shift



Circuit Description

The transmission pressure is modified by an adaptive modifier which controls the shift execution time. This test checks the time required to accomplish the shift. If the shift takes longer than 0.65 seconds and the adaptive modifier cannot shorten this time, then a counter increases by one.

If the PCM detects a counter value of 2 during one trip, then DTC P1811 sets. DTC P1811 is a type C DTC.

Conditions for Running the DTC

- The shift is adaptable.
- The 1-2, the 2-3 or the 3-4 shift adapt cell has reached its limit.

Conditions for Setting the DTC

The 1-2, 2-3 or 3-4 shift is longer than 0.65 seconds, twice in one trip.

Action Taken When the DTC Sets

- The PCM does not illuminate the malfunction indicator lamp (MIL).
- The PCM commands maximum line pressure.
- The PCM freezes shift adapts.
- The PCM records the operating conditions when the Conditions for Setting the DTC are met. The PCM stores this information as Failure Records.
- The PCM stores DTC P1811 in PCM history.

Conditions for Clearing the DTC

- A scan tool can clear the DTC.
- The PCM clears the DTC from PCM history if the vehicle completes 40 consecutive warm-up cycles without a non-emission-related diagnostic fault occurring.
- The PCM cancels the DTC default actions when the fault no longer exists and the ignition switch is OFF long enough in order to power down the PCM.

Diagnostic Aids

- Ask the customer about possible overloading, exceeding the trailer towing limit, or towing in overdrive.
- Ensure that the PCM has the latest calibration update.

Test Description

The numbers below refer to the step numbers on the diagnostic table.

7. This step inspects components that may cause low line pressure.
9. This step inspects or repairs components that may cause a maximum adapt and long 1-2 upshift.
11. This step inspects or repairs components that may cause a maximum adapt and long 2-3 upshift.
13. This step inspects or repairs components that may cause a maximum adapt and long 3-4 upshift.

DTC P1811 Maximum Adapt and Long Shift

Step	Action	Value(s)	Yes	No
1	Did you perform the Powertrain Diagnostic System Check?	--	Go to Step 2	Go to Powertrain On Board Diagnostic (OBD) System Check in Engine Controls
2	Did you perform the transmission fluid checking procedure?	--	Go to Step 3	Go to Transmission Fluid Checking Procedure
3	<ol style="list-style-type: none"> 1. Install a Scan Tool . 2. Turn ON the ignition with the engine OFF. <p>Important</p> <p>Before clearing the DTCs, use the Scan Tool in order to record the Failure Records for reference. Using the Clear Info function will erase the stored Failure Records from the PCM.</p> <ol style="list-style-type: none"> 3. Record the Failure Records. 	--		

	4. Clear the DTCs. Are any of DTCs P0121, P0122, P0123, P0218, P0502, P0503, P0711, P0712, P1121 or P1122 also set?		Go to Step 4	Go to Step 5
4	Diagnose the above DTCs first. Is the diagnosis and repair complete?	--	Go to Step 14	--
5	1. Use the Scan Tool snapshot mode in order to record the shift times. 2. Drive the vehicle in D4 in order to obtain a 1-2, 2-3 and 3-4 upshift. 3. Record the shift times. Did all the shift times exceed the specified value?	0.65 seconds	Go to Step 6	Go to Step 8
6	Perform the line pressure check. Refer to the Line Pressure Check Procedure . Is the line pressure within specifications?	--	Go to Diagnostic Aids	Go to Step 7
7	Inspect the transmission for the following conditions: <ul style="list-style-type: none"> • Fluid level low • Oil filter and seal missing, plugged or damaged • Spacer plate and gasket damaged or misassembled • PC solenoid valve damaged or contaminated • Pressure regulator valve line-up binding or damaged • Torque signal valve line-up binding or damaged • Oil pump assembly damaged or missing components Refer to: <ul style="list-style-type: none"> • Incorrect Line Pressure • Transmission Overhaul Procedure in the 4T65-E Section of the Transmission Unit Repair Manual. Did you complete the repair?	--	Go to Step 14	--
8	Did the 1-2 shift time exceed the specified value?	0.65 seconds	Go to Step 9	Go to Step 10
	Inspect the transmission for the following conditions: <ul style="list-style-type: none"> • 1-2 accumulator piston seals rolled or damaged • 1-2 accumulator piston and pin missing, binding or damaged • Forward servo assembly damaged or misassembled • Oil pump assembly damaged or missing components • Spacer plate and gaskets damaged or misassembled • Driven sprocket support seals damaged or missing 			

9	<ul style="list-style-type: none"> • Second clutch piston and seal assembly binding or damaged • Second clutch fiber and steel plates misassembled, burned or damaged • Second clutch spring assembly damaged or misassembled • Forward band burned, damaged or misassembled • 1-2 support roller clutch assembly damaged or misassembled <p>Refer to Transmission Overhaul Procedure in the 4T65-E Section of the Transmission Unit Repair Manual.</p> <p>Did you complete the repair?</p>	--	Go to Step 14	--
10	Did the 2-3 shift time exceed the specified value?	0.65 seconds	Go to Step 11	Go to Step 12
11	<p>Inspect the transmission for the following conditions:</p> <ul style="list-style-type: none"> • 2-3 accumulator piston seals rolled or damaged • 2-3 accumulator piston and pin missing, binding or damaged • Oil pump assembly damaged or missing components • Spacer plate and gaskets damaged or misassembled • Driven sprocket support seals damaged or missing • Third clutch piston seal rolled or damaged • Third clutch piston damaged or misassembled • Third clutch fiber and steel plates misassembled, burned or damaged • Third clutch spring assembly damaged or misassembled • Third sprag clutch assembly damaged or misassembled <p>Refer to Transmission Overhaul Procedure in the 4T65-E Section of the Transmission Unit Repair Manual.</p> <p>Did you complete the repair?</p>	--	Go to Step 14	--
12	Did the 3-4 shift time exceed the specified value?	0.65 seconds	Go to Step 13	Go to Diagnostic Aids
13	<p>Inspect the transmission for the following conditions:</p> <ul style="list-style-type: none"> • Oil pump assembly damaged or missing components • Spacer plate and gaskets damaged or misassembled • 3-4 accumulator piston seals rolled or damaged • 3-4 accumulator piston and pin missing, binding or damaged • Fourth clutch piston seal rolled or damaged • Fourth clutch piston damaged, misassembled or seized 	--		--

	<ul style="list-style-type: none"> • Fourth clutch fiber and steel plates misassembled, burned or damaged • Fourth clutch spring assembly damaged or misassembled <p>Refer to Transmission Overhaul Procedure in the 4T65-E Section of the Transmission Unit Repair Manual.</p> <p>Did you complete the repair?</p>		<p>Go to Step 14</p>	
14	<ol style="list-style-type: none"> 1. Change the AT fluid and filter. 2. Inspect for correct transmission fluid level. Refer to Transmission Fluid Checking Procedure . 3. Add new AT fluid as necessary. <p>Important</p> <p>The Clear TAPS function will clear all adapt cells. This may affect transmission performance. The PCM will update the transmission adapt cell values as the vehicle is driven.</p> <ol style="list-style-type: none"> 4. Using the Scan Tool , perform the Clear TAPS function. <p>Did you complete the above procedure?</p>	--	<p>Go to Step 15</p>	--
15	<p>Perform the following procedure in order to verify the repair:</p> <ol style="list-style-type: none"> 1. Select DTC. 2. Select Clear Info. 3. Drive the vehicle in D4. 4. Monitor Last Shift Time on the Scan Tool . Ensure that the 1-2, 2-3, and 3-4 shift times are less than 0.65 second. <p>Was each shift time less than 0.65 second?</p>	--	System OK	<p>Go to Step 1</p>