

DTC P0733 [FN4A-EL]

B3E050219090W16

DTC P0733	Gear 3 incorrect (incorrect gear ratio detected)
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM monitors revolution ratio of forward clutch drum revolution to differential gear case revolution when the following monitoring conditions are met. If the revolution ratio is below 0.86 or 1.25 or more, the PCM determines that there is a malfunction. <p>Monitoring condition:</p> <ul style="list-style-type: none"> ATF temperature 20 °C {68 °F} or more Driving in 3 GR in D or M range Engine running Turbine speed within 225-4,987 rpm Differential gear case (output) revolution speed 35 rpm or more None of the following present: DTC P0500, P0706, P0707, P0708, P0712, P0713, P0715, P0751, P0752, P0753, P0756, P0757, P0758, P0761, P0762, P0763, P0766, P0767, P0768, P0771, P0772, P0773 <p>Diagnostic support note:</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The MIL does not illuminate. The AT warning light illuminates if the PCM detects the above malfunction condition during the first drive cycle. FREEZE FRAME DATA is not available. A PENDING CODE is not available. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> ATF level low Deteriorated ATF Shift solenoids A or C stuck Pressure control solenoid stuck Line pressure low 3-4 clutch slipping Forward clutch slipping Control valve stuck (Bypass, TCC or 3-4 shift valve) Oil pump malfunction PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY RELATED REPAIR INFORMATION AVAILABILITY	
	<ul style="list-style-type: none"> Verify related Service Bulletins and/or on-line repair information availability. Is any related repair information available? 	Yes Perform repair or diagnosis according to the available repair information. No Go to the next step.
2	INSPECT ATF CONDITION	
	<ul style="list-style-type: none"> Inspect the ATF condition. (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION.) Is it normal? 	Yes Go to the next step. No Replace the transaxle, then go to Step 8.
	INSPECT ATF LEVEL	
	<ul style="list-style-type: none"> Start the engine. 	Yes Go to the next step.

3	<ul style="list-style-type: none"> Warm up the ATX. Is the ATF level within the specification? (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION.) 	No	Add ATF to the specified level, then go to Step 8.
4	INSPECTION SHIFT SOLENOID VALVE A AND C FOR CLICK SOUND <ul style="list-style-type: none"> Perform operation inspection. (See SOLENOID VALVE INSPECTION.) Verify the click sound of shift solenoid A and C when applying B+ to each transaxle terminal. Was a click heard from solenoids? 	Yes	Go to the next step.
		No	Replace the solenoid where you could not hear a click sound, then go to Step 8. (See SOLENOID VALVE REMOVAL/INSTALLATION.)
5	INSPECT LINE PRESSURE <ul style="list-style-type: none"> Start the engine. Measure the line pressures. <p>Specification</p> <p>Idle: 330-470 kPa {3.4-4.7 kgf/cm², 48-68 psi}</p> <p>Stall:</p> <p>1,090-1,250 kPa {11.2-12.7 kgf/cm², 159-181 psi} (Z6)</p> <p>1,160-1,320 kPa {11.8-13.5 kgf/cm², 168-191 psi} (LF)</p> <ul style="list-style-type: none"> Are the line pressures within the specifications? (See Line Pressure Test.) 	Yes	Go to the next step.
		No	<p>All ranges: Replace the oil pump, then go to Step 8.</p> <p>Any ranges: Replace the control valve body, then go to Step 8. (See CONTROL VALVE BODY REMOVAL.) (See CONTROL VALVE BODY INSTALLATION.)</p>
6	INSPECT STALL SPEED <ul style="list-style-type: none"> Measure the stall speed in D range. (See Stall Test.) <p>Specification</p> <p>2,100-2,700 rpm (Z6)</p> <p>2,000-2,600 rpm (LF)</p> <ul style="list-style-type: none"> Is the stall speed within the specification? 	Yes	Go to the next step.
		No	<p>Replace the automatic transaxle, then go to Step 8. (See AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION [Z6].) (See AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION [LF].)</p>
7	INSPECT FREQUENCY OF INPUT/TURBINE SPEED SENSOR WHEN DRIVING VEHICLE <ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Connect the WDS or equivalent. Start the engine. Measure the frequency of input/turbine speed sensor while driving vehicle under the following conditions: 	Yes	Go to the next step.
			Replace the control valve body, then go to the next step.

	<ul style="list-style-type: none"> - Vehicle speed (VSS PID): 60 km/h {37 mph} - Drive in the D range, 3GR - Throttle opening angle (TP PID): approx. 25% 	No	(See CONTROL VALVE BODY REMOVAL.) (See CONTROL VALVE BODY INSTALLATION.)
	<ul style="list-style-type: none"> • Was the frequency of the input/turbine speed sensor at approx. 1,200 Hz? 		
8	VERIFY REPAIR OF DTC P0732 <ul style="list-style-type: none"> • Make sure to reconnect all the disconnected connectors. • Clear the DTC using the WDS or equivalent. • Start the engine. • Warm up the transaxle. • Drive the vehicle under the following conditions for more than 2 s: <ul style="list-style-type: none"> - ATF temperature: 20 °C {68 °F} or more - Drive in the D range, 3GR - Vehicle speed (VSS PID): 4 km/h {3 mph} or more 	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [ZJ, Z6].) (See PCM REMOVAL/INSTALLATION [LF].)
		No	Go to the next step.
9	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Perform the "After Repair Procedure". (See AFTER REPAIR PROCEDURE [FN4A-EL].) • Are any DTCs present? 	Yes	Go to the applicable DTC inspection.
		No	DTC troubleshooting completed.