

DTC P0713 [FN4A-EL]

B3E050219090W12

DTC P0713	Transaxle fluid temperature (TFT) sensor circuit malfunction (open circuit)
DETECTION CONDITION	<ul style="list-style-type: none"> If the PCM detects the following condition for 150 s or more, the PCM determines that the TFT sensor circuit has a malfunction. <ul style="list-style-type: none"> TFT sensor voltage 4.67 V or more and vehicle speed 20 km/h {12 mph} or more <p>Diagnostic support note:</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The MIL illuminates if the PCM detects the above malfunction conditions during the first drive cycle. A PENDING CODE is not available. FREEZE FRAME DATA is available. The AT warning light illuminates. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> TFT sensor malfunction Open circuit in wiring harness between TFT sensor terminal A and ATX terminal E Open circuit in wiring harness between TFT sensor terminal B and ATX terminal H Open circuit in wiring harness between ATX terminal E and PCM terminal 1AU (Z6)/1U (LF) Open circuit in wiring harness between ATX terminal H and PCM terminal 1AN (Z6)/1AA (LF) Damaged connectors between TFT sensor and PCM PCM malfunction

ATX

TFT SENSOR

PCM

TRANSAXLE CONNECTOR WIRING HARNESS-SIDE CONNECTOR

TFT SENSOR WIRING HARNESS-SIDE CONNECTOR

PCM WIRING HARNESS-SIDE CONNECTOR

Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has the FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • 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. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	VERIFY CURRENT INPUT SIGNAL STATUS • Turn the ignition switch to the ON position (engine off). • Measure the voltage at PCM terminal 1AU (Z6)/1U (LF). • Is the voltage below 4.67 V ?	Yes	Go to the intermittent concern troubleshooting procedure. (See INTERMITTENT CONCERN TROUBLESHOOTING [ZJ, Z6].) (See INTERMITTENT CONCERN TROUBLESHOOTING [LF].)
		No	Go to the next step.
4	INSPECT ATX CONNECTOR FOR POOR CONNECTION • Turn the ignition switch to the LOCK position. • Inspect ATX connector connection. • Disconnect the ATX connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is the connection normal?	Yes	Go to the next step.
		No	Repair or replace the connector and/or terminals, then go to Step 11.
5	INSPECT TFT SENSOR CIRCUIT • Turn the ignition switch to the ON position (engine off). • Measure the voltage at PCM terminal 1AU (Z6)/1U (LF) when connect between ATX terminals E and H (wiring harness-side) using jumper wire. • Verify that voltage changes to 0.06 V or less . • Does the voltage change?	Yes	Go to the next step.
		No	Go to Step 8.
6	INSPECT TFT SENSOR CONNECTOR FOR POOR CONNECTION • Turn the ignition switch to the LOCK position. • Remove the under cover of control valve body. • Disconnect the TFT sensor connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is the connection normal?	Yes	Go to the next step.
		No	Repair or replace the connector and/or terminals or replace the TFT sensor, then go to Step 11. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/INSTALLATION.)
7	INSPECT TFT SENSOR CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity between TFT sensor terminals (wiring harness-side) and ATX terminals (transaxle case side). - ATX terminal E and TFT sensor terminal A - ATX terminal H and TFT sensor terminal B • Is there continuity?	Yes	Replace the TFT sensor, then go to Step 11. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness, then go to Step 11.
	INSPECT PCM CONNECTOR FOR POOR CONNECTION	Yes	Go to the next step.

8	<ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is the connection normal? 	No	Repair or replace the connector and/or terminals, then go to Step 11.
9	INSPECT WIRING HARNESS FOR OPEN CIRCUIT <ul style="list-style-type: none"> • Disconnect the ATX connector. • Connect the PCM connector. • Turn the ignition switch to the ON position (engine off). • Inspect the voltage at ATX terminal E (vehicle wiring harness-side). • Is the voltage 5 V? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 11.
10	INSPECT ATX CONNECTOR CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> • Turn the ignition switch to the LOCK position. • Inspect for continuity between ATX terminal H (wiring harness-side) and body ground. • Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.
11	VERIFY TROUBLESHOOTING OF DTC P0713 COMPLETED <ul style="list-style-type: none"> • Make sure to reconnect all the disconnected connectors. • Clear the DTC from the memory using the WDS or equivalent. • Drive the vehicle under the following condition for 150 s or more. <ul style="list-style-type: none"> - Vehicle speed (VSS PID) 20 km/h {12 mph} or more. • Is the same DTC present? 	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.
12	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.