

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

According to the DATA LIST displayed by the OBD II scan tool or hand-held tester, you can read the value of the switch, sensor, actuator and so on without parts removal. Reading the DATA LIST as the first step of troubleshooting is one method to shorten labor time.

- Warm up the engine.
- Turn the ignition switch off.
- Connect the OBD II scan tool or hand-held tester to the DLC3.
- Turn the ignition switch to the ON position.
- Push the "ON" button of the OBD II scan tool or the hand-held tester.
- When you use the hand-held tester:
Select the item "DIAGNOSIS / ENHANCED OBD II / DATA LIST".
- According to the display on the tester, read the "DATA LIST".

Item	Measurement Item/ Range (display)	Normal Condition	Diagnostic Note
STOP LIGHT SW	Stop light SW Status/ ON or OFF	<ul style="list-style-type: none"> Brake Pedal is depressed: ON Brake Pedal is released: OFF 	–
PNP SW [NSW]	PNP SW Status/ ON or OFF	Shift lever position is; P and N: ON Except P and N: OFF	When the shift lever position displayed on the hand-held tester differs from the actual position, adjustment of the PNP switch or the shift cable may be incorrect. HINT: When the failure still occurs even after adjusting these parts, See page DI-993 .
LOW	PNP SW Status/ ON or OFF	<ul style="list-style-type: none"> Shift lever position is 2: OFF ↓ Shift position L switch Push: ON ↓ Shift position L switch Push: OFF 	↑
2ND	PNP SW Status/ ON or OFF	Shift lever position is; 2 and L: ON Except 2 and L: OFF	↑
3RD	PNP SW Status/ ON or OFF	Shift lever position is; 3: ON Except 3: OFF	↑
DRIVE	PNP SW Status/ ON or OFF	Shift lever position is; D: ON Except D: OFF	↑
REVERSE	PNP SW Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	↑
OVERDRV CUT SW2	O/D SW Status/ ON or OFF	<ul style="list-style-type: none"> IG SW ON: ON ↓ O/D SW Push: OFF ↓ O/D SW Push: ON 	–
SHIFT	Actual Gear Position/ 1st, 2nd, 3rd, 4th or 5th	Shift lever position is; <ul style="list-style-type: none"> L: 1st 2: 1st or 2nd 3: 1st, 2nd or 3rd 4(O/D OFF): 1st, 2nd, 3rd or 4th D: 1st, 2nd, 3rd, 4th or 5th 	–

DIAGNOSTICS – AUTOMATIC TRANSMISSION (A750E for 1GR-FE)

LOCK UP SOL	Lock Up Solenoid Status/ ON or OFF	<ul style="list-style-type: none"> • Lock Up: ON • Except Lock Up: OFF 	–
SOLENOID (SLT)	Shift Solenoid SLT Status/ ON or OFF	<ul style="list-style-type: none"> • Accelerator pedal is depressed: OFF • Accelerator pedal is released: ON 	–
SOLENOID (SLU)	Shift Solenoid SLU Status/ ON or OFF	<ul style="list-style-type: none"> • Lock Up: ON • Except Lock Up: OFF 	–
AT FLUID TEMP 1	ATF Temp. Sensor No.1 Value/ min.: –40°C (–40°F) max.: 215°C (419°F)	<ul style="list-style-type: none"> • After Stall Test; Approx. 80°C (176°F) • Equal to ambient temperature when cold soak 	If the value is "–40°C (–40°F)" or "215°C (419°F)", ATF temp. sensor No.1 circuit is open or shorted.
AT FLUID TEMP 2	ATF Temp. Sensor No.2 Value/ min.: –40°C (–40°F) max.: 215°C (419°F)	<ul style="list-style-type: none"> • After Stall Test; Approx. 80°C (176°F) • Equal to ambient temperature when cold soak 	If the value is "–40°C (–40°F)" or "215°C (419°F)", ATF temp. sensor No.2 circuit is open or shorted.
SPD (SP2)	Output shaft Speed/ min.: 0 km/h (0 mph) max.: 255 km/h (158 mph)	Vehicle stopped: 0 km/h (0 mph) [HINT] Equal to vehicle speed	–
SPD (NT)	Input Turbine Speed/ display: 50 r/min	[HINT] <ul style="list-style-type: none"> • Lock-up ON (After warming up the engine); Input Turbine speed (NT) equal to the engine speed. • Lock-up OFF (Idling at N position); Input Turbine speed (NT) nearly equal to the engine speed. 	–

2. ACTIVE TEST

HINT:

Performing the ACTIVE TEST using the hand-held tester allows the relay, VSV, actuator and so on to operate without parts removal. Performing the ACTIVE TEST as the first step of troubleshooting is one method to shorten labor time.

It is possible to display the DATA LIST during the ACTIVE TEST.

- (a) Warm up the engine.
- (b) Turn the ignition switch off.
- (c) Connect the hand-held tester to the DLC3.
- (d) Turn the ignition switch to the ON position.
- (e) Turn on the tester.
- (f) Select the item "DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST".
- (g) According to the display on the tester, perform the "ACTIVE TEST".

Item	Test Details	Diagnostic Note
SHIFT	[Test Details] Operate the shift solenoid valve and set each shift position by yourself. [Vehicle Condition] Less than 50 km/h (31 mph) [Others] • Press "→" button: Shift up • Press "←" button: Shift down	Possible to check the operation of the shift solenoid valves.
LOCK UP	[Test Details] Control the shift solenoid SLU to set the automatic transmission to the lock-up condition. [Vehicle Condition] • Throttle valve opening angle: Less than 35 % • Vehicle Speed: 60 km/h (37 mph) or more	Possible to check the SLU operation.
LINE PRESS UP *	[Test Details] Operate the shift solenoid SLT and raise the line pressure. [Vehicle Condition] • Vehicle Stopped. • IDL: ON [HINT] OFF: Line pressure up (When the active test of "Control the Line Pressure Up" is performed, the ECM commands the SLT solenoid to turn off). ON: No action (normal operation)	–

*: "LINE PRESS UP" in the ACTIVE TEST is performed to check the line pressure changes by connecting the SST to the automatic transaxle, which is used in the HYDRAULIC TEST (See page [DI-958](#)) as well.

HINT:

The pressure values in ACTIVE TEST and HYDRAULIC TEST are different from each other.