

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

According to the DATA LIST displayed by the intelligent 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.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- (a) Warm up the engine.
- (b) Turn the ignition switch off.
- (c) Connect the intelligent tester together with the CAN VIM (controller area network vehicle interface module) 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 / DATA LIST".
- (g) According to the display on the tester, read the "DATA LIST".

HINT:

*1: Gate shift lever type only

*2: Shift lever with Multi-mode automatic transmission only

Item	Measurement Item/ Range (display)	Normal Condition	Diagnostic Note
STOP LIGHT SW	Stop light switch Status/ ON or OFF	<ul style="list-style-type: none"> • Brake Pedal is depressed: ON • Brake Pedal is released: OFF 	-
PNP SW [NSW]	PNP switch 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 Intelligent 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 AX-42.
REVERSE	PNP switch Status/ ON or OFF	Shift lever position is; R: ON Except R: OFF	↑
DRIVE	PNP switch Status/ ON or OFF	Shift lever position is; D, 4*1 and S*2 : ON Except D, 4*1 and S*2: OFF	↑
4TH/DRIVE*1	PNP SW Status/ ON or OFF	Shift lever position is; 4: ON Except 4: OFF	↑
3RD*1	PNP SW Status/ ON or OFF	Shift lever position is; 3: ON Except 3: OFF	↑
2ND*1	PNP SW Status/ ON or OFF	Shift lever position is; 2 and L: ON Except 2 and L: OFF	↑

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Item	Measurement Item/ Range (display)	Normal Condition	Diagnostic Note
LOW*1	PNP SW Status/ ON or OFF	Shift lever position is; L: ON Except L: OFF	↑
SHIFT	Actual Gear Position/ 1st, 2nd, 3rd, 4th or 5th	Shift Lever Position is; <ul style="list-style-type: none"> • L*1: 1st • 2*1: 1st or 2nd • 3*1: 1st, 2nd or 3rd • 4*1: 1st, 2nd, 3rd or 4th • D: 1st, 2nd, 3rd, 4th or 5th • S*2: 1st, 2nd, 3rd, 4th or 5th 	-
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 	-
AT FLUID TEMP	ATF Temp. Sensor 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 circuit is opened or shorted.
SPD (NC)	Counter Gear Speed/ display: 50 r/min	<p>HINT: 3rd when shift lever position is D position (After warming up the engine);</p> <ul style="list-style-type: none"> • Intermediate shaft speed (NC) becomes close to the engine speed. 	-
SNOW SW	Pattern SW (ECT SNOW) status/ ON or OFF	<ul style="list-style-type: none"> • Engine switch ON: OFF ↓ • Pattern switch (ECT SNOW) Push: ON ↓ • Pattern switch (ECT SNOW) Push: OFF 	-

2. ACTIVE TEST

HINT:

Performing the ACTIVE TEST using the intelligent 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 intelligent tester together with the CAN VIM (controller area network vehicle interface module) to the DLC3.
- (d) Turn the ignition switch to the ON position.
- (e) Push the "ON" button of the intelligent tester.
- (f) Select the item "DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST".

(g) According to the display on tester, perform the "ACTIVE TEST".

Item	Test Details	Diagnostic Note
SHIFT	[Test Details] Operate the shift solenoid valve and set the each shift position by yourself. [Vehicle Condition] <ul style="list-style-type: none"> • IDL: ON • Less than 50 km/h (31 mph) [Others] <ul style="list-style-type: none"> • 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 transaxle to the lock-up condition. [Vehicle Condition] <ul style="list-style-type: none"> • Throttle valve opening angle: Less than 35 % • Vehicle Speed: 60 km/h (37 mph) or more, and 6th gear 	Possible to check the DSL operation.
LINE PRESS UP *	[Test Details] Operate the shift solenoid SLT and raise the line pressure. [Vehicle Condition] <ul style="list-style-type: none"> • Vehicle Stopped. • IDL: ON HINT: OFF: Line pressure up (When the active test of "LINE PRESS 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 [AX-16](#)) as well.

HINT:

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