DATA LIST / ACTIVE TEST

1. READ DATA LIST

HINT:

Using the intelligent tester's DATA LIST allows switch, sensor, actuator, and other item values to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save 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 to the CAN VIM. Then connect the CAN VIM to the DLC3.

(d) Turn the ignition switch ON.

(e) Turn the intelligent tester ON.

(f) Enter the following menus: DIAGNOSIS / ENHANCED OBD II / DATA LIST.

(g) Follow the instructions on the tester and read the DATA LIST.

Item	Measurement Item/ Range (Display)	Normal Condition	Diagnostic Note
STOP LIGHT SW	Stop light switch status/ ON or OFF	• Brake pedal is depressed: ON • Brake pedal is released: OFF	-
PNP SW (NSW)	PNP switch status/ ON or OFF	Shift lever is: On P or N: ON Not on P or N: OFF	When shift lever position displayed on intelligent tester differs from actual position, adjustment of PNP switch or shift cable may be incorrect HINT: When failure still occurs even after adjusting these parts, see page AX-39
REVERSE	PNP switch status/ ON or OFF	Shift lever is: On R: ON Not on R: OFF	When shift lever position displayed on intelligent tester differs from actual position, adjustment of PNP switch or shift cable may be incorrect HINT: When failure still occurs even after adjusting these parts, see page AX-39
DRIVE	PNP switch status/ ON or OFF	Shift lever is: On D: ON Not on D: OFF	When shift lever position displayed on intelligent tester differs from actual position, adjustment of PNP switch or shift cable may be incorrect HINT: When failure still occurs even after adjusting these parts, see page AX-39

Item	Measurement Item/ Range (Display)	Normal Condition	Diagnostic Note
2ND	PNP switch status/ ON or OFF	Shift lever is: On 2: ON Not on 2: OFF	When shift lever position displayed on intelligent tester differs from actual position, adjustment of PNP switch or shift cable may be incorrect HINT: When failure still occurs even after adjusting these parts, see page AX-39
LOW	PNP switch status/ ON or OFF	Shift lever is: On L: ON Not on L: OFF	When shift lever position displayed on intelligent tester differs from actual position, adjustment of PNP switch or shift cable may be incorrect HINT: When failure still occurs even after adjusting these parts, see page AX-39
SHIFT	ECM gear shift command/ 1st, 2nd, 3rd or 4th (O/D)	Shift lever position is: • On L: 1st • On 2: 1st or 2nd • On 3 (O/D OFF): 1st, 2nd or 3rd • On D (O/D ON): 1st, 2nd, 3rd or 4th (O/D)	-
LOCK UP SOL	Lock-up solenoid status/ ON or OFF	• Lock-up: ON • Not on lock-up: OFF	-
SOLENOID (SLT)	Shift solenoid SLT status/ ON or OFF	• Accelerator pedal is depressed: OFF • Accelerator pedal is released: ON	-
OVERDRV CUT SW2	O/D switch status/ ON or OFF	• Ignition switch ON: ON ↓ • O/D switch pushed: OFF ↓ • O/D switch pushed: ON	-
AT FLUID TEMP	ATF temperature sensor value/ Min.: -40°C (-40°F) Max.: 215°C (419°F)	• After stall test: Approximately 80°C (176°F) • Equal to ambient temperature during cold soak	If value is -40°C (-40°F) or 215°C (419°F), ATF temperature sensor circuit is opened or short circuited

AX

2. PERFORM ACTIVE TEST

HINT:

Performing the intelligent tester's ACTIVE TEST allows relay, VSV, actuator and other items to be operated without removing any parts. Performing the ACTIVE TEST early in troubleshooting is one way to save time. The DATA LIST can be displayed during the ACTIVE TEST.

(a) Warm up the engine.
(b) Turn the ignition switch OFF.
(c) Connect the intelligent tester to the CAN VIM. Then connect the CAN VIM to the DLC3.
(d) Turn the ignition switch ON.
(e) Turn the tester ON.
(f) Enter the following menus: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST.

(g) Perform the ACTIVE TEST.

Item	Test Details	Diagnostic Note
SHIFT	[Test Details] Operate shift solenoid valve and set each shift lever position by yourself [Vehicle Condition] 50 km/h (31 mph) or less [Other information] • Press "→" button: Shift up • Press "←" button: Shift down	Possible to check operation of shift solenoid valves
LOCK UP	[Test Details] Control shift solenoid SL to set automatic transaxle to the lock-up condition [Vehicle Condition] Vehicle speed: 58 km/h (36 mph) or more	Possible to check shift solenoid SL operation
TIMING SOL	[Test Details] Operate shift solenoid ST [Vehicle Condition] • Vehicle stopped • IDL: ON	Possible to check shift solenoid ST operation
LINE PRESS UP*	[Test Details] Operate shift solenoid SLT and raise line pressure [Vehicle Condition] • Vehicle stopped • IDL: ON HINT: OFF: Line pressure up ON: No action (normal operation)	-

HINT:
*: LINE PRESS UP in the ACTIVE TEST is performed to check the line pressure changes by connecting SST to the automatic transaxle, which is used in the HYDRAULIC TEST (see page AX-18) as well. Please note that the pressure values in the ACTIVE TEST and HYDRAULIC TEST are different.

DIAGNOSTIC TROUBLE CODE CHART

If a DTC is displayed during the DTC check, check the circuit listed in the table below and proceed to the page given.
HINT:

- *1: "Comes on" means that the MIL will illuminate.
- *2: "DTC stored" means that the ECM memorizes the malfunction code if the DTC detection condition(s) are met.
- These DTCs may be output when the clutch, brake, gear components, etc. inside the automatic transaxle are damaged.

DTC No.	Detection Item	Trouble Area	MIL*1	Memory*2	See page
P0705	Transmission Range Sensor Circuit Malfunction (PRNDL Input)	- Short in park/neutral position switch circuit - Park/Neutral position switch - ECM	Comes on	DTC stored	AX-39
P0710	Transmission Fluid Temperature Sensor "A" Circuit	- Open or short in ATF temperature sensor circuit - ATF temperature sensor - ECM	Comes on	DTC stored	AX-43
P0711	Transmission Fluid Temperature Sensor "A" Performance	- Transaxle fluid level - ATF temperature sensor - ECM	Comes on	DTC stored	AX-46
P0712	Transmission Fluid Temperature Sensor "A" Circuit Low Input	- Short in ATF temperature sensor circuit - ATF temperature sensor - ECM	Comes on	DTC stored	AX-43
P0713	Transmission Fluid Temperature Sensor "A" Circuit High Input	- Open in ATF temperature sensor circuit - ATF temperature sensor - ECM	Comes on	DTC stored	AX-43
P0717	Input Speed Sensor Circuit No Signal	- Open or short in speed sensor NT circuit - Speed sensor NT - ECM - Automatic transaxle (clutch, brake, gear, etc.)	Comes on	DTC stored	AX-49
P0724	Brake Switch "B" Circuit High	- Short in stop light switch circuit - Stop light switch - ECM	Comes on	DTC stored	AX-52

DTC No.	Detection Item	Trouble Area	MIL*1	Memory*2	See page
P0741	Torque Converter Clutch Solenoid Performance (Shift Solenoid Valve SL)	- Shift solenoid valve SL remains open or closed - Valve body is blocked - Shift solenoid valve SL - Torque converter clutch - Automatic transaxle (clutch, brake, gear, etc.) - ECM	Comes on	DTC stored	AX-55
P0751	Shift Solenoid "A" Performance (Shift Solenoid Valve S1)	- Shift solenoid valve S1 remains open or closed - Valve body is blocked - Shift solenoid valve S1 - Automatic transaxle (clutch, brake, gear, etc.) - ECM	Comes on	DTC stored	AX-58
P0756	Shift Solenoid "B" Performance (Shift Solenoid Valve S2)	- Shift solenoid valve S2 remains open or closed - Valve body is blocked - Shift solenoid valve S2 - Automatic transaxle (clutch, brake, gear, etc.) - ECM	Comes on	DTC stored	AX-61
P0787	Shift / Timing Solenoid Low (Shift Solenoid Valve ST)	- Short in shift solenoid valve ST circuit - Shift solenoid valve ST - ECM	Comes on	DTC stored	AX-64
P0788	Shift / Timing Solenoid High (Shift Solenoid Valve ST)	- Open in shift solenoid valve ST circuit - Shift solenoid valve ST - ECM	Comes on	DTC stored	AX-64
P0973	Shift Solenoid "A" Control Circuit Low (Shift Solenoid Valve S1)	- Short in shift solenoid valve S1 circuit - Shift solenoid valve S1 - ECM	Comes on	DTC stored	AX-67
P0974	Shift Solenoid "A" Control Circuit High (Shift Solenoid Valve S1)	- Open in shift solenoid valve S1 circuit - Shift solenoid valve S1 - ECM	Comes on	DTC stored	AX-67
P0976	Shift Solenoid "B" Control Circuit Low (Shift Solenoid Valve S2)	- Short in shift solenoid valve S2 circuit - Shift solenoid valve S2 - ECM	Comes on	DTC stored	AX-71

DTC No.	Detection Item	Trouble Area	MIL*1	Memory*2	See page
P0977	Shift Solenoid "B" Control Circuit High (Shift Solenoid Valve S2)	- Open in shift solenoid valve S2 circuit - Shift solenoid valve S2 - ECM	Comes on	DTC stored	AX-71
P2716	Pressure Control Solenoid "D" Electrical (Shift Solenoid Valve SLT)	- Open or short in shift solenoid valve SLT circuit - Shift solenoid valve SLT - ECM	Comes on	DTC stored	AX-74
P2769	Short in Torque Converter Clutch Solenoid Circuit (Shift Solenoid Valve SL)	- Short in shift solenoid valve SL circuit - Shift solenoid valve SL - ECM	Comes on	DTC stored	AX-78
P2770	Open in Torque Converter Clutch Solenoid Circuit (Shift Solenoid Valve SL)	- Open in shift solenoid valve SL circuit - Shift solenoid valve SL - ECM	Comes on	DTC stored	AX-78