12.Inspection Mode

A: OPERATION

Carry out trouble diagnosis shown in the following DTC table.
When performing trouble diagnosis which is not shown in the DTC table, refer to the next item Drive Cycle. <Ref. to EN(H4DOTC)-47, Drive Cycle.>

DTC No.	Designation	Condition
P0030	HO2S Heater Control Circuit (Bank 1 Sensor 1)	—
P0031	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)	—
P0032	HO2S Heater Control Circuit High (Bank 1 Sensor 1)	—
P0037	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)	—
P0038	HO2S Heater Control Circuit High (Bank 1 Sensor 2)	—
P0068	Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance	—
P0102	Mass or Volume Air Flow Circuit Low Input	—
P0103	Mass or Volume Air Flow Circuit High Input	—
P0107	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input	—
P0108	Manifold Absolute Pressure/Barometric Pressure Circuit High Input	—
P0112	Intake Air Temperature Circuit Low Input	—
P0113	Intake Air Temperature Circuit High Input	—
P0117	Engine Coolant Temperature Circuit Low Input	—
P0118	Engine Coolant Temperature Circuit High Input	—
P0122	Throttle/Pedal Position Sensor/Switch “A” Circuit Low Input	—
P0123	Throttle/Pedal Position Sensor/Switch “A” Circuit High Input	—
P0129	Atmospheric Pressure Sensor Circuit Range/Performance	—
P0130	O_2 Sensor Circuit (Bank 1 Sensor 1)	—
P0134	O_2 Sensor Circuit No ACTIvity Detected (Bank 1 Sensor 1)	—
P0137	O_2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)	—
P0138	O_2 Sensor Circuit High Voltage (Bank 1 Sensor 2)	—
P0171	System too Lean (Bank 1)	—
P0172	System too Rich (Bank 1)	—
P0182	Fuel Temperature Sensor “A” Circuit Low Input	—
P0183	Fuel Temperature Sensor “A” Circuit High Input	—
P0230	Fuel Pump Primary Circuit	—
P0245	Turbo/Super Charger Wastegate Solenoid “A” Low	—
P0246	Turbo/Super Charger Wastegate Solenoid “A” High	—
P0327	Knock Sensor 1 Circuit Low Input (Bank 1 or Single Sensor)	—
P0328	Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)	—
P0335	Crankshaft Position Sensor “A” Circuit	—
P0336	Crankshaft Position Sensor “A” Circuit Range/Performance	—
P0340	Camshaft Position Sensor “A” Circuit (Bank 1 or Single Sensor)	—
P0341	Camshaft Position Sensor “A” Circuit Range/Performance (Bank 1 or Single Sensor)	—
P0447	Evaporative Emission Control System Vent Control Circuit Open	—
P0448	Evaporative Emission Control System Vent Control Circuit Shorted	—
P0452	Evaporative Emission Control System Pressure Sensor Low Input	—
P0453	Evaporative Emission Control System Pressure Sensor High Input	—
P0458	Evaporative Emission Control System Purge Control Valve Circuit Low	—
P0459	Evaporative Emission Control System Purge Control Valve Circuit High	—
P0462	Fuel Level Sensor Circuit Low Input	—
P0463	Fuel Level Sensor Circuit High Input	—
P0502	Vehicle Speed Sensor Circuit Low Input	—
P0503	Vehicle Speed Sensor Intermittent/Erratic/High	—

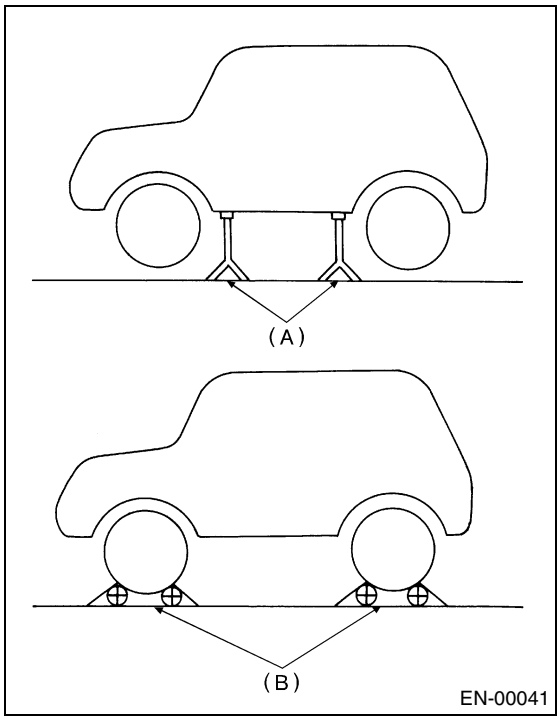
DTC No.	Designation	Condition
P0508	Idle Control System Circuit Low	—
P0509	Idle Control System Circuit High	—
P0512	Starter Switch Circuit High Input	—
P0519	Idle Control System Malfunction (Fail-safe)	—
P0567	Cruise Control Set Signal Circuit Malfunction for AT	—
P0604	Internal Control Module Random Access Memory (RAM) Error	—
P0691	Cooling Fan 1 Control Circuit Low	—
P0692	Cooling Fan 1 Control Circuit High	—
P0703	Torque Converter/Brake Switch “B” Circuit	—
P0705	Transmission Range Sensor Circuit (PRNDL Input)	—
P0710	Transmission Fluid Temperature Sensor Circuit	—
P0716	Input/Turbine Speed Sensor Circuit	—
P0720	Output Speed Sensor Circuit	—
P0725	Engine Speed Input Circuit	—
P0731	Gear 1 Incorrect Ratio	—
P0732	Gear 2 Incorrect Ratio	—
P0733	Gear 3 Incorrect Ratio	—
P0734	Gear 4 Incorrect Ratio	—
P0741	Torque Converter Clutch Circuit Performance or Stuck Off	—
P0743	Torque Converter Clutch Circuit Electrical	—
P0748	Pressure Control Solenoid “A” Electrical	—
P0753	Shift Solenoid “A” Electrical	—
P0758	Shift Solenoid “B” Electrical	—
P0771	AT Low Clutch Timing Solenoid Valve Circuit Malfunction	—
P0778	Pressure Control Solenoid “B” Electrical	—
P0785	Shift/Timing Solenoid	—
P0851	Neutral Switch Input Circuit Low	—
P0852	Neutral Switch Input Circuit High	—
P0864	TCM Communication Circuit Range/Performance	—
P0865	TCM Communication Circuit Low	—
P0866	TCM Communication Circuit High	—
P1086	Tumble Generated Valve Position Sensor 2 Circuit Low	—
P1087	Tumble Generated Valve Position Sensor 2 Circuit High	—
P1088	Tumble Generated Valve Position Sensor 1 Circuit Low	—
P1089	Tumble Generated Valve Position Sensor 1 Circuit High	—
P1090	Tumble Generated Valve System 1 (Valve Open)	Coolant temperature at start: −0.63 — 60°C (30.9 — 140°F).
P1091	Tumble Generated Valve System 1 (Valve Close)	—
P1092	Tumble Generated Valve System 2 (Valve Open)	Coolant temperature at start: −0.63 — 60°C (30.9 — 140°F).
P1093	Tumble Generated Valve System 2 (Valve Close)	—
P1094	Tumble Generated Valve Signal 1 Circuit Malfunction (Open)	—
P1095	Tumble Generated Valve Signal 1 Circuit Malfunction (Short)	—
P1096	Tumble Generated Valve Signal 2 Circuit Malfunction (Open)	—
P1097	Tumble Generated Valve Signal 2 Circuit Malfunction (Short)	—
P1110	Atmospheric Pressure sensor circuit malfunction (Low input)	—
P1111	Atmospheric Pressure sensor circuit malfunction (High input)	—
P1134	A/F sensor Micro-computer problem	—
P1152	O_2 Sensor Circuit Range/Performance (Low) (Bank1 Sensor1)	—
P1153	O_2 Sensor Circuit Range/Performance (High) (Bank1 Sensor1)	—
P1400	Fuel Tank Pressure Control Solenoid Valve Circuit Low	—

DTC No.	Designation	Condition
P1420	Fuel Tank Pressure Control Sol. Valve Circuit High	—
P1446	Fuel Tank Sensor Control Valve Circuit Low	—
P1447	Fuel Tank Sensor Control Valve Circuit High	—
P1518	Starter Switch Circuit Low Input	—
P1540	Vehicle Speed Sensor Malfunction at Low Speed	—
P1560	Back-up Voltage Circuit Malfunction	—
P1698	Engine Torque Control Cut Signal Circuit Malfunction (Low Input)	—
P1699	Engine Torque Control Cut Signal Circuit Malfunction (High Input)	—
P1700	Throttle Position Sensor Circuit Malfunction for AT	—
P1711	Engine Torque Control Signal #1 Circuit Malfunction	—
P1712	Engine Torque Control Signal #2 Circuit Malfunction	—

1. PREPARATION FOR THE INSPECTION MODE

1) Make sure that the fuel remains approx. half amount [20 — 40 ℓ (5.3 — 10.6 US gal, 4.4 — 8.8 Imp gal)], and battery voltage is 12V or more.
2) Raise the vehicle using a garage jack and place on safety stands, or drive the vehicle onto free rollers.

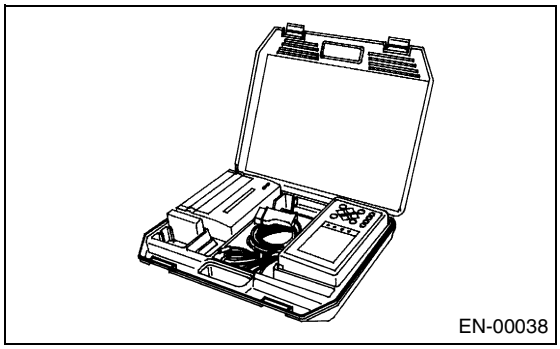
WARNING:
• Before raising the vehicle, ensure the parking brake is applied.
• Do not use a pantograph jack in place of a safety stand.
• Secure a rope or wire to the front and rear towing or tie-down hooks to prevent lateral runout of front wheels.
• Do not abruptly depress/release the clutch pedal or accelerator pedal during works even when engine is operating at low speeds since this may cause vehicle to jump off free rollers.
• In order to prevent the vehicle from slipping due to vibration, do not place any wooden blocks or similar items between the safety stands and the vehicle.
• Since the rear wheels will also rotate, do not place anything near them. Also, make sure that nobody goes in front of the vehicle.



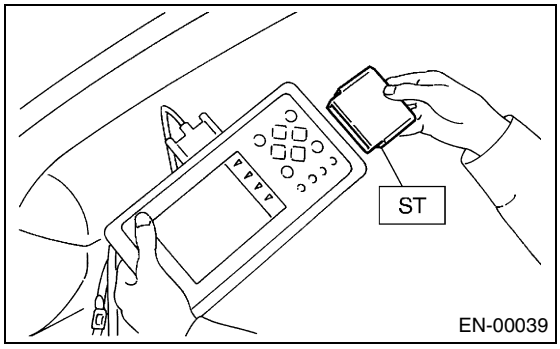
(A) Safety stand
(B) Free rollers

2. SUBARU SELECT MONITOR

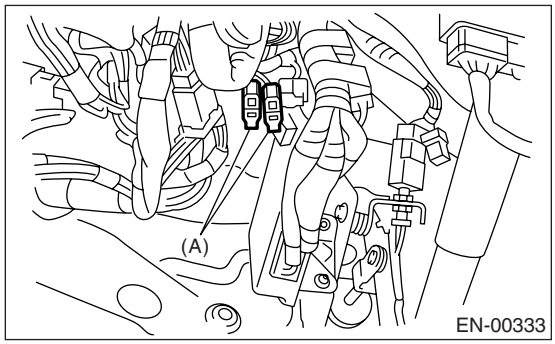
1) After performing the diagnostics and clearing the memory, check for any remaining unsolved trouble data. <Ref. to EN(H4DOTC)-49, Clear Memory Mode.>
2) Warm up the engine.
3) Prepare the Subaru Select Monitor kit. <Ref. to EN(H4DOTC)-9, PREPARATION TOOL, General Description.>



4) Connect the diagnosis cable to Subaru Select Monitor.
5) Insert the cartridge into Subaru Select Monitor. <Ref. to EN(H4DOTC)-9, PREPARATION TOOL, General Description.>



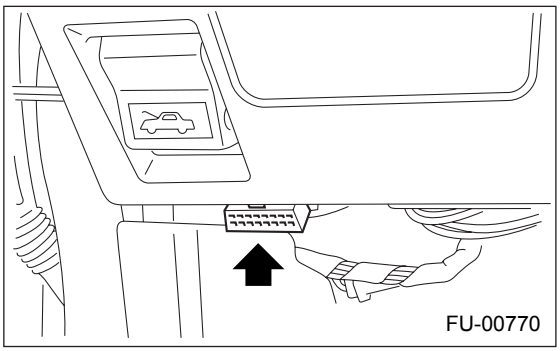
6) Connect the test mode connector (A) at the lower portion of the instrument panel (on the driver's side).



(A) Test mode connector

7) Connect the Subaru Select Monitor to data link connector.

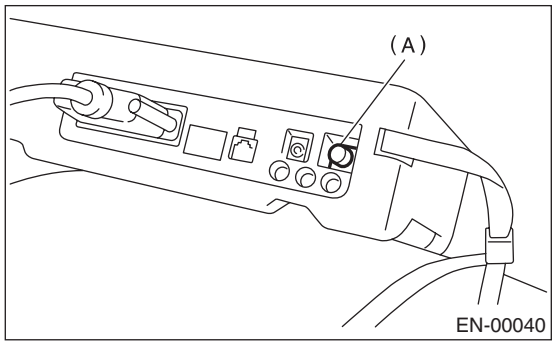
(1) Connect the Subaru Select Monitor to data link connector located at the lower portion of the instrument panel (on the driver's side).



(2) Connect the diagnosis cable to data link connector.

CAUTION:
Do not connect scan tools other than the Subaru Select Monitor or OBD-II general scan tools.

8) Turn the ignition switch to ON (engine OFF) and Subaru Select Monitor switch to ON.



(A) Power switch

9) On the «Main Menu» display screen, select {2. Each System Check} and press the [YES] key.
10) On the «System Selection Menu» display screen, select {Engine Control System} and press the [YES] key.
11) Press the [YES] key after the engine type information is displayed.
12) On the «Engine Diagnosis» display screen, select {Dealer Check Mode Procedure} and press the [YES] key.
13) When "Perform Inspection (Dealer Check) Mode?" is shown on the display screen, press the [YES] key.
14) Perform subsequent procedures as instructed on the display screen.

- If a trouble still remains in the memory, the corresponding diagnostic trouble code (DTC) appears on the display screen.

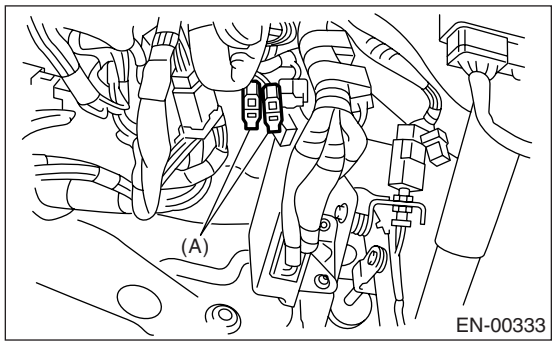
NOTE:
- For detailed operation procedures, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.
- For details concerning diagnostic trouble codes (DTC), refer to the List of Diagnostic Trouble Codes (DTC).

<Ref. to EN(H4DOTC)-81, List of Diagnostic Trouble Codes (DTC).>

- Release the parking brake.
- The speed difference between front and rear wheels may cause the ABS warning light to turn on, but this does not indicate a malfunction. When the engine control diagnosis is finished, perform the ABS memory clearance procedure of self-diagnosis system.

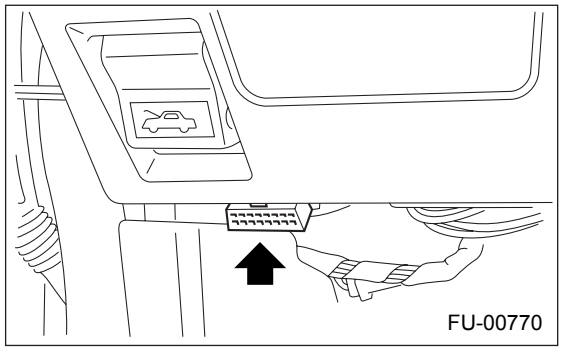
3. OBD-II GENERAL SCAN TOOL

1) After performing the diagnostics and clearing the memory, check for any remaining unsolved trouble data. <Ref. to EN(H4DOTC)-49, Clear Memory Mode.>
2) Warm up the engine.
3) Connect the test mode connector (A) at the lower portion of the instrument panel (on the driver's side).



4) Connect the OBD-II general scan tool to the data link connector located at the lower portion of the instrument panel (on the driver's side).

CAUTION:
Do not connect scan tools other than the Subaru Select Monitor or OBD-II general scan tools.



5) Start the engine.

NOTE:
• Ensure the selector lever is placed in P position before starting. (AT vehicles)
• Depress the clutch pedal when starting the engine. (MT vehicles)

6) Using the selector lever or shift lever, turn the “P” position switch and “N” position switch to ON.
7) Depress the brake pedal to turn brake switch ON. (AT vehicles)
8) Keep the engine speed in 2,500 — 3,000 rpm range for 40 seconds.
9) Place the selector lever or shift lever in D position (AT vehicles) or 1st gear (MT vehicles) and drive the vehicle at 5 to 10 km/h (3 to 6 MPH).

NOTE:
• On AWD vehicles, release the parking brake.
• The speed difference between front and rear wheels may cause the ABS warning light to turn on, but this does not indicate a malfunction. When the engine control diagnosis is finished, perform the ABS memory clearance procedure of self-diagnosis system.

10) Using the OBD-II general scan tool, check for diagnostic trouble code(s) (DTC(s)) and record the result(s).

NOTE:
• For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.
• For details concerning diagnostic trouble codes (DTC), refer to the List of Diagnostic Trouble Codes (DTC).
<Ref. to EN(H4DOTC)-81, List of Diagnostic Trouble Codes (DTC).>