

## 11. Inspection Mode

### A: PROCEDURE

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 Drive cycle. <Ref. to EN(H4SO)(diag)-40, Drive Cycle.>

DTC	Item	Condition
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)	—
P0077	Intake Valve Control Solenoid Circuit High (Bank 1)	—
P0083	Intake Valve Control Solenoid Circuit High (Bank 2)	—
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 Sensor 1 Circuit Low	—
P0113	Intake Air Temperature Sensor 1 Circuit High	—
P0117	Engine Coolant Temperature Circuit Low	—
P0118	Engine Coolant Temperature Circuit High	—
P0122	Throttle/Pedal Position Sensor/Switch "A" Circuit Low	—
P0123	Throttle/Pedal Position Sensor/ Switch "A" Circuit High	—
P0131	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)	—
P0132	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)	—
P0137	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)	—
P0138	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)	—
P0140	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)	—
P0182	Fuel Temperature Sensor "A" Circuit Low Input	—
P0183	Fuel Temperature Sensor "A" Circuit High Input	—
P0197	Engine Oil Temperature Sensor Low	—
P0198	Engine Oil Temperature Sensor High	—
P0222	Throttle/Pedal Position Sensor/Switch "B" Circuit Low	—
P0223	Throttle/Pedal Position Sensor/Switch "B" Circuit High	—
P0327	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)	—
P0328	Knock Sensor 1 Circuit High (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 System Purge Control Valve Circuit Low	—
P0462	Fuel Level Sensor "A" Circuit Low	—
P0463	Fuel Level Sensor "A" Circuit High	—
P0502	Vehicle Speed Sensor "A" Circuit Low Input	—
P0503	Vehicle Speed Sensor "A" Intermittent/Erratic/High	—
P0512	Starter Request Circuit	—

## Inspection Mode

### ENGINE (DIAGNOSTICS)

DTC	Item	Condition
P0519	Idle Air Control System Performance	—
P0600	Serial Communication Link	—
P0604	Internal Control Module Random Access Memory (RAM) Error	—
P0605	Internal Control Module Read Only Memory (ROM) Error	—
P0607	Control Module Performance	—
P0638	Throttle Actuator Control Range/Performance (Bank 1)	—
P0691	Fan 1 Control Circuit Low	—
P0692	Fan 1 Control Circuit High	—
P0700	Transmission Control System (MIL Request)	—
P0851	Park/Neutral Switch Input Circuit Low	—
P0852	Park/Neutral Switch Input Circuit High	—
P1152	O2 Sensor Circuit Range/Performance (Low) (Bank 1 Sensor 1)	—
P1153	O2 Sensor Circuit Range/Performance (High) (Bank 1 Sensor 1)	—
P1160	Return Spring Failure	—
P1400	Fuel Tank Pressure Control Solenoid Valve Circuit Low	—
P1420	Fuel Tank Pressure Control Sol. Valve Circuit High	—
P1491	Positive Crankcase Ventilation (Blow-by) Function Problem	—
P1518	Starter Switch Circuit Low Input	—
P1560	Back-up Voltage Circuit Malfunction	—
P2101	Throttle Actuator Control Motor Circuit Range/Performance	—
P2102	Throttle Actuator Control Motor Circuit Low	—
P2109	Throttle/Pedal Position Sensor "A" Minimum Stop Performance	—
P2122	Throttle/Pedal Position Sensor/Switch "D" Circuit Low Input	—
P2123	Throttle/Pedal Position Sensor/Switch "D" Circuit High Input	—
P2127	Throttle/Pedal Position Sensor/Switch "E" Circuit Low Input	—
P2128	Throttle/Pedal Position Sensor/Switch "E" Circuit High Input	—
P2135	Throttle/Pedal Position Sensor/Switch "A"/"B" Voltage Correlation	—
P2138	Throttle/Pedal Position Sensor/Switch "D"/"E" Voltage Correlation	—
P2227	Barometric Pressure Circuit Range/ Performance	—
P2228	Barometric Pressure Circuit Low	—
P2229	Barometric Pressure Circuit High	—

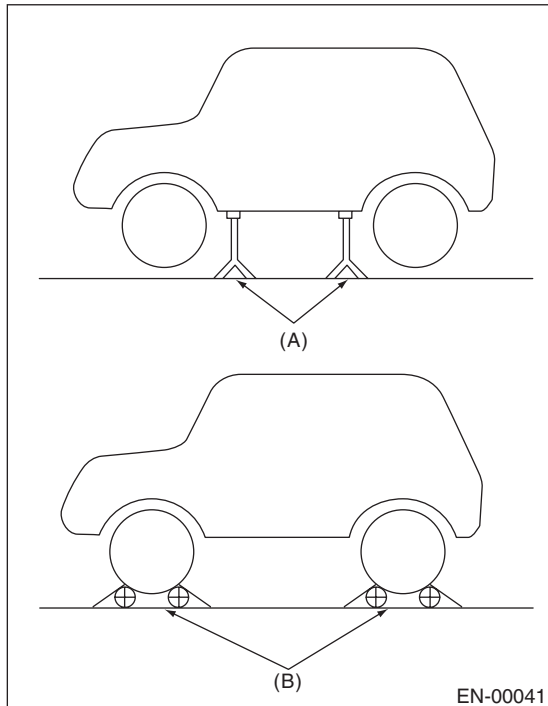
## 1. PREPARATION FOR THE INSPECTION MODE

1) Check battery voltage is more than 12 V and fuel remains half [20 — 40 ℓ (5.3 — 10.6 US gal, 4.4 — 8.8 Imp gal)].

2) Lift-up the vehicle using a garage jack and place it on rigid racks, or drive the vehicle onto free rollers.

### WARNING:

- Before raising the vehicle, ensure parking brakes are applied.
- Do not use a pantograph jack in place of a rigid rack.
- Secure a rope or wire to the front or rear towing hooks to prevent the lateral runout of front wheels.
- Do not abruptly depress/release clutch pedal or accelerator pedal during works even when the 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 rigid racks and 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) Rigid rack
- (B) Free rollers

## 2. SUBARU SELECT MONITOR

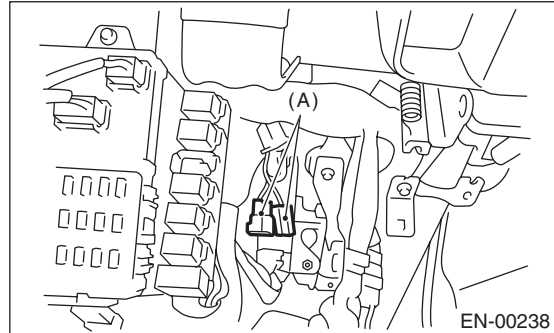
1) After clearing the memory, check for any remaining unresolved trouble data. <Ref. to EN(H4SO)(diag)-44, Clear Memory Mode.>

2) Warm up the engine.

3) Prepare the Subaru Select Monitor kit. <Ref. to EN(H4SO)(diag)-7, PREPARATION TOOL, General Description.>

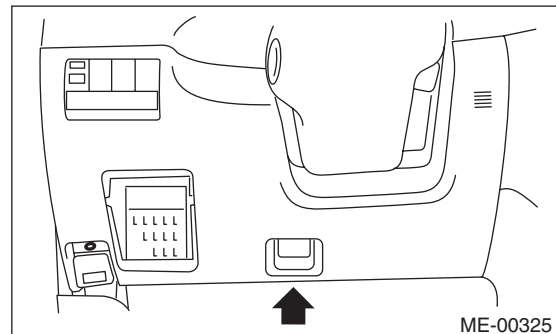
4) Connect the diagnosis cable to the Subaru Select Monitor.

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



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

(1) Data link connector is located in the lower portion of instrument panel (on the driver's side).



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

### CAUTION:

**Do not connect the scan tools except for Subaru Select Monitor and general scan tool.**

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

8) On the «Main Menu» display screen, select the {Each System Check}.

9) On the «System Selection Menu» display screen, select the {Engine Control System}.

10) Select the [OK] after the information of engine type has been displayed.

11) On the «Engine Diagnosis» display screen, select the {Dealer Check Mode Procedure}.

12) When the "Perform Inspection (Dealer Check Mode)" is shown on the screen, select the [OK].

## Inspection Mode

### ENGINE (DIAGNOSTICS)

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13) Perform subsequent procedures as instructed on the display screen.

- If trouble still remains in the memory, the corresponding DTC appears on the display screen.

#### NOTE:

- For detailed operation procedure, refer to the "SUBARU SELECT MONITOR OPERATION MANUAL".
- For details concerning DTC, refer to "List of Diagnostic Trouble Code (DTC)".  
<Ref. to EN(H4SO)(diag)-67, List of Diagnostic Trouble Code (DTC).>
- Release the parking brake.
- The speed difference between front and rear wheels may light the ABS warning light, but this indicates no malfunctions. When engine control diagnosis is finished, perform the ABS memory clearance procedure of self-diagnosis system.

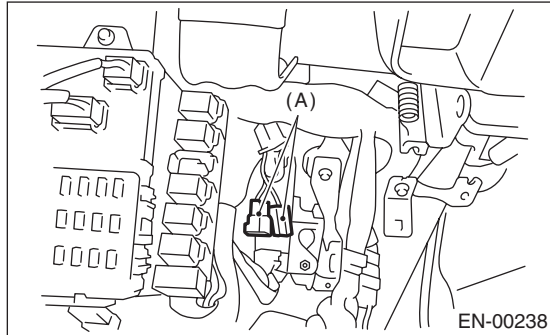
## 3. GENERAL SCAN TOOL

1) After clearing the memory, check for any remaining unresolved trouble data.

<Ref. to EN(H4SO)(diag)-44, Clear Memory Mode.>

2) Warm up the engine.

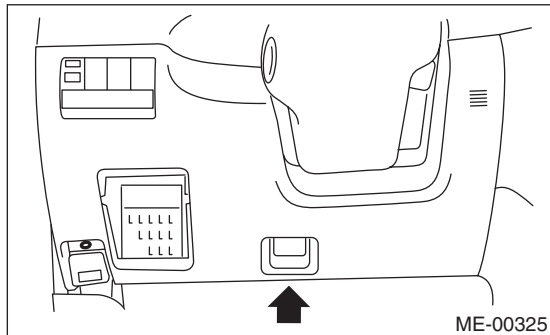
3) Connect the test mode connector (A) at the lower portion of instrument panel (on the driver's side).



4) Connect the general scan tool to its data link connector.

### CAUTION:

**Do not connect the scan tools except for Subaru Select Monitor and general scan tool.**



5) Start the engine.

### NOTE:

- Ensure the selector lever is placed in "P" range before starting. (AT model)

- Depress the clutch pedal when starting engine. (MT model)

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 the brake switch ON. (AT model)

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" range (AT model) or "1st" gear (MT model) and drive the vehicle at 5 to 10 km/h (3 to 6 MPH).

### NOTE:

- For AWD model, release the parking brake.

- The speed difference between front and rear wheels may light the ABS warning light, but this indicates no malfunctions. When engine control diagnosis is finished, perform the ABS memory clearance procedure of self-diagnosis system.

10) Using the general scan tool, check DTC and record the result(s).

### NOTE:

- For detailed operation procedures, refer to the "General Scan Tool Instruction Manual".

- For details concerning DTC, refer to "List of Diagnostic Trouble Code (DTC)".

<Ref. to EN(H4SO)(diag)-67, List of Diagnostic Trouble Code (DTC).>