

11. Inspection Mode

A: PROCEDURE

Perform the diagnosis shown in the following DTC table.

When performing the diagnosis not listed in “List of Diagnostic Trouble Code (DTC)”, refer to the item on the drive cycle. <Ref. to EN(H4SO)(diag)-46, 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	—
P0500	Vehicle Speed Sensor “A”	—
P0512	Starter Request Circuit	—
P0513	Incorrect Immobilizer Key	—

Inspection Mode

ENGINE (DIAGNOSTICS)

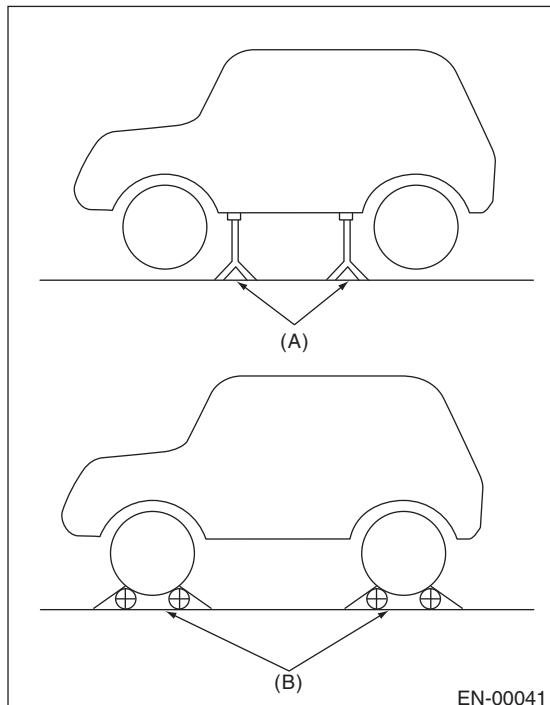
DTC	Item	Condition
P0604	Internal Control Module Random Access Memory (RAM) Error	—
P0605	Internal Control Module Read Only Memory (ROM) Error	—
P0607	Throttle Control System Circuit Range/Performance	—
P0638	Throttle Actuator Control Range/Performance (Bank 1)	—
P0700	Transmission Control System (MIL Request)	—
P0851	Park/Neutral Switch Input Circuit Low	—
P0852	Park/Neutral Switch Input Circuit High	—
P1152	O2 Sensor Circuit Range/Performance (Low) (Bank1 Sensor1)	—
P1153	O2 Sensor Circuit Range/Performance (High) (Bank1 Sensor1)	—
P1160	Return Spring Failure	—
P1518	Starter Switch Circuit Low Input	—
P1560	Back-Up Voltage Circuit Malfunction	—
P1570	Antenna	—
P1571	Reference Code Incompatibility	—
P1572	IMM Circuit Failure	—
P1574	Key Communication Failure	—
P1576	EGI Control Module EEPROM	—
P1577	IMM Control Module EEPROM	—
P1578	Meter Failure	—
P2101	Throttle Actuator Control Motor Circuit Range/Performance	—
P2102	Throttle Actuator Control Motor Circuit Low	—
P2103	Throttle Actuator Control Motor Circuit High	—
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	Atmospheric Pressure Sensor 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 ℥ (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:

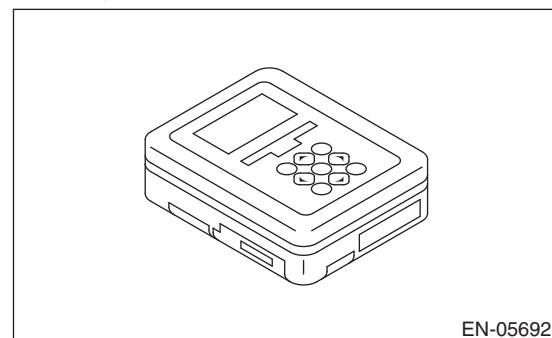
- Before lifting up the vehicle, ensure parking brakes are applied.
- Do not use a pantograph jack in place of a rigid rack.
- Secure a rope or wire to the front or rear towing hooks to prevent the lateral runout of front wheels.
- Before rotating the wheels, make sure that there is no one in front of the vehicle. Besides while the wheels are rotating, make sure that no one approaches the vehicle front side.
- Make sure that there is nothing around the wheels. For AWD model, pay special attention to all four wheels.
- While servicing, do not depress or release the clutch pedal or accelerator pedal quickly regardless of the engine speed. Quick operation may cause the vehicle to drop off the free roller.
- To prevent the vehicle from slipping due to vibration, do not place anything between rigid rack and the vehicle.



(A) Rigid rack
(B) Free roller

2. SUBARU SELECT MONITOR

- 1) Check that no DTC remains after clearing memory. <Ref. to EN(H4SO)(diag)-53, Clear Memory Mode.>
- 2) Warm up the engine.
- 3) Prepare the Subaru Select Monitor kit. <Ref. to EN(H4SO)(diag)-8, PREPARATION TOOL, General Description.>



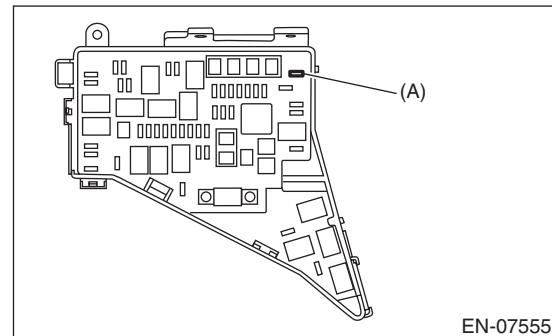
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- 4) Prepare PC with Subaru Select Monitor installed.
- 5) Connect the USB cable to SDI (Subaru Diagnosis Interface) and USB port on the personal computer (dedicated port for the Subaru Select Monitor).

NOTE:

The dedicated port for the Subaru Select Monitor means the USB port which was used to install the Subaru Select Monitor.

- 6) Connect the diagnosis cable to SDI.
- 7) Install the delivery (test) mode fuse (A) of the fuse box.



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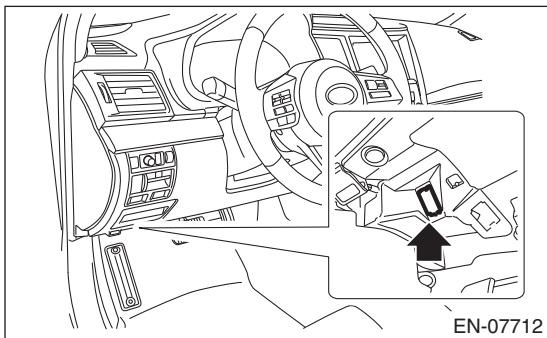
- 8) Connect SDI to data link connector located in the lower portion of the instrument panel (on the driver's side).

Inspection Mode

ENGINE (DIAGNOSTICS)

CAUTION:

Do not connect any scan tools except Subaru Select Monitor or general scan tool.



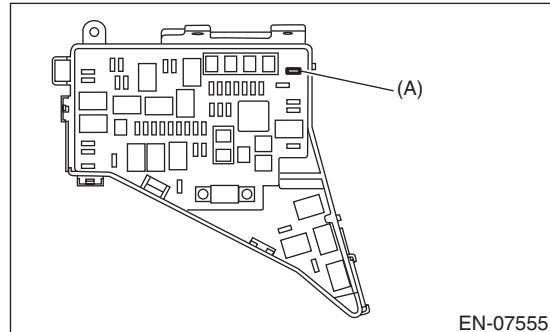
- 9) Start the PC.
- 10) Turn the ignition switch to ON (engine OFF) and run the "PC application for Subaru Select Monitor".
- 11) On «Main Menu» display, select {Each System Check}.
- 12) On «System Selection Menu» display, select {Engine Control System}.
- 13) Click the [OK] button after the information of engine type has been displayed.
- 14) On «Engine Diagnosis» display, select {Dealer Check Mode Procedure}.
- 15) When the «Perform Inspection (Dealer Check Mode?)» is shown on the screen, click the [Next] button.
- 16) 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 procedures, refer to "PC application help for Subaru Select Monitor".
- For details concerning DTC, refer to "List of Diagnostic Trouble Code (DTC)". <Ref. to EN(H4SO)(diag)-78, List of Diagnostic Trouble Code (DTC).>
- Release the parking brake.
- The speed difference between front and rear wheels may illuminate the ABS warning light, but this does not indicate a malfunction. When engine control system diagnosis is finished, perform the VDC memory clearance procedure of self-diagnosis function. <Ref. to VDC(diag)-25, Clear Memory Mode.>

3. GENERAL SCAN TOOL

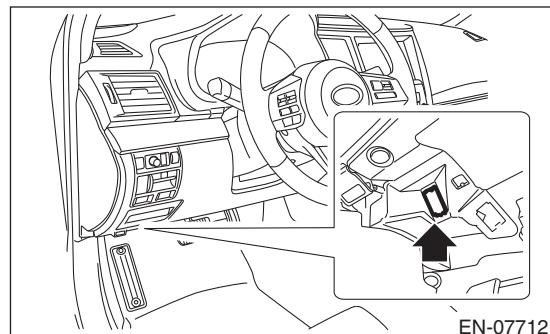
- 1) After performing the diagnostics and clearing the memory, check that no DTC remains. <Ref. to EN(H4SO)(diag)-32, MODE \$04 (CLEAR/RESET EMISSION-RELATED DIAGNOSTIC INFORMATION), OPERATION, General Scan Tool.>
- 2) Warm up the engine.
- 3) Install the delivery (test) mode fuse (A) of the main fuse box.



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

CAUTION:

Do not connect any scan tools except Subaru Select Monitor or general scan tool.



- 5) Start the engine.

NOTE:

- Make sure the select lever is placed in "P" position before starting. (CVT model)
- Depress the clutch pedal when starting engine. (MT model)
- 6) Turn the neutral position switch to ON operating select lever or shift lever.
- 7) Depress the brake pedal to turn the brake switch ON. (CVT model)
- 8) Keep the engine speed in 2,500 — 3,000 rpm range for 40 seconds.
- 9) Place the select lever or shift lever in "D" position (CVT 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 illuminate the ABS warning light, but this does not indicate a malfunction. When engine control system diagnosis is finished, perform the VDC memory clearance procedure of self-diagnosis system. <Ref. to VDC(diag)-25, Clear Memory Mode.>

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

NOTE:

- For detailed operation procedures, refer to the general scan tool operation manual.
- For details concerning DTC, refer to “List of Diagnostic Trouble Code (DTC)”. <Ref. to EN(H4SO)(diag)-78, List of Diagnostic Trouble Code (DTC).>