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(H4SO)-44, Drive Cycle.>

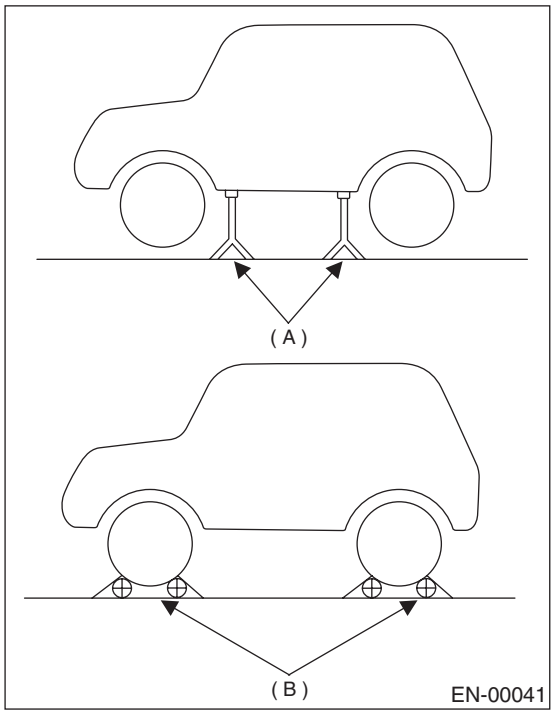
DTC No.	Designation
P0031	HO_2S heater control circuit low input (bank 1 sensor 1)
P0032	HO_2S heater control circuit high input (bank 1 sensor 1)
P0037	HO_2S heater control circuit low input (bank 1 sensor 2)
P0038	HO_2S heater control circuit high input (bank 1 sensor 2)
P0066	Air assisted injector control circuit low input
P0067	Air assisted injector control circuit high input
P0068	Manifold absolute pressure/barometric pressure circuit range/performance problem
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	Barometric pressure sensor circuit range/performance problem
P0131	O_2 sensor circuit low voltage (bank 1 sensor 1)
P0132	O_2 sensor circuit high voltage (bank 1 sensor 1)
P0134	O_2 sensor circuit open (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)
P0182	Fuel temperature sensor “A” circuit low input
P0183	Fuel temperature sensor “A” circuit high input
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 problem
P0340	Camshaft position sensor “A” circuit (bank 1 or single sensor)
P0341	Camshaft position sensor “A” circuit range/performance problem (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
P0458	Evaporative emission control system purge control valve circuit low input
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 circuit high input
P0512	Starter request circuit
P0519	Idle control system malfunction (fail-safe)
P0565	Cruise control set signal circuit malfunction (AT)
P0604	Internal control module random access memory (RAM) error
P0691	Cooling fan 1 control circuit low
P0692	Cooling fan 1 control circuit high

DTC No.	Designation
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
P0726	Engine speed input circuit
P0731	1st gear incorrect ratio
P0732	2nd gear incorrect ratio
P0733	3rd gear incorrect ratio
P0734	4th gear incorrect ratio
P0741	Torque converter clutch circuit performance or stuck off
P0743	Torque converter clutch circuit electrical system
P0748	Pressure control solenoid “A” electrical system
P0753	Shift solenoid “A” electrical system
P0758	Shift solenoid “B” electrical system
P0771	AT low clutch timing solenoid valve circuit malfunction
P0778	Pressure control solenoid “B” electrical system
P0785	Shift/timing solenoid
P0851	Neutral switch input circuit low
P0852	Neutral switch input circuit high
P0864	TCM communication circuit range/performance problem
P0865	TCM communication circuit low
P0866	TCM communication circuit high
P1110	Barometric pressure sensor circuit low input
P1111	Barometric pressure sensor circuit high input
P1400	Fuel tank pressure control solenoid valve circuit low
P1420	Fuel tank pressure control solenoid valve circuit high
P1446	Fuel tank sensor control valve circuit low
P1447	Fuel tank sensor control valve circuit high
P1510	ISC solenoid valve signal #1 circuit low input
P1511	ISC solenoid valve signal #1 circuit high input
P1512	ISC solenoid valve signal #2 circuit low input
P1513	ISC solenoid valve signal #2 circuit high input
P1514	ISC solenoid valve signal #3 circuit low input
P1515	ISC solenoid valve signal #3 circuit high input
P1516	ISC solenoid valve signal #4 circuit low input
P1517	ISC solenoid valve signal #4 circuit high input
P1518	Starter switch circuit low input
P1560	Back-up voltage circuit malfunction
P1698	Engine torque control cut signal circuit low input
P1699	Engine torque control cut signal circuit high input
P1700	Throttle position sensor circuit malfunction (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 the battery voltage is 12 V or more.
2) Raise the vehicle using a garage jack and place on safety stands or drive the vehicle onto free rollers.

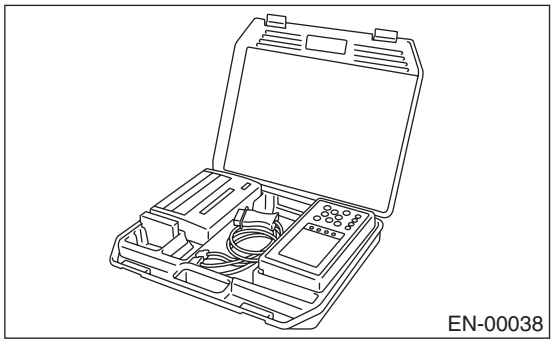
WARNING:
• Before raising the vehicle, ensure the parking brake is applied.
• Do not use a pantograph jack in place of a safety stand.
• Secure a rope or wire to the front and rear towing or tie-down hooks to prevent lateral runout of front wheels.
• Do not abruptly depress/release the clutch pedal or 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.



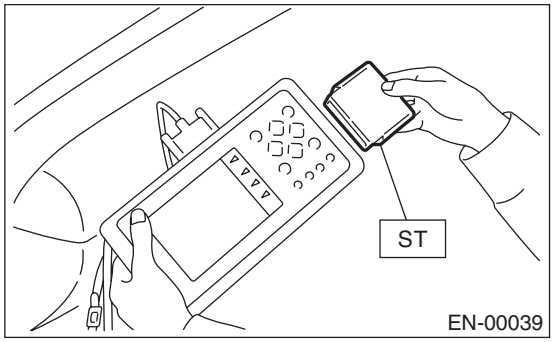
(A) Safety stand
(B) Free rollers

2. SUBARU SELECT MONITOR

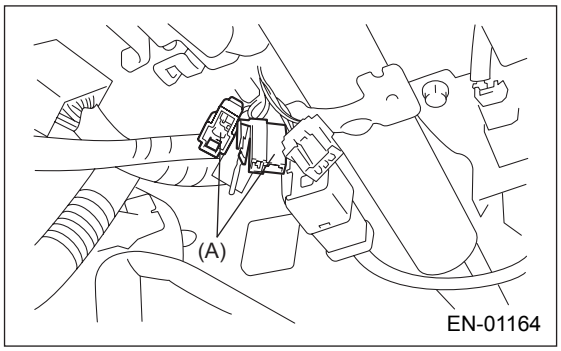
1) After performing the diagnostics and clearing the memory, check for any remaining unsolved trouble data. <Ref. to EN(H4SO)-46, Clear Memory Mode.>
2) Warm up the engine.
3) Prepare the Subaru Select Monitor kit. <Ref. to EN(H4SO)-9, PREPARATION TOOL, General Description.>



4) Connect the diagnosis cable to Subaru Select Monitor.
5) Insert the cartridge into Subaru Select Monitor. <Ref. to EN(H4SO)-9, PREPARATION TOOL, General Description.>

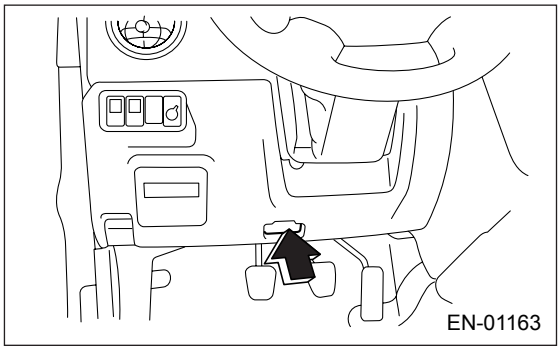


6) Connect the test mode connector (A) at the lower portion of the instrument panel (on the driver's side).



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

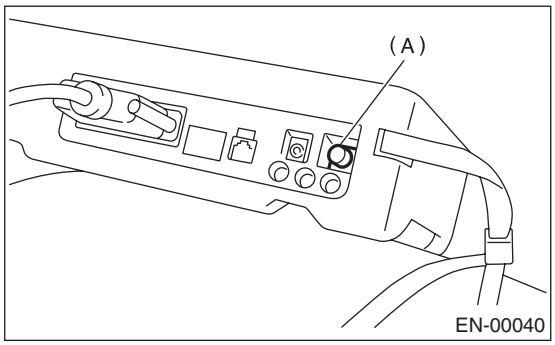
(1) The data link connector is located at the lower portion of the instrument panel (on the driver's side).



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

CAUTION:
Do not connect scan tools except for Subaru Select Monitor and OBD-II general scan tool.

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



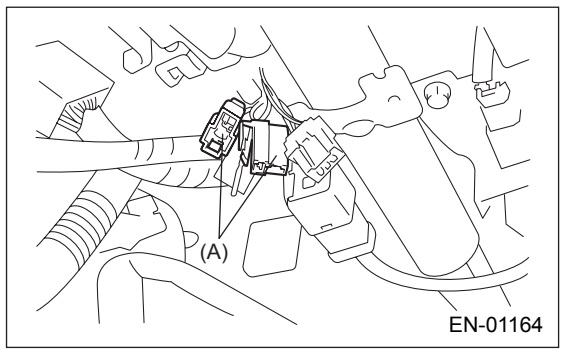
(A) Power switch

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 the diagnostic trouble codes (DTCs), refer to the List of Diagnostic Trouble Codes (DTC).
<Ref. to EN(H4SO)-75, List of Diagnostic Trouble Codes.>
• 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.

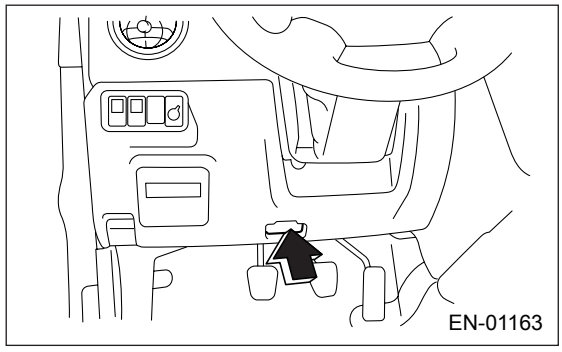
3. OBD-II GENERAL SCAN TOOL

1) After performing the diagnostics and clearing the memory, check for any remaining unsolved trouble data. <Ref. to EN(H4SO)-46, Clear Memory Mode.>
2) Warm up the engine.
3) Connect the test mode connector (A) at the lower side of 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 instrument panel (on the driver's side).

CAUTION:
Do not connect scan tools except for Subaru Select Monitor and OBD-II general scan tool.



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 the diagnostic trouble codes (DTCs), refer to the List of Diagnostic Trouble Codes (DTC).
<Ref. to EN(H4SO)-75, List of Diagnostic Trouble Codes.>