

11. 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(STi)-40, Drive Cycle.>

| DTC | Item | Condition |
|-------|--|-----------|
| P0011 | "A" Camshaft Position-Timing Over-Advanced or System Performance (Bank 1) | — |
| P0021 | "A" Camshaft Position-Timing Over-Advanced or System Performance (Bank 2) | — |
| 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) | — |
| P0101 | Mass or Volume Air Flow 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 | — |
| 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 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) | — |
| P0182 | Fuel Temperature Sensor "A" Circuit Low Input | — |
| P0183 | Fuel Temperature Sensor "A" Circuit High Input | — |
| P0222 | Throttle/Pedal Position Sensor/Switch "B" Circuit Low Input | — |
| P0223 | Throttle/Pedal Position Sensor/Switch "B" Circuit High Input | — |
| P0230 | Fuel Pump Primary Circuit | — |
| P0245 | Turbo/Super Charger Wastegate Solenoid "A" Low | — |
| 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) | — |
| P0345 | Camshaft Position Sensor "A" Circuit (Bank 2) | — |
| 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 | — |

INSPECTION MODE

ENGINE (DIAGNOSTICS)

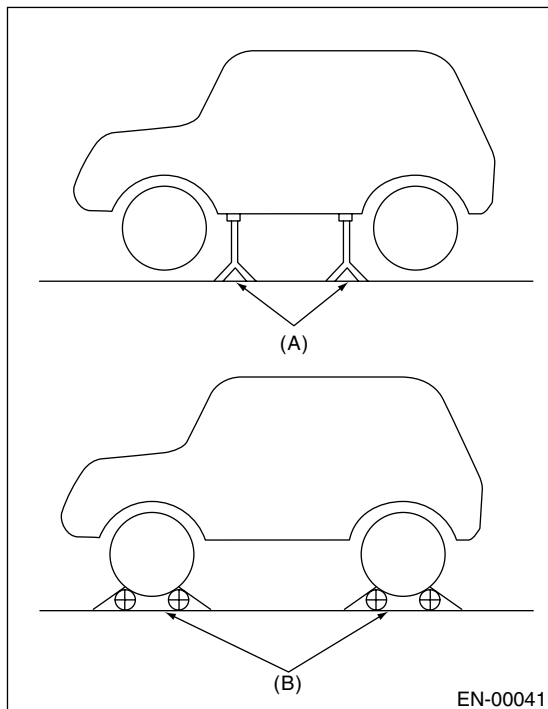
| DTC | Item | Condition |
|-------|--|-----------|
| P0458 | Evaporative Emission Control System Purge Control Valve Circuit Low | — |
| P0462 | Fuel Level Sensor Circuit Low Input | — |
| P0463 | Fuel Level Sensor Circuit High Input | — |
| P0502 | Vehicle Speed Sensor Circuit Low Input | — |
| P0503 | Vehicle Speed Sensor Intermittent/Erratic/High | — |
| P0512 | Starter Request Circuit | — |
| P0519 | Idle Control System Malfunction (Fail-Safe) | — |
| 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 | Cooling Fan 1 Control Circuit Low | — |
| P0851 | Neutral Switch Input Circuit Low | — |
| P0852 | Neutral Switch Input 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 | — |
| P1091 | Tumble Generated Valve System 1 (Valve Close) | — |
| 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) | — |
| P1152 | O ₂ Sensor Circuit Range/Performance (Low) (Bank1 Sensor1) | — |
| P1153 | O ₂ Sensor Circuit Range/Performance (High) (Bank1 Sensor1) | — |
| P1160 | Return Spring Failure | — |
| P1400 | Fuel Tank Pressure Control Solenoid Valve Circuit Low | — |
| 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 | — |
| P1491 | Positive Crankcase Ventilation (Blow-by) Function Problem | — |
| P1518 | Starter Switch Circuit Low Input | — |
| P1560 | Back-up Voltage Circuit Malfunction | — |
| P2088 | OCV Solenoid Valve Signal A Circuit Open (Bank 1) | — |
| P2089 | OCV Solenoid Valve Signal A Circuit Short (Bank 1) | — |
| P2092 | OCV Solenoid Valve Signal A Circuit Open (Bank 2) | — |
| P2093 | OCV Solenoid Valve Signal A Circuit Short (Bank 2) | — |
| 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 Rationality | — |
| P2138 | Throttle/Pedal Position Sensor/Switch "D" / "E" Voltage Rationality | — |

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:

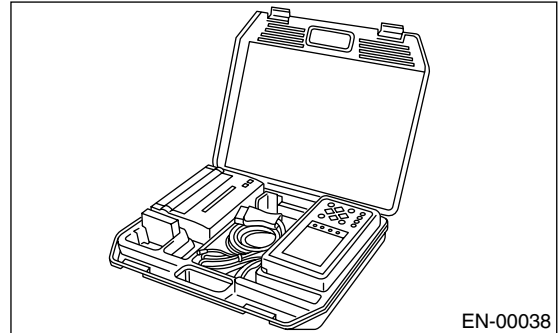
- Before raising the vehicle, ensure the parking brake is applied.
- Do not use a pantograph jack in place of a safety stand.
- Secure a rope or wire to the front and rear towing or tie-down hooks to prevent the lateral runout of front wheels.
- Do not abruptly depress/release the clutch pedal or accelerator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



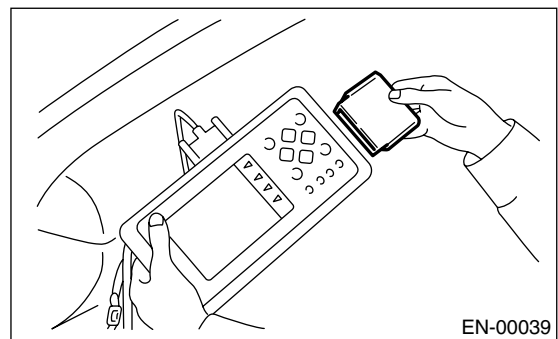
- (A) Safety stand
(B) Free rollers

2. SUBARU SELECT MONITOR

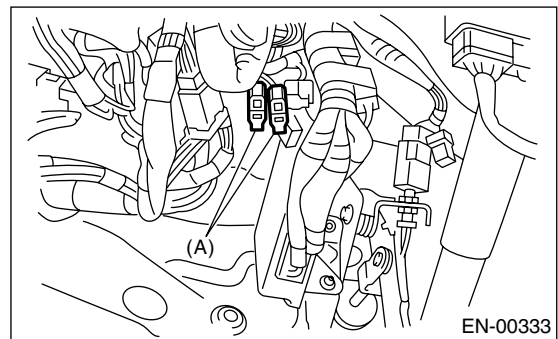
- 1) Warm up the engine.
- 2) Prepare the Subaru Select Monitor kit. <Ref. to EN(STi)-7, PREPARATION TOOL, General Description.>



- 3) Connect the diagnosis cable to Subaru Select Monitor.
- 4) Insert the cartridge into Subaru Select Monitor. <Ref. to EN(STi)-7, PREPARATION TOOL, General Description.>



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

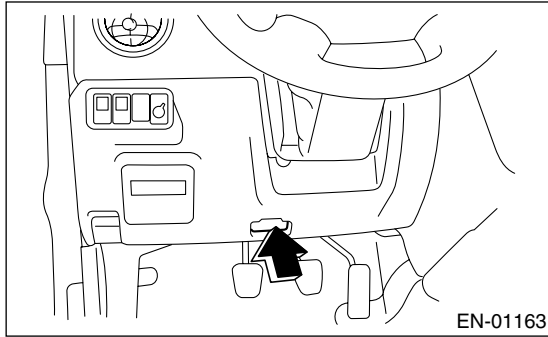


(A) Test mode connector

INSPECTION MODE

ENGINE (DIAGNOSTICS)

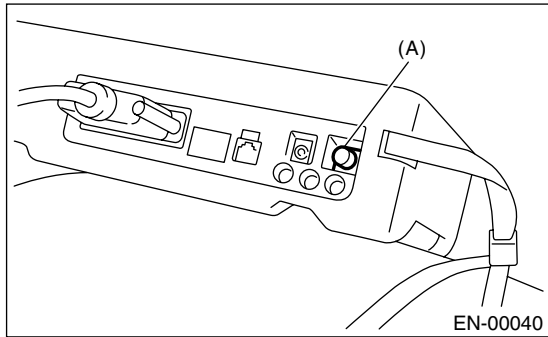
6) Connect the Subaru Select Monitor to data link connector located in the lower portion of the instrument panel (on the driver's side).



CAUTION:

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

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



(A) Power switch

8) On the «Main Menu» display screen, select the {2. Each System Check} and press the [YES] key.

9) On the «System Selection Menu» display screen, select the {Engine Control System} and press the [YES] key.

10) Press the [YES] key after the information of engine type is displayed.

11) On the «Engine Diagnosis» display screen, select the {Dealer Check Mode Procedure} and press the [YES] key.

12) When the “Perform Inspection (Dealer Check) Mode?” is shown on the display screen, press the [YES] key.

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 detailed concerning the DTC, refer to the List of Diagnostic Trouble Code (DTC).

<Ref. to EN(STi)-66, List of Diagnostic Trouble Code (DTC).>

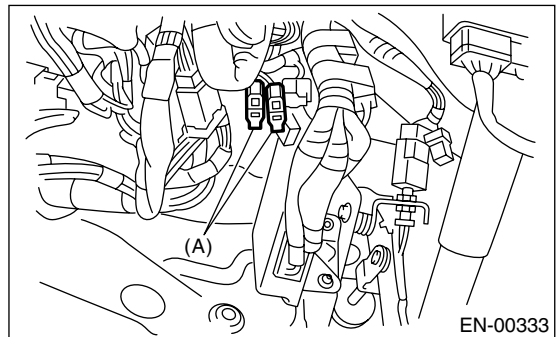
- Release the parking brake.

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

3. OBD-II GENERAL SCAN TOOL

1) Warm up the engine.

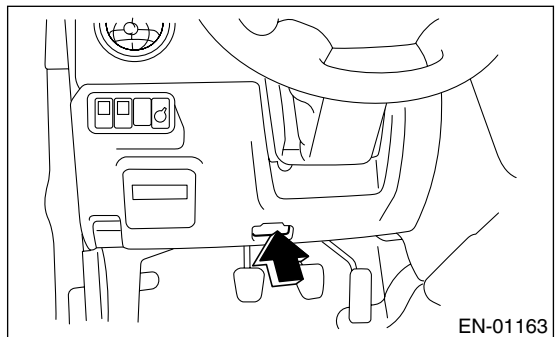
2) Connect the test mode connector (A) at the lower side of instrument panel (on the driver's side).



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

CAUTION:

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



4) Start the engine.

NOTE:

Depress the clutch pedal when starting engine.

5) Using the shift lever, turn the “N” position switch to ON.

6) Keep the engine speed in 2,500 — 3,000 rpm range for 40 seconds.

7) Place the shift lever in “1st” gear and drive the vehicle at 5 to 10 km/h (3 to 6 MPH).

NOTE:

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

8) Using the OBD-II general scan tool, check for DTC and record the result(s).

NOTE:

- For detailed operation procedures, refer to the OBD-II General Scan Tool Instruction Manual.
- For detailed concerning DTC, refer to the List of Diagnostic Trouble Code (DTC).

<Ref. to EN(STi)-66, List of Diagnostic Trouble Code (DTC).>