

Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

1998 MAZDA 626 (Mk.5) Hatchback OEM Service and Repair Workshop Manual

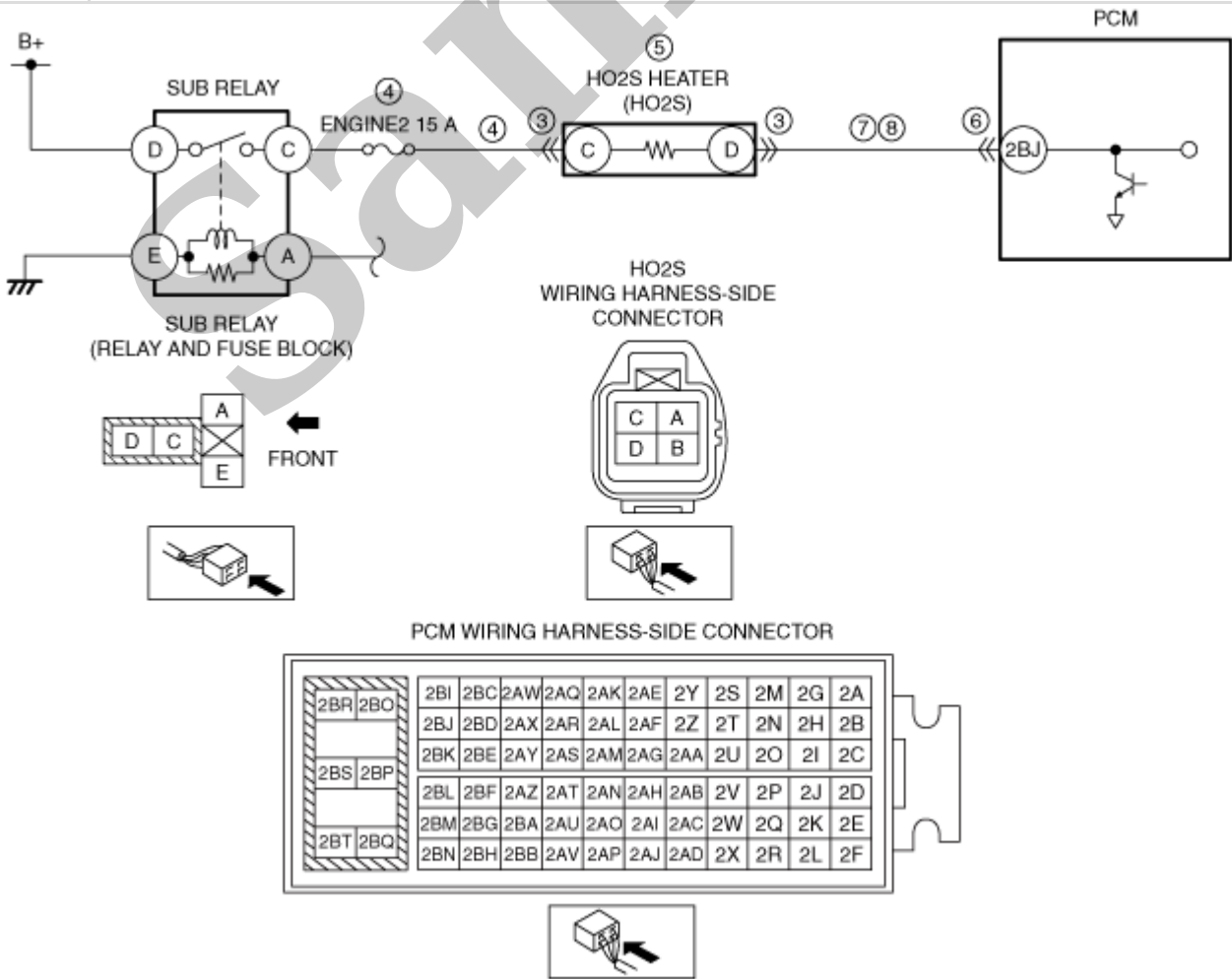
[Go to manual page](#)

DTC P0054:00 [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))]

SM2896832

id0102s993390

DTC P0054:00	HO2S heater resistance
DETECTION CONDITION	<ul style="list-style-type: none">When the PCM controls the HO2S heater, the HO2S element resistance input to the PCM is the specified value or more. Diagnostic support note <ul style="list-style-type: none">This is an intermittent monitor (A/F sensor heater, HO2S heater).The check engine light illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM.PENDING CODE is available if the PCM detects the above malfunction condition during first drive cycle.FREEZE FRAME DATA/Snapshot data is available.DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	<ul style="list-style-type: none">Stops fuel feedback control of HO2S
POSSIBLE CAUSE	<ul style="list-style-type: none">HO2S connector or terminals malfunctionShort to ground or open circuit in HO2S heater power supply circuit<ul style="list-style-type: none">Short to ground in wiring harness between ENGINE2 15 A fuse and HO2S terminal CENGINE2 15 A fuse malfunctionOpen circuit in wiring harness between sub relay terminal C and HO2S terminal CHO2S heater malfunctionPCM connector or terminals malfunctionOpen circuit in wiring harness between HO2S terminal D and PCM terminal 2BJShort to ground in wiring harness between HO2S terminal D and PCM terminal 2BJPCM malfunction

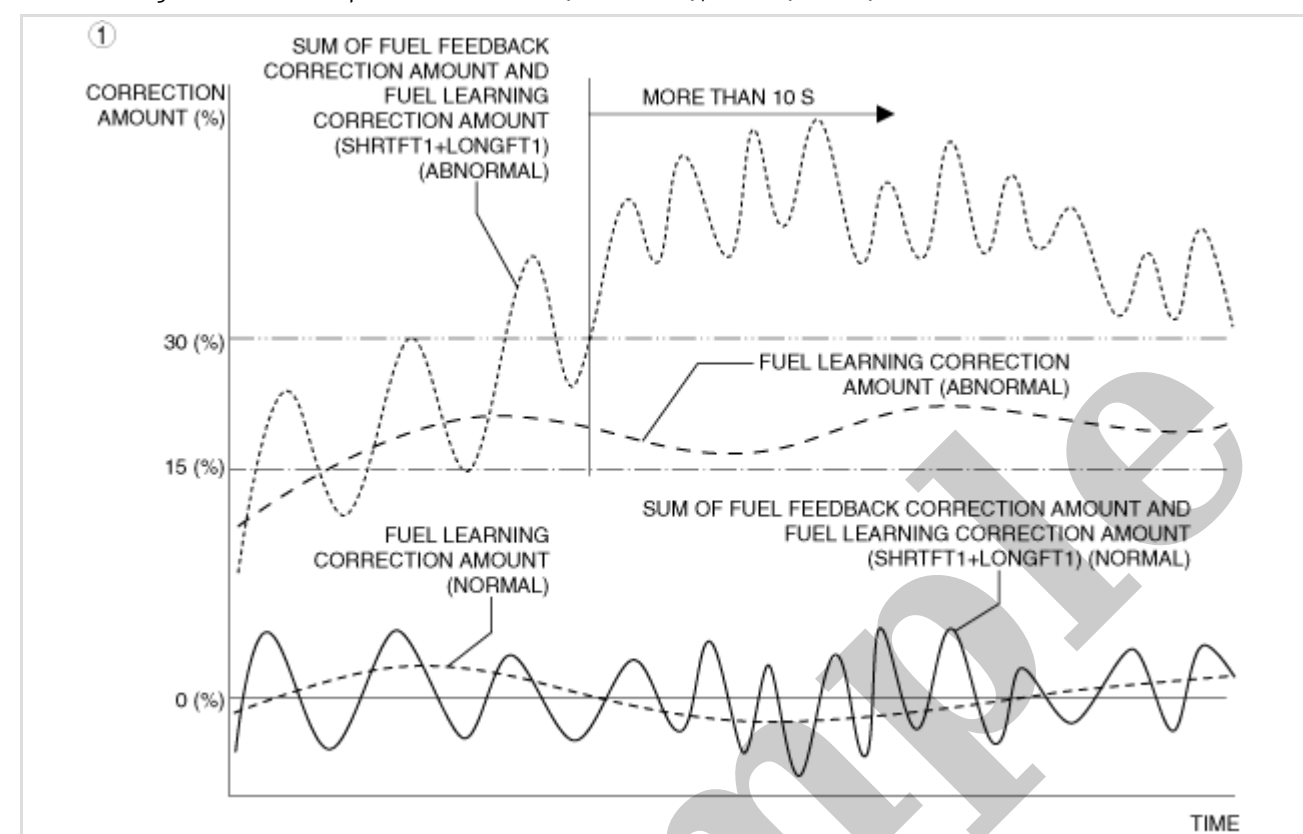


STEP	INSPECTION	RESULTS	ACTION
7	INSPECT HO2S HEATER CONTROL CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> • Verify that the HO2S and PCM connectors are disconnected. • Inspect for continuity between HO2S terminal D (wiring harness-side) and PCM terminal 2BJ (wiring harness-side). • Is there continuity? 	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between HO2S terminal D and PCM terminal 2BJ. If there is a common connector: <ul style="list-style-type: none"> • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit. • Repair or replace the malfunctioning part. If there is no common connector: <ul style="list-style-type: none"> • Repair or replace the wiring harness which has an open circuit. Go to Step 9.
8	INSPECT HO2S HEATER CONTROL CIRCUIT FOR SHORT TO GROUND <ul style="list-style-type: none"> • Verify that the HO2S and PCM connectors are disconnected. • Inspect for continuity between HO2S terminal D (wiring harness-side) and body ground. • Is there continuity? 	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between HO2S terminal D and PCM terminal 2BJ. If there is a common connector: <ul style="list-style-type: none"> • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground. • Repair or replace the malfunctioning part. If there is no common connector: <ul style="list-style-type: none"> • Repair or replace the wiring harness which has a short to ground. Go to the next step.
		No	Go to the next step.
9	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Always reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See CLEARING DTC [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) • Perform the KOER self test. (See KOEO/KOER SELF TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) • Is the PENDING CODE for this DTC present? 	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .) Go to the next step.
		No	Go to the next step.
10	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) • Are any DTCs present? 	Yes	Go to the applicable DTC inspection. (See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))] .)
		No	DTC troubleshooting completed.

feedback correction amount has a “Fuel feedback correction amount” for the air/fuel ratio and a “Fuel learning correction amount” for fuel injector deterioration over time.

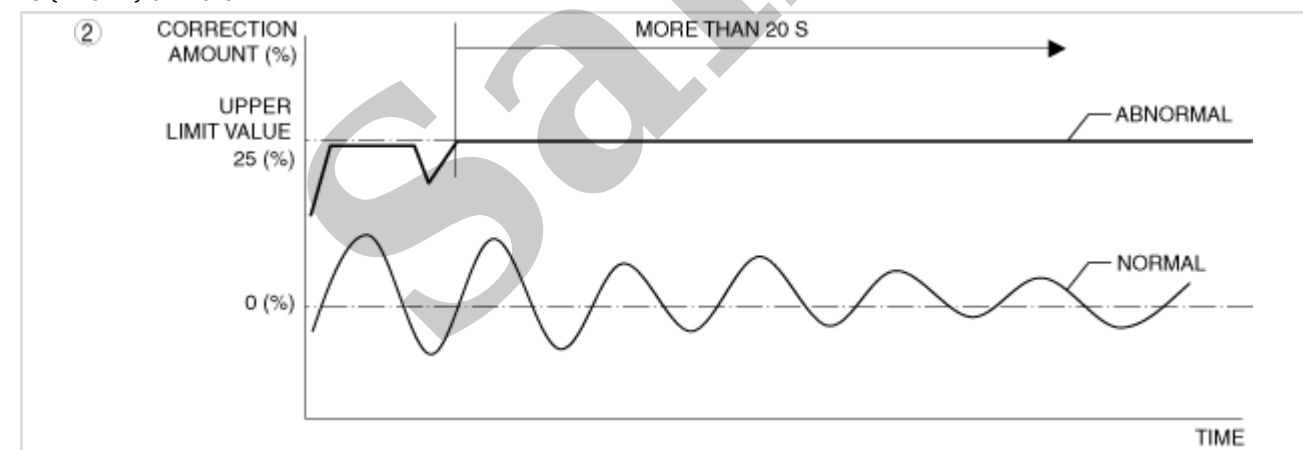
• “Fuel feedback correction amount (SHRTFT1)” and “Fuel learning correction amount (LONGFT1)” can be verified from the M-MDS PID item.

1. The sum of the fuel feedback correction amount (SHRTFT1) and the fuel learning correction amount (LONGFT1) is the specified value (30 %) or more, and 10 s or more have elapsed with the fuel learning correction amount (LONGFT1) at the specified value (15 % or more. Engine coolant temperature: 0–45 °C {32–113 °F}, 60 °C {140 °F} or more



ac5uuw00006346

2. Fuel learning correction amount (LONGFT1) at specified value (25 %) or more. Engine coolant temperature: 0–45 °C {32–113 °F}, 60 °C {140 °F} or more



ac5uuw00006347

Repeatability Verification Procedure

1. Warm up the engine to allow the engine coolant temperature to reach 80 °C {176 °F} or more.
2. Start the engine and leave it idling for 1 min.

Note

- Match the engine coolant temperature in the recorded FREEZE FRAME DATA/snapshot data, the vehicle speed, and engine speed values to the best extent possible while driving the vehicle.

3. Try to reproduce the malfunction by driving the vehicle for 5 min based on the values in the FREEZE FRAME DATA/snapshot data.

STEP	INSPECTION	RESULTS	ACTION
2	PURPOSE: IDENTIFY TRIGGER DTC FOR FREEZE FRAME DATA • Is the DTC P0171:00 on FREEZE FRAME DATA?	Yes	Go to the next step.
		No	Go to the troubleshooting procedure for DTC on FREEZE FRAME DATA. (See DTC TABLE [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))] .)
3	PURPOSE: RECORD VEHICLE STATUS AT TIME OF DTC DETECTION TO UTILIZE WITH REPEATABILITY VERIFICATION Note • Recording can be facilitated using the screen capture function of the PC. • Record the FREEZE FRAME DATA/snapshot data on the repair order.	–	Go to the next step.
4	PURPOSE: VERIFY IF INPUT SIGNAL TO PCM AFFECTS FUEL INJECTION • Start the engine. • Access the following PIDs using the M-MDS: (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))] .) — ECT — APP — TP_REL • Is there any signal that is far out of specification? (See PCM INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)	Yes	Inspect the suspected sensor and related wiring harness. • If there is any malfunction: — Repair or replace the malfunctioning part. — Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 20. • If there is no malfunction: — Go to the next step.
		No	Go to the next step.
5	PURPOSE: VERIFY CONNECTOR CONNECTIONS • Start the engine. • Access the following PIDs using the M-MDS: (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))] .) — FUEL_PRES — FP — EVAPCP — MAF — MAP — MAP_V — IAT2 — VT_EX_ACT — VT_IN_ACT • When the following parts are shaken, does the PID value include a PID item which has changed? — Fuel pressure sensor — Fuel pump control module — Purge solenoid valve — MAF sensor — MAP sensor/IAT sensor No.2 — OCV for hydraulic variable valve timing — Electric variable valve timing motor/driver — PCM	Yes	Repair or replace the applicable connector parts. Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 20.
		No	Go to the next step.

Troubleshooting Diagnostic Procedure

Intention of troubleshooting procedure

- Step 1–7
 - Perform a fuel injector control system inspection.
- Step 8–9
 - Perform an emission system parts inspection.
- Step 10–13
 - Perform an intake air system parts inspection.
- Step 14–17
 - Perform a valve timing inspection.
- Step 18–19
 - Perform an exhaust system parts inspection.
- Step 20
 - Verify that the primary malfunction is resolved and there are no other malfunctions.

STEP	INSPECTION	RESULTS	ACTION
1	PURPOSE: VERIFY IF CAUSE OF MALFUNCTION IS RELATED TO LACK OF FUEL <ul style="list-style-type: none">• Verify the remaining amount of fuel.• Is there a lack of fuel?	Yes	Refill the fuel, then go to Step 20.
		No	Go to the next step.
2	PURPOSE: DETERMINE INTEGRITY OF FUEL PRESSURE SENSOR <ul style="list-style-type: none">• Inspect the fuel pressure sensor. (See FUEL PRESSURE SENSOR INSPECTION [SKYACTIV-G (WITHOUT EGR COOLER)].) (See HIGH FUEL PRESSURE SENSOR INSPECTION [SKYACTIV-G (WITH EGR COOLER)].)• Is there any malfunction?	Yes	Replace the fuel distributor, then go to Step 20. (See FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
3	PURPOSE: DETERMINE INTEGRITY OF HIGH PRESSURE FUEL PUMP <ul style="list-style-type: none">• Inspect the high pressure fuel pump. (See HIGH PRESSURE FUEL PUMP INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)• Is there any malfunction?	Yes	Replace the high pressure fuel pump, then go to Step 20. (See HIGH PRESSURE FUEL PUMP REMOVAL/INSTALLATION [SKYACTIV-G (WITHOUT EGR COOLER)] .) (See HIGH PRESSURE FUEL PUMP REMOVAL/INSTALLATION [SKYACTIV-G (WITH EGR COOLER)] .)
		No	Go to the next step.
4	PURPOSE: VERIFY IF MALFUNCTION RELATED TO FUEL LEAK FROM FUEL SYSTEM OR RESTRICTION AFFECTS DIAGNOSTIC RESULTS <ul style="list-style-type: none">• Inspect the fuel system pipes (low to high pressure sides) for fuel leakage and restriction.• Is there any malfunction?	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to Step 20.
		No	Go to the next step.
5	PURPOSE: DETERMINE INTEGRITY OF FUEL PUMP CONTROL MODULE <ul style="list-style-type: none">• Inspect the fuel pump control module. (See FUEL PUMP CONTROL MODULE INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)• Is there any malfunction?	Yes	Replace the fuel pump control module, then go to Step 20. (See FUEL PUMP CONTROL MODULE REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
6	PURPOSE: DETERMINE INTEGRITY OF FUEL PUMP UNIT <ul style="list-style-type: none">• Inspect the fuel pump unit. (See FUEL PUMP UNIT INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].)• Is there any malfunction?	Yes	Replace the fuel pump unit, then go to Step 20. (See FUEL PUMP UNIT REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.

DTC P0172:00 [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))]

SM2896834

id0102s993430

Note

- To determine the malfunctioning part, proceed with the diagnostics from "Function Inspection Using M-MDS".

Details On DTCs

DESCRIPTION	Fuel trim system too rich	
DETECTION CONDITION	Determination conditions	<ul style="list-style-type: none">• Any one of the following conditions is met:<ul style="list-style-type: none">— The sum of the fuel feedback correction amount (SHRTFT1) and the fuel learning correction amount (LONGFT1) is the specified value (-31 %) or less, and 10 s or more have elapsed with the fuel learning correction amount (LONGFT1) at the specified value (-15 %) or less.— While the engine is idling or the vehicle is driven, the fuel feedback correction amount reaches the lower limit (-25 % or less) for 20 s or more.
	Preconditions	<ul style="list-style-type: none">• Engine coolant temperature: 0–45 °C {32–113 °F}, 60 °C {140 °F} or more ^{*1} <p>^{*1}: Standard can be verified by displaying PIDs using M-MDS</p>
	Malfunction determination period	<ul style="list-style-type: none">• 10 s or 20 s period
	Drive cycle	<ul style="list-style-type: none">• 2
	Self test type	<ul style="list-style-type: none">• CMDTC self test
	Sensor used	<ul style="list-style-type: none">• A/F sensor
FAIL-SAFE FUNCTION	<ul style="list-style-type: none">• Not applicable	
VEHICLE STATUS WHEN DTCs ARE OUTPUT	<ul style="list-style-type: none">• Illuminates check engine light.	

PID/DATA monitor item table

Item	Definition	Unit	Condition/Specification
APP	Accelerator pedal opening angle (relative value) with the fully released status as 0% and fully depressed status as 100%	%	<ul style="list-style-type: none"> Accelerator pedal released: Approx. 0% Accelerator pedal fully depressed: Approx. 100%
ECT	Engine coolant temperature input from ECT sensor No.1	°C, °F	<ul style="list-style-type: none"> Displays ECT
	ECT sensor No.1 voltage	V	<ul style="list-style-type: none"> ECT is 20 °C {68 °F}: Approx. 3.10 V ECT is 40 °C {104 °F}: Approx. 2.16 V ECT is 60 °C {140 °F}: Approx. 1.40 V ECT is 80 °C {176 °F}: Approx. 0.87 V ECT is 100 °C {212 °F}: Approx. 0.54 V
EVAPCP	Purge solenoid valve control duty value	%	<ul style="list-style-type: none"> Idle (after warm up): 0% (Engine coolant temperature 59 °C {140 °F} or less) Racing (Engine speed 2,000 rpm): 4.7% Racing (Engine speed 4,000 rpm): 35.35%
FP	Fuel pump operation status	Off/On	<ul style="list-style-type: none"> Ignition switched ON (engine off): Off Cranking: On Idle (after warm up): On
FUEL_PRES	Fuel pressure input from fuel pressure sensor	KPa {MPa}, mBar {BAR}, psi, in H2O	<ul style="list-style-type: none"> Displays fuel pressure
	Fuel pressure sensor voltage	V	<ul style="list-style-type: none"> Idle (ECT 80 °C {176 °F}) Fuel pressure is 10 MPa {102 kgf/cm², 1450 psi}: Approx. 1.4 V
IAT2	Intake air temperature (No.2) input from IAT sensor No.2	°C, °F	<ul style="list-style-type: none"> Displays IAT (No.2)
	IAT sensor No.2 voltage	V	<ul style="list-style-type: none"> IAT2 is 20 °C {68 °F}: Approx. 3.57 V IAT2 is 40 °C {104 °F}: Approx. 2.70 V IAT2 is 60 °C {140 °F}: Approx. 1.87 V
MAF	Mass air flow input from MAF sensor	g/Sec	<ul style="list-style-type: none"> Displays MAF
	MAF sensor voltage	V	<ul style="list-style-type: none"> Ignition switched ON (engine off) (MAF: 0.00 g/s {0 lb/min}): Approx. 1.69 V (ECT is 53 °C {127 °F}) Idle (after warm up) (MAF: 2.50 g/s {0.331 lb/min}): Approx. 1.89 V (ECT is 93 °C {199 °F}) Racing (engine speed is 2,000 rpm) (MAF: 3.80 g/s {0.503 lb/min}): Approx. 2.02 V (ECT is 95 °C {203 °F})
MAP	Manifold absolute pressure input from MAP sensor	KPa {MPa}, mBar {BAR}, psi, in H2O	<ul style="list-style-type: none"> Displays MAP
MAP_V	MAP sensor voltage	V	<ul style="list-style-type: none"> Ignition switched ON (engine off) (MAP:100 kPa {1.02 kgf/cm², 14.5 psi}): Approx. 4.04 V Idle (after warm up) (MAP: 35 kPa {0.36 kgf/cm², 5.1 psi}): Approx. 1.40 V Racing (engine speed is 2,000 rpm) (MAP: 26 kPa {0.27 kgf/cm², 3.8 psi}): Approx. 1.01 V
O2S11	A/F sensor current	μA	<ul style="list-style-type: none"> Idle (after warm up): Approx. -39 μA Deceleration fuel cut (accelerator pedal released from engine speed of 4,000 rpm or more): Approx. 3.84 mA
TP_REL	Throttle valve opening angle (relative value) with value at throttle valve fully close timing as the start point	%	<ul style="list-style-type: none"> Accelerator pedal released: Approx. 12% Accelerator pedal fully depressed: Approx. 82%
VT_EX_ACT	Actual exhaust variable valve timing control • Retard amount from max advance position	° (deg)	<ul style="list-style-type: none"> Displays actual exhaust variable valve timing-retard amount from max advance position

STEP	INSPECTION	RESULTS	ACTION
6	PURPOSE: VERIFY FUEL PRESSURE (HIGH-SIDE) MALFUNCTION <ul style="list-style-type: none"> Switch the ignition off. Reconnect all disconnected connectors. Start the engine and idle it. Access the FUEL_PRES PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) Is the FUEL_PRES PID value approx. 10 MPa {102 kgf/cm², 1450 psi}? 	Yes	Go to the next step.
		No	FUEL_PRES PID value is lower than approx. 10 MPa {102 kgf/cm ² , 1450 psi}: <ul style="list-style-type: none"> Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 1. FUEL_PRES PID value is higher than approx. 10 MPa {102 kgf/cm ² , 1450 psi}: <ul style="list-style-type: none"> Go to Step 8.
7	PURPOSE: VERIFY FUEL PRESSURE (LOW-SIDE) MALFUNCTION <p>Note</p> <ul style="list-style-type: none"> Verify the fuel pressure on the low pressure side with the operation of the high pressure fuel pump turned off. Bleed the remaining pressure in the fuel line using the following procedure. <ol style="list-style-type: none"> Switch the ignition off. Disconnect the high pressure fuel pump connector. Disconnect the fuel pump relay. (See RELAY LOCATION.) Start the engine and wait until the engine stalls. Switch the ignition off. Install the fuel pump relay. Switch the ignition ON (engine off). Display PID FUEL_PRES and simulation item FP using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) Turn simulation item FP on. Is the FUEL_PRES PID value 405–485 kPa {4.13–4.94 kgf/cm², 58.8–70.3 psi}? 	Yes	Go to the next step.
		No	Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 1.
8	PURPOSE: VERIFY IF MALFUNCTION CAUSED BY FUEL INJECTOR IMPROPER OPERATION <ul style="list-style-type: none"> Switch the ignition off. Reconnect all disconnected connectors. Start the engine and idle it. Access the following simulation items using the M-MDS: (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) <ul style="list-style-type: none"> — INJ_1 — INJ_2 — INJ_3 — INJ_4 Turn each fuel injector from on to off using the simulation items. Does the vibration during idling worsen? 	Yes	Go to the next step.
		No	Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 3.
9	PURPOSE: VERIFY IF MALFUNCTION CAUSED BY PURGE SOLENOID VALVE IMPROPER OPERATION <ul style="list-style-type: none"> Start the engine and idle it. Access the EVAPCP PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION))].) Is the EVAPCP PID value normal? 	Yes	Go to the next step.
		No	Go to Troubleshooting Diagnostic Procedure to perform the procedure from Step 4.

STEP	INSPECTION	RESULTS	ACTION
6	PURPOSE: AIR CLEANER ELEMENT <ul style="list-style-type: none"> Remove the air cleaner element with the engine is running. (See AIR CLEANER ELEMENT REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Does the engine speed increase? 	Yes	Inspect the air cleaner element. (See AIR CLEANER ELEMENT INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .) • If there is any malfunction: <ul style="list-style-type: none"> Clean or replace the air cleaner element, then go to Step 13. (See AIR CLEANER ELEMENT REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) • If there is no malfunction: <ul style="list-style-type: none"> Go to the next step.
		No	Go to the next step.
7	PURPOSE: DETERMINE INTEGRITY OF MAP SENSOR <ul style="list-style-type: none"> Reconnect all disconnected connectors. Inspect the MAP sensor. (See MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the MAP sensor/IAT sensor No.2, then go to Step 13. (See MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR/INTAKE AIR TEMPERATURE (IAT) SENSOR NO.2 REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
8	PURPOSE: DETERMINE INTEGRITY OF ELECTRIC VARIABLE VALVE TIMING DRIVER <ul style="list-style-type: none"> Inspect the electric variable valve timing driver. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the electric variable valve timing motor/driver, then go to Step 13. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
9	PURPOSE: DETERMINE INTEGRITY OF ELECTRIC VARIABLE VALVE TIMING MOTOR <ul style="list-style-type: none"> Inspect the electric variable valve timing motor. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the electric variable valve timing motor/driver, then go to Step 13. (See ELECTRIC VARIABLE VALVE TIMING MOTOR/DRIVER REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
10	PURPOSE: DETERMINE INTEGRITY OF ELECTRIC VARIABLE VALVE TIMING ACTUATOR <ul style="list-style-type: none"> Inspect the electric variable valve timing actuator. (See ELECTRIC VARIABLE VALVE TIMING ACTUATOR INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the electric variable valve timing actuator, then go to Step 13. (See ELECTRIC VARIABLE VALVE TIMING ACTUATOR, HYDRAULIC VARIABLE VALVE TIMING ACTUATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
11	PURPOSE: DETERMINE INTEGRITY OF OCV FOR HYDRAULIC VARIABLE VALVE TIMING <ul style="list-style-type: none"> Inspect the OCV for hydraulic variable valve timing. (See OCV FOR HYDRAULIC VARIABLE VALVE TIMING SYSTEM INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the OCV for hydraulic variable valve timing, then go to Step 13. (See OCV FOR HYDRAULIC VARIABLE VALVE TIMING SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.
12	PURPOSE: DETERMINE INTEGRITY OF A/F SENSOR <ul style="list-style-type: none"> Inspect the A/F sensor. (See AIR FUEL RATIO (A/F) SENSOR INSPECTION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)].) Is there any malfunction? 	Yes	Replace the A/F sensor, then go to the next step. (See AIR FUEL RATIO (A/F) SENSOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITH CYLINDER DEACTIVATION)] .)
		No	Go to the next step.