

NO.4 i-stop FUNCTION DOES NOT OPERATE [SKYACTIV-D 2.2]

id1103a2000900

4	i-stop FUNCTION DOES NOT OPERATE
DESCRIPTION	<ul style="list-style-type: none"> • i-stop function does not operate when vehicle is stopped.
POSSIBLE CAUSE	<p>False detection of conditions other than i-stop function operation.</p> <ul style="list-style-type: none"> • Falsely detects that driver does not intend to stop. <ul style="list-style-type: none"> — False detection of brake pedal not depressed (ATX) <ul style="list-style-type: none"> • Brake switch No.1 malfunction • Open circuit in wiring harness between brake switch terminal D and PCM terminal 2AA • Brake fluid pressure sensor (built-into DSC HU/CM) malfunction (i-stop indicator light (green) flashes) • Falsely detection of external vehicle temperature out of operation range (-10 to 50 °C {14 to 122 °F}) <ul style="list-style-type: none"> — Ambient temperature sensor malfunction (sensor specific malfunction) — Short or open circuit in wiring harness between ambient temperature sensor terminal A and PCM terminal 2AX — Open circuit in wiring harness between ambient temperature sensor terminal B and PCM terminal 2AY • Climate control unit falsely detects that internal vehicle temperature is high. (with full-auto air conditioner) <ul style="list-style-type: none"> — Cabin temperature sensor malfunction (sensor specific or motor malfunction) — Short or open circuit in wiring harness between cabin temperature sensor terminal A and climate control unit terminal 1J — Open circuit in wiring harness between cabin temperature sensor terminal B and climate control unit terminal 1X • Falsely detects that climate control unit detects driver-side air mix door position at MAX HOT or MAX COLD (with full-auto air conditioner) <ul style="list-style-type: none"> — Driver-side air mix actuator malfunction — Driver-side air mix actuator position sensor malfunction — Driver-side air mix door or linkage stuck • Climate control unit falsely detects that i-stop function is operating in manual defroster mode. <ul style="list-style-type: none"> — Climate control unit (panel switch) malfunction • False detection of vehicle not being parked <ul style="list-style-type: none"> — False detection of steering wheel rotation and rotation speed <ul style="list-style-type: none"> • Steering angle sensor initialization malfunction • Steering angle sensor malfunction • Short or open circuit in wiring harness between steering angle sensor and start stop unit terminals 1U, 1T, 1W or 1S

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POSSIBLE CAUSE	<ul style="list-style-type: none"> • False detection of vehicle in unsafe condition <ul style="list-style-type: none"> — False detection of open bonnet <ul style="list-style-type: none"> • Bonnet latch switch malfunction (stuck open) • Open circuit in wiring harness between bonnet latch switch terminal A and rear body control module (RBCM) terminal 3L — False detection of open door and liftgate <ul style="list-style-type: none"> • Door latch switch malfunction • Liftgate latch switch malfunction • Open circuit in wiring harness between door latch switch and rear body control module (RBCM) • Short to ground in wiring harness between liftgate latch switch and rear body control module (RBCM) — False detection of unfastened driver seat belt <ul style="list-style-type: none"> • Driver-side buckle switch malfunction • Short to ground in wiring harness between driver-side buckle switch terminal 4A and SAS control module terminal 2U — False detection of inclination angle (false detection of 7 % or more) (ATX) <ul style="list-style-type: none"> • Low-G (XY) sensor (built-into SAS control module) malfunction (In this case, the SAS control module records DTCs C0061:29 and C0062:29.) • Low-G (XY) sensor (built-into SAS control module) initialization malfunction — DC-DC converter system error (exceeds capacity of DC-DC converter output due to open or short circuit in wiring harness and after-market electrical part) — False detection of low power brake unit load <ul style="list-style-type: none"> • Power brake unit vacuum sensor malfunction • Short or open circuit in wiring harness between power brake unit vacuum sensor terminal C and PCM terminal 2BB • Short or open circuit in wiring harness between power brake unit vacuum sensor terminal B and PCM terminal 2BC • Short or open circuit in wiring harness between power brake unit vacuum sensor terminal A and PCM terminal 2BD • Power brake unit malfunction (air tightness malfunction) • Malfunction in vacuum hose to power brake unit (damage, bad check valve) Falsely detects possible inability of engine to restart <ul style="list-style-type: none"> • False detection of low (55 °C {131 °F} or less) or high (110 °C {230 °F} or more) engine coolant temperature <ul style="list-style-type: none"> — ECT sensor malfunction (sensor specific malfunction) • False detection of high intake air temperature (100 °C {212 °F} or more) <ul style="list-style-type: none"> — IAT sensor No.1 malfunction (sensor specific malfunction) • False detection of low (less than 0 °C {32 °F}) or high (70 °C {158 °F} or more) battery fluid temperature • False detection of low (20 °C {68 °F} or less) or high (120 °C {248 °F} or more) ATF temperature (ATX) • PCM DTC or pending code is stored. <ul style="list-style-type: none"> — MAF sensor malfunction — MAP sensor No.2 malfunction — BARO sensor malfunction — Refrigerant pressure sensor malfunction Determines possible inability of engine to restart <ul style="list-style-type: none"> • Battery voltage decrease <ul style="list-style-type: none"> — Battery malfunction — Generator malfunction — Generator malfunction (part, system, control malfunction) — Large amount of vehicle power consumption/Large amount of back-up current • Determination of jump-start possibility <ul style="list-style-type: none"> — Engine start using key with bonnet opened ATX system malfunction (ATX) <ul style="list-style-type: none"> • Electric AT oil pump malfunction (operation malfunction, insufficient pressure) • ATX malfunction

Diagnostic Procedure

STEP	INSPECTION	RESULTS	ACTION
1	VERIFY i-stop INDICATOR LIGHT (GREEN) CONDITION WHEN MALFUNCTION OCCURS Note <ul style="list-style-type: none"> If any of the following conditions is met, then go to the next step. <ul style="list-style-type: none"> MTX European (L.H.D. U.K.) specs. 	Yes	Perform the symptom troubleshooting "NO.3 i-stop INDICATOR LIGHT (GREEN) FLASHES". (See NO.3 i-stop INDICATOR LIGHT (GREEN) FLASHES [SKYACTIV-D 2.2].)
		No	Go to the next step.
2	DETERMINE IF MALFUNCTION CAUSE IS BATTERY VOLTAGE DECREASE OR OTHER <ul style="list-style-type: none"> Start the engine and warm it up completely. Idle the engine. Access the BATT_SOC PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Is the BATT_SOC PID value above 75 %? 	Yes	Go to the next step.
		No	Recharge the battery (6-hour normal recharge at 10 A recharge current). (See BATTERY RECHARGING [SKYACTIV-D 2.2].)
3	INSPECT INSUFFICIENT REMOTE TRANSMITTER BATTERY POWER FOR MALFUNCTION Note <ul style="list-style-type: none"> The following test should be performed on the advanced keyless entry system. If not equipped, go to Step 3. 	Yes	Replace the remote transmitter battery.
		No	Go to the next step.
4	INSPECT EFFECT OF NON-GENUINE ELECTRICAL ACCESSORY FOR CAUSE OF MALFUNCTION <ul style="list-style-type: none"> Remove any non-genuine electrical accessory. Verify the malfunction symptom. Does the i-stop function operate when the vehicle is stopped? 	Yes	The system is normal. <ul style="list-style-type: none"> Explain to the customer that the i-stop function does not operate due to the effect of the non-genuine electrical accessory installed.
		No	Go to the next step.
5	VERIFY DTC <ul style="list-style-type: none"> Retrieve the PCM, TCM, front body control module (FBCM), rear body control module (RBCM), DSC HU/CM, SAS control module, instrument cluster and climate control unit DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [GW6A-EL, GW6AX-EL].) (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) (See DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)].) (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) (See DTC INSPECTION.) (See DTC INSPECTION [INSTRUMENT CLUSTER].) (See DTC DISPLAY [FULL-AUTO AIR CONDITIONER].) Are any DTCs present? 	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].) (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [GW6A-EL, GW6AX-EL].) (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].) (See DTC TABLE [REAR BODY CONTROL MODULE (RBCM)].) (See ON-BOARD DIAGNOSIS [DYNAMIC STABILITY CONTROL (DSC)].) (See DTC TABLE.) (See DTC TABLE [INSTRUMENT CLUSTER].) (See DTC TABLE [FULL-AUTO AIR CONDITIONER].)
		No	Go to the next step.

STEP	INSPECTION	RESULTS	ACTION
6	INSPECT BATTERY <ul style="list-style-type: none"> Inspect the battery. (See BATTERY INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Replace the battery. (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
7	INSPECT GENERATOR <ul style="list-style-type: none"> Inspect the generator. (See GENERATOR INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
8	DETERMINE IF MALFUNCTION CAUSE IS APP SENSOR SIGNAL OR OTHER <ul style="list-style-type: none"> Start the engine and drive the vehicle for 5 min. Idle the engine. Access the following PCM and TCM PIDs using the M-MDS: (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) (See ON-BOARD DIAGNOSTIC SYSTEM PID/DATA MONITOR INSPECTION [GW6A-EL, GW6AX-EL].) PCM PIDs: <ul style="list-style-type: none"> BATT_TEMP (0—70 °C {32—158 °F}) ECT (55—110 °C {131—230 °F}) IAT (less than 100 °C {212 °F}) TCM PID: (ATX) <ul style="list-style-type: none"> TFT (20—120 °C {68—248 °F}) Are the PID values out of the i-stop operation range? 	Yes	Inspect the related-PID sensor which is out of range and the wiring harness. • If there is any malfunction: — Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
9	DETERMINE IF MALFUNCTION CAUSE IS AMBIENT TEMPERATURE SENSOR SIGNAL OR OTHER <ul style="list-style-type: none"> Switch the ignition ON (engine off). Compare the ambient temperature sensor on the LCD with the actual ambient temperature. Does the ambient temperature on the LCD correspond to the actual ambient temperature? 	Yes	ATX: • Go to Step 12. MTX: • Go to Step 13.
		No	Go to the next step.
10	INSPECT AMBIENT TEMPERATURE SENSOR <ul style="list-style-type: none"> Inspect the ambient temperature sensor. (See AMBIENT TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) Is there any malfunction? 	Yes	Replace the ambient temperature sensor. (See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)
		No	Go to the next step.
11	INSPECT AMBIENT TEMPERATURE SENSOR CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT <ul style="list-style-type: none"> Inspect for an open or short circuit between the following terminals (wiring harness-side): <ul style="list-style-type: none"> Ambient temperature sensor terminal A—PCM terminal 2AX Ambient temperature sensor terminal B—PCM terminal 2AY Is there any malfunction? 	Yes	Repair or replace the suspected wiring harness.
		No	Replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
12	VERIFY IF MALFUNCTION CAUSE IS STEERING ANGLE SENSOR INITIALIZATION NOT PERFORMED <ul style="list-style-type: none"> Drive the vehicle and verify the steering learning. Can learning be completed? 	Yes	Malfunction caused by the steering angle sensor initialization malfunction. • Investigate when there is a malfunction in steering angle learning.
		No	Go to the next step.

STEP	INSPECTION	RESULTS	ACTION
13*	DETERMINE IF MALFUNCTION CAUSE IS DOOR LATCH SWITCH AND LIFTGATE LATCH SWITCH SIGNAL OR OTHER <ul style="list-style-type: none"> Switch the ignition ON (engine off). Access the following rear body control module (RBCM) PIDs using the M-MDS: (See PID/DATA MONITOR INSPECTION [REAR BODY CONTROL MODULE (RBCM)].) — TRUNK — DOOR_D — DOOR_ALL Are the PID values congruent with the opening and closing of the doors and liftgate? (See PID/DATA MONITOR TABLE [REAR BODY CONTROL MODULE (RBCM)].) 	Yes	Go to Step 15.
		No	Go to the next step.
14	INSPECT DOOR LATCH SWITCH AND LIFTGATE LATCH SWITCH <ul style="list-style-type: none"> Inspect the PID-related switch in which the malfunction occurred in Step 13. (See LIFTGATE LATCH SWITCH INSPECTION.) (See FRONT DOOR LATCH SWITCH INSPECTION.) (See REAR DOOR LATCH SWITCH INSPECTION.) Is there any malfunction? 	Yes	Replace the applicable switch. (See LIFTGATE LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) (See FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.) (See REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.)
		No	Inspect the following wiring harness in which the malfunction occurred in Step 13: <ul style="list-style-type: none"> Open circuit in wiring harness between door latch switch and rear body control module (RBCM) Short to ground in wiring harness between liftgate latch switch and rear body control module (RBCM) <ul style="list-style-type: none"> If there is any malfunction: <ul style="list-style-type: none"> Repair or replace the suspected wiring harness.
15	DETERMINE IF MALFUNCTION CAUSE IS DRIVER-SIDE BUCKLE SWITCH SIGNAL OR OTHER <ul style="list-style-type: none"> Switch the ignition ON (engine off). Access the SAS control module PID SEAT_B_D using the M-MDS. (See PID/DATA MONITOR INSPECTION.) Is the SEAT_B_D PID value congruent with the seat belt condition? (See PID/DATA MONITOR TABLE.) 	Yes	With manual air conditioner: <ul style="list-style-type: none"> Go to Step 19. With full-auto air conditioner: <ul style="list-style-type: none"> Go to Step 17.
		No	Go to the next step.
16	INSPECT DRIVER-SIDE BUCKLE SWITCH <ul style="list-style-type: none"> Inspect the driver-side buckle switch. (See BUCKLE SWITCH INSPECTION.) Is there any malfunction? 	Yes	Replace the driver-side buckle switch. (See FRONT BUCKLE REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between driver-side buckle switch terminal 4A and SAS control module terminal 2U for a possible short to ground.
17	DETERMINE IF MALFUNCTION CAUSE IS CABIN TEMPERATURE SENSOR SIGNAL OR OTHER <ul style="list-style-type: none"> Access the climate control unit PID INC_TMP_SEN using the M-MDS. (See PID/DATA MONITOR DISPLAY [FULL-AUTO AIR CONDITIONER].) Does the INC_TMP_SEN PID value indicate the actual cabin temperature of the vehicle? 	Yes	Go to Step 19.
		No	Go to the next step.

STEP	INSPECTION	RESULTS	ACTION
18	INSPECT CABIN TEMPERATURE SENSOR <ul style="list-style-type: none"> Inspect the cabin temperature sensor. (See CABIN TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) Is there any malfunction? 	Yes	Replace the cabin temperature sensor. (See CABIN TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)
		No	Inspect the wiring harness between the following terminals for a short or open circuit: <ul style="list-style-type: none"> Cabin temperature sensor terminal A—Climate control unit terminal 1J Cabin temperature sensor terminal B—Climate control unit terminal 1X — If there is any malfunction: <ul style="list-style-type: none"> Repair or replace the suspected wiring harness.
19*	DETERMINE IF MALFUNCTION CAUSE IS BONNET LATCH SWITCH SIGNAL OR OTHER <ul style="list-style-type: none"> Switch the ignition ON (engine off). Access the rear body control module (RBCM) PID HOOD using the M-MDS. (See PID/DATA MONITOR INSPECTION [REAR BODY CONTROL MODULE (RBCM)].) Is the HOOD PID value normal? (See PID/DATA MONITOR TABLE [REAR BODY CONTROL MODULE (RBCM)].) 	Yes	Go to Step 21.
		No	Go to the next step.
20	INSPECT BONNET LATCH SWITCH <ul style="list-style-type: none"> Inspect the bonnet latch switch. (See BONNET LATCH SWITCH INSPECTION.) Is there any malfunction? 	Yes	Replace the bonnet latch switch. (See BONNET LATCH AND RELEASE LEVER REMOVAL/INSTALLATION.)
		No	Repair or replace the wiring harness between bonnet latch switch terminal A and rear body control module (RBCM) terminal 3L for a possible open circuit.
21	DETERMINE IF MALFUNCTION IS CAUSED BY STEERING ANGLE (ESTIMATED ABSOLUTE ANGLE) SIGNAL ERROR <ul style="list-style-type: none"> Start the engine and idle it. Using the M-MDS, display EPS control module PID STR_ANG. (See .ELECTRIC POWER STEERING (EPS) ON-BOARD DIAGNOSIS) Are the monitoring values normal? 	Yes	ATX: <ul style="list-style-type: none"> Go to Step 23. MTX: <ul style="list-style-type: none"> Go to Step 25.
		No	Go to the next step.
22	INSPECT EPS CONTROL MODULE FOR MALFUNCTION <ul style="list-style-type: none"> Inspect the EPS control module. (See EPS CONTROL MODULE INSPECTION.) Is the EPS control module normal? 	Yes	Perform the following procedure: <ol style="list-style-type: none"> Switch the ignition off, and after 2 min or more have elapsed, switch the ignition ON. Start the engine and drive the vehicle 10 m {33 ft} or more in a straight line at a speed of 10 km/h {6.2 mph} or more. Stop the vehicle with the wheels in the straight-ahead position. Using the M-MDS, display EPS control module PID STR_ANG. <ul style="list-style-type: none"> If the STR_ANG value is normal, go to Step 31. (Because the steering angle (estimated absolute angle) has returned to normal) If the STR_ANG value is not normal, replace the EPS control module, then go to Step 31. (See STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
		No	Replace the EPS control module, then go to Step 31. (See STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)

STEP	INSPECTION	RESULTS	ACTION
23	DETERMINE IF MALFUNCTION CAUSED BY BRAKE OPERATION SIGNAL ERROR <ul style="list-style-type: none"> Switch the ignition ON (engine off). Access the PCM PID BOO using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Does the BOO PID value change according to the brake pedal operation? (See PCM INSPECTION [SKYACTIV-D 2.2].) 	Yes	Go to Step 25.
		No	Go to the next step.
24	INSPECT BRAKE SWITCH <ul style="list-style-type: none"> Inspect the brake switch. (See BRAKE SWITCH INSPECTION.) Is there any malfunction? 	Yes	Replace the brake switch. (See BRAKE PEDAL REMOVAL/INSTALLATION [L.H.D.].) (See BRAKE PEDAL REMOVAL/INSTALLATION [R.H.D.].)
		No	Open circuit in wiring harness between brake switch terminal D and PCM terminal 2AA. • If there is any malfunction: — Repair or replace the suspected wiring harness.
25	DETERMINE IF MALFUNCTION CAUSE IS POWER BRAKE UNIT VACUUM SENSOR SIGNAL OR OTHER <ul style="list-style-type: none"> Start the engine and run it is idling. Access the PCM PID BBP using the M-MDS with the brake pedal held depressed while the i-stop function is operating. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Does the BBP PID value remain less than -43 kPa {-0.44 kgf/cm², -6.2 psi}? 	Yes	With manual air conditioner: • Go to Step 31. With full-auto air conditioner: • Go to Step 29.
		No	Go to the next step.
26	INSPECT POWER BRAKE UNIT VACUUM SENSOR FOR AIR TIGHTNESS MALFUNCTION <ul style="list-style-type: none"> Perform the vacuum function inspection for the power brake unit and the vacuum loss inspection. (See POWER BRAKE UNIT INSPECTION.) Is there any malfunction? 	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Go to the next step.
27	INSPECT POWER BRAKE UNIT VACUUM SENSOR <ul style="list-style-type: none"> Inspect the power brake unit vacuum sensor. (See POWER BRAKE UNIT VACUUM SENSOR INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Replace the power brake unit vacuum sensor. (See POWER BRAKE UNIT VACUUM SENSOR REMOVAL/INSTALLATION.)
		No	Go to the next step.
28	INSPECT POWER BRAKE UNIT VACUUM SENSOR CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT <ul style="list-style-type: none"> Inspect for an open or short circuit between the following terminals (wiring harness-side): <ul style="list-style-type: none"> — Power brake unit vacuum sensor terminal C—PCM terminal 2BB — Power brake unit vacuum sensor terminal B—PCM terminal 2BC — Power brake unit vacuum sensor terminal A—PCM terminal 2BD Is there any malfunction? 	Yes	Repair or replace the suspected wiring harness.
		No	Replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)

STEP	INSPECTION	RESULTS	ACTION
29	DETERMINE IF MALFUNCTION CAUSE IS DRIVER-SIDE AIR MIX ACTUATOR SIGNAL OR OTHER <ul style="list-style-type: none"> Measure the voltage at the following terminal (wiring harness-side) when the driver-side temperature setting is MAX HOT and MAX COLD. <ul style="list-style-type: none"> Climate control unit terminal 1N (L.H.D.) Climate control unit terminal 1P (R.H.D.) Is the voltage normal? (See CLIMATE CONTROL UNIT INSPECTION [FULL-AUTO AIR CONDITIONER].) 	Yes	Repeat the inspection from Step 1. <ul style="list-style-type: none"> If the malfunction is not resolved, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) Go to Step 31.
		No	Go to the next step.
30	INSPECT DRIVER-SIDE AIR MIX ACTUATOR <ul style="list-style-type: none"> Inspect the driver-side air mix actuator. (See AIR MIX ACTUATOR INSPECTION [FULL-AUTO AIR CONDITIONER].) Is there any malfunction? 	Yes	Replace the driver-side air mix actuator. (See AIR MIX ACTUATOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)
		No	Inspect the air mix actuator and linkage for sticking. (See A/C UNIT DISASSEMBLY/ASSEMBLY.) <ul style="list-style-type: none"> If there is any malfunction: <ul style="list-style-type: none"> Repair or replace the malfunctioning part according to the inspection results.
31	Verify the test results. <ul style="list-style-type: none"> If normal, return to the diagnostic index to service any additional symptoms. (See SYMPTOM DIAGNOSTIC INDEX [SKYACTIV-D 2.2].) If a malfunction remains, inspect the related Service Information and perform the repair or diagnosis. <ul style="list-style-type: none"> If the vehicle is repaired, troubleshooting is completed. If the vehicle is not repaired or additional diagnostic information is not available, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) 		