

INDEX FOR DTC

PFP:00024

UBS00EMD

INDEX FOR DTC

Alphabetical Index

NOTE:

If DTC U1000 or U1001 is displayed with other DTC, first perform the trouble diagnosis for DTC U1000, U1001. Refer to [EC-134, "DTC U1000, U1001 CAN COMMUNICATION LINE"](#) .

×:Applicable —: Not applicable

Items (CONSULT-II screen terms)	DTC*1		Trip	MIL lighting up	Reference page
	CONSULT-II GST*2	ECM*3			
A/F SEN1 (B1)	P1271	1271	2	×	EC-428
A/F SEN1 (B1)	P1272	1272	2	×	EC-436
A/F SEN1 (B1)	P1273	1273	2	×	EC-444
A/F SEN1 (B1)	P1274	1274	2	×	EC-453
A/F SEN1 (B1)	P1276	1276	2	×	EC-462
A/F SEN1 (B1)	P1278	1278	2	×	EC-471
A/F SEN1 (B1)	P1279	1279	2	×	EC-483
A/F SEN1 (B2)	P1281	1281	2	×	EC-428
A/F SEN1 (B2)	P1282	1282	2	×	EC-436
A/F SEN1 (B2)	P1283	1283	2	×	EC-444
A/F SEN1 (B2)	P1284	1284	2	×	EC-453
A/F SEN1 (B2)	P1286	1286	2	×	EC-462
A/F SEN1 (B2)	P1288	1288	2	×	EC-471
A/F SEN1 (B2)	P1289	1289	2	×	EC-483
A/F SEN1 HTR (B1)	P1031	1031	2	×	EC-353
A/F SEN1 HTR (B1)	P1032	1032	2	×	EC-353
A/F SEN1 HTR (B2)	P1051	1051	2	×	EC-353
A/F SEN1 HTR (B2)	P1052	1052	2	×	EC-353
A/T INTERLOCK	P1730	1730	1	×	AT-142
A/T TCC S/V FNCTN	P0744	0744	2	×	AT-124
APP SEN 1/CIRC	P2122	2122	1	×	EC-536
APP SEN 1/CIRC	P2123	2123	1	×	EC-536
APP SEN 2/CIRC	P2127	2127	1	×	EC-542
APP SEN 2/CIRC	P2128	2128	1	×	EC-542
APP SENSOR	P2138	2138	1	×	EC-556
ASCD BRAKE SW	P1572	1572	1	—	EC-516
ASCD SW	P1564	1564	1	—	EC-509
ASCD VHL SPD SEN*6	P1574	1574	1	—	EC-524
ATF TEMP SEN/CIRC	P0710	0710	2	×	AT-134
BRAKE SW/CIRCUIT	P1805	1805	2	—	EC-531
CAN COMM CIRCUIT	U1000	1000*4	1	×	EC-134
CAN COMM CIRCUIT	U1001	1001*4	2	—	EC-134
CKP SEN/CIRCUIT	P0335	0335	2	×	EC-254
CLOSED LOOP-B1	P1148	1148	1	×	EC-406
CLOSED LOOP-B2	P1168	1168	1	×	EC-406
CMP SEN/CIRC-B1	P0340	0340	2	×	EC-260

ENGINE CONTROL SYSTEM

System Diagram

PF2:23710

UBS00EML

A

EC

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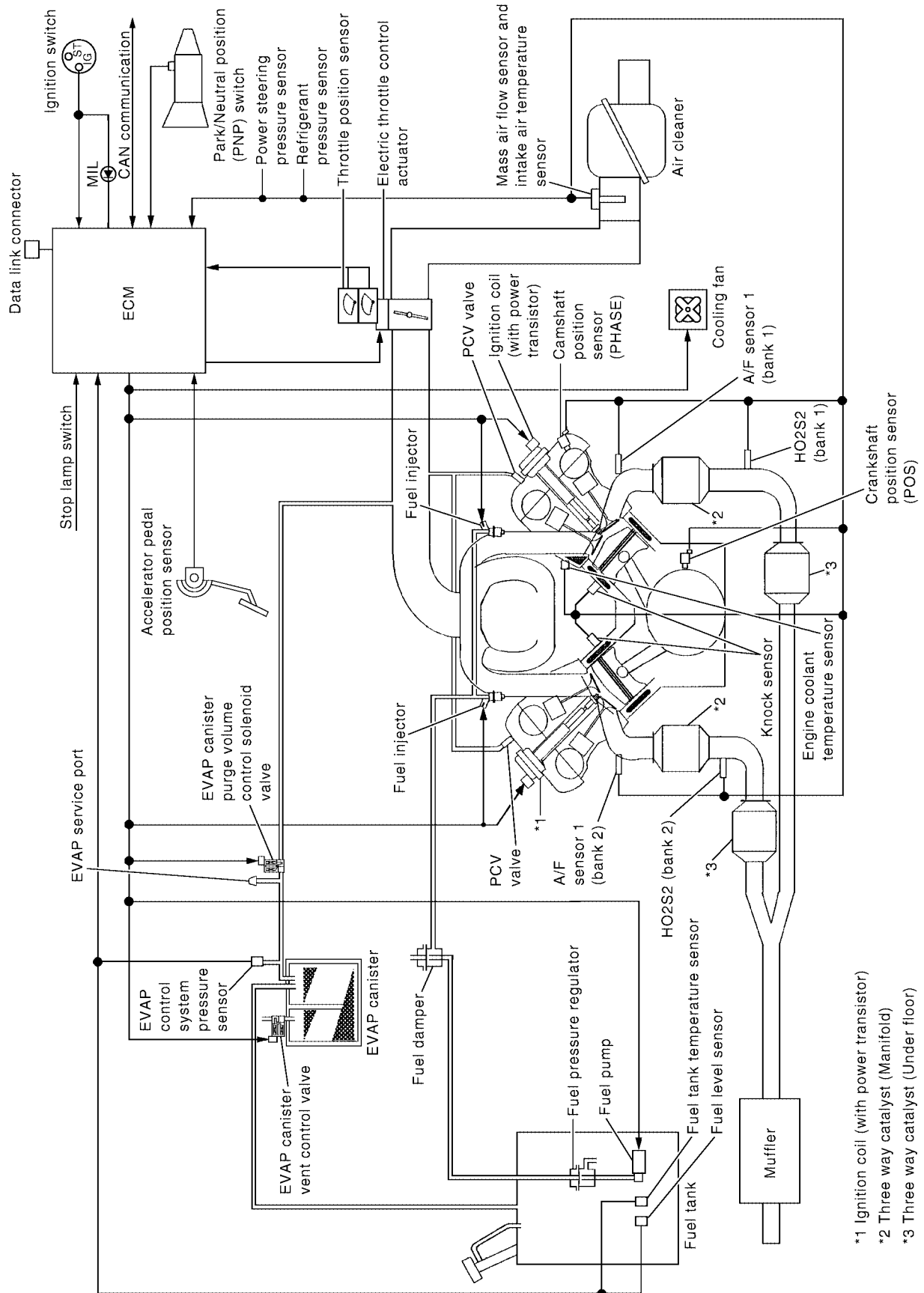
I

J

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M



*1 Ignition coil (with power transistor)

*2 Three way catalyst (Manifold)

*3 Three way catalyst (Under floor)

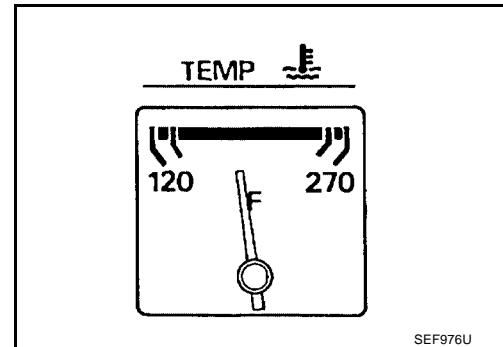
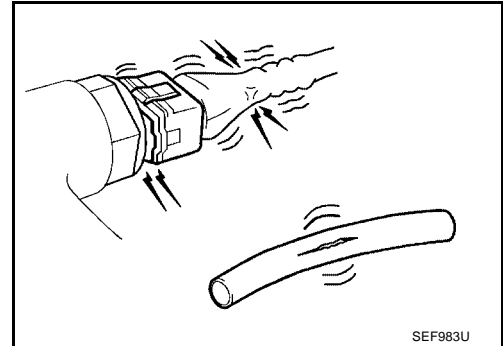
PBIB2051E

BASIC SERVICE PROCEDURE

INSPECTION PROCEDURE

1. INSPECTION START

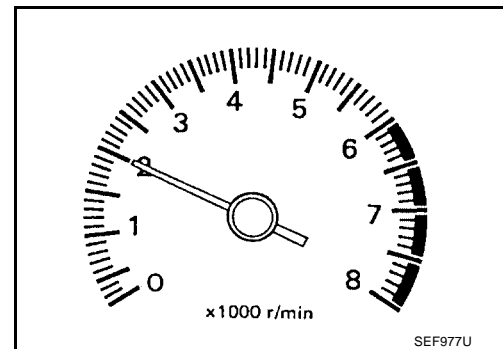
1. Check service records for any recent repairs that may indicate a related malfunction, or a current need for scheduled maintenance.
2. Open engine hood and check the following:
 - Harness connectors for improper connections
 - Wiring harness for improper connections, pinches and cut
 - Vacuum hoses for splits, kinks and improper connections
 - Hoses and ducts for leaks
 - Air cleaner clogging
 - Gasket
3. Confirm that electrical or mechanical loads are not applied.
 - Headlamp switch is OFF.
 - Air conditioner switch is OFF.
 - Rear window defogger switch is OFF.
 - Steering wheel is in the straight-ahead position, etc.
4. Start engine and warm it up until engine coolant temperature indicator points the middle of gauge. Ensure engine stays below 1,000 rpm.



5. Run engine at about 2,000 rpm for about 2 minutes under no load.
6. Make sure that no DTC is displayed with CONSULT-II or GST.

OK or NG

- OK >> GO TO 3.
NG >> GO TO 2.



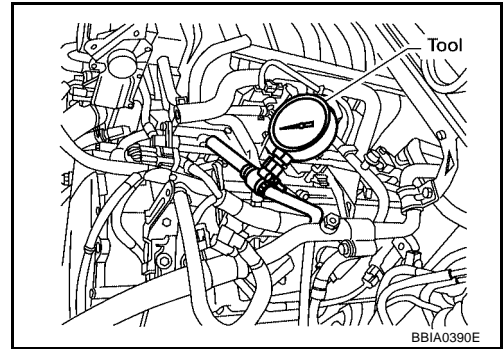
2. REPAIR OR REPLACE

Repair or replace components as necessary according to corresponding Diagnostic Procedure.

>> GO TO 3.

BASIC SERVICE PROCEDURE






4. Install Fuel Pressure Adapter J-44321-6 and Fuel Pressure Gauge (from kit J-44321) as shown in figure.
 - Do not distort or bend fuel rail tube when installing fuel pressure gauge adapter.
 - When reconnecting fuel hose, check the original fuel hose for damage and abnormality.
5. Turn ignition switch ON (reactivate fuel pump), and check for fuel leakage.
6. Start engine and check for fuel leakage.
7. Read the indication of fuel pressure gauge.
 - During fuel pressure check, check for fuel leakage from fuel connection every 3 minutes.



At idling: Approximately 350 kPa (3.57 kg/cm² , 51 psi)

8. If result is unsatisfactory, go to next step.
9. Check the following.
 - Fuel hoses and fuel tubes for clogging
 - Fuel filter for clogging
 - Fuel pump
 - Fuel pressure regulator for cloggingIf OK, replace fuel pressure regulator.
If NG, repair or replace.
10. Before disconnecting Fuel Pressure Gauge and Fuel Pressure Adapter J-44321-6, release fuel pressure to zero. Refer to [EC-46. "FUEL PRESSURE RELEASE"](#) .

ON BOARD DIAGNOSTIC (OBD) SYSTEM

Diagnostic Test Mode	KEY and ENG. Status	Function	Explanation of Function
Mode I	Ignition switch in ON position  Engine stopped 	BULB CHECK	This function checks the MIL bulb for damage (blown, open circuit, etc.). If the MIL does not come on, check MIL circuit.
	Engine running 	MALFUNCTION WARNING	This is a usual driving condition. When a malfunction is detected twice in two consecutive driving cycles (two trip detection logic), the MIL will light up to inform the driver that a malfunction has been detected. The following malfunctions will light up or blink the MIL in the 1st trip. <ul style="list-style-type: none"> ● Misfire (Possible three way catalyst damage) ● One trip detection diagnoses
Mode II	Ignition switch in ON position  Engine stopped 	SELF-DIAGNOSTIC RESULTS	This function allows DTCs and 1st trip DTCs to be read.

When there is an open circuit on MIL circuit, the ECM cannot warn the driver by lighting MIL up when there is malfunction on engine control system.

Therefore, when electrical controlled throttle and part of ECM related diagnoses are continuously detected as NG for 5 trips, ECM warns the driver that engine control system malfunctions and MIL circuit is open by means of operating fail-safe function.

The fail-safe function also operates when above diagnoses except MIL circuit are detected, and demands the driver to repair the malfunction.

Engine operating condition in fail-safe mode	Engine speed will not rise more than 2,500 rpm due to the fuel cut
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HOW TO SWITCH DIAGNOSTIC TEST MODE

NOTE:

- It is better to count the time accurately with a clock.
- It is impossible to switch the diagnostic mode when an accelerator pedal position sensor circuit has a malfunction.
- Always ECM returns to Diagnostic Test Mode I after ignition switch is turned OFF.

How to Set Diagnostic Test Mode II (Self-diagnostic Results)

1. Confirm that accelerator pedal is fully released, turn ignition switch ON and wait 3 seconds.
2. Repeat the following procedure quickly five times within 5 seconds.
 - a. Fully depress the accelerator pedal.
 - b. Fully release the accelerator pedal.
3. Wait 7 seconds, fully depress the accelerator pedal and keep it for approx. 10 seconds until the MIL starts blinking.
4. Fully release the accelerator pedal.

TROUBLE DIAGNOSIS

6. PERFORM IDLE AIR VOLUME LEARNING

Refer to [EC-44, "Idle Air Volume Learning"](#) .

Is Idle Air Volume Learning carried out successfully?

Yes or No

Yes >> GO TO 7.

No >> 1. Follow the instruction of Idle Air Volume Learning.
2. GO TO 4.

7. CHECK TARGET IDLE SPEED AGAIN

With CONSULT-II

1. Start engine and warm it up to normal operating temperature.
2. Read idle speed in "DATA MONITOR" mode with CONSULT-II.

650 ± 50 rpm (in P or N position)

Without CONSULT-II

1. Start engine and warm it up to normal operating temperature.
2. Check idle speed.

650 ± 50 rpm (in P or N position)

OK or NG

OK >> GO TO 10.

NG >> GO TO 8.

8. DETECT MALFUNCTIONING PART

Check the following.

- Check camshaft position sensor (PHASE) and circuit. Refer to [EC-260](#) .
- Check crankshaft position sensor (POS) and circuit. Refer to [EC-254](#) .

OK or NG

OK >> GO TO 9.

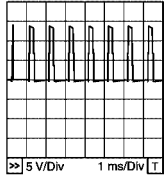
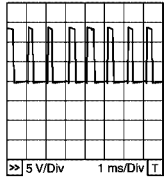
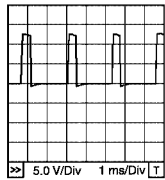

NG >> 1. Repair or replace.
2. GO TO 4.

9. CHECK ECM FUNCTION

1. Substitute another known-good ECM to check ECM function. (ECM may be the cause of an incident, but this is a rare case.)
2. Perform initialization of NVIS (NATS) system and registration of all NVIS (NATS) ignition key IDs. Refer to [BL-135, "NVIS\(NISSAN Vehicle Immobilizer System-NATS\)"](#) .

>> GO TO 4.

TROUBLE DIAGNOSIS

TER-MINAL NO.	WIRE COLOR	ITEM	CONDITION	DATA (DC Voltage)
3	L	Throttle control motor relay power supply	[Ignition switch: ON]	BATTERY VOLTAGE (11 - 14V)
4	L/W	Throttle control motor (Close)	[Ignition switch: ON] <ul style="list-style-type: none"> ● Engine stopped ● Shift lever position: D ● Accelerator pedal: Released 	0 - 14V★  <small>PBIB1104E</small>
5	L/B	Throttle control motor (Open)	[Ignition switch: ON] <ul style="list-style-type: none"> ● Engine stopped ● Shift lever position: D ● Accelerator pedal: Fully depressed 	0 - 14V★  <small>PBIB1105E</small>
6	GR	Heated oxygen sensor 2 heater (bank 1)	[Engine is running] <ul style="list-style-type: none"> ● Engine speed is below 3,600 rpm after the following conditions are met. <ul style="list-style-type: none"> - Engine: After warming up - Keeping the engine speed between 3,500 and 4,000 rpm for 1 minute and at idle for 1 minute under no load 	0 - 1.0V
			[Ignition switch: ON] <ul style="list-style-type: none"> ● Engine stopped [Engine is running] <ul style="list-style-type: none"> ● Engine speed is above 3,600 rpm. 	BATTERY VOLTAGE (11 - 14V)
12	R	Power steering pressure sensor	[Engine is running] <ul style="list-style-type: none"> ● Steering wheel is being turned. 	0.5 - 4.5V
			[Engine is running] <ul style="list-style-type: none"> ● Steering wheel is not being turned. 	0.4 - 0.8V
13	O	Crankshaft position sensor (POS)	[Engine is running] <ul style="list-style-type: none"> ● Warm-up condition ● Idle speed NOTE: The pulse cycle changes depending on rpm at idle.	1.0 - 2.0V★  <small>PBIB1041E</small>
			[Engine is running] <ul style="list-style-type: none"> ● Engine speed is 2,000 rpm. 	1.0 - 2.0V★  <small>PBIB1042E</small>

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TROUBLE DIAGNOSIS

Monitored item [Unit]	ECM INPUT SIGNALS	MAIN SIGNALS	Description	Remarks
Voltage [V]			<ul style="list-style-type: none"> ● Voltage, frequency, duty cycle or pulse width measured by the probe. 	<ul style="list-style-type: none"> ● Only “#” is displayed if item is unable to be measured. ● Figures with “#”s are temporary ones. They are the same figures as an actual piece of data which was just previously measured.
Frequency [msec], [Hz] or [%]				
DUTY-HI				
DUTY-LOW				
PLS WIDTH-HI				
PLS WIDTH-LOW				

NOTE:

- Any monitored item that does not match the vehicle being diagnosed is deleted from the display automatically.

DATA MONITOR (SPEC) MODE

Monitored Item

Monitored item [Unit]	ECM INPUT SIGNALS	MAIN SIGNALS	Description	Remarks
ENG SPEED [rpm]	×	×	<ul style="list-style-type: none"> ● Indicates the engine speed computed from the signal of the crankshaft position sensor (POS). 	
MAS A/F SE-B1 [V]	×	×	<ul style="list-style-type: none"> ● The signal voltage of the mass air flow sensor specification is displayed. 	<ul style="list-style-type: none"> ● When engine is running specification range is indicated.
B/FUEL SCHDL [msec]		×	<ul style="list-style-type: none"> ● “Base fuel schedule” indicates the fuel injection pulse width programmed into ECM, prior to any learned on board correction. 	<ul style="list-style-type: none"> ● When engine is running specification range is indicated.
A/F ALPHA-B1 [%] A/F ALPHA-B2 [%]		×	<ul style="list-style-type: none"> ● The mean value of the air-fuel ratio feedback correction factor per cycle is indicated. 	<ul style="list-style-type: none"> ● When engine is running specification range is indicated. ● This data also includes the data for the air-fuel ratio learning control.

NOTE:

Any monitored item that does not match the vehicle being diagnosed is deleted from the display automatically.

ACTIVE TEST MODE

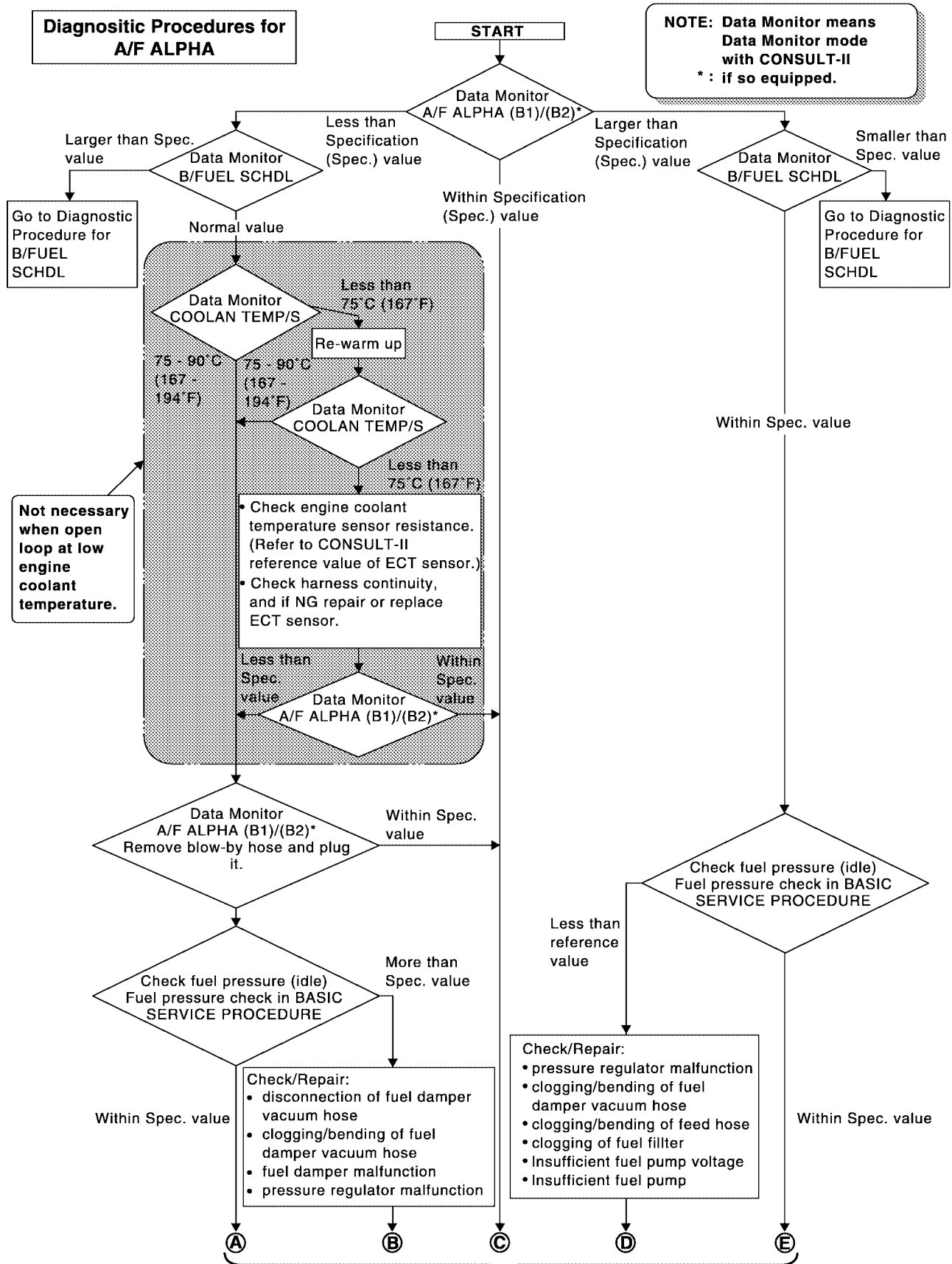
Test Item

TEST ITEM	CONDITION	JUDGEMENT	CHECK ITEM (REMEDY)
FUEL INJECTION	<ul style="list-style-type: none"> ● Engine: Return to the original trouble condition ● Change the amount of fuel injection using CONSULT-II. 	If trouble symptom disappears, see CHECK ITEM.	<ul style="list-style-type: none"> ● Harness and connectors ● Fuel injector ● Air fuel ratio (A/F) sensor 1
IGNITION TIMING	<ul style="list-style-type: none"> ● Engine: Return to the original trouble condition ● Timing light: Set ● Retard the ignition timing using CONSULT-II. 	If trouble symptom disappears, see CHECK ITEM.	<ul style="list-style-type: none"> ● Perform Idle Air Volume Learning.
POWER BALANCE	<ul style="list-style-type: none"> ● Engine: After warming up, idle the engine. ● A/C switch OFF ● Shift lever N ● Cut off each injector signal one at a time using CONSULT-II. 	Engine runs rough or dies.	<ul style="list-style-type: none"> ● Harness and connectors ● Compression ● Fuel injector ● Power transistor ● Spark plug ● Ignition coil

TROUBLE DIAGNOSIS - SPECIFICATION VALUE

Diagnostic Procedure

UBS00ENM



(Go to next page.)

SEF613ZD

DTC P0037, P0038, P0057, P0058 HO2S2 HEATER

DTC P0037, P0038, P0057, P0058 HO2S2 HEATER

PF2:226A0

Description SYSTEM DESCRIPTION

UBS00ENX

Sensor	Input signal to ECM	ECM function	Actuator
Camshaft position sensor (PHASE) Crankshaft position sensor (POS)	Engine speed	Heated oxygen sensor 2 heater control	Heated oxygen sensor 2 heater
Engine coolant temperature sensor	Engine coolant temperature		
Mass air flow sensor	Amount of intake air		

The ECM performs ON/OFF control of the heated oxygen sensor 2 heater corresponding to the engine speed, amount of intake air and engine coolant temperature.

OPERATION

Engine speed rpm	Heated oxygen sensor 2 heater
Above 3,600	OFF
Below 3,600 rpm after the following conditions are met. <ul style="list-style-type: none"> ● Engine: After warming up ● Keeping the engine speed between 3,500 and 4,000 rpm for 1 minute and at idle for 1 minute under no load 	ON

CONSULT-II Reference Value in Data Monitor Mode

UBS00ENY

Specification data are reference values.

MONITOR ITEM	CONDITION	SPECIFICATION
HO2S2 HTR (B1) HO2S2 HTR (B2)	<ul style="list-style-type: none"> ● Engine speed is below 3,600 rpm after the following conditions are met. <ul style="list-style-type: none"> – Engine: After warming up – Keeping the engine speed between 3,500 and 4,000 rpm for 1 minute and at idle for 1 minute under no load 	ON
	<ul style="list-style-type: none"> ● Engine speed: Above 3,600 rpm 	OFF

On Board Diagnosis Logic

UBS00ENZ

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P0037 0037 (Bank 1)	Heated oxygen sensor 2 heater control circuit low	The current amperage in the heated oxygen sensor 2 heater circuit is out of the normal range. (An excessively low voltage signal is sent to ECM through the heated oxygen sensor 2 heater.)	<ul style="list-style-type: none"> ● Harness or connectors (The heated oxygen sensor 2 heater circuit is open or shorted.) ● Heater oxygen sensor 2 heater
P0057 0057 (Bank 2)			
P0038 0038 (Bank 1)	Heated oxygen sensor 2 heater control circuit high	The current amperage in the heated oxygen sensor 2 heater circuit is out of the normal range. (An excessively high voltage signal is sent to ECM through the heated oxygen sensor 2 heater.)	<ul style="list-style-type: none"> ● Harness or connectors (The heated oxygen sensor 2 heater circuit is shorted.) ● Heater oxygen sensor 2 heater
P0058 0058 (Bank 2)			

DTC P0102, P0103 MAF SENSOR

DTC P0102, P0103 MAF SENSOR

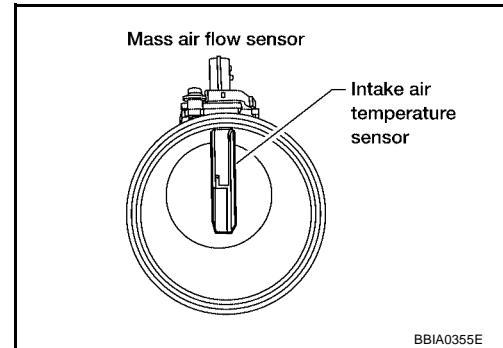
PF:22680

Component Description

UBS00EOE

The mass air flow sensor is placed in the stream of intake air. It measures the intake flow rate by measuring a part of the entire intake flow. The mass air flow sensor controls the temperature of the hot wire to a certain amount. The heat generated by the hot wire is reduced as the intake air flows around it. The more air, the greater the heat loss.

Therefore, the electric current supplied to the hot wire is changed to maintain the temperature of the hot wire as air flow increases. The ECM detects the air flow by means of this current change.



CONSULT-II Reference Value in Data Monitor Mode

UBS00E0F

Specification data are reference values.

MONITOR ITEM	CONDITION	SPECIFICATION
MAS A/F SE-B1	● Engine: After warming up ● Air conditioner switch: OFF ● Shift lever: N ● No load	Idle Approx. 1.1 - 1.4V
		2,500 rpm Approx. 1.7 - 2.0V
CAL/LD VALUE	● Engine: After warming up ● Air conditioner switch: OFF ● Shift lever: N ● No load	Idle 14% - 33%
		2,500 rpm 12% - 25%
MASS AIRFLOW	● Engine: After warming up ● Air conditioner switch: OFF ● Shift lever: N ● No load	Idle 3.0 - 9.0 g-m/s
		2,500 rpm 9.0 - 28.0 g-m/s

On Board Diagnosis Logic

UBS00E0G

These self-diagnoses have the one trip detection logic.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P0102 0102	Mass air flow sensor circuit low input	An excessively low voltage from the sensor is sent to ECM.	<ul style="list-style-type: none"> ● Harness or connectors (The sensor circuit is open or shorted.) ● Intake air leaks ● Mass air flow sensor
P0103 0103	Mass air flow sensor circuit high input	An excessively high voltage from the sensor is sent to ECM.	<ul style="list-style-type: none"> ● Harness or connectors (The sensor circuit is open or shorted.) ● Mass air flow sensor

FAIL-SAFE MODE

When the malfunction is detected, the ECM enters fail-safe mode and the MIL lights up.

Detected items	Engine operating condition in fail-safe mode
Mass air flow sensor circuit	Engine speed will not rise more than 2,400 rpm due to the fuel cut.

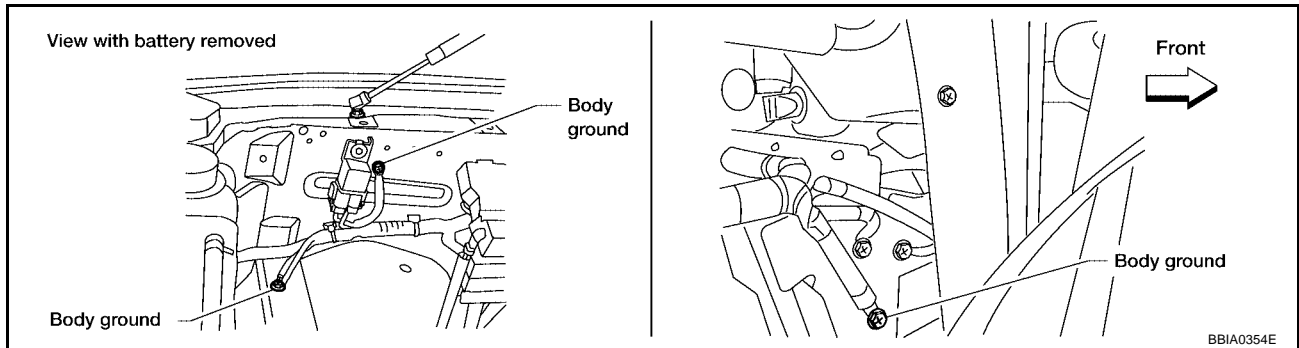
DTC P0117, P0118 ECT SENSOR

UBS00EOX

Diagnostic Procedure

1. CHECK GROUND CONNECTIONS

1. Turn ignition switch OFF.
2. Loosen and retighten three ground screws on the body.



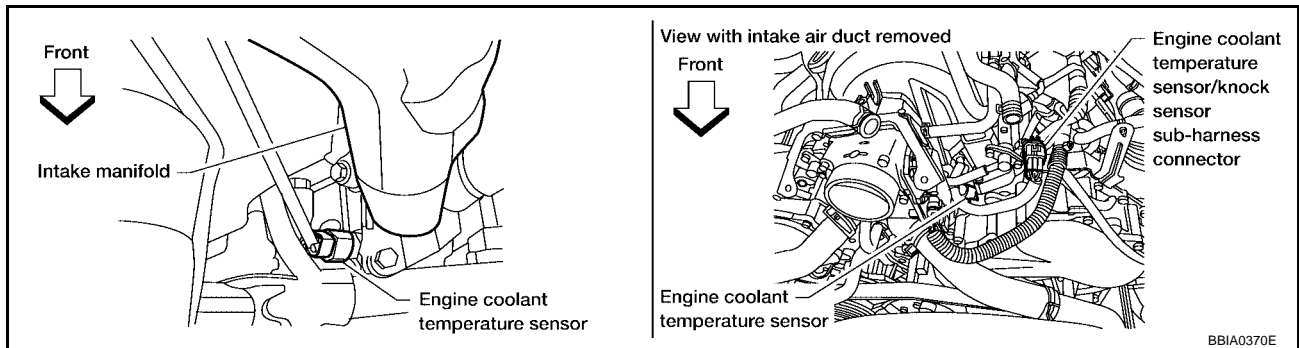
Refer to [EC-132, "Ground Inspection"](#) .

OK or NG

- OK >> GO TO 2.
- NG >> Repair or replace ground connections.

2. CHECK ECT SENSOR POWER SUPPLY CIRCUIT

1. Disconnect engine coolant temperature (ECT) sensor harness connector.

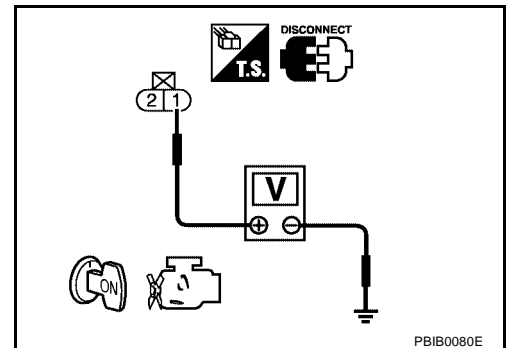


2. Turn ignition switch ON.
3. Check voltage between ECT sensor terminal 1 and ground with CONSULT-II or tester.

Voltage: Approximately 5V

OK or NG

- OK >> GO TO 4.
- NG >> GO TO 3.



3. DETECT MALFUNCTIONING PART

Check the following.

- Harness connector F26, F101
- Harness for open or short between ECM and engine coolant temperature sensor

>> Repair open circuit or short to ground or short to power in harness or connectors.

DTC P0128 THERMOSTAT FUNCTION

DTC P0128 THERMOSTAT FUNCTION

PF2:21200

On Board Diagnosis Logic

UBS00EPK

Engine coolant temperature has not risen enough to open the thermostat even though the engine has run long enough.

This is due to a leak in the seal or the thermostat stuck open.

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
P0128 0128	Thermostat function	The engine coolant temperature does not reach to specified temperature even though the engine has run long enough.	<ul style="list-style-type: none"> ● Thermostat ● Leakage from sealing portion of thermostat ● Engine coolant temperature sensor

DTC Confirmation Procedure

UBS00EPL

NOTE:

If DTC Confirmation Procedure has been previously conducted, always turn ignition switch OFF and wait at least 10 seconds before conducting the next test.

TESTING CONDITION:

- For best results, perform at ambient temperature of -10°C (14°F) or higher.
- For best results, perform at engine coolant temperature of -10°C (14°F) to 60°C (140°F).

WITH CONSULT-II

1. Replace thermostat with new one. Refer to [CO-17, "THERMOSTAT AND WATER PIPING"](#). Use only a genuine NISSAN thermostat as a replacement. If an incorrect thermostat is used, the MIL may come on.
2. Turn ignition switch ON.
3. Select "COOLAN TEMP/S" in "DATA MONITOR" mode with CONSULT-II.
4. Check that the "COOLAN TEMP/S" is above 60°C (140°F).
If it is below 60°C (140°F), go to following step.
If it is above 60°C (140°F), cool down the engine to less than 60°C (140°F), then retry from step 1.
5. Drive vehicle for 10 consecutive minutes under the following conditions.

VHCL SPEED SE	80 - 120 km/h (50 - 75 MPH)
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If 1st trip DTC is detected, go to [EC-183, "Diagnostic Procedure"](#).

WITH GST

1. Follow the procedure "WITH CONSULT-II" above.

Diagnostic Procedure

UBS00EPM

1. CHECK ENGINE COOLANT TEMPERATURE SENSOR

Refer to [EC-183, "Component Inspection"](#).

OK or NG

OK >> INSPECTION END

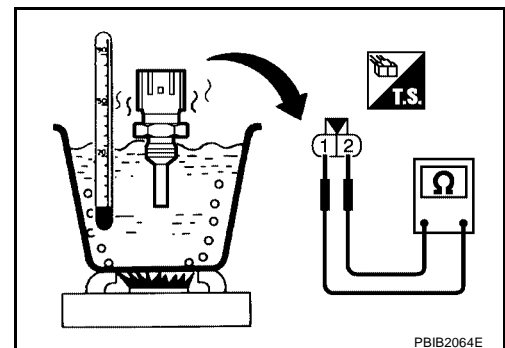
NG >> Replace engine coolant temperature sensor.

Component Inspection

ENGINE COOLANT TEMPERATURE SENSOR

UBS00EPN

Check resistance as shown in the figure.



PBIB2064E

DTC P0447 EVAP CANISTER VENT CONTROL VALVE

6. DETECT MALFUNCTIONING PART

Check the following.

- Harness connectors E41, C1
- Harness for open or short between EVAP canister vent control valve and ECM

>> Repair open circuit or short to ground or short to power in harness or connectors.

7. CHECK RUBBER TUBE FOR CLOGGING

1. Disconnect rubber tube connected to EVAP canister vent control valve.
2. Check the rubber tube for clogging.

OK or NG

- OK >> GO TO 8.
 NG >> Clean the rubber tube using an air blower.

8. CHECK EVAP CANISTER VENT CONTROL VALVE

Refer to [EC-296, "Component Inspection"](#) .

OK or NG

- OK >> GO TO 9.
 NG >> Replace EVAP canister vent control valve.

9. CHECK INTERMITTENT INCIDENT

Refer to [EC-126, "TROUBLE DIAGNOSIS FOR INTERMITTENT INCIDENT"](#) .

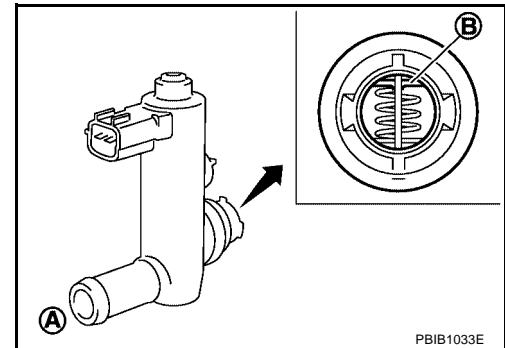
>> INSPECTION END

Component Inspection EVAP CANISTER VENT CONTROL VALVE

UBS00ESF

With CONSULT-II

1. Remove EVAP canister vent control valve from EVAP canister.
2. Check portion **B** of EVAP canister vent control valve for being rusted.
 If NG, replace EVAP canister vent control valve.
 If OK, go to next step.
3. Reconnect harness connectors disconnected.
4. Turn ignition switch ON.



PBIB1033E

5. Perform "VENT CONTROL/V" in "ACTIVE TEST" mode.
6. Check air passage continuity and operation delay time.
Make sure new O-ring is installed properly.

Condition VENT CONTROL/V	Air passage continuity between A and B
ON	No
OFF	Yes

Operation takes less than 1 second.

- If NG, replace EVAP canister vent control valve.
 If OK, go to next step.

ACTIVE TEST	
VENT CONTROL/V	OFF
MONITOR	
ENG SPEED	XXX rpm
A/F ALPHA-B1	XXX %
A/F ALPHA-B2	XXX %

PBIB1679E

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

PF18930

System Description INPUT/OUTPUT SIGNAL CHART

UBS00F1D

Sensor	Input signal to ECM	ECM function	Actuator
ASCD brake switch	Brake pedal operation	ASCD vehicle speed control	Electric throttle control actuator
Stop lamp switch	Brake pedal operation		
ASCD steering switch	ASCD steering switch operation		
Park/Neutral position (PNP) switch	Gear position		
Combination meter*	Vehicle speed		
TCM*	Powertrain revolution		

This signal is sent to the ECM through CAN communication line.

BASIC ASCD SYSTEM

Refer to Owner's Manual for ASCD operating instructions.

Automatic Speed Control Device (ASCD) allows a driver to keep vehicle at predetermined constant speed without pressing accelerator pedal. Driver can set vehicle speed in advance between approximately 40 km/h (25 MPH) and 144 km/h (89 MPH).

ECM controls throttle angle of electric throttle control actuator to regulate engine speed.

Operation status of ASCD is indicated by CRUISE indicator and SET indicator in combination meter. If any malfunction occurs in ASCD system, it automatically deactivates control.

SET OPERATION

Press ON/OFF(MAIN) switch. (The CRUISE indicator in combination meter illuminates.)

When vehicle speed reaches a desired speed between approximately 40 km/h (25 MPH) and 144 km/h (89 MPH), press COAST/SET switch. (Then SET indicator in combination meter illuminates.)

ACCEL OPERATION

If the ACCEL/RESUME switch is pressed during cruise control driving, increase the vehicle speed until the switch is released or vehicle speed reaches maximum speed controlled by the system.

And then ASCD will keep the new set speed.

CANCEL OPERATION

When any of following conditions exist, cruise operation will be canceled.

- CANCEL switch is pressed
- More than 2 switches at ASCD steering switch are pressed at the same time (Set speed will be cleared)
- Brake pedal is depressed
- Selector lever is changed to N, P, R position
- Vehicle speed decreased to 13 km/h (8 MPH) lower than the set speed
- VDC/TCS system is operated

When the ECM detects any of the following conditions, the ECM will cancel the cruise operation and inform the driver by blinking indicator lamp.

- Engine coolant temperature is slightly higher than the normal operating temperature, CRUISE lamp may blink slowly.
When the engine coolant temperature decreases to the normal operating temperature, CRUISE lamp will stop blinking and the cruise operation will be able to work by pressing COAST/SET switch or ACCEL/RESUME switch.
- Malfunction for some self-diagnoses regarding ASCD control: SET lamp will blink quickly.

If ON/OFF(MAIN) switch is turned to OFF during ASCD is activated, all of ASCD operations will be canceled and vehicle speed memory will be erased.

COAST OPERATION

When the COAST/SET switch is pressed during cruise control driving, decrease vehicle set speed until the switch is released. And then ASCD will keep the new set speed.