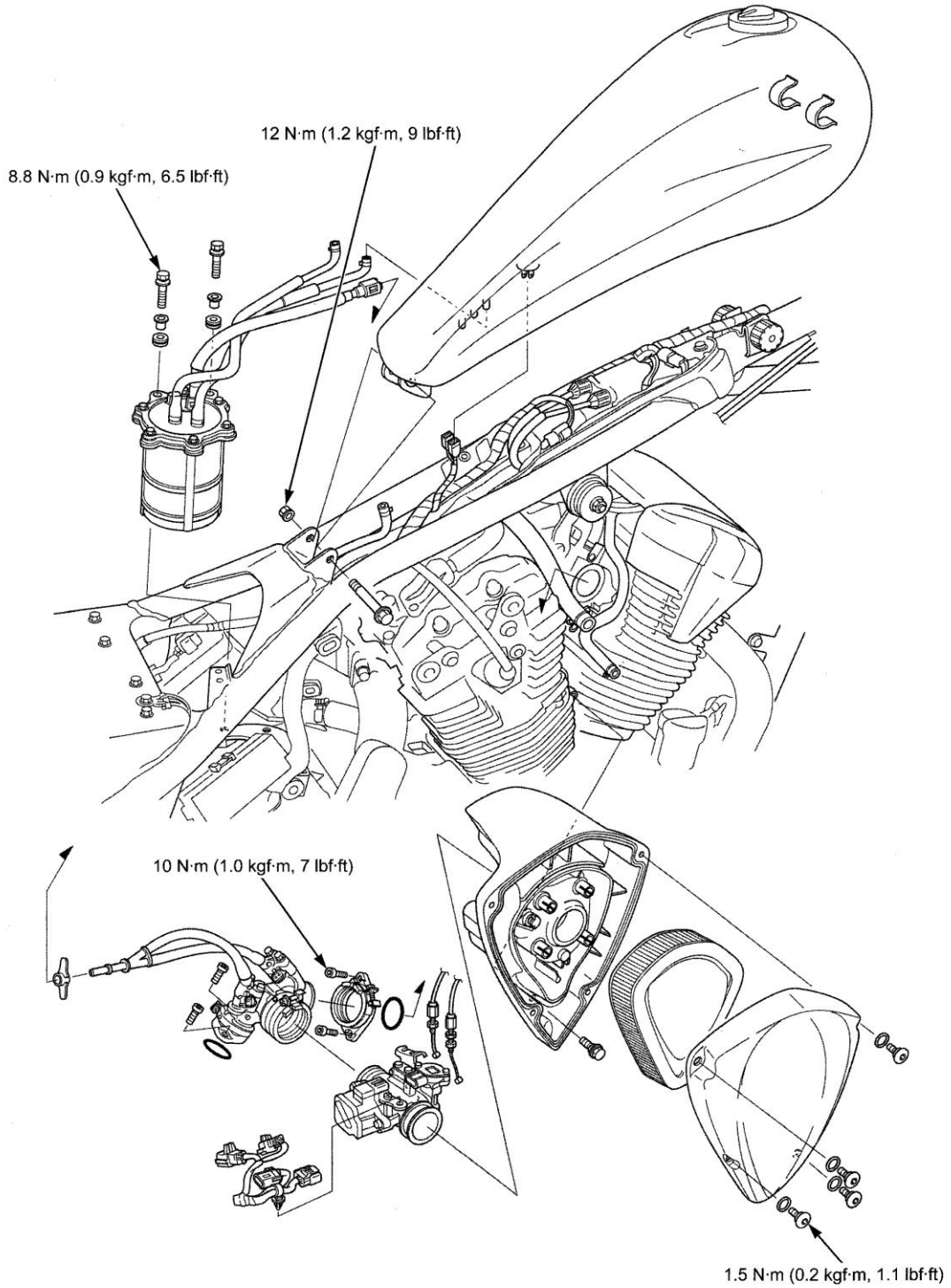


6. FUEL SYSTEM (PGM-FI)

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FUEL SYSTEM (PGM-FI)

COMPONENT LOCATION



SERVICE INFORMATION

GENERAL

- Be sure to relieve the fuel pressure while the engine is OFF.
- Before disconnecting the fuel feed hose, relieve pressure from the system by disconnecting the quick connect fitting from the system (page 6-30).
- Bending or twisting the control cable will impair smooth operation and could cause the cable to stick or bend, resulting in loss of vehicle control.
- Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where gasoline is stored can cause a fire or explosion.
- Do not snap the throttle valve from full open to full close after the throttle cable has been removed. It may cause incorrect idle operation.
- Do not damage the throttle body. It may cause incorrect throttle valve operation.
- Seal the cylinder head intake port with tape or a clean cloth to keep dirt and debris from entering the intake port after the throttle body has been removed.
- Prevent dirt and debris from entering the throttle bore and air passages after the throttle body has been removed. Clean them using compressed air if necessary.
- Do not loosen or tighten the white painted bolts, nuts and screws of the throttle body loosening or tightening them can cause throttle valve and idle control failure.
- A faulty PGM-FI system is often related to poorly connected or corroded connectors. Check those connections before proceeding.
- When disassembling the PGM-FI parts, note the location of the O-rings. Replace them with new ones upon reassembly.
- Use a digital tester for PGM-FI system inspection.
- For fuel reserve sensor inspection (page 22-17).

SPECIFICATIONS

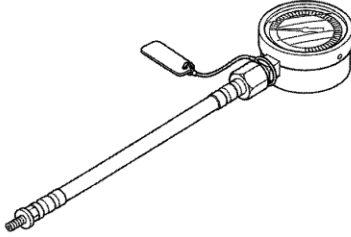
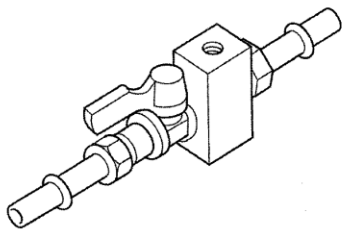
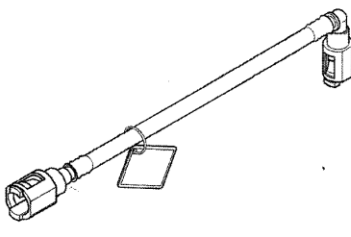
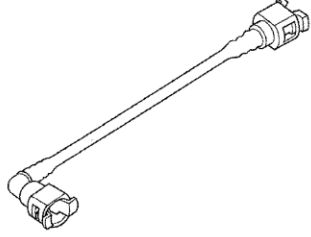


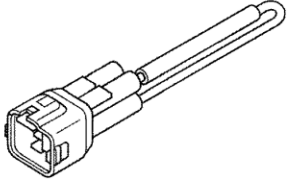
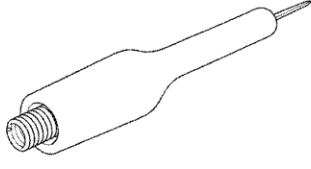
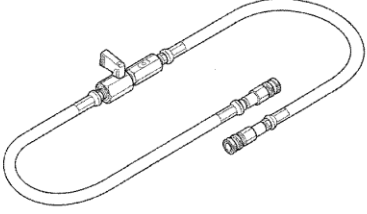
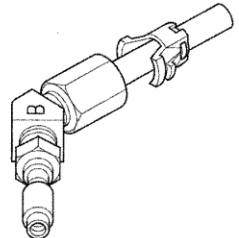
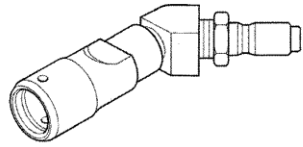
ITEM	SPECIFICATIONS
Throttle body identification number	GQ9HA
Engine idle speed	930 ± 100 rpm
Throttle grip freeplay	2 – 6 mm (1/16 – 1/4 in)
Fuel injector resistance (20°C/68°F)	11 – 13 Ω
PAIR control solenoid valve resistance (20°C/68°F)	20 – 24 Ω
EVAP purge control solenoid valve resistance (20°C/68°F) (CALIFORNIA TYPE)	30 – 34 Ω
Fuel pressure at idle	336 – 350 kPa (3.4 – 3.6 kgf/cm ² , 49 – 51 psi)
Fuel pump flow (at 12 V)	150 cm ³ (5.1 US oz, 5.3 Imp oz) minimum/10 seconds

TORQUE VALUES

Fuel pump assembly bolt	8.8 N·m (0.9 kgf·m, 6.5 lbf·ft)	For tightening sequence (page 6-41)
PAIR check valve cover bolt	5.2 N·m (0.5 kgf·m, 3.8 lbf·ft)	
Air cleaner cover socket screw	1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)	
Air cleaner case screw	1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)	
Air cleaner connecting tube band screw	0.7 N·m (0.1 kgf·m, 0.5 lbf·ft)	
ECT sensor	24.5 N·m (2.5 kgf·m, 18 lbf·ft)	
IACV setting plate torx screw	2.1 N·m (0.2 kgf·m, 1.5 lbf·ft)	
Fuel injector mounting bolt	5.1 N·m (0.5 kgf·m, 3.8 lbf·ft)	
Sensor unit torx screw	3.4 N·m (0.3 kgf·m, 2.5 lbf·ft)	
Throttle cable guide screw	3.4 N·m (0.3 kgf·m, 2.5 lbf·ft)	
Insulator band screw (Throttle body side)	–	See page 6-48
Insulator band screw (Intake manifold side)	–	See page 6-56
Fuel tank mounting nut	12 N·m (1.2 kgf·m, 9 lbf·ft)	U-nut
Manifold base band screw	–	See page 6-56
Intake manifold mounting socket bolt	10 N·m (1.0 kgf·m, 7 lbf·ft)	
Bank angle sensor mounting bolt	2 N·m (0.2 kgf·m, 1.5 lbf·ft)	
Clamp stay screw	3.4 N·m (0.3 kgf·m, 2.5 lbf·ft)	

FUEL SYSTEM (PGM-FI)

TOOLS

<p>Fuel pressure gauge (0 – 100 psi) 07406-0040004</p>  <p>or 07406-004000B (U.S.A. only)</p>	<p>Pressure gauge manifold 07ZAJ-S5A0111</p>  <p>Not available in U.S.A.</p>	<p>Hose attachment, 6 mm/9 mm 07ZAJ-S5A0130</p>  <p>Not available in U.S.A.</p>
<p>Hose attachment, 9 mm/9 mm 07ZAJ-S5A0120</p>  <p>Not available in U.S.A.</p>	<p>Attachment joint, 6 mm/9 mm 07ZAJ-S5A0150</p>  <p>Not available in U.S.A.</p>	<p>HDS pocket tester TDS3557-0112-01 (U.S.A. only)</p> 
<p>SCS connector 070PZ-ZY30100</p> 	<p>Test probe 07ZAJ-RDJA110</p> 	<p>Pressure manifold hose 07AMJ-HW3A100 (U.S.A. only)</p> 
<p>Adaptor, male 07AAJ-S6MA200 (U.S.A. only)</p> 	<p>Adaptor, female 07AAJ-S6MA400 (U.S.A. only)</p> 	

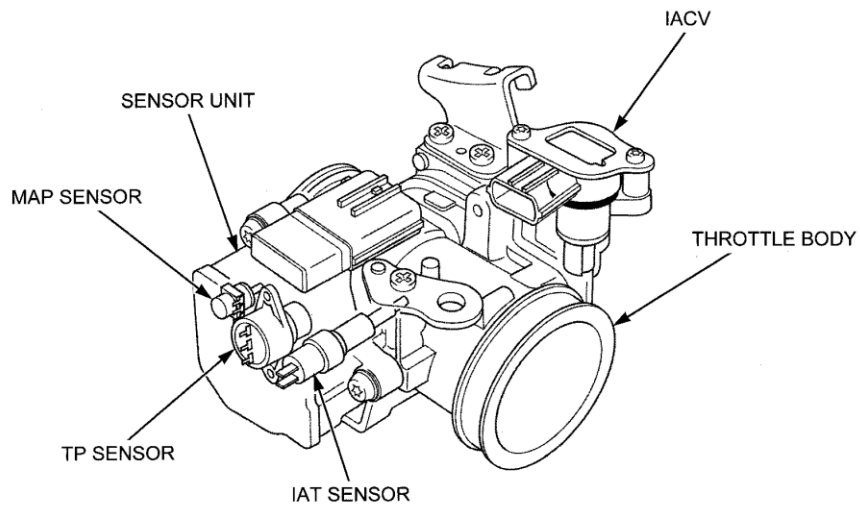
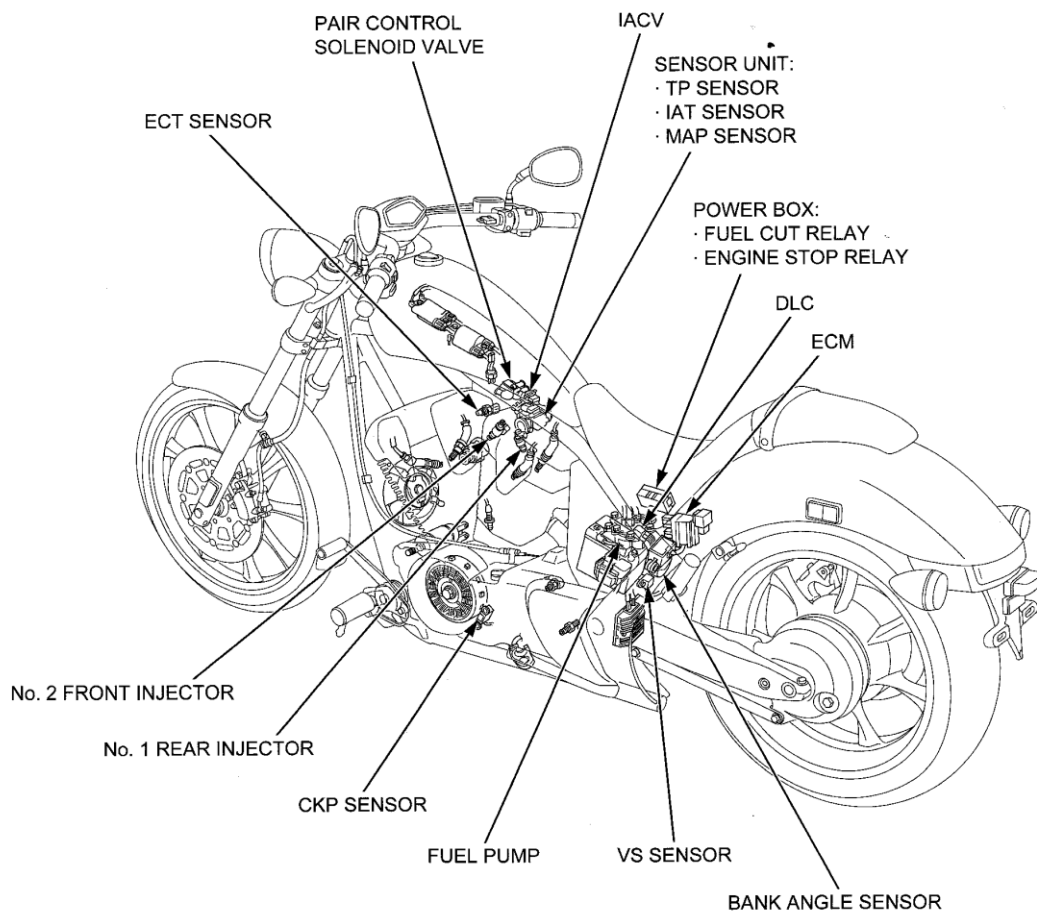
PGM-FI SYMPTOM TROUBLESHOOTING

When the motorcycle has one of these symptoms, check the DTC or MIL blinking, refer to the DTC index (page 6-14) and begin the appropriate troubleshooting procedure. If there are no DTC/MIL blinking stored in the ECM memory, do the diagnostic procedure for the symptom, in sequence listed below, until you find cause.

Symptom	Diagnosis procedure	Also check for
Engine cranks but won't start (No DTC and MIL blinking)	<ol style="list-style-type: none"> 1. Inspect the fuel supply system (page 6-30). 2. Inspect the IACV (page 6-52). 3. Inspect the ignition system (page 20-5). 	<ul style="list-style-type: none"> • No fuel to injector <ul style="list-style-type: none"> – Clogged fuel pump filter – Pinched or clogged fuel tank breather hose – Faulty fuel pump – Faulty fuel pump circuits • Intake air leak • Contaminated/deteriorated fuel • Faulty fuel injector
Engine cranks but won't start (No fuel pump operation sound when the turning the ignition ON)	<ol style="list-style-type: none"> 1. ECM power/ground circuits malfunction (page 6-61) 2. Inspect the fuel supply system (page 6-30). 	<ul style="list-style-type: none"> • Faulty bank angle sensor or related circuit • Faulty engine stop relay or related circuit • Faulty fuel cut relay or related circuit • Faulty engine stop switch or related circuit • Blown sub fuse 20 A (FI) • Blown sub fuse 10 A (ST/ENG STOP)
Engine stalls, hard to start, rough idling	<ol style="list-style-type: none"> 1. Inspect the idle speed (page 4-15). 2. Inspect the IACV (page 6-52). 3. Inspect the fuel supply system (page 6-30). 4. Inspect the battery charging system (page 19-7). 5. Inspect the ignition system (page 20-5). 	<ul style="list-style-type: none"> • Restricted fuel feed hose • Contaminated/deteriorated fuel • Intake air leak • Faulty MAP sensor • Restricted fuel tank breather hose
Afterburn when engine braking is used	<ol style="list-style-type: none"> 1. Inspect the PAIR system (page 6-63). 2. Inspect the ignition system (page 20-5). 	
Backfiring or misfiring during acceleration	Inspect the ignition system (page 20-5).	
Poor performance (driveability) and poor fuel economy	<ol style="list-style-type: none"> 1. Inspect the fuel supply system (page 6-30). 2. Inspect the air cleaner element (page 4-6). 3. Inspect the ignition system (page 20-5). 	<ul style="list-style-type: none"> • Faulty pressure regulator (fuel pump unit) • Faulty injector • Faulty MAP sensor
Idle speed is below specifications or fast idle too low (No DTC and MIL blinking)	<ol style="list-style-type: none"> 1. Inspect the idle speed (page 4-15). 2. Inspect the IACV (page 6-52). 3. Inspect the ignition system (page 20-5). 	
Idle speed is above specifications or fast idle too high (No DTC and MIL blinking)	<ol style="list-style-type: none"> 1. Inspect the idle speed (page 4-15). 2. Inspect the throttle operation and freeplay (page 4-5). 3. Inspect the IACV (page 6-52). 4. Inspect the ignition system (page 20-5). 	<ul style="list-style-type: none"> • Intake air leak • Engine top end problem • Air cleaner condition
MIL stays ON but no DTCs set, or MIL never comes ON at all	Inspect the MIL circuit (page 6-29).	
MIL stays ON at all (No DTC set)	<ol style="list-style-type: none"> 1. Inspect the MIL circuit (page 6-29). 2. Inspect the DLC circuit (page 6-29). 	

FUEL SYSTEM (PGM-FI)

PGM-FI SYSTEM LOCATION

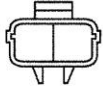


FUEL SYSTEM (PGM-FI)

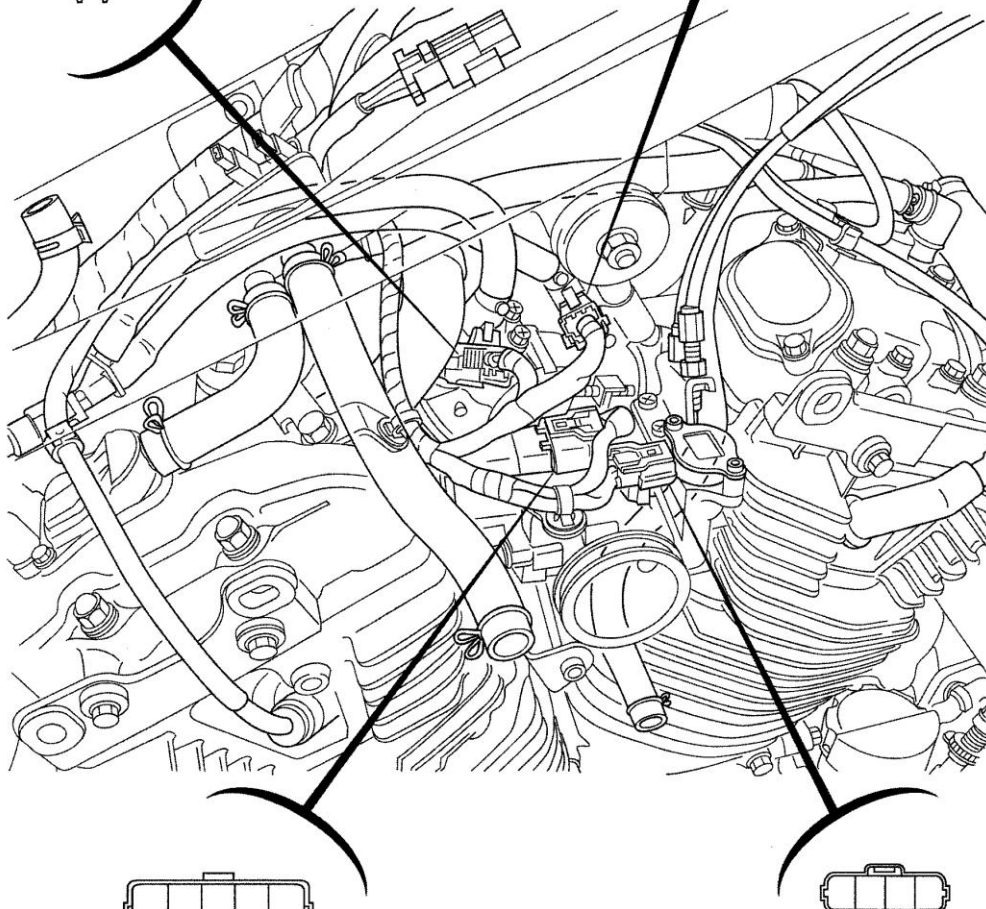
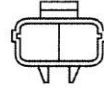
CONNECTOR LOCATION

NOTE 1: Remove the air cleaner housing (page 6-44).

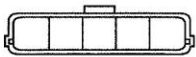
No. 1 REAR INJECTOR 2P (GRAY) CONNECTOR
(NOTE 1)



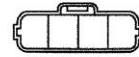
No. 2 FRONT INJECTOR 2P (GRAY) CONNECTOR
(NOTE 1)



SENSOR UNIT 5P (BLACK) CONNECTOR
(NOTE 1)



IACV 4P (BLACK) CONNECTOR
(NOTE 1)

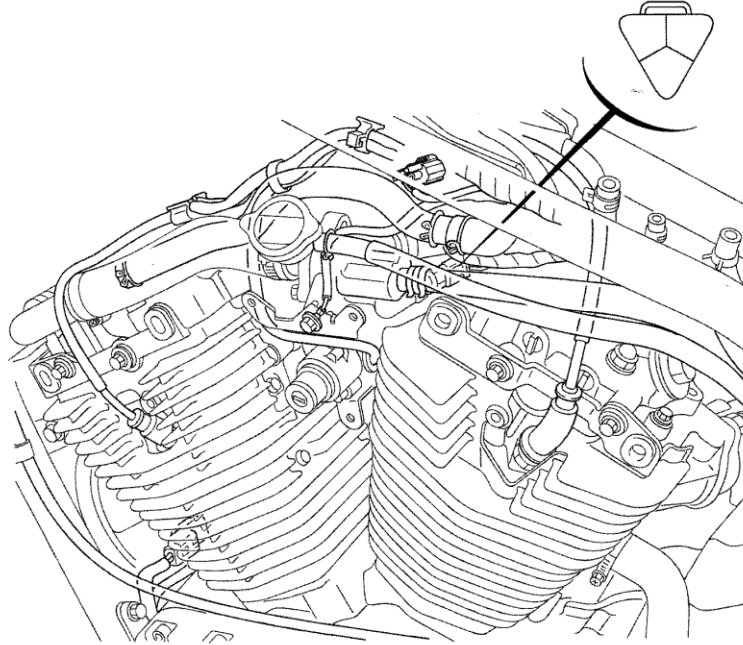


NOTE 1: Remove the following:

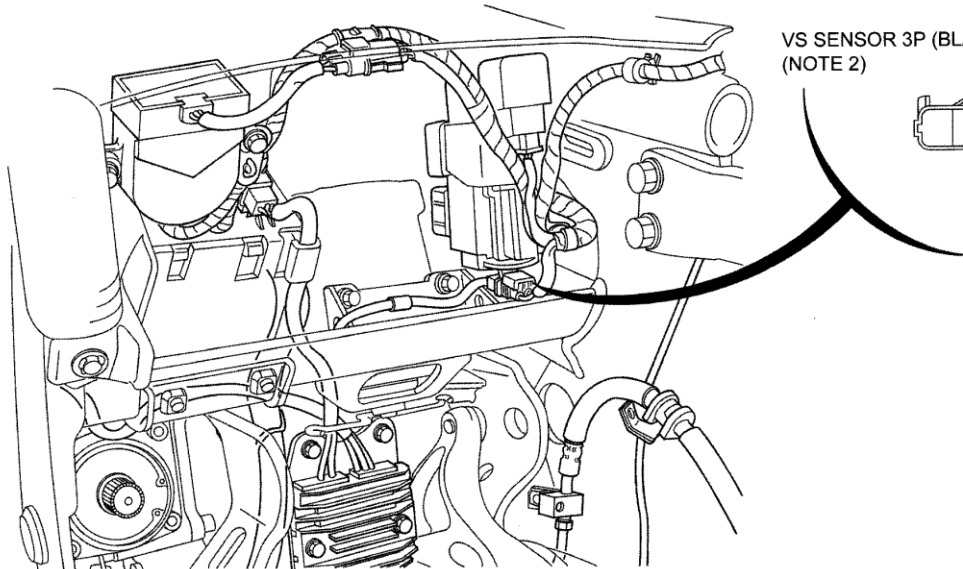
- Ignition switch (page 22-20)
- Rear left over head cover (page 3-5)

NOTE 2: Remove the rear fender (page 3-8).

ECT SENSOR 3P (GRAY) CONNECTOR
(NOTE 1)

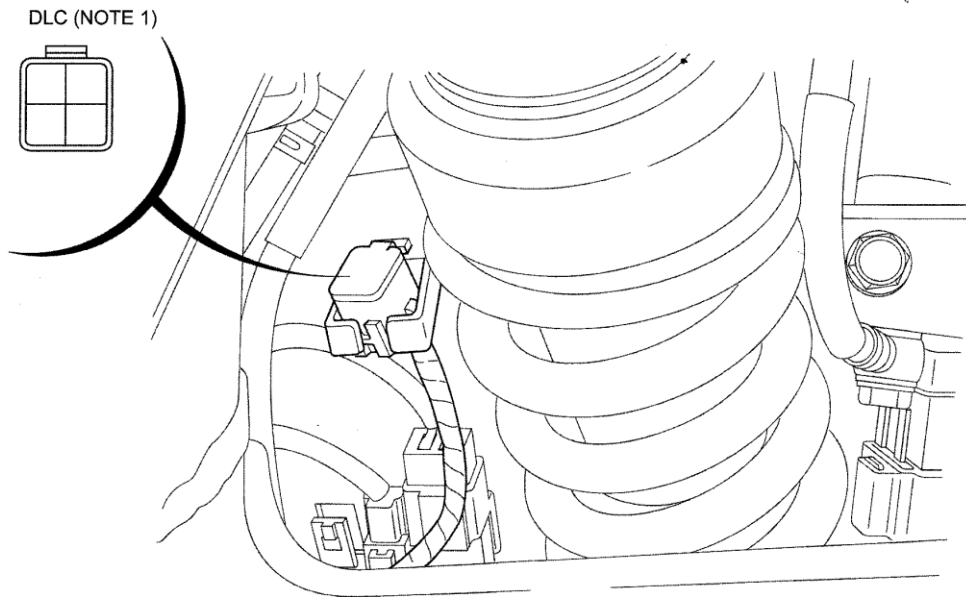


VS SENSOR 3P (BLACK) CONNECTOR
(NOTE 2)



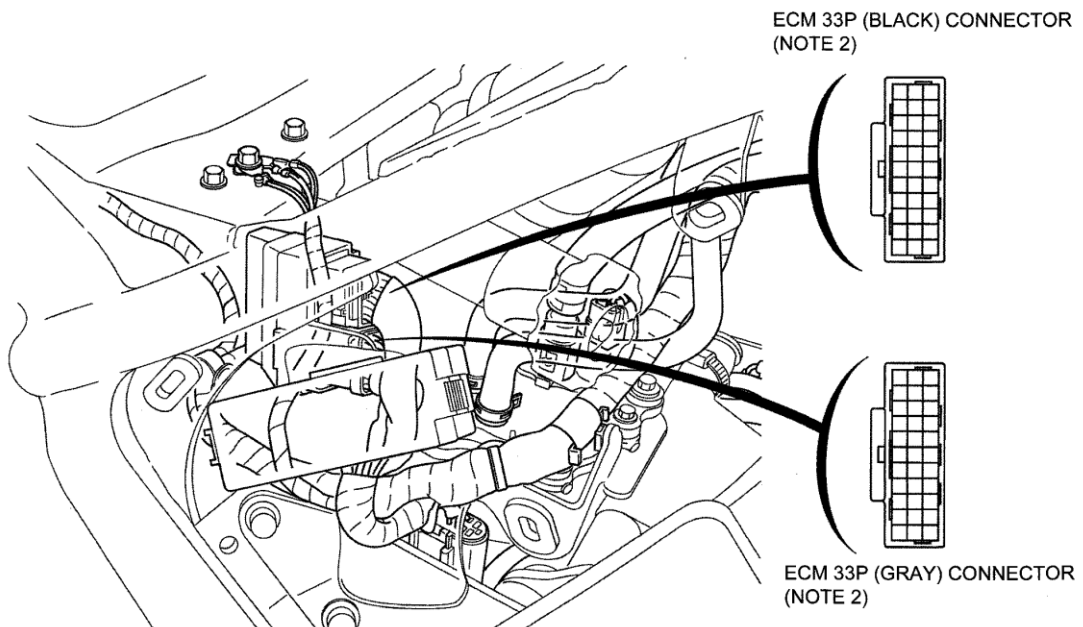
FUEL SYSTEM (PGM-FI)

NOTE 1: Remove the seat (page 3-6).



NOTE 2: Remove the following:

- Right side cover (page 3-6)
- Power box (page 6-62)



PGM-FI TROUBLESHOOTING INFORMATION

GENERAL TROUBLESHOOTING

Intermittent Failure

The term "intermittent failure" means a system may have had a failure, but it checks OK now. If the MIL does not come on, check for poor contact or loose pins at all connectors related to the circuit that of the troubleshooting. If the MIL was on, but then went out, the original problem may be intermittent.

Opens and Shorts

"Opens" and "Shorts" are common electrical terms. An open is a break in a wire or at a connection. A short is an accidental connection of a wire to ground or to another wire. In simple electronics, this usually means something will not work at all. With ECMs this can mean something may work, but not the way it's supposed to.

If the MIL has come on

Refer to DTC READOUT (page 6-12).

If the MIL did not stay on

If the MIL did not stay on, but there is a driveability problem, do the SYMPTOM TROUBLESHOOTING (page 6-5).

SYSTEM DESCRIPTION

SELF-DIAGNOSIS SYSTEM

The PGM-FI system is equipped with the self-diagnostic system. When any abnormality occurs in the system, the ECM turns on the MIL and stores a DTC in its erasable memory.

FAIL-SAFE FUNCTION

The PGM-FI system is provided with a fail-safe function to secure a minimum running capability even when there is trouble in the system. When any abnormality is detected by the self-diagnosis function, running capability is maintained by pre-programmed value in the simulated program map. When any abnormality is detected in the injector(s), the fail-safe function stops the engine to protect it from damage.

DTC (Diagnostic Trouble Code)

- The DTC is composed of a main code and a sub code and it is displayed as a hyphenated number when retrieved from the ECM with the HDS pocket tester.

The digits in front of the hyphen are the main code, they indicate the component of function failure.

The digits behind the hyphen are the sub code, they detail the specific symptom of the component or function failure.

For example, in the case of the TP sensor:

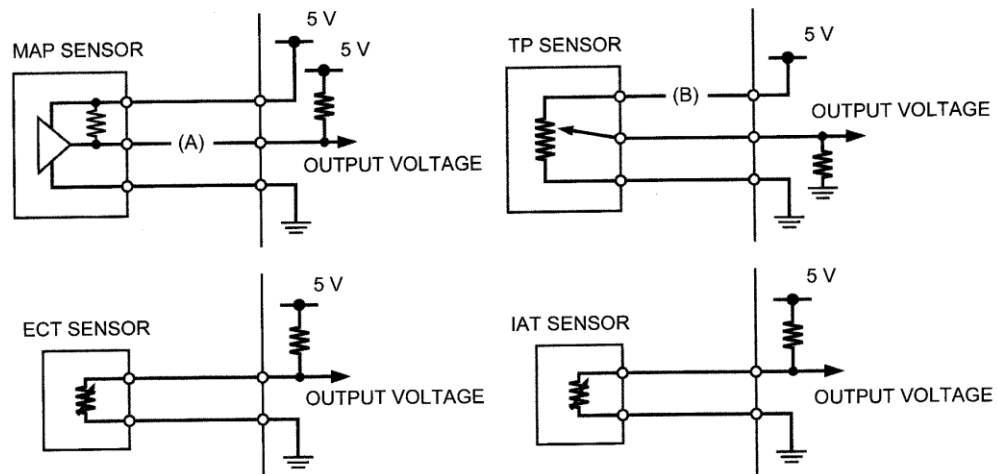
- DTC 08 - 1 = (TP sensor voltage) - (lower than the specified value)
- DTC 08 - 2 = (TP sensor voltage) - (higher than the specified value)

- The MAP, ECT, TP and IAT sensor diagnosis will be made according to the voltage output of the affected sensor.

If a failure occurs, the ECM determines the Function Failure, compares the sensor voltage output to the standard value, and then outputs the corresponding DTC to the HDS pocket tester.

For example:

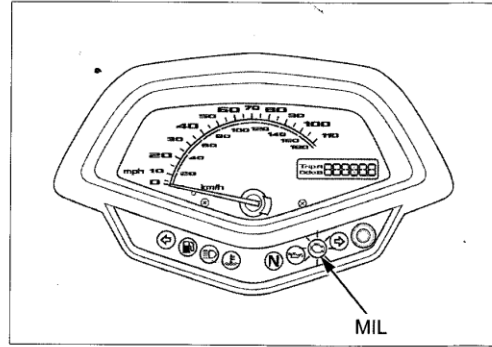
- If the output voltage line (A) on the MAP sensor is opened, the ECM detects the output voltage is about 5 V, then the DTC 1-2 (MAP sensor circuit high voltage) will be displayed.
- If the input voltage line (B) on the TP sensor is opened, the ECM detects the output voltage is 0 V, then the DTC 8-1 (TP sensor circuit low voltage) will be displayed.



FUEL SYSTEM (PGM-FI)

MIL Blink Pattern

- If the HDS pocket tester is not available, DTC can be read from the ECM memory by the MIL blink pattern.
- The number of MIL blinks is the equivalent the main code of the DTC (the sub code cannot be displayed by the MIL).
- The MIL will blink the current DTC, in case the ECM detects the problem at present, when the ignition switch ON or idling with the sidestand down. The MIL will stay ON when the engine speed is over 2,000 rpm or with the sidestand up.
- The MIL has two types of blinks, a long blink and short blink. The long blinking lasts for 1.3 seconds, the short blinking lasts for 0.5 seconds. One long blink is the equivalent of ten short blinks. For example, when two long blinks are followed by five short blinks, the MIL is 25 (two long blinks = 20 blinks, plus five short blinks).
- When the ECM stores more than one DTC, the MIL will indicate them by blinking in the order from the lowest number to highest number.



MIL Check

When the ignition switch is turned to ON and engine stop switch "O", the MIL will stay on for a few seconds, then go off. If the MIL does not come on, troubleshoot the MIL circuit (page 6-29).

CURRENT DTC/FREEZE DTC

The DTC is indicated in two ways according to the failure status.

- In case the ECM detects the problem at present, the MIL will come on and the MIL will start to blink as its DTC when the sidestand is lowered. It is possible to readout the MIL blink pattern as the current DTC.
- In case the ECM does not detect any problem at present but has a problem stored in its memory, the MIL will not light and blink. If it is necessary to retrieve the past problem, readout the freeze DTC by following the DTC readout procedure.

HDS POCKET TESTER INFORMATION

- The HDS can readout the DTC, freeze data, current data and other ECM condition.

How to connect the HDS pocket tester

Turn the ignition switch OFF.

Remove the seat (page 3-6).

Remove the dummy connector from the DLC.

Connect the HDS pocket tester to the DLC.

TOOL:

HDS pocket tester **TDS3557-0112-01 (U.S.A. only)**

Turn the ignition switch ON and engine stop switch "O", check the DTC and freeze data.

NOTE:

- Freeze data indicates the engine conditions when the first malfunction was detected.

ECM reset

The HDS can reset the ECM data including the DTC, freeze data and some learning memory.

DTC READOUT

Start the engine and check the MIL.

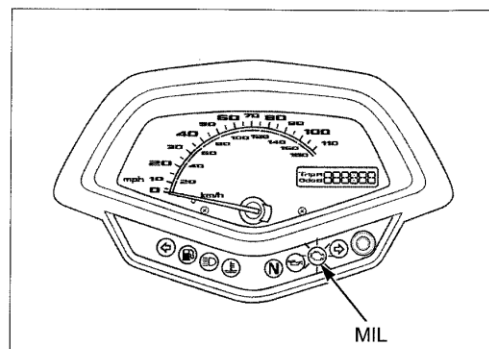
NOTE:

- When the ignition switch is turned to ON, the MIL will stay on for a few seconds, then go off.

If the MIL stays on or blinks, connect the HDS pocket tester to the DLC (page 6-12).

Read the DTC, freeze data and follow the troubleshooting index (page 6-14).

To read the DTC with the MIL blinking, refer to the following procedure.



FUEL SYSTEM (PGM-FI)**DTC INDEX**

DTC (MIL blinks)	Function Failure	Symptom/Fail-safe function	Refer to
1-1 (1)	MAP sensor circuit low voltage (less than 0.2 V) <ul style="list-style-type: none">• Open or short circuit in the MAP sensor wire• Faulty MAP sensor (sensor unit)	<ul style="list-style-type: none">• Engine operates normally• Pre-Program value: 760 mmHg/101 kPa	6-16
1-2 (1)	MAP sensor circuit high voltage (more than 3.9 V) <ul style="list-style-type: none">• Loose or poor contact of the sensor unit connector• Open or short circuit in the MAP sensor wire• Faulty MAP sensor (sensor unit)	<ul style="list-style-type: none">• Engine operates normally• Pre-Program value: 760 mmHg/101 kPa	6-17
7-1 (7)	ECT sensor circuit low voltage (less than 0.08 V) <ul style="list-style-type: none">• Open or short circuit in the ECT sensor wire• Faulty ECT sensor	<ul style="list-style-type: none">• Hard start at a low temperature• Pre-Program value: 90°C/194°F• Cooling fan turns on	6-18
7-2 (7)	ECT sensor circuit high voltage (more than 4.93 V) <ul style="list-style-type: none">• Loose or poor contact of the ECT sensor connector• Open or short circuit in the ECT sensor wire• Faulty ECT sensor	<ul style="list-style-type: none">• Hard start at a low temperature• Pre-Program value: 90°C/194°F• Cooling fan turns on	6-19
8-1 (8)	TP sensor circuit low voltage (less than 0.3 V) <ul style="list-style-type: none">• Loose or poor contact of the sensor unit connector• TP sensor (sensor unit) or its circuit malfunction	<ul style="list-style-type: none">• Poor engine acceleration• Pre-Program value: 0°	6-20
8-2 (8)	TP sensor circuit high voltage (more than 4.93 V) <ul style="list-style-type: none">• Open or short circuit in the TP sensor wire• Faulty TP sensor (sensor unit)	<ul style="list-style-type: none">• Poor engine acceleration• Pre-Program value: 0°	6-21
9-1 (9)	IAT sensor circuit low voltage (less than 0.08 V) <ul style="list-style-type: none">• Open or short circuit in the IAT sensor wire• Faulty IAT sensor (sensor unit)	<ul style="list-style-type: none">• Engine operates normally• Pre-program value: 35°C/95°F	6-22
9-2 (9)	IAT sensor circuit high voltage (more than 4.93 V) <ul style="list-style-type: none">• Loose or poor contact of the sensor unit connector• Open or short circuit in the IAT sensor wire• Faulty IAT sensor (sensor unit)	<ul style="list-style-type: none">• Engine operates normally• Pre-Program value: 35°C/95°F	6-23
11-1 (11)	VS sensor no signal <ul style="list-style-type: none">• Loose or poor contact of the VS sensor connector• Open or short circuit in the VS sensor wire• Faulty VS sensor	<ul style="list-style-type: none">• Engine operates normally	6-24
12-1 (12)	No.1 (rear) injector circuit malfunction <ul style="list-style-type: none">• Loose or poor contact of the injector connector• Open or short circuit in the injector wire• Faulty injector	<ul style="list-style-type: none">• Engine does not start• Injectors, fuel pump and ignition shut down	6-25
13-1 (13)	No.2 (front) injector circuit malfunction <ul style="list-style-type: none">• Loose or poor contact of the injector connector• Open or short circuit in the injector wire• Faulty injector	<ul style="list-style-type: none">• Engine does not start• Injectors, fuel pump and ignition shut down	6-27
29-1 (29)	IACV circuit malfunction <ul style="list-style-type: none">• Loose or poor contact of the IACV connector• Open or short circuit in the IACV wire• Faulty IACV	<ul style="list-style-type: none">• Engine stalls, hard to start, rough idling	6-27
33-2 (-)	ECM EEPROM malfunction	<ul style="list-style-type: none">• Engine operates normally	6-28

SENSOR UNIT POWER LINE INSPECTION

BEFORE DTC TROUBLESHOOTING

1. Sensor Unit Power Input Voltage Inspection

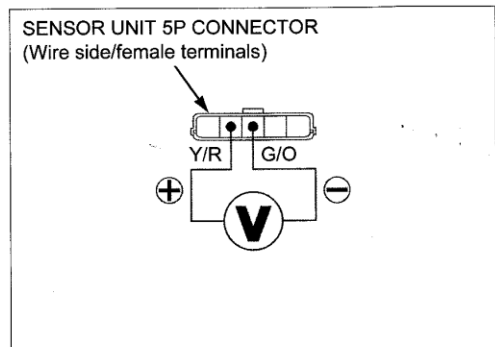
Turn the ignition switch OFF.
 Disconnect the sensor unit 5P (Black) connector.
 Turn the ignition switch ON and engine stop switch "O".
 Measure the voltage at the wire side.

CONNECTION: Yellow/red (+) – Green/orange (-)
STANDARD: 4.75 – 5.25 V

If the voltage within 4.75 – 5.25 V?

YES – Turn the ignition switch OFF. Connect the sensor unit 5P (Black) connector and start the DTC troubleshooting (page 6-16).

NO – GO TO STEP 2.



2. Sensor Unit Input Voltage Line Short Circuit Inspection

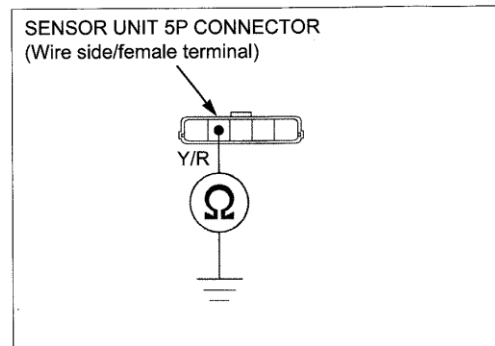
Turn the ignition switch OFF.
 Check for continuity between the sensor unit 5P (Black) connector of the wire side and ground.

CONNECTION: Yellow/red – Ground

Is there continuity?

YES – Short circuit in Yellow/red wire

NO – GO TO STEP 3.



3. Sensor Unit Power Line Open Circuit Inspection

Disconnect the ECM 33P (Black) connector.
 Check for continuity between the sensor unit 5P (Black) and ECM 33P (Black) connectors of the wire side.

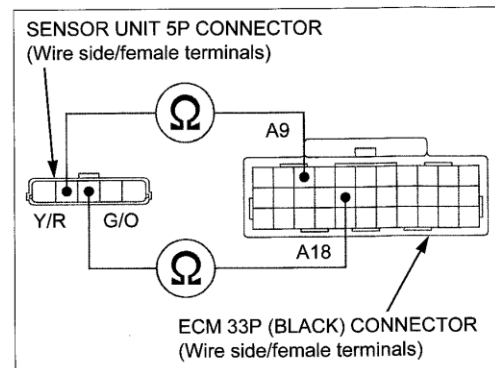
CONNECTION:
A9 – Yellow/red
A18 – Green/orange

TOOL:
Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a known good one, and recheck.

NO – • Open circuit in Yellow/red wire
 • Open circuit in Green/orange wire



DTC TROUBLESHOOTING

DTC 1-1 (MAP SENSOR LOW VOLTAGE)

1. MAP Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".
Check the MAP sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. Sensor Unit Power Line Inspection

Check the sensor unit power line inspection (page 6-15).

Is the sensor unit power line normal?

YES – GO TO STEP 3.

NO – Replace or repair the abnormal circuit.

3. MAP Sensor Output Line Short Circuit Inspection

Turn the ignition switch OFF.
Disconnect the sensor unit 5P (Black) connector.

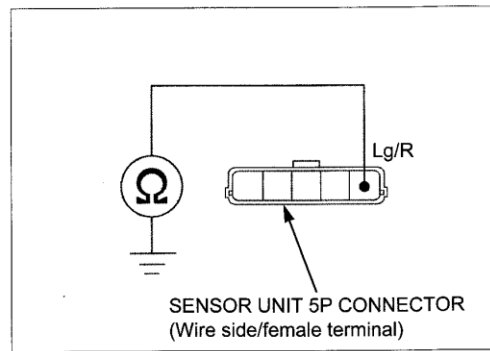
Check for continuity between the sensor unit 5P (Black) connector of the wire side and ground.

CONNECTION: Light green/red – Ground

Is there continuity?

YES – Short circuit in Light green/red wire

NO – GO TO STEP 4.



4. MAP Sensor Inspection

Replace the sensor unit with a known good one (page 6-45).
Erase the DTC's (page 6-13).

Turn the ignition switch ON and engine stop switch "O".

Check the MAP sensor with the HDS pocket tester.

Is DTC 1-1 indicated?

YES – Replace the ECM with a known good one, and recheck.

NO – Faulty original MAP sensor (sensor unit)

DTC 1-2 (MAP SENSOR HIGH VOLTAGE)

NOTE:

- Before starting the inspection, check for loose or poor contact on the sensor unit 5P (Black) and ECM 33P connectors and recheck the DTC.

1. MAP Sensor System Inspection 1

Turn the ignition switch ON and engine stop switch "O".

Check the MAP sensor with the HDS pocket tester.

Is about 5 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. Sensor Unit Power Line Inspection

Check the sensor unit power line inspection (page 6-15).

Is the sensor unit power line normal?

YES – GO TO STEP 3.

NO – Replace or repair the abnormal circuit.

3. MAP Sensor System Inspection 2

Turn the ignition switch OFF.

Disconnect the sensor unit 5P (Black) connector. Connect the sensor unit 5P (Black) connector of the wire side with a jumper wire.

CONNECTION: Light green/red – Green/orange

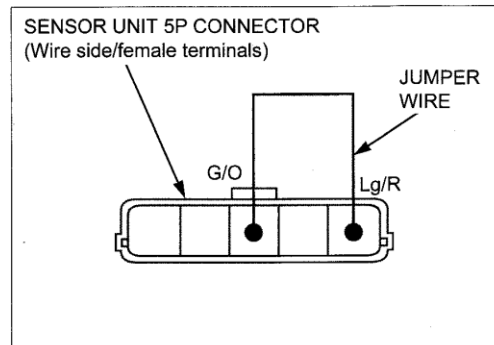
Turn the ignition switch ON and engine stop switch "O".

Check the MAP sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – Faulty MAP sensor (sensor unit)

NO – GO TO STEP 4.



4. MAP Sensor Output Line Open Circuit Inspection

Turn the ignition switch OFF.

Disconnect the jumper wire.

Disconnect the ECM 33P (Gray) connector. Check for continuity at the Light green/red wire between the sensor unit 5P (Black) and ECM 33P (Gray) connectors of the wire side.

CONNECTION: B9 – Light green/red

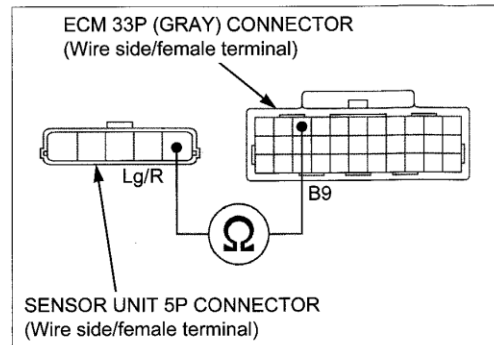
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a known good one, and recheck.

NO – Open circuit in Light green/red wire



DTC 7-1 (ECT SENSOR LOW VOLTAGE)

1. ECT Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the ECT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. ECT Sensor Inspection

Turn the ignition switch OFF.

Disconnect the ECT sensor 3P (Gray) connector.

Turn the ignition switch ON and engine stop switch "O".

Check the ECT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – GO TO STEP 4.

NO – GO TO STEP 3.

3. ECT Sensor Resistance Inspection

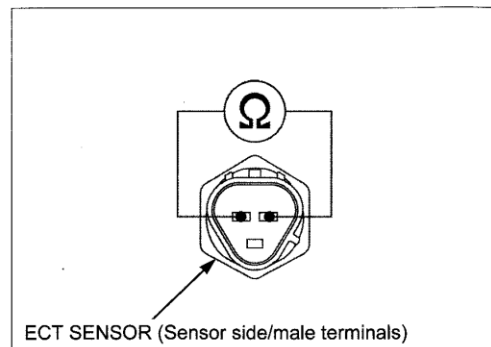
Measure the resistance at the ECT sensor side.

STANDARD: 2.3 – 2.6 k Ω (20°C/68°F)

Is the resistance within 2.3 – 2.6 Ω (20°C/68°F)?

YES – Replace the ECM with a known good one, and recheck.

NO – Faulty ECT sensor



4. ECT Sensor Line Short Circuit Inspection

Turn the ignition switch OFF.

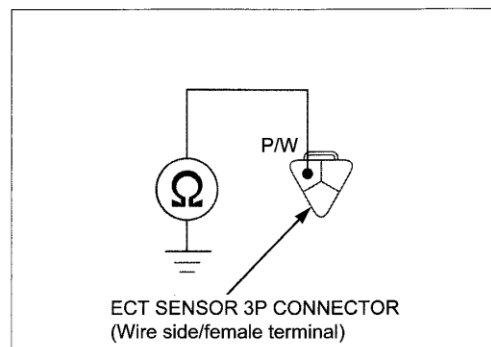
Check for continuity between the ECT sensor 3P (Gray) connector of the wire side and ground.

CONNECTION: Pink/white – Ground

Is there continuity?

YES – Short circuit in Pink/white wire

NO – Replace the ECM with a known good one, and recheck.



DTC 7-2 (ECT SENSOR HIGH VOLTAGE)

NOTE:

- Before starting the inspection, check for loose or poor contact on the ECT sensor 3P (Gray) and ECM 33P connectors and recheck the DTC.

1. ECT Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the ECT sensor with the HDS pocket tester.

Is about 5 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. ECT Sensor Inspection

Turn the ignition switch OFF.

Disconnect the ECT sensor 3P (Gray) connector. Connect the ECT sensor 3P (Gray) connector of the wire side with a jumper wire.

CONNECTION: Pink/white – Green/orange

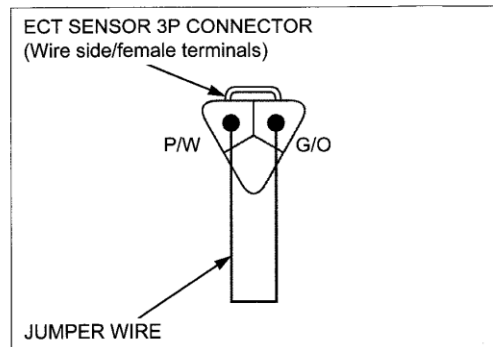
Turn the ignition switch ON and engine stop switch "O".

Check the ECT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – Faulty ECT sensor

NO – GO TO STEP 3.



3. ECT Sensor Line Open Circuit Inspection

Turn the ignition switch OFF.

Disconnect the jumper wire.

Disconnect the ECM 33P connectors. Check for continuity between the ECT sensor 3P (Gray) and ECM connectors of the wire side.

**CONNECTION: B13 – Pink/white
A18 – Green/orange**

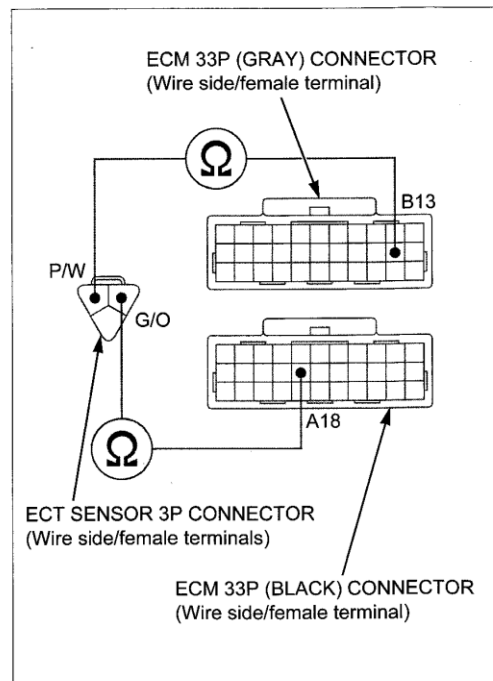
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a known good one, and recheck.

- NO** –
- Open circuit in Pink/white wire
 - Open circuit in Green/orange wire



FUEL SYSTEM (PGM-FI)

DTC 8-1 (TP SENSOR LOW VOLTAGE)

NOTE:

- Before starting the inspection, check for loose or poor contact on the sensor unit 5P (Black) and ECM connectors and recheck the DTC.

1. TP Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the TP sensor with the HDS pocket tester when the throttle fully closed.

Is about 0 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. Sensor Unit Power Line Inspection

Check the sensor unit power line inspection (page 6-15).

Is the sensor unit power line normal?

YES – GO TO STEP 3.

NO – Replace or repair the abnormal circuit.

3. TP Sensor Output Line Open Circuit Inspection

Disconnect the ECM 33P (Gray) connector. Check for continuity at the Red/yellow wire between the sensor unit 5P (Black) and ECM 33P (Gray) connectors of the wire side.

CONNECTION: B31 – Red/yellow

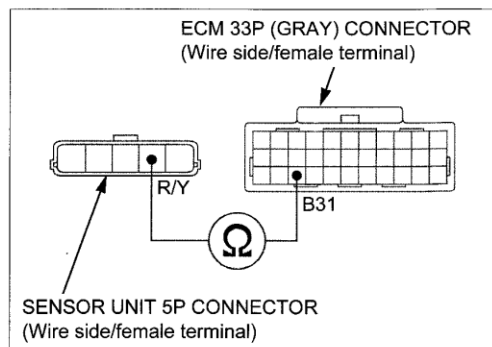
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – GO TO STEP 4.

NO – Open circuit in Red/yellow wire



4. TP Sensor Output Line Short Circuit Inspection

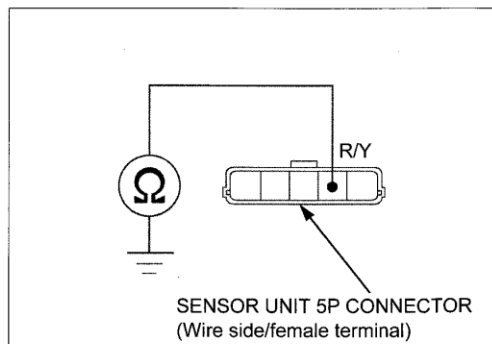
Check for continuity between the sensor unit 5P (Black) connector of the wire side and ground.

CONNECTION: Red/yellow – Ground

Is there continuity?

YES – Short circuit in Red/yellow wire

NO – GO TO STEP 5.



5. TP Sensor Inspection

Replace the sensor unit with a known good one.
Erase the DTC's (page 6-13).

Connect the sensor unit 5P (Black) and ECM 33P connectors.

Turn the ignition switch ON and engine stop switch "O".

Check the TP sensor with the HDS pocket tester.

Is DTC 8-1 indicated?

- YES** – Replace the ECM with a known good one, and recheck.
- NO** – Faulty original TP sensor (sensor unit)

DTC 8-2 (TP SENSOR HIGH VOLTAGE)

1. TP Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the TP sensor with the HDS pocket tester.

Is about 5 V indicated?

- YES** – GO TO STEP 3.
- NO** – GO TO STEP 2.

2. TP Sensor Inspection

Check that the TP sensor voltage increases continuously when moving the throttle from fully closed to fully opened using the data list menu of the HDS pocket tester.

Is the voltage increase continuously?

- YES** – Intermittent failure
- NO** – Replace the TP sensor (sensor unit) with a known good one, and recheck.

3. TP Sensor Resistance Inspection

Turn the ignition switch OFF.

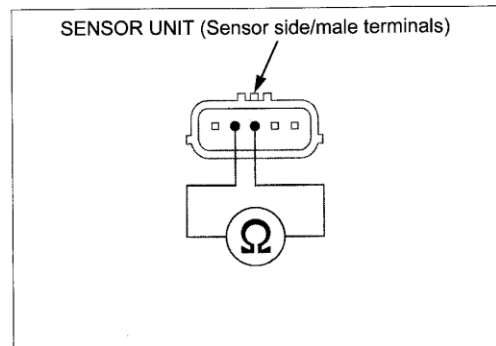
Disconnect the sensor unit 5P (Black) connector.

Measure the resistance at the sensor unit side.

STANDARD: 0.5 – 1.5 kΩ

Is the resistance within 0.5 – 1.5 kΩ?

- YES** – GO TO STEP 4.
- NO** – Faulty TP sensor (sensor unit)



FUEL SYSTEM (PGM-FI)

4. TP Sensor Power Input Voltage Inspection

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the wire side.

CONNECTION: Yellow/red (+) – Green/orange (-)

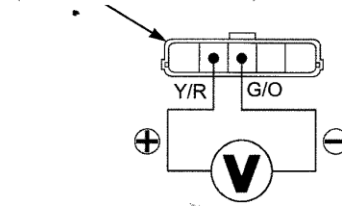
STANDARD: 4.75 – 5.25 V

Is the voltage within 4.75 – 5.25 V?

YES – Replace the ECM with a known good one, and recheck.

NO – • Open circuit in Green/orange wire
• Open circuit in Yellow/red wire

SENSOR UNIT 5P CONNECTOR
(Wire side/female terminals)



DTC 9-1 (IAT SENSOR LOW VOLTAGE)

1. IAT Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the IAT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. IAT Sensor Inspection

Turn the ignition switch OFF.

Disconnect the sensor unit 5P (Black) connector.

Turn the ignition switch ON and engine stop switch "O".

Check the IAT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – GO TO STEP 3.

NO – Faulty IAT sensor (sensor unit)

3. IAT Sensor Output Line Short Circuit Inspection

Turn the ignition switch OFF.

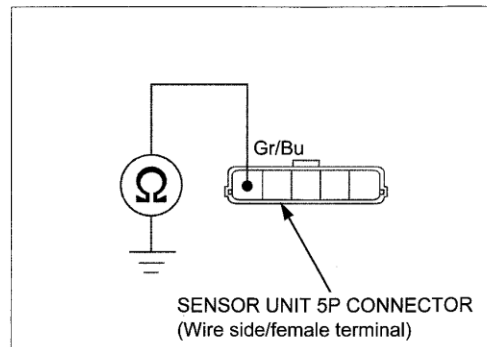
Check for continuity between the sensor unit 5P (Black) connector of the wire side and ground.

CONNECTION: Gray/blue – Ground

Is there continuity?

YES – Short circuit in Gray/blue wire

NO – Replace the ECM with a known good one, and recheck.



DTC 9-2 (IAT SENSOR HIGH VOLTAGE)

NOTE:

- Before starting the inspection, check for loose or poor contact on the sensor unit 5P (Black) and ECM 33P connectors and recheck the DTC.

1. IAT Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the IAT sensor with the HDS pocket tester.

Is about 5 V indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. Sensor Unit Power Line Inspection

Check the sensor unit power line inspection (page 6-15).

Is the sensor unit power line normal?

YES – GO TO STEP 3.

NO – Replace or repair the abnormal circuit.

3. IAT Sensor Inspection

Turn the ignition switch OFF.

Disconnect the sensor unit 5P (Black) connector. Connect the sensor unit 5P (Black) connector of the wire side with a jumper wire.

CONNECTION: Gray/blue – Green/orange

Turn the ignition switch ON and engine stop switch "O".

Check the IAT sensor with the HDS pocket tester.

Is about 0 V indicated?

YES – Faulty IAT sensor (sensor unit)

NO – GO TO STEP 4.

4. IAT Sensor Output Line Open Circuit Inspection

Turn the ignition switch OFF.

Disconnect the ECM 33P connectors.

Check for continuity at the Gray/blue and Green/orange wire between the sensor unit 5P (Black) and ECM 33P connectors.

CONNECTION: B29 – Gray/blue

A18 – Green/orange

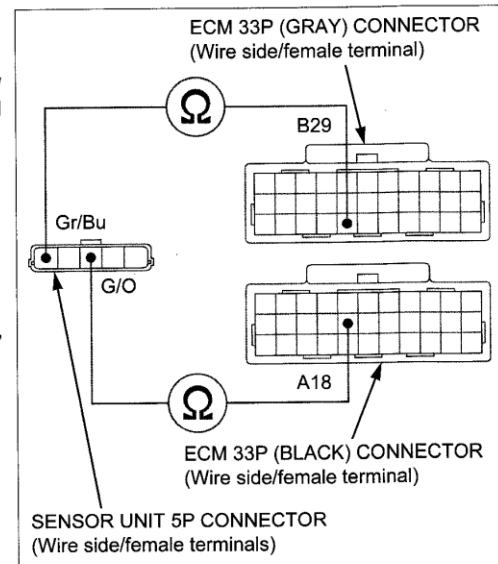
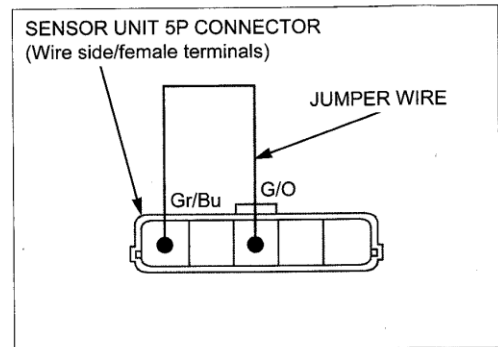
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a known good one, and recheck.

NO – • Open circuit in Gray/blue wire
• Open circuit in Green/orange wire



FUEL SYSTEM (PGM-FI)

DTC 11-1 (VS SENSOR)

NOTE:

- Before starting the inspection, check for loose or poor contact on the VS sensor 3P (Black) and ECM 33P connectors and recheck the DTC.

1. VS Sensor System Inspection

Erase the DTC's (page 6-13).

Test-ride the motorcycle.

Stop the engine.

Turn the ignition switch ON and engine stop switch "O".

Check the VS sensor with the HDS pocket tester.

Is the DTC 11-1 indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

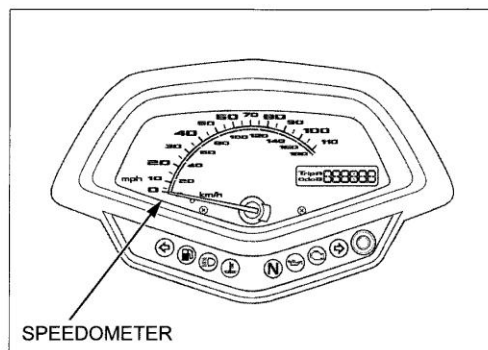
2. Speedometer Inspection

Check for operation of speedometer.

Does the speedometer operate normally?

YES – GO TO STEP 3.

NO – Inspect the speedometer (page 22-10).



3. VS Sensor Input Voltage Inspection

Turn the ignition switch OFF.

Disconnect the VS sensor 3P (Black) connector.

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the VS sensor 3P (Black) connector of the wire side.

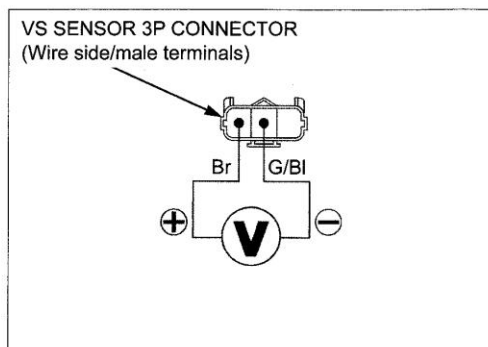
CONNECTION: Brown (+) – Green/black (-)

STANDARD: Battery voltage

Is there battery voltage?

YES – GO TO STEP 4.

- NO** –
- Open or short circuit in Brown wire
 - Open circuit in Green/black wire



4. VS Sensor Signal Line Short Circuit Inspection

Turn the ignition switch OFF.

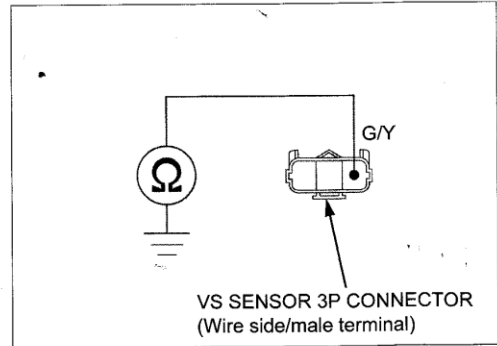
Check for continuity between the VS sensor 3P (Black) connector of the wire side and ground.

CONNECTION: Green/yellow – Ground

Is there continuity?

YES – Short circuit in Green/yellow wire

NO – GO TO STEP 5.



5. VS Sensor Signal Line Open Circuit Inspection

Disconnect the ECM 33P (Gray) connector.

Check for continuity between the VS sensor 3P (Black) and ECM 33P (Gray) connectors of the wire side.

CONNECTION: B28 – Green/yellow

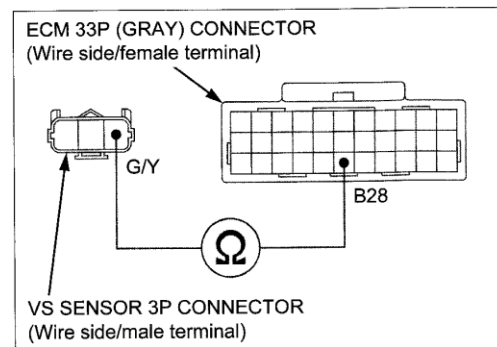
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Faulty VS sensor

NO – Open circuit in Green/yellow wire



DTC 12-1 (No.1 REAR INJECTOR)

NOTE:

- Before starting the inspection, check for loose or poor contact on the injector 2P (Gray) and ECM 33P (Black) connectors and recheck the DTC.

1. Injector System Inspection

Erase the DTC's (page 6-13).

Turn the ignition switch ON and engine stop switch "O".

Start the engine and check the injector with the HDS pocket tester.

Is the DTC 12-1 indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

FUEL SYSTEM (PGM-FI)

2. Injector Input Voltage Inspection

Turn the ignition switch OFF.

Disconnect the injector 2P (Gray) connector.

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage between the injector 2P (Gray) connector of the wire side and ground.

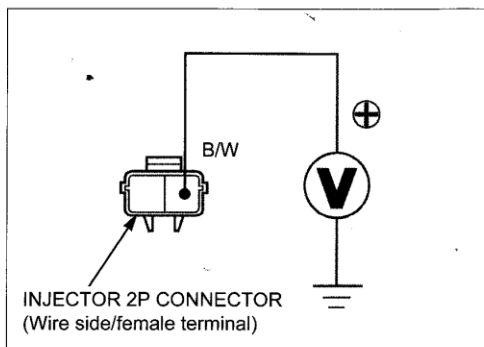
CONNECTION: Black/white (+) – Ground (–)

STANDARD: Battery voltage

Is there battery voltage?

YES – GO TO STEP 3.

NO – Open or short circuit in Black/white wire



3. Injector Signal Line Short Circuit Inspection

Turn the ignition switch OFF.

Check for continuity between the injector 2P (Gray) connector of the wire side and ground.

CONNECTION:

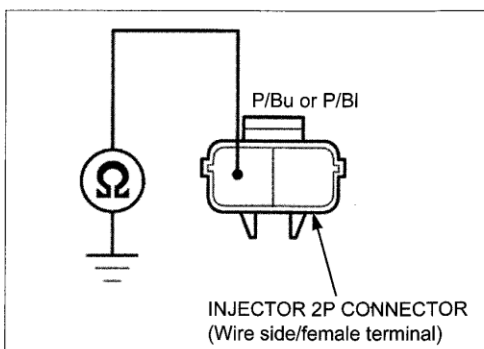
No.1 Rear: Pink/black – Ground

No.2 Front: Pink/blue – Ground

Is there continuity?

YES – Short circuit in Pink/black or Pink/blue wire

NO – GO TO STEP 4.



4. Injector Signal Line Open Circuit Inspection

Disconnect the ECM 33P (Black) connector.

Check for continuity between the injector 2P (Gray) and ECM 33P (Black) connectors of the wire side.

CONNECTION: No.1 Rear: A17 – Pink/black

No.2 Front: A6 – Pink/blue

TOOL:

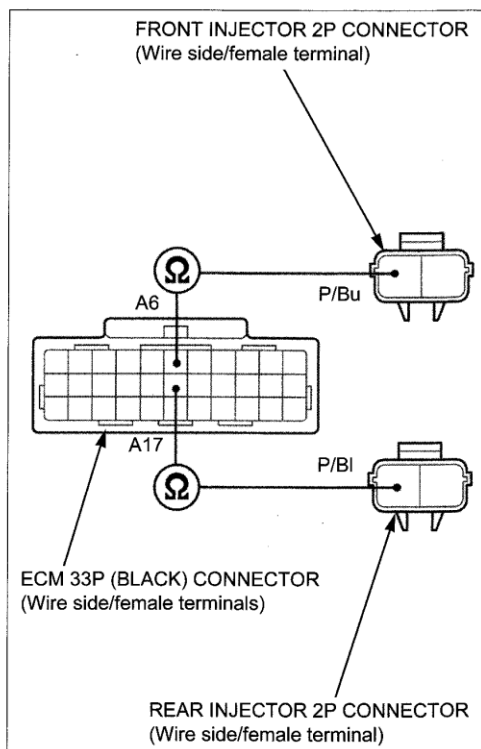
Test probe

07ZAJ-RDJA110

Is there continuity?

YES – GO TO STEP 5.

NO – Open circuit in Pink/black or Pink/blue wire



5. Injector Resistance Inspection

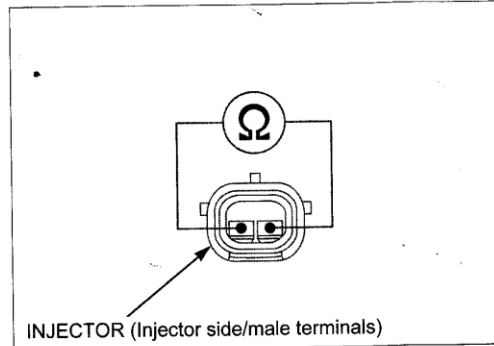
Measure the resistance at the injector side terminals.

STANDARD: 11 – 13 Ω (20°C/68°F)

Is the resistance within 11 – 13 Ω (20°C/68°F)?

YES – Replace the ECM with a known good one, and recheck.

NO – Faulty injector



DTC 13-1 (No.2 FRONT INJECTOR)

See page 6-25

DTC 29-1 (IACV)

NOTE:

- Before starting the inspection, check for loose or poor contact on the IACV 4P (Black) and ECM 33P (Black) connectors and recheck the DTC.

1. Recheck DTC

Erase the DTC's (page 6-13).

Start the engine and recheck the IACV with the HDS pocket tester.

Is the DTC 29-1 indicated?

YES – GO TO STEP 2.

NO – Intermittent failure

2. IACV Short Circuit Inspection

Turn the ignition switch OFF.

Disconnect the IACV 4P (Black) connector.

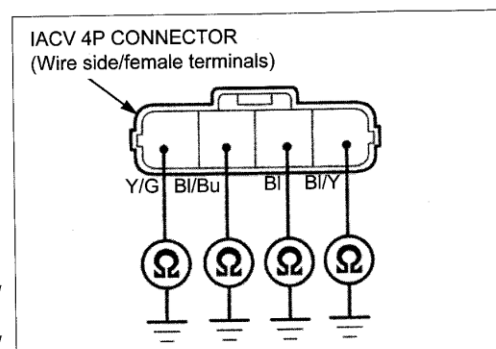
Check for continuities between the IACV 4P (Black) connector of the wire side and ground.

CONNECTION: Yellow/green – Ground
Black/blue – Ground
Black – Ground
Black/yellow – Ground

Is there continuity?

- YES** – • Short circuit in Yellow/green or Black/blue wire
 • Short circuit in Black or Black/yellow wire

NO – GO TO STEP 3.



FUEL SYSTEM (PGM-FI)

3. IACV Circuit Continuity Inspection

Disconnect the ECM 33P (Black) connector.

Check for continuities between the IACV 4P (Black) and ECM 33P (Black) connectors of the wire side.

CONNECTION: A19 – Yellow/green
A27 – Black/blue
A16 – Black
A29 – Black/yellow

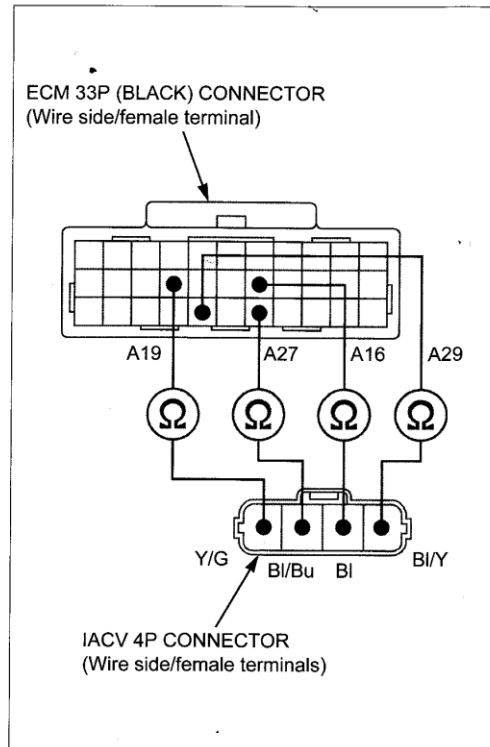
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – GO TO STEP 4.

NO – • Open or loose contact in Yellow/green or Black/blue wire
• Open or loose contact in Black or Black/yellow wire



4. IACV Resistance Inspection

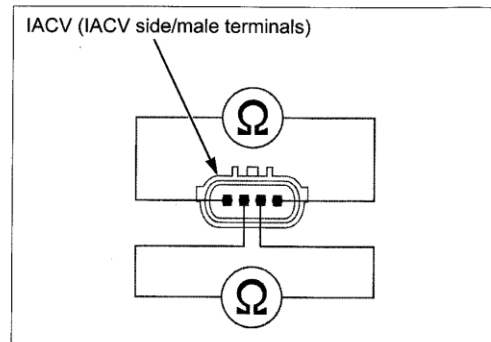
Measure the resistance at the IACV side.

STANDARD: 99 – 121 Ω (25°C/77°F)

Is the resistance within 99 – 121 Ω ?

YES – Replace the ECM with a known good one, and recheck.

NO – Faulty IACV



DTC 33-2 (EEPROM)

1. Recheck DTC

Erase the DTC's (page 6-13).

Turn the ignition switch ON and engine stop switch "O".

Recheck the ECM EEPROM with the HDS pocket tester.

Is the DTC 33-2 indicated?

YES – Replace the ECM with a known good one, and recheck.

NO – Intermittent failure

MIL CIRCUIT INSPECTION

With The Ignition Switch ON, The MIL Does Not Come On

NOTE:

- Before starting the inspection, check the speedometer function (page 22-10).

Turn the ignition switch OFF.

Disconnect the ECM 33P (Black) connector.

Ground the ECM 33P (Black) connector of the wire side with a jumper wire.

CONNECTION: A20 – Ground

TOOL:

Test probe

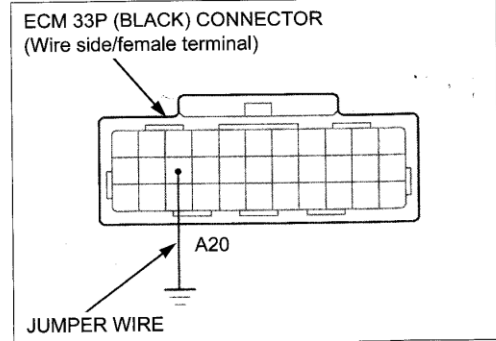
07ZAJ-RDJA110

Turn the ignition switch ON and engine stop switch "O", the MIL should come on.

If the MIL comes on, replace the ECM with a known good one and recheck.

If the MIL does not come on, check for open circuit in the White/blue wire between the speedometer and ECM.

If the White/blue wire is OK, replace the speedometer with a known good one and recheck.



With The Ignition Switch ON, The MIL Does Not Go Off Within A Few Seconds (Engine starts)

NOTE:

- Before starting the inspection, check the speedometer function (page 22-10).

Turn the ignition switch OFF.

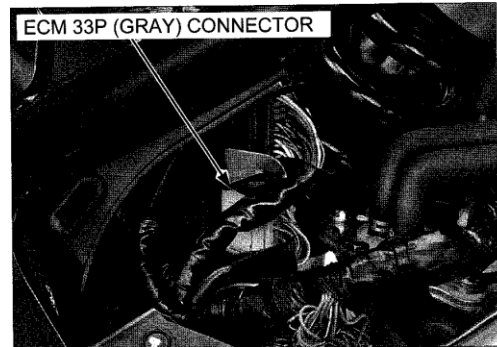
Disconnect the ECM 33P (Gray) connector (page 6-62).

Turn the ignition switch ON and engine stop switch "O", the MIL should come on.

If the MIL come on, check for short circuit in the White/blue wire between the speedometer and ECM.

If the White/blue wire is OK, replace the ECM with a known good one and recheck.

If the MIL turns off, check the following.



Check for continuity between the ECM 33P (Gray) connector of the wire side and ground.

CONNECTION: B19 – Ground

STANDARD: No continuity

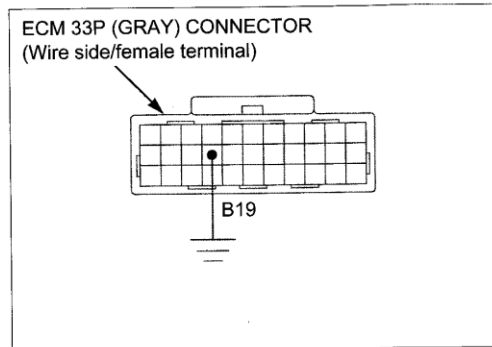
TOOL:

Test probe

07ZAJ-RDJA110

If there is continuity, check for short circuit in the Brown wire between the DLC and ECM.

If there is no continuity, replace the ECM with a known good one and recheck.

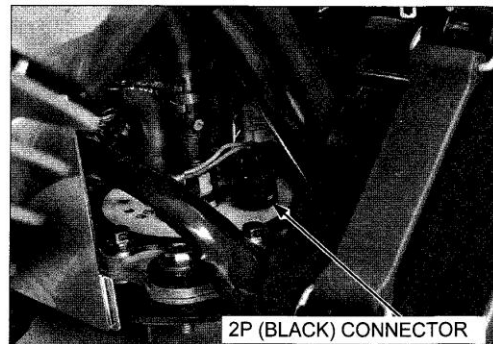


FUEL LINE REPLACEMENT

FUEL PRESSURE RELIEVING

NOTE:

- Before disconnecting fuel feed hose, relieve pressure from the system as follows.
1. Remove the left side cover (page 3-6).
 2. Turn the ignition switch OFF.
 3. Disconnect the fuel pump 2P (Black) connector.
 4. Start the engine, and let it idle until it stalls.
 5. Turn the ignition switch OFF.
 6. Disconnect the battery negative (-) cable (page 19-6).



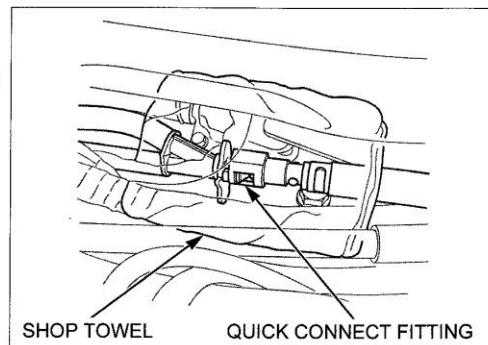
QUICK CONNECT FITTING REMOVAL

NOTE:

- Do not bend or twist fuel feed hose.

INJECTOR HOSE SIDE

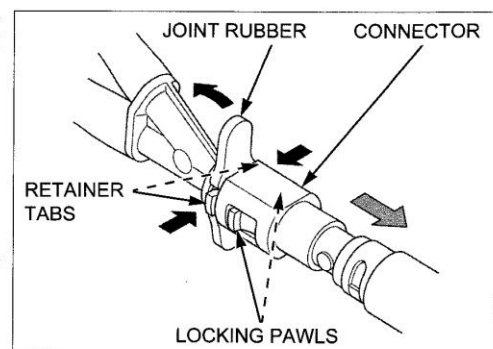
1. Relieve the fuel pressure (page 6-30).
2. Remove the fuel tank (page 6-43).
3. Check the fuel quick connect fitting for dirt, and clean if necessary.
Place a shop towel over the quick connect fitting.



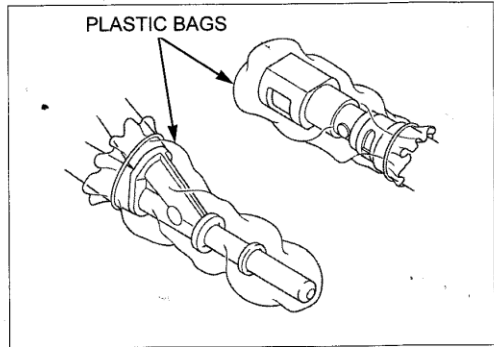
4. Hold the connector with one hand and squeeze the retainer tabs with the other hand to release them from the locking pawls. Pull the connector off, then remove the retainer and joint rubber from the fuel joint.

NOTE:

- Prevent the remaining fuel in the fuel feed hose from flowing out with a shop towel.
- Be careful not to damage the hose or other parts.
- Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.

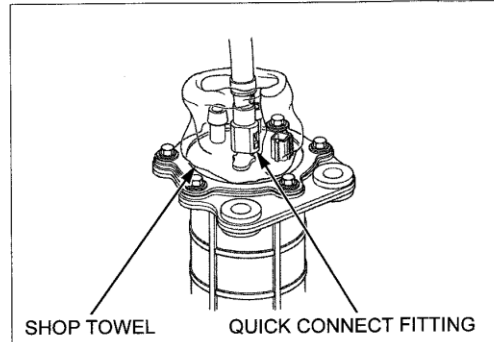


5. To prevent damage and keep foreign matter out, cover the disconnected connector and fuel joint with the plastic bags.



FUEL PUMP SIDE

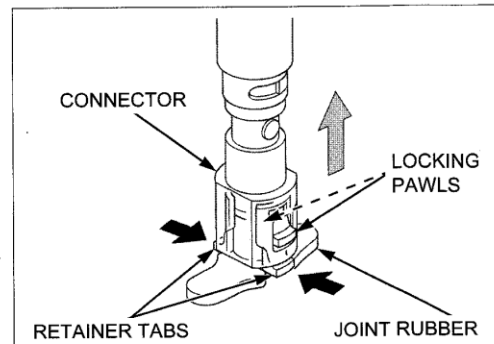
1. Remove the fuel pump (page 6-36).
2. Check the fuel quick connect fitting for dirt, and clean if necessary.
Place a shop towel over the quick connect fitting.



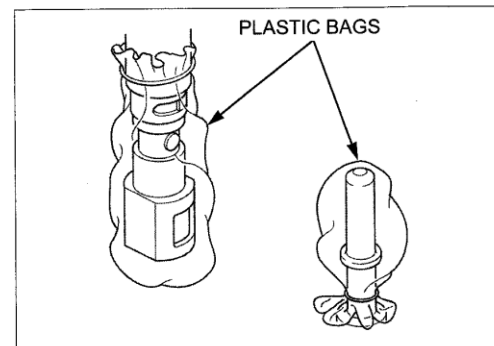
3. Hold the connector with one hand and squeeze the retainer tabs with the other hand to release them from the locking pawls.
Pull the connector off, then remove the retainer and joint rubber from the fuel joint.

NOTE:

- Prevent the remaining fuel in the fuel feed hose from flowing out with a shop towel.
- Be careful not to damage the hose or other parts.
- Do not use tools.
- If the connector does not move, keep the retainer tabs pressed down, and alternately pull and push the connector until it comes off easily.



4. To prevent damage and keep foreign matter out, cover the disconnected connector and fuel joint with the plastic bags.



**QUICK CONNECT FITTING
INSTALLATION**

NOTE:

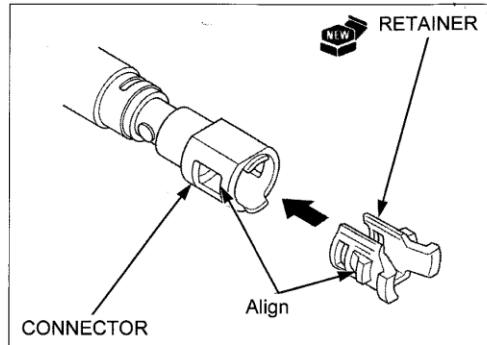
- Always replace the retainer and joint rubber of the quick connect fitting when the fuel feed hose is disconnected.
- Replace the retainer and joint rubber with the same manufacturer's item that was removed.
- Do not bend or twist the fuel feed hose.

INJECTOR HOSE SIDE

1. Insert a new retainer into the connector.

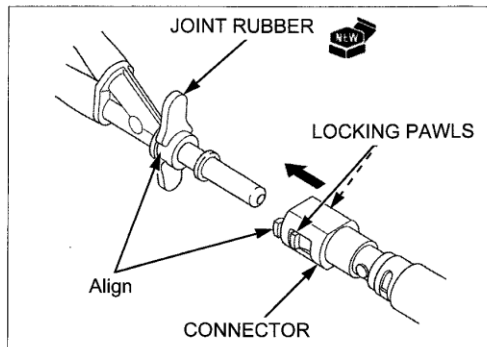
NOTE:

- Align the new retainer locking pawls with the connector grooves.

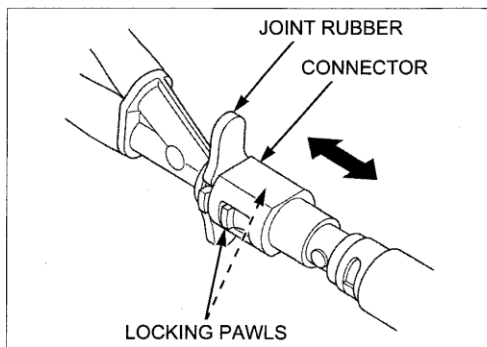


2. Install a new joint rubber to the fuel joint as shown.
3. Install the connector to the fuel joint by aligning retainer tabs with joint rubber grooves. Then press the quick connect fitting onto the joint until both locking pawls lock with a "CLICK".

If it is hard to connect, put a small amount of engine oil on the joint end.



4. Make sure the connection is secure and that the locking pawls are firmly locked into place; check visually and by pulling the connector.
5. Make sure the joint rubber is in place (between the retainer tabs).
6. Install the fuel tank (page 6-43).
7. Increase the fuel pressure and check that there is no leakage in fuel supply system (page 6-33).

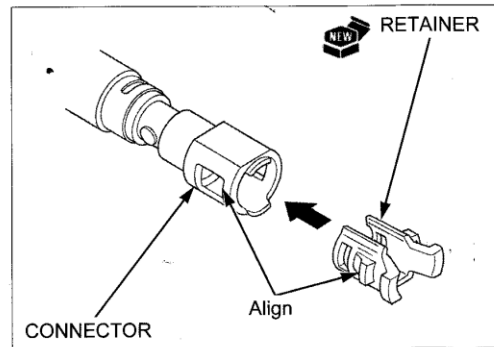


FUEL PUMP SIDE

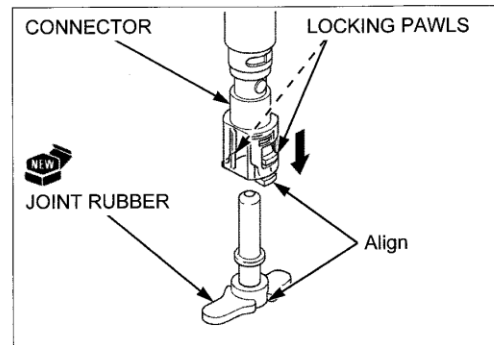
1. Insert a new retainer into the connector.

NOTE:

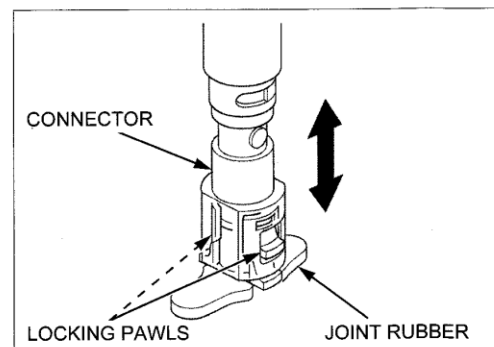
- Align the new retainer locking pawls with the connector grooves.



2. Install a new joint rubber to the fuel joint as shown.
3. Install the connector to the fuel joint by aligning retainer tabs with joint rubber grooves. Then press the quick connect fitting onto the joint until both locking pawls lock with a "CLICK".
If it is hard to connect, put a small amount of engine oil on the joint end.



4. Make sure the connection is secure and that the locking pawls are firmly locked into place; check visually and by pulling the connector.
5. Make sure the joint rubber is in place (between the retainer tabs).
6. Install the fuel pump (page 6-41).
7. Increase the fuel pressure and check that there is no leakage in fuel supply system (page 6-33).

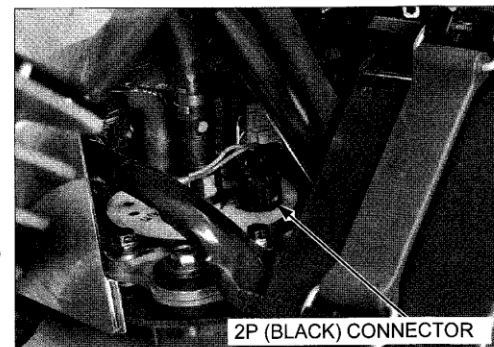


FUEL PRESSURE NORMALIZATION

1. Connect the fuel pump 2P (Black) connector.
2. Connect the battery negative (-) cable (page 19-6).
3. Turn the ignition switch ON and engine stop switch "O".

NOTE:

- Do not start the engine.
4. The fuel pump will run for about 2 seconds, and fuel pressure should rise to its normal operating level. Repeat 2 or 3 times, and check that there is no leakage in the fuel supply system.
 5. Turn the ignition switch OFF.
 6. Install the left side cover (page 3-6).



FUEL SYSTEM (PGM-FI)

FUEL PRESSURE TEST

Relieve the fuel pressure and disconnect the quick connect fitting from the injector hose side (page 6-30).

Attach the fuel pressure gauge, hose, attachments, joint and manifold between the injector hose joint and fuel feed hose.

TOOLS:

(1): Fuel pressure gauge (0 – 100 psi)	07406-0040004
(2): Pressure gauge manifold	07ZAJ-S5A0111
(3): Hose attachment, 6 mm/9 mm	07ZAJ-S5A0130
(4): Hose attachment, 9 mm/9 mm	07ZAJ-S5A0120
(5): Attachment joint, 6 mm/9 mm	07ZAJ-S5A0150

TOOLS, U.S.A. only:

Fuel pressure gauge (0 – 100 psi)	07406-004000B
Pressure manifold hose	07AMJ-HW3A100
Adaptor, male	07AAJ-S6MA200
Adaptor, female	07AAJ-S6MA400

Temporarily connect the negative (-) cable (page 19-6).

Connect the fuel pump 2P (Black) connector.

Start the engine and let it idle.

Read the fuel pressure.

**STANDARD: 336 – 350 kPa (3.4 – 3.6 kgf/cm²,
49 – 51 psi)**

If the fuel pressure is higher than specified, replace the fuel pump unit.

If the fuel pressure is lower than specified, inspect the following:

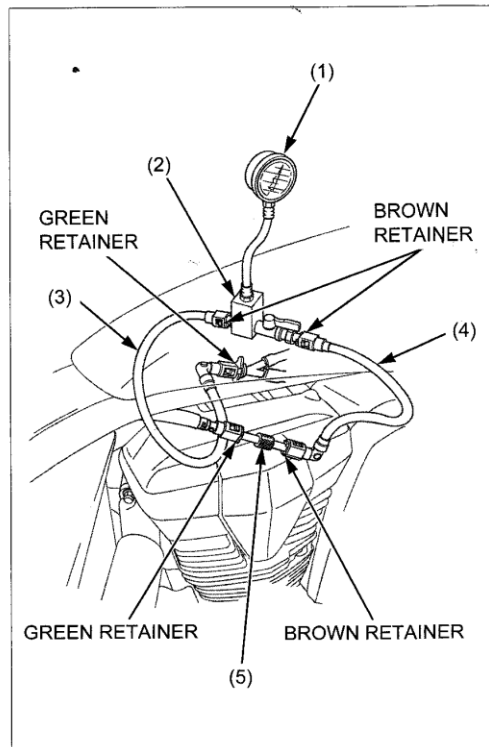
- Fuel line leaking
- Pinched or clogged fuel feed hose or fuel tank breather hose
- Fuel pump (page 6-35)
- Clogged fuel pump filter (page 6-37)

Wrap a shop towel around the attachment to soak up any spilled fuel.

After inspection, relieve the fuel pressure by disconnect the quick connect fitting (page 6-30).

Remove the fuel pressure gauge, hoses, attachment, joint and manifold.

Connect the quick connect fitting to the injector hose side (page 6-32).



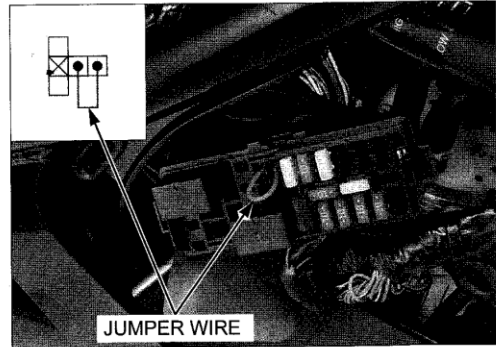
FUEL FLOW INSPECTION

Relieve the fuel pressure and disconnect the quick connect fitting from the injector hose side (page 6-30). Disconnect the fuel cut relay (page 6-42).

Turn the ignition switch OFF.

Connect the fuel cut relay of the wire side with a jumper wire.

CONNECTION: Black/white – Brown



Connect the hose attachment to the fuel feed hose.

TOOL:

Hose attachment, 6 mm/9 mm 07ZAJ-S5A0130

TOOLS, U.S.A. only:

Pressure manifold hose 07AMJ-HW3A100
Adaptor, female 07AAJ-S6MA400

Wipe spilled gasoline out of the container.

Place the end of the hose into an approved gasoline container.

Temporarily connect the negative (-) cable to the battery.

Connect the fuel pump 2P (Black) connector.

Turn the ignition switch ON, engine stop switch "O" for 10 seconds.

Measure the amount of fuel flow.

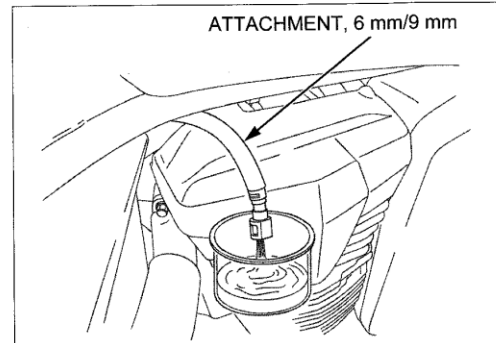
Amount of fuel flow:

150 cm³ (5.1 US oz, 5.3 Imp oz) minimum
/10 seconds at 12 V

If the fuel flow is less than specified, inspect the following:

- Fuel pump (page 6-35)
- Pinched or clogged fuel feed hose (page 6-30)
- Clogged fuel pump filter (page 6-37)

Connect the quick connect fitting to the injector hose side (page 6-32).



FUEL PUMP

SYSTEM INSPECTION

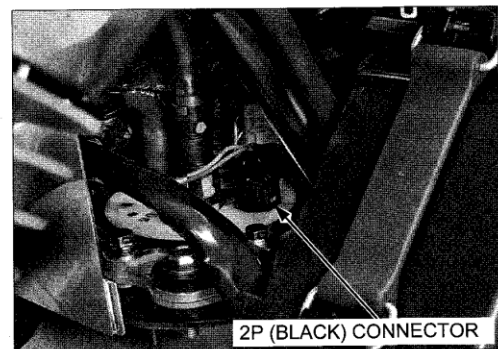
Turn the ignition switch ON, engine stop switch "O" and confirm that the fuel pump operates for a few seconds.

If the fuel pump does not operate, inspect as follows:

Turn the ignition switch OFF.

Remove the left side cover (page 3-6).

Disconnect the fuel pump 2P (Black) connector.



FUEL SYSTEM (PGM-FI)

Turn the ignition switch ON and engine stop switch "O". Measure the voltage at the wire side.

CONNECTION: Brown (+) – Green (-)

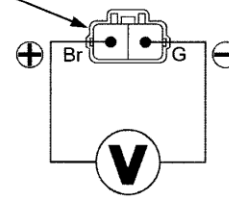
There should be battery voltage for a few seconds.

If there is battery voltage, replace the fuel pump unit.

If there is no battery voltage, inspect the following:

- Open circuit in Brown wire and/or Green wire
- Sub fuse 10 A (METER ILLUMI)
- Sub fuse 10 A (ST/ENG STOP)
- Sub fuse 20 A (FI)
- Main fuse 30 A
- Ignition switch (page 22-20)
- Fuel cut relay (page 6-42)
- Engine stop relay (page 6-60)
- Engine stop switch (page 22-21)
- Bank angle sensor (page 6-58)
- ECM (page 6-61)

FUEL PUMP 2P CONNECTOR
(Wire side/female terminals)



REMOVAL

Relieve the fuel pressure and disconnect the quick connect fitting from the injector hose side (page 6-30).

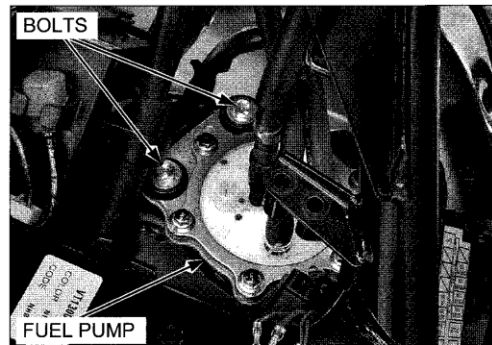
Remove the following:

- Right side cover (page 3-6)
- Shock absorber (page 16-15)

Remove the harness clamp from the frame.



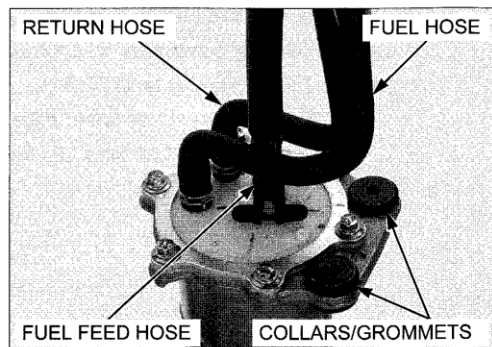
Remove the bolts and fuel pump.



Disconnect the following:

- Fuel hose
- Fuel vapor return hose
- Fuel feed hose (quick connect fitting of fuel pump side) (page 6-31)

Remove the collars and grommets from the fuel pump.



DISASSEMBLY

NOTE:

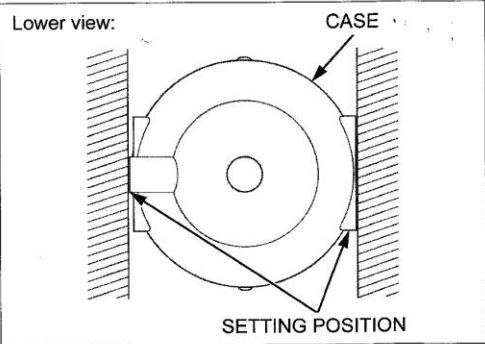
- To prevent dirt and debris from entering the fuel pump, always clean it before disassembly.
- Clean the inside of the fuel pump case, fuel pump unit and fuel pump filter with clean gasoline. Never use commercially available carburetor cleaners.
- Always replace all O-rings with new ones when the fuel pump has been disassembled.
- Be careful not to damage the fuel pump unit wire.

Wipe excess gasoline out of the container. Drain the gasoline from the fuel pump case and store it in an approved container.

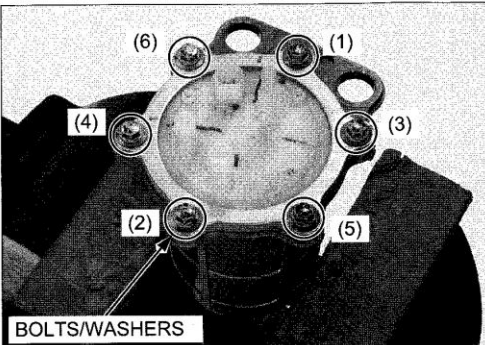
Do not over-tighten the vise on the fuel pump case. Set the fuel pump case in a vise with a piece of wood or soft jaws to prevent damage.

NOTE:

- Set the fuel pump case in a vise as shown.



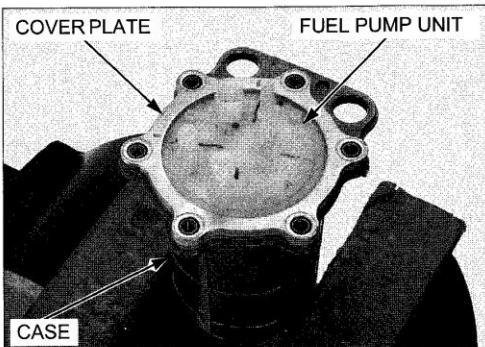
Be careful not to drop the fuel pump unit. Loosen the fuel pump assembly bolts in the specified sequence as shown and remove the bolts and spring washers.



Remove the cover plate and fuel pump unit from the fuel pump case.

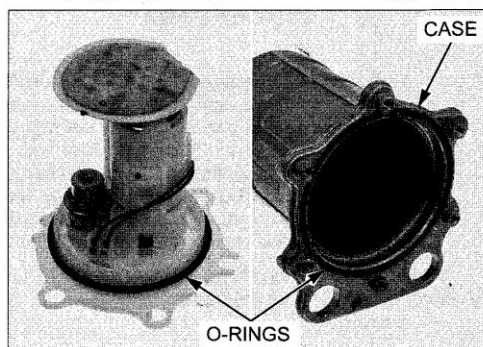
NOTE:

- Be careful not to damage the fuel pump unit and fuel pump unit wire.

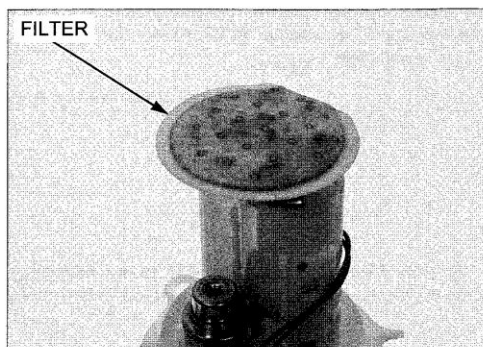


FUEL SYSTEM (PGM-FI)

- Do not reuse the O-rings.* Remove the O-rings.
Clean the inside of the fuel pump case with clean gasoline.

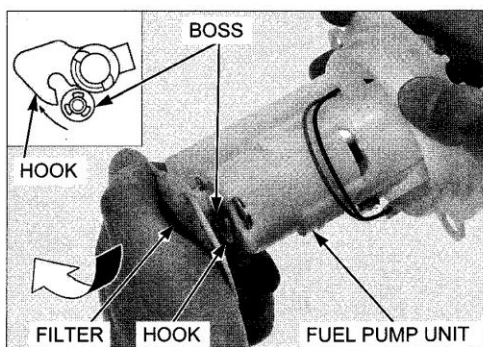


Visually inspect the fuel pump filter for dirt, debris or any clogging, and replace it if necessary.



FUEL PUMP FILTER REPLACEMENT

- Be careful not to damage the fuel pump filter and fuel pump unit.* Hold the bottom face of the fuel pump filter.
Disengage the fuel pump filter hook from the fuel pump unit boss by turning the fuel pump filter clockwise, then remove the fuel pump filter.

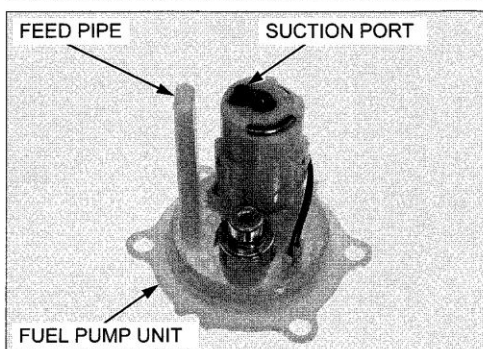


Before installing the fuel pump filter, check the fuel pump unit for dirt.

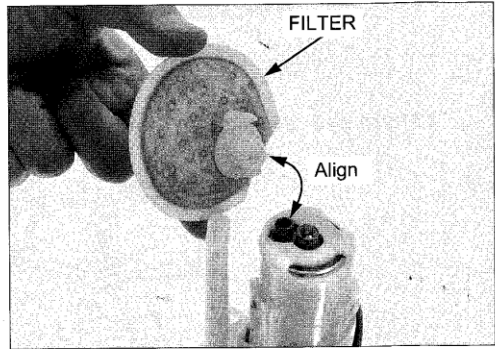
If necessary, clean the fuel pump unit with compressed air.

NOTE:

- Place a shop towel over the fuel pump unit to prevent dirt from entering the feed pipe and suction port.
- Do not blow compressed air directly into the feed pipe or suction port.



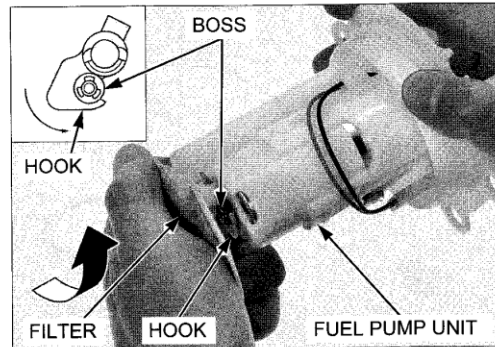
Install the fuel pump filter to the fuel pump unit while aligning the holes for the suction port.



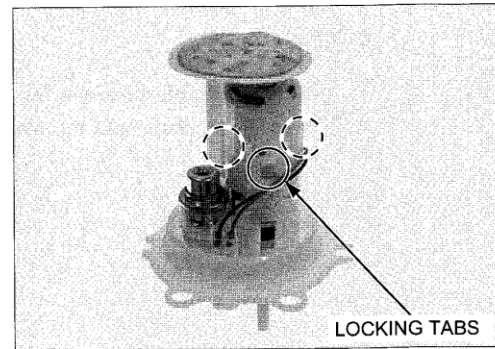
Be careful not to damage the fuel pump filter and fuel pump unit.

Hold the bottom face of the fuel pump filter and push in until it is fully seated on the fuel pump unit.

Engage the fuel pump filter hook to the fuel pump unit boss by turning the fuel pump filter counterclockwise.

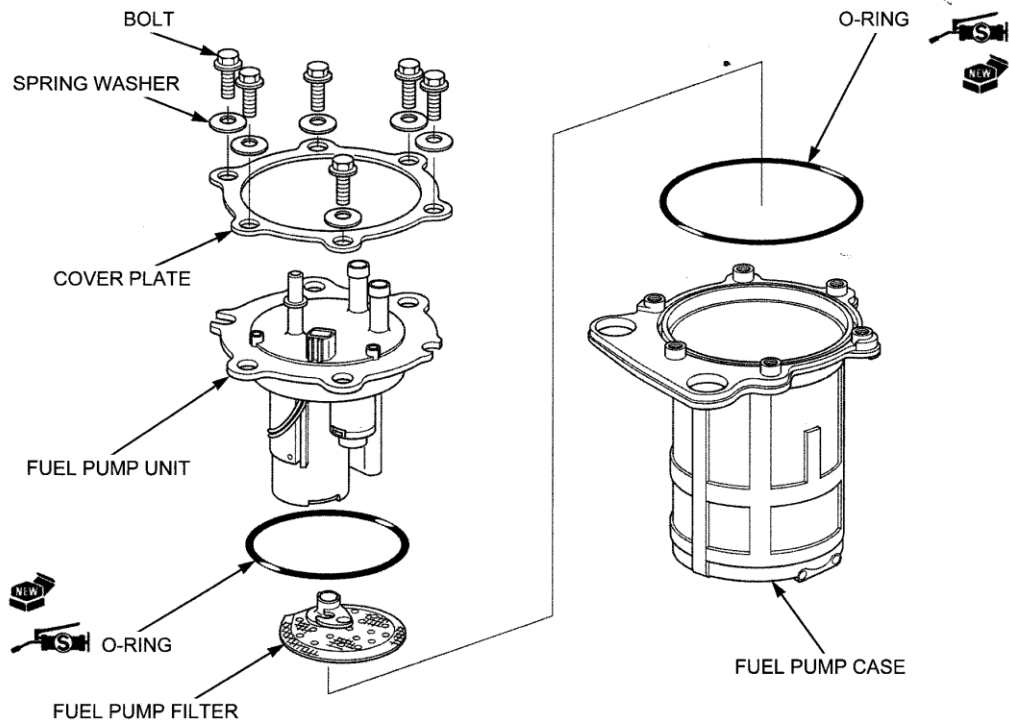


Make sure the fuel pump unit is securely connected and that the locking tabs are firmly locked into place.

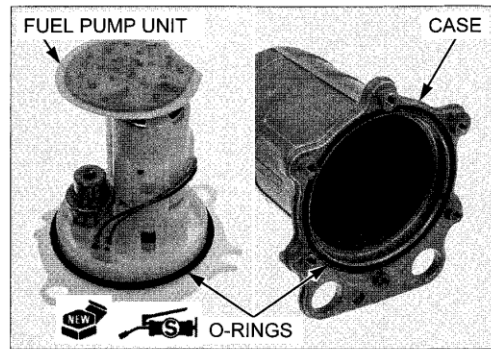


FUEL SYSTEM (PGM-FI)

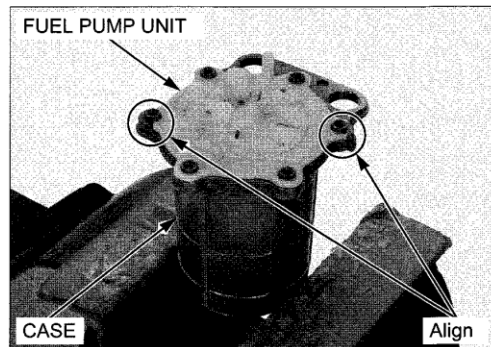
ASSEMBLY



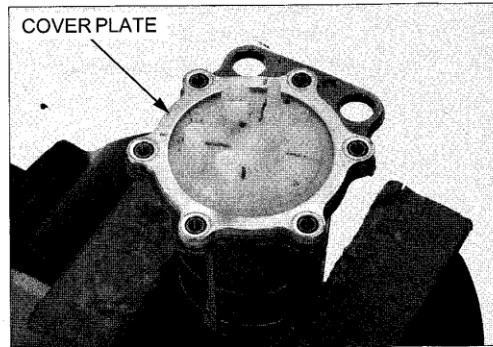
Apply silicone grease to new O-rings.
Install the O-rings onto the fuel pump unit and fuel pump case.



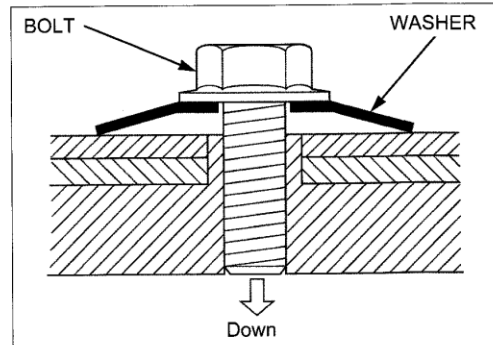
Set the fuel pump case in a vise (page 6-37).
Install the fuel pump unit into the fuel pump case while aligning the bosses of the fuel pump case and fuel pump unit, making sure the fuel pump unit sits flush against the fuel pump case.



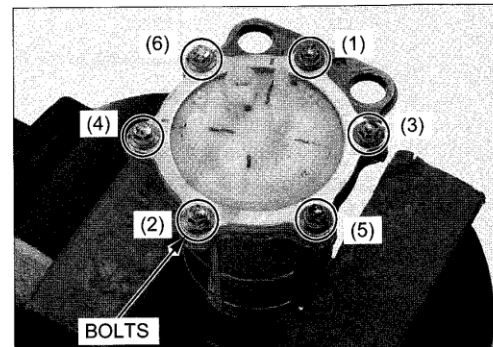
Install the cover plate with the chamfered edges facing up.



Install the spring washers to the fuel pump assembly bolts as shown.
Install the fuel pump assembly bolts.



Be careful not to drop the fuel pump unit. Tighten the fuel pump assembly bolts to the specified torque in the specified sequence as shown.
TORQUE: 8.8 N·m (0.9 kgf·m, 6.5 lbf·ft)



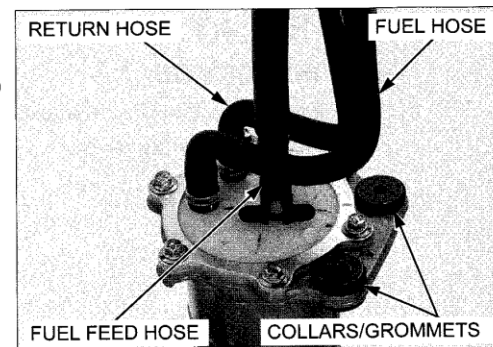
INSTALLATION

Install the grommets and collars to the fuel pump.

Connect the following:

- Fuel feed hose (quick connect fitting of fuel pump side) (page 6-33)
- Fuel vapor return hose
- Fuel hose

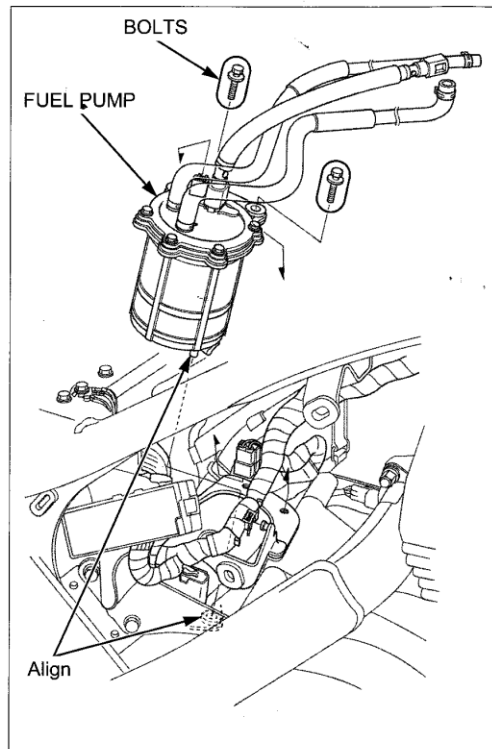
Refer to hose clamps direction (page 1-22).



FUEL SYSTEM (PGM-FI)

Install the fuel pump into the frame by aligning its tab with the grommet of the frame.

Install and tighten the bolts.



Install the harness clamp to the frame.

Install the following:

- Shock absorber (page 16-16)
- Right side cover (page 3-6)

Route the hoses and wires properly (page 1-22).

Connect the quick connect fitting to the injector hose side (page 6-32).

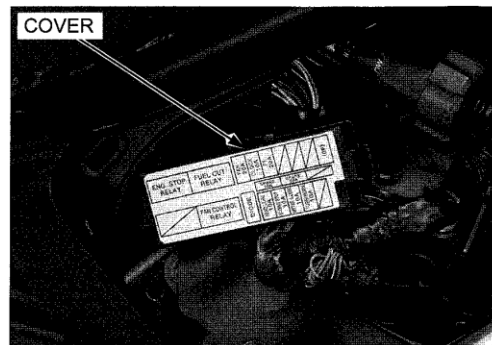


FUEL CUT RELAY

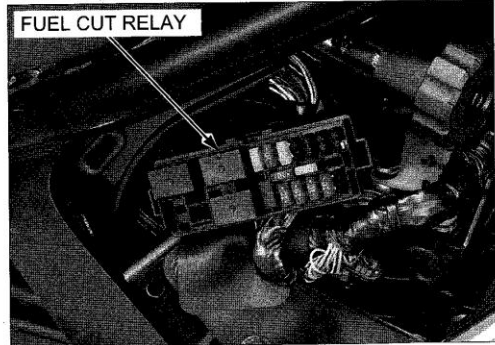
INSPECTION

Remove the right side cover (page 3-6).

Open the power box cover.



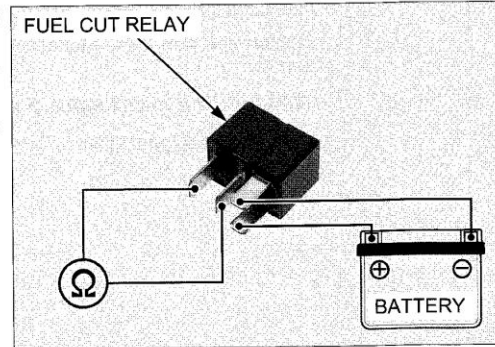
Disconnect the fuel cut relay.



Connect an ohmmeter and 12 V battery to the fuel cut relay terminals as shown.

There should be continuity only when the 12 V battery is connected.

If there is no continuity when the 12 V battery is connected, replace the fuel cut relay.



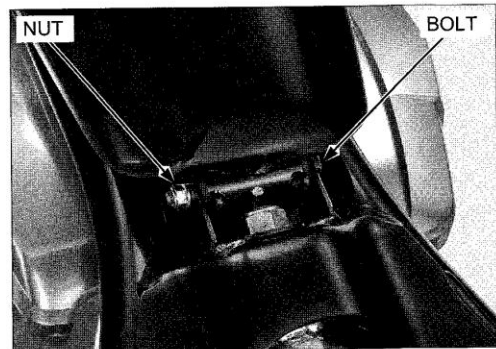
FUEL TANK

REMOVAL/INSTALLATION

Remove the seat (page 3-6).

Remove the fuel tank mounting nut and bolt.

Lift up the fuel tank by moving it rearward.



Pinch the fuel hose and fuel vapor return hose using the hose clamps.

Disconnect the following, and remove the fuel tank:

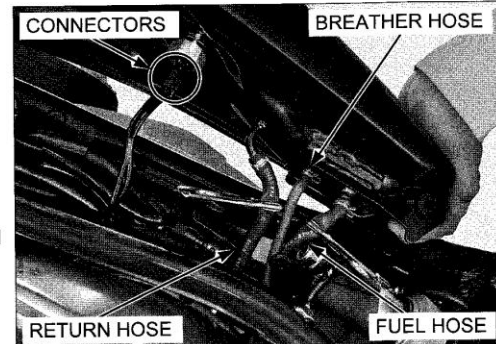
- Fuel hose
- Fuel vapor return hose
- Fuel tank breather hose
- Fuel reserve sensor connectors

NOTE:

- When removing the fuel tank, plug the fuel hose and fuel vapor return hose joint.

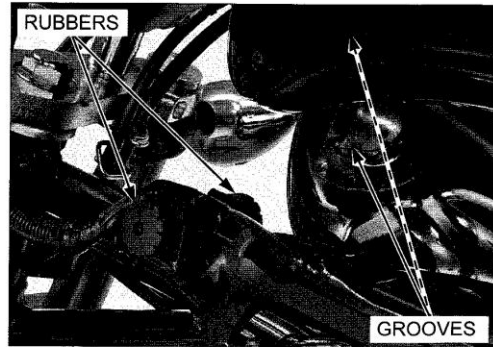
Connect the following:

- Fuel hose
- Fuel vapor return hose
- Fuel tank breather hose
- Fuel reserve sensor connectors



FUEL SYSTEM (PGM-FI)

Install the fuel tank by inserting its grooves over the mounting rubbers.

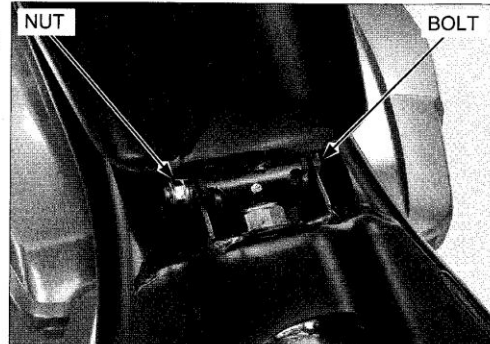


Install the fuel tank mounting bolt and nut.

Tighten the fuel tank mounting nut to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)

Install the seat (page 3-6).



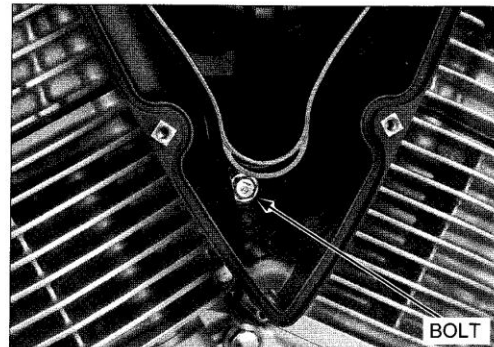
AIR CLEANER HOUSING

REMOVAL/INSTALLATION

Remove the following:

- Air cleaner element (page 4-6)
- Rear right over head cover (page 3-5)

Remove the air cleaner housing mounting bolt.



Disconnect the secondary air suction hose from the air cleaner housing.

Loosen the air cleaner housing connecting tube band screw and release the air cleaner housing.

Disconnect the crankcase breather hose and remove the air cleaner housing.

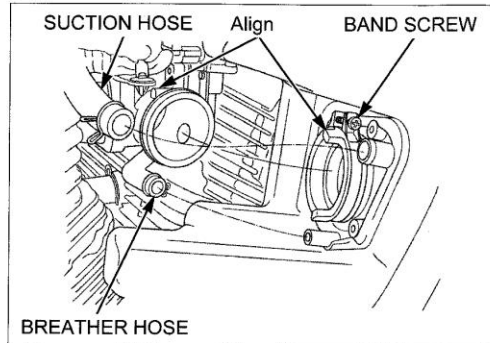
Installation is in the reverse order of removal.

NOTE:

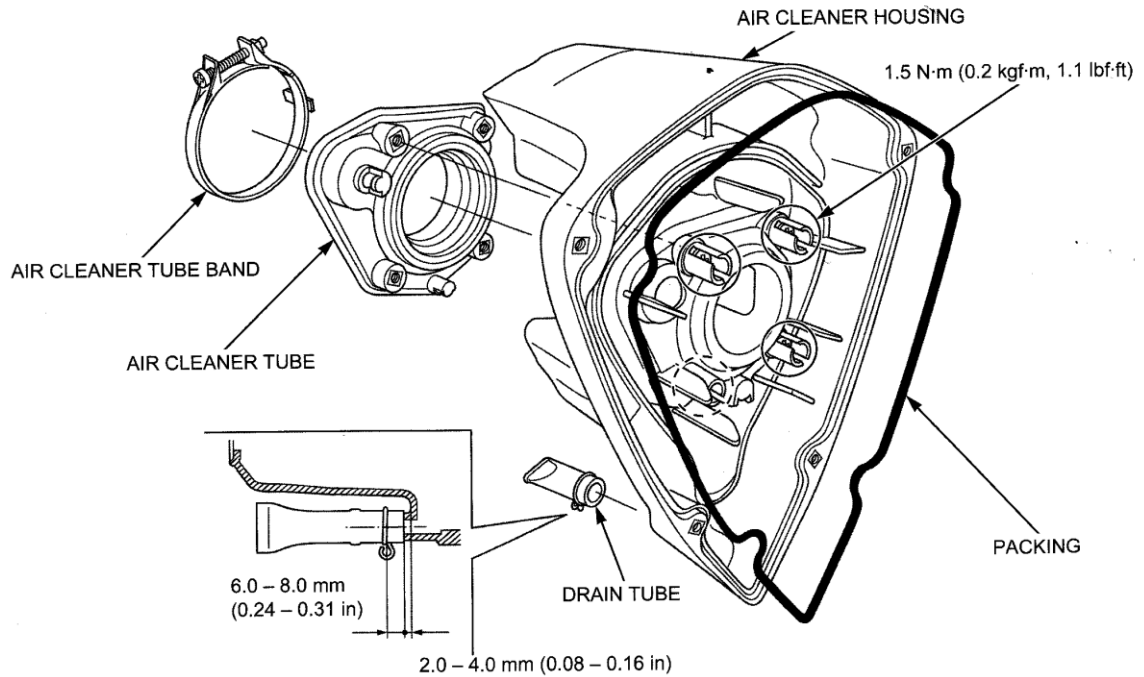
- When installing the air cleaner housing, align the tabs of the throttle body and connection tube.

TORQUE:

Air cleaner connecting tube band screw:
0.7 N·m (0.1 kgf·m, 0.5 lbf·ft)



DISASSEMBLY/ASSEMBLY



THROTTLE BODY

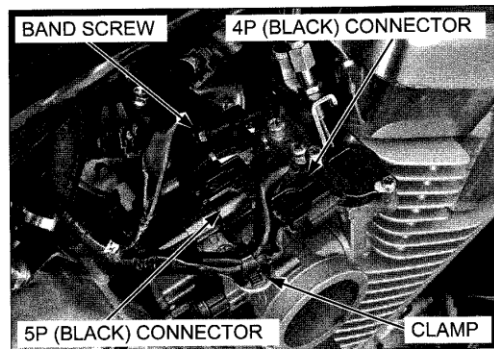
REMOVAL

Remove the air cleaner housing (page 6-44).

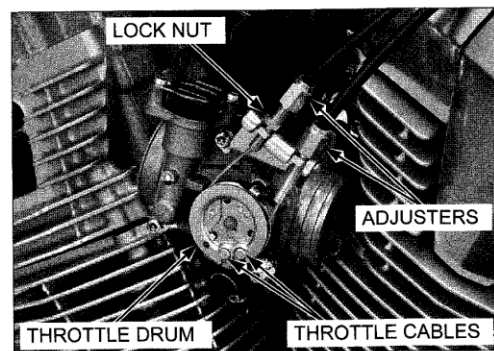
Disconnect the IACV 4P (Black) and sensor unit 5P (Black) connectors.

Remove the clamp from the stay.

Loosen the insulator band screw and release the throttle body from the insulator.



Loosen the throttle cable lock nut and adjusters then disconnect the throttle cables from the throttle drum and cable guide.

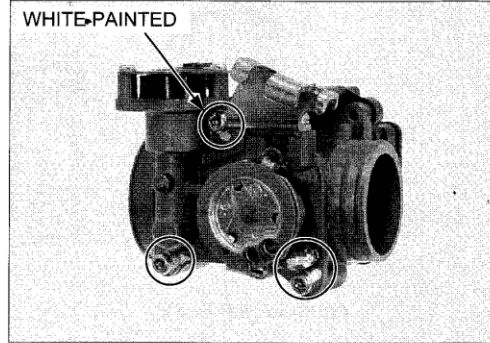


FUEL SYSTEM (PGM-FI)

DISASSEMBLY

NOTICE

- The throttle body is factory pre-set. Do not disassemble in a way other than shown in this manual.
- Do not snap the throttle valve from full open to full close after the throttle cable has been removed. It may cause incorrect idle operation.
- Do not damage the throttle body. It may cause incorrect throttle valve.
- Do not loosen or tighten the white painted bolts, nuts and screws of the throttle body. Loosening or tightening them can cause throttle and idle valve synchronization failure.
- Do not remove the sensor unit unless it is replaced.

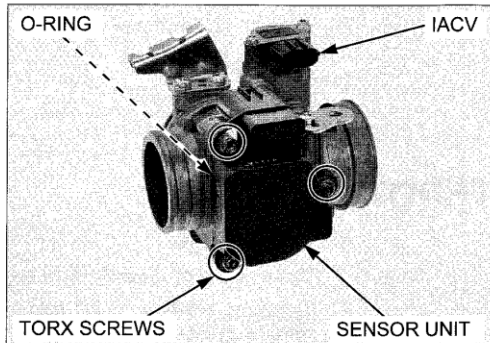


NOTE:

- Perform the throttle valve fully closed reset procedure (page 6-49), if the sensor unit is removed from the throttle body.

If necessary, remove the torx screws, sensor unit and O-ring from the throttle body.

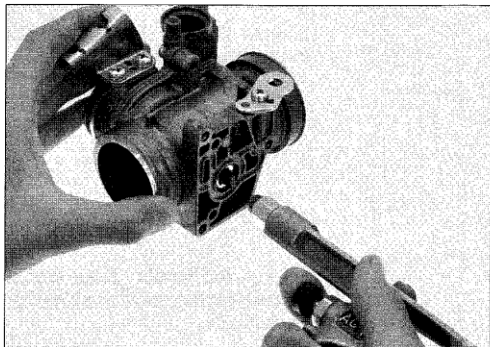
Remove the IACV (page 6-53).



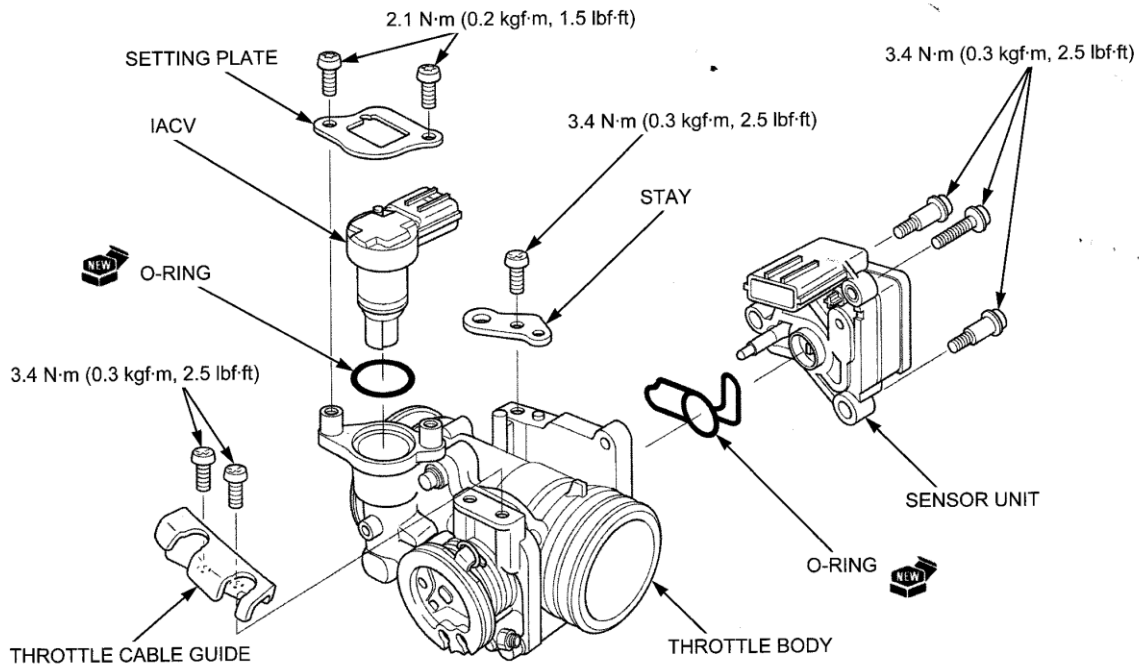
Blow open all air passages and sensor holes in the throttle body with compressed air.

NOTE:

- Cleaning the air passages and sensor hole with a piece of wire will damage the throttle body.
- When cleaning the throttle body with compressed air, remove the IACV (page 6-53).



ASSEMBLY

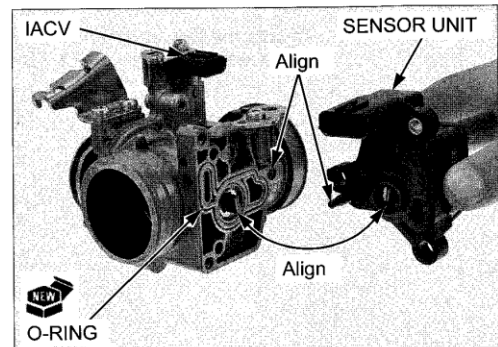


Install the IACV (page 6-53).

Install a new O-ring to the throttle body properly.

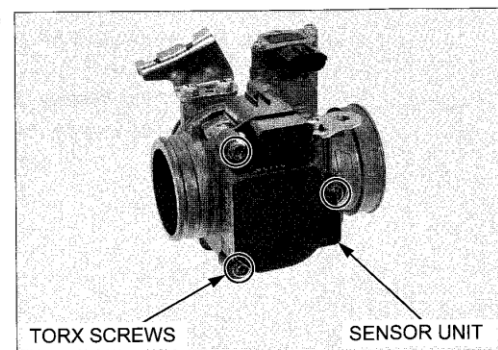
When installing the sensor unit to the throttle body, align the following:

- Clip of the TP sensor with the boss of the throttle valve
- IAT sensor of the throttle body with the hole



Install and tighten the sensor unit torx screws to the specified torque.

TORQUE: 3.4 N·m (0.3 kgf·m, 2.5 lbf·ft)

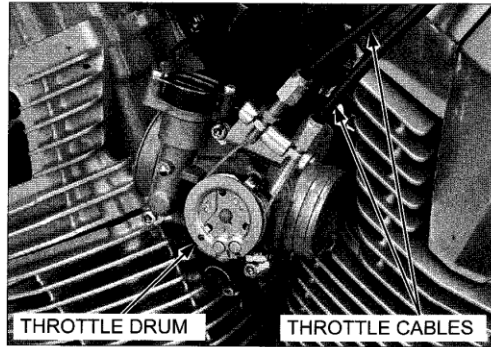


FUEL SYSTEM (PGM-FI)

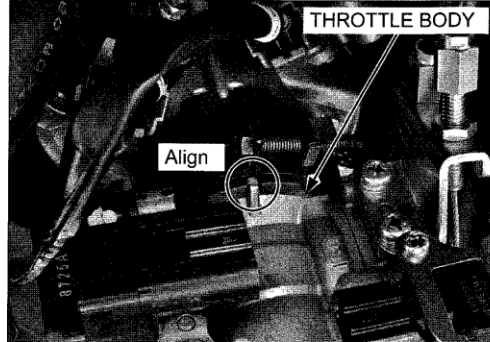
INSTALLATION

Route the throttle cables properly (page 1-22).

Connect the throttle cables to the throttle drum and cable guide.

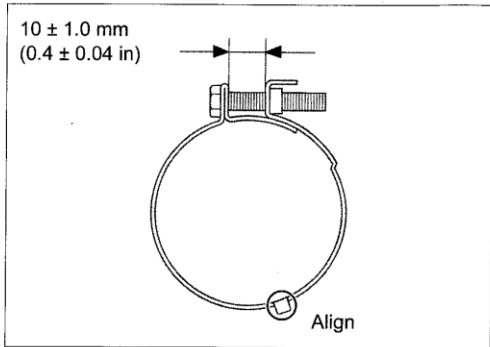


Install the throttle body to the insulator by aligning its lug with the slot in the insulator.



Align the insulator band hole with the insulator boss.

Tighten the insulator band screw so the insulator band distance is 10 ± 1.0 mm (0.4 ± 0.04 in).

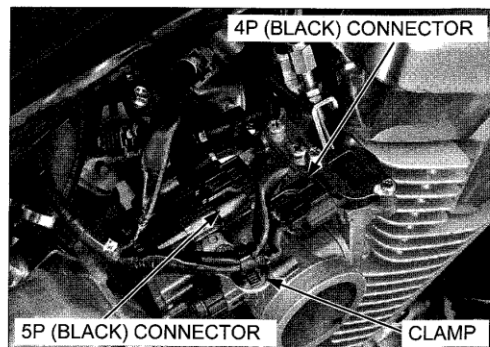


Install the clamp to the stay.

Connect the sensor unit 5P (Black) and IACV 4P (Black) connectors.

Adjust the throttle grip freeplay (page 4-5).

Install the air cleaner housing (page 6-44).



**THROTTLE VALVE FULLY CLOSED
POSITION RESET PROCEDURE**

NOTE:

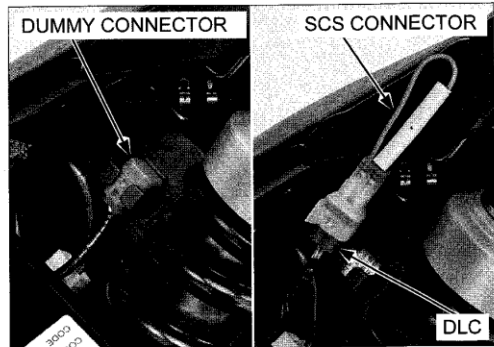
- If the sensor unit is removed, reset the throttle valve fully closed position as following procedure.

Remove the seat (page 3-6).

1. Erase the DTC's (page 6-13).
2. Turn the ignition switch OFF.
3. Remove the dummy connector and short DLC terminals using a special tool.

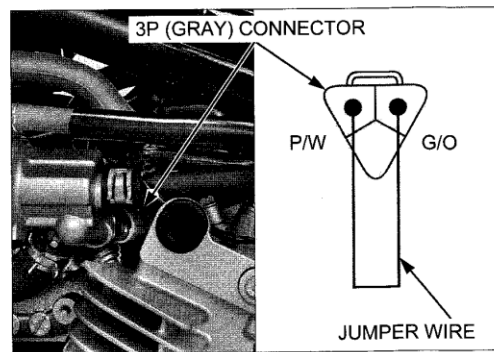
TOOL:

SCS connector 070PZ-ZY30100



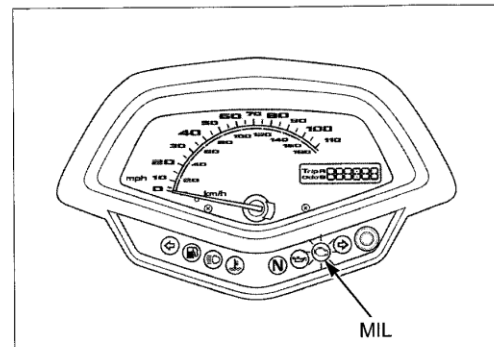
4. Remove the ignition switch (page 22-20)
Connect the ignition switch 2P (Black) connector.
Remove the rear left over head cover (page 3-5)
5. Disconnect the ECT sensor 3P (Gray) connector.
Connect the ECT sensor 3P (Gray) connector of the wire side with a jumper wire.

CONNECTION: Pink/white – Green/orange



6. Turn the ignition switch ON and engine stop switch "O" and the MIL will start blinking.

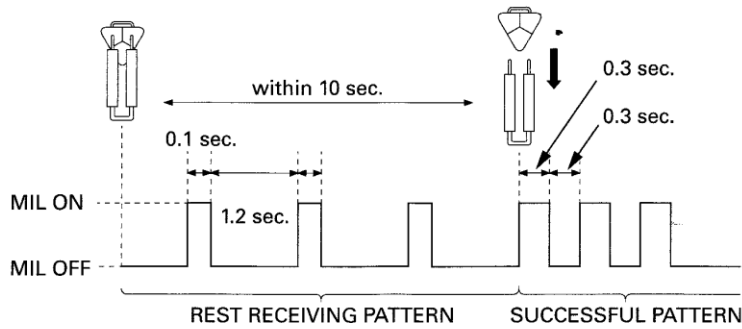
Within 10 seconds after turning the ignition switch ON, disconnect the jumper wire from the ECT sensor 3P (Gray) connector.



FUEL SYSTEM (PGM-FI)

7. Check if the MIL blinks.

If the MIL begins short blink (0.3 seconds), the throttle valve fully closed position is reset.



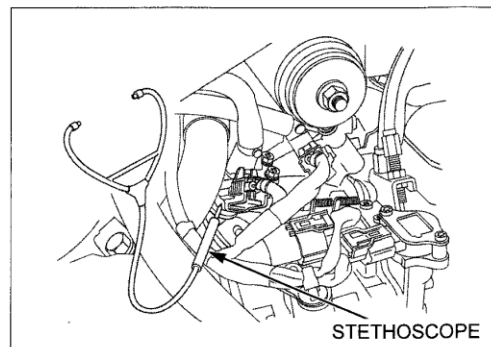
If the MIL stays lit, the throttle valve fully closed position is not reset, repeat the reset procedure from step 1.

INJECTOR

INSPECTION

Start the engine and let it idle.

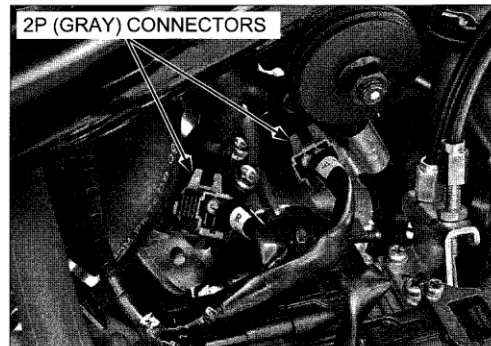
Confirm the injector operating sounds with a stethoscope or sounding rod.



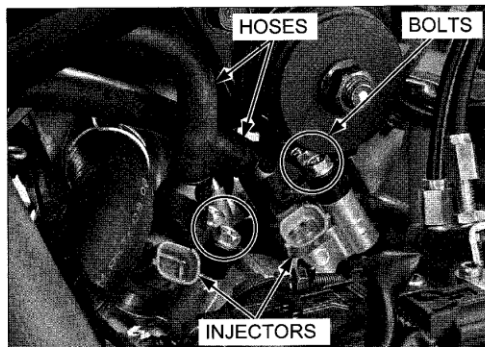
REMOVAL

Relieve the fuel pressure and disconnect the quick connect fitting from the injector hose side (page 6-30). Remove the air cleaner housing (page 6-44).

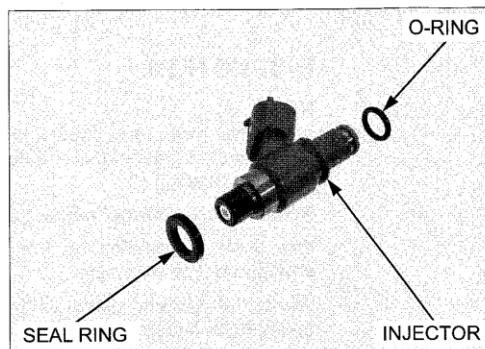
Disconnect the injector 2P (Gray) connectors.



Remove the bolts and disconnect the injector hoses.
Remove the injectors from the intake manifold.



Remove the seal ring and O-ring from the injector.

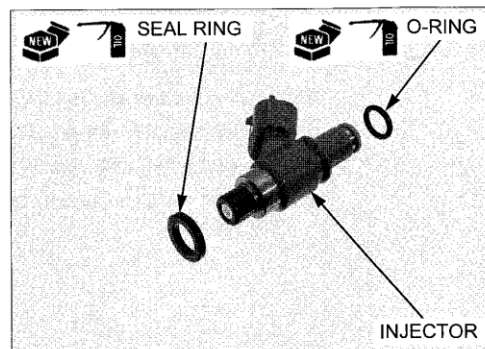


INSTALLATION

Apply engine oil to new O-ring and new seal ring.

Replace the O-ring and seal ring with new ones as a set.

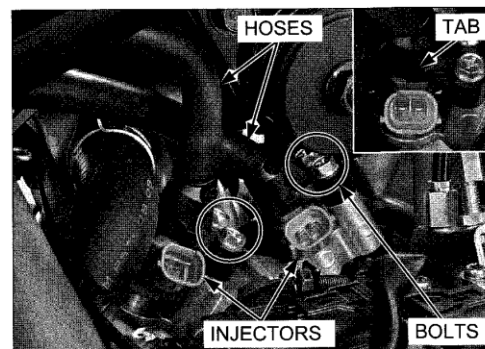
Install the O-ring and seal ring, being careful not to damage it.



Install the injectors and connect the injector hoses.
Install and tighten the fuel injector mounting bolts to the specified torque.

TORQUE: 5.1 N·m (0.5 kgf·m, 3.8 lbf·ft)

Align the tab of the injector hose with the injector terminals as shown.



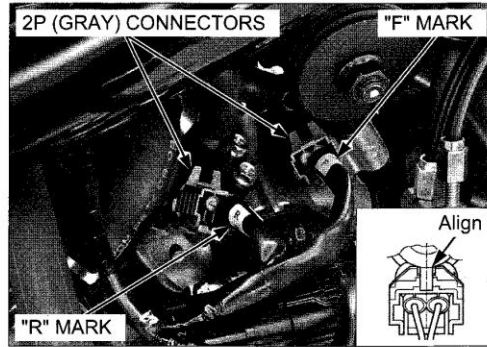
FUEL SYSTEM (PGM-FI)

Connect the injector 2P (Gray) connectors.

NOTE:

- Align the tab of the injector hose with groove of the injector connector as shown.
- The injector wires have the following identification marks:
 - "F" : front
 - "R" : rear

Connect the quick connect fitting to the injector hose side (page 6-32).



IACV

INSPECTION

NOTE:

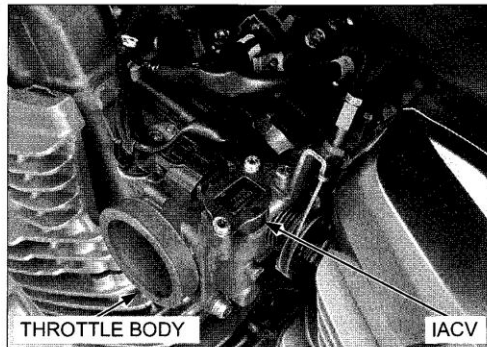
- Always clean the throttle body before the IACV removal to prevent dirt and debris from entering the IACV passage.

Remove the air cleaner housing (page 6-44).

The IACV is installed on the throttle body and is operated by the step motor.

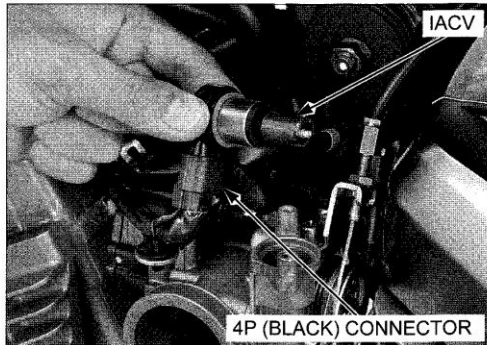
When the ignition switch is turned ON, the IACV operates for a few seconds.

Check the step motor operating (beep) sound with the ignition switch turned ON.



The IACV operation can be checked visually as follows:

1. Remove the IACV (page 6-53).
2. Connect the IACV 4P (Black) connector.
3. Turn the ignition switch ON, check the IACV operation.



REMOVAL

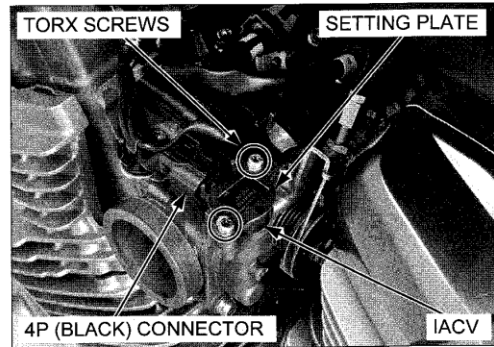
NOTE:

- Always clean the throttle body before the IACV removal to prevent dirt and debris from entering the IACV passage.

Remove the air cleaner housing (page 6-44).

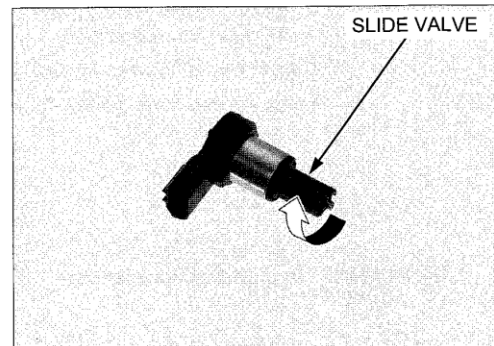
Disconnect the IACV 4P (Black) connector.

Remove the torx screws, setting plate and IACV.



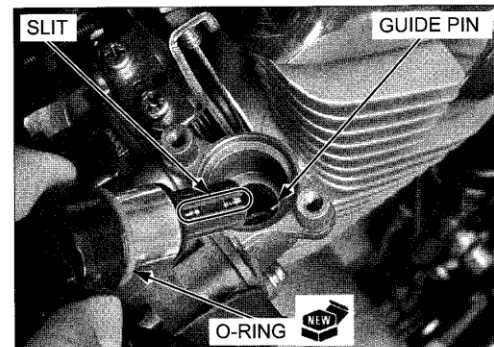
INSTALLATION

Turn the slide valve clockwise until lightly seated on IACV.

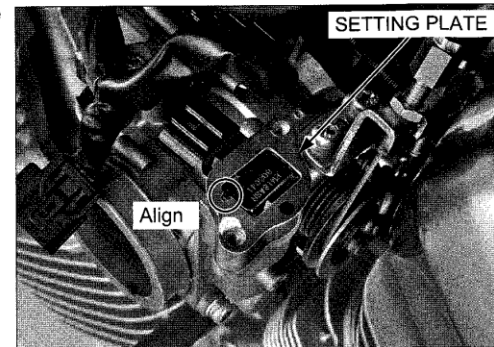


Install a new O-ring to the IACV.

Install the IACV into the throttle body while aligning the valve slit with the guide pin in the throttle body.



Install the setting plate by aligning its groove with the boss of the IACV.



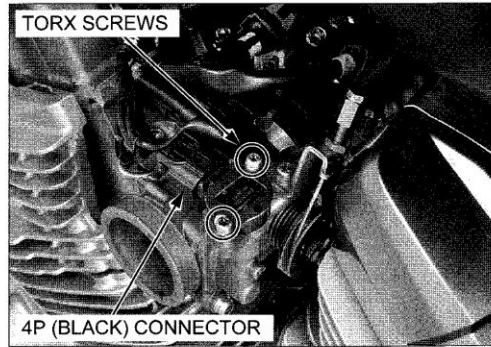
FUEL SYSTEM (PGM-FI)

Install and tighten the IACV setting plate torx screws to the specified torque.

TORQUE: 2.1 N·m (0.2 kgf·m, 1.5 lbf·ft)

Connect the IACV 4P (Black) connector.

Install the air cleaner housing (page 6-44).



INTAKE MANIFOLD

REMOVAL

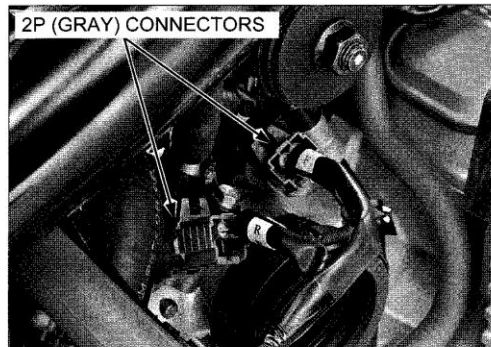
Relieve the fuel pressure and disconnect the quick connect fitting from the injector hose side (page 6-30).

Remove the following:

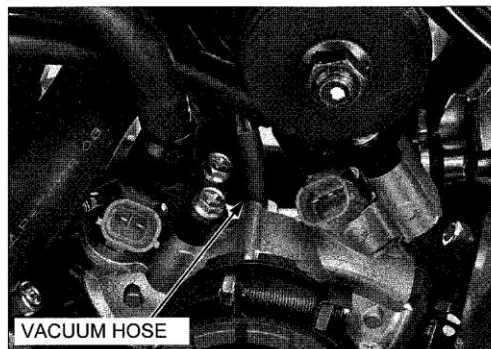
- Ignition switch (page 22-20)
- Throttle body (page 6-45)

Disconnect the injector 2P (Gray) connectors.

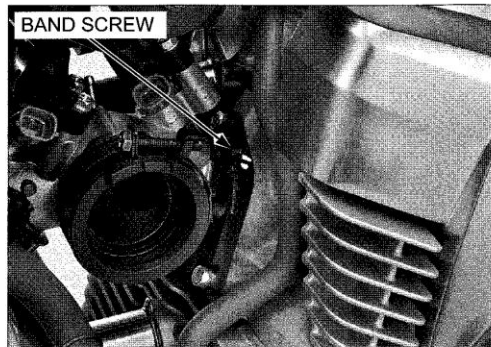
For injector removal (page 6-50).



CALIFORNIA Disconnect the vacuum hose.
TYPE:

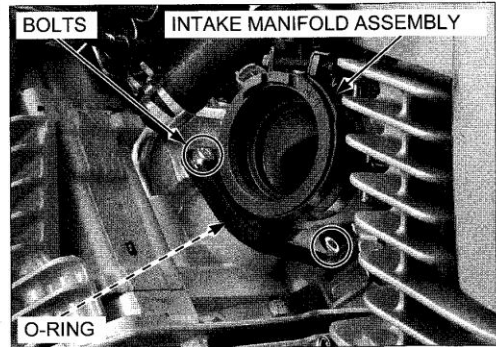


Loosen the front side intake manifold base band screw.



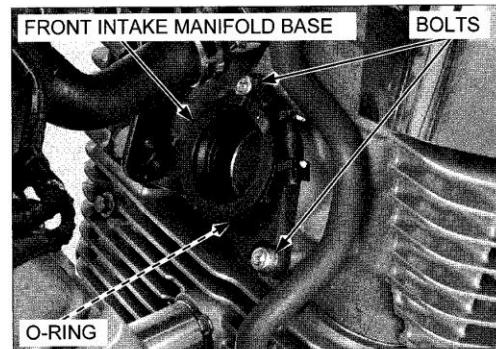
FUEL SYSTEM (PGM-FI)

Remove the rear side intake manifold mounting socket bolts, intake manifold assembly and O-ring.

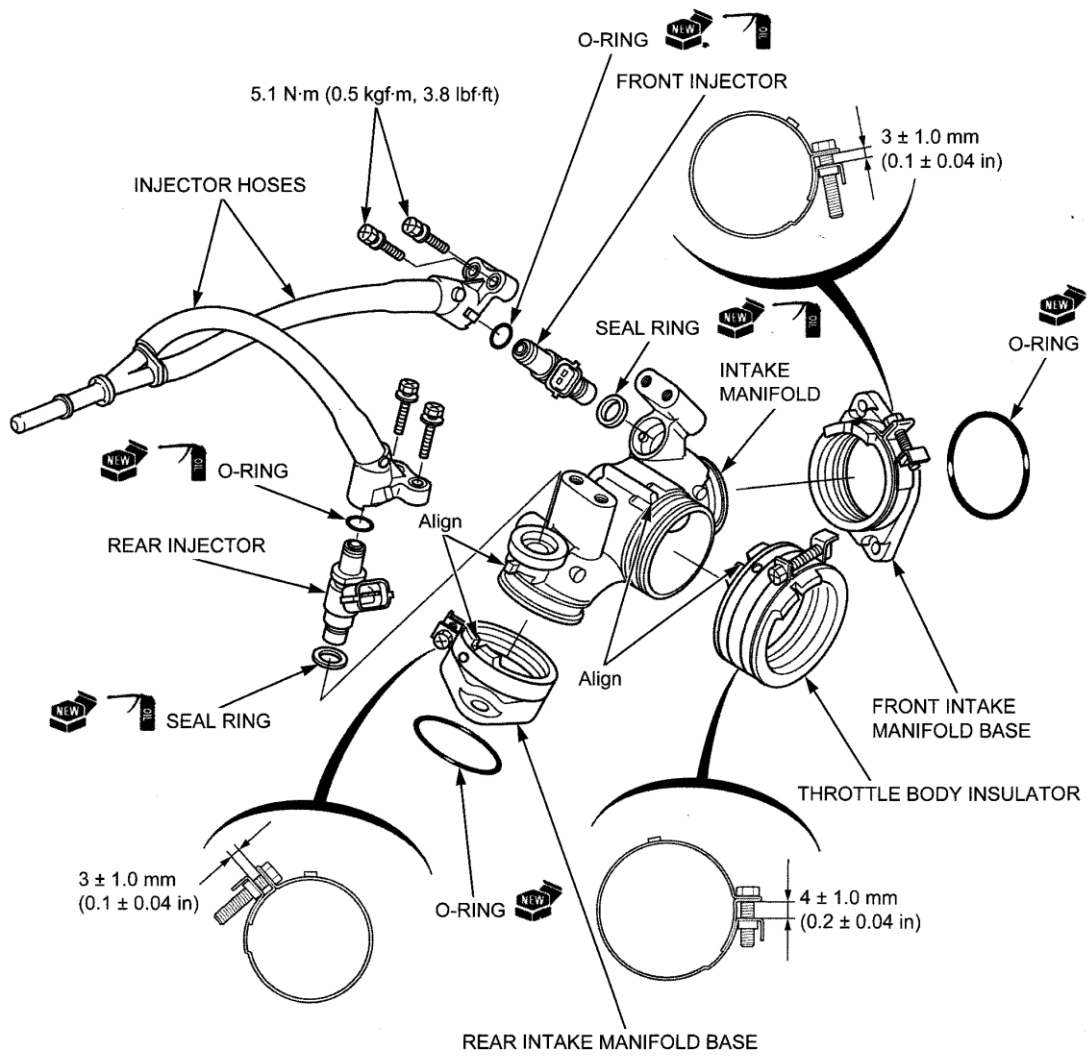


Remove the front side intake manifold mounting socket bolts, intake manifold base and O-ring.

Seal the intake ports of the cylinder heads with tape or clean cloths to keep dirt and debris from entering the engine.

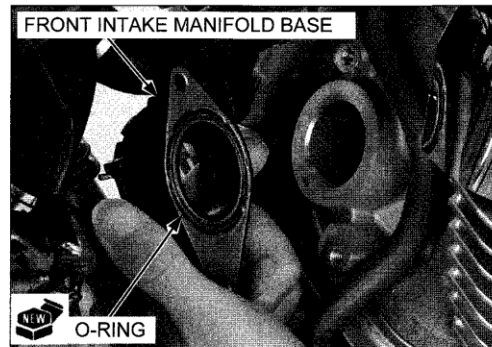


DISASSEMBLY/ASSEMBLY



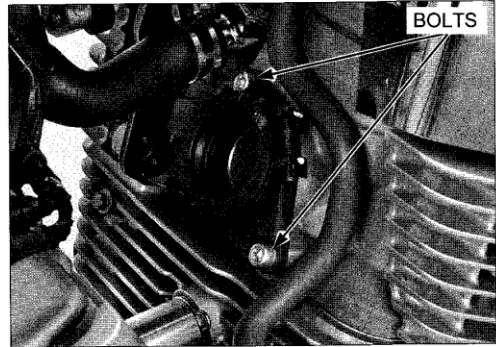
INSTALLATION

Install a new O-ring onto the front side intake manifold base groove then install the front side intake manifold base to the front cylinder head.



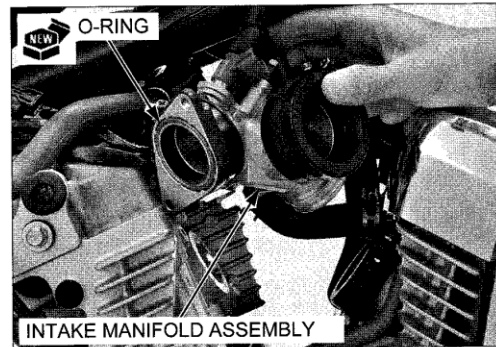
Install and tighten the front side intake manifold mounting socket bolts to the specified torque.

TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)



Install a new O-ring onto the rear side intake manifold base groove.

Install the intake manifold assembly to the rear cylinder head and front intake manifold base.

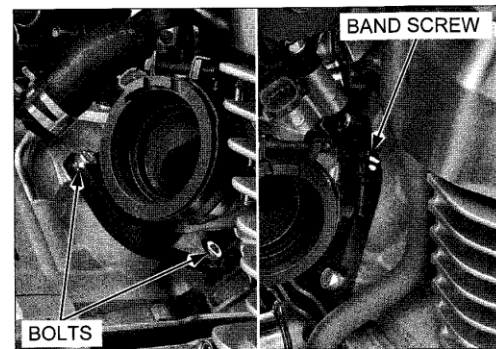


Install and tighten the rear side intake manifold mounting socket bolts to the specified torque.

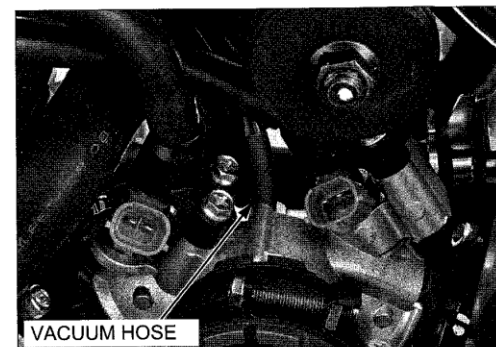
TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)

Tighten the front side intake manifold base band screw to the specified range (page 6-56).

Install the injectors, if they are removed (page 6-51).



CALIFORNIA Connect the vacuum hose.
TYPE:



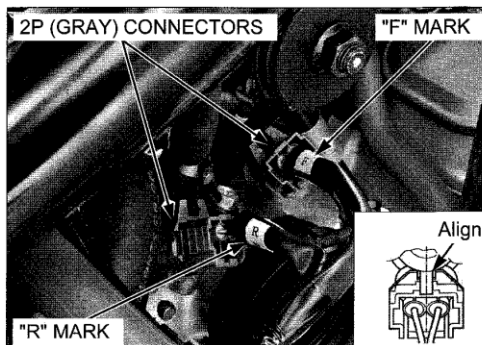
FUEL SYSTEM (PGM-FI)

Connect the injector 2P (Gray) connectors.

NOTE:

- Align the tab of the injector hose with groove of the injector connector as shown.
- The injector wires have the following identification marks:
 - "F" : front
 - "R" : rear

Connect the quick connect fitting to the injector hose side (page 6-32).



ECT SENSOR

REMOVAL/INSTALLATION

Drain the coolant from the system (page 7-7).

Remove the thermostat housing (page 7-10).

Remove the ECT sensor and sealing washer.

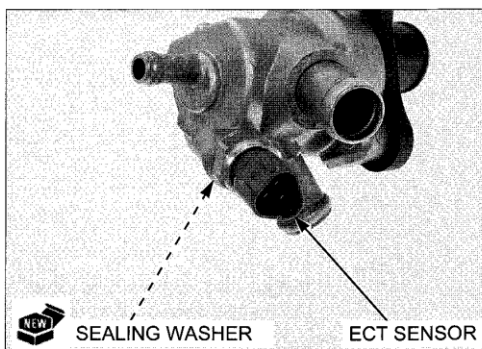
Install a new sealing washer and ECT sensor.

Tighten the ECT sensor to the specified torque.

TORQUE: 24.5 N·m (2.5 kgf·m, 18 lbf·ft)

Install the thermostat housing (page 7-10).

Fill the cooling system with recommended coolant (page 7-6).



BANK ANGLE SENSOR

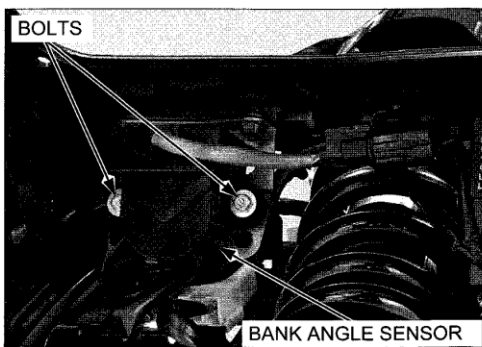
SYSTEM INSPECTION

Support the motorcycle on a level surface.

Remove the rear fender (page 3-8).

Do not disconnect the bank angle sensor 3P (Black) connector during inspection.

Remove the bolts and bank angle sensor with the bank angle sensor 3P (Black) connector is connected.



Before you perform this test, turn the ignition switch OFF, then turn the ignition switch ON and engine stop switch "O".

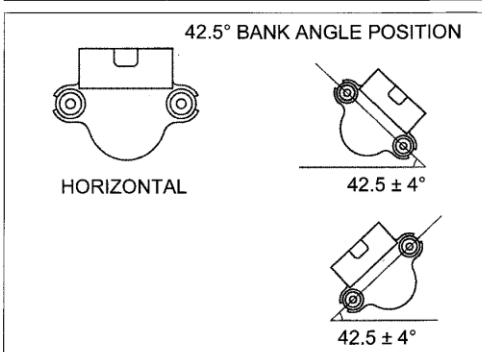
Place the bank angle sensor horizontal (normal position) as shown, and ignition switch ON and engine stop switch "O".

The bank angle sensor is normal if the engine stop relay clicks and power supply is closed.

Incline the bank angle sensor $42.5 \pm 4^\circ$ to the left or right with keep the ignition switch ON and engine stop switch "O".

The bank angle sensor is normal if the engine stop relay clicks and power supply is open.

If you repeat this test, first turn the ignition switch OFF, then turn the ignition switch ON.



INPUT VOLTAGE/GROUND LINE INSPECTION

NOTE:

- Check the bank angle sensor system inspection (page 6-58) before checking the input voltage/ground line.

1. Input Voltage Line Inspection

Turn the ignition switch OFF.
Remove the rear fender (page 3-8).

Disconnect the bank angle sensor 3P (Black) connector.

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the bank angle sensor 3P (Black) connector of wire side and ground.

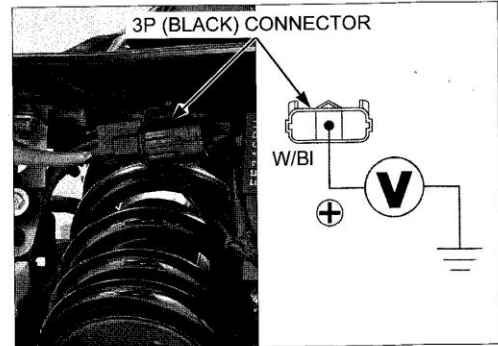
CONNECTION: White/black (+) – Ground (-)

STANDARD: Battery voltage

Is there battery voltage?

YES – GO TO STEP 2.

- NO** –
- Open circuit in White/black wire
 - Blown main fuse 30 A
 - Blown sub fuse 10 A (ST/ENG STOP)



2. Engine Stop Relay Coil Line Inspection

Turn the engine stop switch "O".

Measure the voltage at the bank angle sensor 3P (Black) connector of wire side and ground.

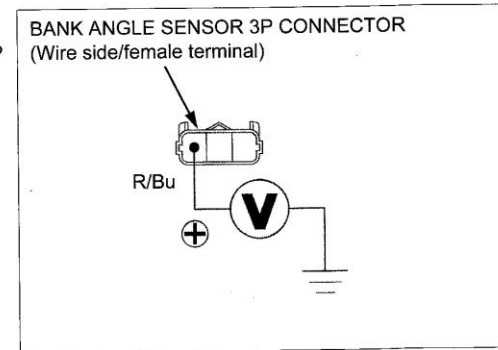
CONNECTION: Red/blue (+) – Ground (-)

STANDARD: Battery voltage

Is there battery voltage?

YES – GO TO STEP 3.

- NO** –
- Open circuit in Red/blue wire
 - Faulty engine stop relay
 - Faulty engine stop switch



3. Ground Line Inspection

Turn the ignition switch OFF.

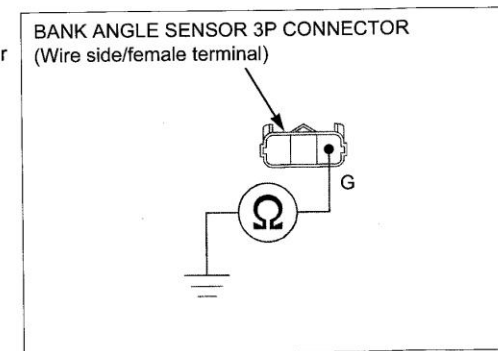
Check for continuity between the bank angle sensor 3P (Black) connector of wire side and ground.

CONNECTION: Green – Ground

Is there continuity?

YES – Faulty bank angle sensor

NO – Open circuit in Green wire



FUEL SYSTEM (PGM-FI)

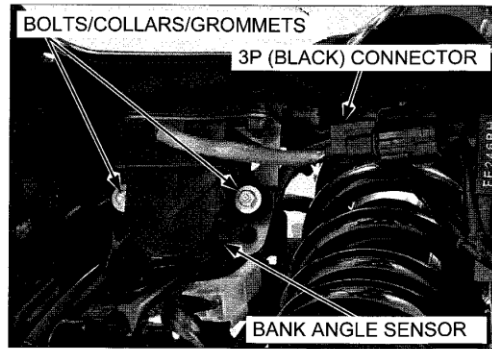
REMOVAL/INSTALLATION

Remove the rear fender (page 3-8).

Disconnect the bank angle sensor 3P (Black) connector.

Remove the bolts and bank angle sensor.

Remove the collars and grommets from the bank angle sensor.



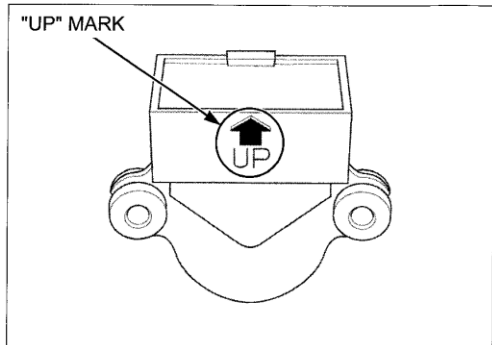
Install the bank angle sensor with its "UP" mark facing up.

Route the sensor wire properly (page 1-22).

Install the removed parts in the reverse order of removal.

TORQUE:

Bank angle sensor mounting bolt:
2 N·m (0.2 kgf·m, 1.5 lbf·ft)

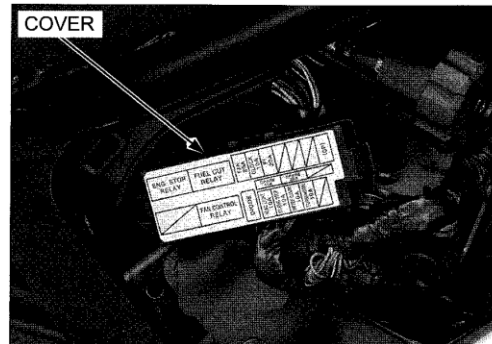


ENGINE STOP RELAY

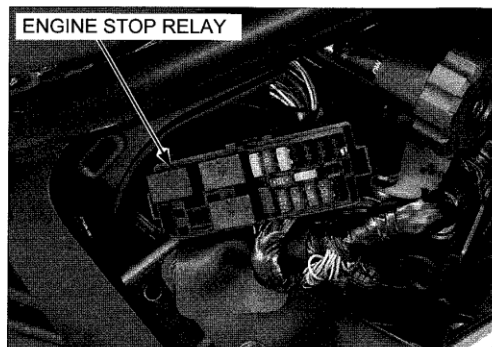
INSPECTION

Remove the right side cover (page 3-6).

Open the power box cover.



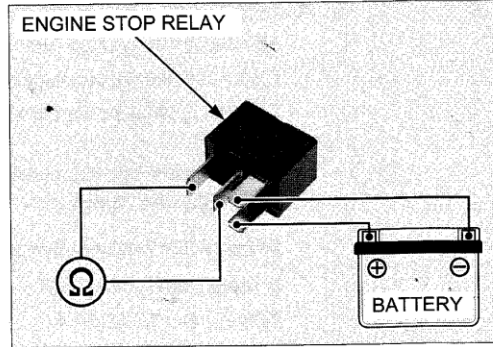
Disconnect the engine stop relay.



Connect an ohmmeter and 12 V battery to the engine stop relay terminals as shown.

There should be continuity only when the 12 V battery is connected.

If there is no continuity when the 12 V battery is connected, replace the engine stop relay.



ECM

ECM POWER/GROUND LINE INSPECTION

NOTE:

- Before starting the inspection, check for loose or poor contact on the ECM 33P connectors and recheck the MIL blinking.

Engine does not start (MIL does not blink)

1. ECM Power Input Voltage Inspection

Disconnect the ECM 33P connectors (page 6-62).

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the ECM 33P (Black) connector of the wire side and ground.

CONNECTION: A4 (+) – Ground (-)

STANDARD: Battery voltage

TOOL:

Test probe 07ZAJ-RDJA110

Is there battery voltage?

YES – GO TO STEP 2.

NO – GO TO STEP 3.

2. ECM Ground Line Inspection

Turn the ignition switch OFF.

Check for continuity between the ECM 33P connectors of the wire side and ground.

**CONNECTION: A23 – Ground
B4 – Ground**

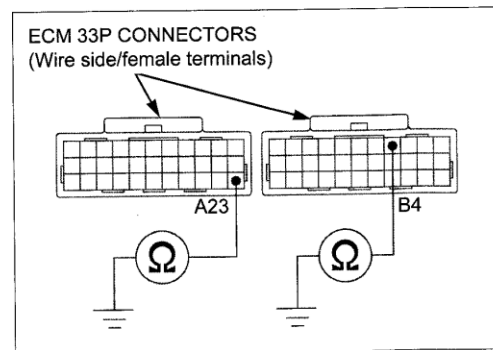
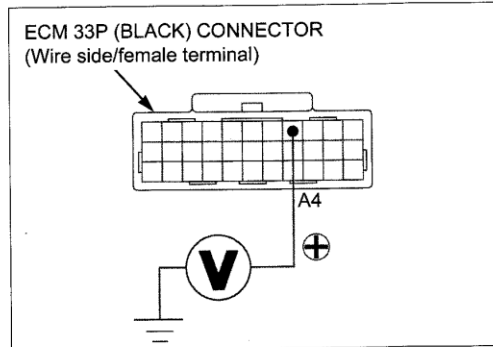
TOOL:

Test probe 07ZAJ-RDJA110

Is there continuity?

YES – Replace the ECM with a known good one, and recheck.

NO – Open circuit in GROUND LINE wire



FUEL SYSTEM (PGM-FI)

3. Engine Stop Relay Inspection 1

Turn the ignition switch OFF.

Disconnect the engine stop relay (page 6-60).

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the wire side terminals.

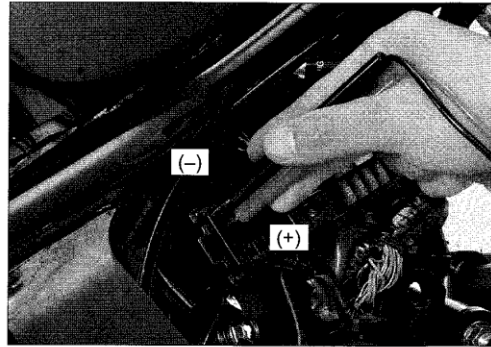
CONNECTION: Black (+) – Red/blue (-)

STANDARD: Battery voltage

Is there battery voltage?

YES – GO TO STEP 4.

NO – Inspect the bank angle sensor (page 6-58).



4. Engine Stop Relay Inspection 2

Turn the ignition switch OFF.

Connect the engine stop relay of the wire side terminals with a jumper wire.

CONNECTION: Black/white – Red/white

Turn the ignition switch ON and engine stop switch "O".

Measure the voltage at the ECM 33P (Black) connector terminals and ground.

CONNECTION: A4 (+) – Ground (-)

STANDARD: Battery voltage

TOOL:

Test probe 07ZAJ-RDJA110

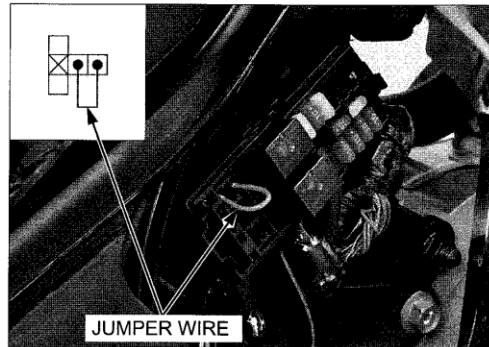
Is there battery voltage?

YES –

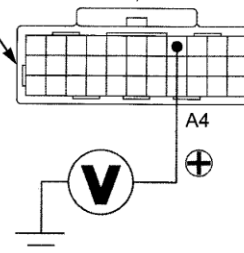
- Inspect the engine stop relay (page 6-60).
- Inspect the engine stop switch (page 22-21).

NO –

- Open circuit in Black/white or Red/white wire between the sub fuse 20 A (FI) and ECM
- Faulty sub fuse 20 A (FI)
- Open circuit in Red wire between the battery and sub fuse 20 A (FI)



ECM 33P (BLACK) CONNECTOR
(Wire side/female terminal)



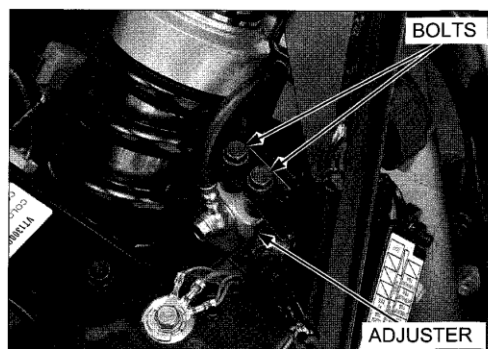
REMOVAL/INSTALLATION

Remove the following:

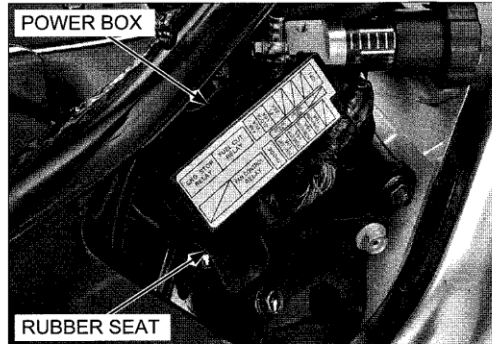
- Seat (page 3-6)
- Right side cover (page 3-6)

Turn the ignition switch OFF.

Remove the bolts and pre-load adjuster.



Remove the power box and rubber seat.



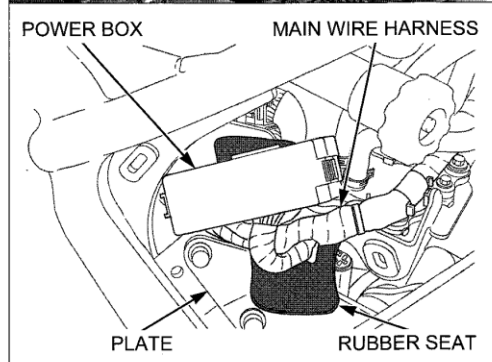
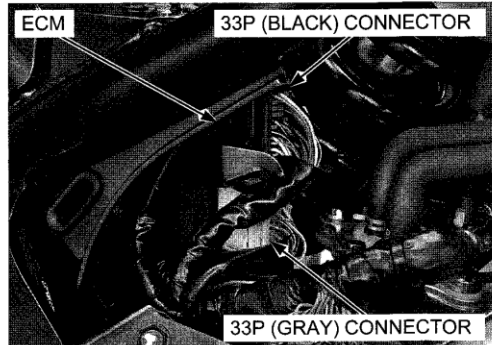
Disconnect the ECM 33P connectors.

Remove the ECM.

Installation is in the reverse order of removal.

NOTE:

- When installing the power box and rubber seat, insert the rubber seat between the main wire harness and engine hanger upper plate.



SECONDARY AIR SUPPLY SYSTEM

SYSTEM INSPECTION

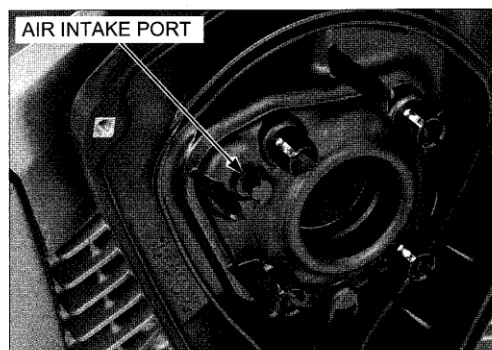
Start the engine and warm it up to coolant temperature is 80°C (176°F).

Stop the engine.

Remove the air cleaner element (page 4-6).

Check that the secondary air intake port is clean and free of carbon deposits.

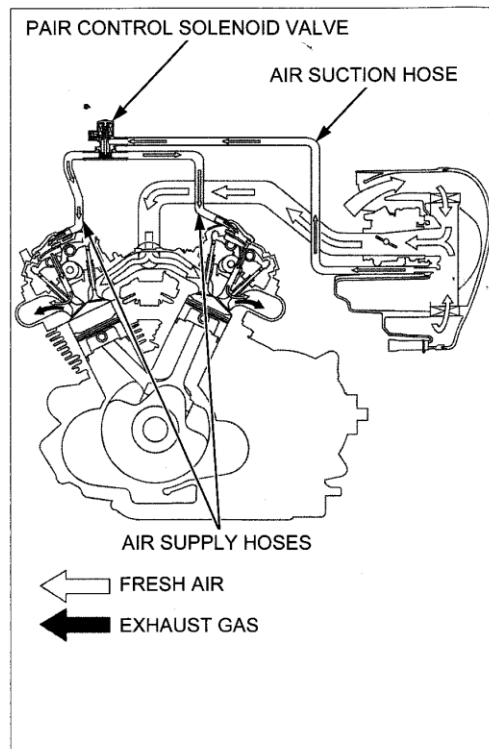
Check the PAIR check valve if the port is carbon fouled (page 6-65).



FUEL SYSTEM (PGM-FI)

Start the engine and open the throttle slightly to be certain that air is sucked in through the air intake port.

If the air is not drawn in, check the secondary air supply air suction hoses for clogs and PAIR control solenoid valve (page 6-64).

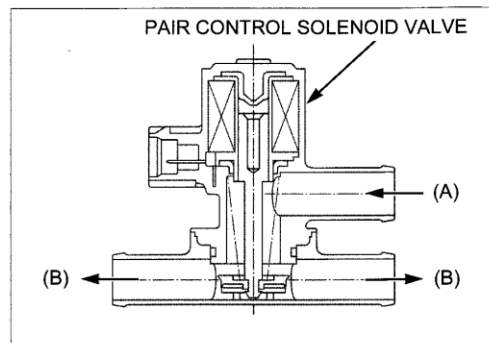


PAIR CONTROL SOLENOID VALVE

INSPECTION

Remove the PAIR control solenoid valve (page 6-65).

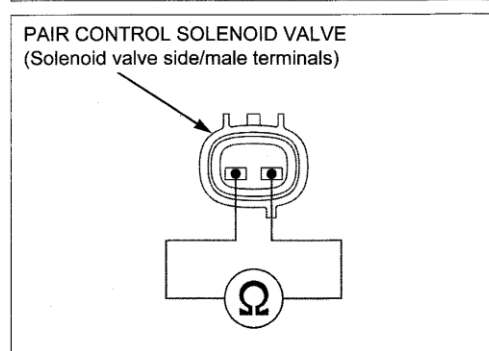
Check that air does not flow (A) to (B) when the 12 V battery is connected to the PAIR control solenoid valve terminals. Air should flow (A) to (B) when there is no voltage applied to the PAIR control solenoid valve terminals.



Measure the resistance at the PAIR control solenoid valve side.

STANDARD: 20 – 24 Ω (20°C/68°F)

If it is out of the standard, replace the PAIR control solenoid valve.



REMOVAL/INSTALLATION

Remove the following:

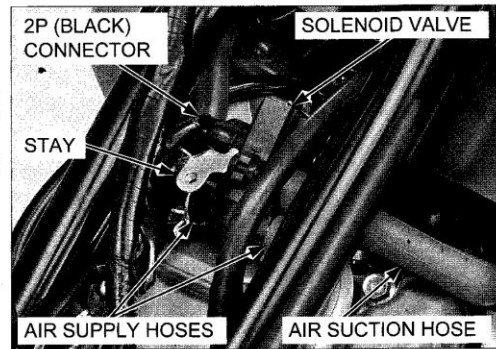
- Fuel tank (page 6-43)
- Rear ignition coil (page 20-8)

Disconnect the PAIR control solenoid valve 2P (Black) connector.

Disconnect the secondary air suction and secondary air supply hoses from the PAIR control solenoid valve.

Remove the stay from the PAIR control solenoid valve.

Installation is in the reverse order of removal.

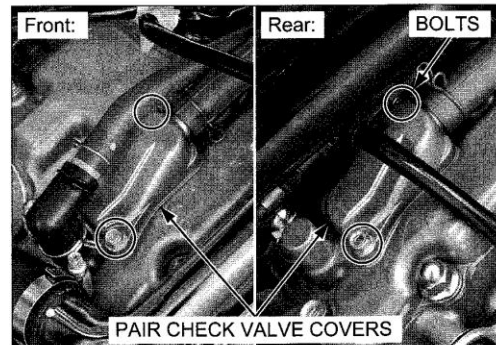


PAIR CHECK VALVE INSPECTION

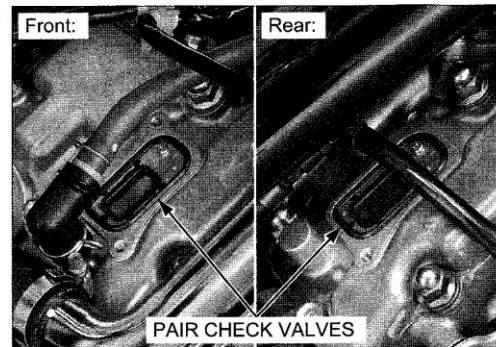
Remove the over head cover (page 3-5).

- Front : Center and left side covers
- Rear : Right side cover

Remove the bolts and PAIR check valve cover.



Remove the PAIR check valve from the cylinder head cover.



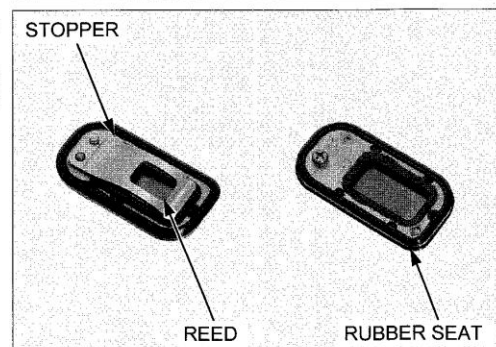
Check the reed and stopper for damage or fatigue, replace the PAIR check valve if necessary.

Replace the PAIR check valve if the rubber seat is cracked, deteriorated or damaged, or if there is clearance between the reed and seat.

Installation is in the reverse order of removal.

TORQUE:

PAIR check valve cover bolt:
5.2 N·m (0.5 kgf·m, 3.8 lbf·ft)



FUEL SYSTEM (PGM-FI)

EVAP PURGE CONTROL SOLENOID VALVE/CANISTER (CALIFORNIA TYPE)

REMOVAL/INSTALLATION

EVAP PURGE CONTROL SOLENOID VALVE

Disconnect the following:

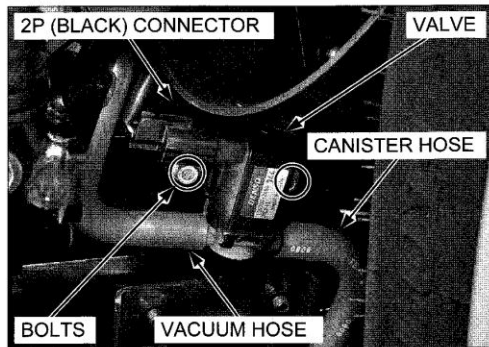
- EVAP purge control solenoid valve 2P (Black) connector
- Canister hose
- Vacuum hose (to intake manifold)

Remove the bolts and EVAP purge control solenoid valve.

Installation is in the reverse order of removal.

NOTE:

- Route the hoses and wire properly (page 1-22).

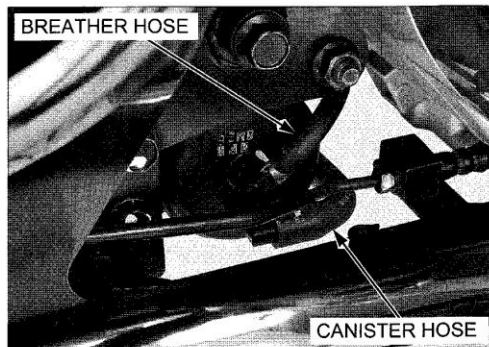


CANISTER

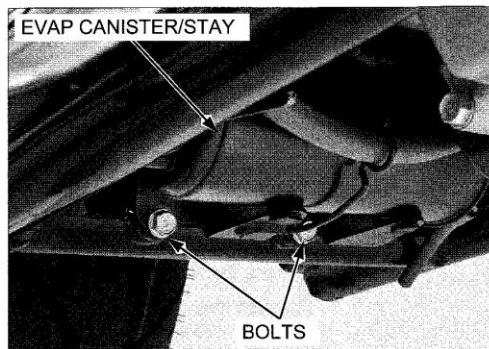
Remove the rear fender (page 3-8).

Disconnect the following:

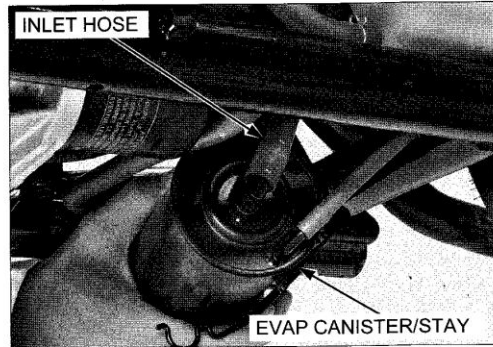
- Fuel tank breather hose (to fuel tank)
- Canister hose (to purge control solenoid valve)



Remove the bolts and EVAP canister/stay.



Disconnect the air inlet hose and remove the EVAP canister/stay.



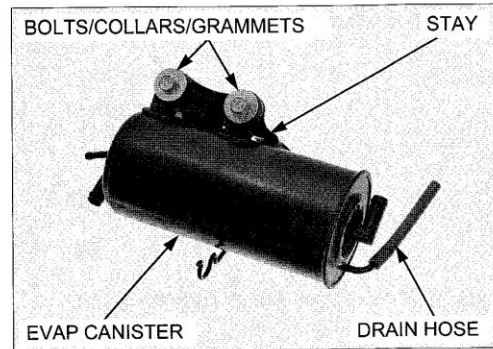
Remove the following:

- Bolts
- Collars
- EVAP canister
- Canister stay
- Grommets
- Drain hose

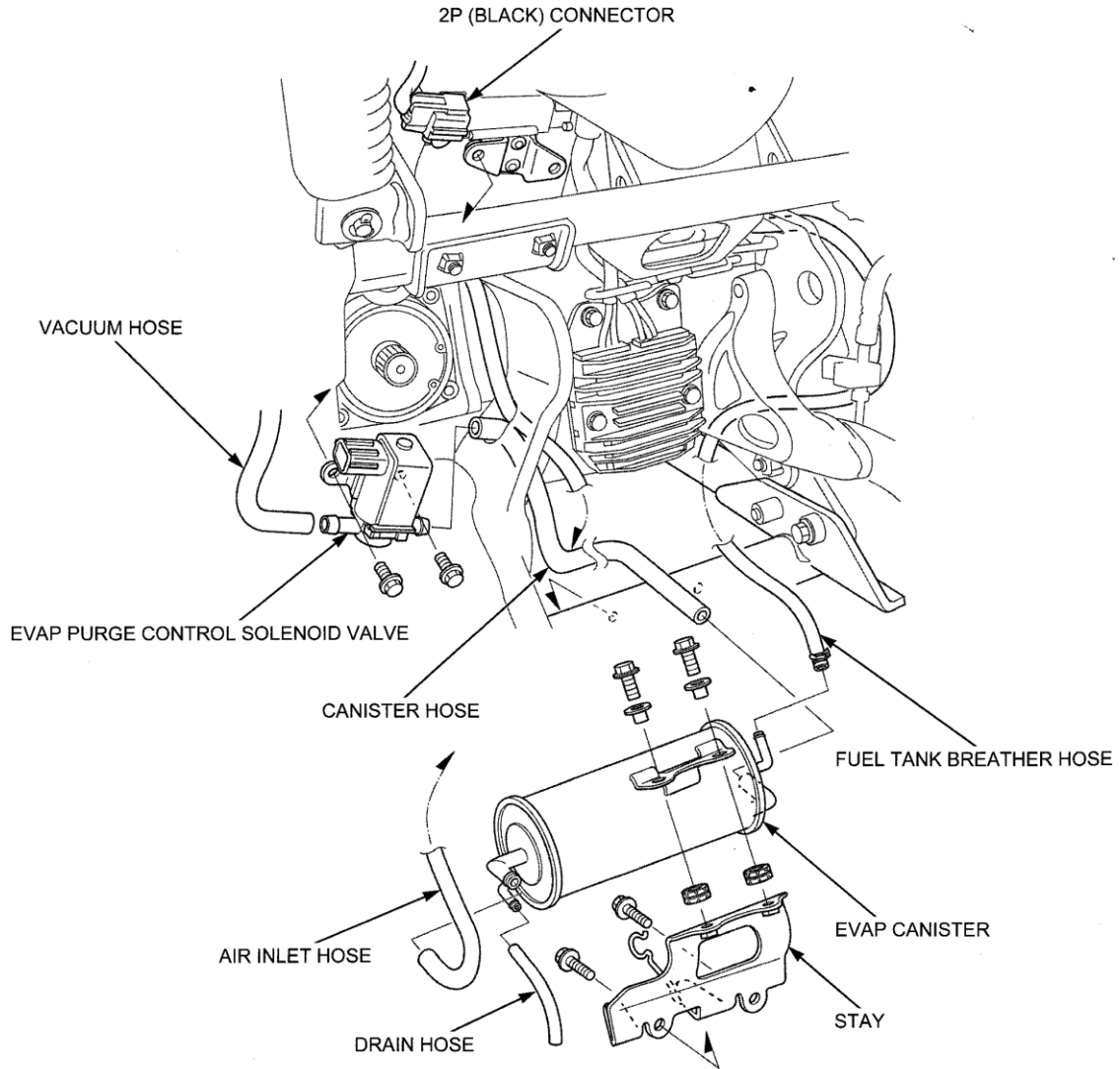
Installation is in the reverse order of removal.

NOTE:

- Route the hoses properly (page 1-22).



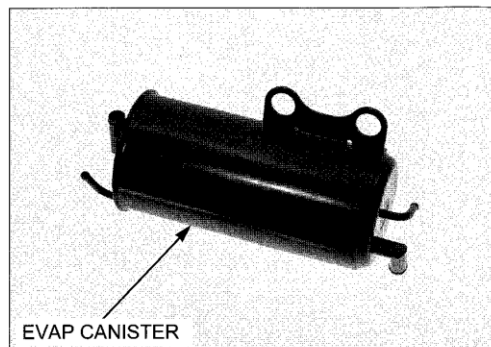
FUEL SYSTEM (PGM-FI)



INSPECTION

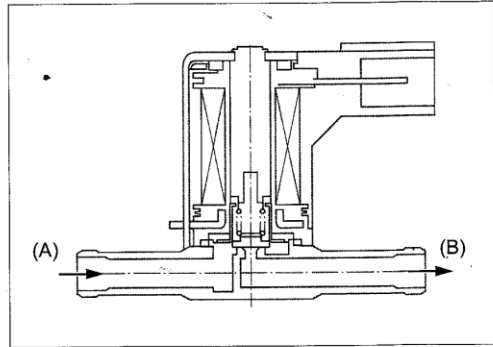
EVAP CANISTER

Check the EVAP canister for cracks, clogs or damage.



EVAP PURGE CONTROL SOLENOID VALVE

Check that air should flow (A) to (B), only when a 12 V battery is connected to the EVAP purge control solenoid valve terminals.

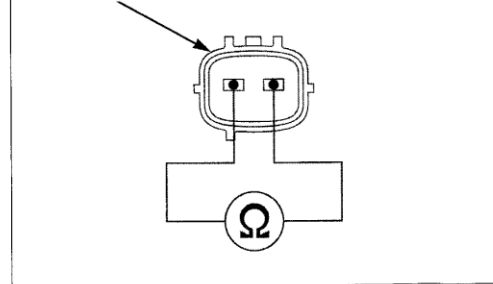


Measure the resistance at the EVAP purge control solenoid valve side.

STANDARD: 30 – 34 Ω (20°C/68°F)

If the resistance is out of specification, replace the EVAP purge control solenoid valve.

EVAP PURGE CONTROL SOLENOID VALVE
(Solenoid valve side/male terminals)



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