

# PGM-FI Control System

## Troubleshooting Flowchart — MAP Sensor



Self-diagnosis LED indicates code 3: Most likely an electrical problem in the Manifold Absolute Pressure (MAP) Sensor system.



Self-diagnosis LED indicates code 5: Most likely a mechanical problem (broken hose) in the Manifold Absolute Pressure (MAP) Sensor system.



- Engine is warm and running.
- Check Engine warning light has been reported on.
- LED indicates CODE 3.

Turn the ignition switch OFF.

Remove HAZARD fuse in the main fuse box for 10 seconds to reset ECU.

Warm up engine to normal operating temperature (cooling fan comes on).

Is Check Engine warning light on and does LED indicate CODE 3?

NO

Intermittent failure, system is OK at this time (test drive may be necessary).  
Check for poor connection or loose wires at MAP sensor connector and ECU.

YES

Turn the ignition switch OFF.

Disconnect the 3P connector from the MAP sensor.

Turn the ignition switch ON.

Measure voltage between YEL/RED (+) terminal and body ground.

Is there approx. 5V?

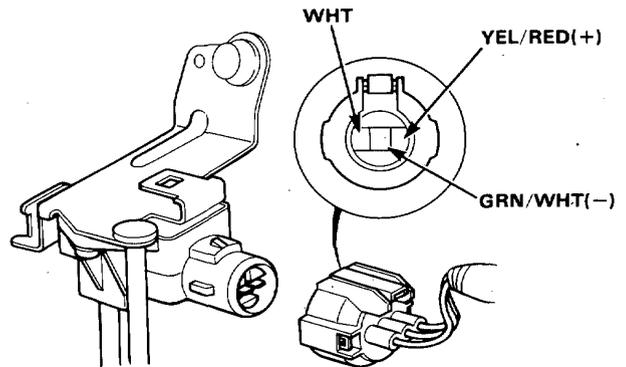
YES

Measure voltage between YEL/RED (+) terminal and GRN/WHT (-) terminal.

NO

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(To page 6-85)





(From page 6-84)

Repair open in YEL/RED wire between ECU (C15) and MAP sensor. If wire is OK, substitute a known-good ECU and recheck. If prescribed voltage is now available, replace the original ECU.

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Is there approx. 5V?

NO

Repair open in GRN/WHT wire between ECU (C14) and MAP sensor. If wire is OK, substitute a known-good ECU and recheck. If prescribed voltage is now available, replace the original ECU.

YES

Measure voltage between WHT (+) terminal and GRN/WHT (-) terminal.

Is there approx. 5V?

NO

Repair open or short in WHT wire between ECU (C11) and MAP sensor. If wire is OK, substitute a known-good ECU and recheck. If prescribed voltage is now available, replace the original ECU.

YES

Turn the ignition switch OFF.

Reconnect the 3P connector to the MAP sensor.

Connect the PGM-FI test harness between the ECU and connector (page 6-75)

Turn the ignition switch ON.

Measure voltage between C11 (+) terminal and C14 (-) terminal.

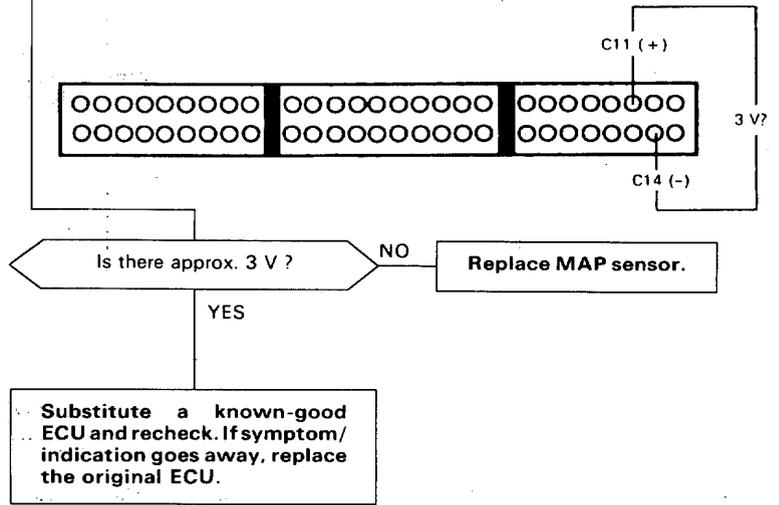
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(cont'd)

# PGM-FI Control System

## Troubleshooting Flowchart — MAP Sensor (cont'd)

(From page 6-85)



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# PGM-FI Control System

## Troubleshooting Flowchart — MAP Sensor (cont'd)



(1.5 l)

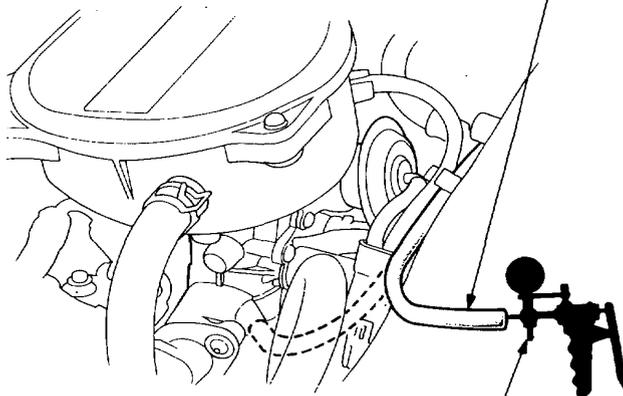
#21 HOSE

- Check Engine warning light has been reported on.  
- LED indicates CODE 5.

Turn the ignition switch OFF.

Remove HAZARD fuse in the main fuse box for 10 seconds to reset ECU.

Start the engine.



- Intermittent failure, system is OK at this time (test drive may be necessary).  
- Check vacuum hoses, pipes and connections.  
- Make sure all connectors are secure.

VACUUM PUMP/GAUGE  
A973X-041-XXXXX

Is Check Engine warning light on and does LED indicate CODE 5?

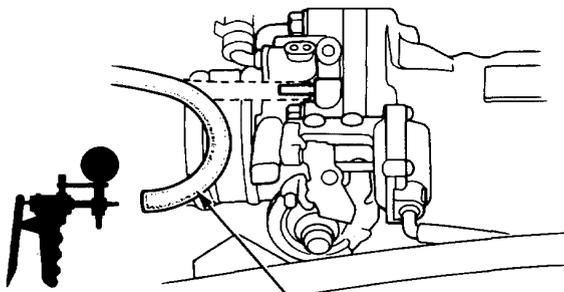
NO

YES

Stop engine.

Connect vacuum pump to #21 hose and apply vacuum.

(1.6 l)



VACUUM PUMP/GAUGE

#21 HOSE

Does it hold vacuum?

NO

YES

Connect a vacuum pump to the MAP sensor and apply vacuum.

Does it hold vacuum?

NO

Replace MAP sensor.

YES

Replace #21 hose.

Disconnect #21 hose from the throttle body and connect a T-fitting from a vacuum gauge between the throttle body and MAP sensor.

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Start engine.

Is there manifold vacuum?

NO

-Remove restriction from throttle body.  
-Replace throttle body.

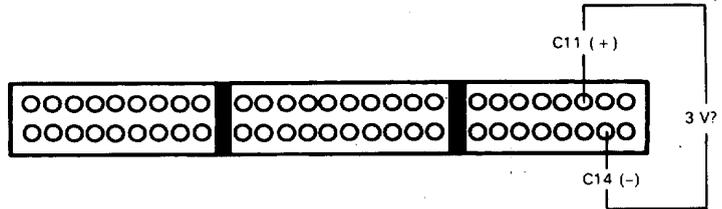
YES

Stop engine.

Connect the PGM-FI test harness between the ECU and connector (page 6-75)

Turn the ignition switch ON.

Measure voltage between C11 (+) terminal and C14 (-) terminal.



Is there approx. 3 V ?

NO

Inspect for an open in WHT wire between the MAP sensor and ECU. If wire is OK, replace the MAP sensor.

YES

Start the engine and allow it to idle..

Is there approx 1V?

NO

Replace MAP sensor.

YES

Substitute a known-good ECU and recheck. If symptom/indication goes away, replace the original ECU.