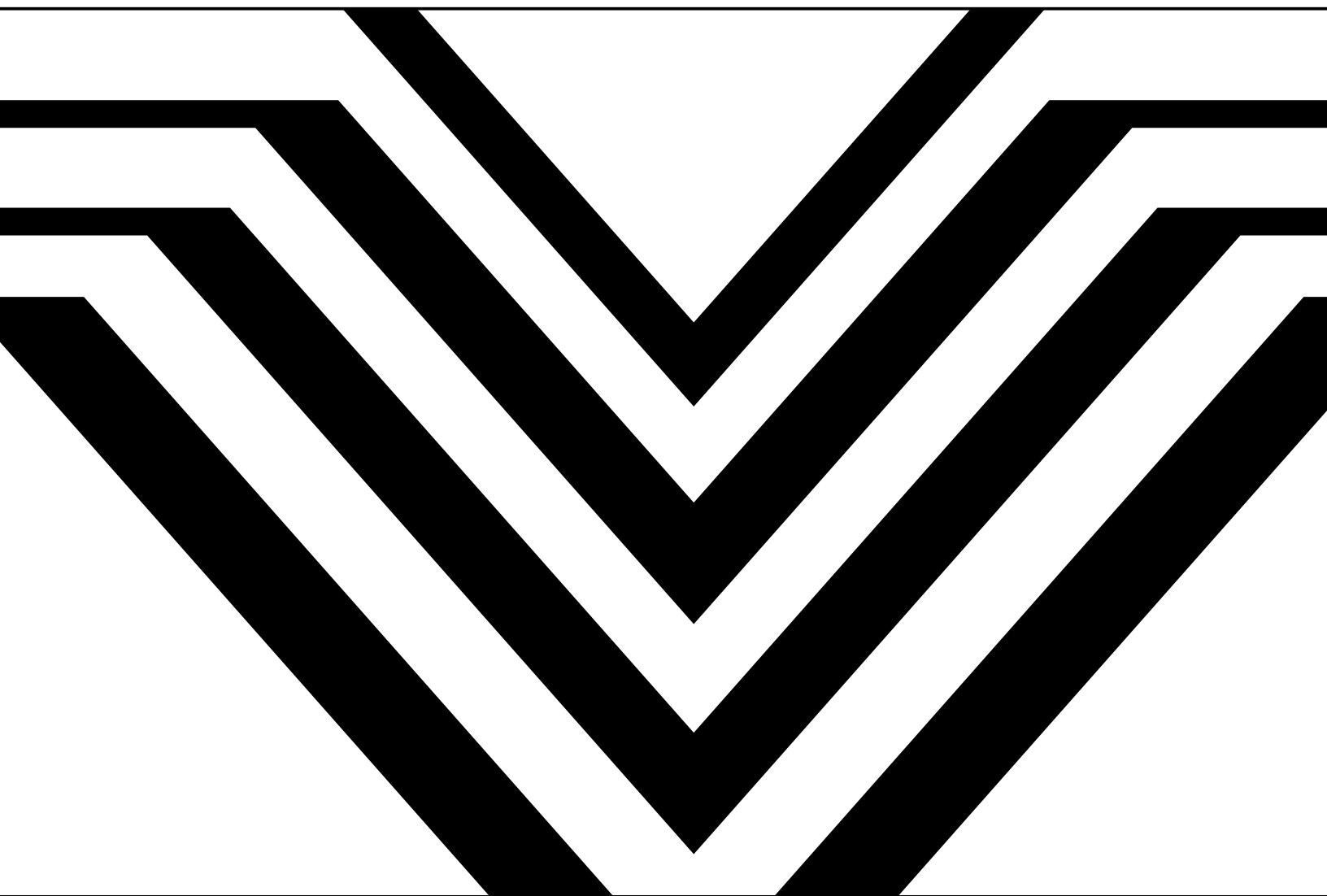


SHOP MANUAL

iGX440U



SHOP MANUAL
MANUEL D' ATELIER
SUPPLEMENT
SUPPLEMENT

WERKSTATT-HANDBUCH
MANUAL DE TALLER
NACHTRAG
SUPLEMENTO

INTRODUCTION

This supplement describes the troubleshooting using the Dr. H (diagnostic equipment) for the Honda iGX440U engine.

For service information that is not covered in this supplement, please refer to the iGX440 base shop manual and supplement (part numbers 66Z2E01, 66Z2E01Z).

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at anytime without notice.


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As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to the engine, other property, or the environment.

SAFETY MESSAGES

Your safety and the safety of others are very important. To help you make informed decisions, we have provided safety messages and other safety information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this engine. You must use your own good judgement.

You will find important safety information in a variety of forms, including:

- **Safety Labels** — on the engine.
- **Safety Messages** — preceded by a safety alert symbol  and one of three signal words, DANGER, WARNING, or CAUTION.

These signal words mean:



You **WILL** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.



You **CAN** be **KILLED** or **SERIOUSLY HURT** if you don't follow instructions.




You **CAN** be **HURT** if you don't follow instructions.

- **Instructions** — how to service this engine correctly and safely.

**Honda Motor Co., Ltd.
Service Publications Office**

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 The marked sections contain no changes. They are not covered in this manual.

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1. SERVICE PRECAUTIONS

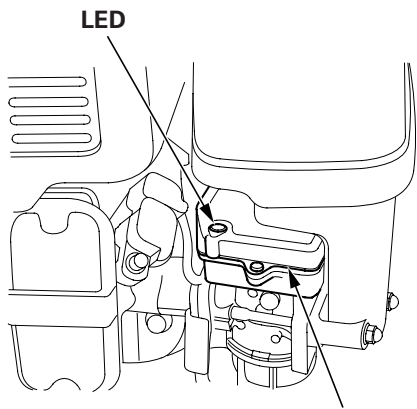
• How to Troubleshoot

When the LED of the ECM (Engine Control Module) blinks and the engine can not be start, perform troubleshooting according to the following procedures.

Use a commercially available digital multimeter for diagnosis. Use the tester probe of the correct size for a connector so that the connector terminal may not be forced to open.

Refer to the base shop manual (part number 66Z2E01) for the diagnostic troubleshooting information that are not covered in this supplement.

- 1) Using the AC adapter kit (sold separately) or battery harness kit (sold separately), provide the electric power to the ECM.
- 2) Turn the combination switch or engine stop switch, and check that the LED of the ECM blinks.

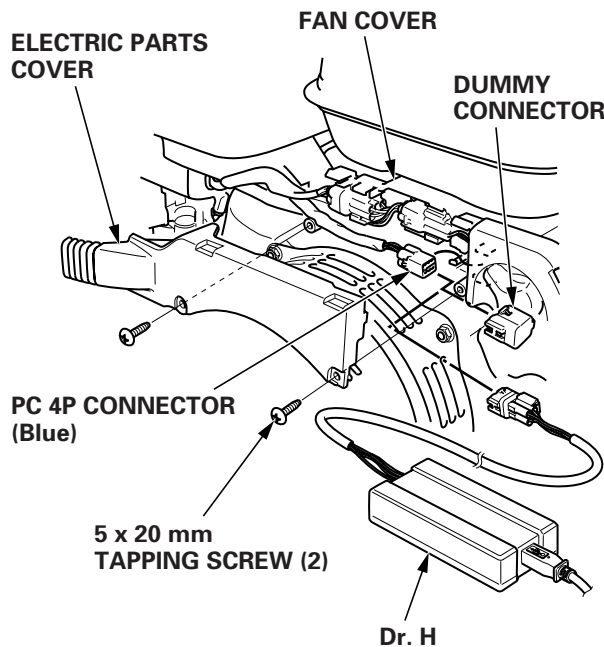


ECM (Engine Control Module)

- 3) If the LED blinks, check the DTC (Diagnostic Trouble Code) using the Dr. H.
- 4) Perform troubleshooting according to the "DTC-to-Symptom Troubleshooting Chart" (P. 2-2). Check each connector for secure connection and the wire harness for any abnormality, and connect or repair as necessary before troubleshooting.

• DTC (Diagnostic Trouble Code) Check

- 1) Turn the combination switch or engine stop switch to the OFF position.
- 2) Remove the two 5 x 20 mm tapping screws and then remove the electric parts cover. Remove the PC 4P connector (Blue) from the fan cover and remove the dummy connector. Connect the Dr. H to the PC 4P connector.

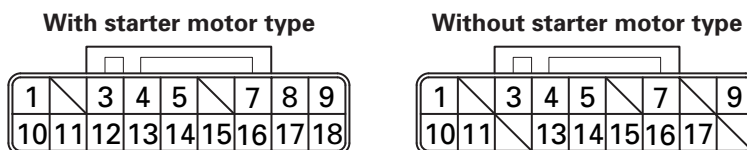


- 3) Turn the combination switch or engine stop switch to the ON position.
- 4) Check the DTC shown on the Dr. H. Read the operation manual of the Dr. H for the detailed information about how to use the Dr. H.

2. TROUBLESHOOTING

• ECM Connector Arrangement

MAIN WIRE HARNESS 18P CONNECTOR (Black)



Viewed from the terminal side

Terminal number	Wire color	Terminal symbol	Connected to	Descriptions
1	Black/Red	DC12V	Combination switch or engine stop switch	Power output for engine switch signal
2	–	–	Not used	
3	Blue/Red	COM_Tx	PC	Communication signal output (Transmission to PC)
4	Blue/Yellow	COM_Rx	PC	Communication signal input (Transmission from PC)
5	Green/Red	SET_NE	Throttle control	Input of the specified engine rotation speed
6	–	–	Not used	
7	White/Red	DC5V	Throttle control	5V output to throttle control
8	Pink	OUTPUT	Combination switch (not used)	
9	Light green	S_GND	Ground	Ground for ECM
10	Green	IGN	Ignition coil	Ignition output to ignition coil
11	Brown	SW_SIGN	Combination switch or engine stop switch	Engine switch signal input
12	Black/Yellow	BAT_SIGN	Combination switch	Battery power input
13	Black	GND	Engine ground	Ground for ECM
14	Yellow	OIL_ALT	Oil level switch	Detects the engine oil level
15	Green/Black	SW2	Throttle control (not used)	
16	Yellow/Black	SW1	Throttle control (not used)	
17	Blue/Black	DA_OUT	Throttle control (not used)	
18	Green/Yellow	TEMP	Engine temperature sensor	Detects the engine temperature

• DTC-to-Symptom Troubleshooting Chart

DTC	DTC name	Possible Problems	LED blinking	Ref. page
01	Oil alert	<ul style="list-style-type: none"> • Insufficient engine oil • Oil level switch failure • Wire harness connecting oil level switch and ECM failure • ECM failure 	2 blinks	P. 2-3
02	Open Circuit in Engine Temperature Sensor (with starter motor type only)	<ul style="list-style-type: none"> • Engine temperature sensor failure • Wire harness connecting engine temperature sensor and ECM failure • ECM failure 	4 blinks	P. 2-4
03	EEPROM Failure	<ul style="list-style-type: none"> • Program failure 	8 blinks	P. 2-5
04	Open Circuit in AC Generator	<ul style="list-style-type: none"> • Power coil failure • Wire harness connecting power coil and ECM failure • ECM failure 	6 blinks	P. 2-5
08	CPU Failure	<ul style="list-style-type: none"> • Program failure 	8 blinks	P. 2-6

• Troubleshooting

DTC 01: Oil Alert

1. Inspection of the engine oil level

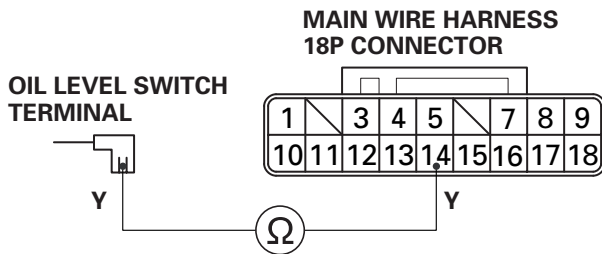
- 1) Turn the combination switch or engine stop switch to the OFF position.
Check the engine oil level (P. 3-2 of the base shop manual).

Is the oil level correct?

- YES – Inspect 2. oil level switch line for open circuit.
NO – Add the engine oil and reinspect.

2. Inspection of the oil level switch line for open circuit

- 1) Disconnect the oil level switch terminal.
Disconnect the main wire harness 18P connector.
- 2) Inspect the continuity between the oil level switch terminal (Yellow) and No.14 terminal (Yellow) of the main wire harness 18P connector of the wire harness.



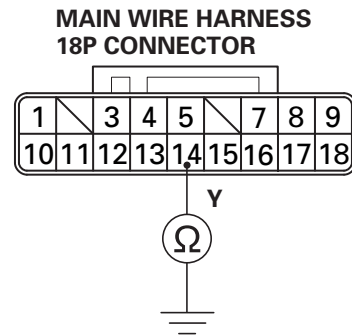
VIEWED FROM THE TERMINAL SIDE

Continuity?

- YES – Inspect 3. oil level switch line for short circuit. 3.
NO – Open circuit in the wire harness (Yellow).

3. Inspection of the oil level switch line for short circuit

- 1) Inspect the continuity between the No.14 terminal (Yellow) of the main wire harness 18P connector of the wire harness and engine ground.



VIEWED FROM THE TERMINAL SIDE

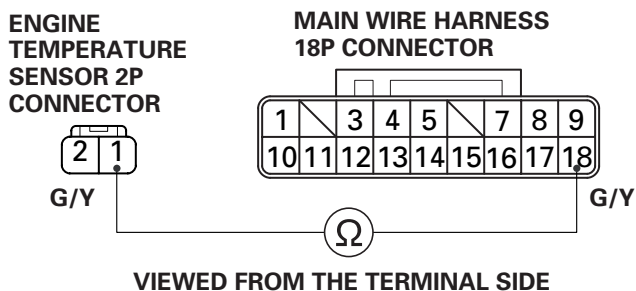
Continuity?

- YES – Short circuit in the wire harness (Yellow).
NO – Inspect the oil level switch (P. 13-12 of the base shop manual).
If the oil level switch is faulty, replace it (P. 13-5 of the base shop manual).
If the oil level switch is not faulty, reinspect with a new ECM.

DTC 02: Open Circuit in Engine Temperature Sensor (with starter motor type only)

1. Inspection of the engine temperature sensor signal line for open circuit

- 1) Turn the combination switch to the OFF position. Disconnect the main wire harness 18P connector. Disconnect the engine temperature sensor 2P connector.
- 2) Inspect the continuity between the No.1 terminal (Green/Yellow) of the engine temperature sensor 2P connector and No.18 terminal (Green/Yellow) of the main wire harness 18P connector of the wire harness.

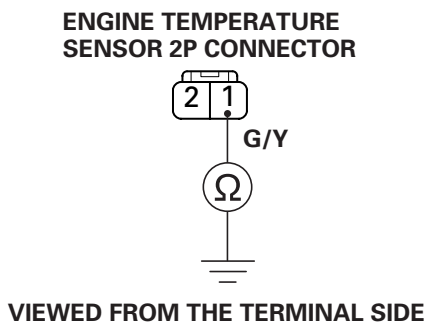


Continuity?

- YES – Inspect 2. engine temperature sensor signal line for short circuit.
- NO – Open circuit in the wire harness (Green/Yellow).

2. Inspection of the engine temperature sensor signal line for short circuit

- 1) Inspect the continuity between the No.1 terminal (Green/Yellow) of the engine temperature sensor 2P connector of the wire harness and engine ground.



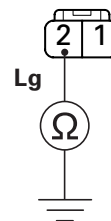
Continuity?

- YES – Short circuit in the wire harness (Green/Yellow).
- NO – Inspect 3. engine temperature sensor ground line for open circuit.

3. Inspection of the engine temperature sensor ground line for open circuit

- 1) Inspect the continuity between the No.2 terminal (Light green) of the engine temperature sensor 2P connector of the wire harness and engine ground.

ENGINE TEMPERATURE SENSOR 2P CONNECTOR



VIEWED FROM THE TERMINAL SIDE

Continuity?

- YES – Inspect the engine temperature sensor (P. 11-10 of the base shop manual). If the engine temperature sensor is faulty, replace it (P. 11-9 of the base shop manual). If the engine temperature sensor is not faulty, reinspect with a new ECM.
- NO – Open circuit in the wire harness (Light green).

DTC 03: EEPROM Failure

1. Inspection of the ECM

- 1) Inspect the following items.
 - Is the main wire harness 18P connector properly connected?
 - Is the ground terminal properly secured on the cylinder barrel? (P. 2-20 of the base shop manual)

Is each connection correct?

YES – Reinspect with a new ECM.

NO – Reconnect the faulty connections and reinspect.

DTC 04: Open Circuit in AC Generator

1. Inspection of the power coil

- 1) Inspect the power coil (P. 11-3 of the base shop manual)

Is the power coil normal?

YES – Reinspect with a new ECM.

NO – Replace the power coil (P. 11-1 of the base shop manual).

DTC 08: CPU Failure

1. Inspection of the ECM

- 1) Inspect the following items.
- Is the main wire harness 18P connector properly connected?
 - Is the ground terminal properly secured on the cylinder barrel? (P. 2-20 of the base shop manual)

Is each connection correct?

YES – Reinspect with a new ECM.

NO – Reconnect the faulty connections and reinspect.

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