

2007-08 ACCESSORIES AND EQUIPMENT

Gauges - Element

COMPONENT LOCATION INDEX

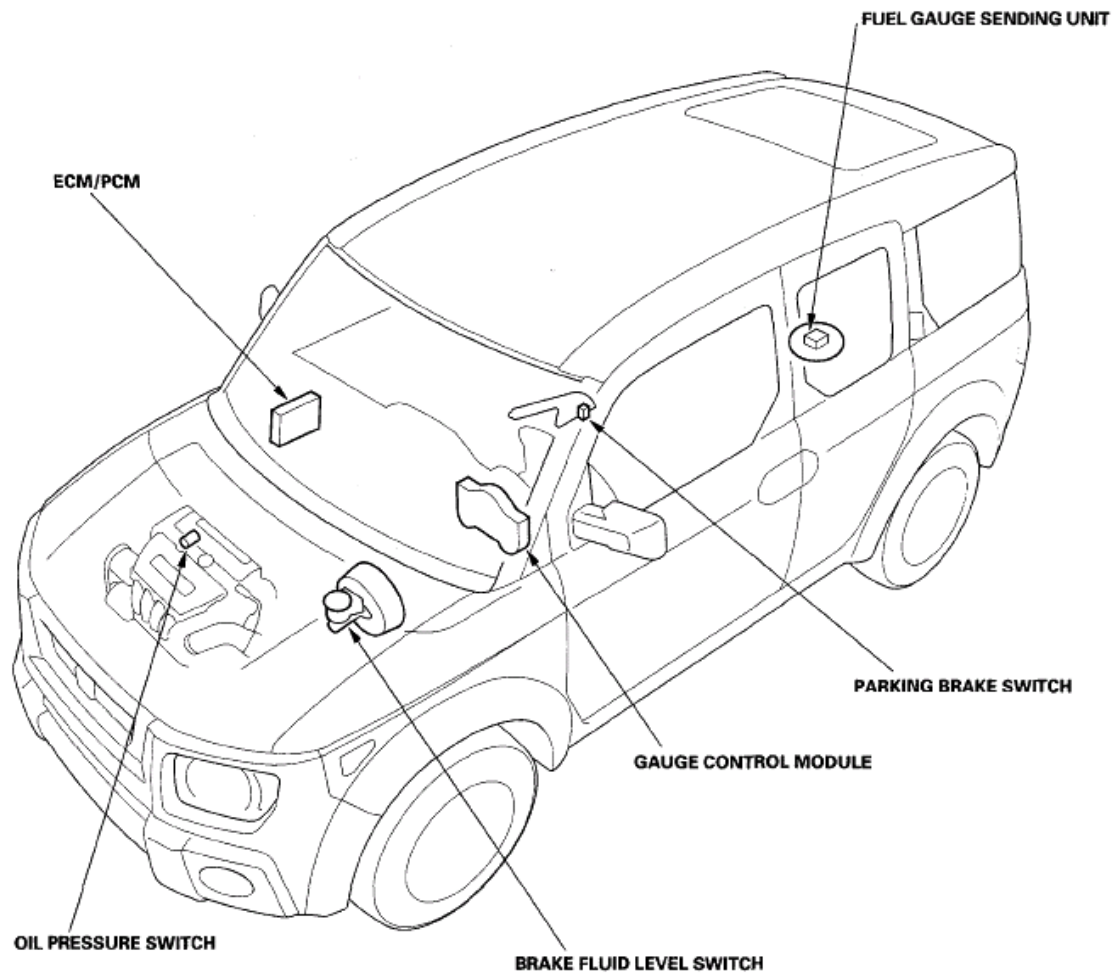


Fig. 1: Identifying Gauges Component Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

GAUGE CONTROL MODULE/TERMINAL LOCATION INDEX

2007 Honda Element EX

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Gauge Control Module/Terminal Location Index

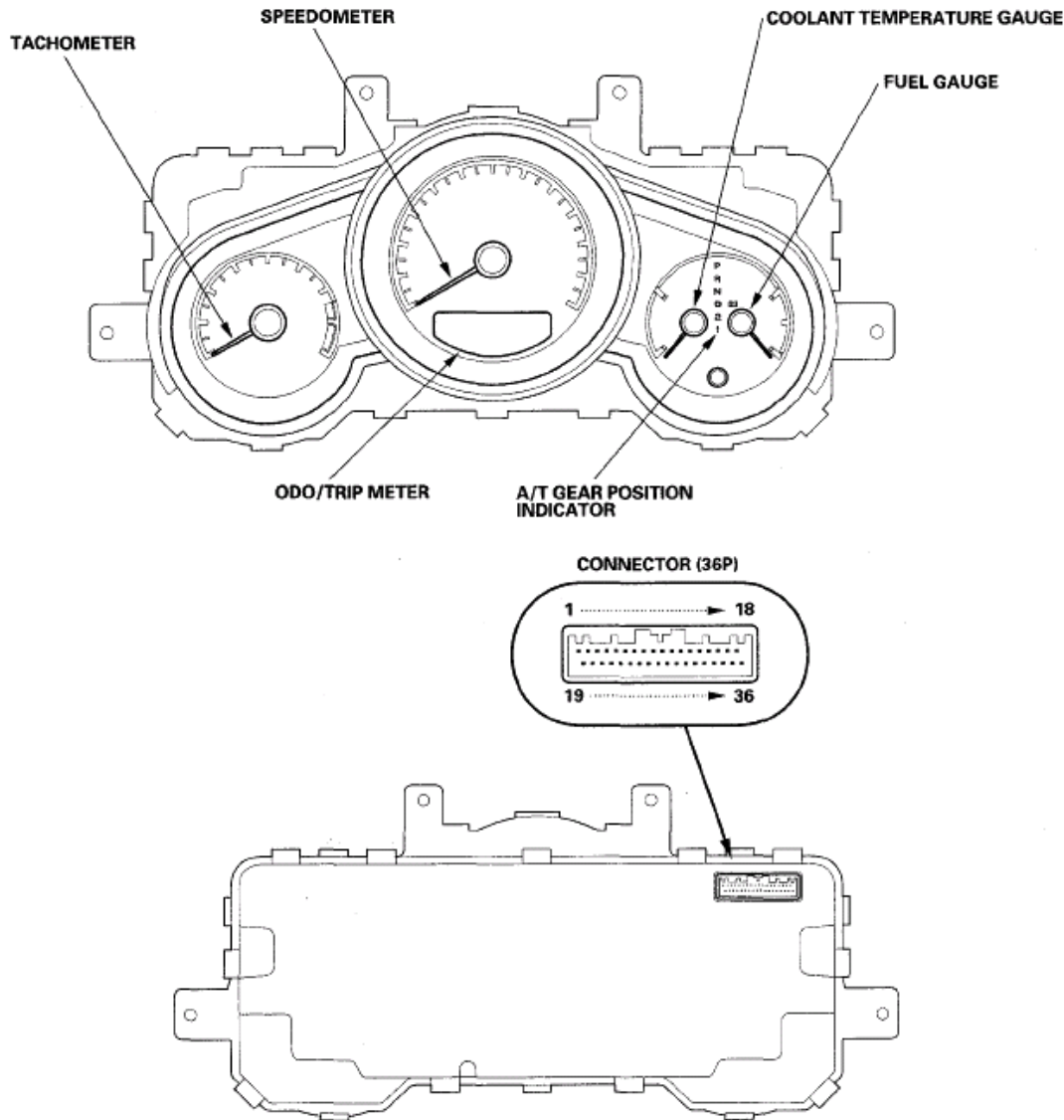


Fig. 2: Identifying Gauge Control Module/Terminal Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

SELF-DIAGNOSTIC FUNCTION

The gauge control module has a self-diagnostic function that checks these circuits:

- The beeper drive circuit.
- The indicator drive circuit.
- The LCD segments.
- The gauges drive circuit (Speedometer, Tachometer, Fuel gauge. Coolant temperature gauge).
- The communication line (the coolant temperature signal and vehicle speed signal line between the gauge

and the ECM/PCM).

ENTERING THE SELF-DIAGNOSTIC FUNCTION

Before entering the self-diagnostic function, check the No. 9 (10 A) fuse in the under-hood fuse/relay box and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

1. Press and hold the TRIP/RESET button.
2. Turn the headlights ON.
3. Turn the ignition switch ON (II).
4. Within 5 sec, turn the headlights OFF, then ON and OFF again.
5. Within the next 5 sec, release the TRIP/RESET button, then press and release the button three times.

NOTE:

- While in the self-diagnostic function, the dash lights brightness controller does not operate.
- While in the self-diagnostic function, the TRIP/RESET button is used to start the Beeper Drive Circuit Test and the Gauge Drive Circuit Check.
- If the vehicle speed exceeds 1.2 mph (2 km/h) or the ignition switch is turned OFF, the self-diagnostic function ends.

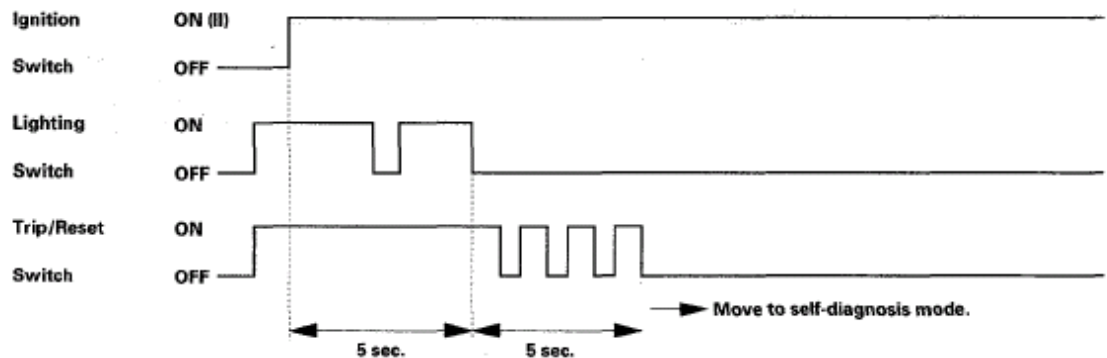


Fig. 3: Identifying Gauge Blinking Pattern
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

THE BEEPER DRIVE CIRCUIT CHECK

When entering the self-diagnostic function, the beeper sounds five times.

THE INDICATOR DRIVE CIRCUIT CHECK

When entering the self-diagnostic function, these indicator lights blink:

ABS indicator, A/T gear position indicator (1,2, D, N, R, P), Brake system indicator. Charging system indicator, Cruise control indicator. Door indicator, Lights-on indicator, D3 indicator (A/T), Low fuel indicator, Low oil pressure indicator. Low tire pressure indicator, Maintenance required indicator. Malfunction indicator lamp

(MIL), Seat belt reminder indicator, TPMS indicator, VSA activation indicator, VSA indicator, and Washer fluid level indicator (Canada models).

SWITCH INPUT CHECK

After the intermittent beeper sounds at the initial stage of self-diagnostics. The beeper will continue to sound while any of the following switch inputs are switched from Off to On: Cruise control master, SET, RESUME, CANCEL switches, SEL/RESET switch., and VSA Off switch.

THE LCD SEGMENTS CHECK

When entering the self-diagnostic function, the odo/trip meter segments blink five times.

THE GAUGE DRIVE CIRCUIT CHECK

When entering the self-diagnostic function, the speedometer, the tachometer, the fuel gauge, and the coolant temperature gauge needles move from the minimum position to the maximum position, then return to the minimum position.

NOTE: After the beeper stops sounding and the gauge needles return to the minimum position, pressing the TRIP/RESET button starts the Beeper Drive Circuit Check (one beep), and the Gauge Drive Circuit Check again.

The check cannot be started until the gauge needles return the minimum position.

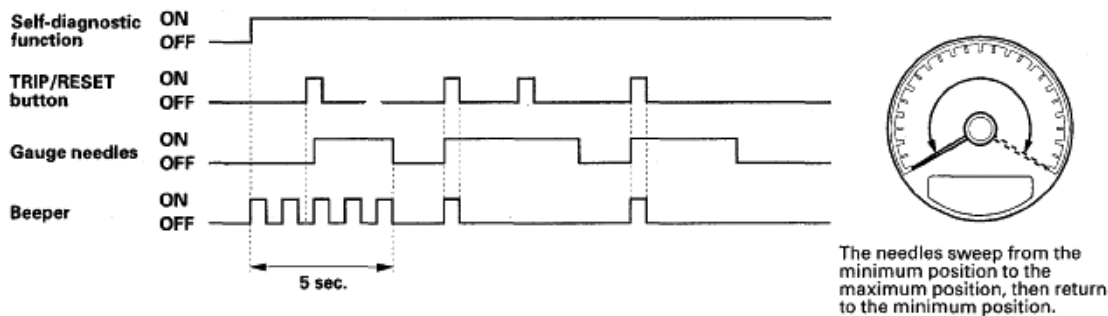


Fig. 4: Gauge Drive Circuit Timing Chart

Courtesy of AMERICAN HONDA MOTOR CO., INC.

THE COMMUNICATION LINE CHECK

While in the self-diagnostic mode, the Communication Line Check starts after the LCD Segments Check.

If all segments come on, the communication line is OK. If faulty, the word "Error" will be indicated on the odometer display followed by number(s).

Error Code List

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ERROR CODE LIST

Error code	Type of communication line(s) error
Error 1	F-CAN communication
Error 2	UART communication
Error 3	F-CAN and UART communication

Example Indication

Normal (all segments come on.)



Faulty (Error 1)



Fig. 5: Identifying Odometer Display (Example Indication)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

- If the word "Error 1" is indicated, there is a malfunction in the communication line between the gauge control module and the fast-controller area network (F-CAN). Check for DTCs in the ECM/PCM and troubleshoot any DTCs found. If no DTCs are found, go to indicated troubleshooting.
- If the word "Error 2" is indicated, there is a malfunction in the UART communication line between the gauge control module and the multiplex control unit. Go to the gauge control module input test and check the No. 27 terminal. If the wire harness is OK, substitute a known-good gauge control module and recheck.
- If the word "Error 3" is indicated, there is a malfunction in the communication line between the gauge control module and F-CAN and UART. Check for DTCs in the ECM/PCM and troubleshoot any DTCs found.

ENDING THE SELF-DIAGNOSTIC FUNCTION

Turn the ignition switch OFF.

NOTE: If the vehicle speed exceeds 1.2 mph (2 km/h), the self-diagnostic function ends.

CIRCUIT DIAGRAM

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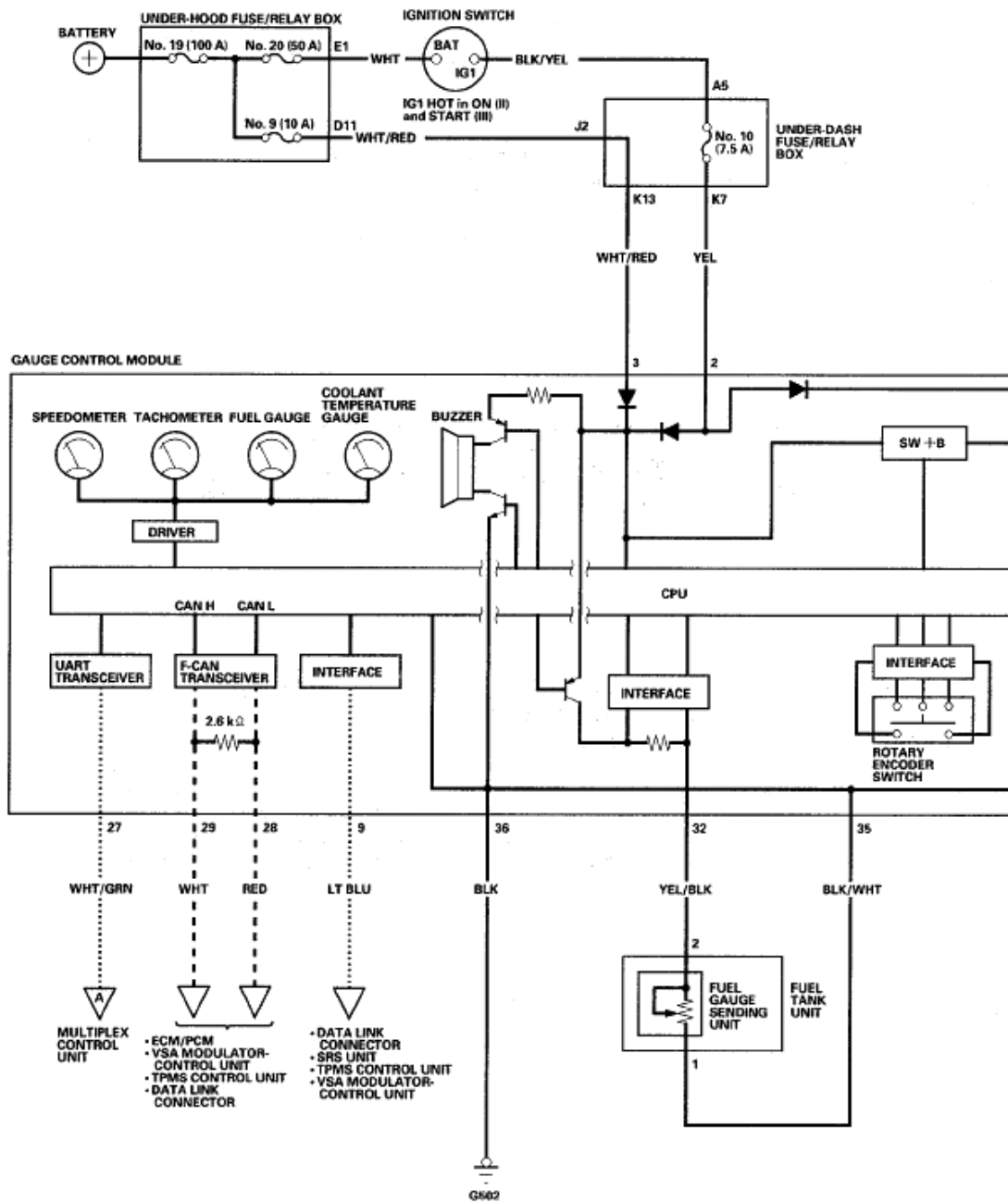


Fig. 6: Gauges - Circuit Diagram (1 Of 6)

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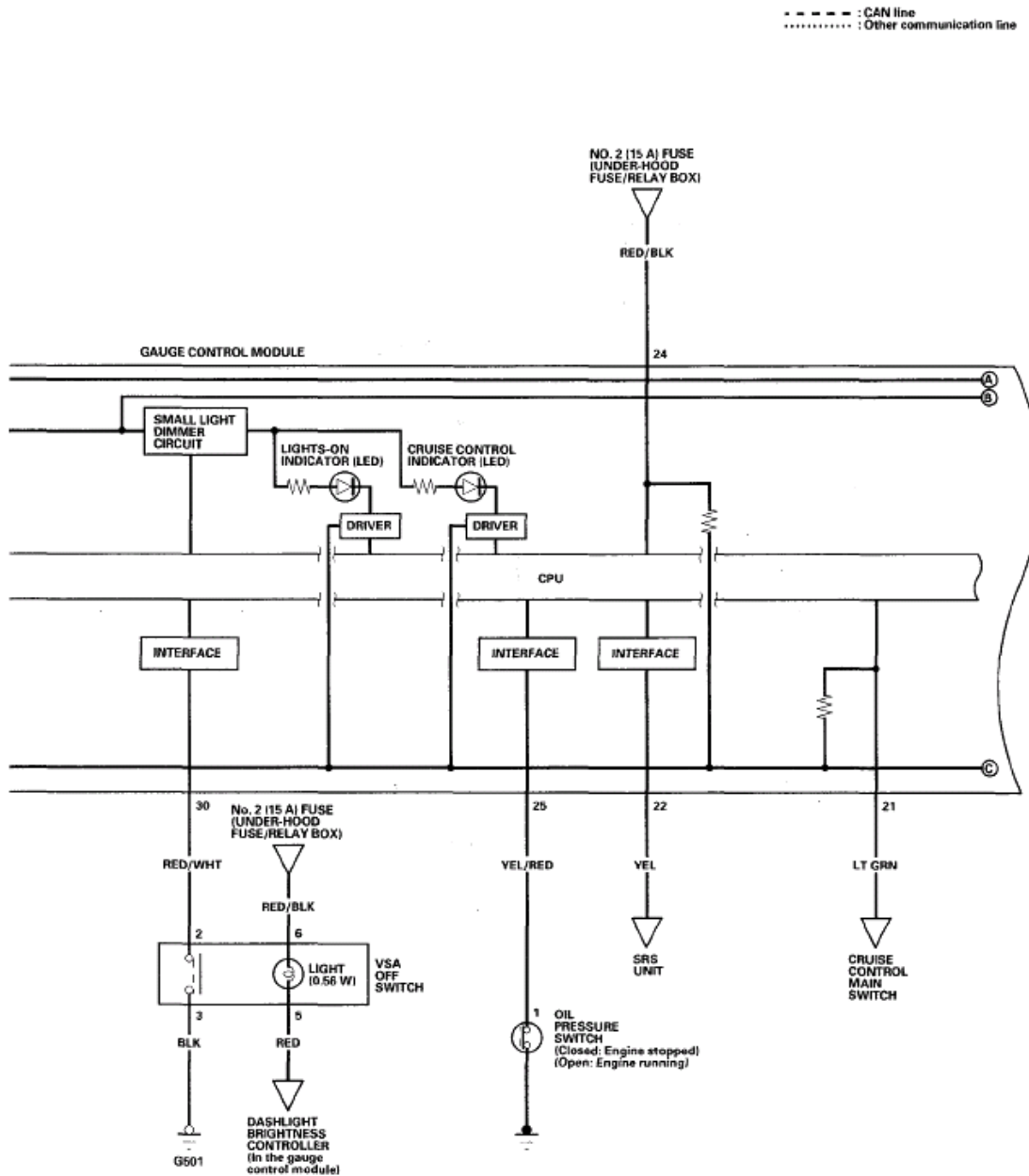


Fig. 7: Gauges - Circuit Diagram (2 Of 6)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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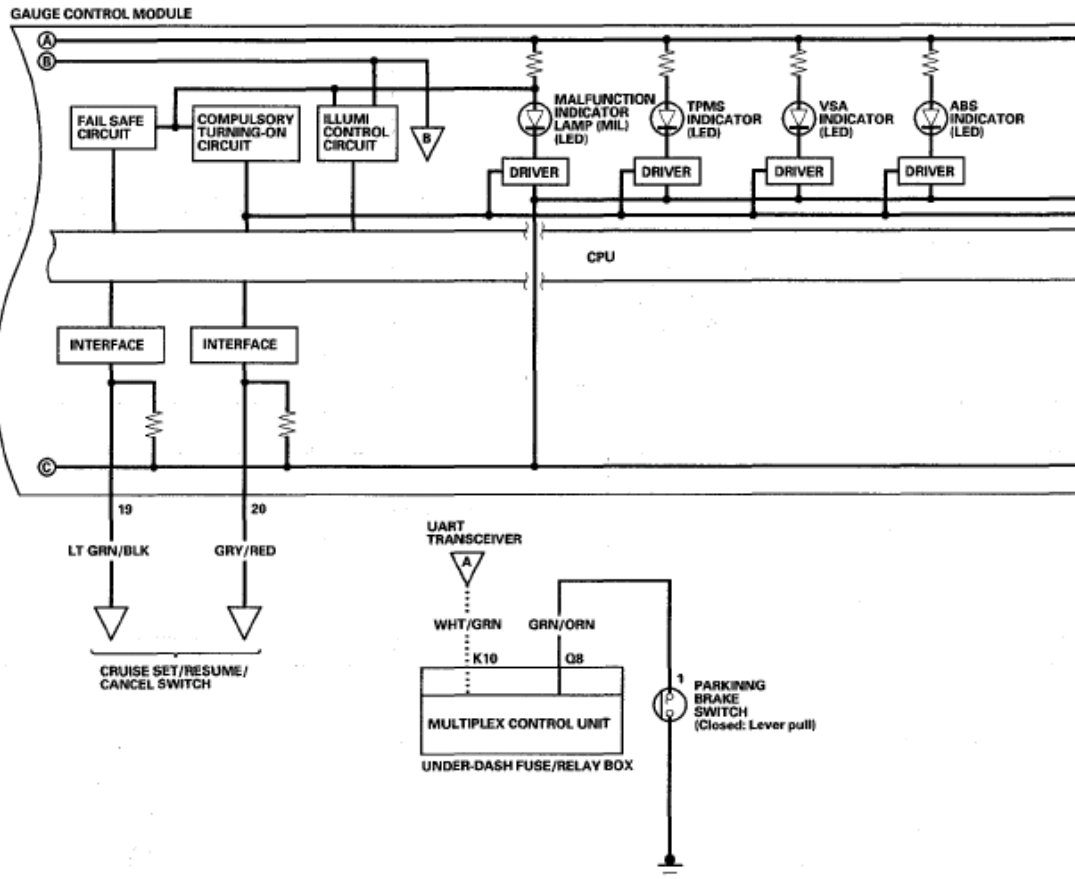


Fig. 8: Gauges - Circuit Diagram (3 Of 6)
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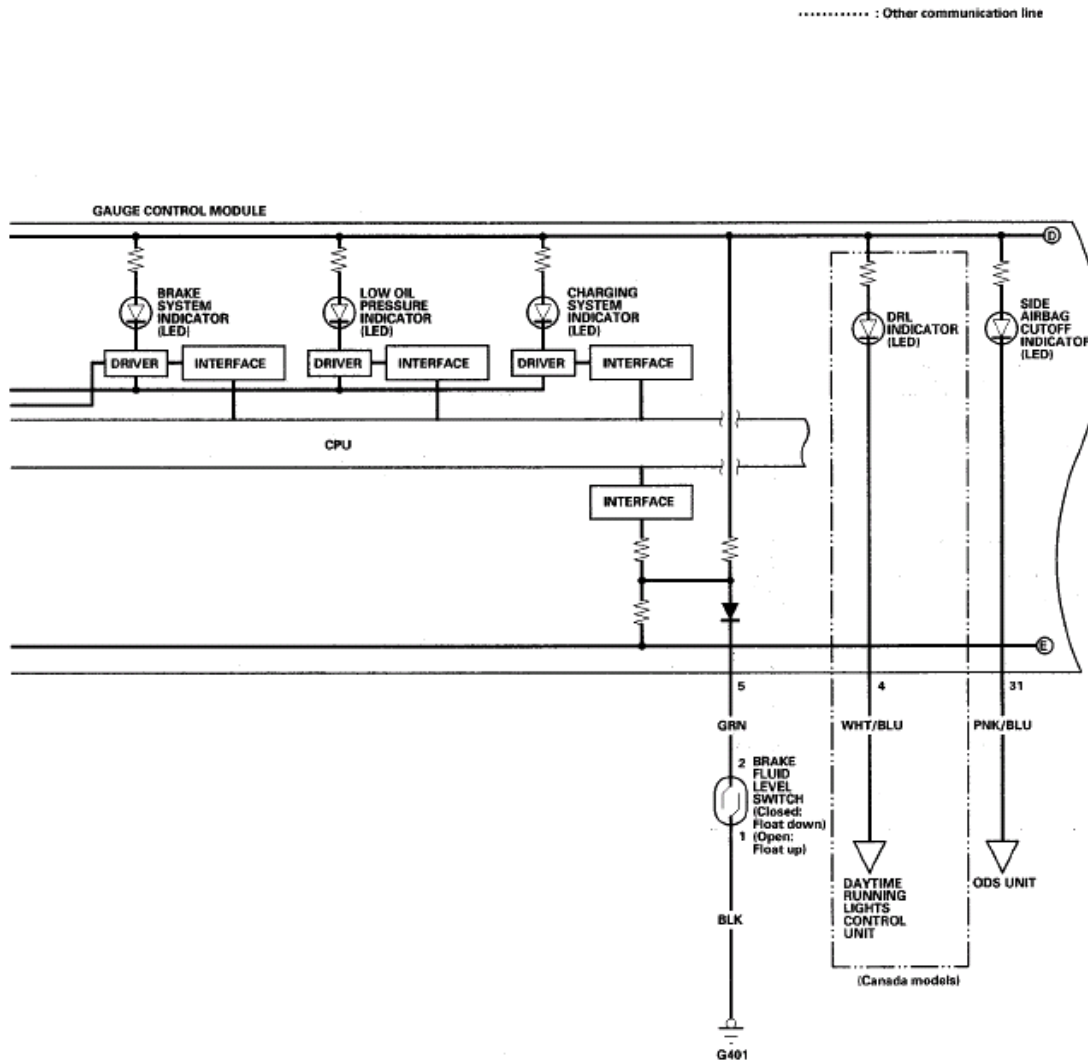


Fig. 9: Gauges - Circuit Diagram (4 Of 6)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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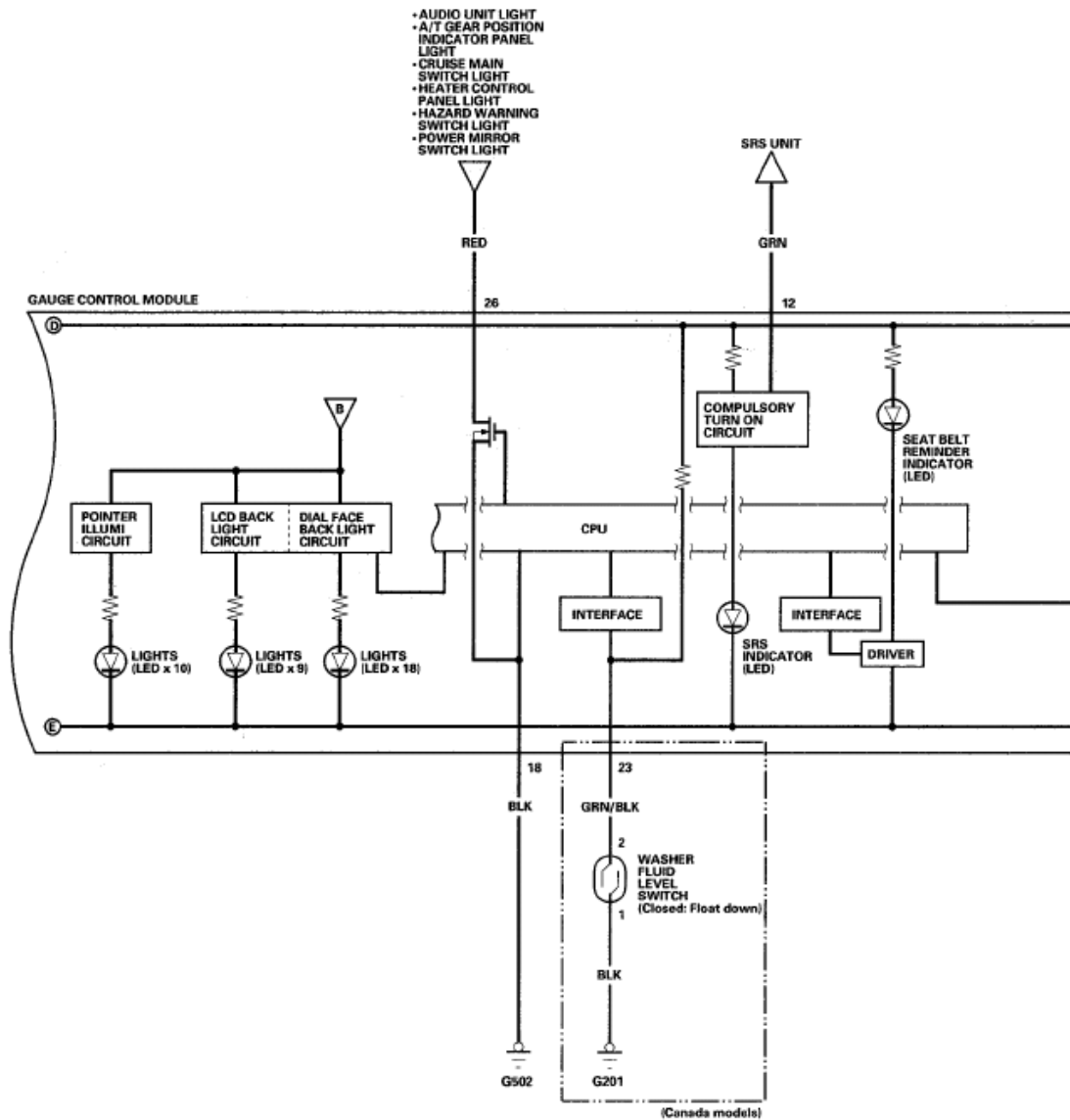


Fig. 10: Gauges - Circuit Diagram (5 Of 6)
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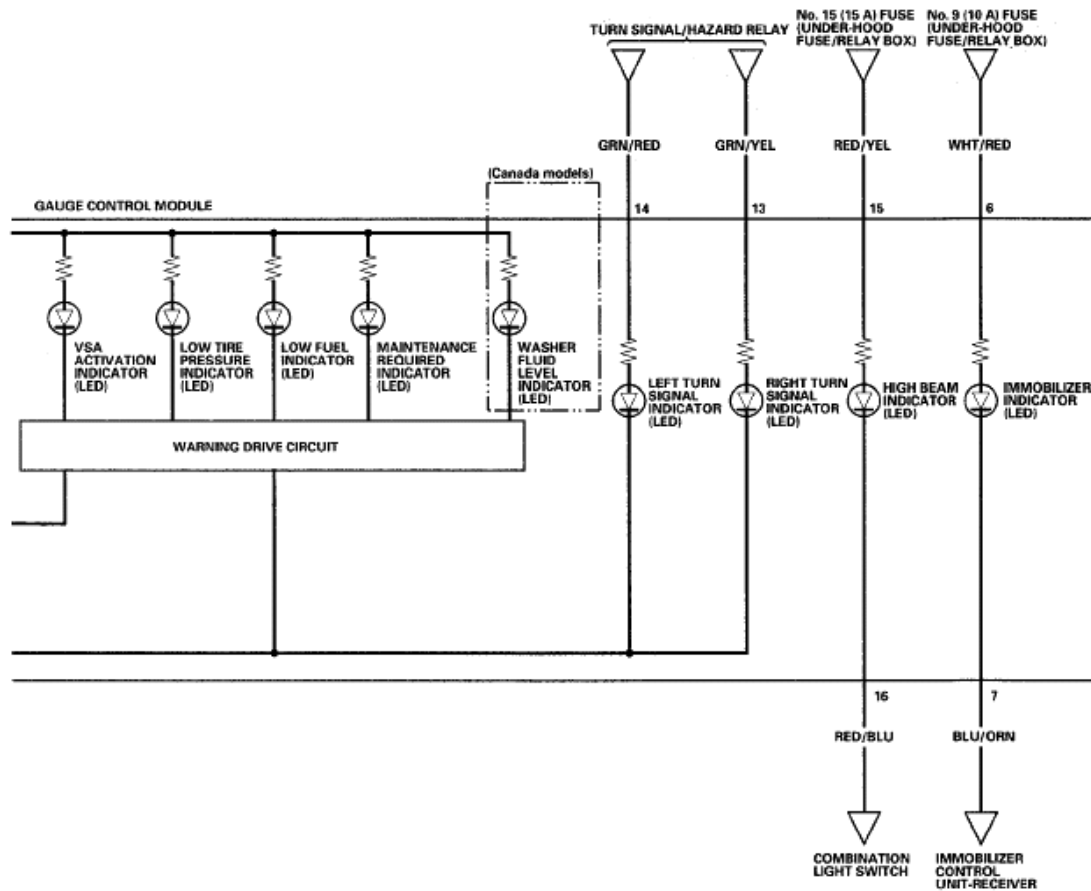


Fig. 11: Gauges - Circuit Diagram (6 Of 6)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING INDEX

DTC TROUBLESHOOTING INDEX

DTC	Description
<u>B1152</u>	Gauge Control Module (EEPROM) Error
<u>B1154</u>	Lost Communication UART
<u>B1168</u>	Gauge Control Module Lost Communication with the ECM/PCM (Engine Messages)
<u>B1169</u>	Gauge Control Module Lost Communication with the PCM (A/T Messages)
<u>B1170</u>	Gauge Control Module Lost Communication with VSA Modulator-Control Unit (VSA Message)
<u>B1173</u>	Gauge Control Module Lost Communication with TPMS Control Unit (TPMS Message)
<u>B1175</u>	Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit Open
<u>B1176</u>	Fuel Level Sensor (Fuel Gauge Sending Unit) Circuit

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	Short
<u>B1177</u>	Abnormal Battery Voltage
<u>B1178</u>	F-CAN Communication Line Error

DTC TROUBLESHOOTING

DTC B1152: GAUGE CONTROL MODULE (EEPROM) ERROR

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Check for DTCs with the HDS.

Is DTC B1152 indicated?

YES - Replace the gauge control module.

NO - Intermittent failure, the system is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

DTC B1154: LOST COMMUNICATION UART

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Check for DTCs with the HDS.

Is DTC B1154 indicated?

YES - Go to step 4.

NO - Intermittent failure, the UART communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

4. Turn the ignition switch OFF.
5. Disconnect the gauge control module 36P connector.
6. Disconnect the keyless receiver unit 5P connector.
7. Disconnect under-dash fuse/relay box connector K (17P).
8. Check for continuity between body ground and under-dash fuse/relay box connector K (17P) No. 2 and No. 10 terminals.

UNDER-DASH FUSE/RELAY BOX CONNECTOR K (17P)

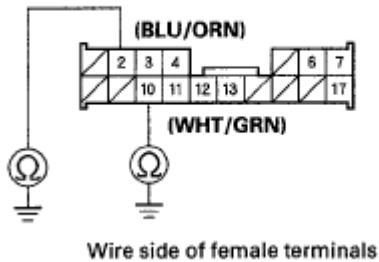


Fig. 12: Checking Continuity Between Body Ground And Under-Dash Fuse/Relay Box Connector K (17P) No. 2 And 10 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

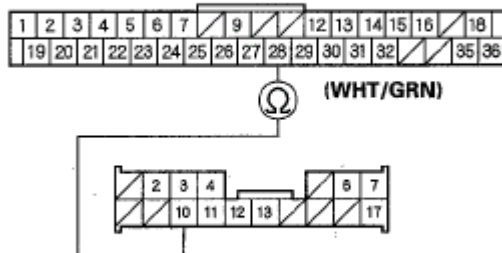
YES - Repair a short to ground in the wires.

NO - Go to step 9.

- Check for continuity between the gauge control module 36P connector No. 27 terminal and under-dash fuse/relay box connector K (17P) No. 10 terminal.

GAUGE CONTROL MODULE 36P CONNECTOR

Wire side of female terminals



UNDER-DASH FUSE/RELAY BOX CONNECTOR K (17P)

Wire side of female terminals

Fig. 13: Checking Continuity Between Gauge Control Module 36P Connector No. 27 Terminal And Under-Dash Fuse/Relay Box Connector K (17P) No. 10 Terminal

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair an open in the wire.

NO - Go to step 10.

- Turn the ignition switch ON (II).

11. Measure voltage between body ground and under-dash fuse/relay box connector K (17P) No. 2 and No. 10 terminals.

UNDER-DASH FUSE/RELAY BOX CONNECTOR K (17P)

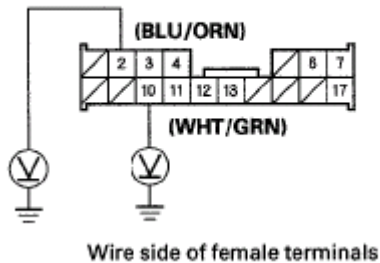


Fig. 14: Measuring Voltage Between Body Ground And Under-Dash Fuse/Relay Box Connector K (17P) No. 2 And 10 Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.5 V or more?

YES - Repair a short to power in the wire.

NO - Substitute a known-good ECM/PCM, and recheck. If DTC B1154 is indicated again, replace the gauge control module.

DTC B1168: GAUGE CONTROL MODULE LOST COMMUNICATION WITH THE ECM/PCM (ENGINE MESSAGES); DTC B1169: GAUGE CONTROL MODULE LOST COMMUNICATION WITH THE PCM (A/T MESSAGES)

1. Clear the DTCs using the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Start and run the engine for at least 5 seconds then turn the engine off.
4. Check for DTCs with the HDS.

Are DTCs B1168 or B1169 indicated?

YES - Go to step 5.

NO - Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

5. Check for DTCs with the HDS.

Is DTC B1178 also indicated at the same time?

YES - Troubleshoot DTC B1178 (see **DTC B1178: F-CAN COMMUNICATION LINE ERROR**).

NO - Go to step 6.

6. Check for DTCs in the ECM/PCM with the HDS. Are any DTCs indicated?

YES - Troubleshoot the ECM/PCM DTCs.

NO - Go to step 7.

7. Turn the ignition switch OFF.

8. Jump the SCS line with the HDS.

9. Disconnect the gauge control module 36P connector.

10. Disconnect ECM/PCM connector E (31P).

11. Check for continuity between the No. 28 and No. 29 terminals of the gauge control module 36P connector and the No. 24 and No. 11 terminals of ECM/PCM connector E (31P) respectively.

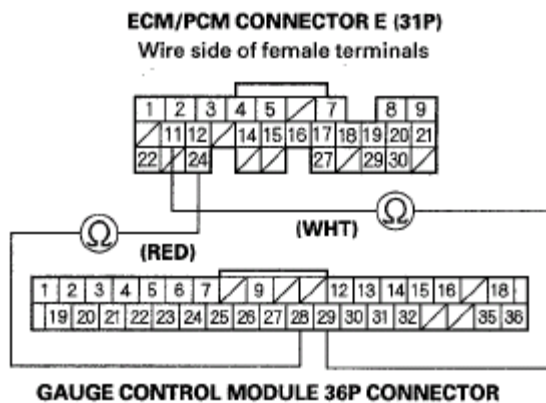


Fig. 15: Checking Continuity Between Terminals Of Gauge Control Module 36P Connector And Terminals Of ECM/PCM Connector E (31P)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 12.

NO - Repair an open in the wire between the gauge control module and the ECM/PCM.

12. Substitute a known-good gauge control module and retest.

13. Check for DTCs with the HDS.

Are DTCs B1168 or B1169 indicated?

YES - Replace the ECM/PCM.

NO - Replace the original gauge control module.

DTC B1170: GAUGE CONTROL MODULE LOST COMMUNICATION WITH VSA MODULATOR-CONTROL UNIT (VSA MESSAGE)

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Start and run the engine for at least 5 seconds then turn the engine off.
4. Check for DTCs with the HDS.

Is DTC B1170 indicated?

YES - Go to step 5.

NO - Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

5. Check for DTCs with the HDS.

Is DTC B1178 also indicated at the same time?

YES - Troubleshoot DTC B1178 (see **DTC B1178: F-CAN COMMUNICATION LINE ERROR**).

NO - Go to step 6.

6. Check for DTCs in the PCM/VSA with the HDS. Are any DTCs indicated?

YES - Troubleshoot the PCM/VSA DTCs.

NO - Go to step 7.

7. Turn the ignition switch OFF.
8. Disconnect the gauge control module 36P connector.
9. Disconnect the VSA modulator-control unit 47P connector.
10. Check for continuity between the No. 28 and No. 29 terminals of the gauge control module 36P connector and the No. 15 and No. 11 terminals of the VSA modulator-control unit 47P connector respectively.

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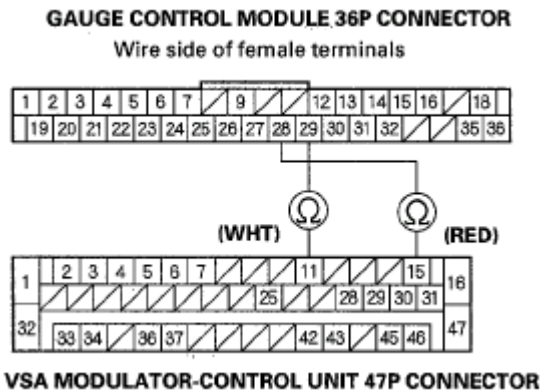


Fig. 16: Checking Continuity Between Terminals Of Gauge Control Module 36P Connector And Terminals Of VSA Modulator-Control Unit 47P Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 11.

NO - Repair an open in the wire between the gauge control module and the VSA modulator-control unit.

11. Check for poor connections, power, and ground to the VSA modulator-control unit. If OK, substitute a known-good VSA modulator-control unit.
12. Check for DTCs with the HDS.

Is DTC B1170 indicated?

YES - Replace the gauge control module.

NO - Replace the original VSA modulator-control unit.

DTC B1173: GAUGE CONTROL MODULE LOST COMMUNICATION WITH TPMS CONTROL UNIT (TPMS MESSAGE)

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Check for DTCs with the HDS.

Is DTC B1173 indicated?

YES - Go to step 4.

NO - Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

4. Check for DTCs with the HDS.

Is DTC B1178 also indicated at the same time?

YES - Troubleshoot DTC B1178 (see **DTC B1178: F-CAN COMMUNICATION LINE ERROR**).

NO - Go to step 5.

5. Check for the DTCs in the TPMS with the HDS.

Are any DTCs indicated?

YES - Troubleshoot the indicated TPMS DTCs, then recheck the DTCs.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Disconnect the gauge control module 36P connector.
8. Disconnect TPMS control unit connector B (20P).
9. Check for continuity between the No. 28 and No. 29 terminals of the gauge control module 36P connector and the No. 10 and No. 19 terminals of TPMS control unit connector B (20P) respectively.

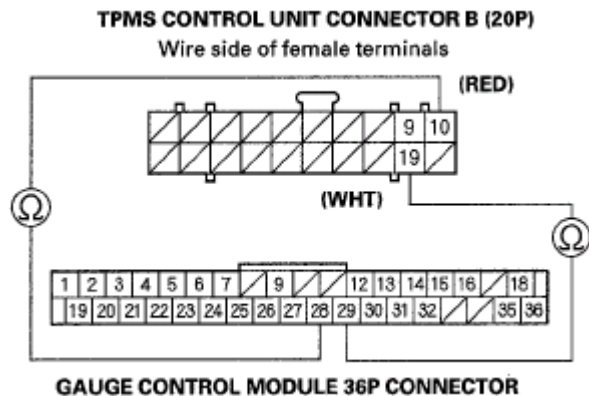


Fig. 17: Checking Continuity Between Terminals Of Gauge Control Module 36P Connector And Terminals Of TPMS Control Unit Connector B (20P)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 10.

NO - Repair an open in the wire between the gauge control module and the TPMS control unit.

10. Substitute a known-good TPMS control unit.
11. Check for DTCs with the HDS.

Is DTC B1173 indicated?

YES - Replace the gauge control module.

NO - Replace the original TPMS control unit.

DTC B1175: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT OPEN

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 30 seconds.
4. Check for DTCs with the HDS.

Is DTC B1175 indicated?

YES - Go to step 5.

NO - Intermittent failure, the fuel level sensor circuit is OK at this time. Check for loose or poor connections.

5. Turn the ignition switch OFF.
6. Disconnect the fuel pump 5P connector.
7. Disconnect the gauge control module 36P connector and check for loose or bent terminals.
8. Reconnect the connectors.
9. Turn the ignition switch ON (II).
10. Measure voltage between gauge control module 36P connector terminal No. 32 and fuel pump 5P connector terminal No. 2, and the gauge control module 36P connector terminal No. 35 and the fuel pump 5P connector terminal No. 1.

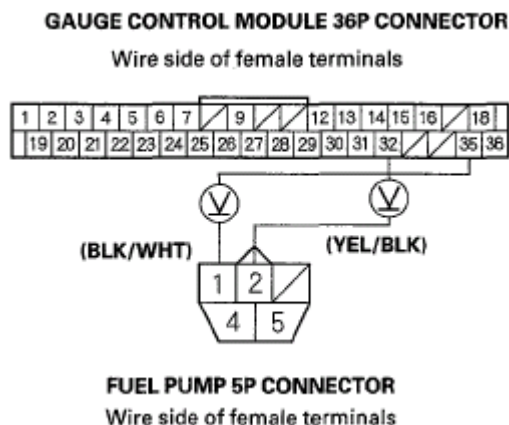


Fig. 18: Measuring Voltage Between Gauge Control Module 36P Connector Terminal And Fuel Pump 5P Connector Terminal, And Gauge Control Module 36P Connector Terminal And Fuel Pump 5P Connector Terminal

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there less than 0.5 V?

YES - Go to step 11.

NO - Repair an open or high resistance in the YEL/BLK or the BLK/WHT wires.

11. Do the fuel gauge sending unit test (see **FUEL GAUGE SENDING UNIT TEST**).

Is the fuel gauge sending unit OK?

YES - Replace the gauge control module.

NO - Replace the fuel gauge sending unit.

DTC B1176: FUEL LEVEL SENSOR (FUEL GAUGE SENDING UNIT) CIRCUIT SHORT

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 30 seconds.
4. Check for DTCs with the HDS.

Is DTC B1176 indicated?

YES - Go to step 5.

NO - Intermittent failure, the fuel level sensor circuit is OK at this time. Check for loose or poor connections.

5. Turn the ignition switch OFF.
6. Disconnect the fuel pump 5P connector.
7. Clear the DTCs with the HDS.
8. Turn the ignition switch OFF, and then back ON (II).
9. Wait for 30 seconds.
10. Check for DTCs with the HDS.

Is DTC B1176 indicated?

YES - Go to step 11.

NO - Do the fuel gauge sending unit test (see **FUEL GAUGE SENDING UNIT TEST**).

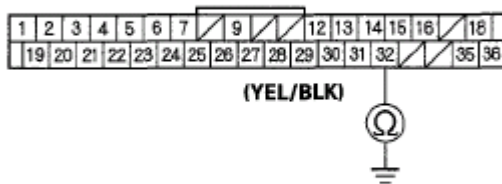
11. Turn the ignition switch OFF.

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12. Disconnect the gauge control module 36P connector.
13. Check for continuity between gauge control module 36P connector terminal No. 32 and body ground.

GAUGE CONTROL MODULE 36P CONNECTOR



Wire side of female terminals

Fig. 19: Checking Continuity Between Gauge Control Module 36P Connector Terminal No. 32 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short in the wire between the gauge control module and the fuel gauge sending unit.

NO - Replace the gauge control module.

DTC B1177: BATTERY VOLTAGE ABNORMAL

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Check for DTCs with the HDS.

Is DTC B1177 indicated?

YES - Go to step 8.

NO - Go to step 4.

4. Clear the DTCs with the HDS.
5. Turn the ignition switch OFF, and then back ON (II).
6. Crank the engine.
7. Check for DTCs with the HDS.

Is DTC B1177 indicated?

YES - Go to step 8.

NO - Intermittent failure. The gauge control module and power supply voltage (IG1) that is supplied to

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the gauge control module are OK at this time. The battery may have been discharged, and recovered.

8. Check the battery (see **BATTERY TEST**) and the charging system.

Is the battery condition normal and the charging system OK?

YES - Go to step 9.

NO - The battery needs a recharge or replacement, or the charging system needs to be repaired.

9. Turn the ignition switch ON (II).
10. With the gauge control module 36P connector still connected, measure voltage between gauge control module 36P connector terminal No. 2 and body ground.

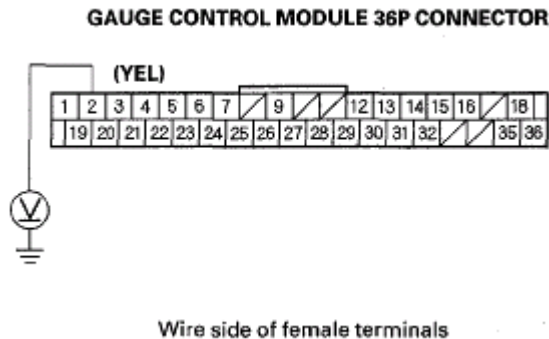


Fig. 20: Measuring Voltage Between Gauge Control Module 36P Connector Terminal No. 2 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is the voltage above 6.5 V?

YES - Replace the gauge control module.

NO - Repair an open or high resistance in the YEL wire between the ignition switch and the gauge control module.

DTC B1178: F-CAN COMMUNICATION LINE ERROR

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Check for DTCs with the HDS.

Is DTC B1178 indicated?

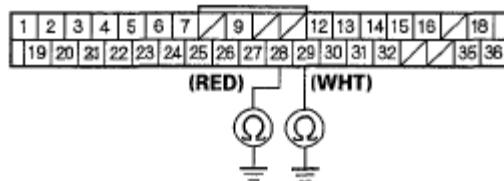
YES - Go to step 4.

NO - Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor

connections. If the connections are good, check the battery condition (see **BATTERY TEST**), and the charging system.

4. Turn the ignition switch OFF.
5. Jump the SCS line with the HDS.
6. Disconnect the gauge control module 36P connector.
7. Disconnect ECM/PCM connector E (31P).
8. Disconnect the VSA modulator-control unit 47P connector.
9. Disconnect TPMS control unit connector B (20P).
10. Check for continuity between body ground and the gauge control module 36P connector terminals No. 28 and No. 29 individually.

GAUGE CONTROL MODULE 36P CONNECTOR



Wire side of female terminals

Fig. 21: Checking Continuity Between Body Ground And Gauge Control Module 36P Connector Terminals No. 28 And 29

Courtesy of AMERICAN HONDA MOTOR CO., INC.

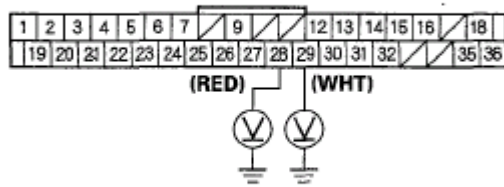
Is there continuity?

YES - Repair a short to ground in the wire.

NO - Go to step 11.

11. Turn the ignition ON (II).
12. Measure voltage between body ground and the gauge control module 36P connector terminals No. 28 and No. 29 individually.

GAUGE CONTROL MODULE 36P CONNECTOR



Wire side of female terminals

Fig. 22: Measuring Voltage Between Body Ground And Gauge Control Module 36P Connector Terminals No. 28 And 29

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 0.5 V or more?

YES - Repair a short to power in the wire.

NO - Go to step 13.

13. Turn the ignition switch OFF.
14. Reconnect the gauge control module 36P connector.
15. Turn the ignition switch ON (II).
16. Clear the DTCs with the HDS.
17. Reconnect the appropriate connector to each control unit in the table one at a time. Wait for 6 seconds, then recheck for DTCs after each unit is reconnected.

APPROPRIATE CONNECTOR REFERENCE

Control Unit	Appropriate Connector
ECM/PCM	Connector E (31P)
VSA modulator-control unit	47P connector
TPMS control unit	Connector B (20P)

Is DTC B1178 indicated with each individual unit reconnected?

YES - Replace the control unit that was reconnected.

NO - Replace the gauge control module.

GAUGE CONTROL MODULE INPUT TEST

NOTE: Before testing, do the gauge control module self-diagnosis procedure, and make sure the B-CAN communication line is OK.

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1. Turn the ignition switch OFF.
2. Remove the gauge control module and disconnect the 36P connector from it (see **Gauge Control Module Replacement**).

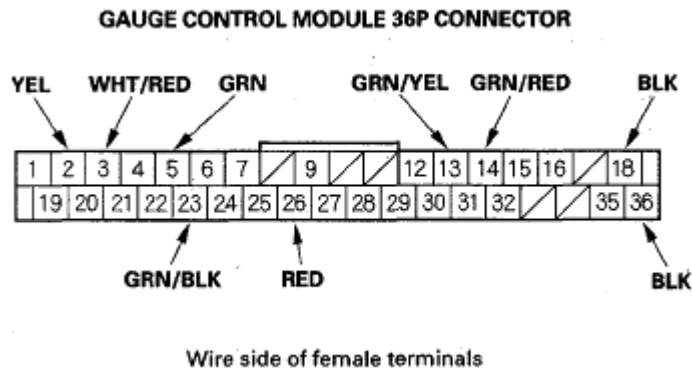


Fig. 23: Identifying Gauge Control Module 36P Connector Terminals
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals are OK, go to step 4.
4. With the connector still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, go to step 5.

REFERENCE CHART

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
26	RED	Combination light switch ON	Attach to ground: The illuminations of the steering wheel switches come on full bright.	<ul style="list-style-type: none"> • Faulty LEDs • An open in the wire

5. Reconnect the connector to the gauge control module, and make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the gauge control module must be faulty; replace it.

REFERENCE CHART

Cavity	Wire	Test condition	Test: Desired result	Possible cause if desired result is not obtained
18	BLK	Under all conditions	Measure voltage to ground: There should be less than 0.5 V.	<ul style="list-style-type: none"> • Poor ground(G502) • An open in the wire
			Measure voltage to	

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36	BLK	Under all conditions	ground: There should be less than 0.5 V.	<ul style="list-style-type: none"> • Poor ground(G502) • An open in the wire
2	YEL	Ignition switch ON (II)	Measure voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Blown No. 10 (7.5 A) fuse in the under-dash fuse/relay box • An open in the wire
3	WHT/RED	Under all conditions	Measure voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Blown No. 9 (10 A) fuse in the under-hood fuse/relay box • An open in the wire
13	GRN/YEL	Ignition switch ON (II), turn signal switch in RIGHT	Measure voltage to ground: There should be battery voltage when the lights are flashing.	<ul style="list-style-type: none"> • Faulty under-dash fuse/relay box • Faulty combination light switch • Faulty turn signal/hazard relay • Hazard warning switch • An open in the wire
14	GRN/RED	Ignition switch ON (II), turn signal switch in LEFT	Measure voltage to ground: There should be battery voltage when the lights are flashing.	<ul style="list-style-type: none"> • Faulty under-dash fuse/relay box • Faulty combination light switch • Faulty turn signal/hazard relay • Hazard warning switch • An open in the wire
5	GRN	Ignition switch ON (II), brake fluid is full level in the reservoir	Measure voltage to ground: There should be 10 V or more.	<ul style="list-style-type: none"> • Faulty brake fluid level switch • A short to ground in the wire
		Ignition switch ON (II), brake fluid is lower level in the reservoir	Measure voltage to ground: There should be less than 0.5 V.	<ul style="list-style-type: none"> • Poor ground(G401) • Faulty brake fluid level switch • An open in the wire
23		Ignition switch ON (II), washer fluid is half or more in the washer reservoir	Measure voltage to ground: There should be battery voltage	<ul style="list-style-type: none"> • Faulty washer fluid level switch • A short to ground in the wire

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(Canada models)	GRN/BLK	Ignition switch ON (II), washer fluid is empty in the washer reservoir	Measure voltage to ground: There should be less than 0.5 V.	<ul style="list-style-type: none">• Poor ground(G201)• Faulty washer brake fluid level switch• An open in the wire
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REWRITING THE ODO DATA AND TRANSFERRING MAINTENANCE MINDER ON A NEW GAUGE CONTROL MODULE

REWRITING PROCEDURE

NOTE:

- Obtain a new gauge control module before starting the rewriting process.
- Rewriting is not possible on a gauge control module that will, not communicate with the HDS.
- Make sure that the HDS shows the correct VIN for the car you are working on.
- Once you have started this procedure, you must complete it before removing the HDS from the DLC.
- Connect a battery jump box (not a Battery charger) to insure that correct battery voltage will be maintained.

1. Before replacing the gauge control module, connect the HDS.
2. Select GAUGES from the BODY ELECTRICAL menu display.
3. Select "Gauge Control Module Replacement (ODO rewrite)" from the ADJUSTMENT menu, and follow the instructions on the display to retrieve the ODO value and the Maintenance Minder information.
4. Replace the gauge control module.
5. Follow the instructions on the display to write the new ODO value and Maintenance Minder to the new gauge control module. If the data transfer fails, refer to the instructions below to release the locked ODO value.

RELEASING LOCKED ODO VALUE

Release Locked odometer mileage to the original gauge control module. If after you attempt to transfer mileage the odometer has dashes (--), garbled, or incorrect value displayed, do the following Start over. The original gauge control module is going to be unlocked and restored to its original state.

1. Confirm that you have the latest HDS version of software.
2. Make sure that the HDS shows the correct VIN for the car you are working on.
3. With the ignition switch OFF, reconnect the original gauge control module.
4. Completely re-boot the HDS.
5. Clear any stored DTCs.
6. Navigate to Body Electric/Gauges/Adjustment/Instrument Panel Replacement.

7. Select "3. Releasing Locked ODO Value".
8. Follow the prompts and the Odometer mileage will be restored.
9. Start over and make sure the screen prompts are followed.

GAUGE CONTROL MODULE REPLACEMENT

1. Remove the driver's dashboard panel (see **DRIVER'S DASHBOARD PANEL REMOVAL/INSTALLATION**).
2. Place a clean shop towel under the gauge control module to prevent scratching the steering column or dashboard.
3. Remove the four mounting screws from the gauge control module (A).

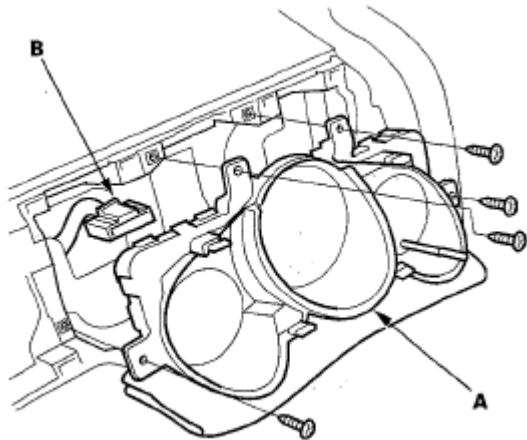


Fig. 24: Identifying Gauge Control Module
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Disconnect the connector (B), and remove the gauge control module.
5. Install the gauge control module in the reverse order of removal.

COOLANT TEMPERATURE GAUGE TROUBLESHOOTING

Before testing, check the No. 9 (10 A) fuse in the under-hood fuse/relay box and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

1. Start the engine, and check the ECM/PCM for DTCs with the HDS.

Are there stored DTCs in the ECM/PCM?

YES - Troubleshoot the cause of the ECM/PCM DTC (see **GENERAL TROUBLESHOOTING INFORMATION**), and recheck.

NO - Go to step 2.

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2. Check for DTCs in the body electrical system with the HDS.

Is a DTC indicated?

YES - Troubleshoot the cause of the body electrical system DTC (see **TROUBLESHOOTING**), and recheck.

NO - Go to step 3.

3. Do the communication line check with the self-diagnostic procedure (see **Ending the self-diagnostic function**).

Is the word "Error" indicated on the odo/trip meter display?

YES - The gauge control module cannot receive the signal from the multiplex control unit and the ECM/PCM. Check for an open in the WHT and RED wire (gauge control module connector terminals No. 28 and No. 29).

NO - Go to step 4.

4. Do the gauge control module drive circuit check with the self-diagnostic procedure (see **Ending the self-diagnostic function**).

Does the temperature gauge needle sweep from the minimum position to the maximum, then return to the minimum position?

YES - Go to step 5.

NO - Replace the gauge control module.

5. Substitute a known-good ECM/PCM (see **SUBSTITUTING THE ECM/PCM**), and recheck.

Does the symptom/indication go away?

YES - Replace the ECM/PCM.

NO - Substitute a known-good gauge control module. If the symptom/indication goes away, replace the gauge control module.