

2005-08 ACCESSORIES AND EQUIPMENT

Gauges - RL

COMPONENT LOCATION INDEX

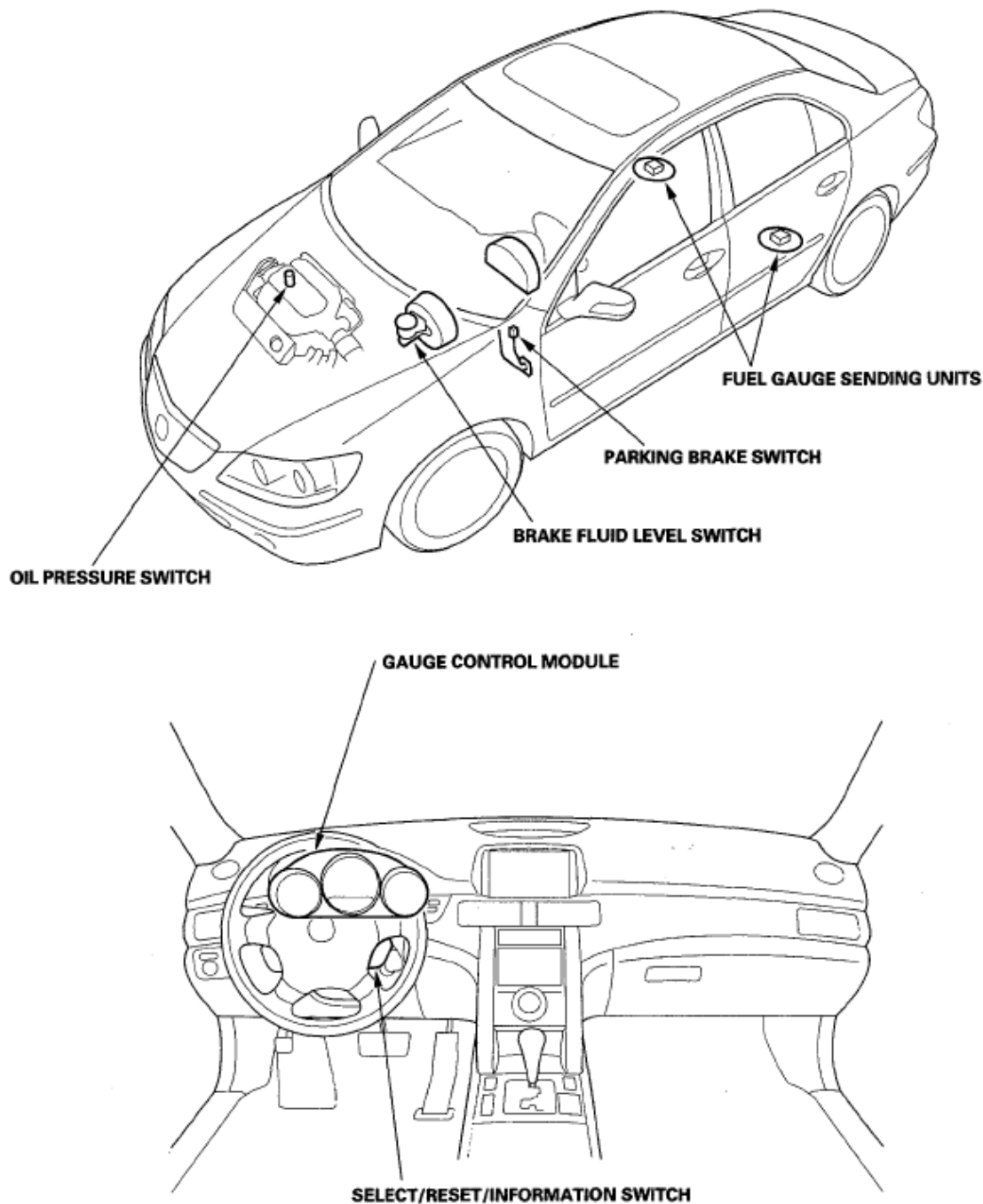


Fig. 1: Identifying Gauges Component Location (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

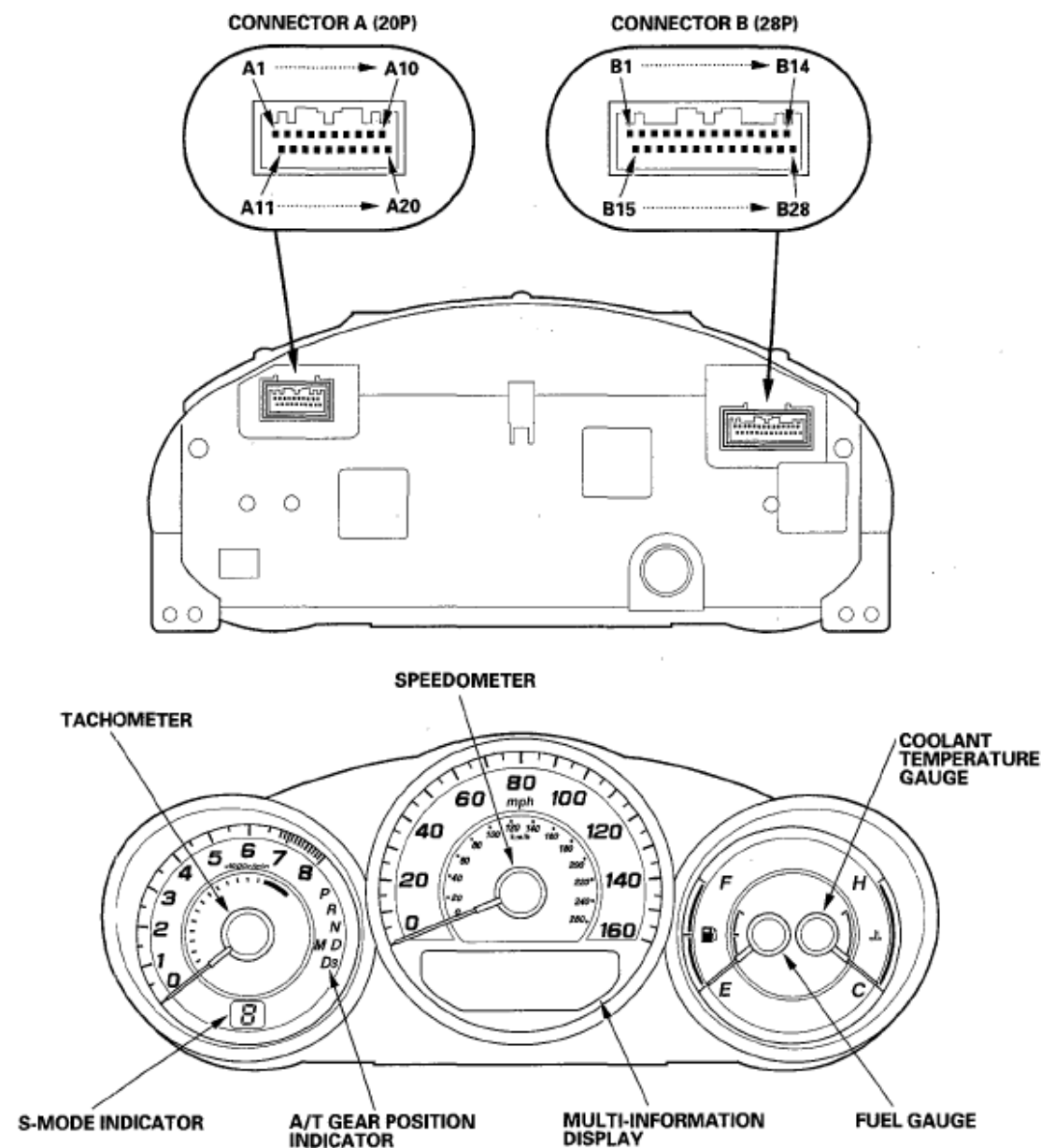


Fig. 2: Identifying Gauges Component Location (2 Of 2)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

SELF-DIAGNOSTIC FUNCTION

The gauge control module has a self-diagnostic function.

- The beeper drive circuit check.
- The indicator drive circuit check.
- The switch input test.
- The LCD segments check.
- The gauges drive circuit check (speedometer, tachometer, fuel gauge, coolant temperature gauge).
- The communication line check (of the body-controller area network (B-CAN) communication line and the fast-controller area network (F-CAN) communication line between the gauges).

NOTE: Indicators are also controlled via the communication line.

ENTERING THE SELF-DIAGNOSTIC FUNCTION

Before doing the self-diagnostic function, check the No. 7 (10A) fuse and the No. 21 (10A) fuse in the driver's under-dash fuse/relay box.

1. Push and hold the SELECT/RESET button.
2. Turn the lighting switch () ON.
3. Turn the ignition switch ON (II).
4. Within 5 sec, turn the lighting switch () OFF, then ON and OFF again.
5. Within 5 sec, release the SELECT/RESET button, and then push and release the button three times repeatedly.

- NOTE:**
- While in the self-diagnostic mode, the dash lights brightness controller operates normally.
 - While in the self-diagnostic mode, the SELECT/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 mode ends.

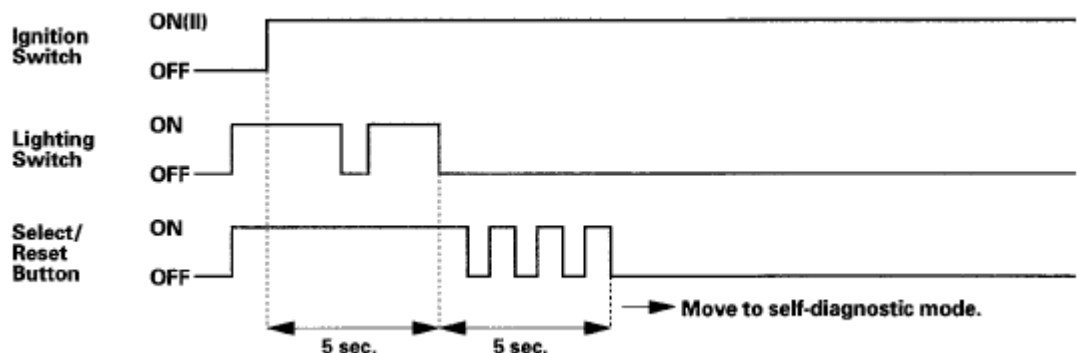


Fig. 3: Ignition Switch Self-Diagnostic Mode Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

THE INDICATOR DRIVE CIRCUIT CHECK

When entering the self-diagnostic mode, these indicators blink:

Seat belt indicator, charging system indicator, low fuel indicator, oil pressure indicator, high beam indicator, VSA indicator, VSA activation indicator, brake system indicator, fog light indicator, lights on indicator, malfunction indicator lamp (MIL), A/T gear position indicator, ABS indicator, SH-AWD indicator, AFS indicator, security indicator, message indicator, tire pressure indicator, ECPS indicator, cruise main indicator, ACC indicator, CMBS indicator and cruise set indicator.

SWITCH INPUT CHECK

After the intermittent beeper sounds at the initial stage of self-diagnosis, a beeper sounds continuously while

any of the following switch inputs are switched from OFF to ON:

Parking brake switch, VSA OFF switch, cruise control master, SET, RESUME, CANCEL switches, select, previous, next switches, DISTANCE switch A, DISTANCE switch B, CMBS OFF switch, and dash lights brightness controller (VOL (+), VOL (-)).

THE BEEPER DRIVE CIRCUIT CHECK

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

THE LCD [SPORT SHIFT AND MULTI-INFORMATION DISPLAY (MID)] SEGMENT CHECK

When entering the self-diagnostic mode, the word "Checking Now" shows on the MID.

THE GAUGE DRIVE CIRCUIT CHECK

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

NOTE: After the beeper stops sounding and the gauge needles return to the minimum position, pushing the select/reset button starts the Beeper Drive Circuit Check (one beep) and the Gauge Drive Circuit Check again. The check cannot be started again until the gauge needles return to the minimum position.

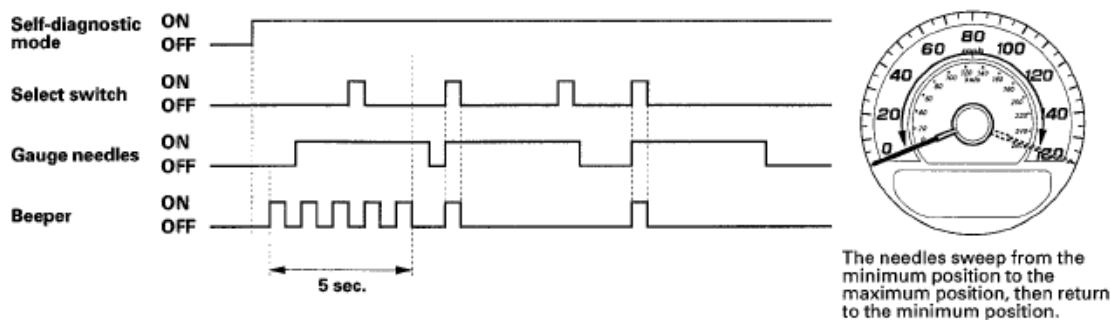


Fig. 4: Select Switch Self-Diagnostic Mode Chart
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If a needle fails to sweep or the beeper does not sound, replace the gauge control module.

THE COMMUNICATION LINE CHECK

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


CHECKING
NOW

Fig. 5: LCD Segment Display - Checking Now
Courtesy of AMERICAN HONDA MOTOR CO., INC.

If the communication line is OK, the word "OK" will be indicated on the multi-information display (MID). If there is a communication line error, the word "NG" will be indicated on the MID.

Indication pattern


There is a malfunction in the communication line between the F-CAN and gauge control module. The B-CAN is OK at this time. Check for DTCs in the PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).



COMMUNICATION CHECK
F-CAN-----NG
B-CAN-----OK

Fig. 6: LCD Segment Display - Communication Check
Courtesy of AMERICAN HONDA MOTOR CO., INC.


There is a malfunction in the communication line between the B-CAN and gauge control module. The F-CAN line is OK at this time. Go to B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).



COMMUNICATION CHECK
F-CAN-----OK
B-CAN-----NG

Fig. 7: LCD Segment Display - Communication Check
Courtesy of AMERICAN HONDA MOTOR CO., INC.

There is a malfunction in the communication line between the gauge control module and F-CAN and B-CAN. Check for DTCs in the PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).



COMMUNICATION CHECK
F-CAN-----NG
B-CAN-----NG

Fig. 8: LCD Segment Display - Communication Check
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

CIRCUIT DIAGRAM



Fig. 9: Gauges - Circuit Diagram (1 Of 7)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

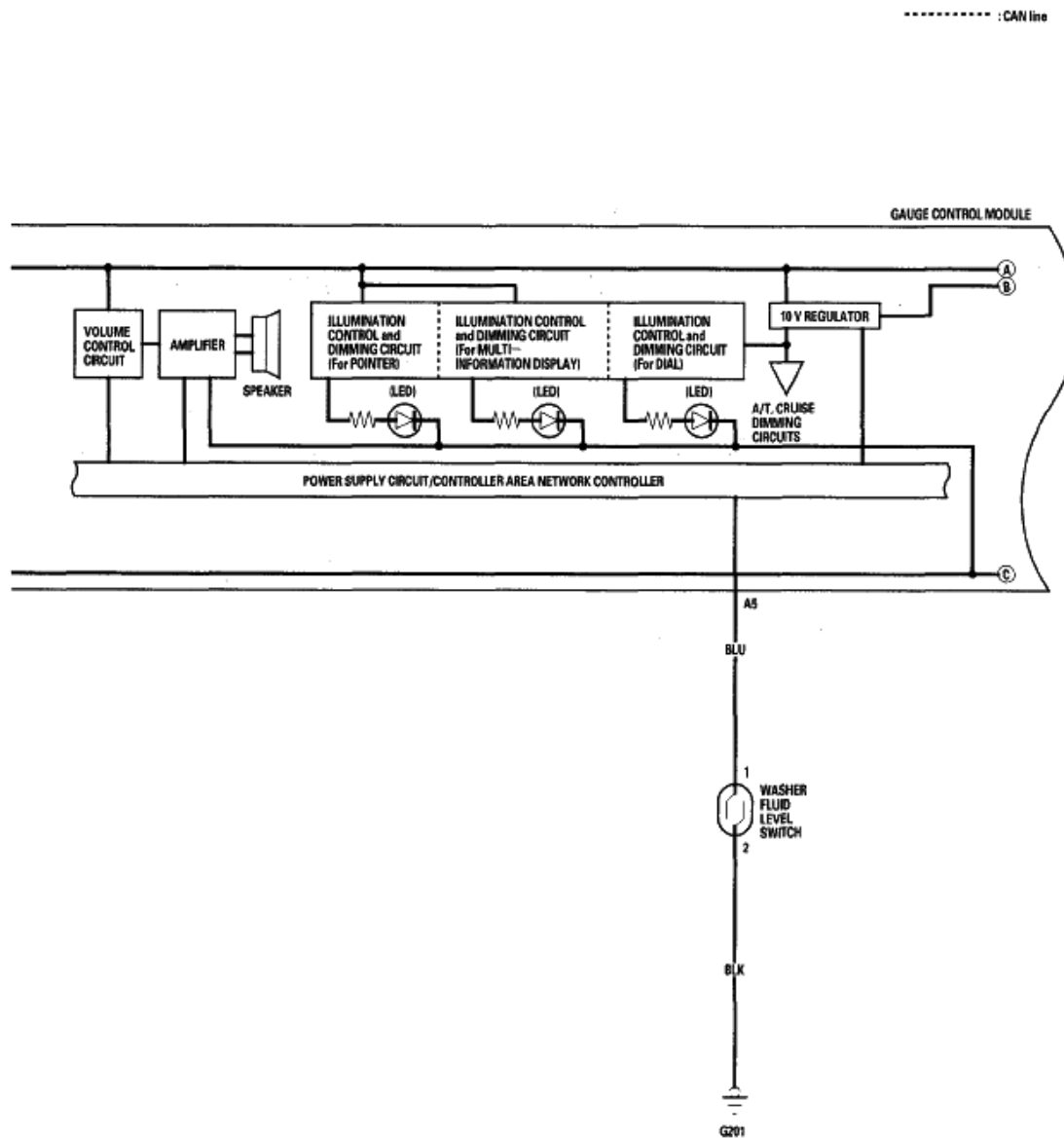


Fig. 10: Gauges - Circuit Diagram (2 Of 7)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

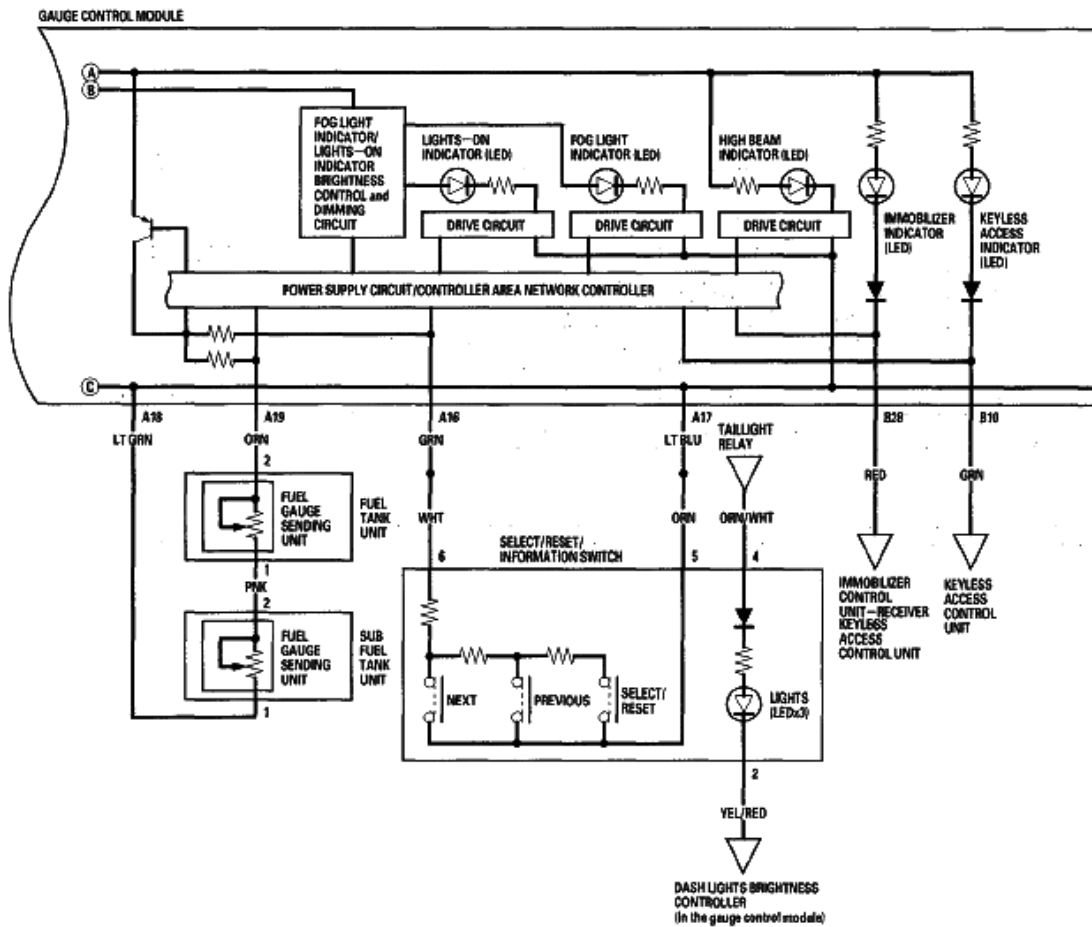


Fig. 11: Gauges - Circuit Diagram (3 Of 7)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

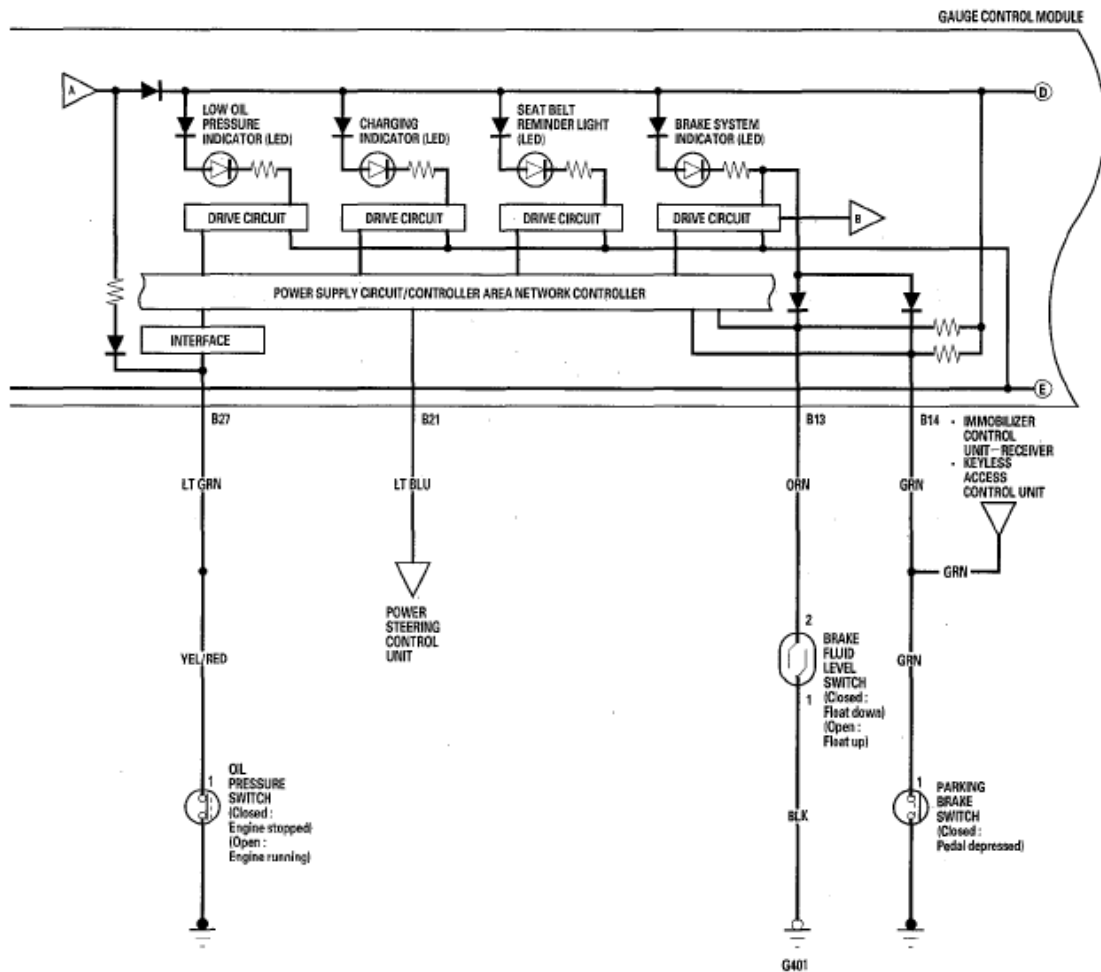


Fig. 12: Gauges - Circuit Diagram (4 Of 7)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

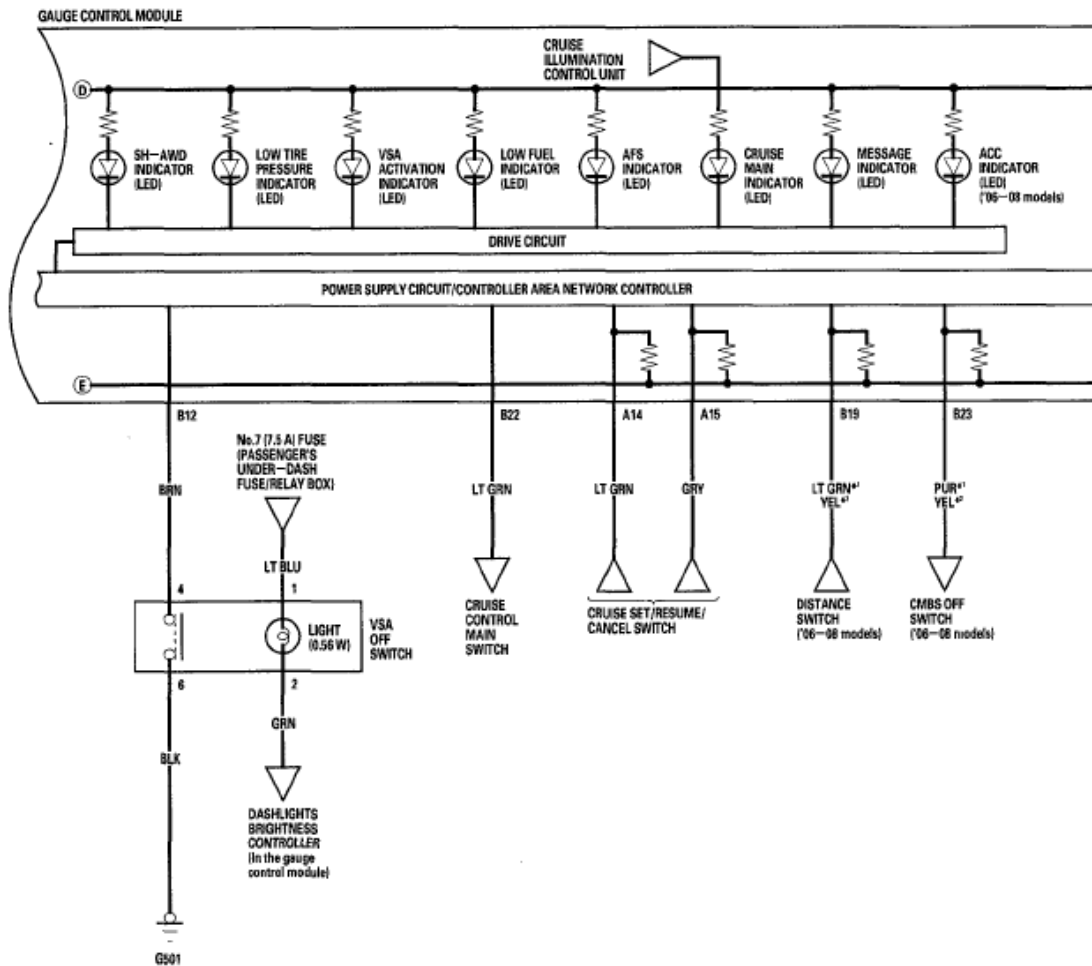


Fig. 13: Gauges - Circuit Diagram (5 Of 7)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

*1: '06 model
 *2: '07-'08 models

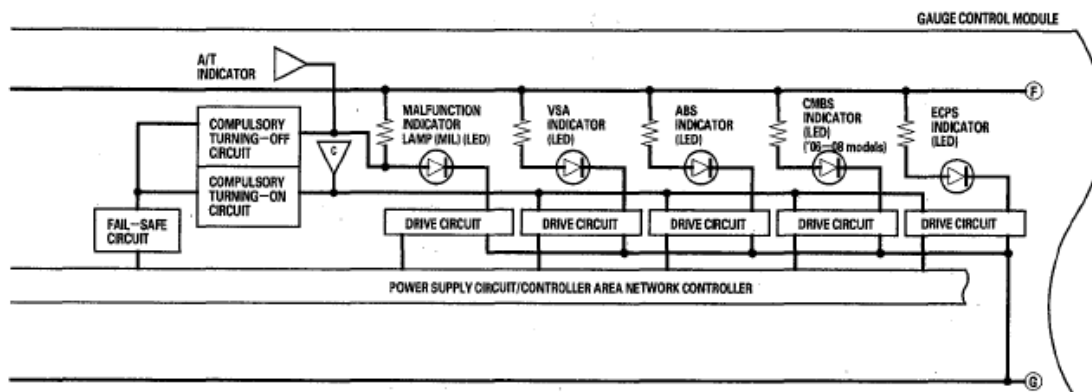


Fig. 14: Gauges - Circuit Diagram (6 Of 7)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

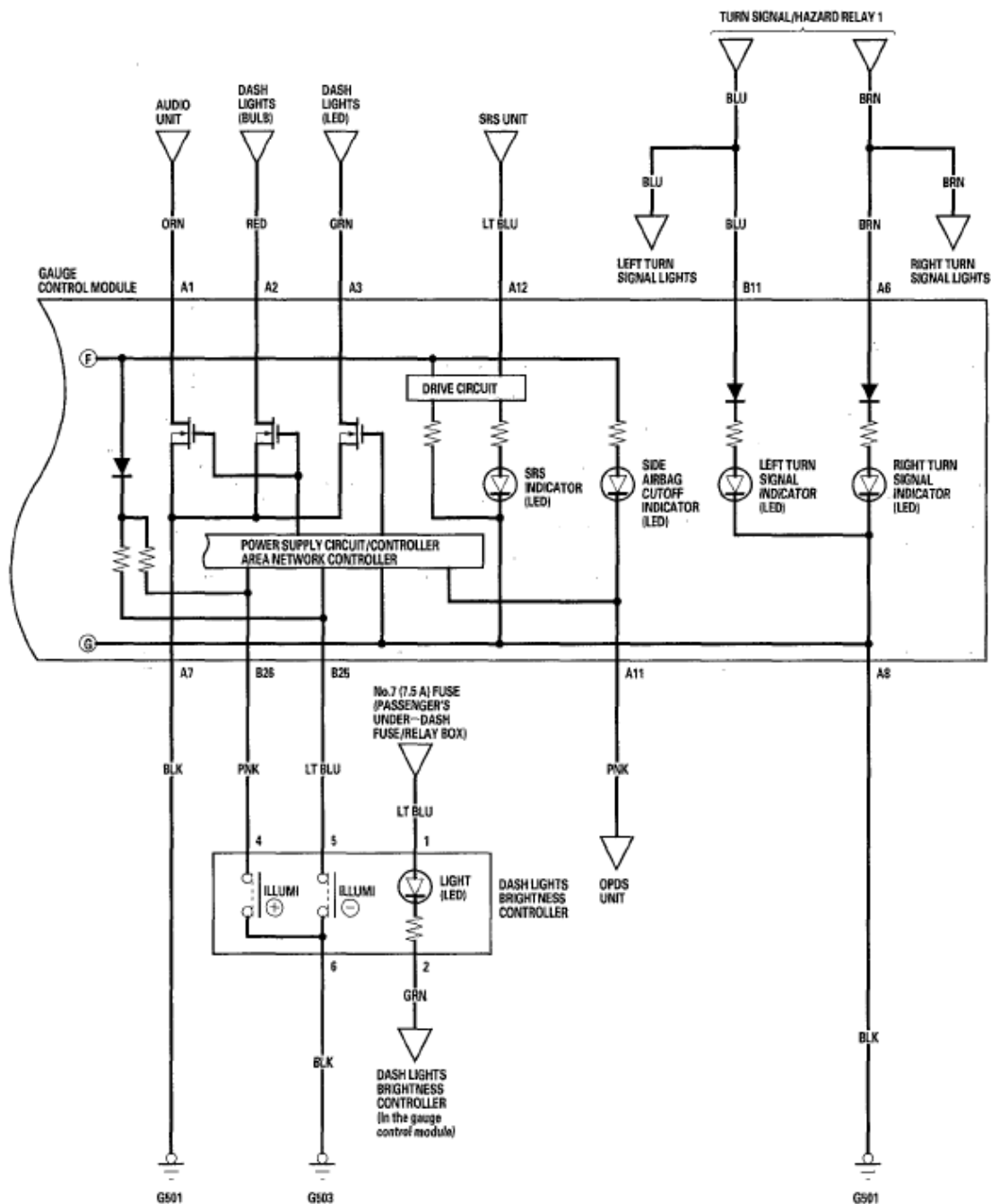


Fig. 15: Gauges - Circuit Diagram (7 Of 7)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC TROUBLESHOOTING

DTC B1152: GAUGE CONTROL MODULE INTERNAL (EEPROM) ERROR

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.

4. Check for DTCs with the HDS.

Is DTC B1152 indicated?

YES - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).

NO - Intermittent failure, the system is OK at this time.

DTC B1155: GAUGE CONTROL MODULE LOST COMMUNICATION WITH COMBINATION SWITCH CONTROL UNIT (HLSW MESSAGE); DTC B1156: GAUGE CONTROL MODULE LOST COMMUNICATION WITH COMBINATION SWITCH CONTROL UNIT (WIPSW MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1155 and/or B1156 indicated?

YES - Go to step 5.

NO - Intermittent failure, the system is OK at this time. Check for loose or poor connections between the gauge control module and the combination switch control unit.

5. Check for DTCs with the HDS.

Are DTCs B1007, B1062, B1063, and/or B2108 also indicated?

YES - Do the combination switch control unit input test (see **WIPER/WASHER SWITCH (COMBINATION SWITCH CONTROL UNIT) INPUT TEST**).

NO - Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

DTC B1157: GAUGE CONTROL MODULE LOST COMMUNICATION WITH MICU (MICU MESSAGE); DTC B1180: GAUGE CONTROL MODULE LOST COMMUNICATION WITH MICU (AUTOLT MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

1. Clear the DTCs with the HDS.

2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1157 and/or B1180 indicated?

YES - Go to step 5.

NO - Intermittent failure, the system is OK at this time. Check for loose or poor connections between the gauge control module and the MICU.

5. Check for DTCs with the HDS.

Are DTCs B1055, B1056, B1255, B1806, B2107, and/or B2155 also indicated?

YES - Do the MICU input test (see MICU INPUT TEST).

NO - Do the gauge control module input test (see GAUGE CONTROL MODULE INPUT TEST).

DTC B1158: GAUGE CONTROL MODULE LOST COMMUNICATION WITH RELAY CONTROL MODULE (RM MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1158 indicated?

YES - Go to step 5.

NO - Intermittent failure, the system is OK at this time. Check for loose or poor connections between the gauge control module and the relay control module.

5. Check for DTCs with the HDS.

Is DTC B1005 also indicated?

YES - Do the relay control module input test (see RELAY CONTROL MODULE INPUT TEST).

NO - Do the gauge control module input test (see GAUGE CONTROL MODULE INPUT TEST).

DTC B1161: GAUGE CONTROL MODULE LOST COMMUNICATION WITH KEYLESS ACCESS CONTROL UNIT (REMOTE ID MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1161 indicated?

YES - Go to step 5.

NO - Intermittent failure, the gauge control system is OK at this time.

5. Check for DTCs with the HDS.

Is DTC B2159 also indicated?

YES - Do the keyless access control unit input test (see **CONTROL UNIT INPUT TEST**).

NO - Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

DTC B1166: GAUGE CONTROL MODULE LOST COMMUNICATION WITH ADAPTIVE FRONT LIGHTING CONTROL UNIT (AFS MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1166 indicated?

YES - Do the adaptive front lighting control unit input test (see **CONTROL UNIT INPUT TEST**).

NO - Do the gauge control module Input test (see **GAUGE CONTROL MODULE INPUT TEST**).

DTC B1168: GAUGE CONTROL MODULE LOST COMMUNICATION WITH PCM (ENG MESSAGE); DTC B1169: GAUGE CONTROL MODULE LOST COMMUNICATION WITH THE PCM (A/T MESSAGE); DTC B1178: F-CAN COMMUNICATION ERROR

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

3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1168, B1169, and/or B1178 indicated?

YES - Go to step 5.

NO - Intermittent failure, the system is OK at this time. Check for loose or poor connection between the gauge control module and the PCM.

5. Check for Fuel and Emissions Systems DTCs with the HDS.

Are there any DTCs indicated?

YES - Go to the indicated DTCs troubleshooting, then recheck.

NO - Go to step 6.

6. Turn the ignition switch OFF.
7. Disconnect gauge control module connector B (28P).
8. Jump the SCS with the HDS.
9. Disconnect PCM connector A (49P).
10. Connect gauge control module connector B (28P) No. 15 and No. 16 terminals and body ground with jumper wires.

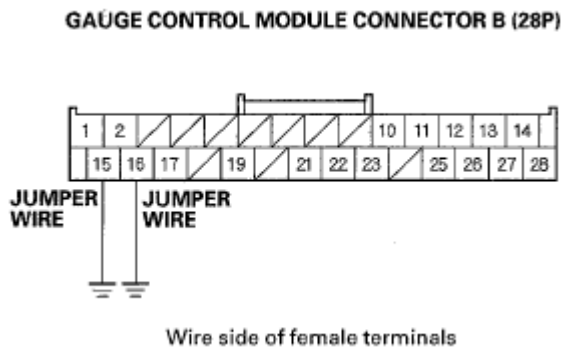


Fig. 16: Connecting Gauge Control Module Connector B No. 15 And No. 16 Terminals And Body Ground With Jumper Wires
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Check for continuity between body ground and PCM connector terminals E15 and E26 individually.

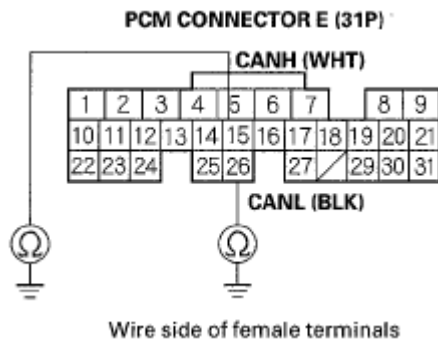


Fig. 17: Checking Continuity Between Body Ground And PCM Connector Terminals E15 And E26

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software (see **UPDATING THE PCM**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), and recheck. If the indication goes away, replace the original PCM (see **PCM REPLACEMENT**). If the DTC is still present, replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).

NO - Repair an open in the wire.

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

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN System Diagnosis Test Mode A (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

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 B1170 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 (see **BATTERY TEST**).

4. Check for VSA System DTCs with the HDS.

Are any DTCs indicated?

YES - Go to the **INDICATED DTCS TROUBLESHOOTING**.

NO - Go to step 5.

5. Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

Are all inputs OK?

YES - Go to step 6.

NO - Repair the faulty input, then recheck for DTCs.

6. Substitute a known-good gauge control module.
7. Clear the DTCs with the HDS.
8. Turn the ignition switch OFF, and then back ON (II).
9. Check for the DTCs with the HDS.

Is DTC B1170 indicated?

YES - Substitute a known-good VSA modulator-control unit, and recheck.

NO - The original gauge control module is faulty; replace it (see **GAUGE CONTROL MODULE REPLACEMENT**).

DTC B1171: GAUGE CONTROL MODULE LOST COMMUNICATION WITH ADAPTIVE CRUISE CONTROL UNIT (ACC MESSAGE)

NOTE: **If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN System Diagnosis Test Mode A (see TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A).**

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

Is DTC B1171 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 (see **ALTERNATOR AND REGULATOR CIRCUIT TROUBLESHOOTING**).

4. Check for Adaptive Cruise Control System DTCs with the HDS.

Are any DTCs indicated?

YES - Go to the **INDICATED DTCS TROUBLESHOOTING**.

NO - Go to step 5.

5. Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

Are all inputs OK?

YES - Go to step 6.

NO - Repair the faulty input, then recheck for DTCs.

6. Substitute a known-good gauge control module.
7. Clear the DTCs with the HDS.
8. Turn the ignition switch OFF, and then back ON (II).
9. Check for DTCs with the HDS.

Is DTC B1171 indicated?

YES - Substitute a known-good adaptive cruise control unit, and recheck.

NO - The original gauge control module is faulty; replace it (see **GAUGE CONTROL MODULE REPLACEMENT**).

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

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

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 (see **ALTERNATOR AND REGULATOR CIRCUIT TROUBLESHOOTING**).

4. Check for TPMS DTCs with the HDS.

Are any DTCs indicated?

YES - Go to the **INDICATED DTCS TROUBLESHOOTING**.

NO - Go to step 5.

5. Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

Are all inputs OK?

YES - Go to step 6.

NO - Repair the faulty input, then recheck for DTCs.

6. Substitute a known-good gauge control module.
7. Clear the DTCs with the HDS.
8. Turn the ignition switch OFF, and then back ON (II).
9. Check for DTCs with the HDS.

Is DTC B1173 indicated?

YES - Substitute a known-good TPMS control unit, and recheck.

NO - The original gauge control module is faulty; replace it (see **GAUGE CONTROL MODULE REPLACEMENT**).

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

NOTE: **If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN System Diagnosis Test Mode A (see TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A).**

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

Is DTC B1175 indicated?

YES - Go to the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

NO - Intermittent failure, the gauge control module is OK at this time. Check for loose or poor connections.

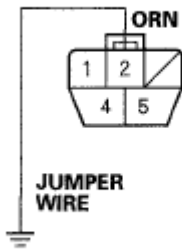
5. Do the fuel gauge sending unit test (see **FUEL GAUGE SENDING UNIT TEST**).

Is the fuel gauge sending unit OK?

YES - Go to step 6.

NO - Replace the fuel gauge sending unit.

6. Turn the ignition switch OFF.
7. Disconnect the fuel pump 5P connector (see **FUEL GAUGE SENDING UNIT TEST**).
8. Disconnect gauge control module connector A (20P).
9. Connect fuel pump 5P connector terminal No. 2 to body ground with a jumper wire.

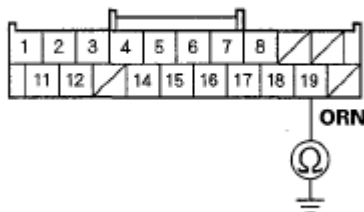
FUEL PUMP 5P CONNECTOR

Wire side of female terminals

Fig. 18: Connecting Fuel Pump 5P Connector Terminal No. 2 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Check for continuity between gauge control module connector A (20P) terminal No. 19 and body ground.

GAUGE CONTROL MODULE CONNECTOR A (20P)

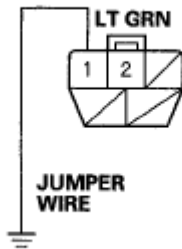
Wire side of female terminals

Fig. 19: Checking Continuity Between Gauge Control Module Connector A (20P) Terminal No. 19 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Go to step 11.**NO** - Repair an open in the wire.

11. Disconnect the secondary fuel gauge sending unit 5P connector (see **FUEL GAUGE SENDING UNIT TEST**).
12. Connect secondary fuel gauge sending unit 5P connector terminal No. 1 to body ground with a jumper wire.

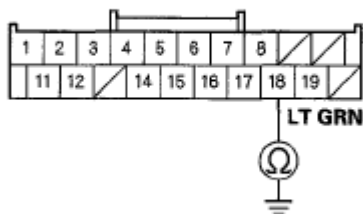
**SECONDARY FUEL GAUGE SENDING UNIT
5P CONNECTOR**

Wire side of female terminals

Fig. 20: Connecting Secondary Fuel Gauge Sending Unit 5P Connector Terminal No. 1 To Body Ground With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Check for continuity between gauge control module connector A (20P) terminal No. 18 and body ground.

GAUGE CONTROL MODULE CONNECTOR A (20P)

Wire side of female terminals

Fig. 21: Checking Continuity Between Gauge Control Module Connector A (20P) Terminal No. 18 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 14.

NO - Repair an open in the wire.

14. Check for continuity between fuel tank unit 5P connector terminal No. 1 and secondary fuel gauge sending unit 5P connector terminal No. 2.

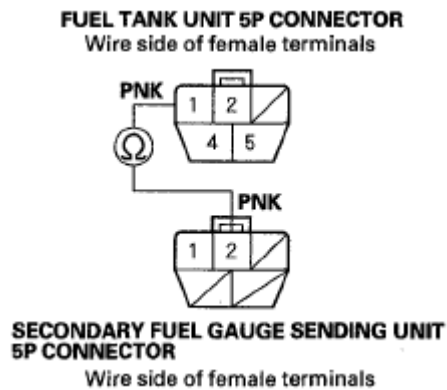


Fig. 22: Checking Continuity Between Terminal No. 1 And Secondary Fuel Gauge Sending Unit 5P Connector Terminal No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).

NO - Repair an open in the wire.

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

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

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

Is DTC B1176 indicated?

YES - Go to the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

NO - Intermittent failure, the gauge control system is OK at this time. Check for loose or poor connections.

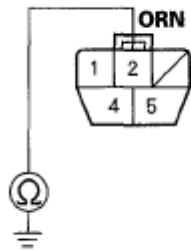
5. Test the fuel gauge sending unit (see **FUEL GAUGE SENDING UNIT TEST**).

Is the fuel gauge sending unit OK?

YES - Go to step 6.

NO - Replace the fuel gauge sending unit.

6. Turn the ignition switch OFF.
7. Disconnect the fuel tank unit 5P connector (see **FUEL GAUGE SENDING UNIT TEST**).
8. Disconnect gauge control module connector A (20P).
9. Check for continuity between fuel tank unit 5P connector terminal No. 2 and body ground.

FUEL TANK UNIT 5P CONNECTOR

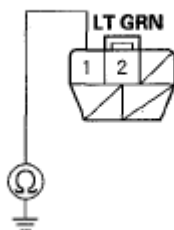
Wire side of female terminals

Fig. 23: Checking Continuity Between Fuel Tank Unit 5P Connector Terminal No. 2 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Repair a short to ground in the wire.**NO** - Go to step 10.

10. Disconnect the secondary fuel gauge sending unit 5P connector (see **FUEL GAUGE SENDING UNIT TEST**).
11. Check for continuity between secondary fuel gauge sending unit 5P connector terminal No. 1 and body ground.

SECONDARY FUEL GAUGE SENDING UNIT 5P CONNECTOR

Wire side of female terminals

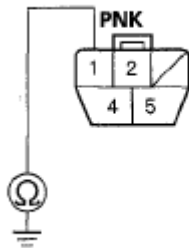
Fig. 24: Checking Continuity Between Secondary Fuel Gauge Sending Unit 5P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

*Is there continuity?***YES** - Repair a short to ground in the wire.**NO** - Go to step 12.

12. Check for continuity between fuel tank unit 5P connector terminal No. 1 and body ground.

FUEL PUMP 5P CONNECTOR



Wire side of female terminals

Fig. 25: Checking Continuity Between Fuel Tank Unit 5P Connector Terminal No. 1 And Body Ground

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair a short to ground in the wire.

NO - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).

DTC B1177: BATTERY VOLTAGE ABNORMAL

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

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

Is DTC B1177 indicated?

YES - Go to step 5.

NO - Go to step 4.

4. Crank the engine.

Is DTC B1177 indicated?

YES - Go to step 5.

NO - Intermittent failure, the gauge control module and power supply voltage (IG1) that is supplied to the gauge control module are OK at this time. The battery may have been discharged and recovered.

5. Check the battery (see **BATTERY TEST**) and the charging system (see **ALTERNATOR AND REGULATOR CIRCUIT TROUBLESHOOTING**)

Is the battery condition normal and the charging system OK?

YES - Go to step 6.

NO - Recharge or replace the battery, or repair the charging system.

6. With gauge control module connector B (28P) still connected, measure the voltage between the No. 1 terminal and body ground.

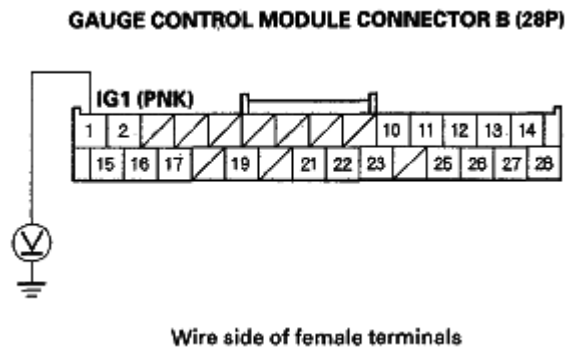


Fig. 26: Measuring Voltage Between No. 1 Terminal And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 7.

NO - Repair an open or high resistance in the PNK wire between the gauge control module and driver's under-dash fuse/relay box.

7. Disconnect the gauge control module connectors.
8. Check for continuity between gauge control module connector A (20A) terminal No. 7 and connector B (28P) terminal No. 1.

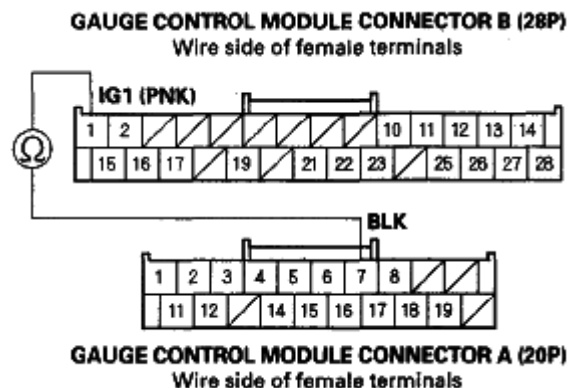


Fig. 27: Checking Continuity Between Gauge Control Module Connector A Terminal No. 7 And Connector B Terminal No. 1
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Replace the gauge control module (see **GAUGE CONTROL MODULE REPLACEMENT**).

NO - Repair an open or high resistance in the BLK wire between the gauge control module and ground (G501).

DTC B1181: GAUGE CONTROL MODULE LOST COMMUNICATION WITH DRIVER'S MPCS UNIT (DOORSW MESSAGE); DTC B1182: GAUGE CONTROL MODULE LOST COMMUNICATION WITH DRIVER'S MPCS UNIT (DRLOKSW MESSAGE)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in **B-CAN System Diagnosis Test Mode A** (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Wait for 6 seconds or more.
4. Check for DTCs with the HDS.

Is DTC B1181 and/or B1182 indicated?

YES - Go to step 5.

NO - Intermittent failure, the gauge control module is OK at this time. Check for loose or poor connections.

5. Check for DTCs with the HDS.

Are DTCs B1014, B1015, B1064, B1065, B1405, B1406*, B1613, B1614, and B1811 also indicated? (*: '05-06 models)*

YES - Do the driver's MPCS input test (see **DRIVER'S MPCS UNIT INPUT TEST**).

NO - Do the gauge control module input test (see **GAUGE CONTROL MODULE INPUT TEST**).

REWRITING THE ODO DATA AND TRANSFERRING THE MAINTENANCE MINDER ON A NEW GAUGE CONTROL MODULE

- 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 jumper 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 system select menu with the HDS.
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 Smart Maintenance Information.
4. Replace the gauge control module.
5. Follow the instructions on the display to write the new ODO value and Smart Maintenance to the new gauge control module. If the data transfer fails, refer to the instructions below to release the locked ODO value.

RELEASE LOCKED ODOMETER MILEAGE TO THE ORIGINAL GAUGE CONTROL MODULE.

If after you attempt to transfer mileage, the new odometer has dashes (-), garbled, or an 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

NOTE: Before replacing the gauge control module, do the "Rewriting the ODO Data and Transferring the Maintenance Minder on a New Gauge Control Module" (see REWRITING THE ODO DATA AND TRANSFERRING THE MAINTENANCE MINDER ON A NEW GAUGE CONTROL MODULE).

1. Remove the instrument fascia (see DRIVER'S SWITCH PANEL REMOVAL/INSTALLATION).
2. Remove the screws from the gauge control module (A).

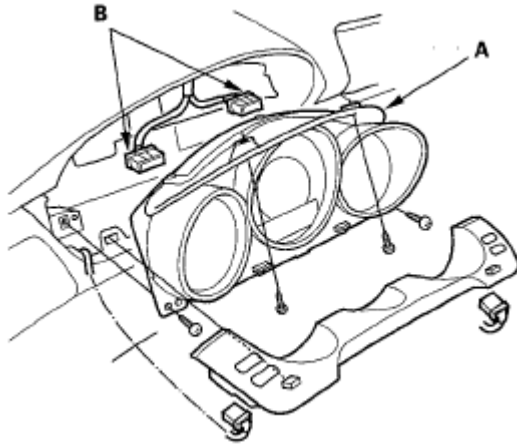


Fig. 28: Identifying Gauge Control Module With Screws
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

SELECT/RESET/INFORMATION SWITCH TEST/REPLACEMENT

1. Remove the driver's airbag assembly (see **DRIVER'S AIRBAG REPLACEMENT**).
2. Disconnect the 6P connector (A) from the select/ reset/information switch (B).

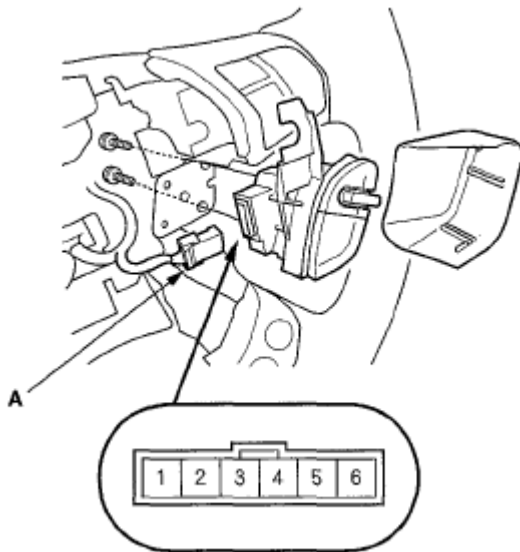


Fig. 29: Identifying Select/ Reset/Information Switch And 6P Connector
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Measure resistance between the select/reset/ information switch 6P connector No. 6 and No. 5 terminals in each switch position according to the table.

TERMINALS RESISTANCE CHART

Position	Resistance

?	About 33 ohms
SEL/RESET	About 1,043 ohms
?	About 363 ohms

4. If the resistance is not as specified, remove the two screws and replace the switch.
5. If the switch is OK, but there is a problem with the switch function, check the steering switches harness and cable reel.

OUTSIDE AIR TEMPERATURE INDICATOR CALIBRATION

NOTE: To test the outside air temperature sensor (see OUTSIDE AIR TEMPERATURE SENSOR TEST).

DESCRIPTION

The outside temperature sensor is located behind the center of the front bumper. The gauge control module uses measurements from this sensor to display the outside air temperature.

Because of the location of the sensor, it may be affected by heat reflection from the road, engine and radiator heat, or hot exhaust from surrounding traffic. These conditions can heat soak the outside air temperature sensor and cause inaccurate readings. Logic has been written into the gauge control module to help prevent abnormal or fluctuating outside air temperature indicator readings.

OUTSIDE AIR TEMPERATURE INDICATOR LOGIC

Initial outside air temperature indication after the ignition switch is turned ON (II).

If the engine coolant temperature is 140°F (60°C) or higher when the ignition switch is turned ON (II), the outside air temperature indicated the last time the key was turned off will be displayed regardless of the current temperature measured by the outside air temperature sensor.

If the engine coolant temperature is 139°F (59°C) or lower when the ignition switch is turned ON (II), the current temperature measured by the outside air temperature sensor will be indicated.

UPDATE TO THE OUTSIDE AIR TEMPERATURE INDICATOR WHILE DRIVING

If the temperature measured by the outside air temperature sensor is greater than the temperature on the outside air temperature indicator, the outside temperature indicator will increase by 1°F (1°C) per minute after the vehicle speed is greater than 19 mph (30 km/h) for more than 30 seconds. It will continue to increase until the current outside air temperature is indicated. So, the first change to the outside air temperature indicator is 1 minute and 30 seconds after the vehicle speed is greater than 19 mph (30 km/h). If the vehicle speed drops below 19 mph (30 km/h), the indicator will not update again until the vehicle speed is increased to 19 mph (30 km/h) or more for more than 1 minute and 30 seconds again.

If the outside air temperature is less than 140°F (60°C), the temperature increases 1°F (1°C) every 2 seconds until the current outside air temperature.

If the outside air temperature is less than the indicated temperature, the temperature will decrease 1°F (1°C) every 2 seconds until the current outside air temperature is indicated regardless of vehicle speed.

TROUBLESHOOTING

If the indicator displays "-" for more than 2 seconds after selecting the outside air temperature display mode, check the climate control system or multiplex integrated control system for DTCs (see B-CAN System Diagnosis Test Mode A) (see **TROUBLESHOOTING - B-CAN SYSTEM DIAGNOSIS TEST MODE A**).

CALIBRATION

The outside air temperature indicator's displayed temperature can be recalibrated $\pm 5^{\circ}\text{F}$ or $\pm 3^{\circ}\text{C}$ to meet the clients expectations.

Calibrate the outside air temperature with the HDS or by custom memory setting.