

2001-02 ACCESSORIES & EQUIPMENT**Navigation Systems - MDX****DESCRIPTION**

WARNING: Deactivate air bag system before performing any service operation. See **DISABLING & ACTIVATING AIR BAG SYSTEM** in **RESTRAINTS**. **DO NOT** apply electrical power to any component on steering column without first deactivating air bag system. Air bag may deploy.

CAUTION: Before disconnecting battery, obtain anti-theft code for radio. After battery is reconnected, the word **CODE** will appear on radio display. Enter 5-digit anti-theft code using select buttons and radio will begin working. If code is entered wrong too many times, leave radio on at least one hour and enter code correctly. Any time radio power is lost, pre-selected radio stations will have to be set.

Navigation system is a highly sophisticated, hybrid locating system that uses satellites and a map database to give current location and help guide drivers. System consists of a navigation unit, Powertrain Control Module (PCM) which provides vehicle speed signal, Global Positioning System (GPS) antenna, and a display unit. The system receives signals from GPS, which is a network of 24 satellites in orbit around earth. Navigation system determines latitude and longitude of vehicle based on information received from the GPS. Navigation unit can keep track of vehicle's direction and rate of travel, and can calculate a route to a destination entered into it by applying information from the vehicle's yaw rate sensor and PCM to DVD-ROM map database. Visual and audio guidance is provided. The audio guidance is provided through the vehicle's front speakers. Audio instructions will announce when the vehicle is entering an intersection or when passing a junction.

OPERATION

The PCM provides vehicle speed by reading a signal outputted by counter shaft speed sensor. Yaw rate sensor is an oscillation gyro built into navigation unit. Yaw rate sensor detects direction change (angular speed) of vehicle. The GPS antenna amplifies the GPS satellite signal and then transmits it to the GPS receiver. GPS is an integral component of the navigation unit. The GPS receiver passes the information to the navigation unit which uses the vehicle position and GPS satellite signal reception to fine tune exact position of vehicle. Navigation unit performs map matching correction using a DVD-ROM map database. It also performs GPS corrections and distance tuning menu functions. The navigation unit then transmits a signal to the display unit and audio driving instructions to the audio unit.

GLOBAL POSITIONING SYSTEM (GPS) LIMITATIONS

GPS cannot detect vehicle position during the following conditions:

- The first 5 to 10 minutes after reconnecting battery.
- Blocked satellite signals due to tall buildings, mountains, tunnels, large trees or large trucks.

- Blocked GPS antenna (by objects on dashboard).
- No satellite signal output (satellite servicing).
- When signals are blocked by operation of aftermarket electronic components.

GPS precision is reduced under following conditions:

- Only 2 satellite signals are received (three satellite signals are needed to accurately locate position).
- Satellite control centers are experiencing problems.

LCD DISPLAY UNIT LIMITATIONS

- In cold temperatures, display may remain dark for first 2-3 minutes until it warms up.
- If display is too hot due to direct sunlight, it will remain dark until temperature drops.
- If humidity is high and interior temperature is low, display may appear cloudy. Should clear with use.
- Fingerprints on touch panel may be noticeable due to panels low reflection coating. Wipe gently with soft cloth.
- Touch panel is an infrared system, if touch switch does not function immediately, shift finger slightly on switch, and touch again.

SELF-INERTIAL NAVIGATION LIMITATIONS

Limitations of the self-inertial portion of navigation system can cause some discrepancies between actual position and indicated vehicle position. If a large discrepancy exists, and system is receiving GPS signals, system will adjust indicated vehicle position to GPS position. If GPS signals are not available, vehicle position must be tuned manually. Positioning errors may be caused by the following:

- Moving vehicle with engine stopped (tow truck or ferry), or if vehicle is spun on a turn table.
- Continuous tire slippage on a slippery surface, or driving with snow chains.
- Changes in tire rolling diameters, abnormal tire pressures, different diameter tires.
- Frequent lane changes across a wide highway or continuous driving on a straight or gently curving highway.

Tolerances in system and map inaccuracy may limit system ability to give precise vehicle location. They may be caused by following:

- Driving on roads not on the map.
- Driving on a road that winds in one direction (loop bridge, an interchange, or spiral parking garage).
- Driving on a road with a series of sharp hair-pin turns.
- Driving on one of two close parallel roads.
- After making many 90 degree turns.

COMPONENT LOCATIONS

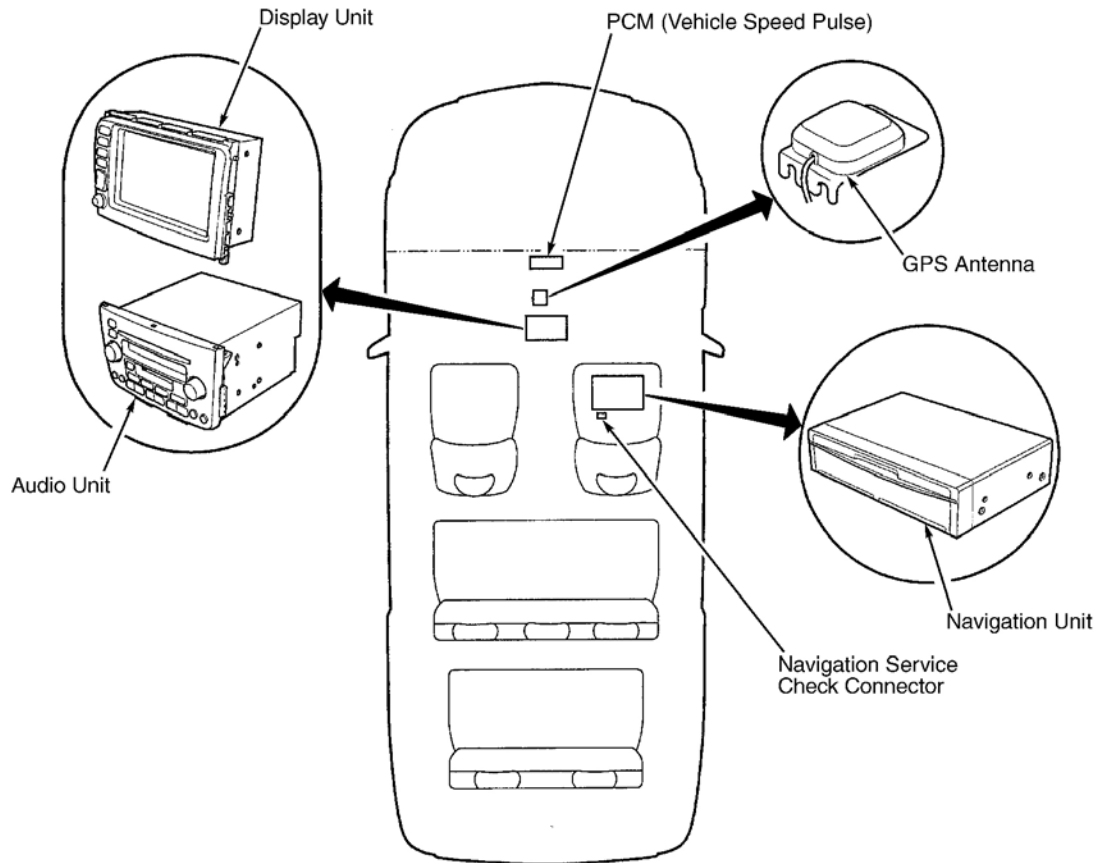
2002 Acura MDX

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NOTE: For component locations, see COMPONENT LOCATIONS table. See Fig. 1 .

COMPONENT LOCATIONS

Component	Location
Audio Unit	Center Of Instrument Panel, Above Center Console
Display Unit	Center Of Instrument Panel, Above Audio Unit
GPS Antenna	Behind Dashboard Center Panel
Navigation Unit	Under Passenger's Seat
Yaw Rate Sensor	Built Into Navigation Unit



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Fig. 1: Identifying Component Locations

Courtesy of AMERICAN HONDA MOTOR CO., INC.

TROUBLE SHOOTING

PICTURE

Start Up Procedure

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Turn ignition switch to ON position. Press OK on disclaimer screen. Main menu screen should appear. Press and hold keys in following order: MENU key, MAP/GUIDE key and CANCEL key. Keep them pushed simultaneously for 5 seconds. Display should change to DIAGNOSIS MENU screen. Diagnostic menu options available are: SYSTEM LINKS, TIRE CALIBRATE, MONITOR CHECK, YAW RATE, UNIT CHECK, CYCLIC DIAG, TRIP CALIBRATE, TRIP DIAG and IN-LINE DIAG. Touch item you want to check. To return to previous screen, touch RETURN key.

System Links

During diagnosis, all communication lines connecting components are shown in Yellow. If system is okay, all communication lines connecting components will change to Green, screen will indicate OK and a tone will sound. If a problem exists in system, the faulty communication line will change to Red, screen will indicate NG (no good) and a tone will sound. Indication on screen will not change until ignition switch is cycled. After repairs, turn ignition off to reset system, return to DIAGNOSIS MENU and run SYSTEM LINKS again.

Tire Calibrate

AUTO TUNING is factory preset to ON and should remain on. If auto tuning is OFF, turn it back ON. TIRE-CAL TUNING can be used, but is not recommended. AUTO TUNING function keeps system in better tune.

Yaw Rate

NOTE: DO NOT try to tune yaw rate sensor unless instructed by manufacturer.

Sensor indicates voltage output from yaw rate sensor. It should indicate 1.500 to 3.500 volts with vehicle stopped.

Cyclic Diag

Under this test, perform the navigation unit check and monitor check repeatedly (except switch test). To exit cyclic diagnosis, touch CANCEL key.

In-Line Diag

During in-line diagnostic test, system links, car status, and yaw rate can be monitored. To exit cyclic diagnosis, touch CANCEL key.

Monitor Check

MONITOR CHECK menu will display RGB COLOR, TEST PATTERN, WHITE RASTER, BLACK RASTER, SWITCH CHECK, COLOR CHANGE and RETURN keys. Touch item key to be tested:

RGB COLOR - Three primary colors of Red, Green and Blue must be shown.

WHITE RASTER - Entire display must be shown in White.

SWITCH CHECK - Each switch must be shown on display and each switch must reverse and sound when touched.

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TEST PATTERN - All 32 colors including Black must be indicated (including background color).

BLACK RASTER - Entire display must be shown in Black.

COLOR CHANGE - This screen is for manufacturer's use only.

Unit Check

UNIT CHECK menu will display DISP, SYSTEM HISTORY, GPS, CAR STATUS, NAVI ECU, BACKUP CLEAR, FORCE DOWNLOAD and RETURN keys. Touch item key to be tested:

DISP - When connection shows NG (no good), check for open or short in communication line. See **WIRING DIAGRAMS** . If communication line is okay, replace display unit. When ROM or RAM show NG, replace display unit.

SYSTEM HISTORY - This screen is for manufacturer's use only.

GPS - This screen shows condition of GPS reception and vehicle position.

CAR STATUS - If indication does not match actual vehicle status, check appropriate signal line. See **CAR STATUS MENU** table.

NAVI ECU - Replace navigation unit if any item shows NG (no good).

BACKUP CLEAR - This screen is for manufacturer's use only.

TRIP CALIBRATE - This screen is used to calibrate range tuning for trip meter and outside temperature display.

TRIP DIAG - This screen is used for trouble shooting. Compare vehicle values to specification. See **TRIP DIAG SPECIFICATIONS** table.

FORCE DOWNLOAD - This screen is for manufacturer's use only.

CAR STATUS MENU

Description	Status
VSP (Vehicle Speed Pulse Indication)	
Vehicle Is Not Moving	OFF
Vehicle Is Moving	ON
BACK (Reverse Indication)	
Shift Lever Is In Any Position Other Than Reverse	OFF
Shift Lever Is In Reverse	ON
CHG (Charging Indication)	
Engine Is Not Running & Generator Is Not Charging	OFF
Engine Is Running & Generator Is Charging	ON
ILL (Illumination Indication)	
Parking Lights Or Headlights Are Off	OFF
Parking Lights Or Headlights Are On	ON
LFW (Low Fuel Warning Indication)	
Low Fuel Indicator Is Off	OFF
Low Fuel Indicator Is ON	ON

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TRIP DIAG SPECIFICATIONS

Parameter	Value
Fuel Vref A/D (Correct Value)	745-1000
Fuel Vmeas A/D (Correct Value)	80-580
Reset FL	Not Used
Measured FL	Not Used
Calculated FL	Not Used
VSA Count (Correct Value)	
Vehicle Speed Is 30 MPH (48 KM/H).	34
Vehicle Speed Is 60 MPH (96 KM/H).	68
FUP Count	
When Idling Cold	5-6
When Idling Warm	2-3

SYMPTOM TESTS

NOTE: Navigation system uses a coded theft protection circuit. Obtain customer's 4-digit security code before disconnecting battery, disconnecting navigation unit, or removing NAVIGATION fuse. Vehicle clock will reset to 0:00 when battery is disconnected. Clock will set to correct time after system receives GPS satellite signals. Park vehicle in an area where GPS satellite signals will be unobstructed. Initial signal may take up to 10 minutes.

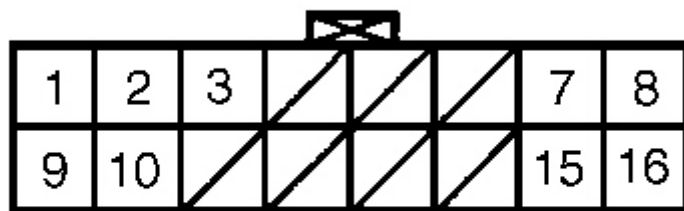
NOTE: To access and backprobe PCM harness connectors, gently remove driver's center console side trim panel.

AUDIO DRIVING INSTRUCTIONS CANNOT BE HEARD

1. Depress display unit MENU key. Select SET UP. Check audio driving instructions volume setting. If volume setting is set to OFF, set volume to audible level. If volume setting is set to audible level, go to next step.
2. Turn ignition off. Disconnect navigation unit 16-pin connector "A" and audio unit 20-pin connector. See **COMPONENT LOCATIONS** . Using DVOM, individually check continuity between ground and navigation unit 16-pin harness connector "A" terminals No. 1 (Blue/Green wire), No. 3 (White/Black wire), No. 9 (Orange/Blue wire) and No. 10 (Orange wire). See **Fig. 2** . If continuity does not exist, go to next step. If continuity exists, repair short to ground in appropriate wire between navigation unit and audio unit. See **WIRING DIAGRAMS** .
3. Using DVOM, check continuity of Blue/Green wire between navigation unit 16-pin harness connector "A" terminal No. 1 and audio unit 20-pin harness connector terminal No. 12. See **Fig. 2** and **Fig. 3** . If continuity exists, go to next step. If continuity does not exist, replace shielded wire harness between navigation unit and audio unit.
4. Using DVOM, check continuity of Orange/Blue wire between navigation unit 16-pin harness connector "A" terminal No. 9 and audio unit 20-pin harness connector terminal No. 13. See **Fig. 2** and **Fig. 3** . If

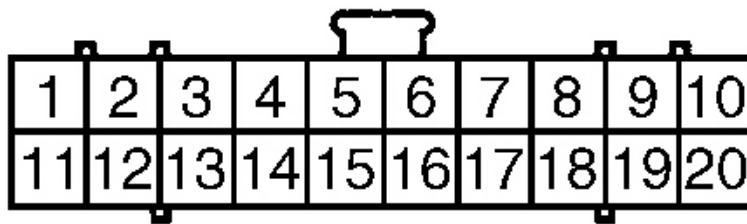
continuity exists, go to next step. If continuity does not exist, replace shielded wire harness between navigation unit and audio unit. See **WIRING DIAGRAMS** .

5. Using DVOM, check continuity of White/Black wire between navigation unit 16-pin harness connector "A" terminal No. 3 and audio unit 20-pin harness connector terminal No. 14. See **Fig. 2** and **Fig. 3** . If continuity exists, go to next step. If continuity does not exist, repair open in White/Black wire between navigation unit and audio unit.
6. Using DVOM, check continuity of Orange wire between navigation unit 16-pin harness connector "A" terminal No. 10 and audio unit 20-pin harness connector terminal No. 11. See **Fig. 2** and **Fig. 3** . If continuity does not exist, replace shielded wire harness between navigation unit and audio unit. See **WIRING DIAGRAMS** . If continuity exists, and vehicle is equipped with Touring Package, go to next step. If continuity exists, and vehicle is not equipped with Touring Package, go to step 10 .
7. Disconnect navigation unit 12-pin connector "B" and front stereo amplifier connector. Front stereo amplifier is located at front of center console on passenger side. Using DVOM, check for continuity between ground and navigation unit 12-pin harness connector "B" terminal No. 8 (Yellow/White wire). If continuity does not exist, go to next step. If continuity exists, repair short to ground in Yellow/White wire between navigation unit, audio unit and front amplifier unit.
8. Using DVOM, check continuity of Yellow/White wire between navigation unit 12-pin harness connector "B" terminal No. 8 and audio unit 20-pin harness connector terminal No. 1. If continuity exists, go to next step. If continuity does not exist, repair open in Yellow/White wire between navigation unit and audio unit. See **WIRING DIAGRAMS** .
9. Using DVOM, check continuity of Yellow/White wire between navigation unit 12-pin harness connector "B" terminal No. 8 and stereo amplifier harness connector terminal No. 5. If continuity exists, go to next step. If continuity does not exist, repair open in Yellow/White wire between navigation unit and amplifier unit.
10. Substitute a known-good audio unit and recheck system. If system operates okay, replace original audio unit. If system operation is not okay, for vehicles equipped with Touring Package, substitute a known-good front amplifier unit. If system operates okay, replace amplifier unit. If system operation is not okay, on all models, replace navigation unit.



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Fig. 2: Identifying Navigation Unit 16-Pin Connector "A" Terminals
 Courtesy of AMERICAN HONDA MOTOR CO., INC.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 3: Identifying Audio Unit 20-Pin Connector Terminals (Display Unit 20-Pin Connector "B" Terminals Are Similar)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

DISPLAY UNIT BUTTONS DO NOT WORK

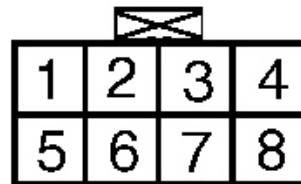
1. Turn ignition switch to ACC position. Backprobing with DVOM, individually measure voltage between ground and display unit 20-pin connector "B" terminal No. 1 (White/Blue wire) and terminal No. 2 (White/Red wire). See **COMPONENT LOCATIONS** . See **Fig. 3** . If battery voltage exists on both circuits, go to step 3 . If battery voltage does not exist on either circuit, go to next step.
2. If battery voltage does not exist at display unit 20-pin connector "B" terminal No. 1, check for open circuit in White/Blue wire between display unit and fuse No. 11 (10-amp) located in passenger's underdash fuse/relay box. See **WIRING DIAGRAMS** . If battery voltage does not exist at display unit 20-pin connector "B" terminal No. 2 (15-amp), check for open circuit in White/Red wire between display unit and fuse No. 9 located in passenger's underdash fuse/relay box. Repair as necessary.
3. Backprobing with DVOM, check for continuity between ground and display unit 20-pin connector "B" terminal No. 10 (Black wire). See **Fig. 3** . If continuity exists, go to next step. If continuity does not exist, repair open or poor ground connection in Black wire between display unit and ground connector G502. Ground connector G502 is located below center of instrument panel, to left side of power outlet.
4. Turn ignition off. Disconnect navigation unit connectors and display unit connectors. Using DVOM, check continuity between ground and display unit 20-pin harness connector "B" terminals No. 5 (Blue/Green wire) and terminal No. 15 (Orange/Blue wire), individually. See **Fig. 3** . If continuity does not exist, go to next step. If continuity exists, replace affected shielded wire harness between display unit and navigation unit. See **WIRING DIAGRAMS** .
5. Using DVOM, check continuity of Blue/Green wire between display unit 20-pin harness connector "B"

terminal No. 5 and navigation unit 16-pin harness connector "A" terminal No. 7. See **Fig. 2** and **Fig. 3** . If continuity exists, go to next step. If continuity does not exist, replace affected shielded wire harness between display unit and navigation unit.

6. Using DVOM, check continuity in Orange/Blue wire between display unit 20-pin harness connector "B" terminal No. 15 and navigation unit 16-pin harness connector "A" terminal No. 15. See **Fig. 2** and **Fig. 3** . If continuity exists, replace display unit. If continuity does not exist, replace affected shielded wire harness between display unit and navigation unit. See **WIRING DIAGRAMS** .

NO PICTURE SHOWN ON DISPLAY

1. Check fuse No. 11 (10-amp) located in passenger's underdash fuse/relay box. If fuse is okay, go to next step. If fuse is blown, replace fuse and recheck.
2. Turn ignition on. Turn radio on. If radio sound can be heard, go to next step. If radio sound can not be heard, check fuse No. 9 (15-amp) located in passenger's underdash fuse/relay box. If fuse is blown, replace fuse and recheck. If fuse is okay, go to next step.
3. Turn ignition switch to ON position. Backprobing with DVOM, individually measure voltage between ground and navigation unit 8-pin connector "C" terminal No. 1 (White/Blue wire) and terminal No. 2 (White/Red wire). See **COMPONENT LOCATIONS** . See **Fig. 4** . If battery voltage exists at both terminals, go to next step. If battery voltage does not exist at navigation unit 8-pin harness connector "C" terminal No. 1, check for open circuit in White/Blue wire between navigation unit and fuse No. 11 (10-amp) located in passenger fuse/relay box. If battery voltage does not exist at navigation unit 8-pin harness connector "C" terminal No. 2, check for open circuit in White/Red wire between navigation unit and fuse No. 9 (15-amp) located in passenger fuse/relay box. See **WIRING DIAGRAMS** . Repair as necessary.
4. Backprobing with DVOM, check for continuity between ground and navigation unit 8-pin connector "C" terminal No. 4 (Black wire). See **Fig. 4** . If continuity exists, go to next step. If continuity does not exist, repair open or poor ground connection in Black wire between navigation unit and ground connector G501. Ground connector G501 is located under driver's side kick panel, above and to right of driver's fuse/relay box.
5. Turn ignition off. Slide passenger seat forward. Connect SCS Service Connector (07PAZ-0010100) to navigation service check 2-pin connector. See **Fig. 5** . Press and hold ACC-TRIP key, press and hold joystick up, then turn ignition switch to ACC position. Check that diagnostic menu for picture diagnosis starts up, and then changes to system link screen. If diagnosis menu of picture diagnosis is displayed, perform **SYSTEM LINKS** under PICTURE under TROUBLE SHOOTING. If diagnosis menu of picture diagnosis is not displayed, go to next step.
6. Shield display screen from the sun. Back light should be visible and display should be black. If back light is visible, replace navigation control unit. See **NAVIGATION UNIT** under REMOVAL & INSTALLATION. If back light is not visible, replace display unit. See **DISPLAY UNIT** under REMOVAL & INSTALLATION.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 4: Identifying Navigation Unit 8-Pin Connector "C" Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

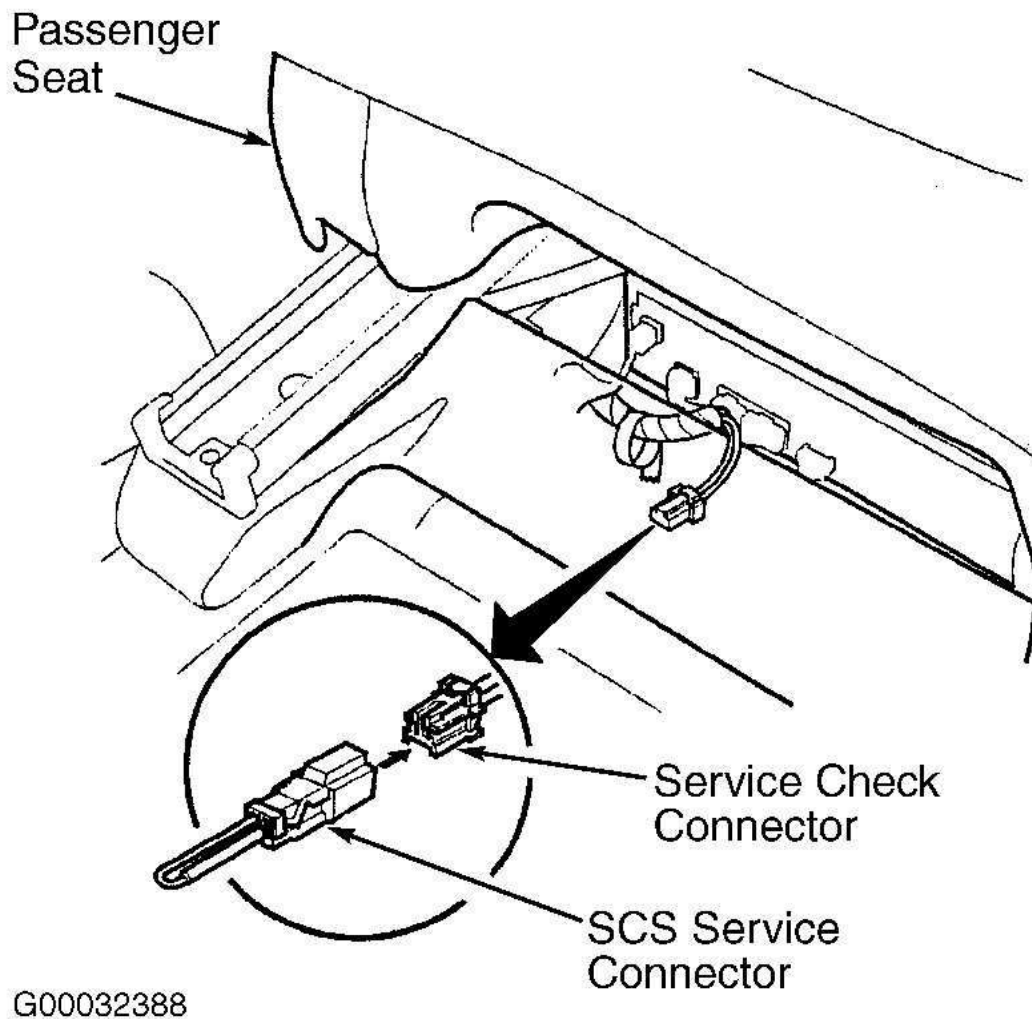


Fig. 5: Locating Navigation System Service Check Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

PICTURE IS MISSING COLOR OR TONE

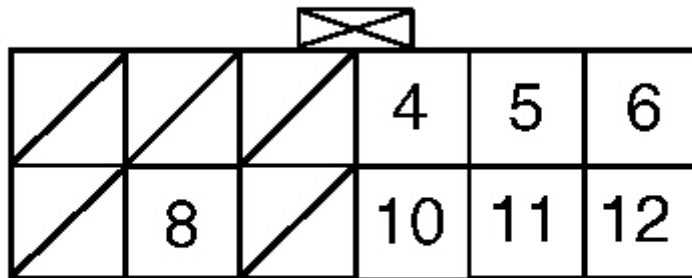
1. Perform start-up procedure. See **START UP PROCEDURE** under PICTURE under TROUBLE SHOOTING. Press MONITOR CHECK button, then press RGB COLOR button. If Red, Green and Blue colored circles are shown, press RETURN button. Press COLOR CHANGE button. Press DEFAULT button to restore standard color settings. If Red, Green or Blue colored circles are not shown, go to next step.
2. Turn ignition off. Disconnect navigation unit 12-pin harness connector "B" and display unit 20-pin harness connector "B". See **COMPONENT LOCATIONS** . Using DVOM, check for continuity between specified terminals of navigation unit 12-pin harness connector "B" and display unit 20-pin

harness connector "B". See **PICTURE WIRE HARNESS CONTINUITY CHECK** table. See **Fig. 3 - Fig. 6** . If all circuits have continuity, go to next step. If any circuits do not have continuity, replace affected shielded wiring harness between navigation unit and display unit.

PICTURE WIRE HARNESS CONTINUITY CHECK

Navigation Unit Harness Connector "B" Terminal No.	Display Unit Connector "B" Terminal No.	Wire Color
10	18	Yellow
5	9	Red
4	8	White

- Using DVOM, check for continuity between navigation unit 16-pin harness connector "B" terminals No. 4 (White wire), No. 5 (Red wire) and No. 10 (Yellow wire) and display unit 20-pin harness connector "B" terminals No. 10 (Black wire) and No. 20 (Brown/Black wire). If continuity exists between any navigation unit 16-pin harness connector "B" terminal and either display unit 20-pin harness connector "B" terminal No. 10 (Black wire) or No. 20 (Brown/Black wire), replace affected shielded wire harness. If continuity does not exist, replace navigation unit.



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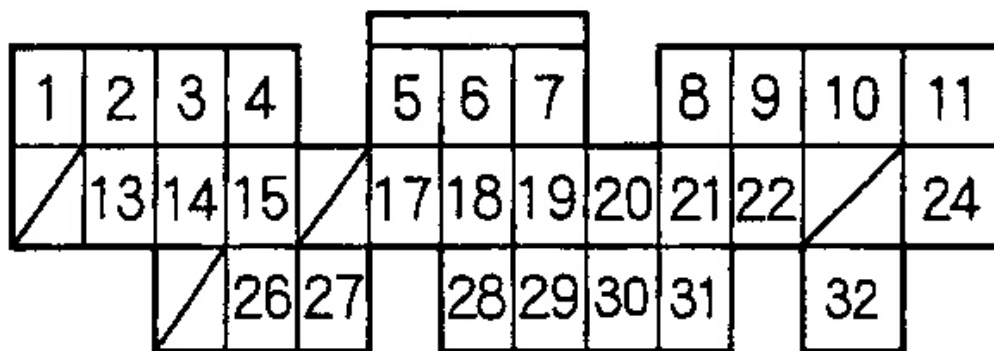
Fig. 6: Identifying Navigation Unit 12-Pin Connector "B" Terminals

Courtesy of AMERICAN HONDA MOTOR CO., INC.

PRESENT FUEL ECONOMY METER IS AT MAX LEVEL WHEN VEHICLE IS MOVING

- Perform start-up procedure. See **START UP PROCEDURE** under PICTURE under TROUBLE SHOOTING. Press TRIP DIAG. If FUP count is 5-6 at cold idle and 2-3 at warm idle, replace navigation unit. See **NAVIGATION UNIT** under REMOVAL & INSTALLATION. If FUP count is not as specified, go to next step.

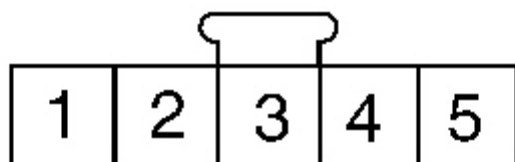
2. Turn ignition off. Disconnect PCM 32-pin connector "A" and navigation unit 5-pin connector "D". See **COMPONENT LOCATIONS** . See **Fig. 7** and **Fig. 8** . Turn ignition on. Using DVOM, measure voltage at navigation unit 5-pin connector terminal No. 1 (Pink wire). If voltage exists, repair short circuit to power in Pink wire between PCM and navigation unit. If voltage does not exist, go to next step.
3. Turn ignition off. Using DVOM, check for continuity between navigation unit 5-pin connector terminal No. 1 (Pink wire) and ground. If continuity exists, repair short to ground in Pink wire at navigation unit 5-pin connector terminal No. 1. If continuity does not exist, go to next step.
4. Using DVOM, check continuity of Pink wire between navigation unit 5-pin connector terminal No. 1 and PCM harness connector "A" terminal No. 11. See **COMPONENT LOCATIONS** . See **Fig. 7** and **Fig. 8** . If continuity exists, go to next step. If continuity does not exist, repair open circuit in Pink wire between navigation unit 5-pin connector terminal No. 1 and PCM harness connector "A" terminal No. 11. See **WIRING DIAGRAMS** .
5. Substitute known-good navigation unit and retest system. If problem no longer exists, replace original navigation unit. If problem is still present, reinstall original navigation unit and replace PCM. See **PCM** under REMOVAL & INSTALLATION.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 7: Identifying Powertrain Control Module (PCM) 32-Pin Connector "A"
 Courtesy of AMERICAN HONDA MOTOR CO., INC.



WIRE SIDE OF FEMALE TERMINALS

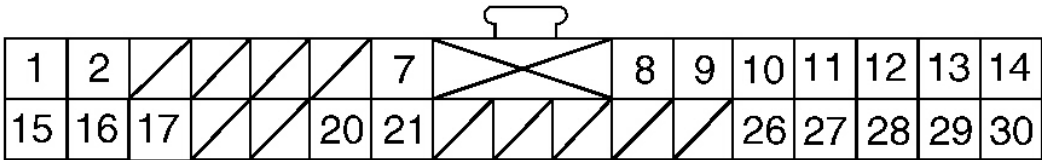
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Fig. 8: Identifying Navigation Unit 5-Pin Connector "D" Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.

RANGE INDICATOR SHOWS "- - -"

1. Perform start-up procedure. See **START UP PROCEDURE** under PICTURE under TROUBLE SHOOTING. Press TRIP DIAG. If FUEL VREF A/D parameter is 745-1000 and FUEL VMEAS A/D parameter is 80-850, replace navigation unit. See **NAVIGATION UNIT** under REMOVAL & INSTALLATION. If parameters are not as specified, go to next step.
2. Turn ignition off. Remove gauge assembly. See GAUGE ASSEMBLY under REMOVAL & INSTALLATION in INSTRUMENT PANELS - MDX article. Disconnect gauge assembly 30-pin connector "A" and navigation unit 5-pin connector "D". Turn ignition on. Using DVOM, measure voltage between ground and navigation unit 5-pin connector "D" terminal No. 4 (Yellow/Blue wire). See **Fig. 8**. If voltage exists, repair short circuit to power in Yellow/Blue wire between navigation unit and gauge assembly. See **WIRING DIAGRAMS**. If voltage does not exist, go to next step.
3. Using DVOM, check for continuity between navigation unit 5-pin connector "D" terminal No. 4 (Yellow/Blue wire) and ground. If continuity exists, repair short circuit to ground in Yellow/Blue wire between navigation unit and gauge assembly. If continuity does not exist, go to next step.
4. Using DVOM, check continuity of Yellow/Blue wire between navigation unit 5-pin connector "D" terminal No. 4 and gauge assembly 30-pin connector "A" terminal No. 2. See **Fig. 8 - Fig. 9**. If continuity exists, go to next step. If continuity does not exist, repair open circuit in Yellow/Blue wire between navigation unit 5-pin connector "D" terminal No. 4 and gauge assembly 30-pin connector "A" terminal No. 2. See **WIRING DIAGRAMS**.
5. Disconnect gauge assembly 14-pin connector "C". Turn ignition on. Using DVOM, measure voltage between ground and navigation unit 5-pin connector "D" terminal No. 3 (Light Green/White wire). If voltage exists, repair short circuit to power in Light Green/White wire between navigation unit and gauge assembly. See **WIRING DIAGRAMS**. If voltage does not exist, go to next step.

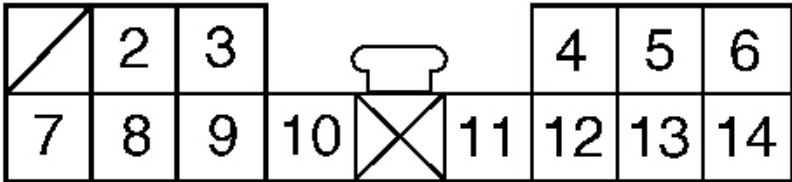
- 6. Using DVOM, check for continuity between navigation unit 5-pin connector "D" terminal No. 3 (Light Green/White wire) and ground. If continuity exists, repair short circuit to ground in Light Green/White wire between navigation unit and gauge assembly. If continuity does not exist, go to next step.
- 7. Using DVOM, check continuity of Light Green/White wire between navigation unit 5-pin connector "D" terminal No. 3 and gauge assembly 30-pin connector "C" terminal No. 6. See **Fig. 8 -Fig. 10** . If continuity exists, go to next step. If continuity does not exist, repair open circuit in Light Green/White wire between navigation unit 5-pin connector "D" terminal No. 3 and gauge assembly 30-pin connector "C" terminal No. 6. See **WIRING DIAGRAMS** .
- 8. Substitute known-good navigation unit and retest system. If problem no longer exists, replace original navigation unit. If problem is still present, reinstall original navigation unit and replace gauge assembly. See GAUGE ASSEMBLY under REMOVAL & INSTALLATION in INSTRUMENT PANELS - MDX article.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 9: Identifying Gauge Assembly 30-Pin Connector "A" Terminals
Courtesy of AMERICAN HONDA MOTOR CO., INC.



WIRE SIDE OF FEMALE TERMINALS

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Fig. 10: Identifying Gauge Assembly 14-Pin Connector "C" Terminals

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Courtesy of AMERICAN HONDA MOTOR CO., INC.

SATELLITE MARK IS NOT INDICATED

1. Check for aftermarket electronic components mounted near GPS antenna or navigation unit. Disable components and retest system. If no components are present, go to next step.
2. Perform SYSTEM LINKS under **PICTURE DIAGNOSIS** . If NG (no good) is indicated, repair as indicated by SYSTEM LINKS check. Go to next step. If NG is not indicated, ensure nothing is blocking GPS antenna (located under dashboard). Move vehicle where GPS satellite signal cannot be obstructed.
3. If NG is still indicated, replace GPS antenna and retest system.

VEHICLE POSITION DOES NOT MOVE ON MAP

1. Test drive vehicle to check speedometer operation. If speedometer works properly, go to next step. If speedometer does not work, perform vehicle speed signal circuit test. See VEHICLE SPEED SENSOR (VSS) CIRCUIT under SYSTEM TESTS in INSTRUMENT PANELS - MDX article.
2. Stop vehicle and leave engine running. Perform car status test. See CAR STATUS in **UNIT CHECK** under PICTURE under TROUBLE SHOOTING. If vehicle speed pulse signal exists (VSP indicator is ON) when vehicle is moving, replace navigation unit. See **NAVIGATION UNIT** under REMOVAL & INSTALLATION. If vehicle speed pulse signal does not exist, go to next step.
3. Turn ignition off. Raise and support vehicle. Disconnect navigation unit 8-pin connector "C". See **Fig. 4** . Turn ignition on and shift into NEUTRAL. Using DVOM, measure voltage at navigation unit 8-pin connector "C" terminal No. 6 (Blue/White wire). Slowly rotate one drive wheel while blocking the other wheel. If voltage pulses from zero to about 5 volts or more, replace navigation unit. See **NAVIGATION UNIT** under REMOVAL & INSTALLATION. If voltage does not pulse as specified, repair open circuit in Blue/White wire between PCM and navigation unit. See **WIRING DIAGRAMS** .

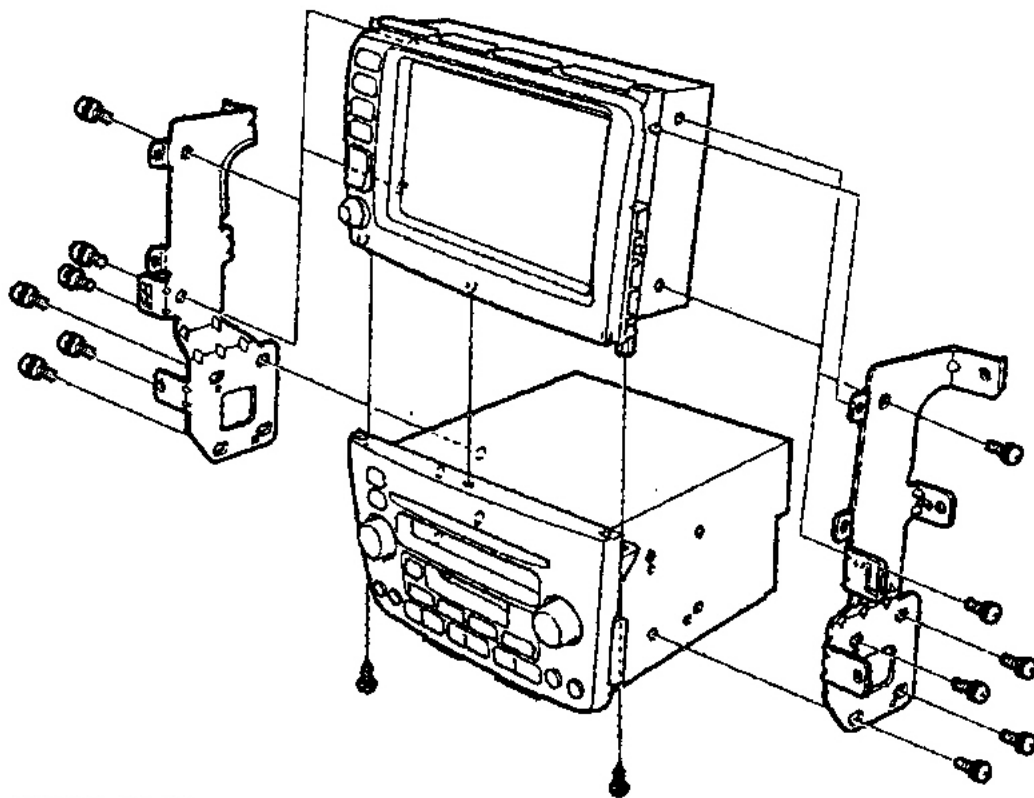
REMOVAL & INSTALLATION

WARNING: Deactivate air bag system before performing any service operation. See **DISABLING & ACTIVATING AIR BAG SYSTEM** in RESTRAINTS. DO NOT apply electrical power to any component on steering column without first deactivating air bag system. Air bag may deploy.

DISPLAY UNIT

Removal & Installation

Remove ash tray and bracket. Push center panel lower clips out by hand, then gently pull out on center panel to release clips. Disconnect electrical connectors. Remove 6 display unit mounting screws. Pull display unit out and disconnect electrical connectors. Remove bracket retaining screws on one bracket. See **Fig. 11** . Remove display unit retaining screws on other bracket. Remove display unit. To install, reverse removal procedure.

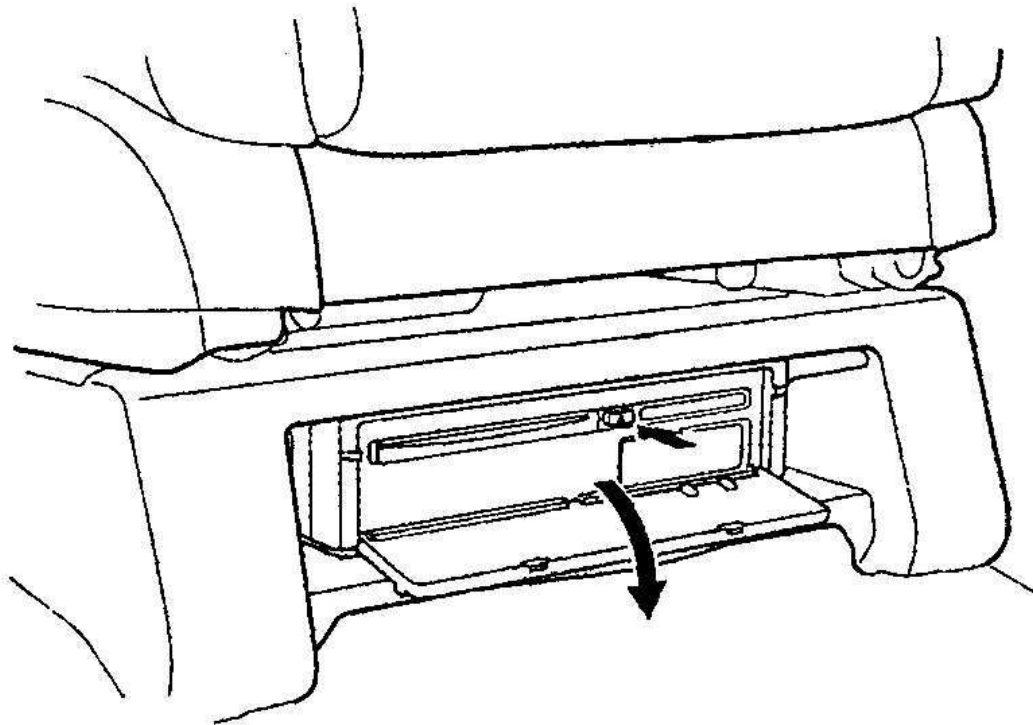


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Fig. 11: Removing Display Unit & Mounting Brackets
Courtesy of HONDA MOTOR CO., INC.

DVD-ROM

Slide the passenger's seat to the rear. Turn the ignition switch on. Open the front cover of the navigation unit. Press the eject button. See **Fig. 12** . Remove the DVD-ROM. Insert a new DVD-ROM. Close the front cover. Do not turn ignition off until data is downloaded into navigation unit. A map match must be performed. Park the vehicle in an area where the GPS satellite signals will be unobstructed, and check the satellite mark on the display. Drive the vehicle 1 mile entering a destination and confirm the road being used is displayed at the bottom of the screen. Enter a known destination and confirm the system routes and performs normally.



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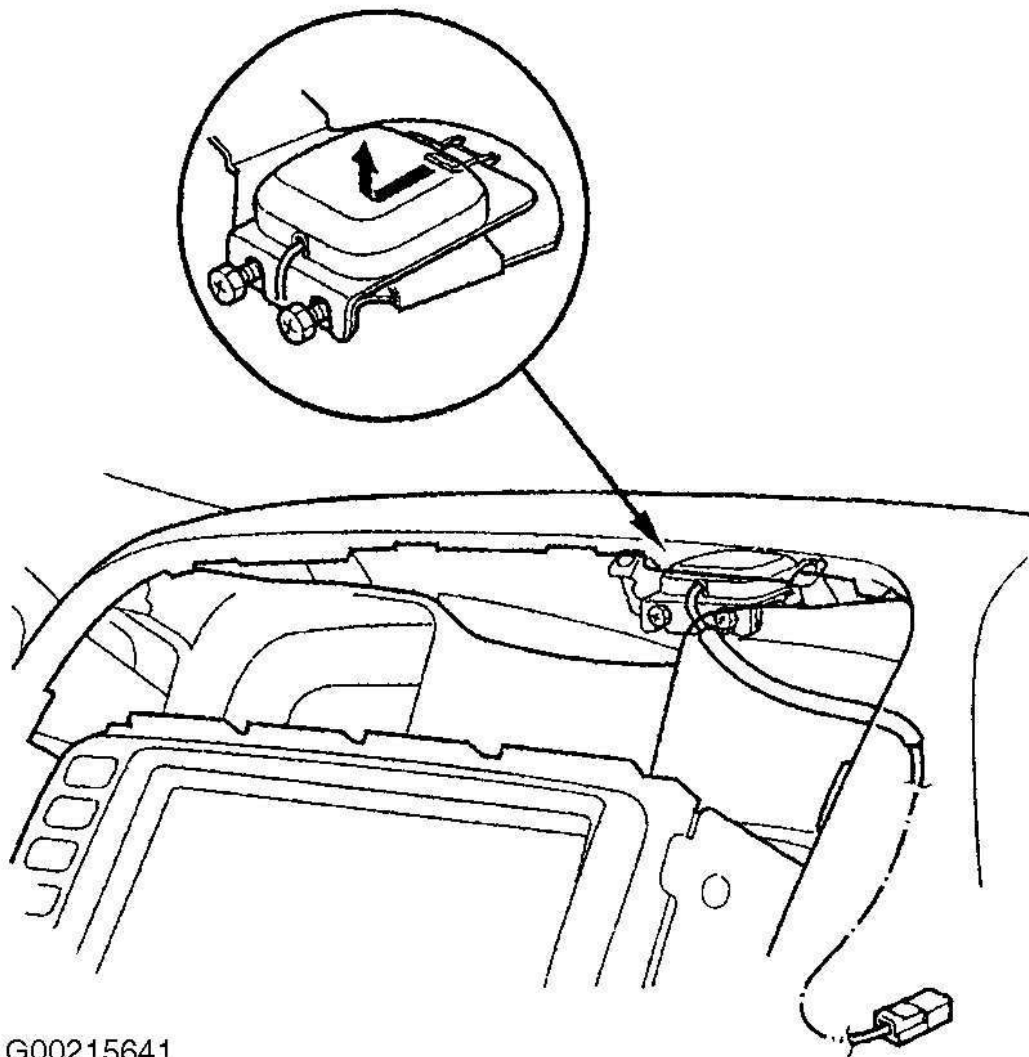
Fig. 12: Removing DVD-ROM

Courtesy of HONDA MOTOR CORP., INC.

GPS ANTENNA

Removal & Installation

Remove ash tray and bracket. Push center panel lower clips out by hand, then gently pull out on center panel to release clips. Loosen 2 screws securing GPS antenna located above display unit. See **Fig. 13** . Disconnect electrical connector and remove GPS antenna. To install, reverse removal procedure.



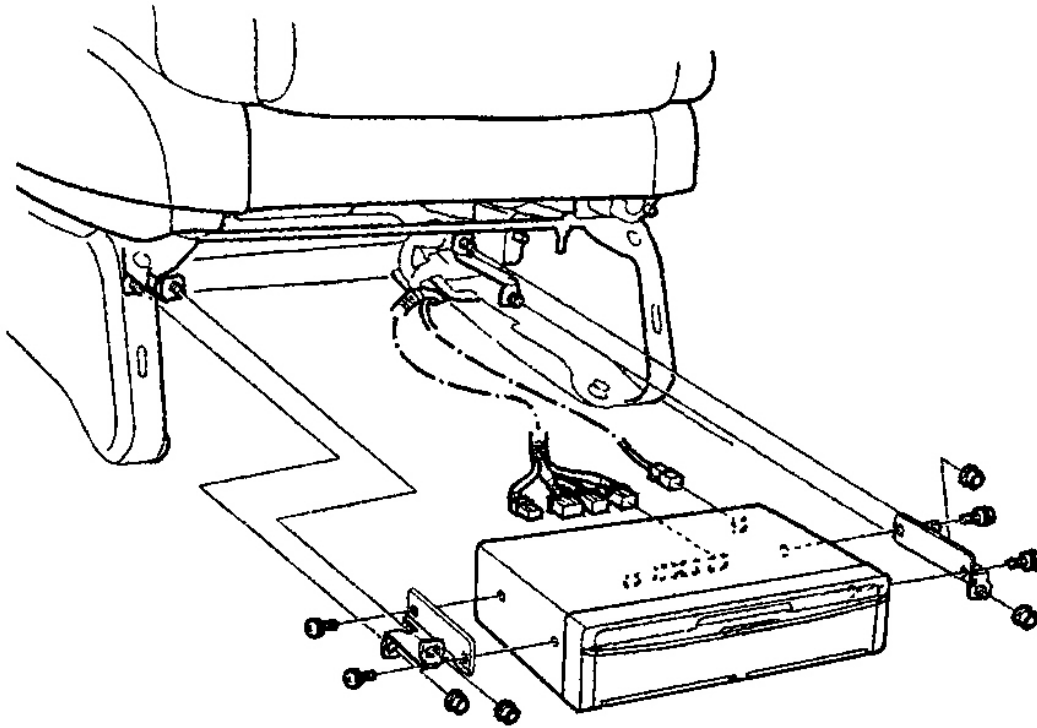
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Fig. 13: Removing GPS Antenna
Courtesy of HONDA MOTOR CORP., INC.

NAVIGATION UNIT

Removal & Installation

Slide passenger seat to rear. Remove 4 nuts securing navigation unit bracket to passenger seat. Disconnect electrical connectors and remove navigation unit. See **Fig. 14** . To install, reverse removal procedure.



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Fig. 14: Removing Navigation Unit & Unit Bracket
Courtesy of HONDA MOTOR CO., INC.

PCM

Gently pry passenger's center console side trim panel off. Remove retaining bolt for IMRC module. Remove 2 nuts from PCM bracket. Remove bolt and nut from PCM. Remove PCM. Disconnect electrical connectors. To install, reverse removal procedure.

WIRING DIAGRAMS

For wiring, see NAVIGATION in SYSTEM WIRING DIAGRAMS article in ELECTRICAL.