Chassis and Paint Codes

2002 Model

Vehicle Identification Number

JH4 KA9 6 5 * 2 C 000001

Manufacturer, Make and Type of Vehicle
JH4: HONDA MOTOR CO., LTD. ACURA Passenger car
Line, Body and Engine Type
KA9: 3.5RL/C35A1
Body Type and Transmission Type
6: 4-speed sedan/Automatic
Vehicle Grade (Series)
U.S. model
5: Premium Package
6: Premium Package with Navigation System
Canada model
5: Premium Package
Check Digit
Model Year
2: 2002
Factory Code
C: Saitama Factory in Japan (Sayama)
Serial Number
U.S. model: 000001~
Canada model: 800001~

Transmission Number

M5DA - 7000001

Transmission Type
M5DA: 4-speed Automatic
Serial Number

Paint Code

Paint Code	Color
B-92P	Nighthawk Black Pearl
B-502P	*Indigo Blue Pearl*1*
G-97P	Vermont Green Pearl*1
NH-623M	Satin Silver Metallic
NH-624P	Premium White Pearl
NH-629M	Quantum Gray Metallic*1
YR-524M	Naples Gold Metallic
YR-528M	Shoreline Mist Metallic

*1: U.S. model only

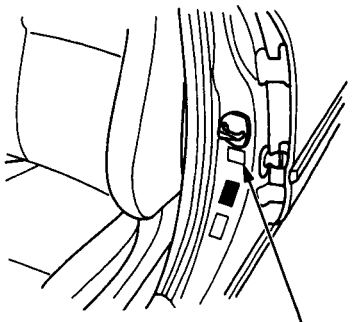
Engine Number

C35A1 - 7000001

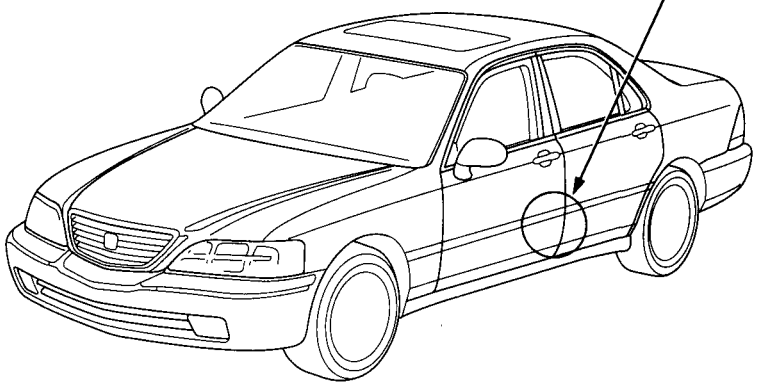
Engine Type
C35A1: 3.5 ℓ SOHC Sequential Multiport Fuel-injected engine
Serial Number

Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification.

Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification.



COLOR LABEL



INT. COLOR
TYPE F
EXT. COLOR
G-97P
KA SZ3 A6 C

Paint Code

Design Specifications

	ITEM		METRIC	ENGLISH	NOTES
DIMENSIONS	Overall Length		4,995 mm	196.7 in	
	Overall Width		1,820 mm	71.7 in	
	Overall Height		1,435 mm	56.5 in	
	Wheelbase		2,910 mm	114.6 in	
	Track Front/Rear		1,550/1,540 mm	61.0/60.6 in	
	Seating Capacity		Five		
WEIGHT (USA)	Gross Vehicle Weight Rating (GVWR)		—	4,810 lbs	
WEIGHT (CANADA)	Gross Vehicle Weight Rating (GVWR)		2,180 kg	—	
ENGINE	Type		Water cooled, 4-stroke SOHC gasoline engine		
	Cylinder Arrangement		90° V6-cylinder		
	Bore and Stroke		90.0 x 91.0 mm	3.54 x 3.58 in	
	Displacement		3,474 cm³ (mℓ)	211 cu-in	
	Compression Ratio		9.6		
	Valve Train		Belt driven, SOHC		
	Lubrication System		Forced and wet sump, trochoid pump		
	Oil Pump Displacement		37.9 ℓ/min	40.0 US qt/min 33.3 Imp qt/min	at 6,000 pump rpm
	[At oil temp. 248°F (120°C)]				
	Fuel Required		Premium UNLEADED gasoline Pump Octane number of 91 or higher		
	Water Pump Displacement		187 ℓ/min	198 US qt/min 165 Imp qt/min	at 5,760 pump rpm
	[At coolant temp. 77°F (25°C)]				
STARTER	Type/Make		Planetary gear reduction, permanent magnet/Mitsubishi		
	Normal Output		2.0 kW		
	Nominal Voltage		12 V		
	Hour Rating		30 seconds		
	Direction of Rotation		Clockwise as viewed from gear end		
	Weight		4.6 kg	10.1 lbs	
CLUTCH	Clutch Type		Torque converter		
TRANSMISSION	Transmission		Electronically controlled 4-speed automatic, 1 reverse		
	Primary Reduction		Direct 1 : 1		
	Gear Ratio	1st	2.458		
		2nd	1.454		
		3rd	0.948		
		4th	0.652		
		Reverse	1.880		
	Secondary Reduction	Gear type	Single helical gear		
		Gear ratio	1.333		
	Final Reduction	Gear type	Spiral bevel gear		
		Gear ratio	3.133		
AIR CONDITIONING	Cooling Capacity		4,880 Kcal/h	19,360 BTU/h	
	Compressor	Type/Make	Swash-plate/DENSO		
		No. of Cylinders	10		
		Capacity	207.4 cm³/rev	12.7 cu-in/rev	
		Max. Speed	7,600 rpm		
		Lubricant Capacity	140 *mℓ*	4 2/3 fl oz, 4.9 Imp qt	*Lubricant type:* ND-OIL8
	Condenser	Type	Corrugated fin type		
	Evaporator	Type	Corrugated fin type		
	Blower	Type	Sirocco fan		
		Motor Input	200 W/12 V		
		Speed Control	Infinite variable		
		Max. Capacity	575 m³/h	20,300 cu-ft/h	at 13.5 V
	Temp Control		Air-mix type		
	Compressor clutch	Type	Dry, single plate, poly-V-belt drive		
		Power consumption	40 W/12 V		
	Refrigerant	Type	HFC-134a (R-134a)		
		Quantity	750 $^{0}_{-50}$ g	26.5 $^{0}_{-1.8}$ oz	

(cont'd)

From page 14-12

Measure ATP D3 Voltage:
1. Shift to D3 position.
2. Measure the voltage between the E9 and A26 terminals.

Is there voltage?

YES → **Repair open in the wire between the E9 terminal and the transmission range switch.**

NO

Measure ATP 2 Voltage:
1. Shift to 2 position.
2. Measure the voltage between the E10 and A26 terminals.

Is there voltage?

YES → **Repair open in the wire between the E10 terminal and the transmission range switch.**

NO

Measure ATP1 Voltage:
1. Shift to 1 position.
2. Measure the voltage between the E11 and A26 terminals.

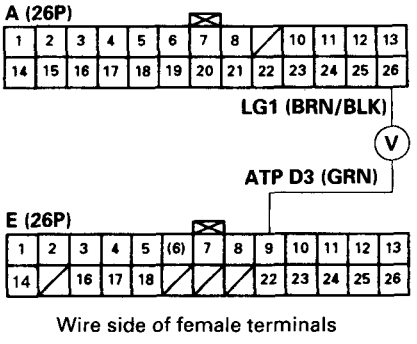
Is there voltage?

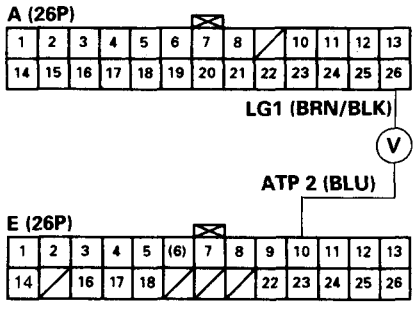
YES → **Repair open in the wire between the E11 terminal and the transmission range switch.**

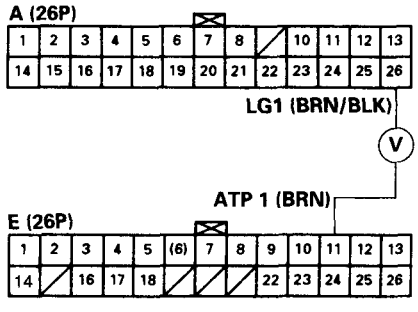
NO

Check for loose PCM connectors. If necessary, substitute a known-good PCM and recheck.

PCM CONNECTORS





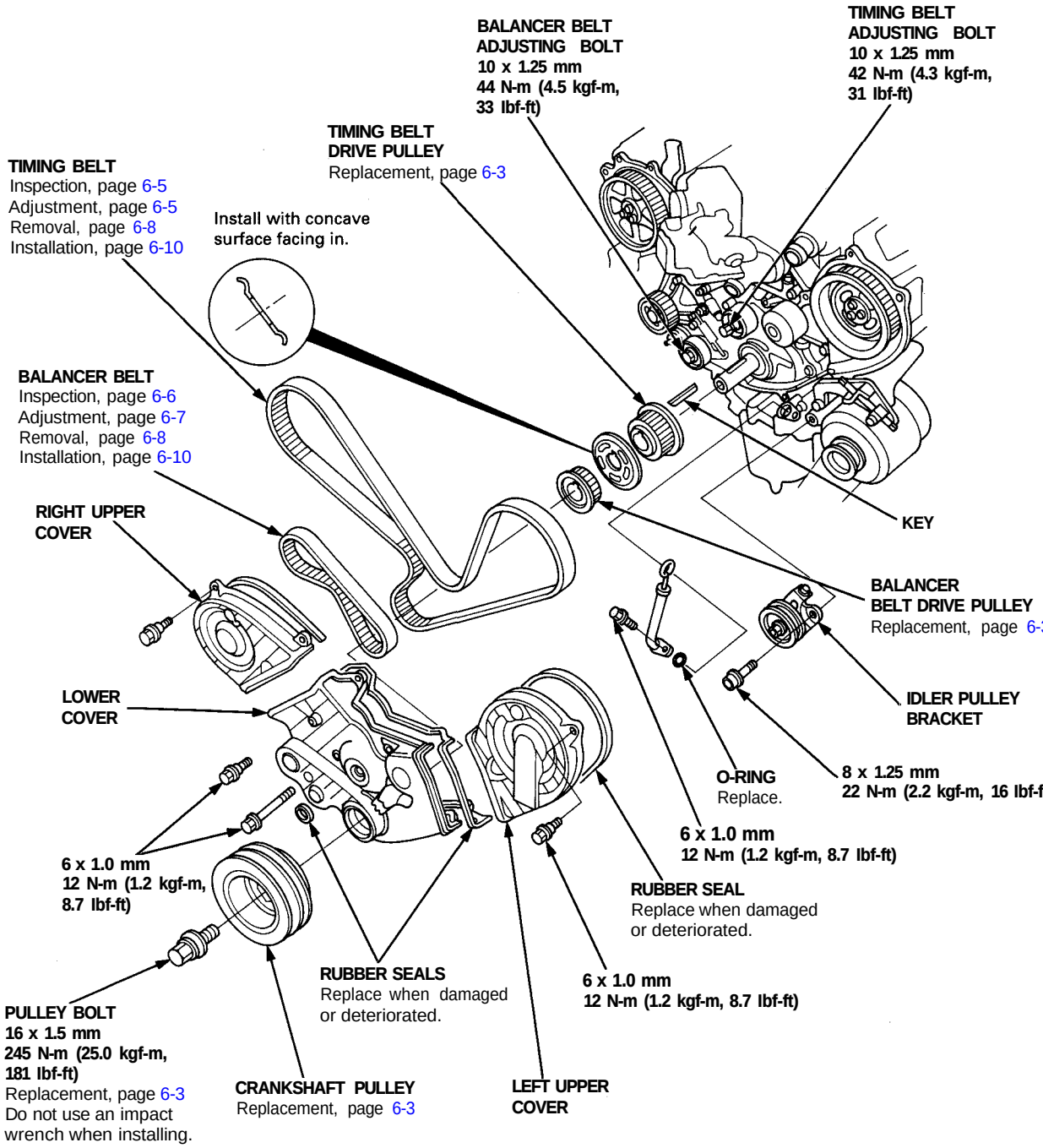


Timing Belt and Balancer Belt

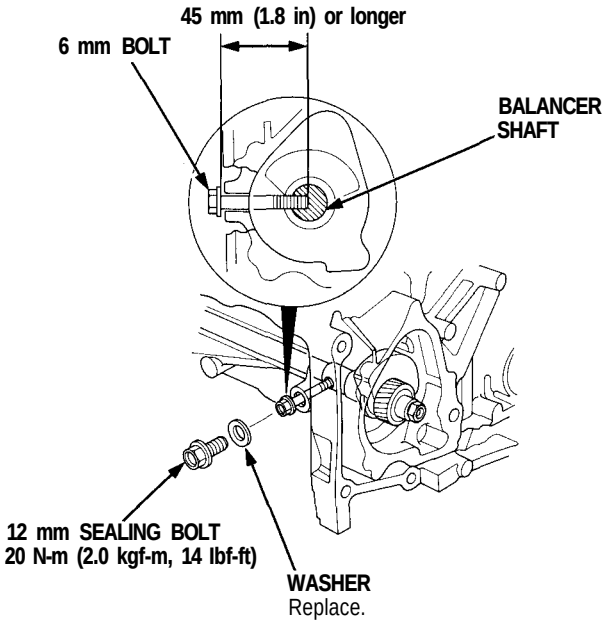
Illustrated Index

NOTE:

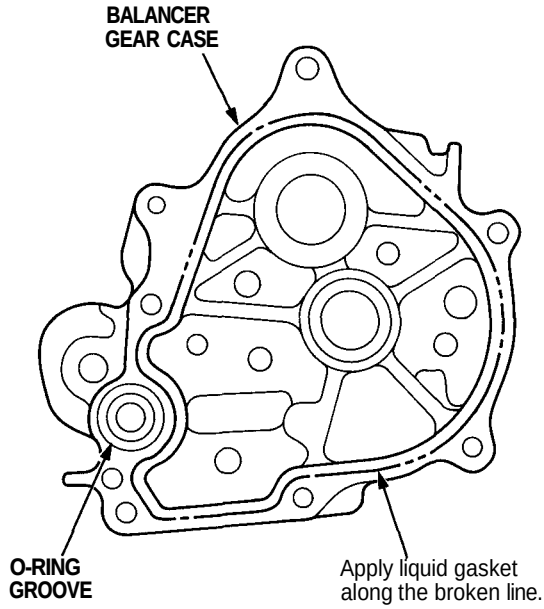
- Refer to page 6-10 for how to position the crankshaft and pulley before installing the belt.
- Mark the direction of rotation on the belt before removing it.
- Do not use the upper covers and lower cover to store removed items.
- Clean the upper covers and lower cover before installing them.
- Replace the camshaft seals and crankshaft seals if there is oil leakage.
- Refer to page 6-3 before installing the timing belt.



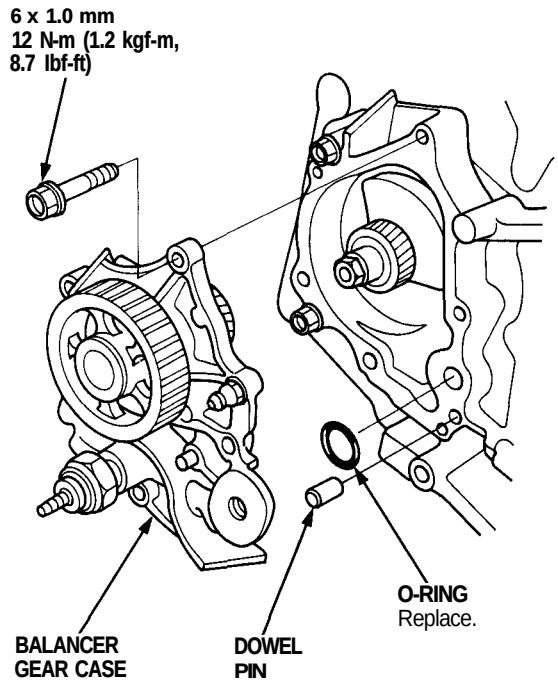
27. Align the maintenance hole and the balancer shaft hole. Insert a 6 mm bolt that is at least 45 mm (1.8 in) long into the balancer shaft.



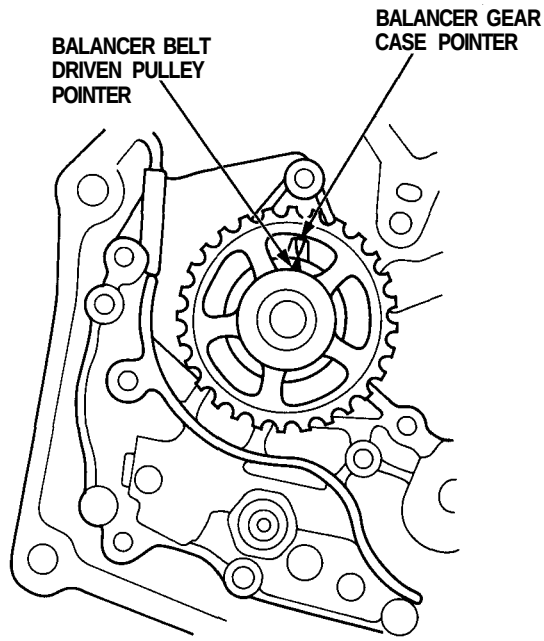
28. Apply liquid gasket to the oil pump mating surface of the balancer gear case.



29. Install the balancer gear case.



30. Check alignment of the pointers after installing the balancer gear case.



31. Remove the 6 mm bolt. Install the sealing bolt in the maintenance hole. Use a new washer.

PGM-FI System

Spark Plug Voltage Detection Module (cont'd)

P1318 The scan tool indicates Diagnostic Trouble Code (DTC) P1318: Spark Plug Voltage Detection Module Reset circuit malfunction [left bank (Bank 2)]

P1319 The scan tool indicates Diagnostic Trouble Code (DTC) P1319: Spark Plug Voltage Detection Module Reset circuit malfunction [right bank (Bank 1)]

— The MIL has been reported on.
— DTC P1318 and/or P1319 is stored.

Problem verification:
1. Do the PCM Reset Procedure.
2. Start the engine. Hold the engine at 3,000 rpm with no load (in Park or neutral) until the radiator fan comes on, then let it idle.

Is DTC P1318 and/or P1319 indicated?

NO → **Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C451 (located under right side of dash), C214 (Spark Plug Voltage Detection Module) and PCM.**

YES

Check for a short in the wire (PHRSTL or PHRSTR* line):
1. Turn the ignition switch OFF.
2. Disconnect the spark plug voltage detection module 8P connector.
3. Disconnect the PCM connector F (8P).
4. Check for continuity between the PCM connector terminal F7 (F3*) and body ground.

Is there continuity?

YES → **Repair short in the wire between the PCM (F7 or F3*) and spark plug voltage detection module.**

NO

Check for an open in the wire (PHRSTL or PHRSTR* line):
Check for continuity between the PCM connector terminal F7 (F3*) and spark plug voltage detection module 8P connector terminal No. 7 (No. 2*).

Is there continuity?

NO → **Repair open in the wire between the PCM (F7 or F3*) and spark plug voltage detection module.**

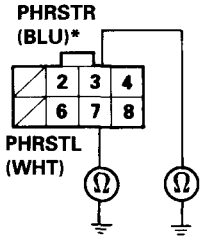
YES

Check for an open in the wire (IG1L or IG1R* line):
1. Turn the ignition switch ON (II).
2. Measure voltage between the spark plug voltage detection module 8P connector terminal No. 5 (No. 4*) and body ground.

(To page 11-105)

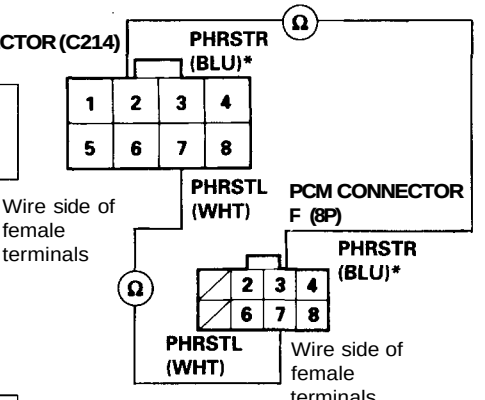
*: P1319

PCM CONNECTOR F (8P)



Wire side of female terminals

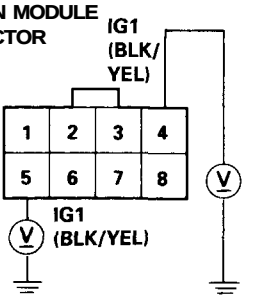
SPARK PLUG VOLTAGE DETECTION MODULE 8P CONNECTOR (C214)



Wire side of female terminals

Wire side of female terminals

SPARK PLUG VOLTAGE DETECTION MODULE 8P CONNECTOR (C214)



PCM CONNECTOR D (22P)

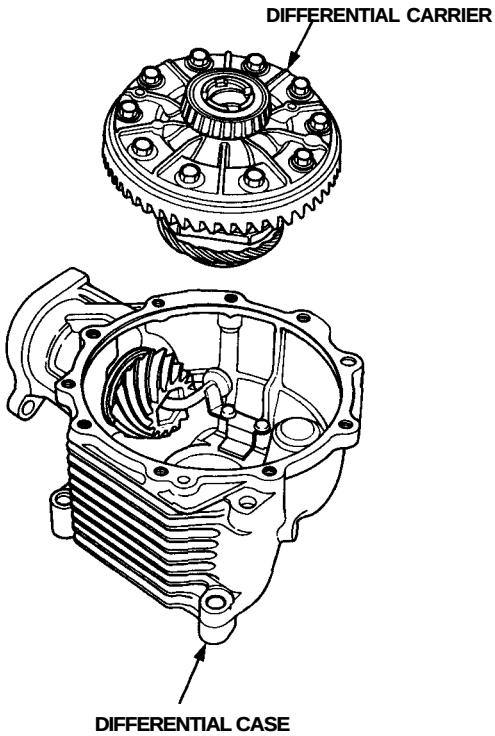
Terminal Number	Signal	Description	Measuring Conditions/Terminal Voltage
D1	VBU	Back-up power system	Always battery voltage
D6	TPS	Throttle Position (TP) sensor signal input	With ignition switch ON (II) and throttle fully open: About 4.8 V With ignition switch ON (II) and throttle fully closed: About 0.1 V
D7	ECT	Engine Coolant Temperature (ECT) sensor signal input	With ignition switch ON (II) and depending on engine coolant temperature: About 0.1 V – 4.8 V
D11	SG1	Sensors ground	
D21	VCC2	Sensors power supply circuit	With ignition switch ON (II): About 5 V
D22	SG2	Sensors ground	

PCM CONNECTOR E (26P)

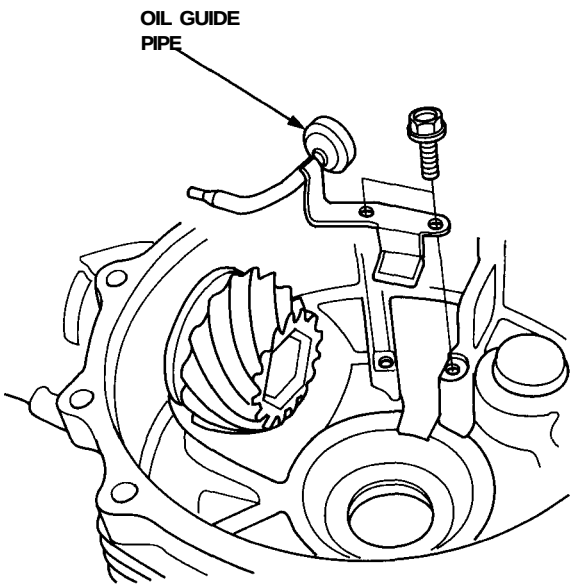
Terminal Number	Signal	Description	Measuring Conditions/Terminal Voltage
E1	VB SOL	Power supply circuit for shift and torque converter clutch (lock-up control) solenoid valves	With ignition switch ON (II): Battery voltage With ignition switch OFF: 0 V
E2	STOP SW	Brake pedal position switch signal input	Brake pedal pressed: Battery voltage Brake pedal released: 0 V
E3	LS+	A/T clutch pressure control solenoid valve power supply positive electrode	With ignition switch ON (II): Pulsing signal
E4	NM	Mainshaft speed sensor signal input	Depending on vehicle speed: Pulsing signal When engine is stopped: 0 V
E5	NC	Countershaft speed sensor signal input	Depending on vehicle speed: Pulsing signal When vehicle is stopped: 0 V
E6	TCSFT	A/T gear position signal for traction control output	With ignition switch ON (II): Pulsing signal
E7	ATP R	Transmission range switch [R] position signal input	In [R] position: 0 V In other than [R] position: Battery voltage
E8	ATP D4	Transmission range switch [D4] position signal input	In [D4] position: 0 V In other than [D4] position: Battery voltage
E9	ATP D3	Transmission range switch [D3] position signal input	In [D3] position: 0 V In other than [D3] position: Battery voltage
E10	ATP 2	Transmission range switch [2] position signal input	In [2] position: 0 V In other than [2] position: Battery voltage
E11	ATP 1	Transmission range switch [1] position signal input	In [1] position: 0 V In other than [1] position: Battery voltage
E12	SHA	Shift solenoid valve A control	In [2] position, in 2nd and 3rd gear in [D3], [D4] position: Battery voltage In [1] position, in 1st gear in [D3], [D4] position, in 4th gear in [D4] position: 0 V
E13	LCA	Torque converter clutch solenoid valve A control	When lock-up is ON: Battery voltage With no lock-up: 0 V

(cont'd)

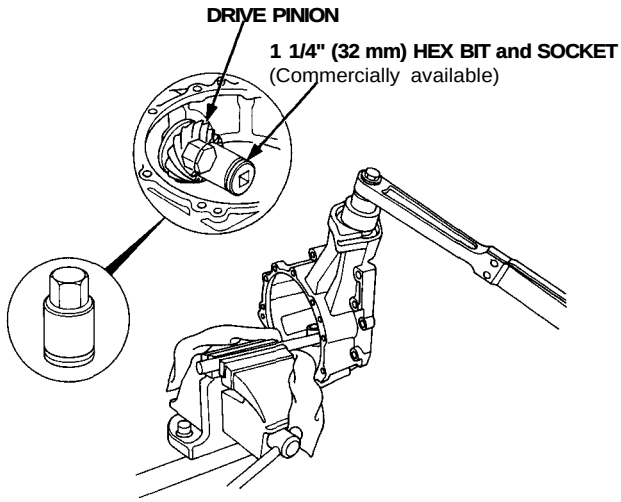
5. Remove the differential carrier from the differential case.



6. Remove the oil guide pipe.

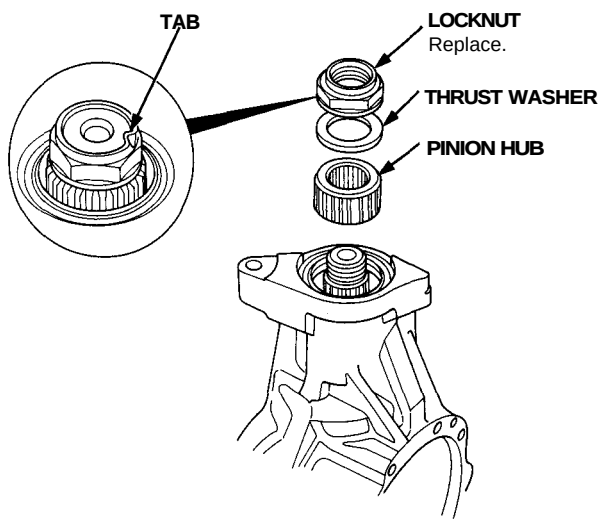


7. Hold the drive pinion with a 1 1/4" (32 mm) hex bit and socket as shown.



8. Raise the locknut tab from the groove of the drive pinion, and remove the locknut, thrust washer and pinion hub.

NOTE: Be sure the tab of the locknut is completely clear of the groove or damage to the threads can occur.



(cont'd)

Parking Brake

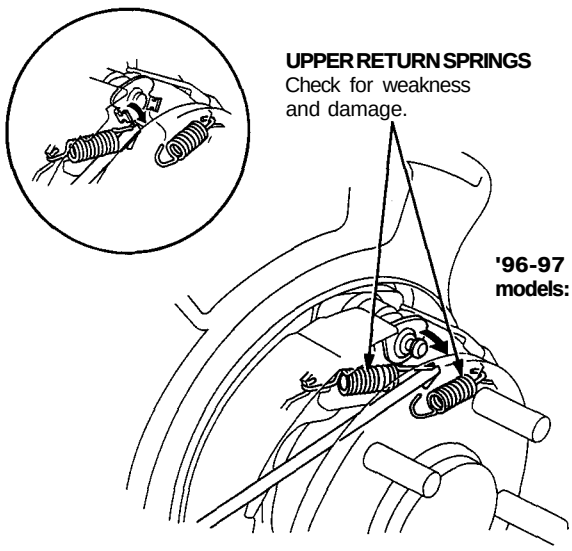
Parking Brake Shoes Replacement

⚠ WARNING Do the lining surface brake-in when replacing the shoes with new linings and/or new brake discs (drums).

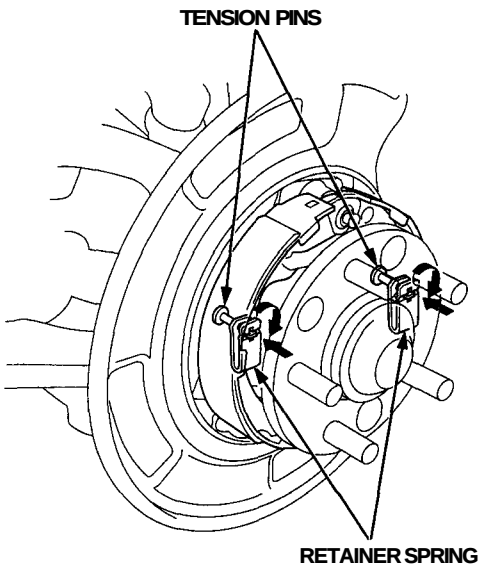
1. Remove the rear brake caliper and rear brake disc/drum (see section 18).

2. Disconnect and remove the upper return springs.

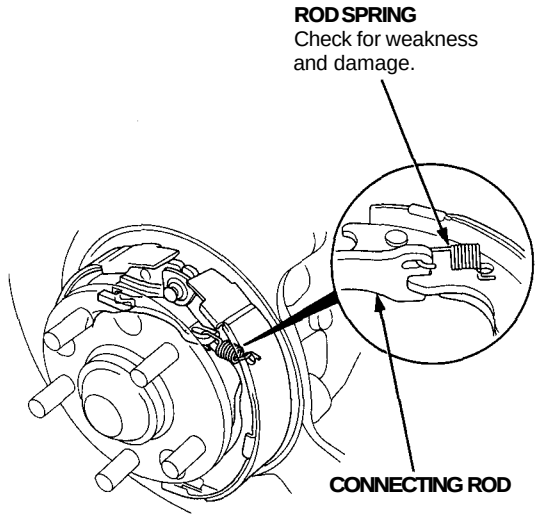
'98-01 models:



3. Remove the tension pins by pushing and turning the retainer spring.

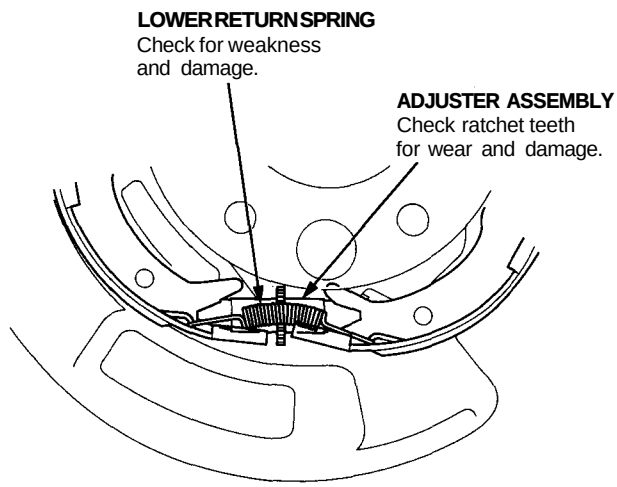


4. Disconnect the rod spring, and remove the connecting rod.



5. Lower the parking brake shoe assembly.

6. Separate the brake shoes by removing the lower return spring and adjuster assembly.



Troubleshooting Precautions

System Indicators

- If the system is OK, the ABS indicator goes off once after turning the ignition switch ON (II) without starting the engine, and then come on again and go off several seconds later after starting the engine. This occurs because the VSA control unit is turned on by the IG2 power source.
- The ABS indicator or VSA system indicator comes on when the VSA control unit detects a problem in the system.
- The ABS indicator or VSA system indicator will also come on under these conditions, even though the system is operating properly:
  — The vehicle goes into a spin
  — The ABS continues to operate for a long time
  — The vehicle is subjected to an electrical signal disturbance
  If there is a fault in the PGM-FI system, only the VSA system indicator comes on.
- The VSA Activation Indicator will flash when only the drive wheels rotate or one of the drive wheels is stuck. When this occurs, the ABS indicator and VSA system indicator do not come on.

To determine the actual cause of the problem, question the customer about the problem, taking these conditions into consideration.

- When a problem is detected and the ABS or VSA indicator comes on, there are cases when the indicator stays on until the ignition switch is turned OFF, and cases when the indicator goes off automatically when the system returns to normal. For DTC 61 and 62, the indicator goes off automatically when the system returns to normal. For all other codes, the indicator stays on until the ignition switch is turned OFF.
- For DTCs 12, 14, 16, 18, 51, 52, 53, 66, 68 and 84, the ABS indicator goes off when the vehicle is driven again and the system is OK after the ignition switch is turned from OFF to ON (II). However, if the DTC is cleared, the CPU resets and the indicator goes off right after the engine is started if the system is OK.
- The ABS is not operational when the ABS indicator is ON; the VSA is not operational when the VSA indicator is ON.
- When the VSA indicator and MIL are both ON, troubleshoot the PGM-FI system first.

Diagnostic Trouble Code (DTC)

- The memory can hold any number of DTCs. However, when the same DTC is detected more than once, the more recent DTC is written over the earlier one. Therefore, when the same problem is detected repeatedly, it is memorized as a single DTC.
- The DTCs are indicated in ascending number order, not in the order they occur.
- The DTCs are memorized in the EEPROM (non-volatile memory). Therefore, the memorized DTCs cannot be canceled by disconnecting the battery. Perform the specified procedures to clear the DTCs.

Self-diagnosis

- Self-diagnosis can be classified into two categories:
  — Initial diagnosis: Performed right after the engine starts and until the ABS or VSA indicator goes off.
  — Regular diagnosis: Performed right after the initial diagnosis until the ignition switch is turned OFF.
- When a problem is detected by self-diagnosis, the VSA control unit shifts to fail-safe mode.

Kickback

The pump motor operates when the ABS is functioning, and the fluid in the reservoir is forced out to the master cylinder, causing kickback at the brake pedal.

Pump Motor

- The pump motor operates when the ABS is functioning.
- The VSA control unit checks the pump motor operation during initial diagnosis when the vehicle is started. You may hear the motor operate at this time, but it is normal.

Brake Fluid Replacement/Air Bleeding

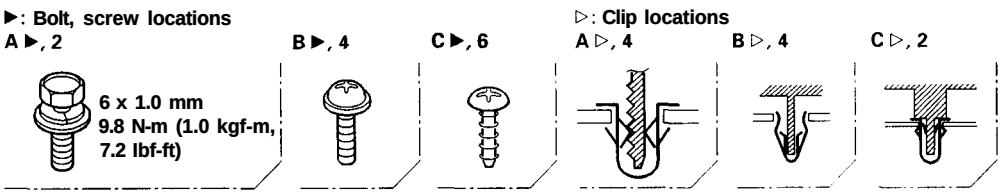
Brake fluid replacement and air bleeding procedures are identical to the procedures use on vehicles not equipped with VSA. To ease bleeding, start with the front wheels.

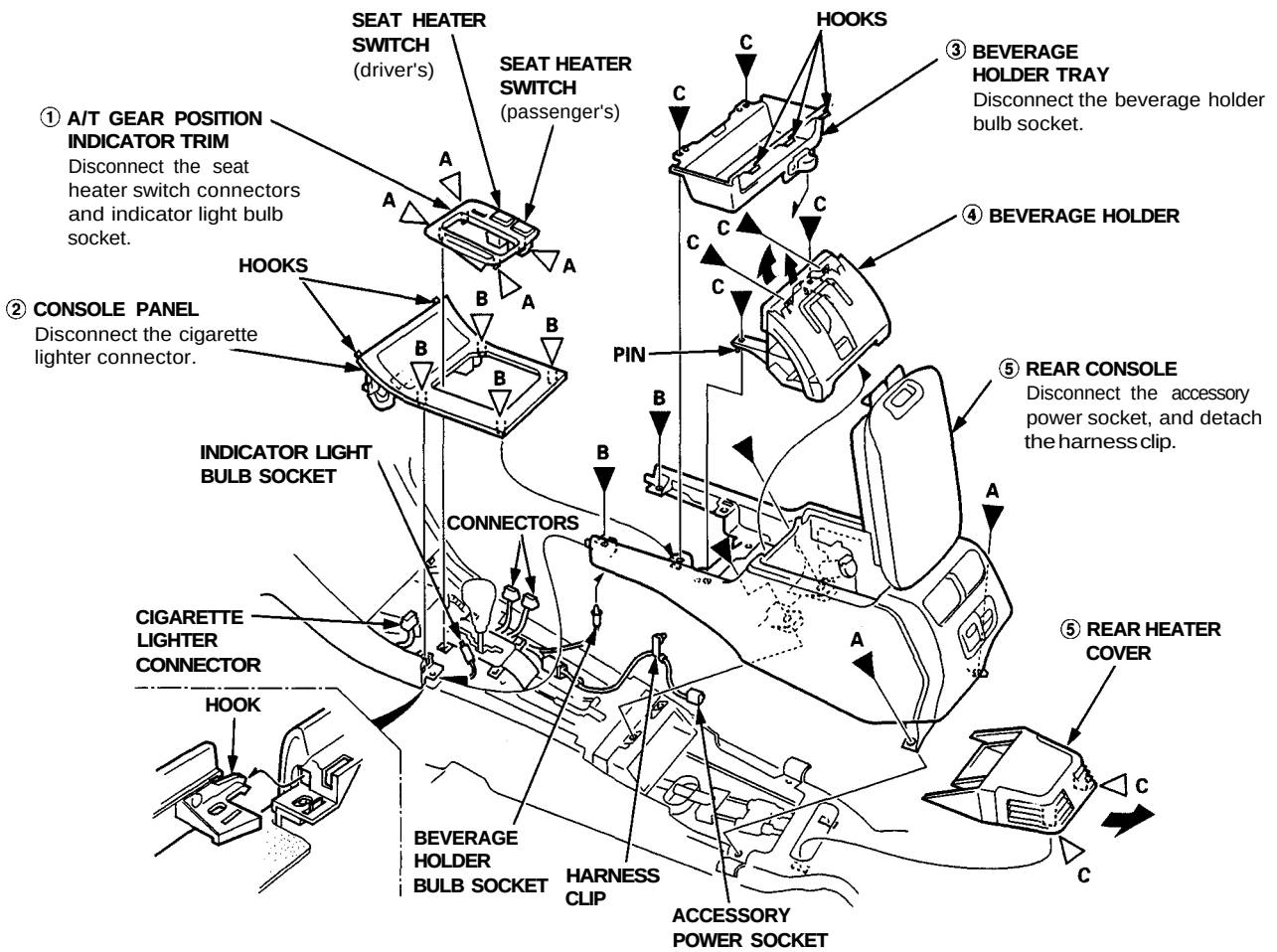
Removal — '99 - 01 Models

CAUTION: When prying with a flat-tip screwdriver, wrap it with protective tape to prevent damage.

NOTE: Take care not to scratch the console panel, rear console, front seat, and related parts.

Disassemble in numbered sequence.





Installation is the reverse of the removal procedure.

NOTE:

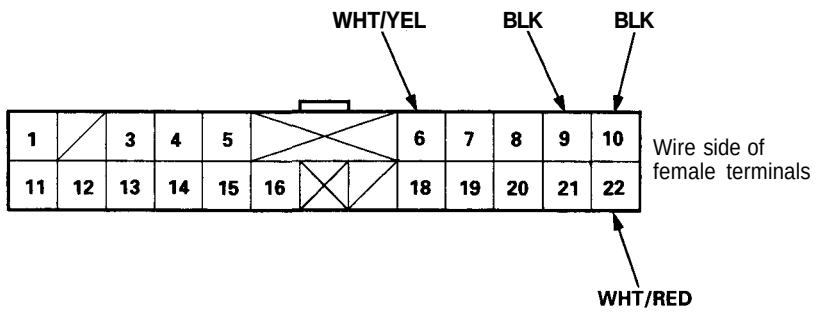
- If necessary, replace any damaged clips.
- Make sure the wire harnesses are not pinched.
- Make sure the connectors and bulb socket are connected properly.

Safety Indicator

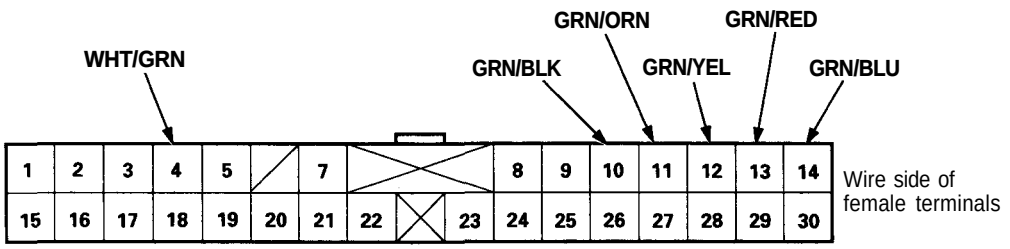
Indicator Input Test

1. Remove the gauge assembly (see page 23-85).
2. Disconnect the connectors from the gauge assembly.
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 look OK, make the following input tests at the connector.
     — If any test indicates a problem, find and correct the cause, then recheck the system.
     — If all the input test prove OK, the gauge printed circuit panel must be faulty; replace it.

22P CONNECTOR "A" (C508)



30P CONNECTOR "B" (C509)

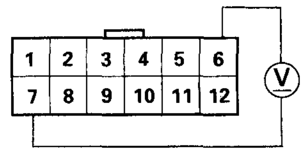


NOTE: All connector views are from wire side of female terminals.

Flowchart No. 10

MIRROR CONTROL UNIT
12P CONNECTOR "A"

Power Mirror Switch:
Turn the ignition switch ON (II). Check for voltage between the power mirror switch connector A6 and A7 terminals.

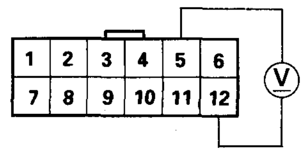


Is there battery voltage?

NO →
- Open or short in the YEL/BLK wire
- Open in the BLK wire
- Faulty power mirror switch

YES ↓

Power Mirror Switch:
Check for voltage between the mirror control unit 12P connector A5 and A12 terminals with the mirror switch pressed toward UP.

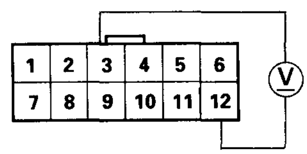


Is there battery voltage?

NO →
- Open or short in the RED/WHT wire
- Faulty power mirror switch

YES ↓

Power Mirror Switch (Right Mirror):
1. Move the selector switch to RIGHT.
2. Check for voltage between the mirror control unit 12P connector A3 and A12 terminals with the mirror switch pressed toward RIGHT.

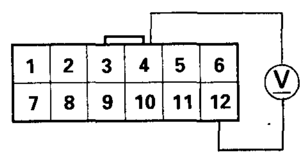


Is there battery voltage?

NO →
- Open or short in the BLU/GRN wire
- Faulty power mirror switch

YES ↓

Power Mirror Switch (Right Mirror):
Check for voltage between the mirror control unit 12P connector A4 and A12 terminals with the mirror switch pressed toward LEFT or DOWN.

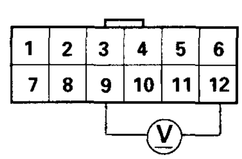


Is there battery voltage?

NO →
- Open or short in the BLU/ORN wire
- Faulty power mirror switch

YES ↓

Power Mirror Switch (Left Mirror):
1. Move the selector switch to LEFT.
2. Check for voltage between the mirror control unit 12P connector A9 and A12 terminals with the mirror switch pressed toward RIGHT.

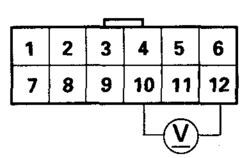


Is there battery voltage?

NO →
- Open or short in the YEL wire
- Faulty power mirror switch

YES ↓

Power Mirror Switch (Left Mirror):
Check for voltage between the mirror control unit 12P connector A10 and A12 terminals with the mirror switch pressed toward LEFT or DOWN.



To page 23-222

(cont'd)

Control Unit Input Test

NOTE:
- Before testing, go to the Troubleshooting Guide (see page 23-244). Be sure to go through self-diagnosis function modes 1 and 2 (see pages 23-248 and 23-252).
- All connector views are from the wire side of female terminals unless otherwise noted.

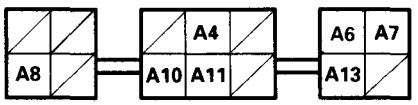
Multiplex Control Unit (Driver's):

1. Remove the under-dash fuse/relay box (see page 23-66).

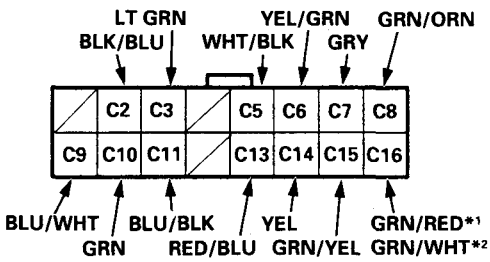
2. Remove the driver's unit from the under-dash fuse/relay box (see page 23-247).

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 look OK, make the following input tests at the connector and the fuse/relay box socket.
     — If any test indicates a problem, find and correct the cause, then recheck the system.
     — If all the input tests prove OK, the control unit must be faulty; replace it.



Fuse/relay box socket



*1: USA
*2: Canada

Disconnect the connectors from the removed driver's unit.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A13	Fuse/relay box socket	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 13 (7.5 A) fuse in the under-dash fuse/relay box • An open in the wire
C6	YEL/GRN	Ignition switch ON (II) and left rear switch down master switch on	Check for voltage to ground: There should be battery voltage.	• Blown No. 13 (7.5 A) fuse in the under-dash fuse/relay box • Faulty master switch • An open in the wire
C14	YEL	Ignition switch ON (II) and left rear switch up master switch on	Check for voltage to ground: There should be battery voltage.	
A8	Fuse/relay box socket	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G401, G402 or G251) • An open in the wire
A11		Under all conditions	Check for continuity to ground: There should be continuity.	• Faulty power window relay • Poor ground (G401, G402 or G251) • An open in the wire

(cont'd)

Audio driving instructions cannot be heard

Check the audio driving instructions set up:
1. Push the display unit MENU key, and select "set-up".
2. Check the audio driving instruction volume setting.

Is it set to OFF? — YES → **Set the volume to an audible level.**

NO

Check for a short to body ground in the RG circuit:
1. Turn the ignition switch OFF.
2. Disconnect the navigation unit connector B (16P) and audio unit connector C (12P).
3. Check for continuity between body ground and navigation unit connector B (16P) terminal No. 9 and No. 10 individually.

Is there continuity? — **YES** → **There is a short to body ground between the audio unit and the navigation unit. Replace the affected shielded harness.**

NO

Check for an open in the RG L+ circuit:
Check for continuity between the navigation unit connector B (16P) terminal No. 9 and the audio unit connector C (12P) terminal No. 4.

Is there continuity? — NO → **There is an open between the audio unit and the navigation unit. Replace the affected shielded harness.**

YES

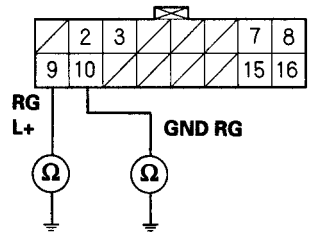
Check for a short to body ground in the MUTE circuit:
1. Turn the ignition switch OFF.
2. Disconnect the navigation unit connector B (16P) and audio unit connector C (12P).
3. Check for continuity between body ground and navigation unit connector B (16P) terminal No. 3.

Is there continuity? — YES → **Repair short to body ground in the wire between the navigation unit and the audio unit.**

NO

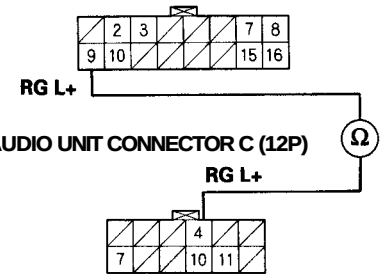
(To page 23-410)

NAVIGATION UNIT CONNECTOR B (16P)



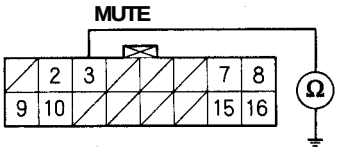
Wire side of female terminals

NAVIGATION UNIT CONNECTOR B (16P)



Wire side of female terminals

NAVIGATION UNIT CONNECTOR B (16P)



Wire side of female terminals

(cont'd)