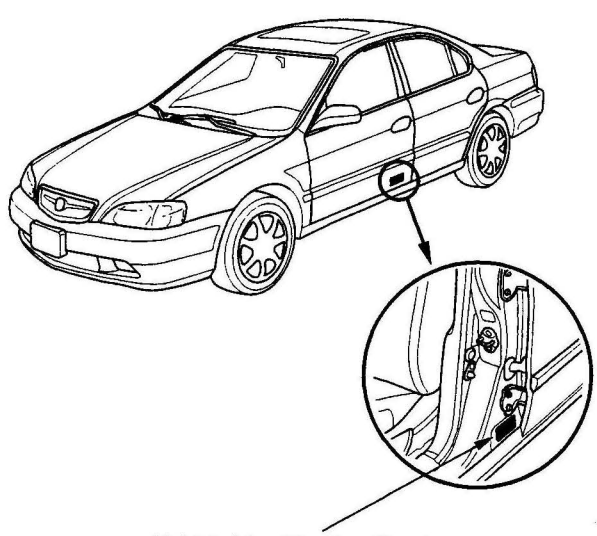
Chassis and Paint Codes - 1999 Model

Vehicle Identification Number

19U UA5 6 4 * X A 000001

a b c d e f g h

a. Manufacturer, Make and Type of Vehicle
19U: HONDA OF AMERICA MFG., INC., U.S.A.
ACURA Passenger vehicle
b. Line, Body and Engine Type
UA5: ACURA 3.2TL/J32A1
c. Body Type and Transmission Type
6: 4-door Sedan/4-speed Automatic
d. Vehicle Grade (Series)
US model
4: Base Package
5: With Navigation System
Canada model
4: Base Package
e. Check Digit
f. Model Year
X: 1999
g. Factory Code
A: Marysville, Ohio Factory in U.S.A.
h. Serial Number
US model: 000001–
Canada model: 800001–



Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification.

Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification.

Engine Number

J32A1 - 1000001

a b

a. Engine Type
J32A1: 3.2 ℓ SOHC VTEC Sequential Multiport Fuel-injected engine
b. Serial Number

Transmission Number

B7VA - 6500001

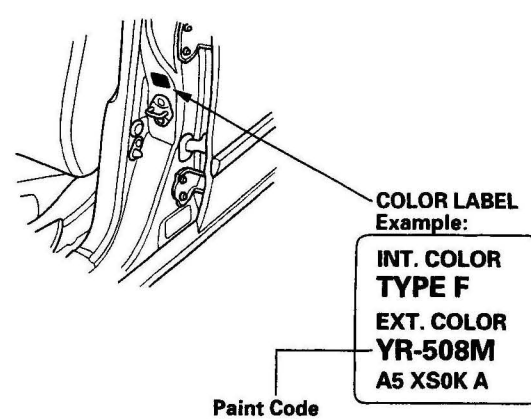
a b

a. Transmission Type
B7VA: 4-speed Automatic
b. Serial Number

Paint Code

Code	Color	US model	Canada model
B-93P	Monterey Blue Pearl	○	○
G-87P	Dark Emerald Pearl	○	○
G-91M	Laguna Metallic	○	○
NH-578	Taffeta White	○	○
NH-592	Flamenco Black Pearl	○	○
NH-603P	White Diamond Pearl	○	○
NH-623M	Satin Silver Metallic	○	○
R-507P	Firepepper Pearl	○	○
YR-508M	Heather Mist Metallic	○	○

○: indicates applicable



Cylinder Head

Item	Measurement	Qualification	Standard or New	Service Limit
Head	Warpage		———	0.05 mm (0.002 in.)
	Height		120.95—121.05 mm (4.762—4.766 in.)	———
Camshaft	End play		0.05—0.20 mm (0.002—0.008 in.)	0.20 mm (0.008 in.)
	Camshaft-to-holder oil clearance		0.050—0.089 mm (0.0020—0.0035 in.)	0.15 mm (0.006 in.)
	Total runout		0.03 mm (0.001 in.) max.	0.04 mm (0.002 in.)
	Cam lobe height J32A1 engine ('99 model)	Intake, primary	34.615 mm (1.3628 in.)	———
		Intake, mid	36.272 mm (1.4280 in.)	———
		Intake, secondary	31.188 mm (1.2279 in.)	———
		Exhaust	36.076 mm (1.4203 in.)	———
	Cam lobe height J32A1 engine ('00-03 models)	Intake, primary	34.737 mm (1.3676 in.)	———
		Intake, mid	36.445 mm (1.4348 in.)	———
		Intake, secondary	34.919 mm (1.3748 in.)	———
		Exhaust	36.326 mm (1.4302 in.)	———
	Cam lobe height J32A2 engine	Intake, primary	34.737 mm (1.3676 in.)	———
		Intake, mid	36.445 mm (1.4348 in.)	———
		Intake, secondary	34.919 mm (1.3748 in.)	———
		Exhaust	36.389 mm (1.4326 in.)	———
Valves	Clearance (cold)	Intake	0.20—0.24 mm (0.008—0.009 in.)	———
		Exhaust	0.28—0.32 mm (0.011—0.013 in.)	———
	Stem O.D.	Intake	5.485—5.495 mm (0.2159—0.2163 in.)	5.455 mm (0.2148 in.)
		Exhaust	5.450—5.460 mm (0.2146—0.2150 in.)	5.420 mm (0.2134 in.)
	Stem-to-guide clearance	Intake	0.020—0.045 mm (0.0008—0.0018 in.)	0.08 mm (0.003 in.)
		Exhaust	0.055—0.080 mm (0.0022—0.0031 in.)	0.12 mm (0.005 in.)
Valve seats	Width	Intake	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
		Exhaust	1.25—1.55 mm (0.049—0.061 in.)	2.00 mm (0.079 in.)
	Stem installed height	Intake	46.75—47.55 mm (1.841—1.872 in.)	47.80 mm (1.882 in.)
		Exhaust	46.68—47.48 mm (1.838—1.869 in.)	47.73 mm (1.879 in.)
	Free length '99-01 models	Intake	51.03 mm (2.009 in.)	———
		Exhaust	53.48 mm (2.106 in.)	———
Valve springs	Free length '02-03 models	Intake	51.54 mm (2.029 in.)	———
		Exhaust	51.06 mm (2.010 in.)	———
Valve guides	I.D.	Intake	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
		Exhaust	5.515—5.530 mm (0.2171—0.2177 in.)	5.55 mm (0.219 in.)
	Installed height	Intake	21.20—22.20 mm (0.835—0.874 in.)	———
		Exhaust	20.63—21.63 mm (0.812—0.852 in.)	———
Rocker arms	Arm-to-shaft clearance	Intake	0.026—0.067 mm (0.0010—0.0026 in.)	0.067 mm (0.0026 in.)
		Exhaust	0.026—0.077 mm (0.0010—0.0030 in.)	0.077 mm (0.0030 in.)

BACK

Lubricants and Fluids

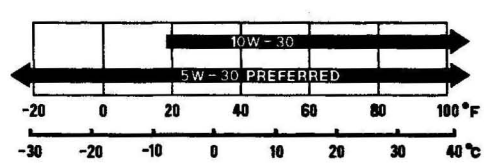
For the details of lubrication points and type of lubricants to be applied, refer to the illustrated index and various work procedures (such as Assembly/Reassembly, Replacement, Overhaul, Installation, etc.) contained in each section.

NO.	LUBRICATION POINTS	LUBRICANT
1	Engine	Honda Motor Oil API Service Grade: Use SJ "Energy Conserving" grade oil. The oil container may also display the API Certification seal shown below. Make sure it says "For Gasoline Engines." SAE Viscosity: See chart below.
2	Transmission	Honda ATF-Z1*1
3	Brake system (includes ABS line)	Honda DOT 3 Brake Fluid*2
4	Power steering gearbox	Steering grease (P/N 08733-B070E)
5 6	Throttle cable end (dashboard lower panel hole) Shift lever	Silicone grease
7	Throttle cable end (throttle link)	Super High Temp Urea Grease (P/N 08798-9002)
8 9 10 11 12 13 14	Brake booster clevis Pedal linkage Battery terminals Fuel fill door Hood hinges and hood latch Trunk hinges and latch Door hinges, upper and lower	Multi-purpose grease
15	Rear brake shoe linkage	Molykote Grease 44MA
16	Caliper piston boot, caliper pins, and boots	Honda Caliper Grease (P/N 08C30-B0234M)
17	Power steering system	Honda Power Steering Fluid *3
18	Air conditioning compressor	Compressor oil: DENSO: ND-OIL 8 (P/N 38897-PR7-A01 AH or 38899-PR7-A01) For Refrigerant: HFC-134 a (R-134 a)

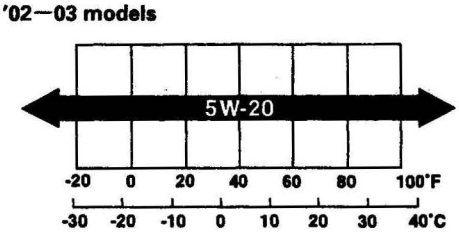
API CERTIFICATION SEAL

Recommended Engine Oil
Engine oil viscosity for ambient temperature ranges

'99—01 models

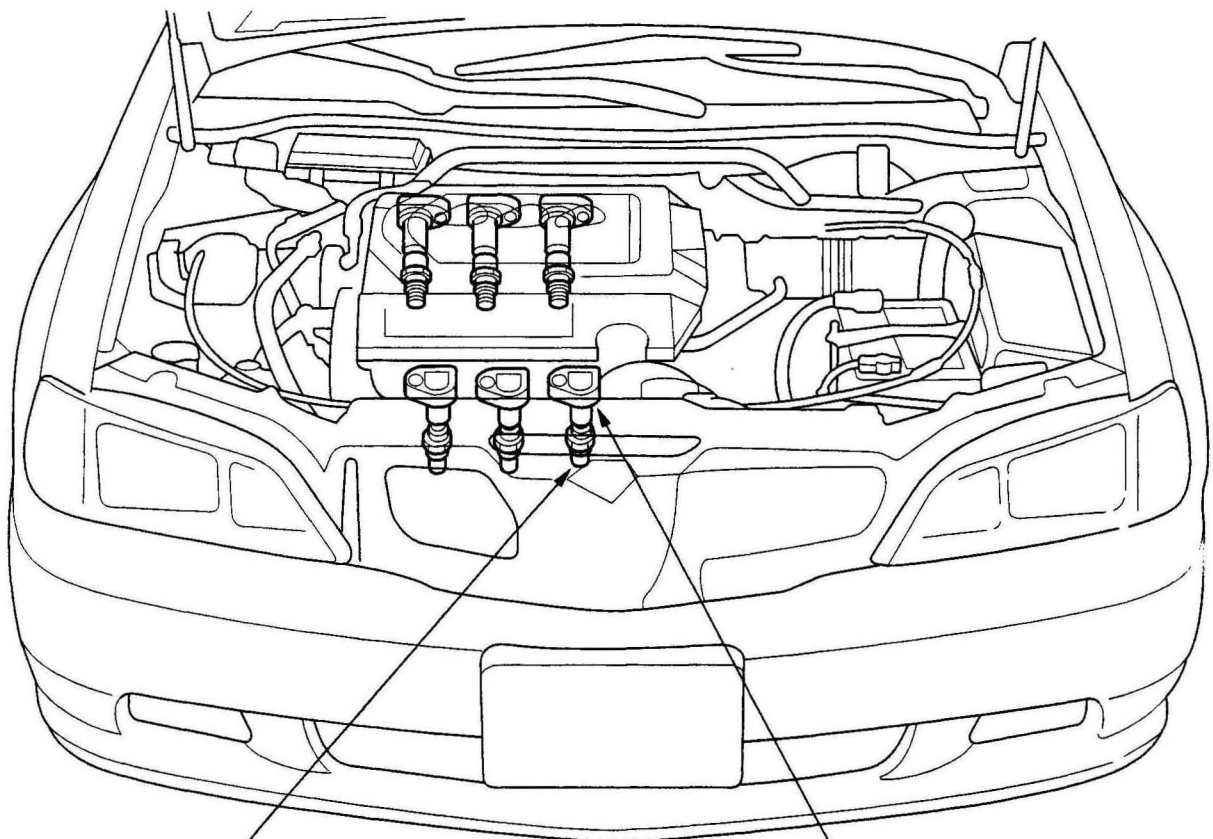


'02—03 models



*1: Always use Honda ATF-Z1. Using a non-Honda ATF can affect shift quality.
*2: Always use Honda DOT 3 Brake Fluid. Using a non-Honda brake fluid can cause corrosion and decrease the life of the system.
*3: Always use Honda Power Steering Fluid. Using any other type of power steering fluid or automatic transmission fluid can cause increased wear and poor steering in cold weather.

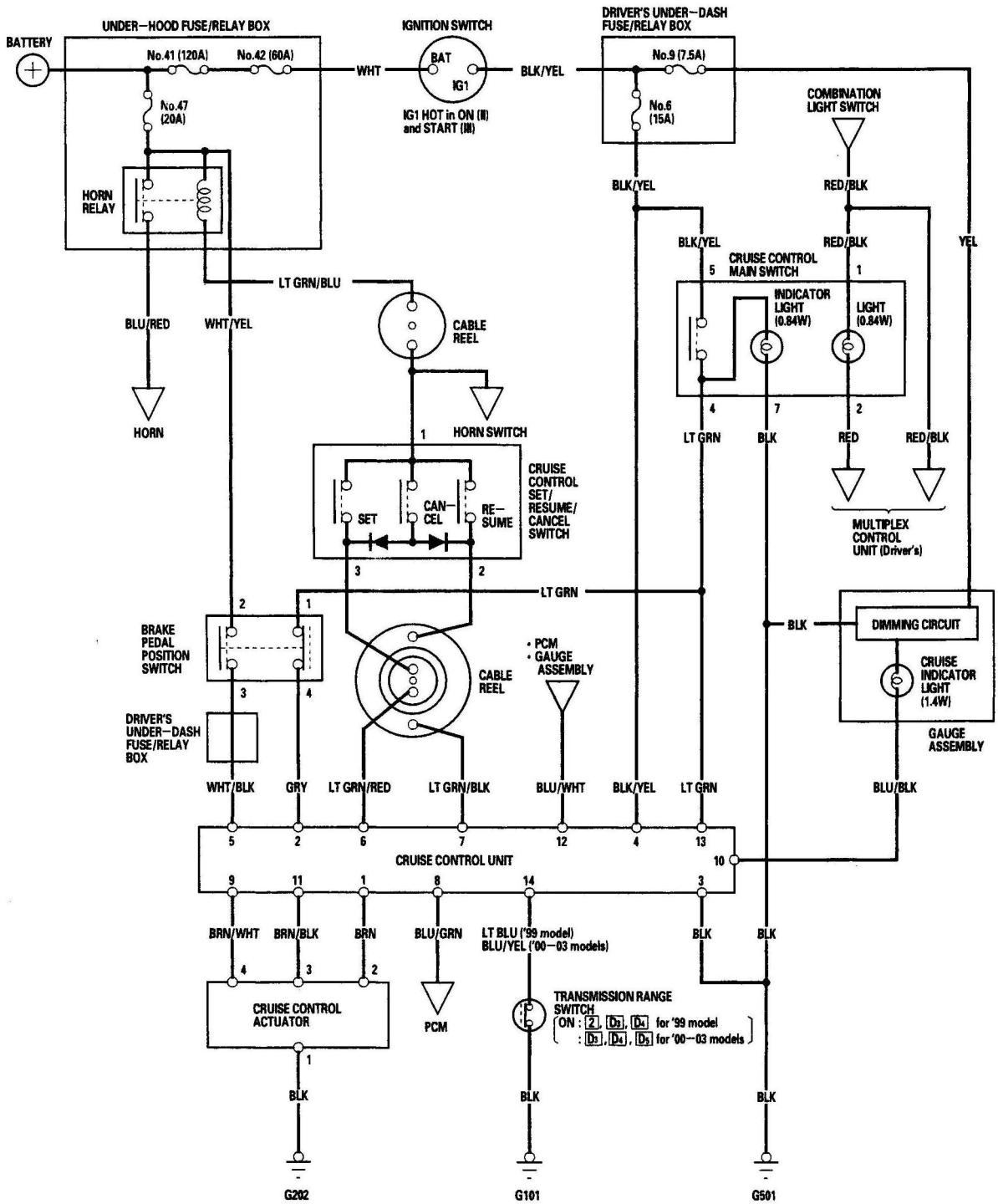
Component Location Index



SPARK PLUG
Inspection, page 4-17

BACK

Circuit Diagram



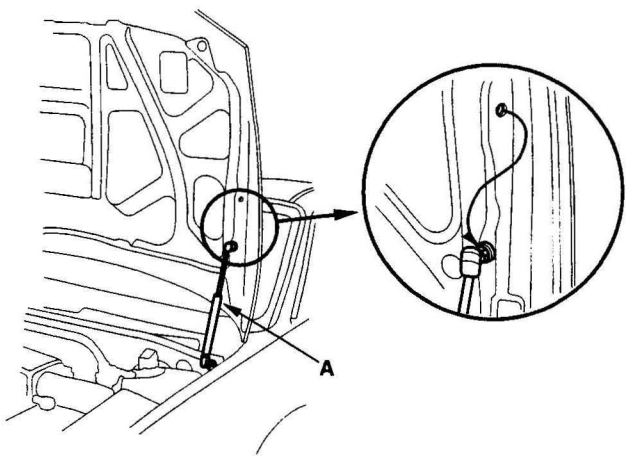
BACK

Engine Removal

NOTE:
- Use fender covers to avoid damaging painted surfaces.
- To avoid damage, unplug the wiring connectors carefully while holding the connector portion.
- Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact other wiring or hoses, or interfere with other parts.

1. Remove the support struts (A) from the engine hood. Move the hood to a vertical position, then reinstall the support strut as shown.

   NOTE: Do not attempt to close the hood with the support strut in the vertical position, as it will damage the support strut and hood.



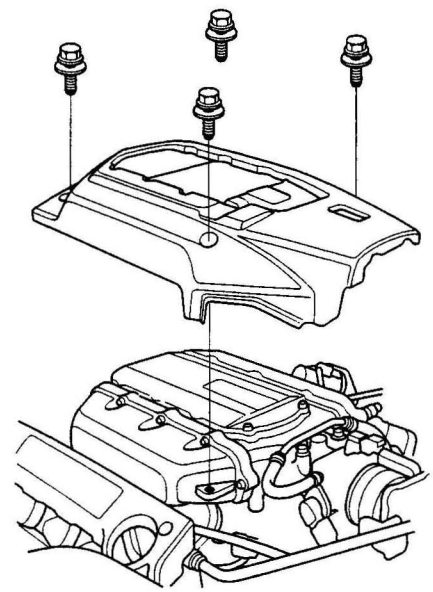
2. Make sure you have the anti-theft code for the radio, then write down the frequencies for the radio's preset buttons.

3. Disconnect the negative cable from the battery first, then the positive cable.

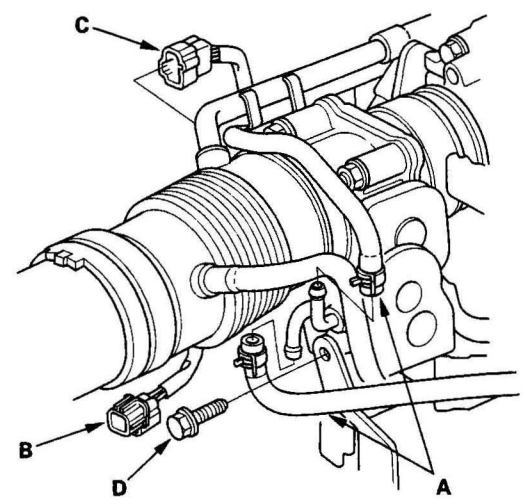
4. Remove the battery.

5. Remove the intake manifold cover ('00-03 models).

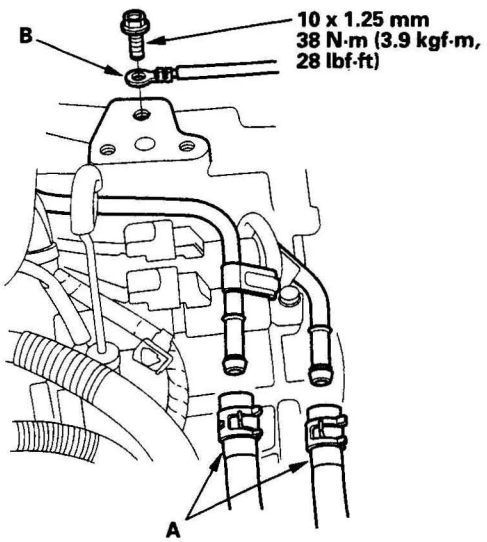
   J32A2 engine shown:



6. Remove the water bypass hoses (A). Disconnect the TCS control valve actuator connector (B) and the TCS control valve angle sensor connector (C) from the TCS control valve assembly, then remove the bolt (D) securing the TCS control valve bracket (J32A2 engine).



29. Install the automatic transmission fluid (ATF) cooler hoses (A) ('99 model).



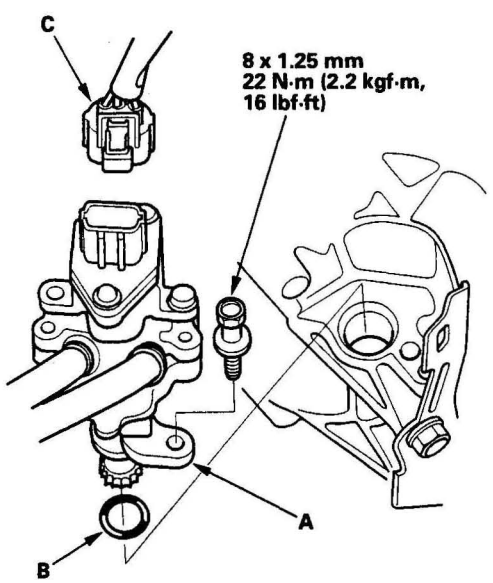
30. Install the ground cable (B) (J32A1 engine).

31. Install the alternator belt.

32. Loosely install the P/S pump belt and pump.

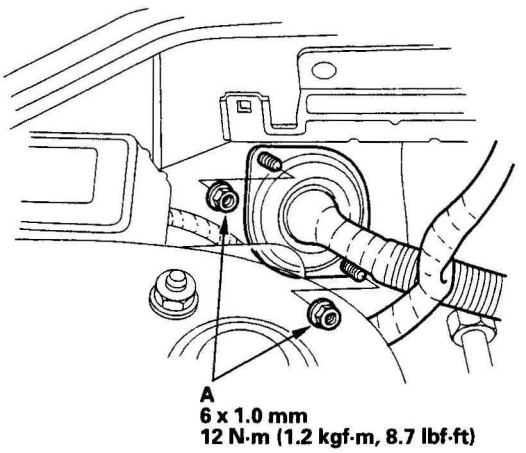
33. Adjust the P/S pump belt (see page 17-14).

34. Install the power steering speed sensor (A) with a new O-ring (B).

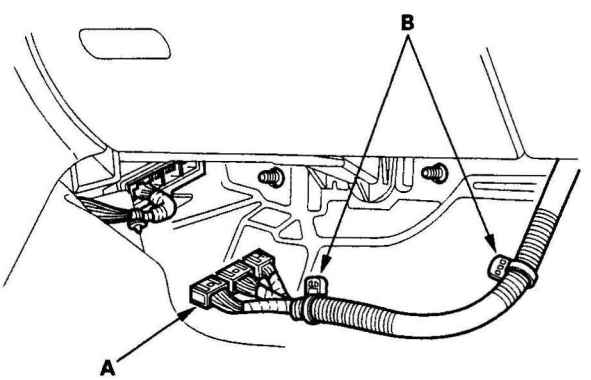


35. Connect the vehicle speed sensor (VSS) connector (C) ('99 model).

36. Push the powertrain control module (PCM) connectors through the bulkhead. Install the grommet, and tighten the mounting nuts (A).



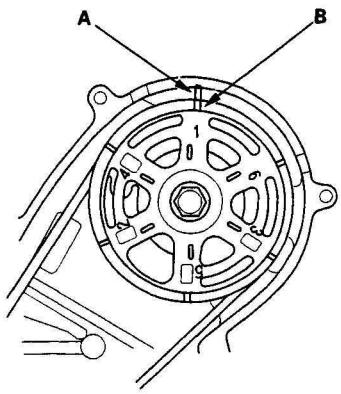
37. Connect the PCM connector (A), and install the harness clamps (B).



(cont'd)

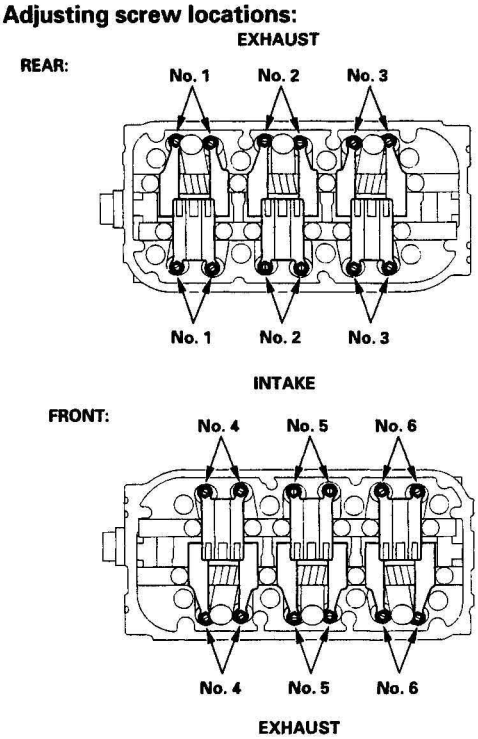
Valve Clearance Adjustment

1. Remove the cylinder head covers (see page 6-31).
2. Remove the front upper cover (see page 6-17).
3. Set the No. 1 piston at top dead center (TDC). Align the pointer (A) on the back cover with the No. 1 piston TDC mark (B) on the front camshaft pulley.

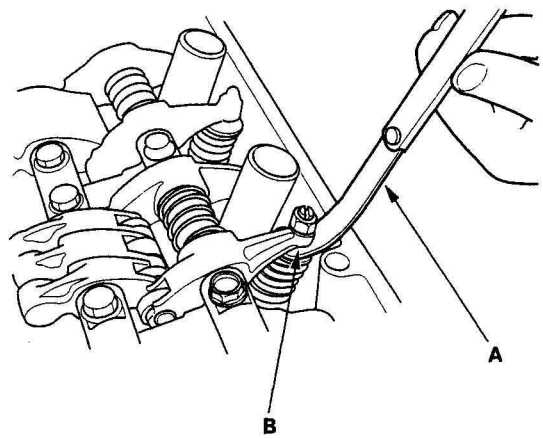


4. Select the correct thickness feeler gauge for the valves you're going to check.
   Intake: 0.20–0.24 mm (0.008–0.009 in.)
   Exhaust: 0.28–0.32 mm (0.011–0.013 in.)

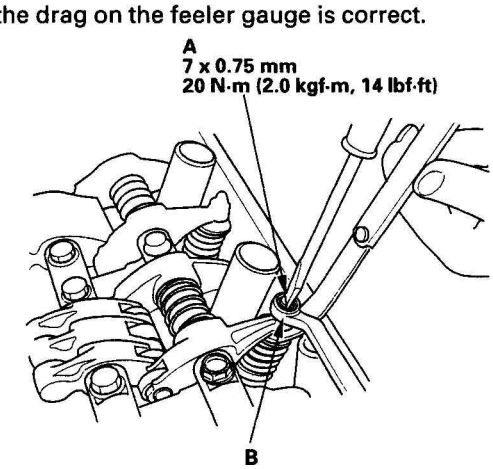
Adjusting screw locations:



5. Insert the feeler gauge (A) between the adjusting screw (B) and the end of the valve stem and slide it back and forth; you should feel a slight amount of drag.



6. If you feel too much or too little drag, loosen the locknut (A), and turn the adjusting screw (B) until the drag on the feeler gauge is correct.



7. Tighten the locknut and recheck the clearance. Repeat the adjustment if necessary.

(cont'd)

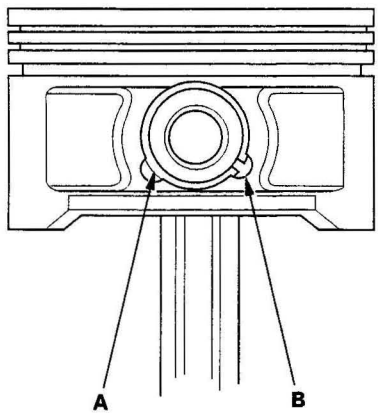
Piston, Pin, and Connecting Rod Replacement

Disassembly

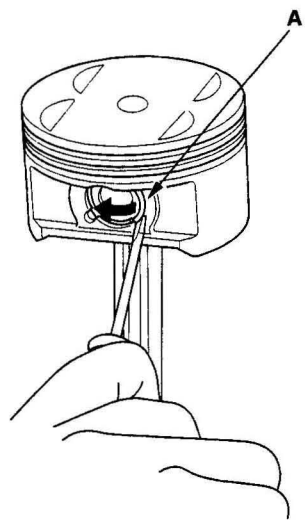
1. Remove the piston from the cylinder block (see page 7-12).

2. Apply engine oil to the piston pin snap rings (A) and turn them in the ring grooves until the end gaps are lined up with the cutouts in the piston pin bores (B).

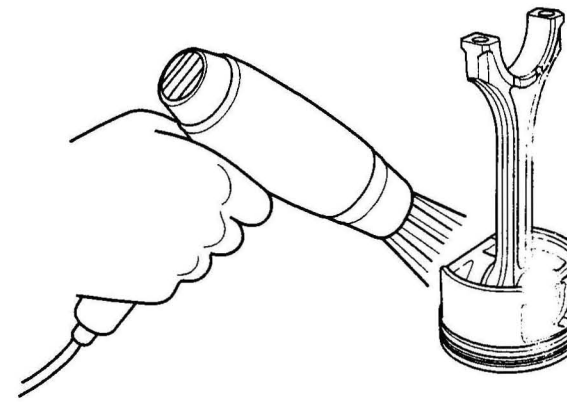
   NOTE: Take care not to damage the ring grooves.



3. Remove both snap rings (A). Start at the cutout in the piston pin bore. Remove the snap rings carefully so they do not go flying or get lost. Wear eye protection.



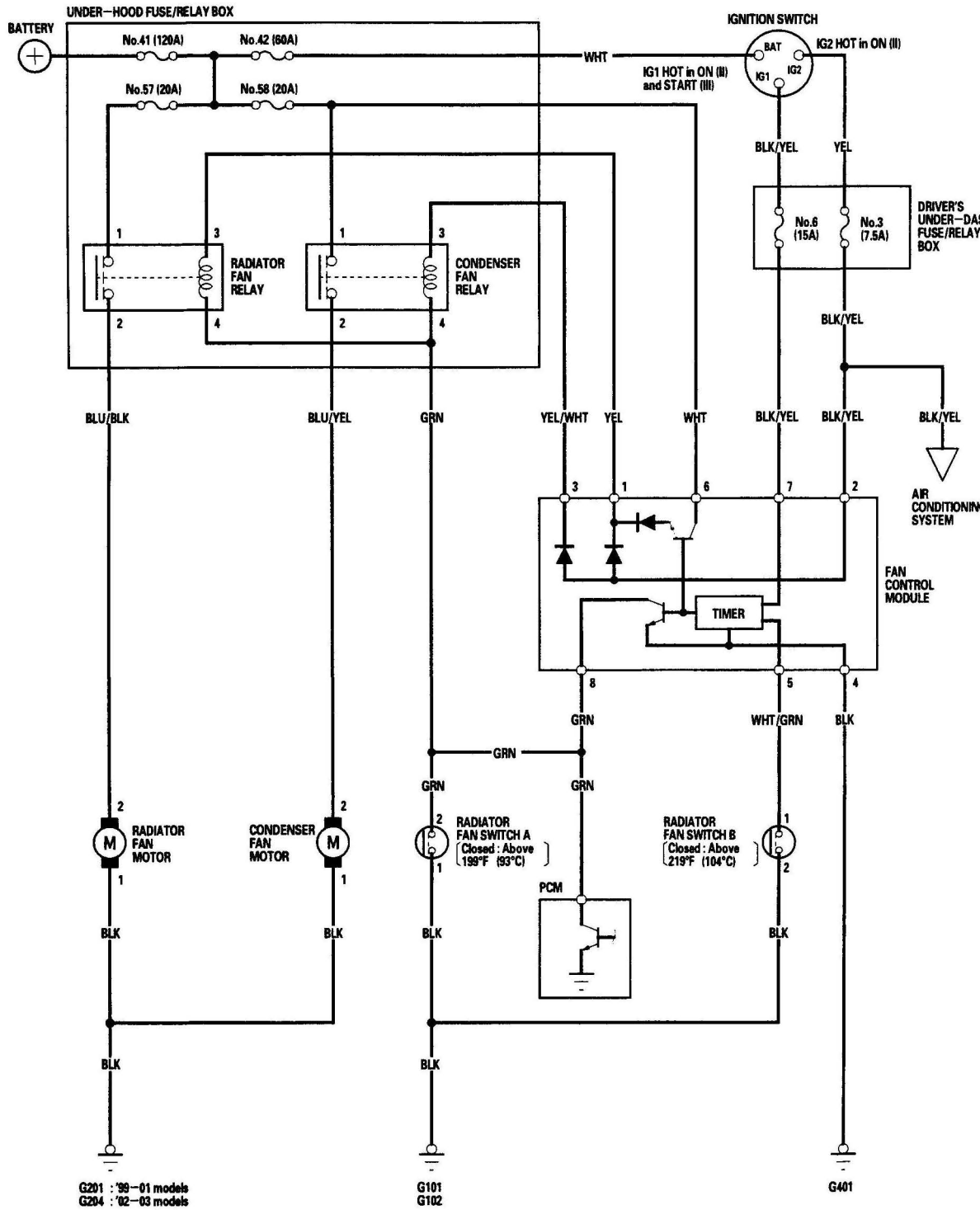
4. Heat the piston and connecting rod assembly to about 158°F (70°C), then remove the piston pin.



BACK

Circuit Diagram

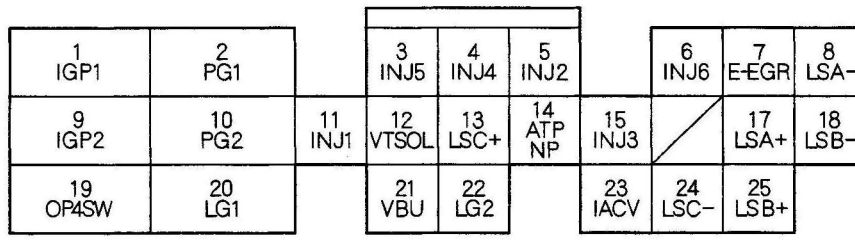
J32A1 engine:



BACK

System Descriptions (cont'd)

PCM Inputs and Outputs at Connector B (25P) – '00-01 Models



Wire side of female terminals

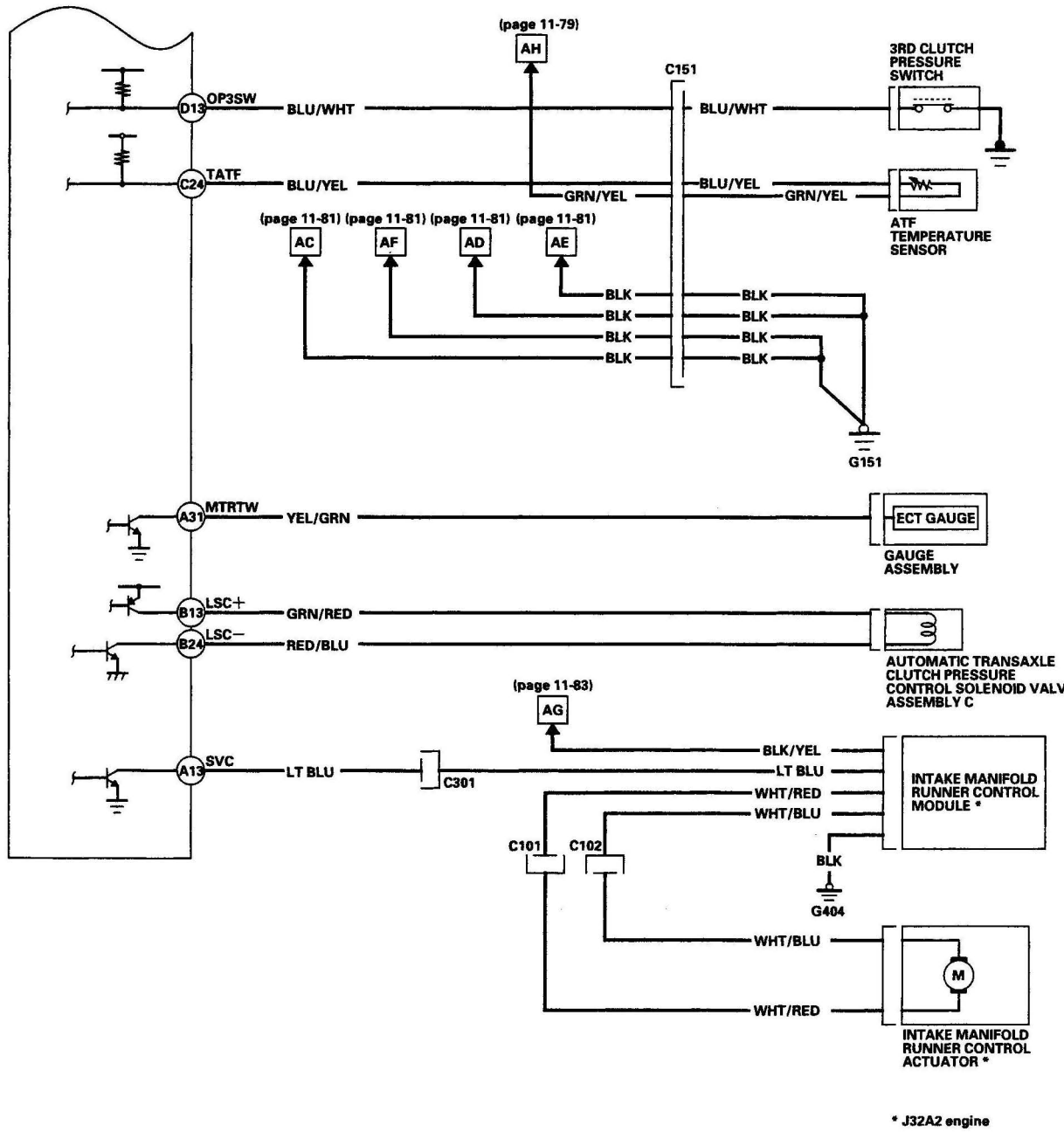
NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	YEL/BLK	IGP1 (POWER SOURCE)	Power source for the PCM control circuit.	With ignition switch ON (II): battery voltage With ignition switch OFF: about 0 V
2	BLK	PG1 (POWER GROUND)	Ground for the PCM control circuit.	Less than 1.0 V at all times
3	BLK/RED	INJ5 (No. 5 INJECTOR)	Drives No. 5 injector.	With engine running: duty controlled
4	YEL	INJ4 (No. 4 INJECTOR)	Drives No. 4 injector.	
5	RED	INJ2 (No. 2 INJECTOR)	Drives No. 2 injector.	
6	WHT/BLU	INJ6 (No. 6 INJECTOR)	Drives No. 6 injector.	
7	BLU/RED	E-EGR	Drives EGR valve.	With EGR operation during driving with fully warmed up engine: duty controlled With EGR not operating: 0 V
8	WHT	LSA – (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A – SIDE)	A/T clutch pressure control solenoid valve A power supply negative terminal.	With ignition switch ON (II): duty controlled
9	YEL/BLK	IGP2 (POWER SOURCE)	Power source for the PCM control circuit.	With the ignition switch ON (II): battery voltage With the ignition switch OFF: about 0 V
10	BLK	PG2 (POWER GROUND)	Ground for the PCM control circuit.	Less than 1.0 V at all times
11	BRN	INJ1 (No.1 INJECTOR)	Drives No.1 injector.	With engine running: duty controlled
12	GRN/YEL	VTSOL (VTEC SOLENOID VALVE)	Drives VTEC solenoid valve.	With engine at low rpm: about 0 V With engine at high rpm: battery voltage
13	GRN/RED	LSC + (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C + SIDE)	A/T clutch pressure control solenoid valve C power supply positive electrode	With ignition switch ON (II): duty controlled
14	BLU/WHT	ATPNP (TRANSMISSION RANGE SWITCH)	Detects transmission range switch signal.	In Park or neutral: about 0 V In any other position: battery voltage
15	BLU	INJ3 (No. 3) INJECTOR	Drives No. 3 injector.	With engine running: duty controlled
17	RED	LSA + (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A + SIDE)	A/T clutch pressure control solenoid valve A power supply positive electrode	With the ignition switch ON (II): duty controlled
18	GRN	LSB – (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B – SIDE)	A/T clutch pressure control solenoid valve B power supply negative terminal	With ignition switch ON (II): duty controlled
19	BLU/YEL	OP4SW (4TH OIL PRESSURE SWITCH)	Detects 4th oil pressure switch.	With ignition switch ON (II): battery voltage
20	BRN/YEL	LG1 (LOGIC GROUND)	Ground for the PCM control circuit.	Less than 1.0 V at all times
21	WHT/RED	VBU (VOLTAGE BACK UP)	Power source for the PCM control circuit. Power source for the DTC memory.	Battery voltage at all times
22	BRN/YEL	LG2 (LOGIC GROUND)	Ground for the PCM control circuit.	Less than 1.0 V at all times
23	BLK/RED	IACV (IDLE AIR CONTROL VALVE)	Drives IAC valve.	With engine running: duty controlled
24	RED/BLU	LSC – (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C – SIDE)	A/T clutch pressure control solenoid valve C power supply negative terminal	With ignition switch ON (II): duty controlled
25	BRN/BLU	LSB + (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B + SIDE)	A/T clutch pressure control solenoid valve B power supply positive terminal	With the ignition switch ON (II): duty controlled

BACK

System Descriptions (cont'd)

PCM Circuit Diagram—'02-03 Models (cont'd)



* J32A2 engine

BACK

Control Unit Input Test (cont'd)

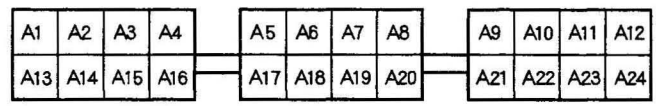
Multiplex Control Unit, Passenger's

6. Remove the passenger's multiplex control unit from the passenger's under-dash fuse/relay box, and disconnect its connector.

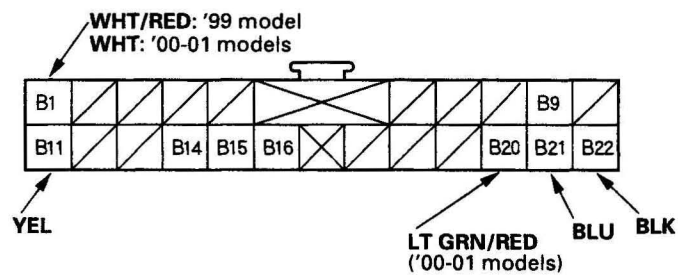
7. Inspect the connector and socket terminals to be sure they are all making good contact.

   - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
   - If the terminals look OK, go to step 8.

FUSE/RELAY BOX SOCKET

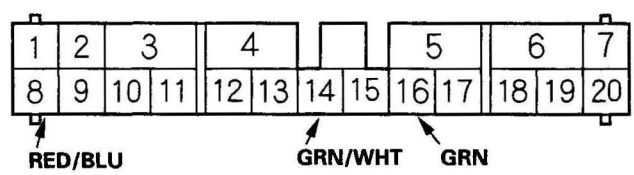


MULTIPLEX CONTROL UNIT, PASSENGER'S CONNECTOR B



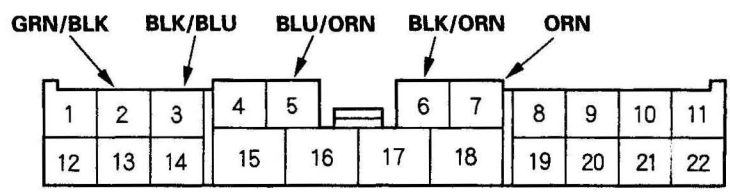
Wire side of female terminals

PASSENGER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR A



Wire side of female terminals

PASSENGER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR F

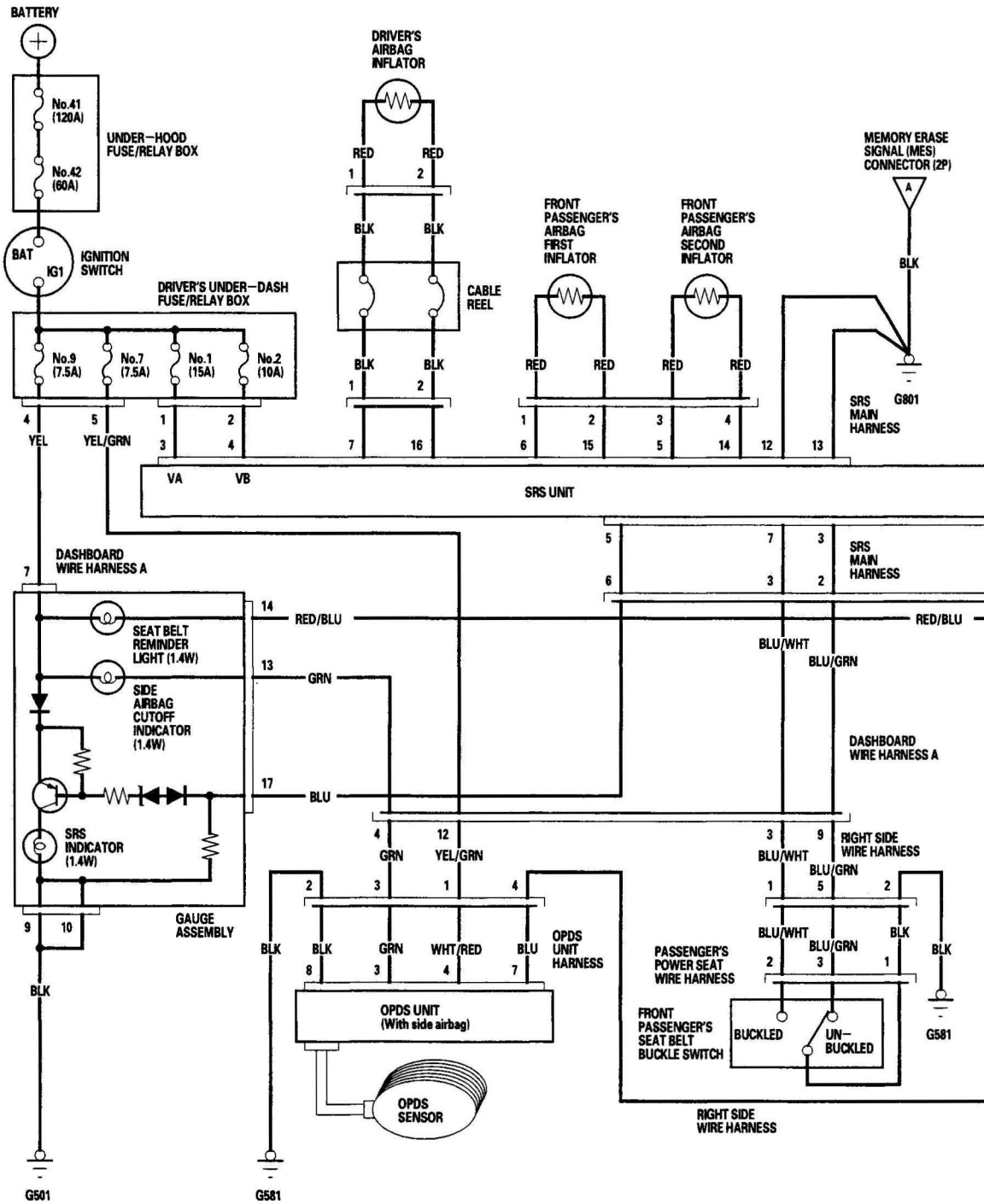


Wire side of female terminals

BACK

Circuit Diagram (cont'd)

'00-01 Models



BACK

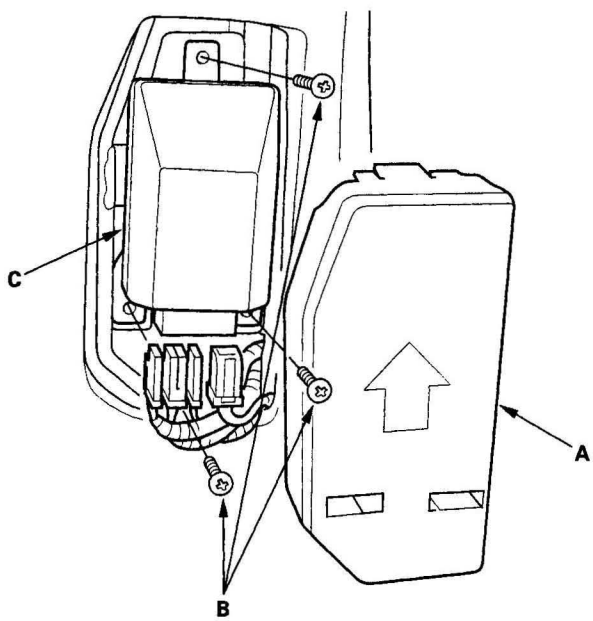
OPDS Unit Replacement

'00-03 Models

NOTE: Review the seats replacement procedure in the body section (see page 20-78) before doing repairs or service.

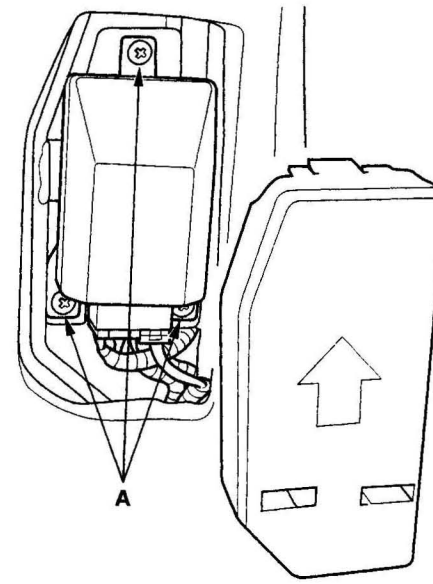
Removal

1. Disconnect the negative battery cable, and wait at least 3 minutes before beginning work.
2. Disconnect the side airbag harness 2P connector (see page 23-25).
3. Remove the seat assembly (see page 20-78) and seat-back cover (see page 20-78).
4. Remove the cover (A), then disconnect the OPDS unit harness 8P and sensor connectors from the OPDS unit.
5. Remove the three screws (B) and OPDS unit (C).



Installation

1. Place the new OPDS unit on the seat-back frame. Tighten the three screws (A), then connect the OPDS unit harness 8P and sensor connectors to the OPDS unit. Reinstall the cover.



2. Install the new seat-back cover (see page 20-90).
3. Install the seat assembly (see page 20-78), then connect the side airbag harness 2P connector.
4. Reconnect the battery negative cable.
5. Set the seat-back in the normal position, and make sure there is nothing sitting on the front passenger's seat.
6. Initialize the OPDS unit (see page 23-33).
7. After installing the OPDS unit, confirm proper system operation: Turn the ignition switch ON (II); the SRS indicator should come on for about 6 seconds and then go off.

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