

Body Electrical

Body Electrical

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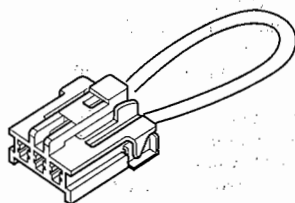
Navigation System 22-453



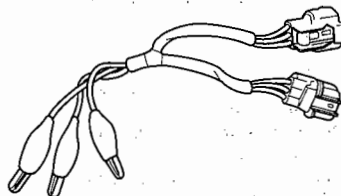
Body Electrical

Special Tools

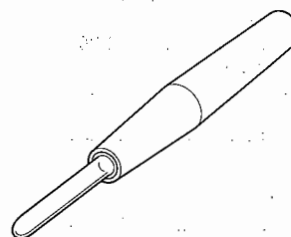
Ref. No.	Tool Number	Description	Qty
①	07WAZ-001010A	MPCS (MCIC) Service Connector	1
②	07LAJ-PT3020A	Test Harness	1
③	07TAZ-001020A	Back Probe Adaptor	1



①



②



③



General Troubleshooting Information

Tips and Precautions

Before Troubleshooting

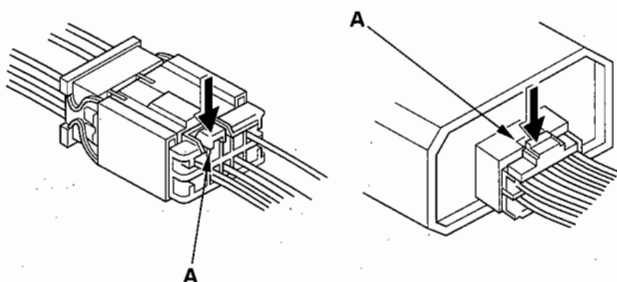
1. Check applicable fuses in the appropriate fuse/relay box.
2. Check the battery for damage, state of charge, and clean and tight connections.

NOTICE

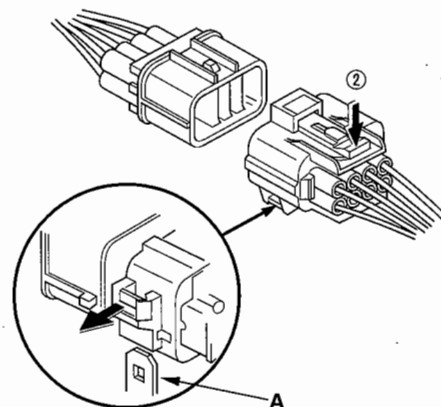
- Do not quick-charge a battery unless the battery ground cable has been disconnected, otherwise you will damage the alternator diodes.
- Do not attempt to crank the engine with the battery ground cable loosely connected or you will severely damage the wiring.

Handling Connectors

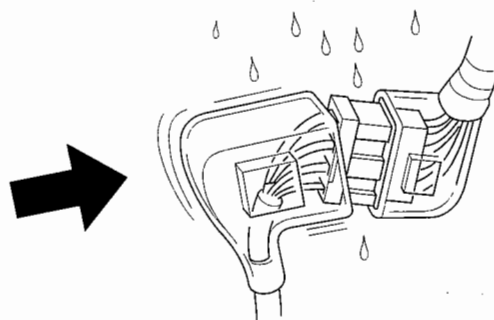
- Make sure the connectors are clean and have no loose wire terminals.
- Make sure multiple cavity connectors are packed with dielectric grease (except watertight connectors).
- All connectors have push-down release type locks (A).



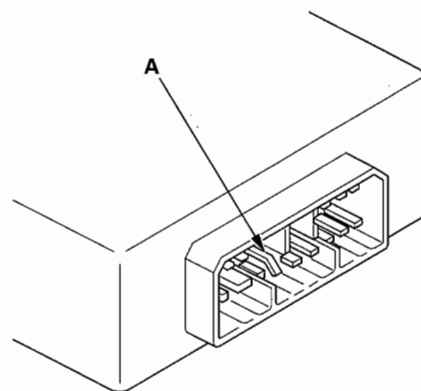
- Some connectors have a clip on their side used to attach them to a mount bracket on the body or on another component. This clip has a pull type lock.
- Some mounted connectors cannot be disconnected unless you first release the lock and remove the connector from its mount bracket (A).



- Never try to disconnect connectors by pulling on their wires; pull on the connector halves instead.
- Always reinstall plastic covers.



- Before connecting connectors, make sure the terminals (A) are in place and not bent.

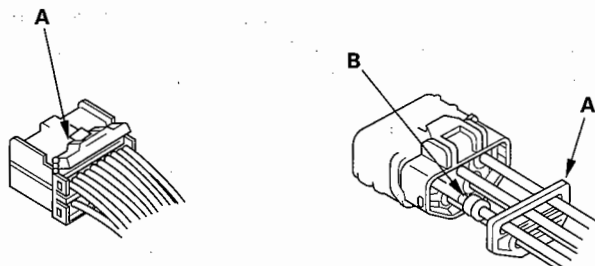


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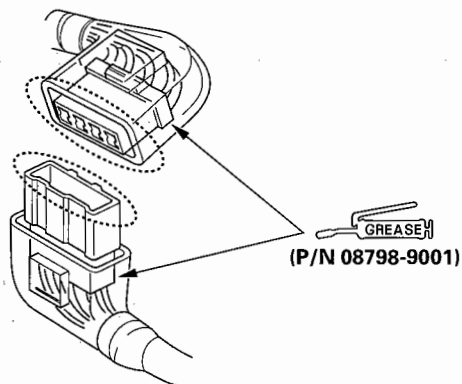
Body Electrical

General Troubleshooting Information (cont'd)

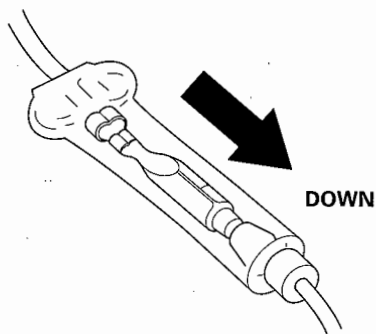
- Check for loose retainer (A) and rubber seals (B).



- The backs of some connectors are packed with dielectric grease. Add grease if necessary. If the grease is contaminated, replace it.

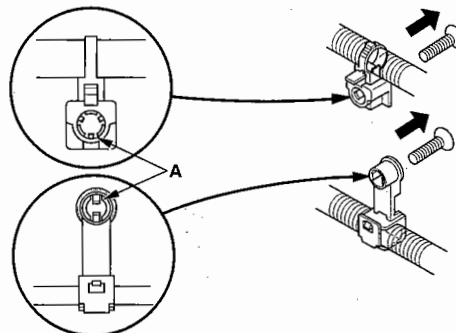


- Insert the connector all the way and make sure it is securely locked.
- Position wires so that the open end of the cover faces down.

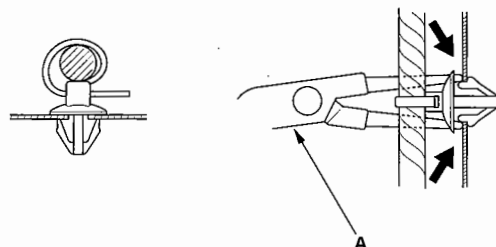


Handling Wires and Harnesses

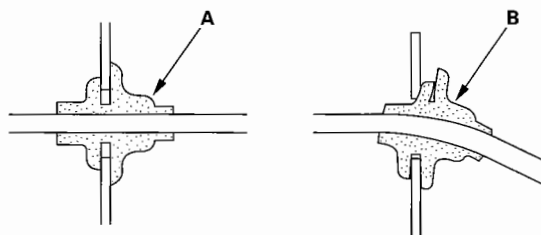
- Secure wires and wire harnesses to the frame with their respective wire ties at the designated locations.
- Remove clips carefully; don't damage their locks (A).



- Slip pliers (A) under the clip base and through the hole at an angle, then squeeze the expansion tabs to release the clip.



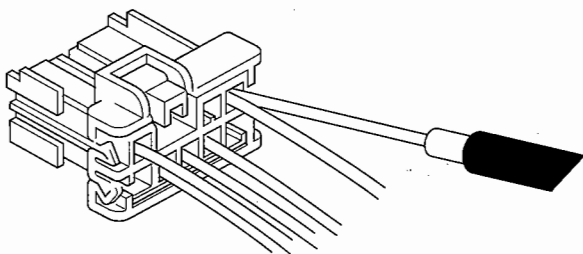
- After installing harness clips, make sure the harness doesn't interfere with any moving parts.
- Keep wire harnesses away from exhaust pipes and other hot parts, from sharp edges of brackets and holes, and from exposed screws and bolts.
- Seat grommets in their grooves properly (A). Do not leave grommets distorted (B).



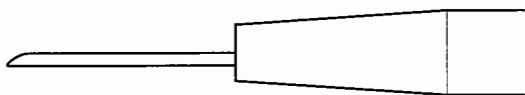


Testing and Repairs

- Do not use wires or harnesses with broken insulation. Replace them or repair them by wrapping the break with electrical tape.
- After installing parts, make sure that no wires are pinched under them.
- When using electrical test equipment, follow the manufacturer's instructions and those described in this manual.
- If possible, insert the probe of the tester from the wire side (except waterproof connector).



- Use back probe adaptor 07TAZ-001020A.



- Refer to the instructions in the Honda Terminal Kit for identification and replacement of connector terminals.

Five-step Troubleshooting

1. **Verify The Complaint**
Turn on all the components in the problem circuit to verify the customer complaint. Note the symptoms. Do not begin disassembly or testing until you have narrowed down the problem area.
2. **Analyze The Schematic**
Look up the schematic for the problem circuit. Determine how the circuit is supposed to work by tracing the current paths from the power feed through the circuit components to ground. If several circuits fail at the same time, the fuse or ground is a likely cause.

Based on the symptoms and your understanding of the circuit operation, identify one or more possible causes of the problem.

3. **Isolate The Problem By Testing The Circuit**
Make circuit tests to check the diagnosis you made in step 2. Keep in mind that a logical, simple procedure is the key to efficient troubleshooting. Test for the most likely cause of failure first. Try to make tests at points that are easily accessible.
4. **Fix The Problem**
Once the specific problem is identified, make the repair. Be sure to use proper tools and safe procedures.
5. **Make Sure The Circuit Works**
Turn on all components in the repaired circuit in all modes to make sure you've fixed the entire problem. If the problem was a blown fuse, be sure to test all of the circuits on the fuse. Make sure no new problems turn up and the original problem does not recur.

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Body Electrical

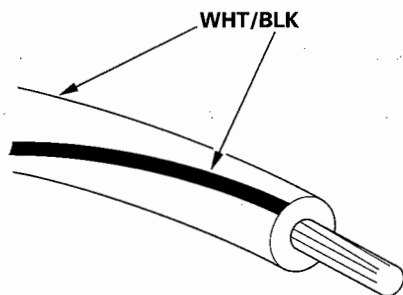
General Troubleshooting Information (cont'd)

Wire Color Codes

The following abbreviations are used to identify wire colors in the circuit schematics:

WHT.....	White
YEL.....	Yellow
BLK.....	Black
BLU.....	Blue
GRN.....	Green
RED.....	Red
ORN.....	Orange
PNK.....	Pink
BRN.....	Brown
GRY.....	Gray
PUR.....	Purple
LT BLU.....	Light Blue
LT GRN.....	Light Green

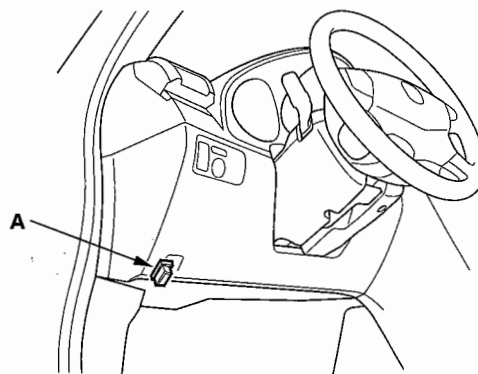
The wire insulation has one color or one color with another color stripe. The second color is the stripe.



How to Check for DTCs with the Honda Diagnostic System (HDS)

1. Connect the Honda Diagnostic System (HDS) to the Data Link Connector (DLC) (A) located under the driver's side of the dashboard.

NOTE: For specific operations, refer to the user's manual that came with the Honda Diagnostic System (HDS).

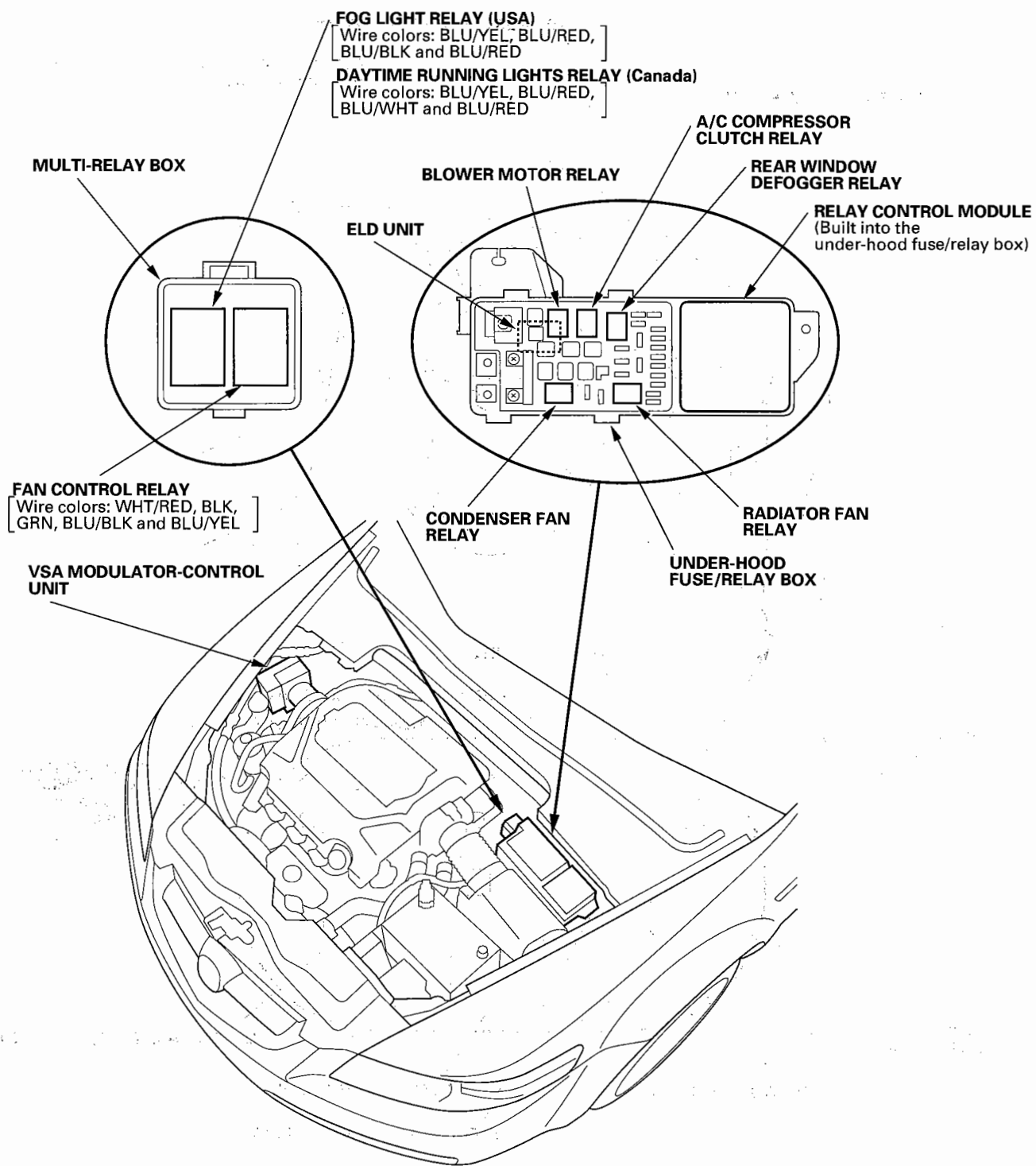


2. Select the TEST MODE MENU and check for Diagnostic Trouble Code (DTCs), and note them. Refer to the Troubleshooting Index and begin the appropriate troubleshooting procedure.



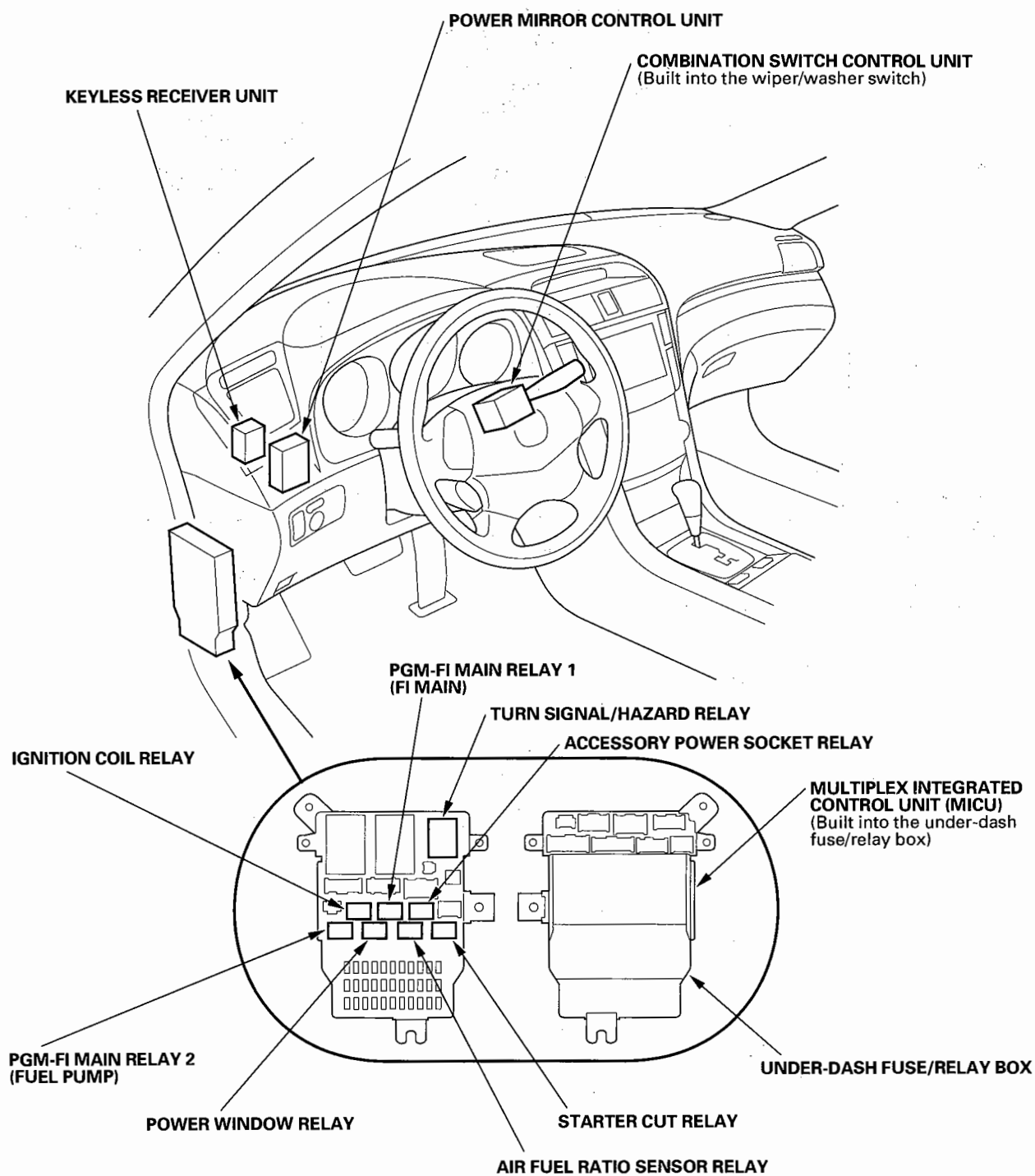
Relay and Control Unit Locations

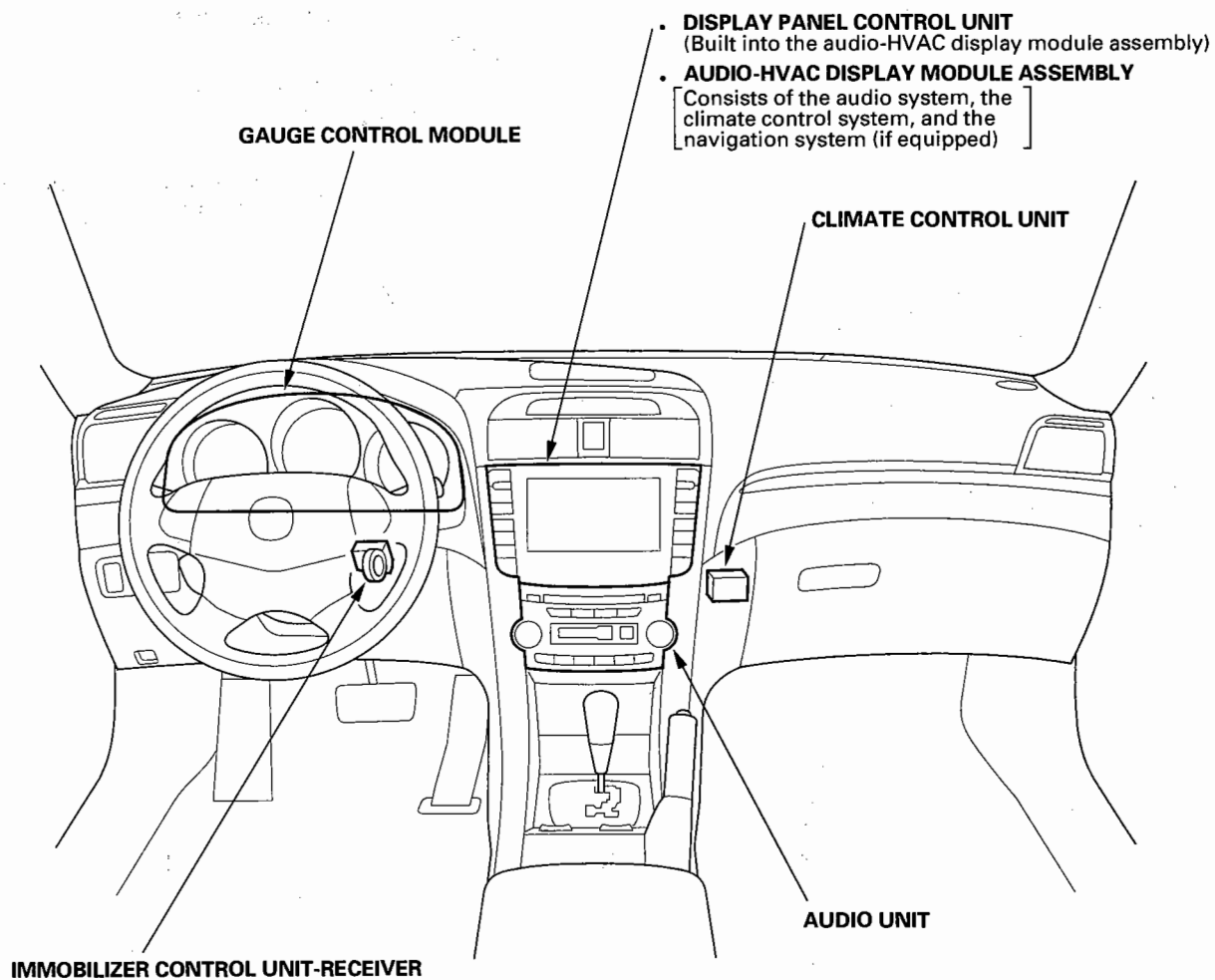
Engine Compartment



Relay and Control Unit Locations

Dashboard

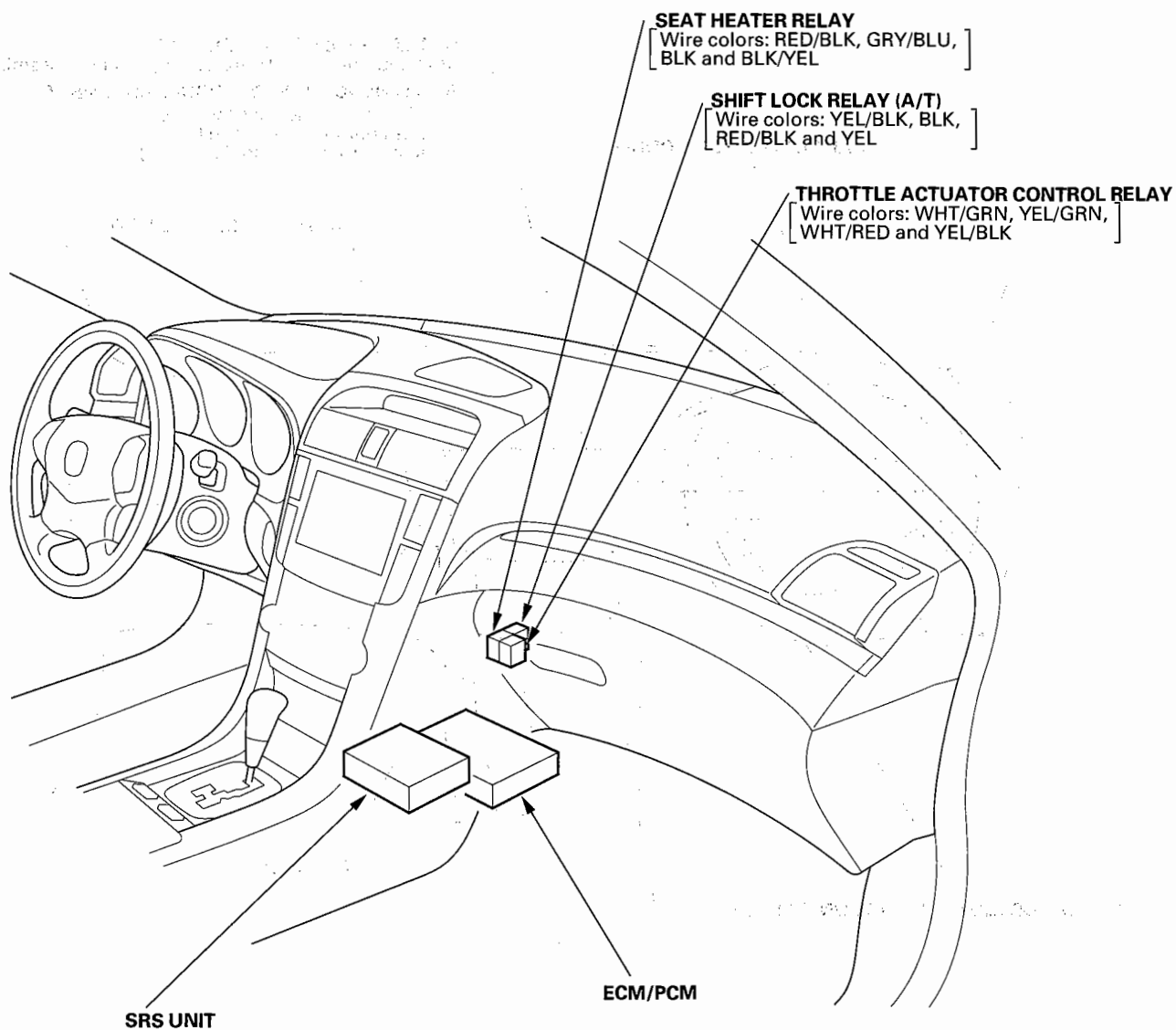




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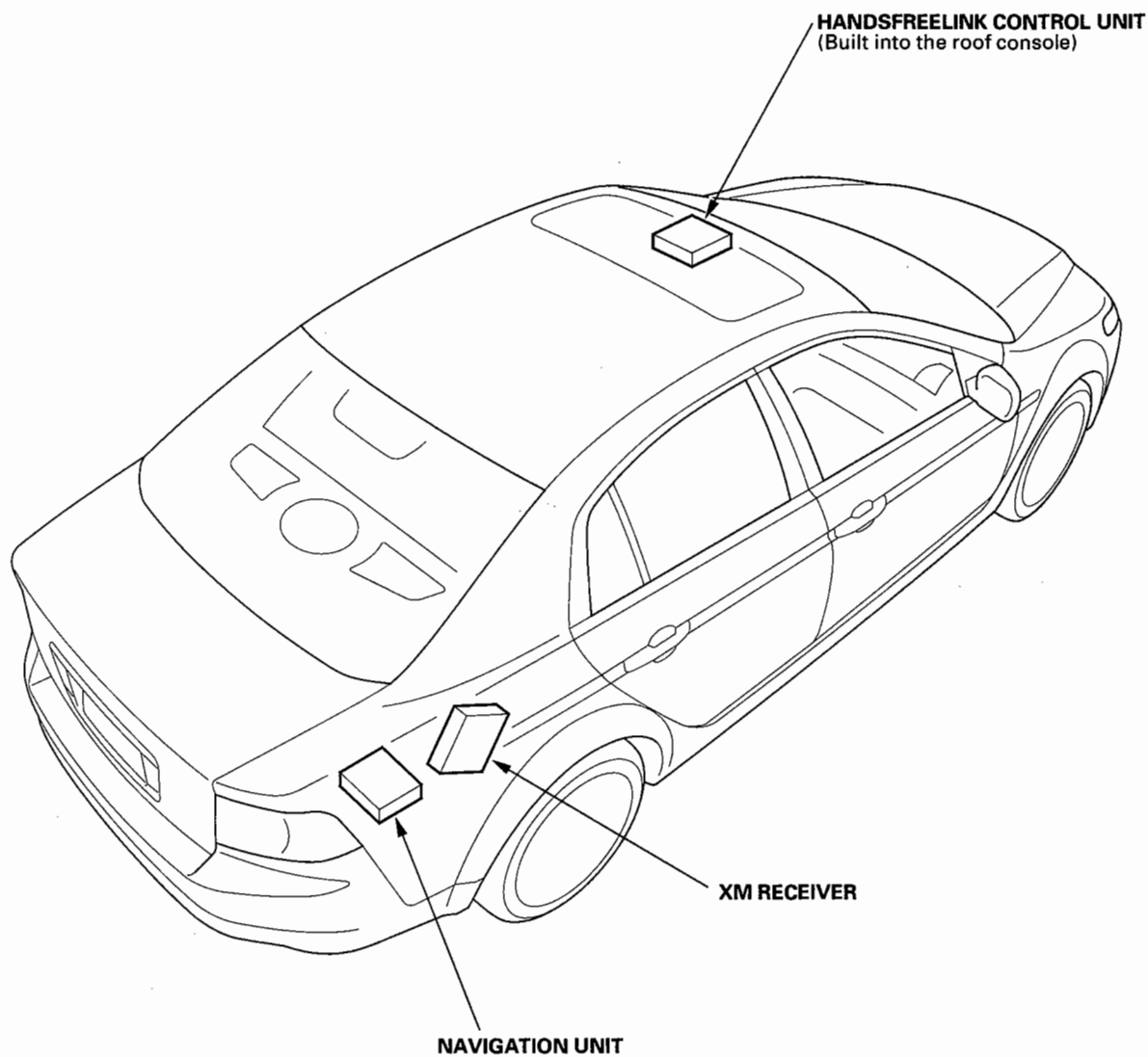
Relay and Control Unit Locations

Dashboard (cont'd)





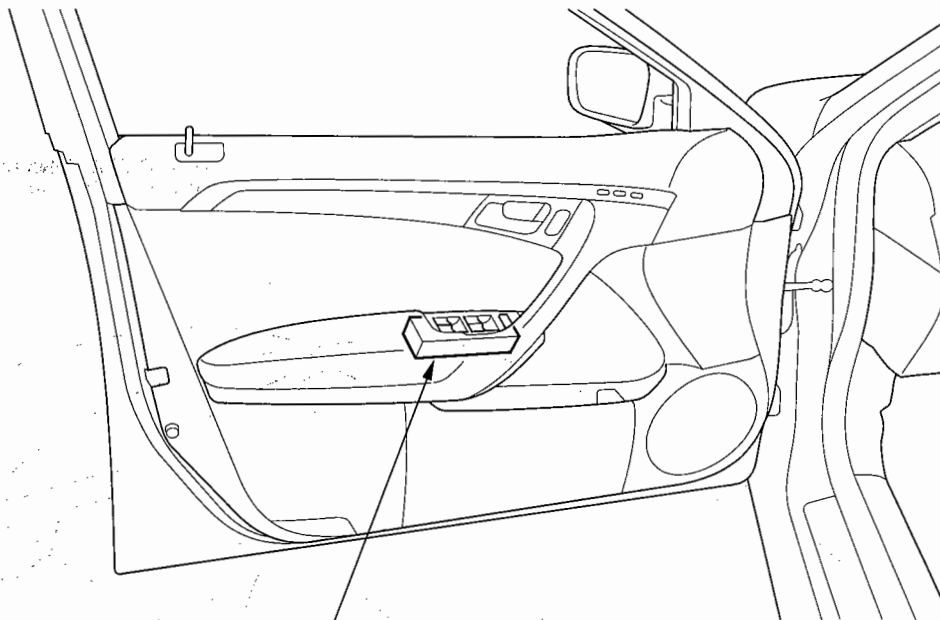
Roof and Trunk



Relay and Control Unit Locations

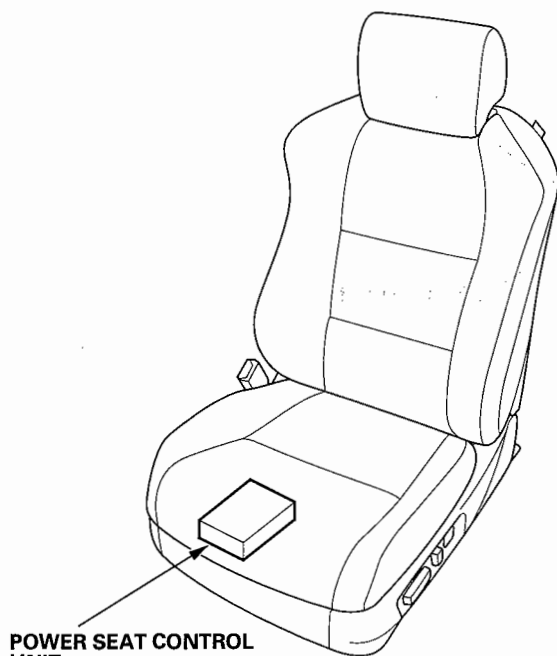
Door and Seat

Driver's Door:



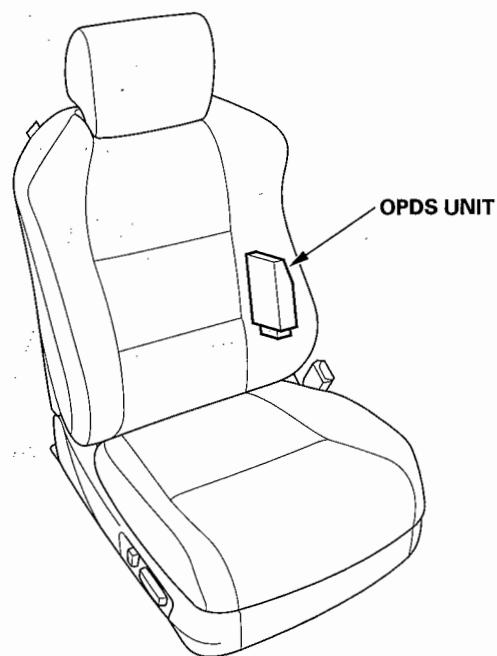
DOOR MULTIPLEX CONTROL UNIT
(Built into the power window master switch)

Driver's Seat:



POWER SEAT CONTROL UNIT

Front Passenger's Seat:



OPDS UNIT

Connectors and Harnesses



Connector Index

Identification numbers have been assigned to in-line connectors. The number is preceded by the letter "C" for connectors, "G" for ground terminals or "T" for non-ground terminals.

Harness	Location			Notes
	Engine Compartment	Dashboard	Others (Floor, Door, Trunk, and Roof)	
Battery ground cable	(-) G1			(see page 22-14)
Engine ground cable A	T1 G2			(see page 22-14)
Engine ground cable B	T2 G3			(see page 22-14)
Starter cable	T3 and (+) T101			(see page 22-14)
Engine wire harness	C101 through C105 C151 through C155 T101 and T102 G101 and G102			(see page 22-16)
CKP sensor subharness	C155			(see page 22-25)
A/T subharness	C151 G151			(see page 22-24)
Transmission range switch subharness	C152			(see page 22-24)
Knock sensor subharness	C154			(see page 22-25)
ECM/PCM wire harness	C101, C102, C103	C171 and C251		(see page 22-26)
Throttle actuator control module subharness		C251		(see page 22-26)
Cable reel subharness		C451		(see page 22-26)
Front engine compartment wire harness (left branch)	C301 and C305 G301			(see page 22-29)
Front engine compartment wire harness (right branch)	G201			(see page 22-29)
Engine compartment wire harness (left branch)	C153 and C301 G302	C302, C303, C304		(see page 22-32)
Engine compartment wire harness (right branch)	G202 and G203			(see page 22-32)
Dashboard wire harness (left branch)		C302, C303, C304, C451, C501, C502, C634, C651, C851 G501, G502		(see page 22-38)
Dashboard wire harness (right branch)		C171, C503, C504, C505, C514, C731, C732 G503 through G506		(see page 22-38)
Floor wire harness (left side)		C501 and C502	C701, C751, C901 G601 and G603	(see page 22-46)
Floor wire harness (right side)		C503, C504, C505, C601	C781, C801, C951 G602 and G604	(see page 22-46)
Rear wire harness			C701 G701	(see page 22-51)
Rear window defogger ground wire			G801	(see page 22-46)
Roof wire harness			C601 and C651	(see page 22-50)
Driver's door wire harness A			C631, C632, C633	(see page 22-52)
Driver's door subharness		C634	C631 and C632	(see page 22-52)
Driver's door wire harness B			C633	(see page 22-52)
Front passenger's door wire harness			C733 and C734	(see page 22-54)
Front passenger's door subharness		C731 and C732	C733 and C734	(see page 22-54)
Left rear door wire harness			C751	(see page 22-55)
Right rear door wire harness			C781	(see page 22-56)
Driver's seat wire harness			C901 and C902	(see page 22-58)
Driver's seat subharness			C902	(see page 22-58)
Front passenger's seat wire harness			C951 and C952	(see page 22-57)
Front passenger's seat subharness			C952	(see page 22-57)
OPDS unit harness				(see page 22-60)
Side curtain airbag harness				(see page 22-60)
A/C wire harness		C851		(see page 22-63)

Connectors and Harnesses

Connector to Harness Index

Starter Cable

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T3	7		Left side of engine compartment	Starter motor	
T101	2		Left side of engine compartment	Under-hood fuse/relay box	
(+)	4		Battery	Battery positive terminal	

Battery Ground Cable

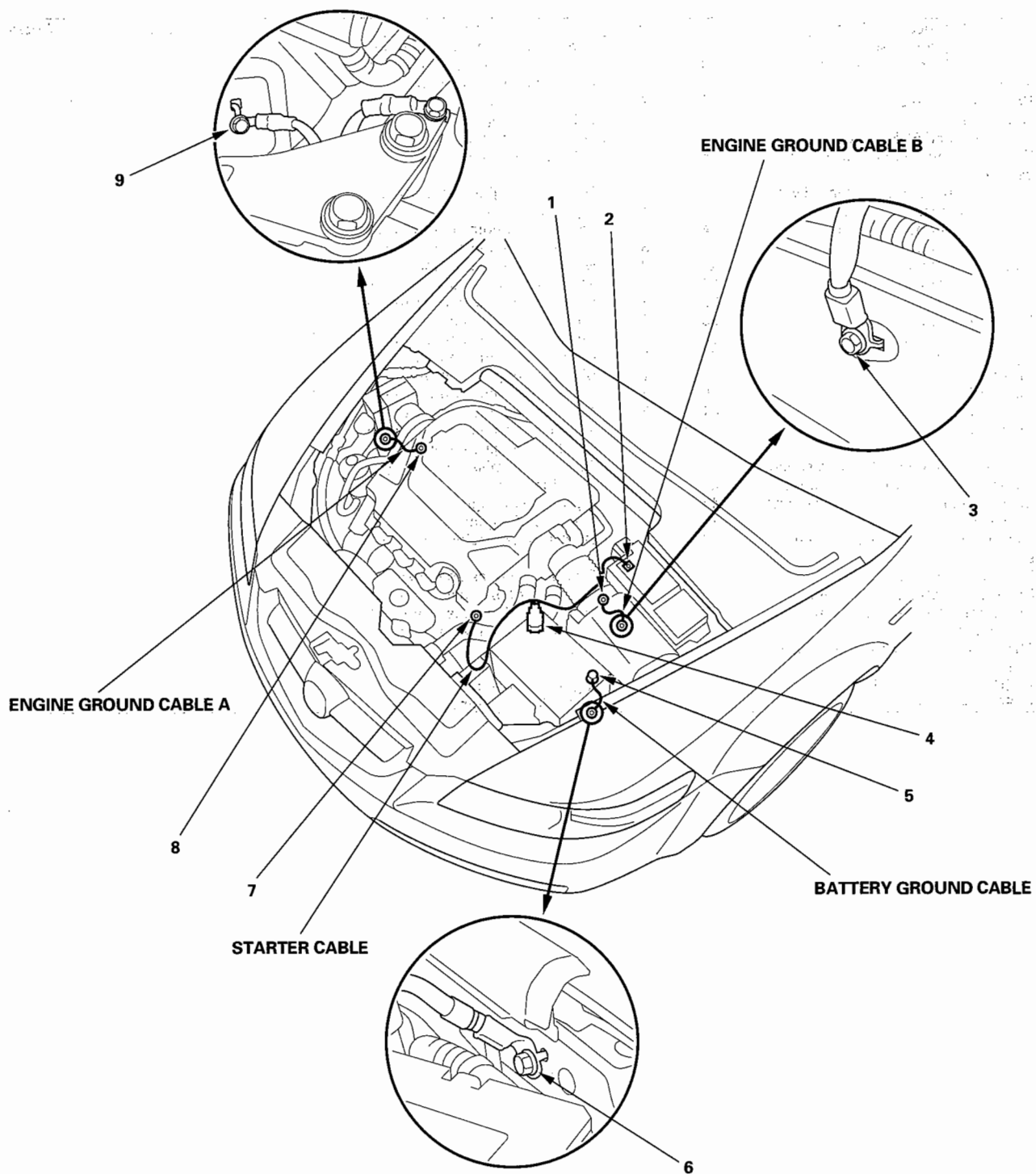
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
G1	6		Left side of engine compartment	Body ground, via battery ground cable	
(-)	5		Battery	Battery negative terminal	

Engine Ground Cable A

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T1	8		Right side of engine compartment	Body ground, via battery ground cable	
G2	9		Right side of engine compartment	Body ground, via engine ground cable A	

Engine Ground Cable B

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
T2	1		Left side of engine compartment	Transmission housing	
G3	3		Left side of engine compartment	Body ground, via engine ground cable B	

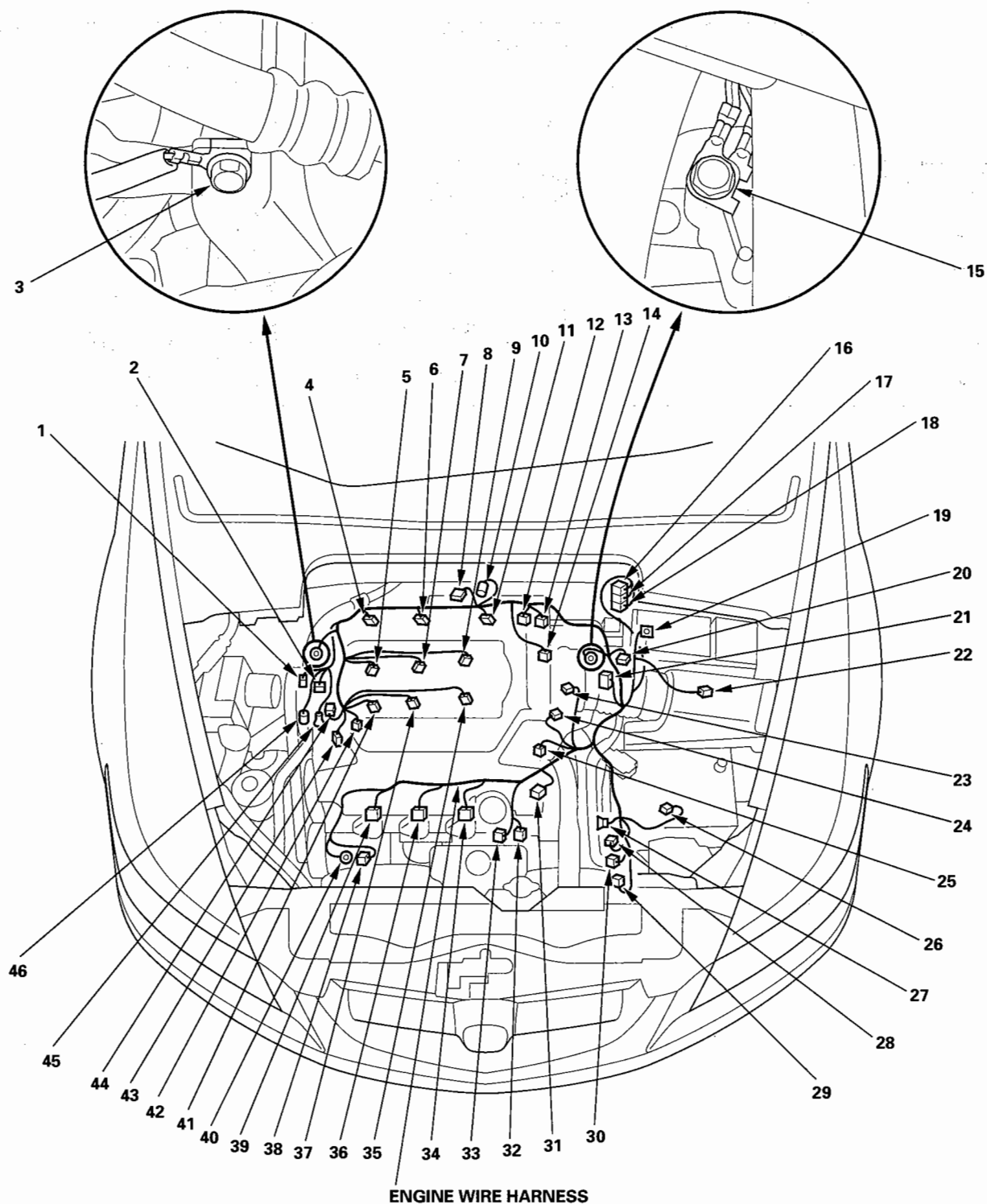


Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Wire Harness (M/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/F sensor (bank 1, sensor 1)	12	8	Rear side of exhaust manifold		
A/F sensor (bank 2, sensor 1)	33	8	Front side of exhaust manifold		
Alternator	38	4	Right side of engine compartment		
Back-up light switch	28	2	On the transmission housing		
CMP sensor	43	3	Left side of engine		
EGR valve and EGR valve lift sensor	31	6	Left side of engine		
Engine coolant temperature (ECT) sensor	25	2	Left side of engine		
Engine mount control solenoid valve	10	2	Middle of engine compartment		
Engine oil pressure switch	45	1	Right side of engine		
EVAP canister purge valve	14	2	Left side of engine compartment		
Ignition coil No. 1	4	3	Middle of engine compartment		
Ignition coil No. 2	6	3	Middle of engine compartment		
Ignition coil No. 3	11	3	Middle of engine compartment		
Ignition coil No. 4	39	3	Middle of engine compartment		
Ignition coil No. 5	36	3	Middle of engine compartment		
Ignition coil No. 6	34	3	Middle of engine compartment		
Injector No. 1	5	2	Middle of engine compartment		
Injector No. 2	7	2	Middle of engine compartment		
Injector No. 3	9	2	Middle of engine compartment		
Injector No. 4	41	2	Middle of engine compartment		
Injector No. 5	37	2	Middle of engine compartment		
Injector No. 6	35	2	Middle of engine compartment		
Input shaft (mainshaft) speed sensor	29	3	On the transmission housing		
Intake air temperature (IAT) sensor	24	2	Left side of engine		
Intake manifold tuning (IMT) actuator	44	5	Right side of engine		
MAP sensor	23	3	Left side of engine		
Output shaft (countershaft) speed sensor	30	3	On the transmission housing		
Reverse lockout solenoid	26	2	On the transmission housing		
Secondary HO2S (bank 1, sensor 2)	13	4	Rear side of exhaust manifold		
Secondary HO2S (bank 2, sensor 2)	32	4	Front side of exhaust manifold		
Starter solenoid	27	1	Left side of engine compartment		
Throttle actuator and throttle position sensor	21	6	Left side of engine		
VTEC oil pressure switch	46	2	Right side of engine		
VTEC solenoid valve	1	1	Right side of engine		



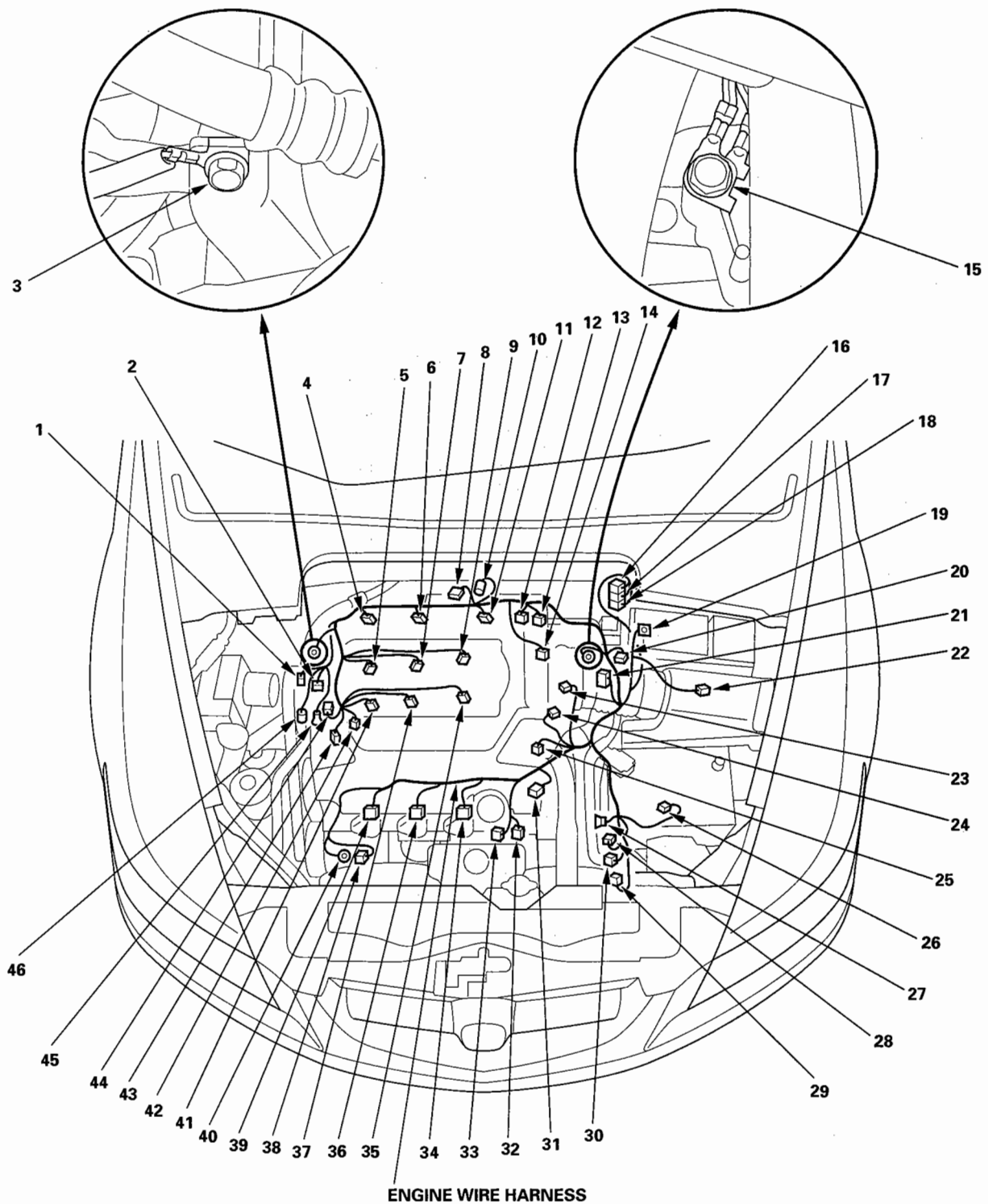
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Wire Harness (M/T) (cont'd)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
C101	16	33	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C102	17	33	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C103	18	23	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C104 (Junction connector A)	8	24	Middle of engine compartment		
C105 (Junction connector B)	20	24	Left side of engine compartment		
C153	22	1	Right side of engine compartment	Engine compartment wire harness (see page 22-32)	
C154	42	1	Right side of engine	Knock sensor subharness (see page 22-25)	
C155	2	6	Right side of engine	CKP sensor subharness (see page 22-25)	
T102	19		Under-hood fuse/relay box		
T103	40		Middle of engine compartment	Alternator	
G101	15		Left side of engine compartment	Engine ground, via engine wire harness	
G102	3		Right side of engine compartment	Engine ground, via engine wire harness	

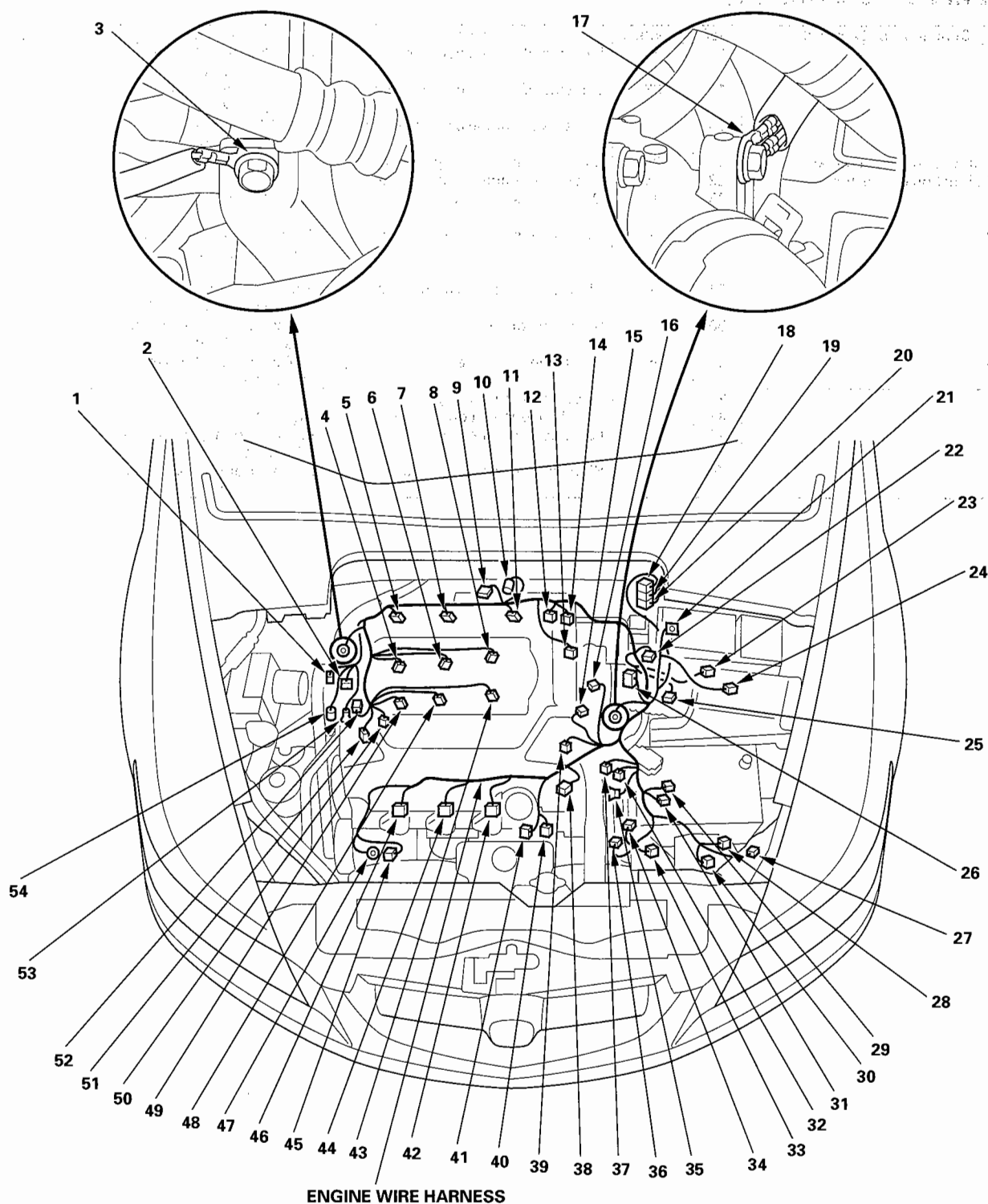


Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Wire Harness (A/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/F sensor (bank 1, sensor 1)	12	8	Rear side of exhaust manifold		
A/F sensor (bank 2, sensor 1)	41	8	Front side of exhaust manifold		
Alternator	45	4	Right side of engine compartment		
A/T clutch pressure control solenoid valve A	31	2	On the transmission housing		
A/T clutch pressure control solenoid valve B	29	2	On the transmission housing		
A/T clutch pressure control solenoid valve C	33	2	On the transmission housing		
CMP sensor	51	3	Left side of engine		
EGR valve and EGR valve lift sensor	38	6	Left side of engine		
Engine coolant temperature (ECT) sensor	39	2	Left side of engine		
Engine mount control solenoid valve	10	2	Middle of engine compartment		
Engine oil pressure switch	53	1	Right side of engine		
EVAP canister purge valve	13	2	Left side of engine compartment		
Ignition coil No. 1	5	3	Middle of engine compartment		
Ignition coil No. 2	7	3	Middle of engine compartment		
Ignition coil No. 3	11	3	Middle of engine compartment		
Ignition coil No. 4	46	3	Middle of engine compartment		
Ignition coil No. 5	44	3	Middle of engine compartment		
Ignition coil No. 6	42	3	Middle of engine compartment		
Injector No. 1	4	2	Middle of engine compartment		
Injector No. 2	6	2	Middle of engine compartment		
Injector No. 3	8	2	Middle of engine compartment		
Injector No. 4	49	2	Middle of engine compartment		
Injector No. 5	48	2	Middle of engine compartment		
Injector No. 6	43	2	Middle of engine compartment		
Input shaft (mainshaft) speed sensor	30	3	On the transmission housing		
Intake air temperature (IAT) sensor	15	2	Left side of engine		
Intake manifold tuning (IMT) actuator	52	5	Right side of engine		
MAP sensor	16	3	Left side of engine		
Output shaft (countershaft) speed sensor	25	3	On the transmission housing		
Secondary HO2S (bank 1, sensor 2)	14	4	Rear side of exhaust manifold		
Secondary HO2S (bank 2, sensor 2)	40	4	Front side of exhaust manifold		
Shift solenoid valve A	36	2	On the transmission housing		
Shift solenoid valve B	37	2	On the transmission housing		
Shift solenoid valve C	34	2	On the transmission housing		
Starter solenoid	35	1	Left side of engine compartment		
Throttle actuator and throttle position sensor	26	6	Left side of engine		
Torque converter clutch solenoid valve	32	2	On the transmission housing		
VTEC oil pressure switch	54	2	Right side of engine		
VTEC solenoid valve	1	1	Right side of engine		
4 th clutch transmission fluid pressure switch	27	1	On the transmission housing		



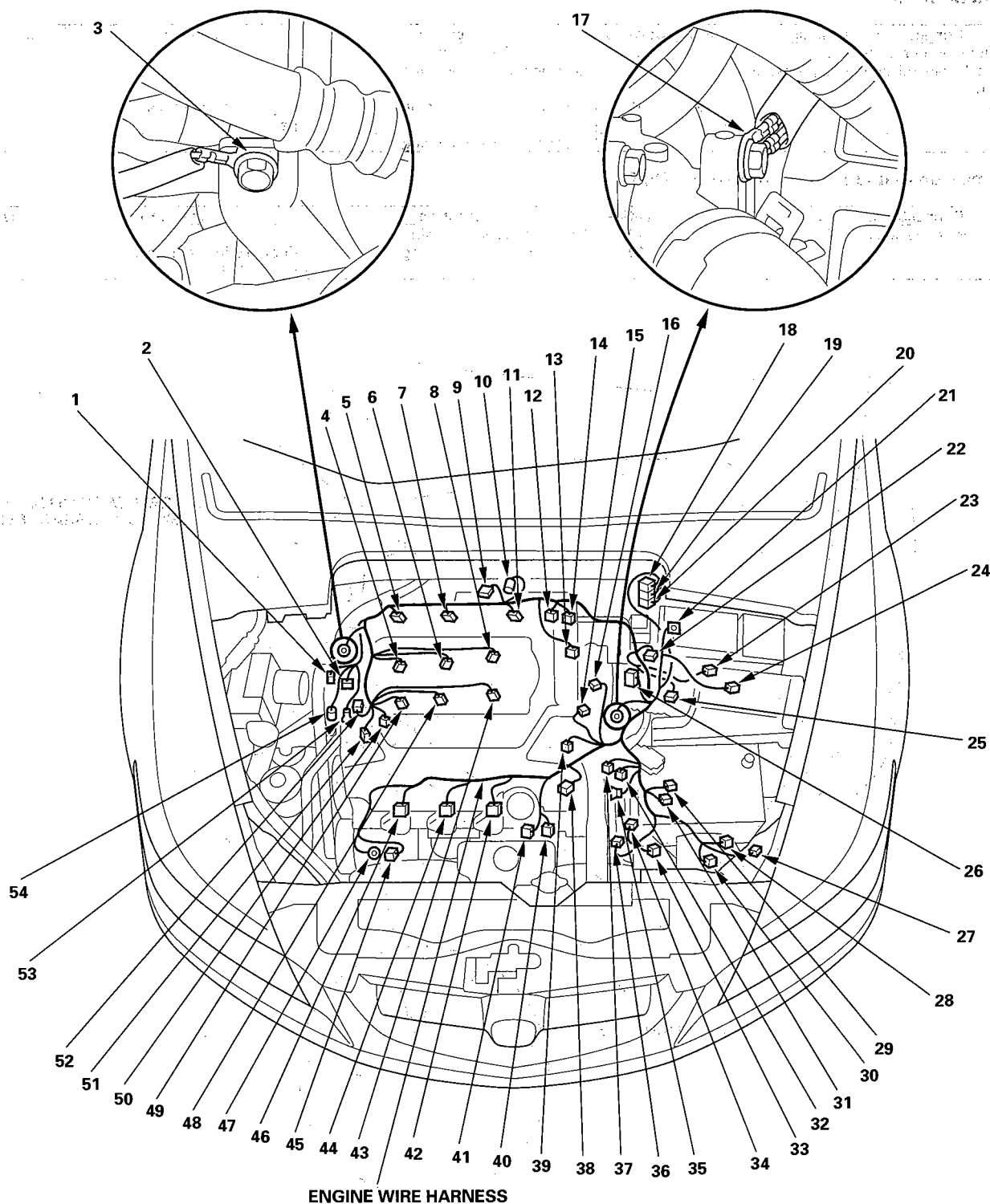
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Wire Harness (A/T) (cont'd)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
C101	18	33	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C102	19	33	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C103	20	23	Left side of engine compartment	ECM/PCM wire harness (see page 22-26)	
C104 (Junction connector A)	9	24	Middle of engine compartment		
C105 (Junction connector B)	22	24	Left side of engine compartment		
C151	28	6	On transmission housing	A/T subharness (see page 22-24)	
C152	23	10	On transmission housing	Transmission range switch subharness (see page 22-24)	
C153	24	1	Right side of engine compartment	Engine compartment wire harness (see page 22-32)	
C154	50	1	Right side of engine	Knock sensor subharness (see page 22-25)	
C155	2	6	Right side of engine	CKP sensor subharness (see page 22-25)	
T102	21		Under-hood fuse/relay box		
T103	47		Middle of engine compartment	Alternator	
G101	17		Left side of engine compartment	Engine ground, via engine wire harness	
G102	3		Right side of engine compartment	Engine ground, via engine wire harness	



Connectors and Harnesses

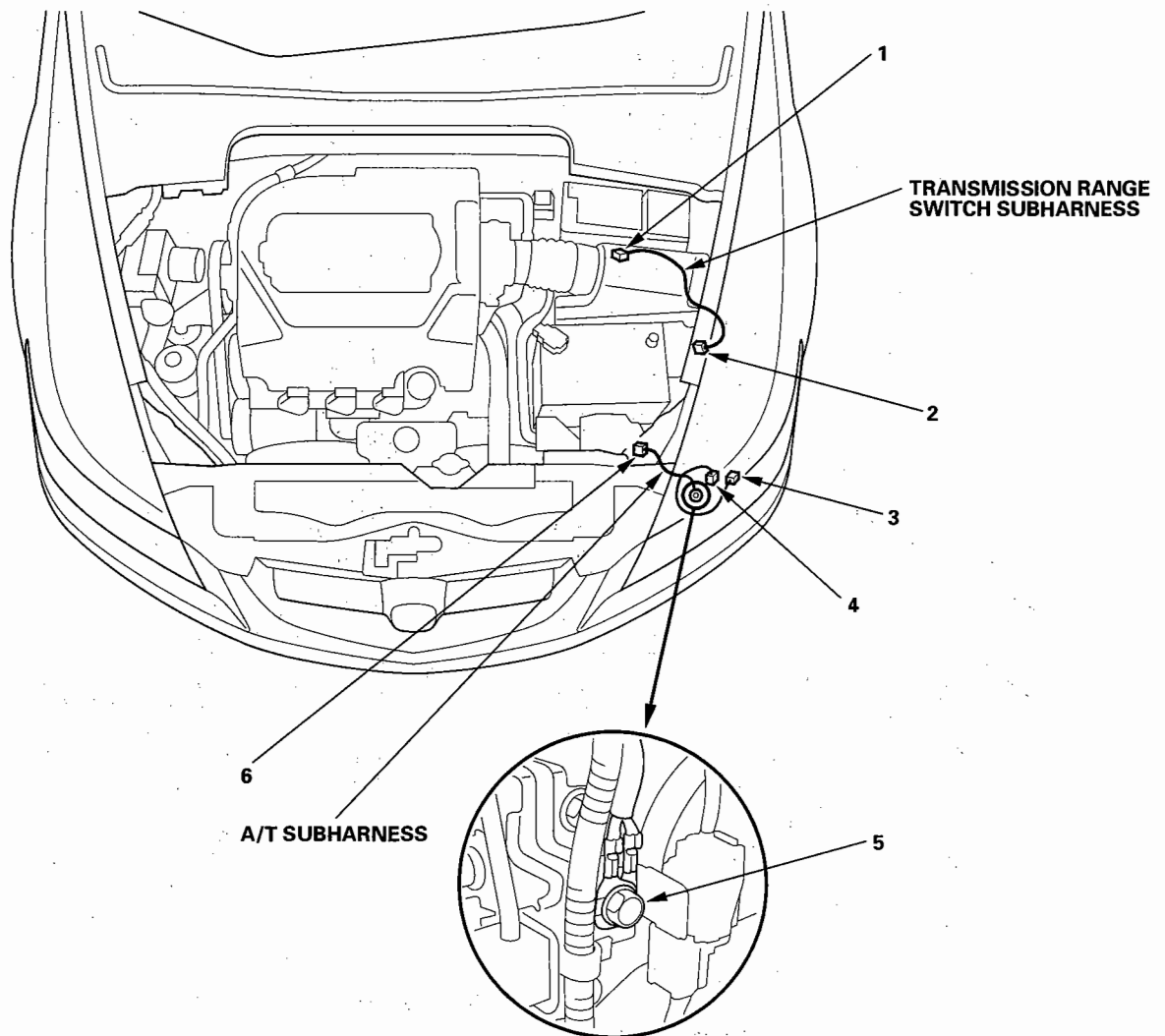
Connector to Harness Index (cont'd)

A/T Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/T fluid temperature sensor	4	2	On transmission housing	Engine wire harness (see page 22-16)	
3 rd clutch transmission fluid pressure switch	3	1	On transmission housing		
C151	6	6	On transmission housing		
G151	5		On transmission housing		

Transmission Range Switch Subharness (A/T)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Transmission range switch	2	10	On transmission housing	Engine wire harness (see page 22-16)	
C152	1	10	On transmission housing		



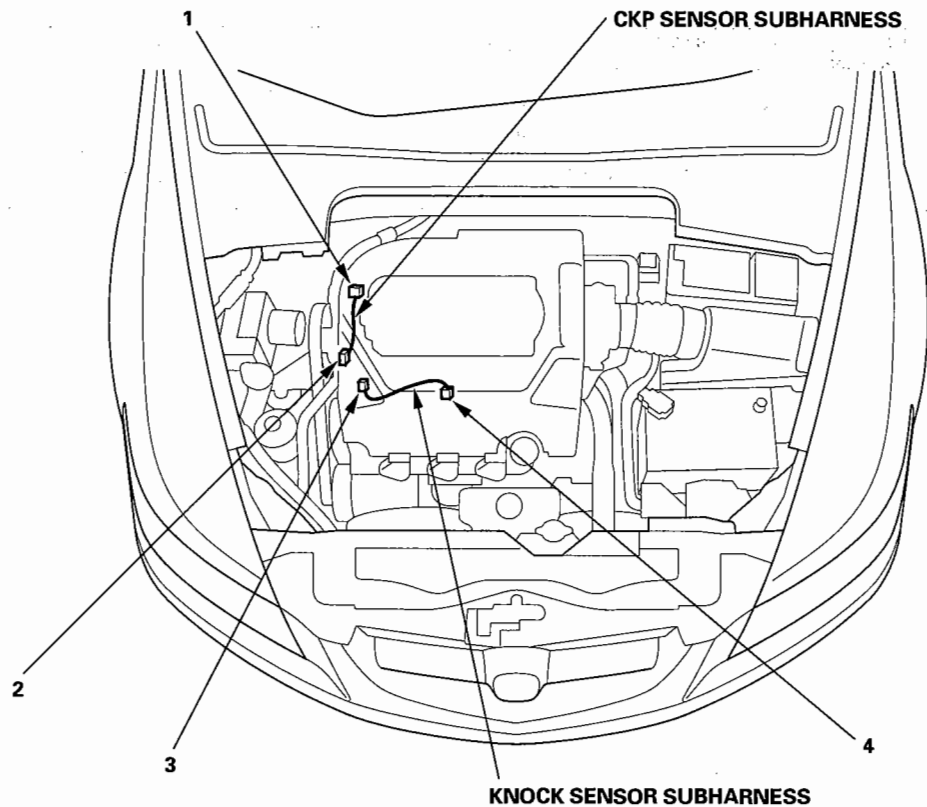


Knock Sensor Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Knock sensor C154	4 3	1 1	Middle of engine compartment Right side of engine	Engine wire harness (see page 22-16)	

CKP Sensor Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
CKP sensor C155	2 1	6 6	Behind crankshaft pulley Right side of engine	Engine wire harness (see page 22-16)	



Connectors and Harnesses

Connector to Harness Index (cont'd)

ECM/PCM Wire Harness (Dashboard branch)

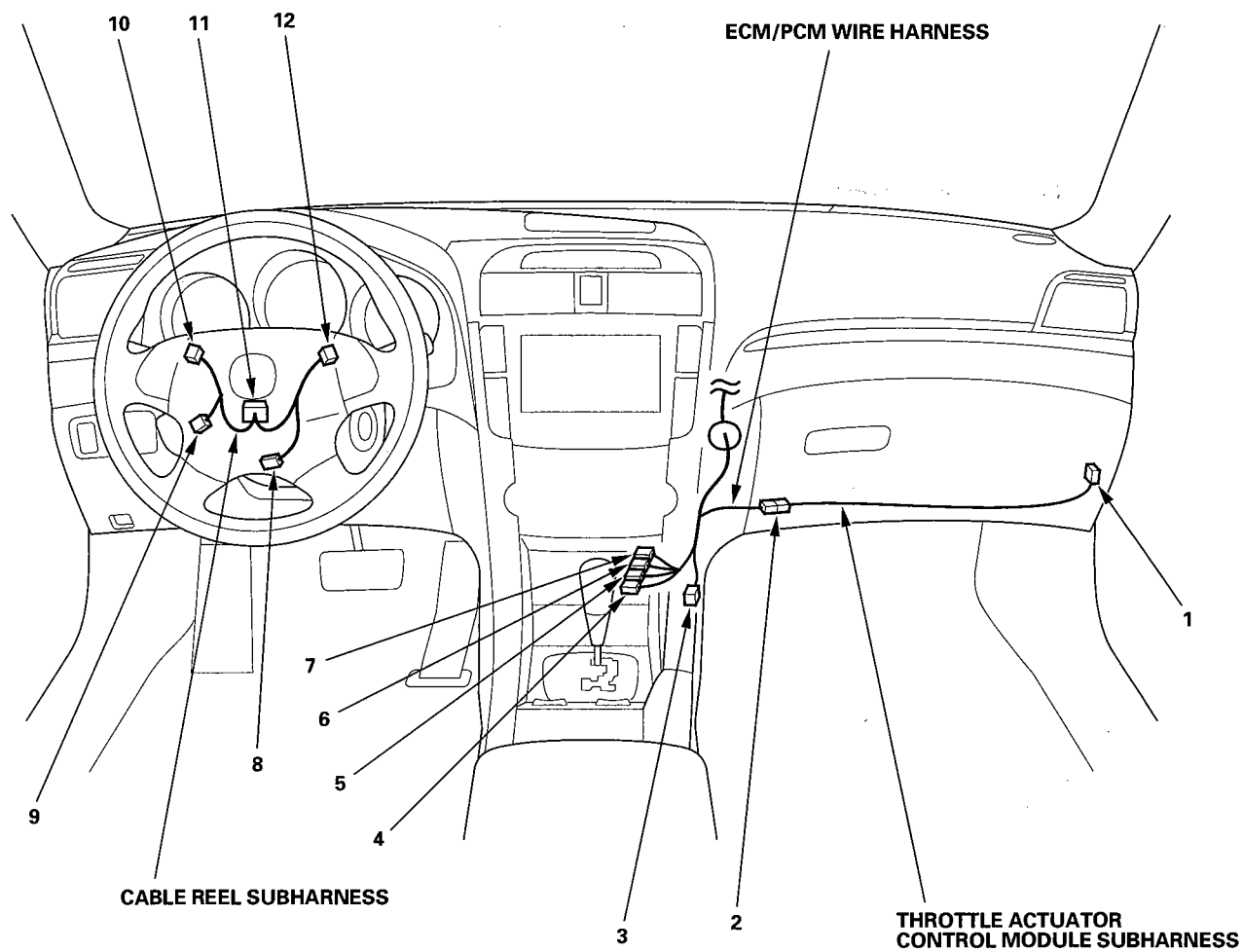
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ECM/PCM connector B	7	6	Under middle side of dash	Dashboard wire harness (see page 22-38) Throttle actuator control module subharness	
ECM/PCM connector D	5	24	Under middle side of dash		
ECM/PCM connector E	4	17	Under middle side of dash		
PCM connector C	6	31	Under middle side of dash		
C171	3	17	Under middle of dash		
C251	2	13	Under middle of dash		

Throttle Actuator Control Module Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Throttle actuator control module	1	16	Under right side of dash	ECM/PCM wire harness	
C251	2	13	Under middle of dash		

Cable Reel Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Cruise control master switch and set/ resume/cancel switch	12	7	Steering column	Dashboard wire harness (see page 22-38)	
HFL-voice control switch	9	5	Steering column		
Horn	8	1	Steering column		
Radio remote switch	10	7	Steering column		
C451	11	13	Steering column		

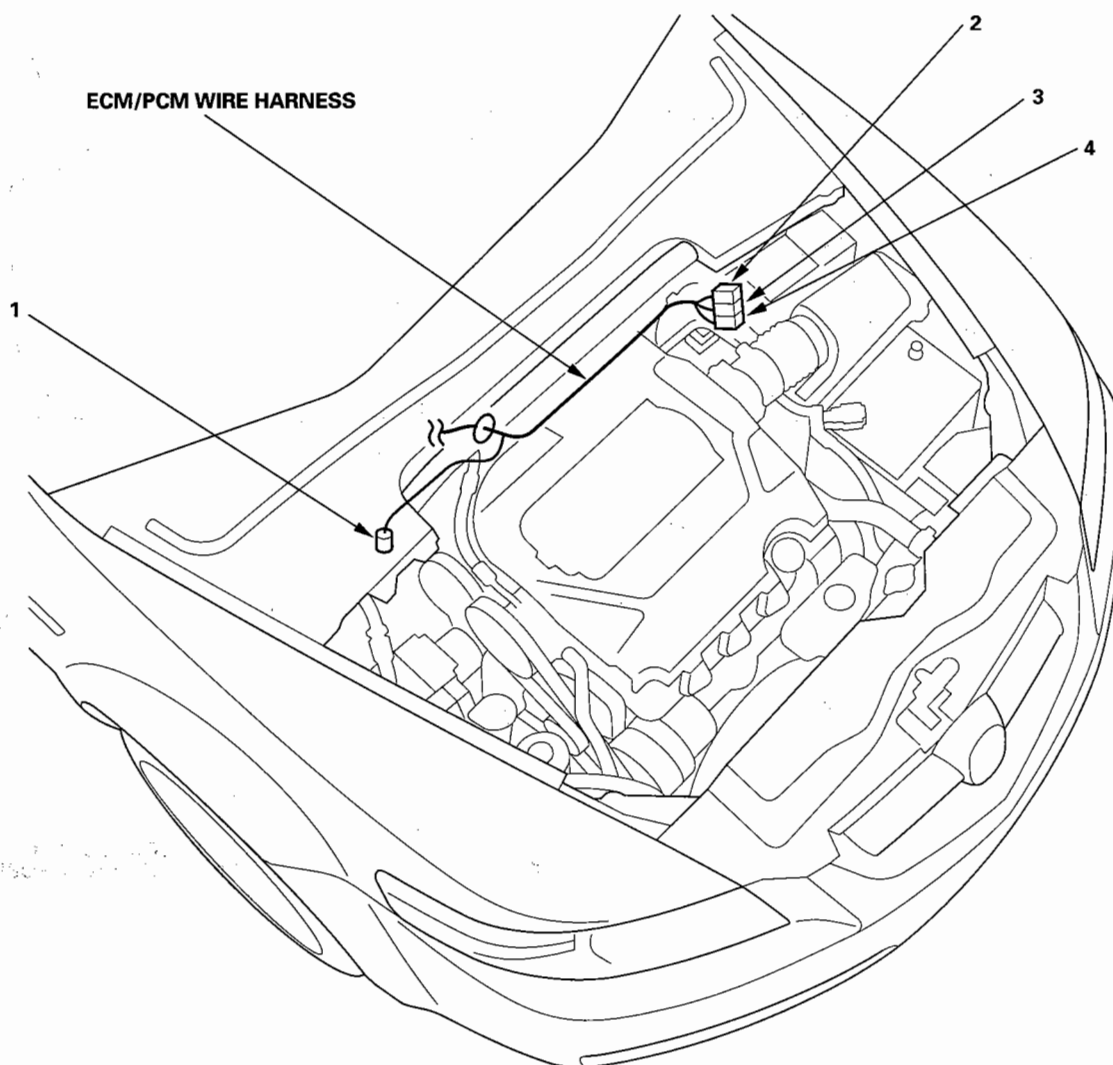


Connectors and Harnesses

Connector to Harness Index (cont'd)

ECM/PCM Wire Harness (Engine compartment branch)

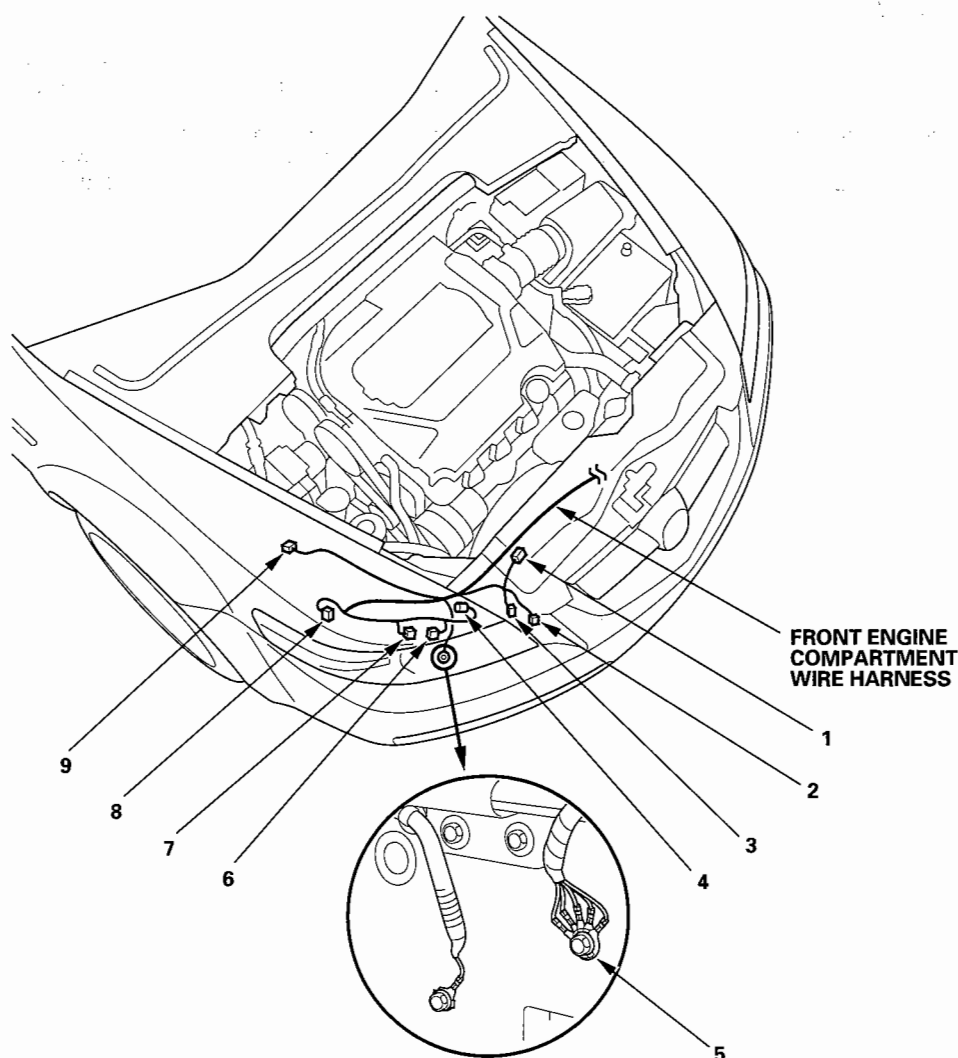
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
APP sensor	1	6	Right side of engine		
C101	2	33	Left side of engine compartment	Engine wire harness (see page 22-16)	
C102	3	33	Left side of engine compartment	Engine wire harness (see page 22-16)	
C103	4	23	Left side of engine compartment	Engine wire harness (see page 22-16)	





Front Engine Compartment Wire Harness (Right branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/C compressor clutch	3	1	Front of engine compartment		
A/C pressure switch	2	4	Front of engine compartment		
Condenser fan motor	1	2	Front of engine compartment		
Horn (low)	9	1	Right of engine compartment		
Right fog light	4	2	Behind right headlight		
Right front turn signal/parking light	8	3	Behind right headlight		
Right headlight (igniter unit)	6	2	Behind right headlight		
Right headlight (high/low switching solenoid)	7	3	Behind right headlight		
G201	5		Right front fenderwell	Body ground, via front engine compartment wire harness	



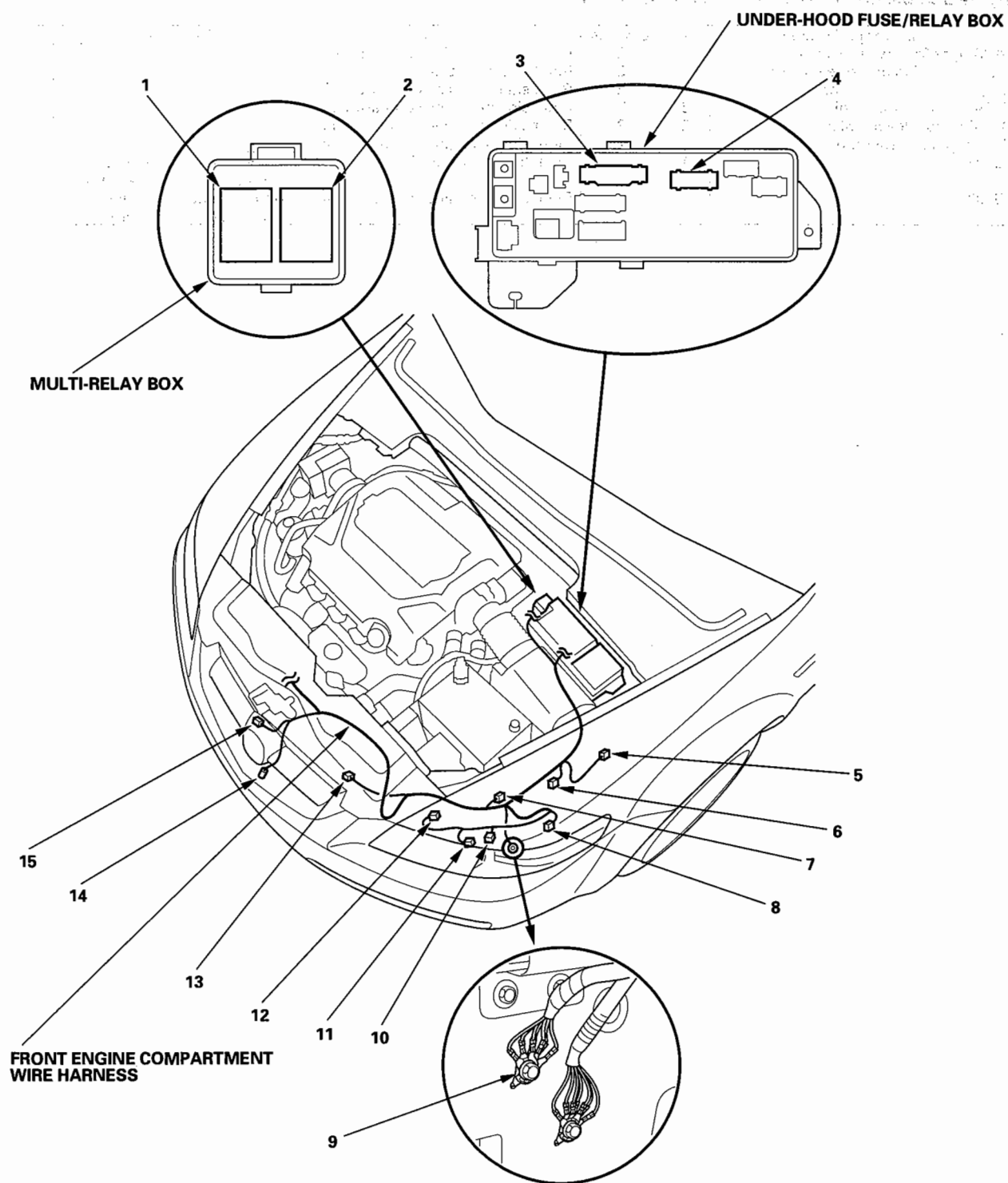
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Front Engine Compartment Wire Harness (Left branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Fan control relay	2	5	Left side of engine compartment		
Fog light relay/DRL relay	1	4	Left side of engine compartment		
Hood switch	15	2	Front of engine compartment		
Horn (high)	5	1	Left of engine compartment		
Left fog light	12	2	Behind left headlight		
Left front turn signal/parking light	8	3	Behind left headlight		
Left headlight (igniter unit)	11	2	Behind left headlight		
Left headlight (high/low switching solenoid)	10	3	Behind left headlight		
Outside air temperature sensor	14	2	Front of engine compartment		
Radiator fan motor	13	2	Front of engine compartment		
Under-hood fuse/relay box connector F (see page 22-64)	3	20	Left side of engine compartment		
Under-hood fuse/relay box connector H (see page 22-64)	4	14	Left side of engine compartment		
C301	6	1	Left side of engine compartment	Engine compartment wire harness (see page 22-32)	USA
C301	6	2	Left front fenderwell	Engine compartment wire harness (see page 22-32)	Canada
C305 (Junction connector)	7	5	Left side of engine compartment		Canada
G301	9		Left front fenderwell	Body ground, via front engine compartment wire harness	

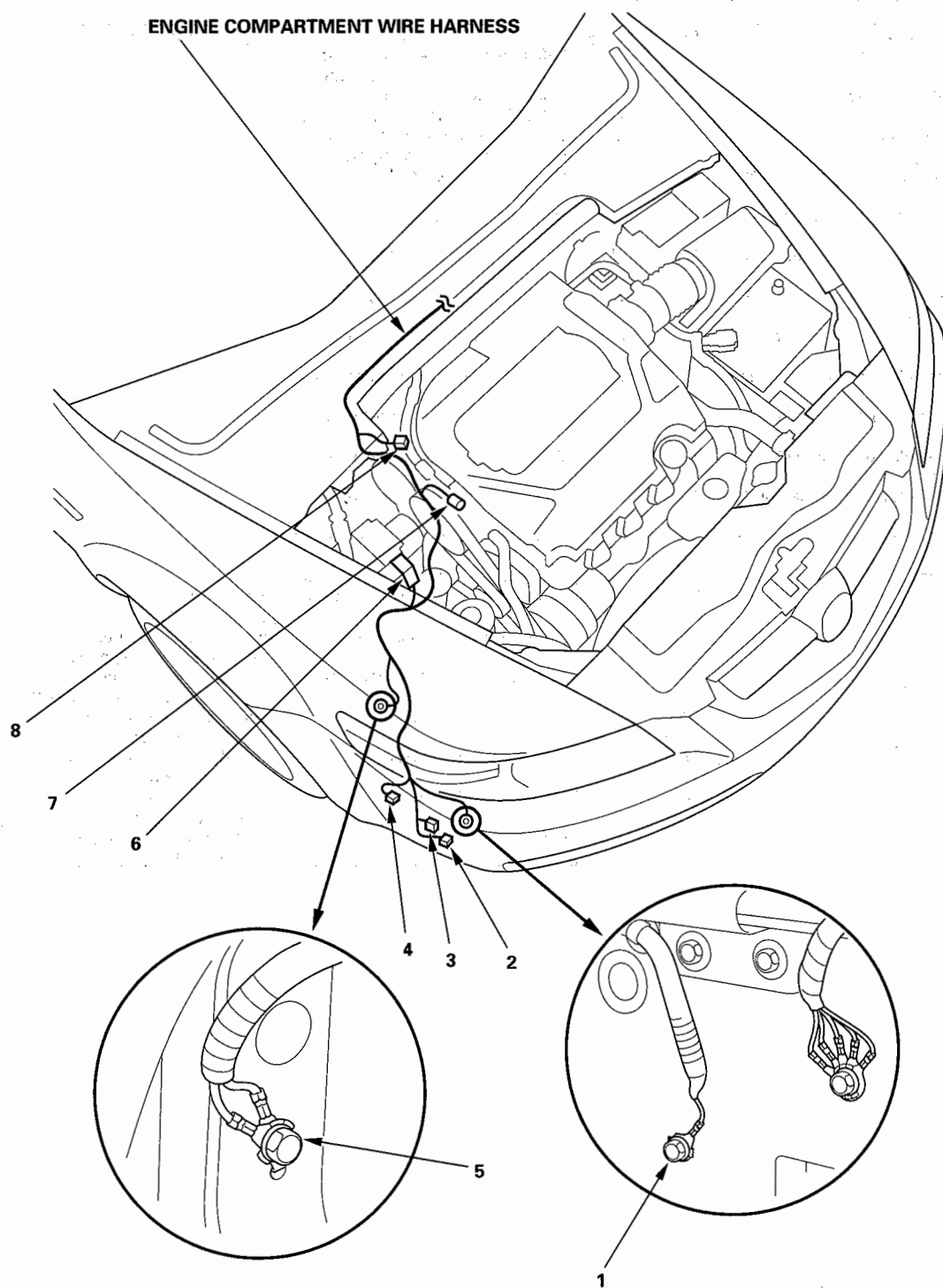


Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Compartment Wire Harness (Right branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ABS right front wheel sensor	8	2	Right side of engine compartment		
Power steering pressure (PSP) switch	7	2	Right side of engine compartment		
Right front airbag sensor	4	2	Right side of engine compartment		
VSA modulator-control unit	6	47	Right side of engine compartment		
Washer fluid level switch	2	2	Right side of engine compartment		Canada
Windshield washer motor	3	2	Right side of engine compartment		
G202	1		Right front fenderwell	Body ground, via engine compartment wire harness	
G203	5		Right side of engine compartment	Body ground, via engine compartment wire harness	



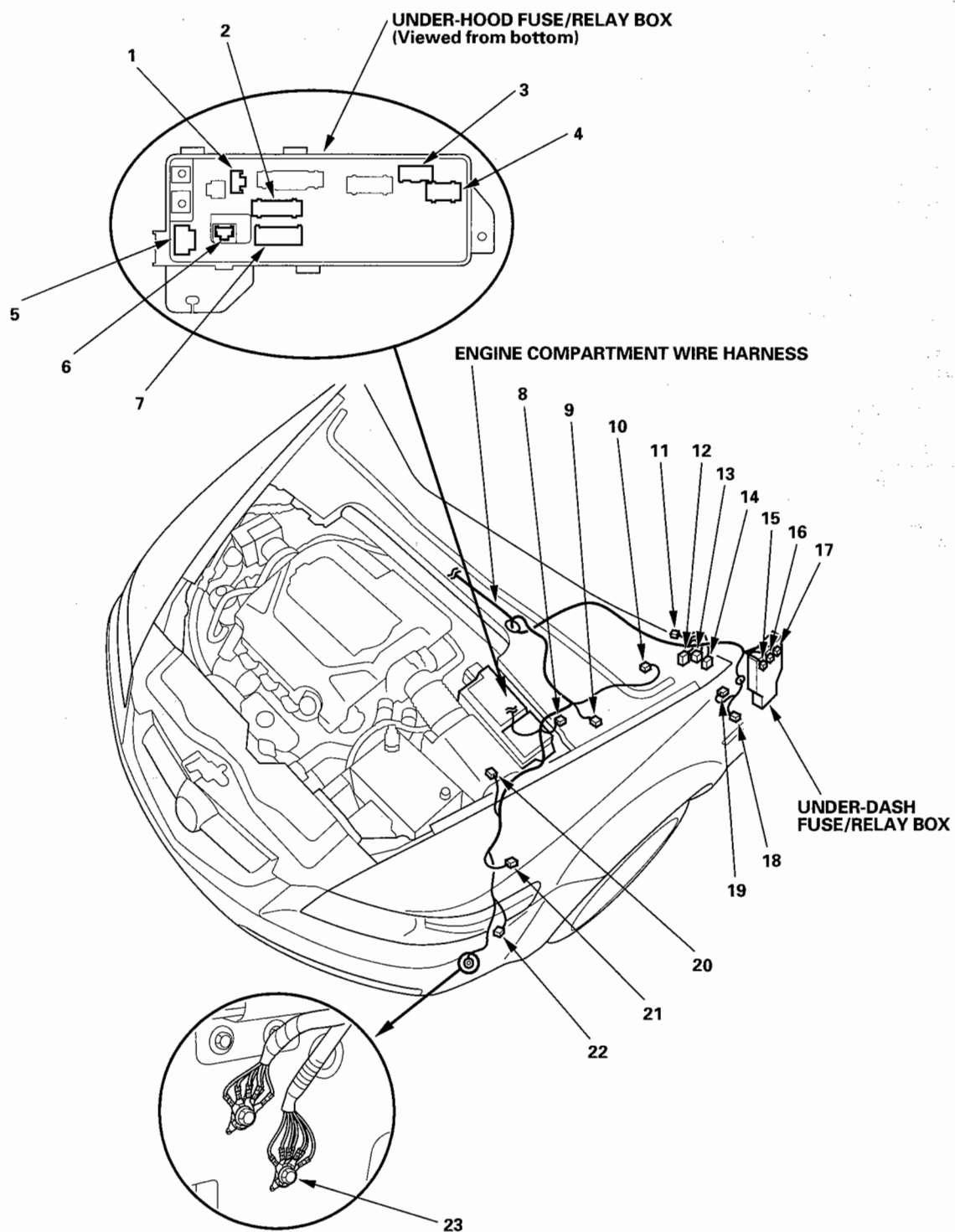
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Compartment Wire Harness (M/T) (Left branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ABS left front wheel sensor	8	2	Left side of engine compartment		
Brake fluid level switch	9	2	Left side of engine compartment		
Diode (for radiator fan relay)	11	2	Under left side of dash		
Keyless buzzer	19	2	Left side of engine compartment		
Left front airbag sensor	22	2	Left side of engine compartment		
Left side marker light	18	2	Left side of engine compartment		
Under-dash fuse/relay box connector B (see page 22-66)	16	6	Under left side of dash		
Under-dash fuse/relay box connector C (see page 22-66)	15	12	Under left side of dash		
Under-dash fuse/relay box connector D (see page 22-66)	17	17	Under left side of dash		
Under-hood fuse/relay box connector A (ELD unit) (see page 22-64)	6	3	In under-hood fuse/relay box		
Under-hood fuse/relay box connector C (see page 22-64)	1	2	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector D (see page 22-64)	7	9	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector E (see page 22-64)	2	16	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector G (see page 22-64)	5	2	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector J (see page 22-64)	3	5	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector W (see page 22-64)	4	10	Behind under-hood fuse/relay box		
Windshield wiper motor	10	5	Left side of engine compartment		
C153	20	1	Left side of engine compartment	Engine wire harness (see page 22-16)	
C301	21	1	Left side of engine compartment	Front engine compartment wire harness (see page 22-29)	USA
C301	21	2	Left side of engine compartment	Front engine compartment wire harness (see page 22-29)	Canada
C302	13	22	Under left side of dash	Dashboard wire harness (see page 22-38)	
C303	12	14	Under left side of dash	Dashboard wire harness (see page 22-38)	
C304	14	4	Under left side of dash	Dashboard wire harness (see page 22-38)	
G302	23		Left front fenderwell	Body ground, via engine compartment wire harness	



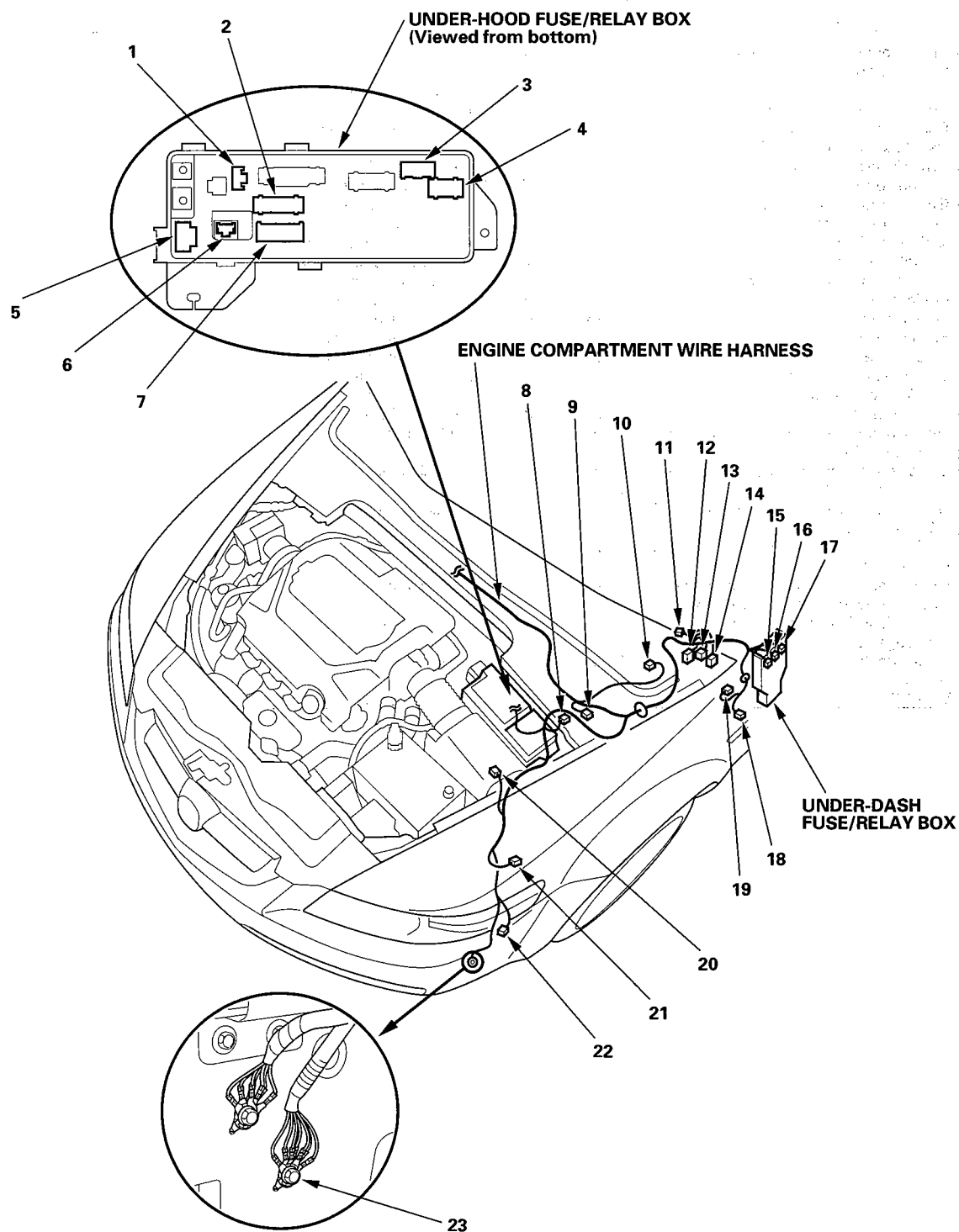
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Engine Compartment Wire Harness (A/T) (Left branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ABS left front wheel sensor	8	2	Left side of engine compartment		
Brake fluid level switch	9	2	Left side of engine compartment		
Diode (for radiator fan relay)	11	2	Under left side of dash		
Keyless buzzer	19	2	Left side of engine compartment		
Left front airbag sensor	22	2	Left side of engine compartment		
Left side marker light	18	2	Left side of engine compartment		
Under-dash fuse/relay box connector B (see page 22-66)	16	6	Under left side of dash		
Under-dash fuse/relay box connector C (see page 22-66)	15	12	Under left side of dash		
Under-dash fuse/relay box connector D (see page 22-66)	17	17	Under left side of dash		
Under-hood fuse/relay box connector A (ELD unit) (see page 22-64)	6	3	In under-hood fuse/relay box		
Under-hood fuse/relay box connector C (see page 22-64)	1	2	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector D (see page 22-64)	7	9	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector E (see page 22-64)	2	16	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector G (see page 22-64)	5	2	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector J (see page 22-64)	3	5	Behind under-hood fuse/relay box		
Under-hood fuse/relay box connector K (see page 22-64)	4	10	Behind under-hood fuse/relay box		
Windshield wiper motor	10	5	Left side of engine compartment		
C153	20	1	Left side of engine compartment	Engine wire harness (see page 22-16)	
C301	21	1	Left side of engine compartment	Front engine compartment wire harness (see page 22-29)	USA
C301	21	2	Left side of engine compartment	Front engine compartment wire harness (see page 22-29)	Canada
C302	13	22	Under left side of dash	Dashboard wire harness (see page 22-38)	
C303	12	14	Under left side of dash	Dashboard wire harness (see page 22-38)	
C304	14	4	Under left side of dash	Dashboard wire harness (see page 22-38)	
G302	23		Left front fenderwell	Body ground, via engine compartment wire harness	

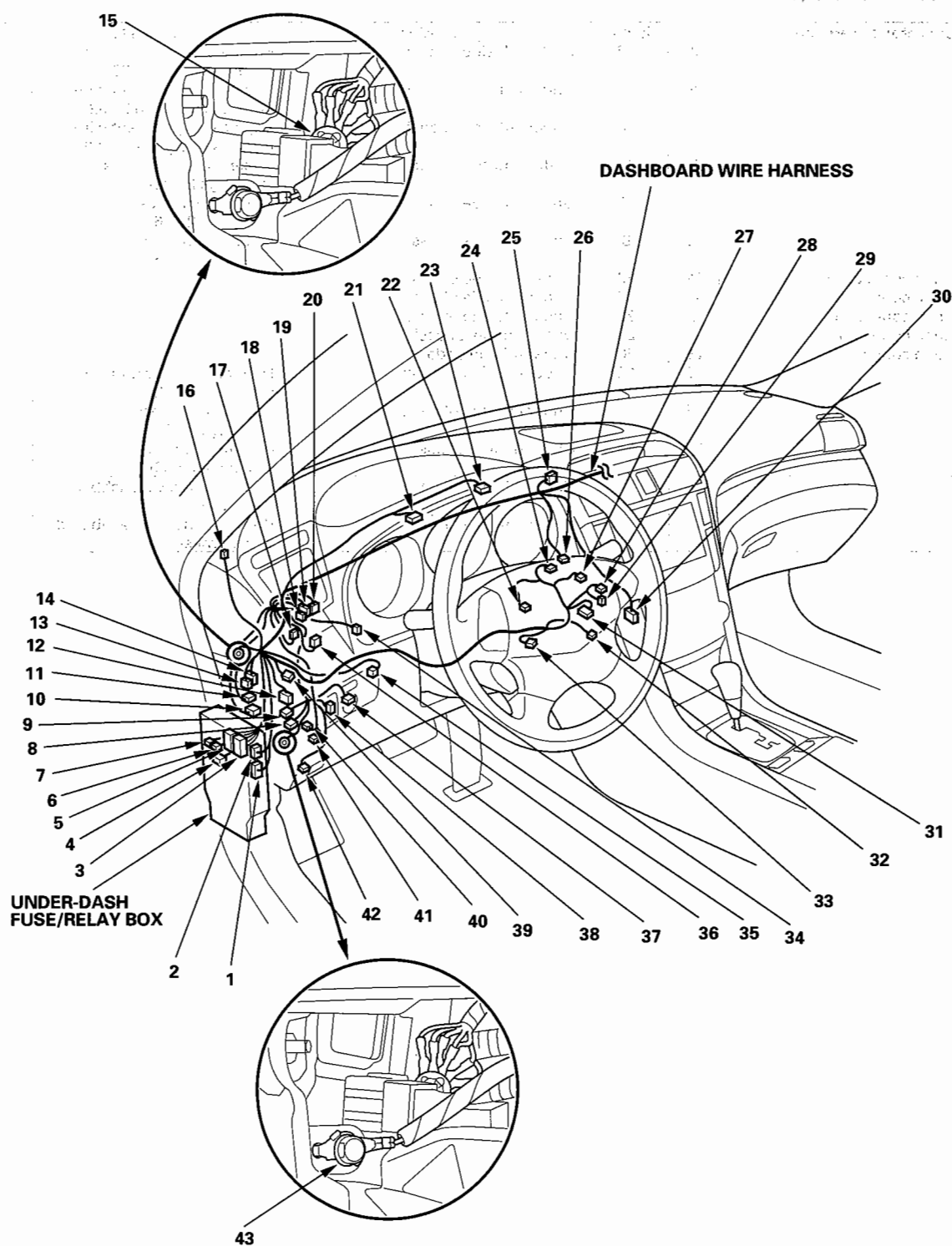


Connectors and Harnesses

Connector to Harness Index (cont'd)

Dashboard Wire Harness (Left branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Brake pedal position switch	35	4	Under left side of dash		
Clutch interlock switch	40	2	Under left side of dash		
Clutch pedal position switch	41	3	Under left side of dash		
Combination switch control unit	27	8	In steering column cover		
Dash lights brightness controller	34	6	Under left side of dash		
Data link connector (DLC)	12	16	Under left side of dash		
Driver's airbag inflator	33	4	In steering column cover		
Gauge control module connector A	21	30	Behind gauge assembly		
Gauge control module connector B	23	18	Behind gauge assembly		
Ignition key switch	29	6	In steering column cover		
Ignition switch	31	7	In steering column cover		
Immobilizer control unit-receiver	28	7	In steering column cover		
In-car temperature sensor	32	2	Under left side of dash		
Keyless receiver unit	17	5	Under left side of dash		
Power mirror control unit	36	26	Under left side of dash		
Power mirror switch	37	13	Under left side of dash		
Select/reset/information switch	26	6	Under left side of dash		
Steering angle sensor	22	5	In steering column cover		
Trunk lid opener switch	42	5	Under left side of dash		
Tweeter (left side)	16	2	Left side of dash		
Under-dash fuse/relay box connector A (see page 22-66)	4	6	Left kick panel		
Under-dash fuse/relay box connector N (see page 22-66)	5	45	Left kick panel		
Under-dash fuse/relay box connector P (MICU) (see page 22-66)	1	30	Left kick panel		
Under-dash fuse/relay box connector Q (MICU) (see page 22-66)	2	14	Left kick panel		
Under-dash fuse/relay box connector R (MES connector) (see page 22-66)	6	2	Left kick panel		
Under-dash fuse/relay box connector S (see page 22-66)	7	2	Left kick panel		
Under-dash fuse/relay box connector X (see page 22-66)	3	39	Left kick panel		
VSA OFF switch	38	5	Under left side of dash		



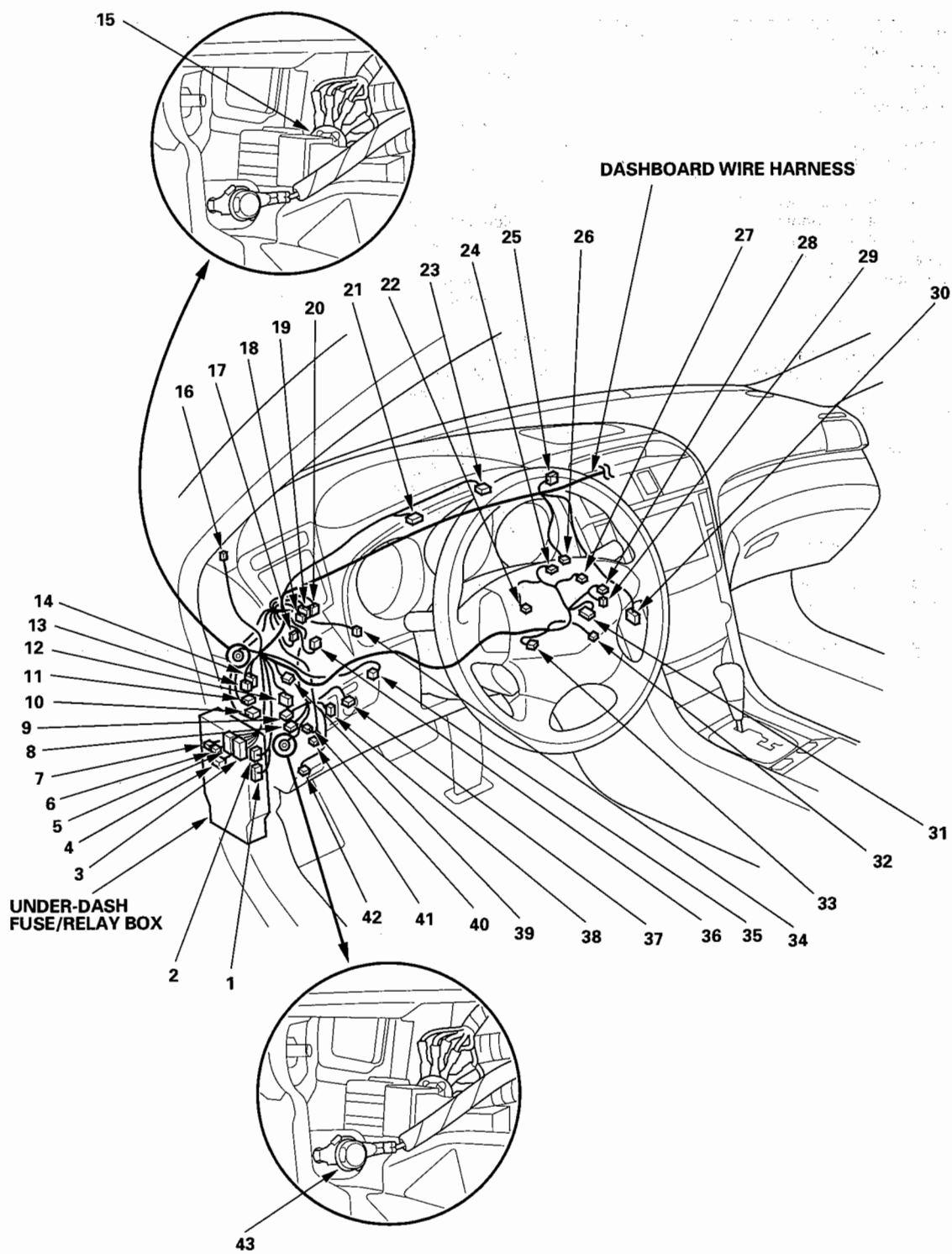
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Connectors and Harnesses

Connector to Harness Index (cont'd)

Dashboard Wire Harness (Left branch) (cont'd)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
C302	19	22	Under left side of dash	Engine compartment wire harness (see page 22-32)	
C303	20	14	Under left side of dash	Engine compartment wire harness (see page 22-32)	
C304	18	4	Under left side of dash	Engine compartment wire harness (see page 22-32)	
C451	24	13	In steering column cover	Cable reel subharness (see page 22-26)	
C501	14	20	Under left side of dash	Floor wire harness (see page 22-46)	
C502	13	8	Under left side of dash	Floor wire harness (see page 22-46)	
C506 (Junction connector)	39	20	Under left side of dash		
C507 (Junction connector)	8	28	Under left side of dash		
C508 (Junction connector)	9	28	Under left side of dash		
C509 (Junction connector)		28	Under middle of dash		
C510 (Junction connector)	25	20	Under middle of dash		
C634	10	12	Under left side of dash	Driver's door subharness (see page 22-52)	
C651	11	16	Under left side of dash	Roof wire harness (see page 22-50)	
C851	30	14	Under middle of dash	A/C wire harness (see page 22-63)	
G501	15		Under left side of dash	Body ground, via dashboard wire harness	
G502	43		Under left side of dash	Body ground, via dashboard wire harness	



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Connectors and Harnesses

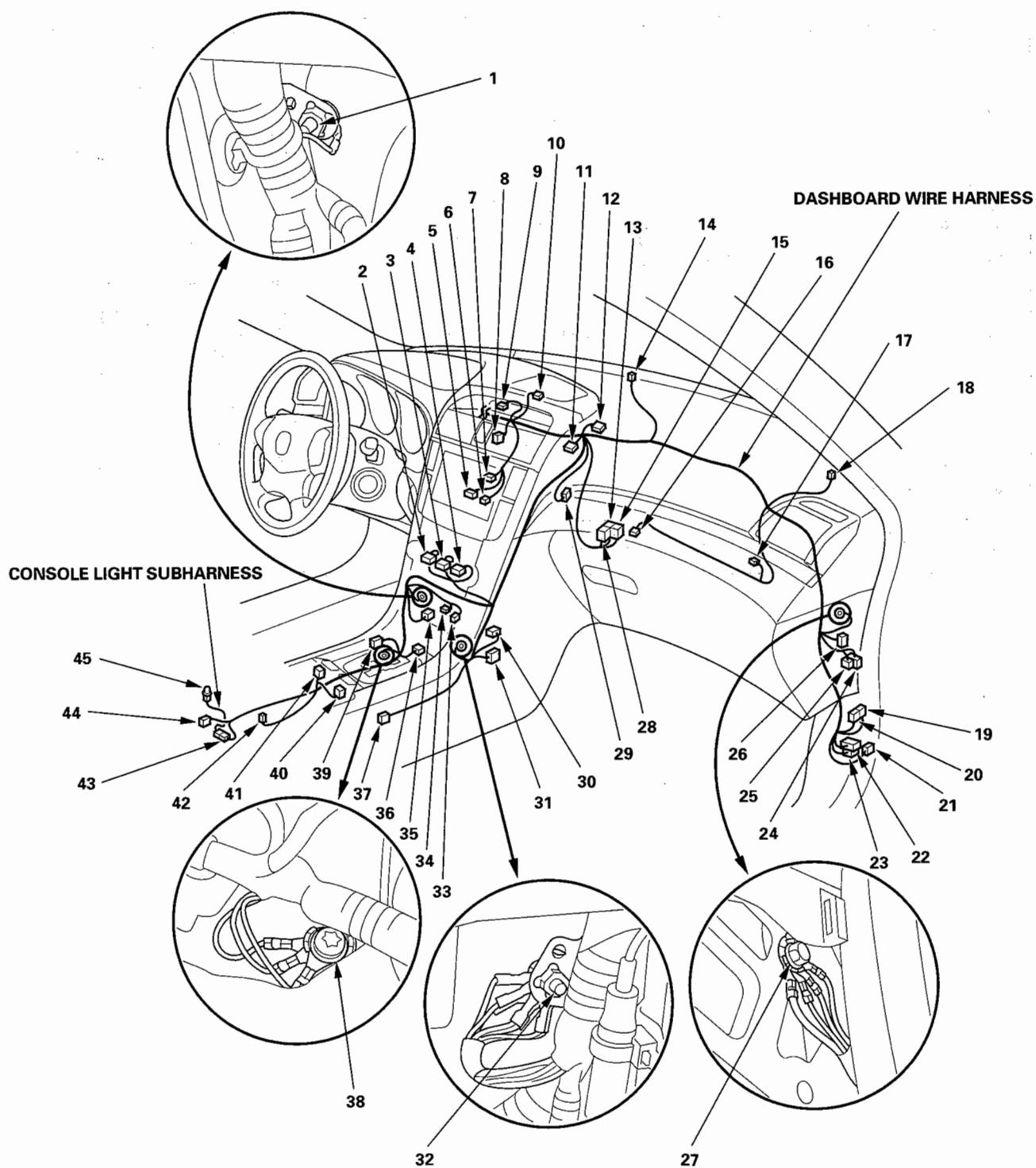
Connector to Harness Index (cont'd)

Dashboard Wire Harness (Right branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
A/T shift lock solenoid	37	2	Under console panel		
Audio amplifier connector A	20	14	Under right side of dash		
Audio amplifier connector B	19	20	Under right side of dash		
Audio-HVAC subdisplay-clock	9	10	Middle of dash		1
Clock	9	5	Middle of dash		2
Audio unit connector A	4	20	Middle of dash		
Audio unit connector B	3	14	Middle of dash		
Audio unit connector C	2	26	Middle of dash		
Display panel control unit connector A	6	14	Under middle of dash		
Display panel control unit connector B	7	6	Under middle of dash		
Display panel control unit connector E	5	22	Under middle of dash		
Cigarette lighter light (optional)	34	2	Middle of dash		
Driver's seat heater switch	41	6	Under console panel		
ECM/PCM connector A	30	31	Under middle of dash		
Front accessory power socket	33	2	Under console panel		
Front center speaker	10	2	Middle of dash		
Front passenger's airbag inflator	29	4	Under right side of dash		
Front passenger's seat heater switch	40	6	Under console panel		
Glove box light	17	2	Under right side of dash		
Hazard warning switch	8	5	Middle of dash		
Parking brake switch	42	1	Behind rear console		
Rear accessory power socket	44	2	Behind rear console		
Seat heater relay	13	4	Under right side of dash		
Shift lock relay	28	5	Under right side of dash		
SRS unit connector A	35	28	Under console panel		
Sunlight sensor	14	2	Middle of dash		
Transmission gear selection switch/ Park pin switch	39	8	Under console panel		
Throttle actuator control module relay	15	4	Under right side of dash		
Trunk lid opener main switch	16	2	Under right side of dash		
Tweeter (right)	18	2	Right side of dash		
Yaw rate-lateral acceleration sensor	36	5	Under console panel		

1: With navigation system

2: Without navigation system



(cont'd)

Connectors and Harnesses

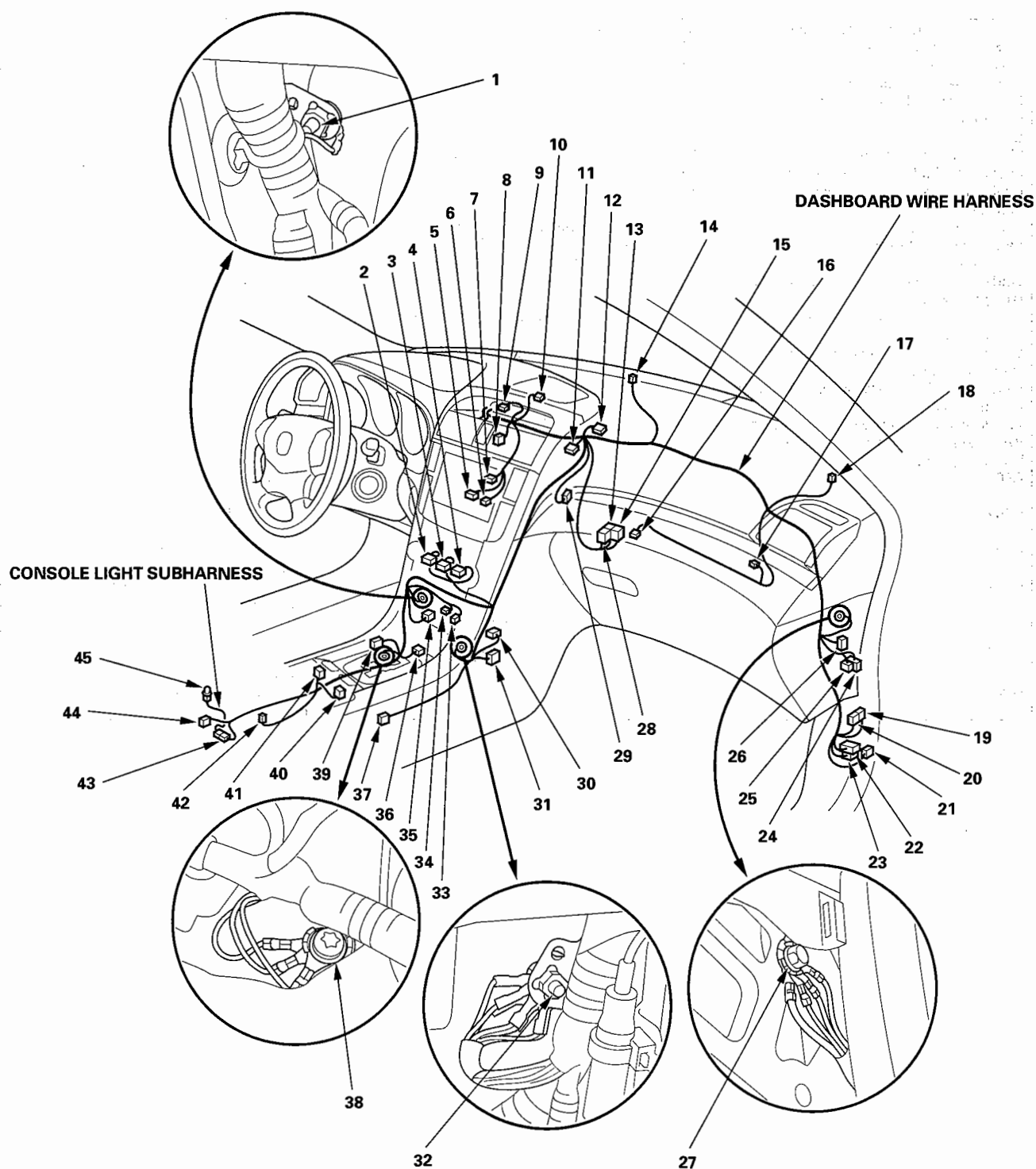
Connector to Harness Index (cont'd)

Dashboard Wire Harness (Right branch) (cont'd)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
C171	31	17	Under middle of dash	ECM/PCM wire harness (see page 22-26) Floor wire harness (see page 22-46) Floor wire harness (see page 22-46) Floor wire harness (see page 22-46) Console light subharness Front passenger's door subharness (see page 22-54) Front passenger's door subharness (see page 22-54)	
C503	22	12	Under right side of dash		
C504	23	17	Under right side of dash		
C505	21	3	Under right side of dash		
C511 (Junction connector)	11	20	Under right side of dash		
C512 (Junction connector)	12	28	Under right side of dash		
C513 (Junction connector)	26	28	Under right side of dash		
C514	43	2	Behind rear console		
C731	25	13	Under right side of dash		
C732	24	14	Under right side of dash		
G503	32		Under console panel	Body ground, via dashboard wire harness	
G504	1		Under middle of dash	Body ground, via dashboard wire harness	
G505	38		Under middle of dash	Body ground, via dashboard wire harness	
G506	27		Under right side of dash	Body ground, via dashboard wire harness	

Console Light Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Rear console light	45		Behind rear console	Dashboard wire harness	
C514	43	2	Behind rear console		

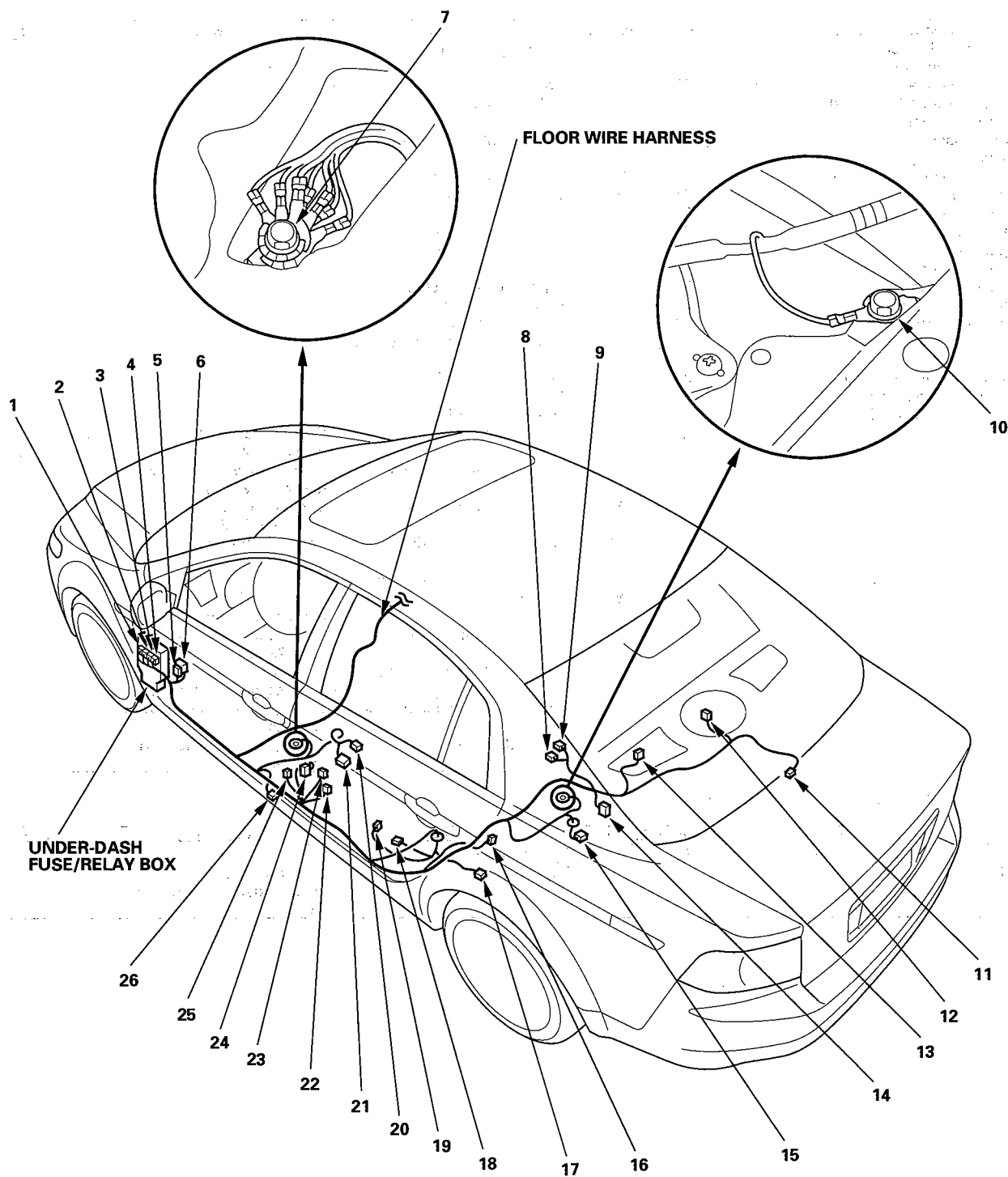


Connectors and Harnesses

Connector to Harness Index (cont'd)

Floor Wire Harness (Left branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ABS left rear wheel sensor	17	2	Under left side of vehicle		
Driver's door switch	25	1	Left B-pillar		
Driver's seat belt tensioner	22	2	Left B-pillar		
Driver's seat belt tension reducer solenoid	23	2	Left B-pillar		
Driver's side airbag inflator	20	2	Under driver's seat		
EVAP canister vent shut valve	19	2	Under left side of vehicle		
Fuel pump/fuel gauge sending unit	15	5	Fuel tank		
Fuel tank pressure (FTP) sensor	18	3	Under left side of vehicle		
Left rear door switch	16	1	Left C-pillar		
Left rear speaker	13	2	Left side of rear shelf		
Left side impact sensor	26	2	Under driver's seat		
Trunk light	11	2	Middle of rear shelf		
Under-dash fuse/relay box connector E (see page 22-66)	2	16	Under left side of dash		
Under-dash fuse/relay box connector F (see page 22-66)	1	14	Under left side of dash		
Under-dash fuse/relay box connector G (see page 22-66)	4	6	Under left side of dash		
Under-dash fuse/relay box connector H (see page 22-66)	3	14	Under left side of dash		
Window antenna amplifier connector A	8	1	Left C-pillar		
Window antenna amplifier connector B	9	1	Left C-pillar		
Woofer speaker	12	2	Middle of rear shelf		
C501	6	20	Under left side of dash	Dashboard wire harness (see page 22-38)	
C502	5	8	Under left side of dash	Dashboard wire harness (see page 22-38)	
C701	14	8	Left C-pillar	Rear wire harness (see page 22-51)	
C751	24	8	Left B-pillar	Left rear door wire harness (see page 22-55)	
C901	21	16	Under driver's seat	Driver's seat wire harness (see page 22-58)	
G601	7		Under driver's seat	Body ground, via floor wire harness	
G603	10		Beside of fuel pump connector	Body ground, via floor wire harness	



(cont'd)

Connectors and Harnesses

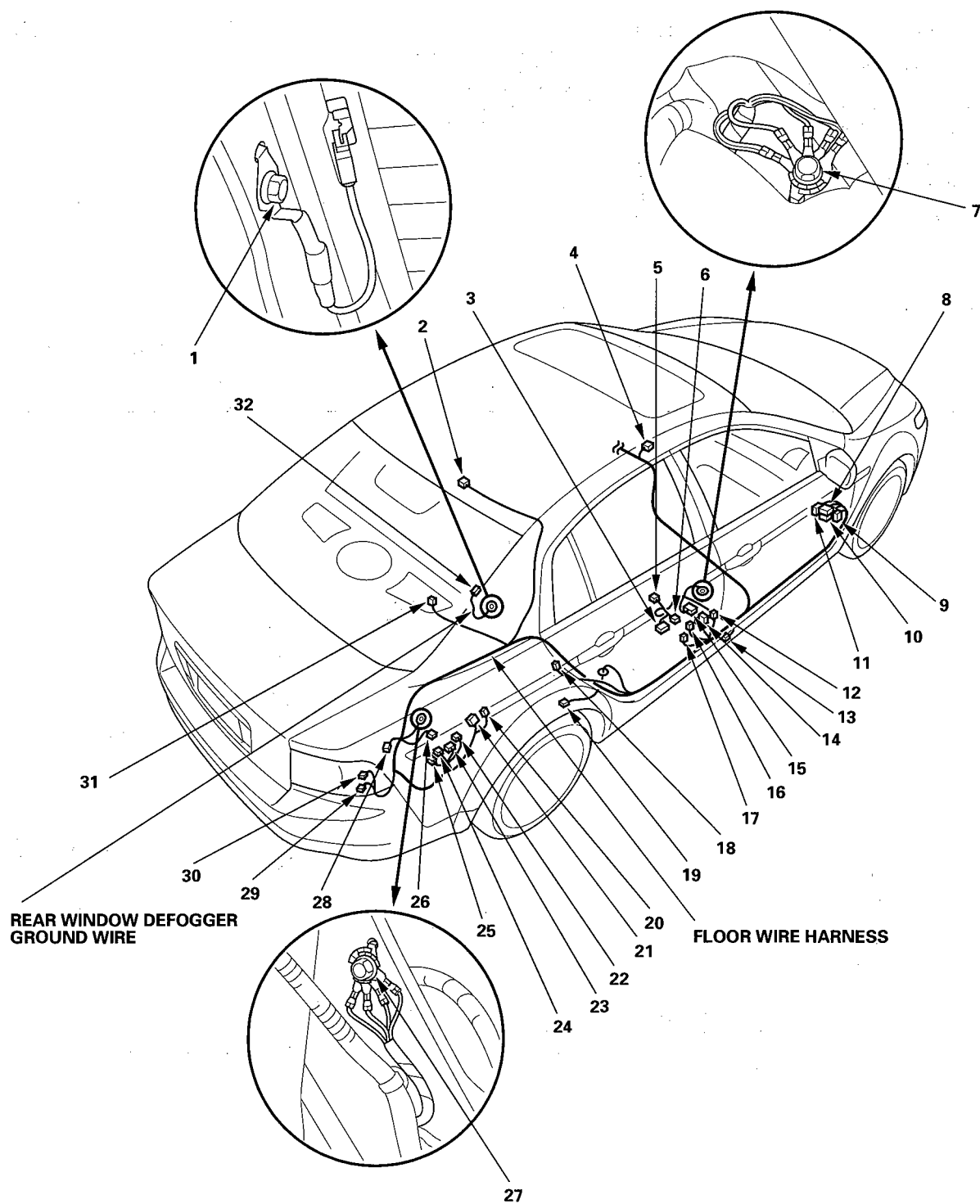
Connector to Harness Index (cont'd)

Floor Wire Harness (Right branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
ABS right wheel sensor	19	2	Under right side of vehicle		
Front passenger's door switch	12	1	Right B-pillar		
Front passenger's seat belt tensioner	17	4	Right B-pillar		
Front passenger's seat belt tension reducer solenoid	16	2	Right B-pillar		
Front passenger's side airbag inflator	6	2	Under front passenger's seat		
Navigation inspection connector	28	2	Right side of trunk		
Navigation unit connector A	23	20	Right side of trunk		
Navigation unit connector B	25	8	Right side of trunk		
Navigation unit connector C	22	14	Right side of trunk		
Navigation unit connector D	24	5	Right side of trunk		
Right brake/taillight	29	3	Right side of trunk		
Right rear door switch	18	1	Right C-pillar		
Right rear speaker	31	2	Right side of rear shelf		
Right rear side marker light	26	2	Right side of trunk		
Right rear turn signal light	30	2	Right side of trunk		
Right side impact sensor	13	2	Under front passenger's seat		
XM receiver	21	14	Right side of trunk		
XM receiver feeder cable A	20		Right side of trunk		
XM receiver feeder cable B	2		Roof		
SRS unit connector B	4	28	Under middle of dash		
C503	8	12	Under right side of dash	Dashboard wire harness (see page 22-38)	Without Navigation
C504	10	17	Under right side of dash	Dashboard wire harness (see page 22-38)	
C505	9	3	Under right side of dash	Dashboard wire harness (see page 22-38)	
C601	11	13	Under right side of dash	Roof wire harness (see page 22-50)	
C602 (Junction connector)	15	24	Under front passenger's seat	Right rear door wire harness (see page 22-56)	
C781	14	8	Right B-pillar	OPDS unit harness (see page 22-60)	
C801	5	4	Under front passenger's seat	Front passenger's seat wire harness (see page 22-57)	
C951	3	10	Under front passenger's seat		
G602	7		Under front passenger's seat	Body ground, via floor wire harness	
G604	27		Right side of trunk	Body ground, via floor wire harness	

Rear Window Defogger Ground Wire

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Rear window defogger connector B (-)	32	1	Right C-pillar		
G801	1		Right C-pillar	Body ground, via rear window defogger ground wire	



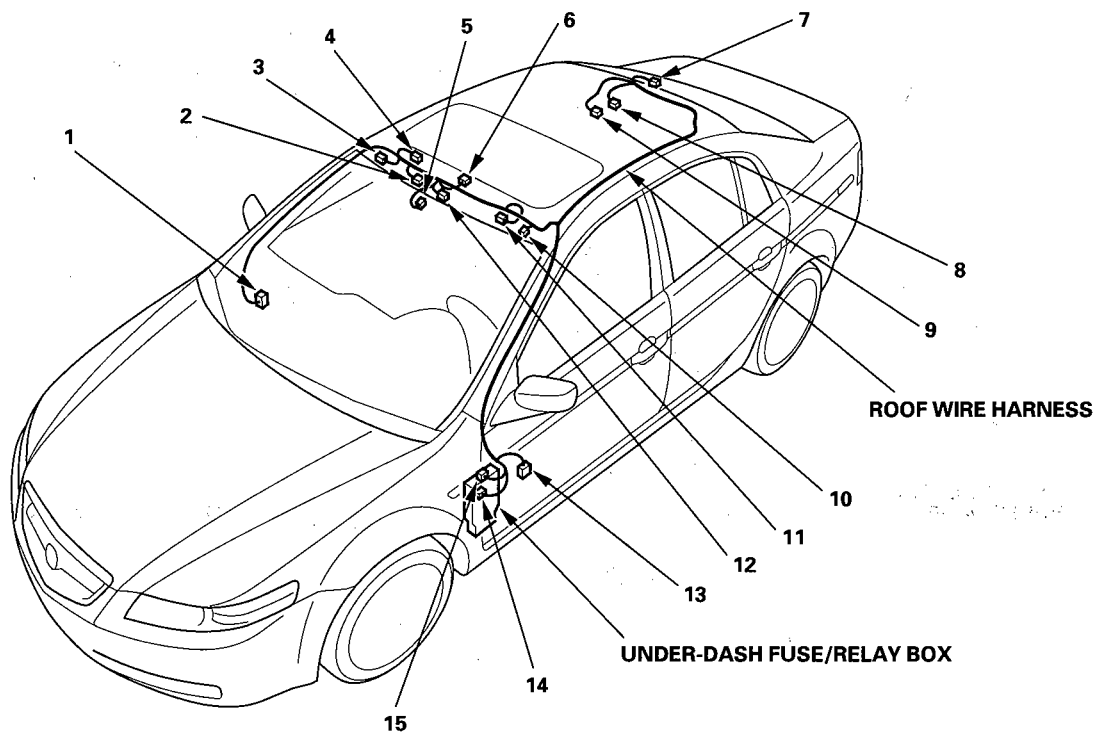
Connectors and Harnesses

Connector to Harness Index (cont'd)

Roof Wire Harness

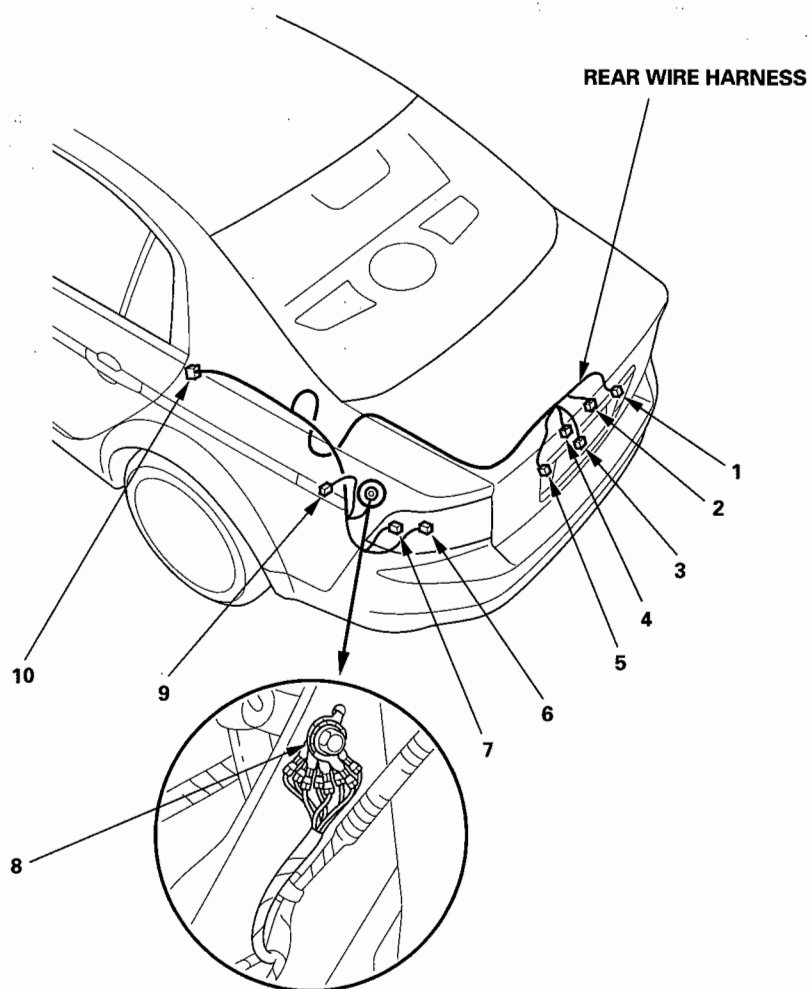
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Automatic dimming inside mirror	12	3	Behind rear view mirror		
Driver's vanity mirror light	11	2	Driver's sunvisor		
Driver's vanity mirror light switch	10	2	Driver's sunvisor		
Front passenger's vanity mirror light	4	2	Front passenger's sunvisor		
Front passenger's vanity mirror light switch	3	2	Front passenger's sunvisor		
HandsFreeLink control unit	5	22	Roof		
High mount brake light	7	2	Roof		
Moonroof switch	6	7	Roof		
Moonroof control unit	9	10	Roof		
Noise condenser (for high mount brake light)	15	2	Roof		
Rear map light	8	3	Roof		
Roof console	2	20	Roof		
Under-dash fuse/relay box connector W (see page 22-66)	14	5	Under left side of dash		
C601	1	13	Under right side of dash	Floor wire harness (see page 22-46)	* 1
C651	13	16	Under right side of dash	Dashboard wire harness (see page 22-38)	

* 1: With navigation



Rear Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Left back-up light	5	2	Left side of trunk	Floor wire harness (see page 22-46)	
Left license plate light	4	2	Middle of trunk		
Left rear side marker light	9	2	Left side of trunk		
Left rear turn signal light	7	2	Left side of trunk		
Left taillight/brake light	6	3	Left side of trunk		
Right back-up light	1	2	Right side of trunk		
Right license plate light	2	2	Middle of trunk		
Trunk lid latch switch/opener solenoid	3	3	Middle of trunk		
C701	10	8	Left side of trunk		
G701	8		Left side of trunk	Body ground, via rear wire harness	



Connectors and Harnesses

Connector to Harness Index (cont'd)

Driver's Door Wire Harness A

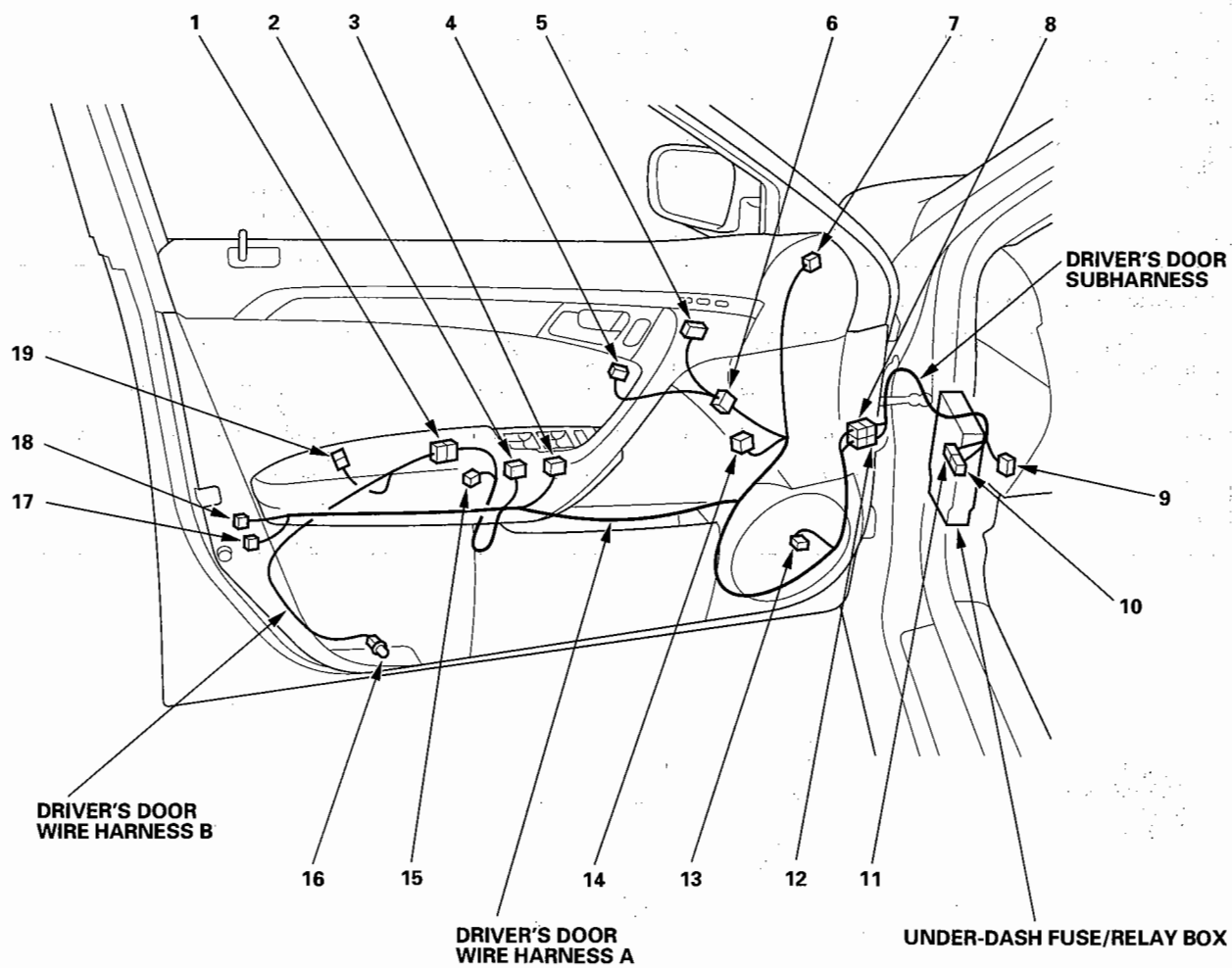
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Left power mirror	7	13	Driver's door		
Left speaker	13	2	Driver's door		
Door multiplex control unit connector A	2	22	Driver's door		
Door multiplex control unit connector B	3	14	Driver's door		
Driver's door key cylinder switch	15	3	Driver's door		
Driver's door lock actuator	17	2	Driver's door		
Driver's door lock knob switch	18	3	Driver's door		
Driver's door lock switch	4	5	Driver's door		
Driver's power window motor	14	6	Driver's door		
Driving position memory switch	5	10	Driver's door		
C631	8	20	Driver's door	Driver's door subharness	
C632	12	14	Driver's door	Driver's door subharness	
C633	1	4	Driver's door	Driver's door wire harness B	
C635 (Junction connector)	6	20	Driver's door		

Driver's Door Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Under-dash fuse/relay box connector J (see page 22-66)	10	21	Under left side of dash		
Under-dash fuse/relay box connector K (see page 22-66)	11	12	Under left side of dash		
C631	8	20	Driver's door	Driver's door wire harness A	
C632	12	14	Driver's door	Driver's door wire harness A	
C634	9	12	Under left side of dash	Dashboard wire harness (see page 22-38)	

Driver's Door Wire Harness B

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's door courtesy light	16	2	Driver's door		
Security indicator	19	2	Driver's door		
C633	1	4	Driver's door	Driver's door wire harness A	



Connectors and Harnesses

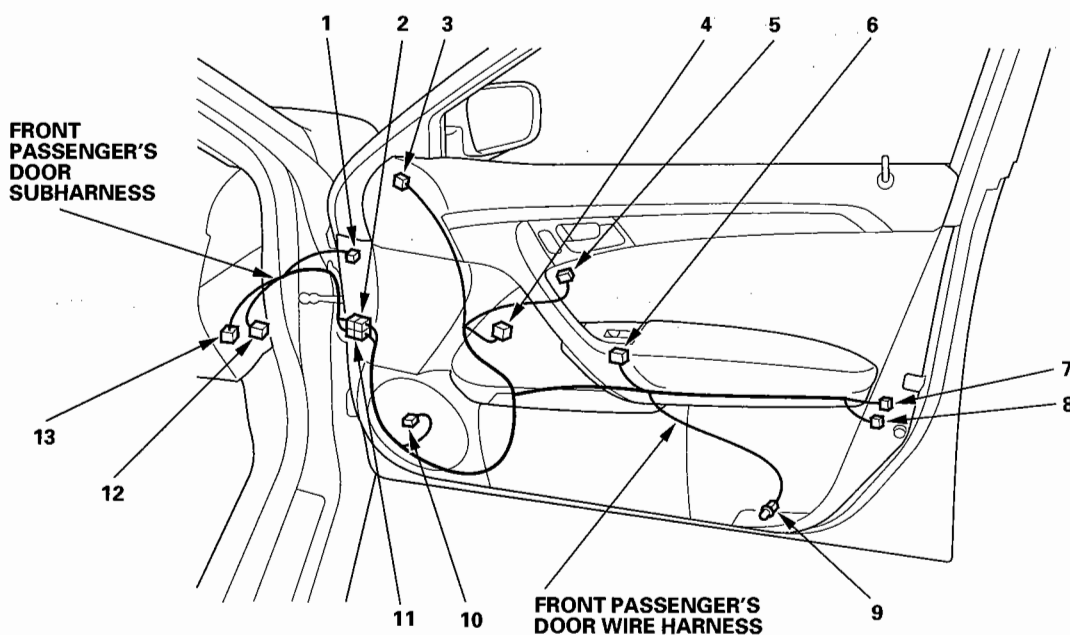
Connector to Harness Index (cont'd)

Front Passenger's Door Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Front passenger's door courtesy light	9	2	Front passenger's door		
Front passenger's door lock actuator	8	2	Front passenger's door		
Front passenger's door lock knob switch	7	3	Front passenger's door		
Front passenger's door lock switch	5	5	Front passenger's door		
Front passenger's power window switch	6	14	Front passenger's door		
Front passenger's power window motor	4	6	Front passenger's door		
Right power mirror	3	13	Front passenger's door		
Right speaker	10	2	Front passenger's door		
C733	2	20	Front passenger's door	Front passenger's door subharness	
C734	11	14	Front passenger's door	Front passenger's door subharness	

Front Passenger's Door Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Right side marker light	1	2	Right fender		
C731	12	13	Under right side of dash	Dashboard wire harness (see page 22-38)	
C732	13	14	Under right side of dash	Dashboard wire harness (see page 22-38)	
C733	2	20	Front passenger's door	Front passenger's door wire harness	
C734	11	14	Front passenger's door	Front passenger's door wire harness	



4. $\mathcal{A} = \{A_1, \dots, A_n\}$ is a $\mathcal{C}$ -family of $\mathcal{C}$ -subalgebras of $\mathcal{A}$ if and only if $\mathcal{A}$ is a $\mathcal{C}$ -family of $\mathcal{C}$ -subalgebras of $\mathcal{A}$ and $\mathcal{A}$ is a $\mathcal{C}$ -family of $\mathcal{C}$ -subalgebras of $\mathcal{A}$.

the 1990s, the number of people in the world who are illiterate has increased from 1.2 billion to 1.5 billion. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015. The number of illiterate people in the world is expected to reach 1.7 billion by the year 2015.

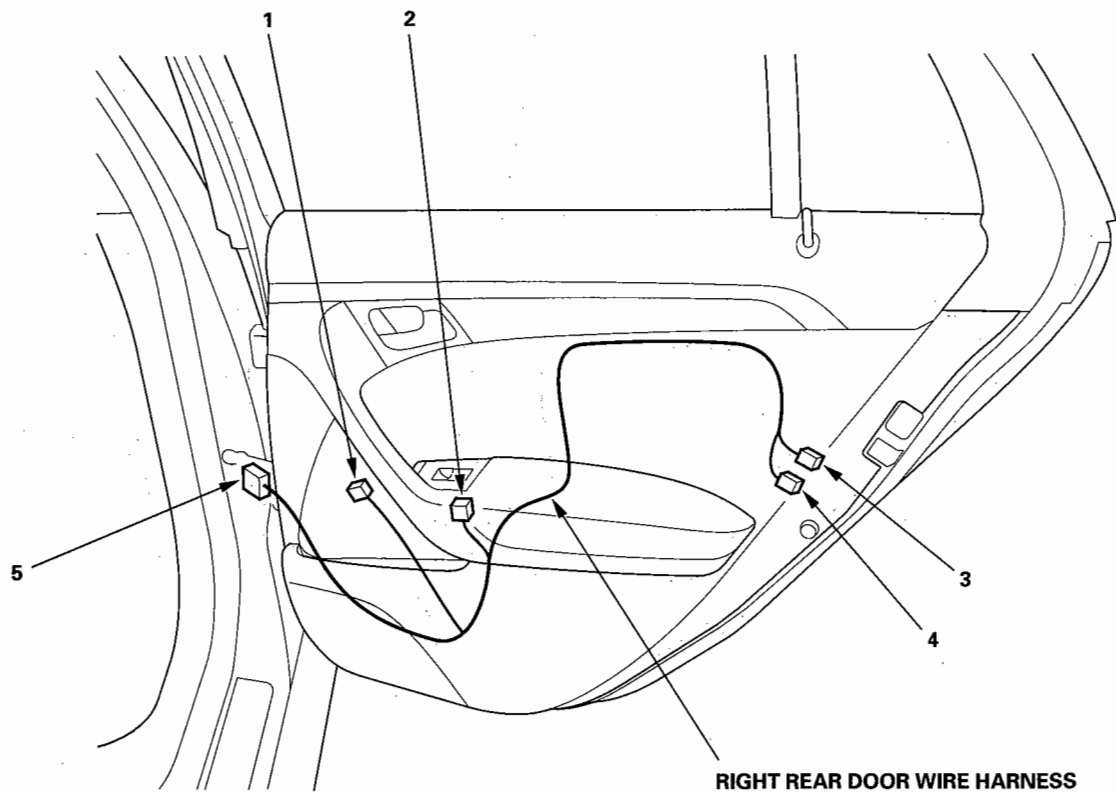


Connectors and Harnesses

Connector to Harness Index (cont'd)

Right Rear Door Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Right rear door lock actuator	4	2	Right rear door	Floor wire harness (see page 22-46)	
Right rear door lock knob switch	3	3	Right rear door		
Right rear power window switch	2	6	Right rear door		
Right rear power window motor C781	1	6	Right rear door		
	5	8	Right B-pillar		



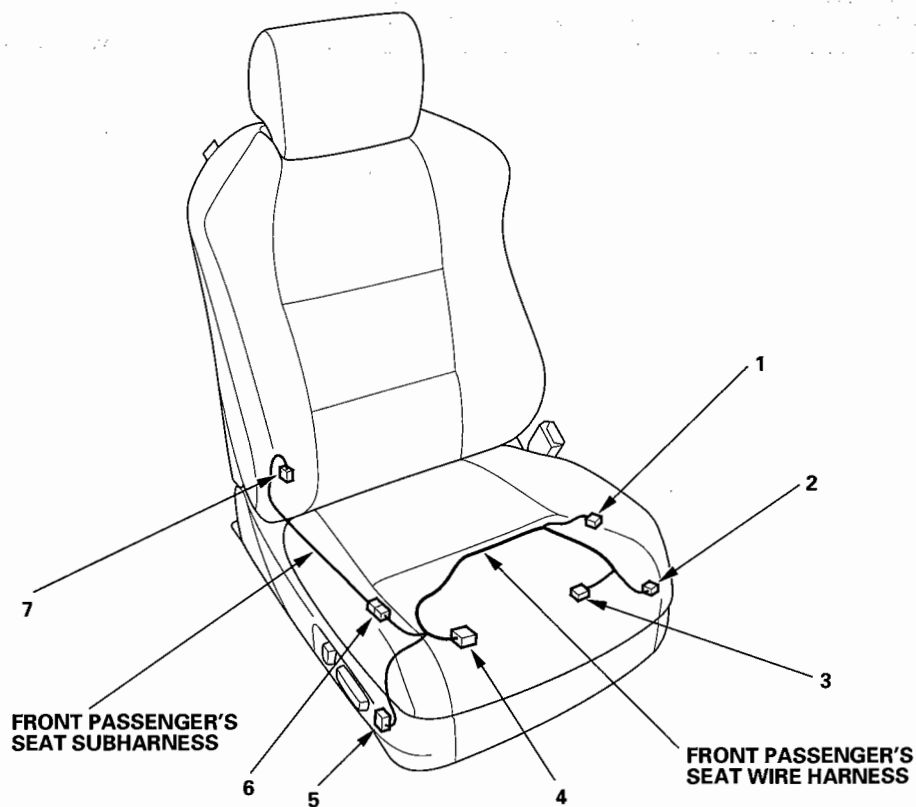


Front Passenger's Seat Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Front passenger's power seat adjustment switch	5	12	Right side of front passenger's seat		
Front passenger's power seat slide motor	2	2	Under front passenger's seat		
Front passenger's seat belt buckle switch	1	3	Front passenger's seat		
Front passenger's seat heater C951	3	3	Front passenger's seat		
	4	10	Under front passenger's seat	Floor wire harness (see page 22-46)	
C952	6	2	Under front passenger's seat	Front passenger's seat subharness	

Front Passenger's Seat Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Front passenger's power seat recline motor C952	7	2	Front passenger's seat		
	6	2	Front passenger's seat	Front passenger's seat wire harness	



Connectors and Harnesses

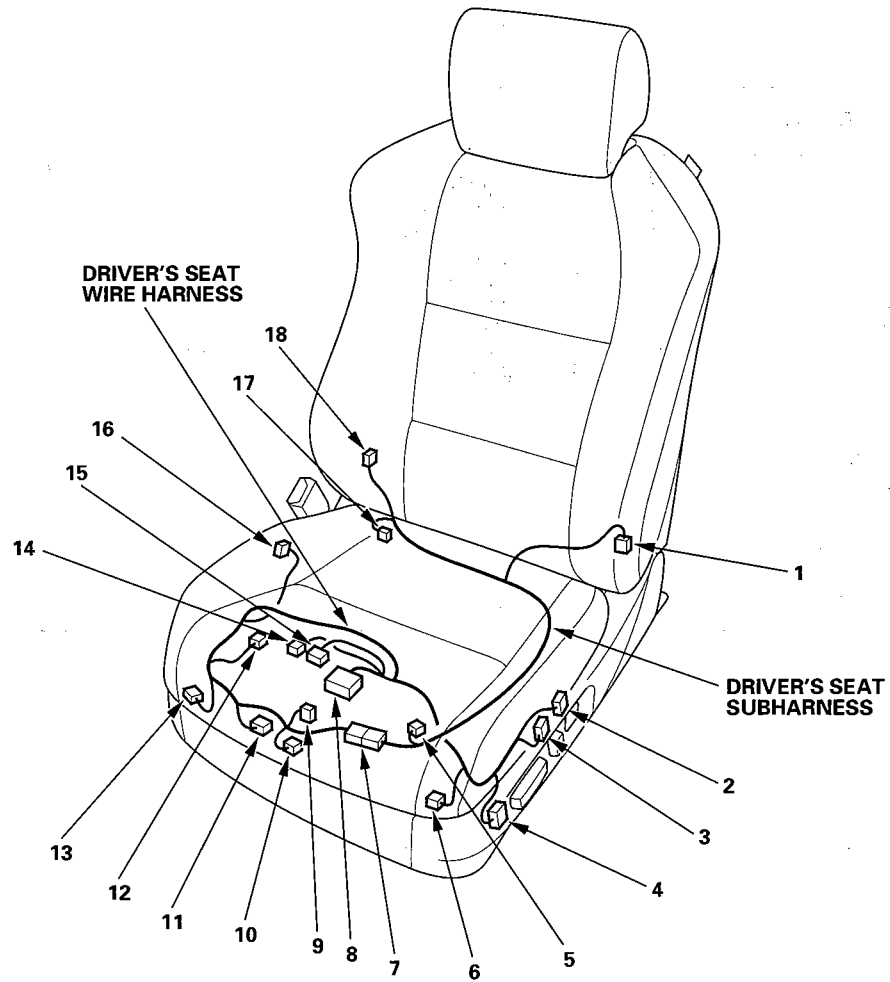
Connector to Harness Index (cont'd)

Driver's Seat Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's power seat adjustment switch	4	12	Left side of driver's seat		
Driver's power seat front up-down motor	16	5	Under driver's seat		
Driver's power seat rear up-down motor	3	5	Under driver's seat		
Driver's power seat slide gear box	13	3	Under driver's seat		
Driver's power seat slide motor	6	2	Under driver's seat		
Driver's seat belt buckle switch	12	3	Driver's seat		
Driver's seat heater	9	3	Driver's seat		
Driver's seat lumbar switch	2	5	Under driver's seat		
Power seat control unit connector A	15	20	Under driver's seat		
Power seat control unit connector B	11	8	Under driver's seat		
Power seat control unit connector C	14	12	Under driver's seat		
Power seat control unit connector D	10	6	Under driver's seat		
C901	8	16	Under driver's seat	Floor wire harness (see page 22-46)	
C902	7	8	Under driver's seat	Driver's seat subharness	

Driver's Seat Subharness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Lumbar motor	18	2	Driver's seat		
Recline motor	1	5	Driver's seat		
Seat back heater connector A	5	2	Driver's seat		
Seat back heater connector B	17	2	Driver's seat		
C902	7	8	Under driver's seat	Driver's seat wire harness	



Connectors and Harnesses

Connector to Harness Index (cont'd)

Dashboard Wire Harness (SRS branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's airbag	2	4	Under left side of dash		
Front passenger's airbag	6	4	Under right side of dash		
SRS unit connector A	3	28	Under middle of dash		
Under-dash fuse/relay box connector R (see page 22-66)	16	2	Under left side of dash		
Under-dash fuse/relay box connector S (see page 22-66)	17	2	Under left side of dash		
C403	1	4	Under left side of dash	Engine compartment wire harness (see page 22-32)	
C501	18	20	Under left side of dash	Floor wire harness	
G505	13			Body ground, via dashboard wire harness	

Floor Wire Harness (SRS branch)

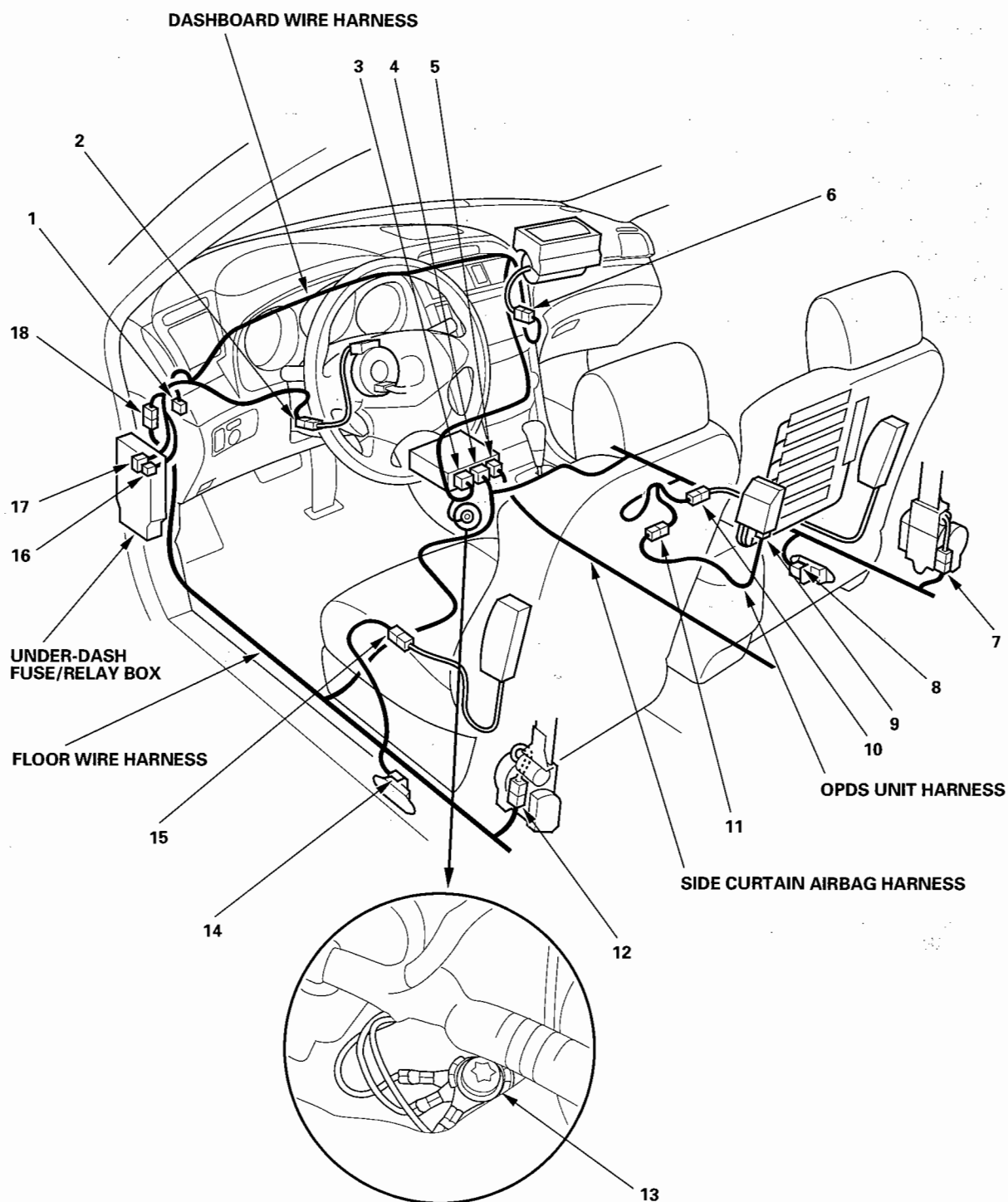
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Driver's seat belt tensioner	12	4	Left B-pillar		
Driver's side airbag	15	2	Under left side of dash		
Front passenger's seat belt tensioner	7	4	Right B-pillar		
Front passenger's side airbag	10	2	Under front passenger's seat		
Left side impact sensor (1st)	14	2	Under driver's seat		
Right side impact sensor (1st)	8	2	Under front passenger's seat		
SRS unit connector B	4	28	Under middle of dash		
C501	18	20	Under light side dash	Dashboard wire harness	
C801	11	4	Under front passenger's seat	OPDS unit harness	

OPDS Unit Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
OPDS unit connector D	9	8	In front passenger's seat		
C801	11	4	Under front passenger's seat	Floor wire harness	

Side Curtain Airbag Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
SRS unit connector C	5	16	Under middle of dash		



Connectors and Harnesses

Connector to Harness Index (cont'd)

Dashboard Wire Harness (SRS branch)

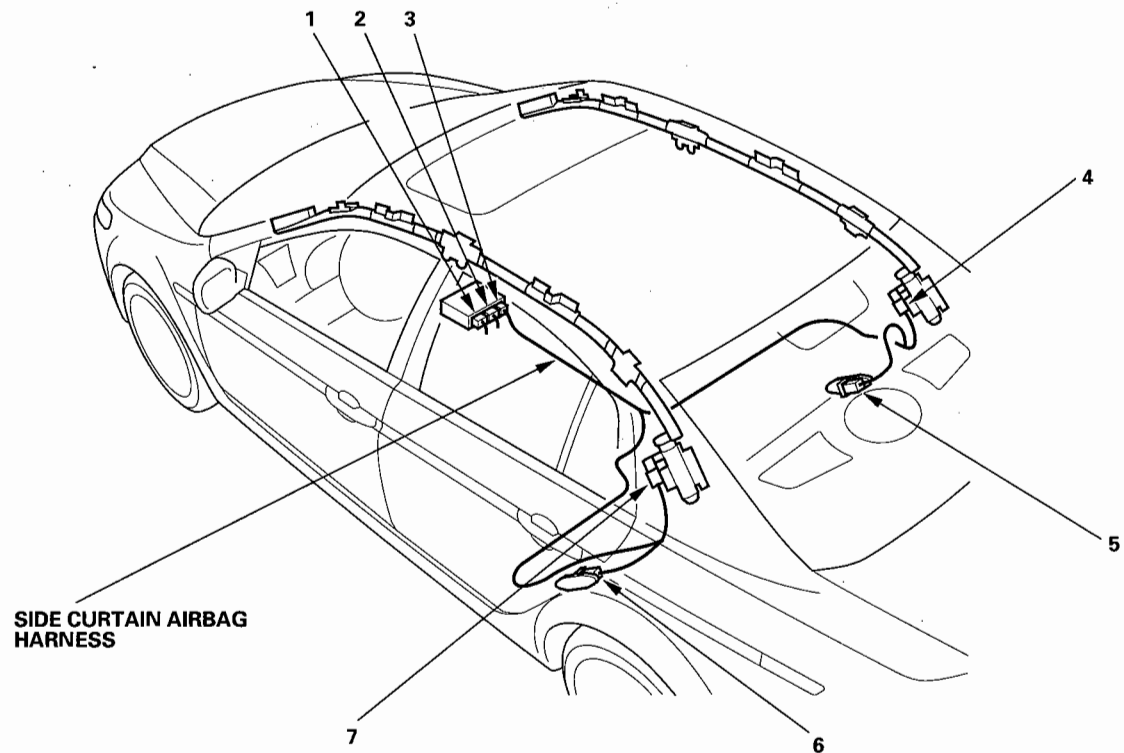
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
SRS unit connector A	1	28	Under middle of dash		

Floor Wire Harness (SRS branch)

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
SRS unit connector B	2	28	Under middle of dash		

Side Curtain Airbag Harness

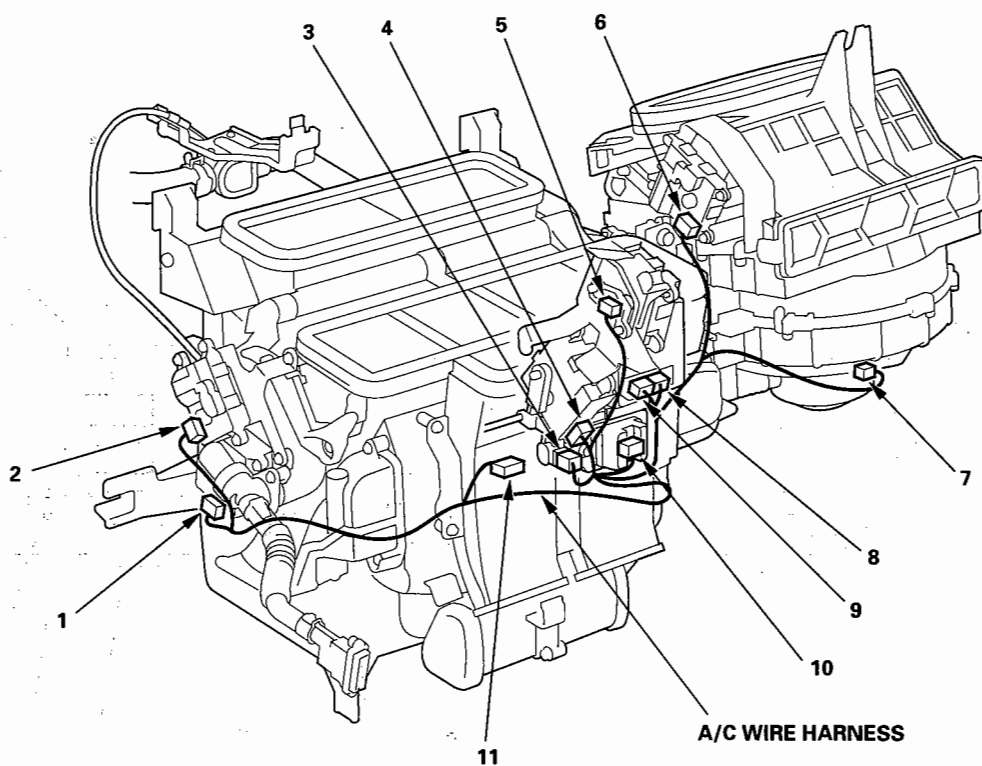
Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Left side impact sensor (2nd)	6	2	Left quarter panel		
Left side curtain airbag	7	2	Left C-pillar		
Right side curtain airbag	4	2	Right quarter panel		
Right side impact sensor (2nd)	5	2	Right C-pillar		
SRS unit connector C	3	16	Under middle of dash		



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A/C Wire Harness

Connector or Terminal	Ref	Cavities	Location	Connects to	Notes
Blower motor	7	2	Under middle of dash		
Climate control unit connector A	8	20	Under middle of dash		
Climate control unit connector B	9	16	Under middle of dash		
Driver's air mix control motor	1	5	Under middle of dash		
Driver's mode control motor	2	10	Under middle of dash		
Evaporator temperature sensor	3	2	Under middle of dash		
Front passenger's air mix control motor	4	5	Under middle of dash		
Front passenger's mode control motor	5	10	Under middle of dash		
Power transistor	10	4	Under middle of dash		
Recirculation control motor	6	5	Under middle of dash		
C851	11	14	Under middle of dash	Dashboard wire harness (see page 22-38)	

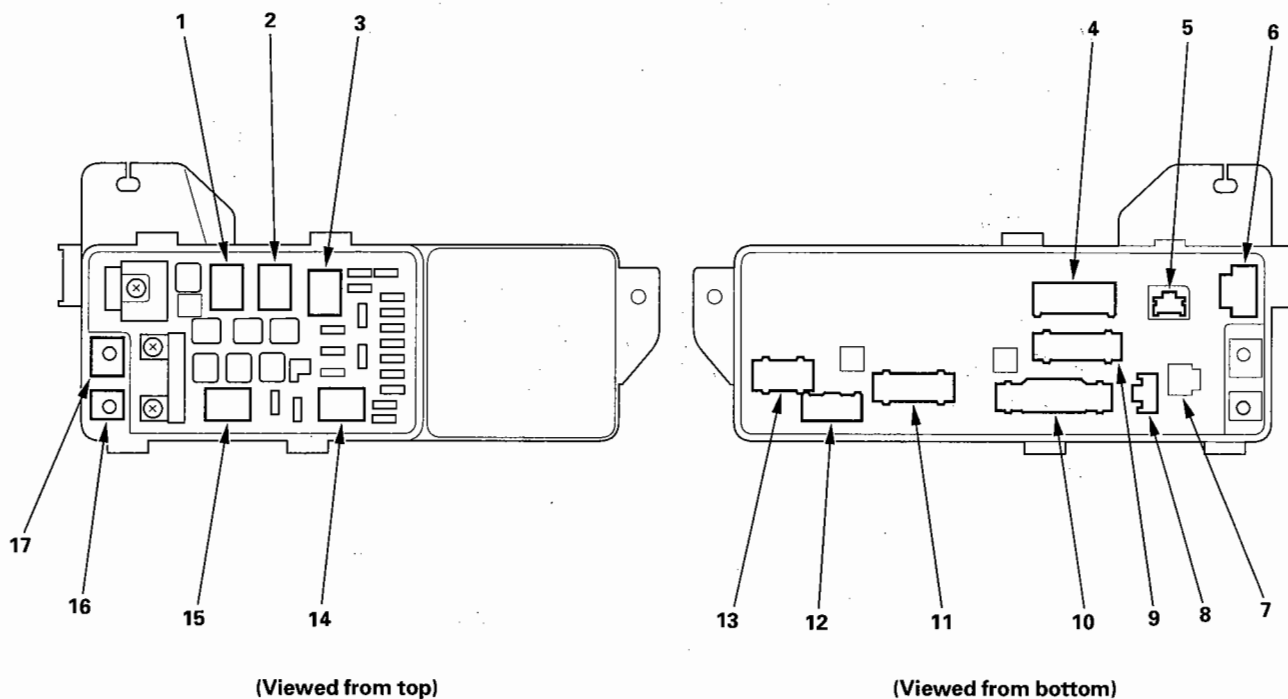


Fuse/Relay Boxes

Connector to Fuse/Relay Box Index

Under-hood Fuse/Relay Box

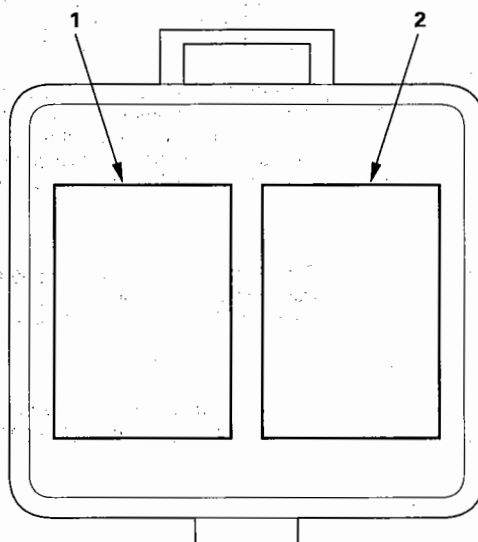
Socket	Ref	Terminal	Connects to
A/C compressor clutch relay	2	4	Engine compartment wire harness (see page 22-32)
A (ELD unit)	5	3	
B	7		Not used
Blower motor relay	1	4	Engine compartment wire harness (see page 22-32)
C	8	2	
Condenser fan relay	15	4	Engine compartment wire harness (see page 22-32)
D	4	9	
E	9	16	Engine compartment wire harness (see page 22-32)
F	10	20	Front engine compartment wire harness (see page 22-29)
G	6	2	Engine compartment wire harness (see page 22-32)
H	11	14	Front engine compartment wire harness (see page 22-29)
J	12	5	Engine compartment wire harness (see page 22-32)
K	13	10	Engine compartment wire harness (see page 22-32)
Radiator fan relay	14	4	Engine compartment wire harness (see page 22-32)
Rear window defogger relay	3	4	
T101	17		Starter cable (see page 22-14)
T102	16		Engine wire harness (see page 22-16)





Under-hood Multi-relay Box

Socket	Ref	Terminal	Connects to
Fog lights/daytime running lights relay	1	4	Front engine compartment wire harness (see page 22-29)
Fan control relay	2	5	Front engine compartment wire harness (see page 22-29)

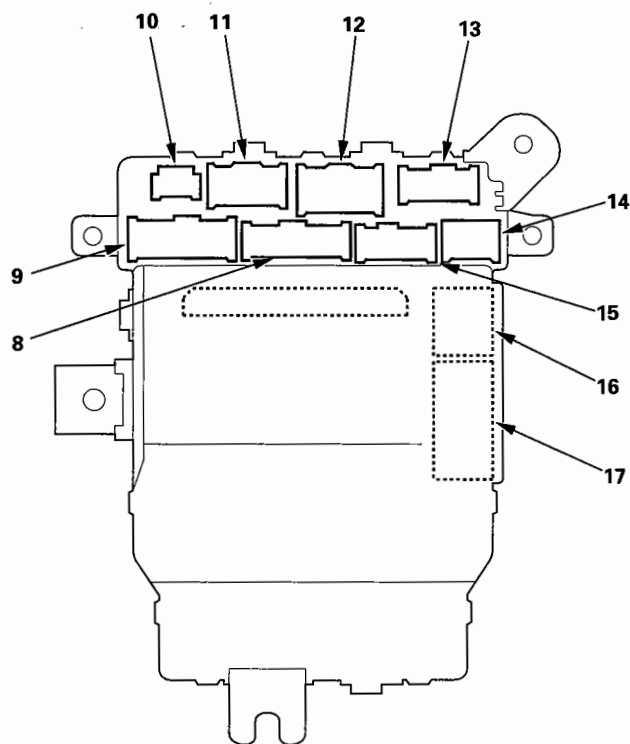
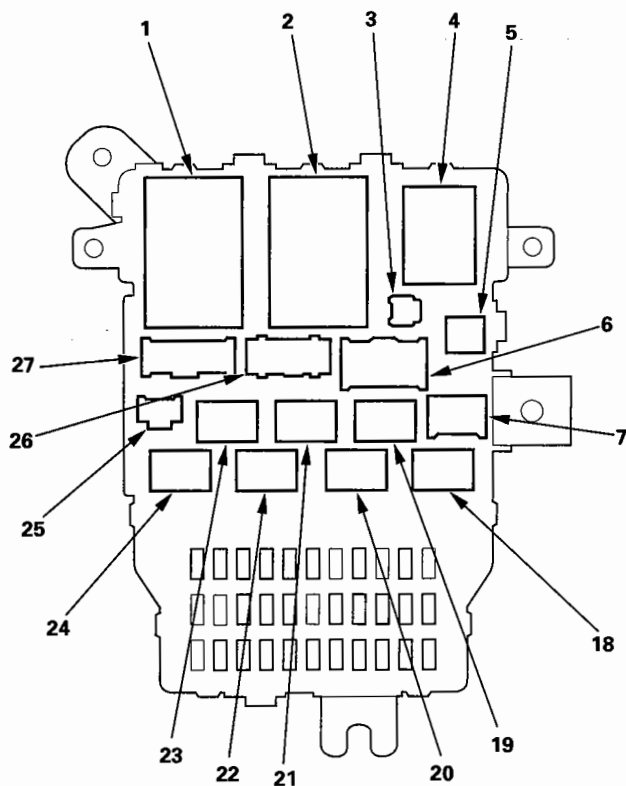


Fuse/Relay Boxes

Connector to Fuse/Relay Box Index (cont'd)

Under-dash Fuse/Relay Box

Socket	Ref	Terminal	Connects to
A	6	6	Dashboard wire harness (see page 22-38)
Accessory power socket relay	19	4	
A/F sensor relay	20	4	
B	12	6	Engine compartment wire harness (see page 22-32)
C	11	12	Engine compartment wire harness (see page 22-32)
D	13	17	Engine compartment wire harness (see page 22-32)
E	8	16	Floor wire harness (see page 22-46)
F	9	14	Floor wire harness (see page 22-46)
G	14	6	Floor wire harness (see page 22-46)
H	15	14	Floor wire harness (see page 22-46)
Ignition coil relay	23	4	
J	27	21	Driver's door subharness (see page 22-52)
K	26	12	Driver's door subharness (see page 22-52)
M	25	3	MICS service check connector
N	2	45	Dashboard wire harness (see page 22-38)
P (MICU)	17	30	Dashboard wire harness (see page 22-38)
PGM-FI main relay 1	21	4	
PGM-FI main relay 2	24	4	
Power window relay	22	4	
Q (MICU)	16	14	Dashboard wire harness (see page 22-38)
R (MES connector)	3	2	Dashboard wire harness (see page 22-38)
S	5	2	Dashboard wire harness (see page 22-38)
Starter cut relay	18	4	
T	7	6	Optional connector
Turn signal/hazard relay	4	6	
W	10	5	Roof wire harness (see page 22-50)
X	1	39	Dashboard wire harness (see page 22-38)



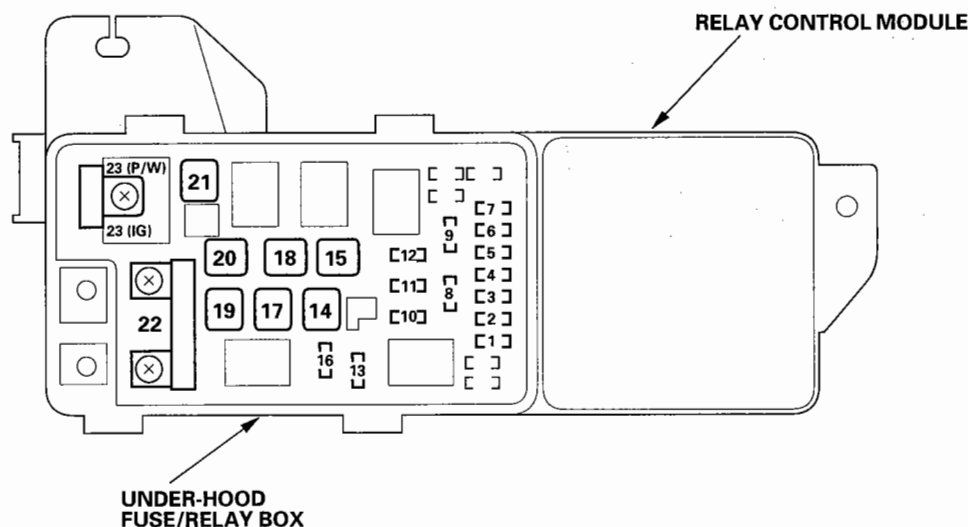
Power Distribution



Fuse to Components Index

Under-hood Fuse/Relay Box

Fuse Number	Amps	Wire Color	Component(s) or Circuit(s) Protected
1	15A	RED/YEL	Left headlight (igniter unit)
2	30A	Internal connection	Relay control module
3	7.5A	WHT/YEL	Left headlight (high/low switching solenoid)
4	10A	RED/BLK	Audio-HVAC display module light, A/T gear position console light, Center pocket light, Dash lights brightness control switch light, Driver's and front passenger's door lock switch light, Driving position memory switch light, Glove box light, Hazard warning switch light, Front parking lights, License plate lights, Moonroof switch light, Navigation unit, Power mirror switch light, Relay control module, Rear side marker lights, Roof console, Seat heater switches lights, Select/reset/information switch light, Side marker lights, Taillights, Trunk lid opener switch light, VSA OFF switch light
5	7.5A	WHT/GRN	Right headlight (high/low switching solenoid)
6	15A	RED/GRN	Right headlight (igniter unit)
7	7.5A	Internal connection	Relay control module
8	15A	WHT/GRN	CKP sensor A/B, CMP sensor, Data link connector (DLC), ECM/PCM (2 wires), Injectors, PGM-FI main relay 1, PGM-FI main relay 2, Throttle actuator control module relay
9	30A	BLU/YEL	Condenser fan motor (via condenser fan relay)
10	20A (USA) 15A (Canada)	BLU/RED	Fog lights relay, Fog lights Daytime running lights relay, Daytime running lights
11	30A	BLU/BLK	Radiator fan motor (via radiator fan relay)
12	7.5A	BLU/RED	A/C compressor clutch (via A/C compressor clutch relay)
13	20A	RED Internal connection	Brake lights, ECM/PCM, High mount brake light, Multiplex integrated control unit (MICU) Horn relay, Horns
14	40A	BLK/YEL	Rear window defogger (via rear window defogger relay)
15	40A	YEL Internal connection	No. 5 through No. 9 fuses in the under-dash fuse/relay box No. 7 fuse in the under-hood fuse/relay box
16	15A	WHT/BLK	Multiplex integrated control unit (MICU), Turn signal/hazard relay
17	30A	WHT/RED	VSA modulator-control unit (+B-MR)
18	40A	WHT	VSA modulator-control unit (+B-FSR)
19	40A	GRN/WHT	No. 1 through No. 4 fuses in the under-dash fuse/relay box
20	40A	BLU	No. 12 through No. 17 fuses in the under-dash fuse/relay box
21	40A	WHT/BLU	Blower motor (via blower motor relay)
22	120A	—	Battery, Power distribution
23	50A (IG) 50A (P/W)	WHT WHT/BLU	Ignition switch (BAT) Power window relay, No. 24 through No. 28 fuses in the under-dash fuse/relay box



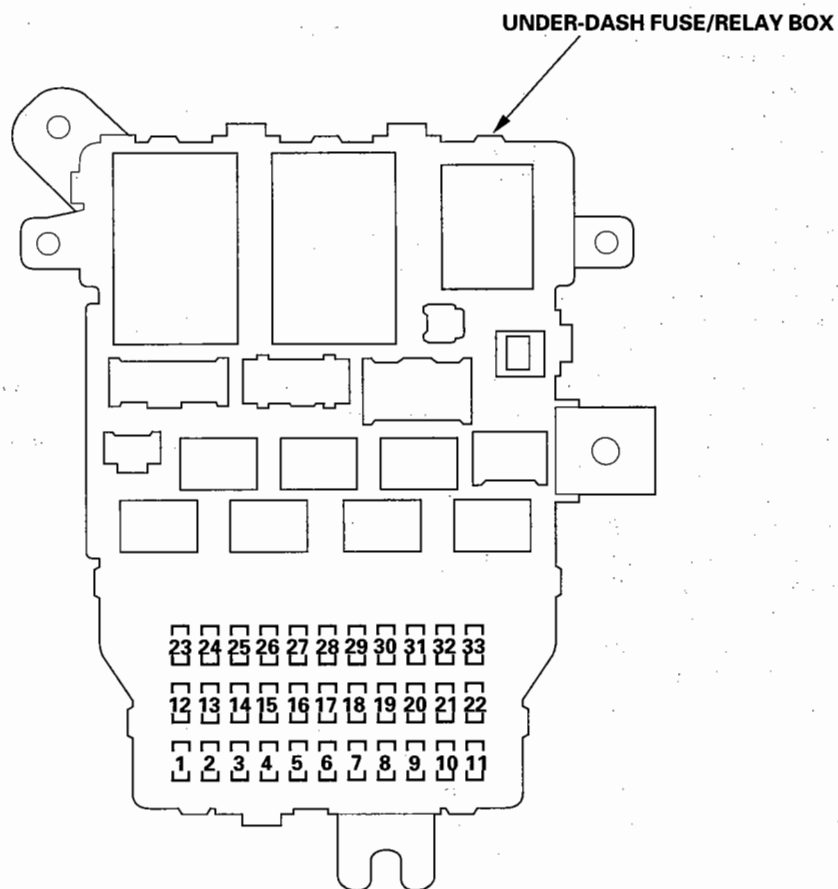
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Power Distribution

Fuse to Components Index (cont'd)

Under-dash Fuse/Relay Box

Fuse Number	Amps	Wire Color	Component(s) or Circuit(s) Protected
1	15A	WHT/GRN	Throttle actuator control module (via throttle actuator control module relay)
2	15A	Fuse/relay box socket	Ignition coil (IG) relay
		BLK/WHT	Ignition coils (via ignition coil relay)
3			Not used
4	15A	WHT/BLK	A/F sensors (front and rear bank), Secondary HO2S (front and rear bank)
5	20A	WHT	Audio amplifier, Audio unit
6	7.5A	GRY/BLU	Courtesy lights, HandsFreeLink control unit, Ignition key light, Keyless receiver unit, Map lights, Roof console, Trunk light, Vanity mirror lights
7	7.5A	WHT/RED	Audio-HVAC display module, Clock (without navigation), Combination switch control unit, Gauge control module, Front passenger's power window switch/control unit, Immobilizer control unit-receiver, Navigation unit, Security indicator, Power window master switch, Power mirror control unit, XM receiver unit
		Fuse/relay box socket	Multiplex integrated control unit (MICU)
8	20A	WHT	Trunk lid opener solenoid
		Fuse/relay box socket	Multiplex integrated control unit (MICU)
9	15A	WHT/RED	Front accessory power socket, Rear accessory power socket
10	7.5A	WHT	OPDS unit, SRS unit
11	30A	GRN	Windshield wiper motor
12			Not used
13	20A	RED/WHT	Front passenger's power seat recline motor
14	20A	WHT/BLU	Driver's power seat control unit
15	20A	RED/BLK	Seat heaters and seat heater switches indicator light
16	20A	WHT/RED	Driver's power seat control unit, Driver's seat lumbar motor
17	20A	WHT/GRN	Front passenger's power seat slide motor
18	15A	BLK/YEL	Alternator, ECM/PCM (via brake pedal position switch), ELD unit, Engine mount control solenoid valve, EVAP canister purge valve, EVAP vent shut solenoid valve, Reverse lockout solenoid (M/T), VSA modulator-control unit
		BLK/GRN	ECM/PCM, Immobilizer control unit-receiver
19	15A	YEL/GRN	Fuel pump (via PGM-FI main relay 2)
20	7.5A	YEL/GRN	Automatic dimming inside mirror, Power mirror control unit, Windshield washer motor
21	7.5A	YEL	Back-up lights, Clock (without navigation), Combination switch control unit, Gauge control module, Keyless receiver unit, Multiplex integrated control unit (MICU), Relay control module, Shift lock relay (A/T), Seat belt tension reducers
22	10A	WHT/RED	SRS unit
23	7.5A	YEL/WHT	Radiator fan relay
		Fuse/relay box socket	A/F sensor relay
24	20A	YEL/RED	Left rear power window motor
25	20A	YEL/BLU	Right rear power window motor
26	30A	GRN/BLK	Front passenger's power window motor
27	30A	GRN/WHT	Driver's power window motor
28	20A	GRN	Moonroof control unit
29			Not used
30	7.5A	BLK/YEL	A/C compressor clutch relay, Blower motor relay, Climate control unit, Condenser fan relay, Power mirror actuators and defoggers, Radiator fan relay, Recirculation control motor, Rear window defogger relay
31			Not used
32	7.5A	YEL/RED	Audio unit, Audio-HVAC display module, Navigation unit, Shift lock solenoid (A/T), HandsFreeLink control unit
		Fuse/relay box socket	Accessory power socket relay, Multiplex integrated control unit (MICU)
33			Not used



Ground Distribution

Ground to Components Index

Ground	Component or circuit grounded
G1	Battery terminal
G2	Engine mount bracket
G3	Transmission housing
G101 and G102	ECM/PCM (PG1 and PG2 are BLK; LG1 and LG2 are BRN/YEL) BLK: EGR valve, Ignition coils, Immobilizer control unit-receiver, Transmission range switch (A/T), Throttle actuator control module BRN/YEL: CKP sensor A/B, CMP sensor Shielding between ECM/PCM and knock sensor, between ECM/PCM and Secondary HO2S (bank1, bank2), throttle actuator control module and throttle body have BRN/YEL wire
G151	A/T clutch pressure control solenoid valves A, B, C, Shift control solenoid valves A, B, C, TCC solenoid valve
G201	A/C pressure switch, Right headlights, Right fog light, Right front turn signal/parking light
G202	Power steering pressure (PSP) switch, Washer fluid level switch (Canada)
G203	VSA modulator-control unit (2 wires)
G301	Fan control relay, Hood switch, Left headlights, Left fog light, Left front turn signal/parking light, Radiator fan motor
G302	Blower motor relay, Brake fluid level switch, ELD unit, Keyless buzzer, Left front side marker light, Relay control module, Windshield wiper motor
G501	Audio-HVAC display module assembly, Cable reel, Dash lights brightness controller, Select/reset/information switch, Door multiplex control unit, Gauge control module (2 wires), Ignition key switch, Key interlock solenoid (A/T), Keyless receiver unit, Moonroof control unit, Noise condenser, Power mirror control unit, Power mirror switch, VSA OFF switch BLU/BLK: Power seat control unit Shielding between the turn signal indicators in the gauge control module and under-dash fuse/relay box has BLK wire
G502	Multiplex integrated control unit (MICU)
G503	Accessory power socket relay, Accessory power sockets (front/rear), Audio-HVAC display module assembly, Automatic dimming inside mirror, Climate control unit, Combination switch control unit, Console box light, Clutch interlock switch (M/T), Clutch pedal position switch (M/T), Data link connector (DLC), Seat heater switches (driver's/front passenger's), High mount brake light, HandsFreeLink control unit, Park pin switch (A/T), Relay control module, Roof console, Vanity mirror light switches, Sportshift mode switch (A/T) (G503 connects to G601 via under-dash fuse/relay box) Shielding between the ECM/PCM, gauge control module, navigation unit and VSA modulator-control unit have BRN wire
G504	Audio unit
G505	Memory erase signal (MES) connector, SRS unit (2 wires)
G506	Audio amplifier, Front passenger's door lock switch, Front passenger's door lock knob switch, Front passenger's power window switch, Glove box light, Power transistor, Right front side marker light, Right power mirror defogger, Seat heater relay, Shift lock relay
G601	Driver's door lock knob switch, Driver's door lock switch, Driver's door key cylinder switch, Driver's seat belt switch, Driver's seat heater, Left power mirror defogger, Left rear door lock knob switch, Left power window switch, Left side turn signal light, Multiplex integrated control unit (MICU) (2 wires), MICS service check connector, Power seat control unit (3 wires), Turn signal/hazard relay (G601 connects to G503 via under-dash fuse/relay box)
G602	Front passenger's power seat (2 wires), Front passenger's seat belt switch, Front passenger's seat heater, OPDS unit, Right rear door lock knob switch, Right rear power window switch
G603	Fuel pump
G604	Navigation unit, Right brake light/taillight, Right rear side marker light, Right rear turn signal light, XM receiver unit Shielding between the right rear turn signal light and gauge control module has BLK wire
G701	Back-up lights, Left brake light/taillight, Left rear side marker light, Left rear turn signal light, License plate lights, Trunk lid latch switch/trunk lid opener solenoid Shielding between the left rear turn signal light and gauge control module has BLK wire

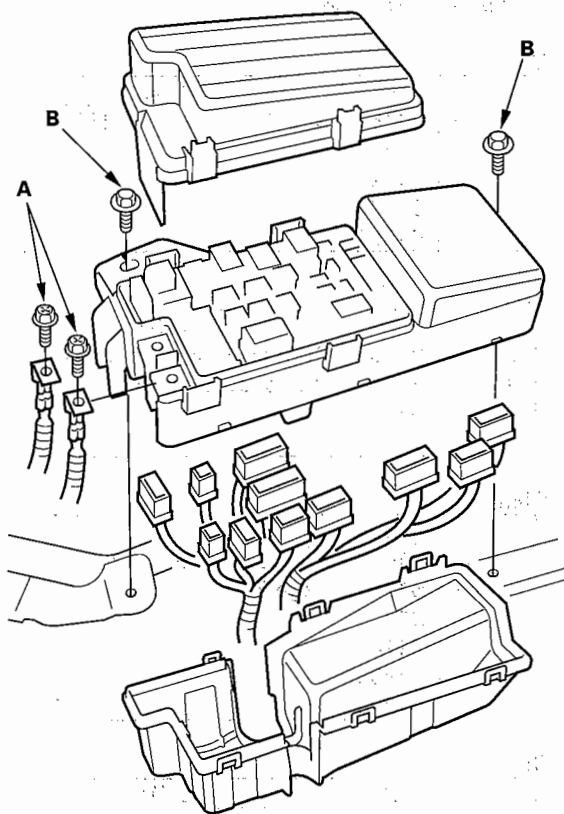
Under-hood Fuse/Relay Box



Removal and Installation

Removal

1. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the channels for the XM radio presets. Make sure the ignition switch is OFF.
2. Disconnect the battery negative cable, then disconnect the positive cable, and wait at least 3 minutes.
3. Remove the under-hood multi-relay box from the under-hood fuse/relay box.
4. Remove the screws (A) from the alternator and battery cable terminals.



5. Remove the two mounting bolts (B) from the under-hood fuse/relay box.
6. Remove the under cover from the under-hood fuse/relay box.
7. Disconnect the connectors from the under-hood fuse/relay box.

Installation

1. Connect the connectors to the under-hood fuse/relay box, then install the under-hood fuse/relay box in the reverse order of removal.
2. Install the removed parts in the reverse order of removal.
3. Connect the both positive cable and negative cable to the battery.
4. Enter the anti-theft codes for the radio and navigation system, then enter the customer's XM radio channel presets.
5. Confirm that all systems work properly.

Under-hood Fuse/Relay Box

DTC Troubleshooting

B1055: Relay Control Module lost communication with MICU

B1056: Relay Control Module lost communication with MICU (alarm)

B1057: Relay Control Module lost communication with MICU (door switch message)

B1058: Relay Control Module lost communication with Door Multiplex Control Unit (door lock switch message)

B1059: Relay Control Module lost communication with Door Multiplex Control Unit (panic message)

B1060: Relay Control Module lost communication with Gauge Control Module (VSP/NE message)

B1061: Relay Control Module lost communication with Gauge Control Module (A/T message)

B1062: Relay Control Module lost communication with Combination Switch Control Unit (headlight switch message)

B1063: Relay Control Module lost communication with Combination Switch Control Unit (wiper switch message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1055, B1056, B1057, B1058, B1059, B1060, B1061, B1062 and/or B1063 indicated?

YES— Go to step 4.

NO— Intermittent failure, the communication line is OK at this time. ■

4. Check for DTCs other than those listed at previous step.

Are any other DTCs present?

YES— Go to step 5.

NO— Perform Relay Control Module Input Test (see page 22-137).

5. Find the chart that contains at least one retrieved DTC in column A and one retrieved DTC in column B. Perform the input test for the ECU listed in that chart.

If no DTC from column B is found, then continue to Relay Control Module Input Test (see page 22-137). ■

Chart 1

A	B	ECU
B1055	B1157	MICU (see page 22-130)
B1056	B1159	
B1057	B1225	
	B1806	
	B1807	

Chart 2

A	B	ECU
B1058	B1006	Door Multiplex Control Unit (see page 22-135)
B1059	B1010	
	B1160	
	B1809	

Chart 3

A	B	ECU
B1060	B1008	Gauge Control Module (see page 22-134)
B1061	B1011	
	B1705	
	B1706	
	B1805	
	B1808	

Chart 4

A	B	ECU
B1062	B1007	Combination Switch Control Unit (see page 22-136)
B1063	B1009	
	B1155	
	B1156	

Under-dash Fuse/Relay Box

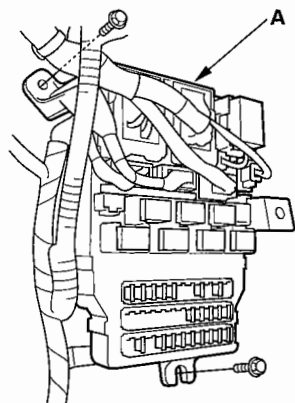


Removal and Installation

SRS components are located in this area. Review the SRS component locations (see page 23-11) and precautions and procedures (see page 23-13) before performing repairs or servicing.

Removal

1. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the channels for the XM radio presets. Make sure the ignition switch is OFF.
2. Disconnect the battery negative cable, then disconnect the positive cable, and wait at least 3 minutes.
3. Remove the left front door sill trim and left kick panel (see page 20-62).
4. Disconnect the connectors from the fuse side of the under-dash fuse/relay box (A).



5. Remove the two mounting bolts and pull the fuse/relay box away from the body.
6. Disconnect the connectors and remove the under-dash fuse/relay box.

NOTE: Some SRS harness connectors are spring-loaded lock type (see page 23-20).

Installation

1. Connect the connectors to the under-dash fuse/relay box, then install the under-dash fuse/relay box in the reverse order of removal.
2. Install the removed parts in the reverse order of removal.
3. Connect both the positive cable and negative cable to the battery.
4. Enter the anti-theft codes for the radio and navigation system, then enter the customer's XM radio channel presets.
5. Confirm that all systems work properly.

Battery

Battery Test

⚠ WARNING

A battery can explode if you do not follow the proper procedure, causing serious injury to anyone nearby. Follow all procedures carefully and keep sparks and open flames away from the battery.

Use either a JCI or Bear ARBST tester, and follow the manufacturer's procedures. If you don't have one of these computerized testers, follow this conventional test procedure:

1. Be sure the temperature of the electrolyte is between 70°F (21°C) and 100°F (38°C).
2. Inspect the battery case for cracks or leaks.
 - If the case is damaged, replace the battery. ■
 - If the case looks OK, go to step 3.
3. Check the indicator EYE.
 - If the EYE indicates the battery is charged, go to step 4.
 - If the EYE indicates a low charge, go to step 7.
4. Apply a 300 amp load for 15 seconds to remove the surface charge.
5. Wait 15 seconds, then apply a test load of 280 amps for 15 seconds.
6. Record battery voltage.
 - If voltage is above 9.6 volts, the battery is OK. ■
 - If voltage is below 9.6 volts, go to step 7.
7. Charge the battery on High (40 amps) until the EYE shows the battery is charged, plus an additional 30 minutes. If the battery charge is very low, it may be necessary to bypass the charger's polarity protection circuitry.
 - If the EYE indicates the battery is charged within three hours, the battery is OK. ■
 - If the EYE indicates the battery is not charged within three hours, replace the battery. ■

Relays



Power Relay Test

Use this chart to identify the type of relay, then do the test listed for it.

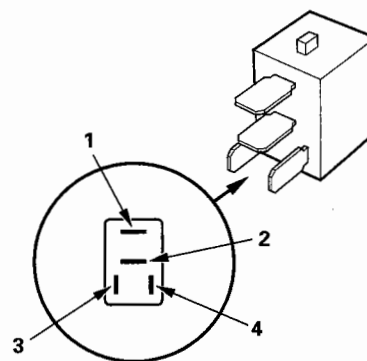
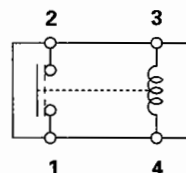
NOTE: For the turn signal/hazard relay input test (see page 22-198).

Relay	Test
A/C compressor clutch relay	Normally-open type
Accessory power socket relay	
Blower motor relay	
Condenser fan relay	
Ignition coil relay	
Air fuel ratio sensor relay	
PGM-FI main relay 1, 2	
Power window relay	
Radiator fan relay	
Rear window defogger relay	
Starter cut relay	
Seat heater relay	
Throttle actuator control relay	
Fog lights/Daytime running lights relay	
Shift lock relay	Five-terminal type
Fan control relay	

Normally-open type

Check for continuity between the terminals.

- There should be continuity between the No. 1 and No. 2 terminals when power and ground are connected to the No. 3 and No. 4 terminals.
- There should be no continuity between the No. 1 and No. 2 terminals when power is disconnected.



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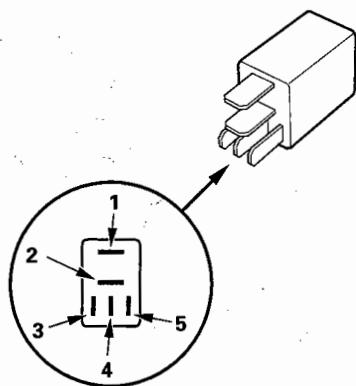
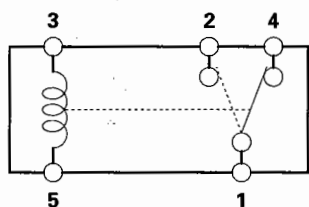
Relays

Power Relay Test (cont'd)

Five-terminal type B

Check for continuity between the terminals.

- There should be continuity between the No. 1 and No. 2 terminals when power and ground are connected to the No. 3 and No. 5 terminals.
- There should be continuity between the No. 1 and No. 4 terminals when power is disconnected.



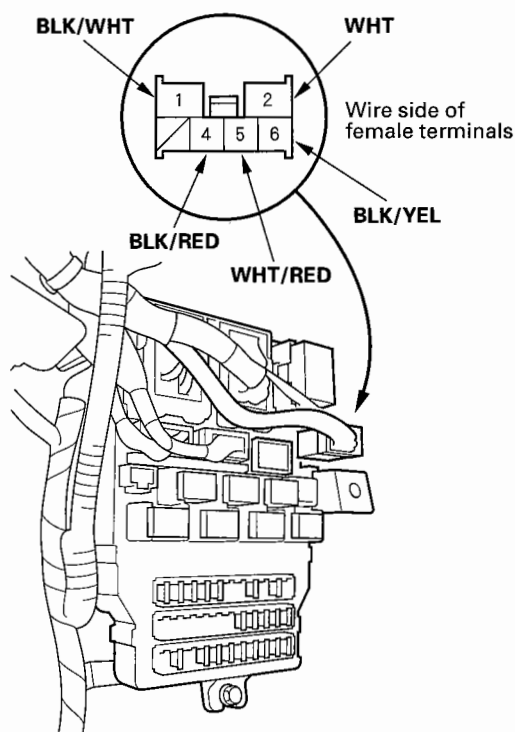
Ignition Switch



Test

SRS components are located in this area. Review the SRS component locations (see page 23-11) and precautions and procedures (see page 23-13) before performing repairs or servicing.

1. Make sure you have the anti-theft code for the radio and the navigation system, then write down the channels for the XM radio presets. Make sure the ignition switch is OFF.
2. Disconnect the battery negative cable.
3. Remove the left front door sill trim and left kick panel (see page 20-62).
4. Disconnect the 6P connector from the driver's under-dash fuse/relay box.



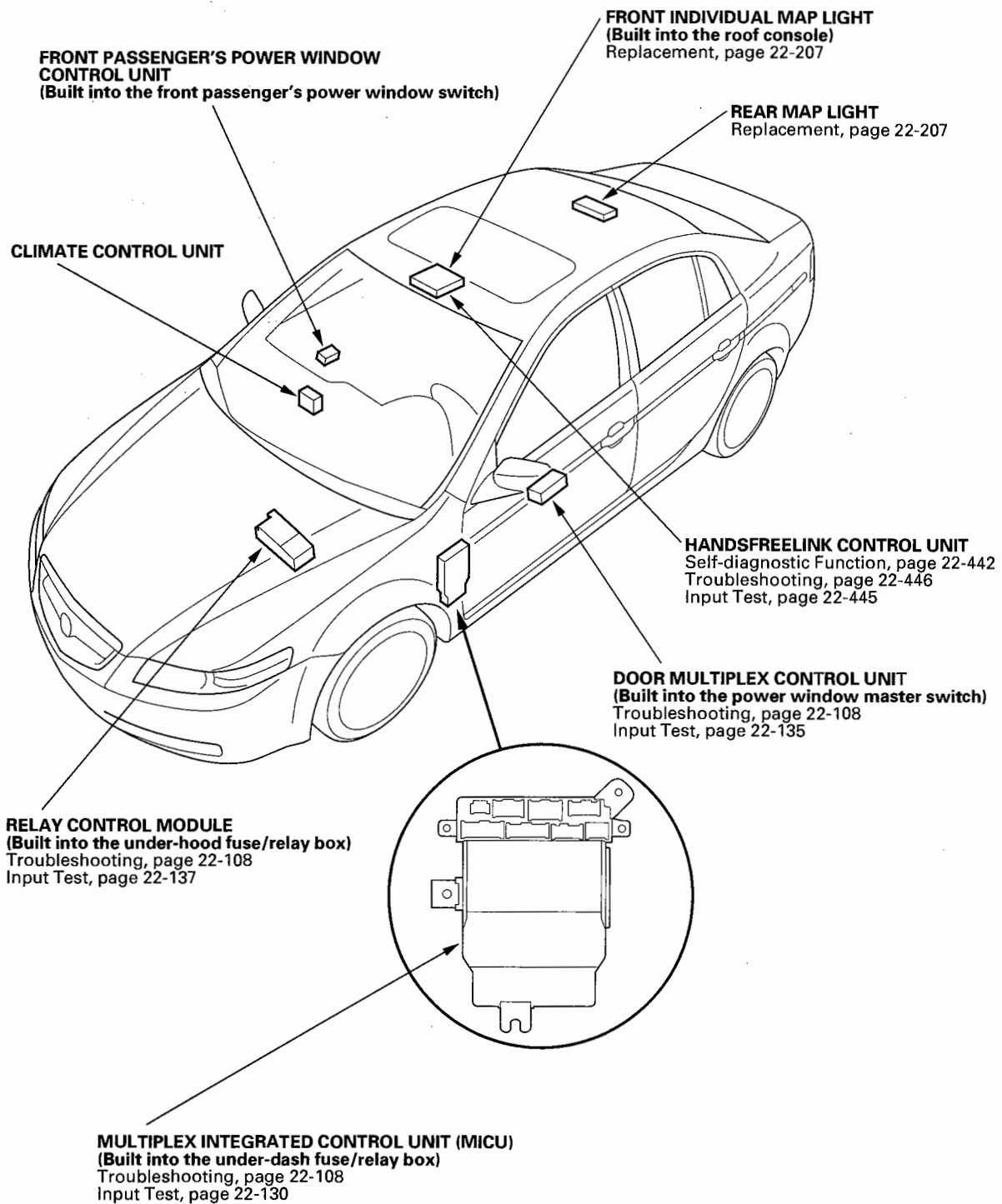
5. Check for continuity between the terminals in each switch position according to the table.

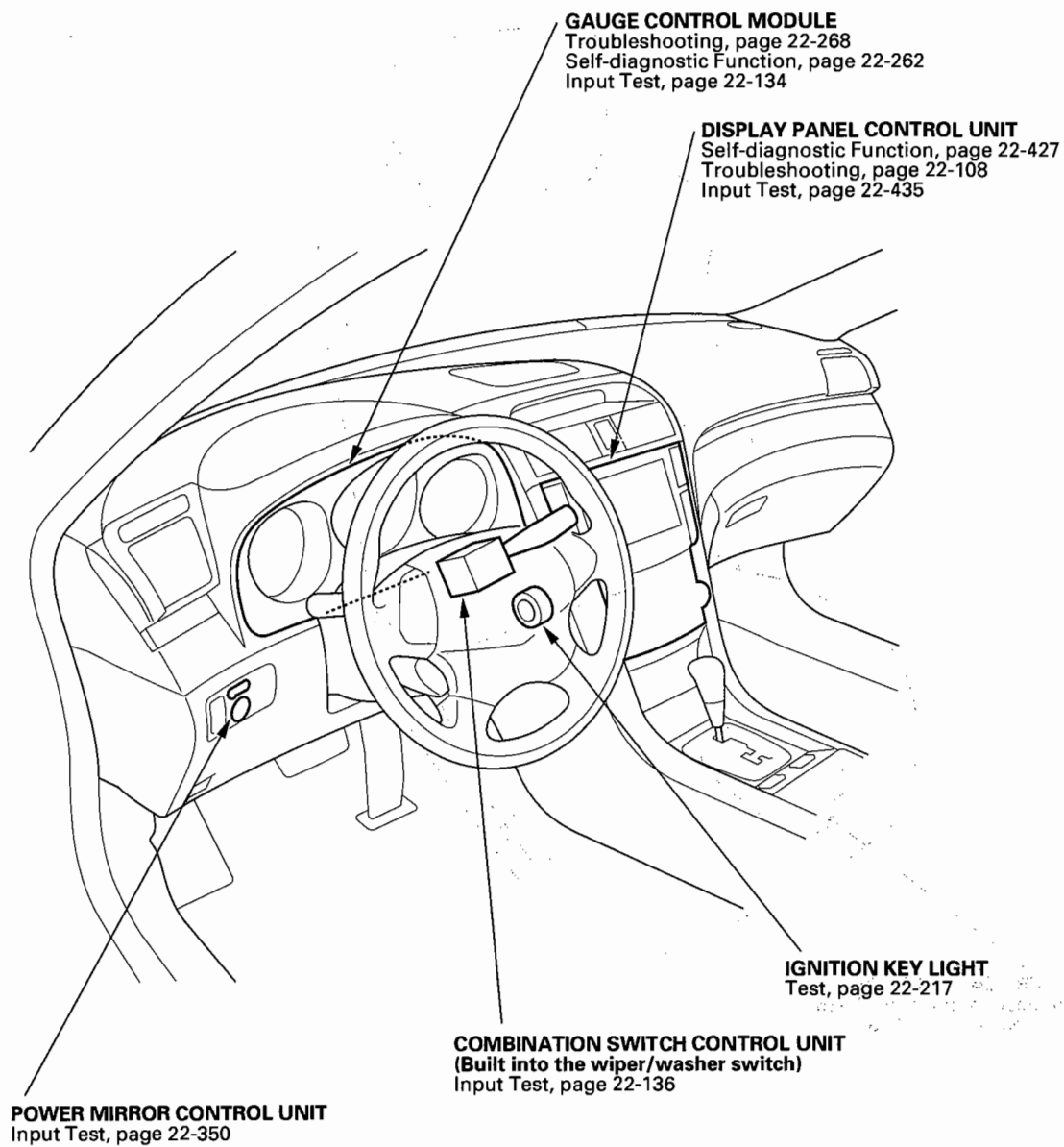
Terminal Position	WHT/ RED (ACC)	WHT (BAT)	BLK/ YEL (IG1)	BLK/ RED (IG2)	BLK/ WHT (ST)
O (LOCK)					
I (ACC)	○	○			
II (ON)	○	○	○	○	
III (START)		○	○		○

6. If the continuity checks do not agree with the table, replace the steering lock.
7. After reconnecting the battery, enter the anti-theft code for the radio and the navigation system, then enter the customer's XM radio channel presets.

Multiplex Integrated Control System (MICS)

Component Location Index

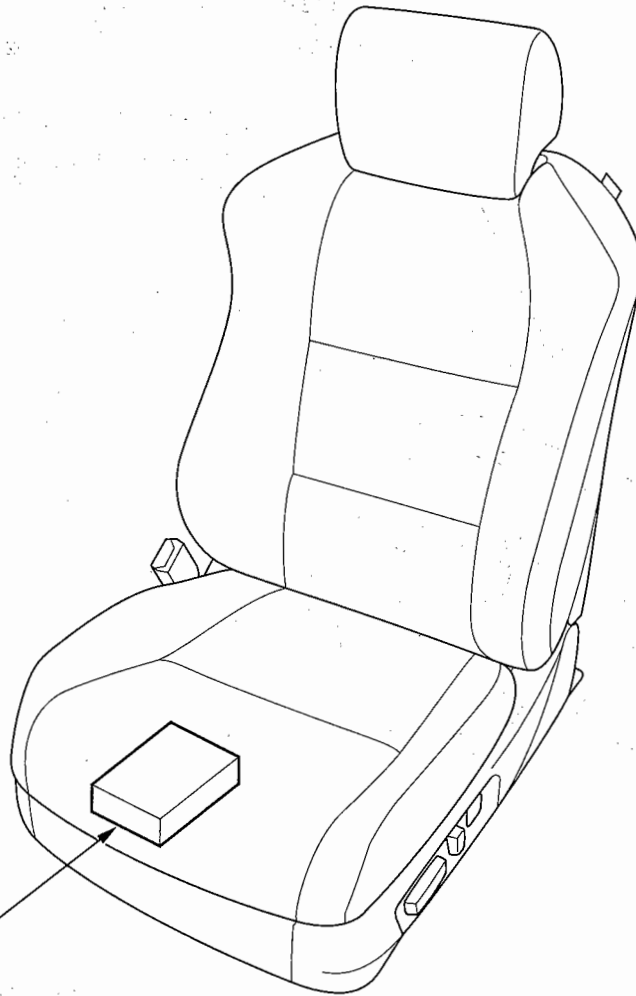




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Multiplex Integrated Control System (MICS)

Component Location Index (cont'd)



POWER SEAT CONTROL UNIT
Troubleshooting, page 22-352
Input Test, page 22-348



General Troubleshooting Information

Troubleshooting CAN Circuit Related Problems

Using the HDS (Preferred method)

1. Go to B-CAN System Diagnosis Test Mode A to check for "Connected units" and DTCs (see page 22-108).
2. If no DTCs are retrieved, go to B-CAN System Diagnosis Test Mode C (see page 22-110) or D (see page 22-111).

Without HDS (Use only if the HDS is unavailable)

1. Check for communication circuit problems using B-CAN System Diagnosis Test Mode 1 (see page 22-112).
2. Check for DTCs while in Mode 1 (see page 22-112).

NOTE: If the problem is related to the display panel control unit or HandsFreeLink system, check for DTCs first with their own self-diagnostic function.

- HandsFreeLink control unit self-diagnostic function (see page 22-442).
 - Display panel control unit self-diagnostic function (see page 22-427).
3. Sort, and then troubleshoot the DTCs in the order below.
 - 1 Battery voltage DTCs
 - 2 Internal error DTCs
 - 3 Loss of communication DTCs
(beginning with the lowest number first; for example, if B1006 and B1059 are retrieved, troubleshoot B1006 first)
 - 4 Signal error DTCs
 4. If no DTCs are retrieved, use B-CAN System Diagnosis Test Mode 2 to check all inputs related to failure (see step 11 on page 22-113).

(cont'd)

Multiplex Integrated Control System (MICS)

General Troubleshooting Information (cont'd)

Loss of Communication DTC cross-reference chart

When an ECU is unable to communicate with the other ECUs on the circuit, the other units will set loss of communication DTCs. Use this chart to find the control unit that is not communicating.

1. Find the Transmitting Unit that is in the same row as all of the loss of communication DTCs retrieved.
2. Perform the input test for the transmitting unit.

Transmitting Unit	Message	Receiving Unit/Loss of Communication DTC						
		MICU	Relay Control Module	Door Multiplex Control Unit	Gauge Control Module	Combination Switch Control Unit	Display Panel Control Unit	Power Seat Control Unit
MICU	Alarm		B1056					
	MICU		B1055	RX	B1157	B1255		B1806
	Door Switch		B1057	RX	B1159			B1807
Relay Control Module	Relay Control Module	B1005			B1158			
Door Multiplex Control Unit	Panic	B1010	B1059					
	Door Lock Switch	B1006	B1058		B1160			
	Memory Switch							B1809
Gauge Control Module	VSP/NE	B1011	B1060				B1706	B1805
	A/T	B1008	B1061					B1808
	ENGTEMP						B1705	
Combination Switch Control Unit	ILLUMI							
	Headlight Switch	B1007	B1062		B1155			
ECM/PCM	Wiper Switch	B1009	B1063		B1156			
					B1168 B1169			
Climate Control Unit							B1726	

RX: Receiving unit does not set a loss of communication DTC.



DTC Troubleshooting Index

NOTE: Record all DTCs, and sort them by DTC type using the DTC troubleshooting index, then troubleshoot the DTC(s) in this order:

- Battery voltage DTCs
- Internal error DTCs
- Loss of communication DTCs (beginning with the lowest number first; for example, if B1006 and B1059 are retrieved, troubleshoot B1006 first).
- Signal error DTCs

DTC	Description	ECU	DTC type	Page
B1000	Communication circuit error (BUS Off)	MICU	Loss of Communication	(see page 22-118)
B1001	MICU internal error (CPU error)	MICU	Internal Error	(see page 22-123)
B1002	MICU internal error (EEPROM error)	MICU	Internal Error	(see page 22-123)
B1005	MICU lost communication with Relay Control Module	MICU	Loss of Communication	(see page 22-125)
B1006	MICU lost communication with Door Multiplex Control Unit (door lock switch message)	MICU	Loss of Communication	(see page 22-125)
B1007	MICU lost communication with Combination Switch Control Unit (headlight switch message)	MICU	Loss of Communication	(see page 22-126)
B1008	MICU lost communication with Gauge Control Module (A/T message)	MICU	Loss of Communication	(see page 22-126)
B1010	MICU lost communication with Door Multiplex Control Unit (panic message)	MICU	Loss of Communication	(see page 22-127)
B1011	MICU lost communication with Gauge Control Module (VSP/NE message)	MICU	Loss of Communication	(see page 22-127)
B1026	Passenger's door lock switch malfunction	MICU	Signal Error	(see page 22-134)
B1050	Communication circuit error (BUS Off)	Relay Control Module	Loss of Communication	(see page 22-119)
B1055	Relay Control Module lost communication with MICU	Relay Control Module	Loss of Communication	(see page 22-72)
B1056	Relay Control Module lost communication with MICU (alarm message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1057	Relay Control Module lost communication with MICU (door switch message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1058	Relay Control Module lost communication with Door Multiplex Control Unit (door lock switch message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1059	Relay Control Module lost communication with Door Multiplex Control Unit (panic message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1060	Relay Control Module lost communication with Gauge Control Module (VSP/NE message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1061	Relay Control Module lost communication with Gauge Control Module (A/T message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1062	Relay Control Module lost communication with Combination Switch Control Unit (headlight switch message)	Relay Control Module	Loss of Communication	(see page 22-72)
B1063	Relay Control Module lost communication with Combination Switch Control Unit (wiper switch message)	Relay Control Module	Loss of Communication	(see page 22-72)

(cont'd)

Multiplex Integrated Control System (MICS)

DTC Troubleshooting Index (cont'd)

DTC	Description	ECU	DTC type	Page
B1075	Headlight switch malfunction	Relay Control Module	Signal Error	(see page 22-178)
B1076	Windshield wiper signal error	Relay Control Module	Signal Error	(see page 22-244)
B1077	Wiper switch (As) malfunction	Relay Control Module	Signal Error	(see page 22-246)
B1080	Power supply circuit (IG1 line) input error for Relay Control Module and MICU	Relay Control Module	Battery voltage	(see page 22-128)
B1100	Communication circuit error (BUS Off)	Door Multiplex Control Unit	Loss of Communication	(see page 22-119)
B1102	Door Multiplex Control Unit internal error	Door Multiplex Control Unit	Internal Error	(see page 22-124)
B1125	Driver's power window motor A pulse malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-226)
B1126	Driver's power window motor B pulse malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-226)
B1127	Driver's door lock key cylinder switch malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-146)
B1128	Driver's door lock switch malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-147)
B1129	Driver's door lock knob switch malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-148)
B1130	Front passenger's power window motor A pulse malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-227)
B1131	Front passenger's power window motor B pulse malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-227)
B1140	Driver's power window position detect circuit malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-228)
B1141	Door Multiplex Control Unit lost communication with Door Multiplex Control Unit (UART BUS line failure)	Door Multiplex Control Unit	Loss of Communication	(see page 22-228)
B1142	Door Multiplex Control Unit lost communication with front passenger's power window switch (UART line open)	Door Multiplex Control Unit	Loss of Communication	(see page 22-229)
B1143	Door MPCS internal error	Door Multiplex Control Unit	Signal Error	(see page 22-230)
B1144	Abnormal signal from keyless receiver unit	Door Multiplex Control Unit	Signal Error	(see page 22-149)
B1145	Front passenger's power window position detect circuit malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-230)
B1146	Front passenger's power window switch malfunction	Door Multiplex Control Unit	Signal Error	(see page 22-231)



DTC	Description	ECU	DTC type	Page
B1150	Communication circuit error (BUS Off)	Gauge Control Module	Loss of Communication	(see page 22-120)
B1152	Gauge Control Module internal error	Gauge Control Module	Internal Error	(see page 22-268)
B1155	Gauge Control Module lost communication with Combination Switch Control Unit (headlight switch message)	Gauge Control Module	Loss of Communication	(see page 22-269)
B1156	Gauge Control Module lost communication with Combination Switch Control Unit (wiper switch message)	Gauge Control Module	Loss of Communication	(see page 22-269)
B1157	Gauge Control Module lost communication with MICU	Gauge Control Module	Loss of Communication	(see page 22-270)
B1158	Gauge Control Module lost communication with Relay Control Module	Gauge Control Module	Loss of Communication	(see page 22-270)
B1159	Gauge Control Module lost communication with MICU (door switch message)	Gauge Control Module	Loss of Communication	(see page 22-271)
B1160	Gauge Control Module lost communication with Door Multiplex Control Unit (door lock switch message)	Gauge Control Module	Loss of Communication	(see page 22-271)
B1168	Gauge Control Module lost communication with ECM/PCM (engine messages)	Gauge Control Module	Loss of Communication	(see page 22-272)
B1169	Gauge Control Module lost communication with PCM (A/T messages)	Gauge Control Module	Loss of Communication	(see page 22-273)
B1175	Fuel gauge sending unit signal malfunction	Gauge Control Module	Signal Error	(see page 22-274)
B1177	Abnormal battery voltage (7.5 V)	Gauge Control Module	Battery voltage	(see page 22-275)
B1178	F-CAN communication circuit error	Gauge Control Module	Loss of Communication	(see page 22-276)
B1202	Climate Control Unit internal error	Climate Control Unit	Internal Error	(see page 21-49)
B1225	Open in the in-car temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-24)
B1226	Short in the in-car temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-25)
B1227	Open in the outside air temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-26)
B1228	Short in the outside air temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-27)
B1229	Open in the sunlight sensor circuit	Climate Control Unit	Signal Error	(see page 21-28)
B1230	Short in the sunlight sensor circuit	Climate Control Unit	Signal Error	(see page 21-30)
B1231	Open in the evaporator temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-31)
B1232	Short in the evaporator temperature sensor circuit	Climate Control Unit	Signal Error	(see page 21-32)
B1233	Open in the driver's air mix control motor circuit	Climate Control Unit	Signal Error	(see page 21-33)
B1234	Short in the driver's air mix control motor circuit	Climate Control Unit	Signal Error	(see page 21-34)
B1235	Problem in the driver's air mix control linkage, door, or motor	Climate Control Unit	Signal Error	(see page 21-36)

(cont'd)

Multiplex Integrated Control System (MICS)

DTC Troubleshooting Index (cont'd)

DTC	Description	ECU	DTC type	Page
B1236	Open in the passenger's air mix control motor circuit	Climate Control Unit	Signal Error	(see page 21-36)
B1237	Short in the passenger's air mix control motor circuit	Climate Control Unit	Signal Error	(see page 21-37)
B1238	Problem in the passenger's air mix control linkage, door, or motor	Climate Control Unit	Signal Error	(see page 21-39)
B1239	Open or short in the mode control motor circuit	Climate Control Unit	Signal Error	(see page 21-39)
B1240	Problem in the driver's mode control linkage, doors, or motor	Climate Control Unit	Signal Error	(see page 21-41)
B1241	Problem in the driver's blower motor circuit	Climate Control Unit	Signal Error	(see page 21-44)
B1242	Problem in the passenger's mode control linkage, doors, or motor	Climate Control Unit	Signal Error	(see page 21-42)
B1243	Problem in the passenger's blower motor circuit	Climate Control Unit	Signal Error	(see page 21-44)
B1250	Communication circuit error (BUS Off)	Combination Switch Control Unit	Loss of Communication	(see page 22-120)
B1255	Combination Switch Control Unit lost communication with MICU	Combination Switch Control Unit	Loss of Communication	(see page 22-129)
B1275	Headlight switch OFF position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-179)
B1276	Headlight switch SMALL position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-180)
B1278	Headlight switch ON position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-180)
B1279	Dimmer switch circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-181)
B1280	Turn signal switch circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-181)
B1281	Windshield wiper switch MIST position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-248)
B1282	Windshield wiper switch INT (AUTO) position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-248)
B1283	Windshield wiper switch LOW position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-248)
B1284	Windshield wiper switch HIGH position circuit malfunction	Combination Switch Control Unit	Signal Error	(see page 22-248)



DTC	Description	ECU	DTC type	Page
B1700	Communication circuit error (BUS Off)	Display panel control unit	Loss of Communication	(see page 22-121)
B1701	Display panel control unit internal error (CPU error)	Display panel control unit	Internal Error	(see page 22-432)
B1702	Display panel control unit internal error (EEPROM error)	Display panel control unit	Internal Error	(see page 22-432)
B1705	Display panel control unit lost communication with Gauge Control Module (engine coolant temperature message)	Display panel control unit	Loss of Communication	(see page 22-433)
B1706	Display panel control unit lost communication with Gauge Control Module (VSP/NE message)	Display panel control unit	Loss of Communication	(see page 22-433)
B1725	Navigation Display Screen temperature too high	Display panel control unit	Loss of Communication	(see page 22-434)
B1726	Display Panel Control Unit lost communication with Climate Control Unit	Display panel control unit	Loss of Communication	(see page 21-48)
B1750	Communication circuit Error (BUS Off)	HandsFreeLink Control Unit	Loss of Communication	(see page 22-121)
B1751	HandsFreeLink Control Unit CPU Error (Anomalous CPU)	HandsFreeLink Control Unit	Internal Error	(see page 22-446)
B1775	Microphone Input/Output Shorted to Power	HandsFreeLink Control Unit	Signal Error	(see page 22-447)
B1776	Microphone Input/Output Shorted to Ground/Open	HandsFreeLink Control Unit	Signal Error	(see page 22-448)
B1779	HFL-Voice Control Switch (Pick Up/Hang Up Switch) Open	HandsFreeLink Control Unit	Signal Error	(see page 22-449)
B1780	HFL-Voice Control Switch (Pick Up/Hang Up Switch) Short	HandsFreeLink Control Unit	Signal Error	(see page 22-450)
B1792	HandsFreeLink Control Unit Internal Error	HandsFreeLink Control Unit	Signal Error	(see page 22-451)
B1800	Communication circuit error (BUS Off)	Power Seat Control Unit	Loss of Communication	(see page 22-122)
B1802	Power Seat Control Unit internal error (EEPROM error)	Power Seat Control Unit	Internal Error	(see page 22-352)
B1805	Power Seat Control Unit lost communication with Gauge Control Module (VSP/NE message)	Power Seat Control Unit	Loss of Communication	(see page 22-352)
B1806	Power Seat Control Unit lost communication with MICU	Power Seat Control Unit	Loss of Communication	(see page 22-353)
B1807	Power Seat Control Unit lost communication with Door Multiplex Control Unit (door switch message)	Power Seat Control Unit	Loss of Communication	(see page 22-353)
B1808	Power Seat Control Unit lost communication with Gauge Control Module (A/T message)	Power Seat Control Unit	Loss of Communication	(see page 22-354)
B1809	Power Seat Control Unit lost communication with Door Multiplex Control Unit (memory switch message)	Power Seat Control Unit	Loss of Communication	(see page 22-354)

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Multiplex Integrated Control System (MICS)

DTC Troubleshooting Index (cont'd)

DTC	Description	ECU	DTC type	Page
B1825	Slide motor pulse error	Power Seat Control Unit	Signal Error	(see page 22-355)
B1826	Front up-down motor pulse error	Power Seat Control Unit	Signal Error	(see page 22-359)
B1827	Rear up-down motor pulse error	Power Seat Control Unit	Signal Error	(see page 22-362)
B1828	Recline motor pulse error	Power Seat Control Unit	Signal Error	(see page 22-365)
B1829	A/T P signal and VSS signal mismatch	Power Seat Control Unit	Signal Error	(see page 22-368)
B1830	Right mirror horizontal sensor malfunction	Power Seat Control Unit	Signal Error	(see page 22-369)
B1831	Right mirror vertical sensor malfunction	Power Seat Control Unit	Signal Error	(see page 22-372)
B1832	Left mirror horizontal sensor malfunction	Power Seat Control Unit	Signal Error	(see page 22-375)
B1833	Left mirror vertical sensor malfunction	Power Seat Control Unit	Signal Error	(see page 22-378)
B1834	M/T harness poor ground	Power Seat Control Unit	Signal Error	(see page 22-381)
B1837	Power seat position memory recall error	Power Seat Control Unit	Signal Error	(see page 22-381)
B1843	Power Seat Control Unit lost communication with other units (UART communication error 2)	Power Seat Control Unit	Loss of Communication	(see page 22-382)

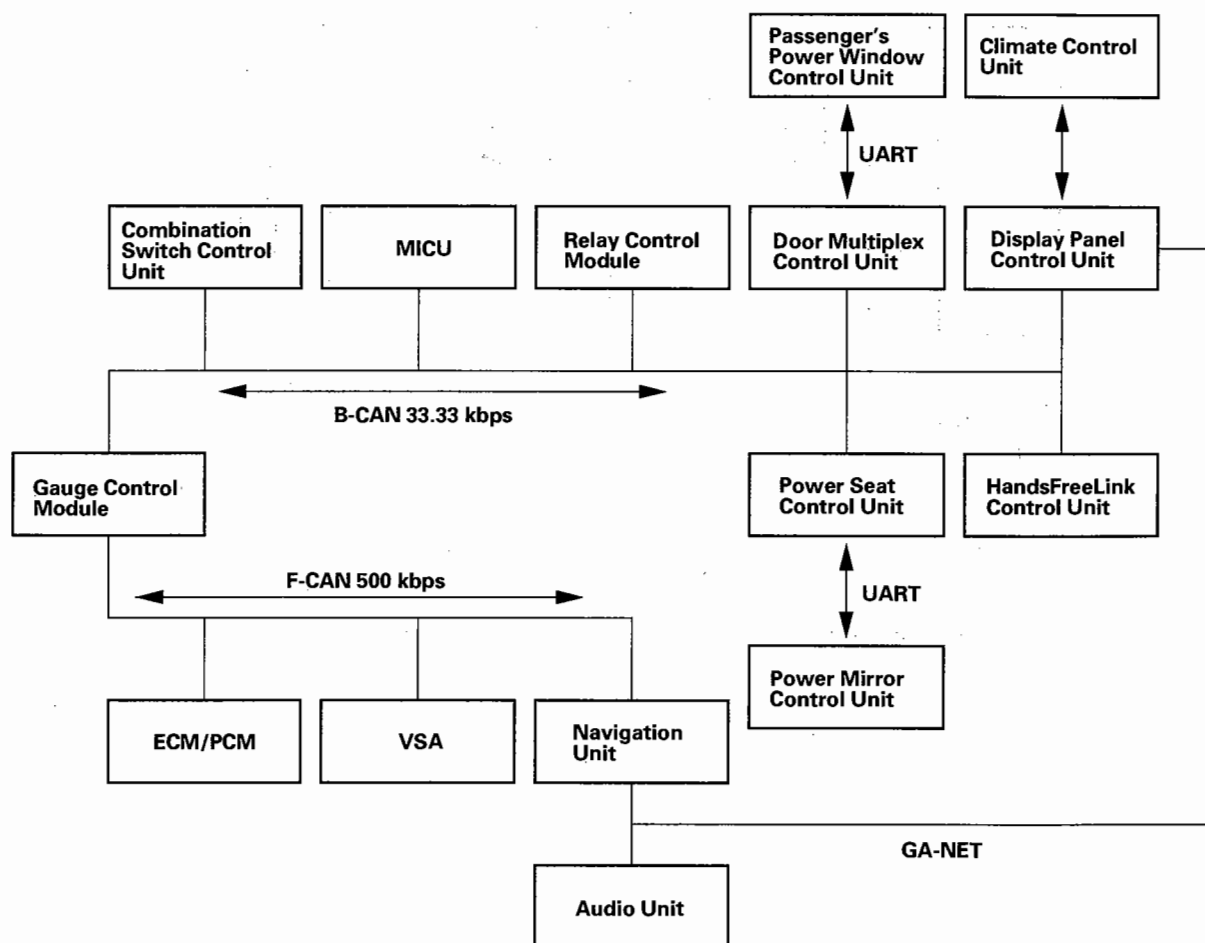


System Description

Body Controller Area Network (B-CAN) and Fast Controller Area Network (F-CAN)

The fast controller area network (F-CAN) and the body controller area network (B-CAN) share information between multiple electronic control units (ECUs). B-CAN communication moves at a slower speed for convenience related items and for other functions. F-CAN information moves at a faster speed for "real time" functions such as fuel and emissions data. To allow both systems to share information, the gauge control module translates information from the B-CAN to the F-CAN and from the F-CAN to the B-CAN.

The ECUs on the B-CAN and the F-CAN transmit and receive information in the form of structured messages that may be received by several different ECUs on the network at one time. These messages are transmitted and received across a communication circuit that consists of a single wire that is shared by all the ECUs on the circuit. Since messages on the F-CAN are typically of higher importance, a second wire is used for communication circuit integrity monitoring. A backup circuit is also added to the headlight and wiper circuits on the B-CAN in the event of a network wire or ECU failure that would effect the operation of the system.

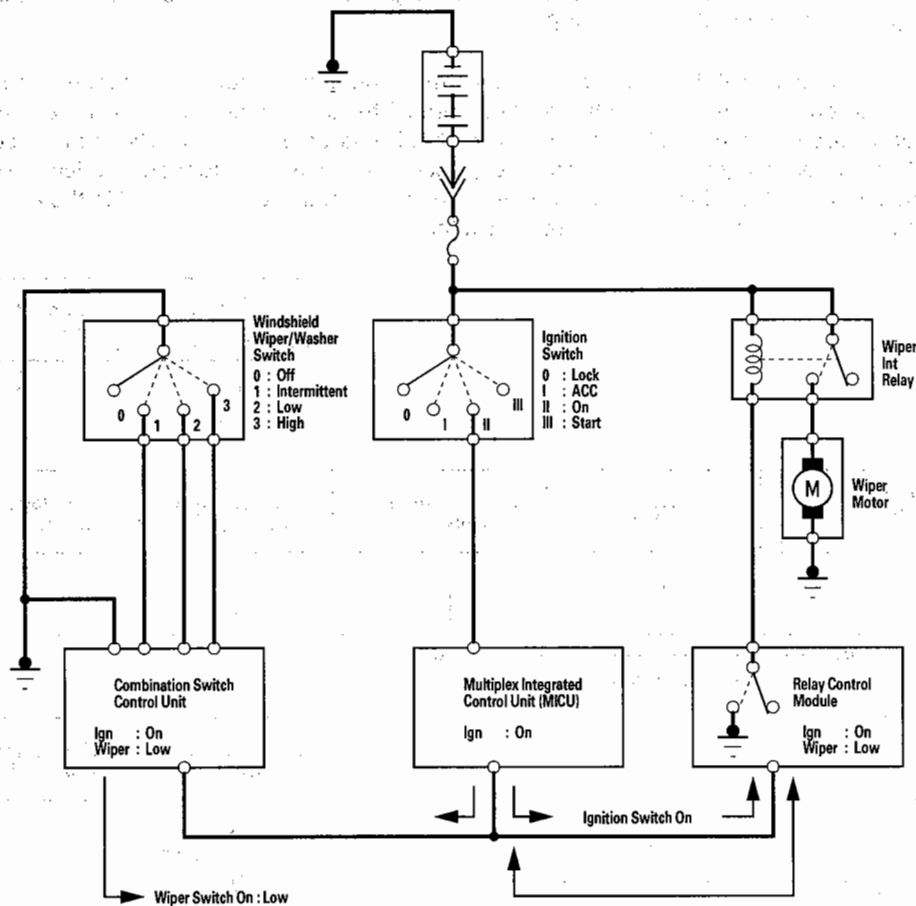


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Multiplex Integrated Control System (MICS)

System Description (cont'd)

Messages are transmitted by an ECU (that monitors an input) over the communication circuit. ECUs that use the message (information related to that input) are the receivers. For example, the combination switch control unit monitors the wiper switch. When the wiper switch is placed in the low speed position, the combination switch control unit transmits that message on the communication circuit. The relay control module receives the message and turns on the wipers by providing a ground for the relay.





Connected ECUs

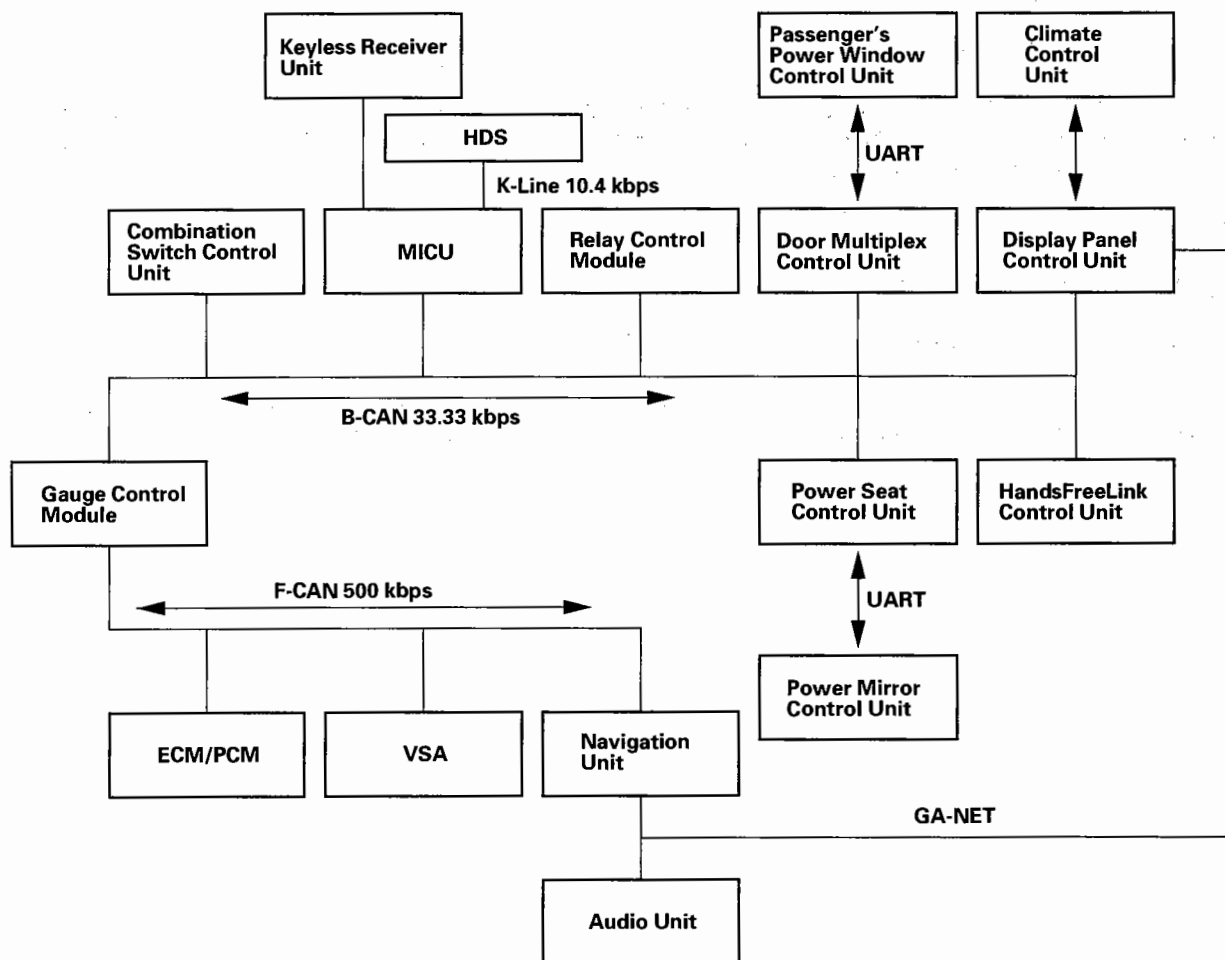
Several ECUs are connected to each of the two networks. The gauge control module is part of both networks since it is the "gateway" between them. Here is a list of ECUs and the network they are connected to.

B-CAN ECUs

- Gauge control module
- Relay control module
- Multiplex integrated control unit (MICU)
- Door multiplex control unit
- Combination switch control unit
- Display panel control unit
- HandsFreeLink control unit
- Power seat control unit

F-CAN ECUs

- Gauge control module
- ECM/PCM
- Navigation unit
- VSA (vehicle stability assist)



(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

Network "Loss of Communication" Error Checking

The B-CAN and the F-CAN send messages to each other to check the integrity of the network communication circuit. They do this by sending a specific digital message out after an event. For example, after turning the ignition switch to ON (II). After the switch to ON, all the ECUs on the communication circuit expect to receive a message from other specific units within a specified amount of time. If the message is not received, the ECU will transmit a DTC reporting that the control units did not communicate.

Examples of communication circuit test

Normal circuit

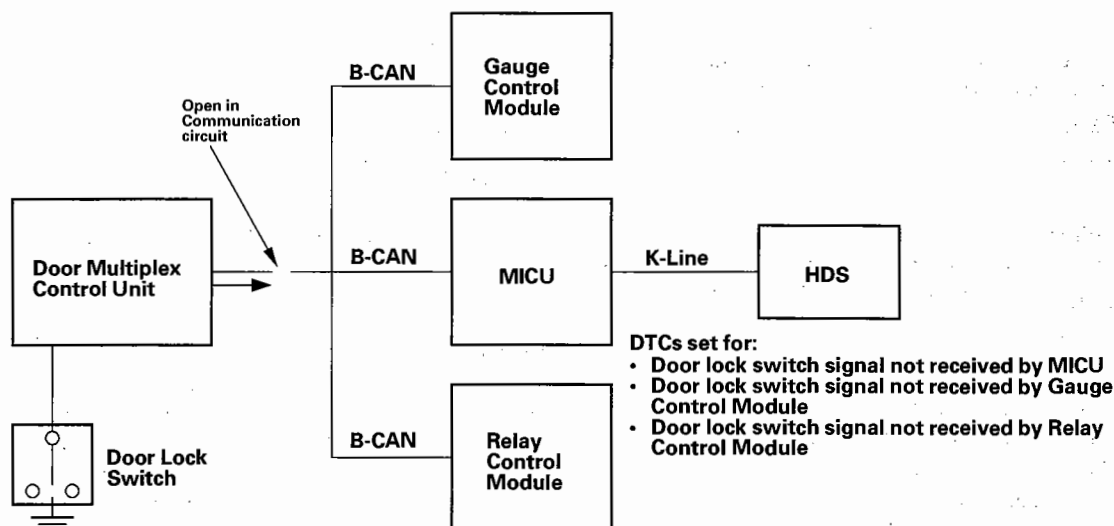
1. Ignition switch is turned ON (II).
2. The door multiplex control unit transmits a door switch signal.
3. The multiplex integrated control unit (MICU), relay control module, and gauge control module receive the door lock switch signal.
4. The communication circuit test is passed.

Since the door lock switch message was received by all the ECUs expecting to receive a signal, the communication circuit between those units is OK. There are multiple signal sent and received by each ECU during this time to insure that the communication circuit is intact.

Failed circuit

1. Ignition switch is turned ON (II).
2. The door multiplex control unit transmits a door switch signal.
3. The multiplex integrated control unit (MICU), relay control module, and gauge control module expect to receive the door lock switch signal, but since there is a break in the communication circuits, it is not received.

8. Each ECU that expects to receive the door lock switch signal from the door multiplex control unit will transmit DTCs for the signal that it did not receive.



Since there is a break in the communication circuit, the door lock switch signal could not be received by the gauge control module, multiplex integrated control unit (MICU), or the relay control module. Each of these units will set "loss of communication" error codes for the signal(s) they did not receive. There may be multiple communication DTCs if the unit that has become disconnected from the network would normally transmit multiple messages during the communication line test. For example, the door multiplex control unit sends the keyless panic signal and door lock switch signal during the communication circuit test.

Diagnostic Trouble Codes (DTC)

There are three types of DTCs used by the CAN networks.

Internal error DTCs	The ECUs run internal checks. If one finds that there is an internal ECU problem, it will set an internal error DTC. Confirm that the battery and charging system are OK. If so, this indicates that the ECU needs to be replaced.
Loss of communication DTCs	Loss of communication DTCs (and Bus-off DTCs) are set when there is a problem with the communication between ECUs. This could be in the connections, the wiring, or the ECU (as called out in the DTC Troubleshooting index).
Signal error DTCs	The ECUs can run diagnostics on some input circuits to determine if those circuits are functioning properly (no opens or shorts). If a circuit fails the diagnostic test, a DTC will set. (NOTE: Not all input circuit are tested for errors.)

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Multiplex Integrated Control System (MICS)

System Description (cont'd)

B-CAN System Switch Device Index

Combination Switch Control Unit	
Input signal	Output signal/Device
Dimmer switch, Lighting switch, Passing switch, Turn signal switch, Wiper/washer switch, Intermittent dwell time controller	None

Relay Control Module	
Input signal	Output signal/Device
Daytime running lights control (Canada), Hood switch, Horn switch, Windshield wiper motor, Windshield wiper fail-safe, Rear window defogger	Daytime running lights control (Canada), Headlight, Parking light, Horn, Windshield washer motor, Windshield wiper motor

Door Multiplex Control Unit	
Input signal	Output signal
Driver's door key cylinder switch (lock/unlock), Driver's door lock knob switch (lock/unlock), Driver's door lock switch, Driver's power window switches (up, down, auto up, auto down), Passenger's power window switches (up, down), Driver's power window motor pulser, Key-off timer, Keyless receiver unit	Driver's power window motor, Passenger's power window switches, Power window relay control, Passenger's power window enable, Security, Moonroof control unit, Memory seat switches and indicators

Multiplex Integrated Control Unit	
Input signal	Output signal/Device
Brake pedal position switch, Door switches, Ignition key cylinder switch, Park pin switch (A/T), Passenger's door lock knob switches (unlock), Passenger's door lock switch, Seat belt switch (unbuckled), Transmission range switch (P, R), Trunk lid latch switch	Door lock actuators, Hazard warning lights, Interior lights, Ignition key light, Key interlock solenoid, Turn signal lights, Moonroof control unit, Trunk lid opener solenoid, Door courtesy lights, Key-off timer, Keyless buzzer

Display Panel Control Unit	
Input signal	Output signal/Device
HandsFreeLink, Illumination positive, Illumination negative, Illumination (LED)	Clock, Audio-HVAC subdisplay-clock



B-CAN System Switch Device Index

Gauge Control Module	
Input signal	Output signal/Device
Dash lights brightness controller, Daytime running lights signal (Canada), Engine oil pressure switch signal, Washer fluid level switch signal (Canada), Parking brake switch, Brake fluid level switch, Fuel gauge sending unit, Select/Reset/Information switch, Cruise control combination switch (set, cancel, resume, master), VSA OFF switch, A/T park position, MET INH from ECM/PCM	Dash lights, Fuel gauge, Gauge lights, Indicator, LEDs, Speedometer, Tachometer, ECT gauge, Warning buzzer, Odometer/Outside air temperature display

Climate Control Unit	
Input signal	Output signal/Device
Evaporator temperature sensor, In-car temperature sensor, Outside air temperature sensor, Sunlight sensor, Air mix motor position (Driver's and Passenger's), Mode motors position, Blower motor control feedback, Ground (Canada)	Air mix control motors (Driver's/Passenger's), Blower motor transistor, Mode control motors, Recirculation motor

Power Seat Control Unit	
Input signal	Output signal/Device
Back-up light switch signal, Driving position memory switch signal, Memory sensors, M/T ground	Driver's power seat motors

Power Mirror Control Unit	
Input signal	Output signal/Device
Mirror switches, Mirror position sensors	Mirror actuator

HandsFreeLink Control Unit	
Input signal	Output signal/Device
Remoto switches, Microphone input (without navigation), Microphone input (with navigation) via navigation unit, Bluetooth communication with cellphone	HandsFreeLink information

(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

HDS Inputs and Commands

System Menu	Data List	Data List Indication
Wiper	Brake Pedal Position Switch	Brake pedal pushed: ON Brake pedal released: OFF
	Windshield Wiper Motor Park Switch	Wipers in park position: ON Wipers in other position: OFF
	Windshield Wiper Switch (BACK-UP)	Wiper switch in HI position: ON Wiper switch in other position: OFF
	Windshield Wiper Switch (LOW)	Wiper switch in LOW position: ON Wiper switch in other position: OFF
	Windshield Wiper Switch (HIGH)	Wiper switch in HI position: ON Wiper switch in other position: OFF
	Windshield Wiper Switch (MIST)	Wiper switch in MIST position: ON Wiper switch in other position: OFF
	Windshield Washer Switch	Washer switch on: ON Washer switch off: OFF
	Windshield Wiper Motor HI Command	Wiper high speed command on: ON Wiper high speed command off: OFF
	Windshield Wiper Motor Lo Command	Wiper low speed command on: ON Wiper high low command off: OFF
	Windshield Washer Motor Command	Washer command on: ON Washer command off: OFF
	Intermittent Wiper Dwell Timer	Switch at short setting: about 0.0 Switch at long setting: about 250



System Menu	Data List	Data List Indication
Power window	Driver's Door Switch	Door open: ON Door closed: OFF
	Front Passenger's Door Switch	Door open: ON Door closed: OFF
	P/W Main Switch	On: ON Off: OFF
	P/W Master Switch (Driver's window AUTO)	Auto position: ON Neutral position: OFF
	P/W Master Switch (Driver's window UP)	Up position: ON Neutral position: OFF
	P/W Master Switch (Driver's window DOWN)	Down position: ON Neutral position: OFF
	P/W Master Sw. (Front Passenger's Wndw UP)	Up position: ON Neutral position: OFF
	P/W Master Sw. (Front Passenger's Wndw DOWN)	Down position: ON Neutral position: OFF
	P/W Master Switch (Left Rear window UP)	UP position: ON Neutral position: OFF
	P/W Master Switch (Left Rear window DOWN)	Down position: ON Neutral position: OFF
	P/W Master Sw. (Right Rear Wndw UP)	UP position: ON Neutral position: OFF
	P/W Master Sw. (Right Rear Wndw DOWN)	Down position: ON Neutral position: OFF
	Driver's P/W Motor Pulse A	Window in motion: DETECT Window stopped: NONE
	Driver's P/W Motor Pulse B	Window in motion: DETECT Window stopped: NONE
	Driver's P/W Motor Command	OFF/UP/DOWN
	Front Passenger's P/W Motor Command	OFF/UP/DOWN
	Left Rear P/W Motor Command	OFF/UP/DOWN
	Right Rear P/W Motor Command	OFF/UP/DOWN
	P/W Relay Command	On command: ON Off command: OFF
	Moonroof Timer Command	Enabled: ON Disabled: OFF
	P/W Master Sw. (Passenger's Wndw AUTO)	Auto position: ON Neutral position: OFF
	Power Window Passenger's Side, UP Switch	Up position: ON Neutral position: OFF
	Power Window Passenger's Side, DOWN Switch	Down position: ON Neutral position: OFF
	Power Window Passenger's Side, AUTO Switch	Down position: ON Neutral position: OFF
	Passenger's Power Window Motor Pulse A	Window in motion: DETECT Window stopped: NONE
	Passenger's Power Window Motor Pulse B	Window in motion: DETECT Window stopped: NONE
	Moonroof Command	OFF/CLOSE/OPEN

(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

System Menu	Data List	Data List Indication
Lighting	Driver's Door Switch	Door open: ON Door closed: OFF
	Ignition Switch (IG1)	Ignition ON (II): ON Other positions: OFF
	Headlight Switch (OFF)	In off position: ON In other positions: OFF
	Headlight Switch (PARKING)	In park light position: ON In other positions: OFF
	Headlight Switch (HEADLIGHT)	In headlight position: ON In other position: OFF
	Headlight Switch (BACK-UP)	In headlight position: ON In headlight position: OFF
	Headlight Switch (DIMMER)	In high-beam position: ON In low-beam position: OFF
	Headlight Switch (PASSING)	Passing switch on: ON Passing switch off: OFF
	Turn Signal Switch (LEFT)	In left position: ON Neutral position: OFF
	Turn Signal Switch (RIGHT)	In right position: ON Neutral position: OFF
	Fog Light Sw.	Switch on: ON Switch on: OFF
	Ignition Key Cylinder Light Command	Light on command: ON Light off command: OFF
	Interior Light Command	Light on command: ON Light off command: OFF
	Left Turn Signal Command	Light on command: ON Light off command: OFF
	Right Turn Signal Command	Light on command: ON Light off command: OFF
	Headlight Command	Light on command: ON Light off command: OFF
	Headlight High Beam Command	Light on command: ON Light off command: OFF
	Parking Light Command	Light on command: ON Light off command: OFF
	Fog Light Command	Light on command: ON Light off command: OFF
	Rear Defroster Command	Defroster on command: ON Defroster off command: OFF
	DRL Command (Canada)	DRL on command: ON DRL off command: OFF



System Menu	Data List	Data List Indication
Gauge	Driver's Door Switch	Door open: ON Door closed: OFF
	Front Passenger's Door Switch	Door open: ON Door closed: OFF
	Driver's Rear Door Switch	Door open: ON Door closed: OFF
	Passenger's Rear Door Switch	Door open: ON Door closed: OFF
	Trunk Lid/Tailgate Switch	Trunk open: ON Trunk closed: OFF
	Headlight Switch (OFF)	In off position: ON In other positions: OFF
	Headlight Switch (PARKING)	In park light position: ON In other positions: OFF
	Headlight Switch (HEADLIGHT)	In headlight position: ON In other positions: OFF
	Headlight Switch (DIMMER)	In high-beam position: ON In low-beam position: OFF
	Headlight Switch (PASSING)	Passing switch on: ON Passing switch off: OFF
	Turn Signal Switch (LEFT)	In left position: ON Neutral position: OFF
	Turn Signal Switch (RIGHT)	In right position: ON Neutral position: OFF
	Left Turn Signal Command	Light on command: ON Light off command: OFF
	Right Turn Signal Command	Light on command: ON Light off command: OFF
	Headlight Command	Light on command: ON Light off command: OFF
	Headlight High Beam Command	Light on command: ON Light off command: OFF
	Parking Light Command	Light on command: ON Light off command: OFF
	Brake Pedal Position Switch	Brake pedal pushed: ON Brake pedal released: OFF
	Fog Light Sw.	Switch on: ON Switch off: OFF
	Cruise Control Main Switch	Switch on: ON Switch off: OFF
	Cruise Control Set Sw.	Switch pushed: ON Switch released: OFF
	Cruise Control Resume Sw.	Switch pushed: ON Switch released: OFF
	VSA/TCS Off Sw.	Switch on: ON Switch off: OFF
	Illumination Volume Plus Switch	Switch pushed: ON Switch released: OFF
	Illumination Volume Minus Switch	Switch pushed: ON Switch released: OFF
	Illumination Volume Max Switch	Switch pushed: ON Switch released: OFF
	Select/Reset Switch	Switch pushed: ON Switch released: OFF
	INFO Previous Switch	Switch pushed: ON Switch released: OFF
	INFO Next Switch	Switch pushed: ON Switch released: OFF

(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

System Menu	Data List	Data List Indication
Gauge	Ignition Key Cylinder Switch	Key in ignition: ON Key out of ignition: OFF
	Driver's Seat Belt Buckle Switch	Unbuckled: ON Buckled: OFF
	Cruise Control Main Sw. Indicator (Operation Lamp)	Cruise set: ON Cruise not set: OFF
	Engine Oil Pressure Switch	Engine off (low pressure): ON Engine running: OFF
	Washer Fluid Level Switch	Fluid level low: ON Fluid level normal: OFF
	Gauge Select/Reset Switch	Reset button pushed: ON Reset button released: OFF
	Parking Brake Switch	Park brake lever pulled: ON Park brake lever released: OFF
	Brake Fluid Level Switch	Fluid level low: ON Fluid level normal: OFF
	Fuel Sending Unit Input 1	Fuel tank empty: 4V Fuel tank half full: 2.5V Fuel tank full: 1V
	Fuel Sending Unit Input 2	Fuel tank empty: 5° Fuel tank half full: 50° Fuel tank full: 100°
	ABS Indicator	Indicator command on: ON Indicator command off: OFF
	EBD (Brake Light) Indicator	Indicator command on: ON Indicator command off: OFF
	MIL Indicator	Indicator command on: ON Indicator command off: OFF
	Washer Fluid Level Indicator (Canada)	Indicator command on: ON Indicator command off: OFF
	DRL Indicator (Canada)	Indicator command on: ON Indicator command off: OFF
	Low Oil Pressure Indicator	Indicator command on: ON Indicator command off: OFF
	Charging System Indicator	Indicator command on: ON Indicator command off: OFF
	Cruise Master Switch ON Indicator	Indicator command on: ON Indicator command off: OFF
	Maintenance Required Indicator	Indicator command on: ON Indicator command off: OFF
	High Beam Indicator	Indicator command on: ON Indicator command off: OFF
	Parking Light ON Indicator	Indicator command on: ON Indicator command off: OFF
	Low Fuel Warning Indicator	Indicator command on: ON Indicator command off: OFF
	Front Fog Indicator	Indicator command on: ON Indicator command off: OFF
	Fuel Gauge Needle Command	Fuel tank empty: 4V Fuel tank half full: 2.5V Fuel tank full: 1V
	VSA/TCS Active Indicator	Indicator command on: ON Indicator command off: OFF
	VSA/TCS Indicator (Warning)	Indicator command on: ON Indicator command off: OFF



System Menu	Data List	Data List Indication
Door lock	Driver's Door Switch	Door open: ON Door closed: OFF
	Front Passenger's Door Switch	Door open: ON Door closed: OFF
	Driver's Rear Door Switch	Door open: ON Door closed: OFF
	Passenger's Rear Door Switch	Door open: ON Door closed: OFF
	Driver's Door Lock Switch (LOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Switch (UNLOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (LOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (UNLOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Knob Switch (LOCK)	Knob up: ON Knob down: OFF
	Driver's Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Front Passenger's Door Lock Knob Sw. (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Rear Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Passenger's Rear Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Door Key Cylinder Switch (LOCK)	Key turned to lock: ON Neutral position: OFF
	Driver's Door Key Cylinder Switch (UNLOCK)	Key turned to unlock: ON Neutral position: OFF
	Door LOCK Command	Lock command: ON Other: OFF
	Door UNLOCK Command	Unlock command: ON Other: OFF
	Driver's Door UNLOCK Command	Unlock command: ON Other: OFF
Climate control	A/C Pressure Switch/Thermal Protector	A/C on: ON

(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

System Menu	Data List	Data List Indication
Keyless	Driver's Door Switch	Door open: ON Door closed: OFF
	Front Passenger's Door Switch	Door open: ON Door closed: OFF
	Driver's Rear Door Switch	Door open: ON Door closed: OFF
	Passenger's Rear Door Switch	Door open: ON Door closed: OFF
	Trunk Lid/Tailgate Switch	Trunk open: ON Trunk closed: OFF
	Driver's Door Lock Switch (LOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Switch (UNLOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (LOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (UNLOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Knob Switch (LOCK)	Knob up: ON Knob down: OFF
	Driver's Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Front Passenger's Door Lock Knob Sw. (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Rear Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Passenger's Rear Door Lock Knob Sw. (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Door Key Cylinder Switch (LOCK)	Key turned to lock: ON Neutral position: OFF
	Driver's Door Key Cylinder Switch (UNLOCK)	Key turned to lock: ON Neutral position: OFF
	Ignition Switch (IG1)	Ignition ON (II): ON Other positions: OFF
	Door LOCK Command	Lock command: ON Other: OFF
	Door UNLOCK Command	Unlock command: ON Other: OFF
	Driver's Door UNLOCK Command	Unlock command: ON Other: OFF
	Trunk Lid Release Command	Release command: ON Other: OFF
	Keyless Buzzer Command	Buzzer on command: ON Buzzer off command: OFF



System Menu	Data List	Data List Indication
Security	Driver's Door Switch	Door open: ON Door closed: OFF
	Front Passenger's Door Switch	Door open: ON Door closed: OFF
	Driver's Rear Door Switch	Door open: ON Door closed: OFF
	Passenger's Rear Door Switch	Door open: ON Door closed: OFF
	Trunk Lid/Tailgate Switch	Trunk open: ON Trunk closed: OFF
	Hood Switch	Hood open: ON Hood closed: OFF
	Driver's Door Lock Switch (LOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Switch (UNLOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (LOCK)	Switch pushed: ON Switch released: OFF
	Front Passenger's Door Lock Sw. (UNLOCK)	Switch pushed: ON Switch released: OFF
	Driver's Door Lock Knob Switch (LOCK)	Knob up: ON Knob down: OFF
	Driver's Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Front Passenger's Door Lock Knob Sw. (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Rear Door Lock Knob Switch (UNLOCK)	Knob up: ON Knob down: OFF
	Passenger's Rear Door Lock Knob Sw. (UNLOCK)	Knob up: ON Knob down: OFF
	Driver's Door Key Cylinder Switch (LOCK)	Key turned to lock: ON Neutral position: OFF
	Driver's Door Key Cylinder Switch (UNLOCK)	Key turned to unlock: ON Neutral position: OFF
	Ignition Switch (IG1)	Ignition ON (II): ON Other position: OFF
	Horn Command	Horn on command: ON Horn off command: OFF
	Door LOCK Command	Lock command: ON Other: OFF
	Door UNLOCK Command	Unlock command: ON Other: OFF
	Driver's Door UNLOCK Command	Unlock command: ON Other: OFF
	Trunk Lid Release Command	Release command: ON Other: OFF
	Headlight Command	Light on command: ON Light off command: OFF
	Headlight High Beam Command	Light on command: ON Light off command: OFF
	Parking Light Command	Light on command: ON Light off command: OFF
	Security Indicator Command	Indicator on command: ON Indicator off command: OFF

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Multiplex Integrated Control System (MICS)

System Description (cont'd)

System Menu	Data List	Data List Indication
Display Panel Control Unit	OFF Switch	Switch on: ON Switch off: OFF
	DUAL Switch	Switch on: ON Switch off: OFF
	Recirculate Switch	Switch on: ON Switch off: OFF
	A/C Compressor Switch	Switch on: ON Switch off: OFF
	Rear Defroster Switch	Switch on: ON Switch off: OFF
	Driver Temp Up Switch	Switch on: ON Switch off: OFF
	Driver Temp Down Switch	Switch on: ON Switch off: OFF
	Passenger Temp Up Switch	Switch on: ON Switch off: OFF
	Passenger Temp Down Switch	Switch on: ON Switch off: OFF
	Driver Temp AUTO Switch	Switch on: ON Switch off: OFF
	Passenger Temp AUTO Switch	Switch on: ON Switch off: OFF
	Driver MODE Switch	Switch on: ON Switch off: OFF
	Passenger MODE Switch	Switch on: ON Switch off: OFF
	Fan Speed Up Switch	Fan speed up switch pushed: ON Fan speed up switch release: OFF
	Fan Speed Down Switch	Fan speed down switch pushed: ON Fan speed down switch release: OFF
	Navi Map/Guide Switch	Switch on: ON Switch off: OFF
	Navi Menu Switch	Switch on: ON Switch off: OFF
	Navi Setup Switch	Switch on: ON Switch off: OFF
	Navi Info Switch	Switch on: ON Switch off: OFF
	Navi Zoom In Switch	Switch pushed: ON Switch release: OFF
	Navi Zoom Out Switch	Switch pushed: ON Switch release: OFF
	Navi Cancel Switch	Switch on: ON Switch off: OFF
	Navi Audio Switch	Switch on: ON Switch off: OFF



System Menu	Data List	Data List Indication
Display Panel Control Unit	Joystick-Enter	Joystick enter: ON Other position: OFF
	Joystick-Up	Joystick up: ON Other position: OFF
	Joystick-Up Right	Joystick up right: ON Other position: OFF
	Joystick-Right	Joystick right: ON Other position: OFF
	Joystick-Down Right	Joystick down right: ON Other position: OFF
	Joystick-Down	Joystick down: ON Other position: OFF
	Joystick-Down Left	Joystick down left: ON Other position: OFF
	Joystick-Left	Joystick left: ON Other position: OFF
	Joystick-Up Left	Joystick left up: ON Other position: OFF
	Rear Defogger Indicator	Indicator command on: ON Indicator command off: OFF
	DEF Indicator	Indicator command on: ON Indicator command off: OFF
	Recirculation Indicator	Indicator command on: ON Indicator command off: OFF
	DUAL Indicator	Indicator command on: ON Indicator command off: OFF
	Display Backlight (Navi)	Backlight command on: ON Backlight command off: OFF
	Front Panel Segment LCD (Non-Navi)	On command: ON Off command: OFF
	Subdisplay Segment LCD (Navi)	On command: ON Off command: OFF

(cont'd)

Multiplex Integrated Control System (MICS)

System Description (cont'd)

Output

System	Description	Data List
Gauge	Speedometer displays value inputted	Speedometer
	Tachometer displays value inputted	Tachometer
	Fuel gauge displays value inputted	Fuel Level Gauge
	Temperature gauge displays value inputted	Engine Temperature Gauge
	Turns VSA activation indicator on/off	VSA/TCS Activation Indicator
	Turns VSA indicator on/off	VSA/TCS Indicator
	Turns ABS indicator on/off	ABS Indicator
	Turns EBD indicator on/off	EBD Indicator
	Turns cruise indicator on/off	Cruise Activation Indicator
	Turns MIL on/off	MIL Status
	Turns DRL indicator on/off	Daytime Running Light Indicator (Canada)
	Turns low oil pressure indicator on/off	Engine Oil Pressure Indicator
	Turns charging system indicator on/off	Charging System Indicator
	Turns cruise main indicator on/off	Cruise Control Main Switch Indicator
	Turns high beam indicator on/off	High Beam Indicator
	Turns lights-on indicator on/off	Light On Indicator
	Turns low fuel indicator on/off	Low Fuel Indicator
	Turns fog light indicator on/off	Front Fog Light Indicator
	Displays inputted value	Trip Meter
	Turns A/T P position indicator on/off	A/T Gear Position Indicator (P)
	Turns A/T R position indicator on/off	A/T Gear Position Indicator (R)
	Turns A/T N position indicator on/off	A/T Gear Position Indicator (N)
	Turns A/T D position indicator on/off	A/T Gear Position Indicator (D)
	Turns A/T M position indicator on/off	A/T Gear Position Indicator (M)
	Turns A/T 1 position indicator on/off	A/T Gear Position Indicator (L)
	Turns S-mode segment on/off	Sequential Shift
	Controls gauge illumination brightness to inputted value	Illumination Brightness Control
	Turns key-in beeper on/off	Key Alarm Chime
	Turns lights-on beeper on/off	Headlight Alarm Chime
	Turns seat belt reminder beeper on/off	Seat belt Reminder Chime
	Rewriting the odo data, etc	METER REPLACEMENT (ODO REWRITE etc.)
Lighting	Turns ignition key light on/off	Ignition Key Cylinder Light Command
	Turns interior lights on/off	Interior Light Command
	Turns left turn signal lights on/off	Left Turn Signal Command
	Turns right turn signal lights on/off	Right Turn Signal Command
	Turns headlights on/off	Headlight Command
	Turns headlights high beam on/off	Headlight High Beam Command
	Turns parking lights on/off	Parking Light Command
	Turns fog lights on/off	Front Fog Light
	Turns daytime running lights on/off	Daytime Running Light Signal (Canada)

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Output

System	Description	Data List
Keyless	Turns trunk lid opener solenoid on/off	Trunk Lid/Tailgate Release Command
	Turns keyless buzzer on/off	Keyless Buzzer
Power window	Runs driver's window up	Driver's Window Up
	Runs driver's window down	Driver's Window Down
	Runs front passenger's window up	Front Passenger's Window Up
	Runs front passenger's window down	Front Passenger's Window Down
	Runs left rear window up	Left Rear Window Up
	Runs left rear window down	Left Rear Window Down
	Runs right rear window up	Right Rear Window Up
	Runs right rear window down	Right Rear Window Down
	Turns power window relay on/off	Power Window Relay
	Runs moonroof open/close	Moonroof:Open/Close
	Reset power window master switch	Resetting the power window – Driver side
	Reset front passenger's window switch	Resetting the power window – Assistant side
Wiper	Turns wiper low speed on/off	Windshield Wiper Motor Low Command
	Turns wiper high speed on/off	Windshied Wiper Motor Hight Command
	Turns washer on/off	Windshied Washer Command
	Turns rear window defogger on/off	Rear Deffogger
Security	Turns horns on/off	Horn Command
	Turns security indicator on/off	Security Indicator
Display panel* control unit	Turns TFT-LCD backlight on/off	Front Panel Display: TFT-LCD backlight (With Navi) – Turn on for 5s.
	Turns segment LCD on/off	Front Panel Display: Segment LCD (Without Navi) – Turn on for 5s.
	Turns subdisplay segment LCD on/off	Front Panel Display: Sub display segment LCD – Turn on for 5s.
Power seat and power mirror	Turns driving position memory switch indicator 1 on/off	Power Seat: Memory Position 1 Indicator
	Turns driving position memory switch indicator 2 on/off	Power Seat: Memory Position 2 Indicator
	Runs slide motor forward	Power Seat: Slide Motor – Full Forward
	Runs slide motor backward	Power Seat: Slide Motor – Full Backward
	Runs front up-down motor up	Power Seat: Front UP-DOWN Motor – Full Up
	Runs front up-down motor down	Power Seat: Front UP-DOWN Motor – Full Down
	Runs rear up-down motor up	Power Seat: Rear UP-DOWN Motor – Full Up
	Runs rear up-down motor down	Power Seat: Rear UP-DOWN Motor – Full Down
	Runs recline motor forward	Power Seat: Recline Motor – Full Forward
	Runs recline motor backward	Power Seat: Recline Motor – Full Backward
	Turns memory buzzer on for 5 seconds	Power Seat: memory Buzzer – 5 seconds
	Runs left power mirror up	Power Mirror: Left Power Mirror – Full Up
	Runs left power mirror down	Power Mirror: Left Power Mirror – Full Down
	Runs left power mirror right	Power Mirror: Left Power Mirror – Full Right
	Runs left power mirror left	Power Mirror: Left Power Mirror – Full Left
	Runs right power mirror up	Power Mirror: Right Power Mirror – Full Up
	Runs right power mirror down	Power Mirror: Right Power Mirror – Full Down
	Runs right power mirror right	Power Mirror: Right Power Mirror – Full Right
	Runs right power mirror left	Power Mirror: Right Power Mirror – Full Left

Multiplex Integrated Control System (MICS)

Troubleshooting - B-CAN System Diagnosis Test Mode A

Perform this diagnosis first if the symptom is related to the B-CAN system.

NOTE: Always cycle the ignition switch within 3 seconds when prompted in the DTC troubleshooting procedures in this section.

1. Check the symptom against this list of B-CAN related systems:

- Gauge control module
- Exterior lights
- Turn signals
- Entry light control
- Interior lights
- Safety indicators
- Rear window defogger
- HandsFreeLink
- Horns (security and panic)
- Chimes (key, seat belt, lights-on and parking brake)
- Power windows
- Power window/moonroof timer
- Wiper/washer
- Security
- Keyless entry
- Power door locks
- Climate control
- Key interlock
- Dash light brightness
- Driving position memory

Is the symptom related to the B-CAN system?

YES—Go to step 2.

NO—Go to the system troubleshooting for the system with the symptom. ■

2. Connect the Honda Diagnostic System (HDS), then turn the ignition switch ON (II).

3. From the BODY ELECTRICAL SYSTEM SELECTION MENU, select UNIT INFORMATION, and then select CONNECTED UNIT listed to see if it is communicating with the HDS.

- MICU
- Door multiplex control unit
- Gauge control module
- Combination switch control unit
- Relay control module
- Display panel control unit
- Power seat control unit
- HandsFreeLink control unit

NOTE:

- If the unit is communicating with the scan tool or the HDS, DETECT will be displayed.
- If the unit is not communicating, "Not Available" will be displayed.

Are all control units communicating with the HDS?

YES—Go to step 4.

NO—If any of them are not communicating, go to B-CAN System Diagnosis Test Mode B (see page 22-109). If all units are not communicating, go to DTC B1000 troubleshooting (see page 22-118). ■



4. Select the system that has the problem from the BODY ELECTRICAL SYSTEM SELECTION MENU, then select DTCs.

Are any DTCs indicated?

YES—Go to step 5.

NO—If the problem is related to one of the following items, go to B-CAN System Diagnosis Test Mode C (see page 22-110).

- Exterior lights
- Turn signals
- Entry light control
- Interior lights
- Horns (security and panic)
- Power windows
- Wiper/washer
- Power door locks

If the problem is related to one of the following items, go to the troubleshooting for that individual system. ■

- Gauge control module
- Safety indicators
- Chimes (key, seat belt and lights-on)
- Rear window defogger (climate control)
- Security
- Keyless entry
- Climate control
- Key interlock
- Dash light brightness
- Audio system
- Navigation
- Driving position memory
- HandsFreeLink

5. Record all DTCs, and sort them by DTC type using the DTC Troubleshooting Index.

6. Troubleshoot the DTC(s) in this order:

- Battery voltage DTCs.
- Internal error DTCs.
- Loss of communication DTCs. Begin troubleshooting with the lowest number first (Example: if DTC B1006 and B1058 are retrieved, begin by troubleshooting B1006).
- Signal error DTCs.

Troubleshooting - B-CAN System Diagnosis Test Mode B

Perform this diagnosis if any of the control units are not communicating (Not Available is displayed in the HDS) as found by the B-CAN System Diagnosis Test Mode A.

1. Using the HDS, select the system that has the symptom from the BODY ELECTRICAL SYSTEM SELECTION MENU.

2. Select DTCs, and then check for loss of communication DTCs (use the DTC Troubleshooting Index to find the DTC type).

Are any loss of communication DTCs indicated?

YES—Go to step 3.

NO—Replace the MICU. ■

3. Perform the input test for the unit not communicating with the HDS.

Unit not communicating
MICU (see page 22-130)
Door multiplex control unit (see page 22-135)
Gauge control module (see page 22-134)
Relay control module (see page 22-137)
Display panel control unit (see page 22-435)
Combination switch control unit (see page 22-136)
Power seat control unit (see page 22-348)
HandsFreeLink control unit (see page 22-445)

Multiplex Integrated Control System (MICS)

Troubleshooting - B-CAN System Diagnosis Test Mode C

Perform this diagnosis if a component that is controlled by the B-CAN system does not stop or turn off.

NOTE:

- If the component does not turn ON, go to B-CAN System Diagnosis Test Mode D (see page 22-111).
- See the B-CAN system unit input/output index for a list of input and output devices and the control units that monitor the input and controls the output devices (see page 22-94).
- Always cycle the ignition switch within 3 seconds when prompted in the DTC troubleshooting procedures in this section.

1. Check for DTCs by selecting the TEST MODE MENU from the HDS.

Are any DTCs indicated?

YES—Go to B-CAN System Diagnosis Test Mode A (see page 22-108). ■

NO—Go to step 2.

2. Turn OFF the switch that controls the malfunctioning component.
3. Select DATA LIST from the TEST MODE MENU, and check the input of the switch that controls the component.

Does the HDS indicate the switch is OFF?

YES—Go to step 4.

NO—Go to step 6.

4. In the DATA LIST, check the output signal of the malfunctioning component.

Is the output signal OFF?

YES—Go to step 5.

NO—Replace the control unit that controls the device that will not turn OFF (see page 22-96). ■

5. Check the relay if applicable, then check for a short in the wire between the relay and the component, relay and control unit or the component and control unit.

Are the relay and the wire harness OK?

YES—Replace the control unit that controls the component that will not turn OFF. ■

NO—Replace the relay or repair the wire harness. ■

6. Check the switch, then check for a short in the wire between the switch and the control unit that monitors the switch.

Is the switch and wire harness OK?

YES—Replace the control unit that monitors the switch. ■

NO—Replace the switch or repair the wire harness. ■



Troubleshooting - B-CAN System Diagnosis Test Mode D

Perform this diagnosis a component that is controlled by the B-CAN system does not run or come on.

NOTE:

- If the component does not turn off or stop, go to B-CAN System Diagnosis Test Mode C (see page 22-110).
- See the B-CAN system unit input/output index for a list of input and output devices and the control units that monitor the input and controls the output devices (see page 22-95).
- Always cycle the ignition switch within 3 seconds when prompted in the DTC troubleshooting procedures in this section.

1. Check the fuse of the malfunctioning output device.

Is the fuse OK?

YES—Go to step 2.

NO—Replace the fuse and recheck. ■

2. Check for DTCs by selecting the TEST MODE MENU from the HDS.

Are any DTCs indicated?

YES—Go to B-CAN System Diagnosis Test Mode A (see page 22-108). ■

NO—Go to step 3.

3. Turn ON the switch that controls the malfunctioning component.

4. Select DATA LIST from the TEST MODE MENU, and check output signal for the malfunctioning component.

Is there an output signal?

YES—Go to step 5.

NO—Go to step 9.

5. Check the relay and ground, then check for an open or a short in the circuit for the malfunctioning component.

Are the relay and circuit OK?

YES—Go to step 6.

NO—Replace the relay or repair the wire circuit. ■

6. Perform the function test for the malfunctioning component.

Does the output device pass the function test?

YES—Go to step 7.

NO—Replace the component. ■

7. With the malfunctioning output device connected, connect a voltmeter between the malfunctioning output device and body ground on the wire that the control unit uses to control the output device circuit.

8. Select MISC. TEST from the TEST MODE MENU, and do the forced operation test of the malfunctioning component.

Is there a change in voltage (12 V to 0 V or 0 V to 12 V)?

YES—Replace the component. ■

NO—Replace the control unit that controls the malfunctioning component. ■

9. Select DATA LIST from the TEST MODE MENU, and make sure the switch signal input for the malfunctioning system indicates a change when operated.

Does the switch input indicated ON when the switch is ON?

YES—Replace the control unit that controls the malfunctioning component. ■

NO—Go to step 10.

10. Check the switch and its ground (if applicable), then check for an open or a short in the wire between the switch and the control unit that monitors it.

Is the switch and the wire harness OK?

YES—Replace the control unit that monitors the switch. ■

NO—Replace the switch or repair the wire harness. ■

Multiplex Integrated Control System (MICS)

Troubleshooting - B-CAN System Diagnosis Test Mode 1

Perform this diagnosis if the HDS is not available.

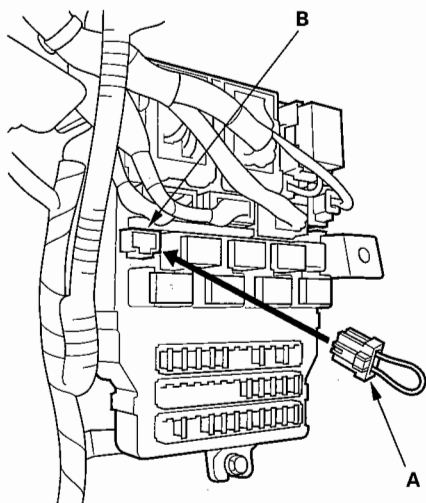
1. Check the No. 7 (7.5A) fuse and No. 21 (7.5A) fuse in the under-dash fuse/relay box.

Are the fuses OK?

YES—Go to step 2.

NO—Find and repair the cause of the blown fuse. ■

2. Remove the left kick panel (see page 20-62).
3. Turn the ignition switch ON (II), and move the interior light switch in middle position.
4. Connect the MPCS service connector (A) to the MCIC socket (B) in the under-dash fuse/relay box.



5. Wait 5 seconds, and watch the map lights. When the system enters Mode 1, the front and rear map lights will flash quickly once, and a double beep will be heard.
6. If there is a DTC, the map lights and ignition key light will blink, pause, then repeat the DTC as long as the ignition switch ON (II).

Is there a repeating DTC?

YES—Count the blinks, then go to step 7.

NO—Go to step 8.

7. About 1 second after you go into self-diagnosis Mode 1, the map lights will indicate the DTC, and repeat it every 3 seconds. If there is more than one DTC, the system will indicate them in ascending order, beginning from the DTC with the lowest numerical value. Troubleshoot the DTCs as indicated below:

- DTC 2, 3, 4 and 5 simultaneously: Check for an open in the BLU wire between multiplex integrated control unit D11 and relay control module I7, BRN/BLK wire between multiplex integrated control unit J4 and door multiplex control unit A5, LT GRN wire between multiplex integrated control unit X27 and combination switch control unit No. 4, BRN/YEL wire between multiplex integrated control unit N28 and gauge B11. If the wire is OK, substitute a known-good under-dash fuse/relay box (multiplex integrated control unit), under-hood fuse/relay box, power window master switch, wiper/washer switch and gauge one at a time, in that order, and recheck for the DTCs after each substitution.
- DTC 1 only: Go to MICU input test (see page 22-130).
- DTC 2 only (no other DTCs present): Go to the relay control module input test. If all inputs are OK, substitute a known-good relay control module and then a MICU, one at a time, and then check for DTCs. If a DTC recurs after a substitution, replace that unit.
- DTC 3 only (no other DTCs present): Go to the door multiplex control unit input test. If all inputs are OK, substitute a known-good door multiplex control unit and then a MICU, one at a time, and then check for DTCs. If a DTC recurs after a substitution, replace that unit.
- DTC 4 only (no other DTCs present): Go to the combination switch control unit input test. If all inputs are OK, substitute a known-good wiper/washer switch and then a MICU, one at a time, and then check for DTCs. If a DTC recurs after a substitution, replace that unit.
- DTC 5 only (no other DTCs present): Go to the gauge control module input test. If all inputs are OK, substitute a known-good gauge control module and then a MICU, one at a time, and then check for DTCs. If a DTC recurs after a substitution, replace that unit.



DTC	Cause
1	The MICU cannot receive signals from the BUS communication line.
2	The MICU cannot receive signals from the relay control module communication line.
3	The MICU cannot receive signals from the power window communication line.
4	The MICU cannot receive signals from the combination switch communication line.
5	The MICU cannot receive signals from the gauge control module.

8. Check for B-CAN DTCs indicated by the gauge control module while still in Test Mode 1.

Are any DTCs indicated?

YES—Go to step 9.

NO—Go to step 11.

9. Record all DTCs and sort them by type using the DTC Troubleshooting Index.
10. Troubleshoot the DTCs in these order:
- Battery voltage DTCs
 - Internal error DTCs
 - Loss of communication DTCs (begin with the lowest number first; for example, if B1006 and B1059 are retrieved, troubleshoot B1006 first)
 - Signal error DTCs

Test Mode 2:

11. Remove the MPCS service connector from the under-dash fuse/relay box socket for 5–10 seconds, then re-insert it to enter Mode 2. When the system enters Mode 2, the front and rear map lights will flash two times quickly.

NOTE: If the MPCS connector is disconnected for too short or too long of a time, or the ignition switch is turned OFF, the system will return to Test Mode 1.

12. In the table below is a list of circuits that can be checked in Test Mode 2. Operate the switch that is most closely related to the problem. If the circuit is OK, the map lights will blink once. If the circuit is faulty, there will be no indication.

MICU

Item
Driver's door switch (OPEN)
Front passenger's door switch (OPEN)
Left rear door switch (OPEN)
Right rear door switch (OPEN)
Trunk lid latch switch (OPEN)
Front passenger's door lock knob switch (UNLOCK)*
Left rear door lock knob switch (UNLOCK)
Right rear door lock knob switch (UNLOCK)*
Audio-HVAC display module security ground (disconnected)
Driver's seat belt switch (unbuckled)
Brake pedal position switch (ON; brake pedal pressed)
Passenger's door lock switch (LOCK/UNLOCK)

* The front passenger's and door lock knob switches must be in the locked position when beginning the test.

RELAY CONTROL MODULE

Item
Windshield wiper switch (AUTO STOP/PARK)
Hood switch (open)
A/C pressure switch/thermal protector (A/C ON)

COMBINATION SWITCH CONTROL UNIT

Item
Turn signal switch (LEFT)
Turn signal switch (RIGHT)
Combination light switch (ON; each position)
Dimmer switch (ON)
Passing switch (ON)
Windshield wiper switch (ON)
Intermittent wiper dwell timer
Windshield washer switch (ON)

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Multiplex Integrated Control System (MICS)

Troubleshooting - B-CAN System Diagnosis Test Mode 1 (cont'd)

POWER WINDOW MASTER SWITCH (DOOR MULTIPLEX CONTROL UNIT)

Item
Power window master switch (Driver's window UP)
Power window master switch (Driver's window DOWN)
Power window master switch (Driver's window AUTO UP)
Power window master switch (Driver's window AUTO DOWN)
Power window master switch (Front passenger's window UP)
Power window master switch (Front passenger's window DOWN)
Power window master switch (Left rear window UP)
Power window master switch (Left rear window DOWN)
Power window master switch (Right rear window UP)
Power window master switch (Right rear window DOWN)
Driver's door key cylinder switch* (LOCK)
Driver's door key cylinder switch* (UNLOCK)
Driver's door lock switch (LOCK)
Driver's door lock switch (UNLOCK)
Driver's door lock knob switch (LOCK)
Driver's door lock knob switch (UNLOCK)
Driver's position memory switches (1, 2, memo)
Passenger's power window switch
Passenger's power window switch (UP)
Passenger's power window switch (DOWN)
Passenger's power window switch (AUTO UP)
Passenger's power window switch (AUTO DOWN)

* A second key is necessary to check the key cylinder inputs.

Be sure to rotate the key cylinder switch two times to each position (lock and lock, unlock and unlock) to ensure the door lock knob switch is in the appropriate position.

GAUGE CONTROL MODULE

Item
Parking brake switch (ON; parking brake applied)
Cruise control main SET/RESUME/CANCEL switch (ON; switch pressed)
Transmission range switch (P, R, N, D)
Washer fluid level switch (fluid removed) (Canada)
Brake fluid level switch (fluid removed)
Illumination control switches (+, -, MAX)
MID switches (Select/Reset, < INFO, INFO >)

POWER SEAT CONTROL UNIT

Item
Power seat slide switch (Forward, Backward)
Power seat front up-down switch (UP, Down)
Power seat rear up-down switch (UP, Down)
Power seat recline switch (Forward, Recline)

POWER MIRROR CONTROL UNIT

Item
Mirror select switch (Left, Center, Right)
Mirror switch (Left, Right, Up, Down)

Does the map lights indicate proper switch operation?

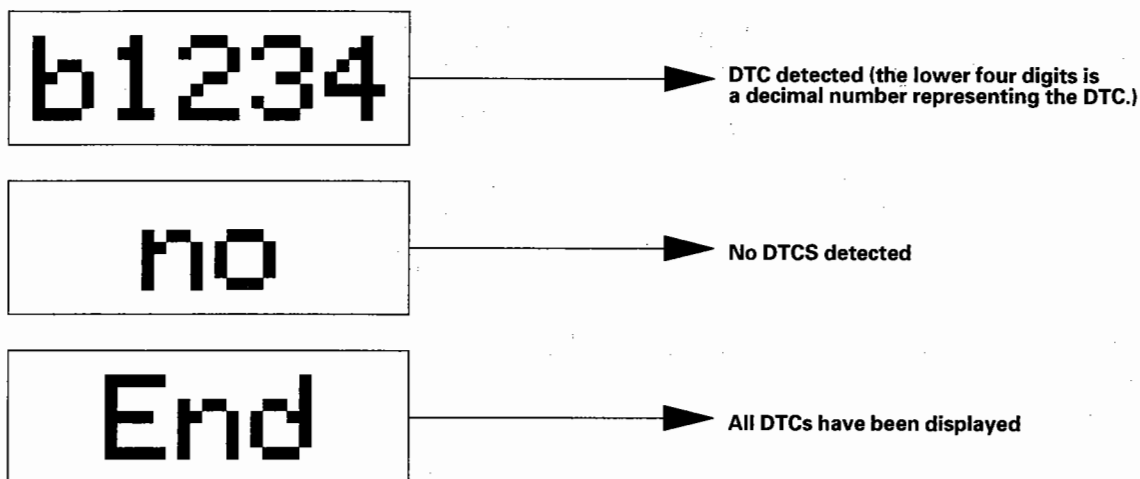
YES — Go to function and input test for the system related to the failure. ■

NO — Repair the open, short, or replace the faulty switch. ■



Gauge Control Module DTC Display

While in Test Mode 1, the DTCs which have been detected and stored individually by various B-CAN (Body-controller Area Network) units, will be shown one by one on the multi-information display when the communication between the Multiplex Integrated Control Unit (MICU) and the gauge control module is normal. To scroll through the DTCs, press the select/reset switch beside the gauge control module.



The unit that has been stored the code can be identified by the number shown on the multi-information display.

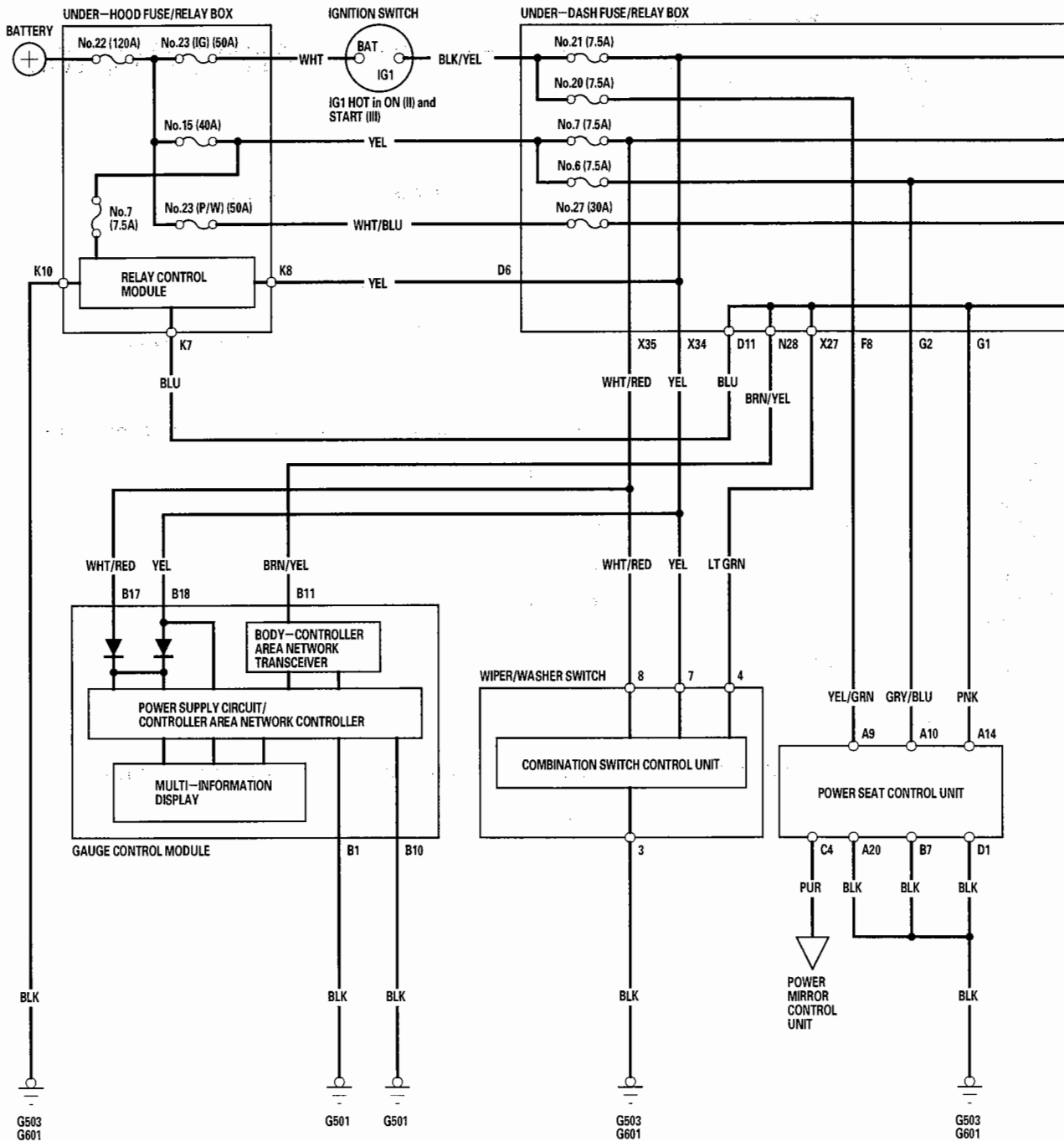
MICU	10
Relay control module	11
Door multiplex control unit	30
Gauge control module	50
Climate control unit	51
Display panel control unit	52
Combination switch control unit	70
HandsFreeLink control unit	94
Power seat control unit	95

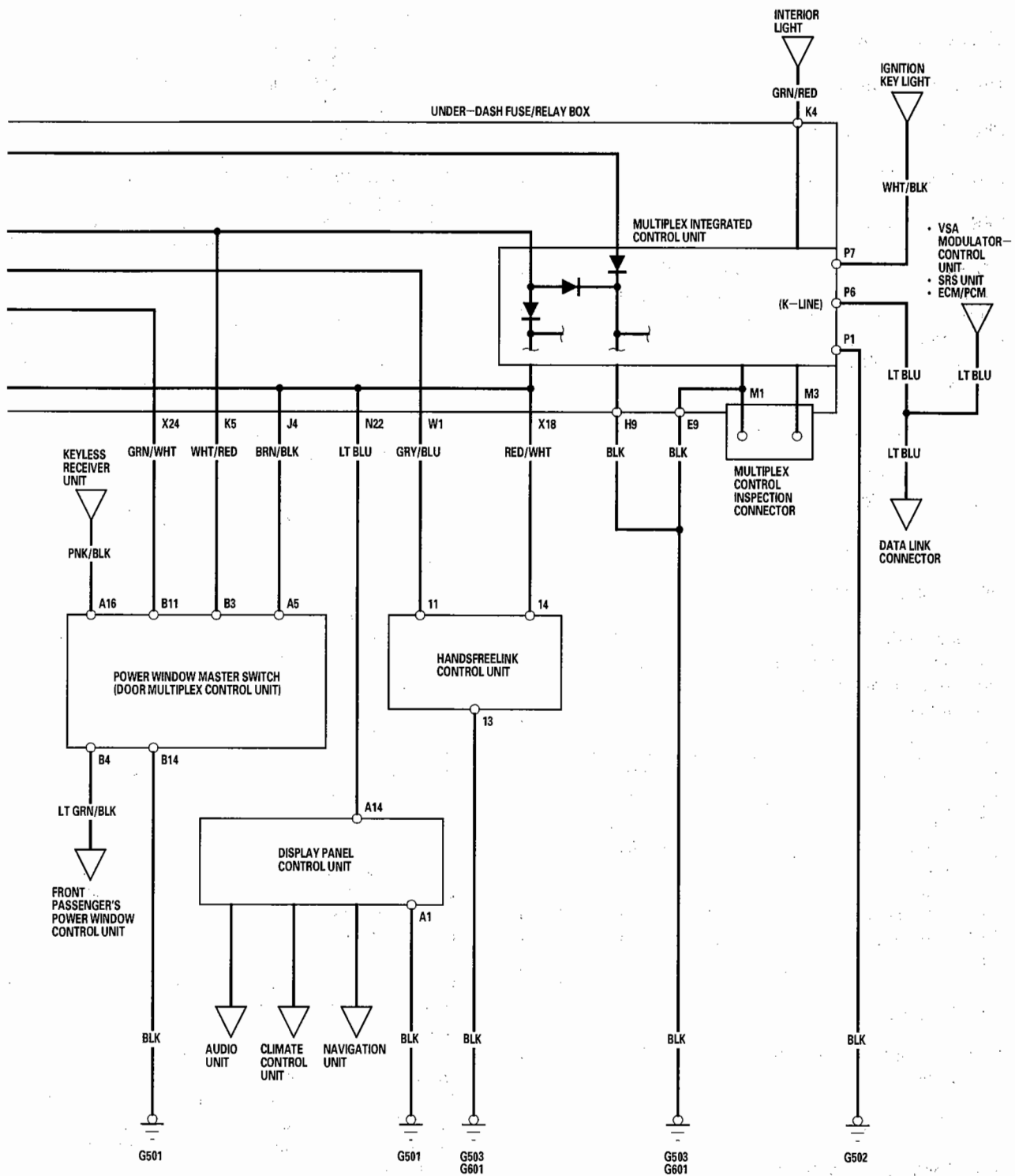
How to clear the DTC

While in Test Mode 1, press and hold down the SELECT/RESET switch button for more than 13 seconds.

Multiplex Integrated Control System (MICS)

Circuit Diagram





Multiplex Integrated Control System (MICS)

DTC Troubleshooting

DTC B1000: Communication Bus Line Error

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

Is DTC B1000 indicated?

YES—Go to step 4.

NO—Intermittent failure. The communication bus line is OK at this time. Check for loose or poor connections, or worn/shorted wires. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Are DTC B1005, B1006, B1007, B1008, B1010, and B1011 indicated?

YES—Go to step 5.

NO—Replace the MICU. ■

5. Disconnect the appropriate connector at each control unit in the table one at a time. Clear the DTC, then recheck for DTCs after each unit is disconnected.

Control Unit	Appropriate Connector
Gauge Control Module	Connector B (18P)
Relay Control Module	Connector I (10P)
Door Multiplex Control Unit	Power window master switch connector A (22P)
Combination switch Control Unit	Connector (8P)
Power Seat Control Unit	Connector A (20P)
Display Panel Control Unit	Connector A (14P)
HandsFreeLink Control Unit	Connector (22P)

Is DTC B1000 indicated with each individual unit disconnected?

YES—Go to step 6.

NO—Replace the control unit that was disconnected and B1000 did not reset. ■

6. Disconnect all of the appropriate connectors for each of the units in the table.

Control Unit	Appropriate Connector
Gauge Control Module	Connector B (18P)
Relay Control Module	Connector K (10P)
Door Multiplex Control Unit	Power window master switch connector A (22P)
Combination Switch Control Unit	Connector (8P)
Power Seat Control Unit	Connector A (20P)
Display Panel Control Unit	Connector A (14P)
HandsFreeLink Control Unit	Connector (22P)

7. Disconnect under-dash fuse/relay box connectors X (39P), N (45P), J (30P), G (8P), D (17P).

8. Check for continuity between each of the under-dash fuse/relay box terminals listed in the table below and body ground.

Connected Control Unit	Under-dash fuse/relay box terminal
Gauge Control Module	N28
Relay Control Module	D11
Door Multiplex Control Unit	J4
Combination Switch Control Unit	X27
Power Seat Control Unit	G1
Display Panel Control Unit	N22
HandsFreeLink Control Unit	X18

Is there continuity?

YES—Repair the short in the wire between the under-dash fuse/relay box and the connected control unit. ■

NO—Go to step 9.

9. Check for voltage between each of the under-dash fuse/relay box terminals listed in the table above and body ground.

Is there 1 V or less?

YES—Replace the under-dash fuse/relay box. ■

NO—Repair the short in the wire between the under-dash fuse/relay box and the connected control unit. ■



DTC B1050: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1050 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at relay control module connector K (10P), and at under-dash fuse/relay box connector D (17P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1050 is indicated, replace the relay control module. ■

DTC B1100: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1100 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at door multiplex connector A (22P), and at under-dash fuse/relay box connector J (30P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1100 is indicated, replace the door multiplex control unit. ■

Multiplex Integrated Control System (MICS)

DTC Troubleshooting (cont'd)

DTC B1150: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1150 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at gauge control module connector B (18P), and at under-dash fuse/relay box connector N (45P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1150 is indicated, replace the gauge control module. ■

DTC B1250: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1250 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at combination switch control unit connector (8P), and at under-dash fuse/relay box connector X (39P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1250 is indicated, replace the combination switch control unit. ■



DTC B1700: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1700 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at display panel control unit connector A (14P), and at under-dash fuse/relay box connector N (45P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1700 is indicated, replace the display panel control unit. ■

DTC B1750: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1750 indicated?

YES—Go to step 4.

NO—Intermittent failure, the system is OK at this time. Check for loose or poor connections at HandsFreeLink control unit connector (22P), and at under-dash fuse/relay box connector X (39P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1750 is indicated, replace the HandsFreeLink control unit. ■

Multiplex Integrated Control System (MICS)

DTC Troubleshooting (cont'd)

DTC B1800: Communication Bus Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1800 indicated?

YES—Go to step 4.

NO—Intermittent failure; the system is OK at this time. Check for loose or poor connections at power seat control unit connector A (22P), and at under-dash fuse/relay box connector G (6P). ■

4. Check for DTCs with the HDS.

Is DTC B1000 indicated?

YES—Troubleshoot DTC B1000. ■

NO—If the B1800 is indicated, replace the power seat control unit. ■



DTC B1001: Multiplex Integrated Control Unit (MICU) Internal Error (CPU Error)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the door lock (LOCK/UNLOCK).
4. Check for DTCs with the HDS.

Is DTC B1001 indicated?

YES—Faulty MICU; replace the under-dash fuse/relay box. ■

NO—Intermittent failure, the MICU is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

DTC B1002: Multiplex Integrated Control Unit (MICU) Internal Error (EEPROM Error)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the door lock (LOCK/UNLOCK).
4. Check for DTCs with the HDS.

Is DTC B1002 indicated?

YES—Faulty MICU; replace the under-dash fuse/relay box. ■

NO—Intermittent failure, the MICU is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

Multiplex Integrated Control System (MICS)

DTC Troubleshooting (cont'd)

DTC B1102: Door Multiplex Control Unit Internal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the power window (UP/DOWN).
4. Check for DTCs with the HDS.

Is DTC B1102 indicated?

YES—Faulty door multiplex control unit; replace the power window master switch. ■

NO—Intermittent failure, the door multiplex control unit is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■



DTC B1005: MICU Lost Communication with Relay Control Module

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1005 indicated?

YES—Go to step 4.

NO—Intermittent failure, the relay control module is OK at this time. Check for loose or poor connection at relay control module connector K (10P), and at under-dash fuse/relay box connector D (17P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Is DTC B1158 indicated?

YES—Go to Relay Control Module Input Test (see page 22-137). ■

NO—Check for an open in the communication circuit between the MICU and the relay control module. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open. ■

DTC B1006: MICU Lost Communication with Door Multiplex Control Unit (Door Lock Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1006 indicated?

YES—Go to step 4.

NO—Intermittent failure, the door multiplex control unit is OK at this time. Check for loose or poor connection at door multiplex connector A (22P), and at under-dash fuse/relay box connector J (30P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Are DTC B1160 and B1058 indicated?

YES—Go to Door Multiplex Control Unit Input Test (see page 22-135).

NO—Check for an open in the communication circuit between the MICU and the door multiplex control unit. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open. ■

Multiplex Integrated Control System (MICS)

DTC Troubleshooting (cont'd)

DTC B1007: MICU Lost Communication with the Combination Switch Control Unit (Headlight Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1007 indicated?

YES—Go to step 4.

NO—Intermittent failure, the MICU is OK at this time. Check for loose or poor connection at combination switch control unit connector (8P), and at under-dash fuse/relay box connector X (39P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Are DTC B1155 and B1062 indicated?

YES—Go to the Combination Switch Control Unit Input Test (see page 22-136).

NO—Check for an open in the communication circuit between the MICU and the combination switch control unit. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open. ■

DTC B1008: MICU Lost Communication with the Gauge Control Module (A/T Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1008 indicated?

YES—Go to step 4.

NO—Intermittent failure, the gauge control module is OK at this time. Check for loose or poor connection at gauge control module connector B (18P), and at under-dash fuse/relay box connector N (45P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Is DTC B1061 or B1808 indicated?

YES—Go to the Gauge Control Module Input Test (see page 22-134).

NO—Check for an open in the communication circuit between the MICU and the gauge control module. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open. ■



DTC B1010: MICU Lost Communication with the Door Multiplex Control Unit (Panic Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1010 indicated?

YES—Go to step 4.

NO—Intermittent failure, the door multiplex control unit is OK at this time. Check for loose or poor connection at door multiplex connector A (22P), and at under-dash fuse/relay box connector J (30P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Is DTC B1059 indicated?

YES—Go to the Door Multiplex Control Unit Input Test (see page 22-135).

NO—Check for an open in the communication circuit between the MICU and the door multiplex control unit. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open. ■

DTC B1011: MICU Lost Communication (VSP/NE Message) with the Gauge Control Module

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1011 indicated?

YES—Go to step 4.

NO—Intermittent failure, the gauge control module is OK at this time. Check for loose or poor connection at gauge control module connector B (18P), and at under-dash fuse/relay box connector N (45P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs of the relay control module, display panel control unit and power seat control unit with the HDS.

Are DTC B1060, B1706 and B1805 indicated?

YES—Go to the Gauge Control Module Input Test (see page 22-134).

NO—Check for an open, or a short to power or ground in the communication circuit between the MICU and the gauge control module. If the circuit is OK, replace the MICU. If the circuit is bad, repair the open, or short to power or ground. ■

Multiplex Integrated Control System (MICS)

DTC Troubleshooting (cont'd)

DTC B1080: Power Supply Circuit (IG1 Line) Input Error for Relay Control Module and MICU

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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

Is DTC B1080 indicated?

YES—Go to step 4.

NO—Intermittent failure, check for loose or poor connections at the relay control module connector K (10P) and under-dash fuse/relay box connector D (17P). If the connections are OK, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check the MICU IG1 power supply No. 21 (7.5A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

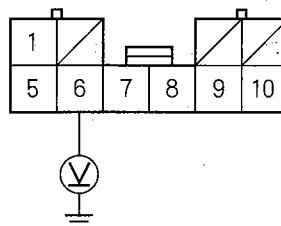
YES—Go to step 5.

NO—Replace the fuse and recheck for DTCs. ■

5. Turn the ignition switch OFF.
6. Disconnect the under-hood fuse/relay box connector K (10P).
7. Turn the ignition switch ON (II).

8. Measure voltage between the No. 6 terminal of the under-hood fuse/relay box connector K (10P) and body ground.

**UNDER-HOOD FUSE/RELAY BOX
CONNECTOR K (10P)**



Wire side of female terminals

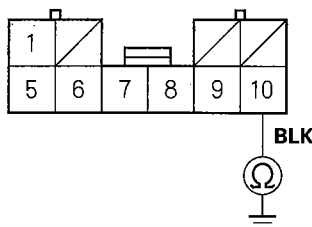
Is there battery voltage?

YES—Go to step 9.

NO—Open in the wire between the under-hood fuse/relay box and the under-dash fuse/relay box. Repair the wire and recheck for DTCs. ■

9. Check for continuity between the No. 10 terminal of the under-hood fuse/relay box connector K (10P) and body ground.

**UNDER-HOOD FUSE/RELAY BOX
CONNECTOR K (10P)**



Wire side of female terminals

Is there continuity?

YES—Faulty relay control module; replace the under-hood fuse/relay box. ■

NO—Open in the wire between the under-hood fuse/relay box and G503, G601. If the wire is OK, inspect the G503 and G601. ■



DTC B1255: Combination Switch Control Unit Lost Communication With MICU

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1255 indicated?

YES—Go to step 4.

NO—Intermittent failure, MICU is OK at this time. Check for loose or poor connection at combination switch control unit connector (8P), and at under-dash fuse/relay box connector X (39P). If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

4. Check for DTCs with the HDS.

Is DTC B1055, B1157 or B1806 indicated?

YES—Go to MICU Input Test (see page 22-130). ■

NO—Replace the combination switch control unit. ■

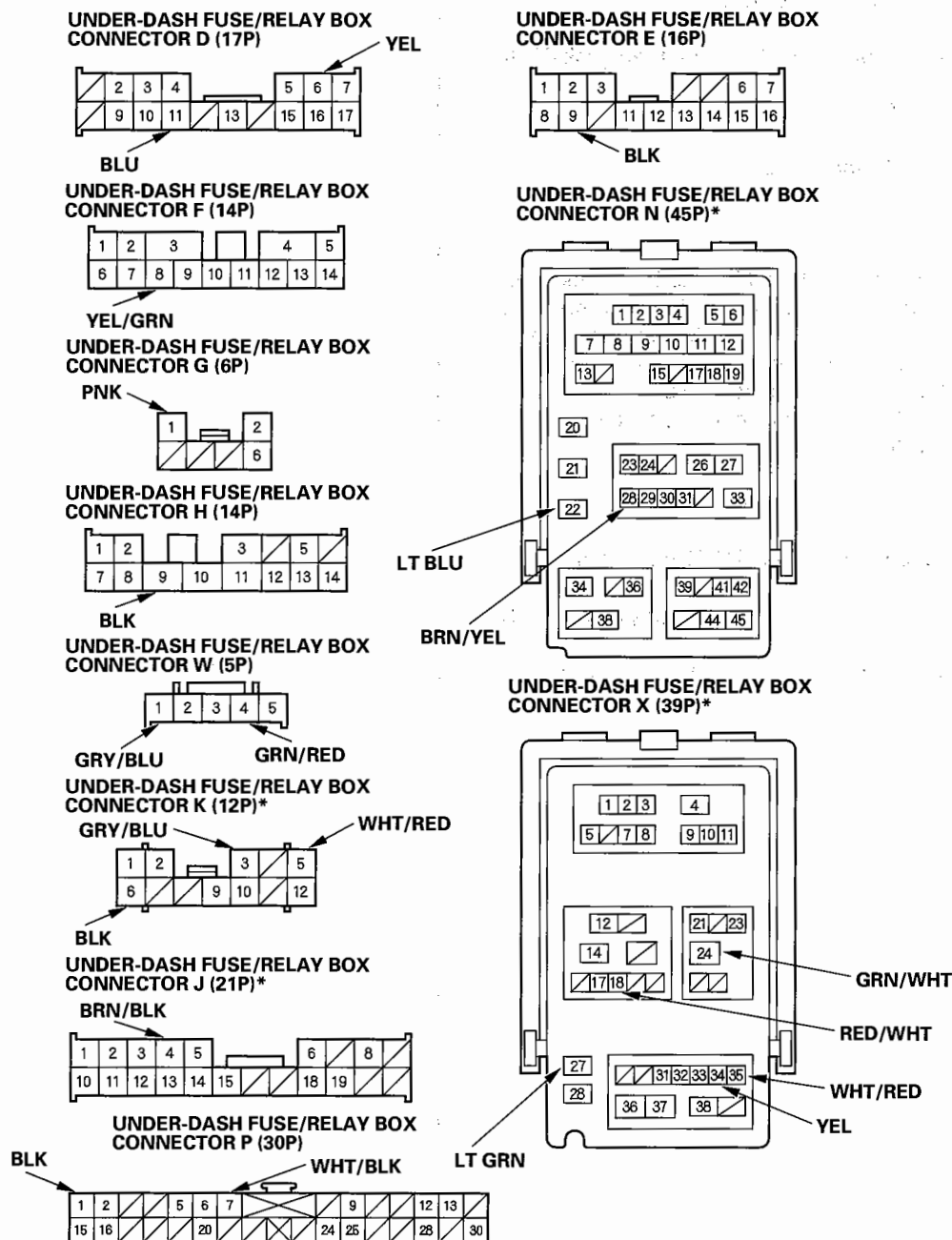
Multiplex Integrated Control System (MICS)

Multiplex Integrated Control Unit Input Test

NOTE: Make sure the ignition switch is OFF before troubleshooting the under-dash fuse/relay box connectors.

1. Remove the left side kick panel (see page 20-62).
2. Disconnect the under-dash fuse/relay box connectors D, E, F, G, H, J, K, M, N, P, W and X.

NOTE: All connectors are wire side of female terminals.



* Connector view shown rotated 180° from actual position in the under-dash fuse/relay box.



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, go to step 4.

4. With the connectors still disconnected from the under-hood fuse/relay box, make these input tests at the connector(s).

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 5.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
E9 H9	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • An open in the wire
P1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G502) • An open in the wire
D11	BLU	Under all conditions	Check for continuity between terminal D11 and relay control module connector K (10P) No. 7 terminal: There should be continuity.	• An open in the wire
		Relay control module connector K (10P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground
G1	PNK	Under all conditions	Check for continuity between terminal G1 and power seat control unit connector A (20P) No. 14 terminal: There should be continuity	• An open in the wire
		Power seat control unit connector A (20P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground
J4	BRN/BLK	Under all conditions	Check for continuity between terminal J4 and power window master switch connector A (22P) No. 5 terminal: There should be continuity.	• An open in the wire
		Power window master switch (Door multiplex control unit) connector (22P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground

(cont'd)

Multiplex Integrated Control System (MICS)

Multiplex Integrated Control Unit Input Test (cont'd)

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
N22	LT BLU	Under all conditions	Check for continuity between terminal N22 and center panel control unit connector A (14P) No. 14 terminal: There should be continuity.	• An open in the wire
		Display panel control unit connector A (14P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground
N28	BRN/YEL	Under all conditions	Check for continuity between terminal N28 and gauge control module connector B (18P) No. 11 terminal: There should be continuity.	• An open in the wire
		Gauge control module connector B (18P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground
X18	RED/WHT	Under all conditions	Check for continuity between terminal X18 and HandsFreeLink control unit connector (22P) No. 14 terminal: There should be continuity.	• An open in the wire
		HandsFreeLink control unit connector (22P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground
X27	LT GRN	Under all conditions	Check for continuity between terminal X27 and wiper/washer connector (8P) No. 4 terminal: There should be continuity.	• An open in the wire
		Wiper/washer switch connector (8P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground



5. Reconnect the connectors to the under-dash fuse/relay box, and make sure these input tests at the appropriate connectors on the under-dash fuse/relay box.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, the multiplex integrated control unit must be faulty, replace the under-dash fuse/relay box assembly.

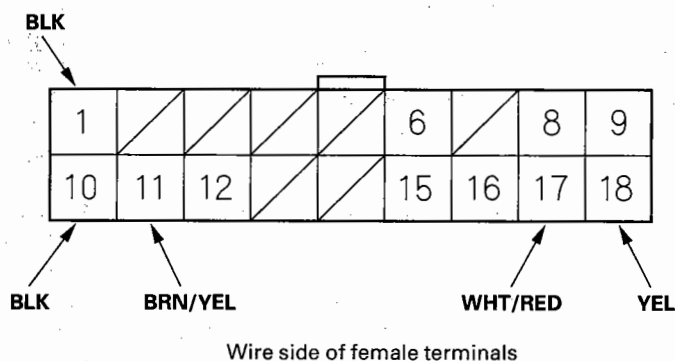
Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
P7	WHT/BLK	Under all conditions	Attach to ground: The ignition key light should come on.	• Blown No. 6 (7.5A) fuse in the under-dash fuse/relay box • Faulty LED • An open in the wire
K4	GRN/RED	Interior light switch in the middle position, all doors closed	Attach to ground: The individual map lights should come on.	• Blown No. 6 (7.5A) fuse in the under-dash fuse/relay box • Faulty map light • An open in the wire
D6 X34	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
K5 X35	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
F8	YEL/GRN	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 20 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
X24	GRN/WHT	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 27 (30A) fuse in the under-dash fuse/relay box • An open in the wire

Multiplex Integrated Control System (MICS)

Gauge Control Module Input Test

1. Remove the gauge control module (see page 22-265).
2. Disconnect the 18P connector from the gauge control module.
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, go to step 4.

GAUGE CONTROL MODULE CONNECTOR B (18P)



4. With the connector still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, replace the gauge control module.

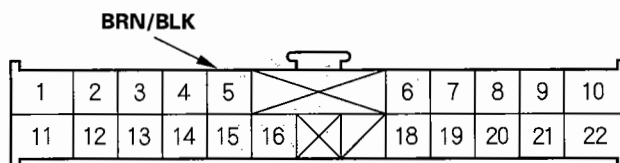
Cavity	Wire	Test Condition	Test: Desired result	Possible cause if result is not obtained
B17	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
B18	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
B1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
B10				
B11	BRN/YEL	Under all conditions	Check for continuity between the B11 terminal and under-dash fuse/relay box connector N (45P) No. 28 terminal: There should be continuity.	• An open in the wire

Door Multiplex Control Unit Input Test

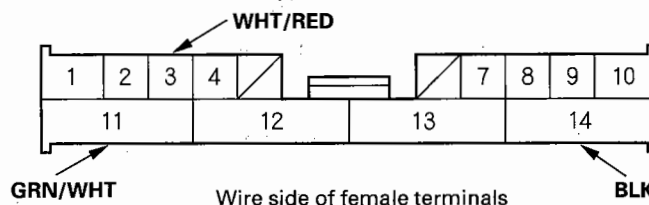
NOTE: Make sure the ignition switch is OFF before disconnecting the driver's door switch panel.

1. Remove the driver's door switch panel (see page 20-7).
2. Disconnect the connectors from the power window master switch.

DOOR MULTIPLEX CONTROL UNIT CONNECTOR A (22P)



DOOR MULTIPLEX CONTROL UNIT CONNECTOR B (14P)



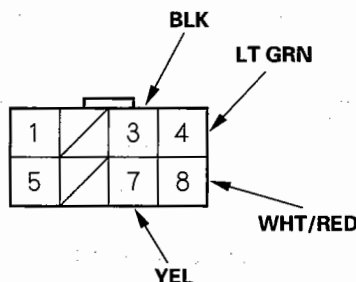
3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 4.
4. With the door multiplex control unit still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the door multiplex control unit must be faulty, replace the power window master switch.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
B3	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
B11	GRN/WHT	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 27 (30A) fuse in the under-dash fuse/relay box • An open in the wire
B14	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
A5	BRN/BLK	Under all conditions	Check for continuity between A5 terminal and the under-dash fuse/relay box connector J (21P) No. 4 terminal: There should be continuity.	• An open in the wire

Multiplex Integrated Control System (MICS)

Combination Switch Control Unit Input Test

1. Remove the steering column covers (see page 17-24).
2. Disconnect the 8P connector from the wiper/washer switch.



Wire side of female terminals

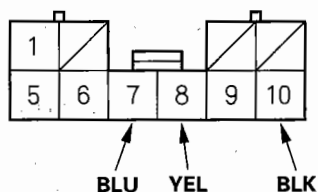
3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 4.
4. With the control unit still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the combination switch control unit must be faulty, replace the wiper/washer switch.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
3	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • An open in the wire
8	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
7	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
4	LT GRN	Under all conditions	Check for continuity between No. 4 terminal and the under-dash fuse/relay box connector X (39P) No. 27 terminal: There should be continuity.	• An open in the wire

Relay Control Module Input Test

1. Remove the under-hood fuse/relay box under cover.
2. Disconnect the under-hood fuse/relay box connector K (10P).

**UNDER-HOOD FUSE/RELAY BOX
CONNECTOR K (10P)**



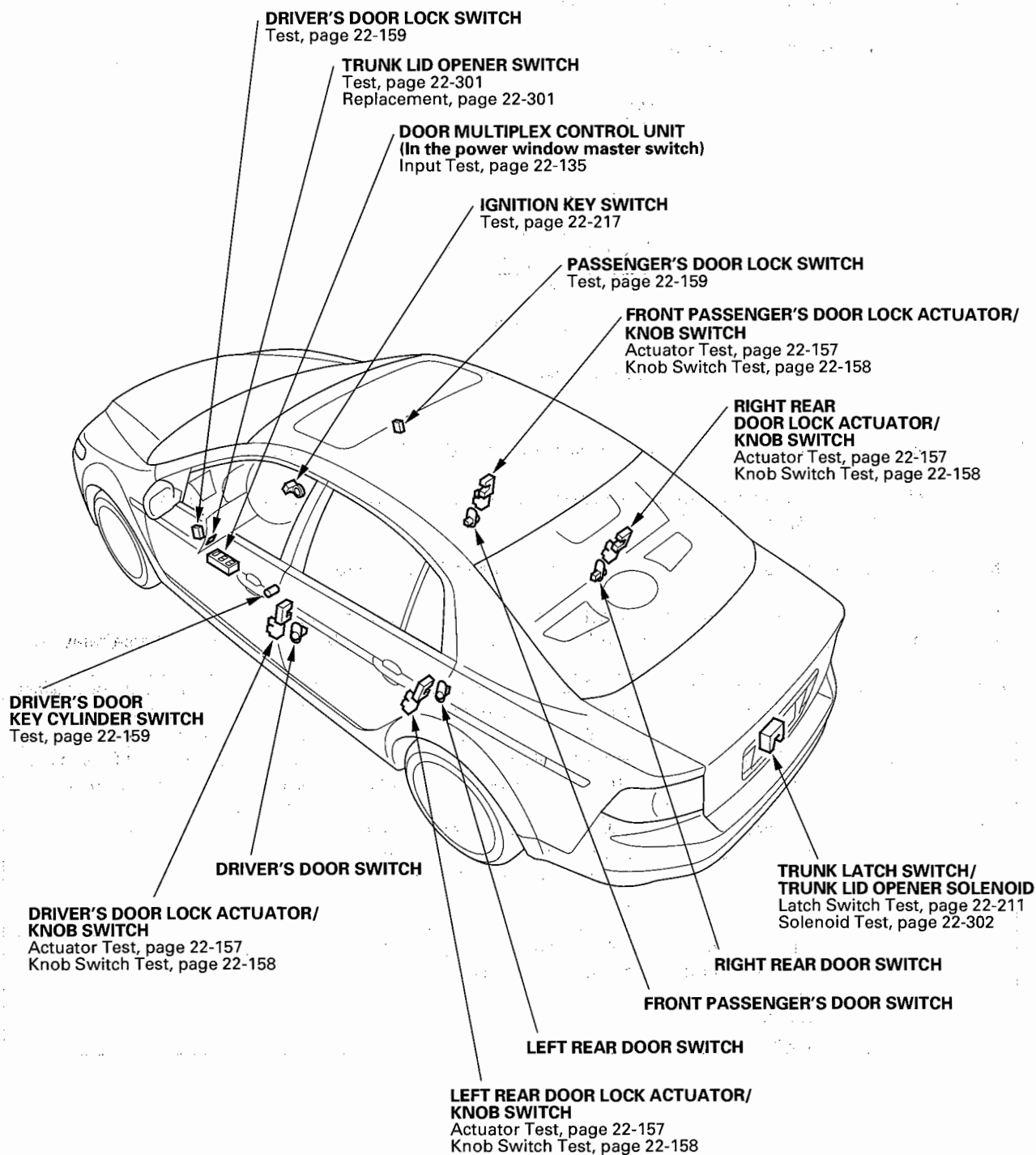
Wire side of female terminals

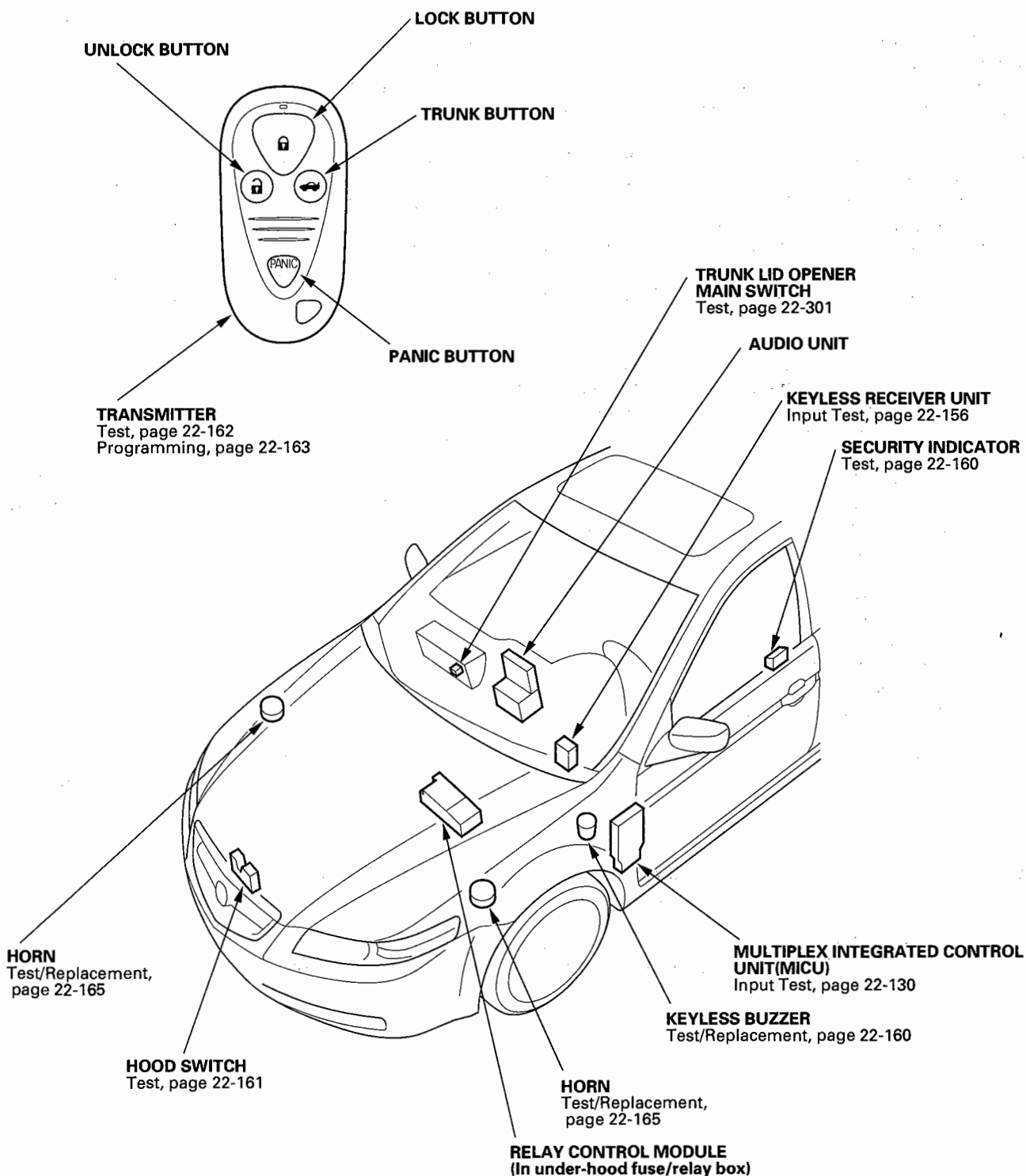
3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 4.
4. With the connector still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the relay control module must be faulty, replace the under-hood fuse/relay box.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
K10	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • An open in the wire
K8	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
K7	BLU	Under all conditions	Check for continuity between K7 terminal and the under-dash fuse/relay box connector D (17P) No. 11 terminal: There should be continuity.	• An open in the wire
		Under-dash fuse/relay box connector D (17P) disconnected	Check for continuity to ground: There should be no continuity.	• Short to ground

Keyless Entry/Security Alarm System

Component Location Index





Keyless Entry/Security Alarm System

System Description

Security Alarm System

The security alarm system is integrated with the MICS, and arms automatically after the doors, hood, and trunk are closed and locked. For the system to arm, the ignition switch must be off, the key must be removed, and the MICU must receive signals that the doors, hood, trunk are closed and locked. The alarm can be disarmed at any time by unlocking the driver's door with the key or pressing the UNLOCK button on the remote transmitter.

When everything is closed and locked, the only inputs that are grounded, and have 0 volts, are the driver's door lock knob switch (LOCK position), and the audio unit. In other words, all of the other switches are open, and have about 5 V or more volts, including the key cylinder switches. The security indicator at the driver's door begins to flash immediately after the doors, trunk, and hood are closed and locked, and shortly later, the security system arms and the security indicator flashes on for a shorter amount of time than before. If the security indicator does not flash, the system is not arming. If the vehicle is completely closed and locked, a beep sounds and parking lights flash to confirm the security alarm system is armed if the LOCK button is pressed a second time within 5 seconds, and the keyless lock acknowledgment is turned on.

If one of the switches is misadjusted or shorted internally (0 volts), or there is a short in the circuit (0 volts), the security system will not arm. A switch that is slightly misadjusted can cause the alarm to sound for no apparent reason. In this case, a significant change in outside air temperature, the vibration of a passing vehicle, or something bumping into the vehicle could cause the alarm to sound. There is no glass breakage or motion detector feature.

If anything is opened or improperly unlocked after the system is armed, the control unit receives a ground signal from that switch, the 10 volts reference drops to 0 volts, and the system sounds the alarm. If the audio unit is disconnected, the input loses its ground, and the input voltage goes to 10 volts, and the system sounds the alarm.

The system sounds the alarm when any of following occur while the security system is armed:

- A door or the trunk is forced open
- A door is unlocked without using the key or the remote transmitter
- The hood is opened
- The audio unit is disconnected
- The remote panic is operated
- The ignition switch is turned ON (II)

When the system sounds the alarm, the horns sound and the exterior lights flash for 2 minutes. The alarm can be stopped at any time by unlocking the driver's door with the key or by pressing any button on the remote transmitter.

Panic Mode

The panic mode sounds the alarm in order to attract attention. When the PANIC button on the remote transmitter is pressed and held for about 2 seconds, the alarm sounds and the exterior lights flash for about 20 seconds.

The panic mode can be cancelled at anytime by pressing any button on the remote transmitter or by turning the ignition switch ON (II). The panic mode will not function if the ignition switch is ON (II).



Keyless Entry System

The keyless entry system is integrated with the MICS. The multiplex integrated control unit (MICU) receives LOCK, UNLOCK and PANIC signals from the keyless receiver unit. The remote transmitters 1 and 2 (Identified on the back of the remote) are linked to the DPMS, the climate control settings, the custom memory settings (in the MID), and the illumination settings. Depending on which remote transmitter unlocks the vehicle, these settings are chosen.

Some functions of the security, keyless entry and power door locks can be customized using the MID keyless memory setting. They include:

- **AUTO DOOR LOCK:** Door locking can be turned off, or turned on when shifting from Park (A/T) or at a speed above 10 mph.
- **AUTO DOOR UNLOCK:** Door unlocking can be turned off, or turned on when shifting to Park (A/T) or turning the ignition switch OFF.
- **WHENEVER UNLOCKING:** Door unlocking can be set to unlock all doors or only the driver's door.
- **KEYLESS DOOR LOCK ACKNOWLEDGEMENT:** The beep can be turned on or off when pressing the LOCK button a second time on the remote transmitter.
- **SECURITY RELOCK TIMER:** Select the time (30, 60, or 90 sec.) that the doors relock if you unlock the doors with the remote transmitter, but do not open any of them.
- **HEADLIGHT AUTO OFF TIMER:** Select time (0, 15, 30, or 60 sec.) to turn the headlights off after removing the key from the ignition and closing the driver's door.
- **INTERIOR LIGHT DIMMING TIMER:** Select the dimming time (5, 15, or 30 sec.) of the interior lights after closing the door with the key removed from the ignition.

The remote transmitters can be linked and unlinked to the keyless memory settings by pressing the LOCK and UNLOCK buttons at the same time for about 1 second. The LED on the remote transmitter blinks once when linked, and twice when unlinked.

The keyless entry system allows you to lock and unlock the vehicle with the remote transmitter. When you press the LOCK button, all the doors lock (unless any one of the doors is not fully closed or the key is in the ignition switch). When you press the UNLOCK button first time, only the driver's door unlocks, if keyless memory setting "WHENEVER UNLOCKING" is set to Driver's Door. The other doors unlock when you press the UNLOCK button a second time. All the doors unlock when you press the UNLOCK button first time if keyless memory setting "WHENEVER UNLOCKING" is set to All Doors.

NOTE: The doors will not lock with the remote transmitter if a door is not fully closed, or if the key is in the ignition switch.

If the UNLOCK button is pressed, released, then pressed and held, the windows and the moonroof begin to open. The windows and the moonroof stop if the button is released. See power windows for more information and troubleshooting.

When the interior light switch is in the center position, it will come on when the UNLOCK button is pressed. If a door is not opened, the light will go off in about 30, 60, or 120 seconds (depending on the keyless memory setting "SECURITY RELOCK TIMER"), and the doors will relock. If the doors are locked with the remote transmitter within 30 seconds, the light will go off immediately.

Power Door Lock System

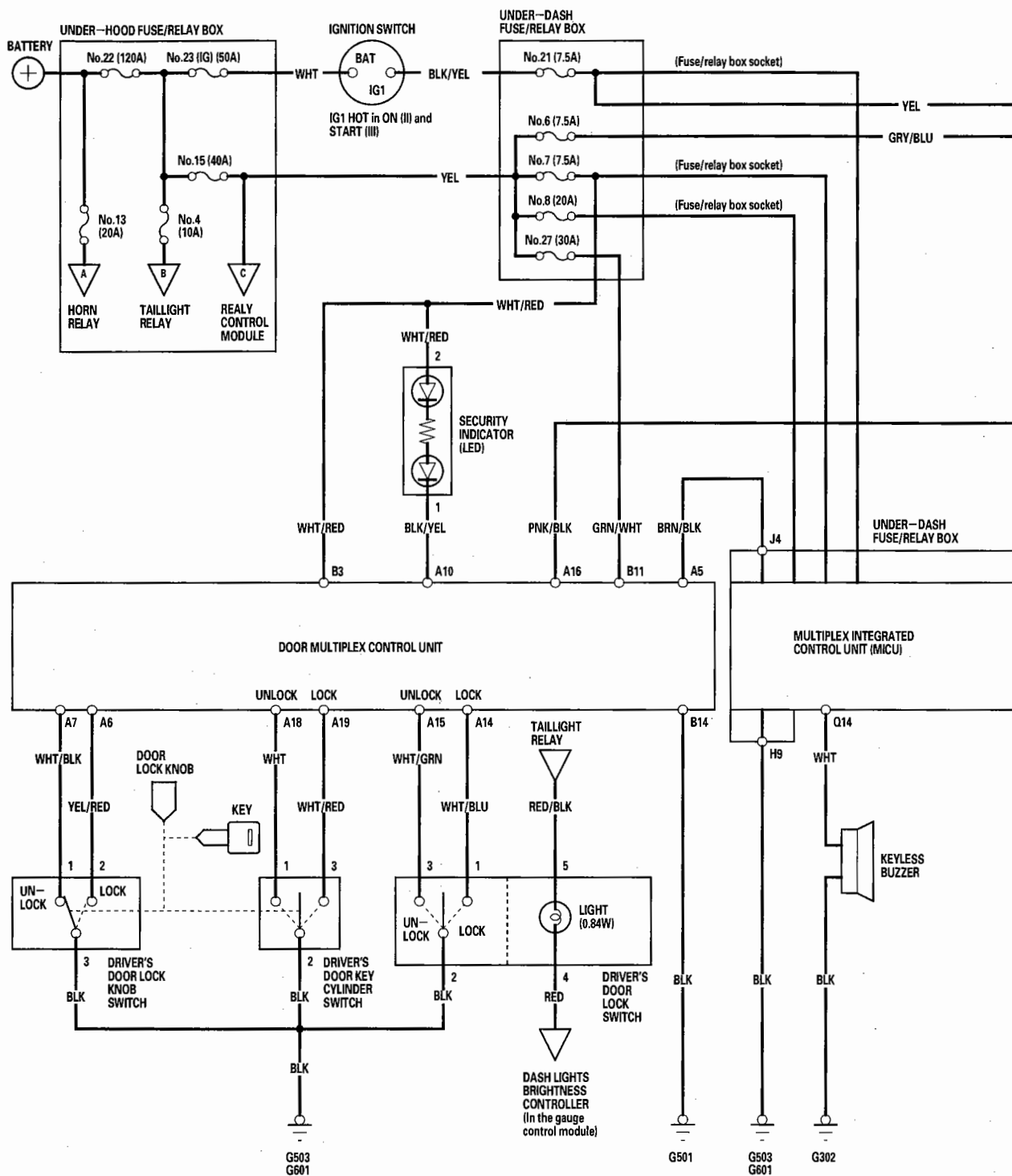
The power door lock system locks and unlocks all four doors with the driver's or passenger's master door lock switch. The doors can be locked and unlocked using the key in the driver's door key cylinder switch. If the key is turned counterclockwise, all the doors lock. If the key is turned clockwise once, the driver's door unlocks, and when the key is released, then turned again, the other doors unlock.

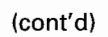
The doors can also be locked by pushing down on the lock knob on the driver's door. Pulling up on the lock knob only unlocks the driver's door. The lock knobs on the other doors only lock and unlock that door.

If the key is in the ignition, and a door is open, the doors will not lock using the master door lock switches and the door multiplex control unit will automatically unlock the doors if you push down on the driver's door lock knob.

Keyless Entry/Security Alarm System

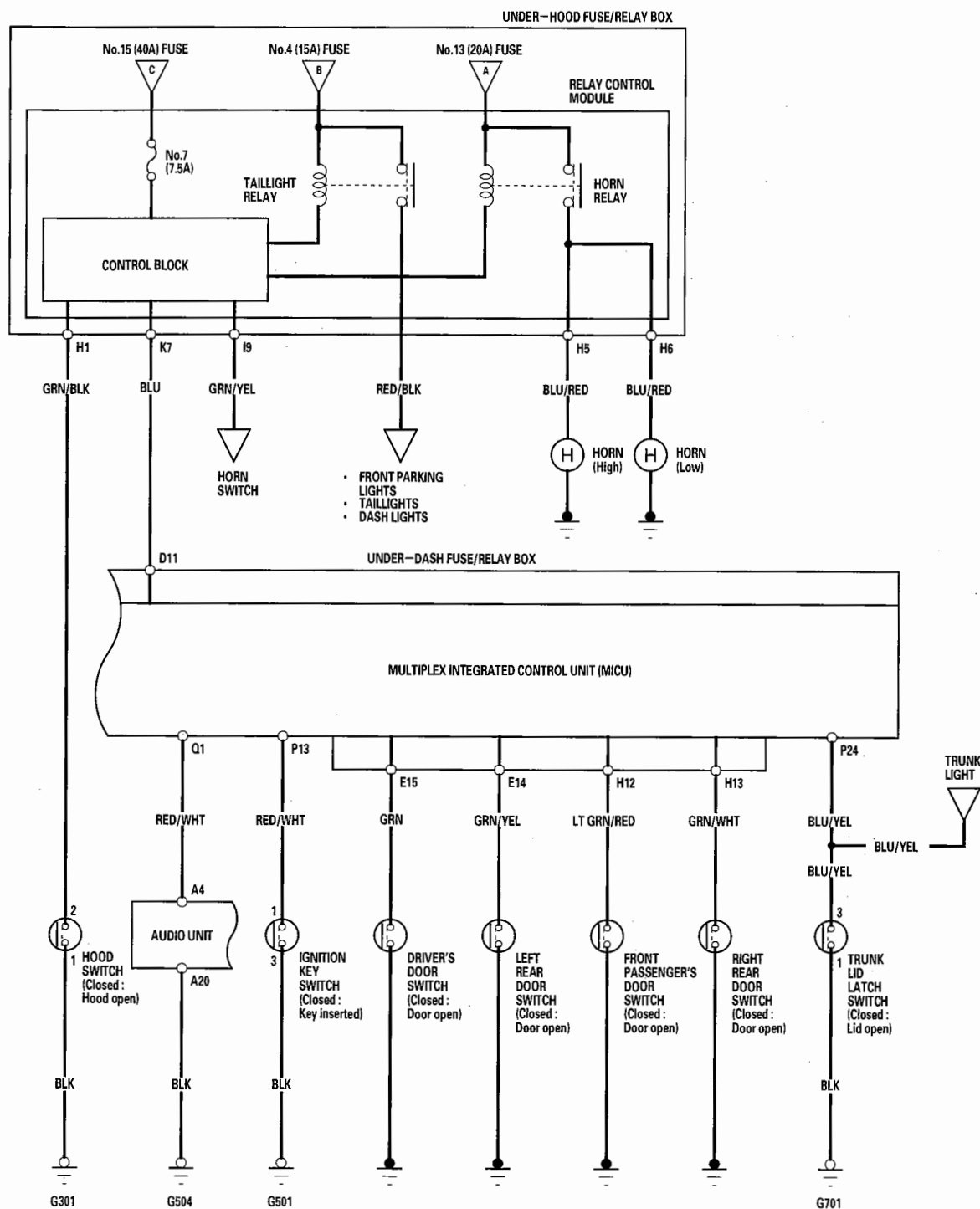
Circuit Diagram





Keyless Entry/Security Alarm System

Circuit Diagram (cont'd)





DTC Troubleshooting

DTC B1026: Passenger's Door Lock Switch Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the passenger's door lock switch several times.
4. Check for DTCs with the HDS.

Is DTC B1026 indicated?

YES—Go to step 5.

NO—Intermittent failure. The passenger's door lock system is OK at this time. Check for shorted wires. ■

5. With the passenger's door lock switch in the neutral position, select SECURITY from the HDS and enter the DATA LIST.
6. Check the ON/OFF information of the Front Passenger's Door Lock Sw. (LOCK) and Front Passenger's Door Lock Sw. (UNLOCK) in the DATA LIST.

Are both information indicators OFF?

YES—Go to step 7.

NO—Go to step 11.
7. Push the passenger's door lock switch in LOCK and UNLOCK positions, and check the ON/OFF information of the Front Passenger's Door Lock Sw. (LOCK) and Front Passenger's Door Lock Sw. (UNLOCK) in the DATA LIST.

Does the Front Passenger's Door Lock Sw. (LOCK) (Front Passenger's Door Lock Sw. (UNLOCK)) information indicate ON when the door lock switch is pushed in each switch position, and OFF when the door lock switch is released?

YES—Faulty MICU, replace it. ■

NO—Go to step 8.

8. Turn the ignition switch OFF.
9. Disconnect the passenger's door lock switch 5P connector and under-dash fuse/relay box connector P (30P).
10. Check for continuity between the No. 1 terminal and No. 3 terminal of the passenger's door lock switch.

Is there continuity?

YES—Repair a short in the PNK/BLK (LOCK) and the PNK/BLU (UNLOCK) wires. ■

NO—Faulty passenger's door lock switch. ■
11. Remove the passenger's door panel (see page 20-3).
12. Disconnect the 5P connector from the passenger's door lock switch.
13. Check the ON/OFF information of the Front Passenger's Door Lock Sw. (LOCK) and Front Passenger's Door Lock Sw. (UNLOCK) in the DATA LIST.

Are both information indicators OFF?

YES—Faulty passenger's door lock switch; replace it. ■

NO—Go to step 14.
14. Turn the ignition switch OFF.
15. Check for a short in the wire between the MICU and passenger's door lock switch using the keyless entry/security alarm control unit input test (see page 22-150).

Are the wire harnesses OK?

YES—Faulty MICU; replace it. ■

NO—A short in the wire, repair and recheck. ■

Keyless Entry/Security Alarm System

DTC Troubleshooting (cont'd)

DTC B1127: Driver's Door Key Cylinder Switch Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the driver's door key cylinder several times.
4. Check for DTCs with the HDS.

Is DTC B1127 indicated?

YES—Go to step 5.

NO—Intermittent failure. The driver's door key cylinder system is OK at this time. Check for shorted wires. ■

5. With the driver's door key cylinder in the neutral position, select SECURITY from the BODY ELECTRICAL SYSTEM SELECT MENU, and enter the DATA LIST.
6. Check the ON/OFF information of the Driver's Door Key Cylinder Switch (LOCK) and Driver's Door Key Cylinder Switch (UNLOCK) in the DATA LIST.

Are both information indicators OFF?

YES—Go to step 7.

NO—Go to step 11.

7. Turn the driver's door key cylinder to the LOCK and UNLOCK positions with the ignition key and check the ON/OFF information of the Driver's Door Key Cylinder Switch (LOCK) and Driver's Door Key Cylinder Switch (UNLOCK) in the DATA LIST.

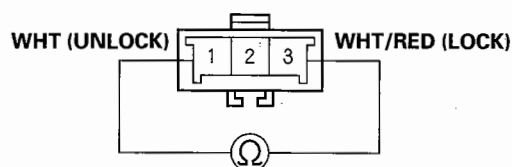
Is the Driver's Door Key Cylinder Switch (LOCK) (Driver's Door Key Cylinder Switch (UNLOCK)) information indicator ON when the key cylinder is in the LOCK (UNLOCK) position, and OFF when the key is returned to the neutral position?

YES—Faulty door multiplex control unit; replace the power window master switch. ■

NO—Go to step 8.

8. Turn the ignition switch OFF.
9. Disconnect the driver's door key cylinder switch 3P connector, and the power window master switch connector A (22P).
10. Check for continuity between the No. 3 (LOCK) terminal and the No. 1 (UNLOCK) terminal of the driver's door key cylinder switch 3P connector.

DRIVER'S DOOR KEY CYLINDER SWITCH 3P CONNECTOR



Terminal side of male terminals

Is there continuity?

YES—Repair an open in the WHT/RED (LOCK) or WHT (UNLOCK) wire. ■

NO—Faulty driver's door key cylinder switch. ■

11. Disconnect the driver's door key cylinder switch 3P connector.
12. Check the ON/OFF information of the Driver's Door Key Cylinder Switch (LOCK) and Driver's Door Key Cylinder Switch (UNLOCK) in the DATA LIST.

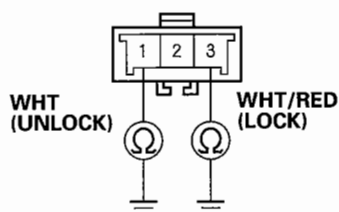
Are both information indicators OFF?

YES—Faulty driver's door key cylinder switch. ■

NO—Go to step 13.

13. Turn the ignition switch OFF.
14. Disconnect the driver's door key cylinder switch 3P connector.
15. Check for continuity between the No. 3 (LOCK) and No. 1 (UNLOCK) terminals of the driver's door key cylinder switch 3P connector and body ground.

**DRIVER'S DOOR KEY CYLINDER SWITCH
3P CONNECTOR**



Terminal side of male terminals

Is there continuity?

YES—Repair a short in the WHT/RED (LOCK) or WHT (UNLOCK) wire. ■

NO—Faulty door multiplex control unit; replace the power window master switch. ■

DTC B1128: Driver's Door Lock Switch Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the driver's door lock switch several times.
4. Check for DTCs with the HDS.

Is DTC B1128 indicated?

YES—Go to step 5.

NO—Intermittent failure. The driver's door lock switch system is OK at this time. Check for shorted wires. ■

5. With the driver's door lock switch in the neutral position, select SECURITY from the BODY ELECTRICAL SYSTEM SELECT MENU, and enter the DATA LIST.
6. Check the ON/OFF information of the Driver's Door Lock Switch (LOCK) and Driver's Door Lock Switch (UNLOCK) in the DATA LIST.

Are both information indicators OFF?

YES—Go to step 7.

NO—Check the door lock switch. If the driver's door lock switch is OK, faulty door multiplex control unit; replace the power window master switch. ■

7. Push the driver's door lock switch in LOCK and UNLOCK positions, and check the ON/OFF information of the Driver's Door Lock Switch (LOCK) and Driver's Door Lock Switch (UNLOCK) in the DATA LIST.

Does the Driver's Door Lock Switch (LOCK) (Driver's Door Lock Switch (UNLOCK)) information indicate ON when the door lock switch is pushed in the LOCK (UNLOCK) position, and OFF when the door lock switch is released?

YES—Faulty door multiplex control unit; replace the power window master switch. ■

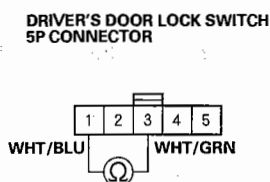
NO—Go to step 8.

(cont'd)

Keyless Entry/Security Alarm System

DTC Troubleshooting (cont'd)

8. Turn the ignition switch OFF.
9. Disconnect the driver's door lock switch 5P connector and power window master switch connector A (22P).
10. Check for continuity between the No. 1 terminal and the No. 3 terminal of the driver's door lock switch 5P connector.



Wire side of female terminals

Is there continuity?

YES—Repair short in the WHT/BLU (LOCK) and WHT/GRN (UNLOCK) wires. ■

NO—Faulty driver's door lock switch. ■

11. Remove the driver's door panel (see page 20-7).
 12. Disconnect the 5P connector from the driver's door lock switch.
 13. Check the ON/OFF information of the Driver's Door Lock Switch (LOCK) and Driver's Door Lock Switch (UNLOCK) in the DATA LIST.
- Are both information indicators OFF?*
- YES**—Faulty driver's door lock switch; replace it. ■
- NO**—Go to step 14.
14. Turn the ignition switch OFF.
 15. Check for a short in the wire between the MICU and driver's door lock switch using the keyless entry/security alarm control unit input test (see page 22-150).

Are the wire harnesses OK?

YES—Faulty MICU; replace it. ■

NO—A short in the wire, repair and recheck. ■

DTC B1129: Driver's Door Lock Knob Switch Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Operate the driver's door lock knob switch several times.
4. Check for DTCs with the HDS.

Is DTC B1129 indicated?

YES—Go to step 5.

NO—Intermittent failure. The driver's door lock knob switch system is OK at this time. Check pinfits and connections. ■

5. Select SECURITY from the BODY ELECTRICAL SYSTEM SELECT MENU, and enter the DATA LIST.

Check the ON/OFF information of the Driver's Door Lock knob Switch (LOCK) and Driver's Door Lock Knob Switch (UNLOCK) in the DATA LIST.

Does the Driver's Door Lock Knob Switch (LOCK) information indicator ON and Driver's Door Lock Knob Switch (UNLOCK) information indicate OFF with the driver's door lock knob switch in LOCK position, and does the Driver's Door Lock Knob Switch (LOCK) information indicate OFF and Driver's Door Lock Knob Switch (UNLOCK) information indicate ON with the driver's door lock knob switch in the UNLOCK position?

YES—Faulty door multiplex control unit; replace the power window master switch. ■

NO—Go to step 6.

6. Disconnect the driver's door lock knob switch 3P connector.

7. Check the ON/OFF information of the Driver's Door Lock Knob Switch (LOCK) and Driver's Door Lock Knob Switch (UNLOCK) in the DATA LIST.

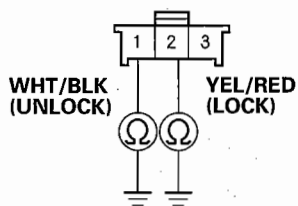
Are both information indicators OFF?

YES—Check for an open in the driver's door lock knob switch (LOCK) wire or the driver's door lock knob switch (UNLOCK) wire between the door multiplex control unit and the driver's door lock knob switch. If OK, replace the driver's door lock actuator. ■

NO—Go to step 8.

8. Turn the ignition switch OFF.
9. Disconnect power window master switch connector A (22P).
10. Check for continuity between the No. 2 (LOCK) and No. 1 (UNLOCK) terminals of the driver's door lock knob switch 3P connector and body ground.

**DRIVER'S DOOR LOCK KNOB SWITCH
3P CONNECTOR**



Wire side of female terminals

Is there continuity?

YES—Repair a short in the YEL/RED (LOCK) or WHT/BLK (UNLOCK) wire. ■

NO—Go to driver's door lock knob switch test (see page 22-158). If the driver's door lock knob switch is OK, the door multiplex control unit is faulty; replace the power window master switch. ■

DTC B1144: Abnormal Signal from Keyless Transmitter

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF and remove the ignition key from the key cylinder.
3. Using the keyless transmitter, press the LOCK/UNLOCK, TRUNK and PANIC buttons several times.
4. Turn the ignition switch ON (II).
5. Check for DTCs with the HDS.

Is DTC B1144 indicated?

YES—Go to step 6.

NO—The system is OK at this time. ■

6. Do the keyless receiver unit input test (see page 22-156).

Is the input test OK?

YES—Substitute a known-good keyless receiver unit, and recheck. If DTC is gone, the original keyless receiver unit is faulty; replace it. If the DTC B1144 is still indicated, replace the door multiplex control unit. ■

NO—Refer to the keyless receiver unit input test and correct the cause. ■

Keyless Entry/Security Alarm System

Control Unit Input Test

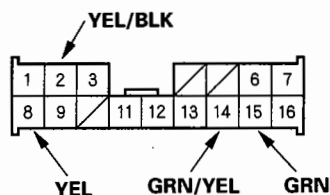
NOTE: Before testing the keyless entry/security control system, troubleshoot the multiplex integrated control system (see page 22-108).

Multiplex Integrated Control Unit

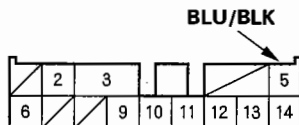
1. Turn the ignition switch OFF.
2. Remove the left kick panel (see page 20-62).
3. Disconnect the under-dash fuse/relay box connectors.

NOTE: All connectors are wire side of female terminals.

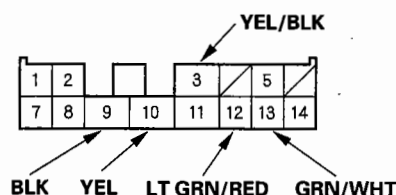
UNDER-DASH FUSE/RELAY BOX CONNECTOR E (16P)



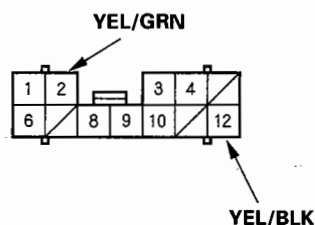
UNDER-DASH FUSE/RELAY BOX CONNECTOR F (14P)



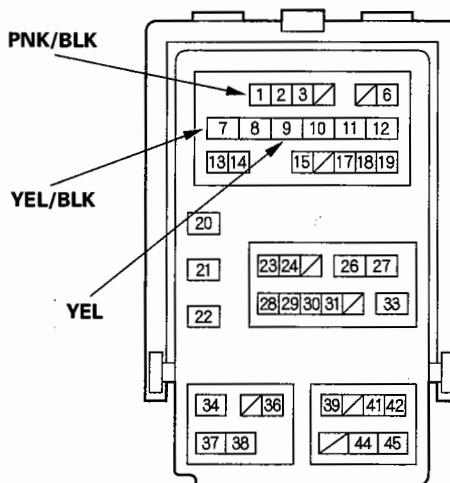
UNDER-DASH FUSE/RELAY BOX CONNECTOR H (14P)



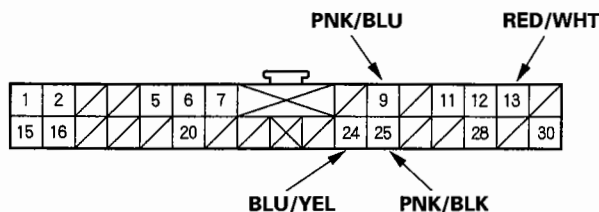
UNDER-DASH FUSE/RELAY BOX CONNECTOR K (12P)



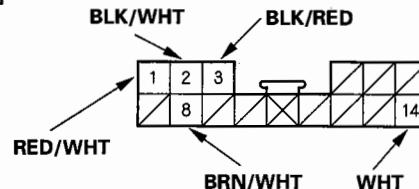
UNDER-DASH FUSE/RELAY BOX CONNECTOR N (45P)



UNDER-DASH FUSE/RELAY BOX CONNECTOR P (30P)



UNDER-DASH FUSE/RELAY BOX CONNECTOR Q (14P)



4. 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 5.



5. With the connectors still disconnected, make these input tests at the connectors.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If the input tests prove OK, go to step 6.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
H9	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • An open in the wire
F5	BLU/BLK	Connect the F5 terminal to the battery positive terminal. Trunk lid opener main switch ON.	Check trunk lid opener solenoid operation: Trunk lid should open.	• Poor ground (G701) • Faulty trunk lid opener solenoid • An open in the wire
K2	YEL/GRN	Connect the battery positive terminal to K12 (K2) terminal, and K2 (K12) terminal to H9 terminal.	Check actuator operation: The driver's door lock actuator should lock (unlock).	• Faulty driver's door lock actuator • An open in the wire
K12	YEL/BLK			
N7	YEL/BLK	Connect the battery positive terminal to N7 (N9) terminal, and N9 (N7) terminal to H9 terminal.	Check actuator operation: The front passenger's door lock actuator should lock (unlock).	• Faulty front passenger's door lock actuator • An open in the wire
N9	YEL			
E2	YEL/BLK	Connect the battery positive terminal to E2 (E8) terminal, and E8 (E2) terminal to H9 terminal.	Check actuator operation: The left rear door lock actuator should lock (unlock).	• Faulty left rear door lock actuator • An open in the wire
E8	YEL			
H3	YEL/BLK	Connect the battery positive terminal to H3 (H10) terminal, and H10 (H3) terminal to H9 terminal.	Check actuator operation: The right rear door lock actuator should lock (unlock).	• Faulty right rear door lock actuator • An open in the wire
H10	YEL			
Q14	WHT	Under all conditions	Apply battery power to Q14 terminal momentarily. The buzzer should chirp.	• Poor ground (G302) • Faulty buzzer • An open in the wire

(cont'd)

Keyless Entry/Security Alarm System

Control Unit Input Test (cont'd)

6. Reconnect all connectors to the under-dash fuse/relay box. Turn the ignition switch ON (II), and make these input tests at the appropriate connectors on the under-dash fuse/relay box.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 7.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
Q8	BRN/WHT	Front passenger's door lock knob switch unlocked	Check for voltage to ground: There should be 1 V or less	• Poor ground (G506) • Faulty front passenger's door lock knob switch • An open in the wire
		Front passenger's door lock knob switch locked	Check for voltage to ground: There should be 5 V or more.	• Faulty front passenger's door lock knob switch • Short to ground
P9	PNK/BLU	Front passenger's door lock switch unlocked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G506) • Faulty front passenger's door lock switch • An open in the wire
		Front passenger's door lock switch in neutral	Check for voltage to ground: There should be 5 V or more.	• Faulty front passenger's door lock switch • Short to ground
P25	PNK/BLK	Front passenger's door lock switch locked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G506) • Faulty front passenger's door lock switch • An open in the wire
		Front passenger's door lock switch in neutral	Check for voltage to ground: There should be 5 V or more.	• Faulty front passenger's door lock switch • Short to ground
Q2	BLK/WHT	Left rear door lock knob switch unlocked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G503, G601) • Faulty left rear door lock knob switch • An open in the wire
		Left rear door lock knob switch locked	Check for voltage to ground: There should be 5 V or more.	• Faulty left rear door lock knob switch • Short to ground
Q3	BLK/RED	Right rear door lock knob switch unlocked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G602) • Faulty right rear door lock knob switch • An open in the wire
		Right rear door lock knob switch locked	Check for voltage to ground: There should be 5 V or more.	• Faulty right rear door lock knob switch • Short to ground



Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
Q1	RED/WHT	Under all conditions	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G504) • Faulty connections at the audio unit • Faulty audio unit • An open in the wire
P13	RED/WHT	Ignition key inserted into the ignition switch.	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G501) • Faulty ignition key switch • An open in the wire
		Ignition switch OFF and ignition key removed from the ignition switch.*	Check for voltage to ground: There should be 5 V or more.	• Faulty ignition key switch • Short to ground
E15	GRN	Driver's door open	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door switch • An open in the wire
		Driver's door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door switch • Short to ground
H12	LT GRN/RED	Front passenger's door open	Check for voltage to ground: There should be 1 V or less.	• Faulty front passenger's door switch • An open in the wire
		Front passenger's door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty front passenger's door switch • Short to ground
E14	GRN/YEL	Left rear door open	Check for voltage to ground: There should be 1 V or less.	• Faulty left rear door switch • An open in the wire
		Left rear door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty left rear door switch • Short to ground
H13	GRN/WHT	Right rear door open	Check for voltage to ground: There should be 1 V or less.	• Faulty right rear door switch • An open in the wire
		Right rear door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty right rear door switch • Short to ground
P24	BLU/YEL	Trunk lid open	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G701) • Faulty trunk latch switch • An open in the wire
		Trunk lid closed	Check for voltage to ground: There should be 5 V or more.	• Faulty trunk latch switch • Short to ground

* : Insert the key into the ignition switch and turn the ignition switch ON (II) before continuing to the next step.

(cont'd)

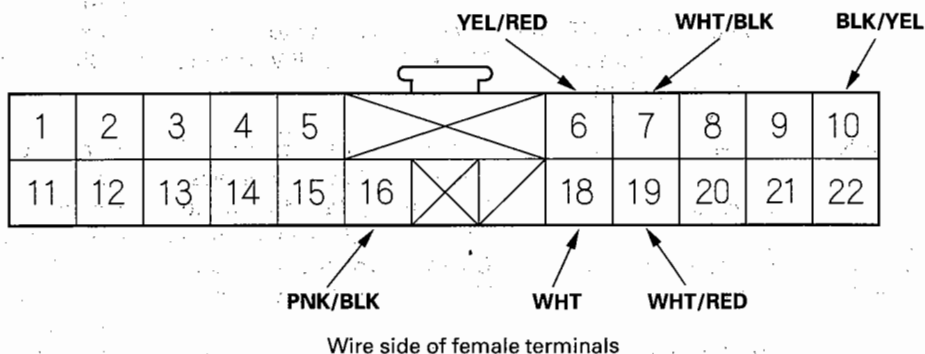
Keyless Entry/Security Alarm System

Control Unit Input Test (cont'd)

Door Multiplex Control Unit

7. Turn the ignition switch OFF.
8. Remove the power window master switch (see page 22-239).
9. Disconnect the 22P connector from the power window master switch.

DOOR MULTIPLEX CONTROL UNIT CONNECTOR A (22P)



10. 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 11.
11. With the connector still disconnected, make these input tests at the connector.
 - If the test indicates a problem, find and correct the cause, then recheck the system.
 - If the input tests prove OK, go to step 12.

Cavity	Wire	Test conditions	Test: Desired result	Possible cause if result is not obtained
A10	BLK/YEL	Under all conditions	Attach to ground: The security indicator should come on.	• Faulty security inndicator • An open in the wire
A16	PNK/BLK	Under all conditions	Check for continuity between the A16 terminal and underdash fuse/relay box connector J terminal No. 10. There should be continuity.	• An open in the wire



12. Reconnect the connector to the door multiplex control unit. Turn the ignition switch ON (II) and make these input tests at the connectors.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 12.

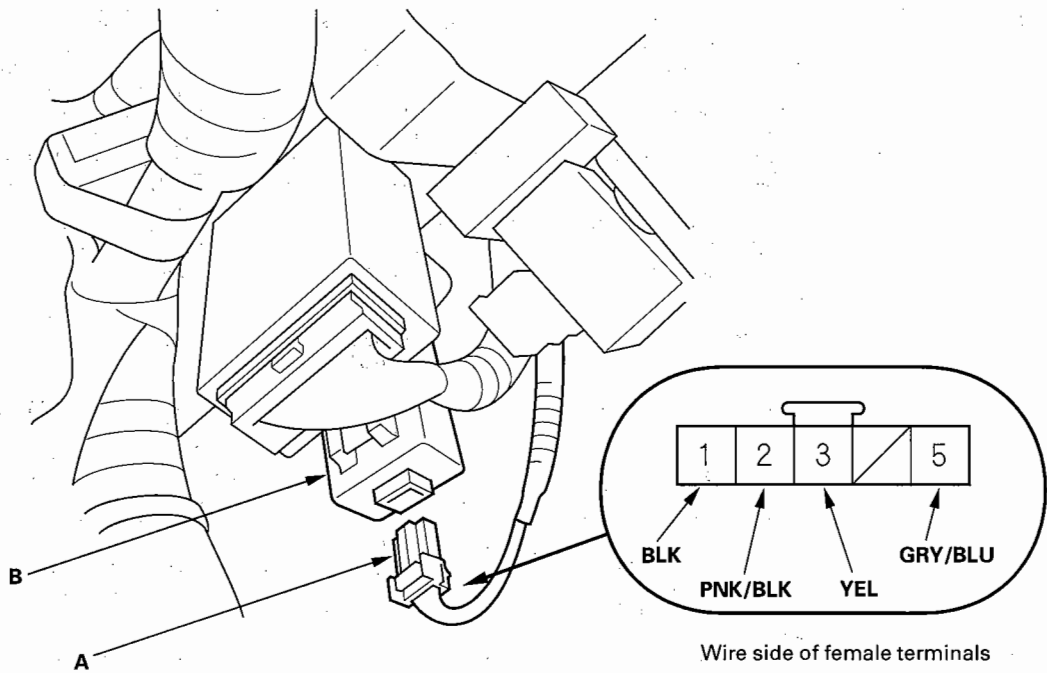
Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A7	WHT/BLK	Driver's door lock knob switch unlocked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G503, G601) • Faulty driver's door lock knob switch • An open in the wire
		Driver's door lock knob switch locked	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door lock knob switch • Short to ground
A6	YEL/RED	Driver's door lock knob switch locked	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G503, G601) • Faulty driver's door lock knob switch • An open in the wire
		Driver's door lock knob switch unlocked	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door lock knob switch • Short to ground
A14	WHT/BLU	Driver's door lock switch pressed (LOCK)	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G503, G601) • Faulty driver's door lock switch • An open in the wire
		Driver's door lock switch in neutral or pressed (UNLOCK)	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door lock switch • Short in the wire
A15	WHT/GRN	Driver's door lock switch pressed (UNLOCK)	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G503, G601) • Faulty driver's door lock switch • An open in the wire
		Driver's door lock switch in neutral or pressed (LOCK)	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door lock switch • Short in the wire
A18	WHT	Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire • Short to ground
		Driver's door key cylinder switch in neutral	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 5 V or more.	
A19	WHT/RED	Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire • Short to ground
		Driver's door key cylinder switch in neutral	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 5 V or more.	

13. If all the input tests prove OK, and no DTCs were found during MICS troubleshooting (B-CAN System Diagnosis Test Mode A), go to the B-CAN system input and output index (see page 22-95). If multiple failures are found on more than one control unit, replace the under-dash fuse/relay box (includes the MICU). If input failures are related to a particular control unit, replace that control unit.

Keyless Entry/Security Alarm System

Keyless Receiver Unit Input Test

1. Remove the dashboard lower cover (see page 20-82).
2. Disconnect the 5P connector (A) from the keyless receiver unit (B).



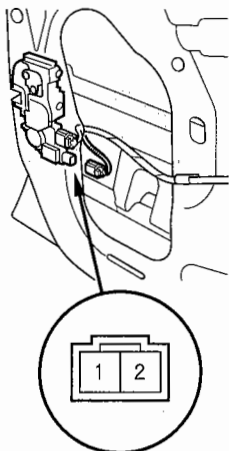
3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals are OK, go to step 4.
4. With the connector still disconnected, make these input tests at the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

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
3	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
5	GRY/BLU	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 6 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
2	PNK/BLK	Under-dash fuse/relay box connector N (45P) disconnected	Check for continuity between the No. 2 terminal and the under-dash fuse/relay box connector N No. 1 terminal. There should be continuity.	An open in the wire
			Check for continuity between No. 2 terminal and body ground: There should be no continuity.	A short in the wire

Door Lock Actuator Test

Driver's door

1. Remove the driver's door panel (see page 20-7).
2. Disconnect the 2P connector from the actuator.



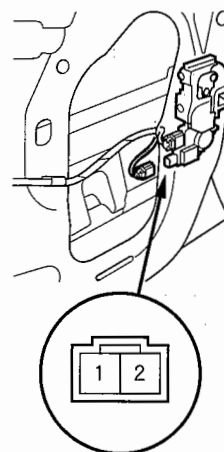
3. Check actuator operation by connecting power and ground according to the table. To prevent damage to the actuator, apply battery voltage only momentarily.

Terminal Position	1	2
LOCK	+	-
UNLOCK	-	+

4. If the actuator does not operate as specified, replace it.

Passenger's door

1. Remove the passenger's door panel (see page 20-7).
2. Disconnect the 2P connector from the actuator.



NOTE: The illustration shows front passenger's door.

3. Check actuator operation by connecting power and ground according to the table. To prevent damage to the actuator, apply battery voltage only momentarily.

Terminal Position	1	2
LOCK	+	-
UNLOCK	-	+

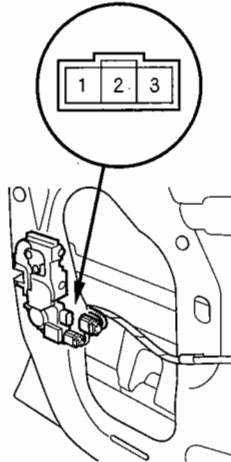
4. If the actuator does not operate as specified, replace it.

Keyless Entry/Security Alarm System

Door Lock Knob Switch Test

Driver's Door

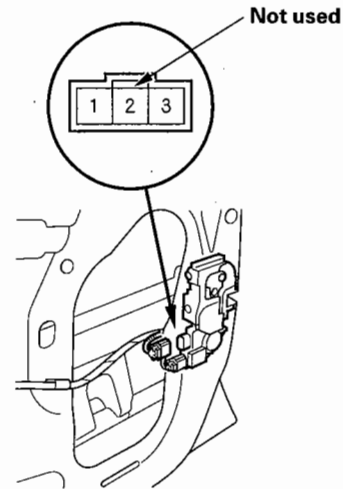
1. Remove the driver's door panel (see page 20-7).
2. Disconnect the 3P connector from the actuator.



3. Check for continuity between the terminals.
 - There should be continuity between the No. 2 and No. 3 terminals when the door lock knob switch is in the LOCK position and no continuity when the switch is in the UNLOCK position.
 - There should be continuity between the No. 1 and No. 3 terminals when the door lock knob switch is in the UNLOCK position and no continuity when the switch is in the LOCK position.
4. If the continuity is not as specified, replace the door lock actuator.

Passenger's Door

1. Remove the passenger's door panel (see page 20-7).
2. Disconnect the 3P connector from the actuator.

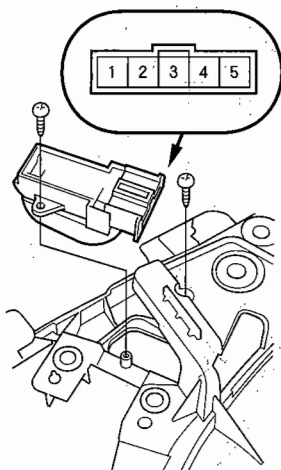


NOTE: The illustration shows front passenger's door.

3. Check for continuity between the terminals. There should be continuity between the No. 1 and No. 3 terminals when the door lock knob switch in the UNLOCK position and no continuity when the switch is in the LOCK position.
4. If the continuity is not specified, replace the door lock actuator.

Door Lock Switch Test

1. Remove the door panel (see page 20-7).
2. Remove the two screws, then remove the door lock switch.



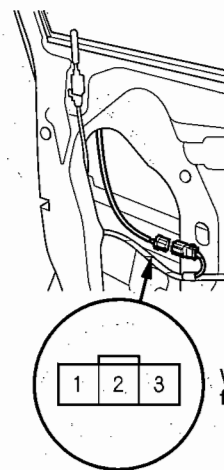
3. Check for continuity between the terminals.

- There should be continuity between the No. 1 and No. 2 terminals when the door lock switch is in the LOCK position.
- There should be no continuity between the No. 1 and No. 2 terminals when the door lock switch is in the neutral position or UNLOCK position.
- There should be continuity between the No. 2 and No. 3 terminals when the door lock switch is in the UNLOCK position.
- There should be continuity between the No. 2 and No. 3 terminals when the door lock switch is in the neutral position or LOCK position.
- There should be continuity between the No. 5 (+) and No. 4 (–) terminals (bulb check).

4. If the continuity is not as specified, replace the bulb or switch.

Door Key Cylinder Switch Test

1. Remove the driver's door panel (see page 20-7).
2. Disconnect the 3P connector from the key cylinder switch.



Wire side of female terminals

3. Check for continuity between the terminals.

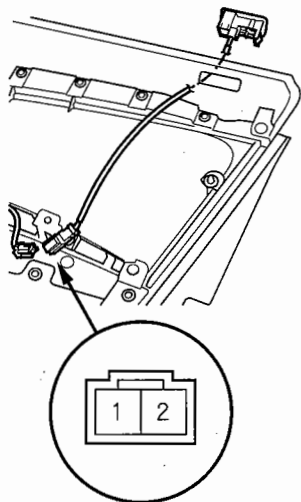
- There should be continuity between the No. 2 and No. 3 terminals when the door key cylinder switch is in LOCK position.
- There should be no continuity between the No. 2 and No. 3 terminals when the door key cylinder switch is in the neutral or UNLOCK position.
- There should be continuity between the No. 1 and No. 2 terminals when the door key cylinder switch is in UNLOCK position.
- There should be no continuity between the No. 1 and No. 2 terminals when the door key cylinder switch is in the neutral or LOCK position.

4. If the continuity is not as specified, replace the door key cylinder assembly (see page 20-9).

Keyless Entry/Security Alarm System

Security Indicator Test

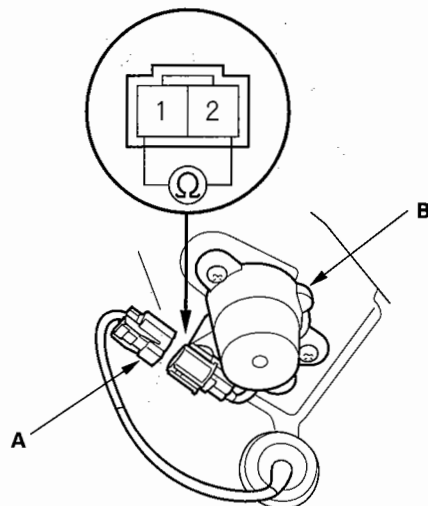
1. Remove the driver's door panel (see page 20-7).
2. Disconnect the 2P connector from the security indicator.



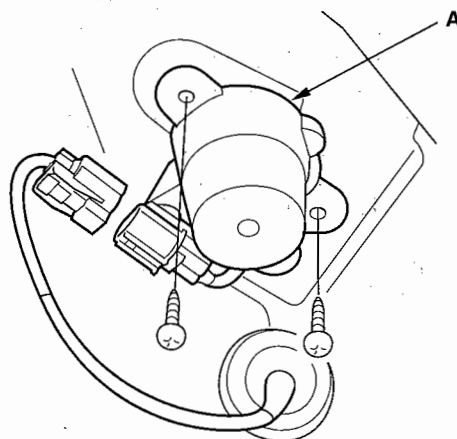
3. The LED should come on when power is connected to terminal No. 2, and ground is connected to terminal No. 1.
4. If the LED does not work as specified, replace the security indicator.

Keyless Buzzer Test/Replacement

1. Remove the left inner fender (see page 20-142).
2. Disconnect the 2P connector (A) from the keyless buzzer (B).



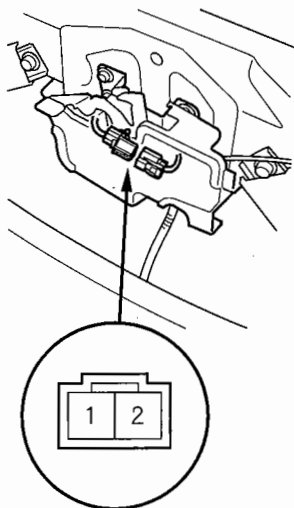
3. Test the buzzer by check the resistance across the No. 1 and No. 2 terminals. There should be about 1.7 k Ω .
4. If the buzzer is not within the specification, remove the two mounting screws, then replace the buzzer (A).





Hood Switch Test

1. Open the hood.
2. Disconnect the 2P connector from the hood switch.



3. Check for continuity between the terminals.
There should be continuity between the No. 1 and No. 2 terminals when the hood is opened (latch released). There should be no continuity between the No. 1 and No. 2 terminals when the hood is closed (latch pushed down).
4. If the continuity is not as specified, replace the hood switch.

Keyless Entry/Security Alarm System

Transmitter Test

NOTE:

- If the doors unlock or lock with the transmitter, but the LED on the transmitter does not come on, the LED is faulty; replace the transmitter.
- If any door is open, you cannot lock the doors with the transmitter.
- If the UNLOCK button is pressed on the transmitter and a door is not opened within 30 seconds, the doors relock automatically.
- The doors do not lock or unlock with the transmitter if the key is in the ignition switch.
- Panic function will not operate if the ignition switch is ON (II).
- If the lock and unlock function works normally, but the driving position memory system (DPMS) is not linked, confirm the link is turned ON (press lock and unlock at the same time), then check for problems in the DPMS (see page 22-336) or B-CAN System Diagnosis Test Mode A (see page 22-108). Refer to System Description (see page 22-140) for more information.

With HDS

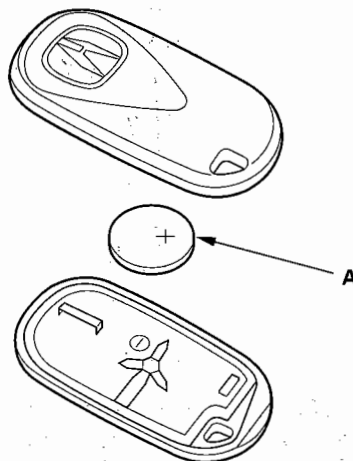
Do a transmitter test using the HDS by selecting the KEYLESS INSPECTION MENU.

Without HDS

1. Press the lock or unlock button five or six times to reset the transmitter.
 - If the locks work, the transmitter is OK. ■
 - If the locks don't work, go to step 2.
2. Open the transmitter and check for water damage.
 - If you find any water damage, replace the transmitter. ■
 - If there is no water damage, go to step 3.

3. Replace the transmitter battery (A) with a new one, and try to lock and unlock the doors with the transmitter by pressing the lock or unlock button five or six times.

- If the doors lock and unlock, the transmitter is OK. ■
- If the doors don't lock and unlock, go to step 4.



4. Reprogram the transmitter (see page 22-163), then try to lock and unlock the doors.

- If the doors lock and unlock, the transmitter is OK. ■
- If the doors don't lock and unlock, try and program to another vehicle.
 - If the transmitter programs to another vehicle, go to B-CAN System Diagnosis Test Mode A (see page 22-108). If no trouble is found, go to keyless receiver unit input test (see page 22-156). ■
 - If the transmitter will not program to another vehicle, replace the transmitter. ■



Transmitter Programming

Storing transmitter codes

The codes of up to three transmitters can be stored into the keyless receiver unit memory. (If a fourth code is stored, the code which was input first will be erased.)

NOTE: It is important to maintain the time limits between the steps. Make sure the doors, the hood and the trunk lid are closed.

1. Turn the ignition switch ON (II).
2. Within 1 to 4 sec, press the transmitter lock or unlock button with the transmitter aimed at the keyless receiver unit behind the driver's side of the dashboard.
3. Within 1 to 4 sec, turn the ignition switch OFF.
4. Within 1 to 4 sec, turn the ignition switch ON (II).
5. Within 1 to 4 sec, press the transmitter lock or unlock button with the transmitter aimed at the keyless receiver unit behind the driver's side of the dashboard.
6. Within 1 to 4 sec, turn the ignition switch OFF.
7. Within 1 to 4 sec, turn the ignition switch ON (II).
8. Within 1 to 4 sec, press the transmitter lock or unlock button with the transmitter aimed at the keyless receiver unit behind the driver's side of the dashboard.
9. Within 1 to 4 sec, turn the ignition switch OFF.
10. Within 4 sec, turn the ignition switch ON (II).

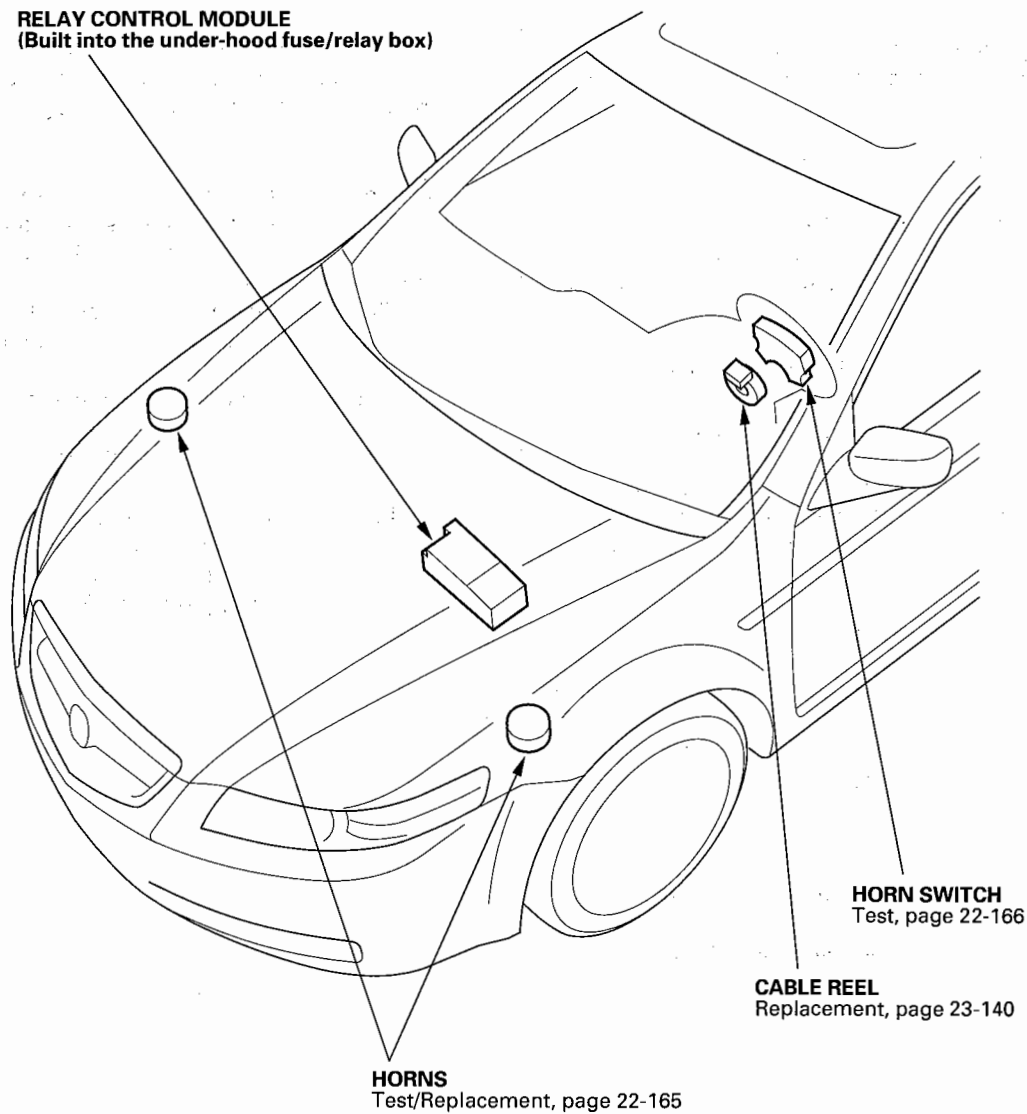
11. Within 1 to 4 sec, press the transmitter lock or unlock button with the transmitter aimed at the keyless receiver unit behind the driver's side of the dashboard.
12. Confirm you can hear the sound of the door lock actuators within 1 to 4 sec, then push the transmitter lock or unlock button again, or the code will not be stored.
13. Within 10 sec, aim the transmitters (up to two additional ones) whose codes you want to store in the keyless receiver, and press the transmitter lock or unlock buttons.
Confirm that you can hear the sound of the door lock actuators after each transmitter code is stored.
14. Turn the ignition switch OFF, and remove the key.
15. Confirm proper operation with the transmitters.

NOTE: Once the programming mode is entered, the remote button must be pressed a second time. If the button is not pressed, or if the ignition switch is turned OFF, the programming for all remotes will be cancelled.

Horns

Component Location Index

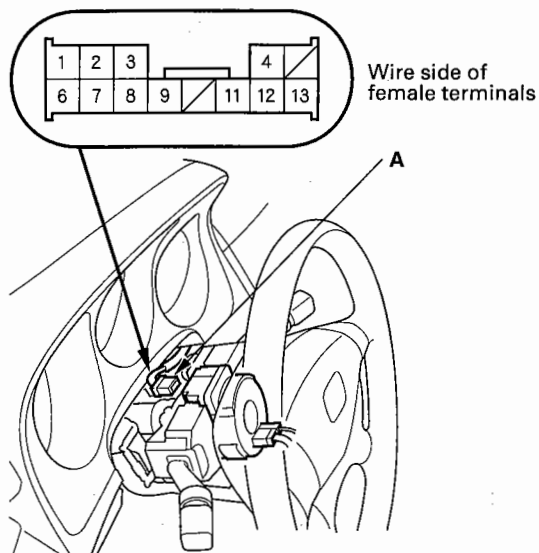
RELAY CONTROL MODULE
(Built into the under-hood fuse/relay box)



Horns

Horn Switch Test

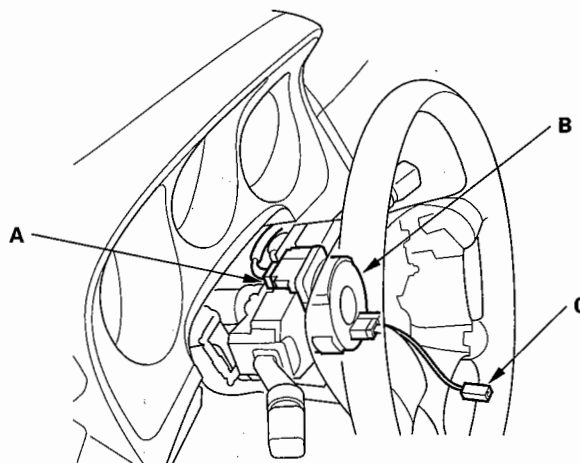
1. Remove the steering column covers (see page 17-24).
2. Disconnect the cable reel 13P connector (A) from the dashboard wire harness.



3. Using a jumper wire, connect the No. 1 terminal of the dashboard wire harness 13P connector to body ground.

- If the horns sound, go to step 4.
- If the horns don't sound, check these items:
 - No. 13 (20A) fuse in the under-hood fuse/relay box.
 - relay control module in the under-hood fuse/relay box.
 - horns (see page 22-165).
 - an open in the wire.

4. Reconnect the cable reel 13P connector (A) to the dashboard wire harness.



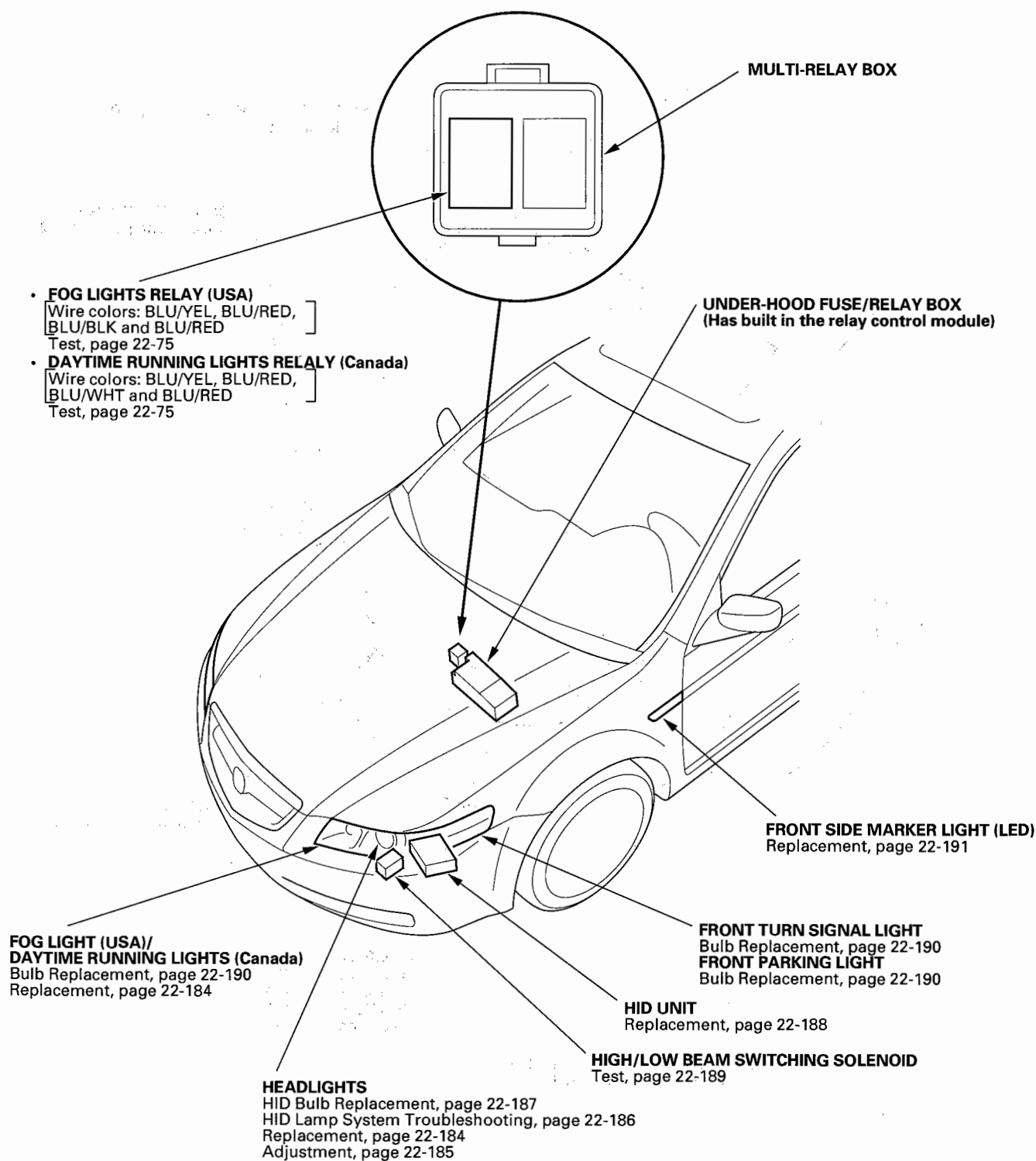
5. Remove the driver's airbag assembly (see page 23-128), and disconnect the horn switch 1P positive terminal from the cable reel (B).
6. Using a jumper wire, connect the cable reel side 1P connector (C) to body ground.

- If the horns sound, replace the driver's airbag assembly.
- If the horns do not sound, check these items:
 - cable reel.
 - an open in the wire (cable reel subharness).

Exterior Lights



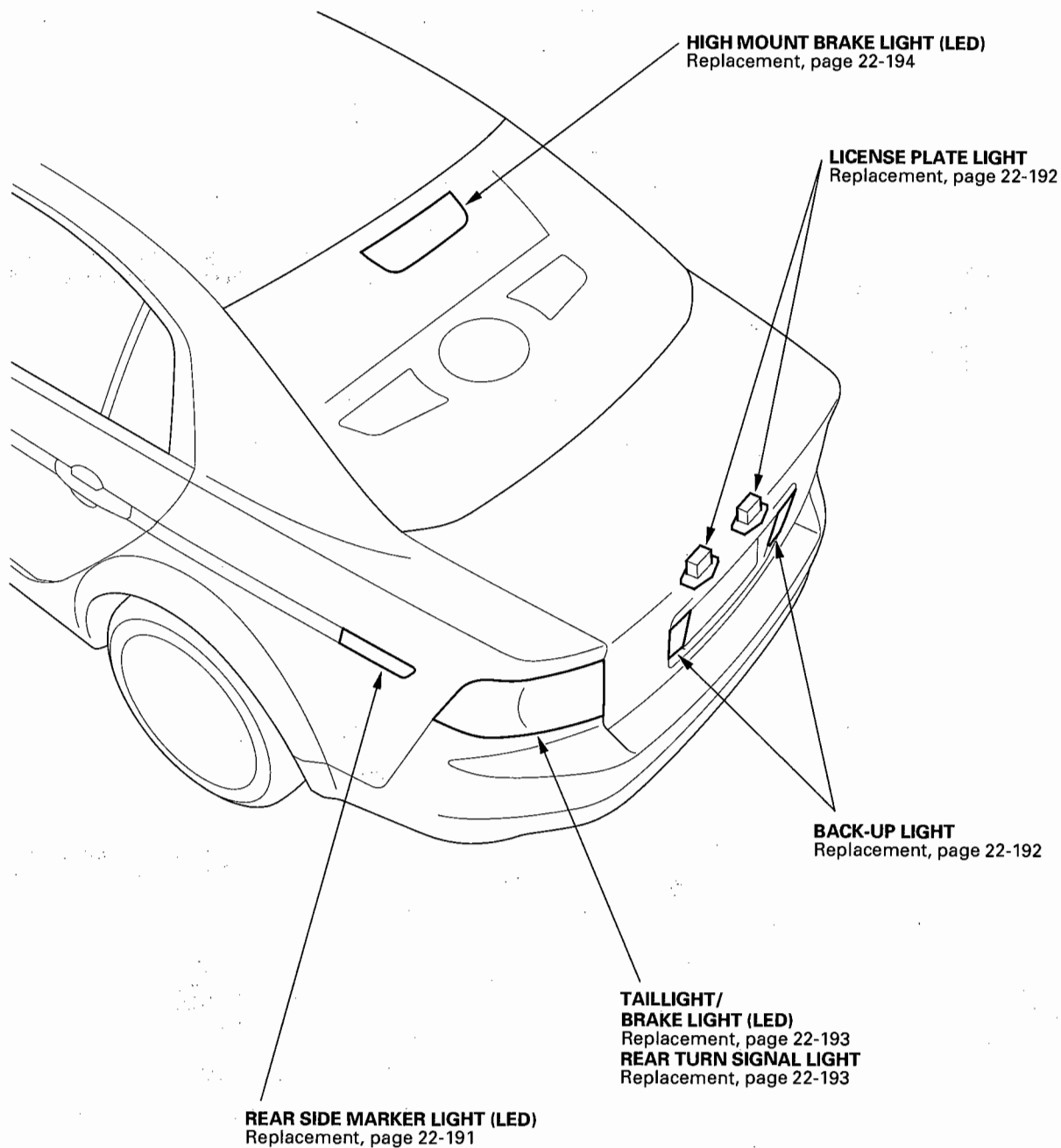
Component Location Index

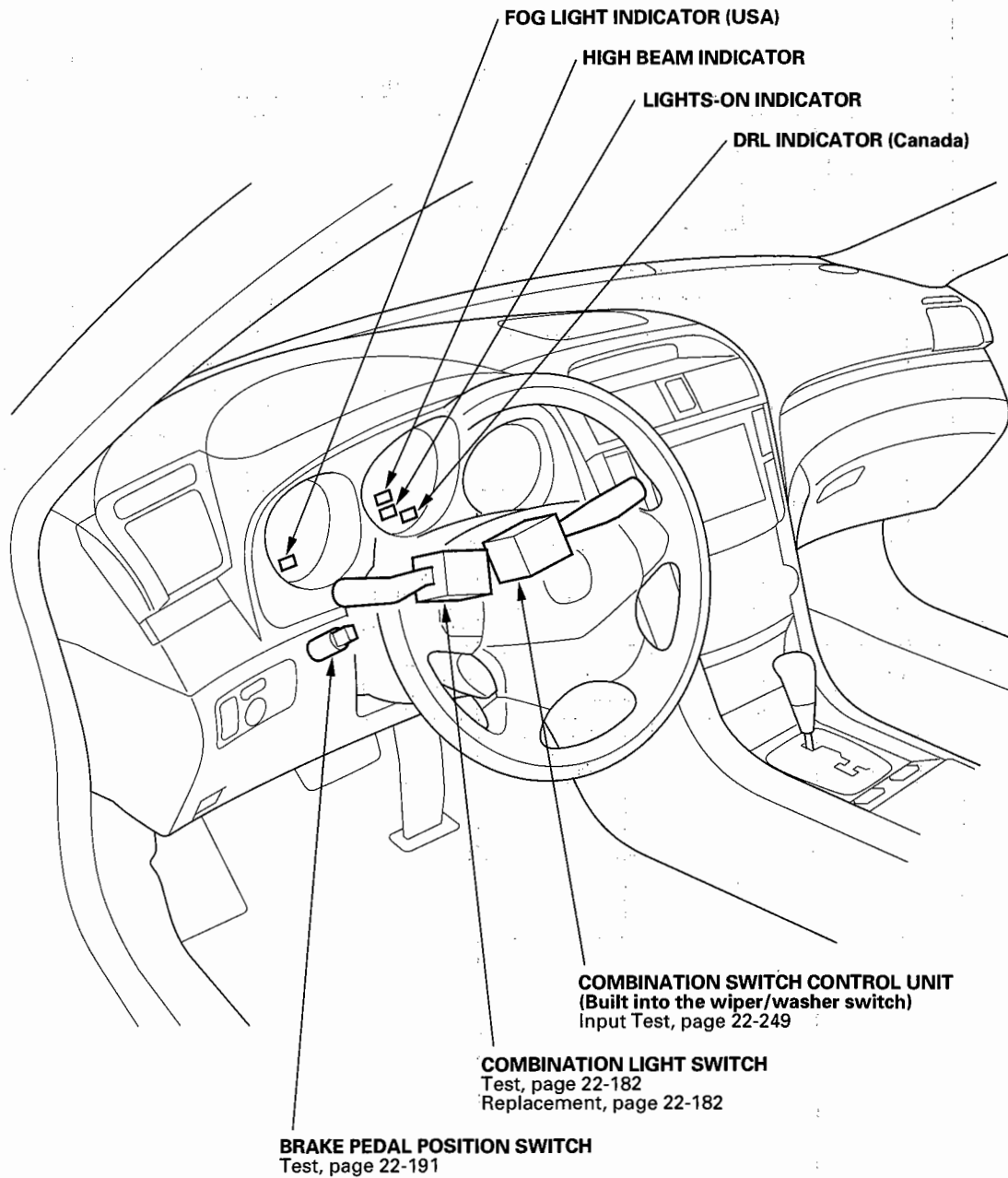


(cont'd)

Exterior Lights

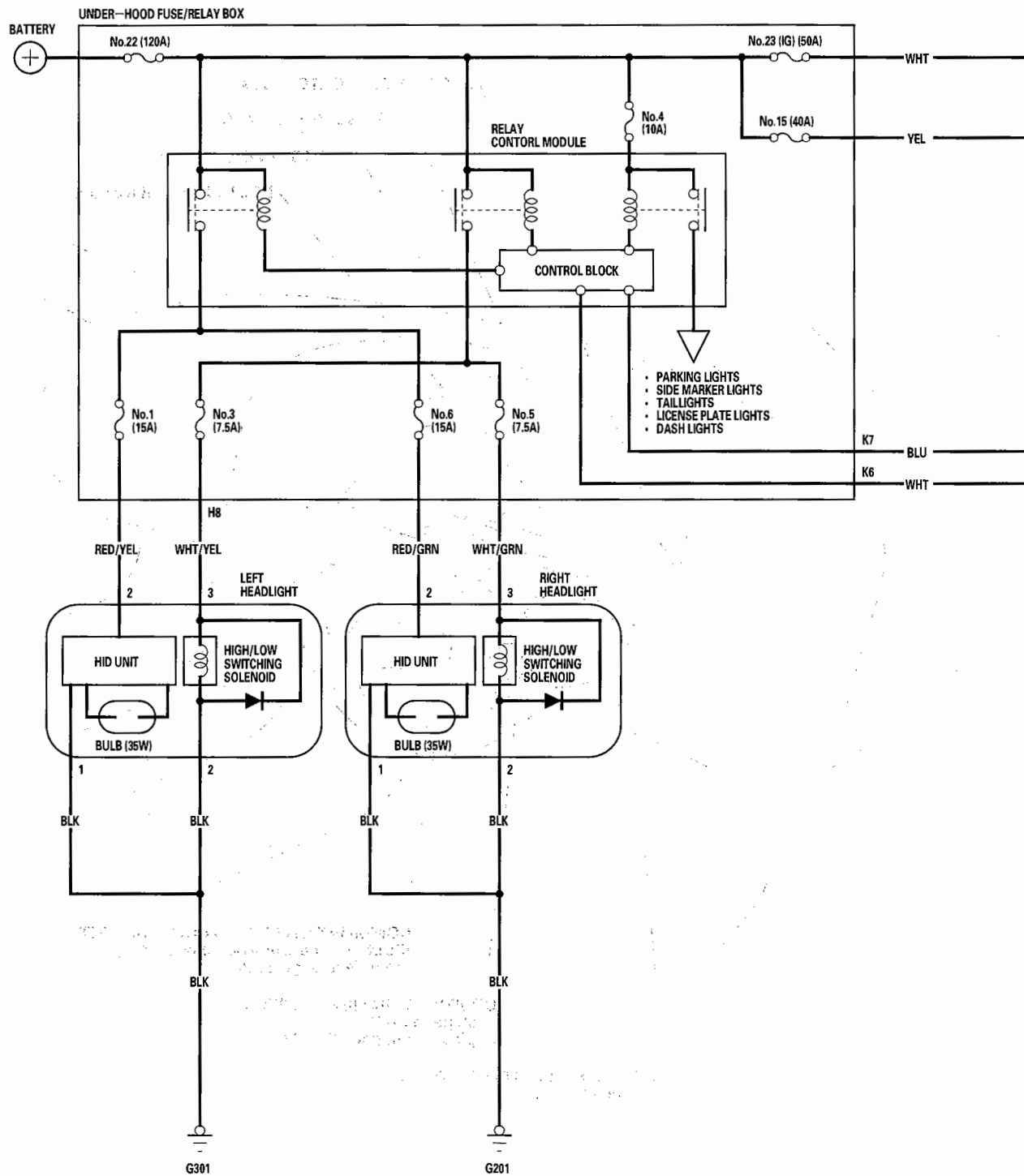
Component Location Index (cont'd)

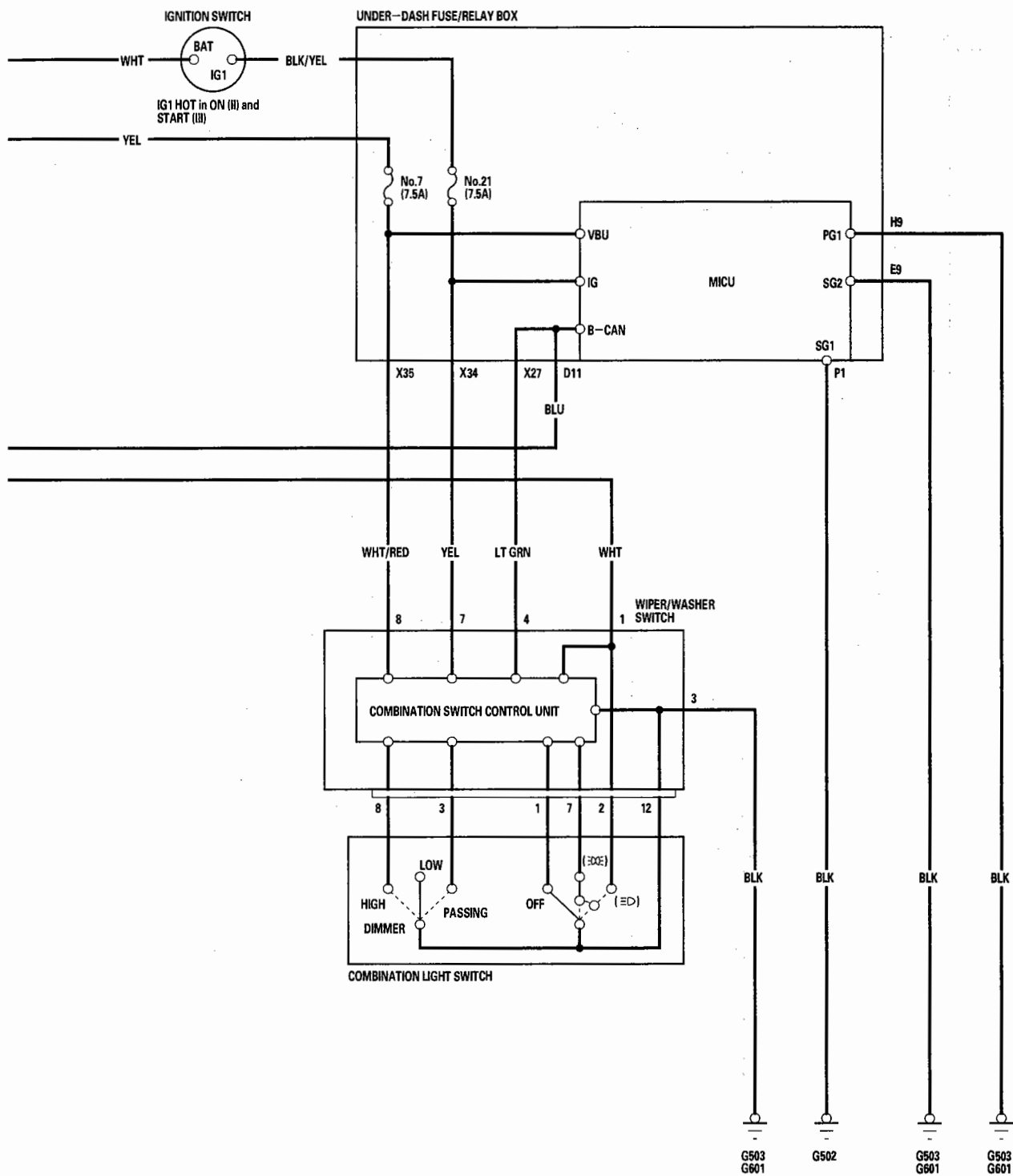




Exterior Lights

Circuit Diagram

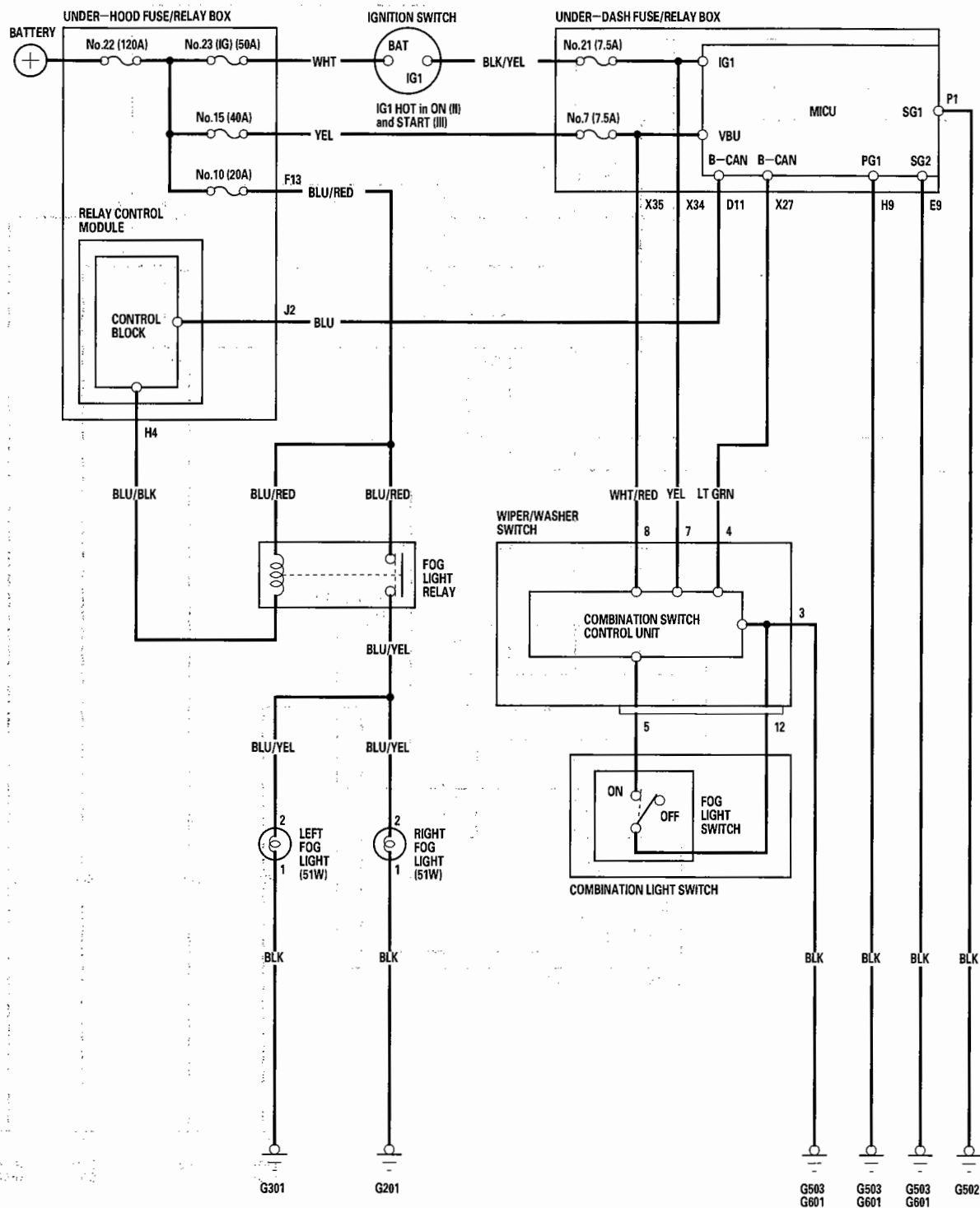




Exterior Lights

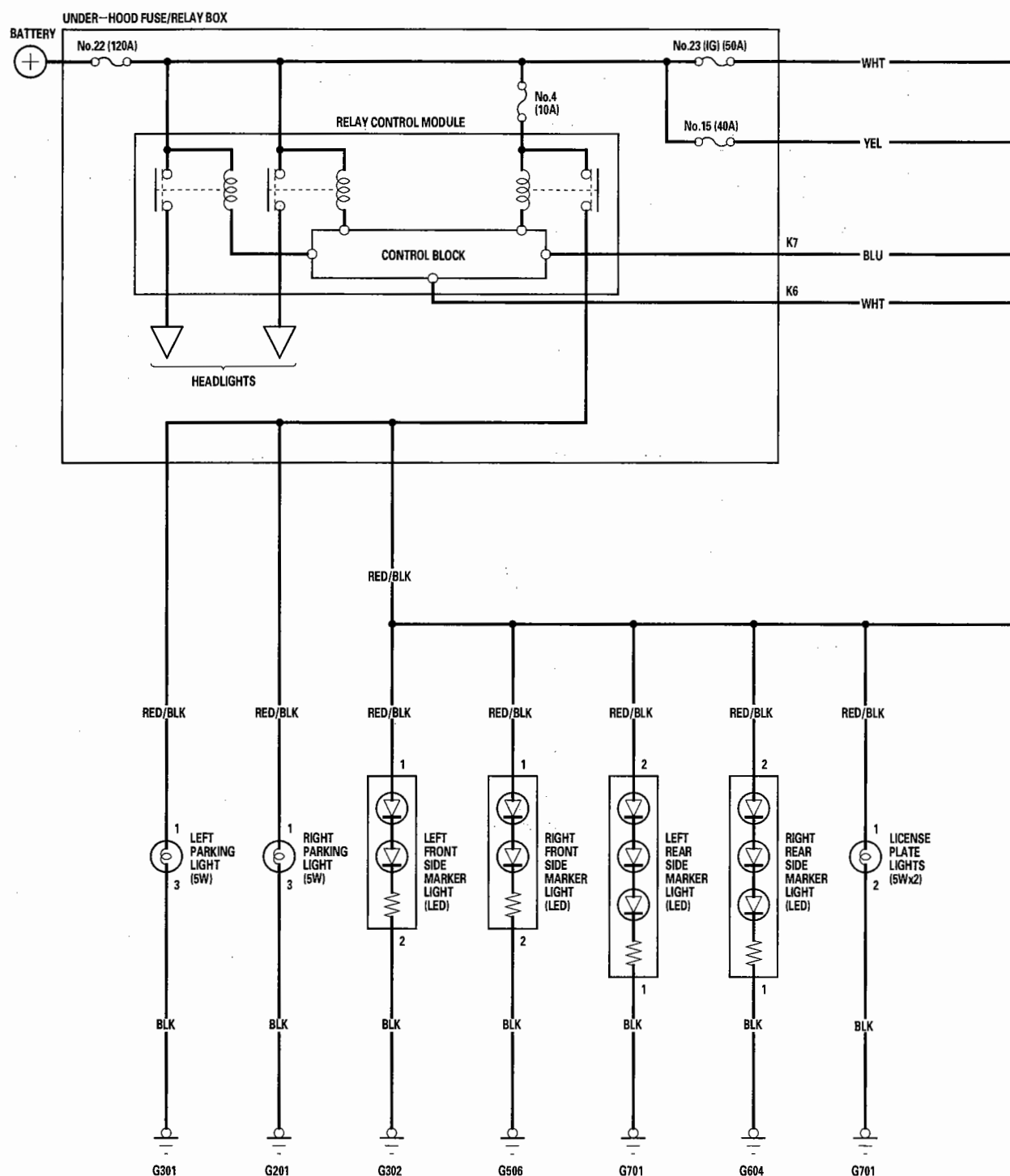
Circuit Diagram - Fog Lights

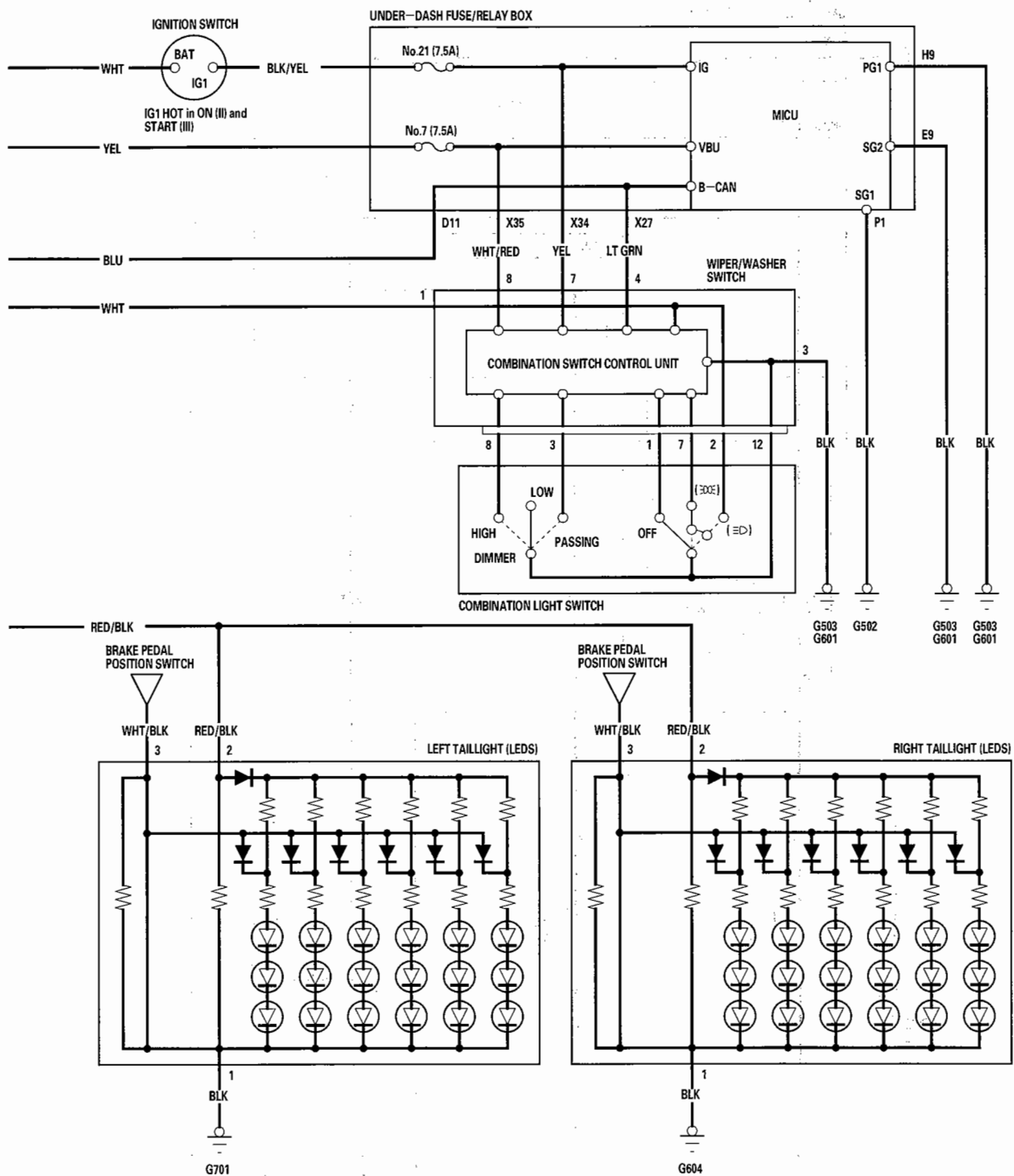
USA:



Exterior Lights

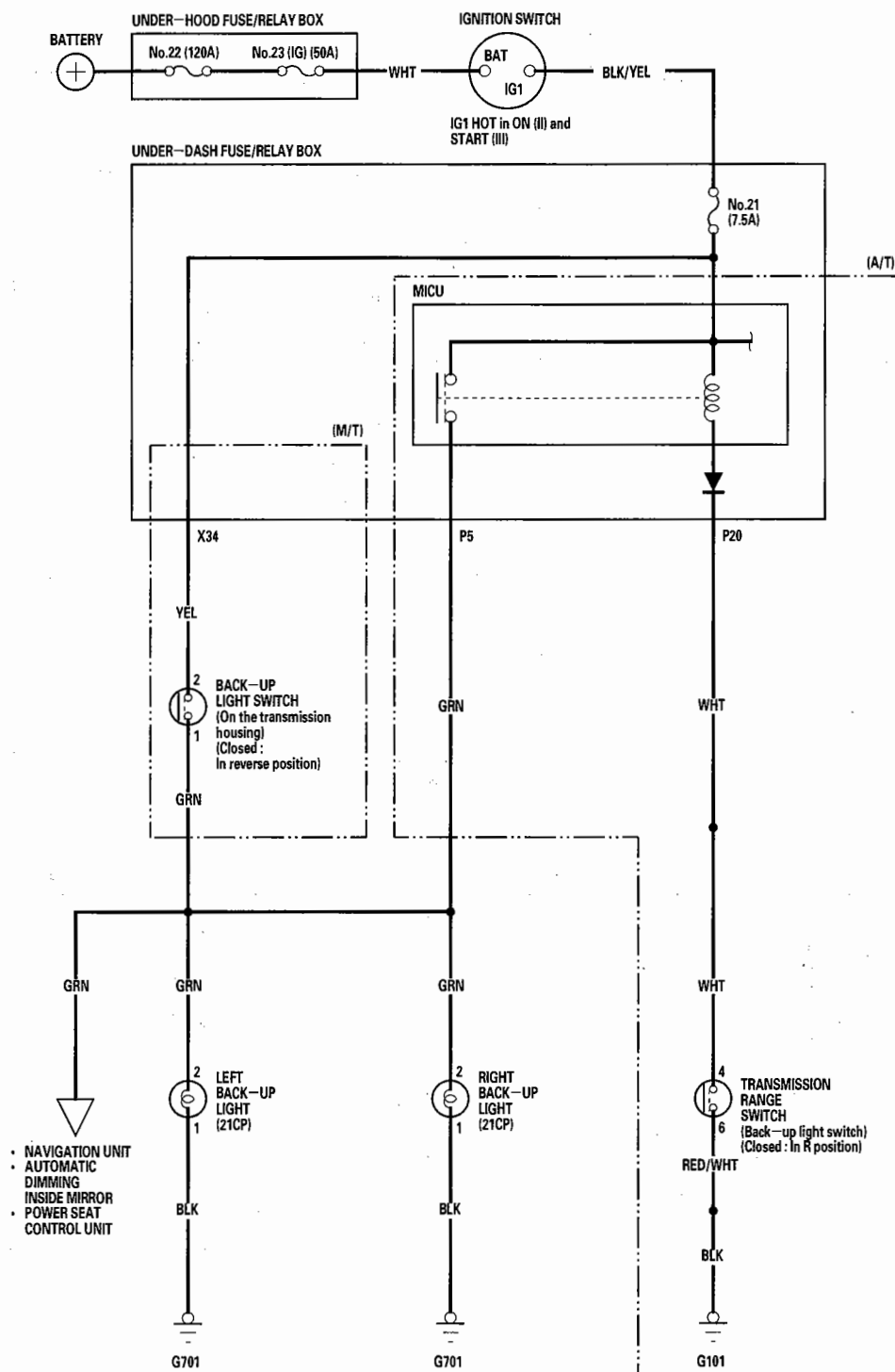
Circuit Diagram - Parking/Side Marker/License Plate Lights, Taillights





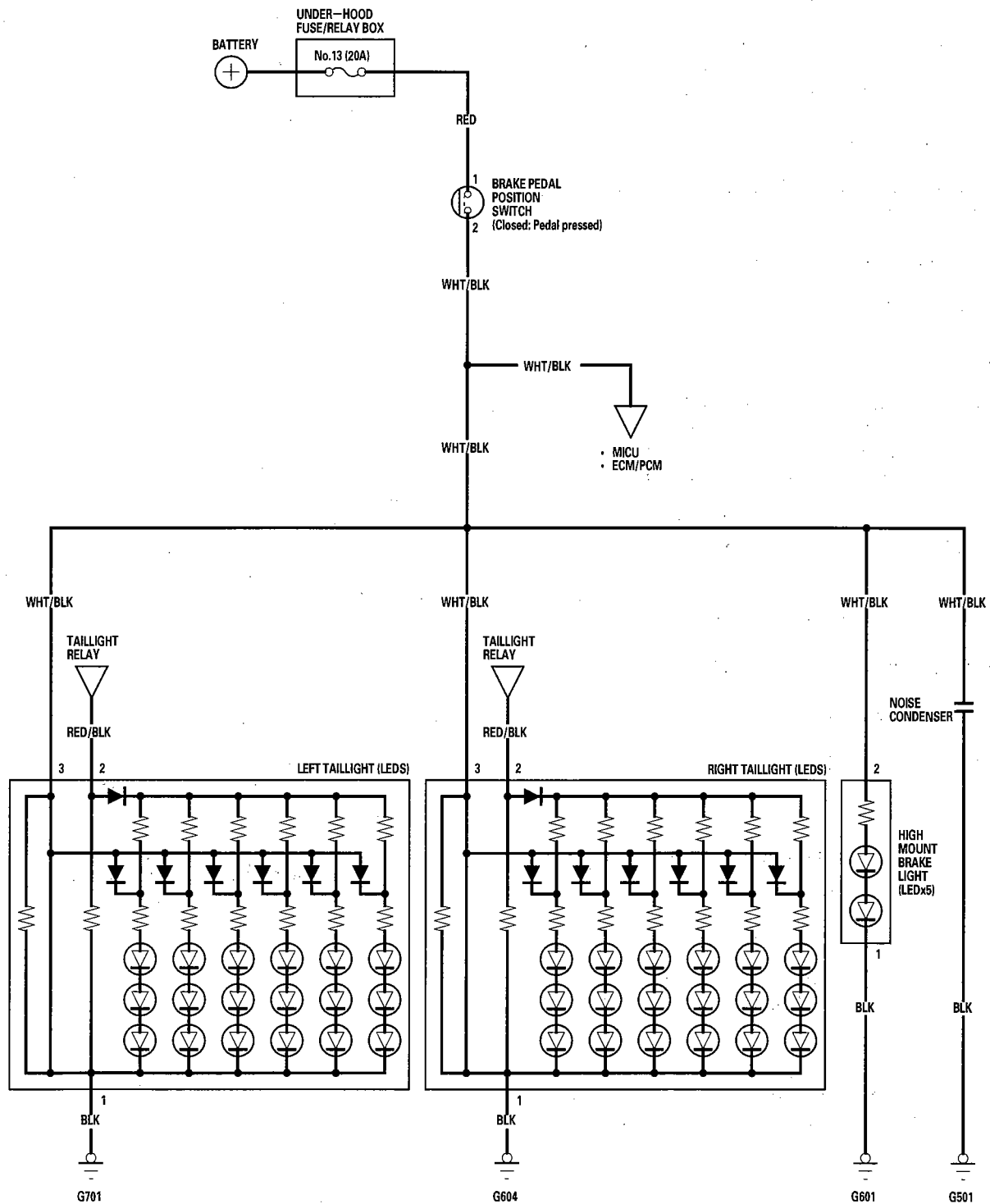
Exterior Lights

Circuit Diagram - Back-up Lights





Circuit Diagram - Brake Lights



Exterior Lights

DTC Troubleshooting

DTC B1075: Headlight Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the headlights switch from the OFF position to the ON position.
3. Check for DTCs with the HDS.

Is DTC B1075 indicated?

YES—Go to step 4.

NO—Intermittent failure, the headlight circuit is OK at this time. Check for loose or poor connections at under-hood fuse/relay box connector K (10P), and at the combination switch connector. ■

4. With the headlight switch OFF, select LIGHTING SYSTEM from the HDS, and enter the DATA LIST.
5. Check the ON/OFF information of the Headlight Switch (BACK-UP) in the DATA LIST.

Is the information indicator OFF?

YES—Go to step 6.

NO—Go to step 10.

6. Turn the headlight switch ON.
7. Check the ON/OFF information of the Headlight Switch (BACK-UP) in the DATA LIST.

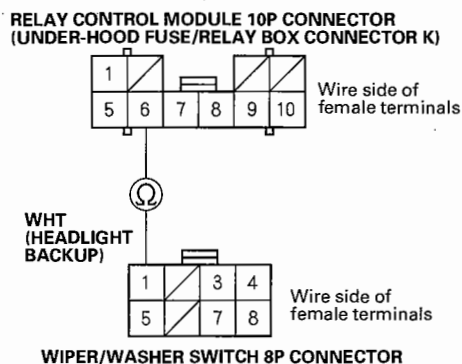
Is the information indicator ON?

YES—Faulty relay control module; replace the underhood fuse/relay box. ■

NO—Go to step 8.

8. Disconnect the relay control module 10P connector and the wiper/washer switch 8P connector.

9. Check for continuity between the No. 6 terminal of the relay control module 10P connector and the No. 1 terminal of the wiper/washer switch (combination switch control unit) 8P connector.

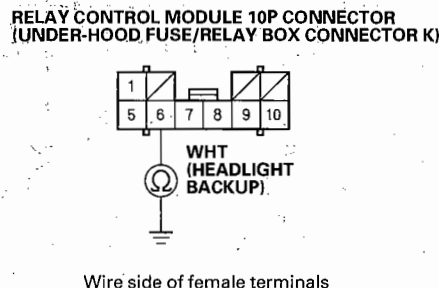


Is there continuity?

YES—Faulty combination switch control unit or relay control module; substitute a known-good wiper/washer switch and retest. If the DTC is no longer present, replace the original wiper/washer switch. If the DTC is still present, the relay control module is faulty, replace the under-hood fuse/relay box. ■

NO—Repair an open in the WHT wire. ■

10. Disconnect the relay control module 10P connector.
11. Check for continuity between the No.6 terminal of the relay control module 10P connector and body ground.



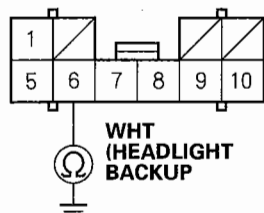
Is there continuity?

YES—Go to step 12. ■

NO—Faulty relay control module; replace the under-hood fuse/relay box. ■

12. Disconnect the wiper/washer switch 12P connector.
13. Check for continuity between the No. 6 terminal of the relay control module 10P connector and body ground.

**RELAY CONTROL MODULE 10P CONNECTOR
(UNDER-HOOD FUSE/RELAY BOX CONNECTOR K)**



Wire side of female terminals

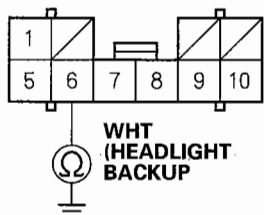
Is there continuity?

YES—Go to step 14.

NO—Faulty combination switch control unit, replace it. ■

14. Disconnect the wiper/washer switch 8P connector.
15. Check for continuity between the No. 6 terminal of the relay control module 10P connector and body ground.

**RELAY CONTROL MODULE 10P CONNECTOR
(UNDER-HOOD FUSE/RELAY BOX CONNECTOR K)**



Wire side of female terminals

Is there continuity?

YES—Repair a short in the WHT wire. ■

NO—Faulty combination switch control unit; replace the wiper/washer switch. ■

DTC B1275: Headlight Switch OFF Position Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II), and wait for 2 seconds.
3. Turn the parking (small) light switch ON and wait for 2 seconds.
4. Turn the headlight light switch (LOW) ON and wait for 2 seconds.
5. Change the dimmer switch position from low beam to high beam and wait for 2 seconds.
6. Check the DTCs with the HDS.

Is DTC B1275 indicated?

YES—Go to step 7.

NO—Intermittent failure, the combination switch and the control unit are OK at this time. Check pinfits and connections. ■

7. Turn the ignition switch OFF.
8. Disconnect the combination light switch 12P connector from the wiper/washer switch.
9. Perform the combination light switch test (see page 22-182).

Is the combination light switch OK?

YES—Faulty combination switch control unit, replace the wiper/washer switch. ■

NO—Replace the combination light switch. ■

Exterior Lights

DTC Troubleshooting (cont'd)

DTC B1276: Headlight Switch Parking (SMALL) Position Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II), and wait for 2 seconds.
3. Turn the parking (small) light switch ON and wait for 2 seconds.
4. Turn the headlight light switch (LOW) ON and wait for 2 seconds.
5. Change the dimmer switch position from low beam to high beam and wait for 2 seconds.
6. Check the DTCs with the HDS.

Is DTC B1276 indicated?

YES—Go to step 7.

NO—Intermittent failure, the combination switch and the control unit are OK at this time. Check pinfits and connections. ■

7. Turn the ignition switch OFF.
8. Disconnect the combination light switch 12P connector from the wiper/washer switch.
9. Perform the combination light switch test (see page 22-182).

Is the combination light switch OK?

YES—Faulty combination switch control unit, replace the wiper/washer switch. ■

NO—Replace the combination light switch. ■

DTC B1278: Headlight Switch ON Position Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II), and wait for 2 seconds.
3. Turn the parking (small) light switch ON and wait for 2 seconds.
4. Turn the headlight light switch (LOW) ON and wait for 2 seconds.
5. Change the dimmer switch position from low beam to high beam and wait for 2 seconds.
6. Check the DTCs with the HDS.

Is DTC B1278 indicated?

YES—Go to step 7.

NO—Intermittent failure, the combination switch and the control unit are OK at this time. Check pinfits and connections. ■

7. Turn the ignition switch OFF.
8. Disconnect the combination light switch 12P connector from the wiper/washer switch.
9. Perform the combination light switch test (see page 22-182).

Is the combination light switch OK?

YES—Faulty combination switch control unit, replace the wiper/washer switch. ■

NO—Replace the combination light switch. ■



DTC B1279: Headlight Switch DIMMER Position Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF and then back ON (II), then turn the headlight switch ON.
3. Change the combination light switch from low beam to high beam and wait for 2 seconds.
4. Pull and hold the combination light switch lever and keep the passing switch position for more than 2 seconds.
5. Check for DTCs with the HDS.

Is DTC B1279 indicated?

YES—Go to step 6.

NO—Intermittent failure, the combination switch and the combination switch control unit are OK at this time. Check pinfits and connections. ■

6. Turn the ignition switch OFF.
7. Disconnect the combination light switch 12P connector from the wiper/washer switch.
8. Perform the combination light switch test (see page 22-182).

Is the combination light switch OK?

YES—Faulty combination switch control unit, replace the wiper/washer switch. ■

NO—Replace the combination light switch. ■

DTC B1280: Turn Signal Switch Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Turn the turn signal switch to the left position and wait for 2 seconds.
4. Turn the turn signal switch to the right position and wait for 2 seconds.
5. Check for DTCs with the HDS.

Is DTC B1280 indicated?

YES—Go to step 6.

NO—Intermittent failure, the turn signal light switch and the combination switch control unit are OK at this time. Check pinfits and connections. ■

6. Turn the ignition switch OFF.
7. Disconnect the combination light switch 12P connector from the wiper/washer switch.
8. Check for short in the turn signal light switch terminals in each switch position (see page 22-182).

Is there a short?

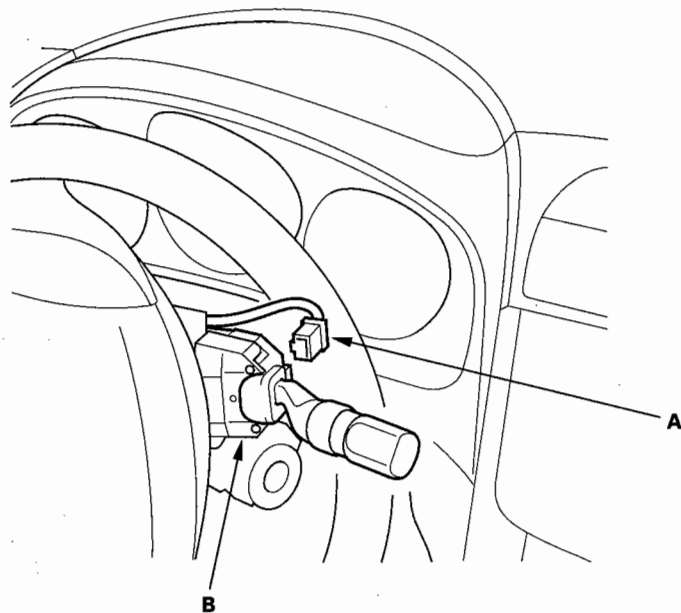
YES—Faulty, turn signal light switch, replace the combination light switch. ■

NO—Faulty combination switch control unit, replace the wiper/washer switch. ■

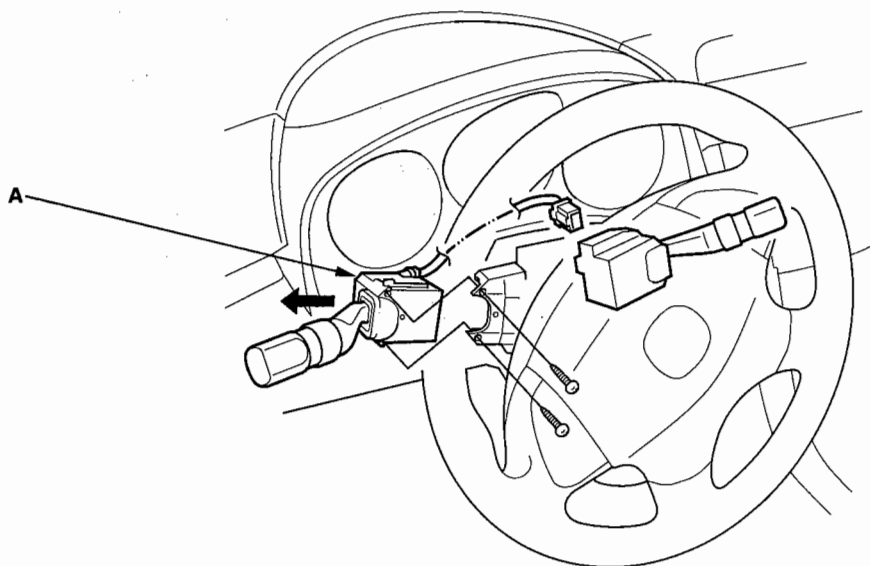
Exterior Lights

Combination Light Switch Test/Replacement

1. Remove the dashboard lower cover (see page 20-82).
2. Remove the steering column covers (see page 17-24).
3. Disconnect the combination light switch 12P connector (A) from the wiper/washer switch (B).



4. Remove the two screws, then slide out the combination light switch (A).





5. Inspect the connector 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, check for continuity between the terminals in each switch position according to the tables.

1	2	3	4	5	
7	8		10	11	12

Wire side of female terminals

Light switch:

Terminal		1	2	3	4	7	12
Position							
Headlight switch	OFF	○					○
	⌘					○	○
	LOW		○			○	○
	HIGH		○		○	○	○
Passing switch	OFF						
	ON			○			○

Turn signal switch:

Terminal	4	10	12
Position			
LEFT	○		○
Neutral			
RIGHT		○	○

Fog light switch:

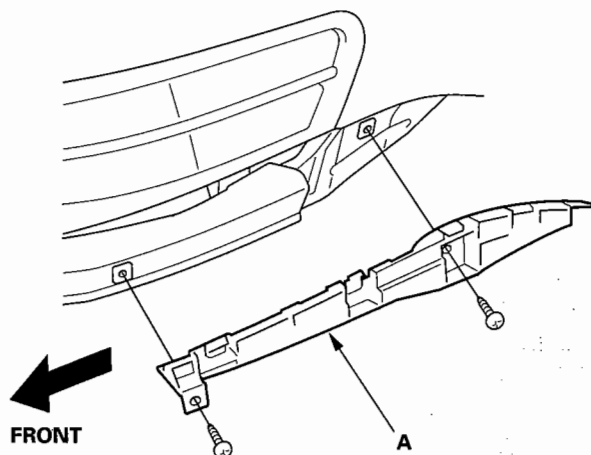
Terminal	5	12
Position		
OFF		
ON	○	○

6. If the continuity check is not as specified, replace the switch.

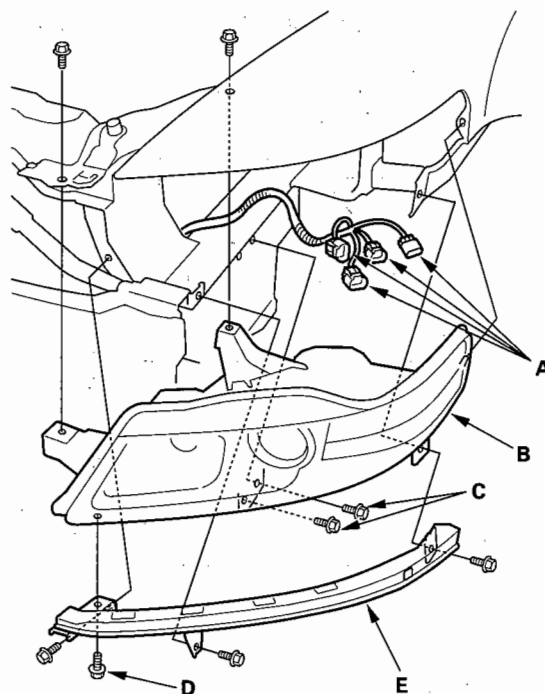
Exterior Lights

Headlight Replacement

1. Remove the front bumper (see page 20-118).
2. Remove the two screws and front bumper spacer (A).



3. Remove the connectors (A) from the headlight assembly (B).



4. Remove the seven mounting bolts and the headlight. For the right headlight assembly, remove the washer reservoir tank (see page 22-252) to access mounting bolts (C).
5. Remove the bolt (D) and the corner upper beam (E) from the headlight.
6. Install the headlight in the reverse order of removal.
7. After replacement, adjust the headlights to local requirement.

Headlight Adjustment

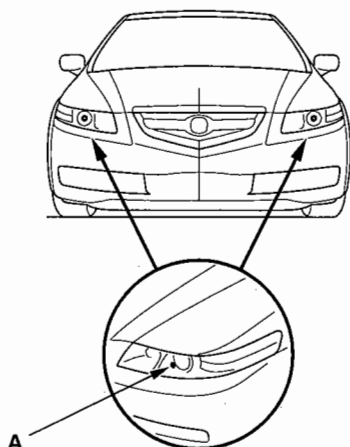
⚠ CAUTION

Headlights become very hot during use; do not touch them or any attaching hardware immediately after they have been turned off.

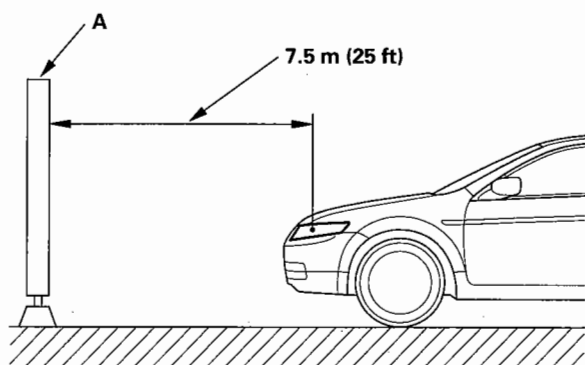
Before adjusting the headlights:

- Park the vehicle on a level surface.
- Make sure the tire pressures are correct.
- Have the driver or someone who weights the same sit in the driver's seat.

1. Clean the outer lens so that you can see the center (A) of the headlights.



2. Park the vehicle 25 ft (7.5 m) away from a wall or a screen (A).

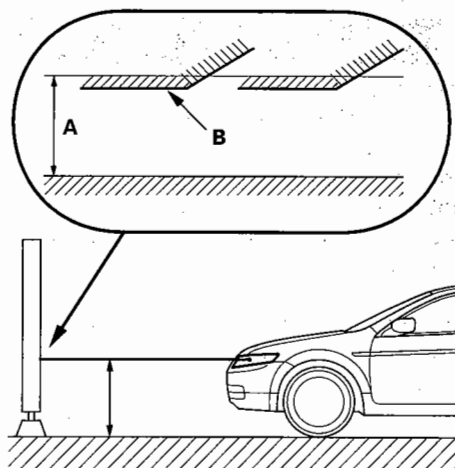


3. Turn the low beams on.

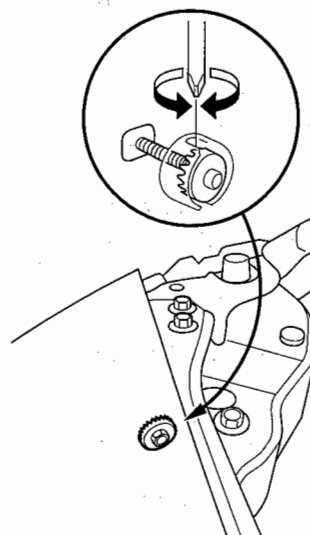
4. Determine if the headlights are aimed properly.

Vertical adjustment:

Measure the height of the headlights (A). The lights should reflect 52 mm (2.1 in.) below headlight height (B).



5. If necessary, open the hood and adjust the headlights to local requirements by turning the vertical adjuster.



Exterior Lights

HID Lamp System Troubleshooting

⚠ WARNING

A transient high tension (25,000 V) occurs at the bulb sockets or the high intensity discharge (HID) lamps when the combination light switch is turned ON, it may cause serious electrical shock or electrocution if you do not observe the cautions below.

⚠ CAUTION

- Never turn on the combination light switch before fitting the HID bulbs to their bulb sockets and completing the reassembly of the headlight assembly.
- Do not service the headlights assembly in wet conditions, such as rain or snow, near a sprinkler system, or when your hands are wet to prevent electrocution.
- Do not touch the surface of the HID bulbs with your bare hands and do not stain it with any oils and fats.
- Do not disassemble the inverter unit and the ignitor unit.
- Do not turn on the HID bulb by using a power source other than the battery mounted on your vehicle.

1. Check the No. 1 (15A) and No. 6 (15A) fuses in the under-hood fuse/relay box.

Are the fuses OK?

YES—Go to step 2.

NO—Replace the fuse(s), and recheck. ■

2. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the channels for the XM radio presets. Make sure the ignition switch is OFF.
3. Turn the combination light switch OFF.
4. Disconnect the battery negative cable, then disconnect the positive cable.
5. Remove the bulb socket from the HID bulb (see page 22-187).
6. Substitute a known-good HID bulb reassemble and recheck.

Does the headlight come on?

YES—Replace the original HID bulb. ■

NO—Go to step 7.

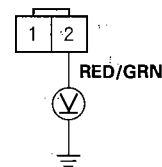
7. Reconnect the battery positive cable and negative cable.

8. Disconnect the 2P connector from the HID unit.

9. Turn the combination light switch ON.

10. Measure voltage between the No. 2 terminal of the HID unit 2P connector and body ground.

HID UNIT 2P CONNECTOR



Wire side of female terminals

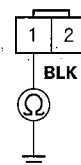
Is there battery voltage?

YES—Go to step 11.

NO—Repair open in the wire between the under-hood fuse/relay box and the HID unit. ■

11. Turn the combination light switch OFF.
12. Check for continuity between the No. 1 terminal of the HID unit 2P connector and body ground.

HID UNIT 2P CONNECTOR



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good HID, and recheck. If the symptom/indication goes away, replace the original inverter unit. ■

NO—Repair open in the wire between the HID unit and body ground. If the wire is OK, check for poor ground at G201 or G301. ■

NOTE: Enter the anti-theft codes for the radio and the navigation system, then enter the customer's XM radio channel presets.



HID Bulb Replacement

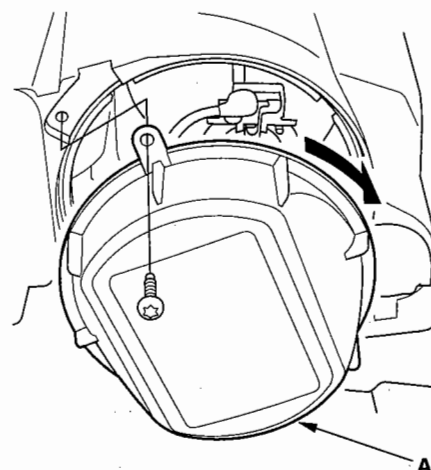
⚠ WARNING

A transient high tension (25,000 V) occurs at the bulb sockets of the high intensity discharge (HID) lamps when the combination light switch is turned ON, it may cause serious electrical shock or electrocution if you do not observe the cautions below.

⚠ CAUTION

- Never turn on the combination light switch before fitting the HID bulbs to their bulb sockets and completing the reassembly of the headlight assembly.
- Do not service the headlights assembly in wet conditions, such as rain or snow, near a sprinkler system, or when your hands are wet to prevent electrocution.
- Do not touch the surface of the HID bulbs with your bare hands and do not stain it with any oils and fats.
- Do not disassemble the inverter unit and the ignitor unit.
- Do not turn on the HID bulb by using a power source other than the battery mounted on your vehicle.

1. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the XM radio channel preset. Make sure the ignition switch is OFF.
2. Turn the combination light switch OFF.
3. Disconnect the battery negative cable, then disconnect the positive cable.
4. Remove the headlight assembly (see page 22-184).
5. Remove the Torx bolt using a tamper-proof Torx T20 bit.



6. Turn the cover (A) 45° counterclockwise to remove it from the headlight assembly.

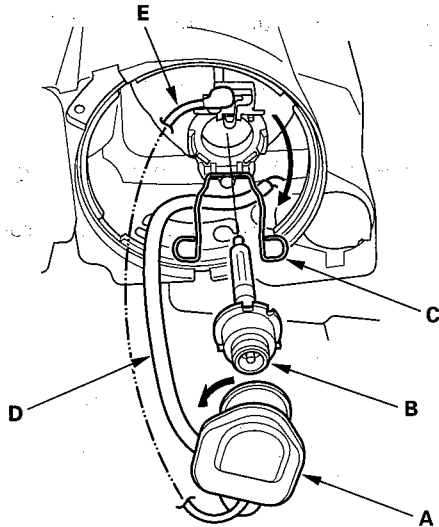
(cont'd)

Exterior Lights

HID Bulb Replacement (cont'd)

7. Turn the socket (A) 45° counterclockwise to remove it from the bulb (B).

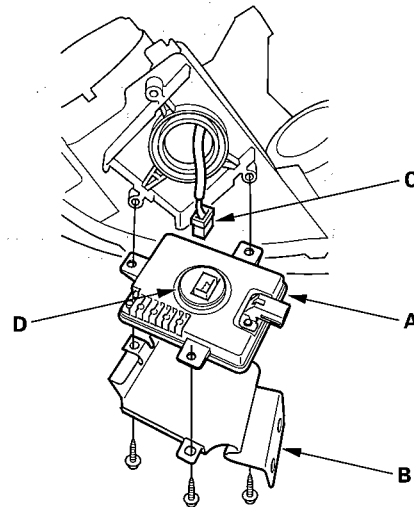
Headlight: 35 W



8. Pull the retaining spring (C) away from the bulb then remove the bulb.
9. Make sure the bulb harness (D) is routed correctly so it does not contact the reflector (E).
10. Install the new bulb in the reverse order of removal. Make sure the notches in the bulb align with the tabs in the headlight.
11. After reconnecting the battery, enter the anti-theft codes for the radio and the navigation system, then enter the customer's XM radio channel presets.

HID Unit Replacement

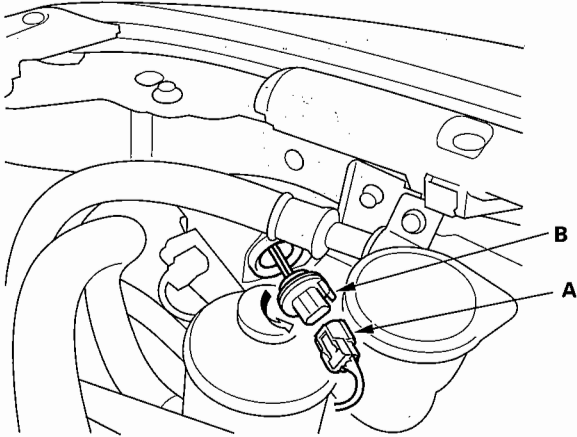
1. Make sure you have the anti-theft code for the radio and the navigation system, then write down the channels for the XM radio presets. Make sure the ignition switch is OFF.
2. Turn the combination light switch OFF.
3. Disconnect the battery negative cable, then disconnect the positive cable.
4. Remove the headlight assembly (see page 22-184).
5. Remove the bulb socket from the HID bulb (see page 22-187).
6. Remove the three mounting screws, the HID unit (A) and HID unit cover (B).



7. Disconnect the 4P connector (C) from the HID unit.
8. Inspect the gasket (D) for damage. If damaged, replace it.
9. Install in the reverse order of removal.
10. Enter the anti-theft codes for the radio and the navigation system, then enter the customer's XM radio channel presets.

High/Low Beam Switching Solenoid Test

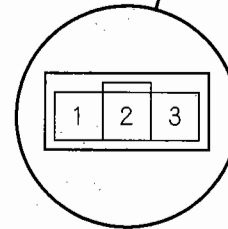
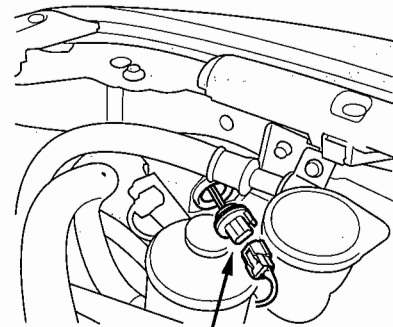
1. Remove the battery cover (left side) or right front fender trim (right side) (see page 20-131).
2. Disconnect the 3P connector (A) from the high/low switching solenoid connector (B).



NOTE: The illustration shows right side.

3. Turn the solenoid connector 45° counterclockwise, and pull it out slightly from the headlight housing.

4. Check the solenoid operation by connecting power to the No. 3 terminal and ground the No. 2 terminal momentarily. The solenoid should work.



Terminal side of male terminals

5. If the solenoid does not work, replace the headlight assembly.

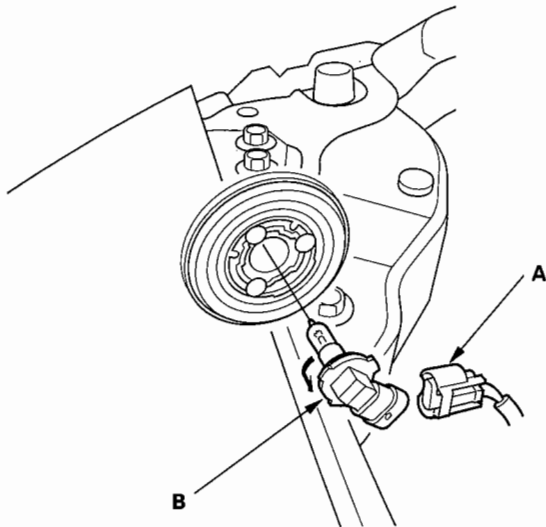
Exterior Lights

Bulb Replacement

Fog Light (USA)/Daytime Running Lights (Canada)

1. Disconnect the 2P connector (A) from the light.

Fog Light: 51 W
Daytime Running Light: 60 W



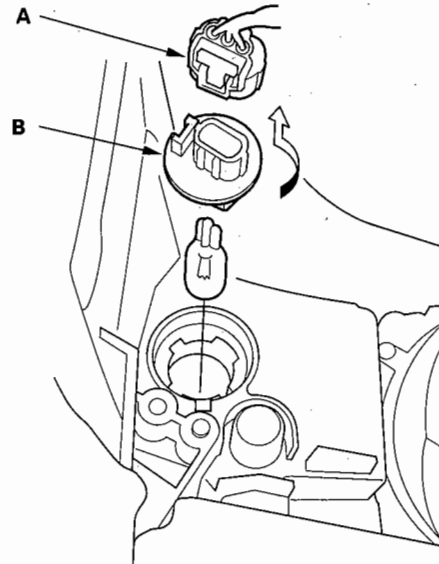
2. Turn the bulb socket (B) 45° counterclockwise to remove it from the headlight housing.
3. Install a new bulb in the reverse order of removal. Make sure the notches in the bulb align with the tabs in the headlight.

NOTE: Do not touch the glass of the bulb with your hands. If necessary, clean the glass area with alcohol.

Front Turn Signal/Front Parking Light

1. Remove the inner fender (see page 20-142).
2. Disconnect the 3P connector (A) from the front turn signal/front parking light.

Front Turn Signal/Front Parking Light: 21/5 W



3. Turn the bulb socket (B) 45° counterclockwise to remove it from the headlight housing.
4. Install a new bulb in the reverse order of removal.

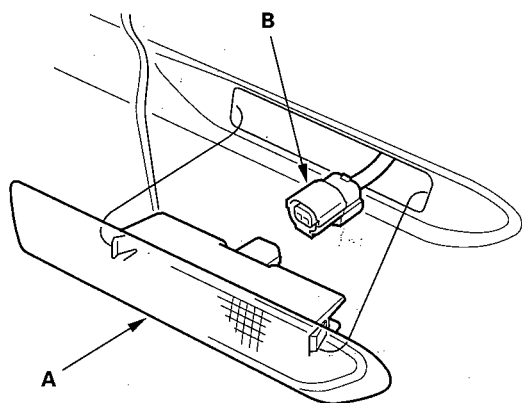
Side Marker Light Replacement

1. Remove the inner fender (see page 20-142) and front fender fairing (see page 20-144), or the trunk side trim panel* (see page 20-68).

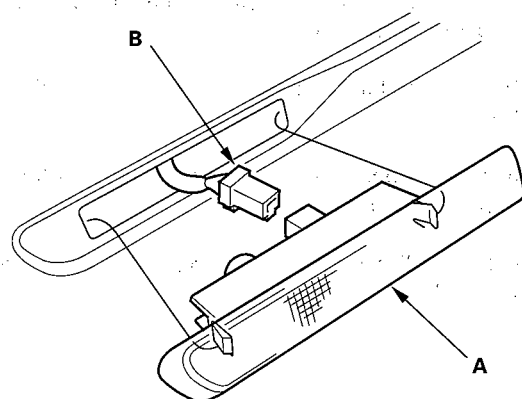
2. Carefully push out the light (A) from behind the fender or trunk*.

* : Rear Side Marker Light

Front Side Marker Light



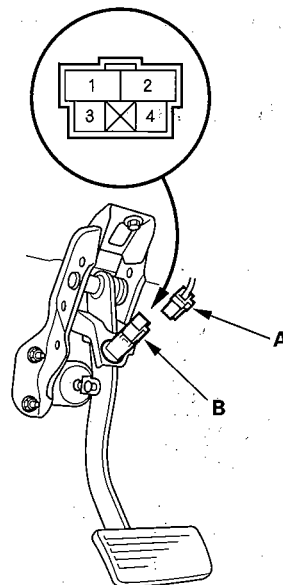
Rear Side Marker Light



3. Disconnect the 2P connector (B) from the light.
4. Install in the reverse order of removal.

Brake Pedal Position Switch Test

1. Disconnect the 4P connector (A) from the brake pedal position switch (B).



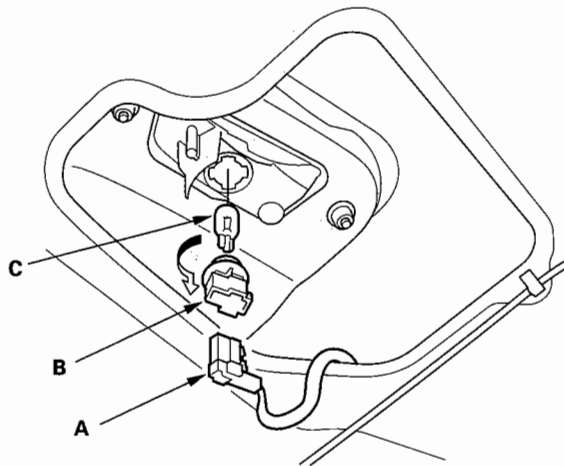
2. Check for continuity between the No. 1 and No. 2 terminals.
 - There should be continuity when the brake pedal is pressed.
 - There should be no continuity when the brake pedal is released.
3. Check for continuity between the No. 3 and No. 4 terminals.
 - There should be no continuity when the brake pedal is pressed.
 - There should be continuity when the brake pedal is released.
4. If necessary, adjust or replace the switch, or adjust the pedal height (see page 19-6).

Exterior Lights

Back-up Light Bulb Replacement

1. Open the trunk lid and remove the trunk lid trim (see page 20-69).
2. Disconnect the 2P connector (A) from the back-up light.

Back-up Light: 21 CP

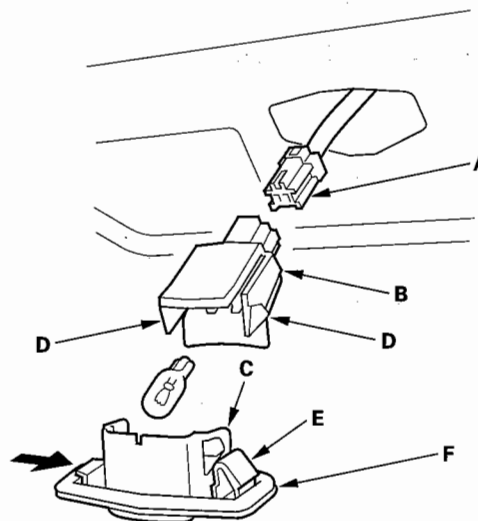


3. Turn the bulb socket (B) 45° counterclockwise, then remove the bulb (C).
4. Install the bulb in the reverse order of removal.

License Plate Light Replacement

1. Open the trunk lid, and remove the trunk lid trim (see page 20-69).
2. Disconnect the 2P connector (A) from the light.

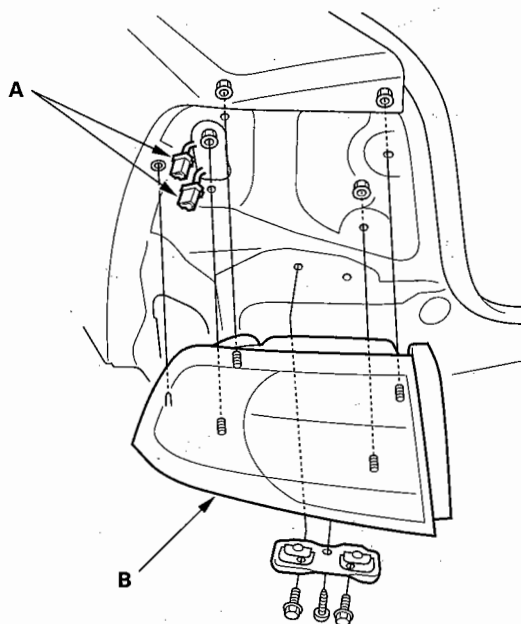
License Plate Light: 3 CP



3. Release the bulb socket (B) from the lens (C) by pressing in on the tabs (D).
4. Remove the lens from the trunk lid by pressing on the tab (E).
5. Inspect the gasket (F), if the gasket is distorted or compressed, replace it.
6. Install the license plate light in the reverse order of removal.

Taillight Replacement

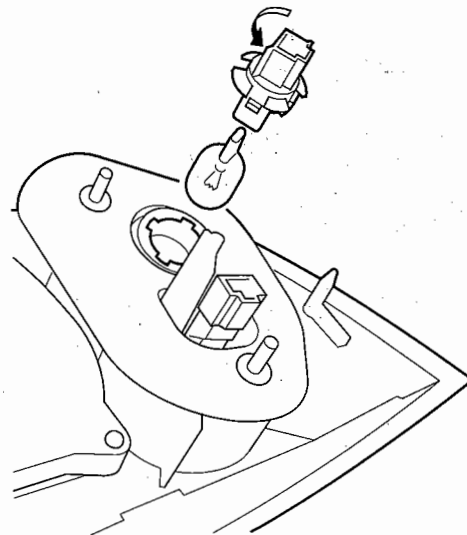
1. Remove the rear bumper (see page 20-120).
2. Open the trunk lid and remove the trunk side trim panel (see page 20-68).
3. Disconnect the connectors (A) from the taillights (B).



4. Remove the mounting nuts and screws, then remove the taillights.

5. Turn the turn signal light bulb socket 45° counterclockwise to remove the bulb.

Turn Signal Light: 21 W

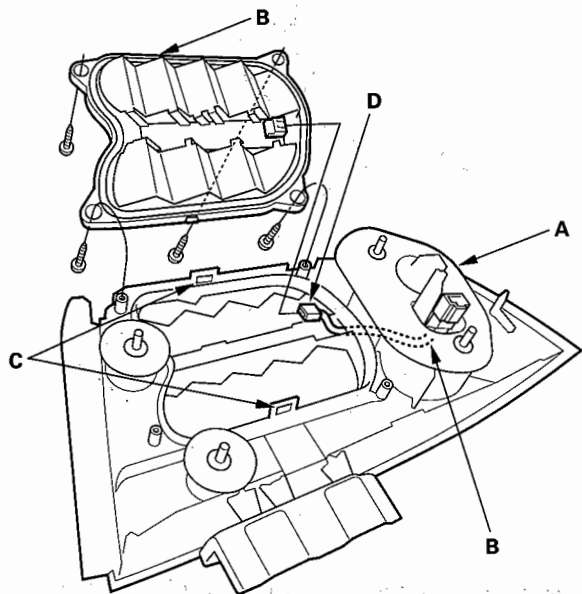


6. Inspect the gasket; replace it if it is distorted or stays compressed.
7. Install the taillight in the reverse order of removal and tighten the nuts to 5 N·m (0.5 kgf·m, 4 lbf·ft).
8. After installing the taillight, run water over it to make sure it does not leak.

Exterior Lights

Taillight/Brake Light LED Replacement

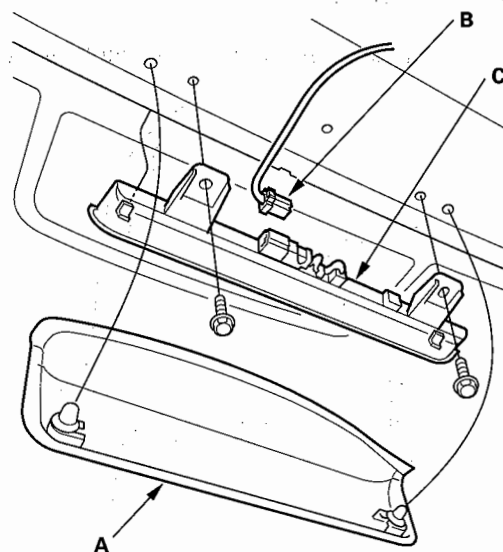
1. Remove the taillight (see page 22-193).
2. Remove the gasket (A) from the taillight.



3. Release and uncoil the taillight harness (B) from the taillight housing. Note the installation of the harness.
4. Remove the four screws and release the two tabs (C). Carefully disconnect the connector (D) from the taillight/brake light LED (E).
5. Inspect the gaskets. If the gaskets are distorted or compressed, replace them.
6. Install the new LED in the reverse order of removal.

High Mount Brake Light Replacement

1. Remove the high mount brake light cover (A).

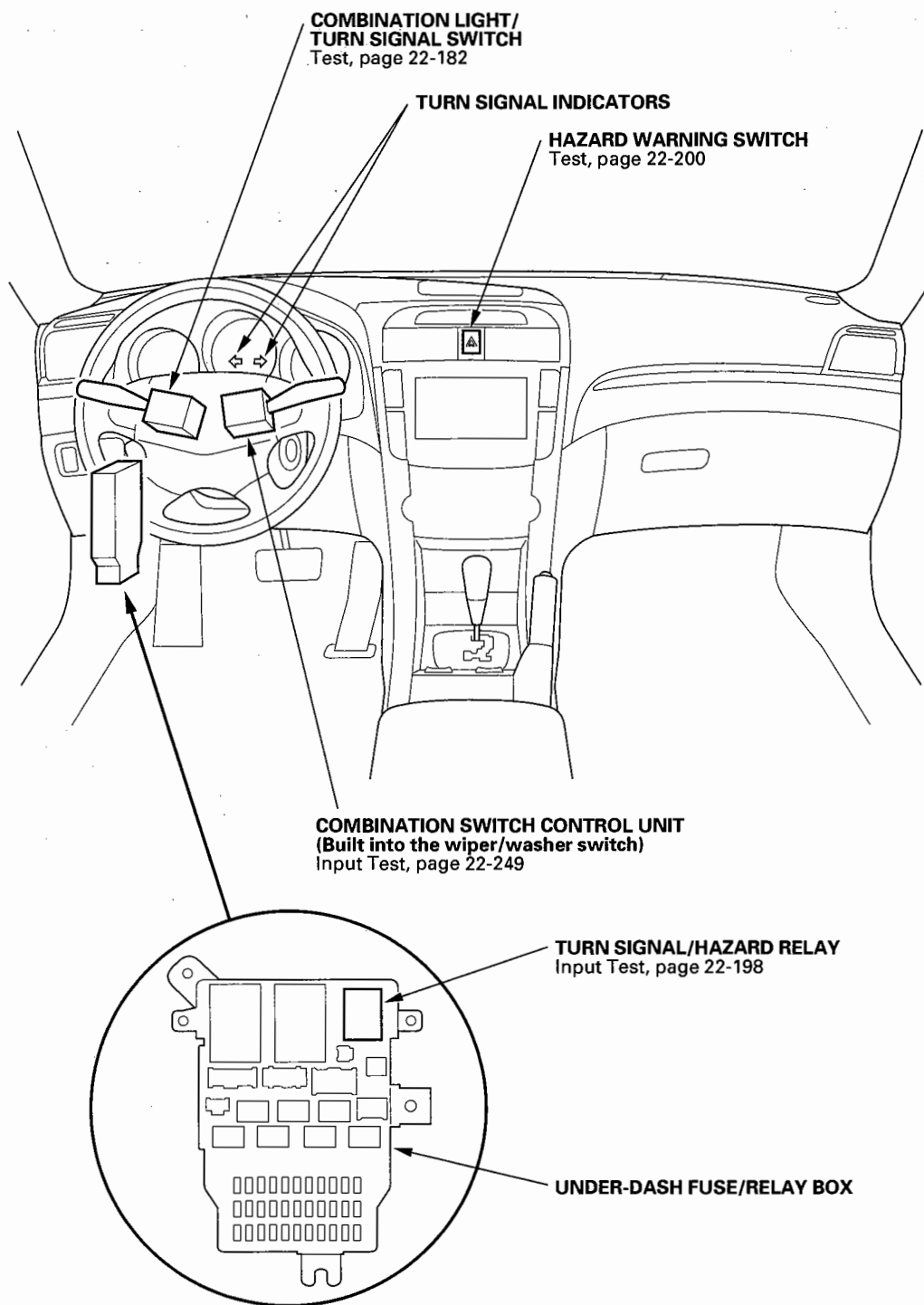


2. Disconnect the 2P connector (B) from the high mount brake light (C).
3. Remove the two bolts and the high mount brake light.
4. Install the light in the reverse order of removal.
5. Clean the rear window and install the high mount brake light cover in the reverse order of removal.



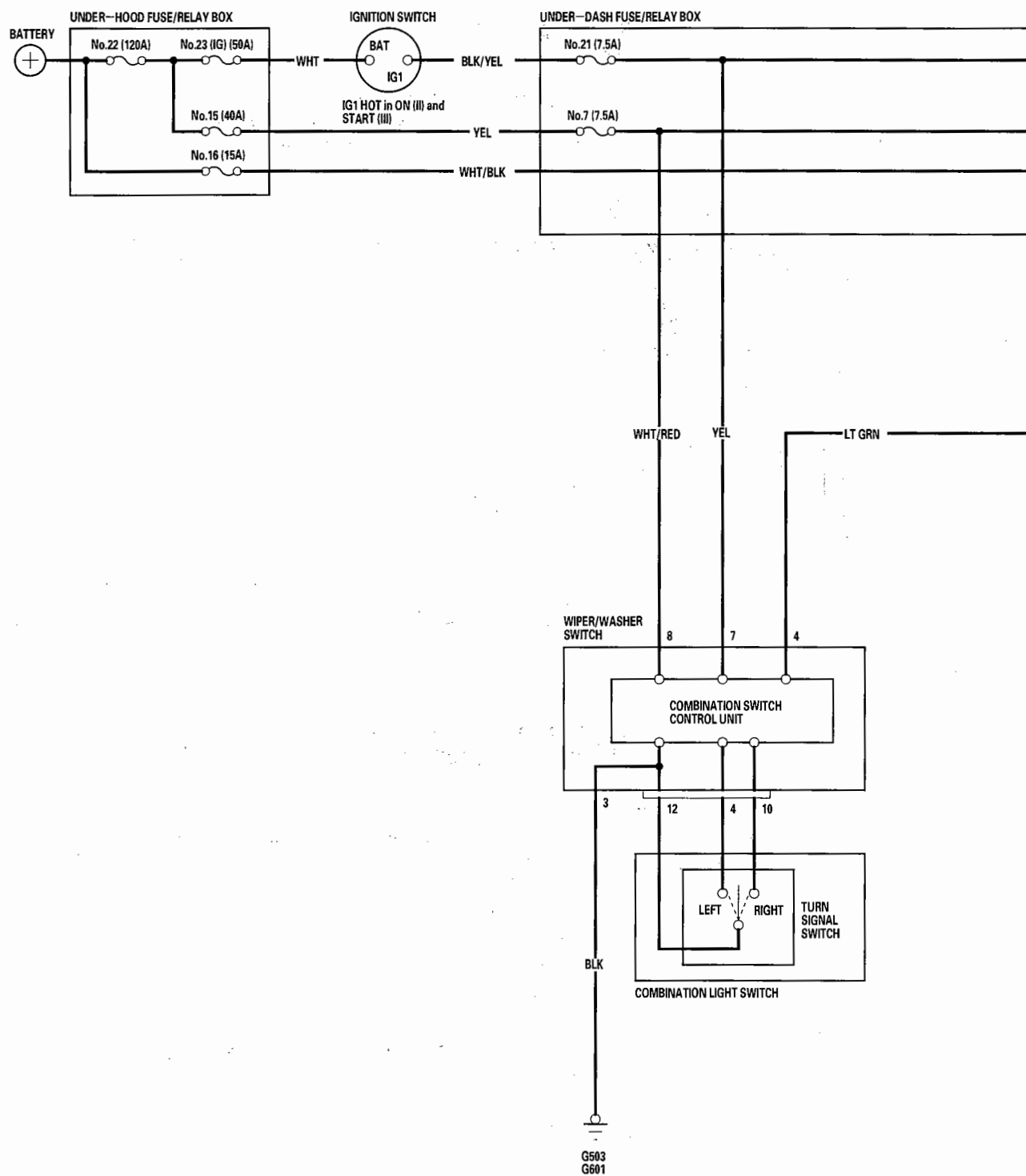
Turn Signal/Hazard Flasher

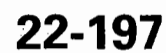
Component Location Index



Turn Signal/Hazard Flasher

Circuit Diagram

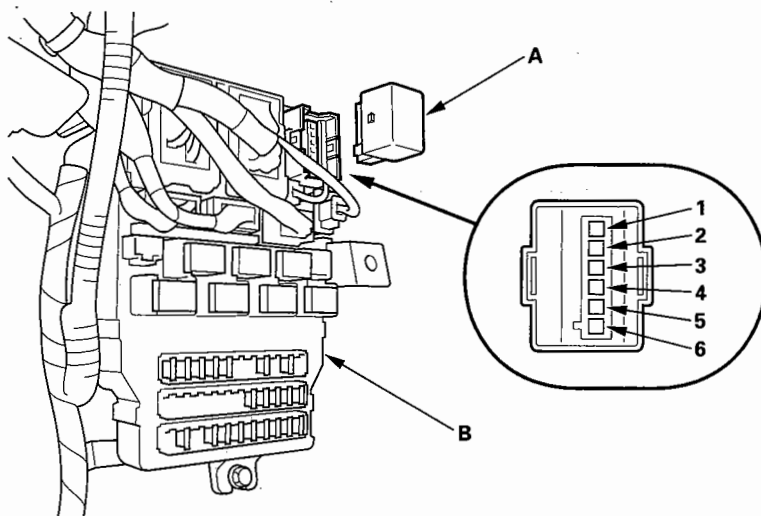




Turn Signal/Hazard Flasher

Turn Signal/Hazard Relay Input Test

1. Remove the turn signal/hazard relay (A) from the under-dash fuse/relay box (B).



2. Inspect the relay and fuse/relay box 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 3.



3. Make these input tests at the fuse/relay box.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, the turn signal/hazard relay must be faulty; replace it.

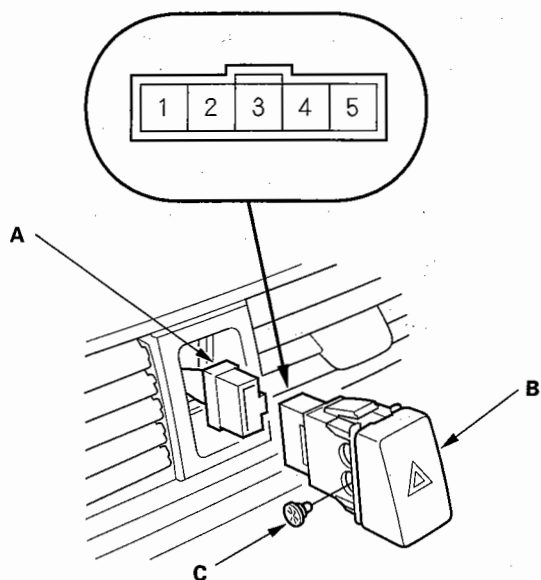
Cavity	Test condition	Test: Desired result	Possible cause if result is not obtained
6	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 16 (15A) fuse in the under-hood fuse/relay box • Faulty under-dash fuse/relay box • An open in the wire
1	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • Faulty under-dash fuse/relay box • An open in the wire
2	Connect the No. 6 terminal to the No. 2 terminal with a jumper wire.	Check the turn signal lights operation. The left turn signal lights and indicator should come on.	• Blown bulb • Poor ground (G301, G701) • An open in the wire
3	Connect the No. 6 terminal to the No. 3 terminal with a jumper wire.	Check the turn signal lights operation. The right turn signal lights and indicator should come on.	• Blown bulb • Poor ground (G201, G604) • An open in the wire
4	Ignition switch ON (II) and turn signal switch in Left position.	Check for voltage to ground. There should be about 10 V.	• Poor ground (G503, G601) • Faulty turn signal switch • Faulty under-dash fuse/relay box • An open in the wire • Faulty combination switch control unit* • Faulty MICU*
5	Ignition switch ON (II) and turn signal switch in Right position.	Check for voltage to ground. There should be about 10 V.	
4	Hazard warning switch ON	Check for voltage to ground. There should be about 10 V.	• Poor ground (G503, G601) • Blown No. 16 (15A) fuse in the under-hood fuse/relay box • Faulty under-dash fuse/relay box • Faulty hazard warning switch • An open in the wire • Faulty MICU*
5		Check for voltage to ground. There should be about 10 V.	

* : Go to the B-CAN System Diagnosis Test Mode A (see page 22-108).

Turn Signal/Hazard Flasher

Hazard Warning Switch Test

1. Remove the upper panel (see page 20-83).
2. Disconnect the 5P connector (A) from the hazard warning switch.



3. Remove the two mounting screws, then remove the hazard warning switch (B) from behind the upper panel.
4. Check for continuity between the terminals in each switch position according to the table.

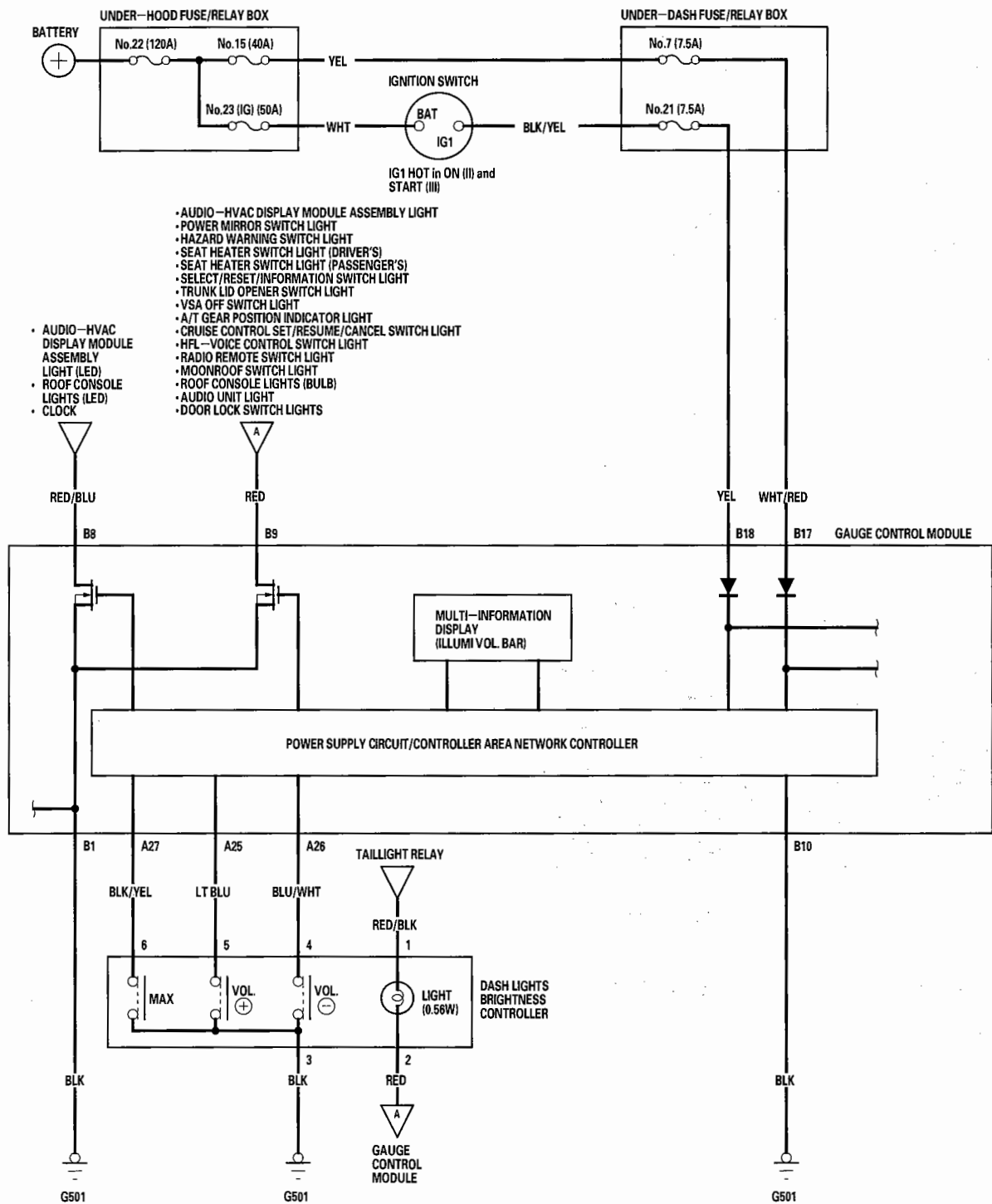
Terminal	1	2	3	4
Position				
OFF			○ — ○	○ — ○
ON	○ — ○		○ — ○	○ — ○

5. If the continuity is not as specified, replace the bulb (C) or the hazard warning switch.



Dash Lights Brightness Controller

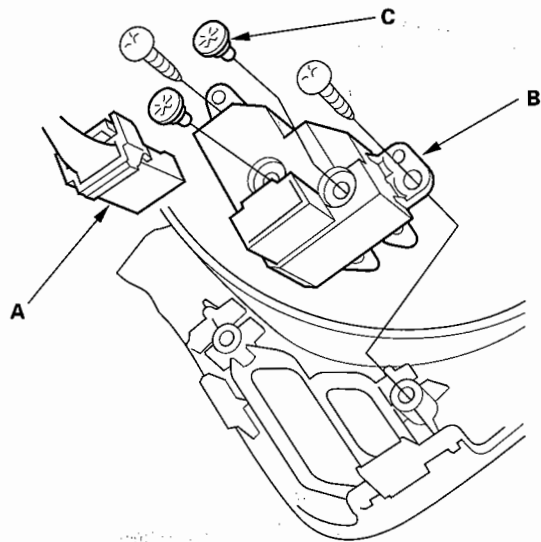
Circuit Diagram



Dash Lights Brightness Controller

Dash Lights Brightness Controller Test/Replacement

- 1. Remove the instrument panel (see page 20-82).
- 2. Disconnect the 6P connector (A) from the dash lights brightness controller (B).



- 3. Remove the two screws and the dash lights brightness controller.
- 4. Check for continuity between the terminals in each switch position according to the table.

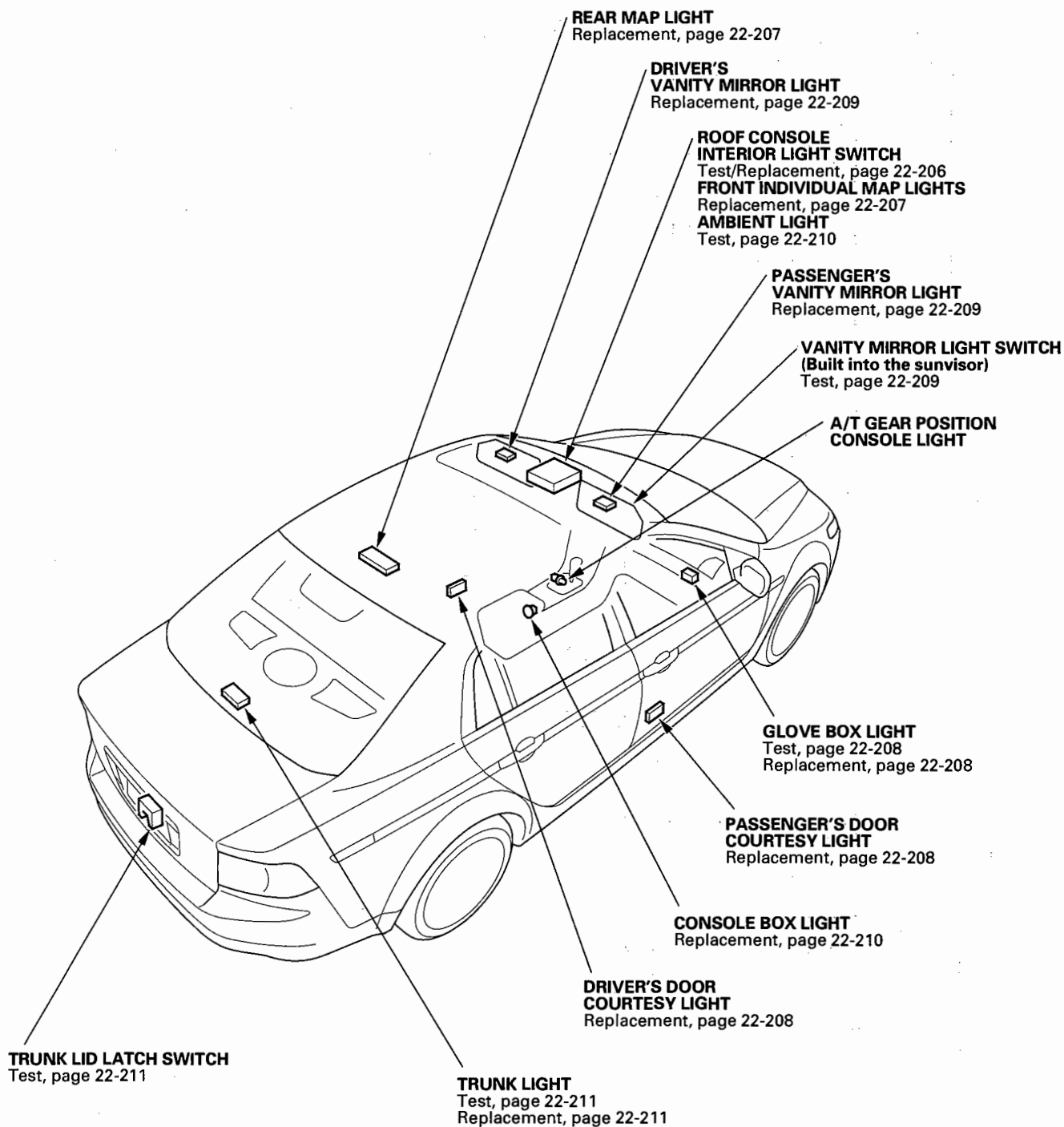
Terminal Position	3	4	5	6	1	2
ILLUMI (+)	○	—	○		○	○
ILLUMI (—)	○	○			○	○
MAX	○			○	○	○

- 5. If the continuity is not as specified, replace the switch.
- 6. If the bulb(s) (C) are faulty, replace the bulb(s).

Interior Lights

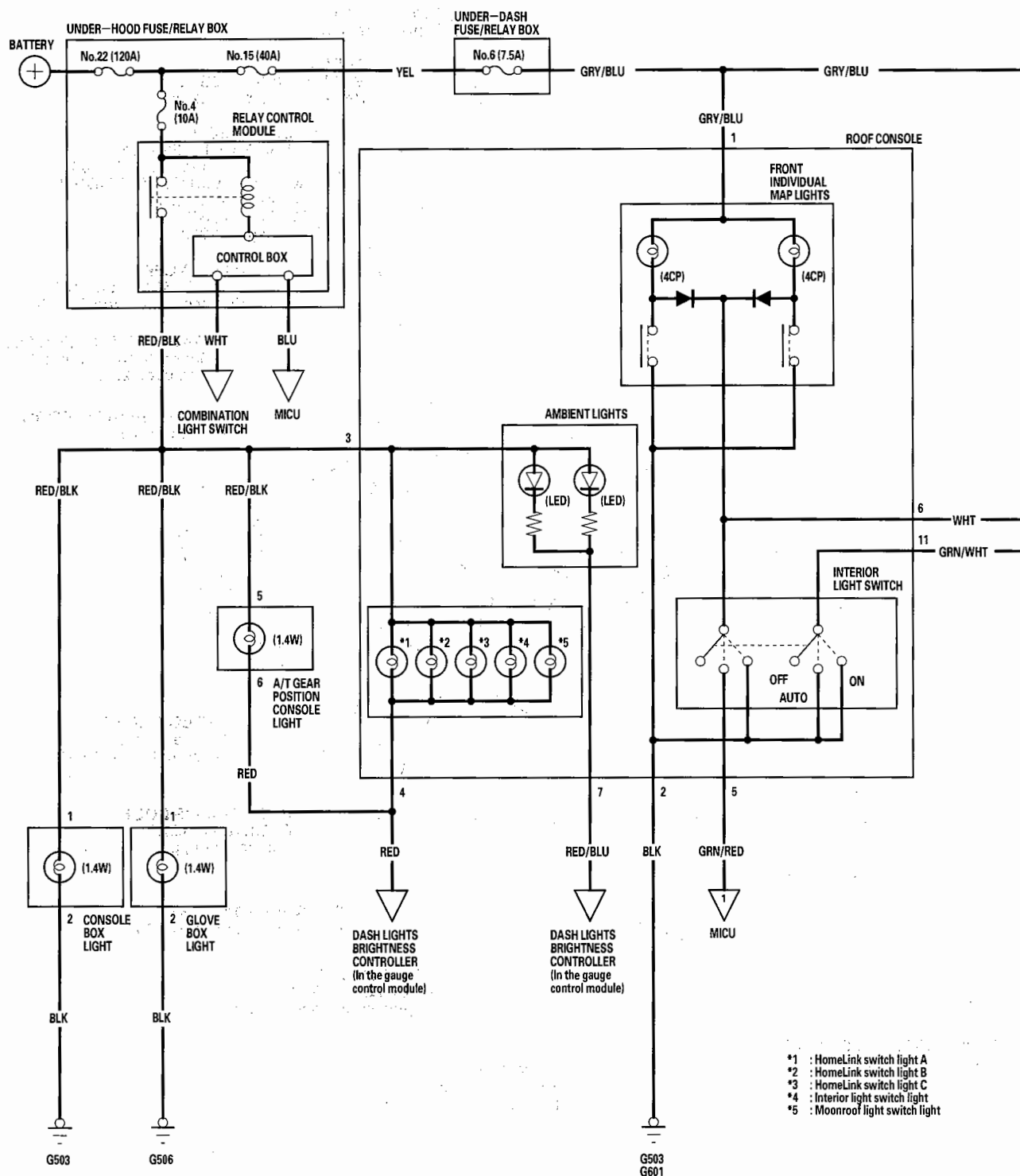


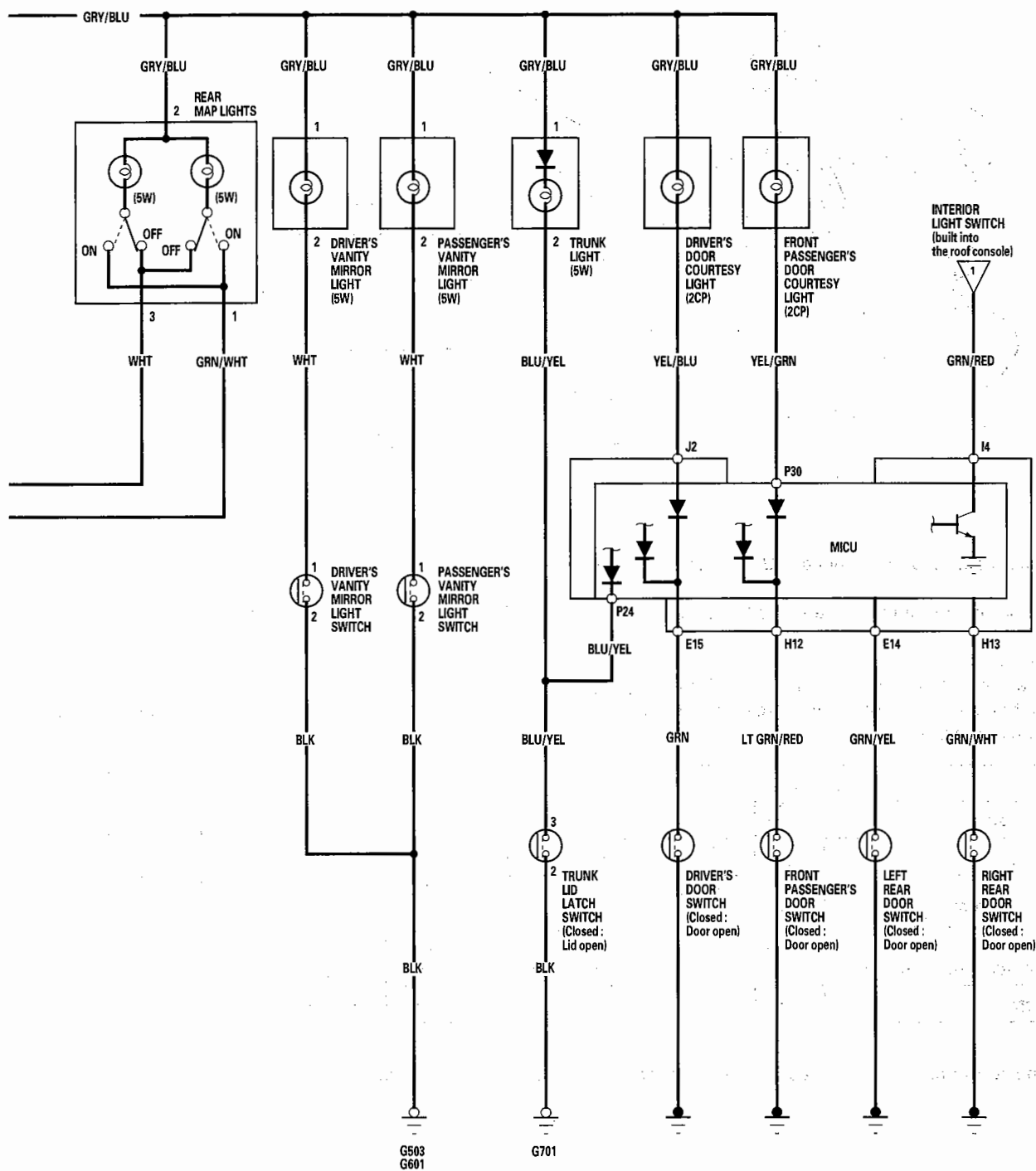
Component Location Index



Interior Lights

Circuit Diagram

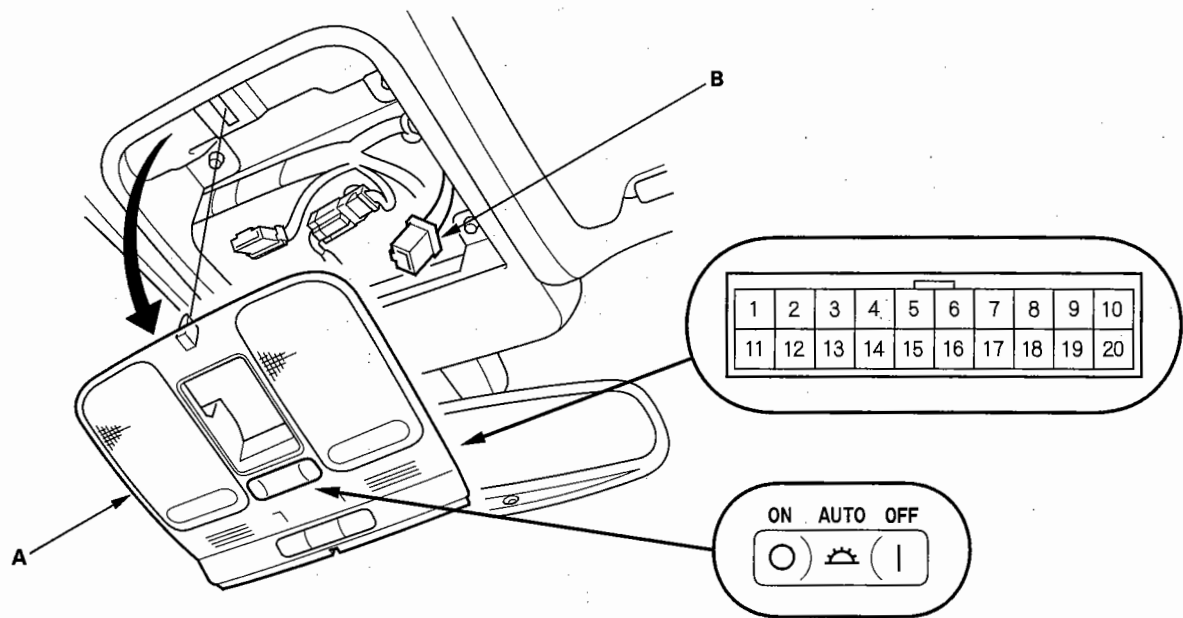




Interior Lights

Interior Light Switch Test/Replacement

- 1. Remove the moonroof switch (see page 22-290).
- 2. Carefully pull down the roof console (A).



- 3. Disconnect the 20P connector (B) from the roof console.
- 4. Check for continuity between the terminals in each interior light switch position according to the table.

NOTE:

- Before testing, check the front individual map light bulb(s).
- When check for continuity across the diode, use the diode setting (→|←) on the digital volt/ohm meter to check the diode bias.

Terminal		1		2	5	6	11
Position							
OFF	(O)	○	→ ←			○	
OFF (Front map light switch ON)	(O)	○	→ ←	○		○	
Middle (AUTO) position	(☀)	○	→ ←		○	○	
ON	()	○	→ ←	○		○	○

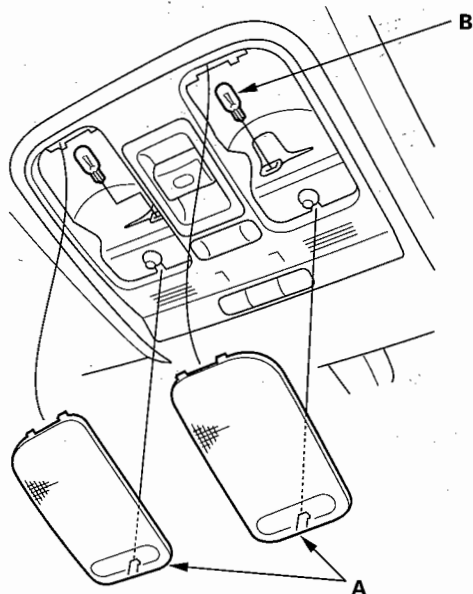
- 5. If the continuity is not as specified, replace the roof console as an assembly.



Front Individual Map Light Replacement

1. Carefully pry off the lens (A) with a small screwdriver.

Front Map Light: 4 CP x 2

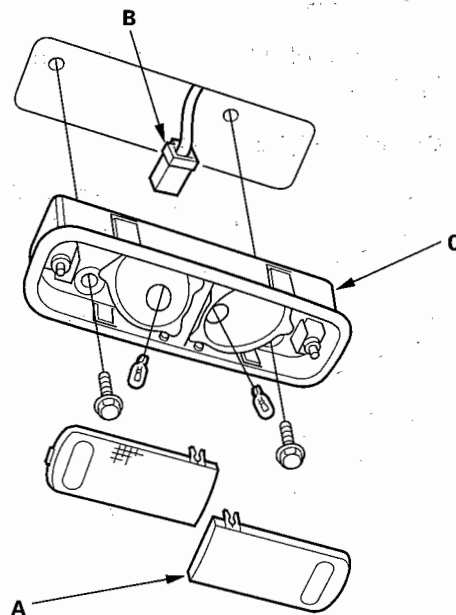


2. Check the bulb(s) (B). If the bulb is OK, but there is a malfunction, check the interior light switch (see page 22-206).

Rear Map Light Replacement

1. Carefully pry off the lens (A) with a small screwdriver.

Rear Map Light: 5 W x 2



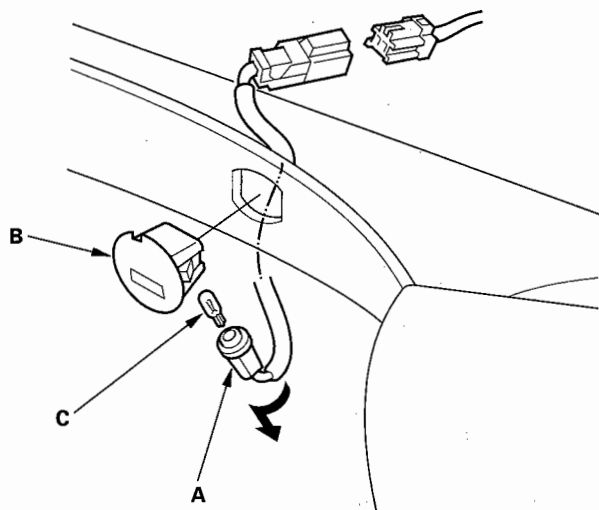
2. Remove the two mounting bolts.
3. Disconnect the 3P connector (B) from the rear map light (C).
4. Install in the reverse order of removal.

Interior Lights

Glove Box Light Test/Replacement

1. Remove the glove box stops and damper (see page 20-84).
2. Carefully pry the glove box light out of the glove box housing.
3. Twist the socket (A) to remove it from the glove box light (B).

Glove Box Light: 1.4 W

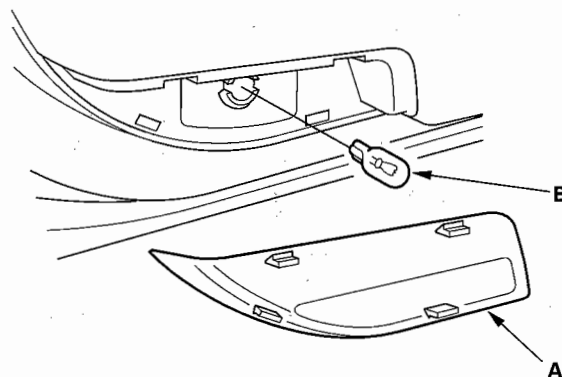


4. Remove the bulb (C) from the socket.
5. Install in the reverse order of removal.

Courtesy Light Replacement

1. Carefully pry off the lens (A) with a small screwdriver.

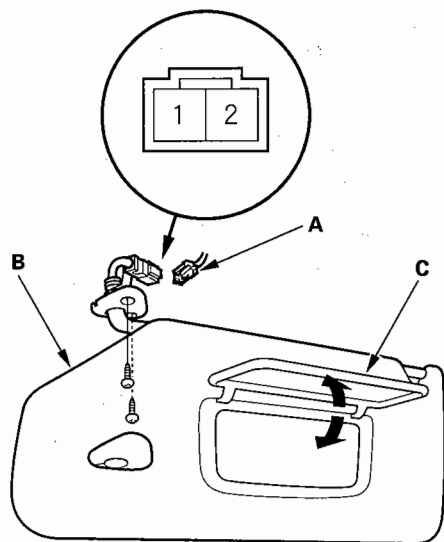
Courtesy Light: 2 CP



2. Remove the bulb (B) from the socket.
3. Install in the reverse order of removal.

Vanity Mirror Light Switch Test

1. Remove the sunvisor (see page 20-70).
2. Disconnect the 2P connector (A) from the sunvisor (B).



3. Check for continuity between the No. 1 and No. 2 terminals.

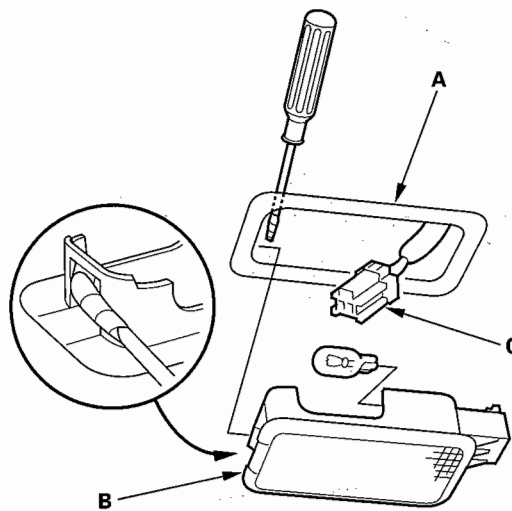
- With the vanity mirror cover (C) opened, there should be continuity.
- With the vanity mirror cover (C) closed, there should be no continuity.

4. If the continuity check is not as specified, replace the sunvisor.

Vanity Mirror Light Replacement

1. Wrap the tip of the screwdriver in tape.
2. Carefully slide the screwdriver between the metal mounting ring (A) and the headliner until the tip of the screwdriver is resting against the lens locking tab.

Vanity Mirror Light: 5 W



NOTE: Right side is shown. Left side is symmetrical.

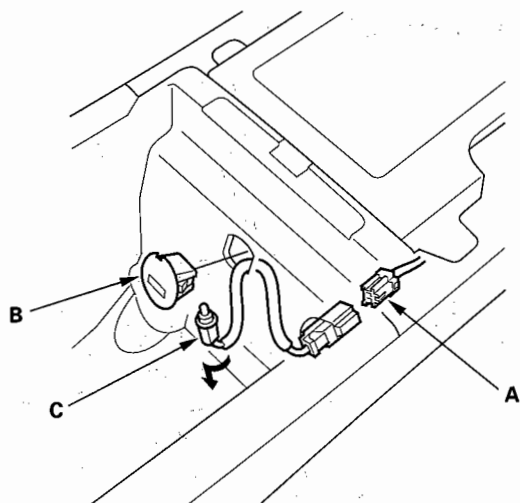
3. Rotate the screwdriver handle toward the center of the vehicle while pressing the tip of the screwdriver against the locking tab to release the lens.
4. Pull the lens (B) down.
5. Disconnect the 2P connector (C) from the light.
6. Install in the reverse order of removal.

Interior Lights

Console Box Light Replacement

1. Remove the center console (see page 20-77).
2. Disconnect the 2P connector (A) from the console box light.

Console Box Light: 1.4 W

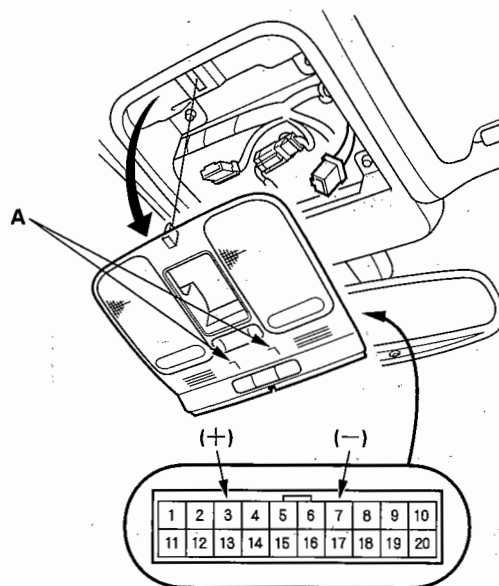


3. Carefully pry out the console box light lens (B).
4. Turn the bulb socket (C) 45° counterclockwise to remove it from the lens.

NOTE: If only replace the lens, it is not necessary to remove the center console box.

Ambient Light Test

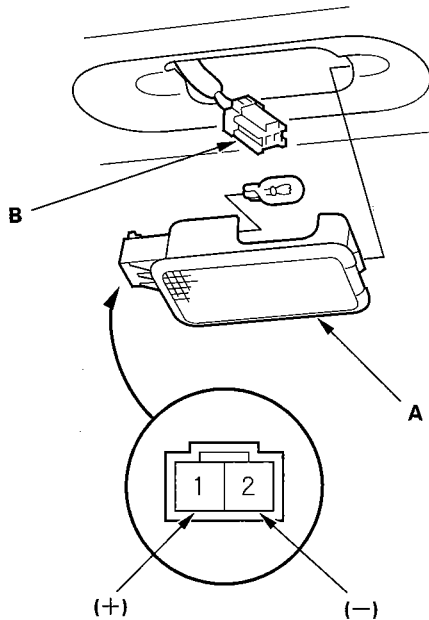
1. Remove the roof console and disconnect the 20P connector (see page 22-206).
2. Connect the roof console connector terminal No. 3 to battery power and terminal No. 7 to body ground. The ambient lights (A) should turn on. If they do not turn on, replace the roof console.



Trunk Light Test/Replacement

1. Open the trunk lid.
2. Carefully pry out the trunk light (A).

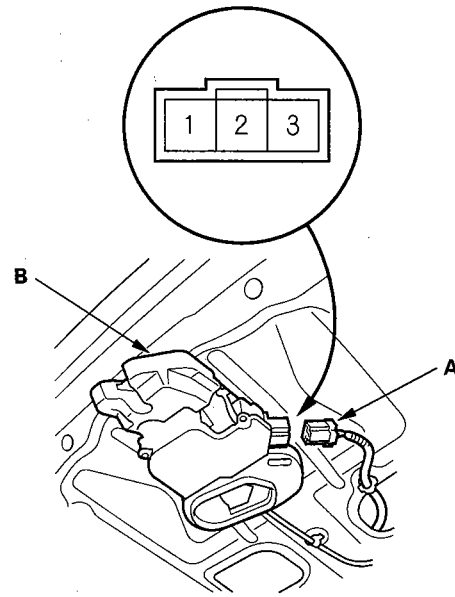
Trunk Light: 5 W



3. Disconnect the 2P connector (B) from the light.
4. Check for continuity between the No. 1 (+) and No. 2 (-) terminals. There should be continuity. If there is no continuity, check the bulb (C). If the bulb is OK, replace the trunk light.

Trunk Lid Latch Switch Test

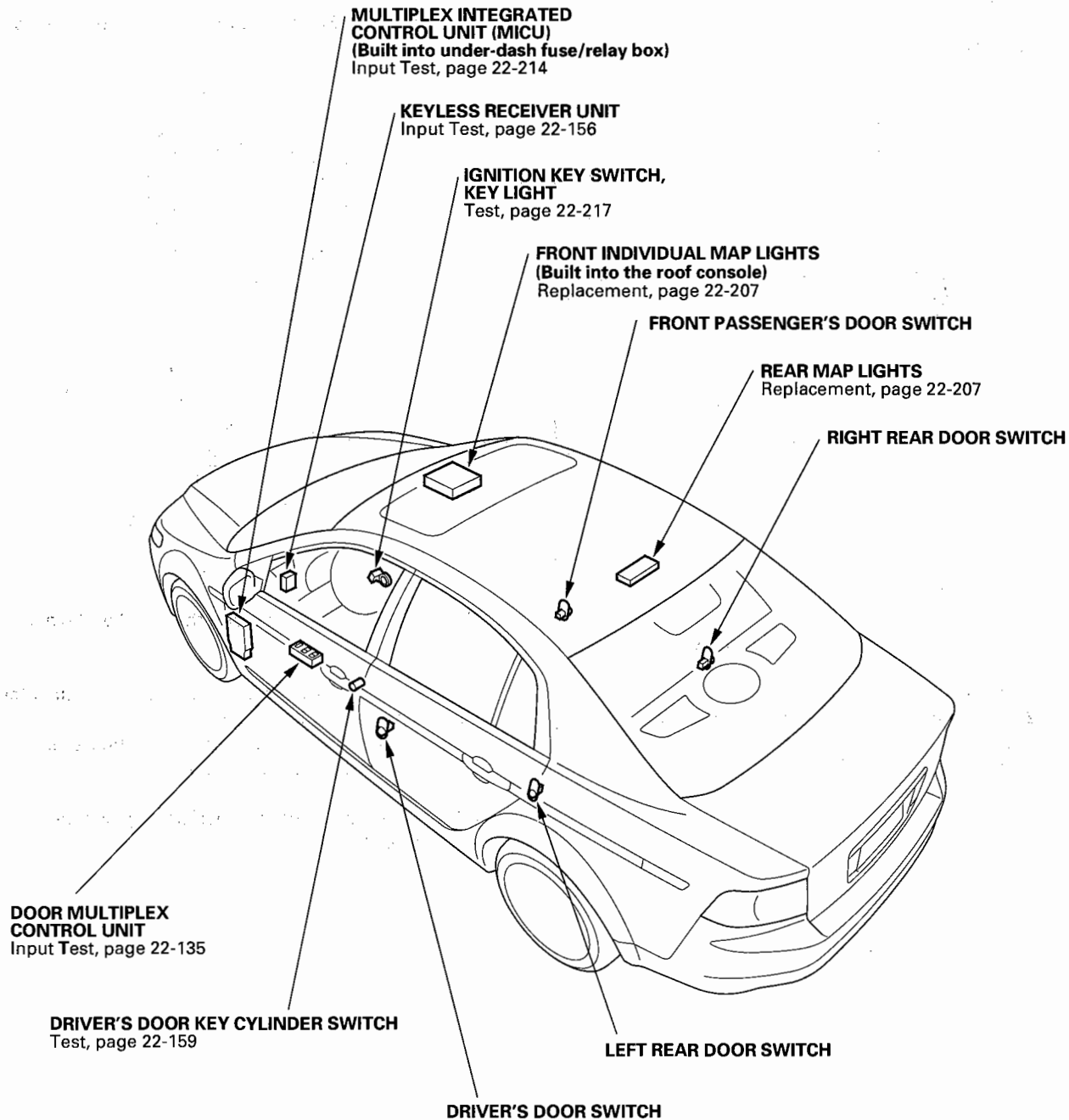
1. Open the trunk lid and remove the trunk lid trim (see page 20-69).
2. Disconnect the 3P connector (A) from the trunk lid latch (B).



3. Check for continuity between the No. 2 and No. 3 terminals.
 - There should be continuity with the trunk lid latch unlatched (trunk lid open).
 - There should be no continuity with the trunk lid latch latched (trunk lid closed).
4. If the continuity is not as specified, replace the trunk lid latch switch.

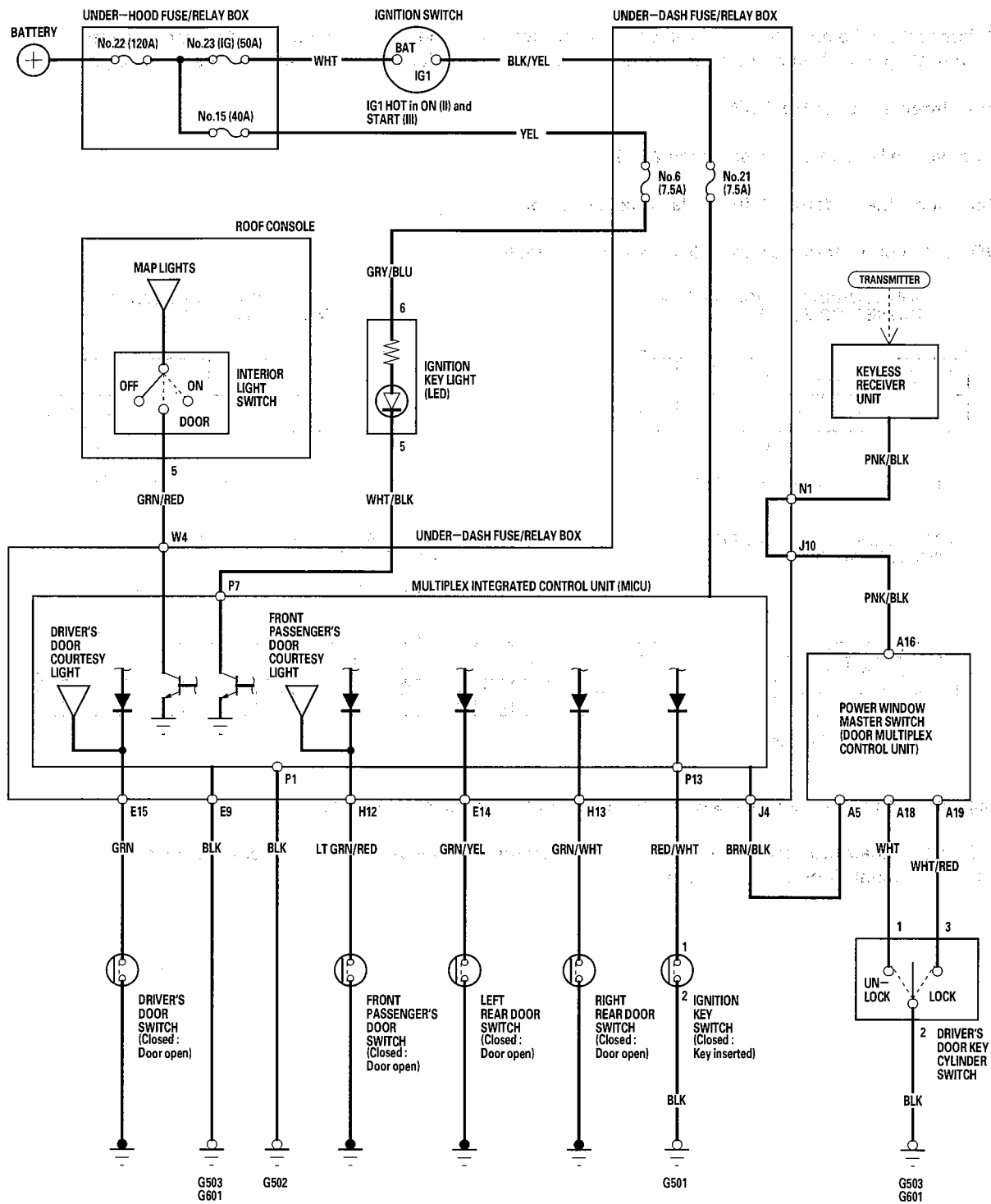
Entry Light Control System

Component Location Index





Circuit Diagram



Entry Light Control System

Control Unit Input Test

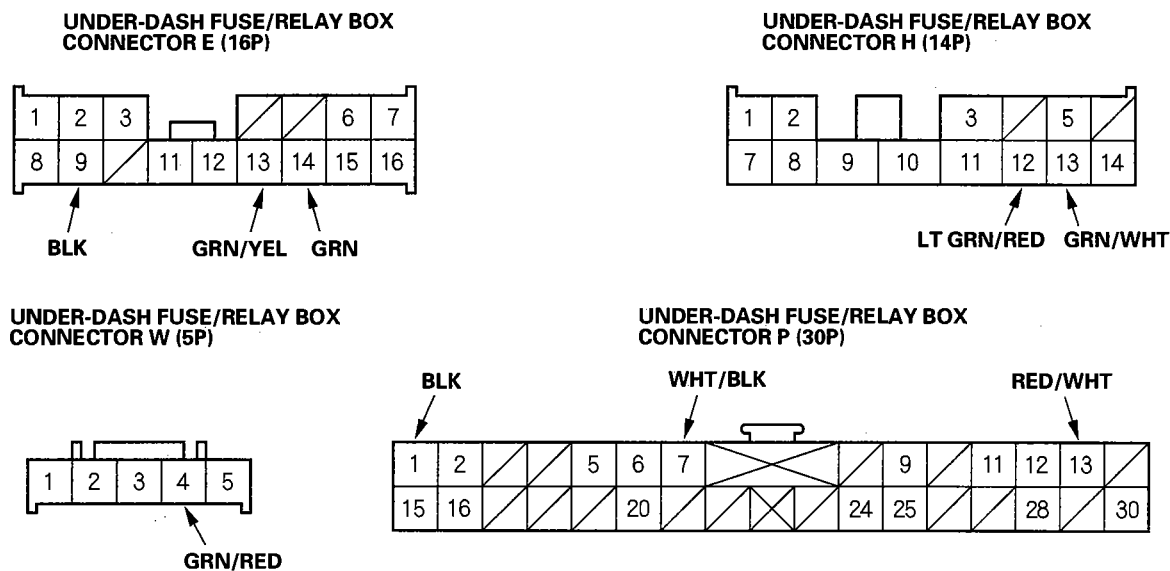
NOTE: Make sure the ignition switch is OFF before disconnecting the under-dash fuse/relay box connectors.

1. Before testing the entry light control functions, troubleshoot the multiplex integrated control system using B-CAN System Diagnosis Test Mode A (see page 22-108), and the keyless receiver unit input test (see page 22-156).

Multiplex Integrated Control Unit

2. Remove the left kick panel (see page 20-62).
3. Disconnect the under-dash fuse/relay box connectors.

NOTE: All connectors are wire side of female terminals.



4. Inspect the connector 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 5.



5. With the connectors still disconnected, make these input tests at the connector.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 6.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
P1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G502) • An open in the wire
E9	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G503, G601) • An open in the wire
P7	WHT/BLK	Under all conditions	Attach to ground: Ignition key light should come on.	• Blown No. 6 (7.5A) fuse in the under-dash fuse/relay box • Faulty ignition key light (LED) • An open in the wire
W4	GRN/RED	Interior light switch in middle (DOOR) position	Attach to ground: Front and rear map light(s) should come on.	• Blown No. 6 (7.5A) fuse in the under-dash fuse/relay box • Blown bulb • Faulty map light • An open in the wire

6. Reconnect the connectors to the under-dash fuse/relay box. Turn the ignition switch ON (II), and make these input tests at the appropriate connectors on the under-dash fuse/relay box.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 7.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
E15	GRN	Driver's door open	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door switch • An open in the wire
		Driver's door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty driver's door switch • Short to ground
H12	LT GRN/RED	Front passenger's door open	Check for voltage to ground: There should be 1 V or less.	• Faulty front passenger's door switch • An open in the wire
		Front passenger's door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty front passenger's door switch • Short to ground
E14	GRN/YEL	Left rear door open	Check for voltage to ground: There should be 1 V or less.	• Faulty left rear door switch • An open in the wire
		Left rear door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty left rear door switch • Short to ground
H13	GRN/WHT	Right rear door open	Check for voltage to ground: There should be 1 V or less.	• Faulty right rear door switch • An open in the wire
		Right rear door closed	Check for voltage to ground: There should be 5 V or more.	• Faulty right rear door switch • Short to ground
P13	RED/WHT	Ignition key inserted into the ignition switch	Check for voltage to ground: There should be 1 V or less.	• Poor ground (G501) • Faulty ignition key switch • An open in the wire
		Ignition switch OFF and the ignition key removed from the ignition switch	Check for voltage to ground: There should be 5 V or more.	• Faulty ignition key switch • Short to ground

(cont'd)

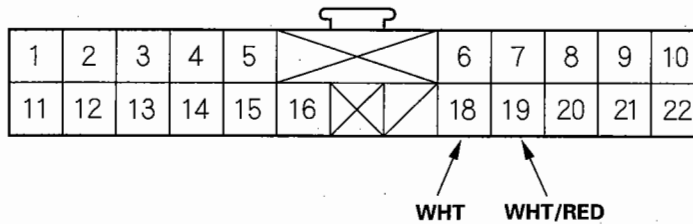
Entry Light Control System

Control Unit Input Test (cont'd)

Door Multiplex Control Unit

7. Turn the ignition switch OFF.
8. Remove the driver's door panel (see page 20-7).
9. Disconnect the 22P connector from the door multiplex control unit.
10. 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 11.

DOOR MULTIPLEX CONTROL UNIT CONNECTOR A (22P)



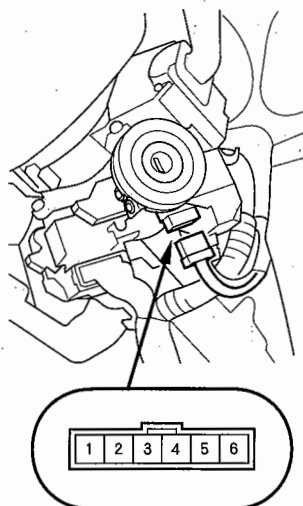
Wire side of female terminals

11. Reconnect the connector to the door multiplex control unit. Turn the ignition switch ON (II), and make these input tests at the appropriate connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the MICU must be faulty; replace the under-dash fuse/relay box.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A19	WHT/RED	Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire • Short to ground
		Driver's door key cylinder switch in the neutral position	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 5 V or more.	
A18	WHT	Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire • Short to ground
		Driver's door key cylinder switch in the neutral position	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 5 V or more.	

Ignition Key Switch Test

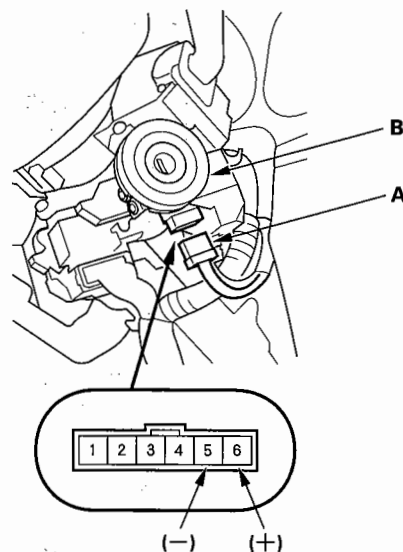
1. Remove the steering column upper and lower covers (see page 17-24).
2. Disconnect the 6P connector.



3. Check for continuity between the No. 1 and No. 2 terminals.
 - There should be continuity with the key in the ignition switch.
 - There should be no continuity with the key removed.
4. If the continuity is not as specified, replace the ignition switch.

Ignition Key Light Test

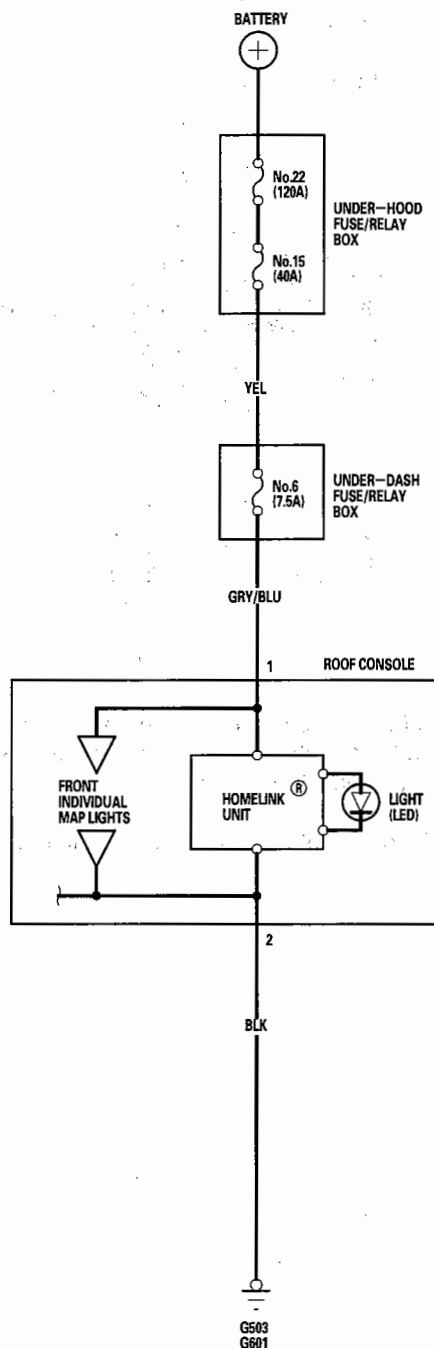
1. Remove the steering column upper and lower covers (see page 17-24).
2. Disconnect the 6P connector (A).



3. The LED (B) should come on when power is connected to the No. 6 terminal and ground is connected to No. 5 terminal.
4. If the LED does not come on, replace the ignition switch.

HomeLink Remote Control System

Circuit Diagram

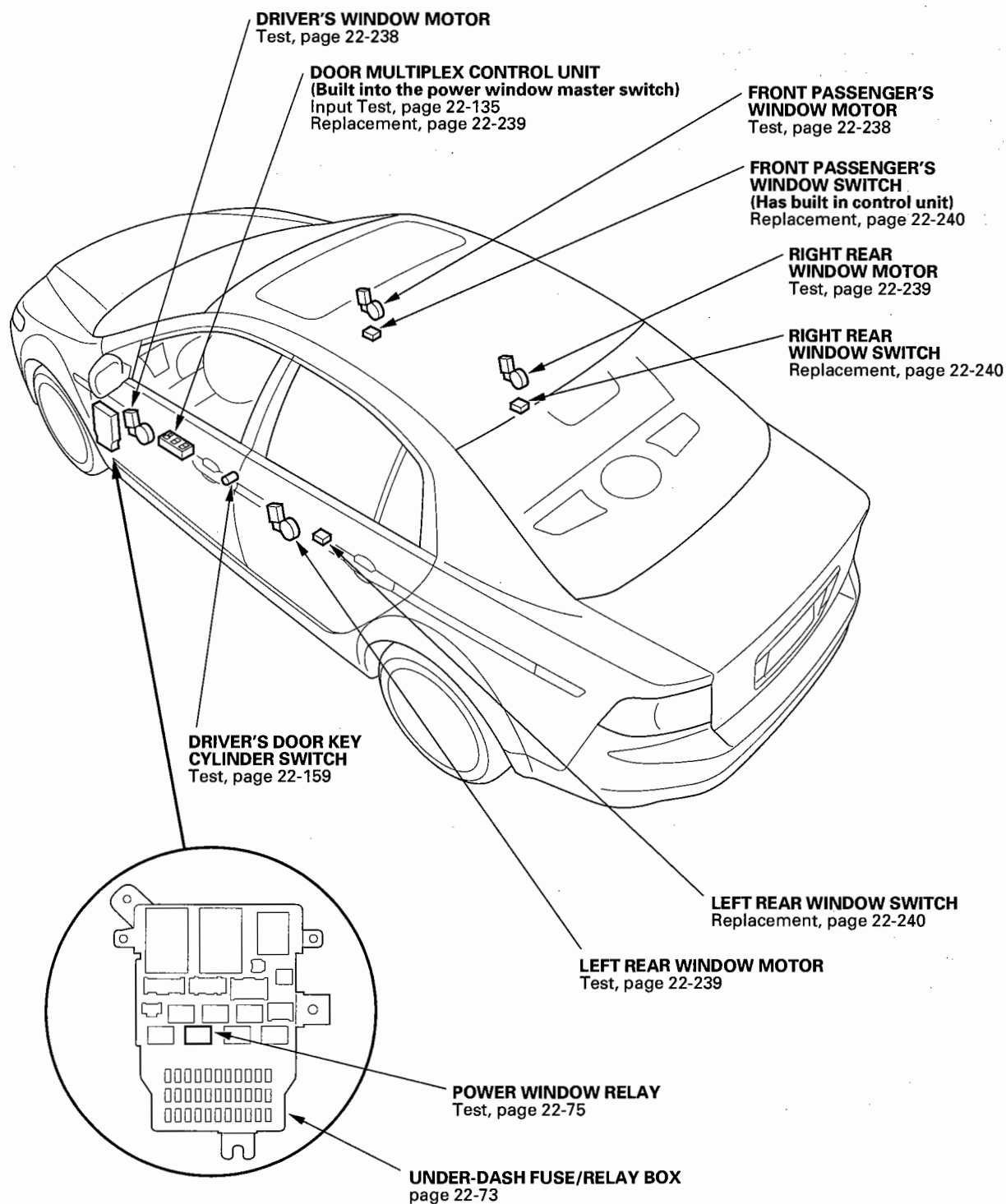


Test

Turn on the front individual map lights.

- If the front individual map lights come on, the HomeLink's power and ground circuits are OK. If the HomeLink will not open the customer's garage door, check that the HomeLink is programmed properly (see the owner's manual) or call HomeLink at 800-355-3515. On the internet, go to www.homelink.jcl.com.
- If the front individual map lights do not come on, check for these problems:
 - a blown No. 6 (7.5A) fuse in the under-dash fuse/relay box.
 - a faulty under-dash fuse/relay box.
 - an open in the GRY/BLU wire between the under-dash fuse/relay box and roof console.
 - an open in the BLK wire between the roof console and G503, G601.

Component Location Index



Power Windows

System Description

Anti-pinch Power Window Operation

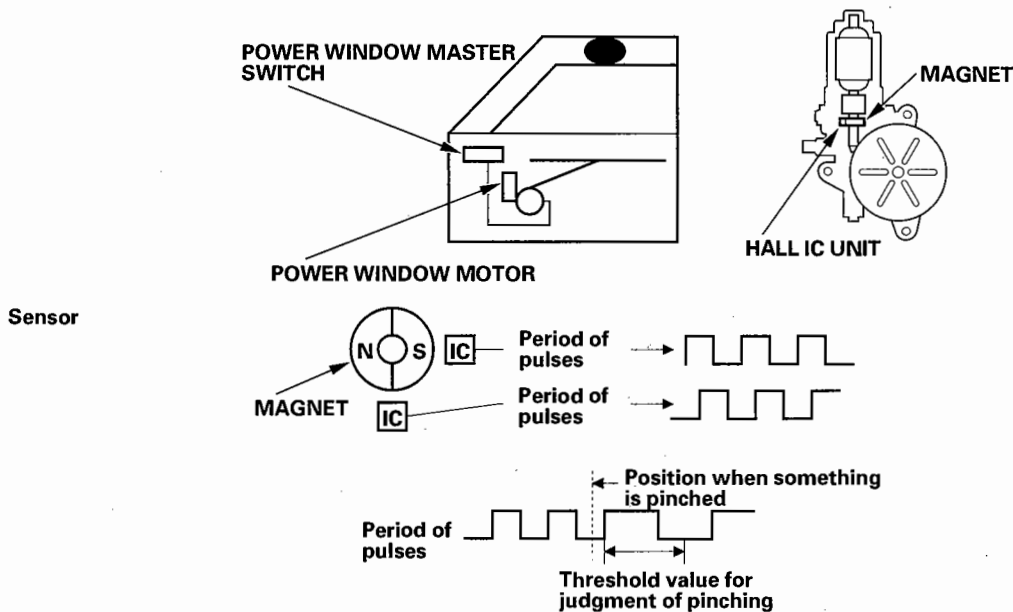
The system is composed of the power window master switch, front passenger's power window switch, front passenger's power window control unit and the driver's and front passenger's power window motors.

Driver's Window

The driver's power window motor incorporates a pulser which generates pulses during the motor's operation and sends the pulses to the driver's power window control unit. As soon as the power window control unit detects no pulses from the pulser, the driver's power window control unit makes the power window motor stop and reverse. This is to prevent pinching your hand or fingers during auto-up operation.

Front Passenger's Window

The front passenger's power window motor incorporates a pulser which generates pulses during the motor's operation and sends the pulses to the front passenger's power window control unit. As soon as the power window control unit detects no pulses from the pulser, the front passenger's power window control unit makes the power window motor stop and reverse. This is to prevent pinching your hand or fingers during auto-up operation.



Key Cylinder Operation

With the key inserted in the driver's door key cylinder, turn the key a second time and hold it within 15 seconds to operate the windows and moonroof (clockwise to open, counterclockwise to close). The windows and moonroof stop moving when the key is released. The anti-pinch operation is not active when closing the windows and moonroof with the key cylinder.

Keyless Operation

By pressing the UNLOCK button of the keyless transmitter a second time and hold within 15 seconds, the windows and moonroof open. The windows and moonroof stop moving when the UNLOCK button is released. The windows do not close with the LOCK button.



Resetting the Power Window Control Unit

Resetting the driver's or front passenger's power window is required when any of the following have occurred:

- Power window regulator replacement or repair
- Power window motor replacement or repair
- Window run channel replacement or repair
- Door glass replacement or repair
- Power is removed from a power window control unit while the power window timer is ON.

Using the HDS

1. Connect the Honda Diagnostic System (HDS) to the vehicle's DLC.
2. Turn the ignition switch ON (II), then enter the vehicle's VIN and mileage at the prompts.
3. Select "Body Electrical" from the "System Selection" menu.
4. From the "Body Electrical System Select" menu, select "Power Windows".
5. From the "Mode" menu, select "Adjustments".
6. From the "Adjustment" menu, select "Window P Reset" for driver's side (passenger's side) window.
7. Follow the prompts on the screen.
8. Confirm that the power window control unit is reset by using the driver's (passenger's) window AUTO UP and AUTO DOWN function.

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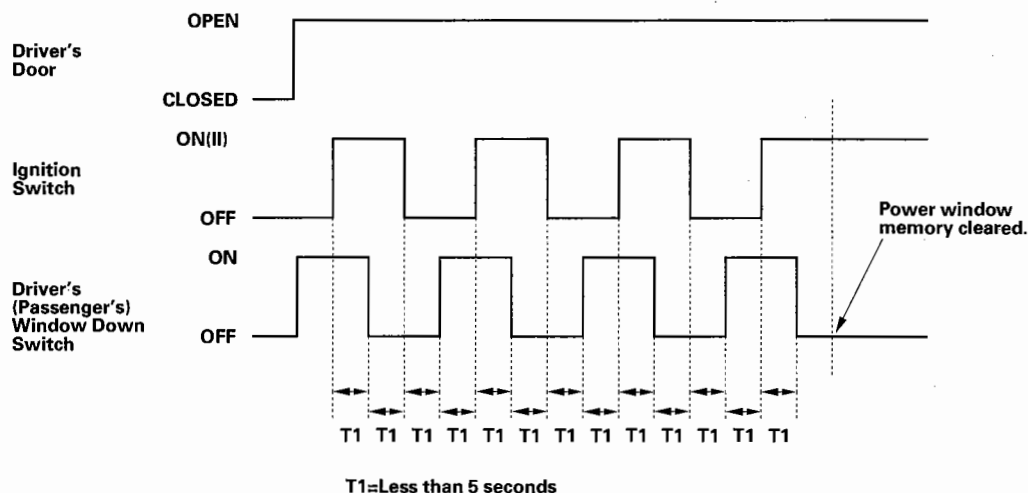
Power Windows

Resetting the Power Window Control Unit (cont'd)

Without the HDS

1. Turn the ignition switch ON (II).
2. Move the driver's (passenger's) window all the way down by using the driver's (passenger's) window DOWN switch.
3. Open the driver's (passenger's) door.

NOTE: Steps 4–7 must be done within 5 seconds of each other.

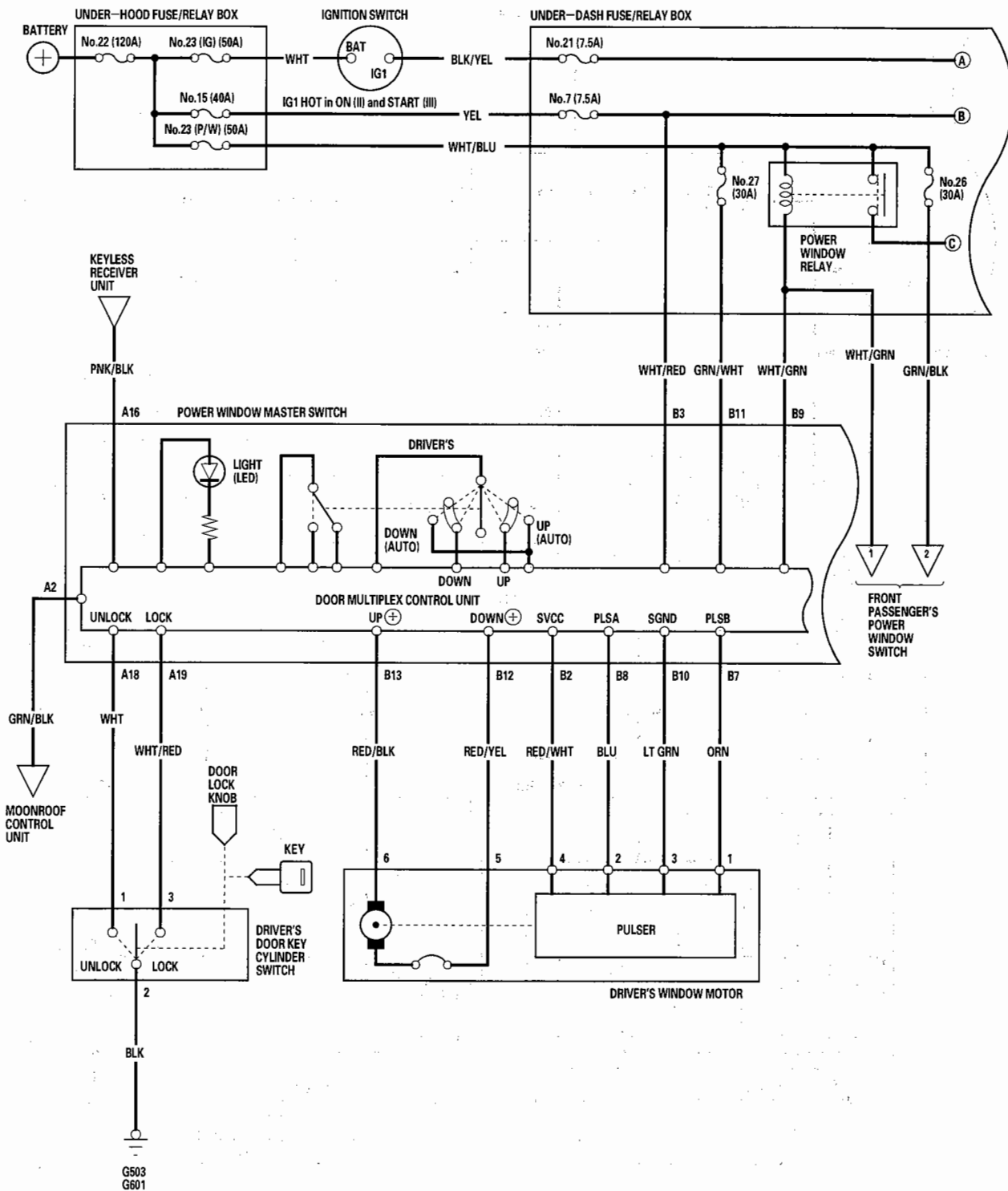


4. Turn the ignition switch OFF.
5. Push and hold the driver's (passenger's) window DOWN switch.
6. Turn the ignition switch ON (II).
7. Release the driver's (passenger's) window DOWN switch.
8. Repeat step 4-7 three more times.
9. Wait 1 second.
10. Confirm that AUTO UP and AUTO DOWN do not work. If AUTO UP and DOWN work, go back to step 1.
11. Move the driver's (passenger's) window all the way down by using the driver's (passenger's) window DOWN switch.
12. Pull up and hold the driver's (passenger's) window UP switch until the window reaches the fully closed position, then continue to hold the switch for 1 second.
13. Confirm that the power window control unit is reset by using the driver's (passenger's) window AUTO UP and AUTO DOWN function.

If the window still does not work in AUTO, repeat the procedure several times, paying close attention to the 5 second time limit between steps. If it still does not work, go to B-CAN System Diagnosis Test Mode A (see page 22-108).



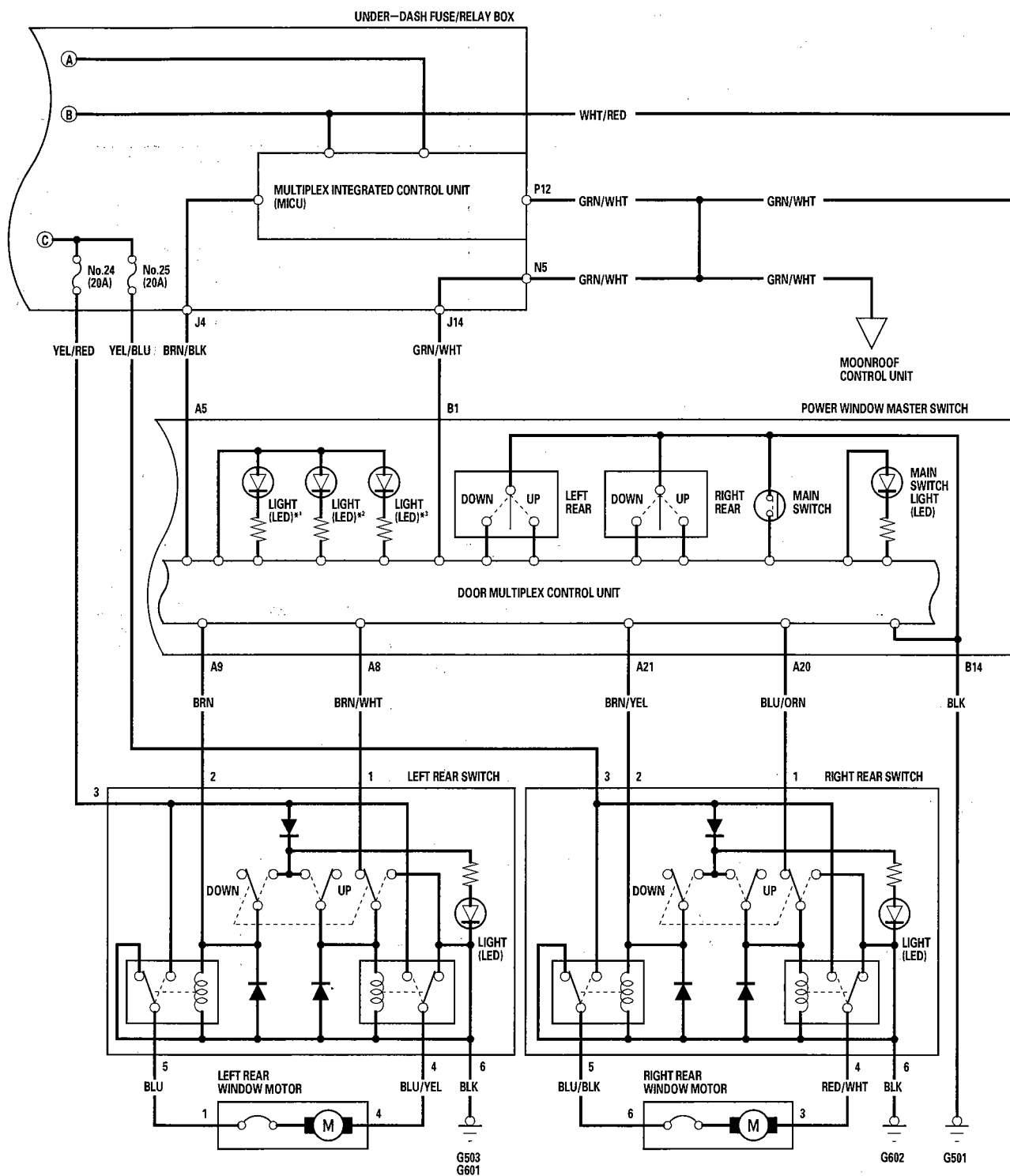
Circuit Diagram



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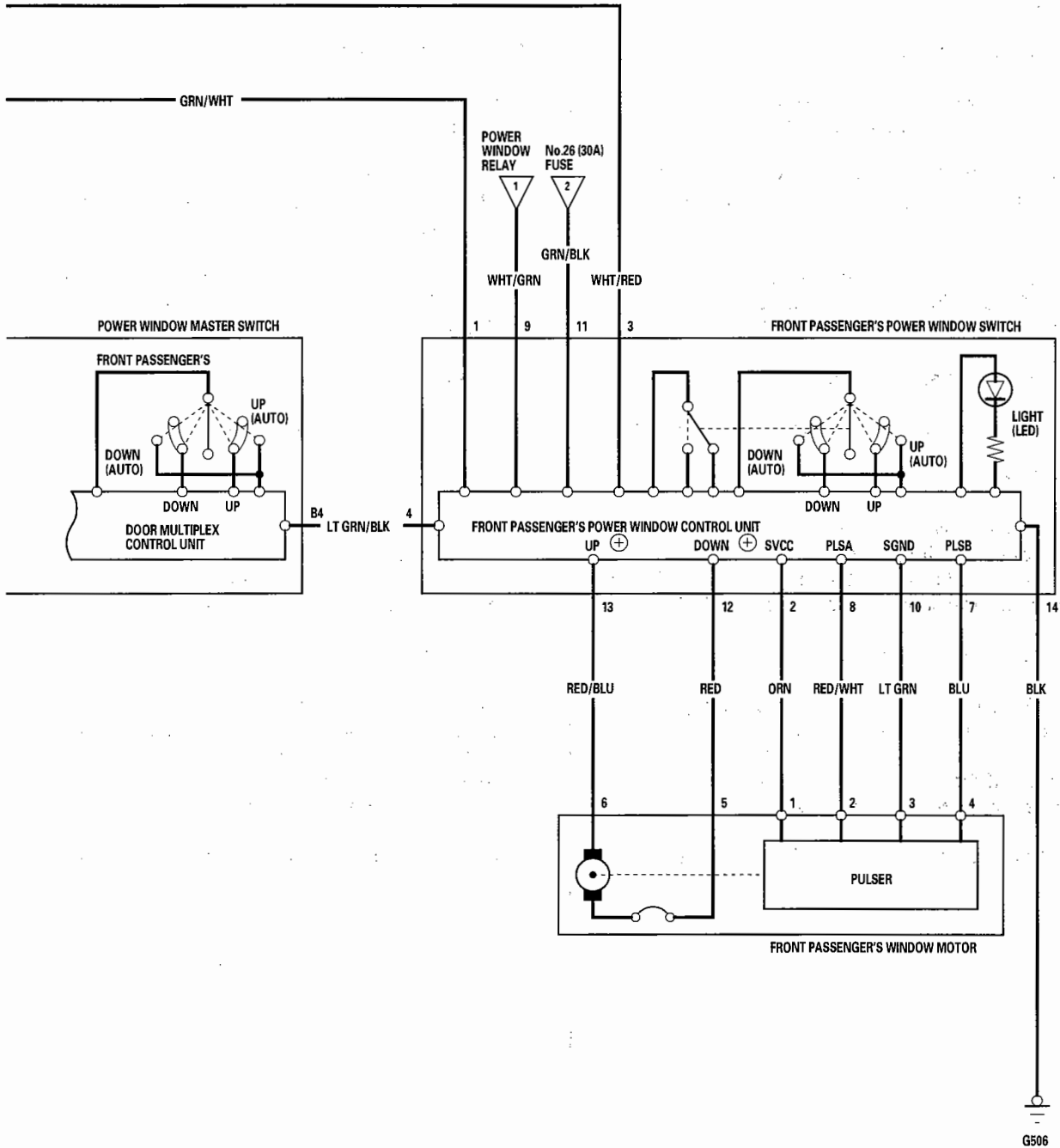
Power Windows

Circuit Diagram (cont'd)





- *1 : FRONT PASSENGER'S SWITCH
- *2 : LEFT REAR SWITCH
- *3 : RIGHT REAR SWITCH



Power Windows

DTC Troubleshooting

DTC B1125: Driver's Power Window Motor A Pulse Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Turn the ignition switch ON (II).
2. Open and close the driver's power window by using the driver's switch manually.
3. Select the POWER WINDOWS from the BODY ELECTRICAL SYSTEM SELECT MENU and enter DATA LIST.
4. While the power window is moving, check the DETECT/NONE information of the Driver's Power Window Motor Pulse A in the DATA LIST.

Does the information indicator display DETECT?

YES—Replace the door multiplex control unit. ■

NO—Go to step 5.

5. Refer to the power window master switch input test, check for continuity between the driver's power window motor 6P connector and the door multiplex control unit 14P connector B (see page 22-232).

Are all the wire harness OK?

YES—Substitute a known-good door multiplex control unit, and recheck. If DTC is gone, the original door multiplex control unit is faulty; replace it. If the DTC is still indicated, replace the driver's power window motor. ■

NO—Repair a short or an open in the wire. ■

DTC B1126: Driver's Power Window Motor B Pulse Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Turn the ignition switch ON (II).
2. Open and close the driver's power window by using the driver's switch manually.
3. Select the POWER WINDOWS from the BODY ELECTRICAL SYSTEM SELECT MENU and enter DATA LIST.
4. While the power window is moving, check the DETECT/NONE information of the Driver's Power Window Motor Pulse B in the DATA LIST.

Does the information indicator display DETECT?

YES—Replace the door multiplex control unit. ■

NO—Go to step 5.

5. Refer to the power window master switch input test, check for continuity between the driver's power window motor 6P connector and the door multiplex control unit 14P connector B (see page 22-232).

Are all the wire harness OK?

YES—Substitute a known-good door multiplex control unit, and recheck. If DTC is gone, the original door multiplex control unit is faulty; replace it. If the DTC is still indicated, replace the driver's power window motor. ■

NO—Repair a short or an open in the wire. ■



DTC B1130: Front Passenger's Power Window Motor A Pulse Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Turn the ignition switch ON (II).
2. Open and close the front passenger's power window by using the front passenger's switch manually.
3. Select the POWER WINDOWS from the BODY ELECTRICAL SYSTEM SELECT MENU and enter DATA LIST.
4. While the power window is moving, check the DETECT/NONE information of the Passenger's Power Window Motor Pulse A in the DATA LIST.

Does the information indicator display DETECT?

YES—Replace the door multiplex control unit. ■

NO—Go to step 5.

5. Refer to the front passenger's power window switch input test, check for continuity on the wires between the front passenger's power window motor 6P connector and the front passenger's power window switch 14P connector (see page 22-232).

Are all the wires OK?

YES—Substitute a known-good front passenger's power window switch, and recheck. If DTC is gone, the original switch is faulty; replace it. If the DTC is still indicated, replace the front passenger's power window motor. ■

NO—Repair a short or an open in the wire. ■

DTC B1131: Front Passenger's Power Window Motor B Pulse Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Turn the ignition switch ON (II).
2. Open and close the front passenger's power window by using the front passenger's switch manually.
3. Select the POWER WINDOWS from the BODY ELECTRICAL SYSTEM SELECT MENU and enter DATA LIST.
4. While the power window is moving, check the DETECT/NONE information of the Passenger's Power Window Motor Pulse B in the DATA LIST.

Does the information indicator display DETECT?

YES—Replace the door multiplex control unit. ■

NO—Go to step 5.

5. Refer to the front passenger's power window switch input test, check for continuity on the wires between the front passenger's power window motor 6P connector and the front passenger's power window switch 14P connector (see page 22-232).

Are all the wires OK?

YES—Substitute a known-good front passenger's power window switch, and recheck. If DTC is gone, the original switch is faulty; replace it. If the DTC is still indicated, replace the front passenger's power window motor. ■

NO—Repair a short or an open in the wire. ■

Power Windows

DTC Troubleshooting (cont'd)

DTC B1140: Driver's Power Window Position Detect Circuit Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Open and close the driver's power window by using the driver's switch manually.
4. Check for DTCs with the HDS.

Is DTC B1125 or B1126 indicated?

YES—Troubleshoot the DTC B1125 (see page 22-226) or B1126 (see page 22-226). ■

NO—Go to step 5.

5. Reset the power window control unit (see page 22-221).
6. Check for DTCs again with the HDS.

Is DTC B1140 indicated?

YES—Go to step 7.

NO—The system is recovered at this time. ■

7. Substitute a known-good power window master switch.
8. Open and close the driver's power window by using the driver's switch manually.
9. Check for DTCs with the HDS.

Is DTC B1140 indicated?

YES—Faulty driver's window motor; replace it. ■

NO—Faulty door multiplex control unit; replace the power window master switch. ■

DTC B1141: Door Multiplex Control Unit Lost Communication with Front Passenger's Power Window Switch (UART line short)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Open and close the front passenger's power window by using the power window master switch manually.
4. Open and close the front passenger's power window by using the front passenger's power window switch manually.
5. Check for DTCs with the HDS.

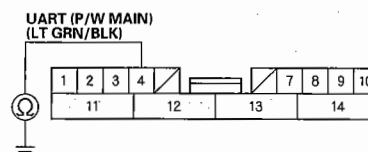
Is DTC B1141 indicated?

YES—Go to step 6.

NO—The system is OK at this time. Check for loose or poor connections at the passenger's power window switch connector. ■

6. Turn the ignition switch OFF.
7. Disconnect the door multiplex control unit connectors and front passenger's power window switch connector.
8. Check for continuity between the door multiplex control unit connector B (14P) No. 4 terminal and body ground.

DOOR MULTIPLEX CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Repair a short in the wire. ■

NO—Substitute a known-good door multiplex control unit, and recheck. If DTC is gone, the original door multiplex control unit is faulty; replace it. If the DTC B1141 is still indicated, replace the front passenger's power window switch. ■



DTC B1142: Door Multiplex Control Unit Lost Communication with Front Passenger's Power Window Switch (UART line open)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Open and close the front passenger's power window by using the power window master switch manually.
4. Open and close the front passenger's power window by using the front passenger's power window switch manually.
5. Check for DTCs with the HDS.

Is DTC B1142 indicated?

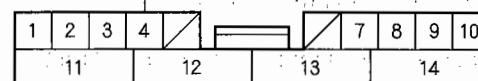
YES—Go to step 6.

NO—The system is OK at this time. Check for loose or poor connections at the passenger's power window switch connector. ■

6. Turn the ignition switch OFF.
7. Disconnect the door multiplex control unit connectors and front passenger's power window switch connector.

8. Check for continuity between the door multiplex control unit connector B (14P) No. 4 terminal and front passenger's power window switch 14P connector No. 4 terminals.

FRONT PASSENGER'S POWER WINDOW SWITCH 14P CONNECTOR



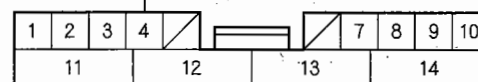
UART (P/W MAIN)
(LT GRN/BLK)

Wire side of female terminals



UART (P/W MAIN)
(LT GRN/BLK)

DOOR MULTIPLEX CONTROL UNIT CONNECTOR B (14P)



Wire side of female terminals

Is there continuity?

YES—Substitute a known-good front passenger's power window switch, and recheck. If DTC is gone, the original front passenger's power window switch is faulty; replace it. If the DTC B1142 is still indicated, replace the door multiplex control unit. ■

NO—Repair an open in the wire. ■

Power Windows

DTC Troubleshooting (cont'd)

DTC B1143: Door Multiplex Control Unit Internal Error (EEPROM error)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Disconnect the door multiplex control unit connectors and wait for 2 seconds.
3. Reconnect the connectors to the door multiplex control unit.
4. Turn the ignition switch OFF, and then back ON (II).
5. Check for DTCs with the HDS.

Is DTC B1143 indicated?

YES— Check connections. If OK, replace the door multiplex control unit. ■

NO— The system is OK at this time. Check the battery and charging system. ■

DTC B1145: Front Passenger's Power Window Position Detect Circuit Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTC with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Open and close the front passenger's power window by using the front passenger's switch manually.
4. Check for DTCs with the HDS.

Is DTC B1130 or B1131 indicated?

YES— Troubleshoot the DTC B1130 (see page 22-227) or B1131 (see page 22-227). ■

NO— Go to step 5.

5. Reset the power window control unit (see page 22-221) and reset the front passenger's power window control unit.
6. Check for DTCs again with the HDS.

Is DTC B1145 indicated?

YES— Go to step 7.

NO— The system is recovered at this time. ■

7. Substitute a known-good passenger's power window switch.
8. Open and close the front passenger's power window by using the front passenger's switch manually.
9. Check for DTCs with the HDS.

Is DTC B1145 indicated?

YES— Faulty front passenger's window motor; replace it. ■

NO— Faulty front passenger's power window switch; replace the front passenger's power window switch. ■



DTC B1146: Front Passenger's Power Window Switch Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Open the driver's door.
3. Turn the ignition switch OFF.
4. Disconnect the 14P connector from the front passenger's power window switch and wait for 2 seconds.
5. Reconnect the 14P connector to the front passenger's power window switch.
6. Turn the ignition switch ON (II).
7. Check for DTCs with the HDS.

Is DTC B1146 indicated?

YES—Check connections. If OK, replace the front passenger's power window switch (EEPROM error). ■

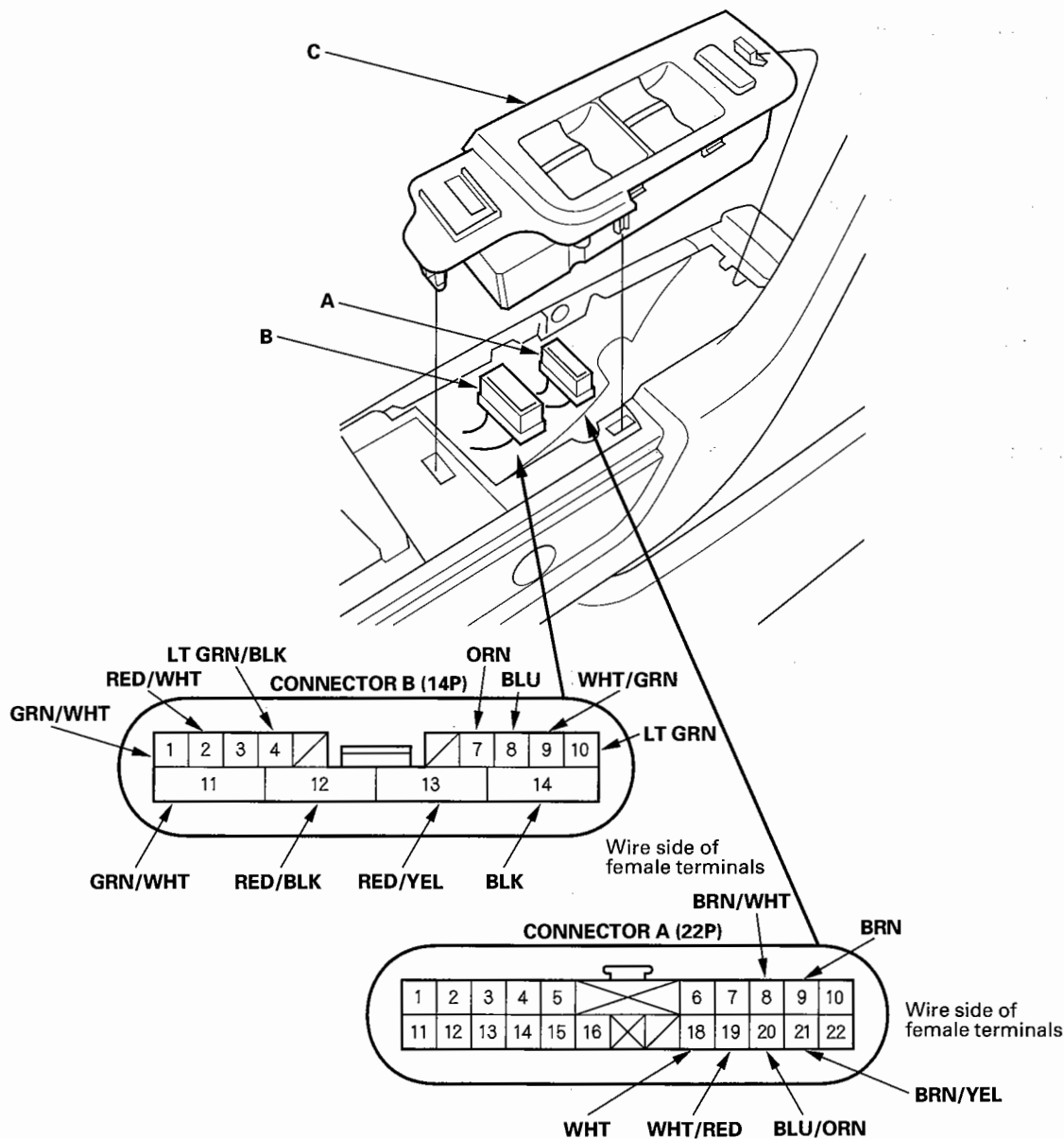
NO—The system is OK at this time. ■

Power Windows

Master Switch Input Test

NOTE: Make sure the ignition switch is OFF before disconnecting the under-dash fuse/relay box connectors.

1. Before testing the power windows, troubleshoot the multiplex integrated control system using B-CAN System Diagnosis Test Mode A (see page 22-108).
2. Turn the ignition switch OFF.
3. Remove the power window master switch (see page 22-239).
4. Disconnect the 22P connector (A) and 14P connector (B) from the power window master switch (C).





5. 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 6.

6. With the power window master switch still disconnected, make these input tests at the connector.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 7.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
B9	WHT/GRN	Under all conditions	Connect B9 terminal to ground. Check for voltage at under-dash fuse/relay box No. 24 (20A) fuse: There should be battery voltage.	• Blown No. 23 (P/W) (50A) fuse in the under-hood fuse/relay box. • Faulty power window relay • Faulty under-dash fuse/relay box • An open in the wire
B11	GRN/WHT	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 23 (P/W) (50A) fuse in the under-hood fuse/relay box • Blown No. 27 (30A) fuse in the under-dash fuse/relay box • An open in the wire • Faulty under-dash fuse/relay box
B14	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
B12	RED/YEL	Connect the B11 and B13 terminals with a jumper wire, and connect B12 terminal to body ground.	Check the driver's window motor operation: The window should go up.	• Blown No. 27 (30A) fuse in the under-dash fuse/relay box • An open in the wire • Faulty driver's power window motor
B13	RED/BLK	Connect the B11 and B12 terminals with a jumper wire, and connect B13 terminal to body ground.	Check for driver's window motor operation: The window should go down.	
A8	BRN/WHT	Connect the B11 and A8 terminals with a jumper wire and connect B9 to body ground with a jumper wire.	Check the left rear window motor operation: The window should go up.	• Poor ground (G501) • Blown No. 24 (20A) fuse in the under-dash fuse/relay box • An open in the wire • Faulty power window relay • Faulty left rear power window switch • Faulty left rear power window motor
A9	BRN	Connect the B11 and A9 terminals with a jumper wire and connect B9 to body ground with a jumper wire.	Check the left rear window motor operation: The window should go down.	
A20	BLU/ORN	Connect the B11 and A20 terminals with a jumper wire and connect B9 to body ground with a jumper wire.	Check the right rear window motor operation: The window should go up.	
A21	BRN/YEL	Connect the B11 and A21 terminals with a jumper wire and connect B9 to body ground with a jumper wire.	Check the right rear window motor operation: The window should go down.	• Poor ground (G602) • Blown No. 25 (20A) fuse in the under-dash fuse/relay box • An open in the wire • Faulty power window relay • Faulty right rear power window switch • Faulty right rear power window motor
B1	GRN/WHT	Under all conditions	Check for continuity between the B1 terminal and under-dash fuse/relay box connector P terminal No. 12. There should be continuity.	• Faulty under-dash fuse/relay box • An open in the wire
B4	LT GRN/BLK	Under all conditions	Check for continuity between the B4 terminal and front passenger's power window switch connector terminal No. 4: There should be continuity.	An open in the wire
		Front passenger's power window switch connector disconnected.	Check for continuity between the B4 terminal and body ground: There should be no continuity.	A short in the wire

(cont'd)

Power Windows

Master Switch Input Test (cont'd)

7. Reconnect the connectors to the switch. Turn the ignition switch ON (II) and perform the following input tests.

- 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 the power window master switch.

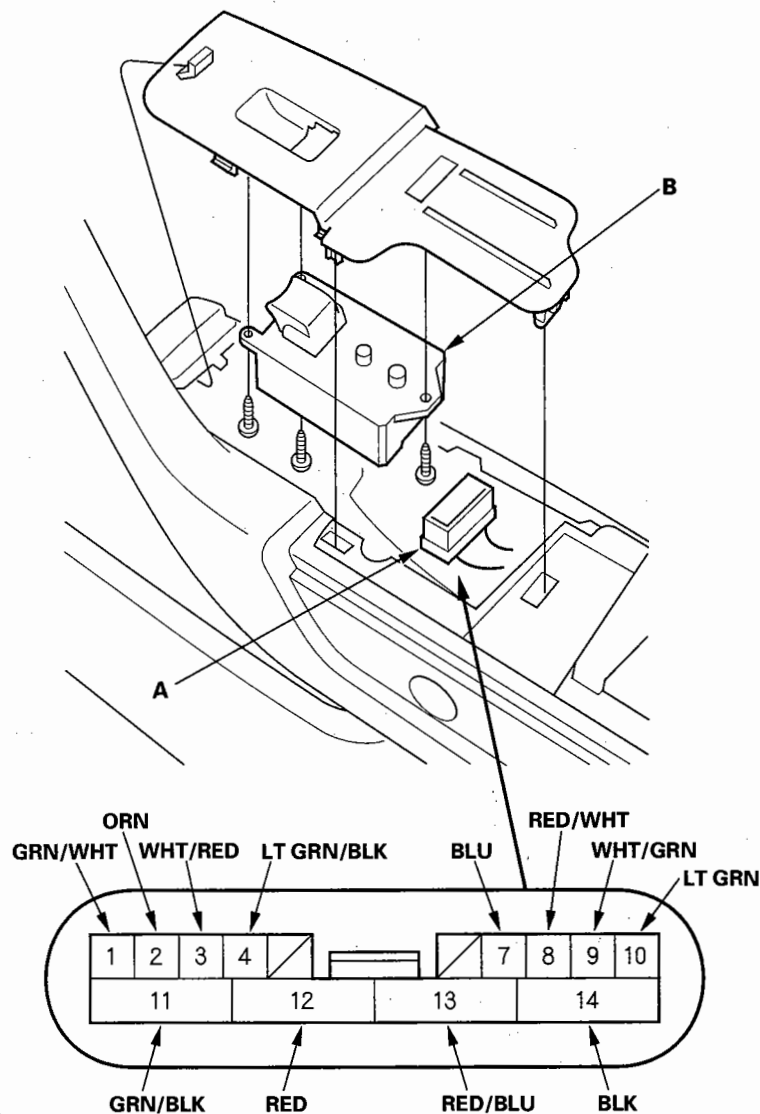
Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
B2	RED/WHT	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Faulty power window master switch • Short to ground in the wire
B10	LT GRN	Under all conditions	Check for voltage to ground: There should be 1 V or less.	Faulty power window master switch
B8	BLU	Ignition switch ON (II), and the driver's window switch moving up or down	Check for voltage between the B8 and B10 terminals: There should be 0 V—about 5 V—0 V—about 5 V repeatedly (a digital voltmeter reads about 2.5 V while the window moves).	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • Blown No. 27 (30A) fuse in the under-dash fuse/relay box • An open in the wire (RED/WHT, BLU, LT GRN, ORN)
B7	ORN	Ignition switch ON (II), and the driver's window switch moving up or down	Check for voltage between the B7 and B10 terminals: There should be 0 V—about 5 V—0 V—about 5 V repeatedly (a digital voltmeter reads about 2.5 V while the window moves).	• Short to ground in the wire • Faulty driver's window motor • Faulty power window master switch
A18	WHT	Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire
		Driver's door key cylinder switch in neutral	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 5 V or more.	
A19	WHT/RED	Driver's door key cylinder switch in LOCK	Check for voltage to ground: There should be 1 V or less.	• Faulty driver's door key cylinder switch • Poor ground (G503, G601) • An open in the wire
		Driver's door key cylinder switch in neutral	Check for voltage to ground: There should be 5 V or more.	
		Driver's door key cylinder switch in UNLOCK	Check for voltage to ground: There should be 5 V or more.	

8. Reset the power window control unit (see page 22-221).

Front Passenger's Power Window Switch Input Test

NOTE: Make sure the ignition switch is OFF before disconnecting the passenger's power window switch.

1. Before testing the power windows, troubleshoot the multiplex integrated control system using B-CAN System Diagnosis Test Mode A (see page 22-108).
2. Remove the front passenger's power window switch (see page 22-240).
3. Disconnect the 14P connector (A) from the front passenger's power window switch (B).



Wire side of female terminals

4. 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 5.

(cont'd)

Power Windows

Front Passenger's Power Window Switch Input Test (cont'd)

5. With the front passenger's power window switch still disconnected, make these input tests at the connector.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 6.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
1	GRN/WHT	Under all conditions	Check for continuity between the No. 1 terminal and under-dash fuse/relay box connector P (30P) terminal No. 12: There should be continuity.	An open in the wire
3	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
9	WHT/GRN	Under all conditions	Connect No. 9 terminal to ground. Check for voltage at under-dash fuse/relay box No. 24 (20A) fuse: There should be battery voltage.	• Blown No. 23 (50A) fuse in the under-hood fuse/relay box • An open in the wire • Faulty power window relay • Faulty under-dash fuse/relay box
11	GRN/BLK	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 23 (50A) fuse in the under-hood fuse/relay box • Blown No. 26 (30A) fuse in the under-dash fuse/relay box • Faulty under-dash fuse/relay box • An open in the wire
12	RED	Connect the No. 11 terminal to the No. 12 terminal with a jumper wire, and connect the No. 13 terminal to body ground.	Check front passenger's power window motor operation: The window should go down.	• Blown No. 26 (30A) fuse in the under-dash fuse/relay box • Faulty front passenger's window motor • An open in the wire
13	RED/BLU	Connect the No. 11 terminal to the No. 13 terminal with a jumper wire, and connect the No. 12 terminal to body ground.	Check front passenger's power window motor operation: The window should go up.	
14	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G506) • An open in the wire



6. Reconnect the 14P connector to the switch. Turn the ignition switch ON (II) and perform the following input tests.

- 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 the front passenger's power window switch.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
2	ORN	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Faulty front passenger's power window switch • Short to ground in the wire
10	LT GRN	Under all conditions	Check for voltage to ground: There should be 1 V or less.	Faulty front passenger's power window switch
8	RED/WHT	Ignition switch ON (II), and front passenger's power window switch moving up or down	Check for voltage between the No. 8 and No. 10 terminals: There should be 0 V—about 5 V—0 V—about 5 V repeatedly (a digital voltmeter reads about 2.5 V while the window moves).	• Blown No. 7 (7.5A) fuse in the under-dash fuse/relay box • Blown No. 26 (30A) fuse in the under-dash fuse/relay box • An open in the wire (RED/WHT, BLU, LT GRN, ORN) • Faulty front passenger's power window switch • Faulty front passenger's power window motor • Short to ground in the wire
7	BLU	Ignition switch ON (II), and front passenger's power window switch moving up or down	Check for voltage between the No. 7 and No. 10 terminals: There should be 0 V—about 5 V—0 V—about 5 V repeatedly (a digital voltmeter reads about 2.5 V while the window moves).	

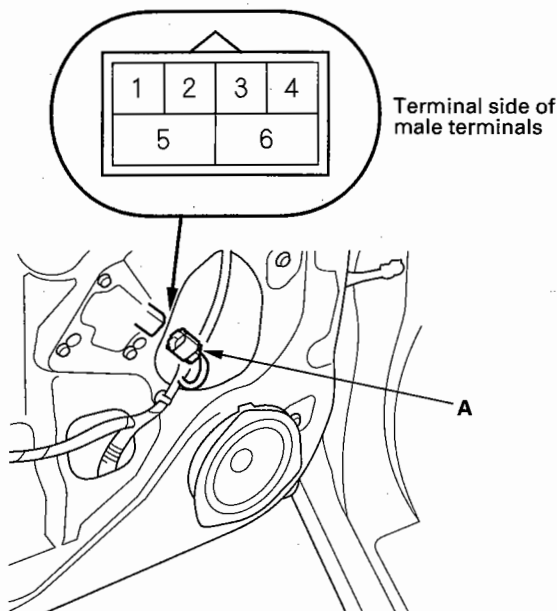
7. Reset the power window control unit (see page 22-221).

Power Windows

Driver's and Front Passenger's Window Motor Test

Motor Test

1. Remove the door panel (see page 20-7).
2. Disconnect the 6P connector (A) from the window motor.



3. Test the motor in each direction by connecting battery power and ground according to the table. When the motor stops running, disconnect one lead immediately.

Terminal	5	6
Direction		
UP	⊖	⊕
DOWN	⊕	⊖

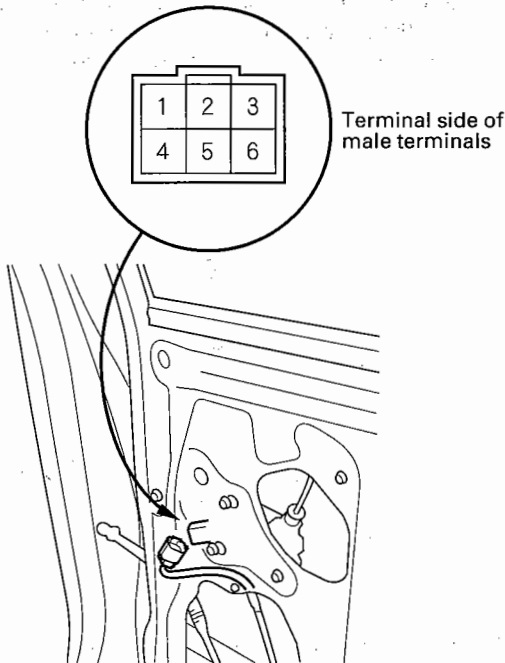
4. If the motor does not run or fails to run smoothly, replace it.

Pulser Test

5. Reconnect the 6P connector to the window motor.
6. Check for voltage between the terminals.
 - There should be battery voltage between the No. 4 [No. 1] (+) and No. 3 (−) terminals when the ignition switch is ON (II).
[] : Front passenger's window motor
 - Connect an analog voltmeter between the No. 2 (+) and No. 3 (−) terminals, and run the window motor down or up. The voltmeter needle should move back and forth alternately (a digital voltmeter should show the average voltage between 0–5 V).
 - Connect an analog voltmeter between the No. 1 [No. 4] (+) and No. 3 (−) terminals, and run the window motor at down or up. The voltmeter needle should move back and forth alternately.
[] : Front passenger's window motor
7. If the voltage is not as specified, do the window switch input test;
 - master switch terminals: B2, B7, B8 and B10 (see step 7 on page 22-234).
 - passenger's switch terminals: No. 2, 7, 8, and 10 (see step 6 on page 22-237).
8. If the switch test is OK, replace the power window motor.
9. Reset the power window control unit (see page 22-221).

Rear Window Motor Test

1. Remove the rear door panel (see page 20-7).
2. Disconnect the 6P connector from the window motor.



3. Test the motor by connecting battery power and ground according to the table. When the motor stops running, disconnect one lead immediately.

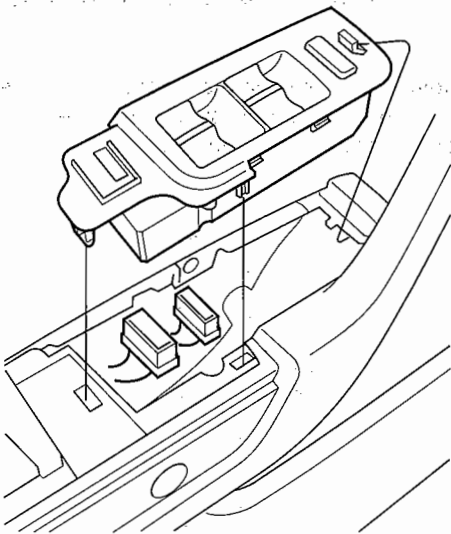
Terminal Direction	3(4)	6(1)
UP	+	-
DOWN	-	+

(): Left rear window motor

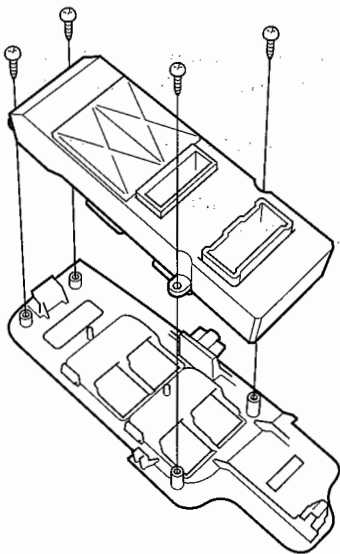
4. If the motor does not run or fails to run smoothly, replace it.

Master Switch Replacement

1. Remove the driver's door panel (see page 20-7).
2. Remove the screw and disconnect the connectors from the master switch, then remove the switch assembly from the door panel.



3. Remove the four mounting screws, then remove the master switch from the switch panel.



4. Install in the reverse order of removal.
5. Reset the power window control unit (see page 22-221).

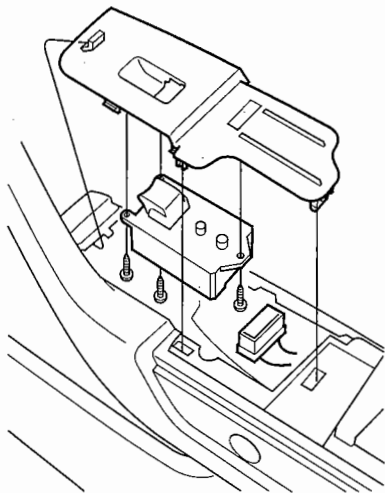
Power Windows

Passenger's Window Switch Test/Replacement

Front Passenger's

NOTE: To test the front passenger's power window switch, refer to the input test (see page 22-235).

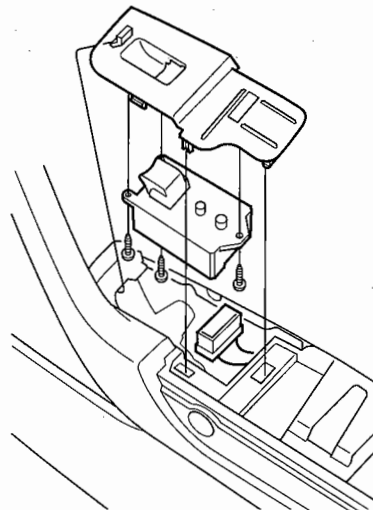
1. Remove the front passenger's door panel (see page 20-7).
2. Remove the screw and disconnect the connector from the power window switch, then remove the switch assembly from the door panel.



3. Remove the three mounting screws, then remove the power window switch from the switch panel.
4. Install in the reverse order of removal.
5. Reset the power window control unit (see page 22-221).

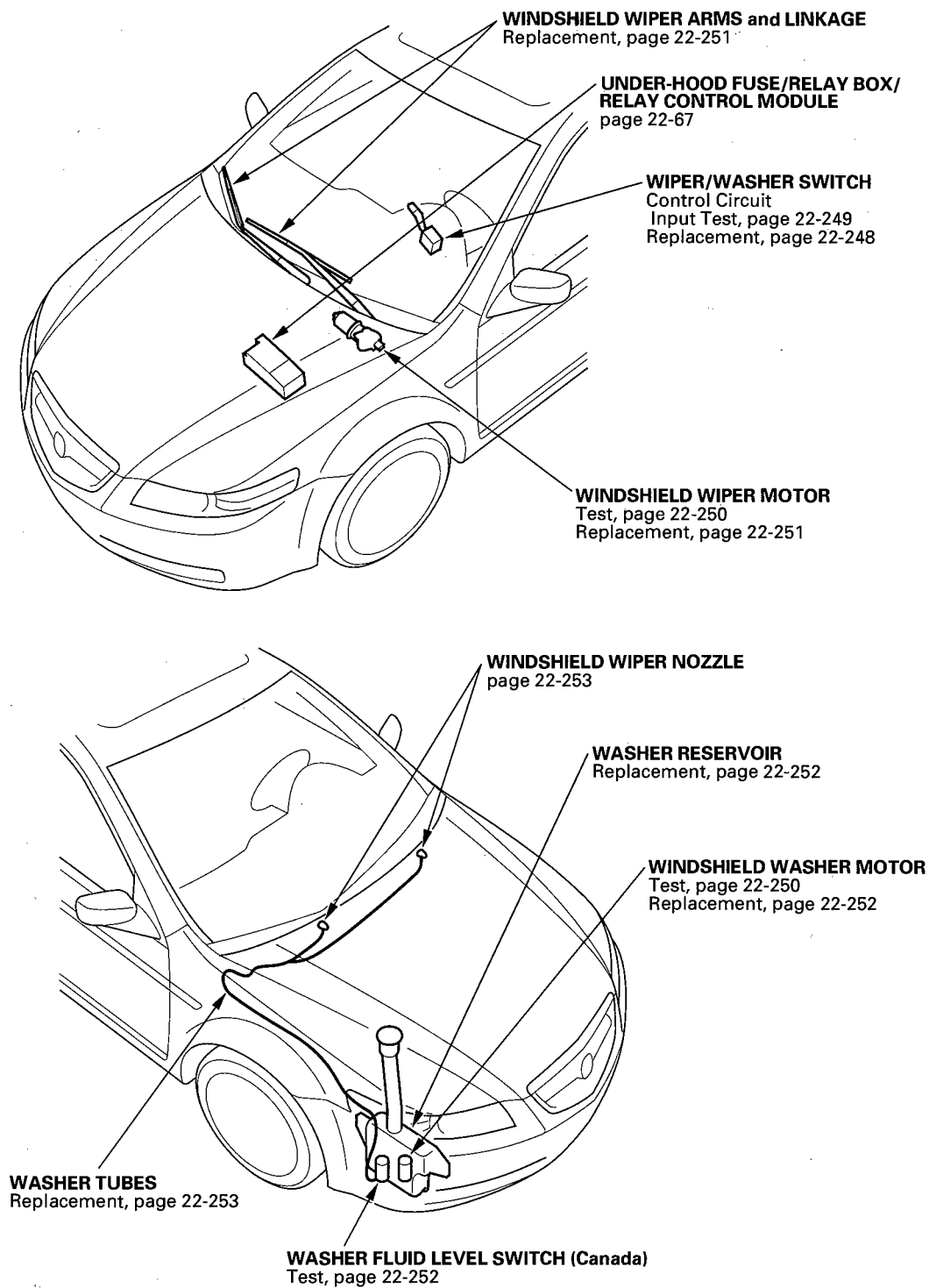
Rear

1. Remove the rear door panel (see page 20-17).
2. Remove the screw and disconnect the connector from the power window switch, then remove the switch assembly from the door panel.



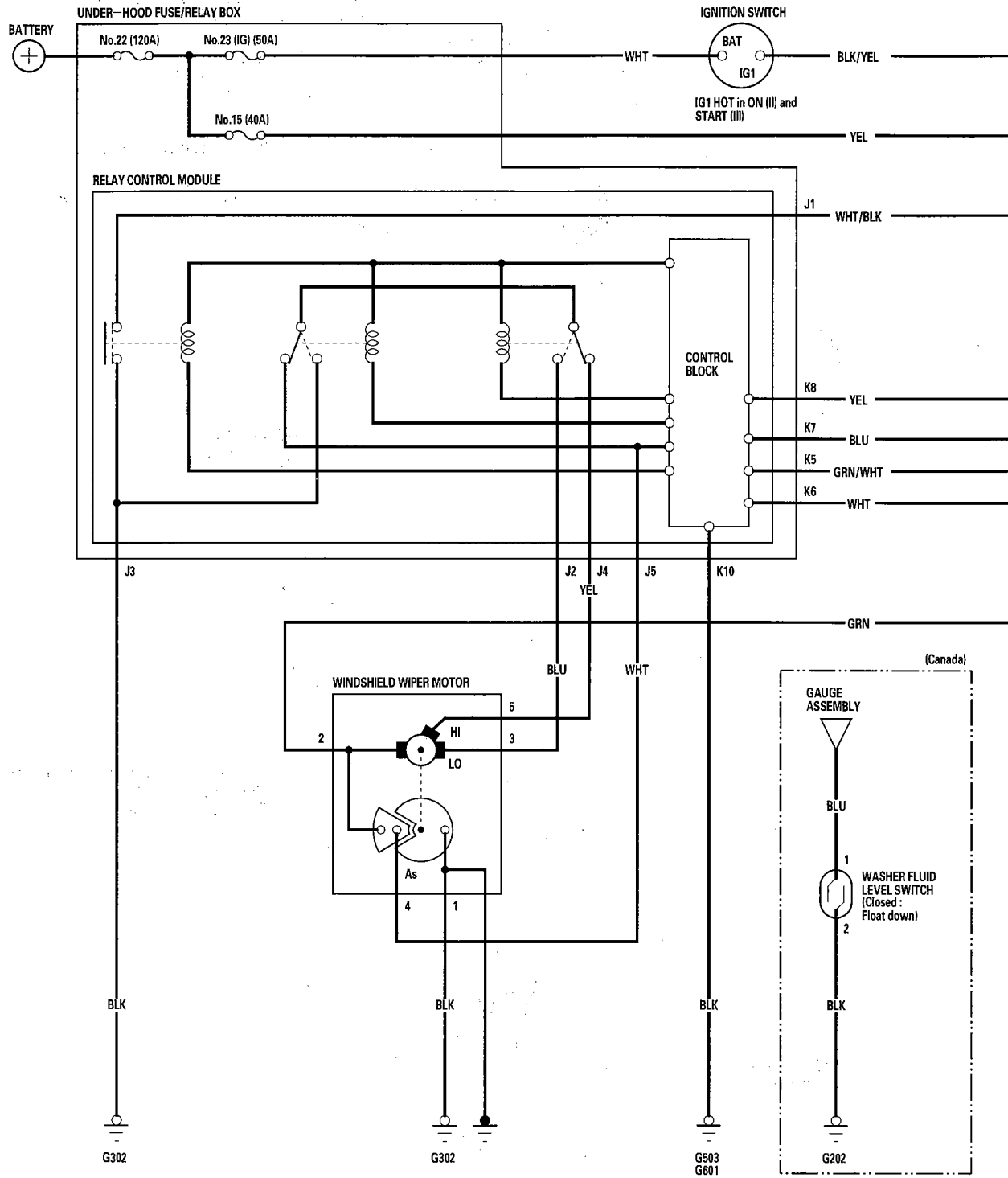
3. Remove the three mounting screws, then remove the power window switch from the switch panel.
4. Swap the rear power window switch with another known-good switch and test. If the original window switch is faulty; replace it.
5. Install in the reverse order of removal.

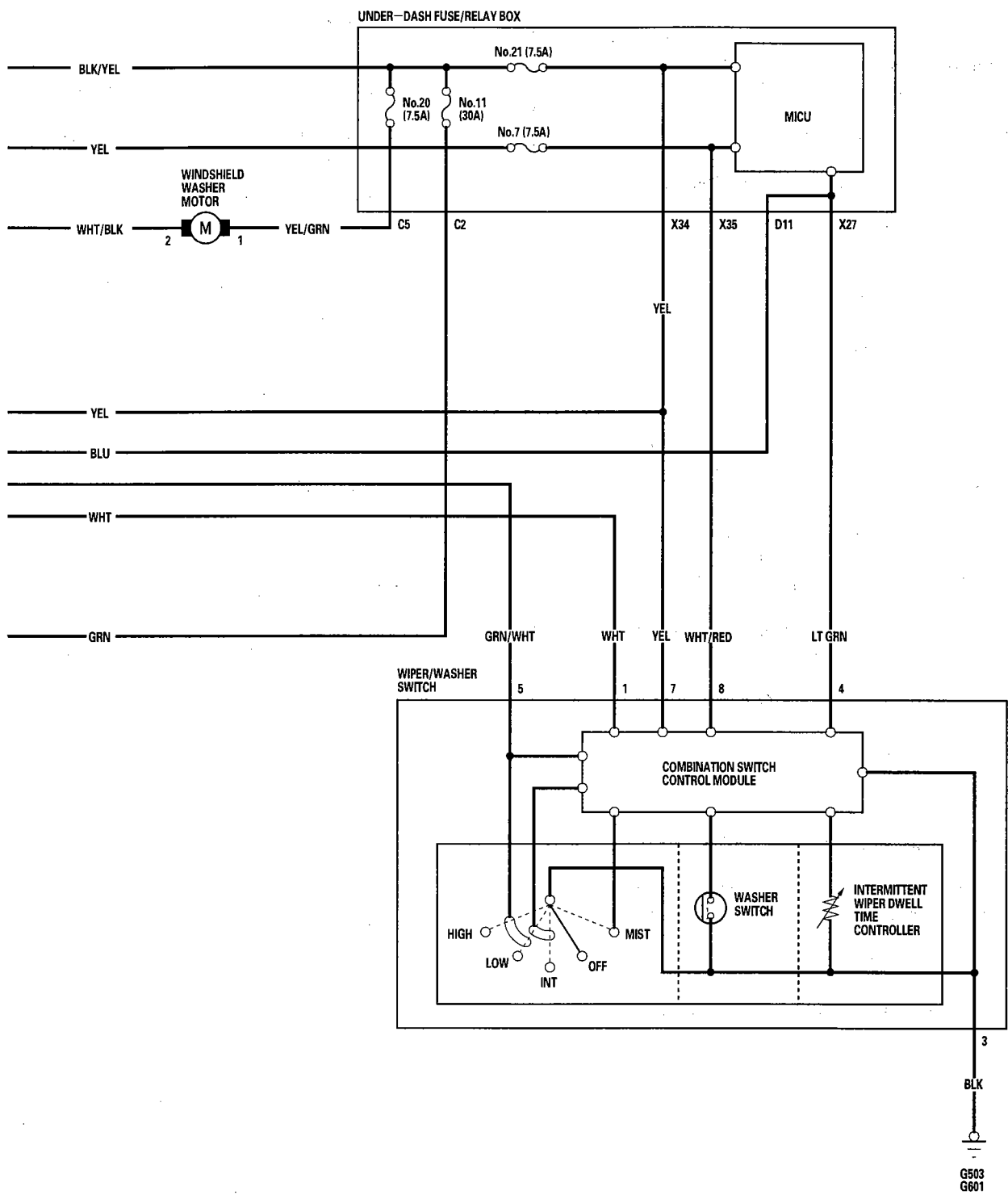
Component Location Index



Wipers/Washers

Circuit Diagram





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DTC Troubleshooting

DTC B1076: Windshield Wiper Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Turn the wiper switch to INT, LOW, then HIGH for at least 2 seconds each.
4. Check for DTCs with the HDS.

Is DTC B1076 indicated?

YES—Go to step 5.

NO—Intermittent failure. The windshield wiper system is OK at this time. Check pinfits and connections. ■

5. With the wiper/washer switch OFF, select Windshield Wipers from the BODY ELECTRICAL SYSTEM SELECT MENU, and enter the DATA LIST.
6. Check the ON/OFF information of the Windshield Wiper Switch (BACK-UP) in the DATA LIST.

Is the information indicator OFF?

YES—Go to step 7.

NO—Go to step 11.

7. Turn the wiper switch ON (low or high).
8. Check the ON/OFF information of the Windshield Wiper Switch (BACK-UP) in the DATA LIST.

Is the information indicator ON?

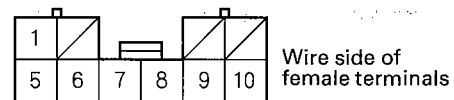
YES—Faulty relay control module; replace the under-hood fuse/relay box. ■

NO—Go to step 9.

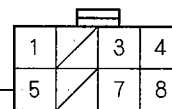
9. Disconnect the under-hood fuse/relay box connector K (10P) and the wiper/washer switch 8P connector.

10. Check for continuity between the No. 5 terminal of the under-hood fuse/relay box connector K (10P) and the No. 5 terminal of the wiper/washer switch (combination switch control unit) 8P connector.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR K (10P)



GRN/WHT
(FR WIPER BACKUP)



WIPER/WASHER SWITCH 8P CONNECTOR

Is there continuity?

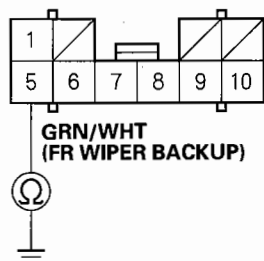
YES—Faulty combination switch control unit; replace the wiper/washer switch. ■

NO—Repair an open in the GRN/WHT wire. ■



11. Disconnect the relay control module 10P connector.
12. Check for continuity between the No. 5 terminal of the under-hood fuse/relay box connector K (10P) and body ground.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR K (10P)



Wire side of female terminals

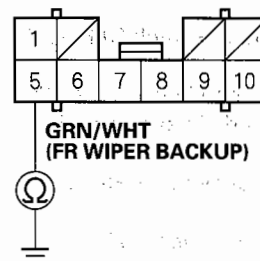
Is there continuity?

YES—Go to step 13.

NO—Faulty relay control module; replace the under-hood fuse/relay box. ■

13. Disconnect the wiper/washer switch 8P connector.
14. Check for continuity between the No. 5 terminal of the under-hood fuse/relay box connector K (10P) and body ground.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR K (10P)



Wire side of female terminals

Is there continuity?

YES—Repair a short in the GRN/WHT wire. ■

NO—Faulty wiper/washer switch; replace it. ■

Wipers/Washers

DTC Troubleshooting (cont'd)

DTC B1077: Windshield Wiper (As) Signal Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Turn the wiper switch to LOW, then HIGH for at least 15 seconds in each position.
4. Check for DTCs with the HDS.

Is DTC B1077 indicated?

YES—Go to step 5.

NO—Intermittent failure. The windshield wiper system is OK at this time. Check pinfits and connections. ■

5. Turn the ignition switch OFF.
6. Perform the wiper motor test (see page 22-250).

Does the wiper motor operate correctly?

YES—Go to step 7.

NO—Replace the windshield wiper motor and recheck. ■

7. Turn the ignition switch ON (II).
8. Turn the wiper switch to LOW, then HIGH and check wiper operation.

Do the wipers operate normally?

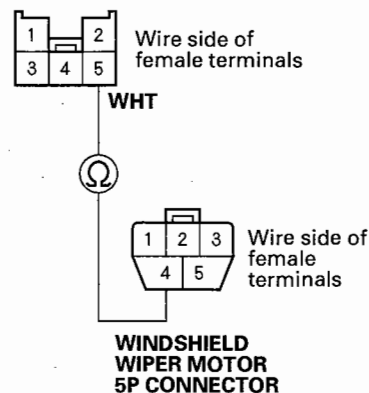
YES—Go to step 9.

NO—Go to step 12.

9. Disconnect the under-hood fuse/relay box connector J (5P) and windshield wiper motor 5P connector.

10. Check for continuity between the No. 4 terminal of the windshield wiper motor 5P connector and No. 5 terminal of the under-hood fuse/relay box connector J (5P).

UNDER-HOOD FUSE/RELAY BOX CONNECTOR J (5P)



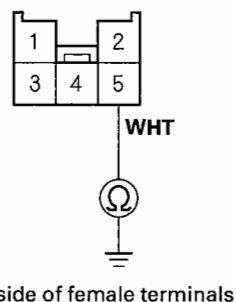
Is there continuity?

YES—Go to step 11.

NO—Repair an open in the WHT wire. ■

11. Check for continuity between the No. 5 terminal of the under-hood fuse/relay box connector J (5P) and body ground.

UNDER-HOOD FUSE/RELAY BOX CONNECTOR J (5P)



Is there continuity?

YES—Repair a short in the WHT wire. ■

NO—Faulty relay control module; replace the under-hood fuse/relay box. ■



12. Turn the ignition switch OFF, and check the No. 11 (30A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

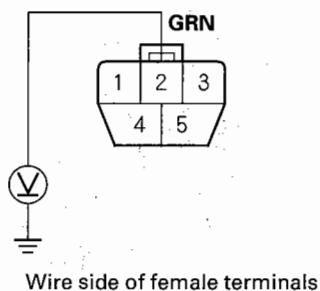
YES—Go to step 13.

NO—Replace the blown fuse and recheck the system. If the fuse blown again, check for a short on the GRN wire between the under-dash fuse/relay box and the windshield wiper motor. ■

13. Turn the ignition switch ON (II).

14. Check for voltage between the No. 2 terminal of the windshield wiper motor 5P connector and body ground.

WINDSHIELD WIPER MOTOR 5P CONNECTOR



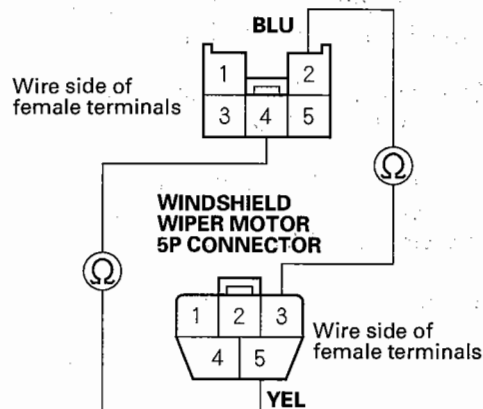
Is there battery voltage?

YES—Go to step 15.

NO—Repair an open in the GRN wire. ■

15. Check for continuity between the No. 3 and No. 5 terminals of the windshield wiper motor 5P connector and the No. 2 and No. 4 terminals of the under-hood fuse/relay box connector J (5P).

UNDER-HOOD FUSE/RELAY BOX CONNECTOR J (5P)



Is there continuity?

YES—Faulty relay control module; replace the under-hood fuse/relay box. ■

NO—Repair an open in the BLU or YEL wire. ■

Wipers/Washers

DTC Troubleshooting (cont'd)

DTC B1281: Windshield Wiper Switch MIST Position Circuit Malfunction

DTC B1282: Windshield Wiper Switch INT (AUTO) Position Circuit Malfunction

DTC B1283: Windshield Wiper Switch LOW Position Circuit Malfunction

DTC B1284: Windshield Wiper Switch HIGH Position Circuit Malfunction

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Turn the ignition switch OFF, and then back ON (II).
3. Turn the windshield wiper switch in MIST and wait for 2 seconds.
4. Turn the windshield wiper switch OFF and wait for 2 seconds.
5. Turn the windshield wiper switch in INT (AUTO) and wait for 2 seconds.
6. Turn the windshield wiper switch in LOW and wait for 2 seconds.
7. Turn the windshield wiper switch in HIGH and wait for 2 seconds.
8. Check for DTCs with the HDS.

Is DTC B1281, B1282, B1283, or B1284 indicated?

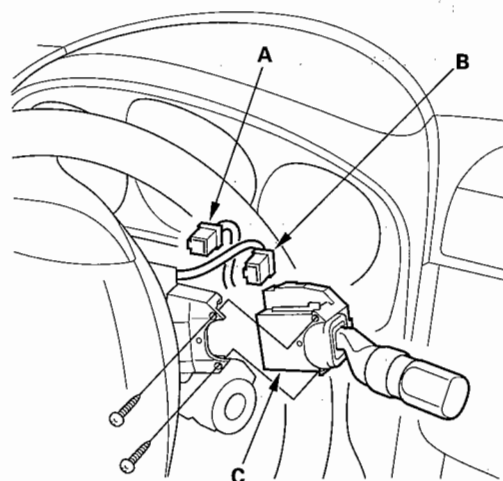
YES—Replace the windshield wiper/washer switch. ■

NO—Intermittent failure, the windshield wiper/washer switch and the combination switch control unit are OK at this time. Check pinfits and connections. ■

Wiper/Washer Switch Test/Replacement

NOTE: The wiper/washer switch is built into the combination switch control unit. For the wiper/washer test, refer to the combination switch control unit input test (see page 22-249).

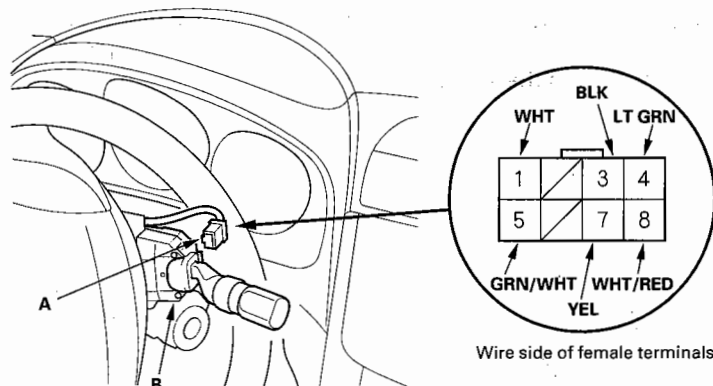
1. Remove the dashboard lower cover (see page 20-82).
2. Remove the steering column covers (see page 17-24).
3. Disconnect the combination light switch 12P connector (A) and dashboard wire harness 8P connector (B) from the wiper/washer switch (C).



4. Remove the two screws, then slide out the wiper/washer switch.

Wiper/Washer Switch (Combination Switch Control Unit) Input Test

- Before troubleshooting the wiper/washer system, troubleshoot the B-CAN System Diagnosis Test Mode A (see page 22-108).
- Remove the dashboard lower cover (see page 20-82).
- Remove the steering column covers (see page 17-24).
- Disconnect the 8P connector (A) from the wiper/washer switch (B).



- 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 6.
- With the connector still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, replace the wiper/washer switch (combination switch control unit).

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
3	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	- Poor ground (G503, G601) - An open in the wire
8	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	- Blown No. 15 (40A) fuse in the under-hood fuse/relay box - Blown No. 7 (10A) fuse in the under-dash fuse/relay box - An open in the wire
7	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	- Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box - An open in the wire
5	GRN/WHT	Under all conditions	Check for continuity between the No. 5 terminal and under-hood fuse/relay box connector K (10P) No. 5 terminal: There should be continuity.	An open in the wire
		Disconnect the under-hood fuse/relay box connector K (10P)	Check for continuity between the No. 5 terminal and body ground: There should be no continuity.	A short in the wire
4	LT GRN	Under all conditions	Check for continuity between the No. 4 terminal and under-dash fuse/relay box connector X No. 27 terminal: There should be continuity.	An open in the wire
		Disconnect the under-dash fuse/relay box connector X (39P)	Check for continuity between the No. 4 terminal and body ground: There should be no continuity.	A short in the wire
1	WHT	Under all conditions	Check for continuity between the No. 1 terminal and under-hood fuse/relay box connector K (10P) No. 6 terminal: There should be continuity.	An open in the wire
		Disconnect the under-hood fuse/relay box connector K (10P)	Check for continuity between the No. 1 terminal and body ground: There should be no continuity.	A short in the wire

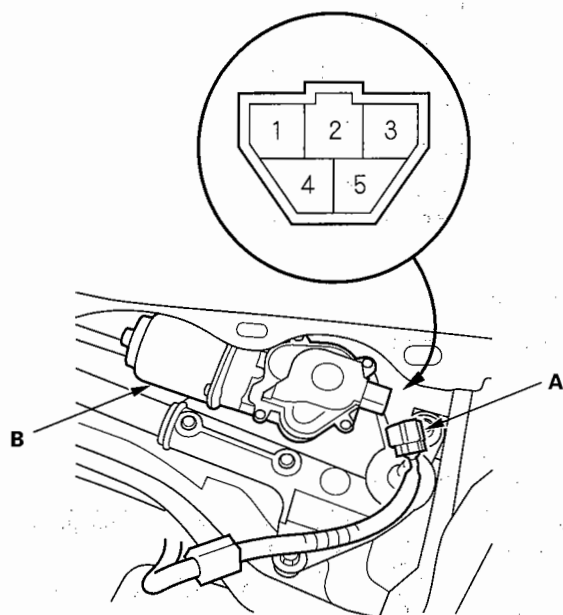
Wipers/Washers

Wiper Motor Test

1. Open the hood, and remove the wiper arms (see page 22-251).

NOTE: Carefully remove the wiper arms, so that they do not touch the hood.

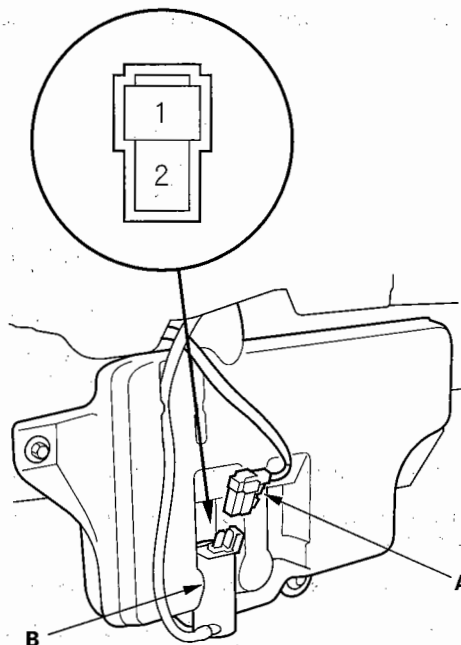
2. Remove the hood seal and cowl cover.
3. Disconnect the 5P connector (A) from the wiper motor (B).



4. Test the motor by connecting battery power to the No. 2 terminal and ground the No. 3 terminal of the wiper motor 5P connector. The motor should run at low speed. If the motor does not run or fails to run smoothly, replace the motor.
5. Test the motor by connecting battery power to the No. 2 terminal and ground the No. 5 terminal of the wiper motor 5P connector. The motor should run at high speed. If the motor does not run or fails to run smoothly, replace the motor.
6. Connect an analog voltmeter between the No. 4 (+) and No. 1 (-) terminals, and run the motor at low or high speed. The voltmeter should indicate 12 V and 4 V or less alternately. If it does not, replace the motor.

Washer Motor Test

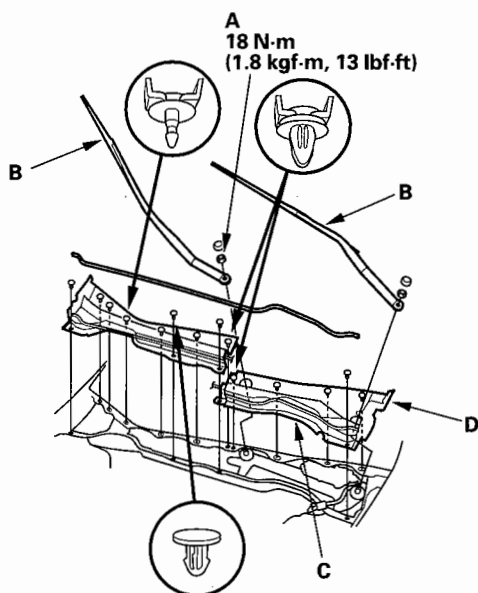
1. Remove the right inner fender (see page 20-142).
2. Disconnect the 2P connector (A) from the washer motor (B).



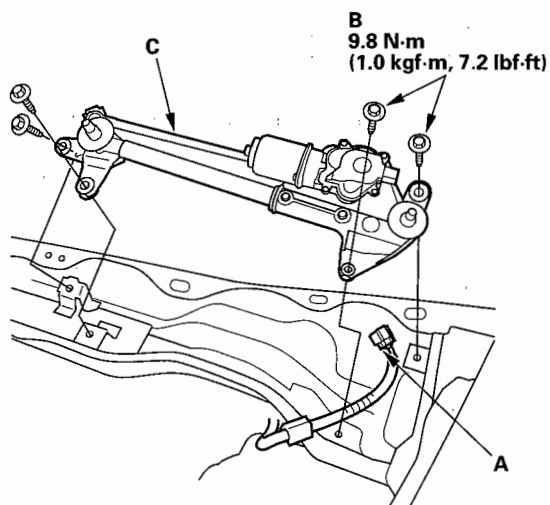
3. Test the motor by connecting battery power to the No. 1 terminal and ground to the No. 2 terminal of the washer motor. The motor should run.
- If the motor does not run or fails to run smoothly, replace it.
 - If the motor runs smoothly, but little or no washer fluid is pumped, check for a disconnected or blocked washer hose, or a clogged washer motor outlet.

Wiper Motor Replacement

1. Open the hood. Remove the left and right rear engine compartment covers (see page 5-2).
2. Remove the caps, nuts (A), and the windshield wiper arms (B).

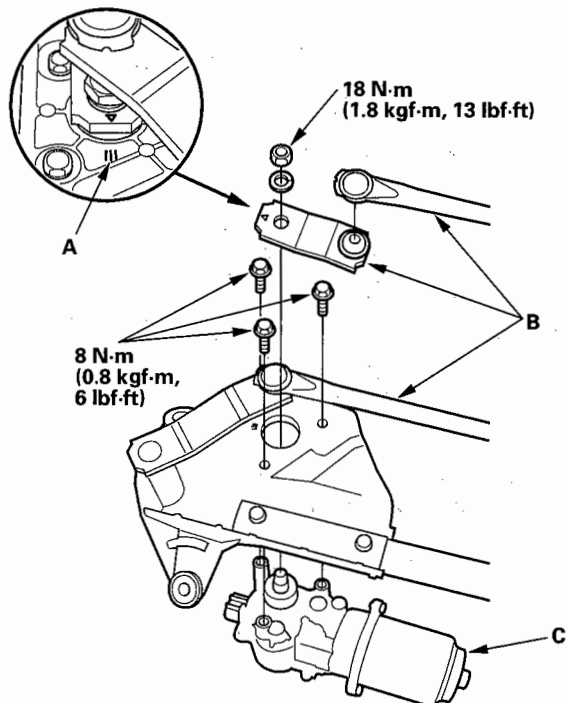


3. Remove the hood seals (C) and cowl covers (D).
4. Disconnect the 5P connector (A) from the wiper motor.



5. Remove the four bolts (B) and wiper linkage assembly (C).

6. Scribe a line (A) across the link and windshield wiper linkage to show the original adjustment. Separate the windshield wiper linkage (B) from the wiper motor (C).



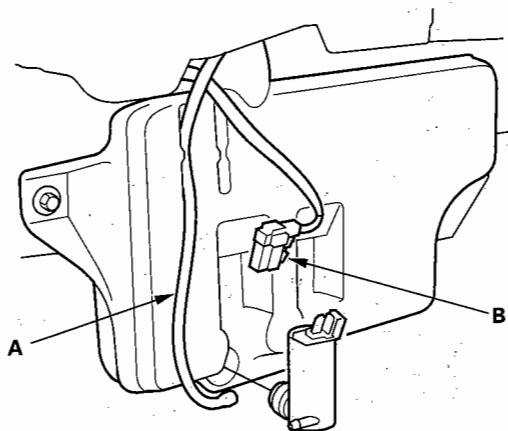
7. Install in the reverse order to removal, and note these items:

- Apply multipurpose grease to the moving parts.
- Before reinstalling the wiper arms, turn the wiper switch ON, then OFF to return the wiper shafts to the park position.
- If necessary, replace any damaged clips.
- Check the wiper motor operation.

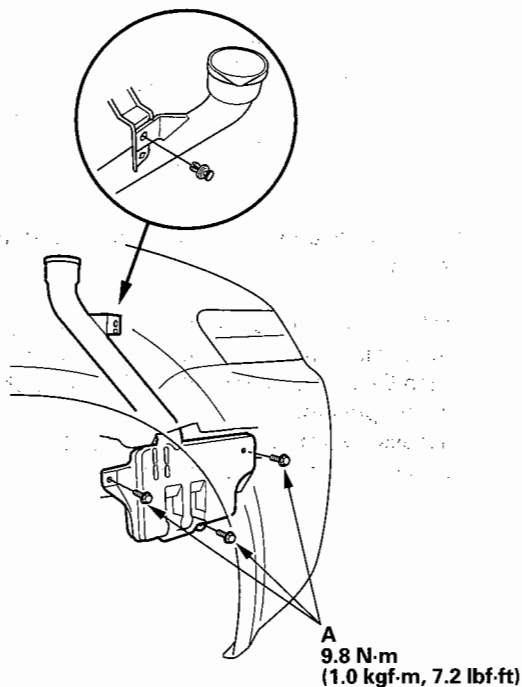
Wipers/Washers

Washer Reservoir Replacement

1. Remove the right inner fender (see page 20-142).
2. Disconnect the washer tube (A) and washer motor 2P connector (B).



3. Remove the clip and three bolts (A), then remove the washer reservoir (B).

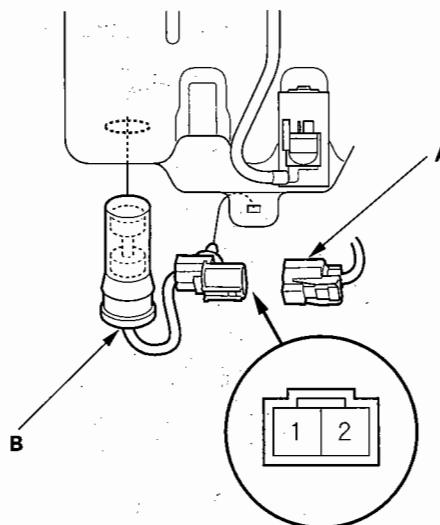


4. Install the reservoir in the reverse order of removal.

Washer Fluid Level Switch Test

Canada

1. Remove the right inner fender (see page 20-142).
2. Disconnect the 2P connector (A) from the washer fluid level switch (B).



Terminal side of male terminals

3. Remove the washer fluid level switch from the reservoir.

NOTE: Fluid may flow out of the opening.

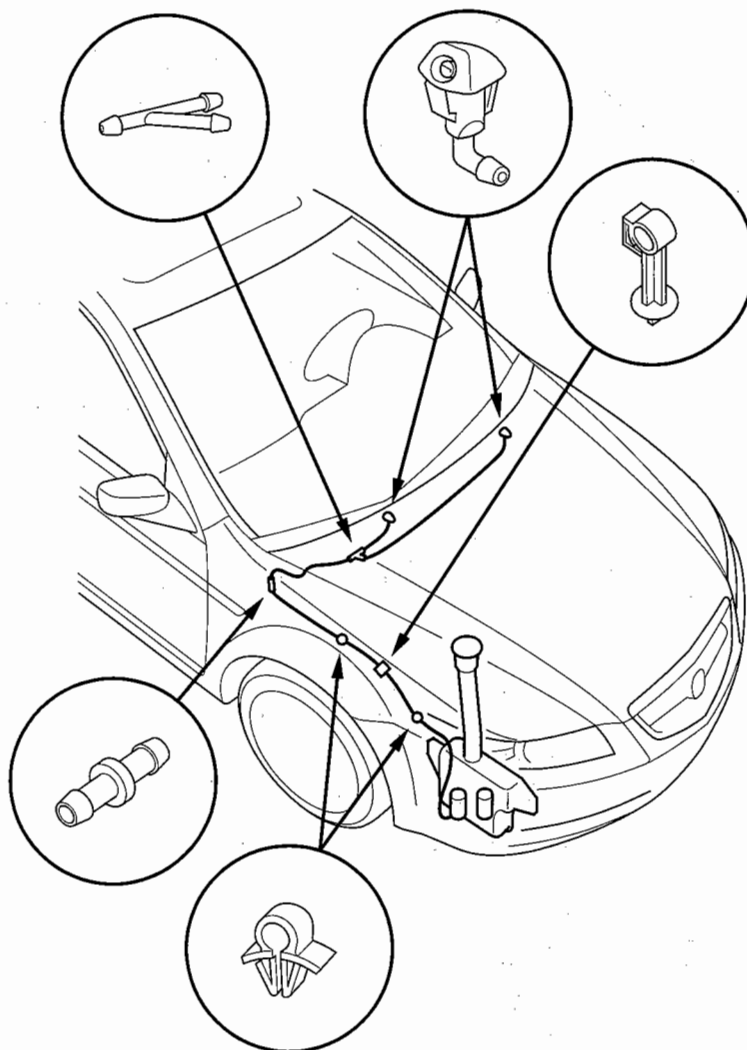
4. Check for continuity between the No. 1 and No. 2 terminals in each float position (C).

- There should be continuity when the float is down.
- There should be no continuity when the float is up.

5. If the continuity is not as specified, replace the switch.

Washer Tube Replacement

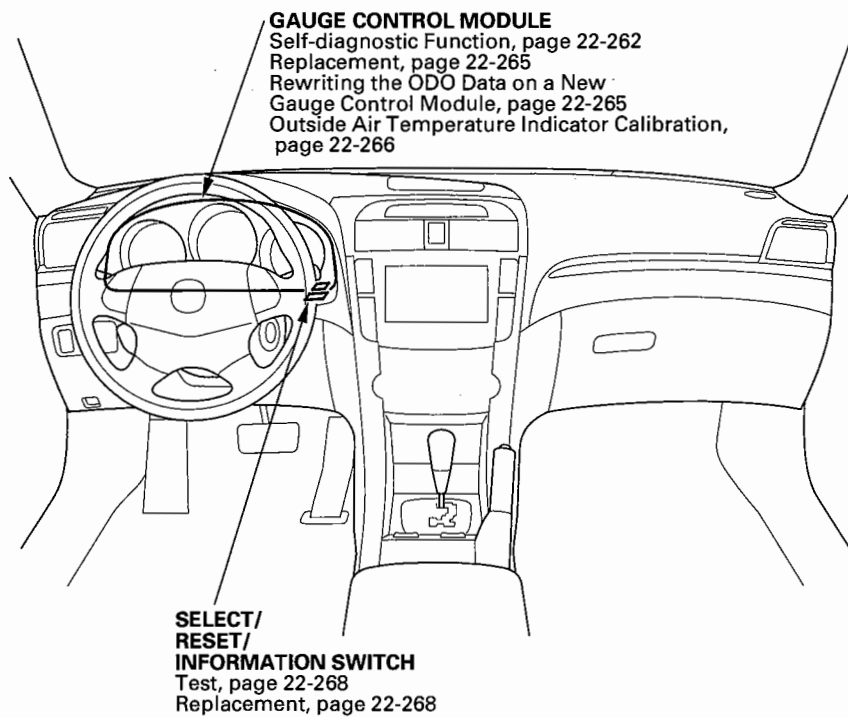
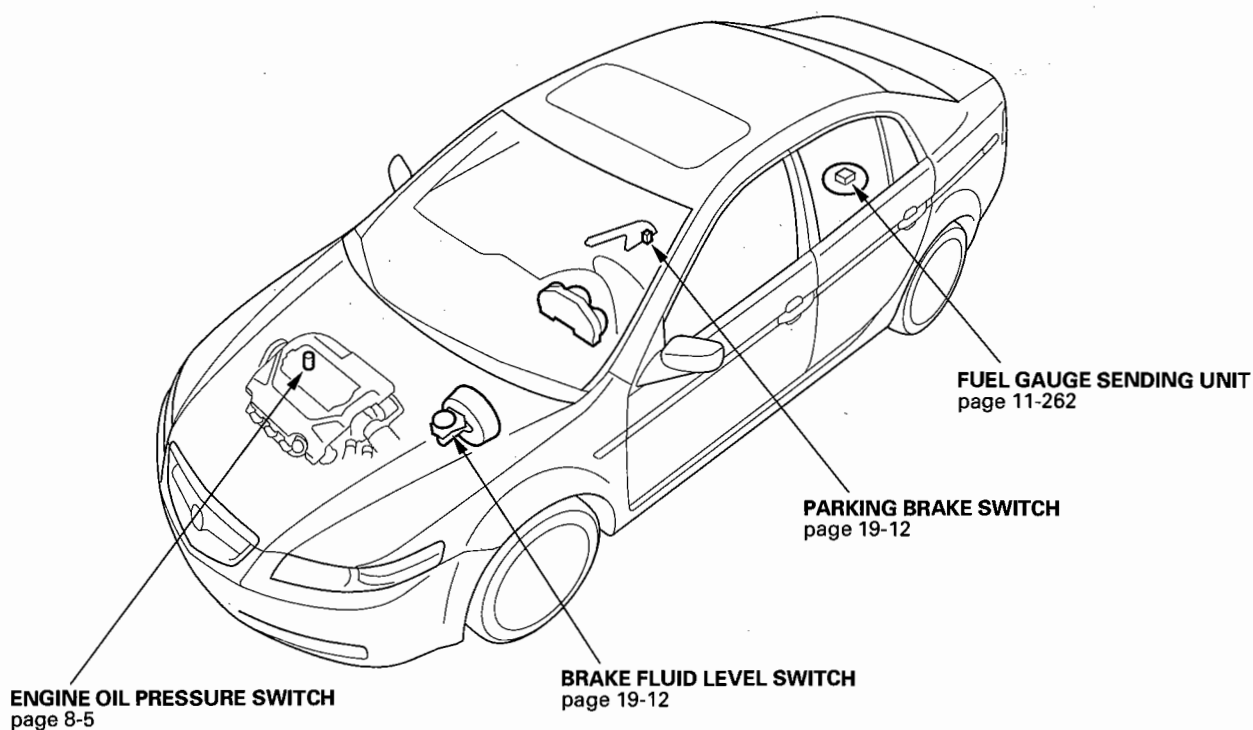
1. Remove the right inner fender (see page 20-142).
2. Remove the windshield washer nozzles and clips, then remove the tube.

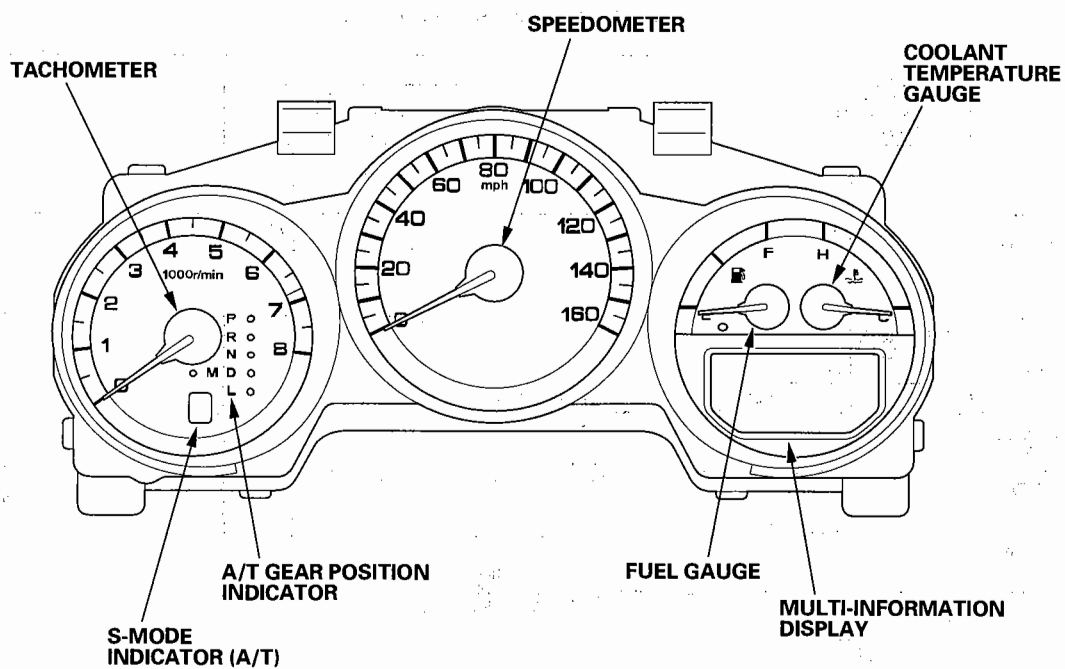
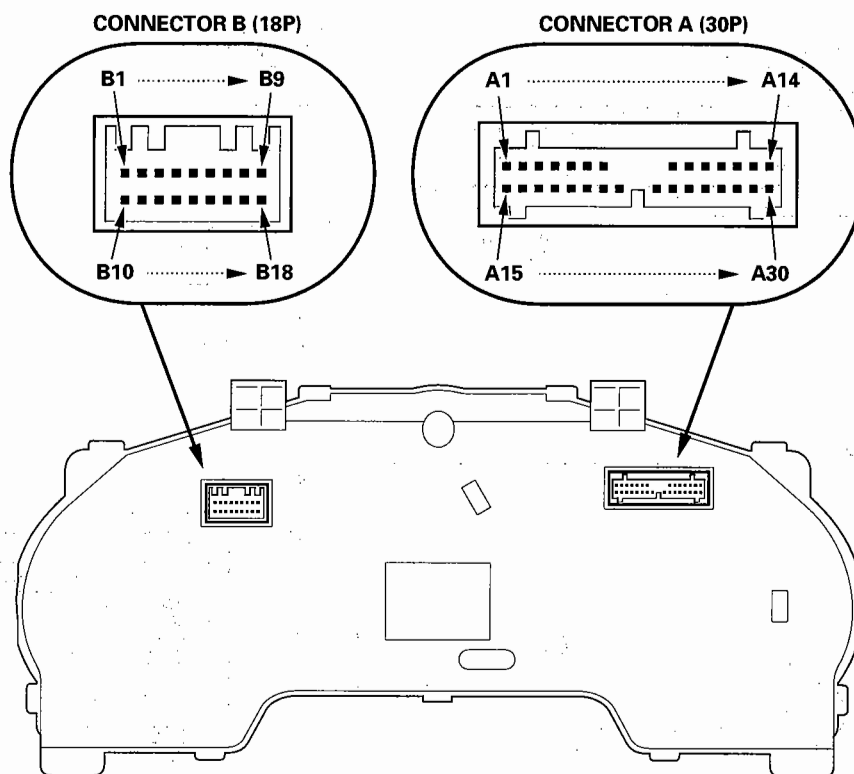


3. Install in the reverse order of removal. Take care not to pinch the washer tube. Check the windshield washer operation.

Gauges

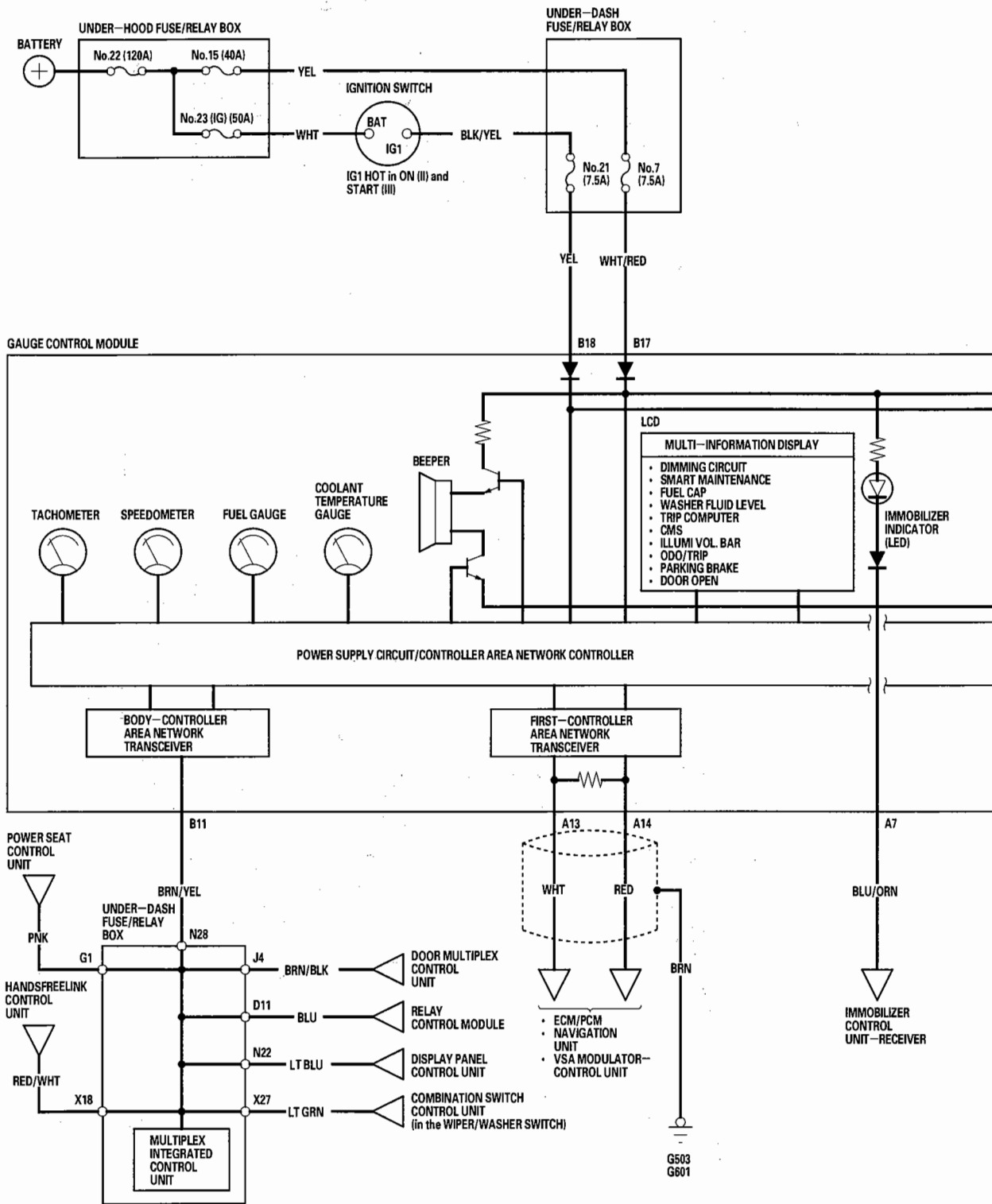
Component Location Index





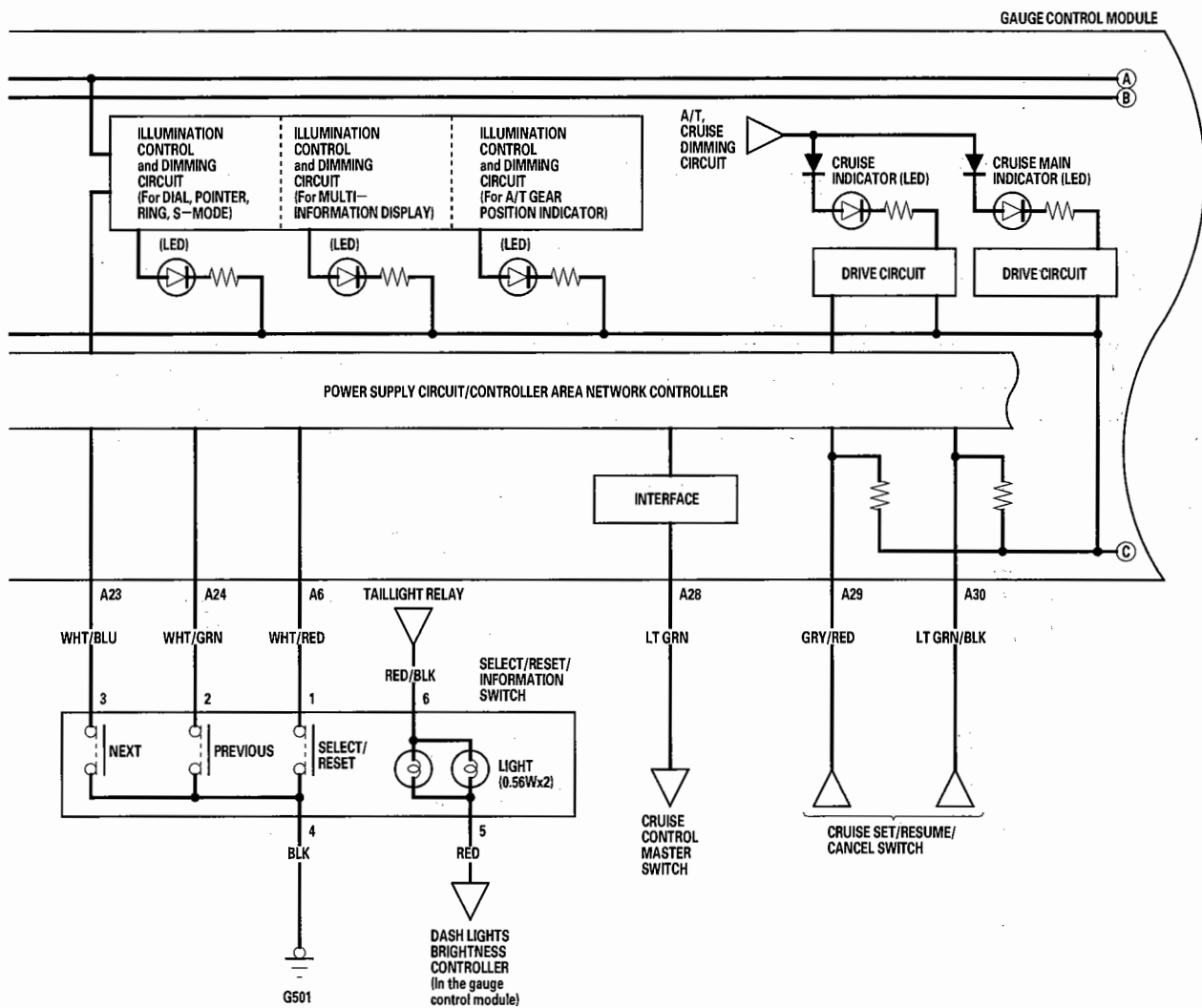
Gauges

Circuit Diagram





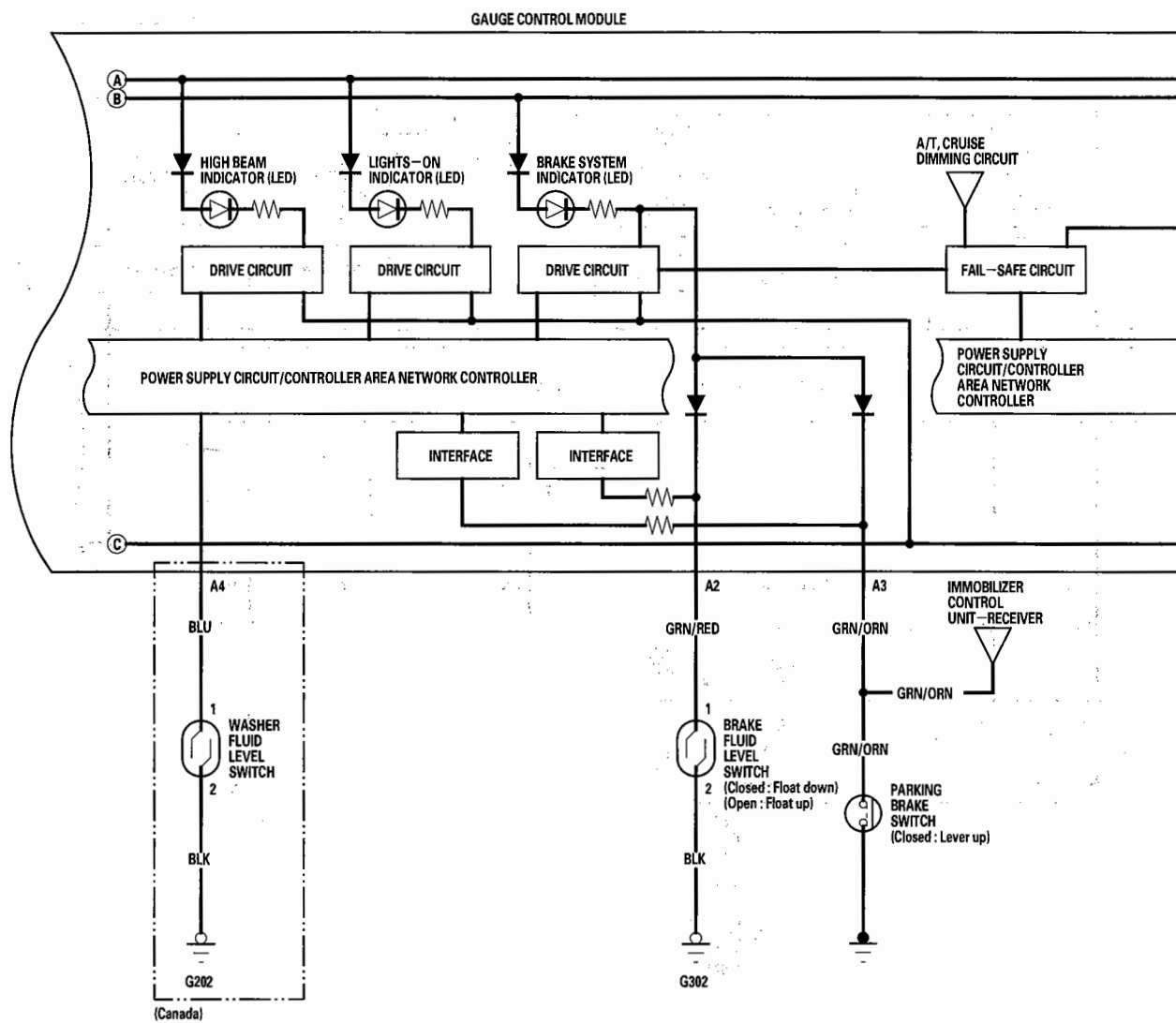
----- : Shielding

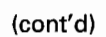


(cont'd)

Gauges

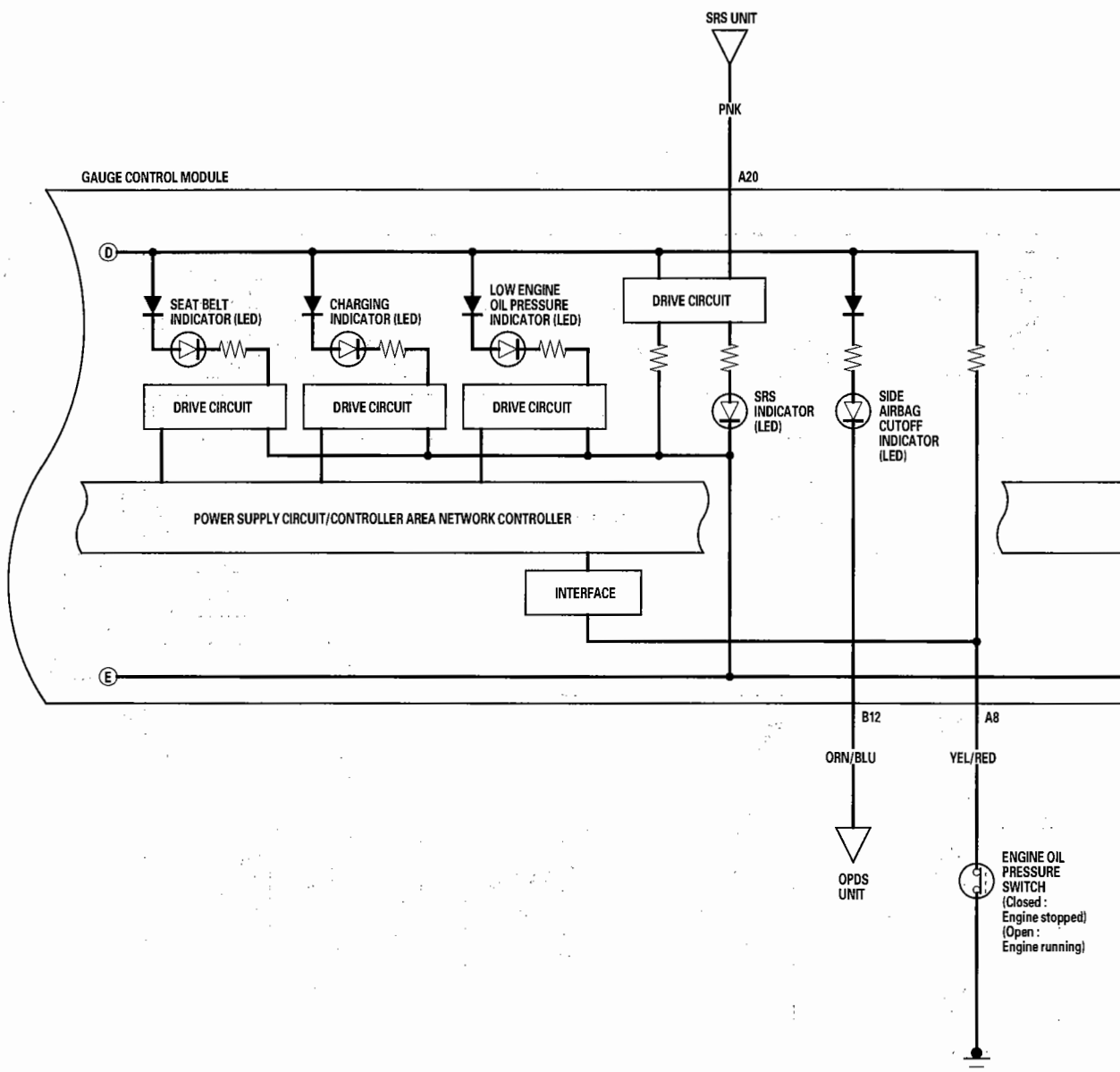
Circuit Diagram (cont'd)





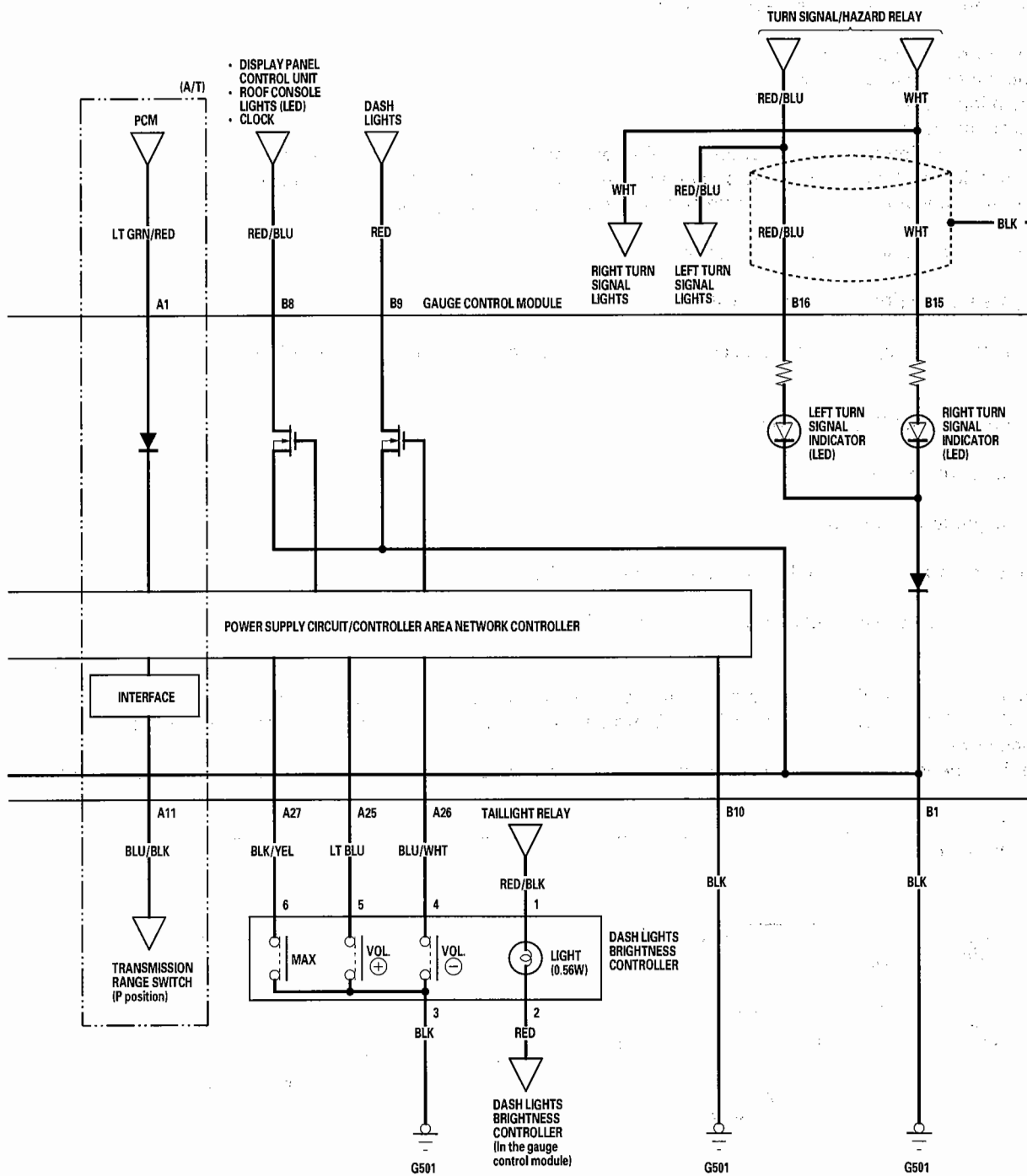
Gauges

Circuit Diagram (cont'd)





Shielding





The Indicator Drive Circuit Check

When entering the self-diagnosis mode, the following indicators blink:

Seat belt indicator, charging system indicator, low fuel indicator, oil pressure indicator, high beam indicator, DRL indicator (Canada), 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, cruise main 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 switches, select, previous, next switches, and dash lights brightness controller (cancel, VOL (+), VOL (-))

The Beeper Drive Circuit Check

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

The LCD [Sport shift and multi-information display (MID)] Segment Check

When entering the self-diagnosis mode, the all segments blink five times.

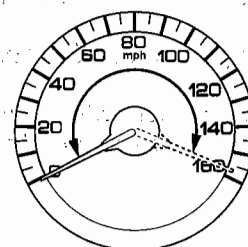
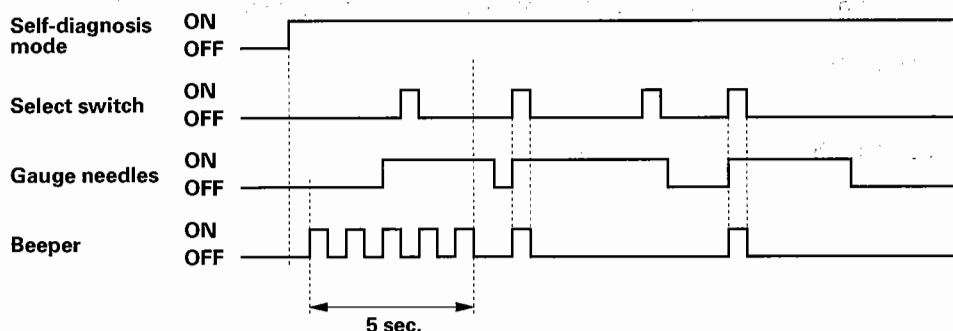
The Gauge Drive Circuit Check

When entering the self-diagnosis 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.



The needles sweep from the minimum position to the maximum position, then return to the minimum position.

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

(cont'd)

Gauges

Self-diagnostic Function (cont'd)

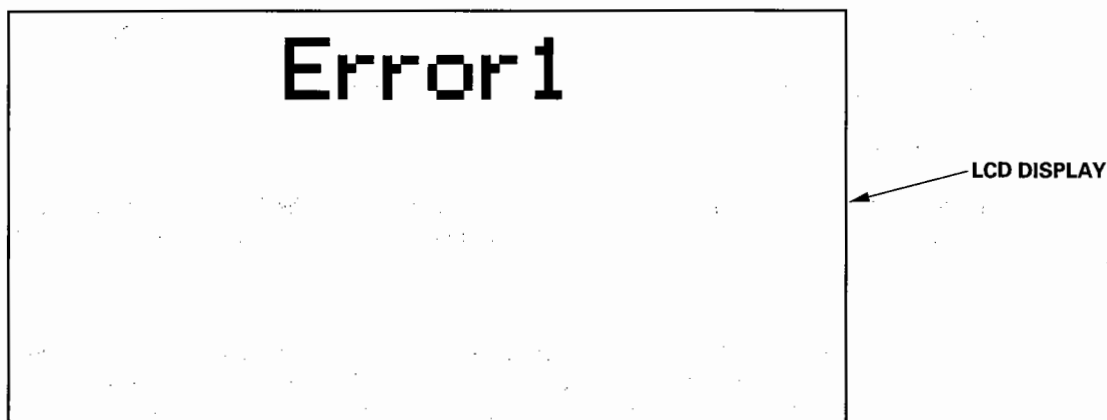
The Communication Line Check

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

If all segments come on, the communication line is OK. If there is a communication line error, the word "Error" will be indicated on the multi-information display followed by a number.

- If the word "Error 1" is indicated, there is a malfunction in the communication line between the gauge control module and the fast-controller area network (F-CAN). Check for DTCs in the ECM/PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A (see page 22-108).
- If the word "Error 2" is indicated, there is a malfunction in the communication line between the gauge control module and the body-controller area network (B-CAN). Go to B-CAN System Diagnosis Test Mode A (see page 22-108). (B1155 or B1161 set).
- If the word "Error 3" is indicated, there is a malfunction in the communication line between the gauge control module and the body-controller area network (B-CAN) and the fast-controller area network (F-CAN). Check for DTCs in the ECM/PCM and troubleshoot any DTCs found. If no DTCs are found, go to B-CAN System Diagnosis Test Mode A (see page 22-108).

Faulty (example Error 1):



If any communication line errors are found, go to B-CAN System Diagnosis Test Mode A (see page 22-108).

Ending the self-diagnosis function

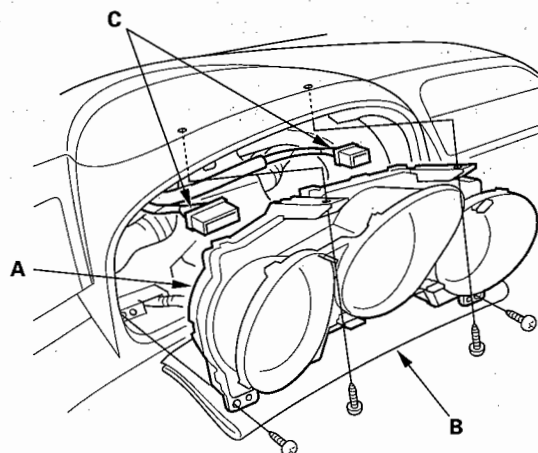
Turn the ignition switch OFF.

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



Gauge Control Module Replacement

1. Remove the instrument panel (see page 20-82).
2. Remove the screws from the gauge control module (A), and spread a protective cloth (B) on the upper column cover.



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

Rewriting the ODO Data on a New Gauge Control Module

NOTE:

- If the HDS retrieves the ODO data from the gauge control module, the ODO value on the multi-information display will appear as "— — —", making the ODO function unusable, and the HDS will be unable to retrieve additional ODO values.
- Rewriting is not possible on a gauge control module that does not communicate.
- Obtain a new gauge control module before starting the rewriting process.

1. Before replacing the gauge control module, connect the HDS to the data link connector.
2. Select GAUGES from the BODY ELECTRICAL SYSTEM SELECT MENU display.
3. Select "Gauge Control Module Replacement (ODO rewrite)" from the ADJUSTMENT MENU, and follow the instructions on the display to retrieve the ODO value.
4. Replace the gauge control module.
5. Follow the instructions on the display to write the new ODO value to the new gauge control module.

Outside Air Temperature Indicator Calibration

NOTE: To test the outside air temperature sensor (see page 21-64).

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 110°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 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 page 22-108).

Calibration

The outside air temperature indicator's displayed temperature can be recalibrated $\pm 3^\circ$ to meet the customer's expectations.

1. Turn the ignition switch ON (II).
2. Select the outside air temperature display and press and hold the SELECT/RESET button for 10 seconds. While you continue to hold the button, the display will scroll through temperature settings from $+3^\circ$ to -3° as shown.

0.1.2.3.-3.-2.-1

3. When the desired correction value appears on the display, release the button, and the recalibrated outside air temperature will be displayed. Each time a desired correction value is entered, it replaces the previous value.

Example:

Incorrect value = 68°F (20°C)

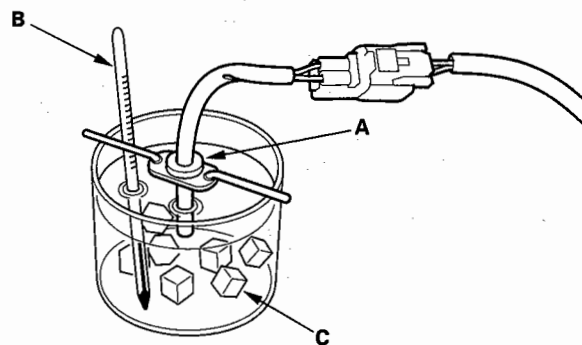
Desired correction value = $+2^\circ\text{F}$ ($+1^\circ\text{C}$)

Correct value = 70°F (21°C)

Desired correction value = -2°F (-1°C)

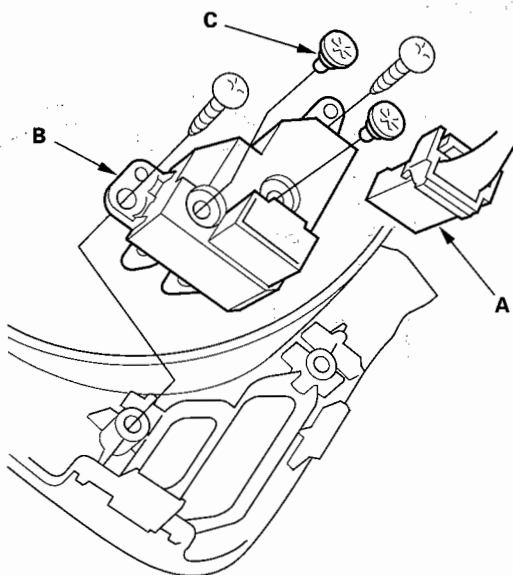
Correct value = 66°F (19°C)

NOTE: To recalibrate the display to the true temperature, remove the outside air temperature sensor (A), but leave it connected. Submerge the sensor and a thermometer (B) in a container of ice water (C). Select the calibration mode as described above, then recalibrate the display to the true temperature.



Select/Reset/Information Switch Test/Replacement

1. Remove the instrument panel (see page 20-82).
2. Disconnect the 6P connector (A) from the select/reset/information switch (B).



3. Remove the two screws and the select/reset/information switch.
4. Check for continuity between the terminal in each switch position according to the table.

Terminal Position	1	2	3	4	5	6
Select/Reset	○	—	—	○	○	○
Next (→)	—	—	○	○	○	○
Previous (←)	—	○	—	○	○	○

5. If the continuity is not as specified, replace the bulbs (C) or the switch.

DTC Troubleshooting

DTC B1152: Gauge Control Module EEPROM Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Clear the DTCs with the HDS.
2. Start the engine.
3. Check for DTCs with the HDS.

Is DTC B1152 indicated?

YES— Faulty gauge control module; replace the gauge control module (see page 22-265). ■

NO— Intermittent failure, the gauge control module is OK at this time. Check pinfits and connections. If the connections are good, check the battery condition (see page 22-74), and the charging system (see page 4-25). ■



DTC B1155: Gauge Control Module Lost Communication with the Combination Switch Control Unit (Headlight Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1155 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1007 or B1062 indicated?

YES—Go to Combination Switch Control Unit Input Test (see page 22-136). ■

NO—Go to Gauge Control Module Input Test (see page 22-134). ■

DTC B1156: Gauge Control Module Lost Communication with the Combination Switch Control Unit (Wiper Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1156 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1063 indicated?

YES—Go to Combination Switch Control Unit Input Test (see page 22-136). ■

NO—Go to Gauge Control Module Input Test (see page 22-134). ■

Gauges

DTC Troubleshooting (cont'd)

DTC B1157: Gauge Control Module Lost Communication with Multiplex Integrated Control Unit (MICU)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1157 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1055, B1255 and B1806 indicated?

YES—Go to Multiplex Integrated Control Unit Input Test (see page 22-130).

NO—Go to Gauge Control Module Input Test (see page 22-134).

DTC B1158: Gauge Control Module Lost Communication with Relay Control Module

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1158 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1005 indicated?

YES—Go to Relay Control Module Input Test (see page 22-137).

NO—Go to Gauge Control Module Input Test (see page 22-134).



DTC B1159: Gauge Control Module Lost Communication with the Multiplex Integrated Control Unit (MICU) (Door Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1159 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1057 or B1807 indicated?

YES—Go to Multiplex Integrated Control Unit Input Test (see page 22-130).

NO—Go to Gauge Control Module Input Test (see page 22-134).

DTC B1160: Gauge Control Module Lost Communication with the Door Multiplex Control Unit (Door Lock Switch Message)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 B1160 indicated?

YES—Go to step 4.

NO—Intermittent failure. The gauge control system is OK at this time. Check pinfits and connections. ■

4. Check for DTCs with the HDS.

Is DTC B1006 or B1058 indicated?

YES—Go to Door Multiplex Control Unit Input Test (see page 22-135).

NO—Go to Gauge Control Module Input Test (see page 22-134).

Gauges

DTC Troubleshooting (cont'd)

DTC B1168: Gauge Control Module Lost Communication with ECM/PCM (Engine Messages)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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

Is DTC B1168 indicated?

YES—Go to step 5.

NO—Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

5. Check for DTCs in the ECM/PCM with the HDS.

Are any DTCs indicated?

YES—Go to the indicated DTCs troubleshooting.

NO—Go to step 6.

6. Do the Gauge Control Module Input Test (see page 22-134).

Are all inputs OK?

YES—Go to step 7.

NO—Repair the faulty input, then recheck the DTCs. ■

7. Substitute a known-good gauge control module.
8. Clear the DTCs with the HDS.
9. Turn the ignition switch OFF, and then back ON (II).
10. Start and run the engine for at least 5 seconds then turn the engine off.
11. Check for DTCs with the HDS.

Is DTC B1168 indicated?

YES—Replace the ECM/PCM. ■

NO—The original gauge control module is faulty; replace it (see page 22-265). ■



DTC B1169: Gauge Control Module Lost Communication with ECM/PCM (A/T Messages)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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

Is DTC B1169 indicated?

YES—Go to step 5.

NO—Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

5. Check for DTCs in the ECM/PCM with the HDS.

Are any DTCs indicated?

YES—Go to the ECM/PCM indicated DTCs troubleshooting.

NO—Go to step 6.

6. Do the Gauge Control Module Input Test (see page 22-134).

Are all inputs OK?

YES—Go to step 7.

NO—Repair the faulty input, then recheck the DTCs. ■

7. Substitute a known-good gauge control module.
8. Clear the DTCs with the HDS.
9. Turn the ignition switch OFF, and then back ON (II).
10. Start and run the engine for at least 5 seconds then turn the engine off.
11. Check for DTCs with the HDS.

Is DTC B1169 indicated?

YES—Replace the ECM/PCM. ■

NO—The original gauge control module is faulty; replace it (see page 22-265). ■

DTC Troubleshooting (cont'd)

DTC B1175: Fuel Level Sensor (Fuel Gauge Sending Unit) Signals Input Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

1. Do the fuel gauge sending unit test (see page 11-262).

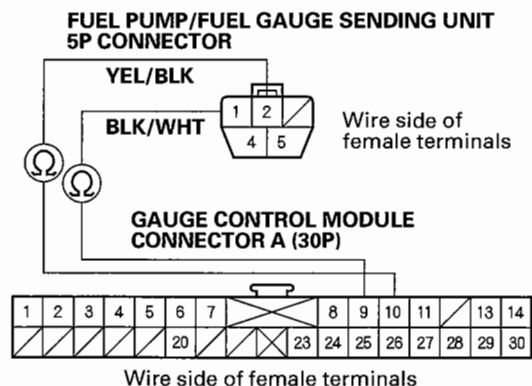
Is the fuel gauge sending unit OK?

YES—Go to step 2.

NO—Replace the fuel gauge sending unit. ■

2. Disconnect the fuel pump/fuel gauge sending unit 5P connector and the gauge control module connector A (30P).

3. Check for continuity between the No. 9 and No. 10 terminals of gauge control module connector A (30P) and No. 1 and No. 2 terminals of the fuel pump/fuel gauge sending unit 5P connector.



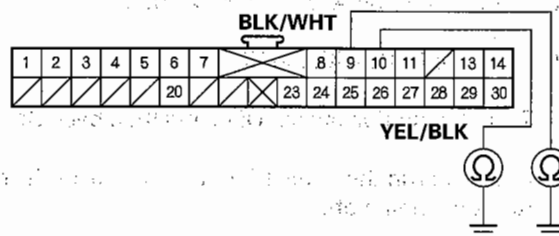
Is there continuity?

YES—Go to step 4.

NO—Repair an open in the BLK/WHT or YEL/BLK wire between the gauge control module and fuel gauge sending unit. ■

4. Check for continuity between the No. 9 and No. 10 terminals of gauge control module connector A (30P) and body ground.

GAUGE CONTROL MODULE CONNECTOR A (30P)



Wire side of female terminals

Is there continuity?

YES—Repair a short to ground in the BLK/WHT or YEL/BLK wire. ■

NO—Replace the gauge control module (see page 22-265). ■



DTC B1177: Abnormal Battery Voltage (7.5 V)

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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 page 22-74) and the charging system (see page 4-25).

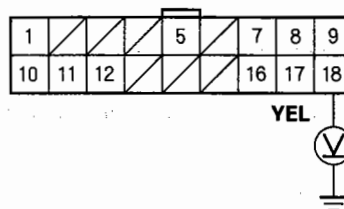
Is the battery condition normal and the charging system OK?

YES—Go to step 6.

NO—Abnormal battery condition which needs a recharge or replacement, or a charging system repair. ■

6. With gauge control module connector B (18P) still connected, check for voltage between the No. 18 terminal and body ground.

GAUGE CONTROL MODULE CONNECTOR B (18P)



Wire side of female terminals

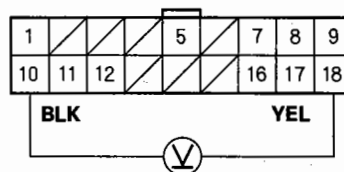
Is there battery voltage?

YES—Go to step 7.

NO—Repair an open or high resistance in the YEL wire between the gauge control module and under-dash fuse/relay box. ■

7. Check for voltage between the No. 10 and No. 18 terminals.

GAUGE CONTROL MODULE CONNECTOR B (18P)



Wire side of female terminals

Is there battery voltage?

YES—Faulty gauge control module; replace the gauge control module (see page 22-265).

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

DTC Troubleshooting (cont'd)

DTC B1178: F-CAN Communication Line Error

NOTE: If you are troubleshooting multiple DTCs, be sure to follow the instructions in B-CAN system diagnosis test mode A (see page 22-108).

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

Is DTC B1178 indicated?

YES—Go to step 5.

NO—Intermittent failure, the F-CAN communication line is OK at this time. Check for loose or poor connections. If the connections are good, check the battery condition (see page 22-74) and the charging system (see page 4-25). ■

5. Check for DTCs in the ECM/PCM with the HDS.

Are any DTCs indicated?

YES—Go to the indicated ECM/PCM DTCs troubleshooting.

NO—Go to step 6.

6. Do the Gauge Control Module Input Test (see page 22-134).

Are all inputs OK?

YES—Go to step 7.

NO—Repair the faulty input, then recheck the DTCs. ■

7. Substitute a known-good gauge control module.
8. Clear the DTCs with the HDS.
9. Turn the ignition switch OFF, and then back ON (II).
10. Start and run the engine for at least 5 seconds then turn the engine off.
11. Check for DTCs with the HDS.

Is DTC B1178 indicated?

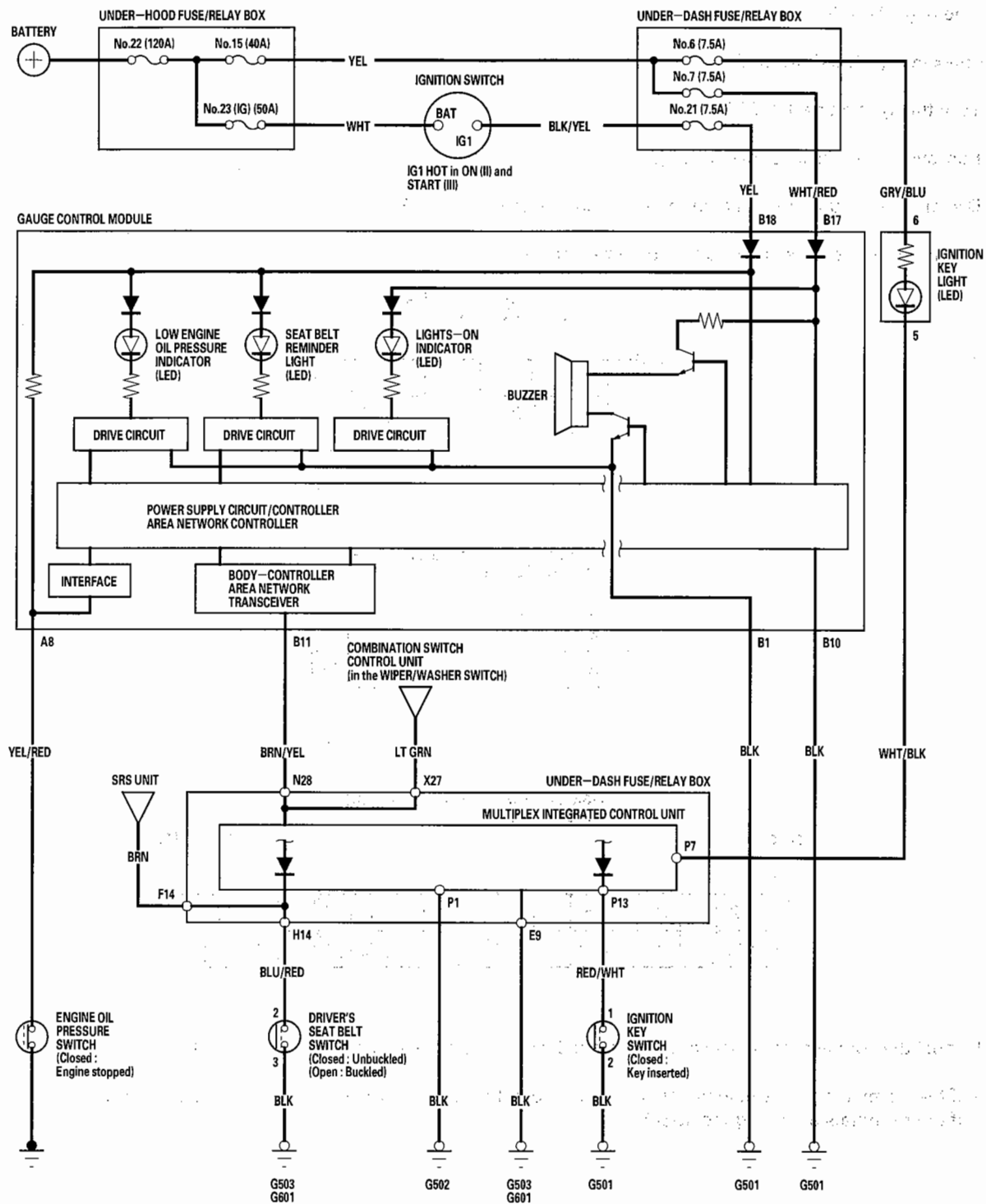
YES—Replace the ECM/PCM. ■

NO—The original gauge control module is faulty; replace it (see page 22-265). ■

Reminder Systems, Key Light Timer, and Engine Oil Pressure Indicator Systems



Circuit Diagram



Reminder Systems, Key Light Timer, and Engine Oil Pressure Indicator Systems

Control Unit Input Test

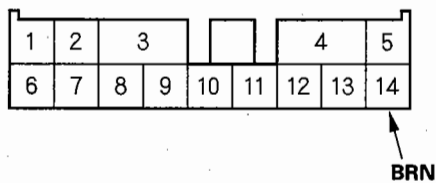
1. Before testing, troubleshoot the multiplex integrated control system using B-CAN System Diagnosis Test Mode A (see page 22-108).

Multiplex Integrated Control Unit

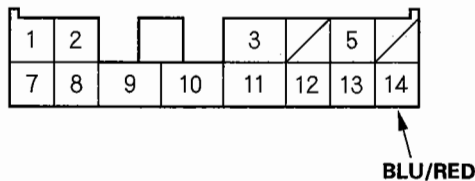
2. Turn the ignition switch OFF.
3. Remove the left kick panel (see page 20-62).
4. Disconnect the under-dash fuse/relay box connectors F, H and P.

NOTE: All connectors are wire side of female terminals.

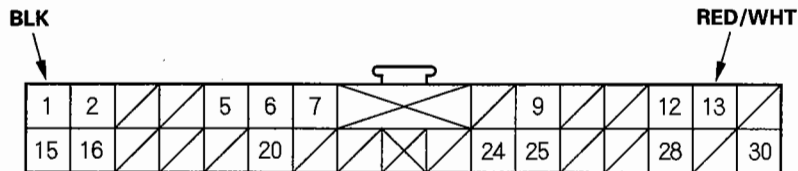
UNDER-DASH FUE/RELAY BOX
CONNECTOR F (14P)



UNDER-DASH FUE/RELAY BOX
CONNECTOR H (14P)



UNDER-DASH FUE/RELAY BOX
CONNECTOR P (30P)



5. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals are OK, go to step 6.



6. Reconnect the connectors. Turn the ignition switch ON (II) and make these input tests at the connector.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If all the input tests prove OK, go to step 7.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
F14	BRN	Ignition switch ON (II), driver's seat belt is unbuckled.	Check for voltage to ground: There should be 1V or less.	• Faulty driver's seat belt switch • Poor ground (G503, G601) • An open in the wire
H14	BLU/RED	Ignition switch ON (II), driver's seat belt is buckled.	Check for voltage to ground: There should be 5V or more.	• Faulty driver's seat belt switch • Short to ground
P13	RED/WHT	Ignition key in the ignition switch.	Check for voltage to ground: There should be 1V or less.	• Faulty ignition key switch • Poor ground (G501) • An open in the wire
		Ignition key out of the ignition switch.	Check for voltage to ground: There should be 5V or more.	• Faulty ignition key switch • Short to ground

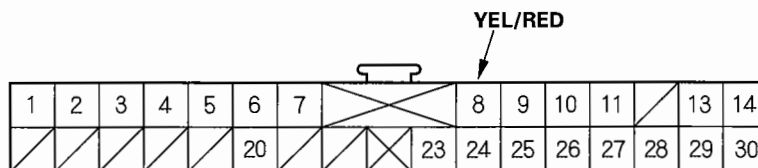
7. Turn the ignition switch OFF.

8. Remove the gauge control module (see page 22-265).

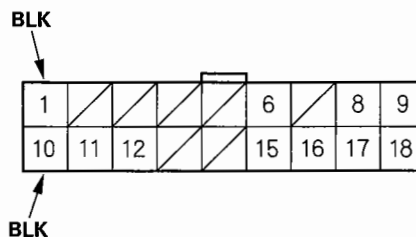
9. Disconnect the gauge control module connectors A and B.

NOTE: All connectors are wire side of female terminals.

GAUGE CONTROL MODULE CONNECTOR A (30P)



GAUGE CONTROL MODULE CONNECTOR B (18P)



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

- If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
- If the terminals are OK, go to step 11.

(cont'd)

Reminder Systems, Key Light Timer, and Engine Oil Pressure Indicator Systems

Control Unit Input Test (cont'd)

11. With the connectors still disconnected, make these input tests at the connector.

- If any test indicates a problem, find and correct the cause, then recheck the system.
- If the input tests prove OK, go to step 12.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A8	YEL/RED	Engine OFF	Check for continuity to ground: There should be continuity.	• Faulty engine oil pressure switch • An open in the wire
		Engine running	Check for continuity to ground: There should be no continuity.	• Mechanical problem in the engine • Faulty engine oil pressure switch • An open in the wire
B1 B10	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire

12. Reconnect the connectors at the under-dash fuse/relay box and the gauge control module.

13. Perform the Gauge Self-diagnosis Procedure (see page 22-262).

- If the beeper sounds and the seat belt reminder light flashes, go to step 14.
- If the beeper does not sound or the seat belt reminder light does not flash, replace the gauge control module.

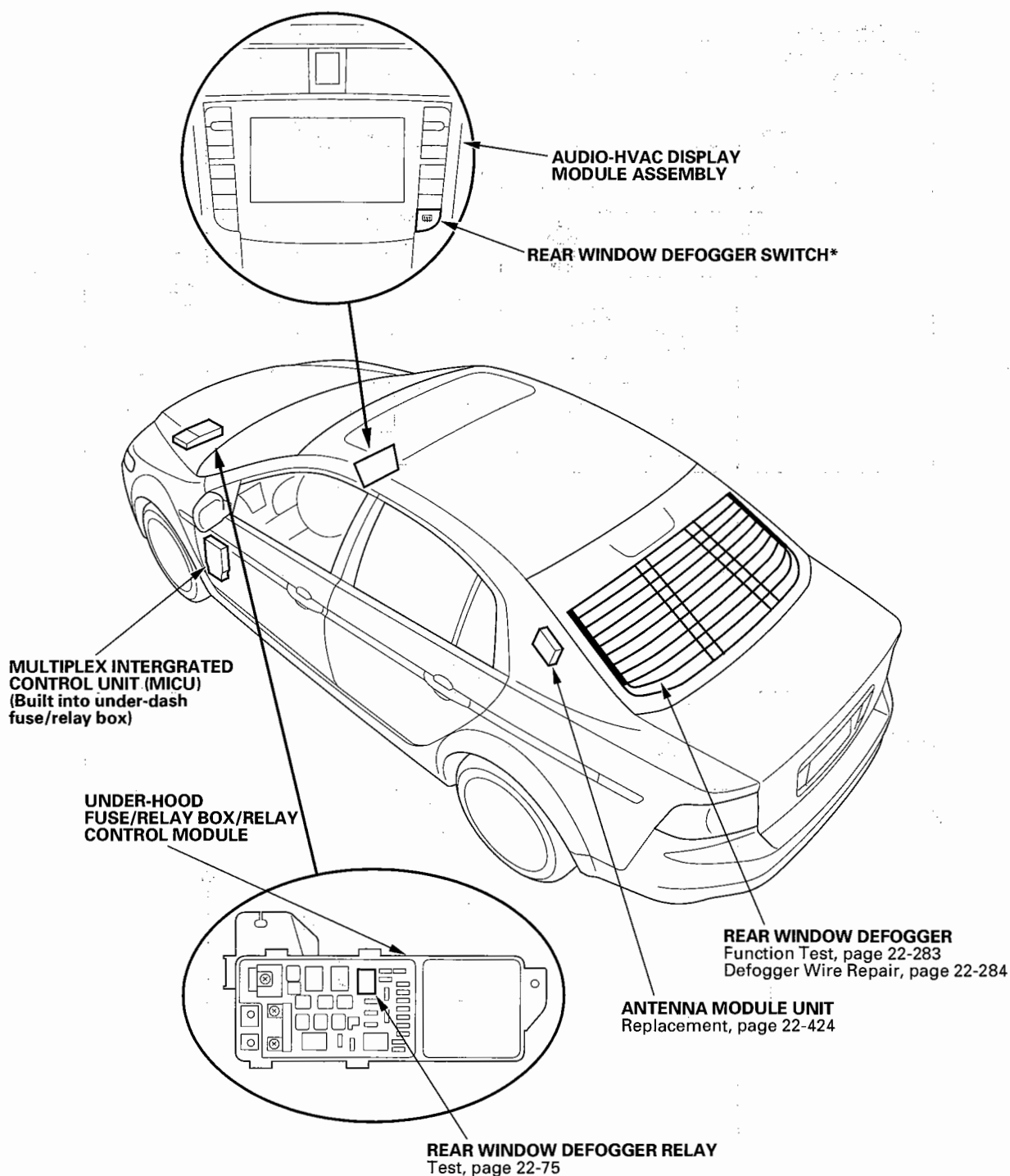
14. Substitute a known-good gauge control module and recheck the system.

- If the symptom is gone, the gauge control module is faulty; replace it.
- If the symptom is still present, the multiplex integrated control unit (MICU) is faulty; replace the under-hood fuse/relay box.



Rear Window Defogger

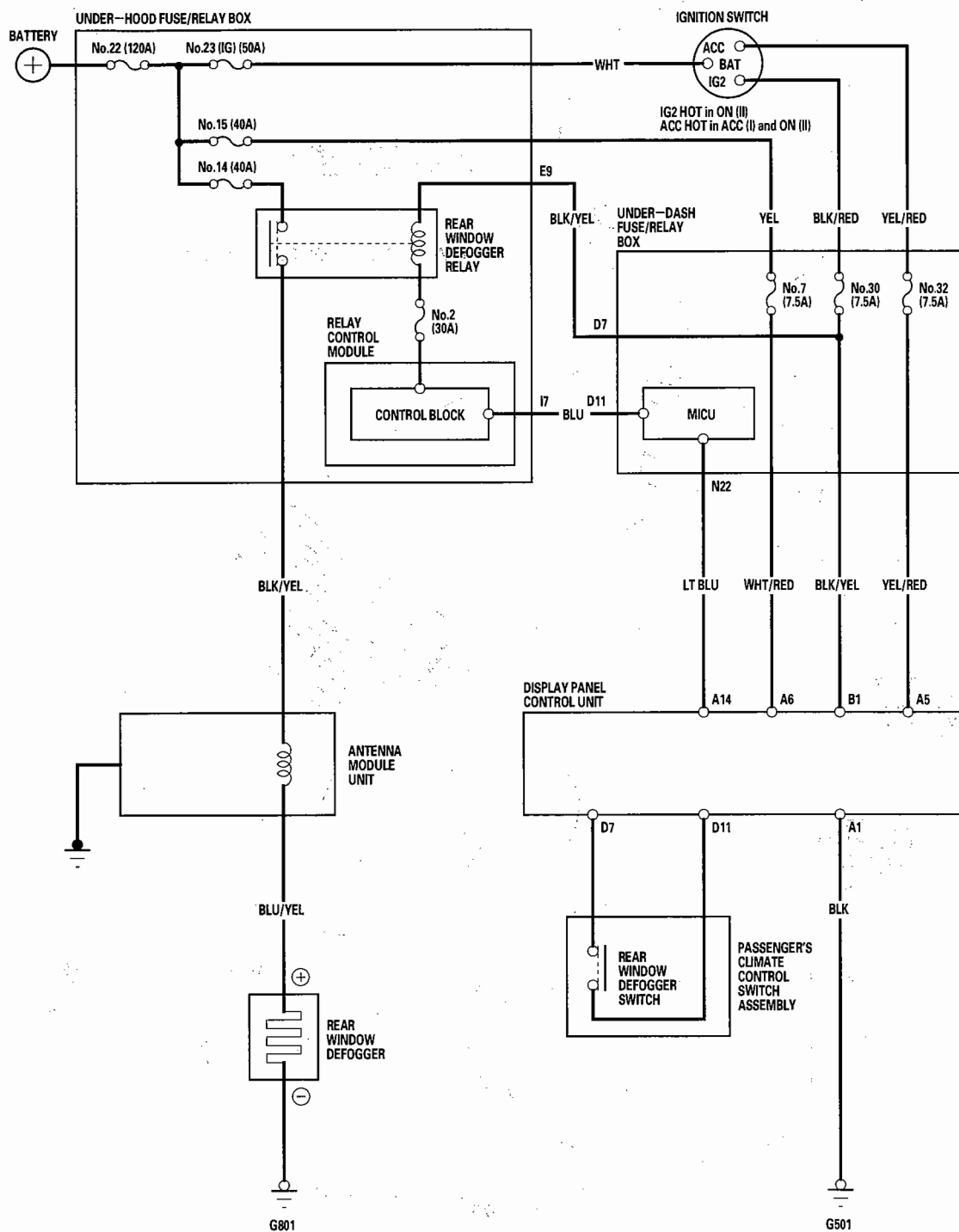
Component Location Index



*: Rear window defogger switch is built into the passenger's climate control switch assembly (audio-HVAC display module assembly).

Rear Window Defogger

Circuit Diagram



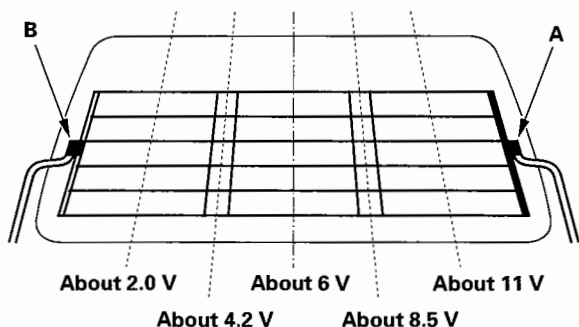


Function Test

Before troubleshooting the rear window defogger circuit, perform multiplex integrated control system troubleshooting using B-CAN System Diagnosis Test Mode A (see page 22-108).

NOTE:

- Be careful not to scratch or damage the defogger wires with the tester probe.
 - Before testing, check the No. 14 (40A) fuse in the under-hood fuse/relay box and No. 7 (7.5A) and No. 30 (7.5A) fuses in the under-dash fuse/relay box.
1. Check for voltage between the positive terminal (A) and body ground with the ignition switch and defogger switch ON.
There should be battery voltage.
- If there is no voltage, check for:
 - Faulty rear window defogger relay.
 - Faulty antenna module.
 - Faulty passenger's climate control switch assembly.
 - Faulty display panel control unit
 - An open in the BLK/YEL wire to the positive terminal.
 - If there is voltage, go to step 2.



2. Disconnect the negative terminal (B) from the rear window defogger.
3. Check for continuity between the negative terminal (B) and body ground.

If there is no continuity, check for an open in the wire or poor ground (G801). If there is continuity, go to step 4.

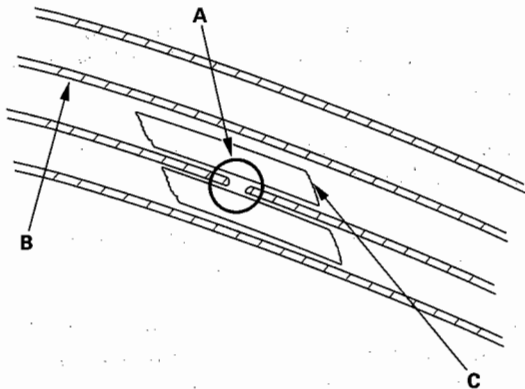
4. Reconnect the negative terminal to the rear window defogger.
 5. Turn the ignition switch ON (II) and the rear window defogger switch ON.
 6. Touch the voltmeter positive probe to the each points on each defogger wire, and the negative probe to the negative terminal.
- If the voltage is as specified, the defogger wire up to that point is OK.
 - If the voltage is not as specified, repair the defogger wire.
 - If it is more than specified at one of the points, there is a break in the negative half of the wire.
 - If it is less than specified at one of the points, there is a break in the positive half of the wire.

Rear Window Defogger

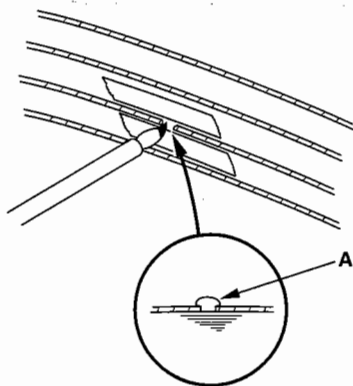
Defogger Wire Repair

NOTE: To make an effective repair, the broken section must be no longer than 1 inch (2.5 mm).

1. Lightly rub the area around the broken section (A) with fine steel wool, then clean it with alcohol.

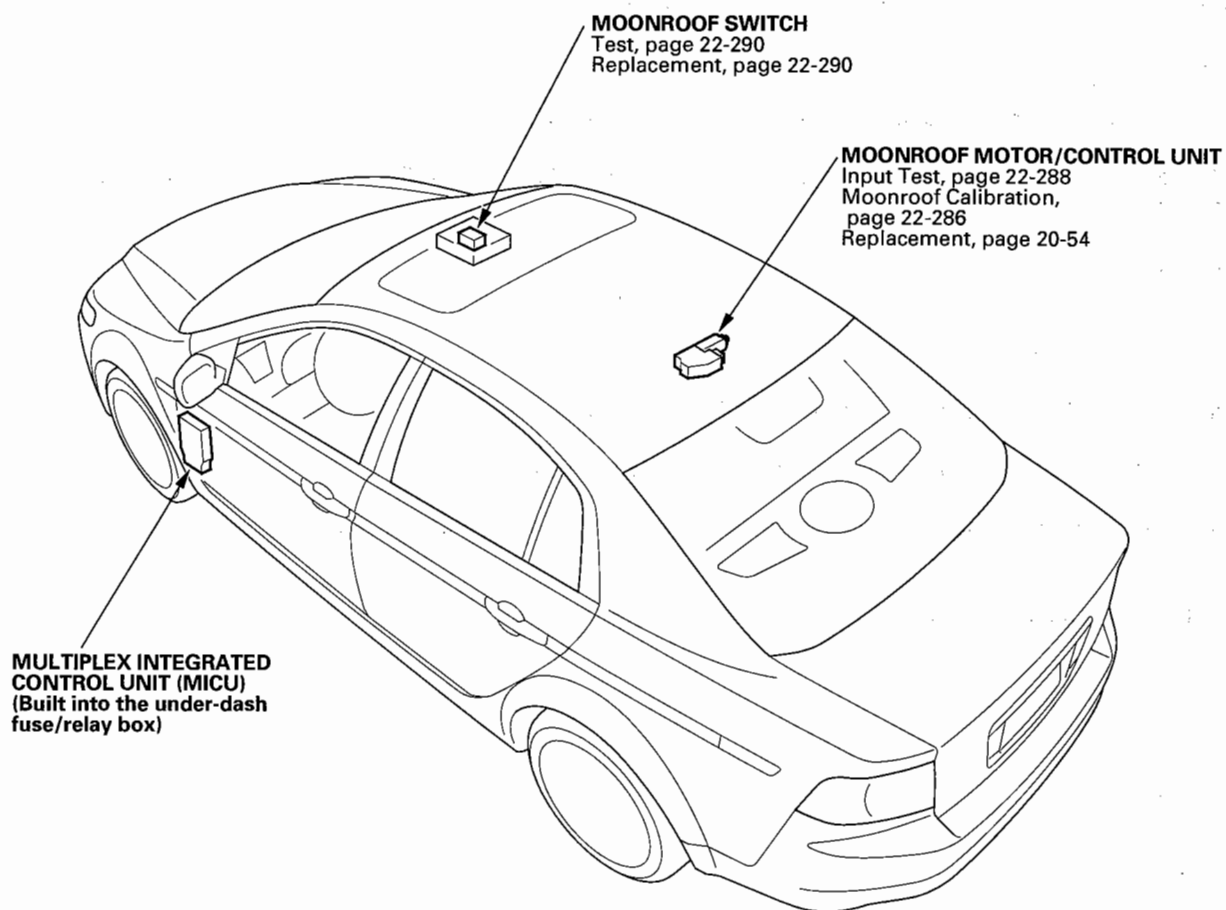


2. Carefully mask above and below the broken portion of the defogger wire (B) with cellophane tape (C).
3. Using a small brush, apply a heavy coat of silver conductive paint (commercially available) extending about 1/8" on both sides of the break. Allow 25 minutes to dry.



4. Perform the function test to confirm that the wire is repaired.
5. Apply a second coat of paint in the same way. Let it dry 3 hours before removing the tape.

Component Location Index



Moonroof

Moonroof Calibration

NOTE: The moonroof calibration must be performed when any of the following events have occurred.

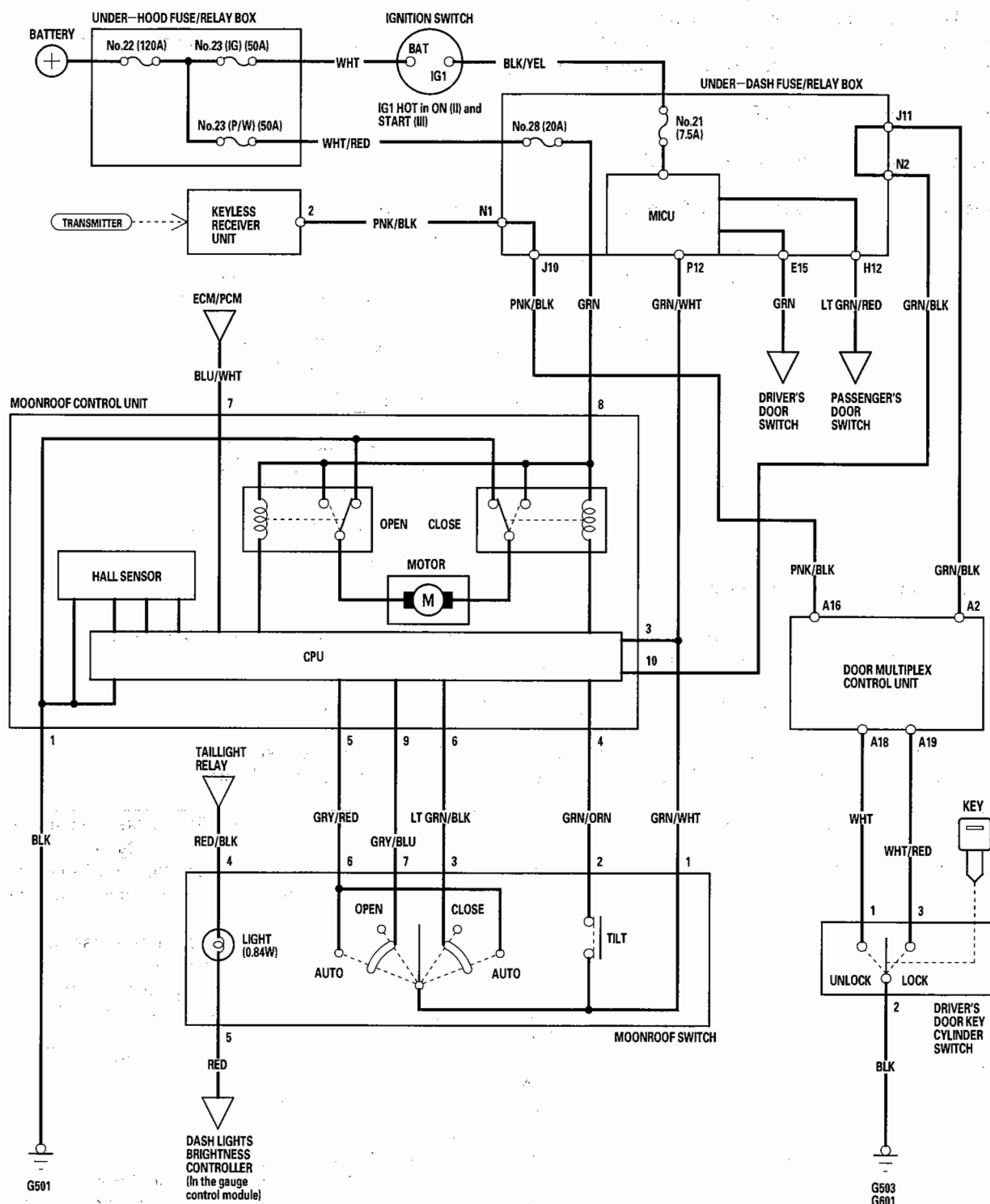
- The moonroof is manually moved with the battery dead or disconnected.
- The moonroof motor is replaced with a new one.
- Any component related to the moonroof replaced.
 - Wind deflector
 - Moonroof glass
 - Moonroof seal
 - Moonroof glass bracket
 - Moonroof cables, etc.

To calibrate the moonroof, perform the following steps

1. Turn the ignition switch ON (II).
2. Open the moonroof to full open position and release the open button.
3. Pull and hold the moonroof OPEN switch until the moonroof glass moves slightly back to its mechanical stop and then forward again slightly.
 - New Motor:
 - Other than new motor: This will take about 13 seconds.
4. Release the OPEN switch.
5. Within 5 seconds, pull and hold the moonroof OPEN switch again.
6. In about 3 seconds the moonroof glass will begin to slide closed.
7. Continue to hold the open button until the glass moves to closed position, tilts up, and returns to the closed position again.
8. Test the moonroof auto operation.



Circuit Diagram



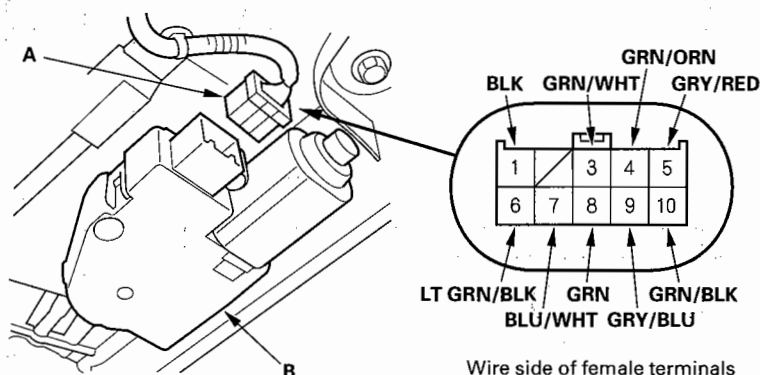
Moonroof

Moonroof Control Unit Input Test

Before troubleshooting the moonroof circuit, troubleshoot the multiplex integrated control system using B-CAN System Diagnosis Test Mode A (see page 22-108).

If the moonroof works OK manually, but will not work in AUTO, or reverse frequently (pinch detection), do the moonroof calibration (see page 22-286) before proceeding with the input test.

1. Turn the ignition switch OFF.
2. Remove the headliner (see page 20-70).
3. Disconnect the 10P connector (A) from the moonroof control unit (B).



4. 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 5.
5. With the control unit still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the control unit must be faulty; replace the control unit.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
8	GRN	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 28 (20A) fuse in the under-dash fuse/relay box • Faulty under-dash fuse/relay box • An open in the wire
1	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
3	GRN/WHT	Under all conditions	Check for continuity between the No. 3 terminal and the multiplex integrated control unit P12 terminal: There should be continuity.	• An open in the wire
		Disconnect the under-dash fuse/relay box connector P (30P)	Check for continuity between the No. 3 terminal and body ground: There should be no continuity.	• A short in the wire • Faulty moonroof switch



Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
4	GRN/ORN	Moonroof switch in TILT position	Check for continuity between the No. 3 and No. 4 terminals: There should be continuity.	- Faulty moonroof switch - An open in the wire
9	GRY/BLU	Moonroof switch in OPEN position	Check for continuity between the No. 3 and No. 9 terminals: There should be continuity.	- Faulty moonroof switch - An open in the wire
6	LT GRN/ BLK	Moonroof switch in CLOSE position	Check for continuity between the No. 3 and No. 6 terminals: There should be continuity.	- Faulty moonroof switch - An open in the wire
5	GRY/RED	Moonroof switch in AUTO OPEN or AUTO CLOSE position	Check for continuity between the No. 3 and No. 5 terminals: There should be continuity.	- Faulty moon roof switch - An open in the wire

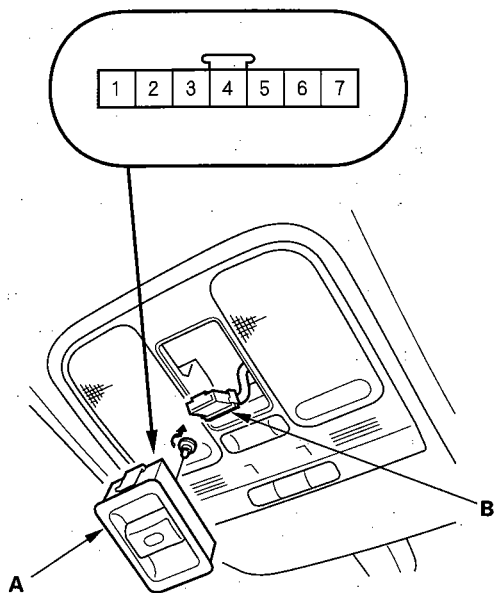
6. Jump the SCS line with the HDS disconnect the ECM/PCM connector A (31P), and make these input tests at the connector.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
7	BLU/WHT	Under all conditions	Check for continuity between the No. 7 terminal and the ECM/PCM connector A No. 11 terminal: There should be continuity.	An open in the wire
			Check for continuity between the No. 7 terminal and body ground: There should be no continuity.	A short in the wire
10	GRN/BLK	Under all conditions	Check for continuity between the No. 10 terminal and the power window master switch (door multiplex control unit) A2 terminal: There should be continuity.	An open in the wire
		Disconnect power window master switch connector A (22P)	Check for continuity between the No. 10 terminal and body ground: There should be no continuity.	A short in the wire

Moonroof

Moonroof Switch Test/Replacement

1. Carefully pry out the moonroof switch (A).



2. Disconnect the 7P connector (B) from the moonroof switch.
3. Check for continuity between the terminals in each switch position according to the table.

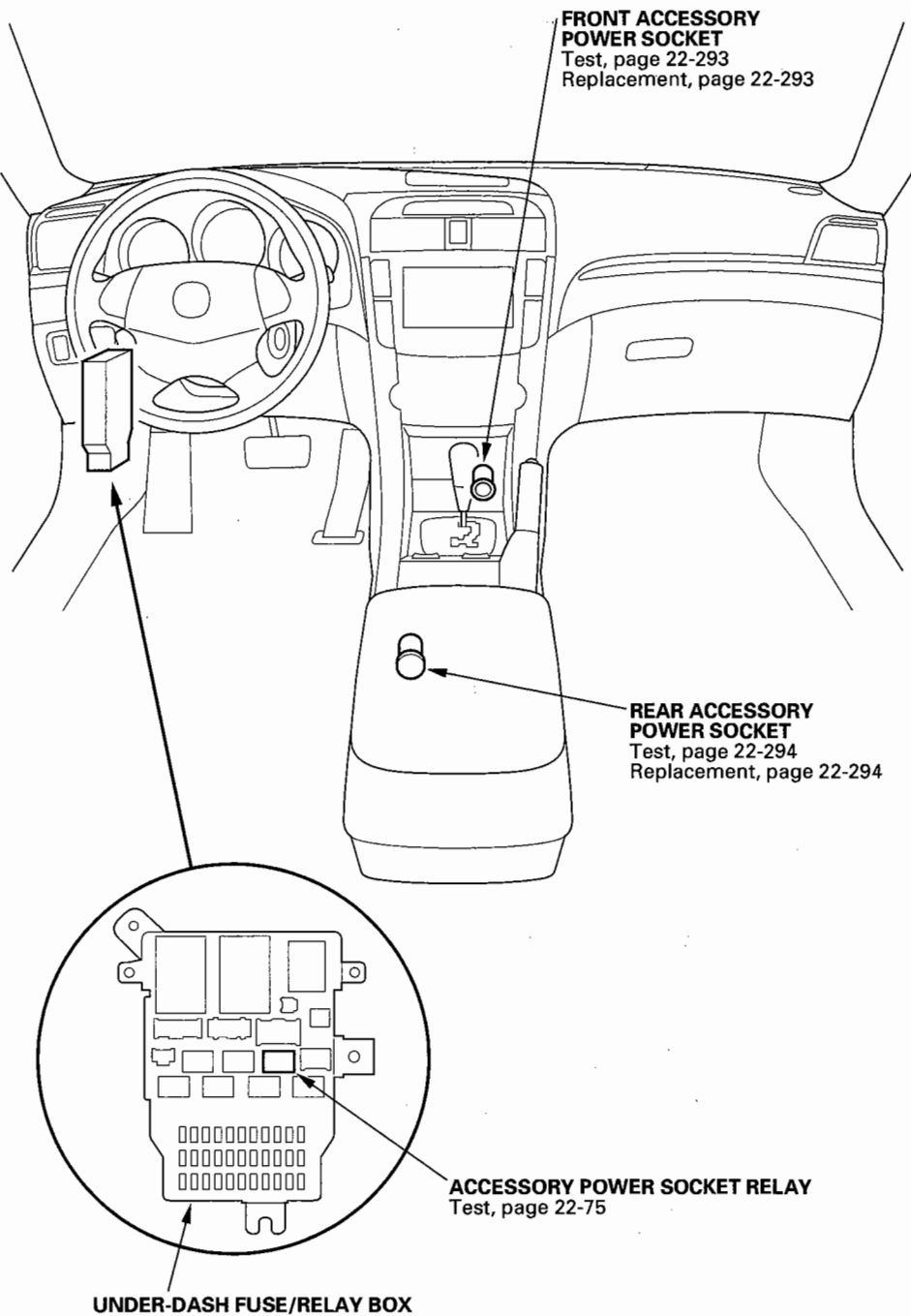
Terminal Position	1	2	3	6	7	4		5
OPEN	○				○	○	⊕	○
CLOSE	○		○			○	⊕	○
TILT	○	○				○	⊕	○
CLOSE+AUTO	○		○	○		○	⊕	○
OPEN+AUTO	○			○	○	○	⊕	○

4. If the continuity check is not as specified, check the bulb. If the bulb is OK, replace the switch.



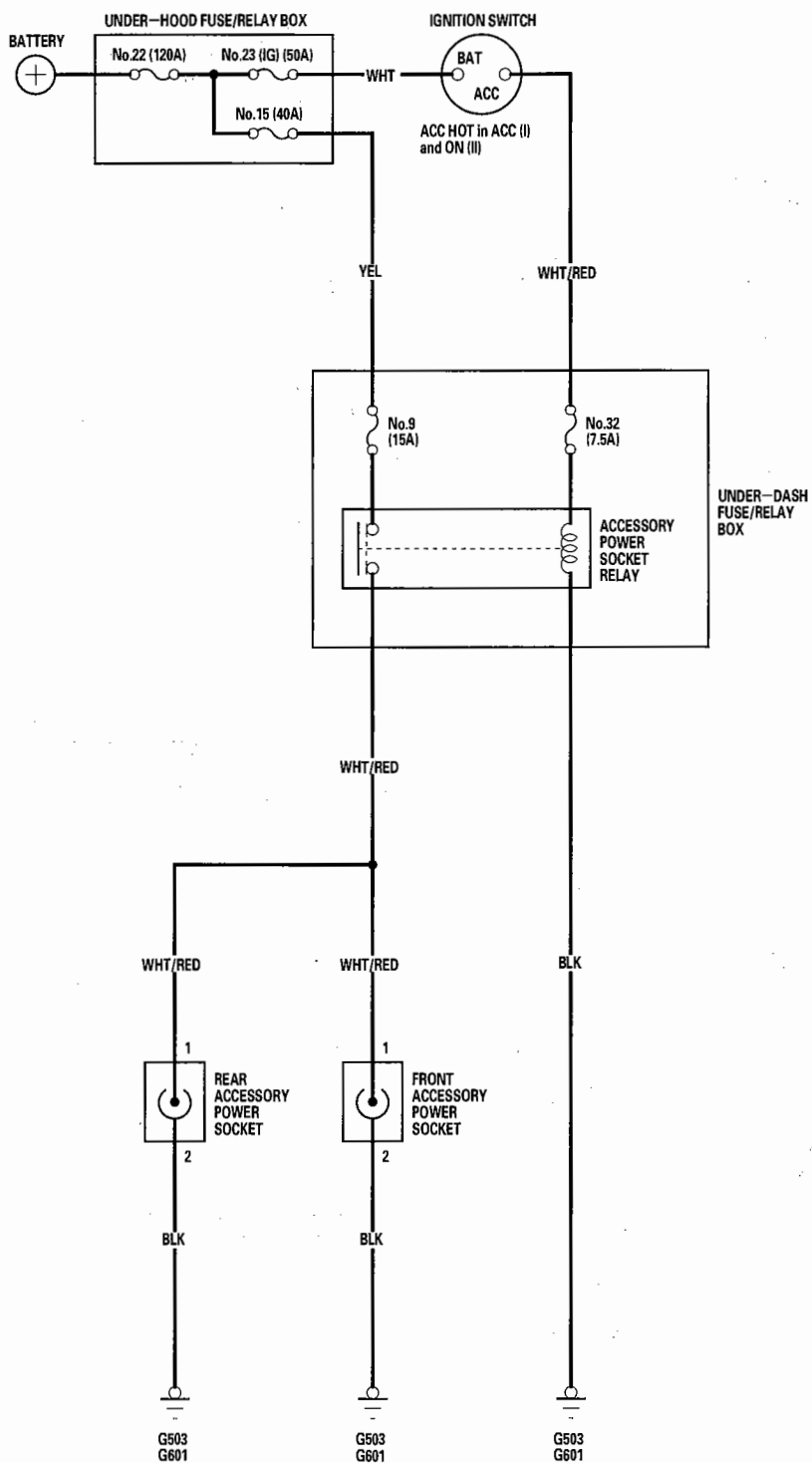
Accessory Power Sockets

Component Location Index



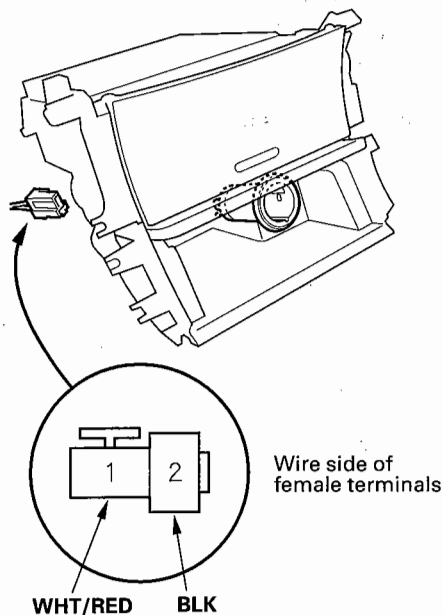
Accessory Power Sockets

Circuit Diagram



Front Accessory Power Socket Test/Replacement

1. Remove the center console panel (see page 20-78).
2. Disconnect the 2P connector from the front accessory power socket.

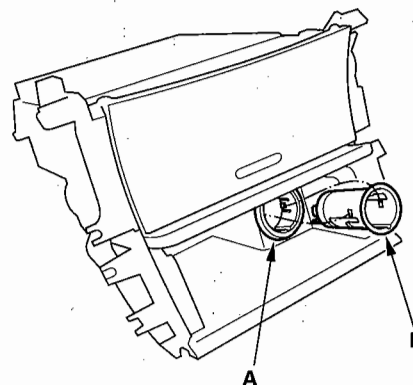


3. Inspect the connector terminals to be sure they are all making good contact.
 - If the terminals are bent, loose, or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 4.
4. Turn the ignition switch to ACC (I), and check for voltage between the No. 1 terminal and body ground. There should be battery voltage.
 - If there is battery voltage, go to step 5.
 - If there is no battery voltage, check for:
 - Blown No. 9 (15A) or No. 32 (7.5A) fuse in the under-dash fuse/relay box.
 - Faulty accessory power socket relay.
 - Poor ground (G 503, G601).
 - An open in the wire.

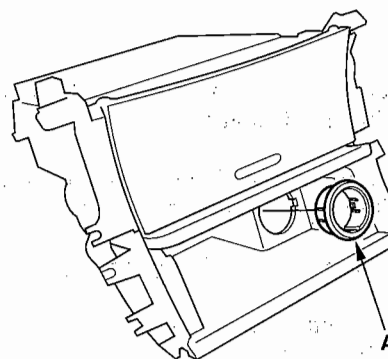
5. Check for continuity between the No. 2 terminal and body ground. There should be continuity.

- If there is continuity, go to step 6.
- If there is no continuity, check for:
 - Poor ground (G 503, G601).
 - An open in the wire.

6. Remove the housing (A) and socket (B).



7. Remove the ring (A).

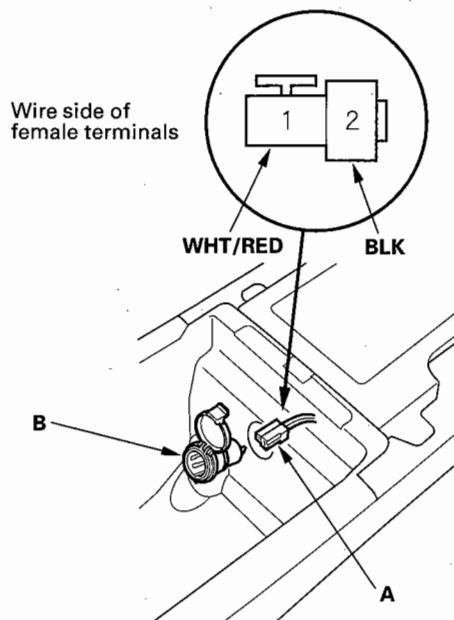


8. Install the power socket in the reverse order of removal.

Accessory Power Sockets

Rear Accessory Power Socket Test/Replacement

1. Remove the center console rear section (see page 20-77).
2. Disconnect the 2P connector (A) from the rear accessory power socket (B).

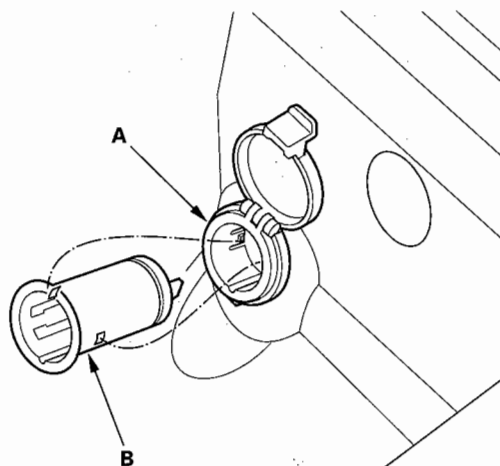


3. Inspect the connector terminals to be sure they are all making good contact.
 - If the terminals are bent, loose, or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 4.
4. Turn the ignition switch to ACC (I), and check for voltage between the No. 1 terminal and body ground. There should be battery voltage.
 - If there is battery voltage, go to step 5.
 - If there is no battery voltage, check for:
 - Blown No. 9 (15A) or No. 32 (7.5A) fuse in the under-dash fuse/relay box.
 - Faulty accessory power socket relay.
 - Poor ground (G 503, G601).
 - An open in the wire.

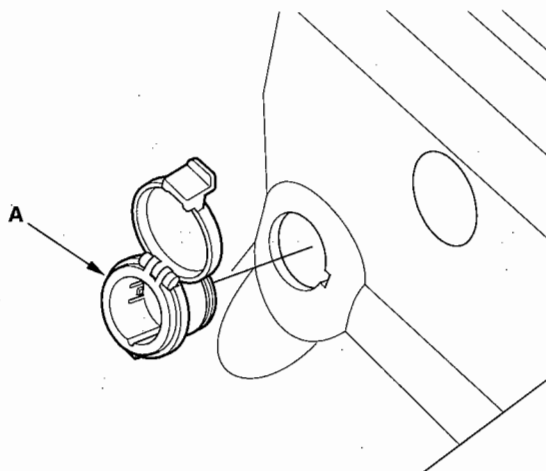
5. Check for continuity between the No. 2 terminal and body ground. There should be continuity.

- If there is continuity, go to step 6.
- If there is no continuity, check for:
 - Poor ground (G 503, G601).
 - An open in the wire.

6. Remove the housing (A) and socket (B).



7. Remove the housing (A) from the panel.

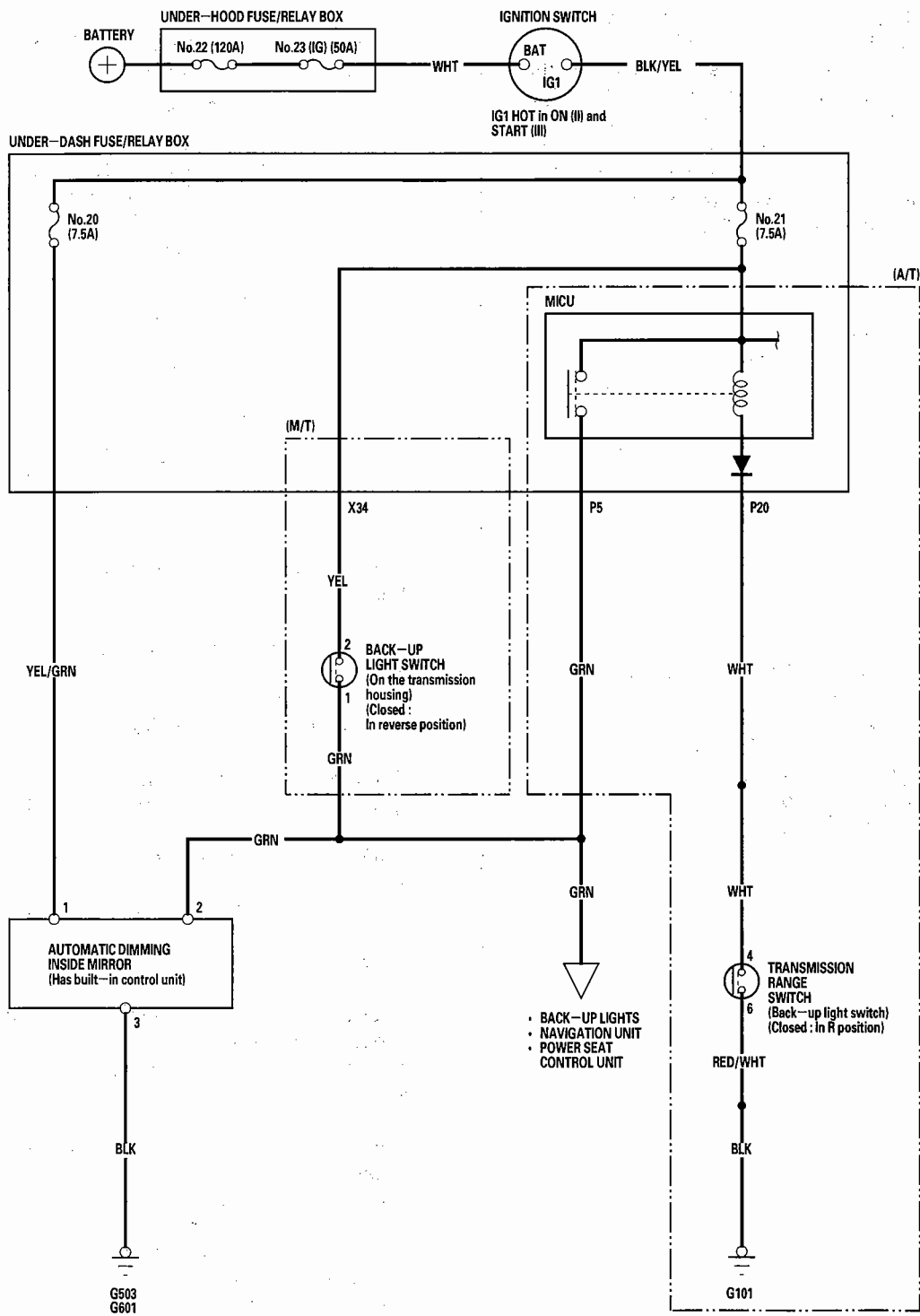


8. Install the power socket in the reverse order of removal.



Automatic Dimming Inside Mirror

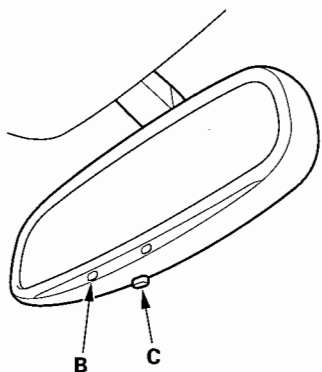
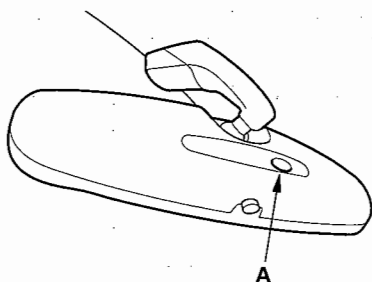
Circuit Diagram



Automatic Dimming Inside Mirror

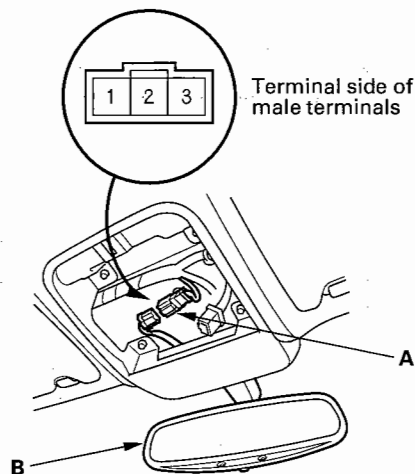
System Description

The automatic dimming inside mirror has a front-facing lux level sensor (A), a rear-facing lux level sensor (B), and a control unit. The control unit receives signals from each sensor. Based on the difference between the two lux levels (the light outside the vehicle and the light from the headlights of the other vehicle, etc.), the control unit controls the electro-chromic gel to reduce the glare. This dimming function is canceled when the transmission is in reverse, or when the automatic dimming off switch (C) is turned OFF.



Test/Replacement

1. Remove the roof console (see page 22-206).
2. Disconnect the 3P connector (A) from the automatic dimming inside mirror (B).

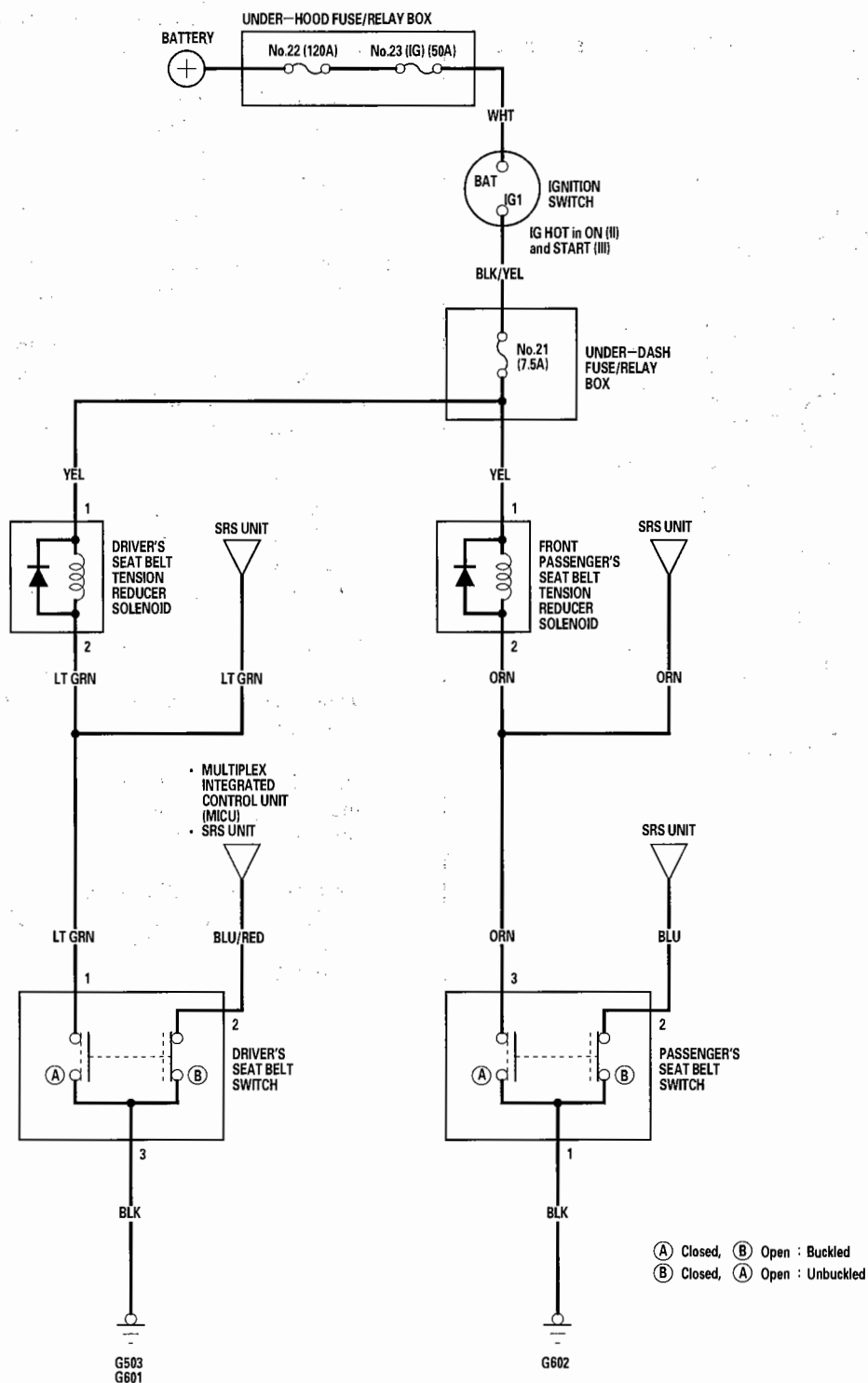


3. Check for continuity between No. 3 terminal and body ground.
 - If there is continuity, go to step 4.
 - If there is no continuity, check for:
 - an open in the wire.
 - poor ground (G 503, G601).
4. Check for voltage between No. 1 terminal and body ground with the ignition switch ON (II).
 - If there is battery voltage, go to step 5.
 - If there is no voltage, check for:
 - blown No. 20 (7.5A) fuse in the under-dash fuse/relay box.
 - an open in the wire.
5. Check for voltage between No. 2 terminal and body ground with the ignition switch turned ON (II) and transmission range switch (A/T) or back-up light switch (M/T) in reverse.
 - If there is battery voltage, replace the mirror assembly.
 - If there is no voltage, check for:
 - an open in the wire.
 - blown No. 21 (7.5A) fuse in the under-dash fuse/relay box.
 - faulty under-dash fuse/relay box.
 - faulty transmission range switch (A/T) or back-up light switch (M/T).

Seat Belt Tension Reducer



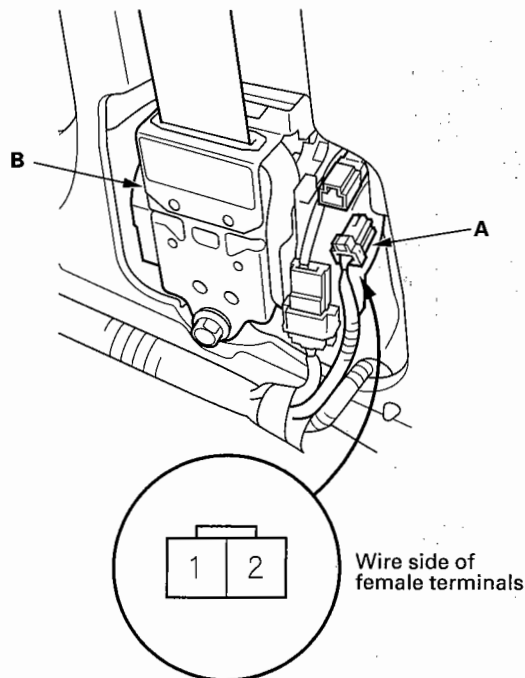
Circuit Diagram



Seat Belt Tension Reducer

Test

1. Remove the B-pillar lower trim (see page 20-62).
2. Disconnect the 2P connector (A) from the seat belt tension reducer (B).

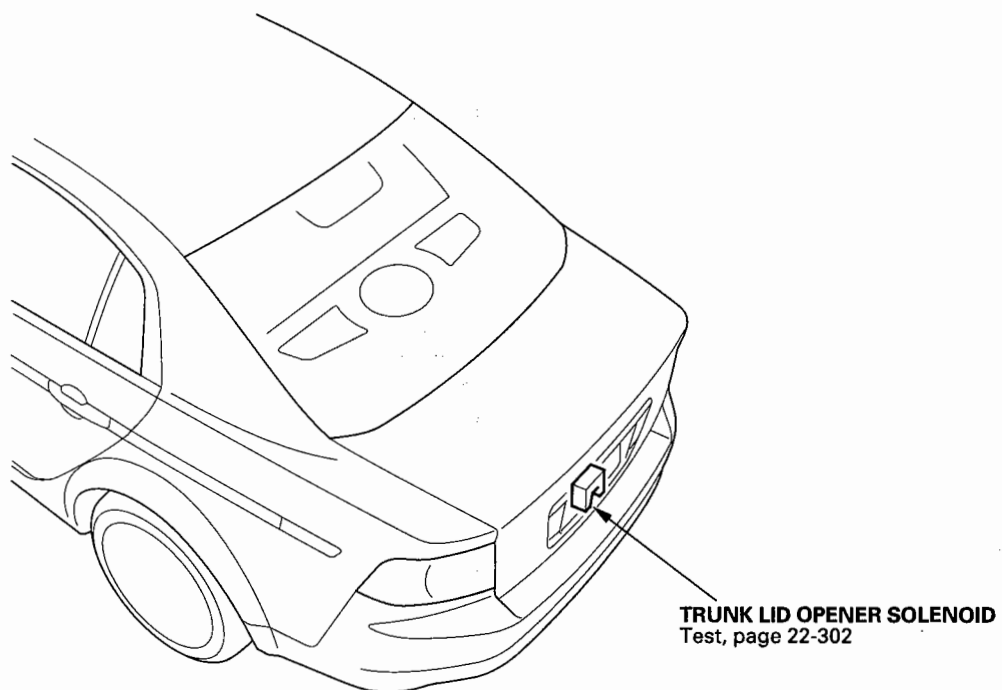
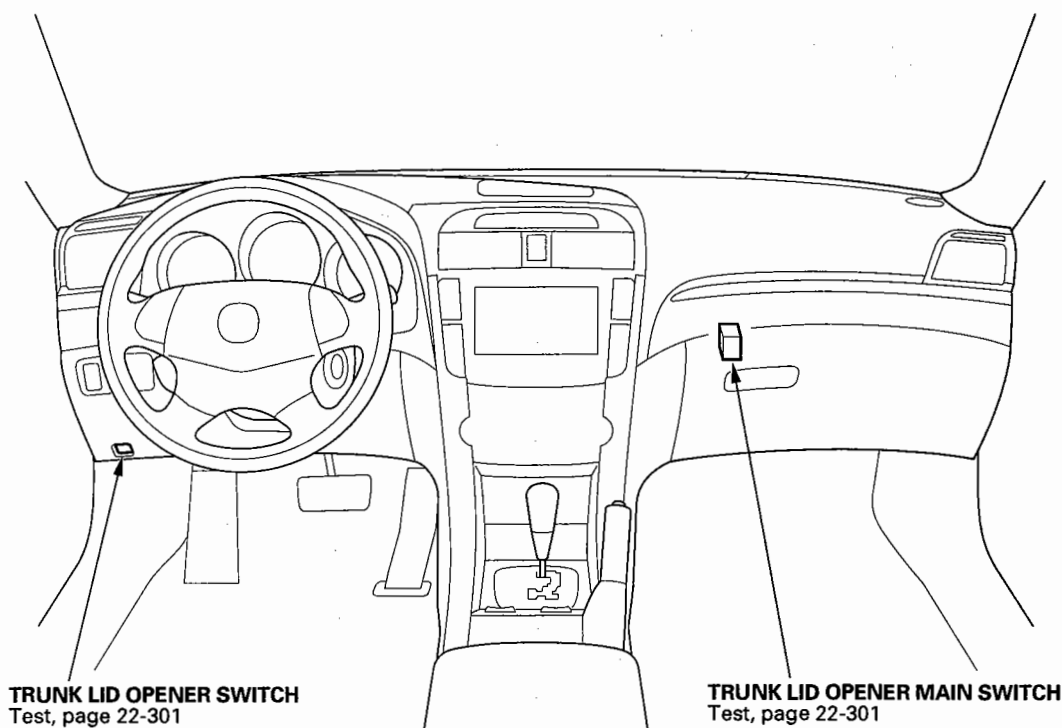


3. Check for voltage between the No. 1 (+) terminal and body ground with the ignition switch ON (II). There should be battery voltage.
 - If there is no voltage, check for:
 - A blown No. 21 (7.5A) fuse in the under-dash fuse/relay box.
 - An open in the YEL wire.
 - If there is battery voltage, go to step 4.
4. Turn the ignition switch OFF, and reconnect the 2P connector to the seat belt tension reducer.
5. Check for voltage between the No. 2 terminal and body ground with the ignition switch ON (II) and the seat belt unbuckled. There should be battery voltage.
 - If there is no voltage, check for a faulty seat belt switch, short to body ground on the LT GRN (or ORN) wire, or replace the seat belt tension reducer.
 - If there is battery voltage, go to step 6.
6. Turn the ignition switch OFF.
7. Disconnect the 2P connector from the seat belt tension reducer.
8. Check for continuity between the No. 2 terminal and body ground with the seat belt buckled. There should be continuity.
 - If there is no continuity, check for:
 - Poor ground (G 503, G601, G602).
 - An open in the wire.
 - Faulty seat belt switch.

Trunk Lid Opener

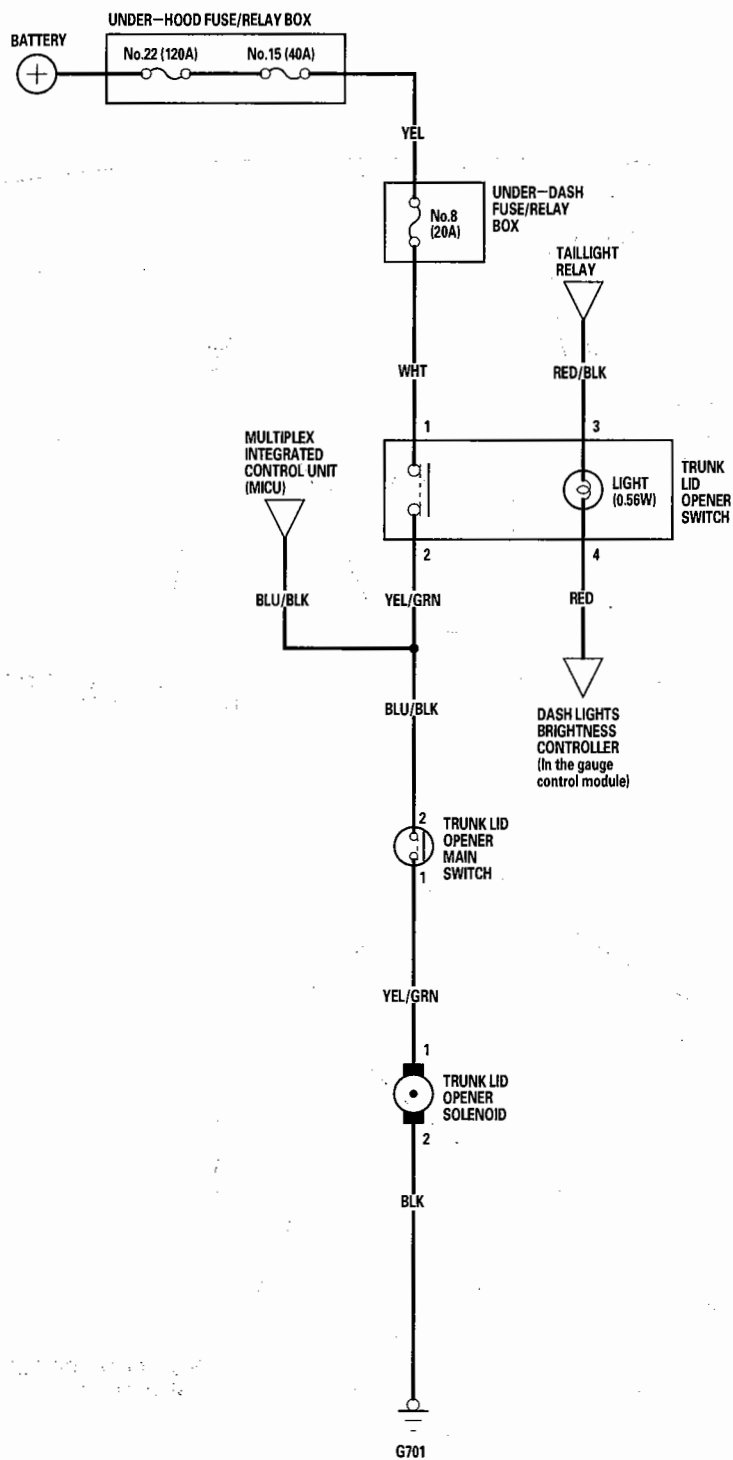


Component Location Index



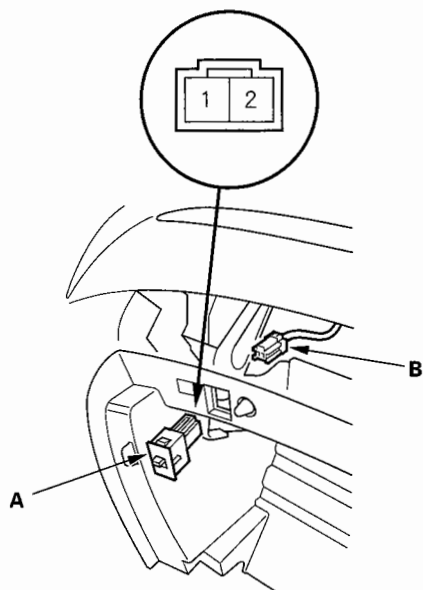
Trunk Lid Opener

Circuit Diagram



Main Switch Test

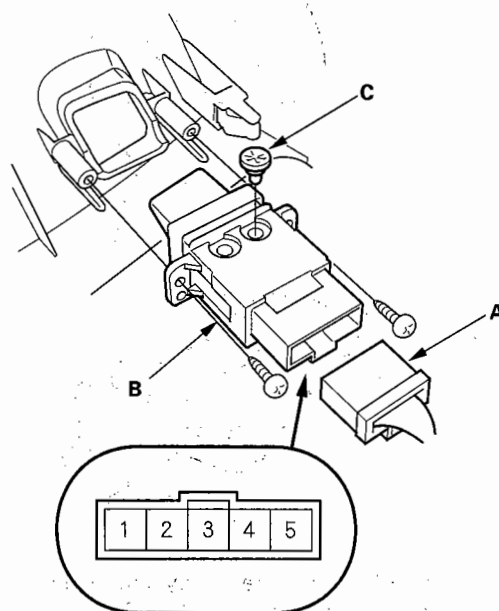
1. Remove the glove box housing (see page 20-84).
2. Carefully push the main switch (A) out from behind the glove box housing.



3. Disconnect the 2P connector (B) from the main switch.
4. Check for continuity between the No. 1 and No. 2 terminals.
 - With the main switch ON, there should be continuity.
 - With the main switch OFF, there should be no continuity.
5. If the continuity check is not as specified, replace the main switch.

Switch Test

1. Remove the driver's dashboard lower cover (see page 20-82).
2. Disconnect the 5P connector (A) from the switch (B).

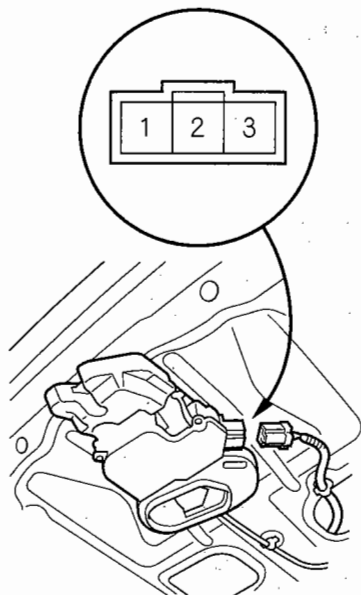


3. Check for continuity between the No. 1 and No. 2 terminals.
 - With the switch pressed, there should be continuity.
 - With the switch released, there should be no continuity.
4. If the continuity check is not as specified, remove the two screws and replace the switch.
5. Check for continuity between the No. 3 and No. 4 terminals. If there is no continuity, replace the bulb (C).

Trunk Lid Opener

Trunk Lid Opener Solenoid Test

1. Disconnect the 3P connector from the trunk latch switch/trunk lid opener solenoid.



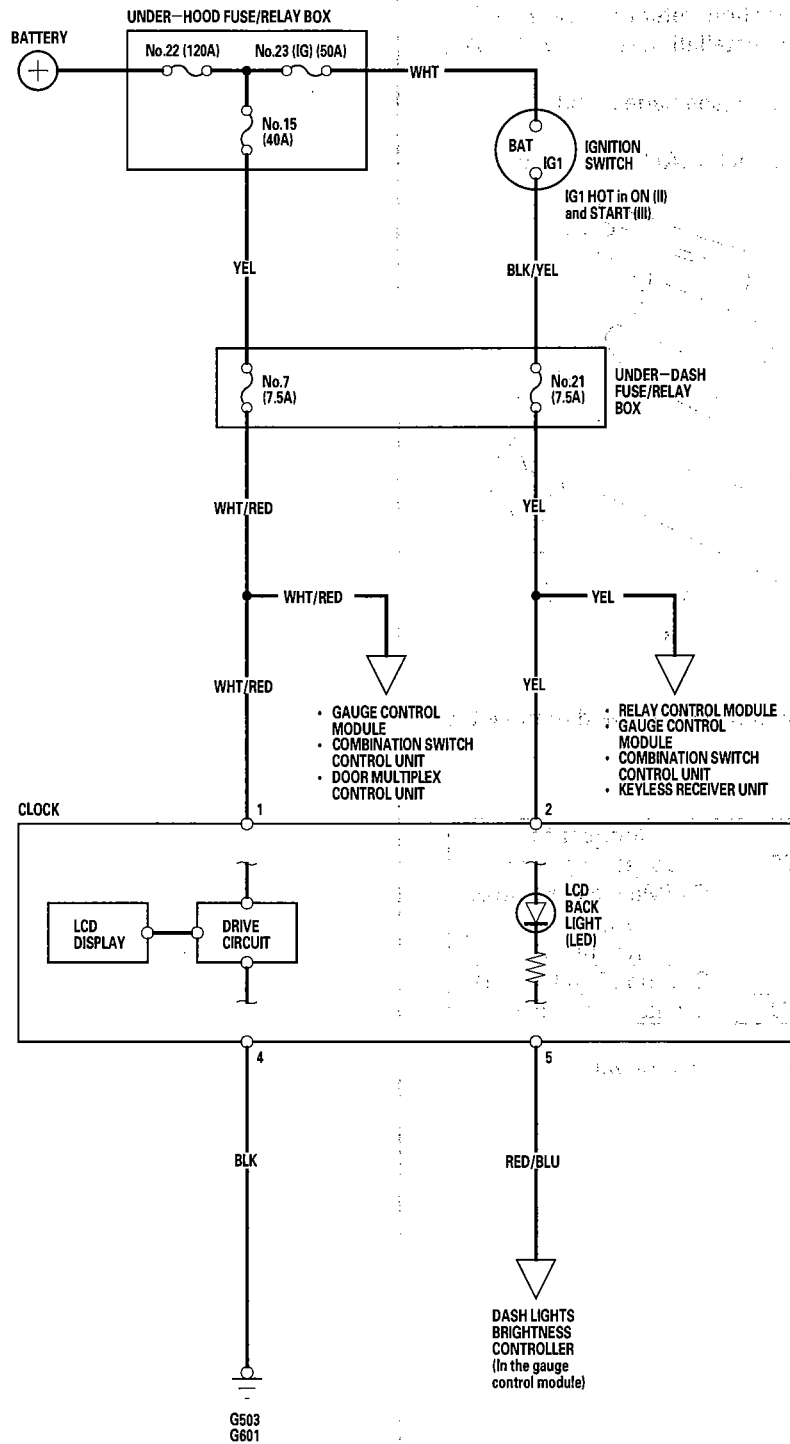
2. Check solenoid operation by connecting power and ground according to the table. To prevent damage to the solenoid, apply battery voltage only momentarily.

Terminal Position	1	2
UNLOCK	⊕	⊖

3. If the solenoid does not work as specified, replace it.

Circuit Diagram

Without Navigation:



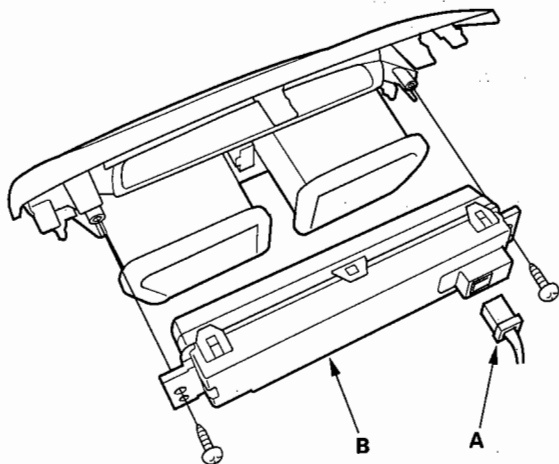
Clock

Replacement

Without Navigation

NOTE: Vehicles with navigation; refer to audio-HVAC subdisplay-clock removal/installation (see page 22-419).

1. Remove the upper panel (see page 20-83).
2. Disconnect the 5P connector (A) from the clock.



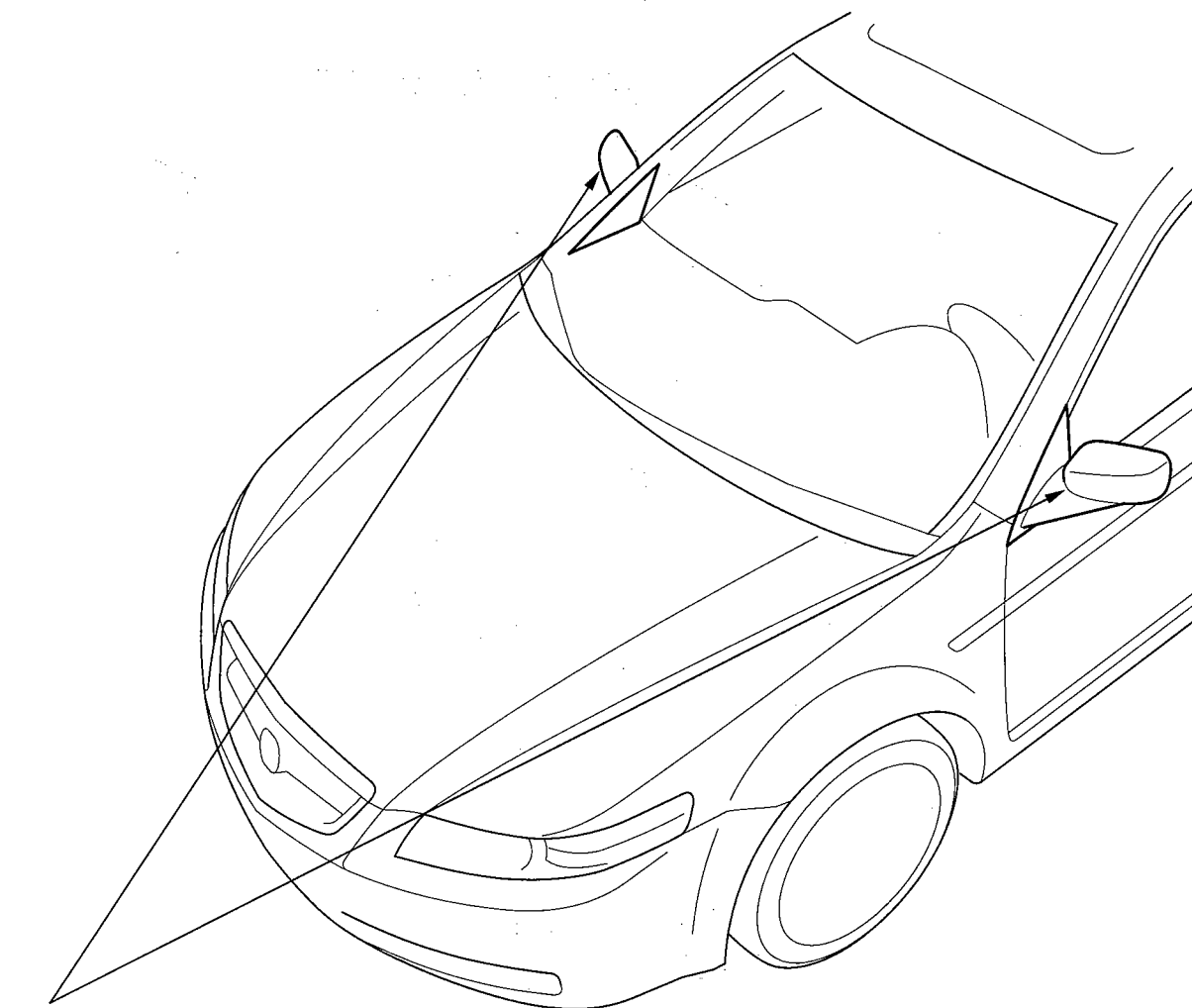
3. Remove the two mounting screws, and remove the clock (B).

Terminals

Cavity	Wire	Connect to
1	WHT/RED	Constant power
2	YEL	IG1 (Main clock power supply)
3	—	Not used
4	BLK	Ground (G503, G601)
5	RED/BLU	Lights-on signal (—)

4. Install in the reverse order of removal.

Component Location Index



POWER MIRRORS

Replacement, page 20-34

Power Mirror Actuator Test, page 22-308

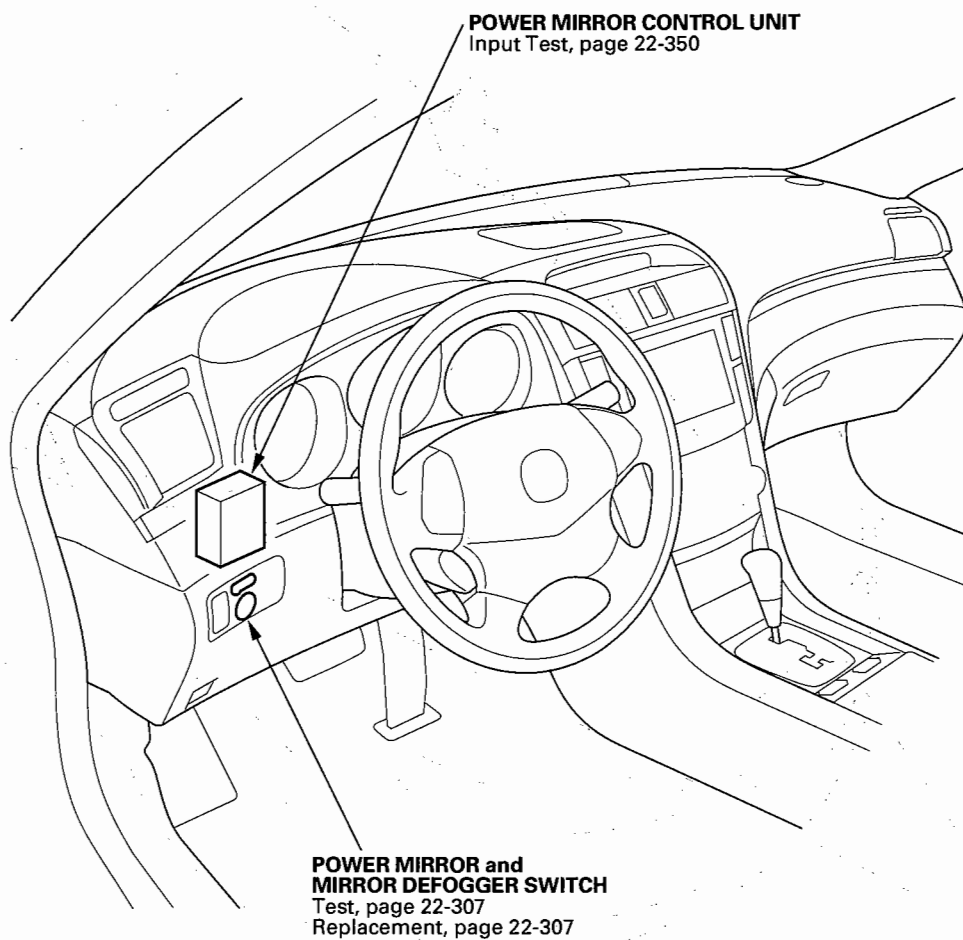
Mirror Actuator Replacement, page 22-309

Circuit Diagram, page 22-330

(cont'd)

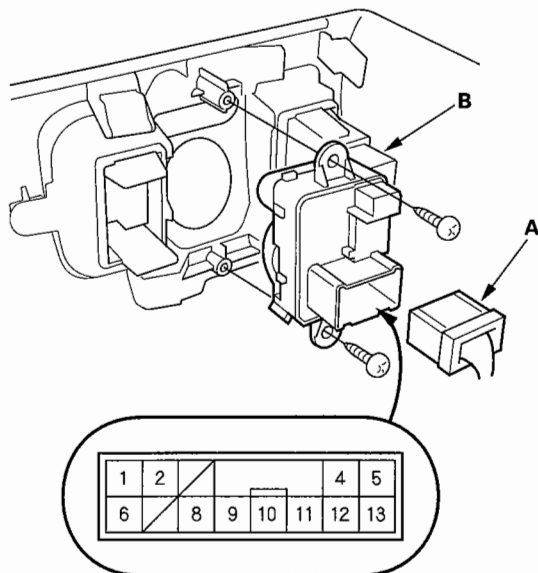
Power Mirrors

Component Location Index (cont'd)



Power Mirror Switch Test/Replacement

1. Remove the driver's dashboard lower cover (see page 20-82).
2. Disconnect the 13P connector (A) from the power mirror switch (B).



3. Check for continuity between the terminals in each switch position according to the table.

Mirror Switch:

Terminal Position	2	5	6	10	11	12	13
L UP	○—○		○—○				
L DOWN	○—○	○—○					
L LEFT	○—○		○—○				
L RIGHT	○—○	○—○					
R UP	○—○		○—○				
R DOWN	○—○	○—○					
R LEFT	○—○	○—○		○—○			
R RIGHT	○—○	○—○		○—○			

Defogger Switch:

Terminal Position	1	8	6
ON	○—○	○—○	○—○
OFF		○—○	○—○

4. If the continuity is not as specified, remove the screws and replace the power mirror switch.

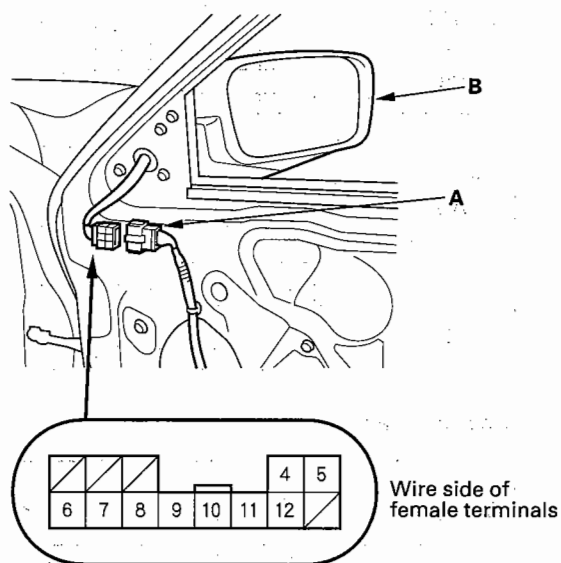
Power Mirrors

Power Mirror Actuator Test

NOTE: The power mirror actuator can be tested by using the HDS by following these steps:

- Select BODY ELECTRICAL from the SYSTEM SELECTION MENU.
- Select FUNCTION TESTS, and then the appropriate power mirror function test.

1. Remove the door panel (see page 20-7).
2. Disconnect the 13P connector (A) from the power mirror actuator (B).



3. Check actuator operation by connecting power and ground according to the table.

Terminal	10	11	12
Position	+		-
TILT UP	+		-
TILT DOWN	-		+
SWING LEFT		-	+
SWING RIGHT		+	-

4. If the mirror fails to work properly, replace the mirror actuator.

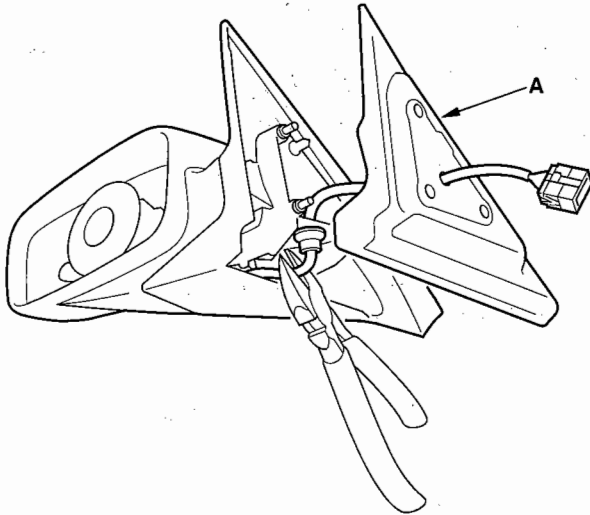
Defogger Test

5. Check for continuity between the No. 5 and No. 4 terminals of the 13P connector. There should be continuity with the defogger switch ON. If there is no continuity, check for an open circuit.

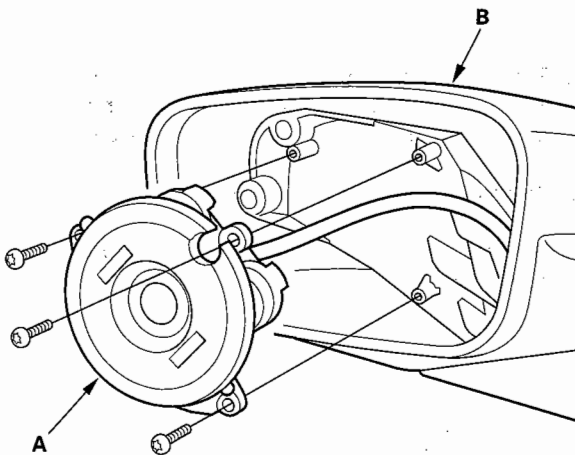
Power Mirror Actuator Replacement

Removal

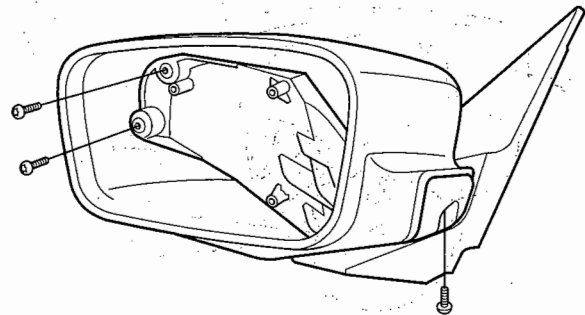
1. Remove the mirror holder (see page 20-34), power mirror (see page 20-34), and disconnect the connectors.
2. Remove the gasket (A).



3. Record the terminal location and wire harness colors, then cut the wire harness with cutter.
4. Remove the three Torx screws and separate the power mirror actuator (A) from the housing (B).

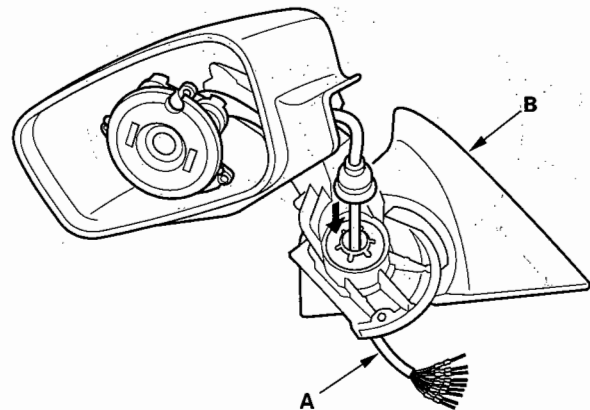


5. Remove the screws and separate the mirror housing (A) and the bracket (B).



Installation

6. Route a new actuator harness (A) through the bracket (B).

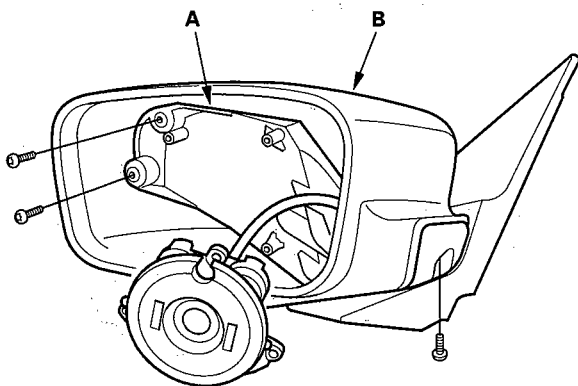


(cont'd)

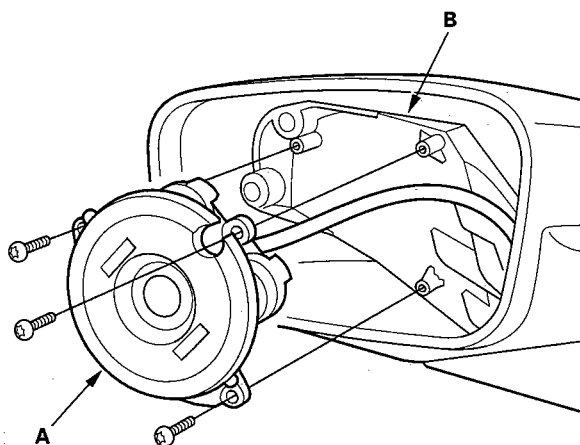
Power Mirrors

Power Mirror Actuator Replacement (cont'd)

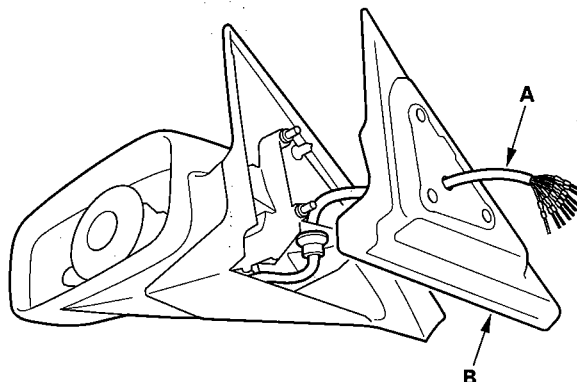
7. Install the bracket (A) on the mirror housing (B).



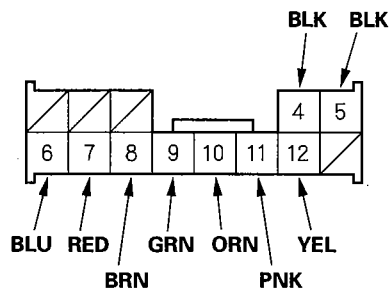
8. Install the mirror actuator (A) to the bracket (B).



9. Route the wire harness (A) through the hole of the gasket (B), then install the gasket.



10. Insert the terminals into the connector in the original arrangement as shown.

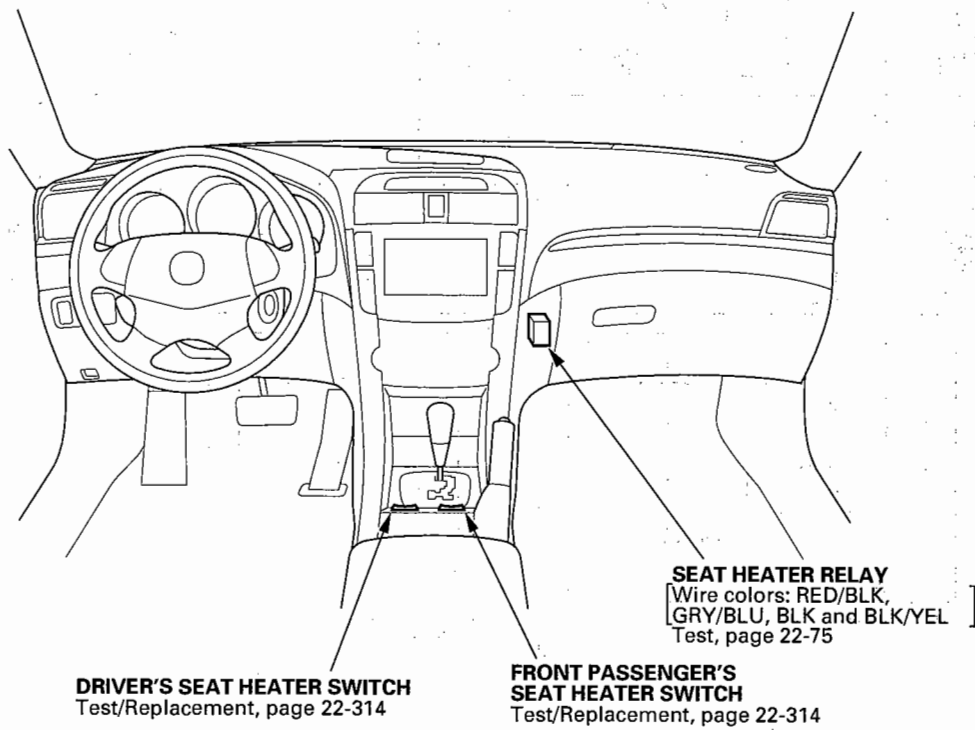
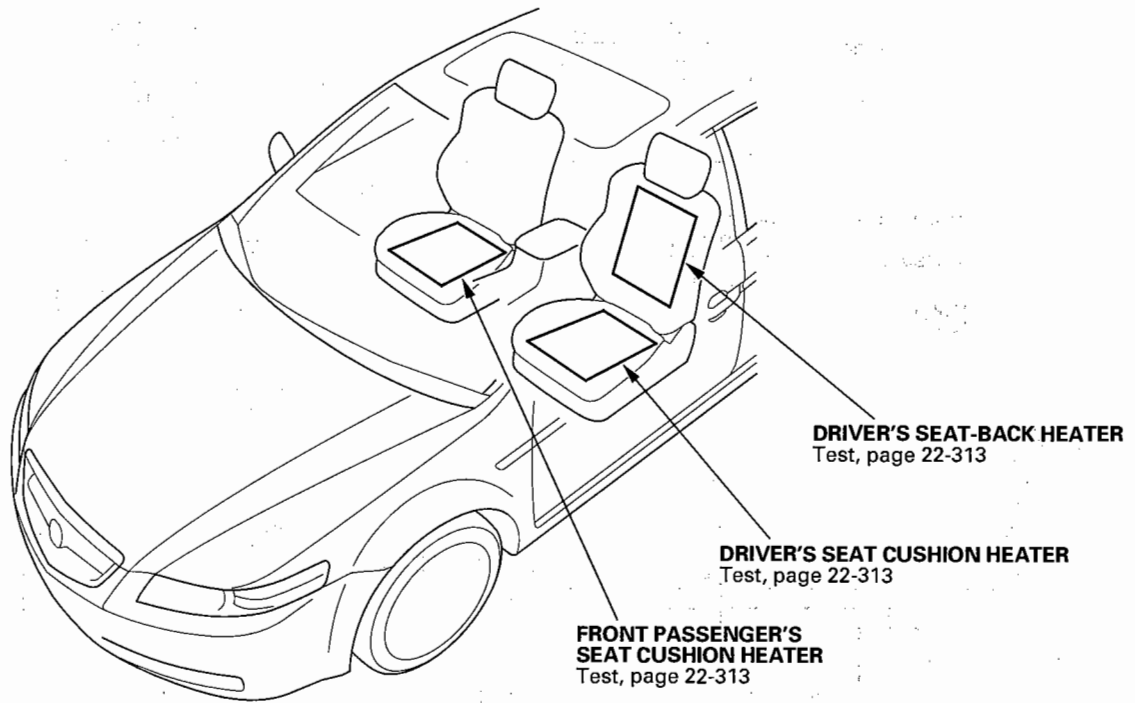


11. Reassemble in the reverse order of disassembly. Be careful not to break the mirror holder when reinstalling it to the actuator (see page 20-34).
12. Reinstall the mirror assembly to the door.
13. Operate the power mirror to ensure smooth operation.

Seat Heaters

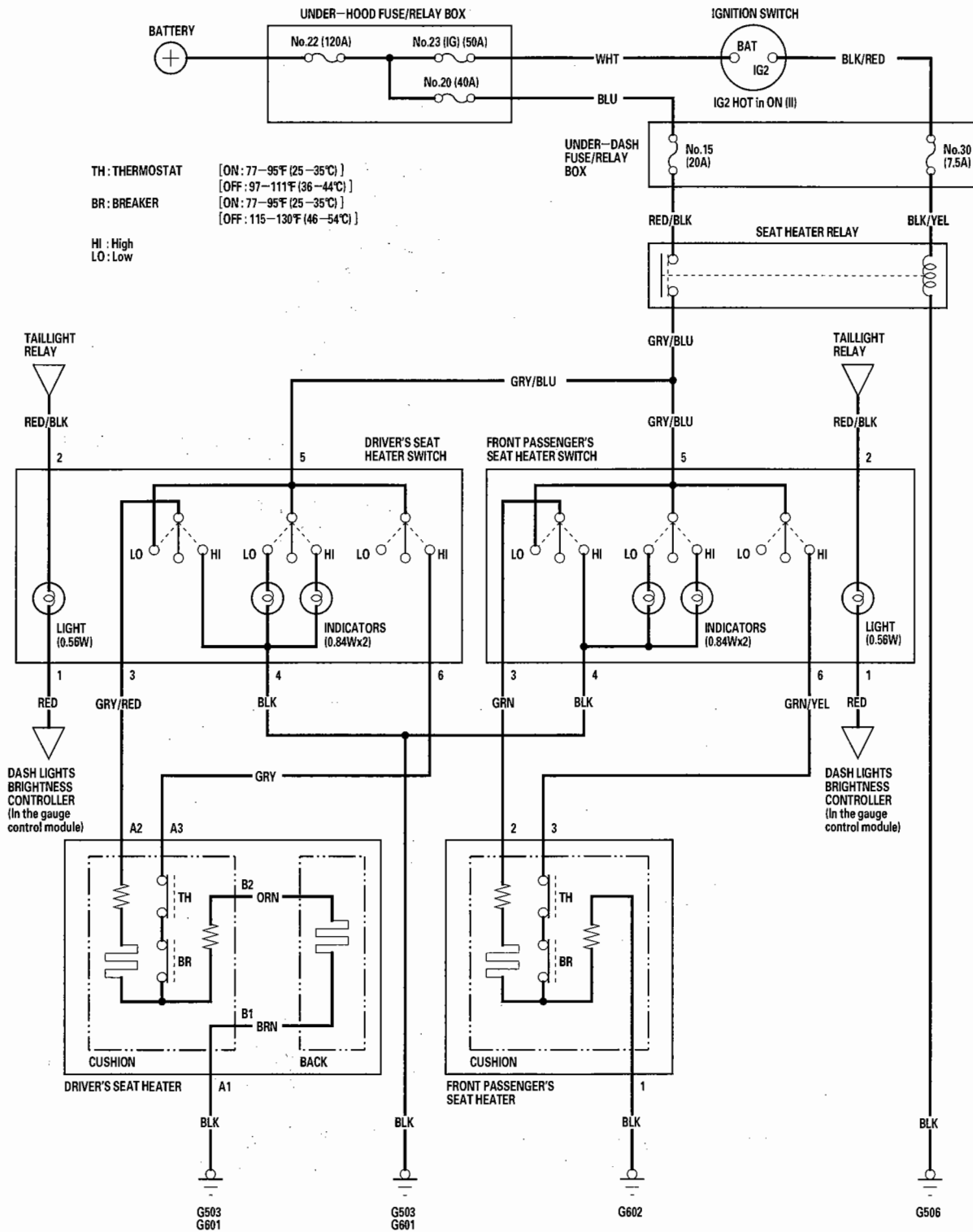


Component Location Index



Seat Heaters

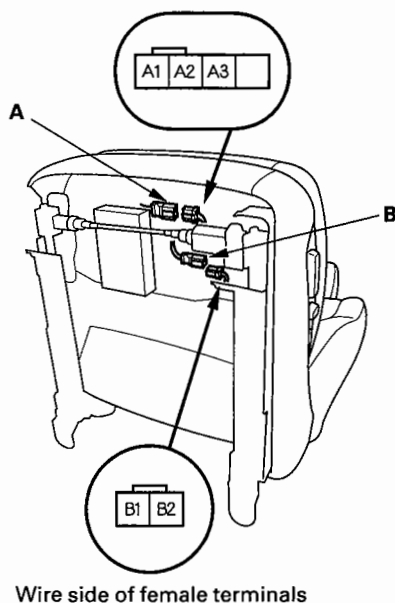
Circuit Diagram



Seat Heater Test

Driver's Seat

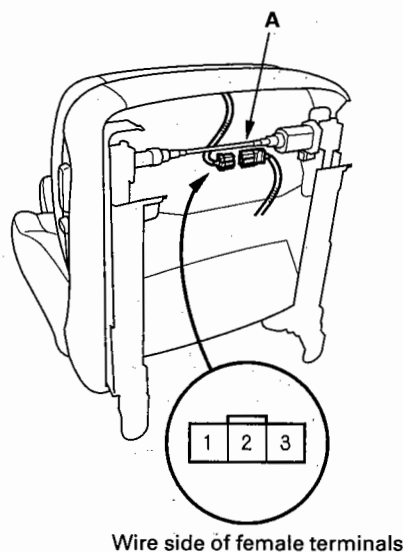
1. Remove the driver's seat (see page 20-99).
2. Disconnect the 3P connector (A) and 2P connector (B) from the seat heater.



3. Check for continuity between the B1 and B2 terminals of the seat-back heater 2P connector. There should be continuity.
4. Check for continuity between the A1 and B1 terminals, the A2 and A3 terminals, and the A2 and B2 terminals. There should be continuity.
5. If the continuity check is not as specified, replace the appropriate seat heater.

Front Passenger's Seat

1. Remove the passenger's seat (see page 20-99).
2. Disconnect the 3P connector (A) from the seat heater.

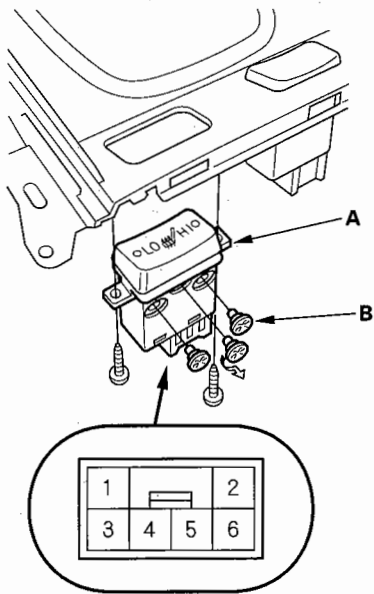


3. Check for continuity between the No. 1 and No. 2 terminals, and No. 1 and No. 3 terminals of the 3P connector. There should be continuity.
4. If the continuity is not as specified, replace the seat heater.

Seat Heaters

Switch Test

- 1. Remove the center console panel (see page 20-78).
- 2. Disconnect the 6P connector from the seat heater switch (A).



- 3. Remove the two screws and the switch.
- 4. Check for continuity between the terminals in each switch position according to the table.

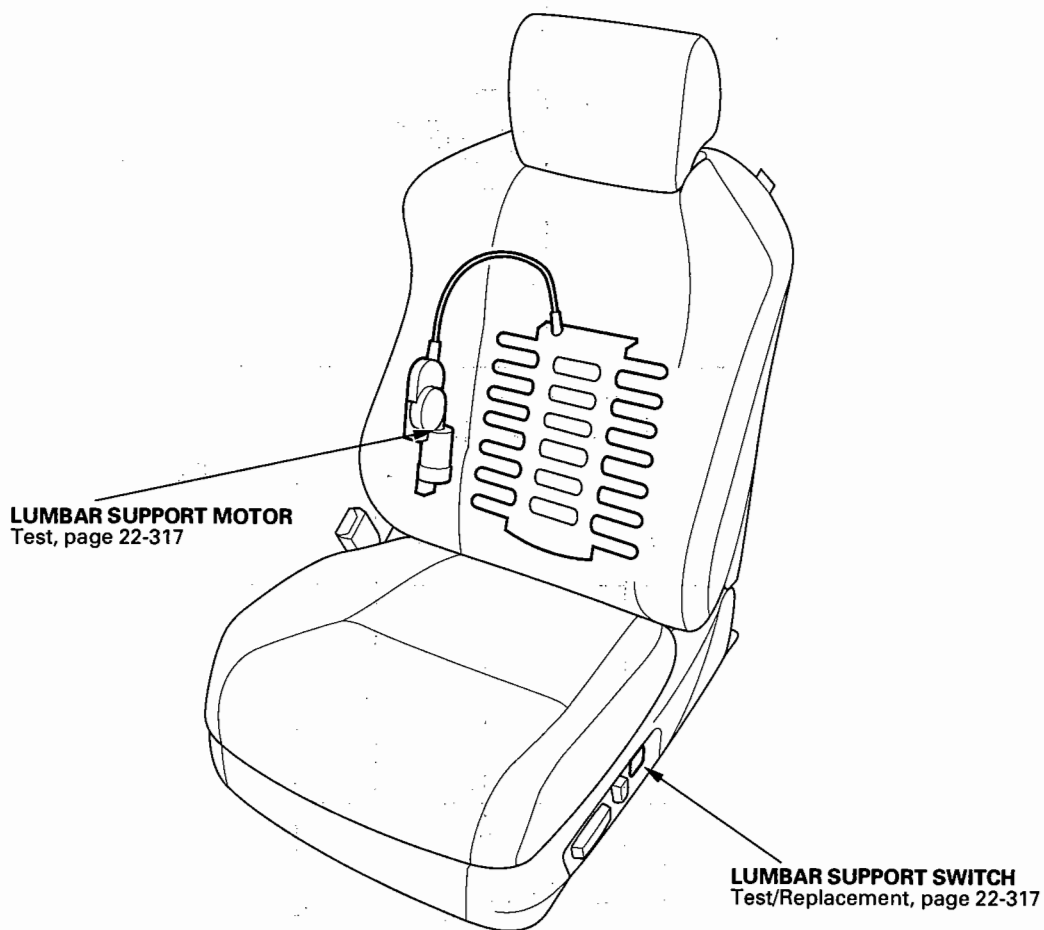
Terminal		1	2	3	4	5	6
Position							
ON	HIGH						
	LOW						
OFF							

- 5. If the continuity check is not as specified, replace the illumination bulbs (B) or the switch.

Power Lumbar Support

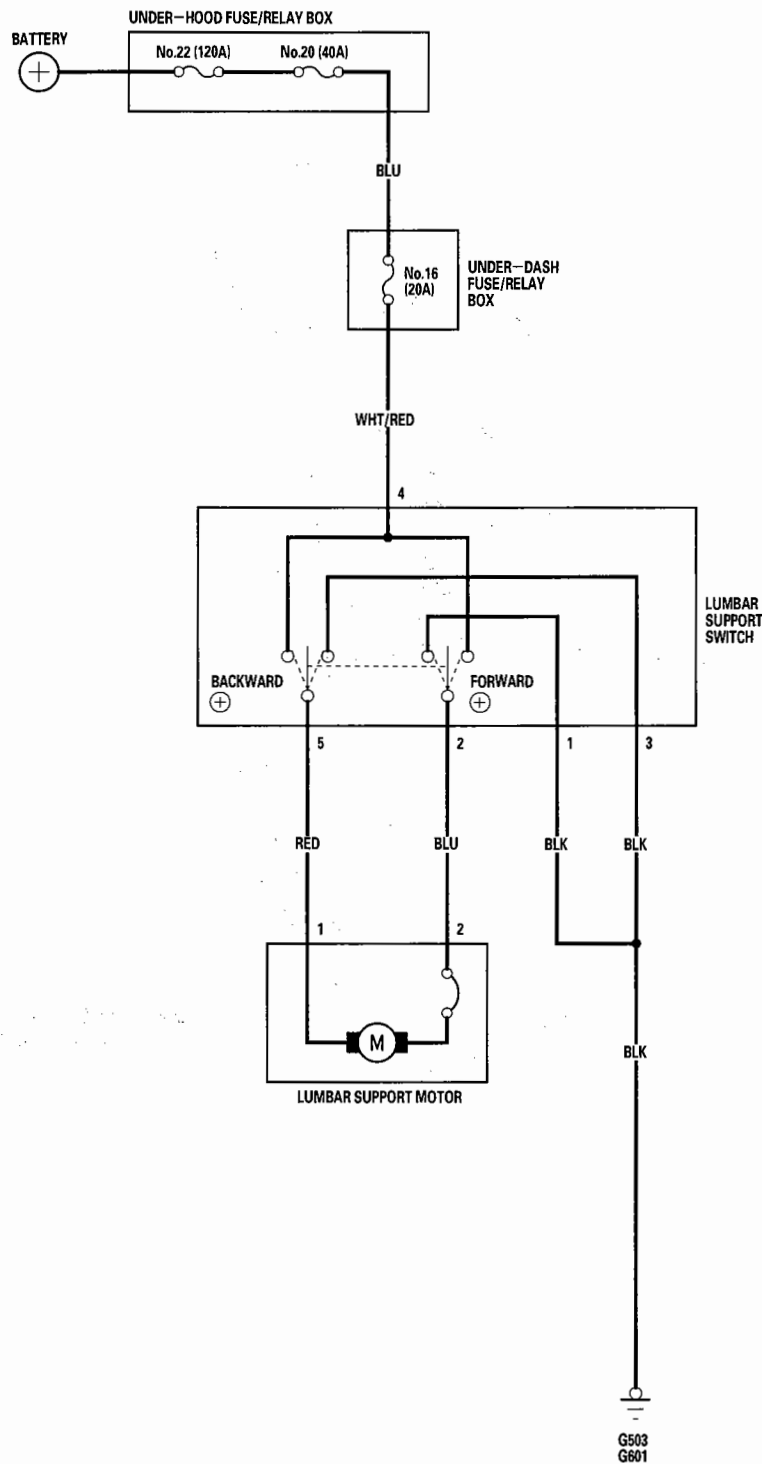


Component Location Index



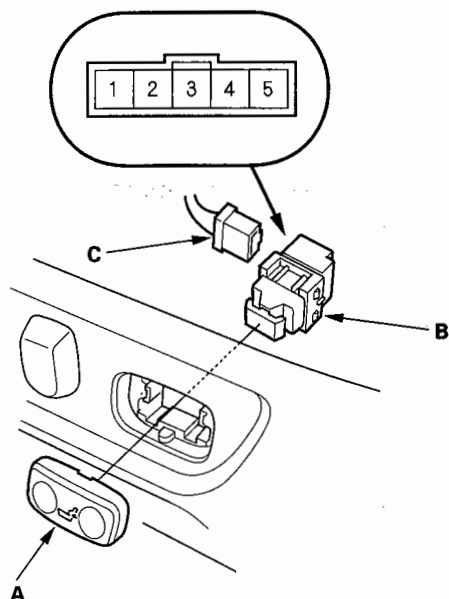
Power Lumbar Support

Circuit Diagram



Switch Test/Replacement

1. Separate the lumbar support switch cover (A) from the switch (B).



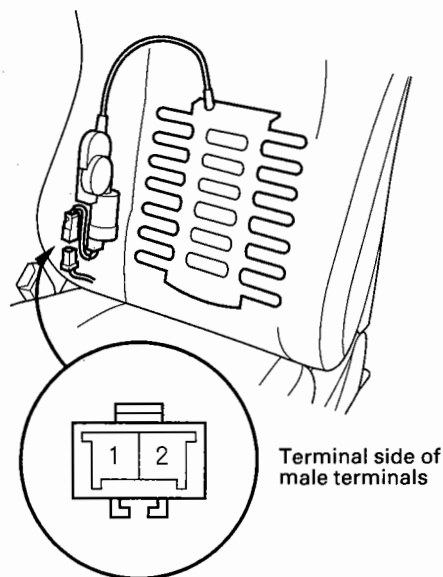
2. Disconnect the 5P connector (C) from the switch.
3. Check for continuity between the terminals in each switch position according to the table.

Terminal	1	2	3	4	5
Position					
Forward		○	○	○	○
Backward	○	○		○	○

4. If the continuity is not as specified, replace the switch.

Motor Test

1. Remove the driver's seat (see page 20-99).
2. Disconnect the 2P connector (A) from the lumbar support motor.



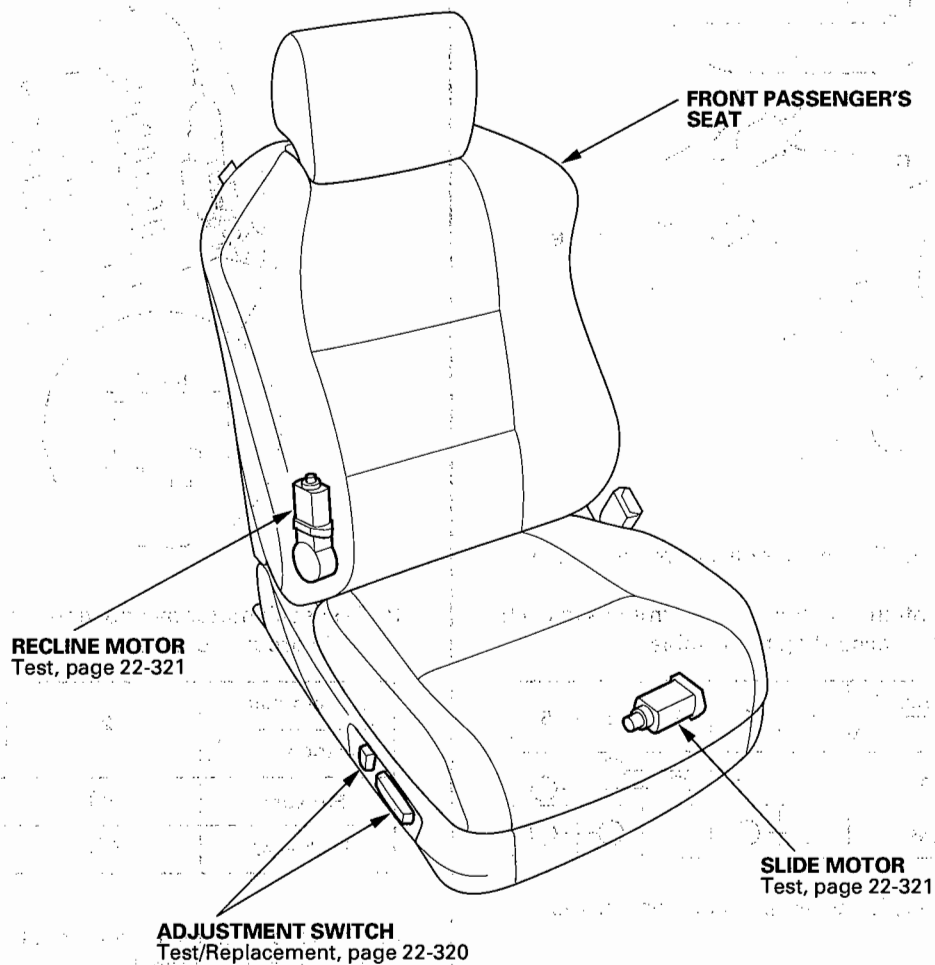
3. Test each motor by applying battery voltage and body ground to the terminals.

Terminal	2	3
Position		
Forward	⊕	⊖
Backward	⊖	⊕

4. If the motor does not run or fails to run smoothly, replace it (see page 20-104).

Power Seats

Component Location Index



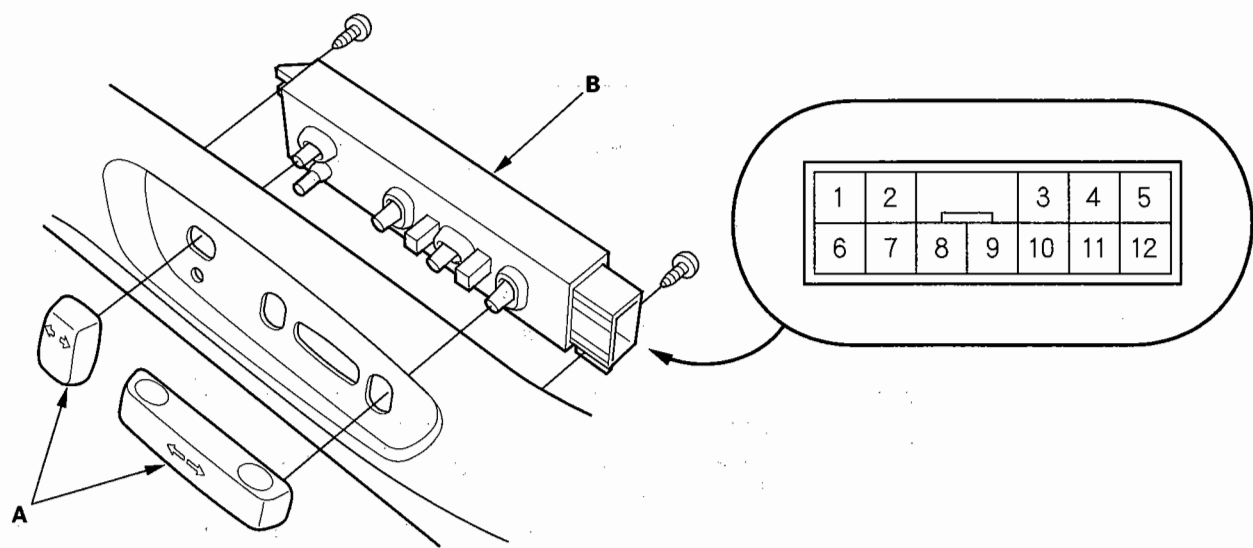
Power Seats

Switch Test/Replacement

NOTE: For driver's power seat, refer to the Driving Position Memory System (DPMS) (see page 22-327).

Front Passenger's Seat

- 1. Remove the power seat adjustment switch knobs (A) and recline cover from the front passenger's seat (see page 20-101).



- 2. Remove the two screws and power seat adjustment switch (B).
- 3. Disconnect the 12P connector from the power seat adjustment switch.
- 4. Reinstall the switch knobs to the switch.
- 5. Check for continuity between the terminals in each switch position according to the table.

Terminal		2	4	6	7	8	10	11	12
Position									
SLIDE SWITCH	Forward				○	○	○	○	
	Backward				○	○	○	○	
RECLINE SWITCH	Forward	○	○	○					○
	Backward	○	○	○					○

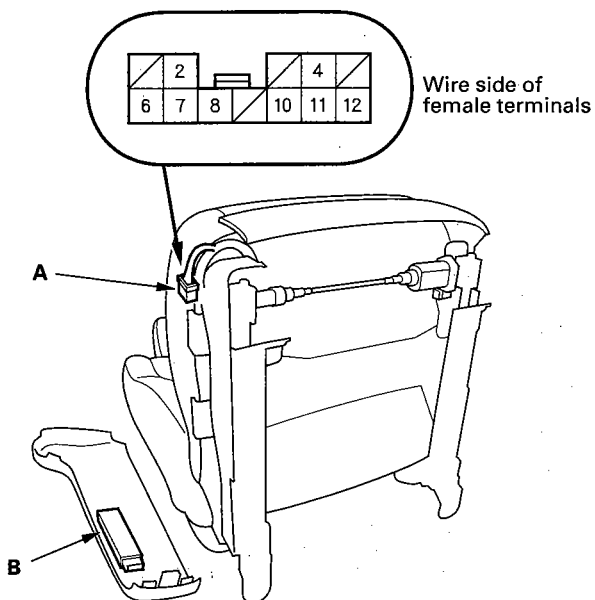
- 6. If the continuity is not as specified, replace the switch.



Motor Test

Front Passenger's Seat

1. Remove the front passenger's seat (see page 20-99).
2. Remove the power seat adjustment switch knobs and recline cover from the seat (see page 20-101).
3. Disconnect the 12P connector (A) from the power seat adjustment switch (B).



4. Test each motor by applying battery voltage and body ground to the 12P connector terminals.

Slide motor

Terminal Position	7	11
Forward	⊖	⊕
Backward	⊕	⊖

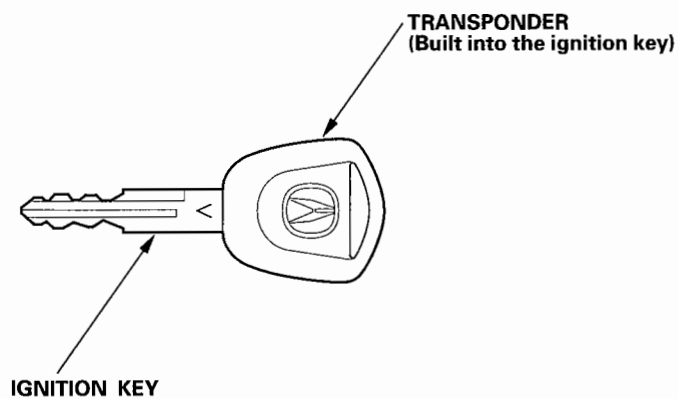
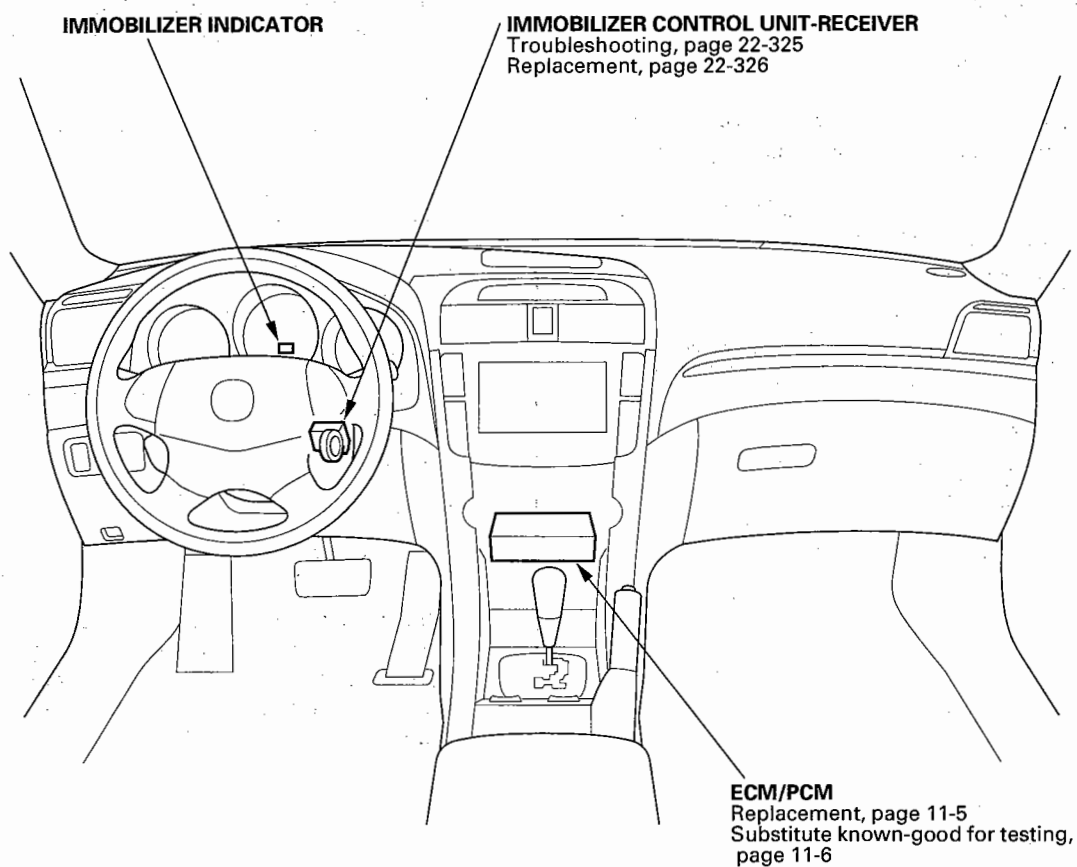
Recline motor

Terminal Position	6	12
Forward	⊖	⊕
Backward	⊕	⊖

5. If the motor does not run or fails to run smoothly, check for an open in the front passenger's seat wire harness between the 12P connector and each motor connector. If the harness is OK, replace the motor (see page 20-104).

Immobilizer System

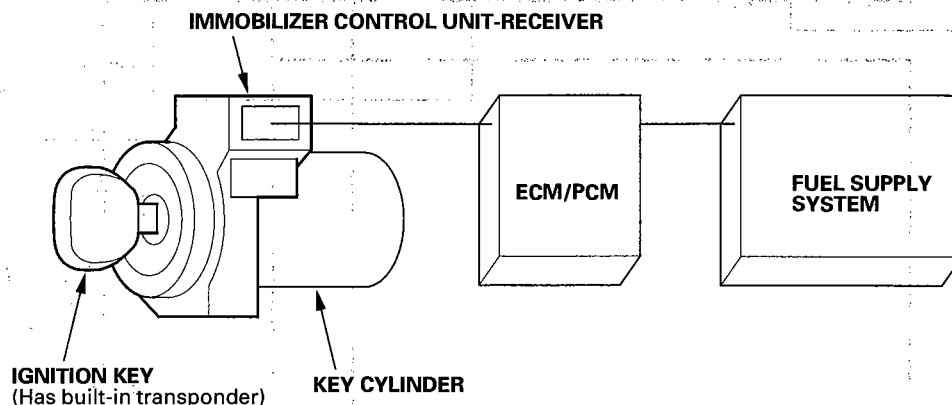
Component Location Index



System Description

The vehicle is equipped with an immobilizer system that will disable the vehicle unless the proper ignition key is used. This system consists of a transponder located in the ignition key, an immobilizer control unit-receiver, an indicator, and the ECM/PCM.

When the key is inserted in the ignition switch and turned to the on (II) position, the immobilizer control unit-receiver sends power to the transponder in the ignition key. The transponder then sends a coded signal back to the immobilizer control unit-receiver which then sends a coded signal to the ECM/PCM.



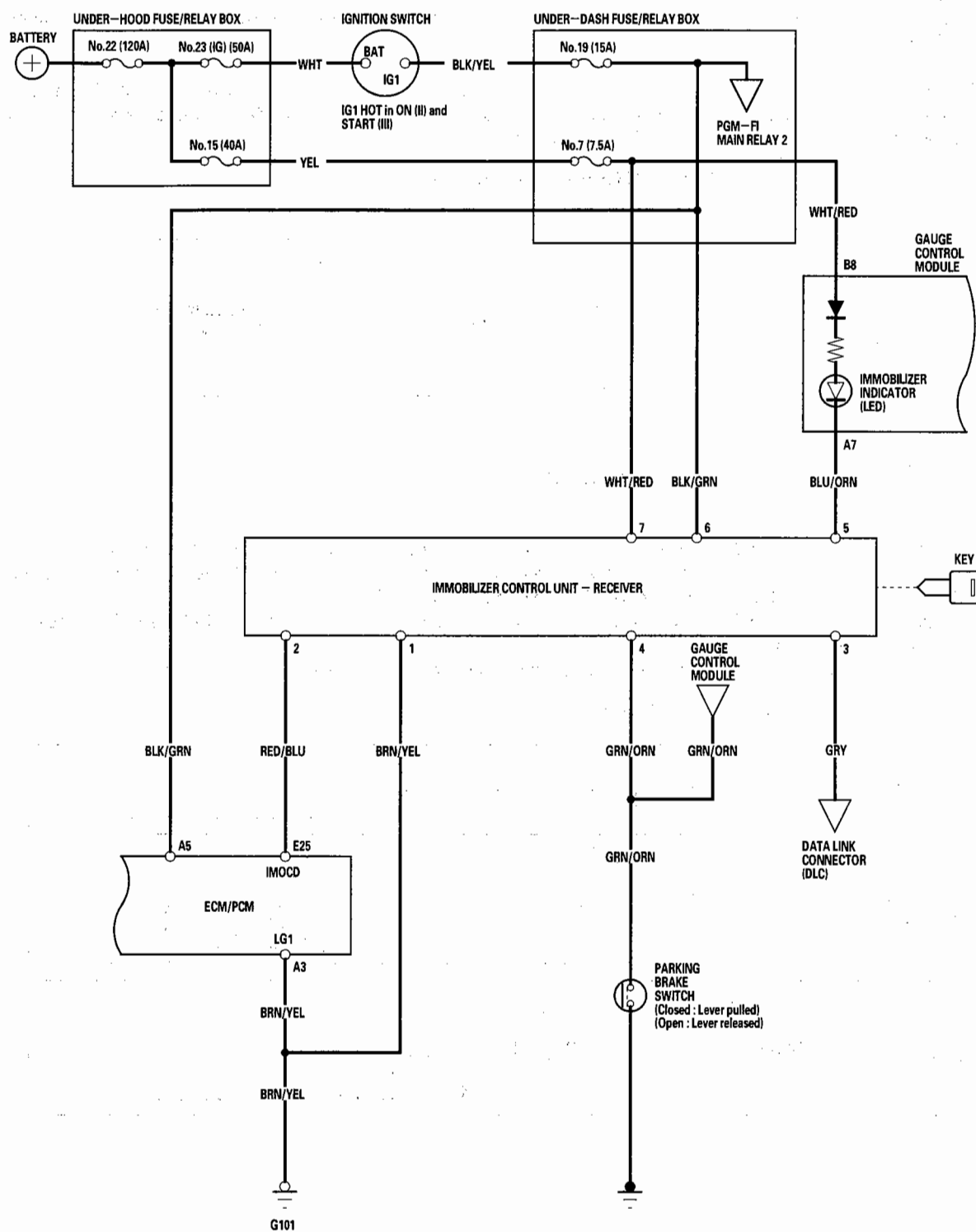
- If the proper key has been used, the immobilizer indicator will come on for about 2 seconds, then go off.
- If the wrong key has been used or the code was not received or recognized by the unit, the indicator will come on for about 2 seconds, then it will blink until the ignition switch is turned OFF.
- If the ignition switch is turned OFF, the indicator will blink for about 5 seconds to signal that the unit has reset correctly, then the indicator will go off.
- If the customer has lost their key, and cannot start the engine, contact Acura Customer Relations.

IMMOBILIZER INDICATOR BLINKING PATTERN:

IGNITION SWITCH		ON	OFF
PROPER KEY INSERTED	INDICATOR	ON	2 sec
		OFF	5 sec
WRONG KEY INSERTED	INDICATOR	ON	1 Hz
		OFF	1 Hz

Immobilizer System

Circuit Diagram





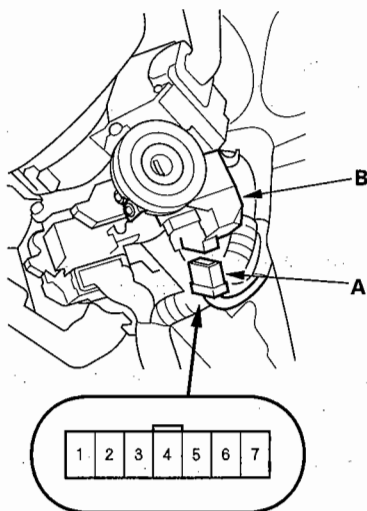
Troubleshooting

Follow this procedure if the vehicle does not start after rewriting the ECM/PCM with the HDS.

Note these items before troubleshooting:

- Due to the action of the immobilizer system, the engine takes slightly more time to start than vehicle's without an immobilizer system.
- When the system is normal, and the proper key is inserted, the indicator comes on for 2 seconds, then it will go off.
- If the indicator starts to blink after 2 seconds, or if the engine does not start, repeat the starting procedure. If the engine still does not start, continue with this procedure.
- Check the ECM/PCM DTC's (see page 11-3).

1. Remove the steering column covers (see page 17-24).
2. Disconnect the 7P connector (A) from the immobilizer control unit-receiver (B).



Wire side of female terminals

3. Turn the ignition switch ON (II) with the proper key.

4. Check to see if the immobilizer indicator comes on.

Does the indicator come on (blinking or solid)?

YES—Go to step 5.

NO—Go to step 8.

5. Check for voltage between the immobilizer control unit-receiver 7P connector No. 7 terminal and body ground.

Is there battery voltage?

YES—Go to step 6.

NO—Check for these problems:

- A blown No. 15 (40A) fuse in the under-hood fuse/relay box. ■
- A blown No. 7 (7.5A) fuse in the under-dash fuse/relay box. ■
- An open in the WHT/RED wire. ■

6. Check for voltage between the immobilizer control-unit receiver 7P connector No. 4 terminal and body ground with the parking brake lever applied, then released.

Is there 1 V or less, then 5 V or more?

YES—Go to step 7.

NO—Check for these problems:

- Short to ground. ■
- Faulty parking brake switch or a poor body ground of the parking brake switch. ■
- Repair an open in the GRN/ORN wire. ■

7. Check for continuity between the immobilizer control unit-receiver 7P connector No. 2 terminal and ECM/PCM 31P connector E25 terminal.

Is there continuity end to end with no continuity to ground?

YES—Go to step 8.

NO—Repair an open or short in the RED/BLU wire. ■

(cont'd)

Immobilizer System

Troubleshooting (cont'd)

8. Connect the immobilizer control unit-receiver 7P connector No. 5 terminal to body ground with a jumper wire, then turn the ignition switch ON (II).

Does the immobilizer indicator come on?

YES—Go to step 9.

NO—Check for these problems:

- An open in the BLU/ORN wire between the gauge control module and immobilizer control unit-receiver. ■
- A faulty immobilizer indicator. ■
- A blown No. 7 (7.5A) fuse in the under-dash fuse/relay box. ■

9. Check for voltage between the immobilizer control unit-receiver 7P connector No. 6 terminal and body ground with the ignition switch ON (II).

Is there battery voltage?

YES—Go to step 10.

NO—Check for these problems:

- A blown No. 19 (15A) fuse in the under-dash fuse/relay box. ■
- An open in the BLK/GRN wire. ■

10. Check for continuity between the immobilizer control unit-receiver 7P connector No. 1 terminal and body ground.

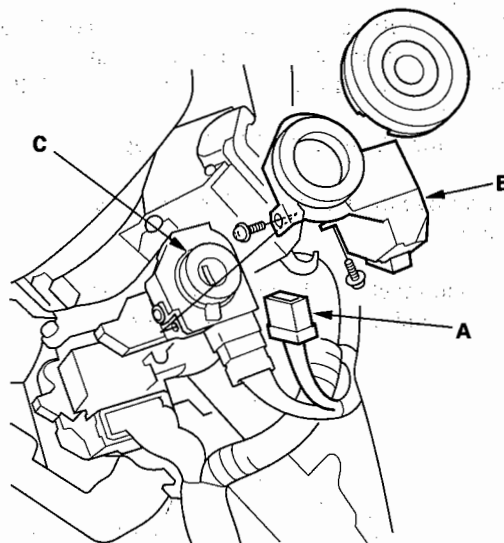
Is there continuity?

YES—Replace the immobilizer control unit-receiver. After replacing the immobilizer control unit-receiver, rewrite the unit with the HDS. ■

NO—Repair the open in the BRN/YEL wire or poor ground (G101). ■

Immobilizer Control Unit-Receiver Replacement

1. Remove the driver's dashboard lower cover (see page 20-82).
2. Remove the steering column covers (see page 17-24).
3. Disconnect the 7P connector (A) from the immobilizer control unit-receiver (B).

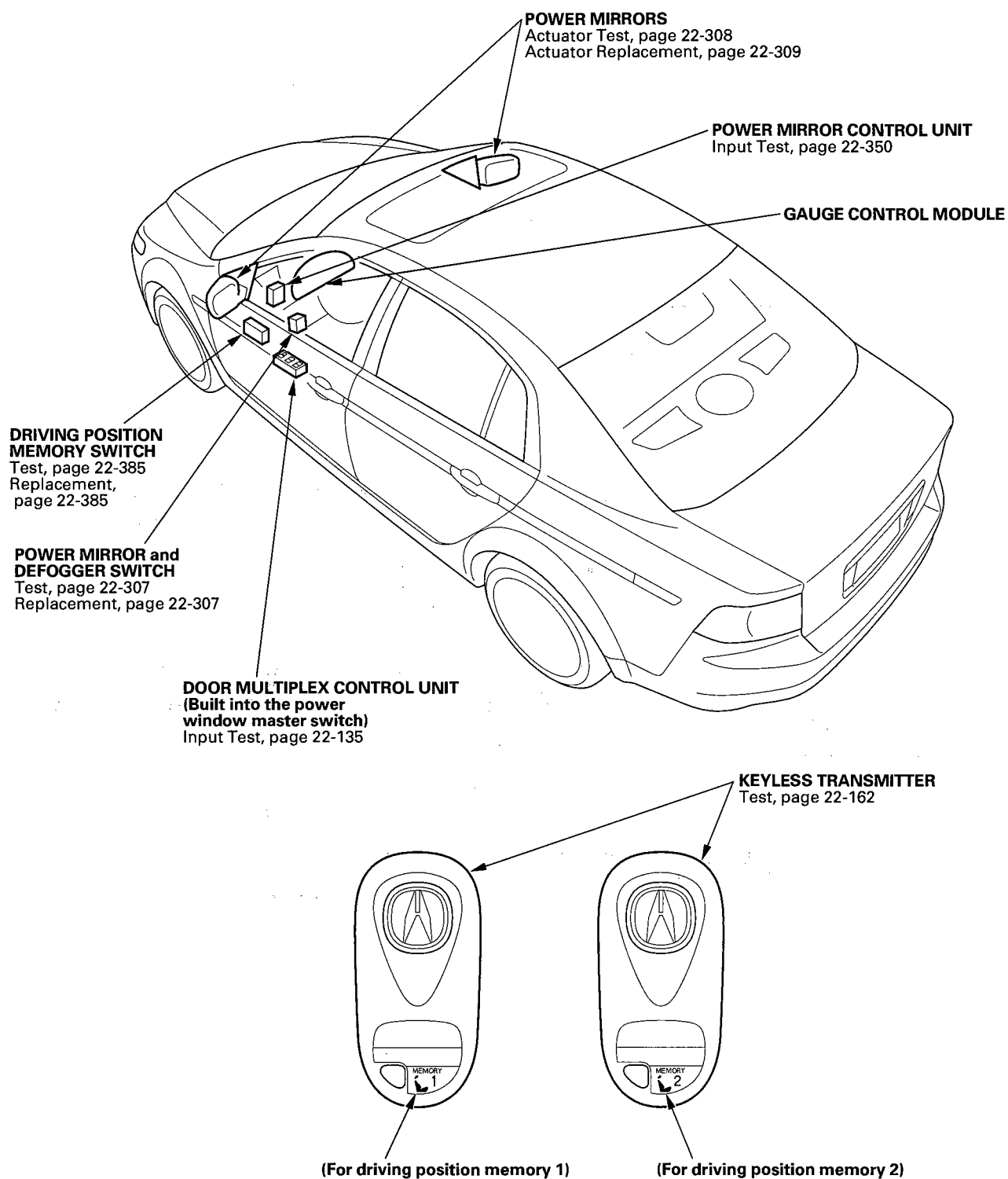


4. Remove the two screws and the immobilizer control unit-receiver from the ignition key cylinder (C).
5. Install the immobilizer control unit-receiver in the reverse order of removal.
6. After replacement, check the immobilizer system.

Driving Position Memory System (DPMS)



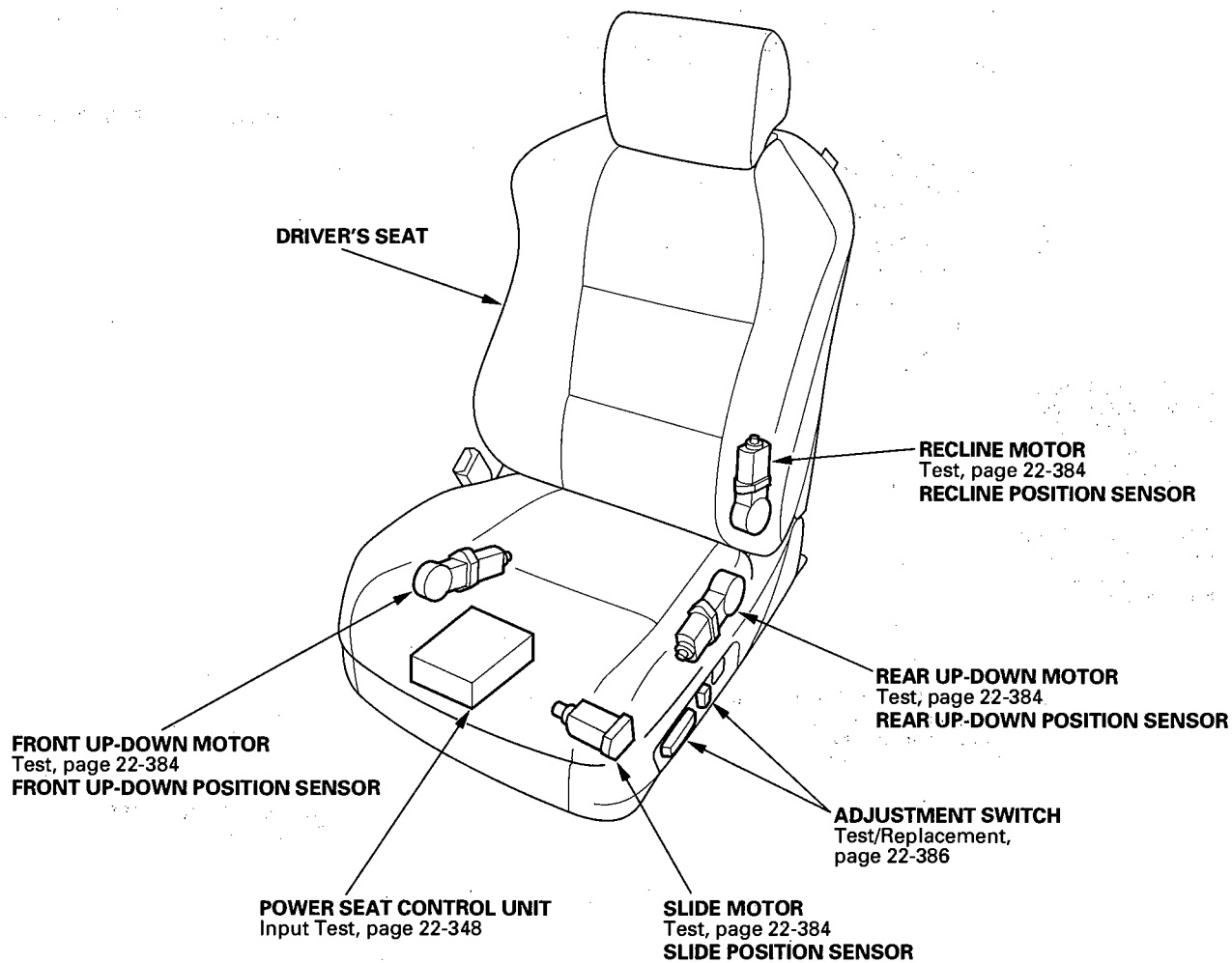
Component Location Index



(cont'd)

Driving Position Memory System (DPMS)

Component Location Index (cont'd)





System Description

The driver's seat and the power mirrors have a memory feature. All the adjustments can be memorized by pressing the MEMO button on the driving position memory switch, and then pressing one of two position buttons within 5 seconds. Pressing the appropriate position button will move the seat and the mirrors to the memorized positions. This system is integrated with the multiplex integrated control system, and has 9 wake-up and sleep mode. All digital signals are sent via shared B-CAN and UART communication lines. For more information about communication line and wake-up/sleep mode, refer to the Multiplex Control System Description (see page 22-89).

Disconnecting the battery will cancel the memorized positions.

DPMS is linked to the keyless transmitters 1 and 2. Depending on which keyless transmitter unlocks the driving memory position 1 or 2 is chosen. To turn remote DPMS feature ON linked or OFF unlinked, press and hold the LOCK and UNLOCK buttons on the keyless transmitter for about 1 second. The LED on the keyless transmitter blinks once when linked, and twice when unlinked, refer to Keyless Entry/Security Alarm System Descriptions (see page 22-140) for more information.

Memory Retrieve

When one of the two buttons on the driving position memory switch is pressed with the vehicle parked (shift lever in P position) and the driver's door closed, the seat and the mirrors move to the memorized positions.

Power Seat Position Sensors

Each motor has a sensor which detects motor rotation and sends a pulse to the power seat control unit when the motor rotates. The control unit stores the number of pulses in its memory, and the seat position is memorized.

Power Mirror Position Sensors

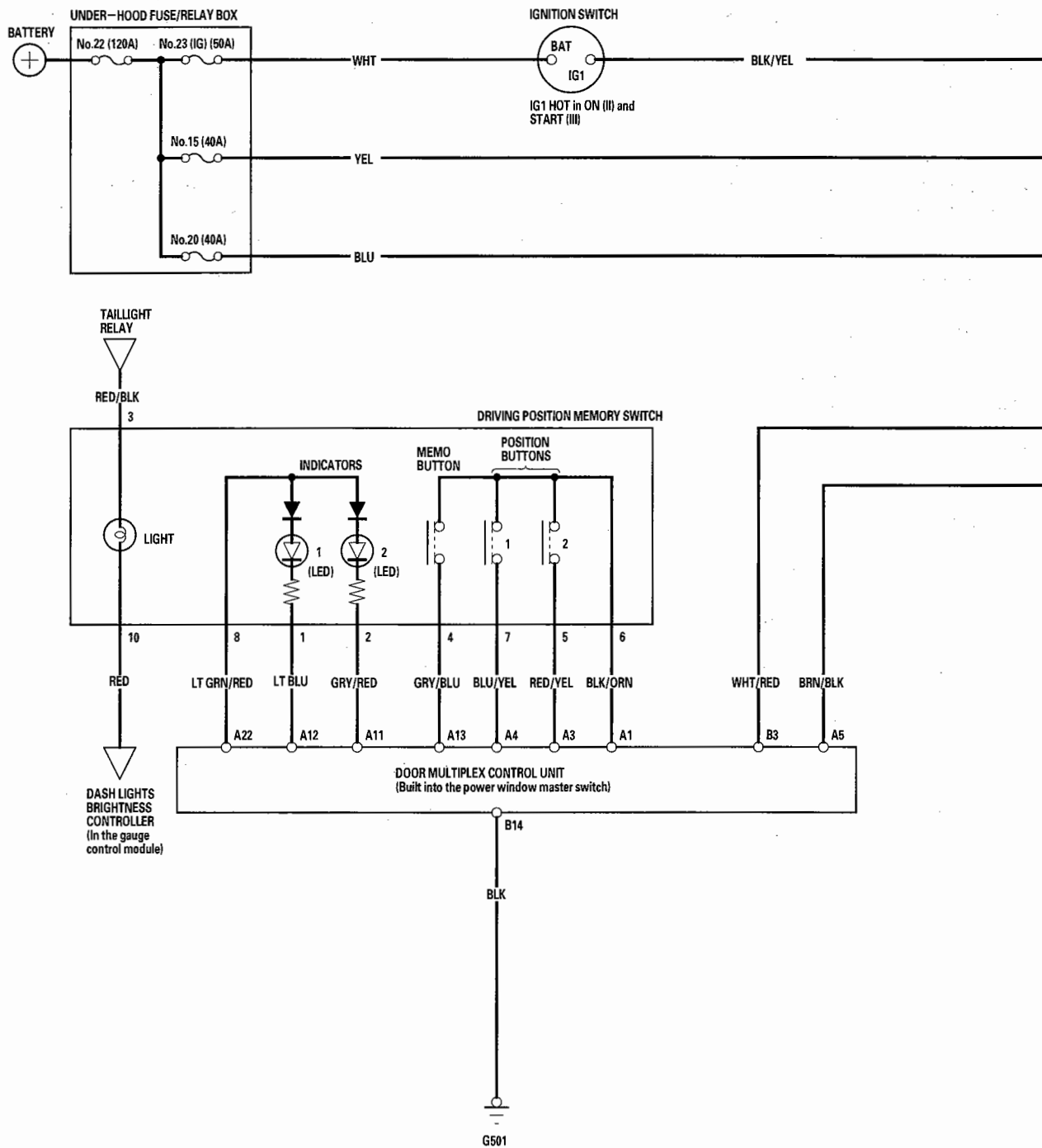
By means of a tilt position sensor and swing position sensor, the power mirror control circuit in the power mirror control unit detects the voltage changes caused by the movements of the mirrors. These voltage changes are stored in memory, and the power mirror positions are memorized for each stored driving position.

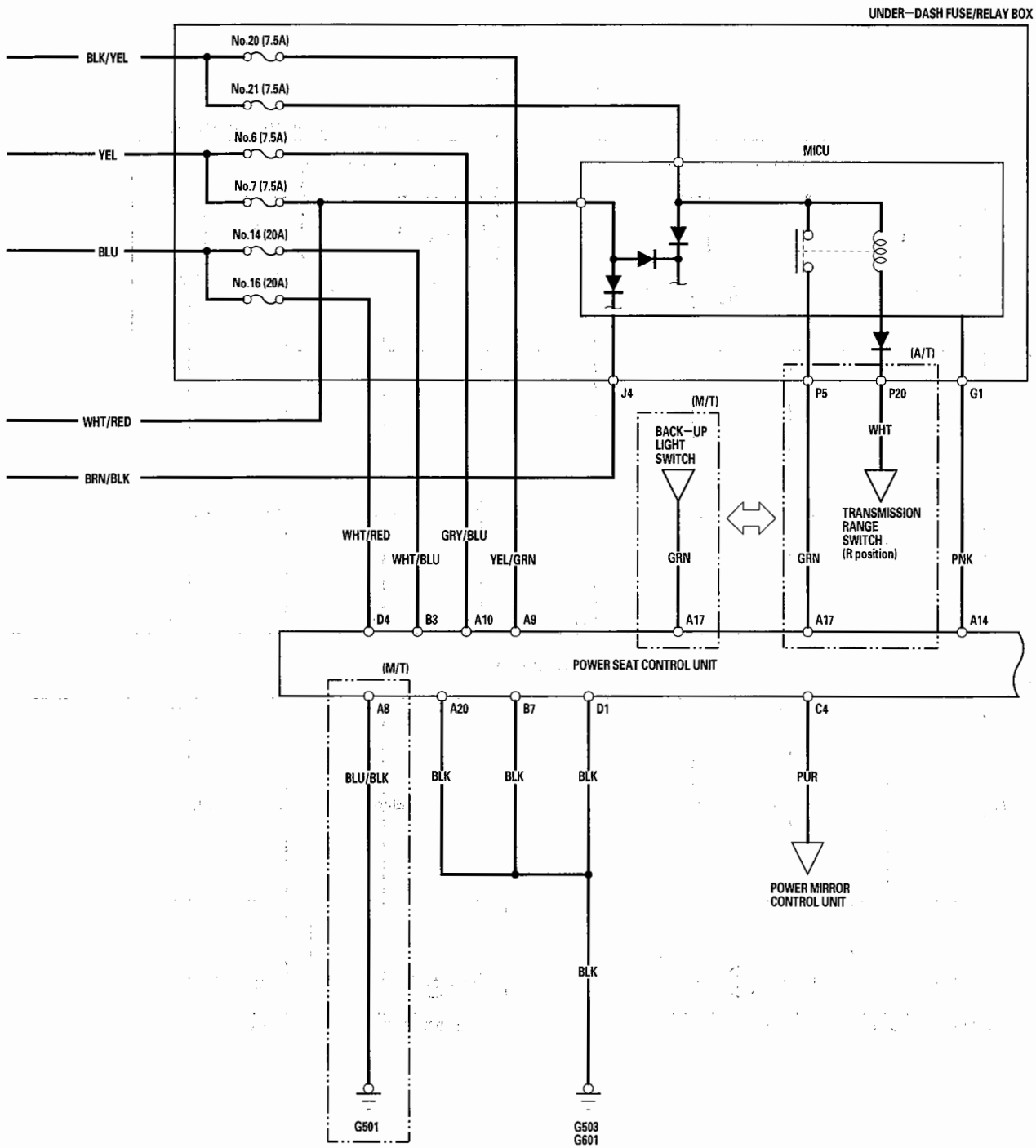
Reverse Mirror Control

When the vehicle is shifted to Reverse (shift lever in R position) with the power mirror selector switch in Left (or Right) position, the driver's (or passenger's) side mirror tilts down automatically to help the driver's view. The mirror will return to the previous position when the shift lever is shifted out of R position. The reverse mirror control is cancelled if the power mirror selector switch is in the center position.

Driving Position Memory System (DPMS)

Circuit Diagram - Power Seat

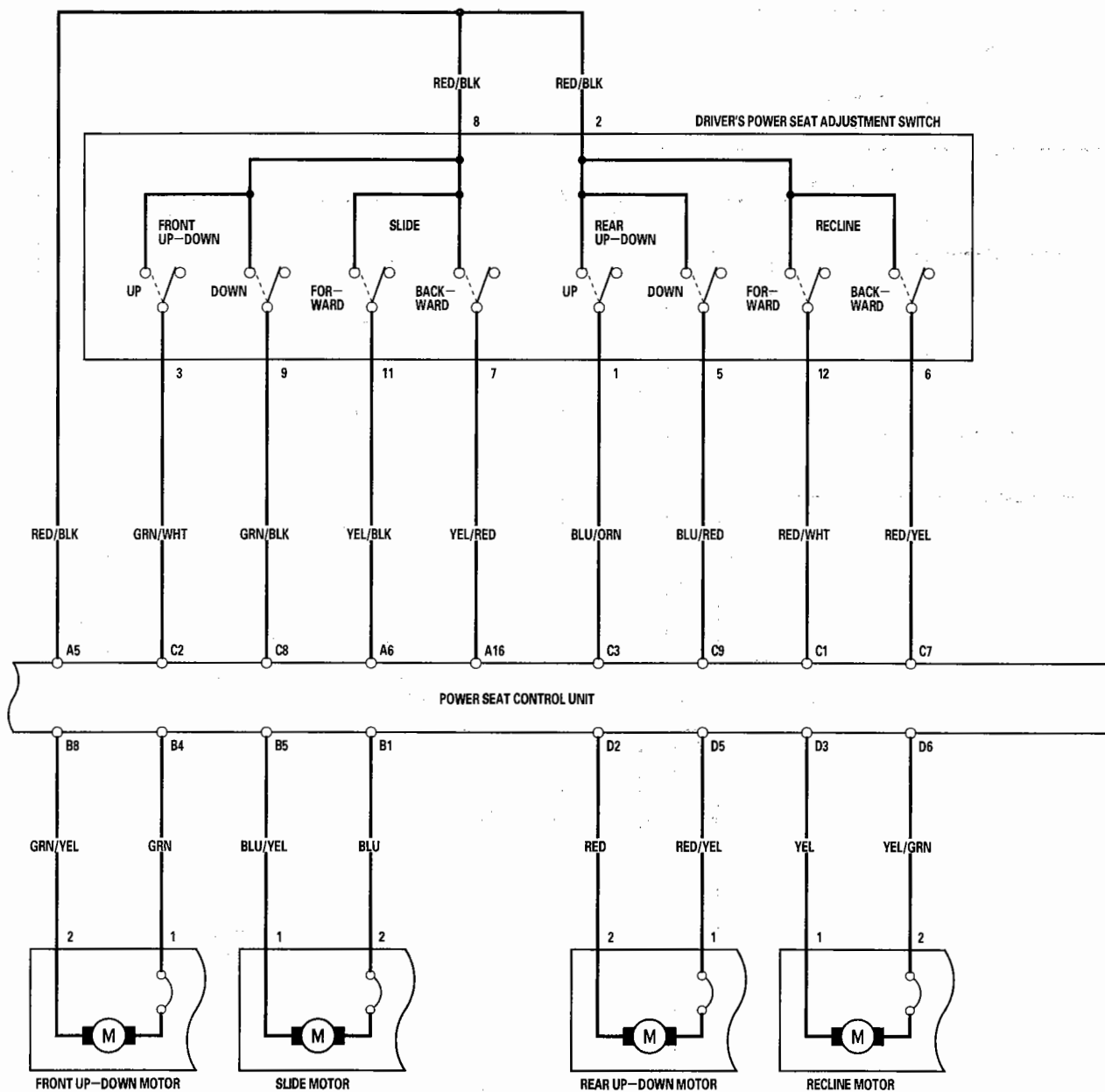


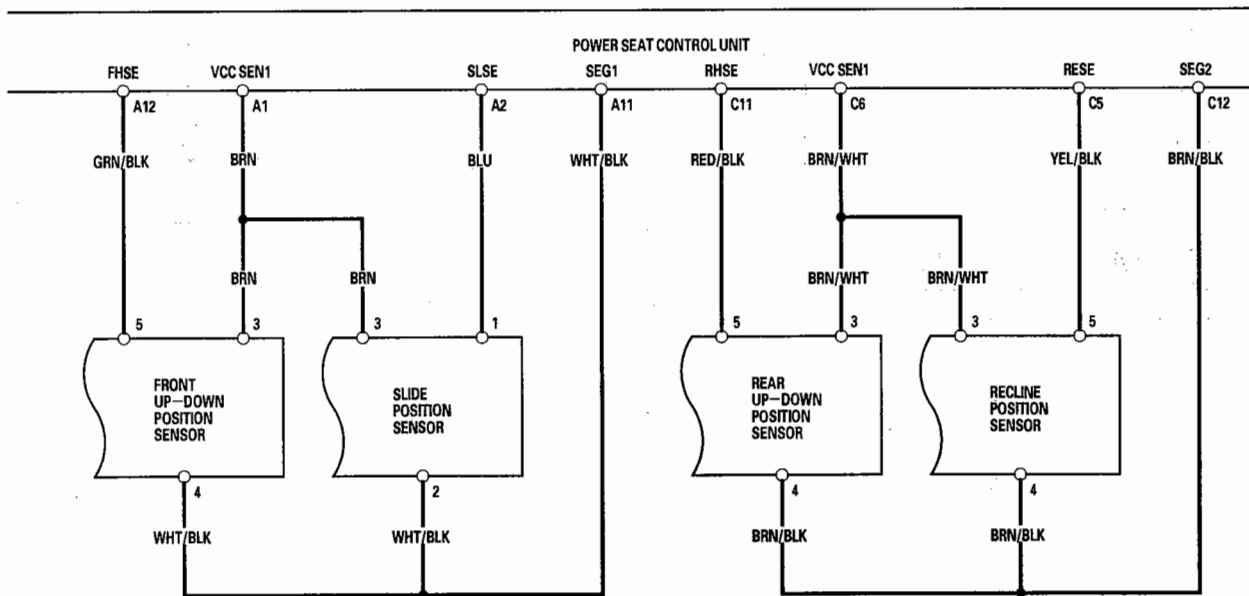


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Driving Position Memory System (DPMS)

Circuit Diagram - Power Seat (cont'd)





Driving Position Memory System (DPMS)

Circuit Diagram - Power Mirror

