

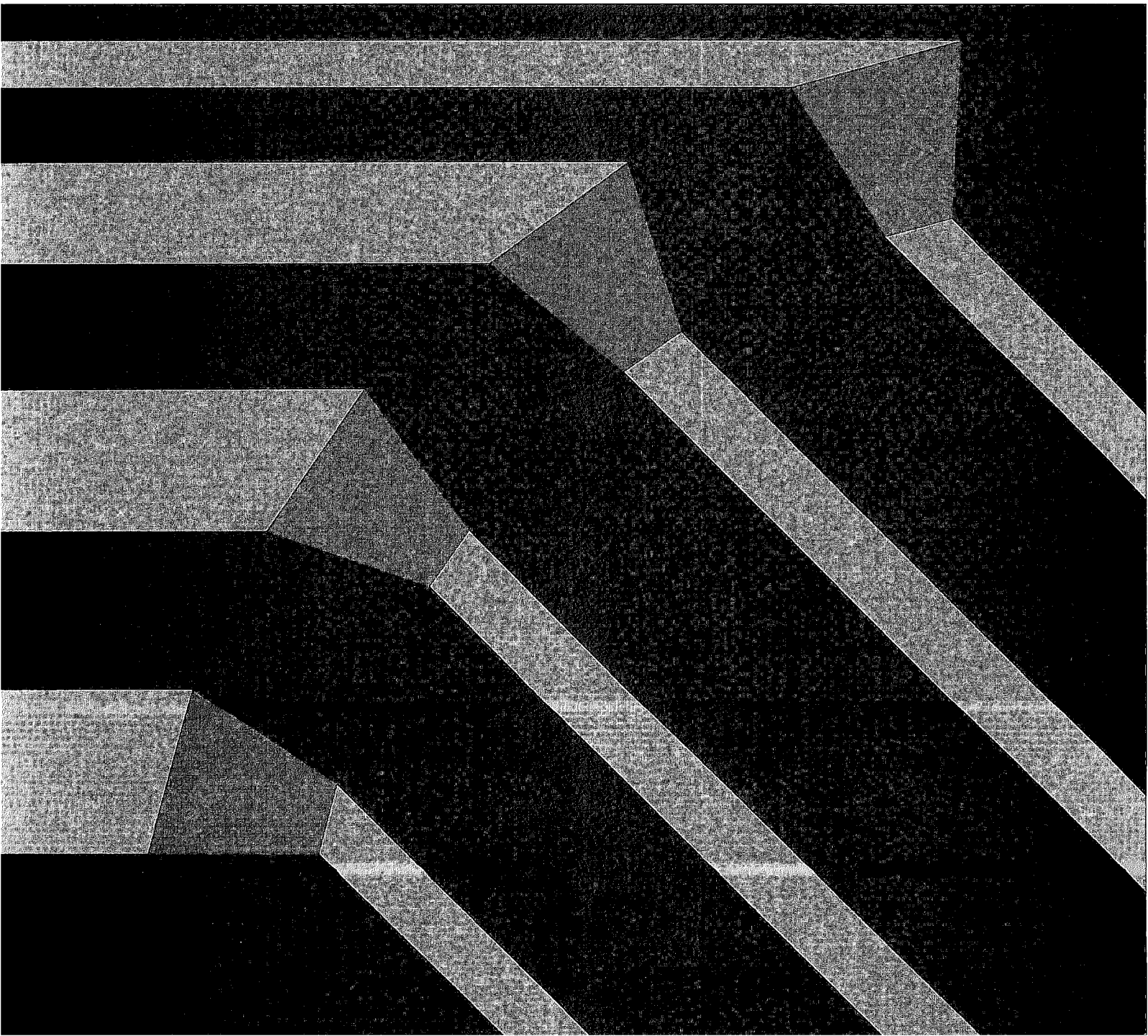
# SHOP MANUAL

**HONDA**

Accord / Accord 5 Door

**SUPPLEMENT**

**2001**



## **SUPPLEMENTAL RESTRAINT SYSTEM (SRS)**

This model has an SRS which includes a driver's airbag in the steering wheel hub and a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors and some types include side airbags in the front seat-backs.

Information necessary to safely service the SRS is included in the '99 Accord Shop Manual, 62S1A00.

Items marked with an asterisk (\*) on the contents page include, or are located near, SRS components. Servicing, disassembling or replacing these items will require special precautions and tools, and should therefore be done by an authorized Honda dealer.

### **⚠ WARNING**

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal collision, all SRS service work must be performed by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags and seat belt tensioners.
- SRS electrical wiring harnesses are identified by yellow color coding. Related components are located in the steering column, front console, dashboard, dashboard lower panel, in the dashboard above the glove box, front seats and around the floor. Do not use electrical test equipment on these circuits.

# INTRODUCTION

## How to Use This Manual

This supplement contains information for the 2001 HONDA Accord/Accord 5 Door. Refer to following shop manual for service procedures and data not included in this supplement.

Description	Code No.
HONDA Accord MAINTENANCE, REPAIR and CONSTRUCTION 99 VOL. 1 and VOL. 2	62S1A00A 62S1A00B
HONDA Accord 5 Door/Accord 5 Door Turbo Diesel SUPPLEMENT 99	62S1A21
HONDA Accord Turbo Diesel/Accord 5 Door Turbo Diesel SUPPLEMENT 99	62S1A22
HONDA Accord/Accord 5 Door Turbo Diesel Fuel and Emissions SUPPLEMENT 99	62S1A23
HONDA Accord/Accord 5 Door 2000	62S1A23

The first page of each section is marked with a black tab that lines up with one of the thumb index tabs on this page. You can quickly find the first page of each section without looking through a full table of contents. The symbols printed at the top corner of each page can also be used as a quick reference system.

## Special Information

**⚠ WARNING** : Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.

**⚠ CAUTION** : Indicates a possibility of personal injury or equipment damage if instructions are not followed.

**NOTICE** : The purpose of these messages it is intended to help prevent damage to the vehicle, other properly, or the environment.

NOTE: Gives helpful information.

### ⚠ CAUTION

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. Please note that this manual contains warnings and cautions against some specific service methods which could cause PERSONAL INJURY, damage a vehicle or make it unsafe. Please understand that these warnings cannot cover all conceivable ways in which service, whether or not recommended by HONDA, might be done, or of the possible hazardous consequences of every conceivable way, nor could HONDA investigate all such ways. Anyone using service procedures or tools, whether or not recommended by HONDA, must satisfy himself thoroughly that neither personal safety nor vehicle safety will be jeopardized.

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice. No part of this publication may be reproduced, stored in retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. This includes text, figures and tables.

 marked sections are not included in this manual.

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HONDA MOTOR CO., LTD.  
Service Publication Office

As sections with \* include SRS components;  
special precautions are required when servicing.

## General Info



## Specifications

specs

## Maintenance



## Engine Electrical



## Engine



## Cooling



## Fuel and Emissions



## \*Transaxle



## \*Steering



## Suspension



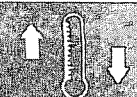
## \*Brakes Including ABS



## \*Body



## \*Heater and Air Conditioning



## \*Body Electrical



## \*Restraints



# Outline of Model Changes

ITEM	ITEM	99 MODEL	99 MODEL	99 MODEL	2000 MODEL	2001 MODEL	REFERENCE SECTION
General	5-door model added	○	○				—
	F23Z5 engine model added					○	—
Engine Electrical	Alternator replacement procedure changed		○				—
	• Ignition system changed • F23Z5 engine added					○	4
Engine Electrical	VTEC Control System of F18B2 and F18B4 engine changed				○		—
	Secondary heated Oxygen sensor adopted to F18B2 engine (M/T) and F18B4 engine (M/T)				○		—
	CYL sensor adopted to D16B6 and D16B7 engines					○	6
	• Changed: • Main bearing identification • Piston diameter • F23Z5 engine added					○	7
	• Secondary heated oxygen sensor adopted to D16B6 and D16B7 engines • F23Z5 engine added					○	9
Cooling	Cooling system components and operation changed		○				—
	Engine coolant changed					○	10
Fuel and Emissions	20T2N engine (turbocharger with intercooler) modified			○			—
	F18B2 and F18B4 engines changed on KE, KG, KS and KR models				○		—
						○	11
Clutch	Refit of clutch assembly changed		○				—
	Clutch disc inspection procedure added					○	12
Manual Transmission	Special tool of refit of differential oil seal added		○				—
	U2N4 transmission added for F23Z5 engine					○	13
Automatic Transmission	• Checking DTC procedure adopted for F23Z5 engine model • PCM changed • Shift schedule changed					○	14
Driveshaft	Replacement procedure for low profile boot bands changed					○	16



ITEM	ITEM	99 MODEL	99 MODEL	99 MODEL	2000 MODEL	2001 MODEL	REFERENCE SECTION
Body	<ul style="list-style-type: none"> <li>• Changed: <ul style="list-style-type: none"> <li>• Component parts of rear window</li> <li>• Component parts of interior trim</li> <li>• Headliner and attached clips</li> <li>• Rear seat and related parts</li> <li>• Tailgate and related parts</li> <li>• Fuel fill opener and fuel lid opener cable</li> </ul> </li> <li>• Added: <ul style="list-style-type: none"> <li>• Type V emblems for some models</li> <li>• Rear pillar molding</li> </ul> </li> </ul>	○					—
	Tailgate latch and tailgate lock cylinder replacement procedure changed for 5-door model				○		—
	<ul style="list-style-type: none"> <li>• Changed: <ul style="list-style-type: none"> <li>• Front and rear door outer handle mounting nut</li> <li>• Immobilizer label</li> <li>• Front "H" emblem</li> <li>• ACCORD emblem attaching point on RHD models</li> </ul> </li> <li>• Added: <ul style="list-style-type: none"> <li>• VTEC emblems for some models</li> </ul> </li> </ul>					○	20
Body Electrical	<ul style="list-style-type: none"> <li>• Added: <ul style="list-style-type: none"> <li>• Accessory socket</li> <li>• Tailgate light</li> <li>• Tweeter speaker</li> <li>• Rear window wiper and washer</li> </ul> </li> <li>• Changed: <ul style="list-style-type: none"> <li>• High mount brake light</li> <li>• Stereo amplifier</li> <li>• Keyless entry and security alarm system</li> </ul> </li> </ul>	○					—
	<ul style="list-style-type: none"> <li>• Hazard warning light discontinued</li> <li>• Passenger's power window switch changed</li> <li>• Radio antenna changed</li> <li>• Ultrasonic system added</li> </ul>					○	23
Navigation System	Navigation unit and GPS antenna locations changed	○					—
	Navigation unit and picture diagnosis changed					○	23
Seat Belts	<ul style="list-style-type: none"> <li>• Rear seat belt changed</li> <li>• Rear center shoulder belt adopted</li> </ul>	○					—
	Side impact sensor changed					○	24

## **General Information**

**Chassis and Engine Numbers ..... 1-2**

**Abbreviations ..... 1-7**

# Chassis and Engine Numbers

4-door:

## Vehicle Identification Number

SHH CG7 2 4 \* 1 U 100001

### Manufacturer, Make and Type of Vehicle

SHH: HONDA OF THE U.K.  
MFG., LTD. U.K.  
HONDA Passenger car

### Line, Body and Engine Type

CG7: ACCORD SEDAN/D16B6,  
D16B7  
CG8: ACCORD SEDAN/F18B2  
CG9: ACCORD SEDAN/F20B6  
CH1: ACCORD SEDAN/H22A7  
CL3: ACCORD SEDAN/F23Z5

### Body and Transmission Type

5: 4-door Sedan/5-speed Manual  
6: 4-door Sedan/4-speed Automatic

### Vehicle Grade

1: 1.8i S  
2: 1.6i S, 1.8i S, 2.3i LS  
4: 1.6i SE, 1.6i LS, 1.8i SE, 1.8i LS  
2.0i SE, 2.0i LS, 2.3i SEE, 2.3i ES  
5: 2.3i SEE, 2.3i ES  
7: 1.8i SEE, 1.8i ES, 2.0i SEE, 2.0i ES  
2.3i V  
8: 1.8i SEE, 1.8i ES, 2.0i SEE, 2.0i ES  
2.2i R, 2.2i Ri, 2.3i V  
9: 2.2i R

### Check Digits

### Model Year

1: 2001

### Factory Code

U: Honda of the U.K. Manufacturing in U.K.

### Serial Number

## Engine Number

D16B6 - E200001

### Engine Type

D16B6, D16B7:  
1.6 l SOHC 16-valves Sequential  
Multiport Fuel-injected Unleaded  
gasoline with CATA  
F18B2: 1.8 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA  
F20B6: 2.0 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA  
H22A7: 2.2 l DOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA  
F23Z5: 2.3 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA

### Serial Number

H22A7: 1000001~  
F23Z5: 1000001~  
Except H22A7, F23Z5: E200001~

## Transmission Number

DH - 1000001

### Transmission Type

DH: 5-speed Manual  
U2L4: 5-speed Manual  
U2Q7: 5-speed Manual  
U2N4: 5-speed Manual  
MDJA: 4-speed Automatic

### Serial Number



# Applicable Area Code/VIN/Engine Number/Transmission Number List

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord SEDAN	KE	1.6i SE	5MT	SHHCG754*1U100001~	D16B6-E200001~	DH-1000001~
		1.8i S	5MT	SHHCG852*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG862*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i SE	5MT	SHHCG854*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG864*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i SEE	5MT	SHHCG857*1U100001~	F18B2-E200001~	U2L4-1000001~
			5MT	SHHCG858*1U100001~*1	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG867*1U100001~	F18B2-E200001~	MDJA-3000001~
			4AT	SHHCG868*1U100001~*1	F18B2-E200001~	MDJA-3000001~
		2.0i SE	5MT	SHHCG954*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCG964*1U100001~	F20B6-E200001~	MDJA-3000001~
		2.0i SEE	5MT	SHHCG957*1U100001~	F20B6-E200001~	U2L4-1000001~
			5MT	SHHCG958*1U100001~*1	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCG967*1U100001~	F20B6-E200001~	MDJA-3000001~
		2.2i R	5MT	SHHCH159*1U100001~	H22A7-1000001~	U2Q7-1000001~
			5MT	SHHCH158*1U100001~*2	H22A7-1000001~	U2Q7-1000001~
		2.3i SEE	5MT	SHHCL354*1U100001~	F23Z5-1000001~	U2N4-1000001~
			5MT	SHHCL355*1U100001~*1	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL364*1U100001~	F23Z5-1000001~	MDJA-3000001~
			4AT	SHHCL365*1U100001~*1	F23Z5-1000001~	MDJA-3000001~
		2.3i V	5MT	SHHCL357*1U100001~	F23Z5-1000001~	U2N4-1000001~
			5MT	SHHCL358*1U100001~*1	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL367*1U100001~	F23Z5-1000001~	MDJA-3000001~
			4AT	SHHCL368*1U100001~*1	F23Z5-1000001~	MDJA-3000001~
	KG	1.6i S	5MT	SHHCG752*1U100001~	D16B6-E200001~	DH-1000001~
		1.6i LS	5MT	SHHCG754*1U100001~	D16B6-E200001~	DH-1000001~
		1.8i S	5MT	SHHCG852*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG862*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i LS	5MT	SHHCG854*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG864*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i ES	5MT	SHHCG857*1U100001~	F18B2-E200001~	U2L4-1000001~
			5MT	SHHCG858*1U100001~*1	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG867*1U100001~	F18B2-E200001~	MDJA-3000001~
			4AT	SHHCG868*1U100001~*1	F18B2-E200001~	MDJA-3000001~
		2.0i LS	5MT	SHHCG954*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCG964*1U100001~	F20B6-E200001~	MDJA-3000001~
		2.0i ES	5MT	SHHCG957*1U100001~	F20B6-E200001~	U2L4-1000001~
			5MT	SHHCG958*1U100001~*1	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCG967*1U100001~	F20B6-E200001~	MDJA-3000001~
			4AT	SHHCG968*1U100001~*1	F20B6-E200001~	MDJA-3000001~
		2.2i Ri	5MT	SHHCH158*1U100001~	H22A7-1000001~	U2Q7-1000001~
		2.3i LS	5MT	SHHCL352*1U100001~	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL362*1U100001~	F23Z5-1000001~	MDJA-3000001~
		2.3i ES	5MT	SHHCL354*1U100001~	F23Z5-1000001~	U2N4-1000001~
			5MT	SHHCL355*1U100001~*1	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL364*1U100001~	F23Z5-1000001~	MDJA-3000001~
			4AT	SHHCL365*1U100001~*1	F23Z5-1000001~	MDJA-3000001~

\*1: with Navigation system

\*2: with Trunk Spoiler

# Chassis and Engine Numbers

Applicable Area Code/VIN/Engine Number/Transmission Number List

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord SEDAN	KR	1.6i S	5MT	SHHCG752*1U100001~	D16B6-E200001~	DH-1000001~
		1.6i LS	5MT	SHHCG754*1U100001~	D16B6-E200001~	DH-1000001~
		1.6i LS7	5MT	SHHCG755*1U100001~	D16B7-E200001~	DH-1000001~
		1.8i LS	5MT	SHHCG854*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG864*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i ES	5MT	SHHCG857*1U100001~	F18B2-E200001~	U2L4-1000001~
		2.0i ES	5MT	SHHCG954*1U100001~	F20B6-E200001~	U2L4-1000001~
			5MT	SHHCG957*1U100001~	F20B6-E200001~	U2L4-1000001~
			5MT	SHHCG958*1U100001~*1	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCG967*1U100001~	F20B6-E200001~	MDJA-3000001~
			4AT	SHHCG968*1U100001~*1	F20B6-E200001~	MDJA-3000001~
		2.3i ES	5MT	SHHCL354*1U100001~	F23Z5-1000001~	U2N4-1000001~
	KS	1.8i S	5MT	SHHCG852*1U100001~	F18B2-E200001~	U2L4-1000001~
		1.8i LS	5MT	SHHCG854*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG864*1U100001~	F18B2-E200001~	MDJA-3000001~
		2.0i LS	5MT	SHHCG954*1U100001~	F20B6-E200001~	U2L4-1000001~
	KY	1.8i S	5MT	SHHCG852*1U100001~*2	F18B2-E200001~	U2L4-1000001~
			5MT	SHHCG851*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCG862*1U100001~*2	F18B2-E200001~	MDJA-3000001~
			4AT	SHHCG861*1U100001~	F18B2-E200001~	MDJA-3000001~

\*1: with Navigation system

\*2: with Immobilizer



## 5-door:

### Vehicle Identification Number

SHH CH5 5 4 \* 1 U 100001

#### Manufacturer, Make and

#### Type of Vehicle

SHH: HONDA OF THE U.K.  
MFG., LTD. U.K.  
HONDA Passenger car

#### Line, Body and Engine Type

CH5: ACCORD 5-door/  
D16B6, D16B7  
CH6: ACCORD 5-door/F18B2  
CH7: ACCORD 5-door/F20B6  
CL4: ACCORD 5-door/F23Z5

#### Body and Transmission Type

5: 5-door Hatchback/5-speed Manual  
6: 4-door Hatchback/  
4-speed Automatic

#### Vehicle Grade

2: 1.6 S, 1.8i S, 2.3i V  
3: 2.3i V  
4: 1.6 SE, 1.6 LS, 1.8i SE, 1.8i LS,  
2.0i SE, 2.0i LS  
5: 1.6 LS7  
7: 1.8i SEE, 2.0i SEE, 2.0i ES, 2.3i SEE,  
2.3i ES  
8: 1.8 SEE, 2.0i SEE, 2.3i SEE

#### Check Digit

#### Model Year

1: 2001

#### Factory Code

U: Honda of the U.K. Manufacturing in U.K.

#### Serial Number

### Engine Number

D16B6 - E200001

#### Engine Type

D16B6, D16B7:

1.6 l SOHC 16-valves Sequential  
Multiport Fuel-injected Unleaded  
gasoline with CATA

F18B2: 1.8 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA

F20B6: 2.0 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA

F23Z5: 2.3 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA

#### Serial Number

F23Z5: 1000001~  
Except H22A7, F23Z5: E200001~

### Transmission Number

DH - 1000001

#### Transmission Type

DH: 5-speed Manual

U2L4: 5-speed Manual

U2Q7: 5-speed Manual

U2N4: 5-speed Manual

MDJA: 4-speed Automatic

#### Serial Number

# Chassis and Engine Numbers

Applicable Area Code/VIN/Engine Number/Transmission Number List

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord 5-door	KE	1.6 SE	5MT	SHHCH574*1U100001~	D16B6-E200001~	DH-1000001~
		1.8i S	5MT	SHHCH672*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH682*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i SE	5MT	SHHCH674*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH684*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i SEE	5MT	SHHCH677*1U100001~	F18B2-E200001~	U2L4-1000001~
			5MT	SHHCH678*1U100001~*1	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH687*1U100001~	F18B2-E200001~	MDJA-3000001~
			4AT	SHHCH688*1U100001~*1	F18B2-E200001~	MDJA-3000001~
		2.0i SE	5MT	SHHCH774*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCH784*1U100001~	F20B6-E200001~	MDJA-3000001~
		2.0i SEE	5MT	SHHCH777*1U100001~	F20B6-E200001~	U2L4-1000001~
			5MT	SHHCH778*1U100001~*1	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCH787*1U100001~	F20B6-E200001~	MDJA-3000001~
			4AT	SHHCH788*1U100001~*1	F20B6-E200001~	MDJA-3000001~
		2.3i SEE	5MT	SHHCL477*1U100001~	F23Z5-1000001~	U2N4-1000001~
			5MT	SHHCL478*1U100001~*1	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL487*1U100001~	F23Z5-1000001~	MDJA-3000001~
			4AT	SHHCL488*1U100001~*1	F23Z5-1000001~	MDJA-3000001~
		2.3i V	5MT	SHHCL472*1U100001~	F23Z5-1000001~	U2N4-1000001~
			5MT	SHHCL473*1U100001~*1	F23Z5-1000001~	U2N4-1000001~
			4AT	SHHCL482*1U100001~	F23Z5-1000001~	MDJA-3000001~
			4AT	SHHCL483*1U100001~*1	F23Z5-1000001~	MDJA-3000001~
	KG	1.6 S	5MT	SHHCH572*1U100001~	D16B6-E200001~	DH-1000001~
		1.8i S	5MT	SHHCH672*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH682*1U100001~	F18B2-E200001~	MDJA-3000001~
		1.8i LS	5MT	SHHCH674*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH684*1U100001~	F18B2-E200001~	MDJA-3000001~
		2.0i LS	5MT	SHHCH774*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCH784*1U100001~	F20B6-E200001~	MDJA-3000001~
		2.0i ES	5MT	SHHCH777*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCH787*1U100001~	F20B6-E200001~	MDJA-3000001~
		KR	1.6 LS	SHHCH574*1U100001~	D16B6-E200001~	DH-1000001~
			1.6 LS7	SHHCH575*1U100001~	D16B7-E200001~	DH-1000001~
			1.8i LS	SHHCH674*1U100001~	F18B2-E200001~	U2L4-1000001~
			5MT	SHHCH777*1U100001~	F20B6-E200001~	U2L4-1000001~
			4AT	SHHCH787*1U100001~	F20B6-E200001~	MDJA-3000001~
			2.3i ES	SHHCL477*1U100001~	F23Z5-1000001~	U2N4-1000001~
	KS	1.8i S	5MT	SHHCH672*1U100001~	F18B2-E200001~	U2L4-1000001~
		1.8i LS	5MT	SHHCH674*1U100001~	F18B2-E200001~	U2L4-1000001~
			4AT	SHHCH684*1U100001~	F18B2-E200001~	MDJA-3000001~
		2.0i LS	5MT	SHHCH774*1U100001~	F20B6-E200001~	U2L4-1000001~
		2.0i ES	5MT	SHHCH777*1U100001~	F20B6-E200001~	U2L4-1000001~

\*1: with Navigation system



# Abbreviations



List of automotive abbreviations which may be used in shop manual.

ABS	Anti-lock Brake System	F	Front
A/C	Air Conditioning, Air Conditioner	FIA	Fuel Injection Air
ACL	Air Cleaner	FL	Front Left
A/F	Air Fuel Ratio	FP	Fuel Pump
ALR	Automatic Locking Retractor	FR	Front Right
ALT	Alternator	FSR	Fail Safe Relay
AMP	Ampere (s)	FWD	Front Wheel Drive
ANT	Antenna		
API	American Petroleum Institute	GAL	Gallon
APPROX.	Approximately	GND	Ground
ASSY	Assembly	GPS	Global Positioning System
A/T	Automatic Transmission		
ATDC	After Top Dead Center	H/B	Hatchback
ATF	Automatic Transmission Fluid	HC	Hydrocarbons
ATT	Attachment	HID	High Intensity Discharge
ATTS	Active Torque Transfer System	HO2S	Heated Oxygen Sensor
AUTO	Automatic		
AUX	Auxiliary	IAB	Intake Air Bypass
		IAC	Idle Air Control
BARO	Barometric	IACV	Idle Air Control Valve
BAT	Battery	IAR	Intake Air Resonator
BDC	Bottom Dead Center	IAT	Intake Air Temperature
BTDC	Before Top Dead Center	ICM	Ignition Control Module
		ID	Identification
CARB	Carburetor	ID or I.D.	Inside Diameter
CAT	Catalytic Converter	IG or IGN	Ignition
or CATA		IMA	Idle Mixture Adjustment
CHG	Charge		Integrated Motor
CKF	Crankshaft Speed Fluctuation		Assisted
CKP	Crankshaft Position	IMMOBI.	Immobilizer (Immobiliser)
CO	Carbon Monoxide	IN	Intake
COMP	Complete	INJ	Injection
CPB	Clutch Pressure Back up	INT	Intermittent
CPC	Clutch Pressure Control		
CPU	Central Processing Unit	KS	Knock Sensor
CVT	Continuously Variable Transmission		
CYL	Cylinder	L	Left
CYP	Cylinder Position	L/C	Lock-up Clutch
		LCD	Liquid Crystal Display
DI	Distributor Ignition	LED	Light Emitting Diode
DIFF	Differential	LEV	Low Emission vehicle
DLC	Data Link Connector	LF	Left Front
DOHC	Double Overhead Camshaft	LH	Left Handle
DPI	Dual Point Injection	LHD	Left Handle Drive
DTC	Diagnostic Trouble Code	LR	Left Rear
		LSD	Limited Slip Differential
EBD	Electronic Brake Distribution	L-4	In-line Four Cylinder (engine)
ECM	Engine Control Module		
ECT	Engine Coolant Temperature		
EGR	Exhaust Gas Recirculation		
ELD	Electrical Load Detector		
EPR	Evaporator Pressure Regulator		
EPS	Electrical Power Steering		
EVAP	Evaporative		
EX	Exhaust		

(cont'd)

# Abbreviations

(cont'd)

MAP	Manifold Absolute Pressure	T	Torque
MAX.	Maximum	TB	Throttle Body
MBS	Mainshaft Brake System	T/B	Timing Belt
MCK	Motor Check	TC	Torque Converter
MCU	Moment Control Unit	TCM	Transmission Control Module
MIL	Malfunction Indicator Lamp	TCS	Traction Control System
MIN.	Minimum	TDC	Top Dead Center
MPI	Multi Point Injection	TFT	Thin Film Transistor
M/S	Manual Steering	T/N	Tool Number
M/T	Manual Transmission	TP	Throttle Position
		TWC	Three Way Catalytic Converter
N	Neutral		
NOx	Oxides of Nitrogen	VC	Viscous Coupling
		VDP	Variable Displacement Pump
OBD	On-board Diagnostic	VFV	Variable Force Control Valve
O2S	Oxygen Sensor	VGR	Variable Gear Ratio
OD or O.D.	Outside Diameter	VIN	Vehicle Identification Number
		VSC	Valuable Space Column
P	Park	VSS	Vehicle Speed Sensor
PAIR	Pulsed Secondary Air Injection	VTEC	Variable Valve Timing & Valve Lift
PCM	Powertrain Control Module		Electronic Control
PCV	Positive Crankcase Ventilation	VVIS	Variable Volume Intake System
	Proportioning Control Valve	V-6	V-type Six Cylinder (engine)
PGM-FI	Programmed-fuel Injection		
PGM-IG	Programmed Ignition	W	With
PH	Pressure High	W/O	Without
PL	Pilot Light or Pressure Low	WOT	Wide Open Throttle
PMR	Pump Motor Relay		
P/N	Part Number	2WD	Two Wheel Drive
PRI	Primary	4WD	Four Wheel Drive
P/S	Power Steering	2WS	Two Wheel Steering
PSF	Power Steering Fluid	4WS	Four Wheel Steering
PSP	Power Steering Pressure	4AT	4-speed Automatic Transmission
PSW	Pressure Switch	5MT	5-speed Manual Transmission
		6MT	6-speed Manual Transmission
Qty	Quantity	P	Park
		R	Reverse
R	Right	N	Neutral
REF	Reference	D <sub>4</sub>	Drive (1st through 4th gear)
RGB	Red, Green, Blue	D <sub>3</sub>	Drive (1st through 3rd gear)
RH	Right Handle	2	Second
RHD	Right Handle Drive	1	First
RL	Rear Left	D	Drive
RON	Research Octane Number	S	Second
RR	Rear Right	L	Low
		O/D	Over Drive
SAE	Society of Automotive Engineers	1ST	Low (gear)
SCS	Service Check Signal	2ND	Second (gear)
SEC	Second	3RD	Third (gear)
	Secondary	4TH	Fourth (gear)
SOHC	Single Overhead Camshaft	5TH	Fifth (gear)
SOL	Solenoid	6TH	Sixth (gear)
SPEC	Specification		
S/R	Sun Roof		
SRS	Supplemental Restraint System		
STD	Standard		
SW	Switch		

News Number  
024 - 008EIssue Date  
APR. 2002

This news provides the following information for the 2001 Accord/Accord 5 Door Shop Manual Supplement.  
Please revise your shop manual by using the following information. See  part of attached pages.

**Applicable Shop Manual**

Shop Manual Name	Code Number	Applicable Page	News Page
2001 Accord/Accord 5 Door Supplement	62S1A25	1-2	2 of 9
		1-3	3 of 9
		1-4	4 of 9
		1-5	5 of 9
		1-6	6 of 9
		3-1	7 of 9
		3-2	8 of 9
		3-3	9 of 9

# Chassis and Engine Numbers

4-door:

Vehicle Identification Number	
SHH CG7 5 4 0 2 U 200001	
Manufacturer, Make and Type of Vehicle	SHH: HONDA OF THE U.K. MFG., LTD. U.K. HONDA Passenger car
Line, Body and Engine Type	CG7: ACCORD SEDAN/D16B6, D16B7 CG8: ACCORD SEDAN/F18B2 CG9: ACCORD SEDAN/F20B6 CH1: ACCORD SEDAN/H22A7 CL3: ACCORD SEDAN/F23Z5
Body and Transmission Type	5: 4-door Sedan/5-speed Manual 6: 4-door Sedan/4-speed Automatic
Vehicle Grade	0: 1.8i E 1: 1.8i S 2: 1.6i S, 1.8i S 3: 1.8 SPORT 4: 1.6i LS, 1.8i SE, 1.8i LS 2.0i SE, 2.0i LS, 2.3i ES 5: 1.6i LS, 1.8i LSR, 2.3i SEE, 2.3i ES 7: 1.8i ES, 2.0i SEE, 2.0i ES 2.3i V 8: 1.8i ES, 2.0i SEE, 2.0i ES 2.2i Ri, 2.3i V 9: 2.2i R
Check Digit	
Model Year	2: 2002
Factory Code	U: Honda of the U.K. Manufacturing in U.K.
Serial Number	

Engine Number	
D16B6 - E400001	
Engine Type	D16B6, D16B7: 1.6 l SOHC 16-valves Sequential Multiport Fuel-injected Unleaded gasoline with CATA F18B2: 1.8 l SOHC 16-valves VTEC Sequential Multiport Fuel-injected Unleaded gasoline with CATA F20B6: 2.0 l SOHC 16-valves VTEC Sequential Multiport Fuel-injected Unleaded gasoline with CATA H22A7: 2.2 l DOHC 16-valves VTEC Sequential Multiport Fuel-injected Unleaded gasoline with CATA F23Z5: 2.3 l SOHC 16-valves VTEC Sequential Multiport Fuel-injected Unleaded gasoline with CATA
Serial Number	H22A7: 4000001~ F23Z5: E200001~ Except H22A7, F23Z5: E400001~

Transmission Number	
DH - 1000001	
Transmission Type	DH: 5-speed Manual U2L4: 5-speed Manual U2Q7: 5-speed Manual U2N4: 5-speed Manual MDJA: 4-speed Automatic
Serial Number	

**Applicable Area Code/VIN/Engine Number/Transmission Number List**

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord SEDAN	KE	1.8i S	4AT	SHHCG86202U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i E	5MT	SHHCG85002U300001~	F18B2-E400001~	U2L4-2000001~
		1.8SPORT	5MT	SHHCG85302U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i SE	5MT	SHHCG85402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCG86402U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i SE	5MT	SHHCG95402U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG96402U300001~	F20B6-E400001~	MDJA-4000001~
		2.0i SEE	5MT	SHHCG95702U300001~	F20B6-E400001~	U2L4-2000001~
			5MT	SHHCG95802U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG96702U300001~	F20B6-E400001~	MDJA-4000001~
		2.3i See	4AT	SHHCG96802U300001~	F20B6-E400001~	MDJA-4000001~
			5MT	SHHCH15902U300001~	H22A7-4000001~	U2Q7-4000001~
		2.3i V	5MT	SHHCL35502U100001~	F23Z5-E200001~	U2N4-2000001~
			5MT	SHHCL35702U100001~	F23Z5-E200001~	U2N4-2000001~
			5MT	SHHCL35802U100001~	F23Z5-E200001~	U2N4-2000001~
			4AT	SHHCL36702U100001~	F23Z5-E200001~	MDJA-4000001~
			4AT	SHHCL36802U100001~	F23Z5-E200001~	MDJA-4000001~
	KG	1.6i S	5MT	SHHCG75202U200001~	D16B6-E400001~	DH-1000001~
		1.6i LS	5MT	SHHCG75402U200001~	D16B6-E400001~	DH-1000001~
		1.8i S	5MT	SHHCG85202U300001~	F18B2-E400001~	U2L4-2000001~
		1.8SPORT	5MT	SHHCG85302U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i LS	5MT	SHHCG85402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCG86402U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i LSR	5MT	SHHCG85502U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCG86502U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i ES	5MT	SHHCG85702U300001~	F18B2-E400001~	U2L4-2000001~
			5MT	SHHCG85802U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCG86702U300001~	F18B2-E400001~	MDJA-4000001~
			4AT	SHHCG86802U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i LS	5MT	SHHCG95402U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG96402U300001~	F20B6-E400001~	MDJA-4000001~
		2.0i ES	5MT	SHHCG95702U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG96702U300001~	F20B6-E400001~	MDJA-4000001~
			4AT	SHHCG96802U300001~	F20B6-E400001~	MDJA-4000001~
		2.2i RI	5MT	SHHCH15802U300001~	H22A7-4000001~	U2Q7-4000001~
		2.3i ES	5MT	SHHCL35402U100001~	F23Z5-E200001~	U2N4-2000001~
			5MT	SHHCL35502U100001~	F23Z5-E200001~	U2N4-2000001~
			4AT	SHHCL36402U100001~	F23Z5-E200001~	MDJA-4000001~
			4AT	SHHCL36502U100001~	F23Z5-E200001~	MDJA-4000001~

# Chassis and Engine Numbers

Applicable Area Code/VIN/Engine Number/Transmission Number List

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord SEDAN	KR	1.6i S	5MT	SHHCG75202U200001~	D16B6-E400001~	DH-1000001~
		1.6i LS	5MT	SHHCG75402U200001~	D16B6-E400001~	DH-1000001~
			5MT	SHHCG75502U200001~	D16B7-E400001~	DH-1000001~
		1.8SPORT	5MT	SHHCG85302U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i LS	5MT	SHHCG85402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCG86402U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i ES	5MT	SHHCG95702U300001~	F20B6-E400001~	U2L4-2000001~
			5MT	SHHCG95802U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG96702U300001~	F20B6-E400001~	MDJA-4000001~
			4AT	SHHCG96802U300001~	F20B6-E400001~	MDJA-4000001~
		2.3i ES	5MT	SHHCL35402U100001~	F23Z5-E200001~	U2N4-2000001~
	KS	1.8i S	5MT	SHHCG85202U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i LS	5MT	SHHCG85402U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCG86402U300001~	F20B6-E400001~	MDJA-4000001~
		2.3i ES	5MT	SHHCL35402U100001~	F23Z5-E200001~	U2N4-2000001~
	KY	1.8i ES	5MT	SHHCG852*2U400001~	F18B3-E400001~	U2J4-4000001~
			5MT	SHHCG851*2U400001~	F18B3-E400001~	U2J4-4000001~
			4AT	SHHCG861*2U400001~	F18B3-E400001~	MDJA-4000001~



## 5-door:

### Vehicle Identification Number

SHH CH5 7 2 0 2 U 200001

#### Manufacturer, Make and Type of Vehicle

SHH: HONDA OF THE U.K.  
MFG., LTD. U.K.  
HONDA Passenger car

#### Line, Body and Engine Type

CH5: ACCORD 5-door/  
D16B6, D16B7  
CH6: ACCORD 5-door/F18B2  
CH7: ACCORD 5-door/F20B6  
CL4: ACCORD 5-door/F23Z5

#### Body and Transmission Type

7: 5-door Hatchback/5-speed Manual  
8: 4-door Hatchback/  
4-speed Automatic

#### Vehicle Grade

0: 1.8i E  
2: 1.6i S, 1.8i S, 2.3i V  
3: 1.8 SPORT, 2.3i V  
4: 1.6i LS, 1.8i SE, 1.8i LS,  
2.0i SE, 2.0i LS  
5: 1.6i LS, 1.8i LSR  
7: 1.8i ES, 1.8i SEE, 2.0i ES, 2.0i SEE  
8: 1.8i ES, 1.8i SEE, 2.0i SEE  
9: 2.3i ES

#### Check Digit

#### Model Year

2: 2002

#### Factory Code

U: Honda of the U.K. Manufacturing in U.K.

#### Serial Number

### Engine Number

D16B6 - E400001

#### Engine Type

D16B6, D16B7:  
1.6 l SOHC 16-valves Sequential  
Multiport Fuel-injected Unleaded  
gasoline with CATA  
F18B2: 1.8 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA  
F20B6: 2.0 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA  
F23Z5: 2.3 l SOHC 16-valves VTEC  
Sequential Multiport Fuel-injected  
Unleaded gasoline with CATA

#### Serial Number

F23Z5: E200001~  
Except F23Z5: E400001~

### Transmission Number

DH - 1000001

#### Transmission Type

DH: 5-speed Manual  
U2L4: 5-speed Manual  
U2N4: 5-speed Manual  
MDJA: 4-speed Automatic

#### Serial Number



# Chassis and Engine Numbers

Applicable Area Code/VIN/Engine Number/Transmission Number List

MODEL	APPLICABLE AREA CODE	GRADE NAME	TRANSMISSION TYPE	VEHICLE IDENTIFICATION NUMBER	ENGINE NUMBER	TRANSMISSION NUMBER
Accord 5-door	KE	1.8i S	4AT	SHHCH68202U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i E	5MT	SHHCH67002U300001~	F18B2-E400001~	U2L4-2000001~
		1.8SPORT	5MT	SHHCH67302U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i SE	5MT	SHHCH67402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68402U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i SE	5MT	SHHCH77402U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCH78402U300001~	F20B6-E400001~	MDJA-4000001~
		2.0i SEE	5MT	SHHCH77702U300001~	F20B6-E400001~	U2L4-2000001~
			5MT	SHHCH77802U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCH78702U300001~	F20B6-E400001~	MDJA-4000001~
			4AT	SHHCH78802U300001~	F20B6-E400001~	MDJA-4000001~
		2.3i V	5MT	SHHCL47202U100001~	F23Z5-E200001~	U2N4-2000001~
			5MT	SHHCL47302U100001~	F23Z5-E200001~	U2N4-2000001~
			4AT	SHHCL48202U100001~	F23Z5-E200001~	MDJA-4000001~
			4AT	SHHCL48302U100001~	F23Z5-E200001~	MDJA-4000001~
	KG	1.6i S	5MT	SHHCH57202U200001~	F16B6-E400001~	DH-1000001~
		1.8i S	5MT	SHHCH67202U300001~	F18B2-E400001~	U2L4-2000001~
		1.8SPORT	5MT	SHHCH67302U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i LS	5MT	SHHCH67402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68402U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i ES	5MT	SHHCH67702U300001~	F18B2-E400001~	U2L4-2000001~
			5MT	SHHCH67802U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68702U300001~	F18B2-E400001~	MDJA-4000001~
			4AT	SHHCH68802U300001~	F18B2-E400001~	MDJA-4000001~
		1.8i LSR	5MT	SHHCH67502U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68502U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i LS	5MT	SHHCH77402U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCH78402U300001~	F20B6-E400001~	MDJA-4000001~
		2.0i ES	5MT	SHHCH77702U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCH78702U300001~	F20B6-E400001~	MDJA-4000001~
		2.3i ES	5MT	SHHCL47902U100001~	F23Z5-E200001~	U2N4-2000001~
			4AT	SHHCL48902U100001~	F23Z5-E200001~	MDJA-4000001~
	KR	1.6i LS	5MT	SHHCH57402U200001~	D16B6-E400001~	DH-1000001~
			5MT	SHHCH57502U200001~	D16B7-E400001~	DH-1000001~
		1.8i LS	5MT	SHHCH67402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68402U300001~	F18B2-E400001~	MDJA-4000001~
		2.0i ES	5MT	SHHCH77702U300001~	F20B6-E400001~	U2L4-2000001~
			4AT	SHHCL78702U300001~	F20B6-E400001~	MDJA-4000001~
	KS	1.8i S	5MT	SHHCH67202U300001~	F18B2-E400001~	U2L4-2000001~
		1.8i LS	5MT	SHHCH67402U300001~	F18B2-E400001~	U2L4-2000001~
			4AT	SHHCH68402U300001~	F18B2-E400001~	MDJA-4000001~
		2.3i ES	5MT	SHHCL47902U100001~	F23Z5-E200001~	U2N4-2000001~

## **Specifications**

<b>Standards and Service Limits .....</b>	<b>2-2</b>
<b>Design Specifications .....</b>	<b>2-19</b>

# Standards and Service Limits

## Engine Electrical — Section 4

	MEASUREMENT	STANDARD (NEW)	
Ignition coil	Rated voltage V	12	
	Primary winding resistance at 20°C (68°F) Ω Except H22A7 engine H22A7 engine	0.45 – 0.55 0.63 – 0.77	
Ignition wire	Secondary winding resistance at 20°C (68°F) kΩ F18B2, F18B3, F20B4, F20B7, F23Z5 engines H22A7 engine	22.4 – 33.6 12.8 – 19.2	
	Resistance at 20°C (68°F) kΩ Firing order	25 max. 1 – 4 – 2 – 3 1 – 3 – 4 – 2	
Spark plug	Type	STANDARD (NEW)	SERVICE LIMIT
	Gap Except H22A7 engine H22A7 engine	See section 4 1.0 – 1.1 (0.039 – 0.043) 1.0 – 1.1 (0.039 – 0.043)	_____ 1.3 (0.051)
Ignition timing	At idle BTDC (Red)	Except H22A7 engine H22A7 engine	M/T A/T
			12 ± 2 (Neutral) 12 ± 2 (N or P position) 15 ± 2 (Neutral)
Alternator Belt*1 (D16B6 engine)	Deflection with 98 N (10 kgf, 22 lbf) between pulleys	7.0 – 10.5 (0.28 – 0.41) with used belt 5.0 – 7.0 (0.20 – 0.28) with new belt	
	Belt tension N (kgf, lbf) Measured with belt tension gauge	340 – 490 (35 – 50, 77 – 110) with used belt 640 – 780 (65 – 80, 140 – 180) with new belt	
Alternator Belt*1 (Except D16B6 engine with A/C)	Deflection with 98 N (10 kgf, 22 lbf) between pulleys	10.0 – 12.0 (0.39 – 0.47) with used belt 5.5 – 7.5 (0.22 – 0.30) with new belt	
	Belt tension N (kgf, lbf) Measured with belt tension gauge	390 – 540 (40 – 55, 88 – 120) with used belt 880 – 1,030 (90 – 105, 200 – 230) with new belt	
Alternator Belt*1 (Except D16B6 engine without A/C)	Deflection with 98 N (10 kgf, 22 lbf) between pulleys	10.0 – 13.0 (0.39 – 0.51) with used belt 7.5 – 10.0 (0.30 – 0.39) with new belt	
	Belt tension N (kgf, lbf) Measured with belt tension gauge	290 – 440 (30 – 45, 66 – 99) with used belt 540 – 740 (55 – 75, 120 – 170) with new belt	
Alternator (Except H22A7 engine)	Output 13.5 V at hot	STANDARD (NEW)	SERVICE LIMIT
	Coil resistance (rotor) at 20°C (68°F) Ω Slip ring O.D. Brush length Brush spring tension N (kgf, lbf)	D16B6, D16B7 engines Except D16B6, D16B7 engines D16B6, D16B7 engines Except D16B6, D16B7 engines	85 A 90 A 2.6 2.4 15.4 (0.61) 13.2 (0.52) 1.9 (0.19, 0.42)
			_____ _____ _____ _____ 14.15 (0.557) 3.2 (0.13) _____
Alternator (H22A7 engine)	Output 13.5 V at hot	95 A	
	Coil resistance (rotor) at 20°C (68°F) Ω Slip ring O.D. Brush length Brush spring tension N (kgf, lbf)	2.2 – 3.0 14.4 (0.57) 10.5 (0.41) 2.9 – 3.5 (0.30 – 0.36, 0.66 – 0.79)	
		_____ _____ _____ _____ 14.0 (0.55) 1.5 (0.06) _____	
Starter (Except H22A7 engine)	Manufacturer	VALEO	
	Output Commutator mica depth Commutator runout Brush length Brush spring tension N (kgf, lbf)	1.0 kW 0.5 – 0.9 (0.020 – 0.035) 0.01 (0.0004) max. 18 (0.7) 15.3 – 19.2 (1.56 – 1.96, 3.44 – 4.32)	
		_____ _____ _____ _____ _____ 0.2 (0.08) 0.015 (0.0006) 5 (0.2) _____	
Starter (H22A7 engine)	Manufacturer	DENSO	
	Output Commutator mica depth Commutator runout Commutator O.D. Brush length Brush spring tension N (kgf, lbf)	1.0 kW 0.5 – 0.8 (0.020 – 0.031) 0.02 (0.0008) max. 27.9 – 28.0 (1.098, 1.102) 14.0 – 14.5 (0.55 – 0.57) 13.7 – 17.7 (1.4 – 1.8, 3.09 – 3.97)	
		_____ _____ _____ _____ _____ 0.2 (0.008) 0.05 (0.002) 27.0 (1.06) 9.0 (0.35) _____	

\*1: When using a new belt, adjust deflection or tension to new belt values. Run the engine for 5 minutes then turn it off.  
Readjust deflection or tension to used belt values.

**Cylinder Head/Valve Train (D16B6, D16B7 engines) — Section 6**

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm (min <sup>-1</sup> ) and wide open throttle kPa (kgf/cm <sup>2</sup> , psi)	Minimum Maximum variation	930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height		92.95 – 93.05 (3.659 – 3.663)	0.05 (0.002)
Camshaft	End play Camshaft-to-holder oil clearance Total runout Cam lobe height	IN EX	0.05 – 0.15 (0.002 – 0.006) 0.050 – 0.089 (0.0020 – 0.0035) 0.03 (0.001) max. 35.019 (1.3787)* <sup>1</sup> , 34.734 (1.3675)* <sup>2</sup> 37.904 (1.4923)	0.5 (0.02) 0.15 (0.006) 0.04 (0.002)
Valve	Valve clearance (Cold) Valve stem O.D. Stem-to-guide clearance	IN EX IN EX	0.18 – 0.22 (0.007 – 0.009) 0.23 – 0.27 (0.009 – 0.011) 5.48 – 5.49 (0.2157 – 0.2161) 5.45 – 5.46 (0.2146 – 0.2150) 0.02 – 0.05 (0.001 – 0.002) 0.05 – 0.08 (0.002 – 0.003)	— — 5.45 (0.2146) 5.42 (0.2134) 0.08 (0.003) 0.11 (0.004)
Valve seat	Width Stem installed height	IN EX IN EX	0.85 – 1.15 (0.033 – 0.045) 1.25 – 1.55 (0.049 – 0.061) 53.17 – 53.64 (2.093 – 2.112) 53.17 – 53.64 (2.093 – 2.112)	1.6 (0.063) 2.0 (0.079) 53.89 (2.122) 53.89 (2.122)
Valve spring	Free length	IN and EX	58.7 (2.31)	—
Valve guide	I.D. Installed height	IN EX IN EX	5.51 – 5.53 (0.217 – 0.218) 5.51 – 5.53 (0.217 – 0.218) 17.85 – 18.35 (0.703 – 0.722) 18.65 – 19.15 (0.734 – 0.754)	5.55 (0.219) 5.55 (0.219) — —
Rocker arm	Arm-to-shaft clearance	IN EX	0.017 – 0.050 (0.0007 – 0.0020) 0.018 – 0.054 (0.0007 – 0.0021)	0.08 (0.003) 0.08 (0.003)

\*1: Timing belt side, \*2: Distributor side

# Standards and Service Limits

## Cylinder Head/Valve Train (F18B2, F20B6, F23Z5 engines) — Section 6

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm (min <sup>-1</sup> ) and wide open throttle kPa (kgf/cm <sup>2</sup> , psi)  Minimum Maximum variation		930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height		99.95 – 100.05 (3.935 – 3.939)	0.05 (0.002)
Camshaft	End play Camshaft-to-holder oil clearance Total runout Cam lobe height		0.05 – 0.15 (0.002 – 0.006) 0.050 – 0.089 (0.0020 – 0.0035) 0.03 (0.001) max.	0.5 (0.02) 0.15 (0.006) 0.04 (0.002)
	F18B2, F18B3 engines			
	IN	Primary	38.539 (1.5173)	_____
		Mid	39.223 (1.5442)	_____
		Secondary	33.913 (1.3352)	_____
	EX		38.645 (1.5215)	_____
	F20B6 engine			
	IN	Primary	38.539 (1.5173)	_____
		Mid	39.725 (1.5640)	_____
		Secondary	33.913 (1.3352)	_____
	EX		38.645 (1.5215)	_____
	F23Z5 engine			
	IN	Primary	37.775 (1.4872)	_____
		Mid	39.725 (1.5640)	_____
		Secondary	34.471 (1.3571)	_____
	EX		38.338 (1.5094)	_____
Valve	Valve clearance (Cold)	IN	0.24 – 0.28 (0.009 – 0.011)	_____
		EX	0.28 – 0.32 (0.011 – 0.013)	_____
	Valve stem O.D.	IN	5.485 – 5.495 (0.2159 – 0.2163)	5.455 (0.2148)
		EX	5.450 – 5.460 (0.2146 – 0.2150)	5.420 (0.2134)
	Stem-to-guide clearance	IN	0.020 – 0.045 (0.0008 – 0.0018)	0.08 (0.003)
		EX	0.055 – 0.080 (0.0022 – 0.0031)	0.12 (0.005)
Valve seat	Width	IN	1.25 – 1.55 (0.049 – 0.061)	2.00 (0.079)
		EX	1.25 – 1.55 (0.049 – 0.061)	2.00 (0.079)
	Stem installed height	IN	46.75 – 47.55 (1.841 – 1.872)	47.80 (1.882)
		EX	46.68 – 47.48 (1.838 – 1.869)	47.73 (1.879)
Valve spring	Free length	IN	51.08 (2.011)	_____
		EX	55.58 (2.188)	_____
Valve guide	I.D.	IN	5.515 – 5.530 (0.2171 – 0.2177)	5.55 (0.219)
		EX	5.515 – 5.530 (0.2171 – 0.2177)	5.55 (0.219)
	Installed height	IN	21.20 – 22.20 (0.835 – 0.874)	_____
		EX	20.63 – 21.63 (0.812 – 0.852)	_____
Rocker arm	Arm-to-shaft clearance	IN	0.026 – 0.067 (0.0010 – 0.0026)	0.08 (0.003)
		EX	0.018 – 0.054 (0.0007 – 0.0021)	0.08 (0.003)

**Cylinder Head/Valve Train (H22A7 engine) — Section 6**

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Compression	250 rpm (min <sup>-1</sup> ) and wide open throttle kPa (kgf/cm <sup>2</sup> , psi)	Nominal Minimum Maximum variation	1,270 (13.0, 185) 930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height		146.95 – 147.05 (5.785 – 5.789)	0.05 (0.002)
Camshaft	End play Camshaft-to-holder oil clearance Total runout Cam lobe height	IN Primary Mid Secondary EX Primary Mid Secondary	0.05 – 0.15 (0.002 – 0.006) 0.050 – 0.089 (0.0020 – 0.0035) 0.03 (0.001) max. 34.041 (1.3402) 37.229 (1.4657) 34.071 (1.3414) 33.745 (1.3285) 36.704 (1.4450) 34.683 (1.3655)	0.5 (0.02) 0.15 (0.006) 0.04 (0.002)
Valve	Valve clearance (Cold) Valve stem O.D. Stem-to-guide clearance	IN EX IN EX IN EX	0.15 – 0.19 (0.006 – 0.007)* <sup>1</sup> 0.17 – 0.21 (0.007 – 0.008)* <sup>1</sup> 5.475 – 5.485 (0.2156 – 0.2159) 5.475 – 5.485 (0.2156 – 0.2159) 0.025 – 0.055 (0.0010 – 0.0022) 0.050 – 0.080 (0.0020 – 0.0031)	— — 5.445 (0.2144) 5.445 (0.2144) 0.08 (0.003) 0.11 (0.004)
Valve seat	Width Stem installed height	IN EX IN EX	1.30 – 1.50 (0.051 – 0.059) 1.25 – 1.55 (0.049 – 0.061) 42.5 – 42.7 (1.673 – 1.681) 43.9 – 44.1 (1.728 – 1.736)	2.00 (0.079) 2.00 (0.079) 42.95 (1.691) 44.35 (1.746)
Valve spring	Free length	IN Outer Inner EX Outer Inner	44.10 (1.736) 41.32 (1.627) 44.92 (1.769) 40.01 (1.575)	— — — —
Valve guide	I.D. Installed height	IN EX IN EX	5.510 – 5.530 (0.2169 – 0.2177) 5.535 – 5.555 (0.2179 – 0.2187) 14.55 – 15.05 (0.573 – 0.593) 14.95 – 15.45 (0.589 – 0.608)	5.55 (0.219) 5.60 (0.220) — —
Rocker arm	Arm-to-shaft clearance	IN EX	0.025 – 0.052 (0.0010 – 0.0020) 0.025 – 0.052 (0.0010 – 0.0020)	0.08 (0.003) 0.08 (0.003)

\*1: Measuring point between camshaft and rocker arm.

# Standards and Service Limits

## Engine Block (D16B6, D16B7 engines) — Section 7

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface Bore diameter Bore taper Reboring limit		0.07 (0.003) max. 75.00 – 75.02 (2.953 – 2.954) _____ _____	0.10 (0.004) 75.07 (2.956) 0.05 (0.002) 0.5 (0.02)
Piston	Skirt O.D. At 5 mm (0.2 in) from bottom of skirt Clearance in cylinder Groove width (for ring)	Top Second Oil	74.980 – 74.990 (2.9520 – 2.9524)  0.010 – 0.040 (0.0004 – 0.0016) 1.020 – 1.030 (0.0402 – 0.0406) 1.220 – 1.230 (0.0480 – 0.0484) 2.805 – 2.820 (0.1104 – 0.1110)	74.970 (2.9516)  0.05 (0.002) 1.05 (0.041) 1.25 (0.049) 2.85 (0.112)
Piston ring	Ring-to-groove clearance  Ring end gap	Top Second Top Second Oil	0.030 – 0.060 (0.0012 – 0.0024) 0.030 – 0.055 (0.0012 – 0.0022) 0.15 – 0.30 (0.006 – 0.012) 0.20 – 0.70 (0.008 – 0.028) 0.20 – 0.80 (0.008 – 0.031)	0.13 (0.005) 0.13 (0.005) 0.70 (0.028) 0.80 (0.031) 0.90 (0.035)
Piston pin	O.D. Pin-to-piston clearance		18.994 – 19.000 (0.7478 – 0.7480) 0.010 – 0.022 (0.0004 – 0.0009)	_____ _____
Connecting rod	Pin-to-rod interference Small end bore diameter Large end bore diameter End play installed on crankshaft	Nominal	0.014 – 0.040 (0.0006 – 0.0016) 18.96 – 18.98 (0.746 – 0.747) 48.0 (1.89) 0.15 – 0.30 (0.006 – 0.012)	_____ _____ _____ 0.40 (0.016)
Crankshaft	Main journal diameter Rod journal diameter Taper Out of round End play Total runout		54.976 – 55.000 (2.1644 – 2.1654) 44.976 – 45.000 (1.7707 – 1.7717) 0.0025 (0.0001) max. 0.0025 (0.0001) max. 0.10 – 0.35 (0.004 – 0.014) 0.03 (0.001) max.	_____ _____ 0.005 (0.0002) 0.005 (0.0002) 0.45 (0.018) 0.04 (0.002)
Bearing	Main bearing-to-journal oil clearance No. 1 and 5 journals No. 2, 3 and 4 journals Rod bearing-to-journal oil clearance		0.018 – 0.036 (0.0007 – 0.0014) 0.024 – 0.042 (0.0009 – 0.0017) 0.020 – 0.038 (0.0008 – 0.0015)	0.05 (0.002) 0.05 (0.002) 0.05 (0.002)



**Engine Block (F18B2, F18B3, F20B6, F23Z5 engines) — Section 7**

Unit of length: mm (in)

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface		0.07 (0.003) max.	0.10 (0.004)
	Bore diameter			
	Except F23Z5 engine	A or I	85.010 – 85.020 (3.3468 – 3.3472)	85.070 (3.3492)
	F23Z5 engine	B or II A or I B or II	85.000 – 85.010 (3.3465 – 3.3468) 86.010 – 86.020 (3.3862 – 3.3866) 86.000 – 86.010 (3.3858 – 3.3862)	85.070 (3.3492) 86.070 (3.3886) 86.070 (3.3886)
	Bore taper		—	0.05 (0.002)
	Reboring limit		—	0.25 (0.01)
Piston	Skirt O.D.	Except F23Z5 engine	84.980 – 84.990 (3.3457 – 3.3461)	84.970 (3.3453)
	at 16 mm	No letter	84.970 – 84.980 (3.3453 – 3.3457)	84.970 (3.3453)
	(0.6 in) from	Letter B	85.980 – 85.990 (3.3850 – 3.3854)	85.970 (3.3846)
	bottom of skirt	No letter	85.970 – 85.980 (3.3846 – 3.3850)	85.960 (3.3842)
	Clearance in cylinder	Letter	0.020 – 0.040 (0.0008 – 0.0016)	0.05 (0.002)
	Groove width (For ring)	Top	1.220 – 1.230 (0.0480 – 0.0484)	1.25 (0.049)
		Second	1.220 – 1.230 (0.0480 – 0.0484)	1.25 (0.049)
		Oil	2.805 – 2.825 (0.1104 – 0.1112)	2.85 (0.112)
Piston ring	Ring-to-groove clearance	Top	0.035 – 0.060 (0.0014 – 0.0024)	0.13 (0.005)
		Second	0.030 – 0.055 (0.0012 – 0.0022)	0.13 (0.005)
	Ring end gap	Top	0.20 – 0.35 (0.008 – 0.014)	0.60 (0.024)
		Second	0.40 – 0.55 (0.016 – 0.022)	0.70 (0.028)
		Oil	0.20 – 0.70 (0.008 – 0.028)	0.80 (0.031)
Piston Pin	O.D.		21.961 – 21.965 (0.8646 – 0.8648)	21.953 (0.8643)
	Pin-to-piston clearance		–0.0050 – + 0.0020 (–0.00020 – + 0.00008)	0.004 (0.0002)
Connecting rod	Pin-to-rod clearance		0.005 – 0.015 (0.0002 – 0.0006)	0.020 (0.0008)
	Small end bore diameter		21.970 – 21.976 (0.8650 – 0.8652)	—
	Large end bore diameter	Nominal	48.0 (1.89)	—
	End play installed on crankshaft		0.15 – 0.30 (0.006 – 0.012)	0.40 (0.016)
Crankshaft	Main journal diameter	No. 1, 2 and 4 journals	54.980 – 55.004 (2.1646 – 2.1655)	—
		No. 3 journal	54.976 – 55.000 (2.1644 – 2.1654)	—
		No. 5 journal	54.992 – 55.016 (2.1650 – 2.1660)	—
	Rod journal diameter		44.976 – 45.000 (1.7707 – 1.7717)	—
	Taper		0.005 (0.0002) max.	0.010 (0.0004)
	Out-of-round		0.005 (0.0002) max.	0.010 (0.0004)
	End play		0.10 – 0.35 (0.004 – 0.014)	0.45 (0.018)
	Runout		0.02 (0.001) max.	0.04 (0.002)
Bearings	Main bearing-to-journal oil clearance			
	No. 1 and No. 2 journals		0.025 – 0.049 (0.0010 – 0.0019)	0.050 (0.0020)
	No. 3 journal		0.021 – 0.045 (0.0008 – 0.0018)	0.050 (0.0020)
	No. 4 journal		0.013 – 0.037 (0.0005 – 0.0015)	0.055 (0.0022)
	No. 5 journal		0.009 – 0.033 (0.0004 – 0.0013)	0.040 (0.0016)
	Rod bearing-to-journal oil clearance		0.015 – 0.043 (0.0006 – 0.0017)	0.050 (0.0020)
Balancer shaft	Journal diameter	No. 1 front journal	42.722 – 42.734 (1.6820 – 1.6824)	42.71 (1.681)
		No. 1 rear journal	20.938 – 20.950 (0.8243 – 0.8248)	20.92 (0.824)
		No. 2 front and rear journals	38.712 – 38.724 (1.5241 – 1.5246)	38.70 (1.524)
		No. 3 front and rear journals	34.722 – 34.734 (1.3670 – 1.3675)	34.71 (1.367)
	Journal taper		0.005 (0.0002) max.	—
	End play	Front	0.10 – 0.40 (0.004 – 0.016)	—
		Rear	0.04 – 0.15 (0.002 – 0.006)	—
	Total runout		0.02 (0.001) max.	0.03 (0.001)
	Shaft-to-bearing oil clearance			
	No. 1 front, No. 3 front and rear journals		0.066 – 0.098 (0.0026 – 0.0039)	0.12 (0.005)
	No. 1 rear journal		0.050 – 0.075 (0.0020 – 0.0030)	0.09 (0.004)
	No. 2 front and rear journals		0.076 – 0.108 (0.0030 – 0.0043)	0.13 (0.005)
Balancer shaft bearing	I.D.	No. 1 front journal	42.800 – 42.820 (1.6850 – 1.6858)	42.83 (1.686)
		No. 1 rear journal	21.000 – 21.013 (0.8268 – 0.8273)	21.02 (0.828)
		No. 2 front and rear journals	38.800 – 38.820 (1.5276 – 1.5283)	38.83 (1.529)
		No. 3 front and rear journals	34.800 – 34.820 (1.3701 – 1.3709)	34.83 (1.371)

# Standards and Service Limits

## Engine Block (H22A7 engine) — Section 7

	MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface		0.07 (0.003) max.	0.10 (0.004)
	Bore diameter	A or I B or II	87.010 – 87.020 (3.4256 – 3.4260) 87.000 – 87.010 (3.4252 – 3.4256)	87.070 (3.4279) 87.070 (3.4279)
	Bore taper		—	0.05 (0.002)
	Reboring limit		—	0.25 (0.010)
Piston	Skirt O.D. [at 15 mm (0.6 in) from bottom of skirt]	No letter Letter B	86.993 – 87.006 (3.4249 – 3.4254) 86.983 – 86.996 (3.4245 – 3.4250)	86.980 (3.4244) 86.970 (3.4240)
	Clearance in cylinder		0.004 – 0.027 (0.0002 – 0.0011)	0.04 (0.002)
	Groove width (For ring)	Top	1.240 – 1.255 (0.0488 – 0.0494)	1.275 (0.0502)
		Second	1.230 – 1.245 (0.0484 – 0.0490)	1.265 (0.0498)
		Oil	2.805 – 2.825 (0.1104 – 0.1112)	2.85 (0.112)
Piston ring	Ring-to-groove clearance	Top	0.055 – 0.085 (0.0022 – 0.0033)	0.13 (0.005)
		Second	0.040 – 0.070 (0.0016 – 0.0028)	0.13 (0.005)
	Ring end gap	Top	0.25 – 0.35 (0.010 – 0.014)	0.60 (0.024)
		Second	0.60 – 0.70 (0.024 – 0.028)	0.90 (0.035)
		Oil	0.20 – 0.70 (0.008 – 0.028)*1 0.20 – 0.50 (0.008 – 0.020)*2	0.80 (0.031)*1 0.60 (0.024)*2
Piston pin	O.D.		21.961 – 21.965 (0.8646 – 0.8648)	21.953 (0.8643)
	Pin-to-piston clearance		–0.0030 – + 0.0060 (–0.00012 – + 0.00024)	0.009 (0.0004)
Connecting rod	Pin-to-rod clearance		0.005 – 0.015 (0.0002 – 0.0006)	0.002 (0.0001)
	Small end bore diameter		21.970 – 21.976 (0.8650 – 0.8652)	—
	Large end bore diameter	Nominal	51.0 (2.01)	—
	End play installed on crankshaft		0.15 – 0.30 (0.006 – 0.012)	0.40 (0.016)
Crankshaft	Main journal diameter	No. 1, 2 and 4 journals No. 3 journal No. 5 journal	54.980 – 55.004 (2.1646 – 2.1655) 54.976 – 55.000 (2.1644 – 2.1654) 54.992 – 55.016 (2.1650 – 2.1660)	— — —
	Rod journal diameter		47.976 – 48.000 (1.8888 – 1.8898)	—
	Taper		0.005 (0.0002) max.	0.006 (0.0002)
	Out-of-round		0.004 (0.0002) max.	0.006 (0.0002)
	End play		0.10 – 0.35 (0.004 – 0.014)	0.45 (0.018)
	Runout		0.03 (0.001) max.	0.04 (0.002)
	Main bearing-to-journal oil clearance	No. 1 and No. 4 journals No. 2 journal No. 3 journal No. 5 journal	0.013 – 0.037 (0.0005 – 0.0015) 0.021 – 0.045 (0.0008 – 0.0018) 0.025 – 0.049 (0.0010 – 0.0019) 0.009 – 0.033 (0.0004 – 0.0013)	0.050 (0.0020) 0.050 (0.0020) 0.055 (0.0022) 0.040 (0.0016)
	Rod bearing-to-journal oil clearance		0.027 – 0.055 (0.0011 – 0.0022)	0.060 (0.0024)
Balancer shaft	Journal diameter	No. 1 front journal No. 1 rear journal No. 2 front and rear journals No. 3 front and rear journals	42.722 – 42.734 (1.6820 – 1.6824) 20.938 – 20.950 (0.8243 – 0.8248) 38.712 – 38.724 (1.5241 – 1.5246) 34.722 – 34.734 (1.3670 – 1.3675)	42.71 (1.681) 20.92 (0.824) 38.70 (1.524) 34.71 (1.367)
	Journal taper		0.005 (0.0002) max.	—
	End play	Front Rear	0.10 – 0.40 (0.004 – 0.016) 0.04 – 0.15 (0.002 – 0.006)	— —
	Total runout		0.02 (0.001) max.	0.03 (0.001)
	Shaft-to-bearing oil clearance	No. 1 front, No. 3 front and rear journals No. 1 rear journal No. 2 front and rear journals	0.066 – 0.098 (0.0026 – 0.0039) 0.050 – 0.075 (0.0020 – 0.0030) 0.076 – 0.108 (0.0030 – 0.0043)	0.12 (0.005) 0.09 (0.004) 0.13 (0.005)
Balancer shaft bearing	I.D.	No. 1 front journal No. 1 rear journal No. 2 front and rear journals No. 3 front and rear journals	42.800 – 42.820 (1.6850 – 1.6858) 21.000 – 21.013 (0.8268 – 0.8273) 38.800 – 38.820 (1.5276 – 1.5283) 34.800 – 34.820 (1.3701 – 1.3709)	42.83 (1.686) 21.02 (0.828) 38.83 (1.529) 34.83 (1.371)

\*1: RIKEN manufactured piston ring.

\*2: TEIKOKU PISTON RING manufactured piston ring.

**Engine Lubrication — Section 8**

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US qt, Imp qt)	D16B6, D16B7 engines: 4.0 (4.2, 3.5) for engine overhaul 3.6 (3.8, 3.2) for oil change, including filter 3.3 (3.5, 2.9) for oil change, without filter F18B2, F18B3, F20B6 engines: 5.7 (6.0, 5.0) for engine overhaul 4.4 (4.6, 3.9) for oil change, including filter 4.1 (4.3, 3.6) for oil change, without filter F23Z5 engine: 5.6 (5.9, 5.0) for engine overhaul 4.3 (4.5, 3.8) for oil change, including filter 4.0 (4.2, 3.6) for oil change, without filter H22A7 engine: 5.9 (6.2, 5.2) for engine overhaul 4.8 (5.1, 4.2) for oil change, including filter 4.5 (4.8, 4.0) for oil change, without filter	
Oil pump	Inner-to-outer rotor clearance D16B6, D16B7 engines Except D16B6, D16B7 engines Pump housing-to-outer rotor clearance D16B6, D16B7 engines Except D16B6, D16B7 engines Pump housing-to-rotor axial clearance D16B6, D16B7 engines Except D16B6, D16B7 engines	0.02 – 0.14 (0.001 – 0.006) 0.02 – 0.16 (0.001 – 0.006) 0.10 – 0.18 (0.004 – 0.007) 0.10 – 0.19 (0.004 – 0.007) 0.03 – 0.08 (0.001 – 0.003) 0.02 – 0.07 (0.001 – 0.003)	0.20 (0.008) 0.20 (0.008) 0.20 (0.008) 0.21 (0.008) 0.15 (0.006) 0.12 (0.005)
Relief valve	Pressure setting at engine oil temp. 80°C (176°F) kPa (kgf/cm², psi) at idle at 3,000 rpm (min⁻¹)	70 (0.7, 10) min. 340 (3.5, 50) min.	

**Cooling — Section 10**

	MEASUREMENT	STANDARD (NEW)
Radiator	Coolant capacity ℓ (US qt, Imp qt) [Including engine, heater, cooling line and reservoir] Reservoir capacity: 0.55 ℓ (0.58 US qt, 0.48 Imp qt)	D16B6, D16B7 engines: 4.6 (4.9, 4.1) for overhaul 3.9 (4.1, 3.4) for coolant change F18B2, F18B3, F20B6, F23Z5 engines: M/T: 5.8 (6.1, 5.1) for overhaul 4.2 (4.4, 3.7) for coolant change A/T: 5.7 (6.0, 5.0) for overhaul 4.1 (4.3, 3.6) for coolant change H22A7 engine: 6.9 (7.3, 6.1) for overhaul 3.3 (3.5, 2.9) for coolant change
Radiator cap	Opening pressure kPa (kgf/cm², psi)	93 – 123 (0.95 – 1.25, 14 – 18)
Thermostat	Start to open °C (°F) Fully open °C (°F) Valve lift at fully open Except H22A7 engine H22A7 engine	76 – 80 (169 – 176) 90 (194) 8.0 (0.31) min. 10.0 (0.39) min.
Cooling fan	Thermoswitch “ON” temperature °C (°F) Except H22A7 engine H22A7 engine Thermoswitch “OFF” temperature °C (°F) Except H22A7 engine H22A7 engine Fan timer “ON” temperature °C (°F) Fan timer “OFF” temperature °C (°F)	91 – 95 (196 – 203) 92 – 98 (198 – 208) Subtract 3 – 8 (5 – 15) from actual “ON” temperature Subtract 2 – 7 (4 – 12) from actual “ON” temperature 103 – 109 (217 – 228) Subtract 4 – 9 (7 – 16) from actual “ON” temperature

# Standards and Service Limits

## Fuel and Emissions — Section 11

	MEASUREMENT	STANDARD (NEW)
Pressure regulator	Pressure with regulator vacuum hose disconnected kPa (kgf/cm <sup>2</sup> , psi)	D16B6 engine 290 – 300 (3.0 – 3.1, 43 – 44) F18B2, F18B3, F20B6 engines 270 – 320 (2.8 – 3.3, 40 – 47) H22A7 engine 270 – 370 (2.8 – 3.8, 40 – 54)
Fuel tank	Capacity ℓ (US gal, Imp gal)	65.0 (17.2, 14.3)
Engine	Idle speed with headlight and cooling fan off rpm (min <sup>-1</sup> )	D16B6, F18B3 engines 750 ± 50 (M/T: neutral) F18B2, F20B6 engines 750 ± 50 (M/T: neutral) 730 ± 50 (A/T: <b>N</b> or <b>P</b> position) H22A7 engine 790 ± 50 (M/T: neutral)
	Idle CO %	With TWC model: 0.1 max. Without TWC model: 1.0 ± 1.0

## Clutch — Section 12

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height Stroke Free play Pedal play Disengagement height	to floor LHD RHD  to floor LHD RHD	177 – 187 (7.0 – 7.4) 201 – 211 (7.9 – 8.3) 141 – 151 (5.55 – 5.94) 9 – 15 (0.4 – 0.6) 1.0 – 7.0 (0.04 – 0.28) 81 (3.2) min. 107 (4.21) min.
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch disc	Rivet head depth Surface runout Thickness	U2J4, U2L4 DH U2Q7 U2N4  U2J4, U2L4 DH U2Q7 U2N4	1.4 (0.06) min 1.3 (0.05) min 1.2 – 1.7 (0.05 – 0.07) 1.65 – 2.25 (0.065 – 0.089) 0.6 (0.02) max. 7.9 – 8.4 (0.31 – 0.33) 7.7 – 8.2 (0.30 – 0.32) 8.3 – 9.0 (0.33 – 0.35) 8.4 – 9.0 (0.33 – 0.35)
Pressure plate	Warpage Diaphragm spring finger alignment	0.03 (0.001) max. 0.6 (0.02) max.	0.2 (0.008) 0.2 (0.008) 0.2 (0.008) 0.2 (0.008) 1.0 (0.04) 6.0 (0.24) 6.0 (0.24) 6.0 (0.24) 6.0 (0.24)

## Manual Transmission (DH) — Section 13

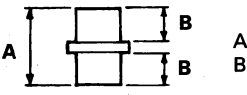
	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission fluid	Capacity ℓ (US qt, Imp qt)	1.8 (1.9, 1.6) at fluid change 1.9 (2.0, 1.7) at overhaul	
Mainshaft	End play Diameter of ball bearing contact area A (Transmission housing side) Diameter of 4th, 5th gear contact area B Diameter of 3rd gear contact area C Diameter of ball bearing contact area D (Clutch housing side) Runout	0.11 – 0.18 (0.004 – 0.007) 21.987 – 22.000 (0.8656 – 0.8661) 26.980 – 26.993 (1.0622 – 1.0627) 33.984 – 34.000 (1.3380 – 1.3386) 25.977 – 25.990 (1.0227 – 1.0232) 0.02 (0.001) max.	Adjust 21.930 (0.8634) 26.930 (1.0602) 33.930 (1.3358) 25.920 (1.0205) 0.05 (0.002)
Mainshaft 3rd and 4th gears	I.D. End play Thickness	3rd 4th 3rd 4th	39.009 – 39.025 (1.5358 – 1.5364) 0.06 – 0.21 (0.002 – 0.008) 0.06 – 0.19 (0.002 – 0.007) 30.22 – 30.27 (1.190 – 1.192) 30.12 – 30.17 (1.186 – 1.188)
Mainshaft 5th gear	I.D. End play Thickness	37.009 – 37.025 (1.4570 – 1.4577) 0.06 – 0.19 (0.002 – 0.007) 28.42 – 28.47 (1.119 – 1.121)	37.07 (1.459) 0.31 (0.012) 28.35 (1.116)
Countershaft	Diameter of needle bearing contact area A Diameter of 1st gear contact area B Diameter of ball bearing contact area C Runout	30.000 – 30.015 (1.1811 – 1.1817) 35.984 – 36.000 (1.4167 – 1.4173) 24.980 – 24.993 (0.9835 – 0.9840) 0.02 (0.001) max.	29.95 (1.179) 35.93 (1.415) 24.93 (0.982) 0.05 (0.002)

**Manual Transmission (DH) — Section 13**

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Countershaft 1st gear	I.D. End play (When tightened by the specified torque) Thickness	41.009 – 41.025 (1.6145 – 1.6152) 0.03 – 0.10 (0.001 – 0.004) 30.41 – 30.44 (1.197 – 1.198)	41.07 (1.617) 0.22 (0.009) 30.36 (1.195)
Countershaft 2nd gear	I.D. End play (When tightened by the specified torque) Thickness	44.009 – 44.025 (1.7326 – 1.7333) 0.04 – 0.12 (0.002 – 0.005) 31.91 – 31.96 (1.256 – 1.258)	44.07 (1.735) 0.24 (0.009) 31.85 (1.254)
Spacer collar (Countershaft 2nd gear)	I.D. O.D. Length	33.000 – 33.010 (1.2992 – 1.2996) 38.989 – 39.000 (1.5350 – 1.5354) 32.03 – 32.06 (1.261 – 1.262)	33.04 (1.301) 38.93 (1.533) 32.01 (1.260)
Spacer collar (Mainshaft 4th and 5th gears)	I.D. O.D. Length	27.002 – 27.012 (1.0631 – 1.0635) 33.989 – 34.000 (1.3381 – 1.3386) 31.989 – 32.000 (1.2594 – 1.2598) 22.83 – 22.86 (0.899 – 0.900) 23.53 – 23.56 (0.926 – 0.928)	27.06 (1.065) 33.93 (1.336) 31.93 (1.257) 22.81 (0.898) 23.51 (0.926)
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance	15.016 – 15.043 (0.5912 – 0.5922) 0.032 – 0.077 (0.0013 – 0.0030)	15.08 (0.594) 0.14 (0.006)
Synchro ring	Ring-to-gear clearance (ring pushed against gear)	0.73 – 1.18 (0.029 – 0.046)	0.4 (0.016)
Shift fork	Finger thickness Fork-to-synchro sleeve clearance	1st/2nd/5th 3rd/4th 6.2 – 6.4 (0.24 – 0.25) 7.4 – 7.6 (0.29 – 0.30) 0.35 – 0.65 (0.014 – 0.026)	— — —
Reverse shift fork	Fork pawl groove width Fork-to-reverse idler gear clearance L-groove width Fork-to-5th/reverse shift shaft piece pin clearance	12.7 – 13.0 (0.50 – 0.51) 0.5 – 1.1 (0.02 – 0.04) 7.05 – 7.25 (0.278 – 0.285) 0.05 – 0.35 (0.002 – 0.014)	— 1.8 (0.07) — 0.5 (0.02)
Shift arm A	Inner diameter of shift arm A contact point Shift arm A-to-shift arm C clearance	13.05 – 13.13 (0.514 – 0.517) 0.05 – 0.23 (0.002 – 0.009)	— 0.35 (0.014)
Shift arm B	Inner diameter of shift arm B shaft contact point Shift arm B-to-shaft clearance Shift arm B-to-shift piece clearance Diameter of shift fork contact point Shift fork 1st – 2nd/shift piece groove width	13.973 – 14.000 (0.5501 – 0.5512) 0.013 – 0.070 (0.0005 – 0.0028) 0.2 – 0.5 (0.01 – 0.02) 12.900 – 13.000 (0.5079 – 0.5118) 13.2 – 13.4 (0.52 – 0.53)	— 0.16 (0.006) 0.6 (0.02) 12.78 (0.503) —
MBS shift piece	Diameter of pin	6.9 – 7.1 (0.27 – 0.28)	6.8 (0.27)
Differential carrier	Pinion shaft bore diameter Carrier-to-pinion shaft clearance Driveshaft bore diameter Carrier-to-driveshaft clearance	18.010 – 18.028 (0.7091 – 0.7098) 0.023 – 0.057 (0.0009 – 0.0022) 26.025 – 26.045 (1.0246 – 1.0254) 0.045 – 0.086 (0.0018 – 0.0034)	— 0.095 (0.004) — 0.14 (0.006)
Differential pinion gear	Backlash Pinion gear bore diameter Pinion gear-to-pinion shaft clearance	0.05 – 0.15 (0.002 – 0.006) 18.042 – 18.066 (0.7103 – 0.7113) 0.055 – 0.095 (0.0022 – 0.0037)	— — 0.15 (0.006)
Set ring-to-bearing outer race		0 – 0.1 (0 – 0.004)	Adjust

# Standards and Service Limits

## Manual Transmission (U2J4/U2L4/U2Q7/U2N4) — Section 13

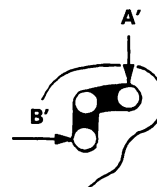
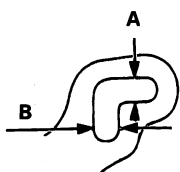
	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission fluid	Capacity ℓ (US qt, Imp qt)	1.9 (2.0, 1.7) at fluid change 2.0 (2.1, 1.8) at overhaul	
Mainshaft	End play Diameter of ball bearing contact area C Diameter of needle bearing contact area B Diameter of ball bearing contact area A Diameter of 4th/5th contact area Runout	0.10 – 0.16 (0.004 – 0.006) 27.977 – 27.990 (1.1015 – 1.1020) 37.984 – 38.000 (1.4954 – 1.4961) 27.987 – 28.000 (1.1018 – 1.1024) 30.987 – 31.000 (1.2200 – 1.2205) 0.02 (0.001) max.	Adjust 27.93 (1.100) 37.93 (1.493) 27.94 (1.100) 30.93 (1.218) 0.05 (0.002)
Mainshaft 3rd and 4th gears	I.D. End play Thickness 3rd gear Except U2Q7 U2Q7 4th gear Except U2Q7 U2Q7	43.009 – 43.025 (1.6933 – 1.6939) 0.06 – 0.21 (0.002 – 0.008) 32.42 – 32.47 (1.276 – 1.278) 34.92 – 34.97 (1.375 – 1.377) 30.92 – 30.97 (1.217 – 1.219) 31.42 – 31.47 (1.237 – 1.239)	43.080 (1.6961) 0.30 (0.012) 32.3 (1.27) 34.8 (1.37) 30.8 (1.21) 31.3 (1.23)
Mainshaft 5th gear	I.D. End play Thickness	43.009 – 43.025 (1.6933 – 1.6939) 0.06 – 0.21 (0.002 – 0.008) 30.92 – 30.97 (1.217 – 1.219)	43.080 (1.6961) 0.30 (0.012) 30.8 (1.21)
Countershaft	Diameter of needle bearing contact area A Diameter of ball bearing and needle bearing contact area C Diameter of 1st gear contact area B Runout	38.000 – 38.015 (1.4961 – 1.4967) 24.987 – 25.000 (0.9837 – 0.9843) 39.984 – 40.000 (1.5742 – 1.5748) 0.02 (0.001) max.	37.95 (1.494) 24.94 (0.982) 39.93 (1.572) 0.05 (0.002)
Countershaft 1st gear	I.D. End play Thickness Except U2Q7 U2Q7 Except U2Q7 U2Q7	46.009 – 46.025 (1.8114 – 1.8120) 0.06 – 0.23 (0.002 – 0.009) 0.06 – 0.18 (0.002 – 0.007) 32.95 – 33.00 (1.297 – 1.299) 26.95 – 27.000 (1.061 – 1.063)	46.08 (1.814) 0.23 (0.009) 0.23 (0.009) — —
Countershaft 2nd gear	I.D. End play Thickness	47.009 – 47.025 (1.8507 – 1.8514) 0.10 – 0.15 (0.004 – 0.006) 28.94 – 28.97 (1.139 – 1.141)	47.08 (1.854) 0.18 (0.007) —
Thrust washer (Countershaft 1st gear)	Thickness	1.95 – 1.97 (0.077 – 0.078)	—
Spacer collar (Countershaft 2nd gear)	I.D. O.D. Length	36.48 – 36.49 (1.436 – 1.437) 41.989 – 42.000 (1.6531 – 1.6535) 29.07 – 29.09 (1.144 – 1.145)	36.50 (1.437) 41.94 (1.651) —
Spacer collar (Mainshaft 4th and 5th gears)	I.D. O.D. Length 	31.002 – 31.012 (1.2205 – 1.2209) 37.989 – 38.000 (1.4956 – 1.4961) 56.45 – 56.55 (2.222 – 2.226) 26.03 – 26.08 (1.025 – 1.027)	31.06 (1.223) 37.94 (1.494) — 26.01 (1.024)
Reverse idler gear	I.D. Gear-to-reverse gear shaft clearance	20.016 – 20.043 (0.7880 – 0.7891) 0.036 – 0.084 (0.0014 – 0.0033)	20.09 (0.7909) 0.160 (0.0063)
Synchro ring	Ring-to-gear clearance (ring pushed against gear)	0.85 – 1.10 (0.033 – 0.043)	0.40 (0.016)
Double cone synchro	Clearance (ring pushed against gear) Outer synchro ring-to-synchro cone Inner synchro ring-to-gear Outer synchro ring-to-gear	0.5 – 1.0 (0.02 – 0.04) min 0.5 – 1.0 (0.02 – 0.04) min 0.95 – 1.68 (0.037 – 0.066)	0.3 (0.01) 0.3 (0.01) 0.6 (0.02)

**Manual Transmission (U2J4/U2L4/U2Q7/U2N4) — Section 13**

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Shift fork	Finger thickness	6.2 – 6.4 (0.24 – 0.25)	—
	Fork-to-synchro sleeve clearance	7.4 – 7.6 (0.29 – 0.30) 0.35 – 0.65 (0.014 – 0.026)	1.0 (0.04)
Reverse shift fork	Pawl groove width	13.0 – 13.3 (0.51 – 0.52)	—
	Fork-to-reverse idler gear clearance	0.5 – 1.1 (0.02 – 0.04)	1.8 (0.07)
	Groove width*1	7.05 – 7.25 (0.278 – 0.285)	—
	Fork-to-5th/reverse shift shaft clearance*2	7.4 – 7.7 (0.29 – 0.30) 0.05 – 0.35 (0.002 – 0.014) 0.4 – 0.8 (0.02 – 0.03)	0.5 (0.02) 1.0 (0.04)
Shift arm	I.D.	15.973 – 16.000 (0.6289 – 0.6299)	—
	Shift arm-to-shaft clearance	0.005 – 0.059 (0.0002 – 0.0023)	—
	Shift fork diameter contact area	12.9 – 13.0 (0.508 – 0.512)	—
	Shift arm-to-shift fork shaft clearance	0.2 – 0.5 (0.01 – 0.02)	0.6 (0.02)
Select lever	Shaft outer diameter	15.941 – 15.968 (0.6276 – 0.6287)	—
	Shift arm cover clearance	0.032 – 0.102 (0.0013 – 0.0040)	—
Shift lever	O.D.	15.941 – 15.968 (0.6276 – 0.6287)	—
	Transmission housing clearance	0.021 – 0.141 (0.0008 – 0.0056)	—
Interlock	Bore diameter	16.00 – 16.05 (0.630 – 0.632)	—
	Shift arm clearance	0.032 – 0.109 (0.0013 – 0.0043)	—
Differential carrier	Pinion shaft contact area I.D.	18.000 – 18.018 (0.7087 – 0.7094)	—
	Carrier-to-pinion shaft clearance	0.017 – 0.047 (0.0007 – 0.0019)	0.10 (0.004)
	Driveshaft contact area I.D.	28.005 – 28.025 (1.1026 – 1.1033)	—
	Carrier-to-driveshaft clearance	0.025 – 0.066 (0.0010 – 0.0026) 0.055 – 0.091 (0.0022 – 0.0036)	0.12 (0.005) 0.15 (0.006)
Differential pinion gear Except U2Q7	Backlash	0.05 – 0.15 (0.002 – 0.006)	—
	I.D.	18.042 – 18.066 (0.7103 – 0.7113)	—
	Pinion gear-to-pinion shaft clearance	0.055 – 0.095 (0.0022 – 0.0037)	0.15 (0.006)
Tapered roller bearing preload	Starting torque N·m (kgf·cm, lbf·in)	1.4 – 2.5 (14 – 26, 12 – 23)	Adjust

\*1: Measuring points

\*2: Measuring points





# Standards and Service Limits

## Automatic Transmission — Section 14

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission fluid	Capacity ℓ (US qt, Imp qt)	6.1 (6.4, 5.4) at overhaul 2.5 (2.6, 2.2) at fluid change	
Hydraulic pressure kPa (kgf/cm <sup>2</sup> , psi)	Line pressure at 2,000 rpm (min <sup>-1</sup> ) in <b>N</b> or <b>P</b> position	850 – 910 (8.7 – 9.3, 120 – 130)	800 (8.2, 120)
	4th clutch pressure at 2,000 rpm (min <sup>-1</sup> ) in <b>D<sub>4</sub></b> position	840 – 920 (8.6 – 9.4, 120 – 130)	790 (8.1, 120)
	3rd clutch pressure at 2,000 rpm (min <sup>-1</sup> ) in <b>D<sub>4</sub></b> position		
	2nd clutch pressure at 2,000 rpm (min <sup>-1</sup> ) in <b>2</b> position		
	1st clutch pressure at 2,000 rpm (min <sup>-1</sup> ) in <b>1</b> position		
Stall speed rpm (min <sup>-1</sup> ) (Check with vehicle on level ground)			
	F20B6, F23Z5 engines	2,250	1,950 – 2,550
	F18B2 engine	2,450	2,150 – 2,750
Clutch	Clutch initial clearance	1st 1.15 – 1.35 (0.045 – 0.053) 2nd 0.7 – 0.9 (0.028 – 0.035) 3rd 0.6 – 0.8 (0.024 – 0.031) 4th 0.4 – 0.6 (0.016 – 0.024)	_____
	Clutch return spring free length	1st, 2nd 45.7 (1.80) 3rd, 4th 33.5 (1.32)	43.7 (1.72) 31.5 (1.24)
	Clutch disc thickness	1.88 – 2.00 (0.074 – 0.079)	Until grooves worn out
	Clutch plate thickness	1st 1.95 – 2.05 (0.077 – 0.081) 2nd 2.25 – 2.35 (0.089 – 0.093) 3rd 2.55 – 2.65 (0.100 – 0.104) 4th 2.25 – 2.35 (0.089 – 0.093)	Discoloration ↑ Discoloration
	Clutch end plate thickness	Mark 6 2.55 – 2.60 (0.100 – 0.102) Mark 7 2.65 – 2.70 (0.104 – 0.106) Mark 8 2.75 – 2.80 (0.108 – 0.110) Mark 9 2.85 – 2.90 (0.112 – 0.114) Mark 0 2.95 – 3.00 (0.116 – 0.118) Mark 1 3.05 – 3.10 (0.120 – 0.122) Mark 2 3.15 – 3.20 (0.124 – 0.126) Mark 3 3.25 – 3.30 (0.128 – 0.130) Mark 4 3.35 – 3.40 (0.132 – 0.134)	Discoloration ↑
	Clutch end plate thickness	Mark 1 2.05 – 2.10 (0.081 – 0.083) Mark 2 2.15 – 2.20 (0.085 – 0.087) Mark 3 2.25 – 2.30 (0.089 – 0.091) Mark 4 2.35 – 2.40 (0.093 – 0.094) Mark 5 2.45 – 2.50 (0.096 – 0.098) Mark 6 2.55 – 2.60 (0.100 – 0.102) Mark 7 2.65 – 2.70 (0.104 – 0.106) Mark 8 2.75 – 2.80 (0.108 – 0.110) Mark 9 2.85 – 2.90 (0.112 – 0.114)	Discoloration ↓
Valve body	Stator shaft needle bearing contact I.D.		
	Torque converter side	27.000 – 27.021 (1.0630 – 1.0638)	Wear or damage
	ATF pump side	29.000 – 29.021 (1.1417 – 1.1426)	_____
	ATF pump gear thrust clearance	0.03 – 0.05 (0.001 – 0.002)	0.07 (0.003)
	ATF pump gear-to-body clearance	0.210 – 0.265 (0.0083 – 0.0104)	_____
	ATF pump driven gear I.D.	0.070 – 0.125 (0.0028 – 0.0049)	_____
	ATF pump driven gear shaft O.D.	14.016 – 14.034 (0.5518 – 0.5525) 13.980 – 13.990 (0.5504 – 0.5508)	Wear or damage Wear or damage
Shifting device and parking brake	Reverse shift fork finger thickness	5.90 – 6.00 (0.232 – 0.236)	5.40 (0.213)
	Parking brake pawl	_____	Wear or
	Parking gear	_____	other defect
Servo body	Shift fork shaft bore I.D.	14.000 – 14.010 (0.5512 – 0.5516)	_____
	Shift fork shaft valve bore I.D.	37.000 – 37.039 (1.4567 – 1.4582)	37.045 (1.4585)
Regulator valve body	Sealing ring contact I.D.	32.000 – 32.025 (1.2598 – 1.2608)	32.050 (1.2618)
Accumulator body	Sealing ring contact I.D.	35.000 – 35.025 (1.3780 – 1.3789)	35.05 (1.3799)
Stator shaft	Sealing ring contact I.D.	29.000 – 29.021 (1.1417 – 1.1426)	29.050 (1.1437)

**Automatic Transmission — Section 14**

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission	Mainshaft 3rd gear thrust shim, 41 x 72 mm thickness	6.32 – 6.35 (0.2488 – 0.2500) 6.37 – 6.40 (0.2508 – 0.2520) 6.42 – 6.45 (0.2528 – 0.2539) 6.47 – 6.50 (0.2547 – 0.2559) 6.52 – 6.55 (0.2567 – 0.2579) 6.57 – 6.60 (0.2587 – 0.2598)	Wear or damage ↑
	Mainshaft 4th gear thrust washer, 27 x 47 mm thickness	4.95 – 5.00 (0.1949 – 0.1969)	
	Secondary shaft splined washer, 38 x 56.5 mm thickness	6.82 – 6.85 (0.269 – 0.270) 6.87 – 6.90 (0.270 – 0.272) 6.92 – 6.95 (0.272 – 0.274) 6.97 – 7.00 (0.274 – 0.276) 7.02 – 7.05 (0.276 – 0.278) 7.07 – 7.10 (0.278 – 0.280)	
	Secondary shaft thrust shim, 37 x 55 mm thickness	4.87 – 4.90 (0.192 – 0.193) 4.92 – 4.95 (0.194 – 0.195) 4.97 – 5.00 (0.196 – 0.197) 5.02 – 5.05 (0.198 – 0.199) 5.07 – 5.10 (0.200 – 0.201) 5.12 – 5.15 (0.202 – 0.203) 5.17 – 5.20 (0.204 – 0.205)	
			↓ Wear or damage
	Mainshaft 4th gear collar length	49.40 – 49.50 (1.945 – 1.949)	Wear or damage
	Mainshaft 4th gear collar flange thickness	4.35 – 4.50 (0.171 – 0.177)	
	Countershaft distance collar length	50.42 – 50.46 (1.985 – 1.987)	Wear or damage
	Cotter thickness	1.99 – 2.02 (0.078 – 0.080)	
	Secondary shaft sealing ring, 35 mm thickness	1.890 – 1.950 (0.074 – 0.077)	1.800 (0.071)
	Mainshaft sealing ring, 32 mm thickness	1.850 – 1.950 (0.073 – 0.077)	1.800 (0.071)
	Mainshaft sealling ring, 29 mm thickness	1.850 – 1.950 (0.073 – 0.077)	1.800 (0.071)
	Mainshaft sealling ring groove width	2.025 – 2.060 (0.080 – 0.081)	2.080 (0.082)
	Secondary shaft sealing ring groove width	2.025 – 2.060 (0.080 – 0.081)	2.080 (0.082)
	Mainshaft 4th clutch feed pipe O.D.	11.47 – 11.48 (0.4516 – 0.4520)	11.45 (0.4508)
	Mainshaft 3rd clutch feed pipe O.D.	5.97 – 5.98 (0.2350 – 0.2354)	5.95 (0.2343)
	Secondary shaft feed pipe O.D.	7.97 – 7.98 (0.3138 – 0.3142)	7.95 (0.3130)
	Mainshaft 4th clutch feed pipe bushing I.D.	11.500 – 11.518 (0.4528 – 0.4535)	11.530 (0.4539)
	Mainshaft 3rd clutch feed pipe bushing I.D.	6.018 – 6.030 (0.2369 – 0.2374)	6.045 (0.2380)
	Secondary shaft bushing I.D.	8.000 – 8.015 (0.3150 – 0.3156)	8.030 (0.3161)
	Diameter of needle bearing contact area		
	On mainshaft of stator shaft	22.984 – 23.000 (0.9049 – 0.9055)	Wear or damage
	On mainshaft of 3rd gear	55.975 – 55.991 (2.2037 – 2.2044)	
	On mainshaft of 4th gear collar	33.975 – 33.991 (1.3376 – 1.3382)	Wear or damage
	On countershaft of 4th gear	33.975 – 33.991 (1.3376 – 1.3382)	
	On countershaft 2nd gear	39.979 – 40.000 (1.5740 – 1.5748)	Wear or damage
	On countershaft of L. side	36.005 – 36.015 (1.4175 – 1.4179)	
	On parking gear	41.964 – 41.980 (1.6521 – 1.6528)	Wear or damage
	On secondary shaft of 1st gear	37.978 – 37.993 (1.4952 – 1.4958)	
	On secondary shaft of 2nd gear	33.986 – 33.999 (1.3380 – 1.3385)	Wear or damage
	On secondary shaft of L. side	34.000 – 34.013 (1.3386 – 1.3391)	
	On reverse idler gear shaft	14.985 – 15.000 (0.5900 – 0.5906)	Wear or damage
	Transmission housing of reverse idler gear shaft contact area I.D.	14.800 – 14.818 (0.5827 – 0.5834)	
	Reverse idler gear shaft holder I.D.	14.800 – 14.824 (0.5827 – 0.5836)	Wear or damage
	Reverse selector hub O.D.	55.87 – 55.90 (2.1996 – 2.2008)	Wear or damage
	Inside Diameter		
	Mainshaft 3rd gear	61.000 – 61.019 (2.4016 – 2.4023)	Wear or damage
	Mainshaft 4th gear	40.000 – 40.016 (1.5748 – 1.5754)	
	Countershaft 4th gear	40.000 – 40.016 (1.5748 – 1.5754)	Wear or damage
	Countershaft idler gear	50.000 – 50.016 (1.9685 – 1.9691)	
	Countershaft reverse gear	46.000 – 46.016 (1.8110 – 1.8116)	Wear or damage
	Reverse idler gear	20.007 – 20.020 (0.7877 – 0.7882)	
	Secondary shaft 1st gear	44.000 – 44.016 (1.7323 – 1.7329)	Wear or damage
	Secondary shaft 2nd gear	40.000 – 40.016 (1.5748 – 1.5754)	

(cont'd)

# Standards and Service Limits

## Automatic Transmission (cont'd) — Section 14

Automatic Transmission (cont'd) — Section 14					
	MEASUREMENT	STANDARD (NEW)		SERVICE LIMIT	
Transmission (cont'd)	End play				
	Mainshaft 3rd gear	0.03 – 0.11 (0.001 – 0.004)		—	
	Mainshaft 4th gear	0.10 – 0.22 (0.004 – 0.009)		—	
	Countershaft 1st gear	0.00 – 0.33 (0.000 – 0.013)		—	
	Countershaft 4th gear	0.04 – 0.28 (0.002 – 0.011)		—	
	Countershaft idler gear	0.015 – 0.045 (0.0006 – 0.0018)		—	
	Countershaft reverse gear	0.10 – 0.25 (0.004 – 0.010)		—	
	Reverse idler gear	0.20 – 0.55 (0.008 – 0.022)		—	
	Secondary shaft 1st gear	0.07 – 0.15 (0.003 – 0.006)		—	
Secondary shaft 2nd gear	0.04 – 0.12 (0.002 – 0.005)		—		
Differential carrier	Pinion shaft contact area I.D.	18.010 – 18.028 (0.709 – 0.710)		—	
	Carrier-to-pinion shaft clearance	0.023 – 0.057 (0.001 – 0.002)		0.1 (0.004)	
	Driveshaft contact area I.D.	28.025 – 28.045 (1.103 – 1.104)		—	
	Carrier-to-driveshaft clearance	0.045 – 0.086 (0.002 – 0.003)		0.12 (0.005)	
Differential pinion gear	Backlash	0.050 – 0.150 (0.002 – 0.006)		—	
	I.D.	18.042 – 18.066 (0.710 – 0.711)		—	
	Pinion gear-to-pinion shaft clearance	0.055 – 0.095 (0.002 – 0.004)		0.12 (0.005)	
Differential tapered roller bearing preload		For new bearing	Adjust		
Starting torque N·m (kgf·cm, lbf·in)		For used bearing	Adjust		
	MEASUREMENT	STANDARD (NEW)			
		Wire Dia.	O.D.	Free Length	No. of Coils
Spring	Regulator valve spring A	1.9 (0.075)	14.7 (0.579)	77.4 (3.047)	15.2
	Regulator valve spring B	1.6 (0.063)	9.2 (0.362)	44.0 (1.732)	12.5
	Stator reaction spring	4.5 (0.177)	35.4 (1.394)	30.3 (1.193)	1.92
	Modulator valve spring	1.6 (0.063)	10.4 (0.409)	33.5 (1.319)	9.8
	Torque converter check valve spring	1.1 (0.043)	8.4 (0.331)	38.2 (1.504)	14.0
	Relief valve spring	0.9 (0.035)	6.6 (0.260)	39.8 (1.567)	20.4
	Cooler check valve spring	0.6 (0.024)	5.8 (0.228)	14.5 (0.571)	6.8
	Shift valve A spring	0.8 (0.031)	7.1 (0.280)	40.4 (1.591)	16.9
	Shift valve B spring	0.8 (0.031)	7.1 (0.280)	40.4 (1.591)	16.9
	Shift valve C spring	0.8 (0.031)	6.6 (0.260)	49.1 (1.933)	21.7
	Shift valve E spring	0.7 (0.028)	6.6 (0.260)	32.2 (1.268)	13.4
	Lock-up shift valve spring	0.9 (0.035)	7.6 (0.299)	63.0 (2.480)	22.4
	Lock-up timing valve spring	0.65 (0.026)	6.6 (0.260)	34.8 (1.370)	15.6
	Lock-up control valve spring	0.7 (0.028)	6.6 (0.260)	42.9 (1.689)	14.2
	Shift valve D spring	0.7 (0.028)	6.6 (0.260)	35.7 (1.406)	17.2
	Servo control valve spring	0.7 (0.028)	6.6 (0.260)	35.7 (1.406)	17.2
	Reverse CPC valve spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
	CPC valve A spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
	CPC valve B spring	0.7 (0.028)	6.1 (0.240)	17.8 (0.701)	7.9
	1st accumulator spring A	2.6 (0.102)	19.6 (0.772)	69.7 (2.744)	10.8
	1st accumulator spring B	2.5 (0.098)	12.8 (0.504)	49.5 (1.949)	8.5
	3rd accumulator spring	3.8 (0.150)	19.6 (0.772)	59.8 (2.354)	7.8
	4th accumulator spring	3.8 (0.150)	19.6 (0.772)	59.8 (2.354)	7.8
	2nd accumulator spring A	2.6 (0.102)	21.6 (0.850)	73.2 (2.882)	10.0
	2nd accumulator spring B	2.7 (0.106)	14.8 (0.583)	51.0 (2.008)	9.6

## Steering — Section 17

Steering — Section 17		
	MEASUREMENT	STANDARD (NEW)
Steering wheel	Rotational play at steering wheel circumference Starting load at steering wheel circumference N (kgf, lbf) Engine running	0 – 10 (0 – 0.39) 30 (3.1, 6.8)
Gearbox	Angle of rack-guide-screw loosened from locked position	5° – 10°
Pump	Pump pressure with shut-off valve closed kPa (kgf/cm <sup>2</sup> , psi) D16B6 engine model F18B2, F18B3, F20B6 engine models H22A7 engine model	5,700 – 6,400 (58 – 65, 820 – 920) 6,700 – 7,400 (68 – 75, 970 – 1,070) 6,900 – 7,600 (70 – 77, 1,000 – 1,090)
Power steering fluid	Recommended fluid Fluid capacity ℓ (US qt, Imp qt) For overhaul D16B6 engine model RHD (Except D16B6 engine) LHD (Except D16B6 engine) For fluid change	Honda power steering fluid S  1.0 (1.1, 0.9) 1.1 (1.2, 1.0) 1.0 (1.1, 0.9) 0.4 (0.42, 0.35)
Power steering belt*	Deflection with 98 N (10 kgf, 22 lbf) between pulleys D16B6 engine model  Except D16B6 engine model	10.5 – 14.0 (0.41 – 0.55) with used belt 7.5 – 10.0 (0.30 – 0.39) with new belt 13.0 – 16.5 (0.51 – 0.65) with used belt 8.5 – 11.0 (0.33 – 0.43) with new belt
	Belt tension N (kgf, lbf) Measured with belt tension gauge D16B6 engine model  Except D16B6 engine model	340 – 490 (35 – 50, 77 – 110) with used belt 640 – 780 (65 – 80, 143 – 176) with new belt 390 – 540 (40 – 55, 88 – 121) with used belt 740 – 880 (75 – 90, 165 – 198) with new belt

\*: When using a new belt, adjust deflection or tension to new values. Run the engine for 5 minutes then turn it off. Readjust deflection or tension to used belt values.

## Suspension — Section 18

Suspension — Section 18					
	MEASUREMENT			STANDARD (NEW)	
Wheel alignment	Camber	Front	H22A7 engine model	−0°15' ± 1°	
			Except H22A7 engine model	0° ± 1°, 0°10' ± 1°**	
		Rear	H22A7 engine model	−1°15' ± 30'	
			Except H22A7 engine model	−1°00' ± 30', −0°50' ± 30°**	
	Caster	Front	H22A7 engine model	3°00' ± 1°	
			Except H22A7 engine model	2°50' ± 1°, 2°45' ± 1°**	
	Total toe	Front		0 ± 2 (0 ± 0.08)	
		Rear		IN 2 <sup>-2</sup> <sub>-1</sub> (0.08 <sup>-0.08</sup> <sub>-0.09</sub> )	
	Front wheel turning angle	Inward wheel	H22A7 engine model	36°06' ± 2°	
			Except H22A7 engine model	39°10' ± 2°, 39°27' ± 2°	
Outward wheel		H22A7 engine model	29°12' (Reference)		
		Except H22A7 engine model	30°58' (Reference), 31°14' (Reference)**		
Wheel bearing	End play	Front	0 – 0.05 (0 – 0.002)		
		Rear	0 – 0.05 (0 – 0.002)		
Wheel	Rim runout	Aluminum wheel	Axial	0 – 0.7 (0 – 0.03)	2.0 (0.08)
			Radial	0 – 0.7 (0 – 0.03)	1.5 (0.06)
		Steel wheel	Axial	0 – 1.0 (0 – 0.04)	2.0 (0.08)
			Radial	0 – 1.0 (0 – 0.04)	1.5 (0.06)

\*1: KY model

# Standards and Service Limits

## Brakes — Section 19

	MEASUREMENT	STANDARD (NEW)
Parking brake lever	Play in stroke at 196 N (20 kgf, 44 lbf) lever force	To be locked when pulled 6 – 9 notches
Foot brake pedal	Pedal height (With floor mat removed) M/T Free play A/T	168.5 (6.63) 173.5 (6.83) 1 – 5 (0.04 – 0.20)
Master cylinder	Piston-to-pushrod clearance	0 – 0.4 (0 – 0.02)
Disc brake	Disc thickness H22A7 engine model Except D16B6, D16B7, H22A7 engines model D16B6, D16B7 engines model	<b>STANDARD (NEW)</b>
		<b>SERVICE LIMIT</b>
	Rear	27.9 – 28.1 (1.10 – 1.11) 24.9 – 25.1 (0.98 – 0.99)
	Front	22.9 – 23.1 (0.90 – 0.91) 9.9 – 10.1 (0.390 – 0.398)
	Rear	26.0 (1.02) 23.0 (0.91)
	Front and rear	21.0 (0.83) 8.0 (0.31) 0.10 (0.004) 0.10 (0.004) 0.015 (0.0006)
Drum brake	Drum I.D. Lining thickness	228.6 – 228.7 (9.000 – 9.004) 5.0 (0.20)
Brake booster	Characteristics at 98 N (10 kgf, 22 lbf) and 294 N (30 kgf, 66 lbf) pedal force	
		Minimum line pressure
		D16B6 engine model
		Except D16B6 engine model
	Vacuum kPa (mm Hg, in Hg)	N (kgf, lbf) kPa (kgf/cm <sup>2</sup> , psi) N (kgf, lbf) kPa (kgf/cm <sup>2</sup> , psi)
	0 (0, 0)	98 (10, 22) 0 (0, 0) 98 (10, 22) 0 (0, 0)
	66.7 (500, 19.7)	294 (30, 66) 1,470 (15, 213) 294 (30, 66) 1,275 (13, 185)
		98 (10, 22) 3,040 (31, 441) 98 (10, 22) 3,825 (39, 555)
		294 (30, 66) 6,860 (70, 995) 294 (30, 66) 8,238 (84, 1,194)

## Air Conditioning — Section 22

	MEASUREMENT	STANDARD (NEW)
Air conditioning system SANDEN	Lubricant type: SP – 10 (P/N 38897 – P13 – 003, 38898 – P13 – 003 or 38899 – P13 – A01) (For Refrigerant: HFC-134a (R-134a))	
	Lubricant capacity ml (fl oz, Imp oz) Condenser Evaporator Line or hose Receiver	25 (5/6, 0.9) 40 (1 1/3, 1.4) 10 (1/3, 0.4) 10 (1/3, 0.4)
DENSO	Lubricant type: ND – OIL8 (P/N 38897 – PR7 – 003, 38898 – PR7 – 003 or 38899 – PR7 – A01) (For Refrigerant: HFC-134a (R-134a))	
	Lubricant capacity ml (fl oz, Imp oz) Condenser Evaporator Line or hose Receiver	25 (5/6, 0.9) 40 (1 1/3, 1.4) 10 (1/3, 0.4) 10 (1/3, 0.4)
Compressor SANDEN	Lubricant type: SP – 10 Lubricant capacity ml (fl oz, Imp oz) Field coil resistance at 20°C (68°F) Ω Pulley-to-pressure plate clearance	130 (4 1/3, 4.6) 3.05 – 3.35 0.5 ± 0.15 (0.02 ± 0.006)
DENSO	Lubricant type: ND – OIL8 Lubricant capacity ml (fl oz, Imp oz) Stator coil resistance at 20°C (68°F) Ω Pulley-to-pressure plate clearance	160 (5 1/3, 5.6) 3.9 – 4.3 0.5 ± 0.15 (0.02 ± 0.006)
Compressor belt*	Deflection with 98 N (10 kgf, 22 lbf) between pulleys D16B6, D16B7 engines	7.5 – 9.5 (0.30 – 0.37) with used belt 5.0 – 6.5 (0.20 – 0.26) with new belt
	All except D16B6, D16B7 engines	10.0 – 12.0 (0.39 – 0.47) with used belt 5.5 – 7.5 (0.22 – 0.30) with new belt
	Belt tension N (kgf, lbf) Measured with belt tension gauge D16B6, D16B7 engines	340 – 490 (35 – 50, 77 – 110) with used belt 690 – 830 (70 – 85, 150 – 190) with new belt
	All except D16B6, D16B7 engines	390 – 540 (40 – 55, 88 – 120) with used belt 880 – 1,030 (90 – 105, 200 – 231) with new belt

\*: When using a new belt, adjust deflection or tension to new values. Run the engine for 5 minutes then turn it off.  
Readjust deflection or tension to used belt values.

# Design Specifications

specs

	ITEM		METRIC	ENGLISH	NOTES
DIMENSIONS	Overall Length		4,595 mm	180.9 in	
	Overall Width		1,750 mm	68.9 in	
	Overall Height	Except KY model	1,430 mm	56.3 in	
		KY model	1,445 mm	56.9 in	
	Wheelbase	Except TYPE R	2,668 mm	105.0 in	
		TYPE R	2,670 mm	105.1 in	
	Track Front/Rear	Except TYPE R	1,495/1,504 mm	58.9/59.2 in	
	Wheel Arch Front/Rear	TYPE R	1,507/1,515 mm	59.3/59.6 in	
	Seating Capacity		666/669 mm	26.2/26.3 in	EU
			Five		
WEIGHT 4-door	Curb Weight				
	KE 1.6iS	M/T	1,270 kg	2,800 lbs	
		M/T with A/C, S/R	1,301 kg	2,868 lbs	
	1.6iLS	M/T with A/C, S/R	1,301 kg	2,868 lbs	
	1.8iS	M/T	1,345 kg	2,965 lbs	
		A/T	1,370 kg	3,020 lbs	
		M/T with A/C	1,360 kg	2,998 lbs	
		A/T with A/C	1,385 kg	3,053 lbs	
		M/T with S/R	1,361 kg	3,000 lbs	
		A/T with S/R	1,386 kg	3,056 lbs	
	1.8iLS	M/T with S/R	1,361 kg	3,000 lbs	
		A/T with S/R	1,386 kg	3,056 lbs	
		M/T with A/C, S/R	1,376 kg	3,034 lbs	
		A/T with A/C, S/R	1,401 kg	3,089 lbs	
	1.8iES	M/T	1,406 kg	3,100 lbs	
		A/T	1,431 kg	3,155 lbs	
	2.0iLS	M/T with S/R	1,361 kg	3,000 lbs	
		A/T with S/R	1,386 kg	3,056 lbs	
		M/T with A/C, S/R	1,376 kg	3,034 lbs	
		A/T with A/C, S/R	1,401 kg	3,089 lbs	
	2.0iES	M/T	1,406 kg	3,100 lbs	
		A/T	1,431 kg	3,155 lbs	
	TYPE R	M/T	1,345 kg	2,965 lbs	
	KG 1.6iS	M/T with A/C	1,285 kg	2,833 lbs	
		M/T with S/R	1,286 kg	2,835 lbs	
	1.6iLS	M/T with A/C	1,285 kg	2,833 lbs	
		M/T with S/R	1,286 kg	2,835 lbs	
		M/T with A/C, S/R	1,301 kg	2,868 lbs	
	1.8iS	M/T with A/C	1,360 kg	2,998 lbs	
		A/T with A/C	1,385 kg	3,053 lbs	
		M/T with S/R	1,361 kg	3,000 lbs	
	1.8iLS	M/T	1,345 kg	2,965 lbs	
		A/T	1,370 kg	3,020 lbs	
		M/T with A/C	1,360 kg	2,998 lbs	
		A/T with A/C	1,385 kg	3,053 lbs	
		M/T with S/R	1,361 kg	3,000 lbs	
		A/T with S/R	1,386 kg	3,056 lbs	
		M/T with A/C, S/R	1,376 kg	3,034 lbs	
		A/T with A/C, S/R	1,401 kg	3,089 lbs	
	1.8iES	M/T	1,406 kg	3,100 lbs	
		A/T	1,431 kg	3,155 lbs	
	2.0iLS	M/T	1,345 kg	2,965 lbs	
		A/T	1,370 kg	3,020 lbs	
		M/T with A/C	1,360 kg	2,998 lbs	
		A/T with A/C	1,365 kg	3,053 lbs	
		M/T with S/R	1,361 kg	3,000 lbs	
		A/T with S/R	1,386 kg	3,056 lbs	
		M/T with A/C, S/R	1,376 kg	3,034 lbs	
		A/T with A/C, S/R	1,401 kg	3,089 lbs	
	2.0iES	M/T	1,406 kg	3,100 lbs	
		A/T	1,431 kg	3,155 lbs	
	TYPE R	M/T	1,345 kg	2,965 lbs	
	KS 1.6iS	M/T	1,270 kg	2,800 lbs	
		M/T with A/C	1,285 kg	2,833 lbs	
	1.6iLS	M/T with A/C	1,285 kg	2,833 lbs	
	1.8iS	M/T with A/C	1,360 kg	2,998 lbs	
	1.8iLS	A/T	1,375 kg	3,031 lbs	
		M/T with A/C	1,360 kg	2,998 lbs	

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# Design Specifications

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	ITEM			METRIC	ENGLISH	NOTES
WEIGHT 4-door	KS	2.0iLS	M/T	1,345 kg	2,965 lbs	
		2.0iES	M/T with A/C	1,390 kg	3,064 lbs	
	KR	1.6iS	M/T	1,265 kg	2,789 lbs	
			M/T with ABS	1,270 kg	2,800 lbs	
			M/T with ABS, A/C	1,285 kg	2,833 lbs	
		1.6iLS	M/T with A/C	1,285 kg	2,833 lbs	
			M/T with A/C, S/R	1,301 kg	2,868 lbs	
		1.8iS	M/T with A/C	1,360 kg	2,998 lbs	
		1.8iLS	M/T	1,345 kg	2,965 lbs	
			A/T	1,370 kg	3,020 lbs	
			M/T with A/C	1,360 kg	2,998 lbs	
			A/T with A/C	1,385 kg	3,053 lbs	
			M/T with A/C, S/R	1,376 kg	3,034 lbs	
		1.8iES	M/T	1,375 kg	3,031 lbs	
		2.0LS	M/T	1,360 kg	2,998 lbs	
		2.0ES	M/T	1,406 kg	3,100 lbs	
			A/T	1,431 kg	3,155 lbs	
		TYPE R	M/T	1,345 kg	2,965 lbs	
	KY	1.8iS	M/T	1,340 kg	2,954 lbs	
			A/T	1,365 kg	3,009 lbs	
	Weight Distributions (Front/Rear)					
	KE	1.6iS	M/T	730/540 kg	1,610/1,190 lbs	
			M/T with A/C, S/R	753/548 kg	1,660/1,208 lbs	
		1.6iLS	M/T with A/C, S/R	753/548 kg	1,660/1,208 lbs	
		1.8iS	M/T	805/540 kg	1,775/1,190 lbs	
			A/T	830/540 kg	1,830/1,190 lbs	
			M/T with A/C	820/540 kg	1,808/1,190 lbs	
			A/T with A/C	845/540 kg	1,863/1,190 lbs	
			M/T with S/R	813/548 kg	1,792/1,208 lbs	
			A/T with S/R	838/548 kg	1,848/1,208 lbs	
		1.8iLS	M/T with S/R	813/548 kg	1,792/1,208 lbs	
			A/T with S/R	838/548 kg	1,848/1,208 lbs	
			M/T with A/C, S/R	828/548 kg	1,826/1,208 lbs	
			A/T with A/C, S/R	853/548 kg	1,881/1,208 lbs	
		1.8iES	M/T	838/568 kg	1,848/1,252 lbs	
			A/T	863/568 kg	1,903/1,252 lbs	
		2.0iLS	M/T with S/R	823/538 kg	1,814/1,186 lbs	
			A/T with S/R	848/538 kg	1,870/1,186 lbs	
			M/T with A/C, S/R	838/538 kg	1,848/1,186 lbs	
			A/T with A/C, S/R	863/538 kg	1,903/1,186 lbs	
		2.0iES	M/T	848/558 kg	1,870/1,230 lbs	
			A/T	873/558 kg	1,925/1,230 lbs	
		TYPE R	M/T	820/525 kg	1,808/1,157 lbs	
	KG	1.6iS	M/T with A/C	745/540 kg	1,643/1,190 lbs	
			M/T with S/R	738/548 kg	1,627/1,208 lbs	
		1.6iLS	M/T with A/C	745/540 kg	1,643/1,190 lbs	
			M/T with S/R	738/548 kg	1,627/1,208 lbs	
			M/T with A/C, S/R	753/548 kg	1,660/1,208 lbs	
		1.8iS	M/T with A/C	820/540 kg	1,808/1,190 lbs	
			A/T with A/C	845/540 kg	1,863/1,190 lbs	
			M/T with S/R	813/548 kg	1,792/1,208 lbs	
		1.8iLS	M/T	805/540 kg	1,775/1,190 lbs	
			A/T	830/540 kg	1,830/1,190 lbs	
			M/T with A/C	820/540 kg	1,808/1,190 lbs	
			A/T with A/C	845/540 kg	1,863/1,190 lbs	
			M/T with S/R	813/548 kg	1,792/1,208 lbs	
			A/T with S/R	838/548 kg	1,848/1,208 lbs	
			M/T with A/C, S/R	828/548 kg	1,826/1,208 lbs	
			A/T with A/C, S/R	853/548 kg	1,881/1,208 lbs	
		1.8iES	M/T	838/568 kg	1,848/1,252 lbs	
			A/T	863/568 kg	1,903/1,252 lbs	
		2.0iLS	M/T	815/530 kg	1,797/1,168 lbs	
			A/T	840/530 kg	1,852/1,168 lbs	
			M/T with A/C	830/530 kg	1,830/1,168 lbs	
			A/T with A/C	855/530 kg	1,885/1,168 lbs	
			M/T with S/R	823/538 kg	1,814/1,186 lbs	
			A/T with S/R	848/538 kg	1,870/1,186 lbs	
			M/T with A/C, S/R	838/538 kg	1,848/1,186 lbs	
			A/T with A/C, S/R	863/538 kg	1,903/1,186 lbs	

	ITEM			METRIC	ENGLISH	NOTES
WEIGHT	KG	2.0iES	M/T	848/558 kg	1,870/1,230 lbs	
			A/T	873/558 kg	1,925/1,230 lbs	
		TYPE R	M/T	820/525 kg	1,808/1,157 lbs	
	KS	1.6iS	M/T	730/540 kg	1,610/1,190 lbs	
			M/T with A/C	745/540 kg	1,643/1,190 lbs	
		1.6iLS	M/T with A/C	745/540 kg	1,643/1,190 lbs	
		1.8iS	M/T with A/C	830/530 kg	1,830/1,168 lbs	
		1.8iLS	A/T	815/560 kg	1,797/1,234 lbs	
			M/T with A/C	820/540 kg	1,808/1,190 lbs	
		2.0iLS	M/T	815/530 kg	1,797/1,168 lbs	
		2.0iES	M/T with A/C	840/550 kg	1,852/1,212 lbs	
	KR	1.6iS	M/T	725/540 kg	1,598/1,191 lbs	
			M/T with ABS	730/540 kg	1,610/1,190 lbs	
			M/T with ABS, A/C	745/540 kg	1,643/1,190 lbs	
		1.6iLS	M/T with A/C	745/540 kg	1,643/1,190 lbs	
			M/T with A/C, S/R	753/548 kg	1,660/1,208 lbs	
		1.8iS	M/T with A/C	820/540 kg	1,808/1,190 lbs	
		1.8iLS	M/T	805/540 kg	1,775/1,190 lbs	
			A/T	830/540 kg	1,830/1,190 lbs	
			M/T with A/C	820/540 kg	1,808/1,190 lbs	
			A/T with A/C	845/540 kg	1,863/1,190 lbs	
			M/T with A/C, S/R	828/548 kg	1,826/1,208 lbs	
		1.8iES	M/T	815/560 kg	1,797/1,234 lbs	
		2.0LS	M/T	830/530 kg	1,830/1,168 lbs	
		2.0ES	M/T	848/558 kg	1,870/1,230 lbs	
			A/T	873/558 kg	1,925/1,230 lbs	
		TYPE R	M/T	820/525 kg	1,808/1,157 lbs	
	KY	1.8iS	M/T	805/535 kg	1,775/1,179 lbs	
			A/T	830/535 kg	1,830/1,179 lbs	
	Max. Permissible Weight (EU)					
			D16B6 engine model	1,740 kg	3,836 lbs	
			F18B2, F18B3, F20B6 engine models	1,890 kg	4,167 lbs	
			H22A7 engine model	1,820 kg	4,012 lbs	
WEIGHT 5-door	Curb Weight					
	KE	1.6iS	M/T with SRS	1,314 kg	2,897 lbs	
		1.6iLS	M/T with SRS	1,314 kg	2,897 lbs	
		1.8iS	M/T with SRS, A/C	1,389 kg	3,062 lbs	
			M/T with SRS, S/R	1,404 kg	3,095 lbs	
			A/T with SRS, A/C	1,414 kg	3,117 lbs	
			A/T with SRS, S/R	1,429 kg	3,150 lbs	
		1.8iLS	M/T with SRS, A/C, S/R	1,409 kg	3,106 lbs	
			A/T with SRS, A/C, S/R	1,434 kg	3,161 lbs	
		1.8iES	M/T with SRS, A/C, S/R	1,420 kg	3,131 lbs	
			M/T with SRS, A/C, S/R, Power seat	1,426 kg	3,144 lbs	
			M/T with SRS, A/C, S/R, NAVI.	1,425 kg	3,142 lbs	
			M/T with SRS, A/C, S/R, Power seat, NAVI.	1,431 kg	3,155 lbs	
			A/T with SRS, A/C, S/R	1,445 kg	3,186 lbs	
			A/T with SRS, A/C, S/R, Power seat	1,451 kg	3,199 lbs	
			A/T with SRS, A/C, S/R, NAVI.	1,450 kg	3,197 lbs	
			A/T with SRS, A/C, S/R, Power seat, NAVI.	1,456 kg	3,210 lbs	
		2.0iLS	M/T with SRS, A/C, S/R	1,411 kg	3,110 lbs	
			A/T with SRS, A/C, S/R	1,436 kg	3,165 lbs	
		2.0iES	M/T with SRS, A/C, S/R, Power seat	1,428 kg	3,148 lbs	
			M/T with SRS, A/C, S/R, NAVI.	1,427 kg	3,146 lbs	
			M/T with SRS, A/C, S/R, Power seat, NAVI.	1,433 kg	3,159 lbs	
			A/T with SRS, A/C, S/R, Power seat	1,451 kg	3,199 lbs	
			A/T with SRS, A/C, S/R, NAVI.	1,450 kg	3,197 lbs	
			A/T with SRS, A/C, S/R, Power seat, NAVI.	1,456 kg	3,210 lbs	
		2.0iV	M/T with SRS, A/C, S/R	1,434 kg	3,161 lbs	
			M/T with SRS, A/C, S/R, Power seat, NAVI.	1,439 kg	3,172 lbs	
			A/T with SRS, A/C, S/R	1,459 kg	3,217 lbs	
			A/T with SRS, A/C, S/R, Power seat, NAVI.	1,464 kg	3,228 lbs	
		2.0TDi	M/T with SRS, A/C	1,464 kg	3,228 lbs	
		2.0SDi	M/T with SRS, A/C, S/R	1,479 kg	3,261 lbs	

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# Design Specifications

(cont'd)

	ITEM	METRIC	ENGLISH	NOTES
WEIGHT 5-door	KG 1.6iS M/T	1,312 kg	2,892 lbs	
	M/T with SRS	1,314 kg	2,897 lbs	
	1.6iLS M/T	1,312 kg	2,892 lbs	
	M/T with SRS	1,314 kg	2,897 lbs	
	M/T with SRS, side SRS	1,309 kg	2,885 lbs	
	1.8iS M/T	1,390 kg	3,064 lbs	
	M/T with SRS	1,419 kg	3,128 lbs	
	M/T with SRS, side SRS	1,386 kg	3,056 lbs	
	A/T with SRS	1,417 kg	3,124 lbs	
	1.8iLS M/T	1,390 kg	3,064 lbs	
	M/T with side SRS	1,390 kg	3,064 lbs	
	M/T with SRS, A/C	1,392 kg	3,068 lbs	
	M/T with SRS, A/C, S/R	1,409 kg	3,106 lbs	
	M/T with SRS	1,376 kg	3,034 lbs	
	A/T with SRS, A/C	1,417 kg	3,123 lbs	
	A/T with SRS, A/C, S/R	1,434 kg	3,161 lbs	
	1.8iES M/T with SRS, A/C, S/R	1,420 kg	3,131 lbs	
	M/T with SRS, A/C, S/R, Power seat	1,426 kg	3,144 lbs	
	M/T with SRS, A/C, S/R, NAVI.	1,425 kg	3,142 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	1,431 kg	3,155 lbs	
	M/T with SRS, S/R	1,389 kg	3,062 lbs	
	A/T with SRS, A/C, S/R	1,445 kg	3,186 lbs	
	A/T with SRS, A/C, S/R, Power seat	1,451 kg	3,199 lbs	
	A/T with SRS, A/C, S/R, NAVI.	1,450 kg	3,197 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	1,456 kg	3,210 lbs	
	KG 2.0iLS M/T with SRS, A/C	1,396 kg	3,077 lbs	
	M/T with SRS, A/C, S/R	1,411 kg	3,110 lbs	
	A/T with SRS, A/C	1,419 kg	3,128 lbs	
	A/T with SRS, A/C, S/R	1,436 kg	3,165 lbs	
	2.0iES M/T with SRS, A/C, S/R	1,422 kg	3,135 lbs	
	M/T with SRS, A/C, S/R, Power seat	1,428 kg	3,148 lbs	
	M/T with SRS, A/C, S/R, NAVI.	1,427 kg	3,146 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	1,433 kg	3,159 lbs	
	A/T with SRS, A/C, S/R	1,442 kg	3,179 lbs	
	A/T with SRS, A/C, S/R, Power seat	1,451 kg	3,199 lbs	
	A/T with SRS, A/C, S/R, NAVI.	1,450 kg	3,197 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	1,456 kg	3,210 lbs	
	2.0iV M/T with SRS, A/C, S/R	1,434 kg	3,161 lbs	
	M/T with SRS, A/C, S/R, NAVI.	1,439 kg	3,172 lbs	
	A/T with SRS, A/C, S/R	1,459 kg	3,217 lbs	
	A/T with SRS, A/C, S/R, NAVI.	1,464 kg	3,228 lbs	
	2.0TDi M/T with SRS, A/C	1,464 kg	3,228 lbs	
	2.0SDi M/T with SRS, A/C	1,464 kg	3,228 lbs	
	M/T with SRS, A/C, S/R	1,479 kg	3,260 lbs	
	KS 1.6iS M/T	1,312 kg	2,892 lbs	
	M/T with SRS	1,314 kg	2,897 lbs	
	1.6iLS M/T with SRS	1,314 kg	2,897 lbs	
	1.8iS M/T with SRS	1,419 kg	3,128 lbs	
	1.8iLS M/T with SRS, A/C	1,392 kg	3,068 lbs	
	A/T with SRS, A/C	1,417 kg	3,123 lbs	
	2.0iLS M/T with SRS, A/C	1,396 kg	3,077 lbs	
	2.0iES M/T with SRS, A/C	1,409 kg	3,106 lbs	
	KR 1.6iS M/T	1,307 kg	2,881 lbs	
	M/T with SRS	1,314 kg	2,897 lbs	
	1.6iLS M/T with SRS	1,314 kg	2,897 lbs	
	1.8iS M/T with SRS	1,419 kg	3,128 lbs	
	1.8iLS M/T with SRS, A/C	1,408 kg	3,104 lbs	
	M/T with SRS, A/C (AUTO)	1,408 kg	3,104 lbs	
	M/T with SRS, A/C, S/R	1,423 kg	3,137 lbs	
	A/T with SRS, A/C	1,433 kg	3,159 lbs	
	A/T with SRS, A/C (AUTO)	1,433 kg	3,159 lbs	
	2.0iES M/T with SRS, A/C, S/R	1,422 kg	3,135 lbs	
	M/T with SRS, A/C, S/R, Power seat	1,428 kg	3,148 lbs	
	M/T with SRS, A/C, S/R, NAVI.	1,427 kg	3,146 lbs	
	A/T with SRS, A/C, S/R	1,442 kg	3,179 lbs	
	A/T with SRS, A/C, S/R, Power seat	1,451 kg	3,199 lbs	
	A/T with SRS, A/C, S/R, NAVI.	1,450 kg	3,197 lbs	
	2.0TDi M/T with SRS, A/C	1,464 kg	3,228 lbs	
	2.0SDi M/T with SRS, A/C	1,464 kg	3,228 lbs	

	ITEM	METRIC	ENGLISH	NOTES
WEIGHT	Weight Distributions (Front/Rear)			
	KE 1.6iS M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.6iLS M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.8iS M/T with SRS, A/C	802/587 kg	1,768/1,294 lbs	
	M/T with SRS, S/R	810/594 kg	1,786/1,309 lbs	
	A/T with SRS, A/C	827/587 kg	1,823/1,294 lbs	
	A/T with SRS, S/R	835/594 kg	1,840/1,310 lbs	
	1.8iLS M/T with SRS, A/C, S/R	817/592 kg	1,801/1,305 lbs	
	A/T with SRS, A/C, S/R	841/593 kg	1,854/1,307 lbs	
	1.8iES M/T with SRS, A/C, S/R	827/593 kg	1,824/1,307 lbs	
	M/T with SRS, A/C, S/R, Power seat	830/596 kg	1,830/1,314 lbs	
	M/T with SRS, A/C, S/R, NAVI.	832/593 kg	1,835/1,307 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	835/596 kg	1,841/1,314 lbs	
	A/T with SRS, A/C, S/R	851/594 kg	1,876/1,310 lbs	
	A/T with SRS, A/C, S/R, Power seat	854/597 kg	1,883/1,316 lbs	
	A/T with SRS, A/C, S/R, NAVI.	856/594 kg	1,887/1,310 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	859/597 kg	1,894/1,316 lbs	
	2.0iLS M/T with SRS, A/C, S/R	809/602 kg	1,783/1,327 lbs	
	A/T with SRS, A/C, S/R	834/602 kg	1,838/1,327 lbs	
	2.0iES M/T with SRS, A/C, S/R, Power seat	825/603 kg	1,819/1,329 lbs	
	M/T with SRS, A/C, S/R, NAVI.	827/600 kg	1,823/1,323 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	830/603 kg	1,830/1,329 lbs	
	A/T with SRS, A/C, S/R, Power seat	856/595 kg	1,887/1,312 lbs	
	A/T with SRS, A/C, S/R, NAVI.	858/592 kg	1,892/1,305 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	861/595 kg	1,898/1,312 lbs	
	2.0iV M/T with SRS, A/C, S/R	831/603 kg	1,832/1,329 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	836/603 kg	1,843/1,329 lbs	
	A/T with SRS, A/C, S/R	856/603 kg	1,888/1,329 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	861/603 kg	1,899/1,329 lbs	
	2.0TDi M/T with SRS, A/C	873/591 kg	1,925/1,303 lbs	
	2.0SDi M/T with SRS, A/C, S/R	881/598 kg	1,942/1,319 lbs	
	KG 1.6iS M/T	738/574 kg	1,627/1,265 lbs	
	M/T with SRS	738/576 kg	1,627/1,270 lbs	
	1.6iLS M/T	738/574 kg	1,627/1,265 lbs	
	M/T with SRS	739/575 kg	1,629/1,268 lbs	
	M/T with SRS, side SRS	730/578 kg	1,610/1,275 lbs	
	1.8iS M/T	806/584 kg	1,777/1,287 lbs	
	M/T with SRS	809/610 kg	1,783/1,345 lbs	
	M/T with SRS, side SRS	813/573 kg	1,793/1,263 lbs	
	A/T with SRS	832/585 kg	1,834/1,290 lbs	
	1.8iLS M/T	806/584 kg	1,777/1,287 lbs	
	M/T with side SRS	806/584 kg	1,777/1,287 lbs	
	M/T with SRS, A/C	807/585 kg	1,779/1,289 lbs	
	M/T with SRS, A/C, S/R	817/592 kg	1,801/1,305 lbs	
	M/T with SRS	805/570 kg	1,775/1,259 lbs	
	A/T with SRS, A/C	831/586 kg	1,832/1,291 lbs	
	A/T with SRS, A/C, S/R	841/593 kg	1,854/1,307 lbs	
	1.8iES M/T with SRS, A/C, S/R	827/593 kg	1,824/1,307 lbs	
	M/T with SRS, A/C, S/R, Power seat	830/596 kg	1,830/1,314 lbs	
	M/T with SRS, A/C, S/R, NAVI.	832/593 kg	1,834/1,308 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	835/596 kg	1,841/1,314 lbs	
	M/T with SRS, S/R	803/586 kg	1,770/1,292 lbs	
	A/T with SRS, A/C, S/R	851/594 kg	1,876/1,310 lbs	
	A/T with SRS, A/C, S/R, Power seat	854/597 kg	1,883/1,316 lbs	
	A/T with SRS, A/C, S/R, NAVI.	856/594 kg	1,887/1,310 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	859/597 kg	1,894/1,316 lbs	
	2.0iLS M/T with SRS, A/C	801/595 kg	1,765/1,312 lbs	
	M/T with SRS, A/C, S/R	809/602 kg	1,783/1,327 lbs	
	A/T with SRS, A/C	824/595 kg	1,816/1,312 lbs	
	A/T with SRS, A/C, S/R	834/602 kg	1,838/1,327 lbs	

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# Design Specifications

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	ITEM	METRIC	ENGLISH	NOTES
WEIGHT 5-door	KG 2.0iES M/T with SRS, A/C, S/R	822/600 kg	1,812/1,323 lbs	
	M/T with SRS, A/C, S/R, Power seat	825/603 kg	1,819/1,329 lbs	
	M/T with SRS, A/C, S/R, NAVI.	827/600 kg	1,823/1,323 lbs	
	M/T with SRS, A/C, S/R, Power seat, NAVI.	830/603 kg	1,830/1,329 lbs	
	A/T with SRS, A/C, S/R	848/594 kg	1,870/1,309 lbs	
	A/T with SRS, A/C, S/R, Power seat	856/595 kg	1,887/1,312 lbs	
	A/T with SRS, A/C, S/R, NAVI.	858/592 kg	1,892/1,305 lbs	
	A/T with SRS, A/C, S/R, Power seat, NAVI.	861/595 kg	1,898/1,312 lbs	
	2.0iV M/T with SRS, A/C, S/R	831/603 kg	1,832/1,329 lbs	
	M/T with SRS, A/C, S/R, NAVI.	836/603 kg	1,843/1,329 lbs	
	A/T with SRS, A/C, S/R	856/603 kg	1,888/1,329 lbs	
	A/T with SRS, A/C, S/R, NAVI.	861/603 kg	1,899/1,329 lbs	
	2.0TDi M/T with SRS, A/C	873/591 kg	1,925/1,303 lbs	
	2.0SDi M/T with SRS, A/C	873/591 kg	1,925/1,303 lbs	
	M/T with SRS, A/C, S/R	881/598 kg	1,942/1,318 lbs	
	KS 1.6iS M/T	738/574 kg	1,627/1,265 lbs	
	M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.6iLS M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.8iS M/T with SRS	809/610 kg	1,783/1,345 lbs	
	1.8iLS M/T with SRS, A/C	807/585 kg	1,779/1,289 lbs	
	A/T with SRS, A/C	831/586 kg	1,832/1,291 lbs	
	2.0iLS M/T with SRS, A/C	801/595 kg	1,766/1,311 lbs	
	2.0iES M/T with SRS, A/C	816/592 kg	1,799/1,305 lbs	
	KR 1.6iS M/T	733/574 kg	1,616/1,265 lbs	
	M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.6iLS M/T with SRS	739/575 kg	1,629/1,268 lbs	
	1.8iS M/T with SRS	809/610 kg	1,784/1,344 lbs	
	1.8iLS M/T with SRS, A/C	823/585 kg	1,814/1,290 lbs	
	M/T with SRS, A/C (AUTO)	823/585 kg	1,814/1,290 lbs	
	M/T with SRS, A/C, S/R	830/593 kg	1,830/1,307 lbs	
	A/T with SRS, A/C	847/586 kg	1,867/1,292 lbs	
	A/T with SRS, A/C (AUTO)	847/586 kg	1,867/1,292 lbs	
	2.0iES M/T with SRS, A/C, S/R	822/600 kg	1,812/1,323 lbs	
	M/T with SRS, A/C, S/R, Power seat	825/603 kg	1,819/1,329 lbs	
	M/T with SRS, A/C, S/R, NAVI.	827/600 kg	1,823/1,323 lbs	
	A/T with SRS, A/C, S/R	848/594 kg	1,869/1,310 lbs	
	A/T with SRS, A/C, S/R, Power seat	856/595 kg	1,887/1,312 lbs	
	A/T with SRS, A/C, S/R, NAVI.	858/592 kg	1,892/1,305 lbs	
	2.0TDi M/T with SRS, A/C	873/591 kg	1,925/1,303 lbs	
	2.0SDi M/T with SRS, A/C	873/591 kg	1,925/1,303 lbs	
	Max. Permissible Weight (EU)			
	D16B6, D16B7 engine models	1,740 kg	3,241 lbs	
	F18B2, F18B4, F20B6 engine models	1,930 kg	4,255 lbs	
	20T2N engine model	1,940 kg	4,277 lbs	

	ITEM	METRIC	ENGLISH	NOTES	
ENGINE	Type	D16B6, D16B7 engines			
	F18B2, F18B3, F20B6, F23Z5 engines	Water-cooled, 4-stroke SOHC gasoline engine			
	H22A7 engine	Water-cooled, 4-stroke SOHC VTEC gasoline engine			
	Cylinder Arrangement	Water-cooled, 4-stroke DOHC VTEC gasoline engine			
	Bore and Stroke	Inline 4-cylinder, transverse			
	D16B6, D16B7 engines	75.0 x 90.0 mm	2.95 x 3.54 in		
	F18B2, F18B3 engines	85.0 x 81.5 mm	3.35 x 3.21 in		
	F20B6 engine	85.0 x 88.0 mm	3.35 x 3.46 in		
	F23Z5 engine	86.0 x 97.0 mm	3.38 x 3.82 in		
	H22A7 engine	87.0 x 90.7 mm	3.43 x 3.57 in		
	Displacement	D16B6, D16B7 engines	1,590 cm <sup>3</sup> (mℓ)		97.0 cu-in
	F18B2, F18B3 engines	1,850 cm <sup>3</sup> (mℓ)	112.9 cu-in		
	F20B6 stet	1,997 cm <sup>3</sup> (mℓ)	121.9 cu-in		
	F23Z5 engine	2,253 cm <sup>3</sup> (mℓ)	137.4 cu-in		
	H22A7 engine	2,157 cm <sup>3</sup> (mℓ)	131.6 cu-in		
	Compression Ratio	D16B6, D16B7 engines	9.6		
	F18B2, F18B3, F20B6, F20B7 engines	10.0			
	F23Z5 engine	9.8			
	H22A7 engine	11.0			
	Valve Train	D16B6, D16B7 engines	Belt Driven, SOHC 4 valve per cylinder		
F18B2, F18B3, F20B6, F23Z5 engines	Belt Driven, SOHC VTEC 4 valve per cylinder				
H22A7 engine	Belt Driven, DOHC VTEC 4 valve per cylinder				
Lubrication System	Forced and wet sump, trochoid pump				
Oil Pump Displacement	D16B6, D16B7 engines	35.4 ℓ (37.4 US qt, 31.1 Imp qt)	at 6,000 engine rpm (min <sup>-1</sup> )		
Except D16B6, D16B7 engines	73.5 ℓ (77.7 US qt, 64.7 Imp qt)				
Water Pump Displacement	D16B6, D16B7 engines	125 ℓ (132 US qt, 110 Imp qt)	at 6,000 engine rpm (min <sup>-1</sup> )		
Except D16B6, D16B7 engines	160 ℓ (169 US qt, 141 Imp qt)				
Fuel Required	D16B6, D16B7, F18B2, F20B6, F23Z5 engines	Premium UNLEADED gasoline with a Research Octane Number (RON) of 95 or higher			
F18B3 engine	LEADED gasoline with a Research Octane Number (RON) of 91 or higher* <sup>1</sup>				
H22A7 engine	Super plus UNLEADED gasoline with a Research Octane Number (RON) of 98 or higher				
STARTER	Type	Gear reduction			
	Normal Output	1.0 kW			
	Normal Voltage	12 V			
	Hour Rating	30 seconds			
	Direction of Rotation	Clockwise as viewed from gear end			

# Design Specifications

(cont'd)

	ITEM		METRIC		ENGLISH		NOTES	
CLUTCH	Type	M/T	Single plate dry, diaphragm spring Torque converter					
	Facing Area	M/T						
TRANSMISSION	Type	M/T A/T	Synchronized 5-speed forward, 1 reverse Electronically controlled 4-speed automatic, 1 reverse Direct/1:1					
	Primary Reduction	Type/Ratio						
	Manual Transmission Gear Ratio		DH	U2J4	U2Q7	U2L4	U2N4	
			D16B6 D16B7 engines	F18B3 engines	H22A7 engine	F18B2 F20B6 engines	F23Z5 engine	
		1st	3.250	3.285	3.285	3.285	3.285	
		2nd	1.782	1.807	2.090	1.956	1.807	
		3rd	1.250	1.266	1.481	1.344	1.266	
		4th	0.937	0.966	1.071	0.966	0.933	
		5th	0.750	0.787	0.870	0.787	0.735	
	Final Reduction Gear	Reverse	3.153	3.000	3.000	3.000	3.000	
		Ratio	4.437	4.266	4.266	4.266	4.266	
		Type	Single helical gear					
	Automatic Transmission Gear Ratio	1st	2.528					
2nd		1.427						
3rd		0.976						
4th		0.653						
Reverse		1.863						
Ratio		4.466						
Final Reduction Gear	Type	Single helical gear						
AIR CONDITIONING	Cooling Capacity		4,780 Kcal/h 3,910 Kcal/h 3,740 Kcal/h		19,000 BTU/h 15,500 BTU/h 14,800 BTU/h		KY model KR model KG, KE, KS models	
	Compressor: SANDEN	Type	Scroll					
		Capacity	85.7 cm <sup>3</sup> /rev		5.23 cu-in/rev			
	DENSO	Max. Speed	10,000 rpm (min <sup>-1</sup> )					
		Lubricant Type	SP - 10					
		Lubricant Capacity	130 cm <sup>3</sup>		4 1/3 fl oz, 4.6 Imp oz			
		Type	Swash-plate					
		No. of Cylinder	10					
		Capacity	188.0 cm <sup>3</sup> /rev		11.47 cu-in/rev			
		Max. Speed	7,600 rpm (min <sup>-1</sup> )					
		Lubricant Type	ND - OIL8					
		Lubricant Capacity	160 cm <sup>3</sup>		5 1/3 fl oz, 5.6 Imp oz			
	Condenser	Type	Corrugated fin					
Evaporator	Type	Corrugated fin						
Blower	Type	Sirocco fan				*1: Manual A/C *2: AUTO A/C		
	Motor Input	220 W/12 V max.						
	Speed Control	4-speed*/Infinite variable*2						
	Max. Capacity	470 m <sup>3</sup> /h		16,600 cu-ft/h				
Temp. Control	Type	Air Mix						
Compressor Clutch	Type	Dry, single plate, poly-V belt drive						
	Power Consumption	40 W max/12 V 40 W max/12 V						
	SANDEN							
	DENSO							
Refrigerant	Type	HFC - 134a (R - 134a)						
	Quantity	500 - 550 g		18 - 19 oz				
STEERING SYSTEM	Type	Power assisted, rack and pinion						
	Overall Ratio	Except H22A7 engine model	15.50					
		H22A7 engine model	15.74					
	Turns, Lock-to-Lock	Except H22A7 engine model	3.02					
		H22A7 engine model	2.88					
	Steering Wheel Dia.		380 mm		15.0 in			

	ITEM		METRIC	ENGLISH	NOTES	
SUSPENSION	Type	Front	Independent double wishbone, coil spring with stabilizer			
		Rear	Independent double wishbone, coil spring with stabilizer			
	Shock Absorber	Front and Rear	Telescopic, hydraulic nitrogen gas-filled			
WHEEL ALIGNMENT	4-door	Camber	-0°15'			
		Front	0°00', 0°10'' <sup>*1</sup>			
		Rear	-1°15'			
			-1°00', -0°50'' <sup>*1</sup>			
		Caster	3°00'			
		Front	2°50', 2°45'' <sup>*1</sup>			
	5-door	Total Toe	Front	0 mm	0 in	
			Rear	In 2 mm	In 0.08 in	
		Camber	Front	0°00'		
			Rear	-1°00'		
		Caster	Front	2°50'		
		Total Toe	Front	0 mm	0 in	
			Front	In 2 mm	In 0.08 in	
			Rear			
BRAKE SYSTEM	Type	Front	Power-assisted self-adjusting ventilated disc		H22A7 engine model Except H22A7, D16B6 engine model D16B6 engine model Disk brake Drum brake	
		Rear	Power-assisted self-adjusting solid disc <sup>*2</sup>			
	Pad Surface Area	Front	Power-assisted self-adjusting drum <sup>*3</sup>			
			53.2 cm² x 2	8.25 sq-in x 2		
		47.6 cm² x 2	7.38 sq-in x 2			
	Lining Surface Area	Rear	40.0 cm² x 2	6.20 sq-in x 2		
			25.4 cm² x 2	3.94 sq-in x 2		
	Parking Brake	Type	86.8 cm² x 2	13.45 sq-in x 2		
		Mechanical actuating, rear two wheel brakes				
TIRE	Size and Pressure		See tire label			
WASHER RESERVOIR	Capacity ℓ (US qt, Imp qt)		4.5*8 (4.8, 4.0) 6.9*9 (7.3, 6.1)			
ELECTRICAL	Battery		*412 V - 47 AH - 20 HR			
			*512 V - 57 AH - 20 HR			
	Under-hood fuse/relay box		100 A, 50 A, 40 A, 30 A, 20 A, 15 A, 10 A, 7.5 A			
	Driver's under-dash fuse/relay box		30 A, 15 A, 10 A, 7.5 A			
	Passenger's under-dash fuse/relay box		30 A, 20 A, 7.5 A			
	Headlight high beam		12 V - 55 W			
	Headlight low beam		*612 V - 35 W *712 V - 55 W			
	Front turn signal lights		12 V - 21 W			
	Front parking lights		12 V - 5 W			
	Front fog lights		12 V - 55 W			
	Side turn signal lights		12 V - 5 W			
	Rear turn signal lights		12 V - 21 W			
	Brake lights		12 V - 21 W			
	Tail lights		12 V - 5 W			
	High mount brake light		12 V - 5 W			
	Back-up lights		12 V - 21 W			
	Rear fog light		12 V - 21 W			
	License plate lights		12 V - 5 W			
	Front ceiling light		12 V - 5 W			
	Rear ceiling light		12 V - 5 W			
	Trunk light		12 V - 5 W			
	Glove box light		12 V - 3.4 W			
	Spotlights		12 V - 5 W			
	Gauge lights		14 V - 1.12 W, 1.4 W, 3.0 W, 9.5 V - 1.1 W			
	Indicator lights		12 V - LED, 14 V - 0.84 W, 1.4 W			
	Panel and pilot lights		14 V - 0.84 W, 1.2 W			

\*1: KY model

\*2: Except B16B6 engine model

\*3: B16B6 engine model

\*4: CG7 (Vehicle type)

\*5: Except CG7 (Vehicle type)

\*6: With HID lamp

\*7: Without HID lamp

\*8: Without Headlight Washer

\*9: With Headlight Washer



## **Maintenance**

**Maintenance Schedule ..... 3-2**

# Maintenance Schedule

## European Model — Normal Conditions

Follow the Normal Maintenance Schedule if the severe driving conditions specified in the Severe Conditions Maintenance Schedule on pages 3-6 and 3-7 do not apply.

Service at the indicated distance or time whichever comes first.	km x 1,000	15	30	45	60	75	90	105	120	135	150	165	NOTES	SECTION and PAGE
	miles x 1,000	9	18	27	36	45	54	63	72	81	90	99		
	months	12	24	36	48	60	72	84	96	108	120	132		
Replace engine oil and oil filter		●	●	●	●	●	●	●	●	●	●	●		*18-7 to 8-10
Replace air cleaner element				●			●			●				*111-A-119
Inspect valve clearance				●			●			●			Check the valve clearance.	*16-A-3, *16-B-12, *16-C-9
Replace fuel filter								●						*111-A-105
Replace spark plugs	Normal type			●			●			●				*14-31
	Platinum type								●					
Replace timing belt, timing balancer belt and inspect water pump									●				Check water pump for signs of seal leakage.	*16-A-8, *16-B-18, *16-C-14, *10-17
Inspect and adjust drive belts				●			●			●			<ul style="list-style-type: none"> <li>• Check for cracks and damage.</li> <li>• Check deflection and tension.</li> </ul>	*14-46, 47, 48, *217-14, *222-53, 54
Inspect idle speed								●						*111-A-94 *111-B-65, *111-C-57
Replace engine coolant		200,000 km (120,000 miles) or 120 months, thereafter every 75,000 km (45,000 miles) or 60 months											Check specific gravity for freezing point.	*10-7 to 10-10
Replace transmission fluid	MT								●				Manual transmission: Genuine Honda MTF Automatic transmission: Genuine Honda ATF-Z1 (ATF)	*113-3, 57
	AT								● <sup>*3</sup>					*114-132
Inspect front and rear brakes		●	●	●	●	●	●	●	●	●	●	●	<ul style="list-style-type: none"> <li>• Check the brake pad and disc thickness. Check for damage or cracks.</li> <li>• Check the calipers for damage, leaks, and tightness.</li> </ul>	*219-A-4, 10, 12, 14, 15, 17, 26, 28, 30, 31
Replace brake fluid		Every 36 months											Use only DOT3 or DOT4** fluid. Check that brake fluid level is between the upper and lower marks on the reservoir.	*219-A-7
Check parking brake adjustment		●	●		●		●		●		●		Check the parking brake operation.	*219-A-6
Replace pollen filter		Every 30,000 km (18,000 miles) or 12 months												*222-39
Check lights alignment		●	●	●	●	●	●	●	●	●	●	●	Check the position of the headlights.	*223-D-9
Test drive (noise, stability, dashboard operation)		●	●	●	●	●	●	●	●	●	●	●	Check for road stability, noise, vibrations and dashboard operation.	—

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B

\*3: Replace at 120,000 km (72,000 miles) or 96 months, thereafter every 75,000 km (45,000 miles) or 60 months.

\*4: We recommend Genuine Honda Brake Fluid.



Service at the indicated distance or time whichever comes first.	km x 1,000	15	30	45	60	75	90	105	120	135	150	165	NOTES	SECTION and PAGE
	miles x 1,000	9	18	27	36	45	54	63	72	81	90	99		
	months	12	24	36	48	60	72	84	96	108	120	132		
Visually inspect the following items:													<ul style="list-style-type: none"> <li>• Check for correct installation and position, check for cracks, deterioration, rust, and leaks.</li> <li>• Check tightness of screws, nuts, and joints. If necessary, retighten.</li> </ul>	—
Tie rod ends, steering gearbox, and boots													<ul style="list-style-type: none"> <li>• Check rack grease and steering linkage.</li> <li>• Check the boot for damage and leaking grease.</li> <li>• Check the fluid line for damage and leaks.</li> </ul>	*217-13, 26
Suspension components													<ul style="list-style-type: none"> <li>• Check the bolts for tightness.</li> <li>• Check the all dust cover for deterioration and damage.</li> </ul>	*218-9, 10, 11, 20, 21, 22
Driveshaft boots													<ul style="list-style-type: none"> <li>• Check boots and boot band for cracks.</li> <li>• Check rack grease.</li> </ul>	*216-3
Brake hoses and lines (including ABS)													Check the master cylinder, proportioning control valve and ABS modulator for damage and leakage.	*219-A-3, 36
All fluid levels and condition of fluids	●	●	●	●	●	●	●	●	●	●	●	●	Check levels and check for leaks. If necessary, add transmission fluid, engine coolant, brake fluid, windshield washer fluid, and battery fluid.	*18-4, *110-5, *114-108, *115-4, *217-16, *219-8
Exhaust system													Check the catalytic converter heat shield, exhaust pipe and muffler for damage, leaks and tightness.	*19-9 to 9-12
Fuel lines and connections													Check fuel lines for loose connections, cracks and deterioration. Retighten loose connections and replace any damaged parts.	*111-A-95, *111-C-59
Tyre condition													Check for pressure, puncture or cuts and irregular thread wear.	—

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B



# Maintenance Schedule

## European Model — Severe Conditions

Service at the indicated distance or time whichever comes first.	km x 1,000	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105	112.5	120	NOTES	SECTION and PAGE
	miles x 1,000	4.5	9	13.5	18	22.5	27	31.5	36	40.5	45	49.5	54	58.5	63	67.5	72		
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96		
Replace engine oil and oil filter		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		*18-7 to 8-10
Clean (○) or replace (●) air cleaner element — Use normal schedule except in dusty conditions	Except 1.6 l			○			●			○			●			○			*11-A-119
	1.6 l			●			●			●			●			●			
Inspect valve clearance							●						●					Check the valve clearance.	*16-A-3, *16-B-12, *16-C-9
Replace fuel filter															●				*11-A-105
Replace spark plugs	Normal type						●						●						*14-31
	Platinum type																●		
Replace timing belt, timing balancer belt and inspect water pump																	*3 ●	Check water pump for signs of seal leakage.	*16-A-8, 6-B-18, 6-C-14, 10-17
Inspect and adjust drive belts							●						●					• Check for cracks and damage. • Check deflection and tension.	*14-46, 47, 48 *217-14, *22-53, 54
Inspect idle speed															●				*111-A-94 *111-B-65, *111-C-57
Replace engine coolant	200,000 km (120,000 miles) or 120 months, thereafter every 100,000 km (60,000 miles) or 60 months																	Check specific gravity for freezing point.	*110-7 to 10-10
Replace transmission fluid	MT								●								●	Manual transmission: Genuine Honda MTF Automatic transmission: Genuine Honda ATF-Z1 (ATF)	*113-3, 57
	AT								*5 ●						●				*114-132
Inspect front and rear brakes		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	• Check the brake pad and disc thickness. Check for damage or cracks. • Check the calipers for damage, leaks, and tightness.	*219-A-4, 10, 12, 14, 15, 17, 26, 28, 30, 31
Replace brake fluid	Every 36 months																	Use only DOT3 or DOT4*4 fluid. Check that brake fluid level is between the upper and lower marks on the reservoir.	*219-A-7
Check parking brake adjustment			●		●				●				●				●	Check the parking brake operation.	*219-A-6
Replace pollen filter	Every 30,000 km (18,000 miles) or 12 months																		*22-39
Check lights alignment			●		●		●		●		●		●		●		●	Check the position of the headlights.	*23-D-9
Test drive (noise, stability, dashboard operations)			●		●		●		●		●		●		●		●	Check for road stability, noise, vibrations and dashboard operation.	—

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B

\*3: These belts should normally be replace at the intervals shown in the maintenance schedule. (Normal Conditions)

Replace these belts at 75,000 km or 45,000 miles if you regularly drive your vehicle in one or more of these conditions.

• In very high temperatures [43°C (110°F) above]

• In very low temperatures [–29°C (–20°F) under]

\*4: We recommend Genuine Honda Brake Fluid.

\*5: Replace at 60,000 km (36,000 miles) or 48 months, thereafter every 45,000 km (27,000 miles) or 36 months

Service at the indicated distance or time whichever comes first.	km x 1,000	7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5	105	112.5	120	NOTES	SECTION and PAGE
	miles x 1,000	4.5	9	13.5	18	22.5	27	31.5	36	40.5	45	49.5	54	58.5	63	67.5	72		
	months	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96		
Visually inspect the following items:																		<ul style="list-style-type: none"><li>• Check for correct installation and position, check for cracks, deterioration, rust, and leaks.</li><li>• Check tightness of screws, nuts, and joints. If necessary, retighten.</li></ul>	_____
Tie rod ends, steering gearbox, and boots																		<ul style="list-style-type: none"><li>• Check rack grease and steering linkage.</li><li>• Check the boot for damage and leaking grease.</li><li>• Check the fluid line for damage and leaks.</li></ul>	*217-13, 26
Suspension components	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	<ul style="list-style-type: none"><li>• Check the bolts for tightness.</li><li>• Check the all dust cover for deterioration and damage.</li></ul>	*218-9, 10, 11, 20, 21, 22
Driveshaft boots																		<ul style="list-style-type: none"><li>• Check boots and boot band for cracks.</li><li>• Check rack grease.</li></ul>	*216-3
Brake hoses and lines (including ABS)																		Check the master cylinder, proportioning control valve and ABS modulator for damage and leakage.	*219-A-3, 36
All fluid levels and condition of fluids																		Check levels and check for leaks. If necessary, add transmission fluid, engine coolant, brake fluid, windshield washer fluid, and battery fluid.	*18-4, *10-5, *114-108, *115-4, *217-16, *219-8
Exhaust system		●		●		●		●		●		●		●		●		Check the catalytic converter heat shield, exhaust pipe and muffler for damage, leaks and tightness.	*19-9 to 9-12
Fuel lines and connections																		Check fuel lines for loose connections, cracks and deterioration. Retighten loose connections and replace any damaged parts.	*111-A-95 *111-C-59
Tyre condition																		Check for pressure, puncture or cuts and irregular thread wear.	_____

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B

Follow the Severe Maintenance Schedule if the customer's vehicle is driven MAINLY under one or more of the following conditions:

- Driving less than 8 km (5 miles) per trip or, in freezing temperatures, driving less than 16 km (10 miles) per trip.
- Driving in extremely hot [over 32°C, (90°F)] conditions.
- Extensive idling or long periods of stop-and-go driving.
- Trailer towing, driving with a car-top carrier, or driving in mountainous conditions.
- Driving on muddy, dusty, or de-iced roads.

NOTE: If the customer's vehicle is driven OCCASIONALLY under severe condition, you should follow the Normal Conditions Maintenance Schedule on pages 3-4 and 3-5.





## **Maintenance**

**Maintenance Schedule** KY Model ..... 3-2

# Maintenance Schedule

KY Model

Follow the Normal Maintenance Schedule if the severe driving conditions specified in the Severe Conditions Maintenance Schedule on pages 3-6 and 3-7 do not apply.

Service at the indicated distance or time whichever comes first.	km x 1,000	20	40	60	80	100	120	140	160	180	200	NOTES	SECTION and PAGE
	miles x 1,000	12	24	36	48	60	72	84	96	108	120		
	months	12	24	36	48	60	72	84	96	108	120		
Replace engine oil and oil filter		Every 5,000 km (3,000 miles) or 6 months											*18-7 to 8-10
Replace air cleaner element		Clean: Every 10,000 km (6,000 miles) or 6 months Replace: Every 20,000 km (12,000 miles) or 12 months											*111-A-119
Inspect valve clearance		●	●	●	●	●	●	●	●	●	●	Check the valve clearance.	*16-B-12
Replace fuel filter			●		●		●		●		●		*111-A-105
Replace spark plugs		●	●	●	●	●	●	●	●	●	●		*14-31
Replace timing belt, timing balancer belt and inspect water pump						●					●	Check water pump for signs of seal leakage.	*16-B-18, *110-17
Inspect and adjust drive belts			●		●		●		●		●	• Check for cracks and damage. • Check deflection and tension.	*14-47, 48, *217-14, *222-54
Inspect idle speed and idle CO		●	●	●	●	●	●	●	●	●	●		*111-B-65, *111-B-67
Replace engine coolant		200,000 km (120,000 miles) or 120 months, thereafter every 100,000 km (60,000 miles) or 60 months										Genuine Honda All Season Antifreeze/ Coolant Type 2	*110-7, 8
Replace transmission fluid	MT						●					Manual transmission: Genuine Honda MTF	*113-57
	AT						● <sup>*3</sup>				●	Automatic transmission: Genuine Honda ATF-Z1 (ATF)	*114-132
Inspect front and rear brakes		Every 10,000 km (6,000 miles) or 6 months										• Check the brake pad and disc thickness. Check for damage or cracks. • Check the calipers for damage, leaks, and tightness.	*219-A-4, 10, 14, 15, 26, 28, 30, 31
Replace brake fluid		Every 36 months										Use only DOT3 or DOT4 <sup>**4</sup> fluid. Check that brake fluid level is between the upper and lower marks on the reservoir.	*219-A-7
Check parking brake adjustment		●	●		●		●		●		●	Check the parking brake operation.	*219-A-6

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B

\*3: If you only occasionally drive under conditions, you should follow at the interval.

• Driving in extremely hot [over 32°C, (90°F)] conditions.

• Trailer towing, driving with a car – top carrier, or driving in mountainous conditions.

MT: Replace every 60,000 km (36,000 miles) or 36 months.

AT: Replace at 60,000 km (36,000 miles) or 36 months, thereafter every 40,000 km (24,000 miles) or 24 months.

\*4: We recommend Genuine Honda Brake Fluid.

Service at the indicated distance or time whichever comes first.	km x 1,000	20	40	60	80	100	120	140	160	180	200	NOTES	SECTION and PAGE
	miles x 1,000	12	24	36	48	60	72	84	96	108	120		
	months	12	24	36	48	60	72	84	96	108	120		
Inspect distributor cap, rotor and ignition wiring			●		●		●		●		●		*14-24, 29
Inspect PCV valve			●		●		●		●		●		*11-B, 65
Inspect ignition timing			●		●		●		●		●		*14-23
Inspect evaporative emission control system						●					●		*11-B-80
Visually inspect the following items:												<ul style="list-style-type: none"> <li>• Check for correct installation and position, check for cracks, deterioration, rust, and leaks.</li> <li>• Check tightness of screws, nuts, and joints. If necessary, retighten.</li> </ul>	—
Tie rod ends, steering gearbox, and boots	Every 10,000 km (6,000 miles) or 6 months											<ul style="list-style-type: none"> <li>• Check rack grease and steering linkage.</li> <li>• Check the boot for damage and leaking grease.</li> <li>• Check the fluid line for damage and leaks.</li> </ul>	*217-13, 26
Suspension components												<ul style="list-style-type: none"> <li>• Check the bolts for tightness.</li> <li>• Check the all dust cover for deterioration and damage.</li> </ul>	*218-9, 10, 11, 20, 21, 22
Driveshaft boots												<ul style="list-style-type: none"> <li>• Check boots and boot band for cracks.</li> <li>• Check rack grease.</li> </ul>	*216-3
Brake hoses and lines (including ABS)												Check the master cylinder, proportioning control valve and ABS modulator for damage and leakage.	*219-A-3, 36
All fluid levels and condition of fluids	●	●	●	●	●	●	●	●	●	●	●	Check levels and check for leaks. If necessary, add transmission fluid, engine coolant, brake fluid, windshield washer fluid, and battery fluid.	*18-4, *110-4, *114-108, *113-3, *217-17, *219-A-9
Exhaust system												Check the catalytic converter heat shield, exhaust pipe and muffler for damage, leaks and tightness.	*19-10
Fuel lines and connections												Check fuel lines for loose connections, cracks and deterioration. Retighten loose connections and replace any damaged parts.	*11-A-95, *11-C-59
Cooling system hoses and connection												Check for pressure, puncture or cuts and irregular thread wear.	—

\*1: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 1 Code No. 62S1A00A

\*2: Refer to shop manual: 99 Accord MAINTENANCE, REPAIR and CONSTRUCTION VOL. 2 Code No. 62S1A00B



## Engine Electrical



**Special Tool ..... 4-2**

### **Ignition System**

**Component Location Index ..... 4-3**

**Circuit Diagram ..... 4-4**

**Ignition Timing Inspection ..... 4-5**

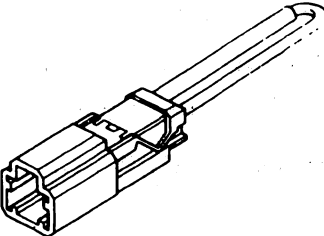
**Spark Plug Inspection ..... 4-6**

### **Outline of Model Changes**

- Ignition system has been changed.
- F23Z5 engine has been added. For related information, refer to the F18B2 engine information in the 1999 Accord Shop Manual (P/N: 62S1A00A).

# Special Tools

Ref. No.	Tool Number	Description	Qty	Remark
①	07PAZ – 0010100	SCS Short Connector	1	

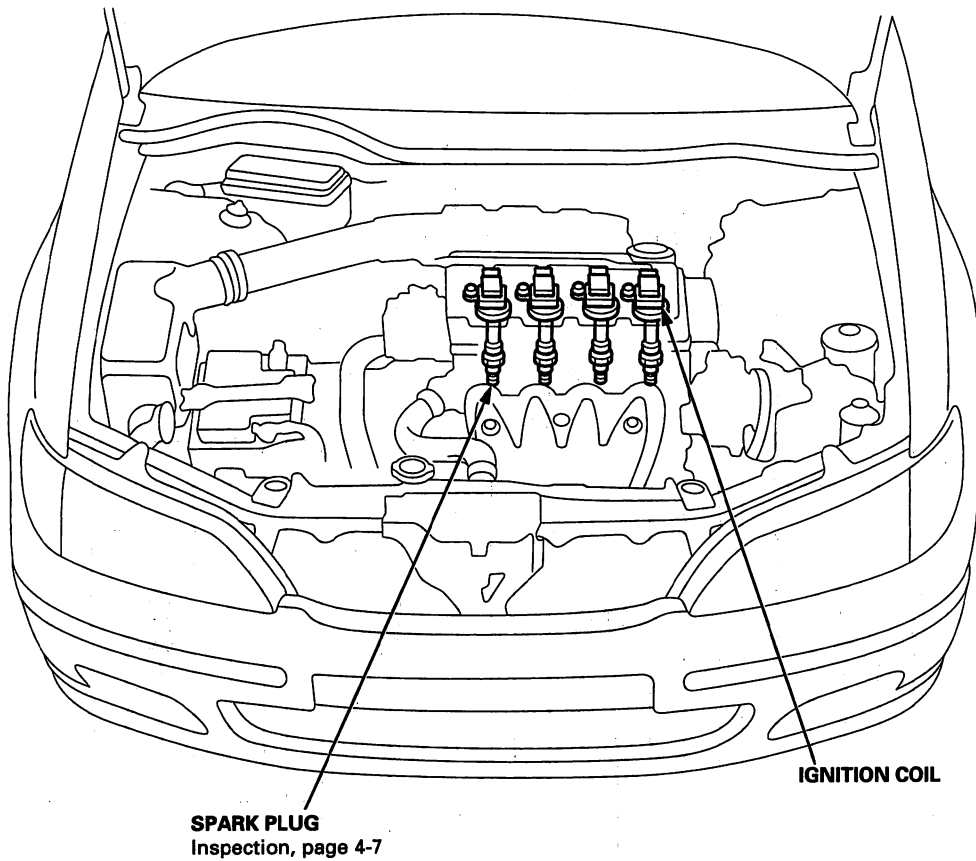


①



## Component Location Index

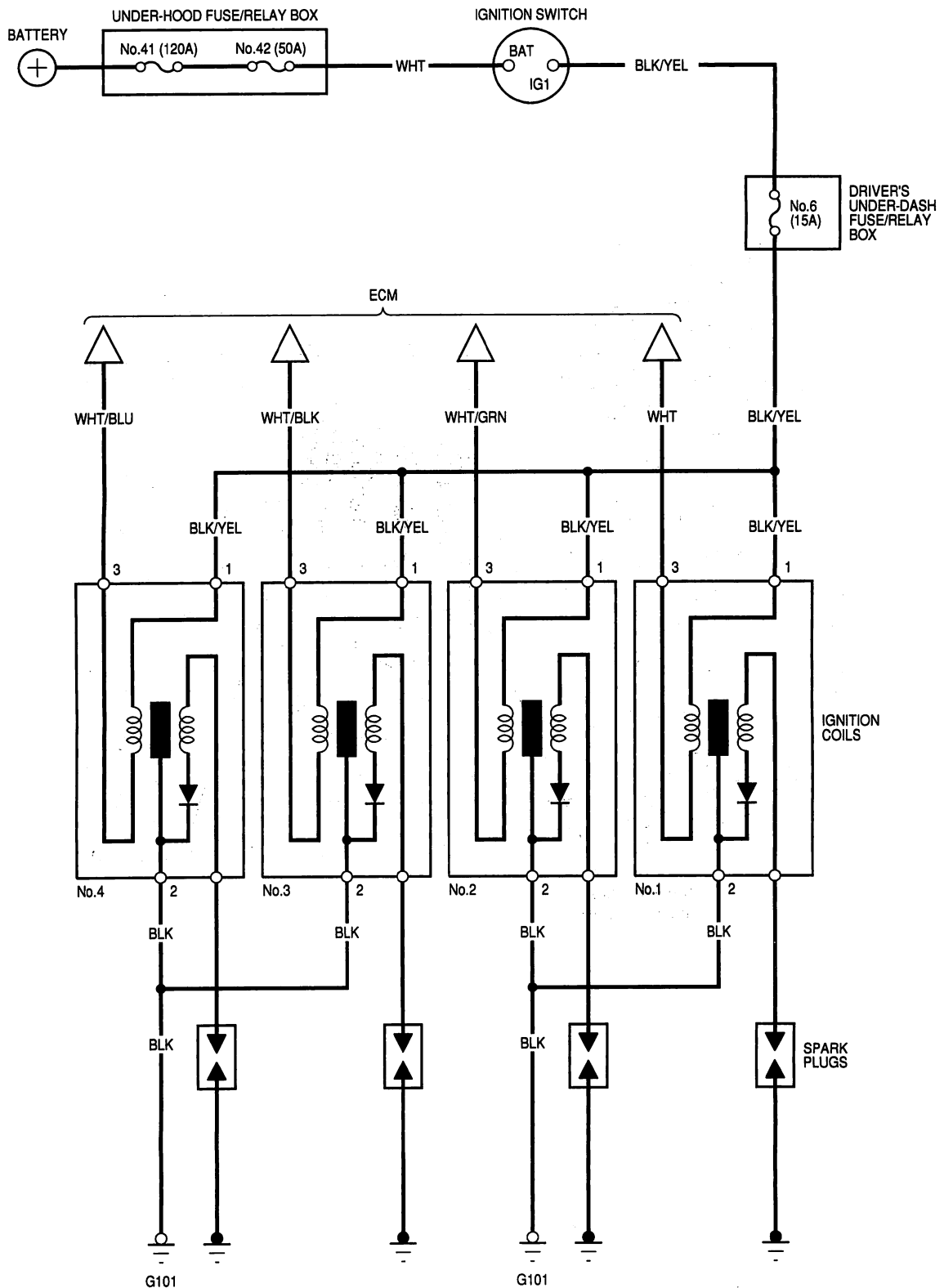
D16B6, D16B7 engines:



# Ignition System

## Circuit Diagram

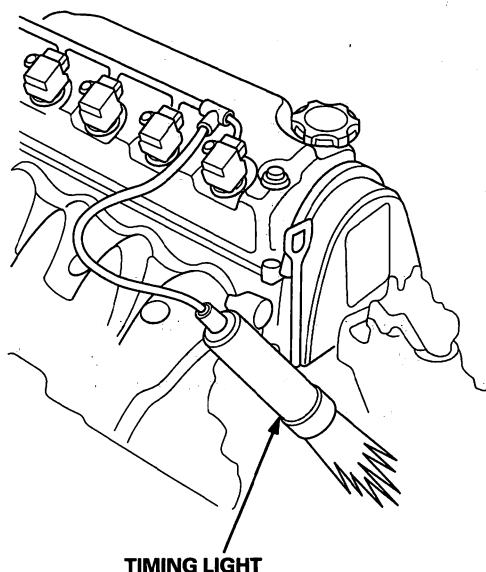
D16B6, D16B7 engines :



## Ignition Timing Inspection

### B16B6, B16B7 engines:

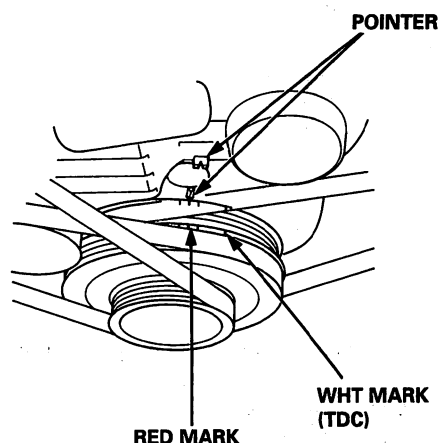
1. Start the engine. Hold the engine at 3,000 rpm ( $\text{min}^{-1}$ ) with no load, shift lever in neutral until the radiator fan comes on, then let it idle.
2. Check the idle speed, and adjust it if necessary (see section 11).
3. Pull out the service check connector 2P (GRN/BLK and BRN wires) from the connector holder located under the dash on the front passenger side, then connect the SCS short connector (T/N 07PAZ - 0010100) to it.
4. Connect the timing light to the No. 1 ignition coil wire, then point the light toward the pointer on the timing belt cover.



5. Check the ignition timing under no load conditions; headlights, blower fan, rear window defogger, and air conditioner are not operating. If the ignition timing differs from the specification below, replace the ECM (see section 11).

### Ignition Timing:

**$12^\circ \pm 2^\circ$  BTDC (RED) during idling in neutral**



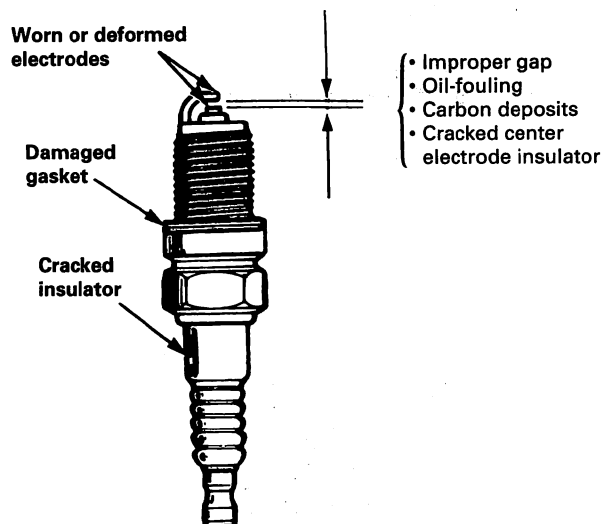
6. Disconnect the SCS short connector from the service check connector.

# Ignition System

## Spark Plug Inspection

Except H22A7 engine:

1. Inspect the electrodes and ceramic insulator for:



**Burned or worn electrodes may be caused by:**

- Advanced ignition timing
- Loose spark plug
- Plug heat range too hot
- Insufficient cooling

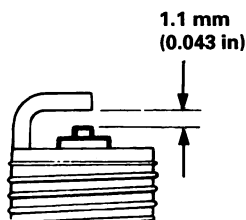
**Fouled plug may be caused by:**

- Retarded ignition timing
- Oil in combustion chamber
- Incorrect spark plug gap
- Plug heat range too cold
- Excessive idling/low speed running
- Clogged air cleaner element
- Deteriorated ignition coil or ignition wires

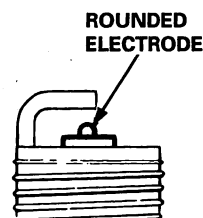
2. Check the electrode gap.
  - Adjust the gap with a suitable gapping tool.

### Electrode Gap

Standard	1.1 $\pm$ 0.1 mm (0.043 $\pm$ 0.004 in)
----------	---



- Replace the plug if the center electrode is rounded as shown below:



### Spark Plugs

Engine Type	Spark Plug Type
D16B6 D16B7 F18B3	ZFR5F-11 (NGK) KJ16CR-L11 (DENSO)
F18B2 F20B6 F23Z5	ZFR6F-11 KJ20CR-L11

3. Apply a small quantity of anti-seize compound to the plug threads, and screw the plugs into the cylinder head finger-tight. Then torque them to 18 N·m (1.8 kgf·m, 13 lbf·ft).

## Engine

### Cylinder Head

**D16B6, D16B7 engines ..... 6-A-1**

### Engine Block

**F18B2, F18B3, F20B6,  
H22A7 engines ..... 7-B-1**

**Intake Manifold/Exhaust System ..... 9-1**

**Cooling ..... 10-1**

NOTE: F23Z5 engine has been added. For related maintenance, repair information, refer to the F18B2 engine information in the 1999 Accord Shop Manual (P/N: 62S1A00A), and changed specifications (see Specifications section).



## Cylinder Head

**CYL Sensor  
Replacement ..... 6-A-2**



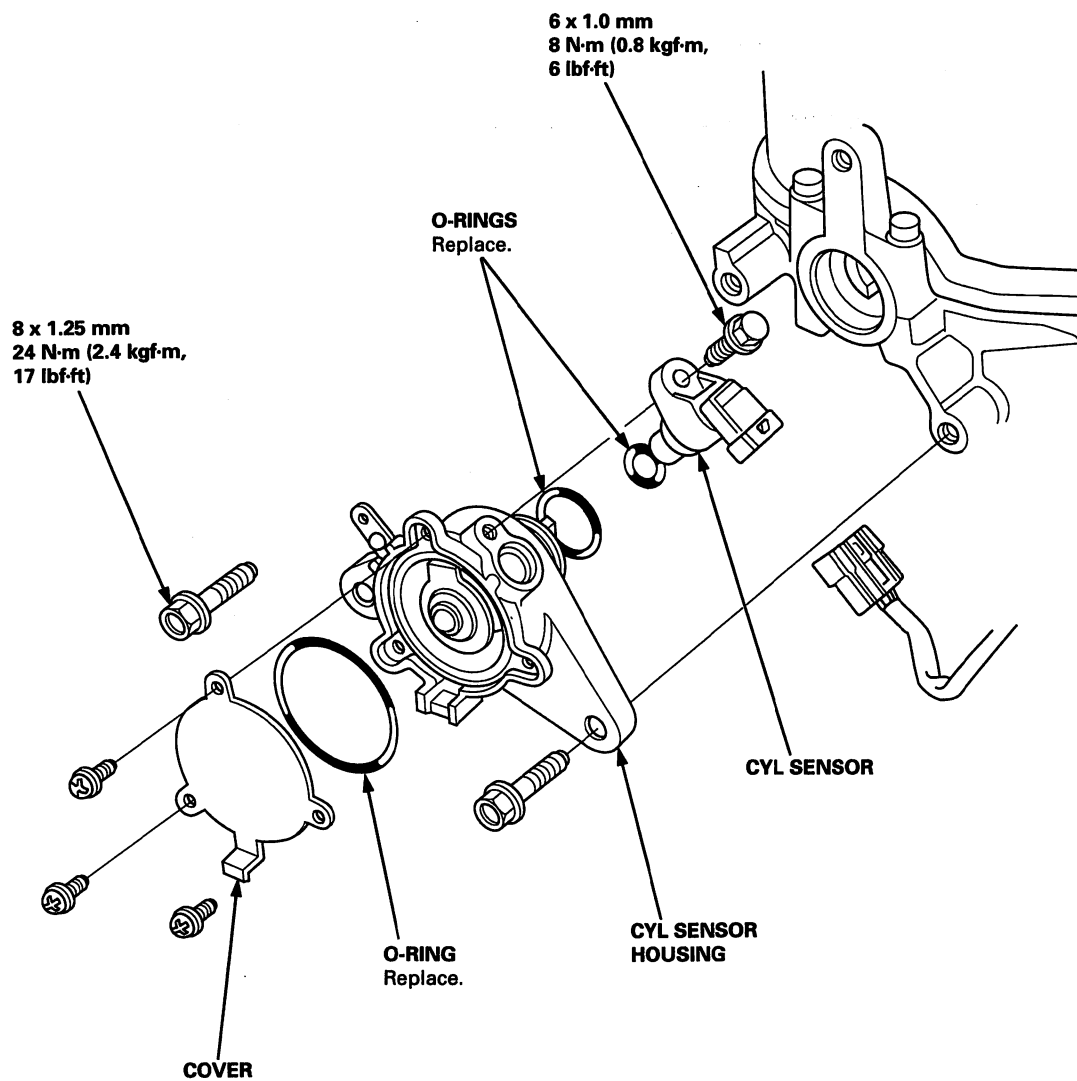
### Outline of Model Change

The CYL sensor has been adopted on the D16B6, D16B7 engines.

# CYL Sensor

## Replacement

NOTE: Use new O-rings when reassembling.



## **Engine Block F18B2, F18B3, F20B6, F23Z5, H22A7 engines**

### **Main Bearing**

**Selection ..... 7-B-2**

### **Pistons**

**Inspection ..... 7-B-4**



### **Outline of Model Changes**

- Main bearing identification has been changed.
- Piston diameter has been changed.
- F23Z5 engine has been added. For related maintenance, repair information, refer to the F18B2 engine information in the 1999 Accord Shop Manual (P/N: 62S1A00A), and changed Specifications (see Specifications section).



# Main Bearings

## Selection

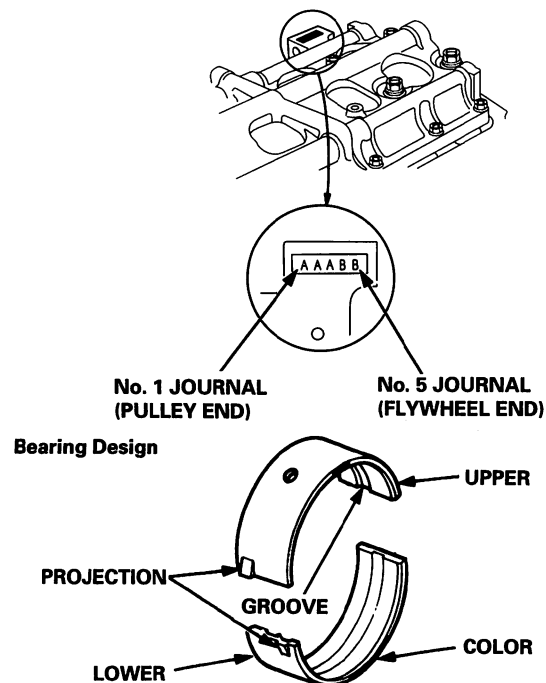
Except H22A7 engine:

NOTE: If the codes are indecipherable because of an accumulation of dirt and dust, do not scrub them with a wire brush or scraper. Clean them only with solvent or detergent.

### Crankshaft Bore Code Location

Numbers or Letters or Bars have been stamped on the end of the block as a code for the size of each of the 5 main journal bores.

Use them, and the numbers stamped on the crankshaft (codes for main journal size), to choose the correct bearings.



### No. 1 and 2 journals:

#### Bearing Identification

Color code is on the edge of the bearing.

1 or I
2 or II
3 or III
4 or IIIL
5 or IIIL
6 or IIIL

Smaller main journal  
Smaller bearing (Thicker)

Larger crank bore			
1 or A or I	2 or B or II	3 or C or III	4 or D or IIIL

#### Smaller bearing (Thicker)

Pink	Pink	Pink/Yellow	Yellow
Pink	Pink/Yellow	Yellow	Yellow/Green
Pink/Yellow	Yellow	Yellow/Green	Green
Yellow	Yellow/Green	Green	Green/Brown
Yellow/Green	Green	Green/Brown	Brown
Green	Green/Brown	Brown	Brown/Black

NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.

### No. 3 journal:

#### Bearing Identification

Color code is on the edge of the bearing.

1 or I
2 or II
3 or III
4 or IIIL
5 or IIIL
6 or IIIL

Smaller main journal  
Smaller bearing (Thicker)

Larger crank bore			
1 or A or I	2 or B or II	3 or C or III	4 or D or IIIL

#### Smaller bearing (Thicker)

Pink/Yellow	Yellow	Yellow/Green	Green
Yellow	Yellow/Green	Green	Green/Brown
Yellow/Green	Green	Green/Brown	Brown
Green	Green/Brown	Brown	Brown/Black
Green/Brown	Brown	Brown/Black	Black
Brown	Brown/Black	Black	Black/Blue

NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.



## No. 4 journal:

### Bearing Identification

Color code is on the edge of the bearing.

→ Larger crank bore

1 or A or I	2 or B or II	3 or C or III	4 or D or IIII
-------------	--------------	---------------	----------------

→ Smaller bearing (Thicker)

Yellow	Yellow/ Green	Green	Green/ Brown
Yellow/ Green	Green	Green/ Brown	Brown
Green	Green/ Brown	Brown	Brown/ Black
Green/ Brown	Brown	Brown/ Black	Black
Brown	Brown/ Black	Black	Black/ Blue
Brown/ Black	Black	Black/ Blue	Blue

1 or I
2 or II
3 or III
4 or IIII
5 or IIIII
6 or IIIIII

Smaller  
main  
journal

Smaller  
bearing  
(Thicker)

NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.

## No. 5 journal:

### Bearing Identification

Color code is on the edge of the bearing.

→ Larger crank bore

1 or A or I	2 or B or II	3 or C or III	4 or D or IIII
-------------	--------------	---------------	----------------

→ Smaller bearing (Thicker)

Pink	Pink/ Yellow	Yellow	Yellow/ Green
Pink/ Yellow	Yellow	Yellow/ Green	Green
Yellow	Yellow/ Green	Green	Green/ Brown
Yellow/ Green	Green	Green/ Brown	Brown
Green	Green/ Brown	Brown	Brown/ Black
Green/ Brown	Brown	Brown/ Black	Black

1 or I
2 or II
3 or III
4 or IIII
5 or IIIII
6 or IIIIII

Smaller  
main  
journal

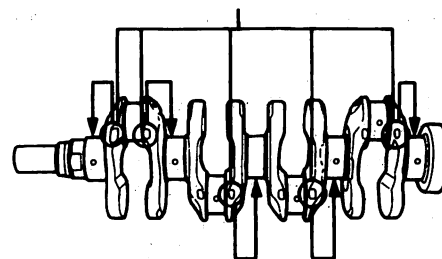
Smaller  
bearing  
(Thicker)

NOTE: When using bearing halves of different colors, it does not matter which color is used in the top or bottom.

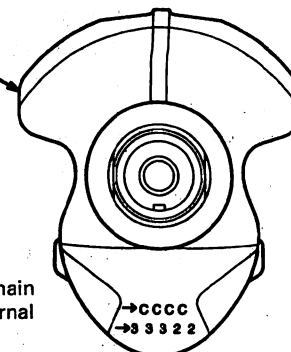
## Main Journal Code Locations (Numbers or Bars)

The Main Journal Codes are stamped in one of the following locations.

### Main Journal Code Locations (Numbers or Bars)



### No. 1 CRANK WEB



Arrows point to No. 1 main and connecting rod journal codes.

# Pistons

## Inspection

1. Check the piston for distortion or cracks.  
NOTE: If the cylinder is bored, an oversized piston must be used.

2. Measure the piston diameter at a point A from the bottom of the skirt.

### Point A:

**F18B2, F18B3, F20B6, F23Z5 engines:** 16 mm (0.6 in)

**H22A7 engine:** 15 mm (0.6 in)

NOTE: There are two standard-size pistons (No Letter or A, and B). The letter is stamped on the top of the piston. Letters are also stamped on the block as cylinder bore sizes.

### Piston Diameter:

**F18B2, F18B3, F20B6 engines:**

#### Standard (New):

**No Letter (A):** 84.980 – 84.990 mm  
(3.3457 – 3.3461 in)

**B:** 84.970 – 84.980 mm  
(3.3453 – 3.3457 in)

#### Service Limit:

**No Letter (A):** 84.970 mm (3.3453 in)

**B:** 84.960 mm (3.3449 in)

#### F23Z5 engine:

##### Standard (New):

**No Letter (A):** 85.980 – 85.990 mm  
(3.3850 – 3.3854 in)

**B:** 85.970 – 85.980 mm  
(3.3846 – 3.3850 in)

#### Service Limit:

**No Letter (A):** 85.970 mm (3.3846 in)

**B:** 85.960 mm (3.3842 in)

#### H22A7 engine:

##### Standard (New):

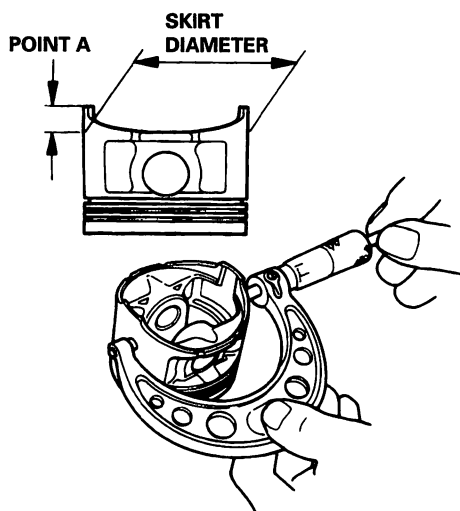
**No Letter (A):** 86.993 – 87.006 mm  
(3.4249 – 3.4254 in)

**B:** 86.983 – 86.996 mm  
(3.4245 – 3.4250 in)

#### Service Limit:

**No Letter (A):** 86.980 mm (3.4244 in)

**B:** 86.970 mm (3.4240 in)



3. Calculate the difference between the cylinder bore diameter and piston diameter.

### Piston-to-Cylinder Clearance:

**F18B2, F18B3, F20B6 engines:**

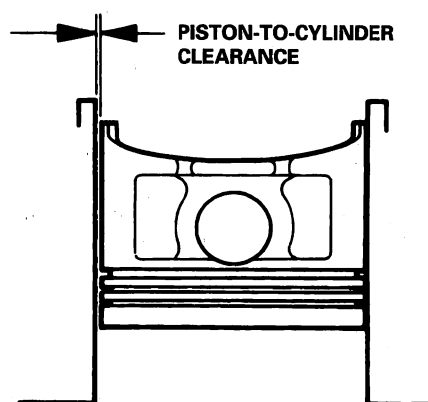
**Standard (New):** 0.020 – 0.040 mm  
(0.0008 – 0.0016 in)

**Service Limit:** 0.05 mm (0.002 in)

**H22A7 engine:**

**Standard (New):** 0.004 – 0.027 mm  
(0.0002 – 0.0011 in)

**Service Limit:** 0.04 mm (0.002 in)



If the clearance is near or exceeds the service limit, inspect the piston and cylinder block for excessive wear.

### Oversize Piston Diameter:

**F18B2, F18B3, F20B6 engines:**

**0.25:** 85.230 – 85.240 mm (3.3555 – 3.3559 in)

**F23Z5 engine:**

**0.25:** 86.230 – 86.240 mm (3.3949 – 3.3953 in)

**H22A7 engine:**

**0.25:** 87.233 – 87.246 mm (3.4344 – 3.4349 in)

## **Intake Manifold/Exhaust System**

### **Exhaust Pipe and Muffler**

**Replacement ..... 9-2**



#### **Outline of Model Changes**

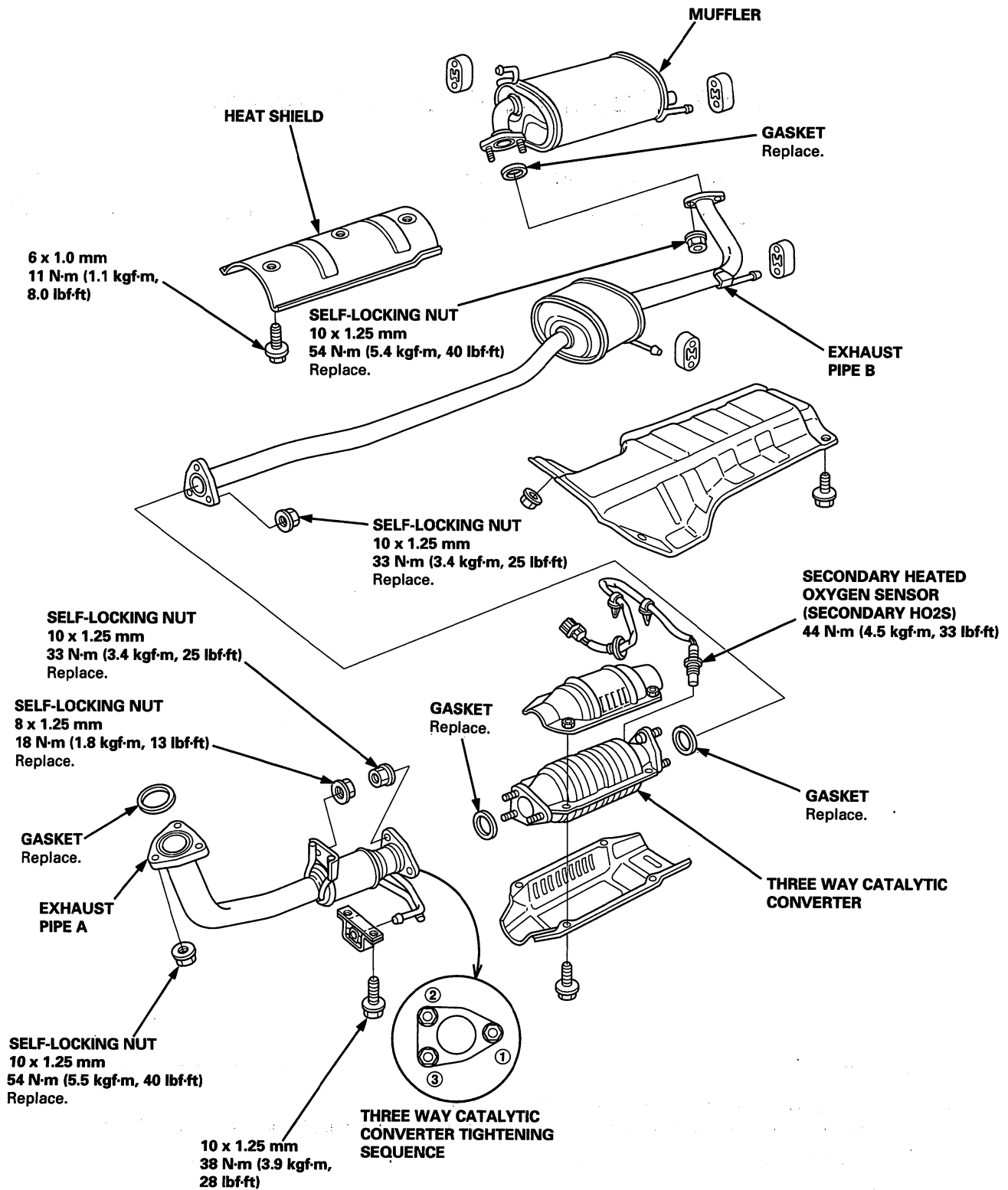
- Secondary heated oxygen sensor has been adopted on D16B6, D16B7 engines.
- F23Z5 engine has been added. For related information refer to the F18B2 engine information in the 2000 Accord Shop Manual (P/N: 62S1A24).

# Exhaust Pipe and Muffler

## Replacement

NOTE: Use new gaskets and self-locking nuts when reassembling.

D16B6, D16B7 engines:



## Cooling

### Radiator

### Engine Coolant Refilling and Bleeding ..... 10-2



#### Outline of Model Change

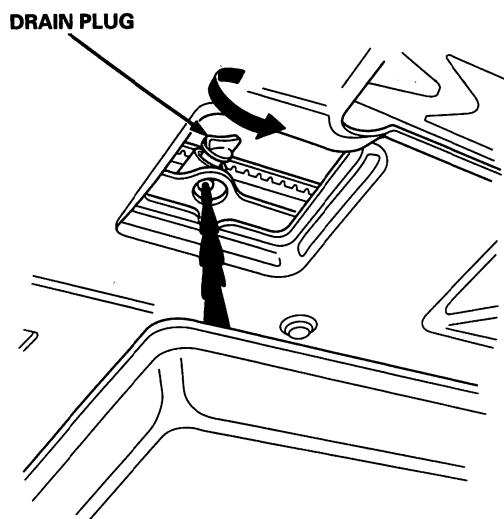
Engine Coolant has been changed.

# Radiator

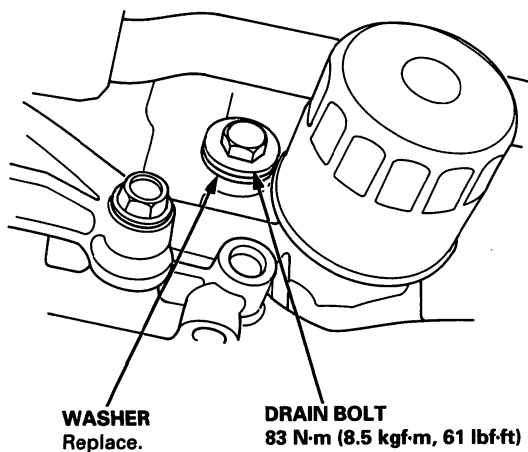
## Engine Coolant Refilling and Bleeding

Except H22A7 engine:

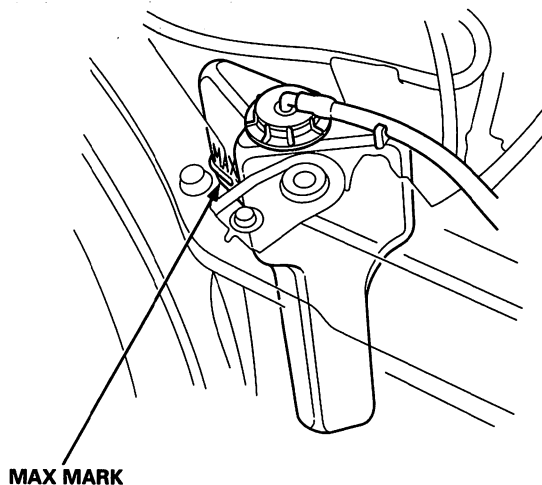
1. Start the engine. Set the heater temperature control dial to maximum heat, then turn off the engine. Make sure the engine and radiator are cool to the touch.
2. Remove the radiator cap.
3. Loosen the drain plug, and drain the coolant.



4. Remove the drain bolt from the rear side of the cylinder block.



5. Apply liquid gasket to the drain bolt threads, then reinstall the bolt with a new washer and tighten it securely.
6. Tighten the radiator drain plug securely.
7. Remove drain and reinstall the reservoir. Fill the tank to the MAX mark with genuine Honda All Season Antifreeze/Coolant Type 2.





8. Pour genuine Honda All Season Antifreeze/Coolant Type 2 into the radiator up to the base of the filler neck.

**NOTE:**

- Always use genuine Honda All Season Antifreeze/Coolant Type 2. Using a non-Honda coolant can result in corrosion, causing the cooling system to malfunction or fail.
- Genuine Honda All Season Antifreeze/Coolant Type 2 is a mixture of 50% antifreeze and 50% water. Pre-mixing is not required.

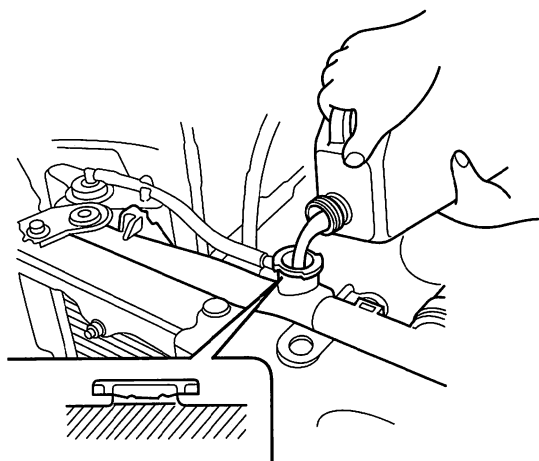
**Engine Coolant Refill Capacity [including reservoir (0.55 ℓ (0.58 US qt, 0.48 Imp qt))]:**

**D16B6, D16B7 engines: 3.9 ℓ (4.1 US qt, 3.4 Imp qt)**

**F18B2, F18B3, F20B6, F23Z5 engines:**

**M/T: 4.2 ℓ (4.4 US qt, 3.7 Imp qt)**

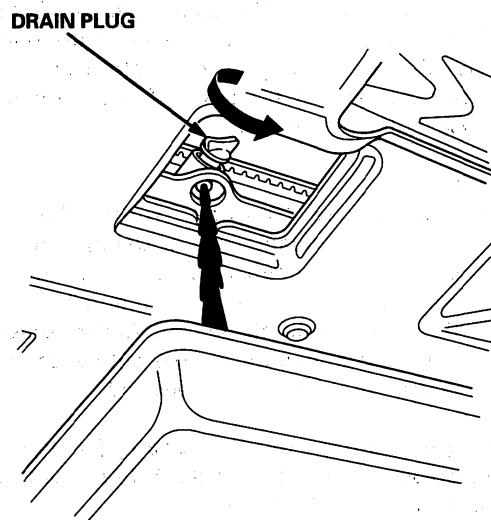
**A/T: 4.1 ℓ (4.3 US qt, 3.6 Imp qt)**



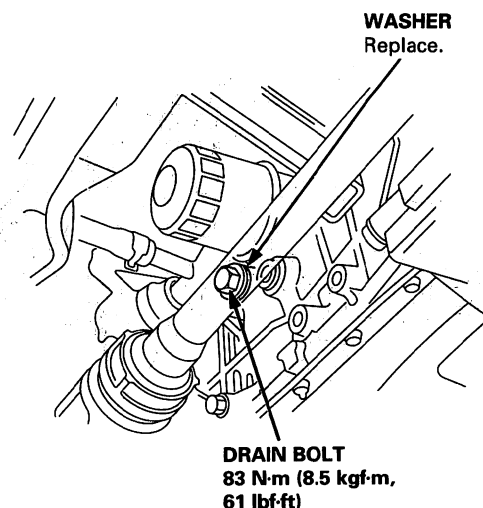
9. Install the radiator cap loosely.
10. Start the engine and let it run until it warms up (the radiator fan comes on at least twice).
11. Turn off the engine. Check the level in the radiator, and add genuine Honda All Season Antifreeze/Coolant Type 2 if needed.
12. Put the radiator cap on tightly, then run the engine again and check for leaks.

**H22A7 engine:**

1. Start the engine. Set the heater temperature control dial to maximum heat, then turn off the engine. Make sure the engine and radiator are cool to the touch.
2. Remove the radiator cap.
3. Loosen the drain plug, and drain the coolant.



4. Remove the drain bolt from the rear side of the cylinder block.



(cont'd)



# Radiator

## Engine Coolant Refilling and Bleeding (cont'd)

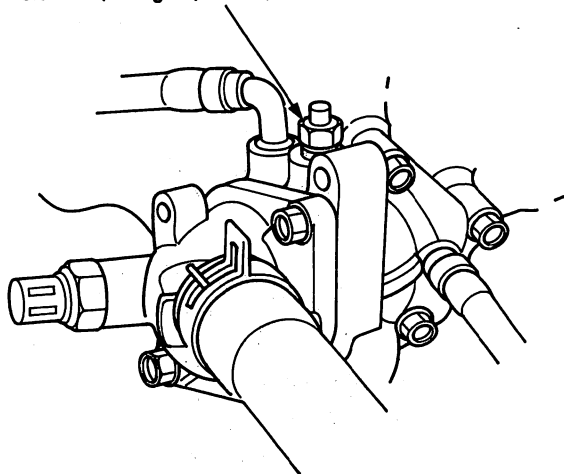
5. After the coolant has drained, apply liquid gasket to the drain bolt threads, then reinstall the bolt with a new washer and tighten it securely.
6. Tighten the radiator drain plug securely.
7. Remove, drain and reinstall the reservoir. Fill the tank to the MAX mark with genuine Honda All Season Antifreeze/Coolant Type 2.
8. Loosen the air bleed bolt in the thermostat housing, then pour genuine Honda All Season Antifreeze/Coolant Type 2 into the radiator to the bottom of the filler neck. Do not let coolant spill on any electrical parts or the paint. If any coolant spills, rinse it off immediately.

### NOTE:

- Always use Genuine Honda All Season Antifreeze/Coolant Type 2. Using a non-Honda coolant can result in corrosion, causing the cooling system to malfunction or fail.
- Genuine Honda All Season Antifreeze/Coolant Type 2 is a mixture of 50% antifreeze and 50% water. Pre-mixing is not required.

**Engine Coolant Refill Capacity [including the reservoir capacity of 0.55 l (0.58 US qt, 0.48 Imp qt)]:**  
**3.5 l (3.5 US qt, 2.9 Imp qt)**

**BLEED BOLT**  
**9.8 N·m (1.0 kgf-m, 7 lbf-ft)**



9. Tighten the bleed bolt as soon as coolant starts to run out in a steady stream.
10. With the radiator cap off, start the engine and let it run until warmed up (radiator fan comes on at least twice). Then, if necessary, add more genuine Honda All Season Antifreeze/Coolant Type 2 to bring the level back up to the bottom of the filler neck.
11. Put the radiator cap on tightly, then run the engine again and check for leaks.

## **Fuel and Emissions**

**F18B2, F18B3, F23Z5 engine ..... 11-B-1**

**D16B6 engine ..... 11-C-1**



## **F18B2, F18B3, F23Z5 engine**



### **Outline of Model Change**

F23Z5 engine has been added. For related information, refer to the F18B2 engine information in the 2000 Accord/Accord 5 Door Shop Manual (P/N: 62S1A24).

## D16B6 engine

**Special Tools ..... 11-C-2**

### **Fuel and Emissions Systems**

**Component Locations Index ..... 11-C-3**

**Vacuum Distribution ..... 11-C-6**

**ECM Circuit Diagram ..... 11-C-7**

### **General Troubleshooting Information**

**How to Use the PGM Tester or a Scan Tool ..... 11-C-29**

**How to Reset the ECM ..... 11-C-30**

**How to End a Troubleshooting Session ..... 11-C-30**

**How to Substitute the ECM for Testing  
Purposes ..... 11-C-30**

**How to Connect the ECM Test Harness and  
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### **PGM-FI System**

**System Description ..... 11-C-44**

**DTC Troubleshooting ..... 11-C-45**

**MIL Circuit Troubleshooting ..... 11-C-92**

**Heated Oxygen Sensor Replacement ..... 11-C-98**

### **Idle Control System**

**DTC Troubleshooting ..... 11-C-99**

### **Emission Control System**

**DTC Troubleshooting ..... 11-C-102**

**Evaporative Emission (EVAP) Control  
System Inspection ..... 11-C-107**

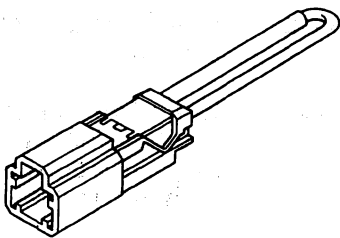


### **Outline of Model Changes**

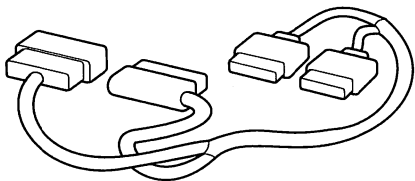
- The ECM has been changed.
- The Secondary Heated Oxygen Sensor (Secondary HO2S) has been added.
- The Crankshaft Position (CKP) Sensor has been changed.
- The Cylinder Position (CYP) Sensor has been added.
- The Ignition System has been changed.

## Special Tools

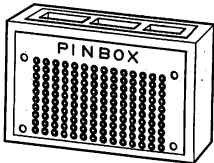
Ref. No	Tool Number	Description	Qty	Remark
①	07PAZ – 0010100	SCS Short Connector	1	
②	07XAZ – S1A0300	ECM Test Harness	1	
③	07XAZ – 0010100	Test Pin Box (Pin Box 130 Seem)	1	



①



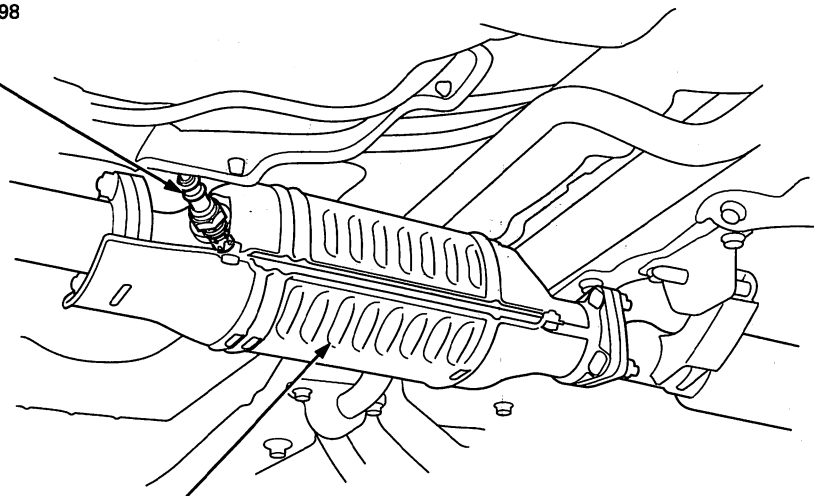
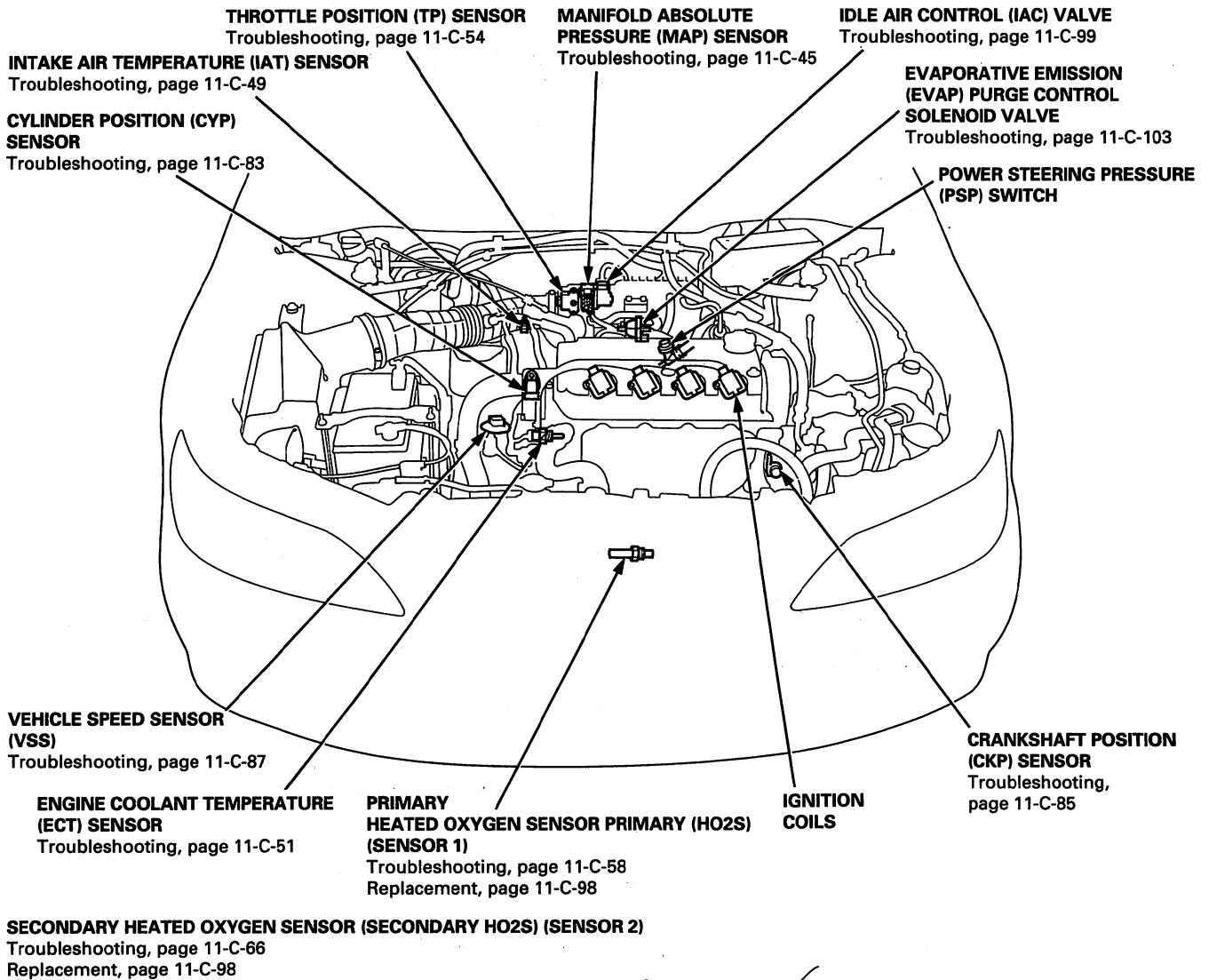
②



③



## Component Location Index



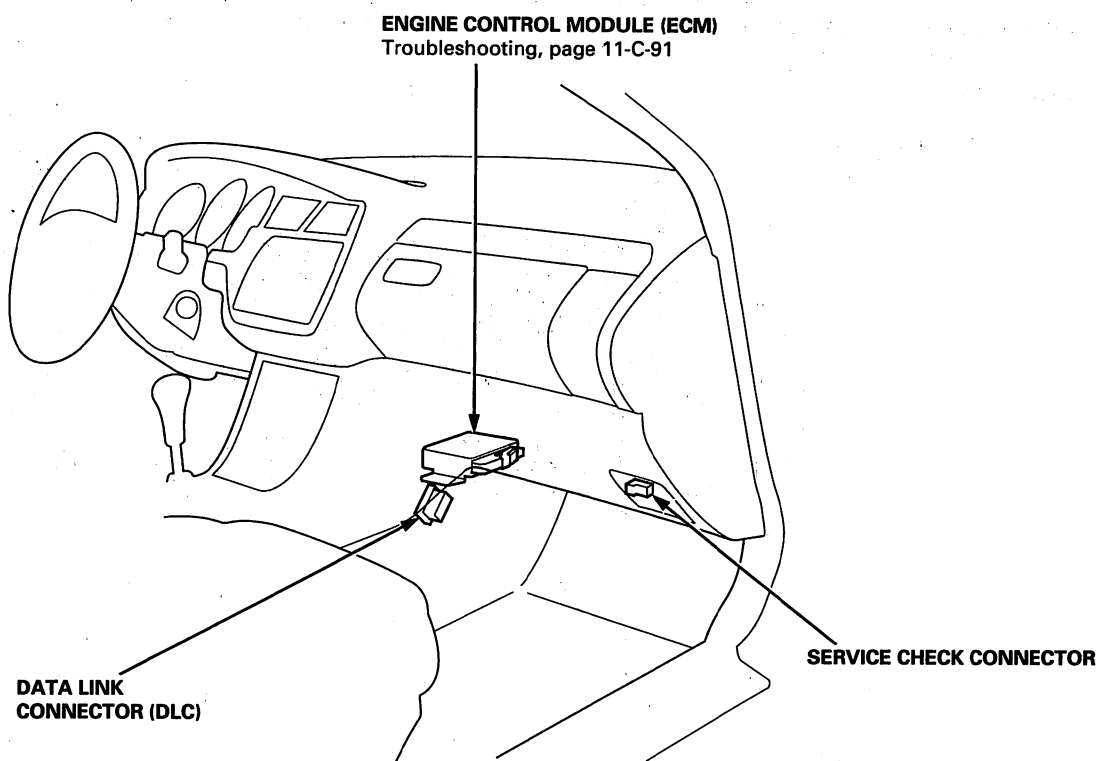
**THREE WAY CATALYTIC CONVERTER (TWC)**

(cont'd)

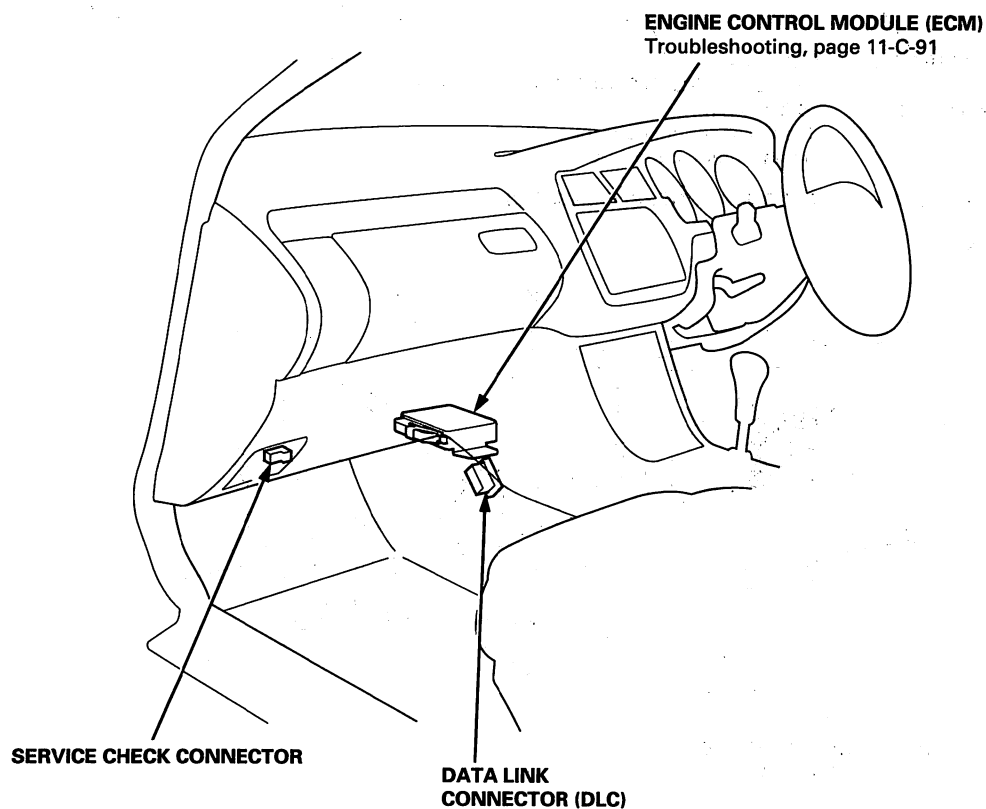
# Fuel and Emissions Systems

## Component Location Index (cont'd)

LHD:

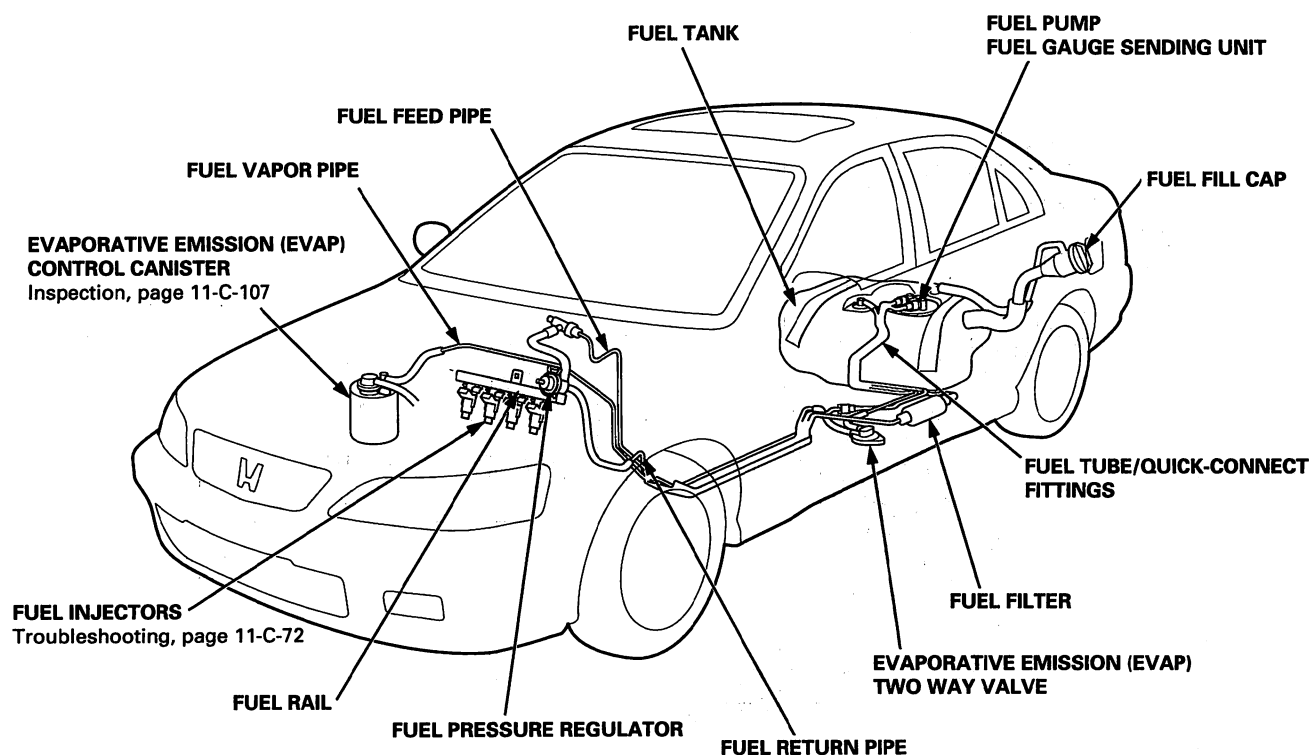


RHD:

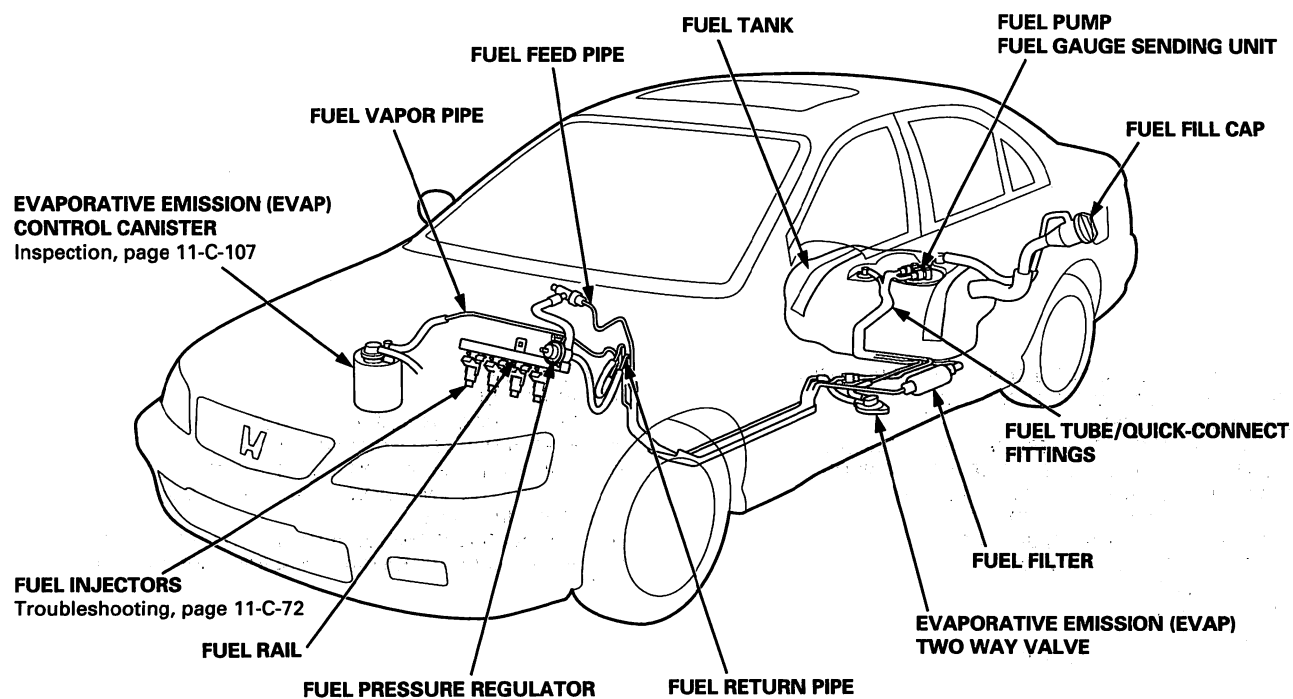




**LHD:**



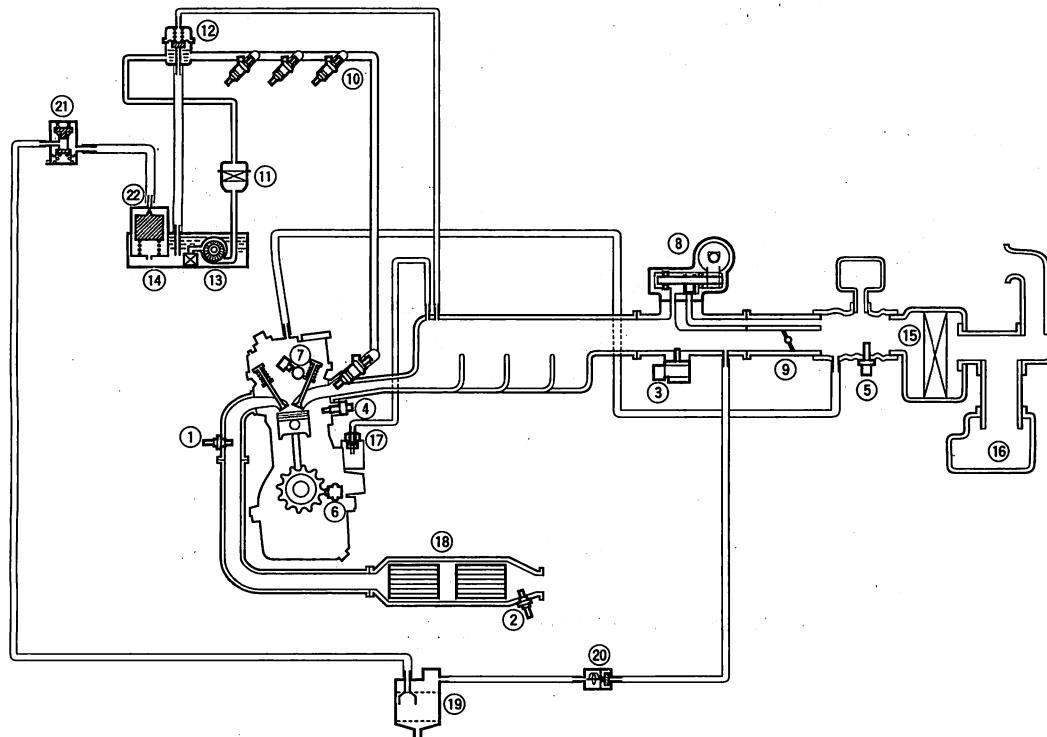
**RHD:**





# Fuel and Emissions Systems

## Vacuum Distribution

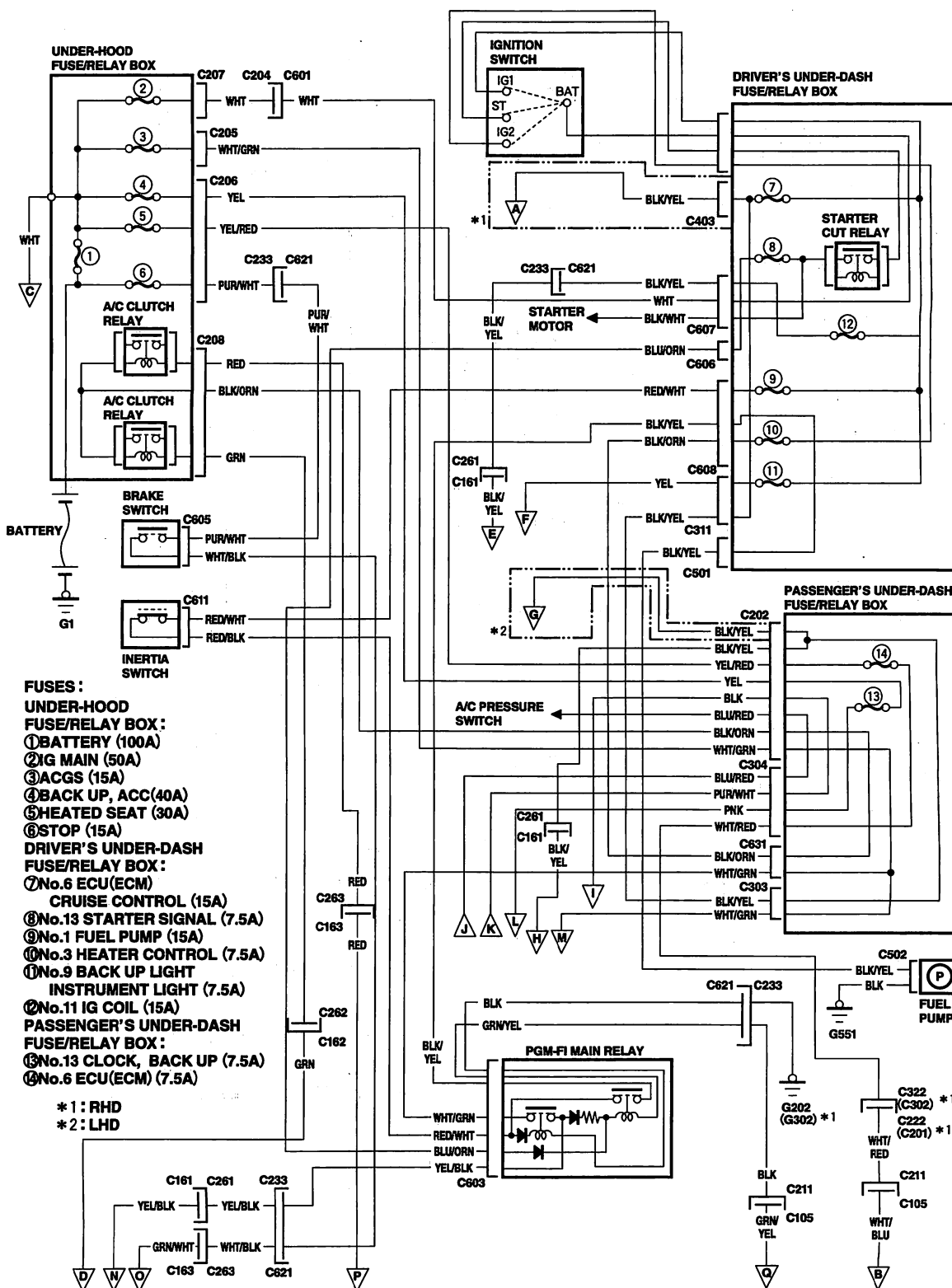


- ① PRIMARY HEATED OXYGEN SENSOR (PRIMARY HO2S)
- ② SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S)
- ③ MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR
- ④ ENGINE COOLANT TEMPERATURE (ECT) SENSOR
- ⑤ INTAKE AIR TEMPERATURE (IAT) SENSOR
- ⑥ CRANKSHAFT POSITION (CKP) SENSOR
- ⑦ CYLINDER POSITION (CYP) SENSOR
- ⑧ IDLE AIR CONTROL (IAC) VALVE
- ⑨ THROTTLE BODY
- ⑩ FUEL INJECTOR
- ⑪ FUEL FILTER
- ⑫ FUEL PRESSURE REGULATOR
- ⑬ FUEL PUMP
- ⑭ FUEL TANK

- ⑮ AIR CLEANER
- ⑯ RESONATOR
- ⑰ POSITIVE CRANKCASE VENTILATION (PCV) VALVE
- ⑱ THREE WAY CATALYTIC CONVERTER
- ⑲ EVAPORATIVE EMISSION (EVAP) CONTROL CANISTER
- ⑳ EVAPORATIVE EMISSION (EVAP) PURGE CONTROL SOLENOID VALVE
- ㉑ EVAPORATIVE EMISSION (EVAP) TWO WAY VALVE
- ㉒ FUEL TANK EVAPORATIVE EMISSION (EVAP) VALVE



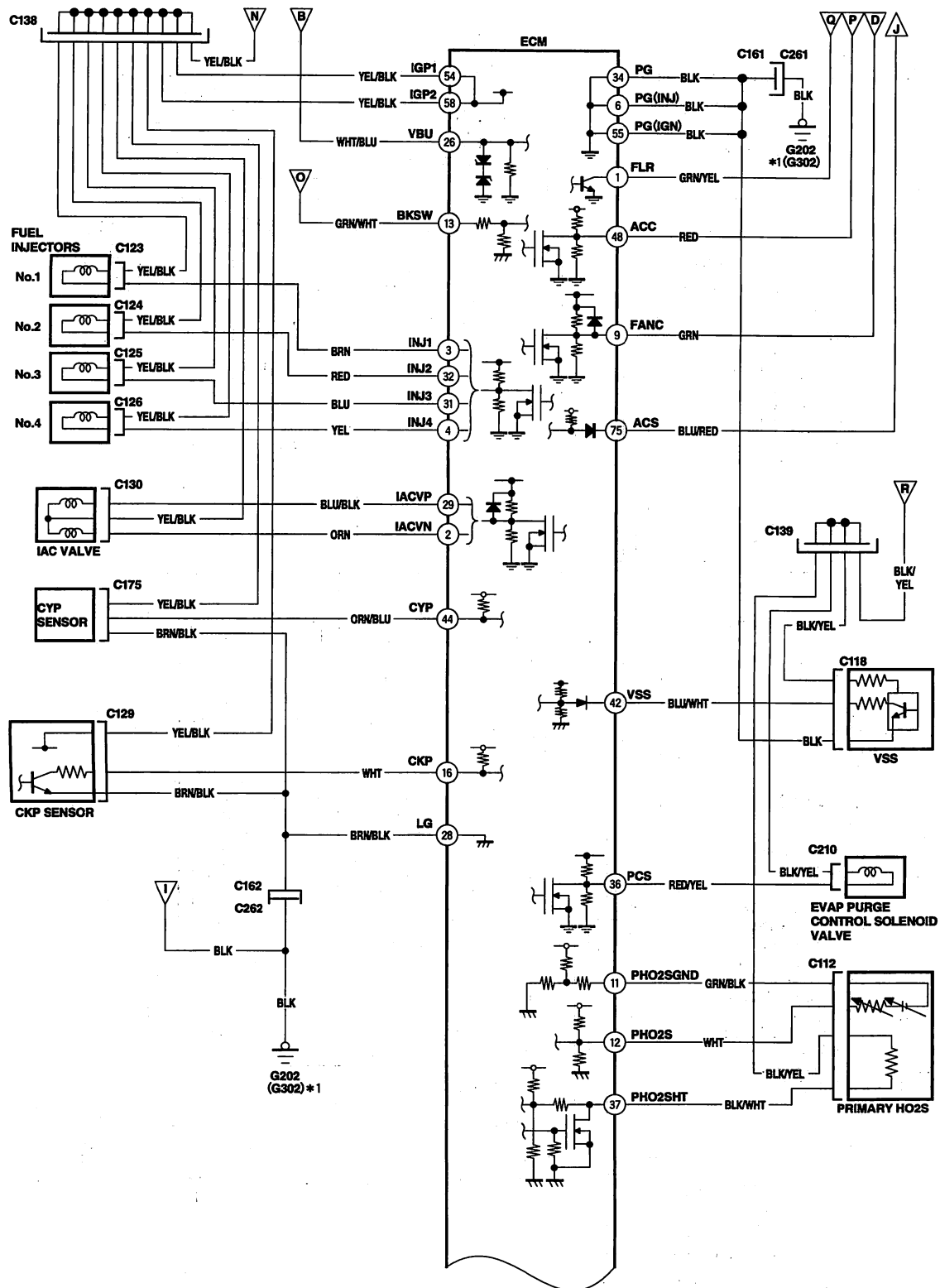
## ECM Circuit Diagram

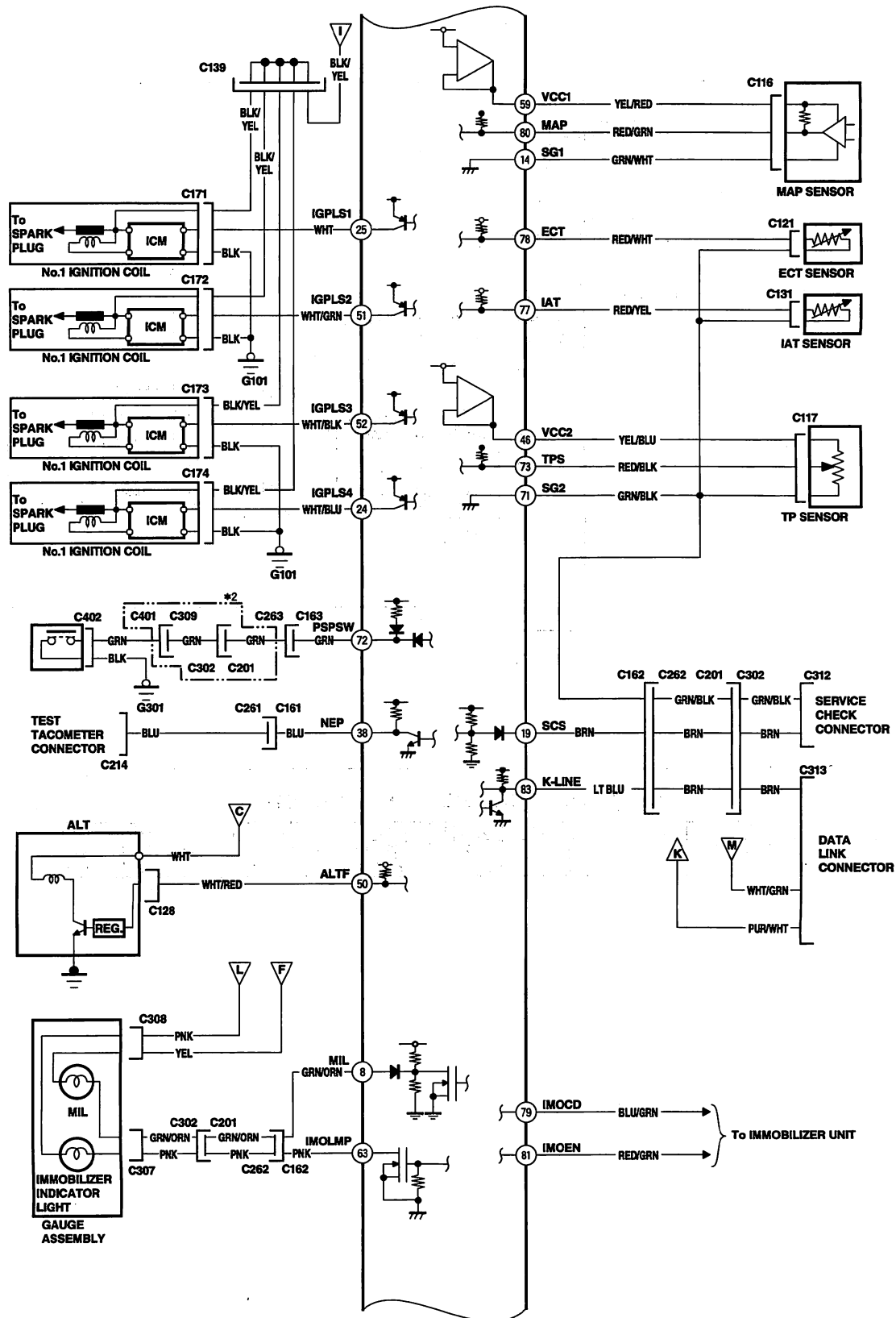


(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

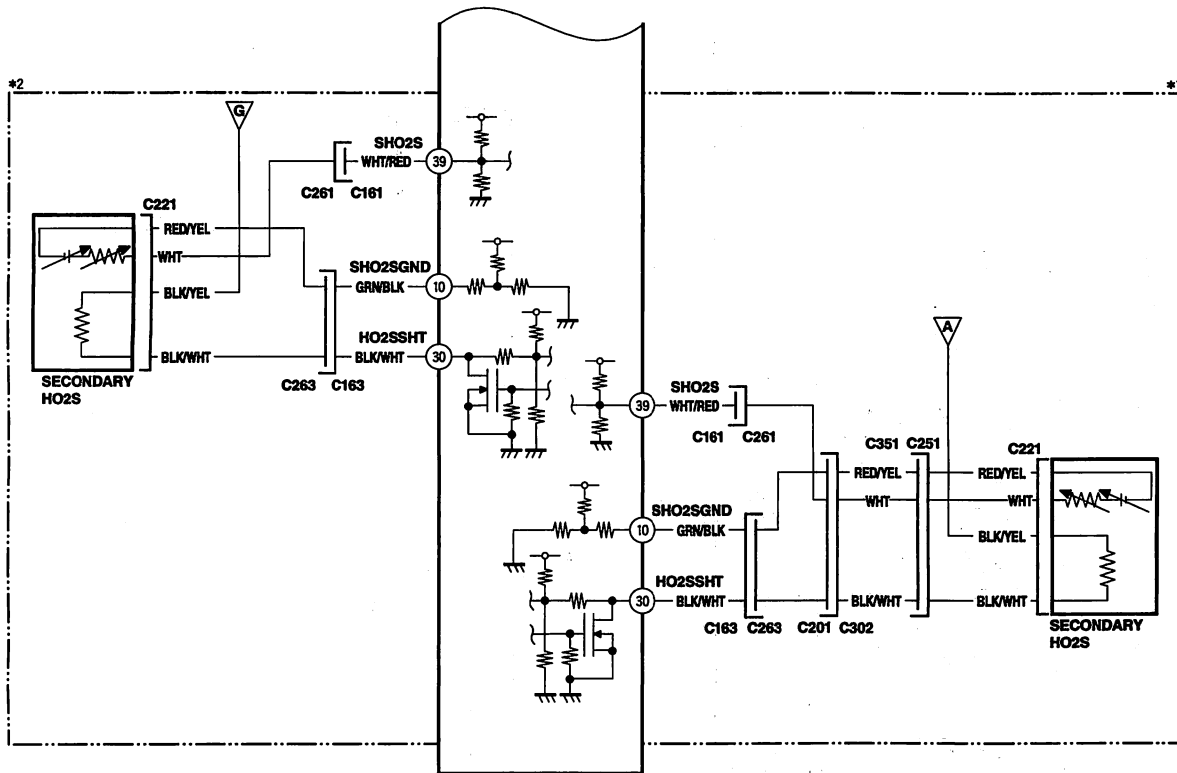




(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

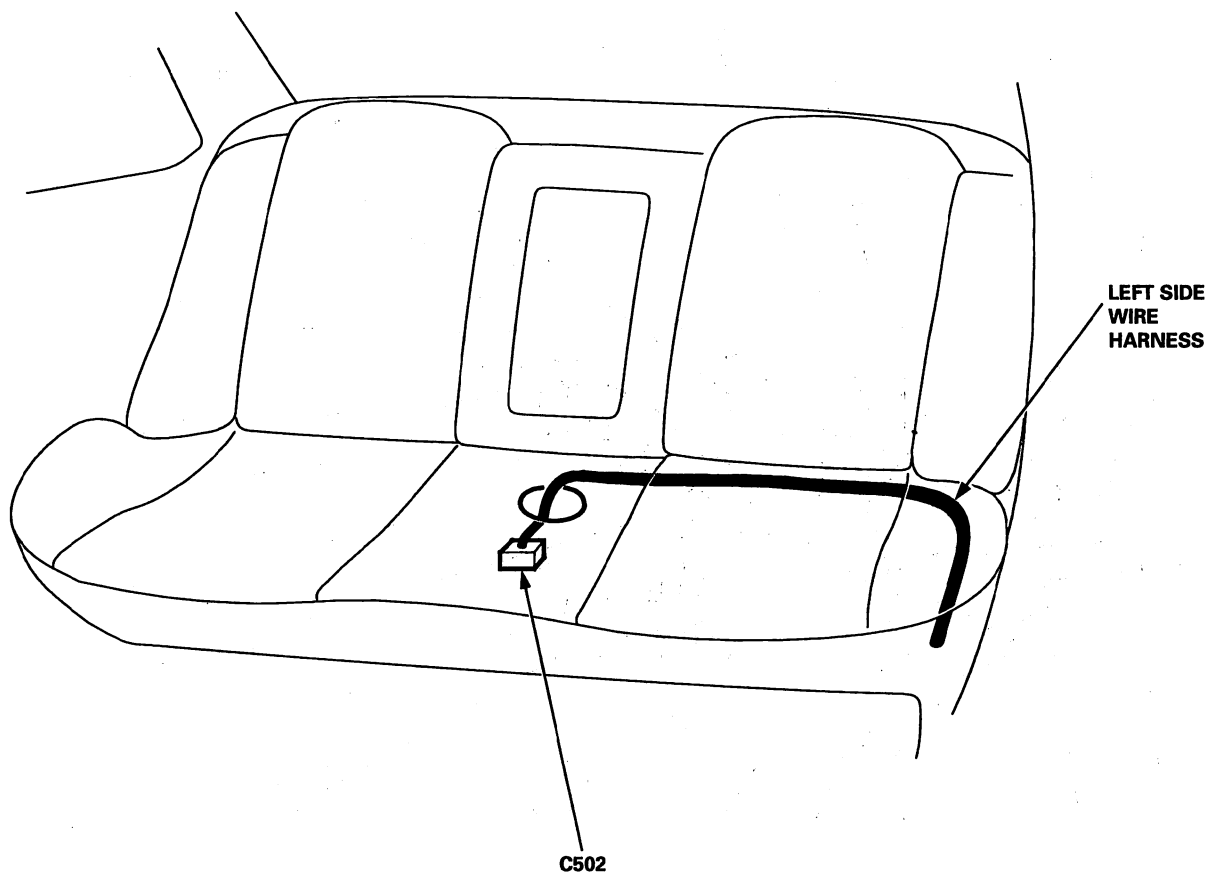


### ECM CONNECTOR TERMINAL LOCATIONS

55	54	52	51	50	83	81	80	79	78	77	75	73	72	71	39	38	37	36	34	63	59	58	32	31	30	29
28	26	25	24							19	16	14	13	12	11	10	9	8	6		4	3	2	1		



**Fuel Pump (LHD)**



**C502**



①	BLK/YEL
②	BLK
3	BLK
4	YEL/BLU

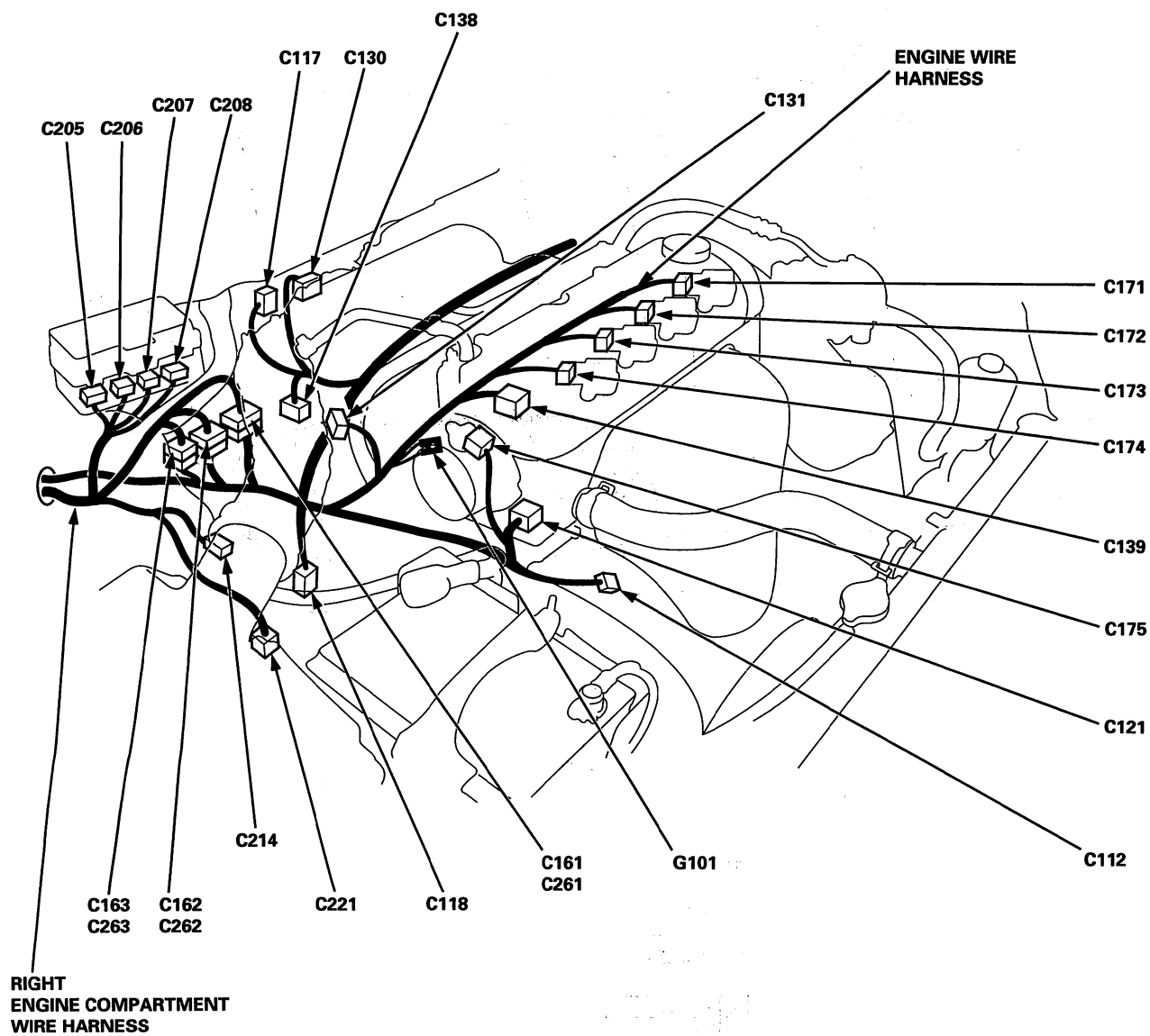
- NOTE:** ● ○: Related to Fuel and Emissions System.
- Connector with male terminals (double outline): View from terminal side
  - Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Engine Compartment (LHD)





C112



①	BLK/WHT
②	BLK/YEL
③	GRN/BLK
④	WHT

C117



①	RED/BLK
②	GRN/BLK
③	YEL/BLU

C118



①	BLK/YEL
②	BLK
③	BLU/WHT

C121



①	GRN/BLK
②	RED/WHT

C130



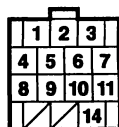
①	BLK/BLU
②	YEL/BLK
③	ORN

C131



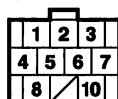
①	GRN/BLK
②	RED/YEL

C138



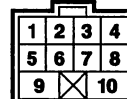
①	YEL/BLK	⑧	YEL/BLK
②	YEL/BLK	⑨	YEL/BLK
③	YEL/BLK	⑩	YEL/BLK
④	YEL/BLK	⑪	YEL/BLK
⑤	YEL/BLK	12	—
⑥	YEL/BLK	13	—
⑦	YEL/BLK	⑬	YEL/BLK

C139



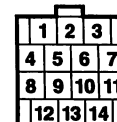
①	BLK/YEL	⑥	BLK/YEL
②	BLK/YEL	⑦	BLK/YEL
③	BLK/YEL	⑧	BLK/YEL
④	BLK/YEL	9	—
⑤	BLK/YEL	⑩	BLK/YEL

C161



①	WHT/RED	⑥	GRN/YEL
②	WHT/BLU	7	WHT/BLU
③	BLK/YEL	⑧	BLK
④	YEL/BLK	9	BLK/WHT
⑤	BLU	⑩	BLK/YEL

C162



①	BRN/BLK	⑧	PNK
2	YEL/GRN	⑨	LT BLU
③	GRN/BLK	⑩	GRN/ORN
4	BLU/WHT	⑪	BRN
5	GRN/BLK	⑫	GRN
6	YEL	13	BLU/GRN
7	YEL/RED	14	ORN/BLU

C163



①	RED
②	GRN
③	BLK/WHT
4	BLU/RED
⑤	GRN/WHT
⑥	GRN/BLK

C171



①	BLK/YEL
②	BLK
③	WHT

C172



①	BLK/YEL
②	BLK
③	WHT/GRN

C173



①	BLK/YEL
②	BLK
③	WHT/BLK

C174



①	BLK/YEL
②	BLK
③	WHT/BLU

C175



①	YEL/BLK
②	ORN/BLU
③	BRN/BLK

C205



1	RED/WHT	10	—
2	—	11	LT GRN/BLU
3	RED/YEL	12	—
4	RED/WHT	13	BLU/RED
5	—	14	—
6	PUR/WHT	15	—
7	—	16	—
8	—	⑰	WHT/GRN
9	BLU/RED	18	—

C206



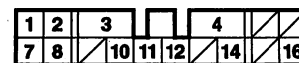
1	WHT/BLU
2	YEL/GRN
③	YEL/RED
4	WHT/GRN
⑤	PUR/WHT
6	GRN
⑦	YEL

C207



1	YEL/BLK
②	WHT
3	WHT/GRN

C208



①	BLK/ORN	9	—
2	RED/WHT	10	WHT
3	BLU/BLK	11	RED
4	BLU/YEL	⑫	GRN
5	—	13	—
6	—	14	BLK
7	RED	15	—
8	BLK/ORN	16	BLK/ORN

C214



1	—
②	BLU

C221



①	RED/YEL
②	WHT
③	BLK/WHT
④	BLK/YEL

NOTE: ● ○: Related to Fuel and Emissions System.

- Connector with male terminals (double outline): View from terminal side
- Connector with female terminals (single outline): View from wire side

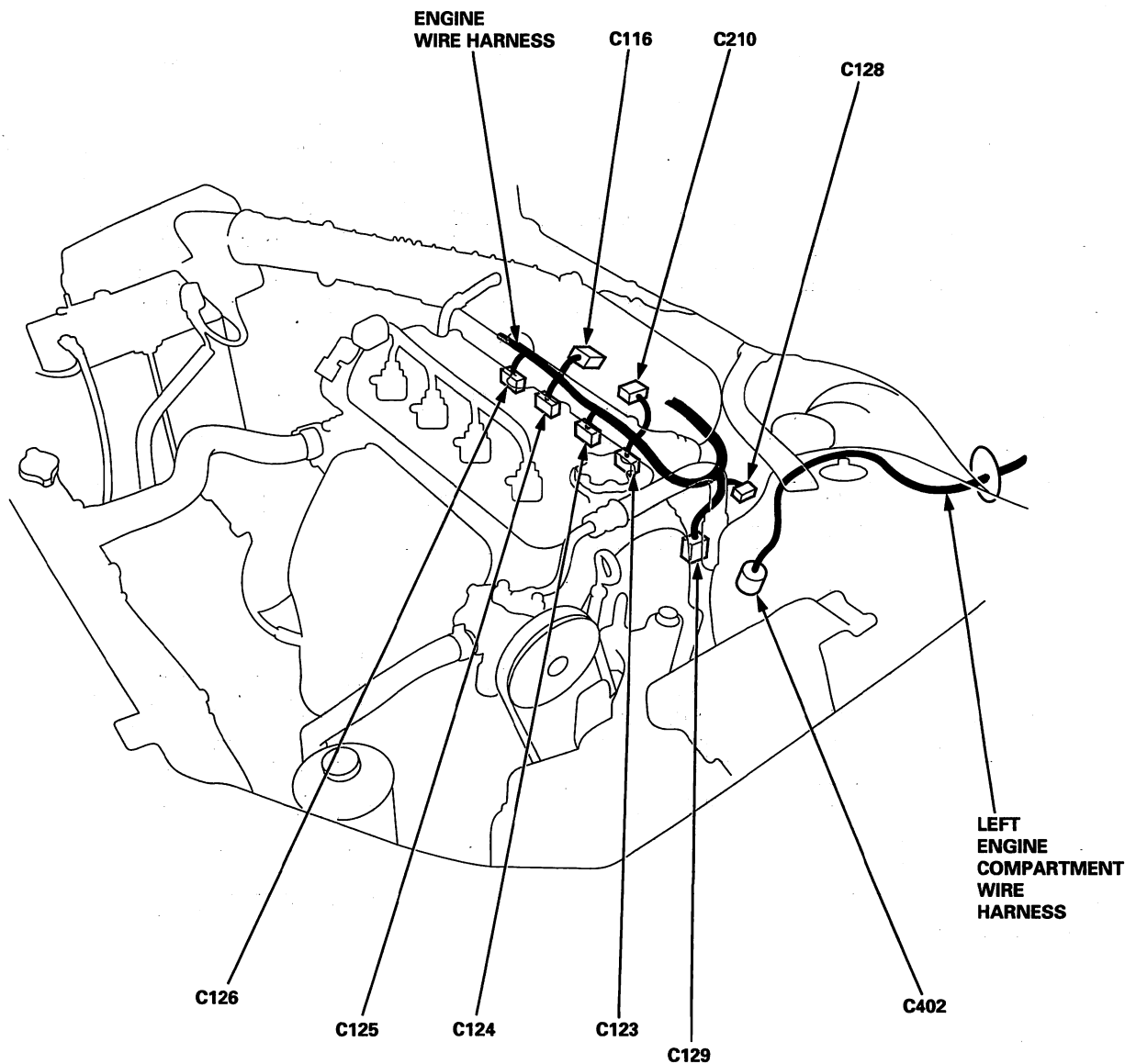
(cont'd)



# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Engine Compartment (LHD)





C116



①	RED/GRN
②	GRN/WHT
③	YEL/RED

C123



①	BRN
②	YEL/BLK

C124



①	RED
②	YEL/BLK

C125



①	BLU
②	YEL/BLK

C126



①	YEL
②	YEL/BLK

C128



1	WHT/BLU
2	WHT/RED

C129



①	WHT
②	BRN/BLK
③	YEL/BLK

C210



①	BLK/YEL
②	RED/YEL

C402



①	GRN
②	BLK

NOTE: ● ○: Related to Fuel and Emissions System.

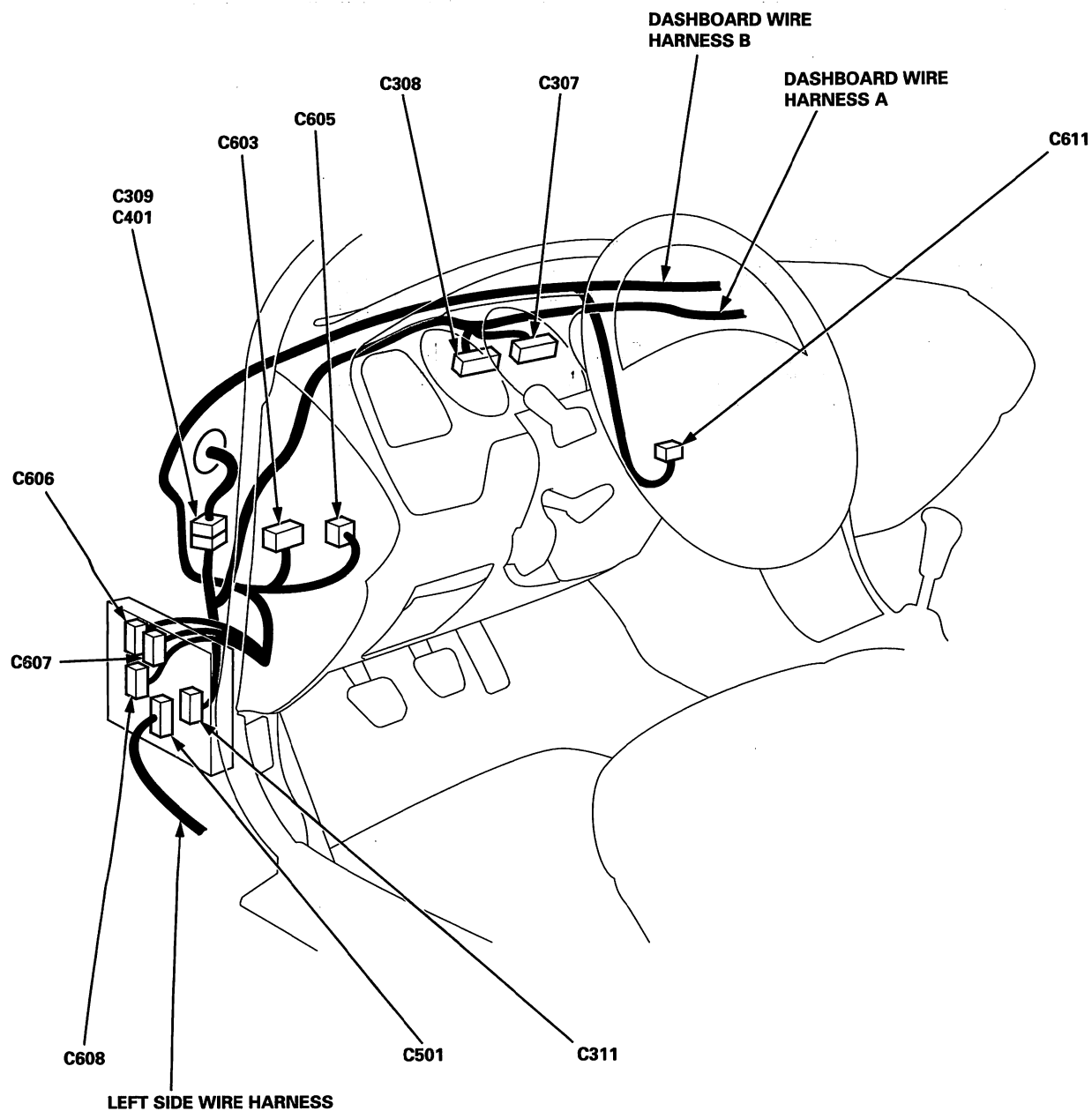
- Connector with male terminals (double outline): View from terminal side
- Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Dash and Floor (LHD)





C307



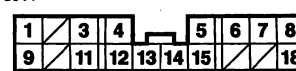
1	YEL/BLU	9	RED/BLK
2	—	10	YEL/RED
3	—	11	WHT/BLU
4	—	12	—
5	—	13	—
6	—	⑭	PNK
7	—	⑮	GRN/ORN
8	PUR	16	BLK/YEL

C308



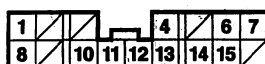
1	—	12	GRN/BLK
2	YEL/GRN	13	GRN/WHT
3	GRN/RED	14	GRN/YEL
4	RED/YEL	⑮	YEL
5	ORN	⑯	PNK
6	—	17	BLK
7	—	18	BLU/WHT
8	—	19	—
9	—	20	—
10	BLU	21	—
11	GRN/ORN	22	BLK

C311



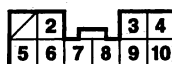
1	GRN/WHT	10	—
2	—	11	PUR
3	GRY	⑫	BLK/YEL
④	YEL	13	RED/BLK
5	YEL/GRN	14	GRN/ORN
6	BLK	15	GRN/YEL
7	YEL/RED	16	—
8	RED/BLK	17	—
9	GRN/RED	18	PNK/BLU

C401



1	GRN/BLK	9	—
2	—	10	ORN
3	—	⑪	GRN
4	BLU/WHT	12	BLU/RED
5	—	13	PUR/WHT
6	PUR	14	LT GRN
7	GRN	15	RED/YEL
8	YEL/GRN	16	—

C501



1	—	6	GRN/BLK
2	GRN	7	RED/BLU
3	GRN/ORN	8	PUR
④	BLK/YEL	9	LT BLU
5	GRN/ORN	10	GRN/YEL

C603



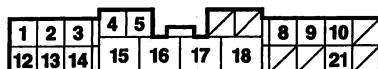
①	GRN/YEL	⑥	RED/BLK
②	BLU/ORN	⑦	YEL/BLK
③	BLK	⑧	WHT/GRN
④	BLK/YEL		

C805



①	PUR/WHT
2	—
③	WHT/BLK
4	—

C806



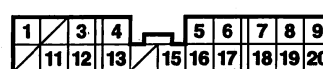
1	PUR	12	ORN
2	WHT/BLU	13	GRN/WHT
3	GRN/RED	14	YEL/RED
4	BLK	15	BLK
5	BLK/ORN	16	WHT
6	—	17	LT BLU
7	—	18	GRN
8	RED/BLK	19	—
9	BLK	20	—
⑩	BLU/ORN	21	GRN/ORN
11	—	22	—

C807



①	BLK/WHT
2	—
③	WHT
4	GRN/BLK
5	BLK/YEL
6	—
⑦	BLK/YEL

C808



①	RED/WHT	11	YEL/BLK
2	—	12	BLK
3	RED/BLK	⑬	BLK/ORN
4	LT GRN/RED	14	—
5	WHT/RED	15	YEL
6	BLK	16	LT GRN
⑦	BLK/YEL	17	BLU/WHT
8	WHT/BLK	18	YEL
9	BLU	19	PNK
10	—	20	WHT/BLK

C811



①	BLK/WHT
2	—
③	RED/BLK

NOTE: ● ○: Related to Fuel and Emissions System.

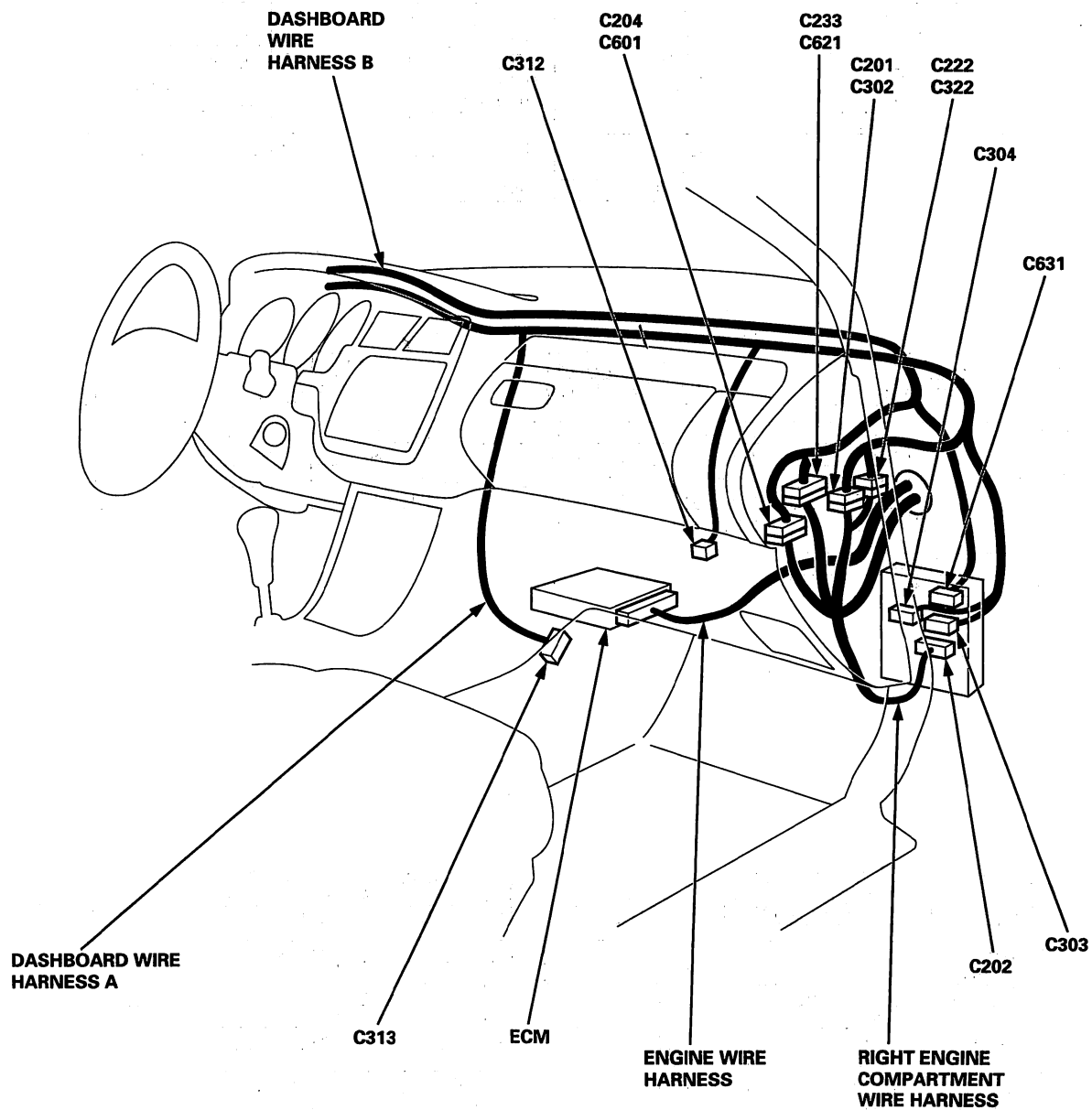
- Connector with male terminals (double outline): View from terminal side
- Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Dash and Floor (LHD)





C202

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

1	—	⑩	BLK/YEL
2	RED/YEL	11	—
③	BLK/YEL	12	BLU/WHT
④	YEL/RED	13	BLU/RED
⑤	YEL	14	GRN/YEL
⑥	BLU/RED	⑮	PNK
7	RED/BLK	16	—
⑧	BLK/ORN	17	—
⑨	WHT/GRN	⑯	BLK

C204

1	2	3
4	5	6
7	8	9

1	BLK/WHT
2	WHT/BLU
③	WHT
4	BLU
5	BLU/YEL
6	BLU/RED
7	BLU/BLK

C233

1	2	3	4	5	6	7	8	9
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28

1	RED/BLU	13	LT GRN/RED
②	GRN/YEL	14	LT BLU
3	—	⑮	YEL/BLK
④	BLK	16	—
5	—	⑰	PUR/WHT
6	YEL	18	WHT/BLK
7	—	19	GRN
⑧	BLK/YEL	20	GRN/BLK
9	RED	21	RED/WHT
10	—	22	WHT/GRN
11	YEL/BLU	23	PNK/BLK
12	—	24	—

C302

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

1	—	12	BLU/BLK
2	—	⑬	GRN/BLK
3	—	14	—
4	YEL	⑮	YEL/RED
5	GRN/BLK	⑯	GRN
6	—	⑰	BLU
⑦	LT BLU	18	YEL/GRN
⑧	BRN	19	WHT/BLU
⑨	GRN/ORN	20	YEL/GRN
⑩	PNK	21	—
11	—	22	—

C303

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24

1	BLU/WHT	10	RED/WHT
2	—	11	PUR/WHT
3	—	⑫	BLK/YEL
4	—	13	RED/YEL
5	RED/YEL	14	RED/BLU
6	BRN/WHT	⑮	WHT/GRN
7	RED/BLK	16	GRN/WHT
8	BLK/WHT	17	—
9	GRN/BLK	18	RED/YEL

C304

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

1	—	10	WHT/GRN
2	—	11	WHT/GRN
3	GRN/WHT	12	—
4	—	13	WHT/RED
5	WHT	⑭	PUR/WHT
6	YEL/GRN	15	—
7	YEL	⑮	PNK
⑧	WHT/RED	⑰	BLU/RED
9	—	18	—

C312

1	2
---	---

①	GRN/BLK
②	BRN

C313

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24

1	—	9	—
2	—	10	—
3	—	11	—
4	—	12	BLK
5	—	⑬	PUR/WHT
6	LT BLU	14	—
7	—	⑮	GRY
⑧	WHT/GRN	16	—

C322

1	2	3	4
5	6	7	8
9	10	11	12

1	—	6	PUR/WHT
2	—	7	BLU/BLK
③	WHT/RED	8	YEL
4	WHT/GRN	9	—
5	ORN	10	—

C631

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

1	WHT/BLU	9	—
2	GRN/YEL	10	BLU/YEL
3	WHT	⑪	WHT/GRN
4	—	12	YEL
5	RED/BLK	13	LT GRN
6	BLK	14	—
7	YEL/BLK	⑮	BLK/ORN
8	BLU/WHT	16	—

ECM

83	81	80	79	78	77	75	73	72	71	63	59	58
55	54	52	51	50	48	46	44	42	39	38	37	36
28	26	25	24	19	16	14	13	12	11	10	9	8
6	4	3	2	1								

①	GRN/YEL	23	—	45	—	67	—
②	ORN	②④	WHT/BLU	④⑥	YEL/BLU	68	—
③	BRN	②⑤	WHT	47	—	69	—
④	YEL	②⑥	WHT/BLU	④⑦	RED	70	—
5	—	27	—	49	—	⑦①	GRN/BLK
⑥	BLK	②⑦	BRN/BLK	⑤⑧	WHT/RED	⑦②	GRN
7	—	②⑧	BLK/BLU	⑤⑨	WHT/GRN	⑦③	RED/BLK
⑧	GRN/ORN	②⑨	BLK/WHT	⑤⑩	WHT/BLK	⑦④	—
⑨	GRN	③①	BLU	53	—	⑦⑤	BLU/RED
⑩	GRN/BLK	③②	RED	⑤⑪	YEL/BLK	76	—
⑪	GRN/BLK	33	—	⑤⑫	BLK	⑦⑦	RED/YEL
⑫	WHT	③④	BLK	56	—	⑦⑧	RED/WHT
⑬	GRN/WHT	35	—	57	—	⑦⑨	BLU/GRN
⑭	GRN/WHT	③⑤	RED/YEL	⑤⑬	YEL/BLK	⑧①	RED/GRN
15	—	③⑥	BLK/WHT	⑤⑭	YEL/RED	⑧②	ORN/BLU
⑮	WHT	③⑦	BLU	60	—	82	—
17	—	③⑧	WHT/RED	61	—	③⑩	LT BLU
18	—	40	—	62	—	84	—
⑮	BRN	41	—	③⑪	PNK	85	—
20	—	④②	BLU/WHT	64	—	86	—
21	—	④③	—	65	—	87	—
22	—	④④	ORN/BLU	66	—	88	—

NOTE: ● ○: Related to Fuel and Emissions System.

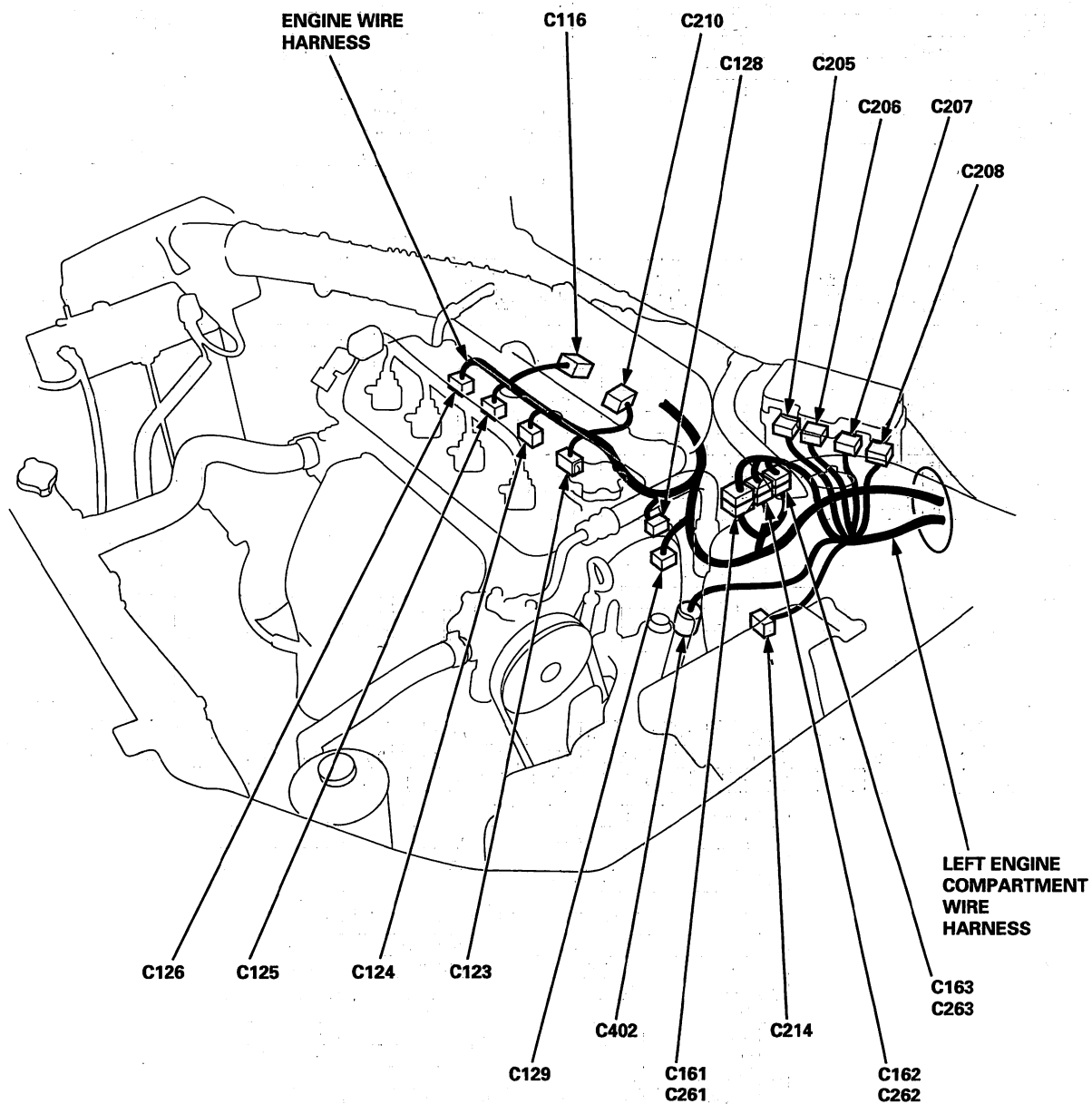
- Connector with male terminals (double outline): View from terminal side
- Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Engine Compartment (RHD)





C116

1	2	3
① RED/GRN		
② GRN/WHT		
③ YEL/RED		

C123

1	2
① BRN	
② YEL/BLK	

C124

1	2
① RED	
② YEL/BLK	

C125

1	2
① BLU	
② YEL/BLK	

C126

1	2
① YEL	
② YEL/BLK	

C128

1	2
---	---

1	WHT/BLU
②	WHT/RED

C129

1	2	3
---	---	---

①	WHT
②	BRN/BLK
③	YEL/BLK

C161

1	2	3	4
5	6	7	8
9	⊗		10

①	WHT/RED	⑧	GRN/YEL
②	WHT/BLU	7	WHT/BLU
③	BLK/YEL	⑩	BLK
④	YEL/BLK	9	BLK/WHT
⑤	BLU	⑩	BLK/YEL

C162

1	2	3
4	5	6
8	9	10
12	13	14

①	BRN/BLK	⑧	PNK
2	YEL/GRN	⑨	LT BLU
③	GRN/BLK	⑩	GRN/ORN
4	BLU/WHT	⑪	BRN
5	GRN/BLK	⑫	GRN
6	YEL	13	BLU/GRN
7	YEL/RED	14	ORN/BLU

C163

1	2	3
4	5	6

①	RED
②	GRN
③	BLK/WHT
4	BLU/RED
⑤	GRN/WHT
⑥	GRN/BLK

C205

1	2	3	4	5	6
9	10	11	12	13	14
15	16	17	18	19	20

1	RED/WHT	10	—
2	—	11	LT GRN/BLU
3	RED/YEL	12	—
4	RED/WHT	13	BLU/RED
5	—	14	—
6	PUR/WHT	15	—
7	—	16	—
8	—	⑰	WHT/GRN
9	BLU/RED	18	—

C206

1	2	3
4	5	6
7		

1	WHT/BLU
2	YEL/GRN
③	YEL/RED
4	WHT/GRN
⑤	PUR/WHT
6	GRN
⑦	YEL

C207

1	2	3
---	---	---

1	YEL/BLK
②	WHT
3	WHT/GRN

C208

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

①	BLK/ORN	9	—
2	RED/WHT	10	WHT
3	BLU/BLK	⑩	RED
4	BLU/YEL	⑫	GRN
5	—	13	—
6	—	14	BLK
7	RED	15	—
8	BLK/ORN	16	BLK/ORN

C210

1	2
---	---

①	BLK/YEL
②	RED/YEL

C214

1	2
---	---

1	—
②	BLU

C402

1
2

①	GRN
②	BLK

- NOTE:
- ○: Related to Fuel and Emissions System.
  - Connector with male terminals (double outline): View from terminal side
  - Connector with female terminals (single outline): View from wire side

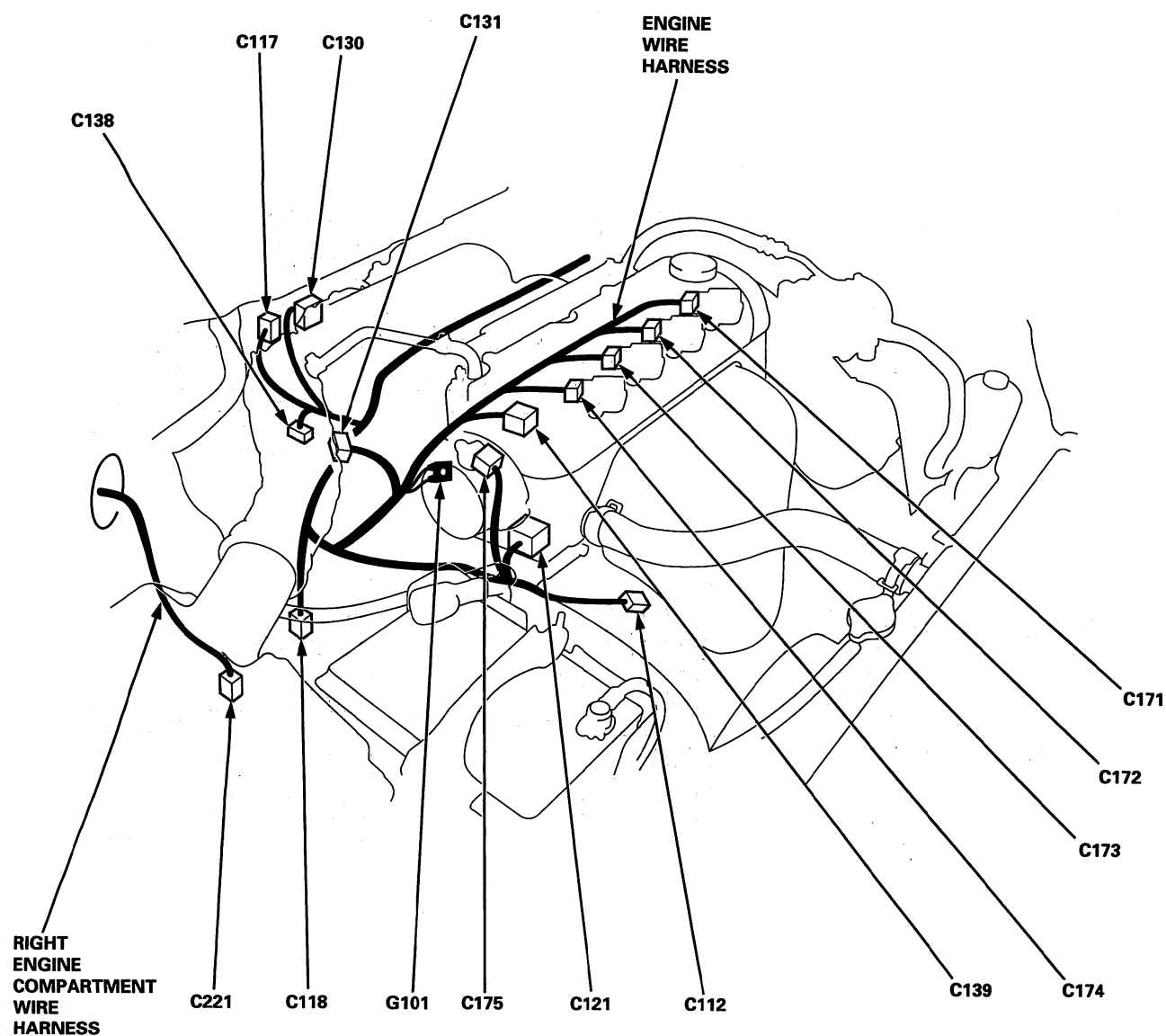
(cont'd)



# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Engine Compartment (RHD)





C112



①	BLK/WHT
②	BLK/YEL
③	GRN/BLK
④	WHT

C117



①	RED/BLK
②	GRN/BLK
③	YEL/BLU

C118



①	BLK/YEL
②	BLK
③	BLU/WHT

C121



①	GRN/BLK
②	RED/WHT

C130



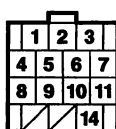
①	BLK/BLU
②	YEL/BLK
③	ORN

C131



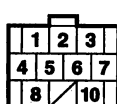
①	GRN/BLK
②	RED/YEL

C138



①	YEL/BLK	⑧	YEL/BLK
②	YEL/BLK	⑨	YEL/BLK
③	YEL/BLK	⑩	YEL/BLK
④	YEL/BLK	⑪	YEL/BLK
⑤	YEL/BLK	12	—
⑥	YEL/BLK	13	—
⑦	YEL/BLK	⑭	YEL/BLK

C139



①	BLK/YEL	⑥	BLK/YEL
②	BLK/YEL	⑦	BLK/YEL
③	BLK/YEL	⑧	BLK/YEL
④	BLK/YEL	9	—
⑤	BLK/YEL	⑩	BLK/YEL

C171



①	BLK/YEL
②	BLK
③	WHT

C172



①	BLK/YEL
②	BLK
③	WHT/GRN

C173



①	BLK/YEL
②	BLK
③	WHT/BLK

C174



①	BLK/YEL
②	BLK
③	WHT/BLU

C175



①	YEL/BLK
②	ORN/BLU
③	BRN/BLK

C221



①	RED/YEL
②	WHT
③	BLK/WHT
④	BLK/YEL

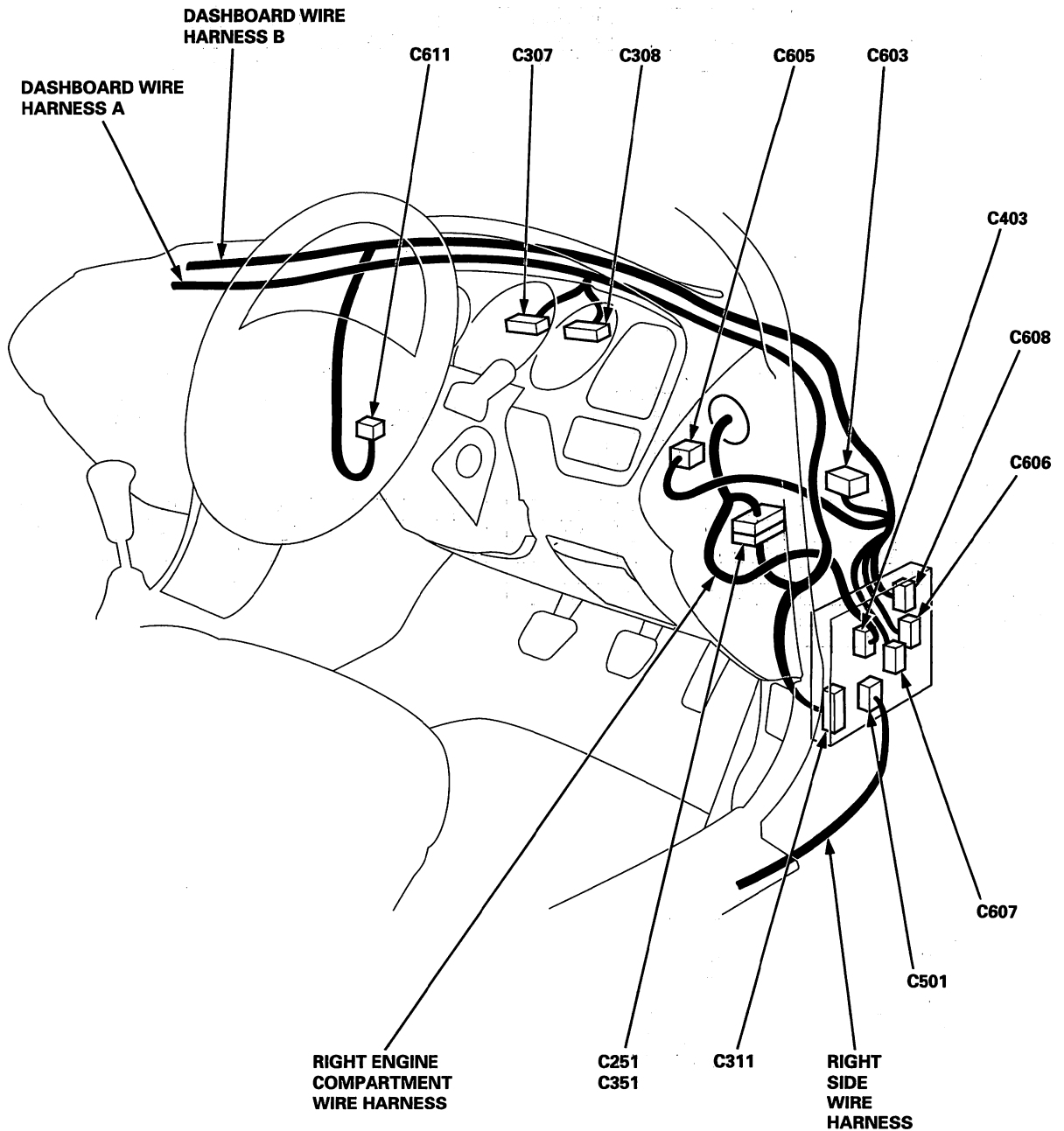
NOTE: ● ○: Related to Fuel and Emissions System.  
 ● Connector with male terminals (double outline): View from terminal side  
 ● Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Dash and Floor (RHD)





C251



1	---	8	---
2	---	⑨	WHT
3	---	⑩	BLK/WHT
4	---	⑪	GRN/BLK
5	---	12	---
6	---	13	RED/WHT
7	---	14	---

C307



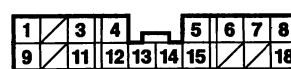
1	YEL/BLU	9	RED/BLK
2	---	10	YEL/RED
3	---	11	WHT/BLU
4	---	12	---
5	---	13	---
6	---	⑫	PNK
7	---	⑬	GRN/ORN
8	PUR	16	BLK/YEL

C308



1	---	12	GRN/BLK
2	YEL/GRN	13	GRN/WHT
3	GRN/RED	14	GRN/YEL
4	RED/YEL	⑮	YEL
5	ORN	⑯	PNK
6	---	17	BLK
7	---	18	BLU/WHT
8	---	19	---
9	---	20	---
10	BLU	21	---
11	GRN/ORN	22	BLK

C311



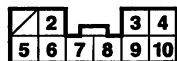
1	GRN/WHT	10	---
2	---	11	PUR
3	GRY	⑫	BLK/YEL
④	YEL	13	RED/BLK
5	YEL/GRN	14	GRN/ORN
6	BLK	15	GRN/YEL
7	YEL/RED	16	---
8	RED/BLK	17	---
9	GRN/RED	18	PNK/BLU

C403



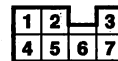
1	ORN	11	---
2	BLK	12	---
3	GRN/RED	⑬	BLK/YEL
4	---	14	---
5	---	15	---
6	YEL/GRN	16	---
7	LT BLU	17	---
8	---	18	RED/BLK
9	---	19	---
10	---	20	GRN/RED

C501



1	---	6	GRN/BLK
2	GRN	7	RED/BLU
3	GRN/ORN	8	PUR
④	BLK/YEL	9	LT BLU
5	GRN/ORN	10	GRN/YEL

C603



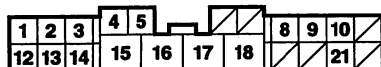
①	GRN/YEL	⑤	RED/BLK
②	BLU/ORN	⑥	YEL/BLK
③	BLK	⑦	WHT/GRN
④	BLK/YEL		

C605



①	PUR/WHT
2	---
③	WHT/BLK
4	---

C606



1	LT BLU	12	ORN
2	WHT/BLU	13	GRN/WHT
3	GRN/RED	14	YEL/RED
4	BLK	15	BLK
5	BLK/ORN	16	WHT
6	---	17	LT BLU
7	---	18	GRN
8	RED/BLK	19	---
9	BLK	20	---
⑩	BLU/ORN	21	GRN/ORN
11	---	22	---

C607



①	BLK/WHT
2	---
③	WHT
4	GRN/BLK
5	BLK/YEL
6	---
⑦	BLK/YEL

C608



①	RED/WHT	11	YEL/BLK
2	GRN/YEL	12	BLK
3	RED/BLK	⑬	BLK/ORN
4	LT GRN/RED	14	---
5	WHT/RED	15	YEL/BLK
6	BLK	16	LT GRN
⑦	BLK/YEL	17	BLU/WHT
8	WHT/BLK	18	YEL
9	BLU	19	PNK
10	BLU/YEL	20	WHT/BLK

C611



①	BLK/WHT
2	---
③	RED/BLK

NOTE: ● ○: Related to Fuel and Emissions System.

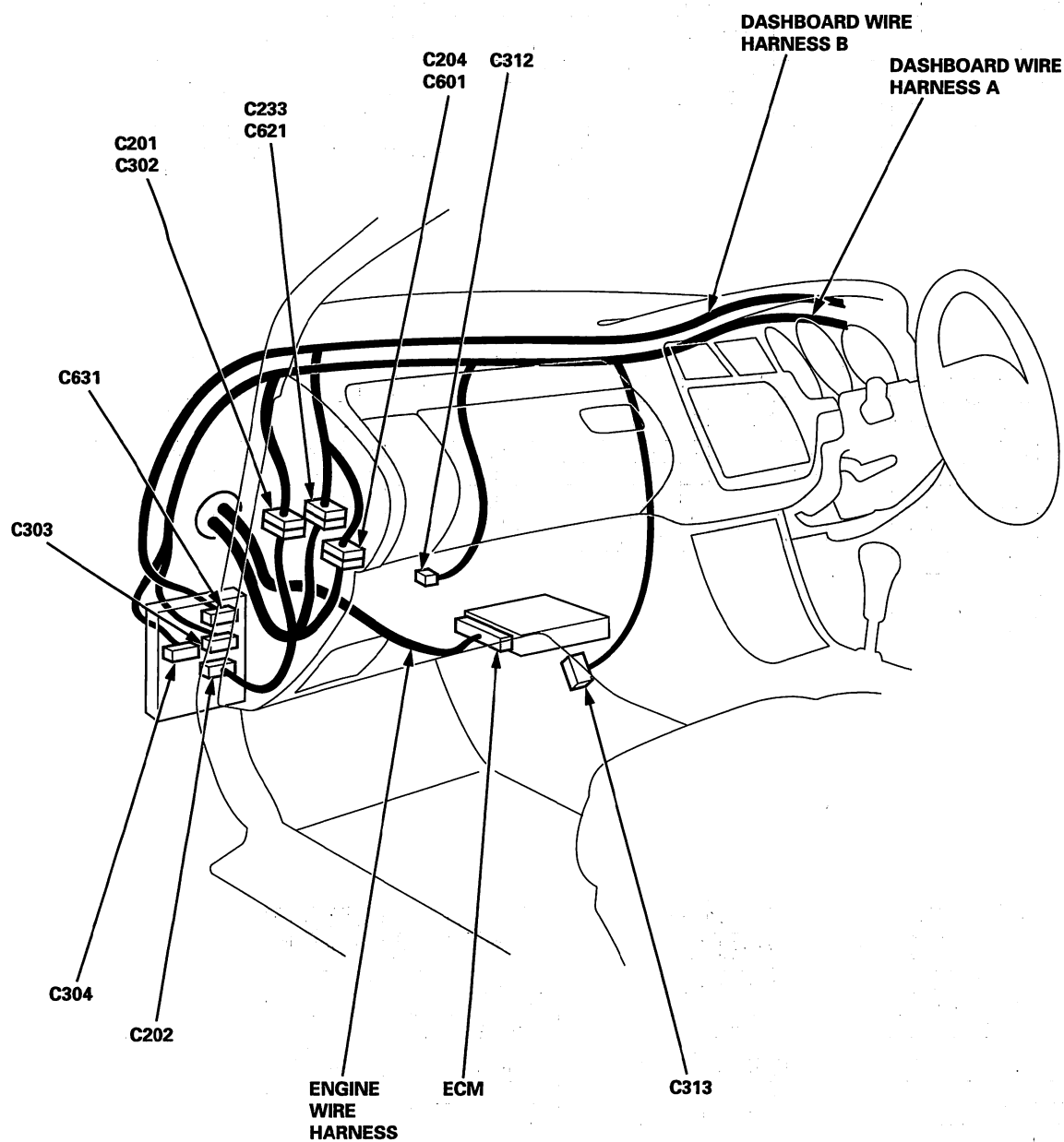
- Connector with male terminals (double outline): View from terminal side
- Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

Dash and Floor (RHD)





C202

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

1	—	10	BLK/YEL
2	RED/WHT	11	GRY
3	BLK/YEL	12	BLU/WHT
4	YEL/RED	13	BLU/RED
5	YEL	14	—
6	—	15	—
7	BLK/YEL	16	LT BLU
8	BLK/ORN	17	RED/BLK
9	WHT/GRN	18	BLK

C204

1	2	3	4	5	6	7
---	---	---	---	---	---	---

1	BLK/WHT
2	—
3	WHT
4	BLU
5	BLU/YEL
6	BLU/RED
7	BLU/BLK

C233

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

1	BLU/YEL	19	WHT/BLK
2	GRN/YEL	14	WHT/GRN
3	GRN	15	RED/WHT
4	GRN/BLK	16	—
5	—	17	—
6	—	18	BLK/YEL
7	YEL/BLU	19	BLK
8	PUR	20	YEL/BLK
9	GRN/YEL	21	PNK/BLK
10	—	22	RED
11	YEL/RED	23	PUR/WHT
12	LT GRN/RED	24	YEL

C302

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----

1	YEL/GRN	12	YEL
2	BLU/RED	13	—
3	RED/YEL	14	—
4	PNK	15	BLU
5	GRN/ORN	16	YEL/GRN
6	BRN	17	YEL/GRN
7	GRY	18	BLU/BLK
8	WHT/RED	19	YEL/RED
9	GRN/BLK	20	—
10	GRN/BLK	21	BLK/WHT
11	—	22	WHT

C303

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

1	BLU/WHT	10	—
2	RED/WHT	11	—
3	PUR/WHT	12	BLK/YEL
4	—	13	RED/YEL
5	RED/YEL	14	RED/BLU
6	BRN/WHT	15	WHT/GRN
7	—	16	GRN/WHT
8	BLK/WHT	17	—
9	GRN/BLK	18	RED/YEL

C304

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

1	—	10	WHT/GRN
2	—	11	WHT/GRN
3	GRN/WHT	12	YEL/BLK
4	—	13	WHT/RED
5	WHT	14	PUR/WHT
6	YEL/GRN	15	—
7	YEL	16	PNK
8	WHT/RED	17	BLU/RED
9	RED/BLK	18	—

C312

1	2
---	---

1	GRN/BLK
2	BRN

C313

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

1	—	9	—
2	—	10	—
3	—	11	—
4	—	12	BLK
5	—	13	PUR/WHT
6	LT BLU	14	—
7	—	15	GRY
8	WHT/GRN	16	—

C631

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----

1	WHT/BLU	9	—
2	—	10	—
3	WHT	11	WHT/GRN
4	—	12	YEL
5	BLK/YEL	13	LT GRN
6	BLK	14	—
7	YEL/BLK	15	BLK/ORN
8	BLU/WHT	16	—

ECM

83	81	80	79	78	77	75	73	72	71	63	59	58	57	56	55	54	53	52	51	50	48	46	44	42	41	39	38	37	36	34	32	31	30	29	28	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---	---

1	GRN/YEL	23	—	45	—	67	—
2	ORN	24	WHT/BLU	46	YEL/BLU	68	—
3	BRN	25	WHT	47	—	69	—
4	YEL	26	WHT/BLU	48	RED	70	—
5	—	27	—	49	—	71	GRN/BLK
6	BLK	28	BRN/BLK	50	WHT/RED	72	GRN
7	—	29	BLK/BLU	51	WHT/GRN	73	RED/BLK
8	GRN/ORN	30	BLK/WHT	52	WHT/BLK	74	—
9	GRN	31	BLU	53	—	75	BLU/RED
10	GRN/BLK	32	RED	54	YEL/BLK	76	—
11	GRN/BLK	33	—	55	BLK	77	RED/YEL
12	WHT	34	BLK	56	—	78	RED/WHT
13	GRN/WHT	35	—	57	—	79	BLU/GRN
14	GRN/WHT	36	RED/YEL	58	YEL/BLK	80	RED/GRN
15	—	37	BLK/WHT	59	YEL/RED	81	ORN/BLU
16	WHT	38	BLU	60	—	82	—
17	—	39	WHT/RED	61	—	83	LT BLU
18	—	40	—	62	—	84	—
19	BRN	41	—	63	PNK	85	—
20	—	42	BLU/WHT	64	—	86	—
21	—	43	—	65	—	87	—
22	—	44	ORN/BLU	66	—	88	—

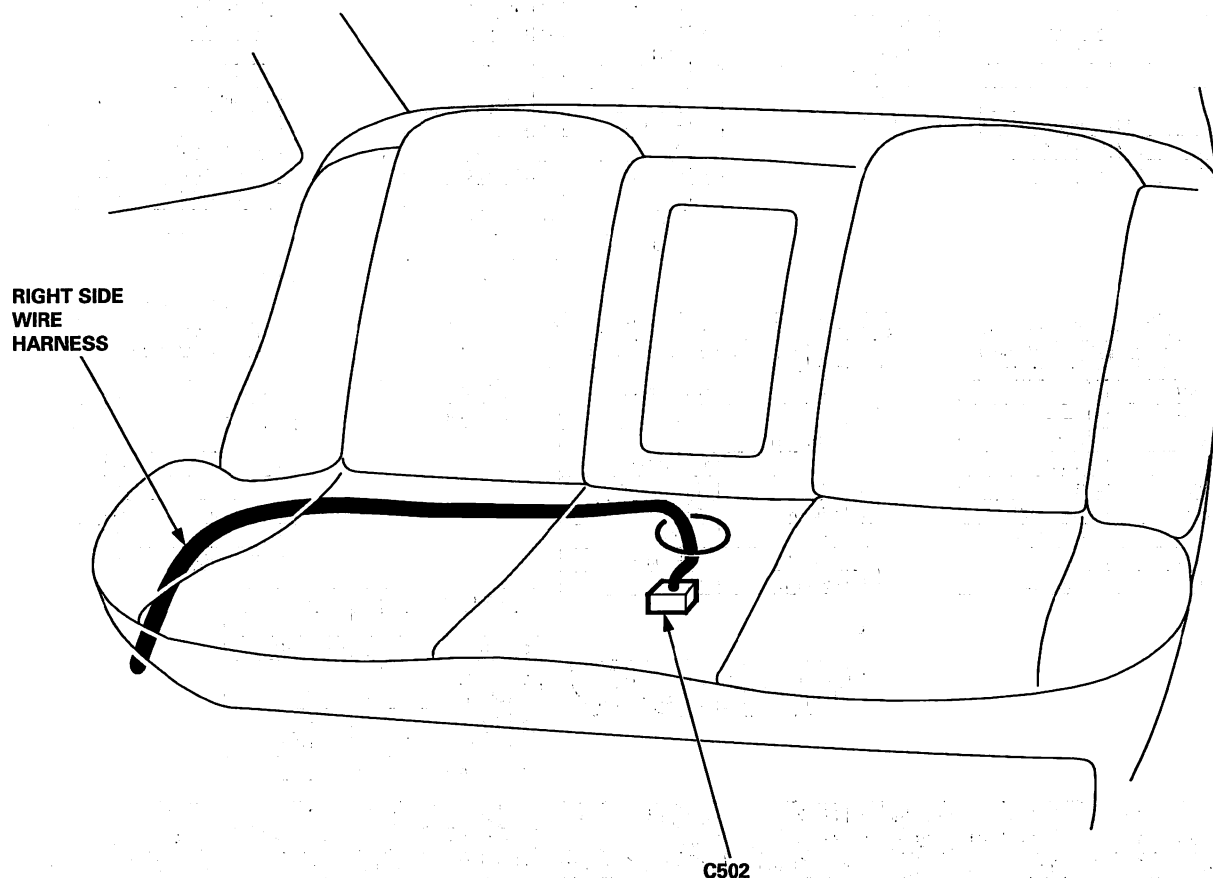
- NOTE: ● ○: Related to Fuel and Emissions System.
- Connector with male terminals (double outline): View from terminal side
  - Connector with female terminals (single outline): View from wire side

(cont'd)

# Fuel and Emissions Systems

## ECM Circuit Diagram (cont'd)

### Fuel Pump (RHD)



C502



①	BLK/YEL
②	BLK
3	BLK
4	YEL/BLU

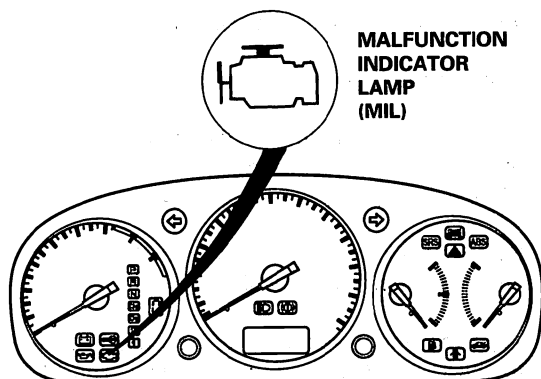
- NOTE:
- ○: Related to Fuel and Emissions System.
  - Connector with male terminals (double outline): View from terminal side
  - Connector with female terminals (single outline): View from wire side



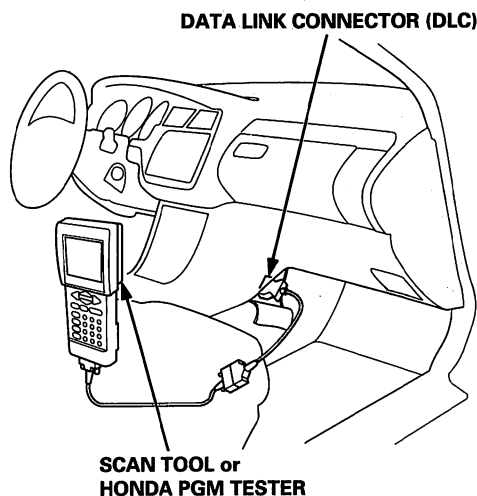
## How to Use the PGM Tester or a Scan Tool

If the MIL (Malfunction Indicator Lamp) has come on

1. Start the engine and check the MIL.



2. If the MIL stays on, turn the ignition switch OFF and connect the Honda PGM Tester or a scan tool to the Data Link Connector (DLC) located on the passenger's side of the center console.



The illustration shows LHD type.  
RHD type is symmetrical.

3. Turn the ignition switch ON (II).
4. Check the Diagnostic Trouble Codes (DTC) and note it. Also check the freeze frame data. Refer to the DTC Troubleshooting Index and begin the appropriate troubleshooting procedure.

### NOTE:

- Freeze frame data indicates the engine conditions when the first malfunction, misfire or fuel trim malfunction was detected.
- The scan tool and the Honda PGM Tester can read the DTC, freeze frame data, current data, and other ECM data.
- For specific operations, refer to the user's manual that came with the scan tool or Honda PGM Tester.

### If the MIL did not come on

If the MIL did not come on but there is a driveability problem, refer to the Symptom Troubleshooting Index (see page 11-C-36).

### If you cannot duplicate the DTC

Some of the troubleshooting in this section requires you to reset the Engine Control Module (ECM) and try to duplicate the DTC. If the problem is intermittent and you cannot duplicate the code, do not continue through the procedure. To do so will only result in confusion and, possibly, a needlessly replaced ECM.

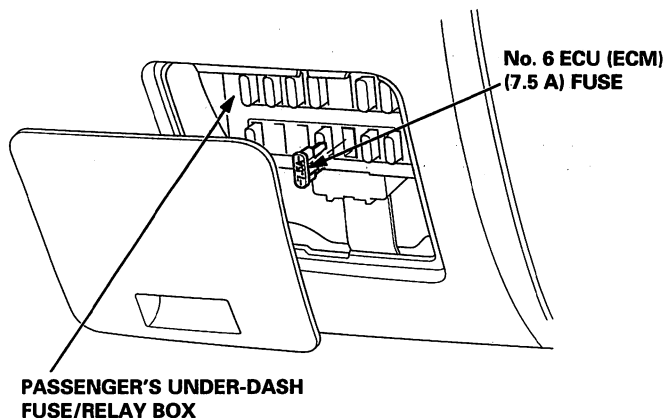


# General Troubleshooting Information

## How to Reset the ECM

You can reset the ECM in either of two ways:

- Use the scan tool or Honda PGM Tester to clear the ECM's memory. See the scan tool or Honda PGM Tester user's manuals for specific operating instructions.
- Turn the ignition switch OFF, and remove the No. 6 ECU (ECM) (7.5 A) fuse from the passenger's under-dash fuse/relay box for 10 seconds.



The illustration shows LHD type.  
RHD type is symmetrical.

## How to End a Troubleshooting Session

This procedure must be done after any troubleshooting.

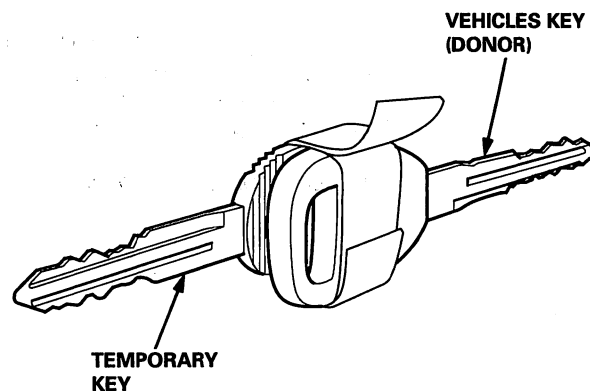
1. Do the ECM Reset Procedure.
2. Turn the ignition switch OFF.
3. Disconnect the scan tool or Honda PGM Tester from the Data Link Connector (DLC).

**NOTE:** The ECM is part of the immobilizer system. If you replace ECM, the ECM will have a different immobilizer code. In order for the engine to start, you must rewrite the immobilizer code with the Honda PGM Tester.

## How to Substitute the ECM for Testing Purpose

Use this procedure if you need a known-good ECM to test a vehicle. It allows you to swap a ECM from a "donor" vehicle without having to program it to the test vehicle's ignition key.

1. Cut a temporary ignition key for the test vehicle with a non-immobilizer key blank.
2. Remove the ECM from the test vehicle.
3. Write the test vehicle's VIN on the ECM you just removed to avoid confusing it with the donor vehicle's ECM.
4. Remove the known-good ECM from the donor vehicle, and install it in the test vehicle.
5. Tape the donor vehicle's ignition key head-to-head to the test vehicle's temporary key. The ECM will recognize the code from the donor vehicle's key and allow you to start the engine with the temporary key.



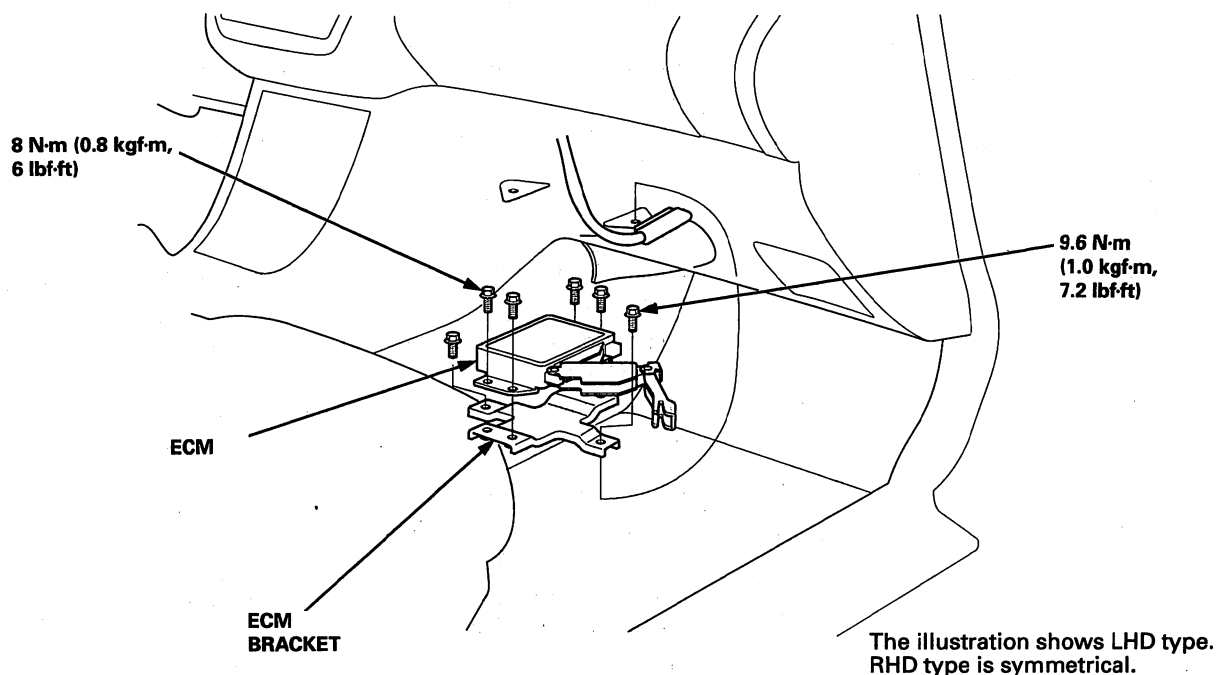
6. After completing your tests, reinstall both ECM's and destroy the temporary key.



## How to Connect the ECM Test Harness and Test Pin Box

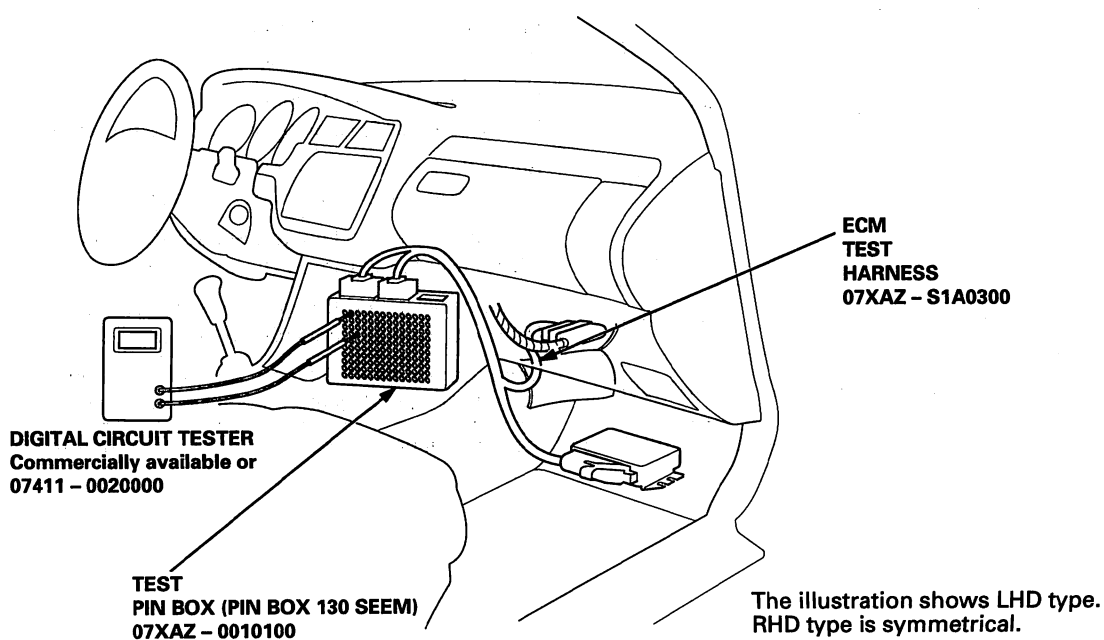
### ECM Removal

Pull the carpet from the passenger's side of the center console to expose the ECM. Unbolt the ECM bracket. Remove the four bolts from the ECM.



### Checking The ECM Connector Terminals

When checking the ECM connector terminals, connect the ECM test harness and test pin box. Check the system according to the procedure described for the appropriate DTC listed on the following pages.



# General Troubleshooting Information

## DTC Troubleshooting Index

Scan tool		Honda DTC (MIL indication)*	Detection Item	Page
DTC	Temporary DTC			
P0107	———	3-1 (3)	Manifold Absolute Pressure (MAP) Sensor Circuit Low voltage	11-C-45
P0108	———	3-2 (3)	Manifold Absolute Pressure (MAP) Sensor Circuit High voltage	11-C-47
P0112	———	10-1 (10)	Intake Air Temperature (IAT) Sensor Circuit Low Voltage	11-C-49
P0113	———	10-2 (10)	Intake Air Temperature (IAT) Sensor Circuit High Voltage	11-C-50
P0117	———	6-1 (6)	Engine Coolant Temperature (ECT) Sensor Circuit Low Voltage	11-C-51
P0118	———	6-2 (6)	Engine Coolant Temperature (ECT) Sensor Circuit High Voltage	11-C-52
P0122	———	7-1 (7)	Throttle Position (TP) Sensor Circuit Low Voltage	11-C-54
P0123	———	7-2 (7)	Throttle Position (TP) Sensor Circuit High Voltage	11-C-56
P0125	———	86-2 (86)	Cooling System Malfunction	11-C-53
P0130	———	61-8 (61)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Range/Performance Problem	11-C-58
P0131	———	1-1 (1)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Circuit Low Voltage	11-C-59
P0132	———	1-2 (1)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Circuit High Voltage	11-C-61
P0133	P0133	61-1 (61)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Slow Response	11-C-62
P0134	———	61-7 (61)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Circuit Open Problem	11-C-63
P0135	———	41-3 (41)	Primary Heated Oxygen Sensor (Primary HO2S) (Sensor 1) Heater Circuit Malfunction	11-C-64
P0136	———	63-8 (63)	Secondary Heated Oxygen Sensor (Secondary HO2S) (Sensor 2) Range/Performance Problem	11-C-66
P0137	P0136	63-1 (63)	Secondary Heated Oxygen Sensor (Secondary HO2S) (Sensor 2) Circuit Low Voltage	11-C-67
P0138	P0136	63-2 (63)	Secondary Heated Oxygen Sensor (Secondary HO2S) (Sensor 2) Circuit High Voltage	11-C-68
P0140	———	63-7 (63)	Secondary Heated Oxygen Sensor (Secondary HO2S) (Sensor 2) Circuit Open Problem	11-C-69
P0141	———	65-3 (65)	Secondary Heated Oxygen Sensor (Secondary HO2S) (Sensor 2) Heater Circuit Malfunction	11-C-64

\*: These DTCs will be indicated by the blinking of the Malfunction Indicator Lamp (MIL) when the SCS short connector is connected.



Scan tool		Honda DTC (MIL indication)*	Detection Item	Page
DTC	Temporary DTC			
P0171	P0170	45-2 (45)	Fuel System Too Lean	11-C-70
P0172	P0170	45-1 (45)	Fuel System Too Rich	11-C-70
P0201	—	71-5 (71)	Fuel Injector Open Circuit – No. 1 Cylinder	11-C-72
P0202	—	72-5 (72)	Fuel Injector Open Circuit – No. 2 Cylinder	11-C-72
P0203	—	73-5 (73)	Fuel Injector Open Circuit – No. 3 Cylinder	11-C-72
P0204	—	74-5 (74)	Fuel Injector Open Circuit – No. 4 Cylinder	11-C-72
P0261	—	71-6 (71)	Fuel Injector Circuit Short to Ground – No. 1 Cylinder	11-C-74
P0262	—	71-7 (71)	Fuel Injector Circuit Short to Voltage – No. 1 Cylinder	11-C-75
P0264	—	72-6 (72)	Fuel Injector Circuit Short to Ground – No. 2 Cylinder	11-C-74
P0265	—	72-7 (72)	Fuel Injector Circuit Short to Voltage – No. 2 Cylinder	11-C-75
P0267	—	73-6 (73)	Fuel Injector Circuit Short to Ground – No. 3 Cylinder	11-C-74
P0268	—	73-7 (73)	Fuel Injector Circuit Short to Voltage – No. 3 Cylinder	11-C-75
P0270	—	74-6 (74)	Fuel Injector Circuit Short to Ground – No. 4 Cylinder	11-C-74
P0271	—	74-7 (74)	Fuel Injector Circuit Short to Voltage – No. 4 Cylinder	11-C-75
P0300 and some of P0301 P0302 P0303 P0304	P1399	75-4 (75) and some of 71-1 (71) 72-1 (72) 73-1 (73) 74-1 (74)	Random Misfire	11-C-76
P0301	P1399	71-1 (71)	No. 1 Cylinder Misfire	11-C-77
P0302	P1399	72-1 (72)	No. 2 Cylinder Misfire	11-C-77
P0303	P1399	73-1 (73)	No. 3 Cylinder Misfire	11-C-77
P0304	P1399	74-1 (74)	No. 4 Cylinder Misfire	11-C-77
P0335	—	4-1 (4)	Crankshaft Position (CKP) Sensor No Signal	11-C-83
P0336	—	4-2 (4)	Crankshaft Position (CKP) Sensor Intermittent Interruption	11-C-83
P0342	—	9-3 (9)	Cylinder Position Sensor (CYP) Circuit Low Voltage	11-C-85
P0343	—	9-4 (9)	Cylinder Position Sensor (CYP) Circuit High Voltage	11-C-85
P0420	—	67-1 (67)	Catalyst System Efficiency Below Threshold	11-C-102
P0444	—	92-5 (92)	Evaporative Emission (EVAP) Purge Control Solenoid Valve Circuit Open Problem	11-C-103
P0445	—	92-6 (92)	Evaporative Emission (EVAP) Purge Control Solenoid Valve Circuit Short Problem	11-C-105

\*: These DTCs will be indicated by the blinking of the Malfunction Indicator Lamp (MIL) with the SCS short connector connected.

(cont'd)

# General Troubleshooting Information

## DTC Troubleshooting Index (cont'd)

Scan tool		Honda DTC (MIL indication)*	Detection Item	Page
DTC	Temporary DTC			
P0500	—	17-1 (17)	Vehicle Speed Sensor (VSS) Malfunction	11-C-87
P0560	—	34-1 (34)	Engine Control Module (ECM) Back Up System Voltage Problem	11-C-88
P0562	—	34-3 (34)	Engine Control Module (ECM) Back Up Circuit Low Voltage	11-C-89
P0563	—	34-4 (34)	Engine Control Module (ECM) Back Up Circuit High Voltage	11-C-89
P0601	—	0-6 (—)	Engine Control Module (ECM) Internal Circuit Malfunction	11-C-91
P0604	—	0-5 (—)	Engine Control Module (ECM) Internal Circuit Malfunction	11-C-91
P1515	—	14-7 (14)	Idle Air Control (IAC) Valve Circuit Short Problem	11-C-99
P1516	—	14-8 (14)	Idle Air Control (IAC) Valve Circuit Short Problem	11-C-99
P1517	—	14-5 (14)	Idle Air Control (IAC) Valve Circuit Open Problem	11-C-100
P1518	—	14-6 (14)	Idle Air Control (IAC) Valve Circuit Open Problem	11-C-100
P1607	—	0-2 (—)	Engine Control Module (ECM) Internal Circuit Malfunction	11-C-91

\*: These DTCs will be indicated by the blinking of the Malfunction Indicator Lamp (MIL) when the SCS short connector is connected.



# General Troubleshooting Information

## Symptom Troubleshooting Index

Listed below are symptoms and probable causes for problems that DO NOT cause the Malfunction Indicator Lamp (MIL) to come on. If the MIL was reported on, go to DTC Troubleshooting Index (see page 11-C-32).

NOTE: Across each row in the chart, the systems that could be sources of a symptom are ranked in the order they should be inspected starting with ①. Find the symptom in the left column, read across to the most likely source, then refer to the page listed at the top of that column. If inspection shows the system is OK, try the next most likely system ②, etc.

PAGE		SYSTEM	PGM-FI		IDLE CONTROL					
			MIL CIRCUIT	IMMOBI- LIZER SYSTEM	IAC VALVE	ALTERNA- TOR FR SIGNAL	STARTER SWITCH	BRAKE SWITCH SIGNAL	P/S PRES- SURE SWITCH SIGNAL	HOSES AND CONNEC- TIONS
SYMPTOM			11-C-92	——	11-C-99	——	——	——	——	——
ENGINE WON'T START	MIL COMES ON									②
	MIL DOESN'T COME ON OR STAYS ON AND NEVER GO OFF	①								②
DIFFICULT TO START ENGINE					③		①			①
WHEN COLD FAST IDLE OUT OF SPEC					③					①
ENGINE SPEED TOO HIGH AFTER WARN- ING UP					③					①
RPM TOO LOW AFTER WARNING UP	IDLE SPEED IS BELOW SPECIFIED ENGINE SPEED (NO LOAD)				①					③
	IDLE SPEED FLUCTUATES WITH ELECTRICAL LOAD				②	①		②		③
	IDLE SPEED DROPS WHIN STEERING WHEEL IS TURNING				②	①			①	
ROUGH IDLE					①	③				
FREQUENT STALLING AFTER WARMING UP					①					②
POOR PER- FORMANCE	MISFIRE OR ROUGH RUN- NING									③
	FAILS EMISSION TEST									③
	LOSS OF POWER									



FUEL SUPPLY						INTAKE AIR			EMISSION CONTROL		
FUEL LINES, FUEL PRESSURE	FUEL INJECTOR	FUEL FILTER	FUEL PUMP	PGM-FI MAIN RELAY	FUEL	AIR CLEANER	THROTTLE WIRE	THROTTLE BODY	TWC	PCV SYSTEM	EVAP CONTROL SYSTEM
—	—	—	—	—	—	—	—	—	11-C-102	—	11-C-103
①	③		②	②	①			③			
①	③	②	②		①			③			
							②	②			
							②	②			
								②			
								②			
								②			
②	②				③					③	
①	②		②		②						
②	②				③				①		③
①	③	②	②		③	②	②	②	②		



# Troubleshooting

## ECM Data

You can retrieve data from the ECM by connecting a scan tool or the Honda PGM Tester to the Data Link Connector (DLC). The items listed in the table below can be indicated by both scan tool and Honda PGM Tester. The Honda PGM Tester also reads data beyond these items. Understanding this data may help you find the causes of intermittent problems.

### NOTE:

- The “operating values” listed are approximate and may vary depending on the environment and the individual vehicle.
- Unless noted otherwise, “at idle speed” means idling with the engine completely warmed up, transmission in neutral, and the A/C and all accessories turned off.

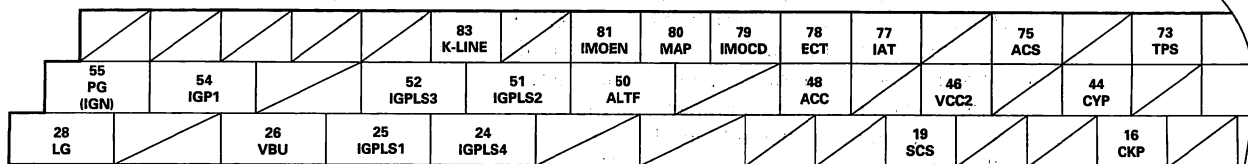
Data	Description	Operating Value	Freeze Data
Diagnostic Trouble Code (DTC)	If the ECM detects a problem, it will store it as a code consisting of one letter and four numbers.	If no problem is detected, there is no output.	YES
Engine Speed	The ECM computes engine speed from the signals sent from the Crankshaft Position sensor. This data is used for determining the time and amount of fuel injection.	Nearly the same as tachometer indication At idle speed: 750 ± 50 rpm (min <sup>-1</sup> )	YES
Vehicle Speed	The ECM converts pulse signals from the Vehicle Speed Sensor (VSS) into speed data.	Nearly the same as speedometer indication	YES
Manifold Absolute Pressure (MAP)	The absolute pressure caused in the intake manifold by engine load and speed.	With engine stopped: Nearly the same as atmospheric pressure At idle speed: 24 – 30 kPa (180 – 225 mmHg, 7.1 – 8.9 inHg)	YES
Engine Coolant Temperature (ECT)	The ECT sensor converts coolant temperature into voltage and signals the ECM. The sensor is a thermistor whose internal resistance changes with coolant temperature. The ECM uses the voltage signals from the ECT sensor to determine the amount of injected fuel.	With cold engine: Same as ambient temperature and IAT With engine warmed up: approx. 80 – 97°C (176 – 207°F)	YES
Heated Oxygen Sensor (HO2S) (Primary, Sensor 1) (Secondary Sensor 2)	The Heated Oxygen Sensor detects the oxygen content in the exhaust gas and sends voltage signals to the ECM. Based on these signals, the ECM controls the air/fuel ratio. When the oxygen content is high (that is, when the ratio is leaner than the stoichiometric ratio), the voltage signal is lower. When the oxygen content is low (that is, when the ratio is richer than the stoichiometric ratio), the voltage signal is higher.	0.0 – 1.25 V At idle speed: about 0.1 – 0.9 V	YES (Primary Sensor 1 only)
HO2S Feedback Loop Status	Loop status is indicated as “open” or “closed”. Closed: Based on the HO2S output, the ECM determines the air/fuel ratio and controls the amount of injected fuel. Open: ignoring HO2S output, the ECM refers to signals from the TP, MAP, and ECT sensors to control the amount of injected fuel.	At idle speed: closed	YES



Data	Description	Operating Value	Freeze Data
Short Term Fuel Trim	The air/fuel ratio correction coefficient for correcting the amount of injected fuel when HO2S feedback is in the closed loop status. When the signal from the HO2S is weak, short term fuel trim gets higher, and the ECM increases the amount of injected fuel. The air/fuel ratio gradually gets richer, causing a higher HO2S output. Consequently, the short term fuel trim is lowered, and the ECM reduces the amount of injected fuel. This cycle keeps the air/fuel ratio close to the stoichiometric ratio when in closed loop status.	0.75 – 1.25	YES
Long Term Fuel Trim	Long term fuel trim is computed from short term fuel trim and indicates changes occurring in the fuel supply system over a long period. If long term fuel trim is higher than 1.00, the amount of injected fuel must be increased. If it is lower than 1.00, the amount of injected fuel must be reduced.	0.75 – 1.25	YES
Intake Air Temperature (IAT)	The IAT sensor converts intake air temperature into voltage and signals the ECM. When intake air temperature is low, the internal resistance of the sensor increases, and the voltage signal is higher.	With cold engine: Same as ambient temperature and ECT	YES
Throttle Position	Based on the accelerator pedal position, the opening angle of the throttle valve is indicated.	At idle speed: approx. 10%	YES
Ignition Timing	Ignition timing is the ignition advance angle set by the ECM. The ECM matches ignition timing to the driving conditions.	At idle speed: $12^{\circ} \pm 2^{\circ}$ BTDC with the SCS service signal line is jumped with the Honda PGM tester	NO
Calculated Load Value (CLV)	CLV is the engine load calculated from the MAP data.	At idle speed: 24 – 30%	YES

# General Troubleshooting Information

## Engine Control Module (ECM) Terminal Arrangement



Wire side female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	GRN/YEL	FLR (FUEL PUMP RELAY)	Drives fuel pump relay.	0 V for 2 seconds after turning ignition switch ON (II), then battery voltage
2	ORN	IACV N (IDLE AIR CONTROL VALVE N SIDE)	Drives IAC valve N side coil.	With engine running: pulses
3	BRN	INJ1 (No. 1 FUEL INJECTOR)	Drives No. 1 fuel injector.	With the ignition switch ON (II): battery voltage At idle: duty controlled
4	YEL	INJ4 (No. 4 FUEL INJECTOR)	Drives No. 4 fuel injector.	
6	BLK	PG (INJ) (POWER GROUND)	Ground for the injector circuit.	Less than 1.0 V at all times
8	GRN/ORN	MIL (MALFUNCTION INDICATOR LIGHT)	Drives MIL.	With MIL turned ON: 0 V With MIL turned OFF: battery voltage
9	GRN	FANC (RADIATOR FAN CONTROL)	Drives radiator fan relay.	With radiator fan running: 0 V With radiator fan stopped: battery voltage
10	GRN/BLK	SHO2S GND (SECONDARY HO2S GROUND)	Ground for secondary HO2S	Less than 1.0 V at all times
11	GRN/BLK	PHO2S GND (PRIMARY HO2S GROUND)	Ground for primary HO2S	Less than 1.0 V at all times
12	WHT	PHO2S (PRIMARY HEATED OXYGEN SENSOR)	Detects primary HO2S signal.	With throttle fully opened from idle with fully warmed up engine: above 0.9 V With throttle quickly closed: below 0.6 V
13	GRN/WHT	BKSW (BRAKE SWITCH)	Detects brake switch signal.	With brake pedal released: 0 V With brake pedal depressed: battery voltage
14	GRN/WHT	SG1 (SENSOR GROUND)	Ground for MAP sensor.	Less than 1.0 V at all times
16	WHT	CKP (CKP SENSOR SIDE)	Detects CKP sensor.	With engine running: pulses
19	BRN	SCS (SERVICE CHECK SIGNAL)	Detects service check connector signal (the signal causing a DTC indication)	With the terminal connected: 0 V With the terminal disconnected: battery voltage
24	WHT/BLU	IGPLS4 (No. 4 IGNITION COIL PULSE)	Drives No. 4 ignition coil.	With engine running: pulses
25	WHT	IGPLS1 (No. 1 IGNITION COIL PULSE)	Drives No. 1 ignition coil.	With engine running: pulses
26	WHT/BLU	VBU (VOLTAGE BACK UP)	Power source for the ECM control circuit. Power source for the DTC memory.	Battery voltage at this times
28	BRN/BLK	LG (LOGIC GROUND)	Ground for the ECM control circuit.	Less than 1.0 V at all times
29	BLK/BLU	IACV P (IDLE AIR CONTROL VALVE P SIDE)	Drives IAC valve P side coil.	With engine running: pulses
30	BLK/WHT	SHO2SHTC (SECONDARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives secondary HO2S heater.	With ignition switch ON (II): battery voltage With fully warmed up engine running: duty controlled
31	BLU	INJ3 (No. 3 FUEL INJECTOR)	Drives No. 3 fuel injector.	With the ignition switch ON (III): battery voltage At idle: duty controlled
32	RED	INJ2 (No. 2 FUEL INJECTOR)	Drives No. 2 fuel injector.	
34	BLK	PG (POWER GROUND)	Ground for the ECM control circuit.	Less than 1.0 V at all times
36	RED/YEL	PCS (EVAP PURGE CONTROL SOLENOID VALVE)	Drives EVAP purge control solenoid valve.	With engine running, engine coolant, below 40.5°C (104.9°F): battery voltage With engine running, engine coolant, above 40.5°C (104.9°F): duty controlled
37	BLK/WHT	PHO2SHTC (PRIMARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives primary HO2S heater.	With ignition switch ON (III): battery voltage With fully warmed up engine running: duty controlled
38	BLU	NEP (ENGINE SPEED PULSE)	Outputs engine speed pulse.	With engine running: pulses
39	WHT/RED	SHO2S (SECONDARY HEATED OXYGEN SENSOR, SENSOR 2)	Detects secondary HO2S signal.	With throttle fully opened from idle with fully warmed up engine: above 0.9 V With throttle quickly closed: below 0.6 V



72 PSP SW	71 SG2								63 IMO LMP					59 VCC1	58 IGP2		
42 VSS			39 SHO2S	38 NEP	37 PHO2S HTC	36 PCS		34 PG			32 INJ2	31 INJ3		30 SHO2S HTC		29 IACV P	
	14 SG1	13 BKSW	12 PHO2S	11 PHO2S GND	10 SHO2S GND	9 FANC	8 MIL		6 PG (INJ)			4 INJ4	3 INJ1		2 IACV N		1 FLR

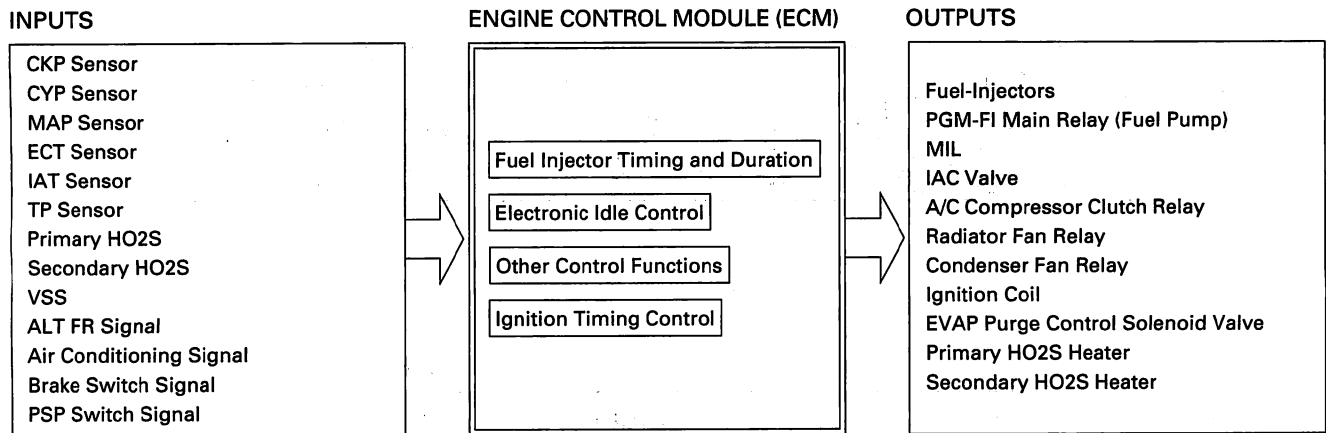
Wire side female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
42	BLU/WHT	VSS (VEHICLE SPEED SENSOR)	Detects VSS signal.	With ignition switch ON (II) and front wheel rotating: cycles 0 V – 5 V
44	ORN/BLU	CYP (CYP SENSOR)	Detects CYP sensor.	With engine running: pulses
46	YEL/BLU	VCC2 (SENSOR VOLT-AGE)	Provides sensor voltage.	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
48	RED	ACC (A/C CLUTCH RELAY)	Drives A/C clutch relay.	With compressor ON: 0 V With compressor OFF: battery voltage
50	WHT/RED	ALTF (ALTERNATOR FR SIGNAL)	Detects alternator FR signal.	With fully warmed up engine running: 0 V – battery voltage (depending on electrical load)
51	WHT/GRN	IGPLS2 (No. 2 IGNITION COIL PULSE)	Drives No. 2 ignition coil.	With engine running: pulses
52	WHT/BLK	IGPLS3 (No. 3 IGNITION COIL PULSE)	Drives No. 3 ignition coil.	With engine running: pulses
54	YEL/BLK	IGP1 (POWER SOURCE)	Power source for the ECM control circuit.	With ignition switch ON (III): battery voltage With ignition switch OFF: 0 V
55	BLK	PG (IGN) (POWER GROUND)	Ground for the ignition system.	Less than 1.0 V at all times
58	YEL/BLK	IGP2 (POWER SOURCE)	Power source for the ECM control circuit.	With ignition switch ON (II): battery voltage With ignition switch OFF: 0 V
59	YEL/RED	VCC1 (SENSOR VOLT-AGE)	Power source to MAP sensor.	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
63	PNK	IMOLMP (IMMOBILIZER INDICATOR LIGHT)	Drives immobilizer indicator light.	With immobilizer indicator light turned ON: 0 V With immobilizer indicator light turned OFF: battery voltage
71	GRN/BLK	SG2 (SENSOR GROUND)	Sensor ground.	Less than 1.0 V at all times
72	GRN	PSPSW (P/S PRESSURE SWITCH SIGNAL)	Detects PSP switch signal.	At idle with steering wheel in straight ahead position: 0 V At idle with steering wheel at full lock: battery voltage
73	RED/BLK	TPS (THROTTLE POSITION SENSOR)	Detects TP sensor signal.	With throttle fully open: about 4.3 V With throttle fully closed: about 0.5 V
75	BLU/RED	ACS (A/C SWITCH SIGNAL)	Detects A/C switch signal.	With A/C switch ON: 0 V With A/C switch OFF: about 5 V
77	RED/YEL	IAT (INTAKE AIR TEMPERATURE SENSOR)	Detects IAT sensor signal.	With ignition switch ON (II): about 0.1 – 4.8 V (depending on intake air temperature)
78	RED/WHT	ECT (ENGINE COOLANT TEMPERATURE SENSOR)	Detects ECT sensor signal.	With ignition switch ON (II): about 0.1 – 4.8 V (depending on engine coolant temperature)
79	BLU/GRN	IMODD (IMMOBILIZER CODE)	Detects immobilizer signal.	
80	RED/GRN	MAP (MANIFOLD ABSOLUTE PRESSURE SENSOR)	Detects MAP sensor signal.	With ignition switch ON (II): about 3 V At idle: about 1.0 V (depending on engine speed)
81	ORN/BLU	IMOEN (IMMOBILIZER ENABLE SIGNAL)	Sends immobilizer enable signal.	
83	LT BLU	K-LINE (DLC)	Sends and receives scan tool signal.	With ignition switch ON (III): pulses

# General Troubleshooting Information

## System Description



### PGM-FI System

The PGM-FI system on this model is a multiport fuel injection system.

### Fuel Injector Timing and Duration

The ECM contains memories for the basic discharge durations at various engine speeds and manifold pressures. The basic discharge duration, after being read out from the memory, is further modified by signals sent from various sensors to obtain the final discharge duration.

### Idle Air Control

Idle Air Control Valve (IAC Valve)

When the engine is cold, the A/C compressor is on, the brake pedal is depressed, the P/S load is high, or the alternator is charging, the ECM controls duty to the IAC Valve to maintain the correct idle speed.

### Ignition Timing Control

The ECM contains memories for basic ignition timing at various engine speeds and manifold pressures. Ignition timing is also adjusted for engine coolant temperature.

### Other Control Functions

#### 1. Starting Control

When the engine is started, the ECM provides a rich mixture by increasing fuel injector duration.

#### 2. Fuel Pump Control

- When the engine is running, the ECM supplies ground to the PGM-FI main relay that supplies current to the fuel pump.
- When the engine is not running and the ignition is on, the ECM cuts ground to the PGM-FI main relay which cuts current to the fuel pump.



### 3. Fuel Cut-off Control

- During deceleration with the throttle valve closed, current to the fuel injectors is cut off to improve fuel economy at speeds over 1,160 rpm ( $\text{min}^{-1}$ ).
- Fuel cut-off action also takes place when engine speed exceeds, 6,800 rpm ( $\text{min}^{-1}$ ), regardless of the position of the throttle valve, to protect the engine from over-revving.

### 4. A/C Compressor Clutch Relay

When the ECM receives a demand for cooling from the air conditioning system, it delays the compressor from being energized.

### 5. Evaporative Emission (EVAP) Purge Control Solenoid Valve

When the engine coolant temperature is below 40.5°C (104.9°F), the ECM controls the EVAP purge control solenoid valve which controls vacuum to the EVAP purge control canister.

## ECM Fail-safe/Self-diagnosis Functions

### 1. Fail-safe Function

When an abnormality occurs in a signal from a sensor, the ECM ignores that signal and assumes a pre-programmed value for that sensor that allows the engine to continue to run.

### 2. Self-diagnosis Function [Malfunction Indicator Lamp (MIL)]

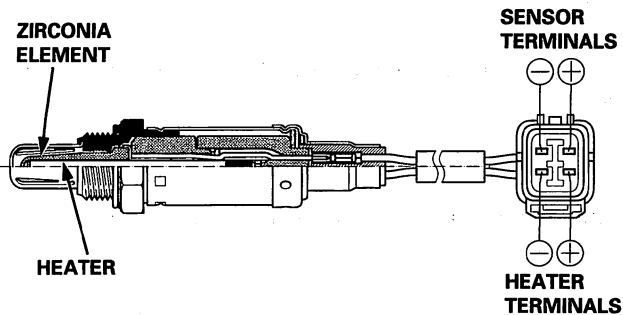
When an abnormality occurs in a signal from a sensor, the ECM supplies ground for the MIL and stores the code in erasable memory. When the ignition is initially turned on, the ECM supplies ground for the MIL for 2 seconds to check the MIL bulb condition.

# PGM-FI System

## System Descriptions

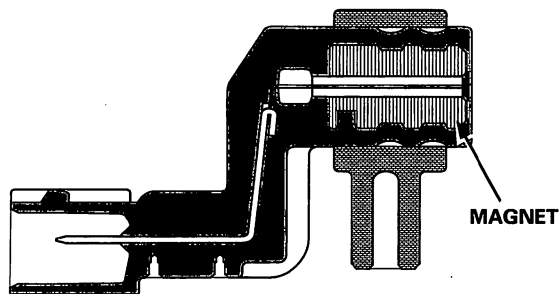
### Secondary Heated Oxygen Sensor (Secondary HO2S)

The Secondary HO2S detects the oxygen content in the exhaust gas in the downstream of the Three Way Catalytic Converter (TWC) and sends signals to the ECM which varies the duration of fuel injection accordingly. To stabilize its output, the sensor has an internal heater. The Secondary HO2S is installed in the TWC.



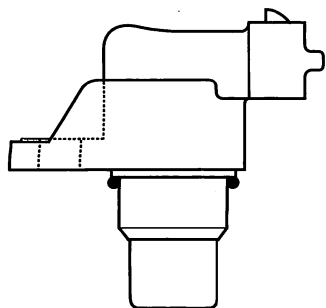
### Crankshaft Position (CKP) Sensor

The CKP Sensor determines timing for fuel injection and ignition of each cylinder and also detects engine speed.



### Cylinder Position (CYP) Sensor

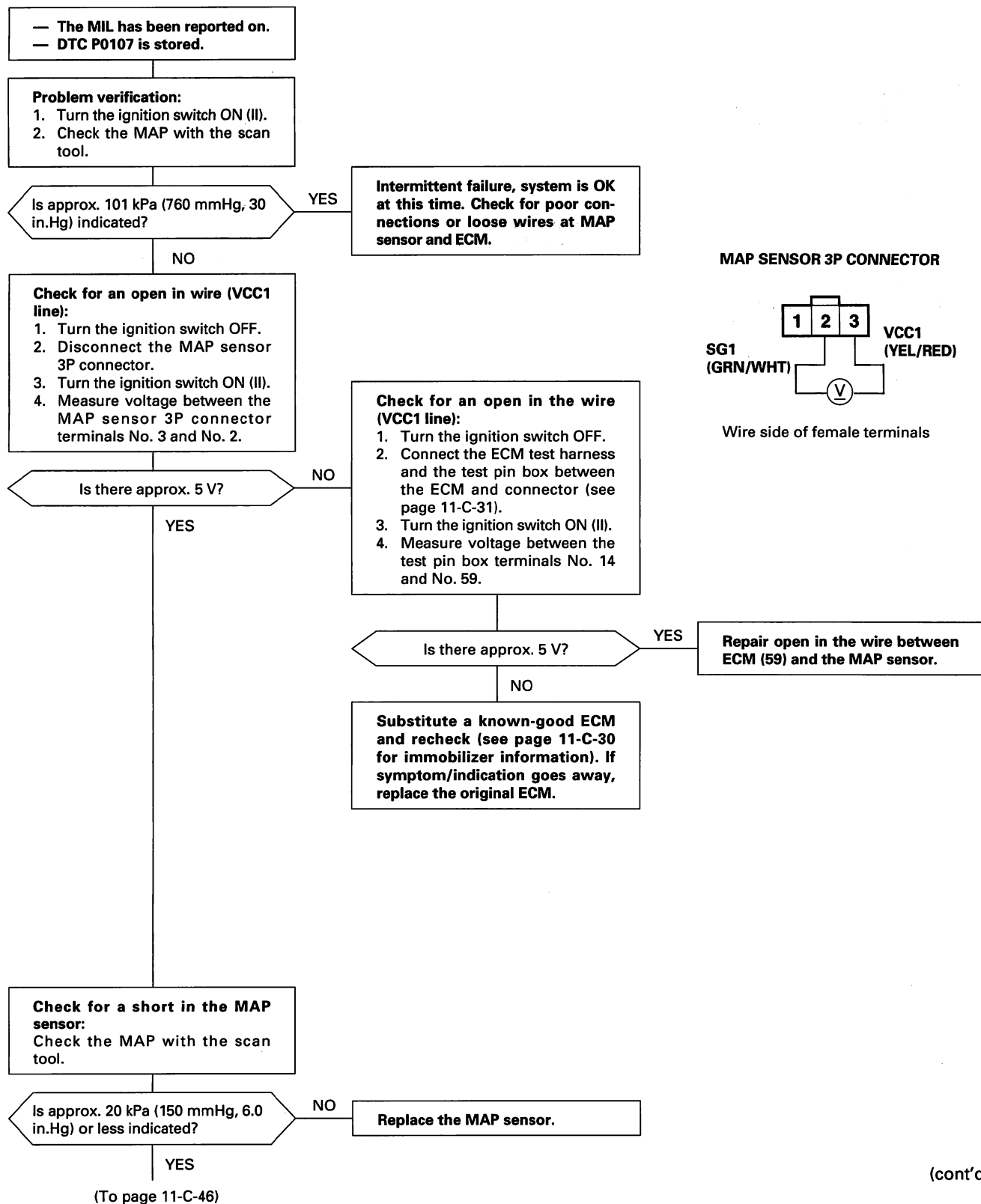
The CYP Sensor detects the position of No. 1 cylinder for sequential fuel injection to each cylinder.





## DTC Troubleshooting

### DTC P0107: MAP Sensor Circuit Low Voltage



(cont'd)



# PGM-FI System

## DTC Troubleshooting (cont'd)

(From page 11-C-45)

**Check for a short in the wire (MAP line):**  
1. Turn the ignition switch OFF.  
2. Disconnect the ECM connector.  
3. Check for continuity between the MAP sensor 3P connector terminal No. 1 and body ground.

Is there continuity?

YES

**Repair short in the wire between ECM (80) and MAP sensor.**

NO

**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If normal MAP is indicated, replace the original ECM.**

**MAP SENSOR 3P CONNECTOR**



Wire side of female terminals



## DTC P0108: MAP Sensor Circuit High Voltage

- The MIL has been reported on.
- DTC P0108 is stored.

### Problem verification:

1. Start the engine. Hold the engine at 3,000 rpm ( $\text{min}^{-1}$ ) with no load (in neutral) until the radiator fan comes on, then let it idle.
2. Check the MAP with the scan tool.

Is 101 kPa (760 mmHg, 30 in.Hg), 1.0 V or higher indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at MAP sensor and ECM.

YES

### Check for an open in the MAP sensor:

1. Turn the ignition switch OFF.
2. Disconnect the MAP sensor 3P connector.
3. Connect a jumper wire between the MAP sensor 3P connector terminals No. 1 and No. 2.
4. Turn the ignition switch ON (II).
5. Check the MAP with the scan tool.

Is 101 kPa (760 mmHg, 30 in.Hg), 1.0 V or higher indicated?

NO

Replace the MAP sensor.

YES

### Check for an open in wire (SG1 line):

1. Remove the jumper wire.
2. Measure voltage between the MAP sensor 3P connector terminals No. 3 and No. 2.

Is there approx. 5 V?

NO

### Check for an open in the wire (SG1 line):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Turn the ignition switch ON (II).
4. Measure voltage between the test pin box terminals No. 14 and No. 59.

Is there approx. 5 V?

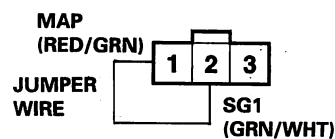
YES

Repair open in the wire between ECM (14) and the MAP sensor.

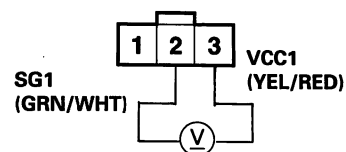
NO

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.

### MAP SENSOR 3P CONNECTOR



Wire side of female terminals



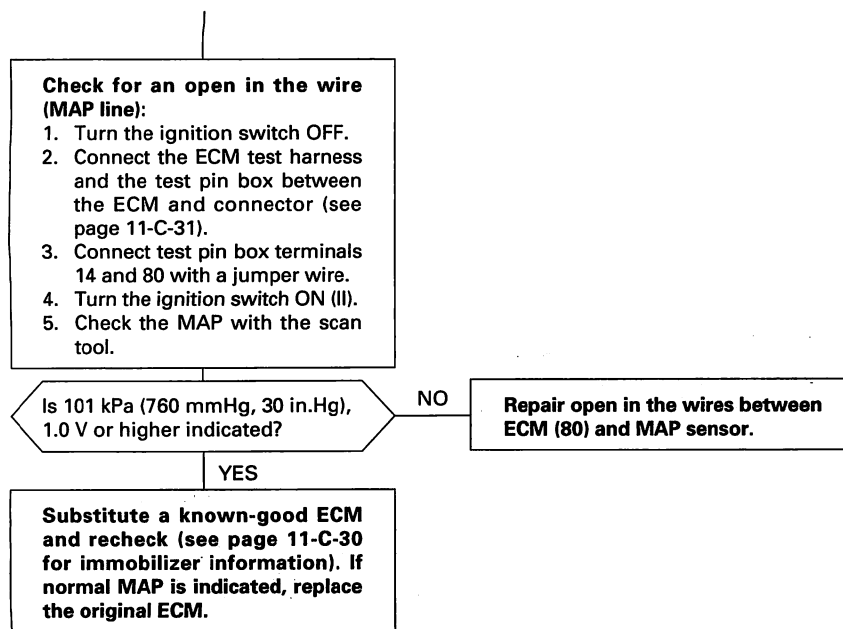
(To page 11-C-48)

(cont'd)

# PGM-FI System

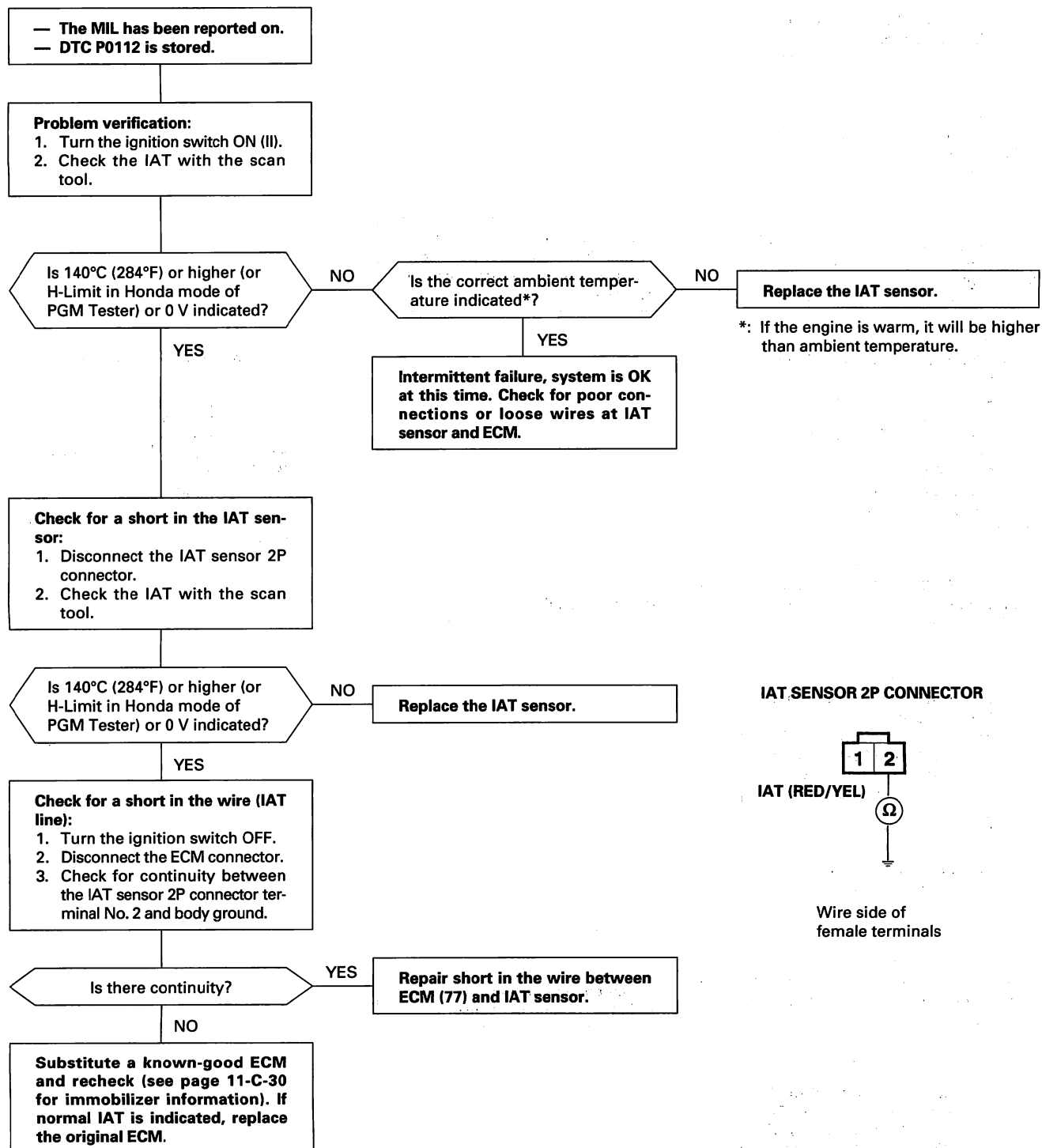
## DTC Troubleshooting (cont'd)

(From page 11-C-47)





## DTC P0112: IAT Sensor Circuit Low Voltage



# PGM-FI System

## DTC Troubleshooting (cont'd)

### DTC P0113: IAT Sensor Circuit High Voltage

- The MIL has been reported on.
- DTC P0113 is stored.

#### Problem verification:

1. Turn the ignition switch ON (II).
2. Check the IAT with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at IAT sensor and ECM.

YES

#### Check for an open in the IAT sensor:

1. Disconnect the IAT sensor 2P connector.
2. Connect the IAT sensor 2P connector terminals No. 1 and No. 2 with a jumper wire.
3. Check the intake air temperature with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

NO

Replace the IAT sensor.

YES

#### Check for an open in the wires (IAT, SG2 lines):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Connect test pin box terminals 71 and 77 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the IAT with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

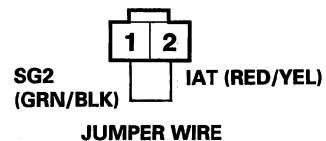
NO

Repair open in the wires between ECM (71, 77) and IAT sensor.

YES

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If normal IAT is indicated, replace the original ECM.

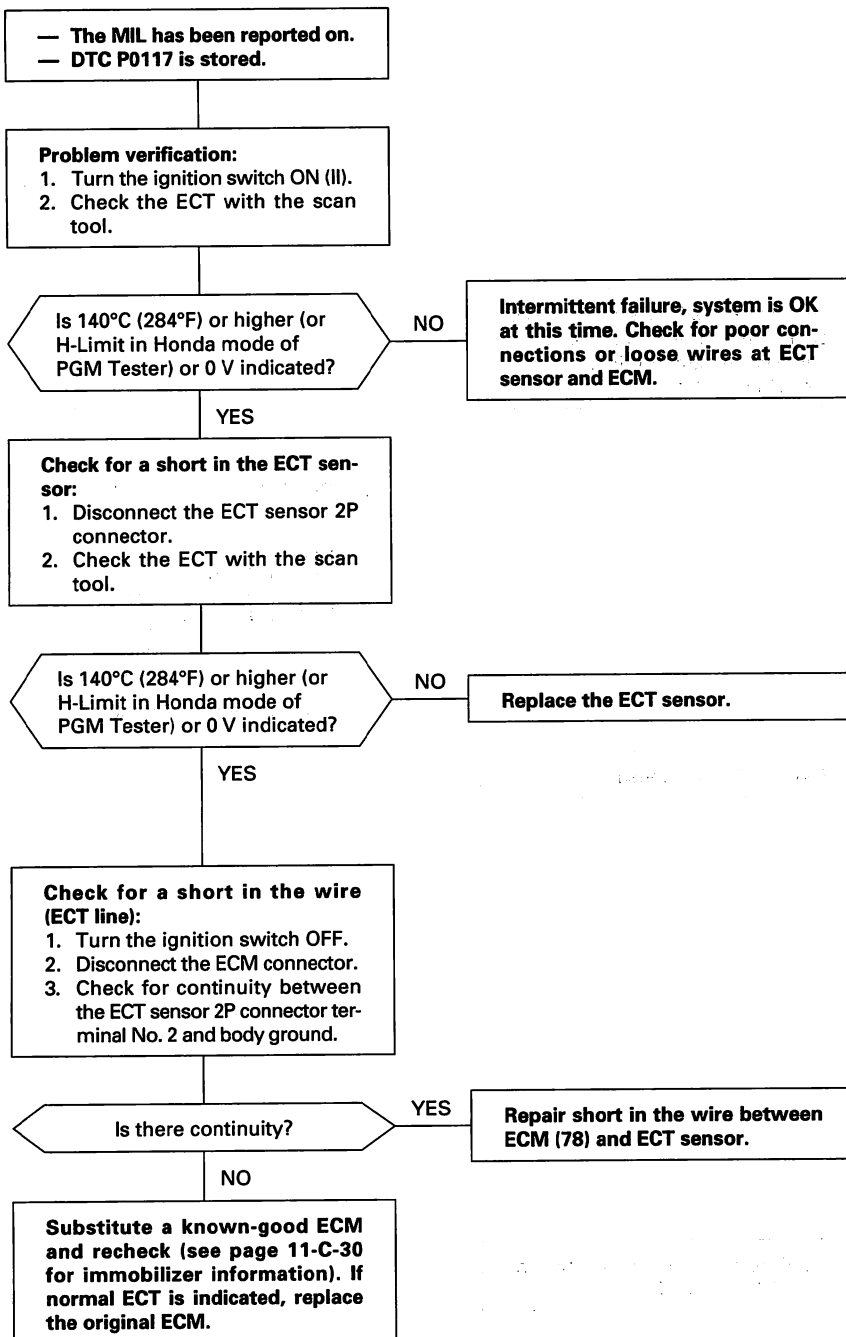
#### IAT SENSOR 2P CONNECTOR



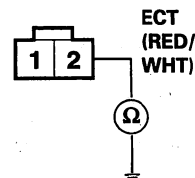
Wire side of female terminals



## DTC P0117: ECT Sensor Circuit Low Voltage



ECT SENSOR 2P CONNECTOR



Wire side of female terminals

# PGM-FI System

## DTC Troubleshooting (cont'd)

### DTC P0118: ECT Sensor Circuit High Voltage

- The MIL has been reported on.
- DTC P0118 is stored.

#### Problem verification:

1. Turn the ignition switch ON (II).
2. Check the ECT with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at ECT sensor and ECM.

YES

#### Check for an open in the ECT sensor:

1. Disconnect the ECT sensor 2P connector.
2. Connect the ECT sensor 2P connector terminals No. 1 and No. 2 with a jumper wire.
3. Check the ECT with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

NO

Replace the ECT sensor.

YES

#### Check for an open in the wires (ECT, SG2 lines):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Connect test pin box terminals 71 and 78 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the ECT with the scan tool.

Is  $-38^{\circ}\text{C}$  ( $-36^{\circ}\text{F}$ ) or less (or L-Limit in Honda mode of PGM Tester) or 5 V indicated?

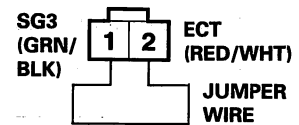
NO

Repair open in the wires between ECM (71, 78) and ECT sensor.

YES

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If normal ECT is indicated, replace the original ECM.

#### ECT SENSOR 2P CONNECTOR



Wire side of female terminals



## P0125: Cooling System Malfunction

- The MIL has been reported on.
- DTC P0125 is stored.

### Problem verification:

1. Start the engine. Hold the engine speed at 3,000 rpm ( $\text{min}^{-1}$ ) with no load (transmission in neutral) until the radiator fan comes on, then let it idle.
2. With the scan tool, check the ECT.

Is 80 – 97°C (176 – 207°F) indicated?

YES

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at ECT sensor and ECM.

NO

### Check for ECT sensor:

1. Turn the ignition switch OFF.
2. Disconnect the ECT sensor 2P connector.
3. Measure resistance between the 2 terminals on the ECT sensor.

Is there 200 – 400  $\Omega$ ?

NO

Replace the ECT sensor.

YES

Test the thermostat.

Is it OK?

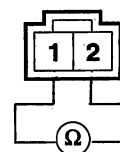
NO

Replace the thermostat.

YES

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.

### ECT SENSOR 2P CONNECTOR



Terminal side of male terminals



## DTC Troubleshooting (cont'd)

### DTC P0122: TP Sensor Circuit Low Voltage

- The MIL has been reported on.
- DTC P0122 is stored.

#### Problem verification:

1. Turn the ignition switch ON (II).
2. Check the throttle position with the scan tool.

Is there approx. 10% when the throttle is fully closed and approx. 85% when the throttle is fully opened?

YES

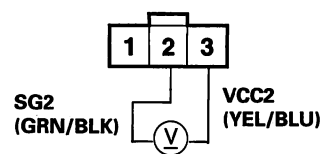
**Intermittent failure, system is OK at this time. Check for poor connections or loose wires at TP sensor and ECM.**

NO

#### Check for an open in the wire (VCC2 line):

1. Turn the ignition switch OFF.
2. Disconnect the TP sensor 3P connector.
3. Turn the ignition switch ON (II).
4. Measure voltage between the TP sensor 3P connector terminals No. 2 and No. 3.

#### TP SENSOR 3P CONNECTOR



Wire side of female terminals

Is there approx. 5 V?

NO

#### Check for an open in the wire (VCC2 line):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Turn the ignition switch ON (II).
4. Measure voltage between the test pin box terminals No. 46 and No. 71.

YES

#### Check for an open or short in TP sensor:

1. Turn the ignition switch OFF.
2. At the sensor side, measure resistance between the TP sensor 3P connector terminals NO. 1 and No. 2 with the throttle fully closed.

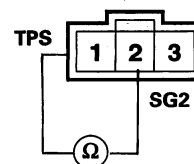
Is there approx. 5 V?

YES

**Repair open in the wire between ECM (46) and TP sensor.**

NO

**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If prescribed voltage is now available, replace the original ECM.**

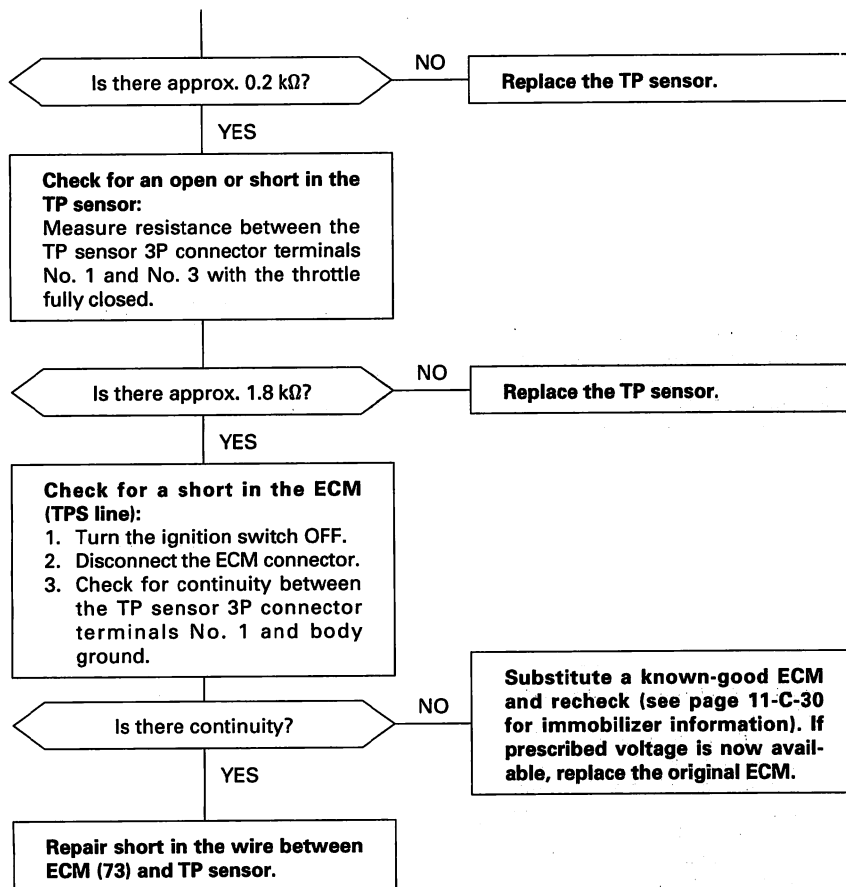


Terminal side of male terminals

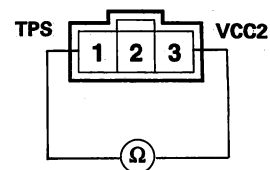
(To page 11-C-55)



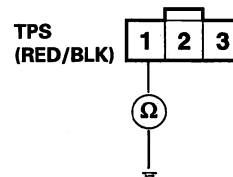
(From page 11-C-54)



#### TP SENSOR 3P CONNECTOR



Terminal side of male terminals



Wire side of female terminals

# PGM-FI System

## DTC Troubleshooting (cont'd)

### DTC P0123: TP Sensor Circuit High Voltage

- The MIL has been reported on.
- DTC P0123 is stored.

#### Problem verification:

1. Turn the ignition switch ON (II).
2. Check the throttle position with the scan tool.

Is there approx. 10% when the throttle is fully closed and approx. 85% when the throttle is fully opened?

YES

**Intermittent failure, system is OK at this time. Check for poor connections or loose wires at TP sensor and ECM.**

NO

#### Check for an open in the TP sensor:

1. Turn the ignition switch OFF.
2. Disconnect the TP sensor 3P connector.
3. Turn the ignition switch ON (II).
4. At the wire harness side, measure voltage between the TP sensor 3P connector terminals No. 2 and No. 3.

Is there approx. 5 V?

NO

YES

(To page 11-C-57)

#### Check for an open in the wire (SG2 line):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Turn the ignition switch ON (II).
4. Measure voltage between the test pin box terminals No. 46 and No. 71.

Is there approx. 5 V?

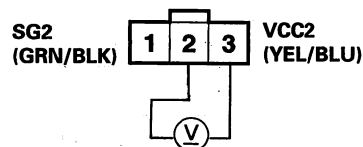
YES

**Repair open in the wire between ECM (71) and TP sensor.**

NO

**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If prescribed voltage is now available, replace the original ECM.**

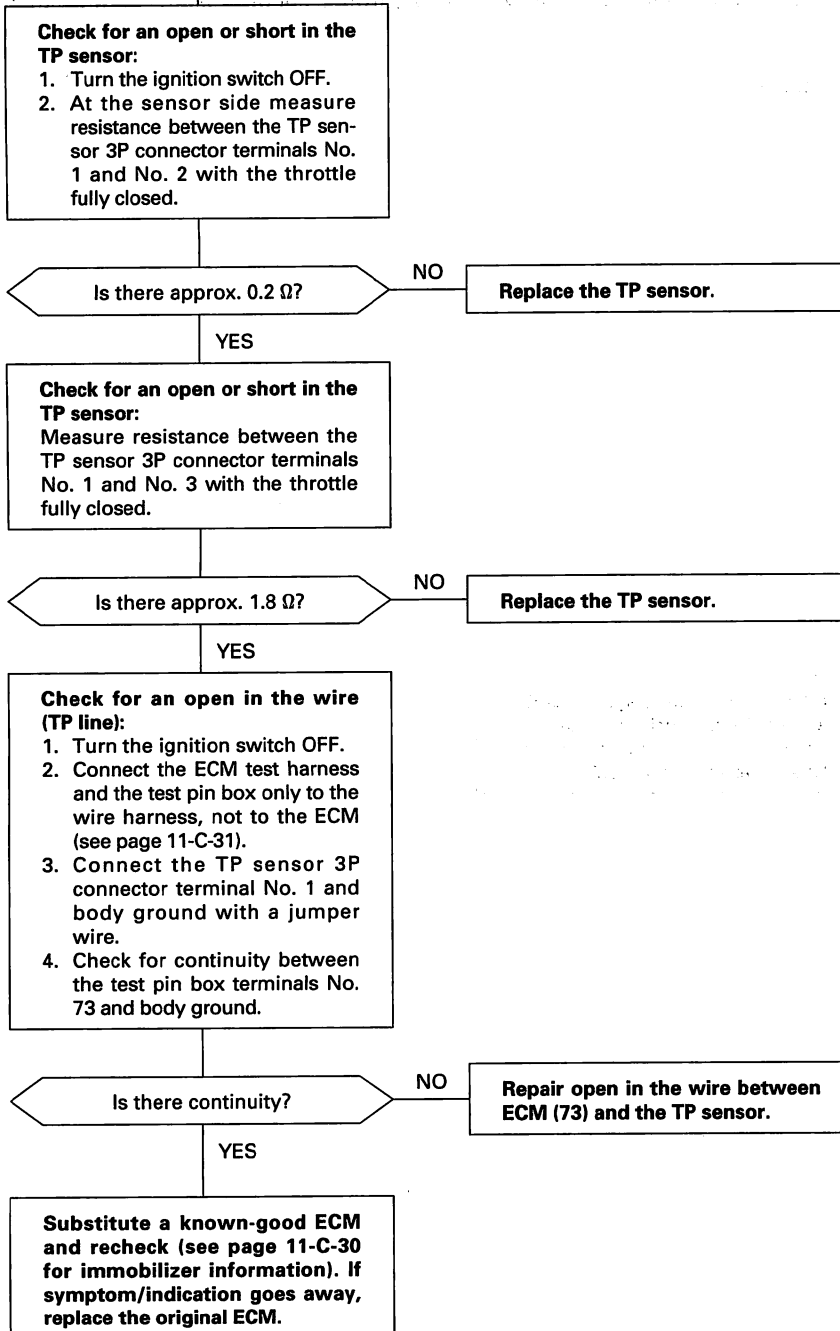
TP SENSOR 3P CONNECTOR



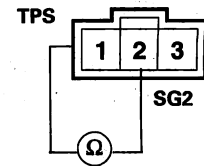
Wire side of female terminals



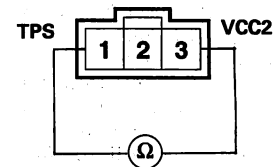
(From page 11-C-56)



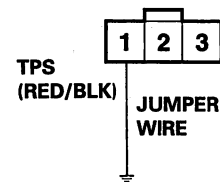
#### TP SENSOR 3P CONNECTOR



Terminal side of male terminals



#### TP SENSOR 3P CONNECTOR



Wire side of female terminals

# PGM-FI System

## DTC Troubleshooting (cont'd)

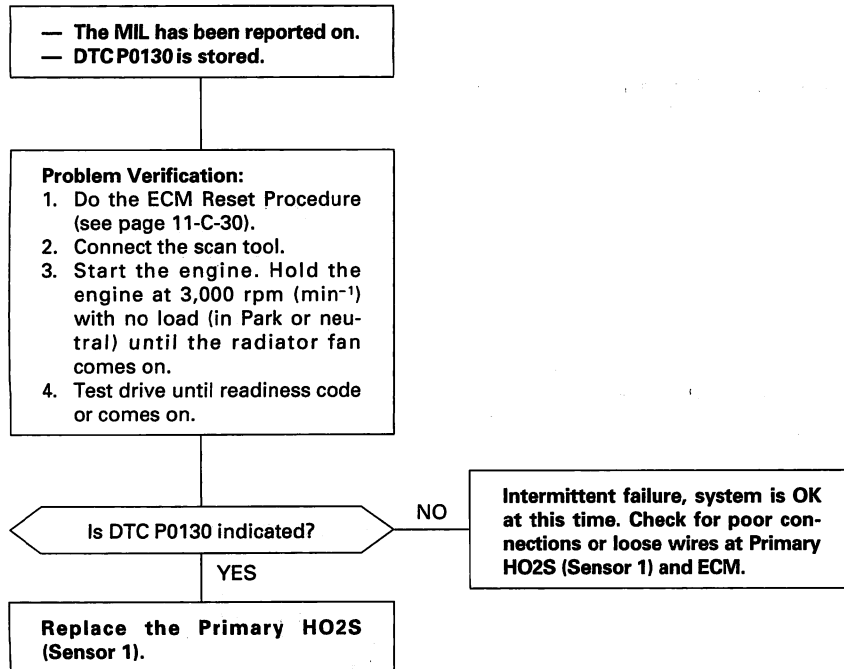
**P0130:** Primary HO2S (Sensor 1) Range/Performance Problem

NOTE: If some of the DTCs listed below are stored at the same time as DTC P0130, troubleshoot those DTCs first, then troubleshoot DTC P0130.

**P0136, P0137, P0138, P0140:** Secondary HO2S (sensor 2)

**P0141:** Secondary HO2S (sensor 2) Heater

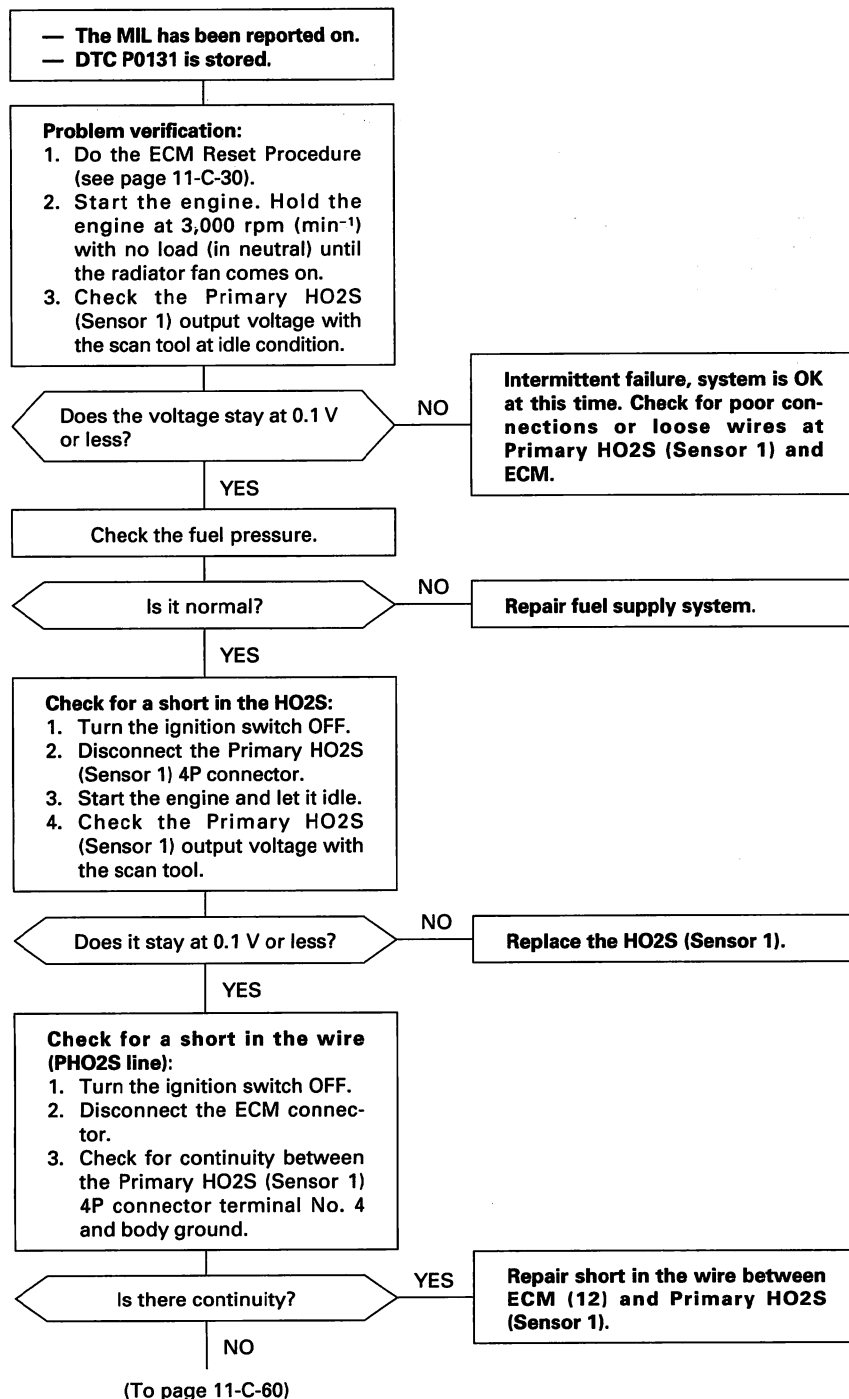
### Troubleshooting Flowchart



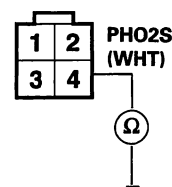


## DTC P0131: Primary HO2S (Sensor 1) Circuit Low Voltage

NOTE: Lack of fuel may cause the DTC P0131.



PRIMARY HO2S (Sensor 1)  
4P CONNECTOR



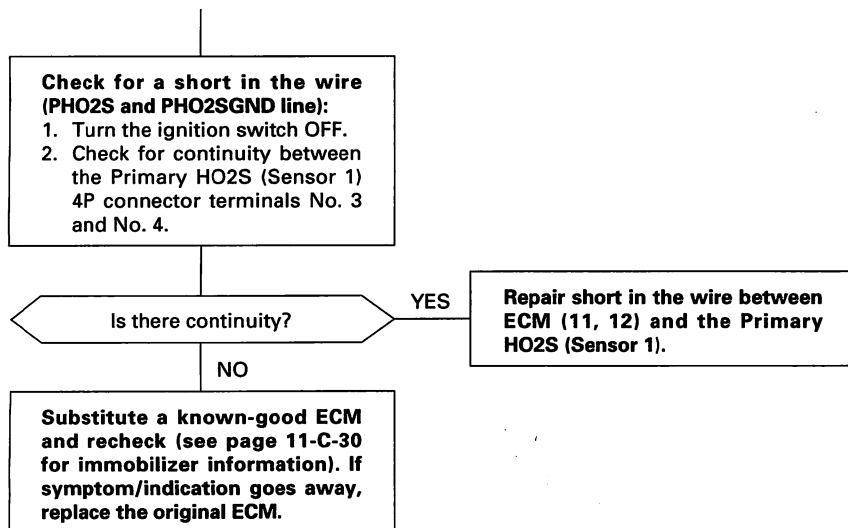
Wire side of female terminals

(cont'd)

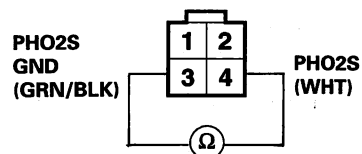
# PGM-FI System

## DTC Troubleshooting (cont'd)

(From page 11-C-59)



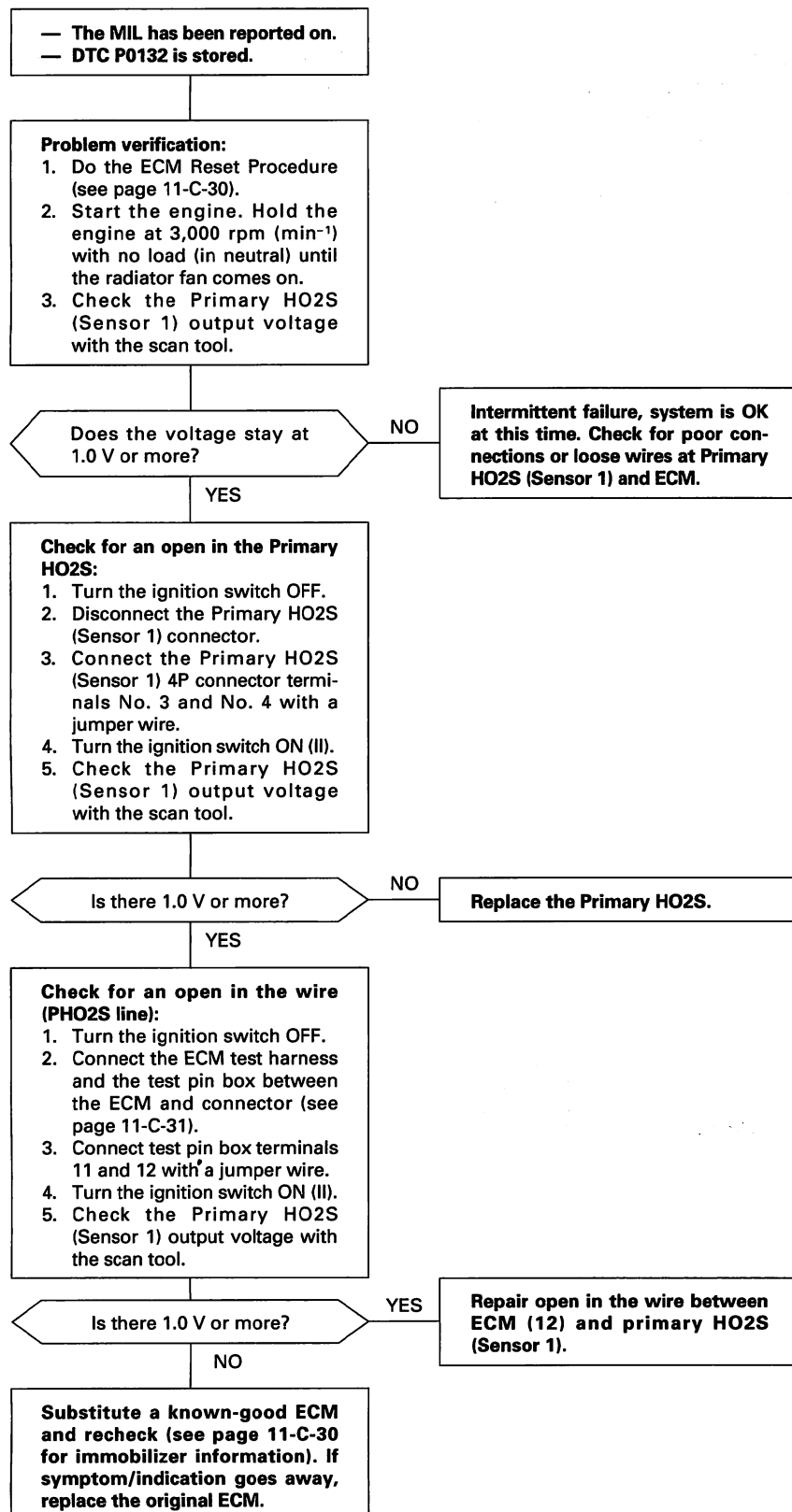
**PRIMARY HO2S (Sensor 1) 4P CONNECTOR**



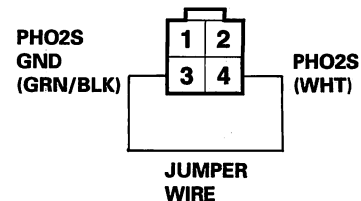
Wire side of female terminals



## DTC P0132: Primary HO2S (Sensor 1) Circuit High Voltage



PRIMARY HO2S (Sensor 1) 4P CONNECTOR



Wire side of female terminals



# PGM-FI System

## DTC Troubleshooting (cont'd)

### DTC P0133: Primary HO2S (Sensor 1) Slow Response

#### Description

By controlling the air/fuel ratio with a Primary HO2S (Sensor 1) and a Secondary HO2S (Sensor 2), the deterioration of the Primary HO2S (Sensor 1) can be evaluated by its feedback period. When the feedback period of the HO2S exceeds a certain value during stable driving conditions, the sensor will be judged as deteriorated.

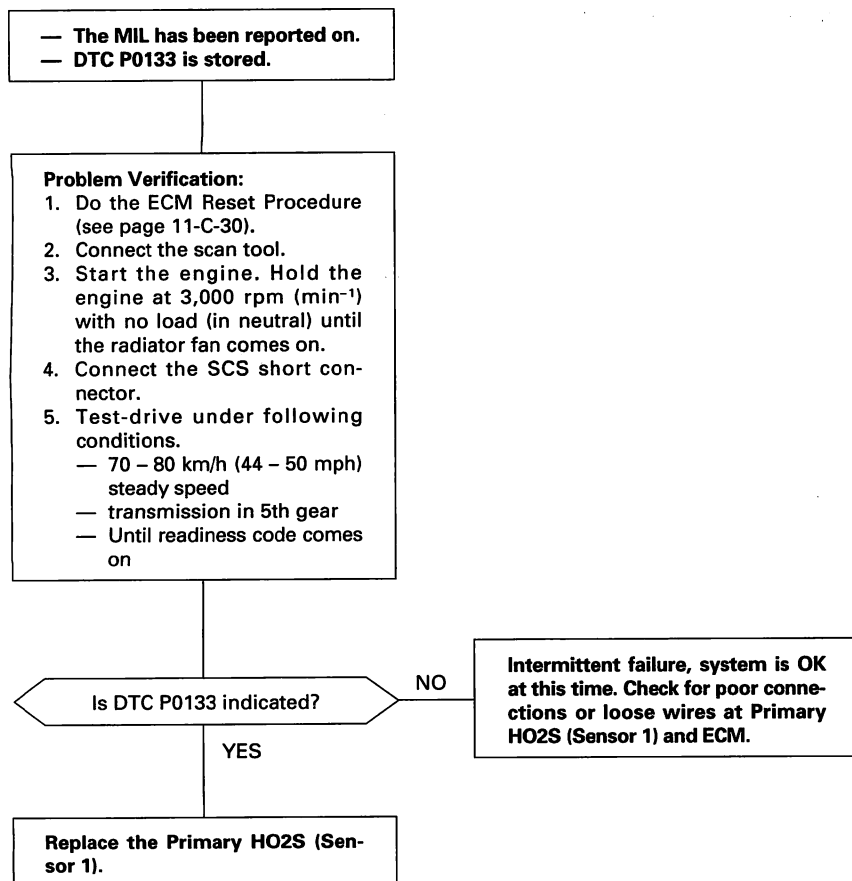
When deterioration has been detected during two consecutive trips, the MIL comes on and DTC P0133 will be stored.

NOTE: If DTC P0130, P0131, P0132 and/or P0134 are stored at the same time as DTC P0133, troubleshoot those DTCs first, then troubleshoot DTC P0133.

#### Possible Cause

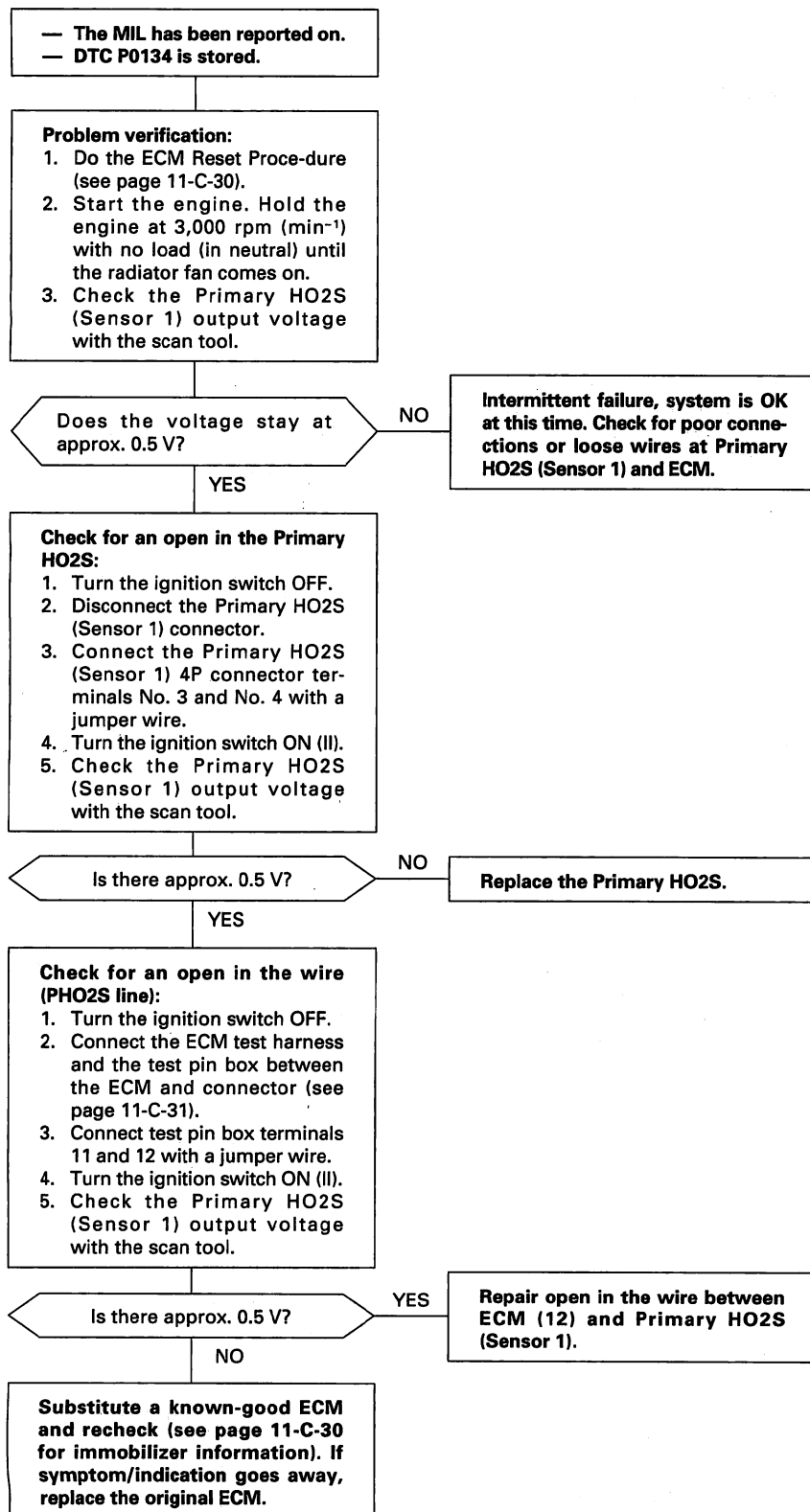
- Primary HO2S (Sensor 1) Deterioration
- Primary HO2S Heater (Sensor 1) Deterioration
- Exhaust System Leakage

#### Troubleshooting Flowchart

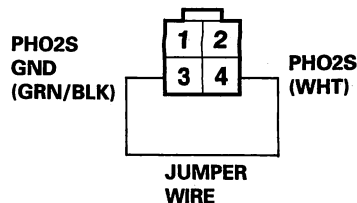




## DTC P0134: Primary HO2S (Sensor 1) Circuit Open Problem



PRIMARY HO2S (Sensor 1) 4P CONNECTOR



Wire side of female terminals

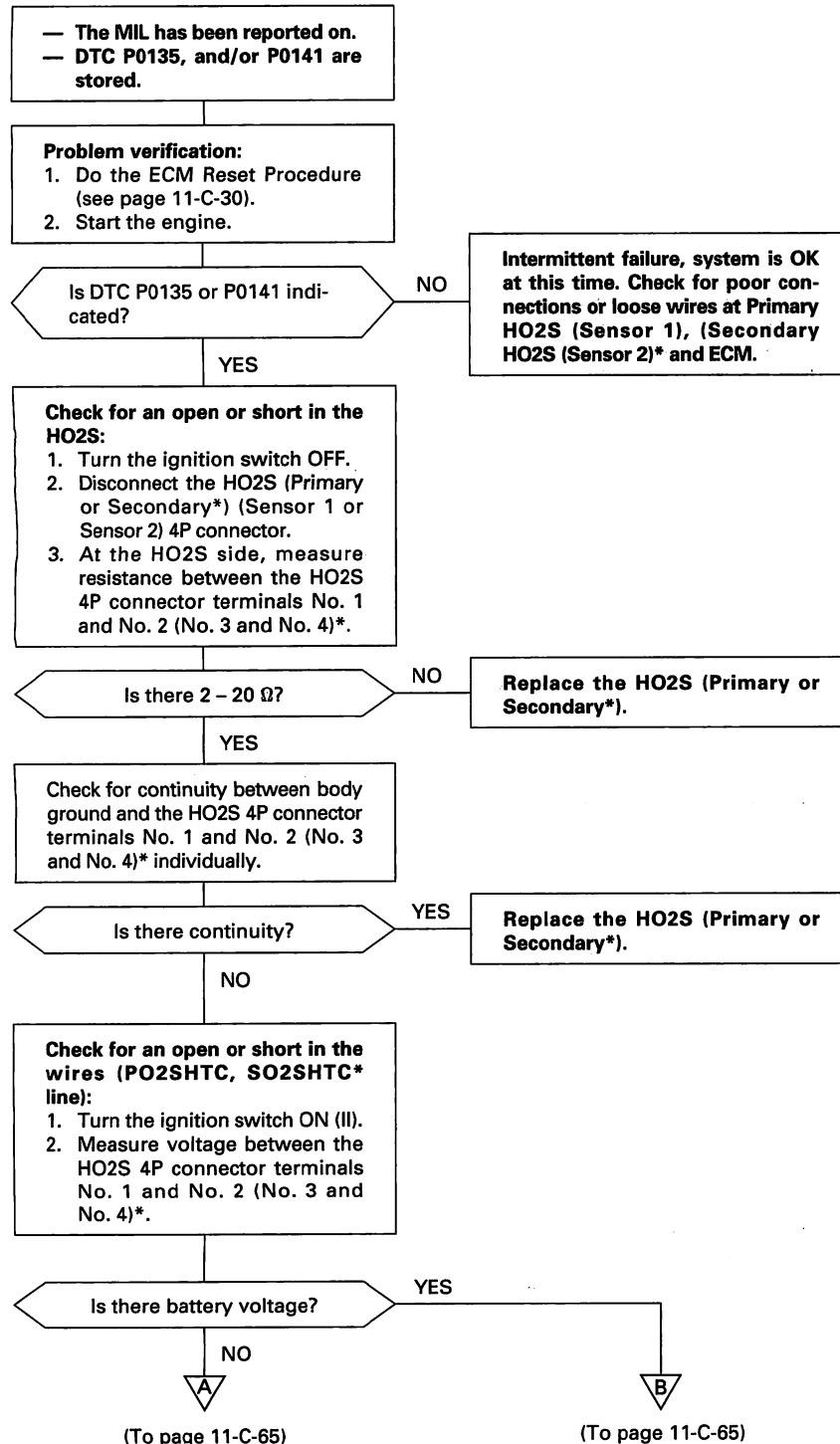
# PGM-FI System

## DTC Troubleshooting (cont'd)

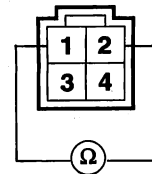
**DTC P0135:** Primary HO2S (Sensor 1) Heater Circuit Malfunction

**DTC P0141:** Secondary HO2S (Sensor 2) Heater Circuit Malfunction

NOTE: Information marked with an asterisk (\*) applies to DTC P0141.

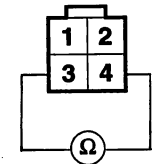


**PRIMARY HO2S (Sensor 1) 4P CONNECTOR**

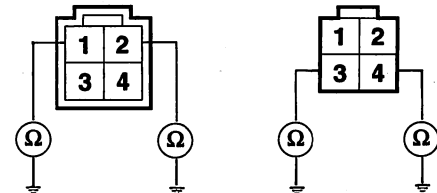


Terminal side of male terminals

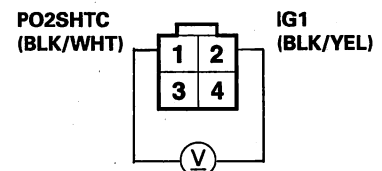
**SECONDARY HO2S (Sensor 2) 4P CONNECTOR\***



Wire side of female terminals

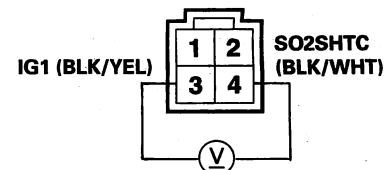


**PRIMARY HO2S (Sensor 1) 4P CONNECTOR**



Wire side of female terminals

**SECONDARY HO2S (Sensor 2) 4P CONNECTOR\***



Terminal side of male terminals

\*: P0141



(From page 11-C-64)



**Check for an open in the wires (IG1 line):**  
Measure voltage between the primary HO2S 4P connector terminal No. 2 (secondary HO2S: No. 3) and body ground.

Is there battery voltage?

NO

**Repair open in the wire between HO2S and No. 6 ECU (ECM) CRUISE CONTROL (15 A) fuse in the driver's under-dash fuse/relay box.**

YES

**Check for an open in the wires (PO2SHTC, SO2SHTC\* line):**

1. Turn the ignition switch OFF.
2. Reconnect the HO2S 4P connector.
3. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
4. Start the engine.
5. Measure voltage between the test pin box terminals No. 37 and No. 34 (No. 30 and No. 34)\*.

Is there 1.0 V or less?

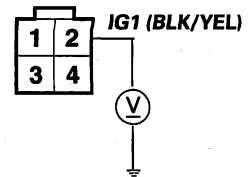
YES

**Repair open in the wire between ECM (37 and 30\*) and HO2S (Primary, Secondary\*).**

NO

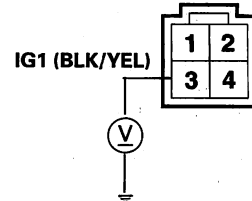
**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.**

**PRIMARY HO2S (Sensor 1) 4P CONNECTOR**



Wire side of female terminals

**SECONDARY HO2S (Sensor 2) 4P CONNECTOR\***



Terminal side of male terminals

(Form page 11-C-64)



**Check for a short in the wires (PO2SHTC, SO2SHTC\* line):**

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box to the wire harness only, not to the ECM (see page 11-C-31).
3. Check for continuity between body ground and the test pin box terminal No. 37 (No. 30)\*.

Is there continuity?

YES

**Repair short in the wire between ECM (37 and 30\*) and HO2S (Primary, Secondary\*).**

NO

**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.**

\*: P0141

# PGM-FI System

## DTC Troubleshooting (cont'd)

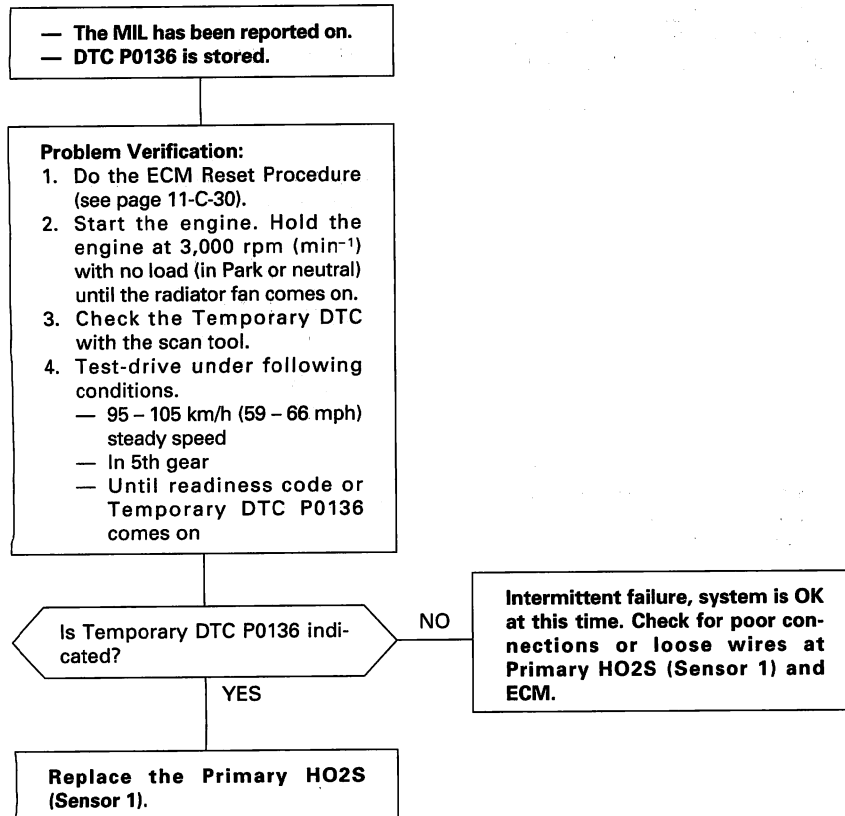
### DTC P0136: Secondary HO2S (Sensor 2) Range/Performance Problem

NOTE: If some of the DTCs listed below are stored at the same time as DTC P0136, troubleshoot those DTCs first, then troubleshoot DTC P0136.

**P0130, P0131, P0132, P0133, P0134:** Primary HO2S (Sensor 1)

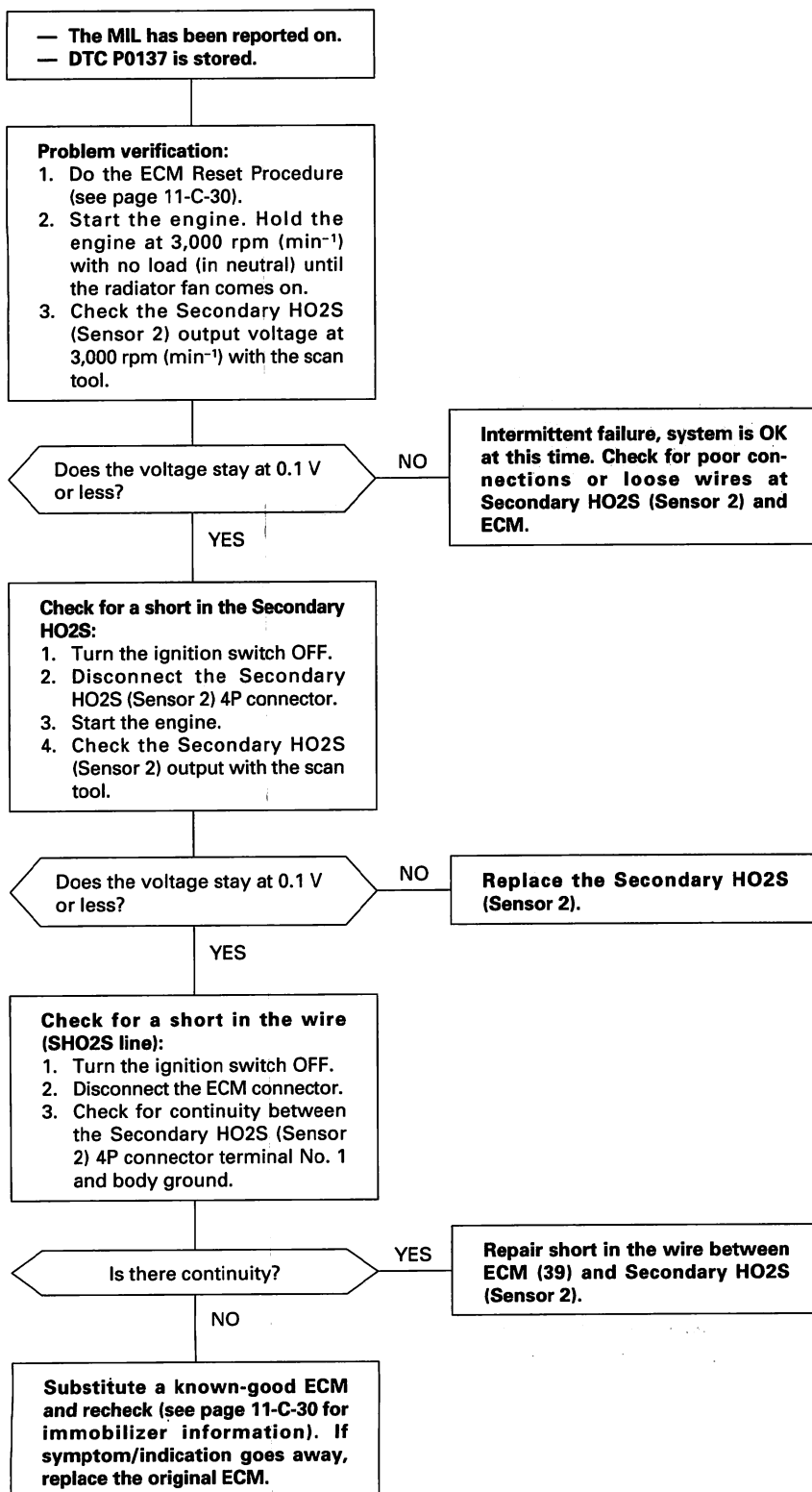
**P0135:** Primary HO2S (Sensor 1) Heater

### Troubleshooting Flowchart

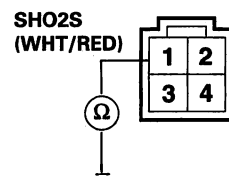




## DTC P0137: Secondary HO2S (Sensor 2) Circuit Low Voltage



SECONDARY HO2S (Sensor 2) 4P CONNECTOR



Terminal side of male terminals

# PGM-FI System

## DTC Troubleshooting (cont'd)

### DTC P0138: Secondary HO2S (Sensor 2) Circuit High Voltage

- The MIL has been reported on.
- DTC P0138 is stored.

#### Problem verification:

1. Do the ECM Reset Procedure (see page 11-C-30).
2. Start the engine. Hold the engine at 3,000 rpm ( $\text{min}^{-1}$ ) with no load (in neutral) until the radiator fan comes on.
3. Check the Secondary HO2S (Sensor 2) output voltage at 3,000 rpm ( $\text{min}^{-1}$ ) with the scan tool.

Does the voltage stay at 1.0 V or more?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at Secondary HO2S (Sensor 2) and ECM.

YES

#### Check for an open in the Secondary HO2S:

1. Turn the ignition switch OFF.
2. Disconnect the Secondary HO2S (Sensor 2) 4P connector.
3. Connect the Secondary HO2S (Sensor 2) 4P connector terminals No. 1 and No. 2 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the Secondary HO2S (Sensor 2) output voltage with the scan tool.

Is there 1.0 V or more?

NO

Replace the Secondary HO2S (Sensor 2).

YES

#### Check for an open in the wire (SHO2S line):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Connect test pin box terminals 39 and 10 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the Secondary HO2S (Sensor 2) output voltage with the scan tool.

Is there 1.0 V or more?

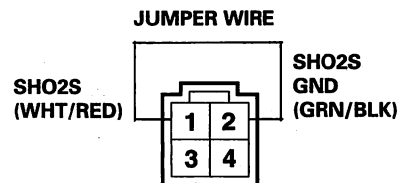
NO

Repair open in the wire between ECM (39) and Secondary HO2S (Sensor 2).

YES

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.

#### SECONDARY HO2S (Sensor 2) 4P CONNECTOR



Terminal side of male terminals



## DTC P0140: Secondary HO2S (Sensor 2) Circuit Open Problem

- The MIL has been reported on.
- DTC P0140 is stored.

### Problem verification:

1. Do the ECM Reset Procedure (see page 11-C-30).
2. Start the engine. Hold the engine at 3,000 rpm ( $\text{min}^{-1}$ ) with no load (in neutral) until the radiator fan comes on.
3. Check the Secondary HO2S (Sensor 2) output voltage at 3,000 rpm ( $\text{min}^{-1}$ ) with the scan tool.

Does the voltage stay at approx. 0.5 V?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at Secondary HO2S (Sensor 2) and ECM.

YES

### Check for an open in the Secondary HO2S:

1. Turn the ignition switch OFF.
2. Disconnect the Secondary HO2S (Sensor 2) 4P connector.
3. Connect the Secondary HO2S (Sensor 2) 4P connector terminals No. 1 and No. 2 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the Secondary HO2S (Sensor 2) output voltage with the scan tool.

Is there approx. 0.5 V?

NO

Replace the Secondary HO2S (Sensor 2).

YES

### Check for an open in the wire (SHO2S line):

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Connect test pin box terminals 39 and 10 with a jumper wire.
4. Turn the ignition switch ON (II).
5. Check the Secondary HO2S (Sensor 2) output voltage with the scan tool.

Is there approx. 0.5 V?

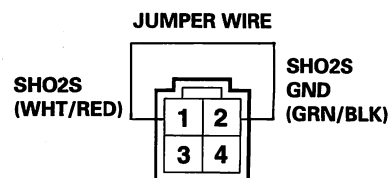
NO

Repair open in the wire between ECM (39) and Secondary HO2S (Sensor 2).

YES

Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.

### SECONDARY HO2S (Sensor 2) 4P CONNECTOR



Terminal side of male terminals



# PGM-FI System

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## DTC Troubleshooting (cont'd)

**DTC P0171: Fuel System Too Lean**

**DTC P0172: Fuel System Too Rich**

NOTE: If some of the DTCs listed below are stored at the same time as DTC P0171 and/or P0172, troubleshoot those DTCs first, then recheck the system.

- P0107, P0108: MAP sensor
- P0130, P0131, P0132, P0134: Primary HO2S (Sensor 1)
- P0135: Primary HO2S (Sensor 1) Heater
- P0136, P0137, P0138, P0140: Secondary HO2S (Sensor 2)
- P0141: Secondary HO2S (Sensor 2) Heater
- P0444, P0445: EVAP Purge Control Solenoid Valve Circuit

### Possible Cause

DTC P0171  
System too lean

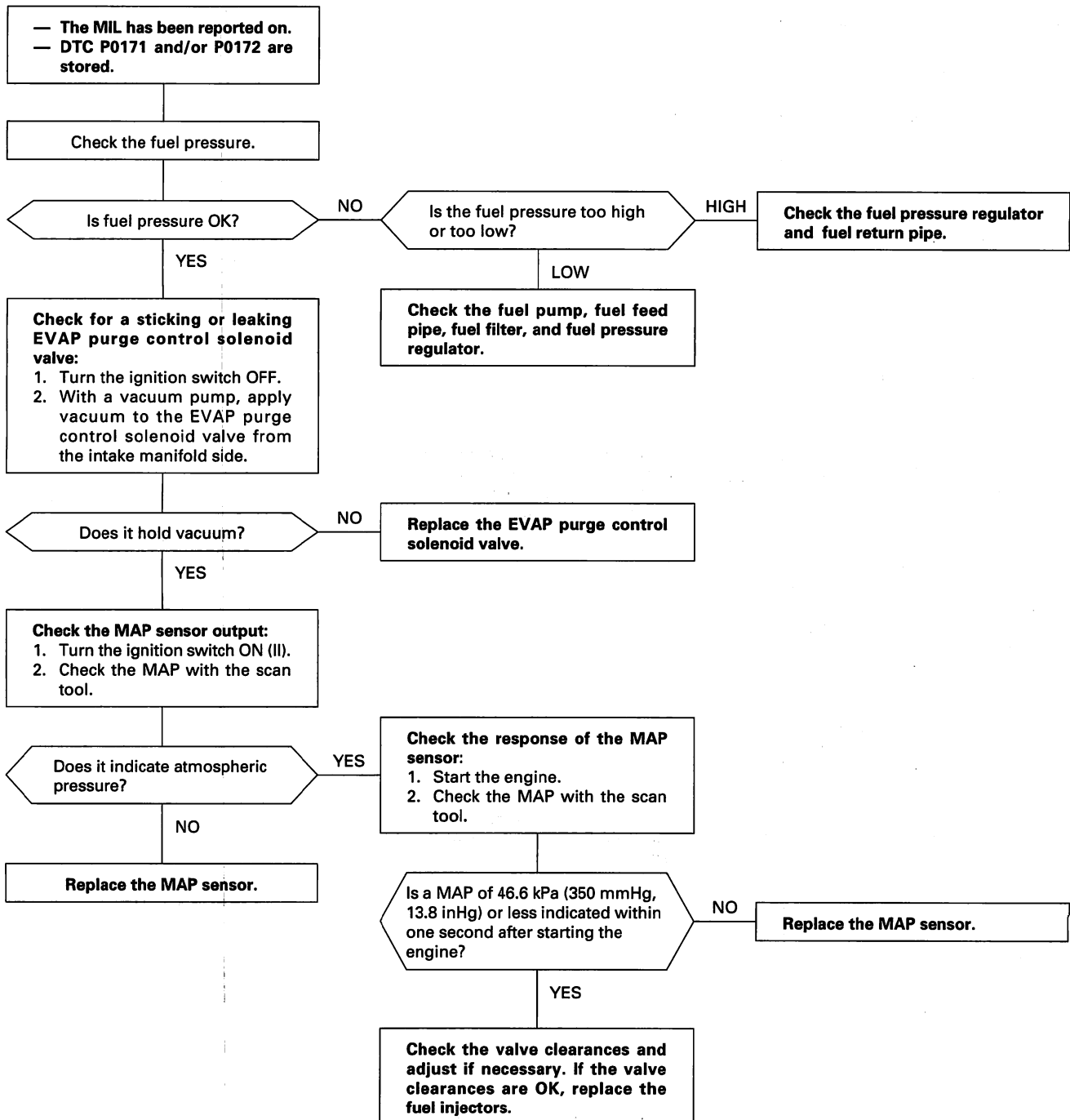
- Fuel Pump insufficient flow/pressure
- Fuel Feed Line clogged, leaking
- Fuel Pressure Regulator stuck open
- Fuel Filter clogged
- Fuel Injector clogged, air inclusion
- Gasoline doesn't meet Owner's Manual spec.
- Primary HO2S (Sensor 1) deteriorated
- MAP Sensor range/performance
- Valve Clearance
- Exhaust leak

DTC P0172  
System too rich

- Fuel Pressure Regulator clogged, stuck closed
- Fuel Return Pipe clogged
- Fuel Injector leaking
- Gasoline doesn't meet Owner's Manual spec.
- Primary HO2S (Sensor 1) deteriorated
- MAP Sensor range/performance
- EVAP Purge Control Solenoid Valve leaking, stuck opened
- Valve Clearance



### Troubleshooting Flowchart



# PGM-FI System

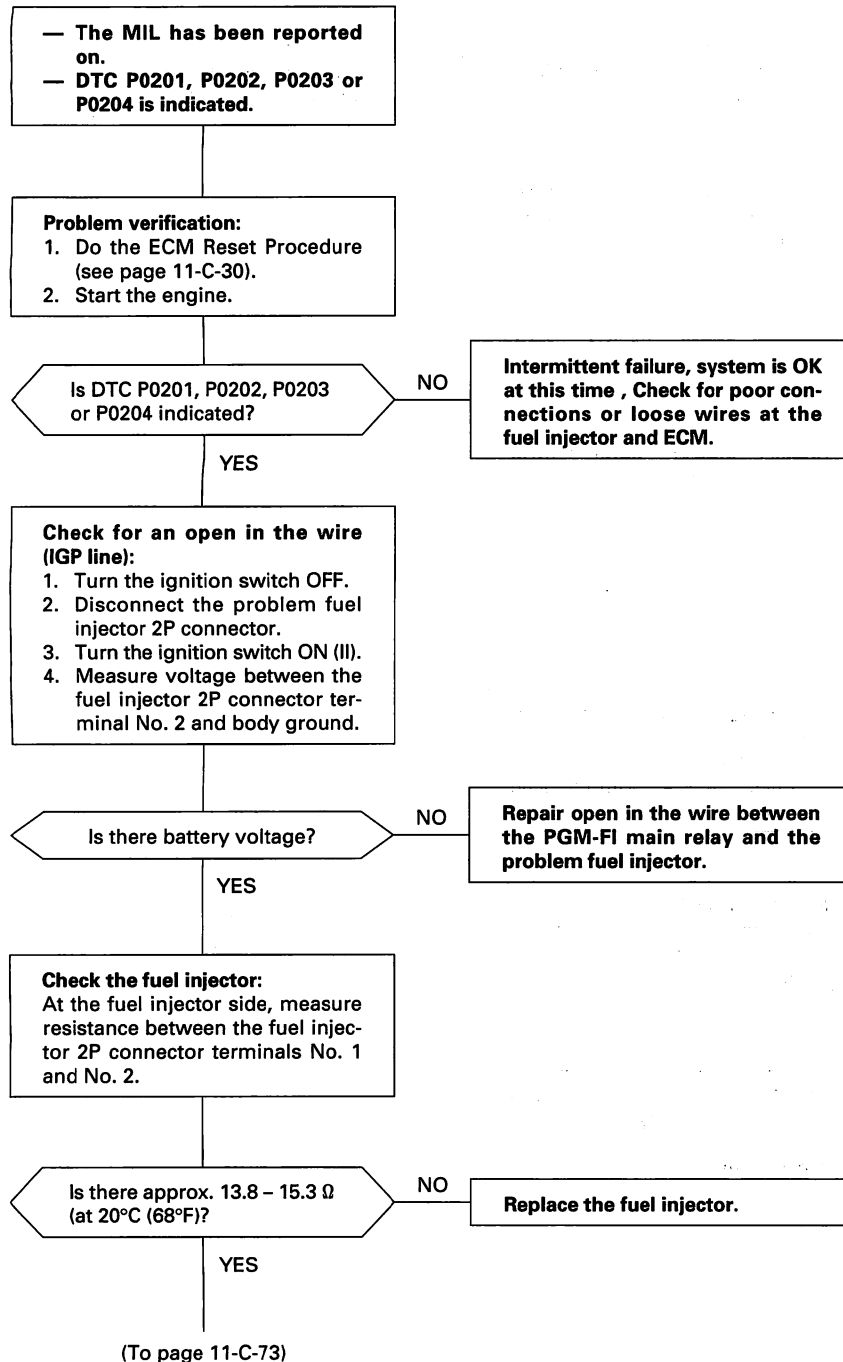
## DTC Troubleshooting (cont'd)

**P0201:** Fuel injector Open Circuit – No. 1 Cylinder

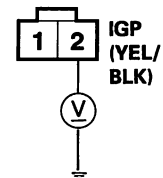
**P0202:** Fuel injector Open Circuit – No. 2 Cylinder

**P0203:** Fuel injector Open Circuit – No. 3 Cylinder

**P0204:** Fuel injector Open Circuit – No. 4 Cylinder

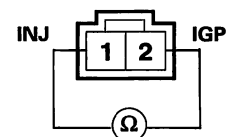


**FUEL INJECTOR  
2P CONNECTOR**



Wire side of female terminals

**FUEL INJECTOR  
2P CONNECTOR**



Terminal side of  
male terminals



(From page 11-C-72)

**Check for an open in the wire (INJ line):**

1. Turn the ignition switch OFF.
2. Reconnect the fuel injector 2P connector.
3. Connect the ECM test harness and the test pin box only to the wire harness, not to the ECM (see page 11-C-31).
4. Turn the ignition switch ON (II).
5. Measure voltage between body ground and the test pin box terminal of the problem fuel injector (see table).

PROBLEM INJECTOR	DTC	ECM TERMINAL	WIRE COLOR
No. 1	P0201	3	BRN
No. 2	P0202	32	RED
No. 3	P0203	31	BLU
No. 4	P0204	4	YEL

Is there battery voltage?

NO

**Repair open in the wire between ECM and the problem fuel injector.**

YES

**Substitute a known-good ECM and recheck (see page 11-C-30 immobilizer information). If symptom/indication goes away, replace the original ECM.**

# PGM-FI System

## DTC Troubleshooting (cont'd)

**P0261:** Fuel Injector Circuit Short to Ground – No. 1 Cylinder

**P0264:** Fuel Injector Circuit Short to Ground – No. 2 Cylinder

**P0267:** Fuel Injector Circuit Short to Ground – No. 3 Cylinder

**P0270:** Fuel Injector Circuit Short to Ground – No. 4 Cylinder

— The MIL has been reported on.  
— DTC P0261, P0264, P0267 or P270 is indicated.

### Problem verification:

1. Do the ECM Reset Procedure (see page 11-C-30).
2. Start the engine.

Is DTC P0261, P0264, P0267 or P0270 indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at the fuel injector and ECM.

YES

### Check for a short in the fuel injector:

1. Turn the ignition switch OFF.
2. Disconnect the problem fuel injector 2P connector.
3. Turn the ignition switch ON (II).
4. Measure voltage between the fuel injector 2P connector terminal No. 1 and body ground.

Is there approx. 0 V?

NO

Replace the fuel injector.

YES

### Check for a short in the wire (INJ line):

1. Turn the ignition switch OFF.
2. Disconnect the ECM connector.
3. Check for continuity between the fuel injector 2P connector terminal No. 1 and body ground.

Is there continuity?

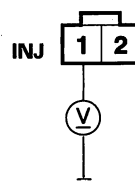
YES

Repair short in the wire between ECM and the problem fuel injector (see table).

NO

Substitute a known-good ECM and recheck (see page 11-C-30 immobilizer information). If symptom/indication goes away, replace the original ECM.

FUEL INJECTOR 2P CONNECTOR



Wire side of female terminals

PROBLEM INJECTOR	DTC	ECM TERMINAL	WIRE COLOR
No. 1	P0261	3	BRN
No. 2	P0264	32	RED
No. 3	P0267	31	BLU
No. 4	P0270	4	YEL



**P0262: Fuel Injector Circuit Short to Voltage – No. 1 Cylinder**

**P0265: Fuel Injector Circuit Short to Voltage – No. 2 Cylinder**

**P0268: Fuel Injector Circuit Short to Voltage – No. 3 Cylinder**

**P0271: Fuel Injector Circuit Short to Voltage – No. 4 Cylinder**

— The MIL has been reported on.  
— DTC P0262, P0265, P0268 or P271 is indicated.

**Problem verification:**  
1. Do the ECM Reset Procedure (see page 11-C-30).  
2. Start the engine.

Is DTC P0262, P0265, P0268 or P0271 indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at the fuel injector and ECM.

YES

**Check the fuel injector:**  
1. Turn the ignition switch OFF.  
2. Disconnect the problem fuel injector 2P connector.  
3. At the fuel injector side, measure resistance between the fuel injector 2P connector terminals No. 1 and No. 2.

Is there approx. 13.8 – 15.3  $\Omega$  (at 20°C (68°F))?

NO

Replace the fuel injector.

YES

**Check for a short in the wire (INJ line):**  
1. Disconnect the ECM connector.  
2. Turn the ignition switch ON (II).  
3. Measure voltage between the fuel injector 2P connector terminal No. 1 and body ground.

Is there battery voltage?

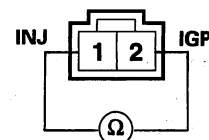
YES

Repair short in the wire between ECM and the problem fuel injector (see table).

NO

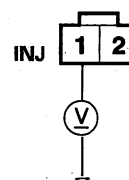
Substitute a known-good ECM and recheck (see page 11-C-30 immobilizer information). If symptom/indication goes away, replace the original ECM.

**FUEL INJECTOR 2P CONNECTOR**



Terminal side of male terminals

**FUEL INJECTOR 2P CONNECTOR**



Wire side of female terminals

PROBLEM INJECTOR	DTC	ECM TERMINAL	WIRE COLOR
No. 1	P0262	3	BRN
No. 2	P0265	32	RED
No. 3	P0268	31	BLU
No. 4	P0271	4	YEL

# PGM-FI System

## DTC Troubleshooting (cont'd)

**DTC P0300:** Random misfire and any combination of the following:

**DTC P0301:** No. 1 Cylinder misfire

**DTC P0302:** No. 2 Cylinder misfire

**DTC P0303:** No. 3 Cylinder misfire

**DTC P0304:** No. 4 Cylinder misfire

### Description

Misfire detection is accomplished by monitoring the crankshaft speed with the crankshaft position (CKP) sensor which is attached to the crankshaft. If misfiring strong enough to damage the catalyst is detected, the MIL will blink during the time of its occurrence, and DTC P0300 and some of DTCs P0301 through P0304 will be stored. Then, after misfire has ceased, the MIL will come on. If misfiring that increases emissions is detected during two consecutive driving cycles, the MIL will come on, and DTC P0300 and some of DTCs P0301 through P0304 will be stored.

**NOTE:** If some of the DTCs listed below are stored at the same time as a misfire DTC, troubleshoot those DTCs first, then troubleshoot the misfire DTC.

P0107, P0108: MAP Sensor

P0171, P0172: Fuel metering

P0342, P0343: CYP Sensor

P1515, P1516, P1517, P1518: IAC Valve

### Possible Cause

- Fuel pump insufficient fuel pressure, amount of flow
- Fuel line clogging, blockage, leakage
- Fuel filter clogging
- Fuel pressure regulator stuck open
- MAP sensor range/performance, poor response
- Valves carbon deposit
- Compression low
- IAC valve malfunction
- Fuel does not meet Owner's Manual spec., lack of fuel

### Troubleshooting

By test-driving, determine the conditions during which misfire occurs. Depending on these conditions, test in the order described in the table below.

Possible cause Page	MAP sensor	Crankshaft position sensor	Fuel pressure	Ignition coil	Valve Clearance	IAC Valve
Condition	11-C-45	11-C-78	—	section 4	section 6	11-C-99
Only low rpm and load	②	④	③		⑤	①
Only accelerating	③		②	①		
Only high rpm and load	③	④	①	②	④	
Not specific	③	④	①	②	④	

**NOTE:** If misfire doesn't recur, some possible causes are fuel that doesn't meet owner's manual spec, lack of fuel, carbon deposits on spark plug, etc.



**DTC P0301:** No. 1 Cylinder misfire detected

**DTC P0302:** No. 2 Cylinder misfire detected

**DTC P0303:** No. 3 Cylinder misfire detected

**DTC P0304:** No. 4 Cylinder misfire detected

**Description**

Misfire detection is accomplished by monitoring the crankshaft speed with the crankshaft position (CKP) sensor which is attached to the crankshaft. If misfiring strong enough to damage the catalyst is detected, the MIL will blink during the time of its occurrence, and DTC P0301, P0302, P0303 or P0304 will be stored. Then, after the misfire has ceased, the MIL will come on. If misfiring that increases emissions is detected during two consecutive driving cycles, the MIL will come on, and DTC P0301, P0302, P0303 or P0304 will be stored.

**NOTE:** If some of the DTCs listed below are stored at the same time as a misfire DTC, troubleshoot those DTCs first, then troubleshoot the misfire DTC.

P0201-P0204, P0261, P0262,  
P0264, P0265, P0267, P0268,  
P0270, P0271: Fuel injector

**Possible Cause**

- Fuel injector clogging, fuel leakage, air leakage
- Fuel injector circuit open or shorted
- Spark plug carbon deposits, fouling, malfunction
- Ignition coil wires open, leaking
- Compression low
- Valve clearance out of spec.

(cont'd)



# PGM-FI System

## DTC Troubleshooting (cont'd)

### Troubleshooting

- The MIL has been reported on.
- DTC P0301, P0302, P0303 or P0304 is indicated.

#### Problem verification:

1. After checking the freeze data, reset the ECM (see page 11-C-30). If there is no freeze data of misfiring, just clear the DTC.
2. Exchange the ignition coil from the problem cylinder with one from another cylinder.
3. Connect the SCS short connector.
4. Test-drive the vehicle several times in the range of the freeze data or under various conditions if there was no freeze data.
5. Check the DTC with the scan tool.

Is DTC P0301, P0302, P0303 or P0304 indicated?

NO

Intermittent misfire due to ignition coil fouling etc (no misfire at this time).

YES

**Check the ignition coil:**  
Determine which cylinder had the misfire.

Does the misfire occur in the other cylinder whose ignition coil was exchanged?

YES

Replace the faulty ignition coil.

NO

(To page 11-C-79)



(From page 11-C-78)

**Problem verification:**

1. Turn the ignition switch OFF.
2. Exchange the spark plug from the problem cylinder with one from another cylinder.
3. Test-drive the vehicle several times in the range of the freeze data or under various conditions if there was no freeze data.
4. Check the DTC with the scan tool.

Is DTC P0301, P0302, P0303 or P0304 indicated?

NO

**Intermittent misfire due to spark plug fouling etc (no misfire at this time).**

YES

**Check the spark plug:**  
Determine which cylinder had the misfire.

Does the misfire occur in the other cylinder whose spark plug was exchanged?

YES

**Replace the faulty spark plug.**

NO

**Problem verification:**

1. Turn the ignition switch OFF.
2. Exchange the fuel injector from the problem cylinder with one from another cylinder.
3. Test-drive the vehicle several times in the range of the freeze data or under various conditions if there was no freeze data.
4. Check the DTC with the scan tool.

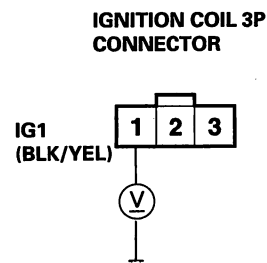
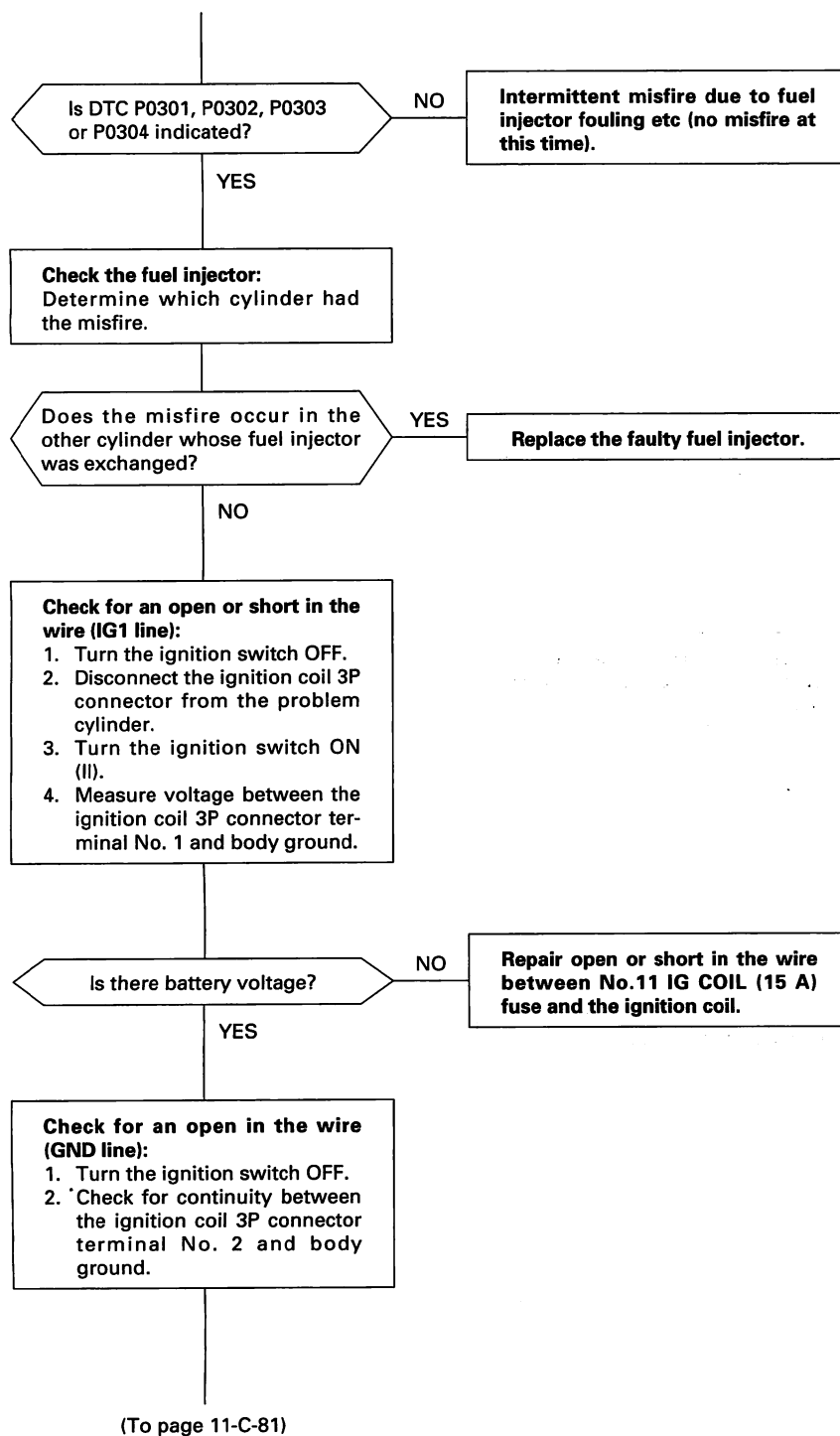
(To page 11-C-80)

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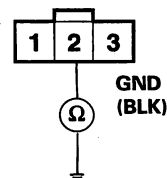
# PGM-FI System

## DTC Troubleshooting (cont'd)

(From page 11-C-79)

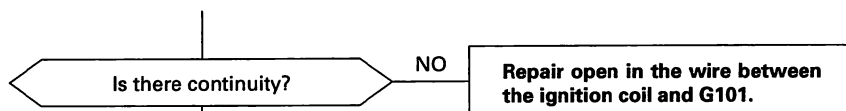


Wire side of female terminals





(From page 11-C-80)

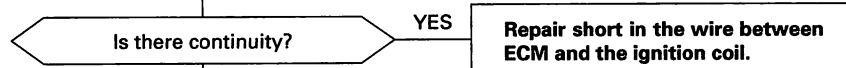


YES

**Check for a short in the wire (IGPLS line):**

1. Connect the ECM test harness and the test pin box only to the wire harness, not to the ECM (see page 11-C-31).
2. Check for continuity between body ground and the test pin box terminal (see table).

PROBLEM CYLINDER	DTC	ECM TERMINAL	WIRE COLOR
No. 1	P0301	25	WHT
No. 2	P0302	51	WHT/RED
No. 3	P0303	52	WHT/GRN
No. 4	P0304	24	WHT/BLU

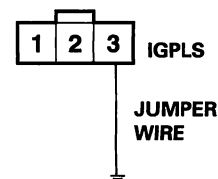


NO

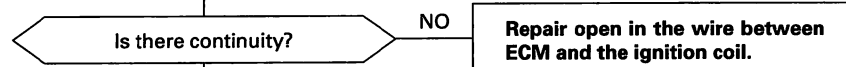
**Check for an open in the wire (IGPLS line):**

1. Connect the ignition coil 3P connector terminal No. 3 and body ground with a jumper wire (see table).
2. Check for continuity between body ground and the test pin box terminal (see table).

**IGNITION COIL 3P CONNECTOR**



Wire side of female terminals



YES

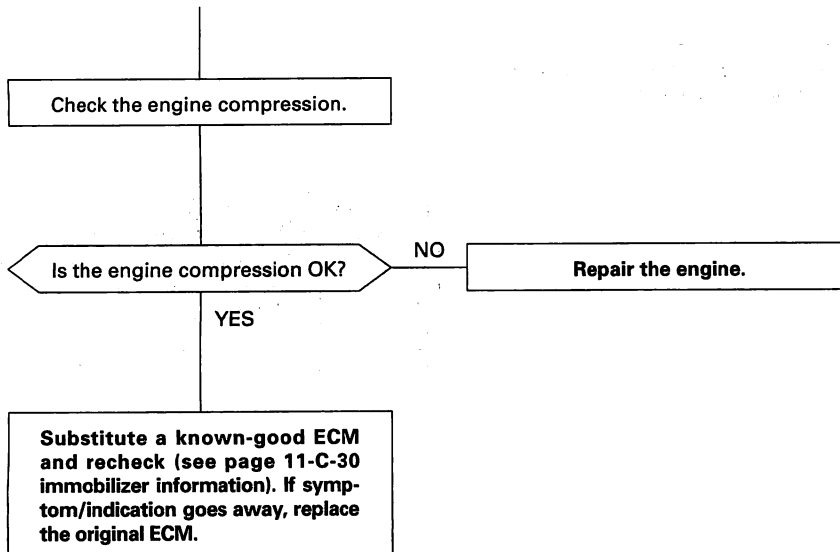
(To page 11-C-82)

(cont'd)

# PGM-FI System

## DTC Troubleshooting (cont'd)

(From page 11-C-81)





**DTC P0335: CKP Sensor No Signal**  
**DTC P0336: CKP Sensor intermittent Interruption**

- The MIL has been reported on.
- DTC P0335 or P0336 is stored.

**Problem verification:**

1. Do the ECM Reset Procedure (see page 11-C-30)
2. Start the engine.

Is DTC P0335 or P0336 indicated?

NO

**Intermittent failure, system is OK at this time. Check for poor connections or loose wires at the CKP sensor and ECM.**

YES

**Check for an open in the wire (IGP line):**

1. Turn the ignition switch OFF.
2. Disconnect the CKP sensor 3P connector.
3. Turn the ignition switch ON (II).
4. Measure voltage between the CKP sensor 3P connector terminal No.3 and body ground.

NO

**Repair open in the wire between the PGM-FI main relay and the CKP sensor.**

YES

**Check for an open in the wire (CKP line):**

Measure voltage between the CKP sensor 3P connector terminal No. 1 and body ground.

Is there approx. 5 V?

YES

**Check for an open in the wire (GND line):**  
Measure voltage between the CKP sensor 3P connector terminal No. 2 and No. 3.

Is there battery voltage?

YES

**Repair open in the wire between the CKP sensor and G202 (G302)\*.**  
\*: RHD

NO

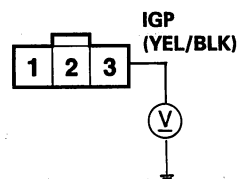


(To page 11-C-84)

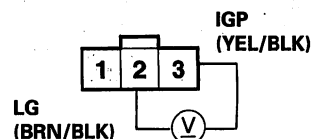
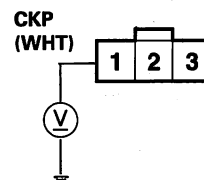


(To page 11-C-84)

**CKP SENSOR 3P CONNECTOR**



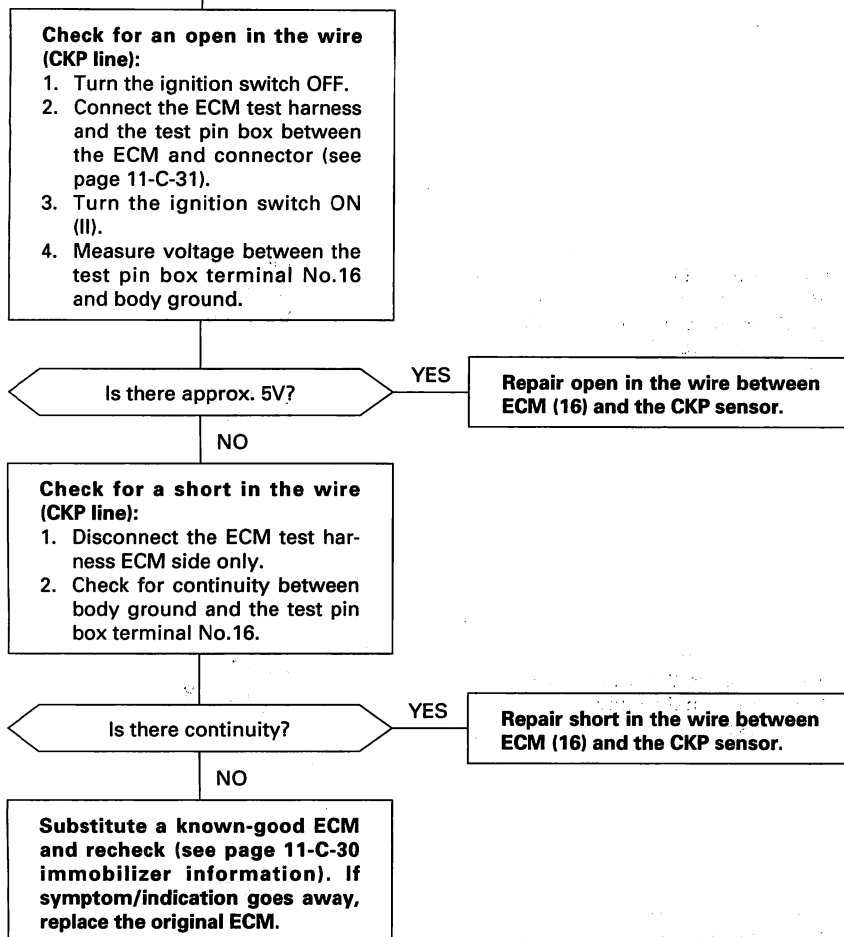
Wire side of female terminals



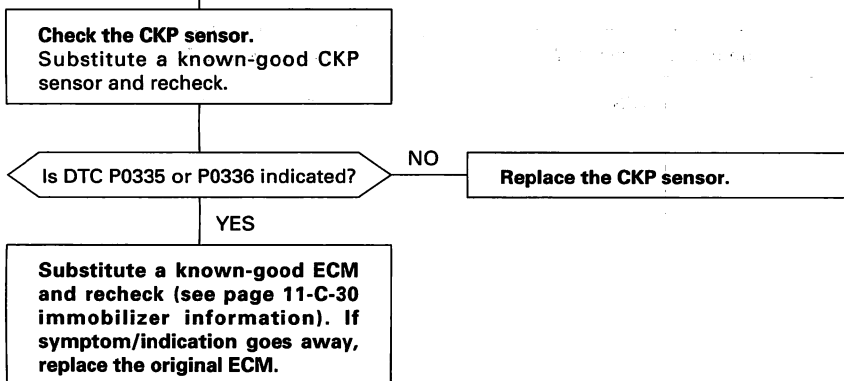
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## DTC Troubleshooting (cont'd)

(From page 11-C-83)

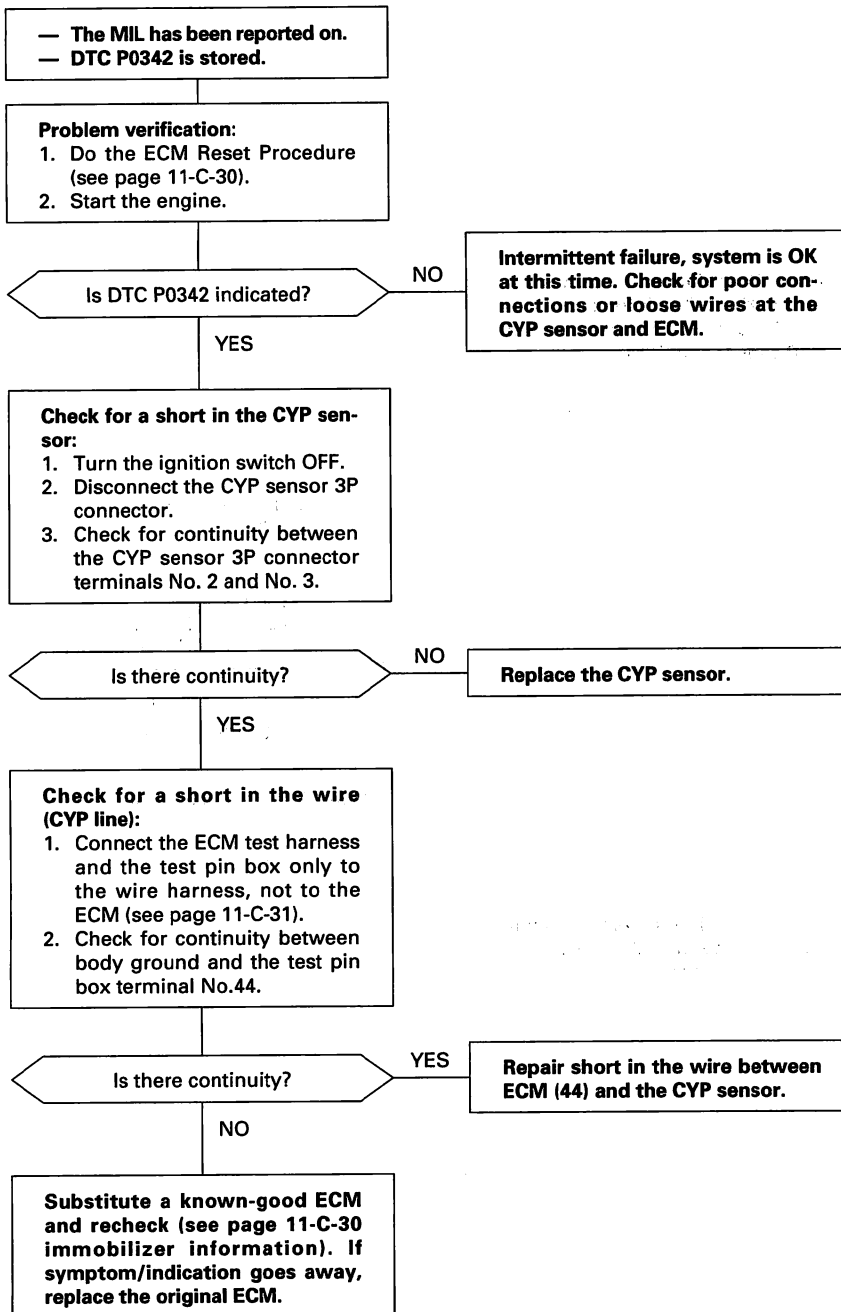


(From page 11-C-83)

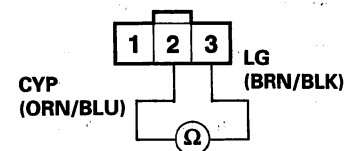




## P0342: CYP Circuit Low Voltage



CYP SENSOR 3P CONNECTOR



Wire side of female terminals



# PGM-FI System

## DTC Troubleshooting (cont'd)

**P0343: CYP circuit High Voltage**

- The MIL has been reported on.
- DTC P0343 is stored.

**Problem verification:**

1. Do the ECM Reset Procedure (see page 11-C-30).
2. Start the engine.

Is DTC P0343 indicated?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at the CYP sensor and ECM.

YES

**Check for an open in the wire (CYP line):**

1. Turn the ignition switch OFF.
2. Disconnect the CYP sensor 3P connector.
3. Connect the CYP sensor 3P connector terminals No. 2 and No. 3 with a jumper wire.
4. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
5. Turn the ignition switch ON (II).
6. Measure voltage between the test pin box terminal No.44 and body ground.

Is there approx. 5 V?

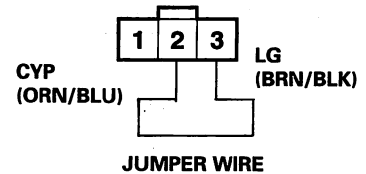
YES

Repair open in the wire between ECM (44) and the CYP sensor.

NO

Substitute a known-good ECM and recheck (see page 11-C-30 immobilizer information). If symptom/indication goes away, replace the original ECM.

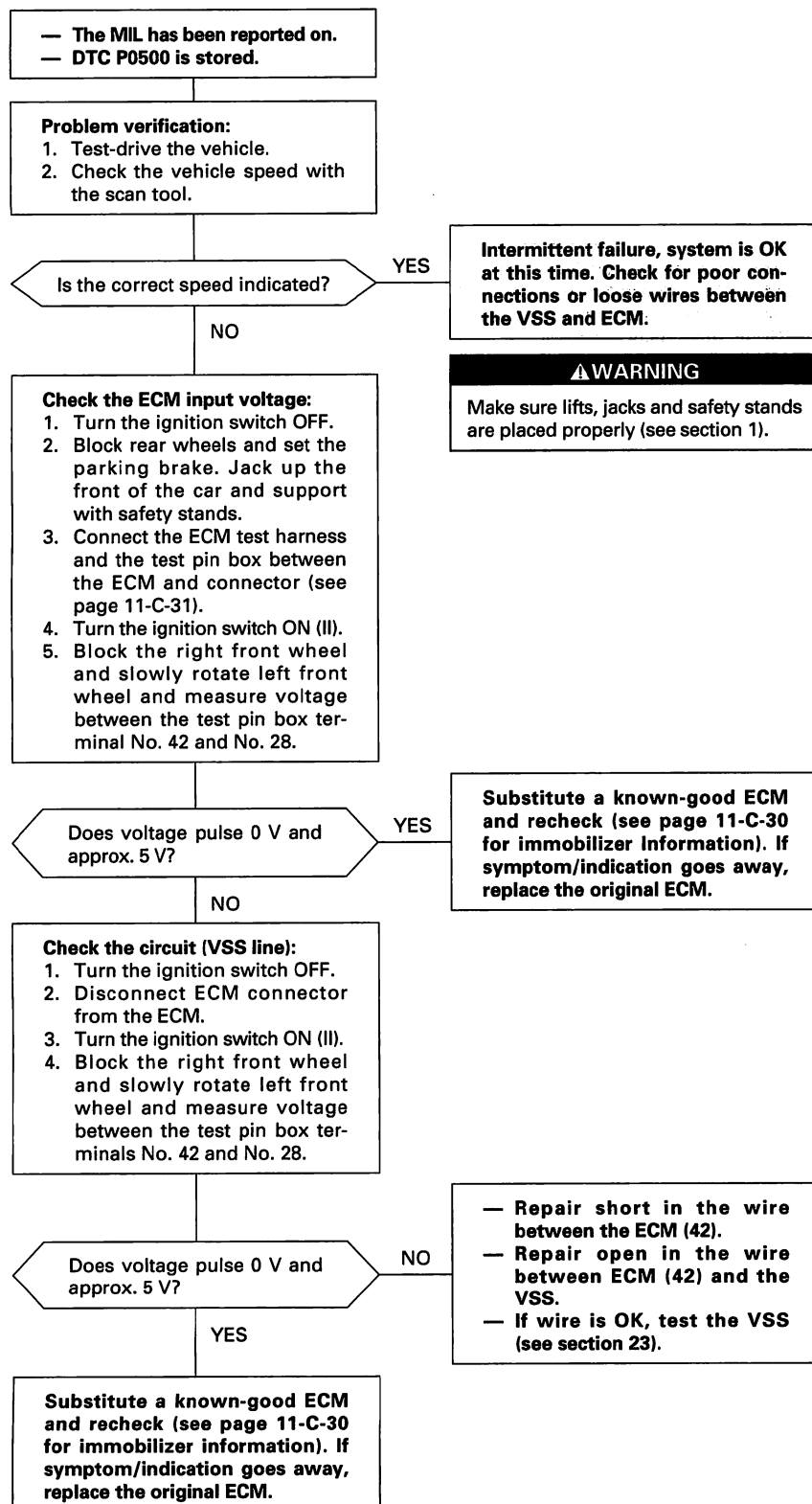
**CYP SENSOR 3P CONNECTOR**



Wire side of female terminals



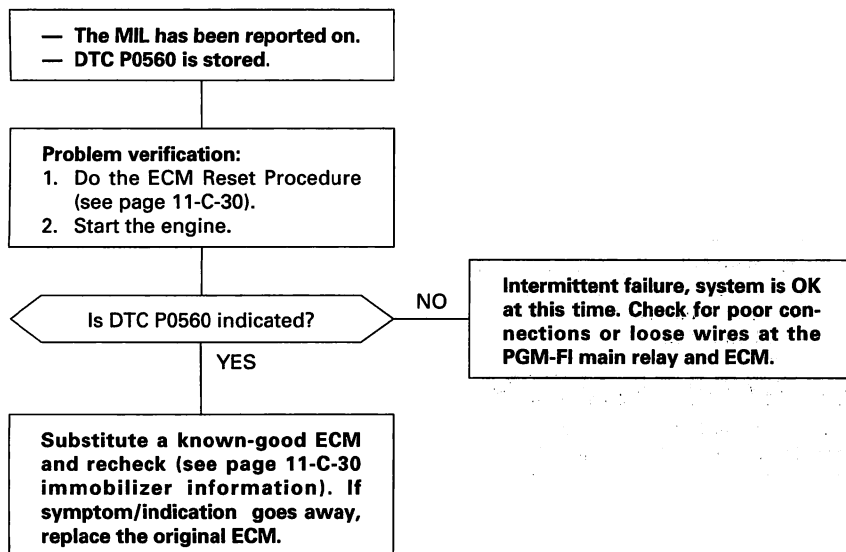
## DTC P0500: VSS Malfunction



# PGM-FI System

## DTC Troubleshooting (cont'd)

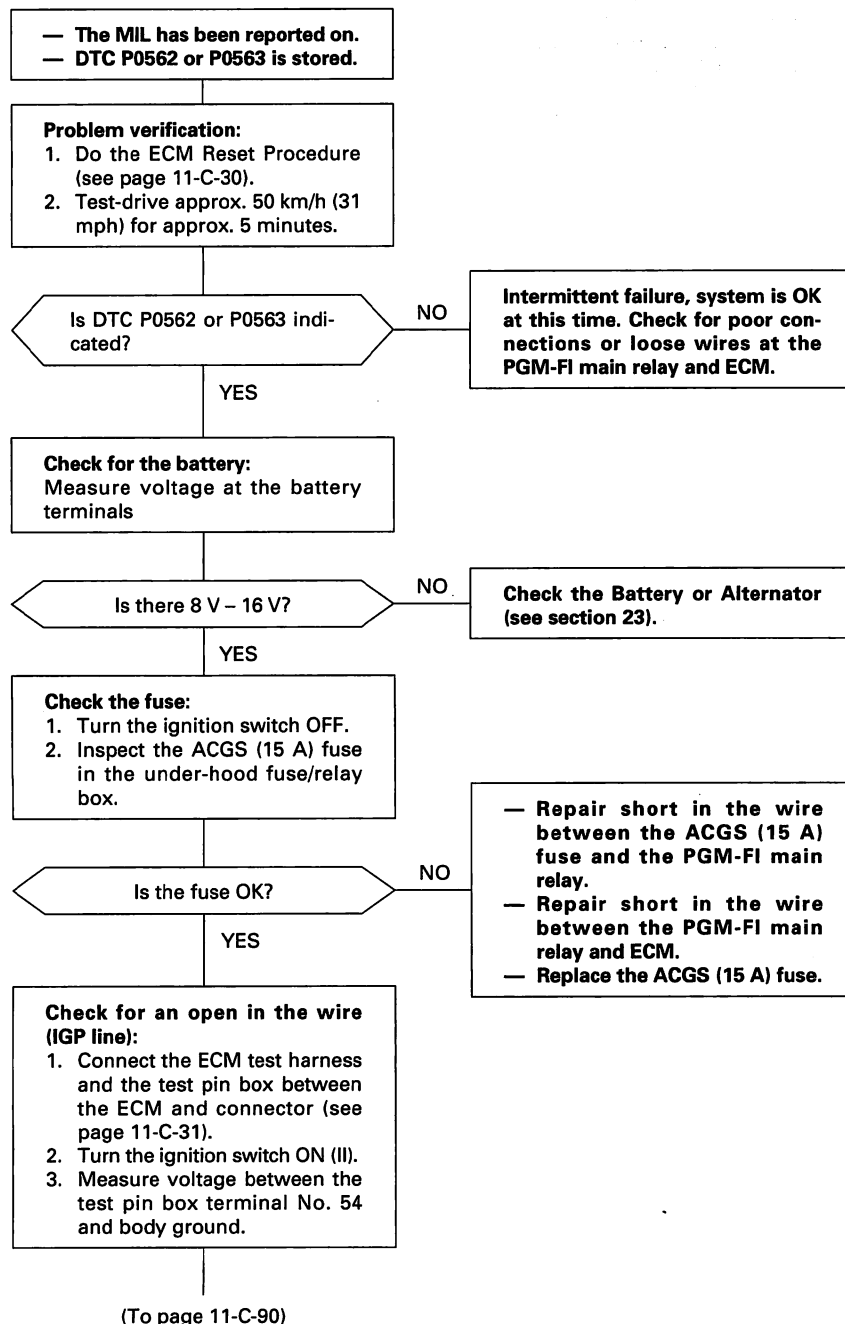
### P0560: ECM Back Up System Voltage Problem





## P0652: ECM Back Up Circuit Low Voltage

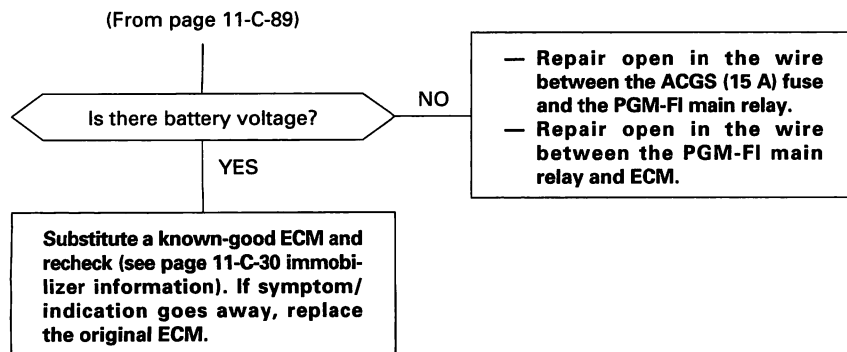
## P0653: ECM Back Up Circuit High Voltage



(cont'd)

# PGM-FI System

## DTC Troubleshooting (cont'd)

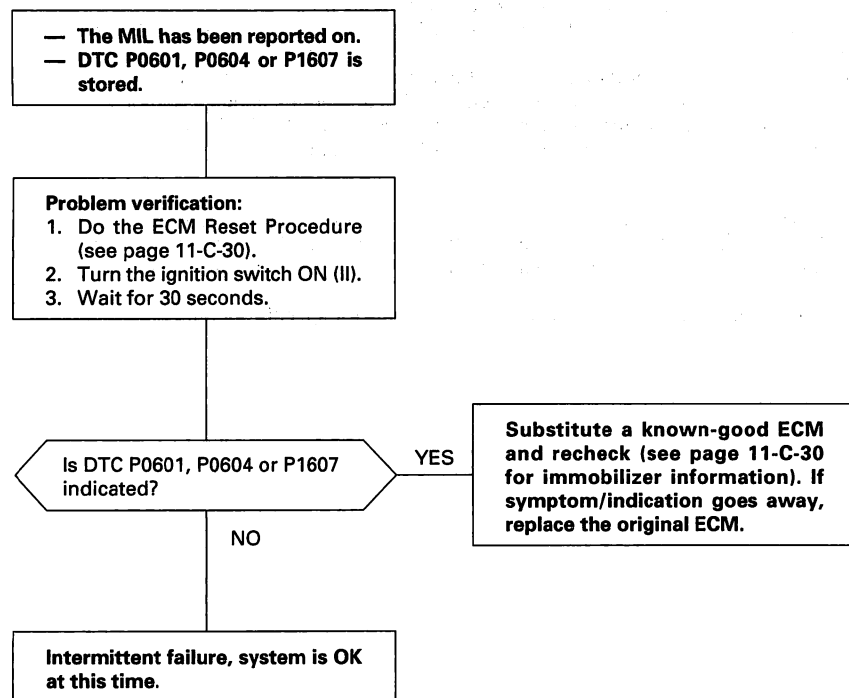




**DTC P0601: ECM Internal Circuit Malfunction**

**DTC P0604: ECM Internal Circuit Malfunction**

**DTC P1607: ECM Internal Circuit Malfunction**



# PGM-FI System

## MIL Circuit Troubleshooting

Turn the ignition switch ON (II) and watch the Malfunction Indicator Lamp (MIL).

### NOTE:

If this symptom is intermittent, check for the following problems.

- The MIL never comes on after the ignition switch is turned ON (II).
  - A loose ACGS (15 A) fuse in the under-hood fuse/relay box.
  - A loose No. 9 BACK UP LIGHT INSTRUMENT LIGHT (7.5 A) fuse in the driver's under-dash fuse/relay box.
  - A loose No. 1 FUEL PUMP fuse (15 A) in the driver's under-dash fuse/relay box
  - An intermittent short in the wire between the ECM (8) and the gauge assembly.
  - An intermittent short in the wire between the ECM (59) and the MAP sensor.
  - An intermittent short in the wire between the ECM (46), the TP sensor.
  - PGM-FI main relay.
- The MIL stays on or comes on after two second with the ignition switch turned ON (II).
  - An intermittent short in the wire between the ECM (19) and the service check connector.
  - An intermittent short in the wire between the ECM (8) and the gauge assembly.
- See the scan tool or Honda PGM Tester user's manuals for specific operating instructions.

Does the MIL come on and stay on?

YES



(To page 11-C-95)

NO

### Check the inertia switch:

1. Turn the ignition switch OFF.
2. Press the inertia switch button.
3. Turn the ignition switch ON (II).

Does the MIL come on for two seconds after ignition switch turned ON (II)?

YES

Intermittent failure, system is OK at this time.

NO

### Check the fuse:

1. Turn the ignition switch OFF.
2. Turn the ignition switch ON (II).

Does the low oil pressure indicator light come on?

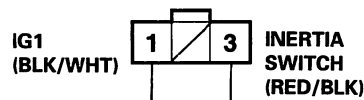
NO

- Repair short or open in the wire between No. 9 INSTRUMENT LIGHT (7.5 A) fuse and gauge assembly.
- Replace the No. 9 INSTRUMENT LIGHT (7.5 A) fuse.

YES

(To page 11-C-93)

### INERTIA SWITCH 3P CONNECTOR

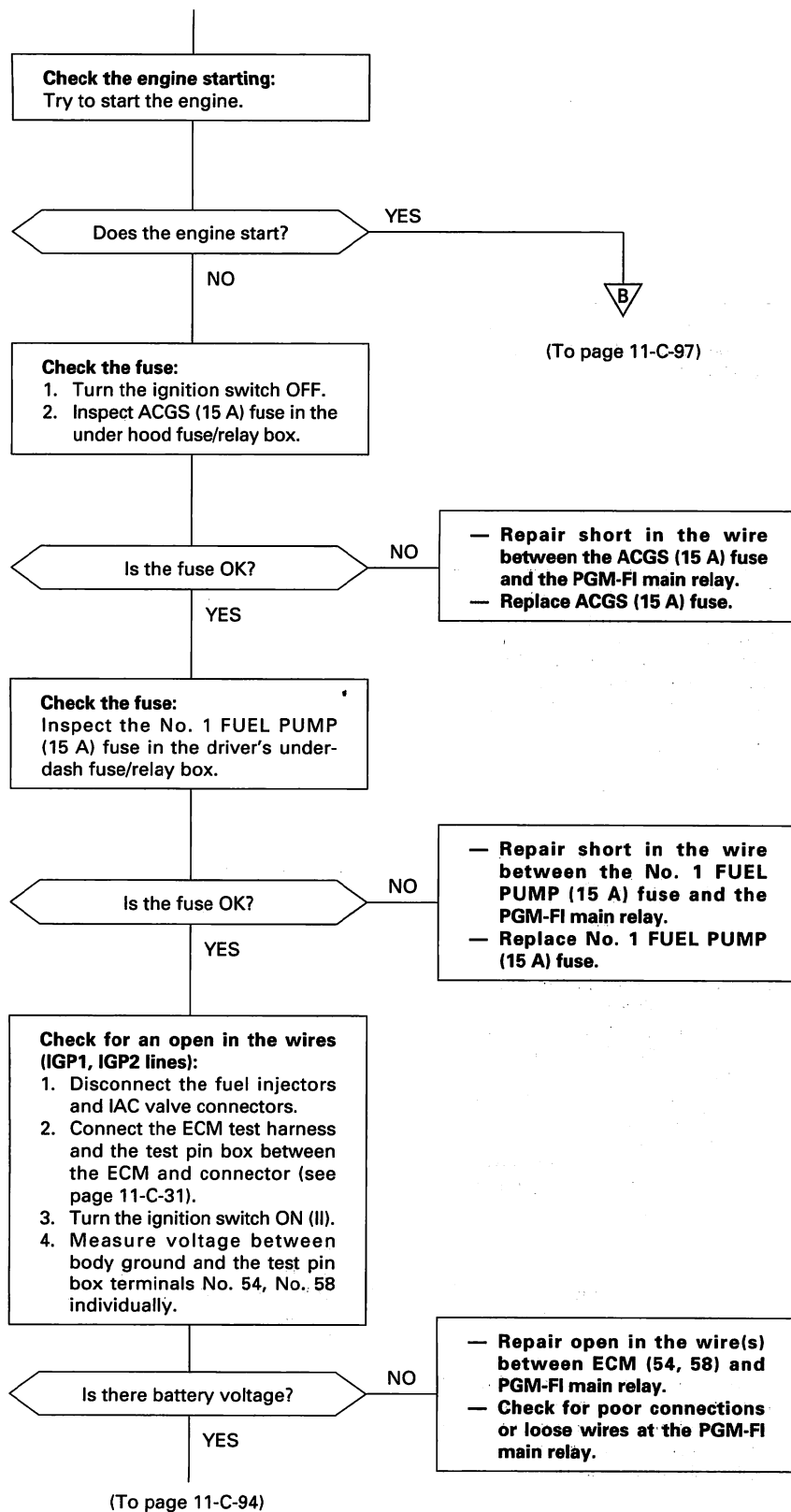


JUMPER WIRE

Terminal side of male terminals



(From page 11-C-92)

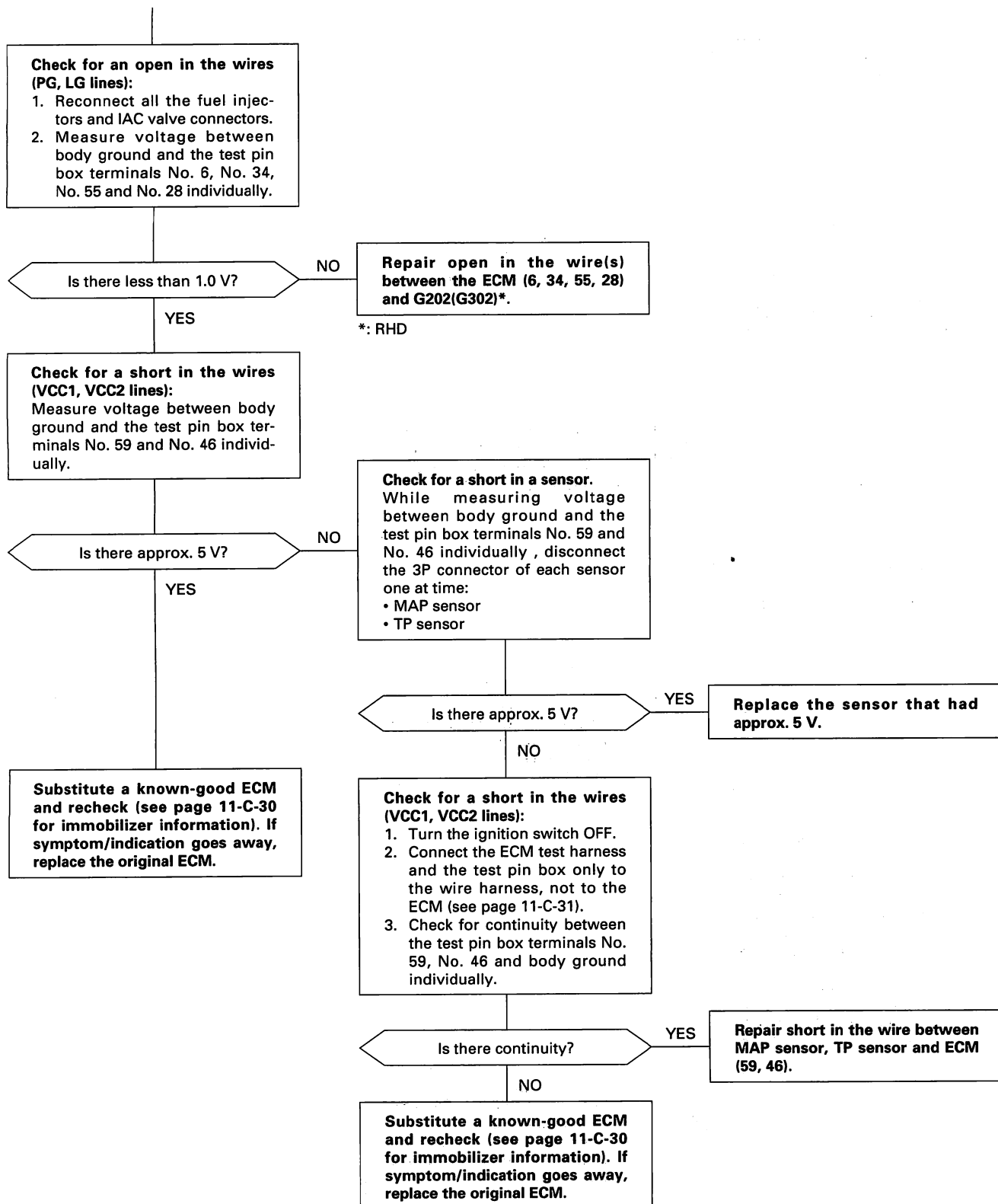


(cont'd)



## MIL Circuit Troubleshooting (cont'd)

(From page 11-C-93)





(From page 11-C-92)



**Check the Diagnostic Trouble Code (DTC):**

1. Turn the ignition switch OFF.
2. Connect a scan tool or Honda PGM Tester.
3. Turn the ignition switch ON (II).
4. Read the DTC with the scan tool or Honda PGM Tester.

Are any DTC(s) indicated?

YES

Go to the DTC Troubleshooting Index (see page 11-C-32).

NO

**Check for a short in the wire (SCS line):**

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Turn the ignition switch ON (II).
4. Measure voltage between body ground and the test pin box terminal No. 19.

Is there battery voltage?

NO

Repair short to body ground in the wire between ECM (19) and service check connector.

YES

**Check for a short in the wire (K-line):**

1. Turn the ignition switch OFF.
2. Disconnect the ECM test harness from the ECM.
3. Check for continuity between the Data Link Connector (DLC) terminal No. 15 and body ground.

Is there continuity?

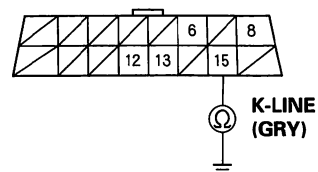
YES

Repair short in the wire between the DLC and ECM (83).

NO

(To page 11-C-96)

DATA LINK CONNECTOR (DLC) (16P)



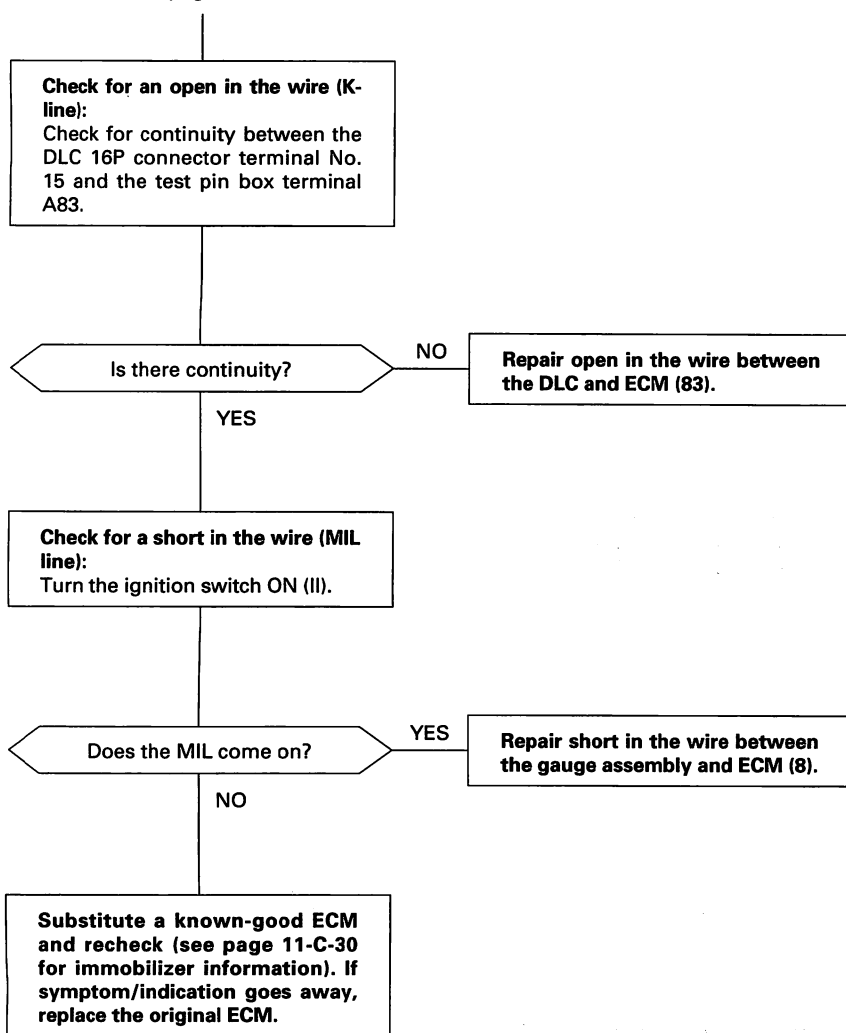
Wire side of female terminals

(cont'd)

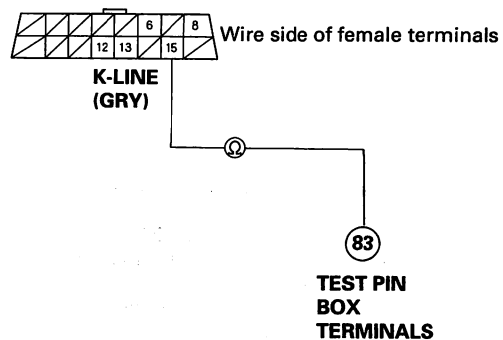
# PGM-FI System

## MIL Circuit Troubleshooting (cont'd)

(From page 11-C-95)



DATA LINK CONNECTOR (DLC) (16P)





(From page 11-C-93)



**Check for an open in the wire or bulb (MIL line):**

1. Turn the ignition switch OFF.
2. Connect the ECM test harness and the test pin box between the ECM and connector (see page 11-C-31).
3. Connect the test pin box terminal No. 8 and body ground with a jumper wire.
4. Turn the ignition switch ON (II).

Does the MIL come on?

NO

- Repair open in the wires between the ECM (8) and gauge assembly.
- Replace the MIL bulb.

YES

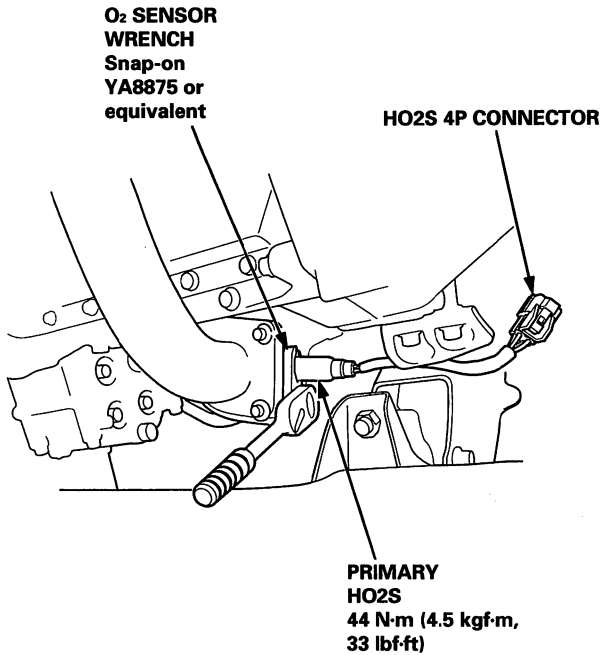
**Substitute a known-good ECM and recheck (see page 11-C-30 for immobilizer information). If symptom/indication goes away, replace the original ECM.**

# PGM-FI System

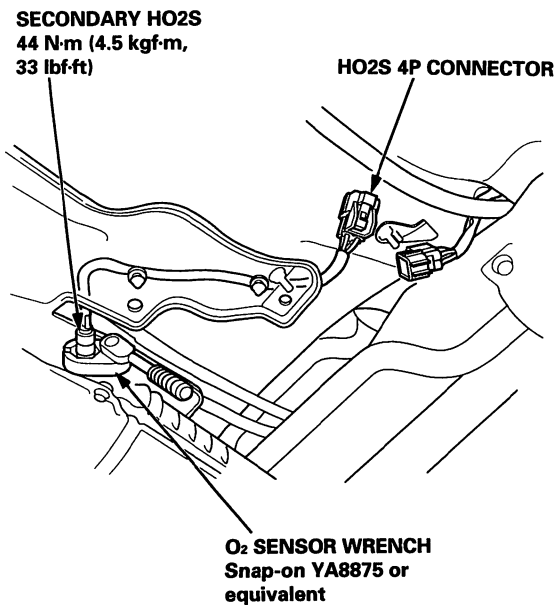
## Heated Oxygen Sensor Replacement

1. Disconnect the HO2S 4P connector, then remove the HO2S.

### Primary HO2S:



### Secondary HO2S:



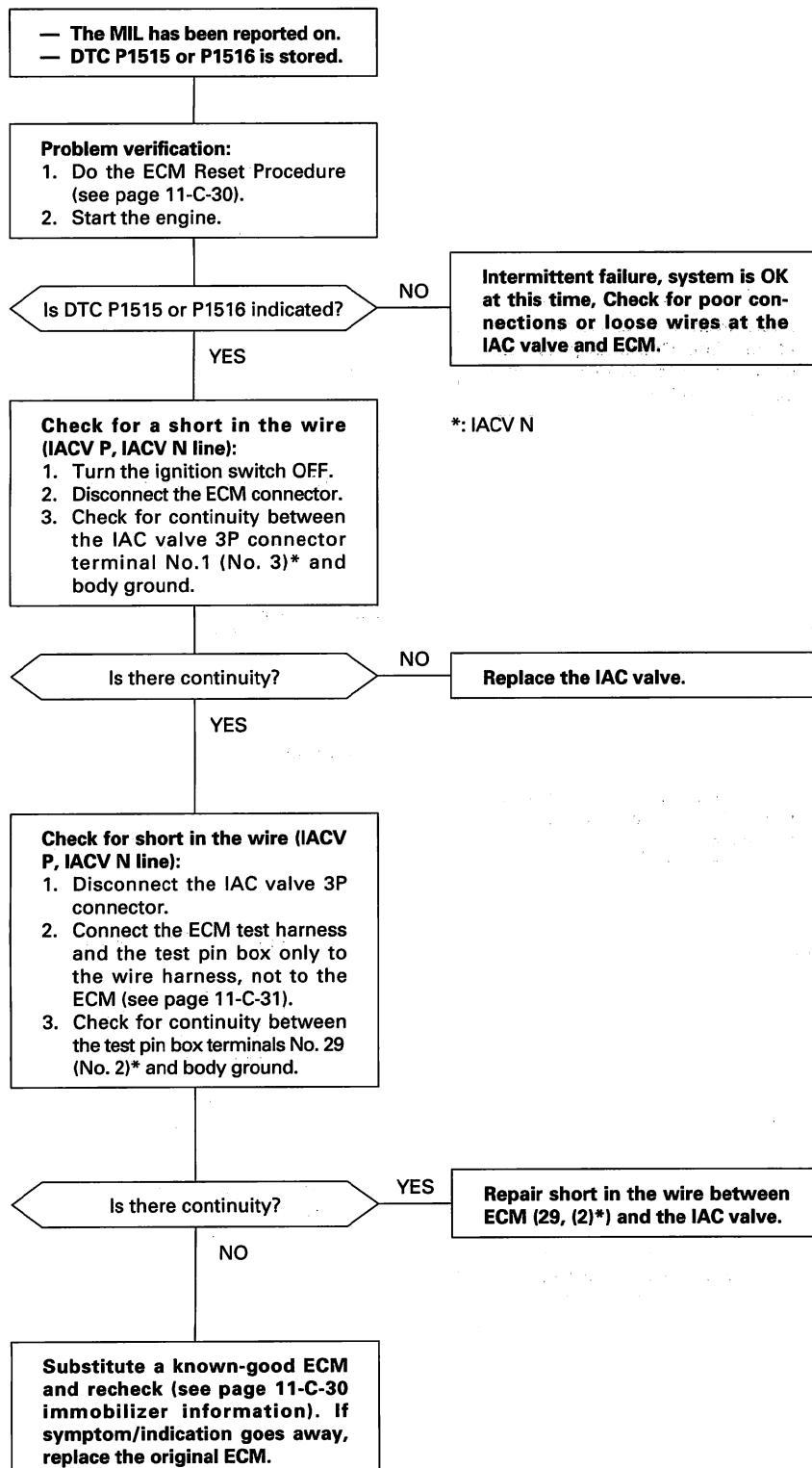
2. Install the HO2S in reverse order of removal.



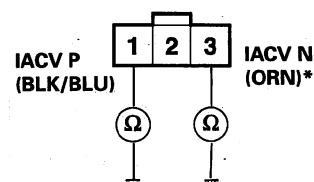
## DTC Troubleshooting

**DTC P1515: IAC Valve Circuit Short Problem**

**DTC P1516: IAC Valve Circuit Short Problem**



**IAC VALVE 3P CONNECTOR**



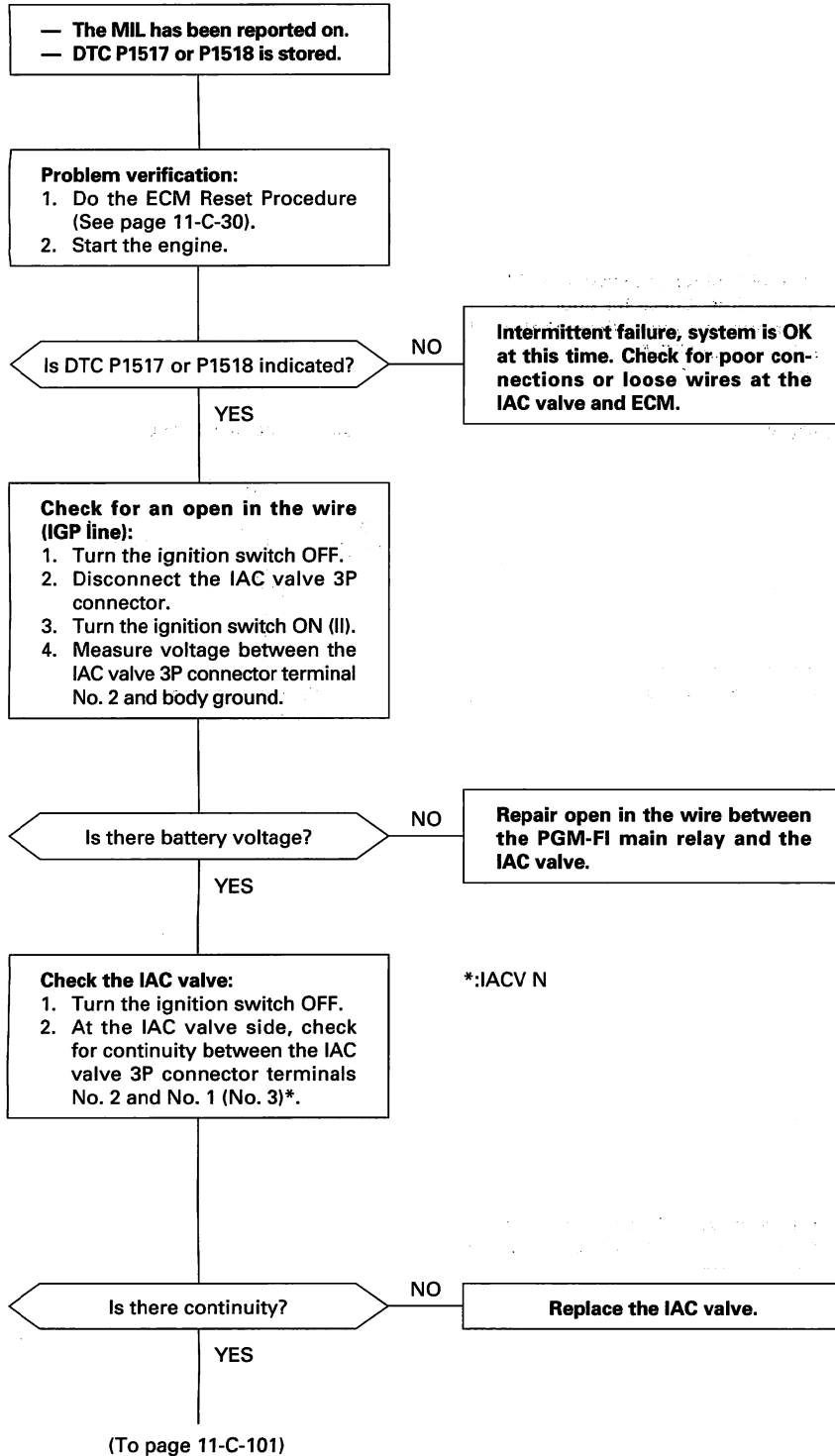
Wire side of female terminals

# Idle control System

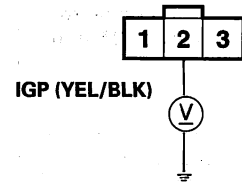
## DTC Troubleshooting (cont'd)

**P1517: IAC Valve Circuit Open Problem**

**P1518: IAC Valve Circuit Open Problem**

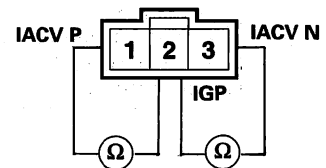


IAC VALVE 3P CONNECTOR



Wire side of female terminals

IAC VALVE 3P CONNECTOR



Terminal side of male terminals



(From page 11-C-100)

**Check for an open in the wire (IACV P, IACV N line):**

1. Connect the ECM test harness and the test pin box only to the wire harness, not to the ECM (see page 11-C-31).
2. Connect the IAC valve 3P connector terminal No. 1 (No. 3)\* and body ground with a jumper wire.
3. Check for continuity between the test pin box terminals No. 29 (No. 2)\* and body ground.

Is there continuity?

NO

**Repair open in the wire between ECM (29, (2)\*) and the IAC valve.**

YES

**Check for a short in the wire (IACV P, IACV N line):**

1. Remove the jumper wire from the IAC valve 3P connector.
2. Turn the ignition switch ON (II).
3. Measure voltage between the IAC valve 3P connector terminal No. 1 (No. 3)\* and body ground.

Is there battery voltage?

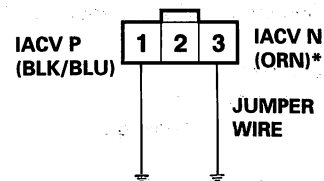
YES

**Repair short in the wire between ECM (29, (2)\*) and the IAC valve.**

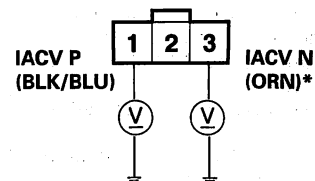
NO

**Substitute a known-good ECM and recheck (see page 11-C-30 immobilizer information). If symptom/indication goes away, replace the original ECM.**

**IAC VALVE 3P CONNECTOR**



Wire side of female terminals





# Emission Control System

## DTC Troubleshooting

### DTC P0420: Catalytic System Efficiency Below Threshold

NOTE: If some of the DTCs listed below are stored at the same time as DTC P0420, troubleshoot those DTCs first, then troubleshoot DTC P0420.

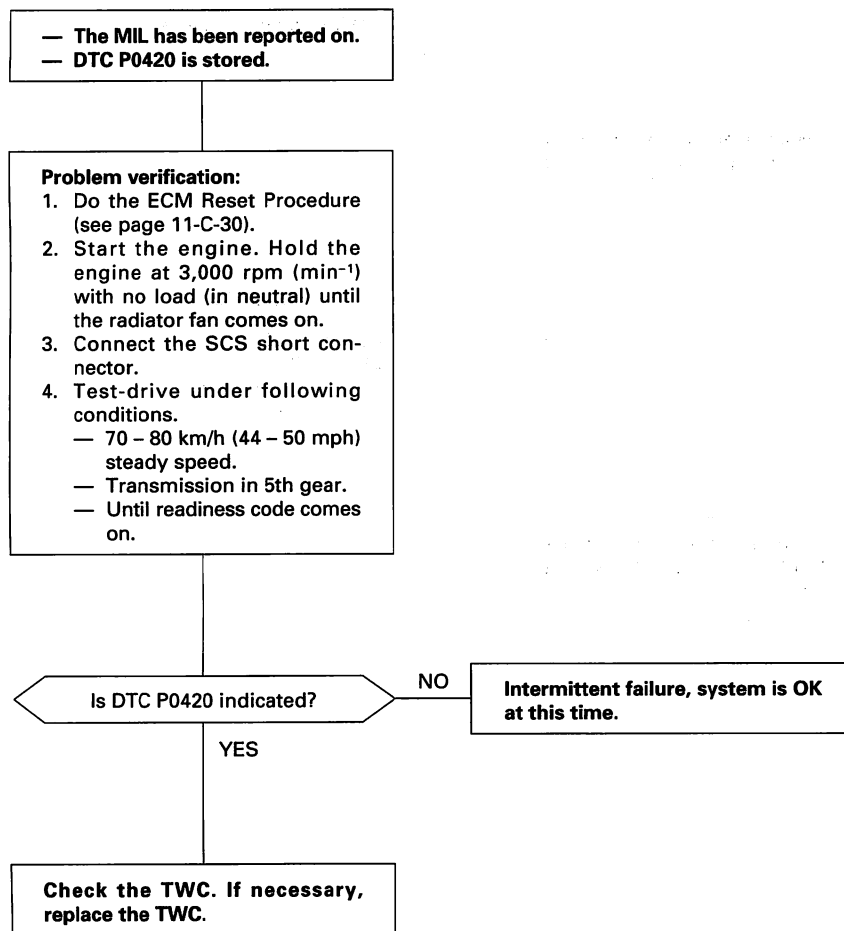
P0137, P0138: Secondary HO2S (Sensor 2)

P0141: Secondary HO2S (Sensor 2) Heater

#### Possible Cause

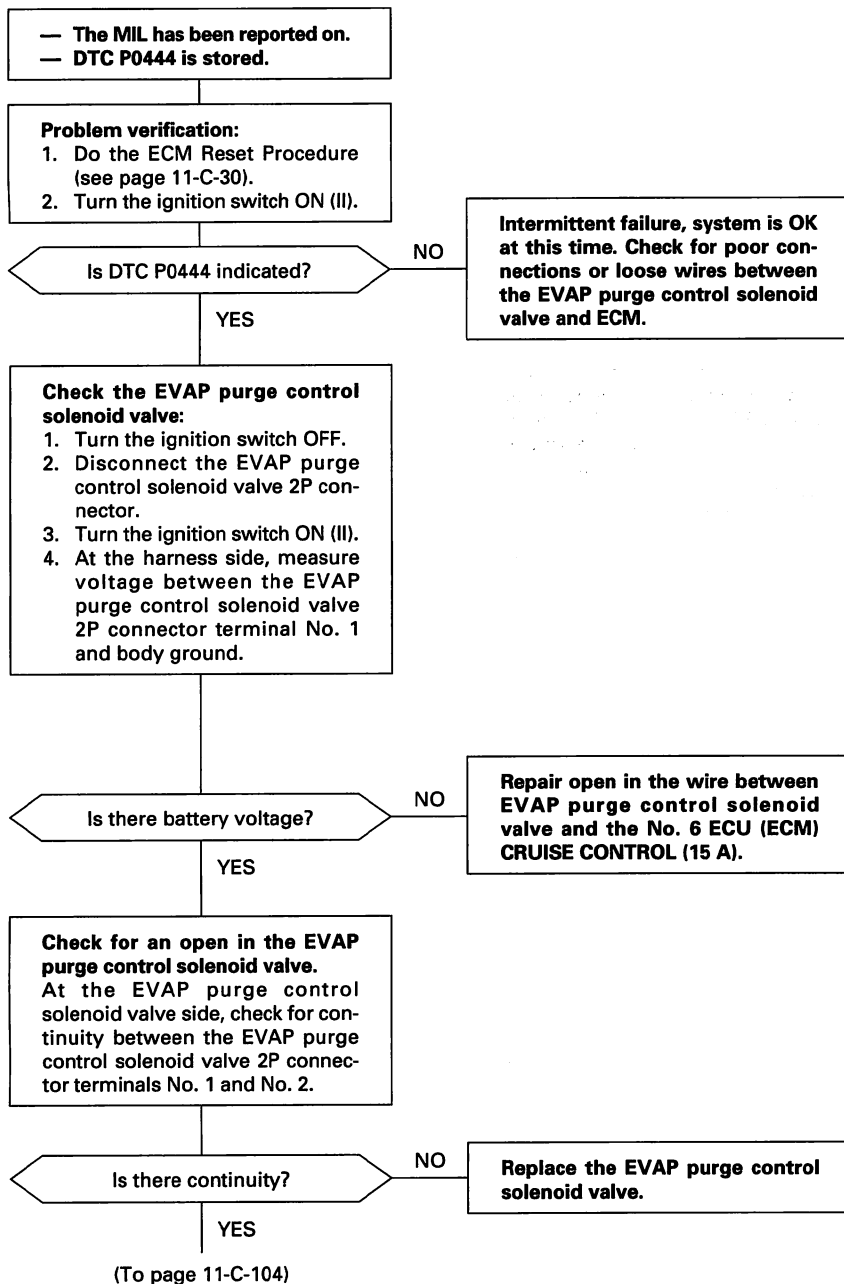
- TWC Deterioration
- Exhaust System Leakage

#### Troubleshooting Flowchart

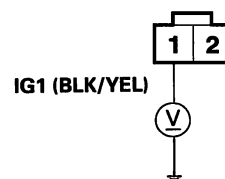




## DTC P0444: EVAP Purge Control Solenoid Valve Circuit Open Problem



### EVAP PURGE CONTROL SOLENOID VALVE 2P CONNECTOR



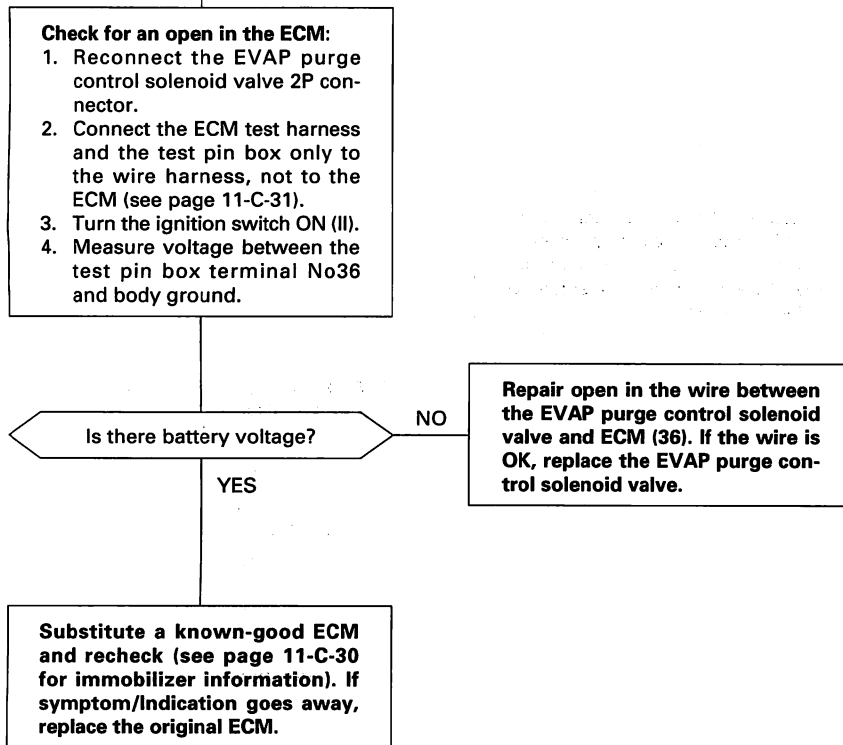
Wire side of female terminals

(cont'd)

# Emission Control System

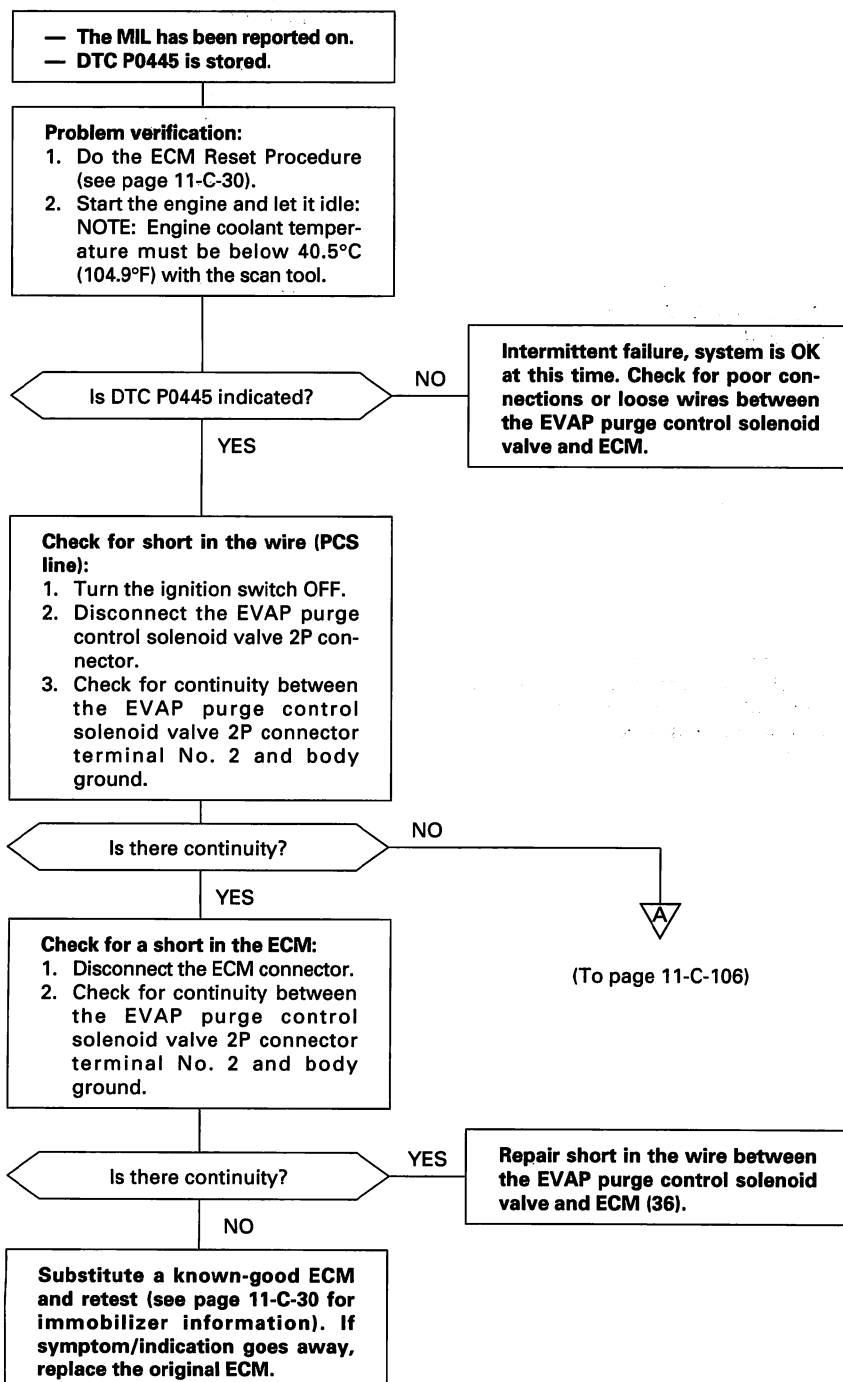
## DTC Troubleshooting (cont'd)

(From page 11-C-103)

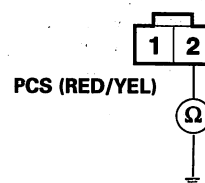




## DTC P0445: EVAP Purge Control Solenoid Valve Circuit Short Problem



### EVAP PURGE CONTROL SOLENOID VALVE 2P CONNECTOR



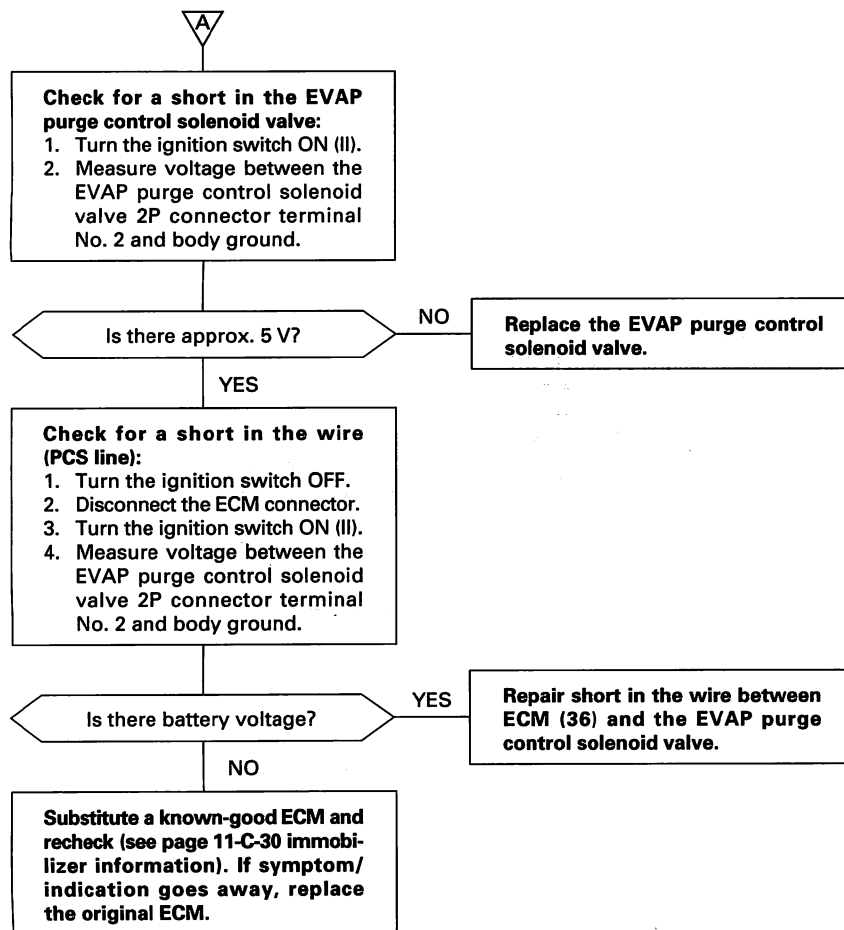
Wire side of female terminals

(cont'd)

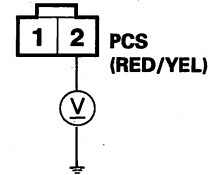
# Emission Control System

## DTC Troubleshooting (cont'd)

(From page 11-C-105)



**EVAP PURGE CONTROL SOLENOID VALVE 2P CONNECTOR**



Wire side of female terminals

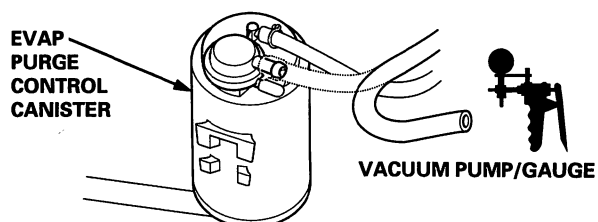


## Evaporative Emission (EVAP) Control System Inspection

### Inspection of Evaporative Emission Controls

#### Check the vacuum when cold:

1. Disconnect the vacuum hose from the EVAP purge control canister and connect a vacuum gauge to the hose.
2. Start the engine and let it idle:  
NOTE: Engine coolant temperature must be below 40.5°C (104.9°F) with the scan tool.



Is there vacuum?

YES

Inspect vacuum hose routing.  
If OK, replace the EVAP purge control solenoid valve.

NO

#### Check the vacuum when hot:

1. Hold the engine at 3,000 rpm ( $\text{min}^{-1}$ ) with no load (in neutral) until the radiator fan comes on, then let it idle for at least 2 minutes.
2. Check for vacuum at the vacuum hose.

Is there vacuum?

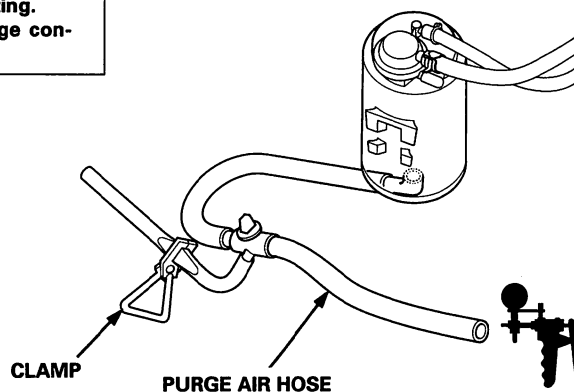
NO

Inspect vacuum hose routing.  
If OK, replace EVAP purge control solenoid valve.

YES

#### Check the EVAP control canister:

1. Turn the ignition switch OFF.
2. Reconnect the vacuum hose to the EVAP purge control canister.
3. Remove the fuel fill cap.
4. Connect a vacuum gauge to canister purge air hose.
5. Start the engine and let it idle for at least 2 minutes.



Is there vacuum?

NO

Replace the EVAP control canister.

YES

See EVAP two way valve test to complete.  
Evaporative emission controls are OK.

## Clutch

<b>Clutch Disc Inspection .....</b>	<b>12-2</b>
---	-------------



### Outline of Model Change

- The inspection procedure for clutch disc has been added.

# Clutch Disc

## Inspection

1. Inspect the lining of the clutch disc for signs of slipping or oil. If the clutch disc is burned black or oil soaked, replace it.

2. Measure the clutch disc thickness.

### Standard (2WD):

#### D16B6, D16B7 engine:

7.7 – 8.2 mm (0.30 – 0.32 in.)

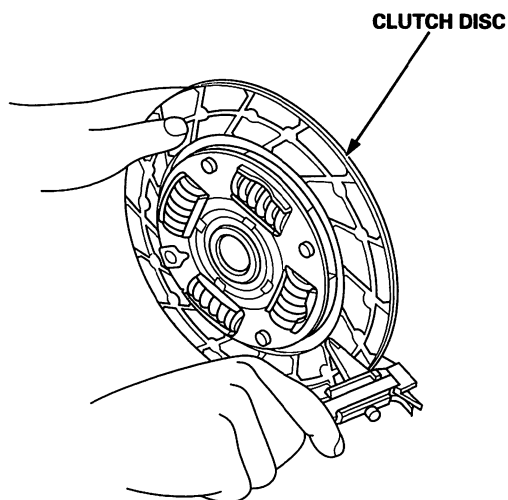
#### F18B2, F18B3, F20B6 engines:

7.9 – 8.4 mm (0.31 – 0.33 in.)

#### H22A7 engine: 8.3 – 9.0 mm (0.33 – 0.35 in.)

#### F23Z5 engine: 8.4 – 9.0 mm (0.33 – 0.35 in.)

**Service Limit:** 6.0 mm (0.24 in.)



If the thickness is less than the service limit, replace the clutch disc.

3. Measure the rivet depth from the lining surface to the rivets, on both sides.

### Standard (2WD):

#### D16B6, D16B7 engine:

1.3 mm (0.051 in.)

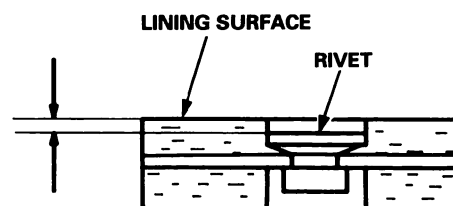
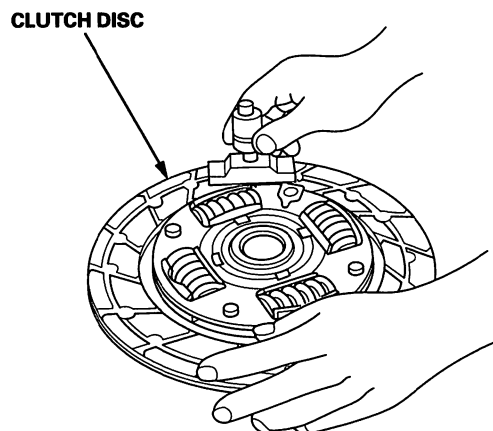
#### F18B2, F18B3, F20B6 engines:

1.4 mm (0.055 in.)

#### H22A7 engine: 1.2 – 1.7 mm (0.047 – 0.067 in.)

#### H23Z5 engine: 1.65 – 2.25 mm (0.065 – 0.089 in.)

**Service Limit:** 0.2 mm (0.008 in.)

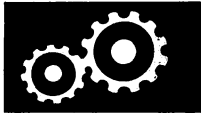


If the rivet depth is less than the service limit, replace the clutch disc.



## **U2J4, U2L4, U2Q7, U2N4 Model Manual Transmission (F18B2, F18B3, F20B6, H22A7, F23Z5 engine models)**

NOTE: Refer to the U2J4, U2L4 Model Manual Transmission (F18B2, F18B3, F20B6 engine models) of the '99 Accord Shop Manual (P/N 62S1A00) for the U2N4 Model Manual Transmission (F23Z5 engine model).

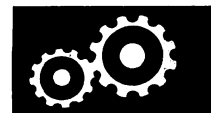


### **Outline of Model Change**

- The U2N4 Model Manual Transmission (F23Z5 engine model) has been added.

## Automatic Transmission

<b>Special Tools .....</b>	<b>14-2</b>
<b>Troubleshooting Procedures .....</b>	<b>14-3</b>
<b>Symptom-to-Component Chart</b>	
<b>Electrical System .....</b>	<b>14-6</b>
<b>Electrical Troubleshooting</b>	
<b>Troubleshooting Flowchart .....</b>	<b>14-10</b>
<b>Road Test</b>	
<b>Shift Schedules .....</b>	<b>14-16</b>

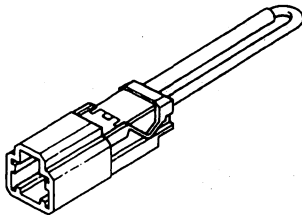


### Outline of Model Changes

- Checking DTC procedure with OBD scan tool and Honda PGM Tester on electrical troubleshooting procedures has been adopted to F23Z5 engine model.
- The PCM can now detect mechanical problems in the hydraulic control system. Troubleshooting for DTCs 45, 45-1, P0780, 46, 46-1, P1750, 47, 47-1, and P1751: Mechanical problem in the hydraulic control system have been added to F18B2, F20B6, and F23Z5 engine models.
- Shift schedules have been changed.

# Special Tools


Ref. No.	Tool Number	Description	Qty	Remark
①	07PAZ – 0010100	SCS Short Connector	1	




①

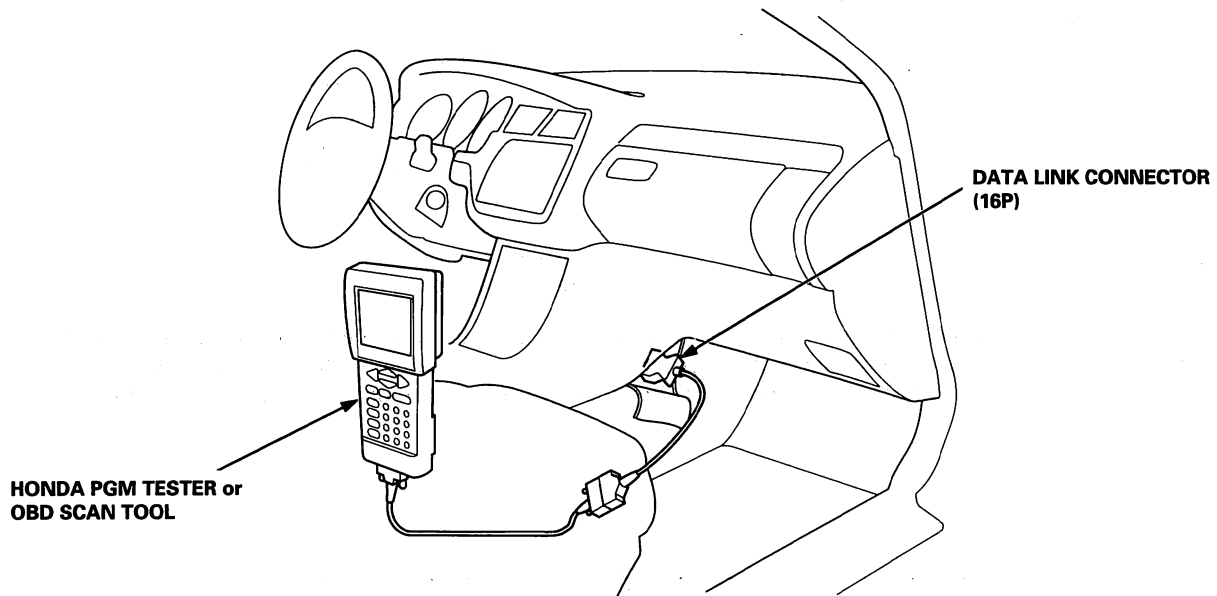


## Checking the Diagnostic Trouble Code (DTC) with an OBD Scan Tool or the Honda PGM Tester for F20B6, F23Z5 Engines


When the PCM senses an abnormality in the input or output systems, the  indicator light in the gauge assembly will blink. When the 16P Data Link Connector (DLC) (located under the dash on the passenger side) is connected to the OBD Scan Tool or Honda PGM Tester as shown, the scan tool or tester will indicate the Diagnostic Trouble Code (DTC) when the ignition switch is turned ON (II).

When the  indicator light has been reported on, connect the OBD Scan Tool or Honda PGM Tester to the DLC (16P). Turn the ignition switch ON (II), and observe the DTC on the screen of the Scan Tool or Honda PGM Tester. After determining the DTC, refer to the Symptom-to-Component Chart Electrical System on pages 14-6 thru 14-9 in this supplement.

**NOTE:** See the OBD Scan Tool or Honda PGM Tester user's manual for specific instructions.



### NOTE:

- If the  indicator light and the MIL (Malfunction Indicator Lamp) come on at the same time, follow this procedures:
  1. Record the DTCs for the fuel and emissions and A/T systems.
  2. Check the fuel and emissions system indicated by the DTC.
  3. Write down the numbers of the customer's radio station presets.
  4. Reset the PCM memory by removing the BACK UP fuse in the passenger's under-hood fuse/relay box for more than 10 seconds.
  5. Drive the vehicle for several minutes at speeds over 30 mph (50 km/h), and then recheck the DTCs.
- Disconnecting the BACK UP fuse also cancels the radio station presets and the clock setting.

# Troubleshooting Procedures

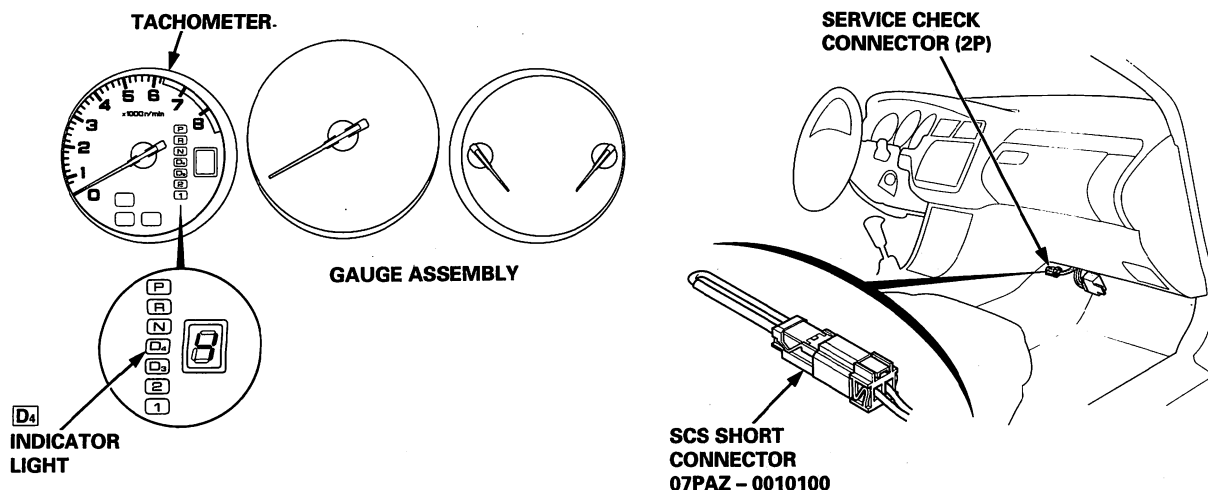
## Checking the Diagnostic Trouble Code (DTC)

### connecting with the Special Tool to the Service Check Connector for All Models

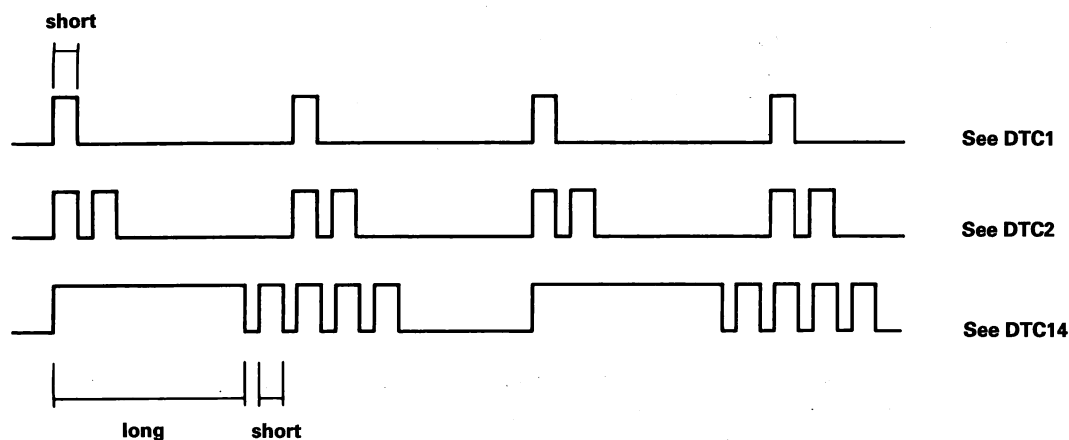
When the PCM senses an abnormality in the input or output systems, the **D<sub>4</sub>** indicator light in the gauge assembly will blink.

When the Service Check Connector (located under the dash on the passenger side) is connected with the special tool as shown, the **D<sub>4</sub>** indicator light will blink the Diagnostic Trouble Code (DTC) when the ignition switch is turned ON (II).

When the **D<sub>4</sub>** indicator light has been reported on, connect the Service Check Connector with the special tool. Then turn ON (II) the ignition switch and observe the **D<sub>4</sub>** indicator light.



Codes 1 through 9 are indicated by individual short blinks. Code 10 and above are indicated by a series of long and short blinks. One long blink equals 10 short blinks. Add the long and short blinks together to determine the code. After determining the code, refer to the Symptom-to Component Chart Electrical System on pages 14-6 thru 14-9 in this supplement.



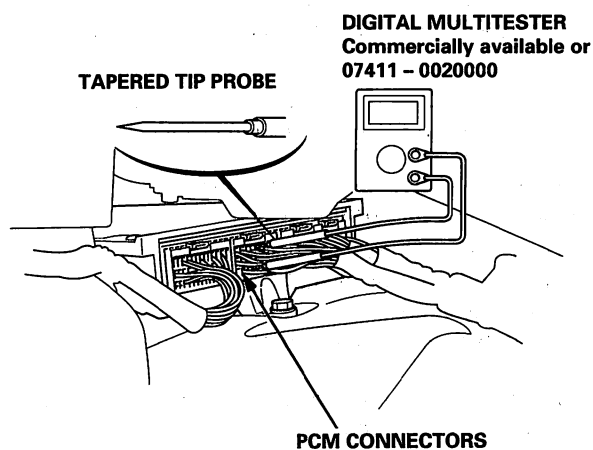
#### NOTE:

- If the **D<sub>4</sub>** indicator light and the MIL (Malfunction Indicator Lamp) come on at the same time, follow this procedures:
  1. Record the DTCs for the fuel/emissions and A/T systems.
  2. Check the fuel and emissions system indicated by the DTC.
  3. Write down the numbers of the customer's radio station presets.
  4. Reset the PCM memory by removing the BACK UP fuse in the passenger's under-hood fuse/relay box for more than 10 seconds.
  5. Drive the vehicle for several minutes at speeds over 30 mph (50 km/h), and then recheck the DTCs.
- Disconnecting the BACK UP fuse also cancels the radio station presets and the clock setting.



SRS component are located in this area. Review the SRS component locations, precautions, and procedures in the SRS section (24) before performing repairs or service.

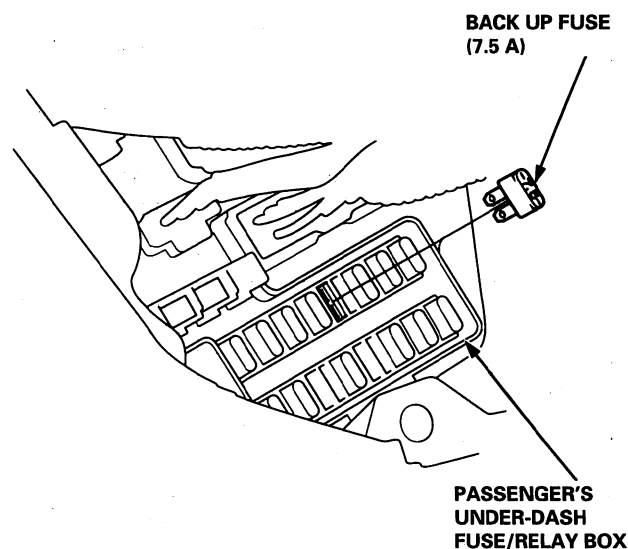
1. Pull back the carpet from passenger's side of the center console to expose the PCM.
2. Inspect the circuit on the PCM according to the troubleshooting flowchart with a digital multimeter and a tapered tip probe as shown.



#### ● PCM Reset Procedure

1. Turn the ignition switch OFF.
2. Remove the BACK UP fuse (7.5 A) from the passenger's under-dash fuse/relay box for 10 seconds to reset the PCM.

**NOTE:** Disconnecting the BACK UP fuse also cancels the radio preset stations and the clock setting. Make note of the radio presets before removing the fuse so you can reset them.





#### ● Final Procedure

**NOTE:** This procedure must be done after any troubleshooting.

1. Remove the special tool from the Service Check Connector.
2. Reset the PCM.
3. Set the radio preset stations and clock setting.



# Symptom-to-Component Chart

## Electrical System

When PCM senses abnormality,  indicator light:	Number of  Indicator Light indicates	Symptom	Possible Cause	Refer to Page in the '99 Accord shop manual, P/N 62S1A00A
	DTC on Honda PGM Tester*			
	DTC on OBD Scan Tool*			
Blinks	1	<ul style="list-style-type: none"> <li>Lock-up clutch does not engage.</li> <li>Fails to shift (stuck in 4th gear).</li> </ul>	<ul style="list-style-type: none"> <li>Disconnected lock-up control solenoid valve/shift control solenoid valve A assembly connector</li> <li>Short or open in lock-up control solenoid valve wire</li> <li>Faulty lock-up control solenoid valve</li> <li>Open in VB SOL wire</li> </ul>	14-62
	1-1			
	P1753			
Blinks	5	<ul style="list-style-type: none"> <li>Fails to shift other than 2nd-3rd gears.</li> <li>Lock-up clutch does not engage.</li> </ul>	<ul style="list-style-type: none"> <li>Short in A/T gear position switch wire</li> <li>Faulty A/T gear position switch</li> </ul>	14-64
	5-1			
	P1705			
Does not blink	6	No specific symptom appears.	<ul style="list-style-type: none"> <li>Disconnected A/T gear position switch connector</li> <li>Open in A/T gear position switch wire</li> <li>Faulty A/T gear position switch</li> </ul>	14-68
	6-1			
	P1706			
Blinks	7	Fails to shift (stuck in 4th gear).	<ul style="list-style-type: none"> <li>Disconnected lock-up control solenoid valve/shift control solenoid valve A assembly connector</li> <li>Short or open in shift control solenoid valve A wire</li> <li>Faulty shift control solenoid valve A</li> <li>Open in VB SOL wire</li> </ul>	14-71
	7-1			
	P0753			
Blinks	8	Fails to shift (stuck in 4th gear).	<ul style="list-style-type: none"> <li>Disconnected shift control solenoid valve B connector</li> <li>Short or open in shift control solenoid valve B wire</li> <li>Faulty shift control solenoid valve B</li> <li>Open in VB SOL wire</li> </ul>	14-73
	8-1			
	P0758			
Blinks	9	<ul style="list-style-type: none"> <li>Fails to shift (between 2nd-3rd, downshift to 3rd gear only).</li> <li>Speedometer does not operate.</li> <li>Lock-up clutch does not engage.</li> </ul>	<ul style="list-style-type: none"> <li>Disconnected countershaft speed sensor connector</li> <li>Short or open in countershaft speed sensor wire</li> <li>Faulty countershaft speed sensor</li> </ul>	14-75
	9-1			
	P0720			
Blinks	15	<ul style="list-style-type: none"> <li>Fails to shift (between 2nd-3rd, downshift to 3rd gear only).</li> <li>Lock-up clutch does not engage.</li> </ul>	<ul style="list-style-type: none"> <li>Disconnected mainshaft speed sensor connector</li> <li>Short or open in mainshaft speed sensor wire</li> <li>Faulty mainshaft speed sensor</li> </ul>	14-79
	15-1			
	P0715			

\*: DTCs on Honda PGM Tester and OBD Scan Tool apply to F18B2, F20B6, and F23Z5 engine models.



When PCM senses abnormality,  indicator light:	Number of  Indicator Light indicates	Symptom	Possible Cause	Refer to Page in the '99 Accord shop manual, P/N 62S1A00A
	DTC on Honda PGM Tester*			
	DTC on OBD Scan Tool*			
Blinks	16	<ul style="list-style-type: none"> <li>• Fails to shift (stuck in 4th gear).</li> <li>• Lock-up clutch does not engage.</li> </ul>	<ul style="list-style-type: none"> <li>• Disconnected A/T clutch pressure control solenoid valve A connector</li> <li>• Short or open in A/T clutch pressure control solenoid valve A wire</li> <li>• Faulty A/T clutch pressure control solenoid valve A</li> <li>• Open in VB SOL wire</li> <li>• Open in PG1 or PG2 wires or poor ground (101)</li> </ul>	14-83
	16-1			
	P1768			
Blinks	22	Fails to shift (stuck in 4th gear).	<ul style="list-style-type: none"> <li>• Disconnected shift control solenoid valve C connector</li> <li>• Short or open in shift control solenoid valve C wire</li> <li>• Faulty shift control solenoid valve C</li> <li>• Open in VB SOL wire</li> </ul>	14-85
	22-1			
	P0763			
Blinks	23	<ul style="list-style-type: none"> <li>• Fails to shift (stuck in 4th gear).</li> <li>• Lock-up clutch does not engage.</li> </ul>	<ul style="list-style-type: none"> <li>• Disconnected A/T clutch pressure control solenoid valve B connector</li> <li>• Short or open in A/T clutch pressure control solenoid valve B wire</li> <li>• Faulty A/T clutch pressure control solenoid valve B</li> <li>• Open in VB SOL wire</li> <li>• Open in PG1 or PG2 wires or poor ground (101)</li> </ul>	14-87
	23-1			
	P1773			
Blinks	24	Transmission does not shift into manual mode.	<ul style="list-style-type: none"> <li>• Disconnected mode switch connector</li> <li>• Short or open in mode switch wire</li> <li>• Faulty mode switch</li> </ul>	14-89
	24-1			
	P1709			
Does not blink	25	No specific symptom appears.	<ul style="list-style-type: none"> <li>• Disconnected 2nd clutch pressure switch connector</li> <li>• Short or open in 2nd clutch pressure switch wire</li> <li>• Faulty 2nd clutch pressure switch</li> </ul>	14-91
	25-1			
	P1738			
Does not blink	26	No specific symptom appears.	<ul style="list-style-type: none"> <li>• Disconnected 3rd clutch pressure switch connector</li> <li>• Short or open in 3rd clutch pressure switch wire</li> <li>• Faulty 3rd clutch pressure switch</li> </ul>	14-93
	26-1			
	P1739			
Does not blink	41	<ul style="list-style-type: none"> <li>• Fails to shift (between 1st-2nd, 1st-2nd-3rd, 1st-3rd-4th or 2nd-3rd-4th gears only).</li> <li>• Fails to shift (stuck in 4th gear).</li> </ul>	Faulty shift control system	14-95
	41-1			
	P0730			



\*: DTCs on Honda PGM Tester and OBD Scan Tool apply to F18B2, F20B6, and F23Z5 engine models.

(cont'd)



# Symptom-to-Component Chart

## Electrical System (cont'd)

When PCM senses abnormality,  indicator light:	Number of  Indicator Light indicates	Symptom	Possible Cause	Refer to Page in this supplement
	DTC on Honda PGM Tester*			
	DTC on OBD Scan Tool*			
Blinks	45*	<ul style="list-style-type: none"> <li>• Fails to shift (stuck in 1st gear or 3rd gear).</li> <li>• Fails to shift (down-shift to 2nd gear at 3 – 4 upshift point).</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical problem in the hydraulic control system for shift control solenoid valve A and A/T clutch pressure control solenoid valves A and B</li> <li>• Faulty transmission hydraulic control system</li> <li>• Faulty PCM</li> </ul>	14-10
	45-1*			
	P0780*			
Blinks	46*	<ul style="list-style-type: none"> <li>• Fails to shift (clutch slips when upshifting).</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical problem in the hydraulic control system for A/T clutch pressure control solenoid valves A and B</li> <li>• Faulty transmission hydraulic control system</li> <li>• Faulty PCM</li> </ul>	14-12
	46-1*			
	P1750*			
Blinks	47*	<ul style="list-style-type: none"> <li>• Fails to shift (stuck in 2nd gear).</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanical problem in the hydraulic control system for shift control solenoid valve B and A/T clutch pressure control solenoid valves A and B</li> <li>• Faulty transmission hydraulic control system</li> <li>• Faulty PCM</li> </ul>	14-14
	47-1*			
	P1751*			

\*: DTCs on Honda PGM Tester and OBD Scan Tool, and DTCs 45, 45-1, P0780, 46, 46-1, P1750, 47, 47-1, and P1751 apply to F18B2, F20B6, and F23Z5 engine models.

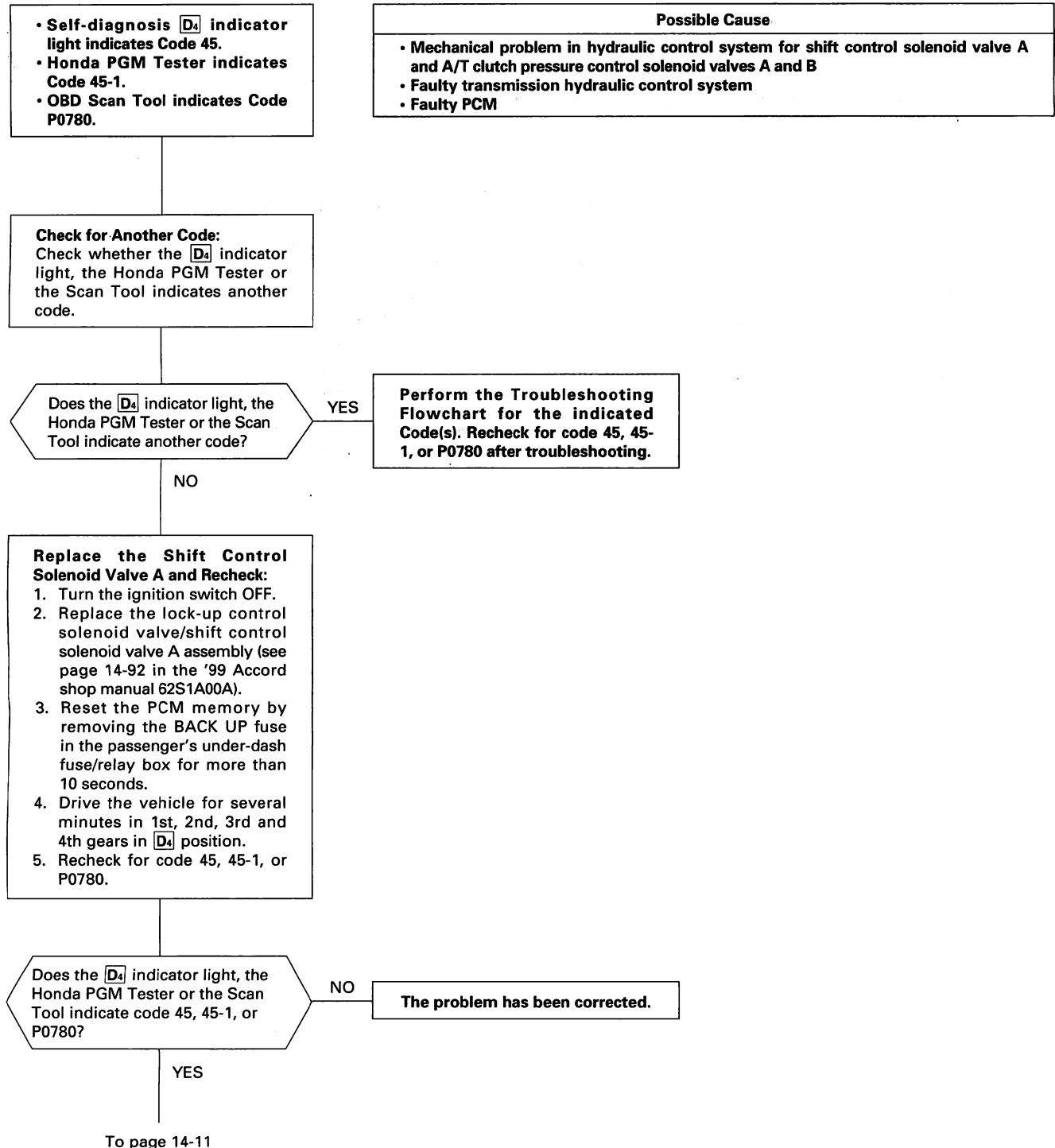


The following symptom appears if the self-diagnostic **D4** indicator light does not blink, perform an inspection according to the table below.

Symptom	Possible Cause	Refer to Page in the '99 Accord shop manual, P/N 62S1A00A
<b>D4</b> indicator light is on constantly (not blinking) whenever the ignition switch is ON (II).	_____	14-97
<b>D4</b> indicator light does not come on for 2 seconds after ignition switch is first turn ON (II).	_____	14-98
Transmission does not shift up and down when operating the shift lever in the manual mode position.	Check shift switch.	14-100
Shift indicator does not indicate selected gear while shift lever is in the manual mode position.	Check shift indicator circuit.	14-103
Shift lever cannot be moved from <b>P</b> position with the brake pedal depressed.	Check interlock system — Shift lock system	14-104
Shift lever cannot pass through <b>R</b> position from <b>N</b> position.	Check interlock system — Reverse lock system	14-107
Ignition key cannot be moved from ACC (I) position to LOCK (0) position while pushing the ignition key with the shift lever in <b>P</b> position.	Check interlock system — Key interlock system	14-109

# Electrical Troubleshooting

## Troubleshooting Flowchart — Hydraulic Control System (F18B2, F20B6 and F23Z5 Engine Models) – Mechanical Problem in Hydraulic Control System for Shift Control Solenoid Valve A and A/T Clutch Pressure Control Solenoid Valves A and B





From page 14-10

**Replace the A/T Clutch Pressure Control Solenoid Valve A/B Assembly and Recheck:**

1. Turn the ignition switch OFF.
2. Replace the A/T clutch pressure control solenoid valve A/B assembly (see page 14-95 in the '99 Accord shop manual 62S1A00A).
3. Reset the PCM memory by removing the BACK UP fuse in the passenger's under-dash fuse/relay box for more than 10 seconds.
4. Drive the vehicle for several minutes in 1st, 2nd, 3rd and 4th gears in **D<sub>4</sub>** position.
5. Recheck for code 45, 45-1, or P0780.

Does the **D<sub>4</sub>** indicator light, the Honda PGM Tester or the Scan Tool indicate code 45, 45-1, or P0780?

NO

**The problem has been corrected.**

YES

**Overhaul Transmission Hydraulic Control System and Recheck:**

1. Turn the ignition switch OFF.
2. Remove the transmission, and overhaul it for hydraulic control system.
3. Install the transmission.
4. Drive the vehicle for several minutes in 1st, 2nd, 3rd and 4th gears in **D<sub>4</sub>** position.
5. Recheck for code 45, 45-1, or P0780.

NOTE: The shift valves A, B and D, the modulator valve and the CPC valve A probably stuck in their valve bodies.

Does the **D<sub>4</sub>** indicator light, the Honda PGM Tester or the Scan Tool indicate code 45, 45-1, or P0780?

NO

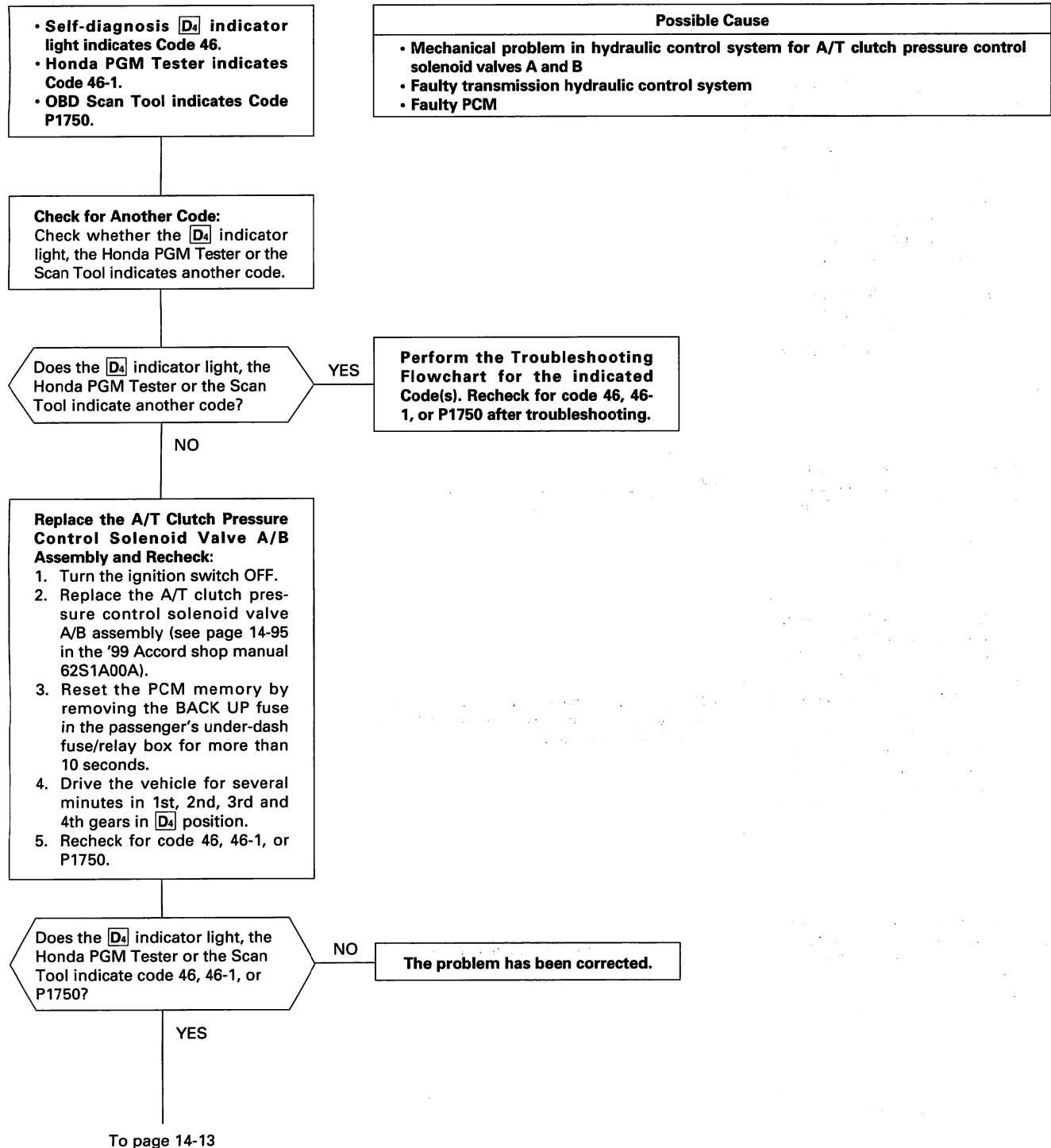
**The problem has been corrected.**

YES

**Replace the transmission.**

# Electrical Troubleshooting

## Troubleshooting Flowchart — Hydraulic Control System (F18B2, F20B6 and F23Z5 Engine Models) – Mechanical Problem in Hydraulic Control System for A/T Clutch Pressure Control Solenoid Valves A and B





From page 14-12

**Overhaul Transmission Hydraulic Control System and Recheck:**

1. Turn the ignition switch OFF.
2. Remove the transmission, and overhaul it for hydraulic control system.
3. Install the transmission.
4. Drive the vehicle for several minutes in 1st, 2nd, 3rd and 4th gears in **D<sub>4</sub>** position.
5. Recheck for code 46, 46-1, or P1750.

**NOTE:** The CPC valves A and B probably stuck in the valve body.

Does the **D<sub>4</sub>** indicator light, the Honda PGM Tester or the Scan Tool indicate code 46, 46-1, or P1750?

NO

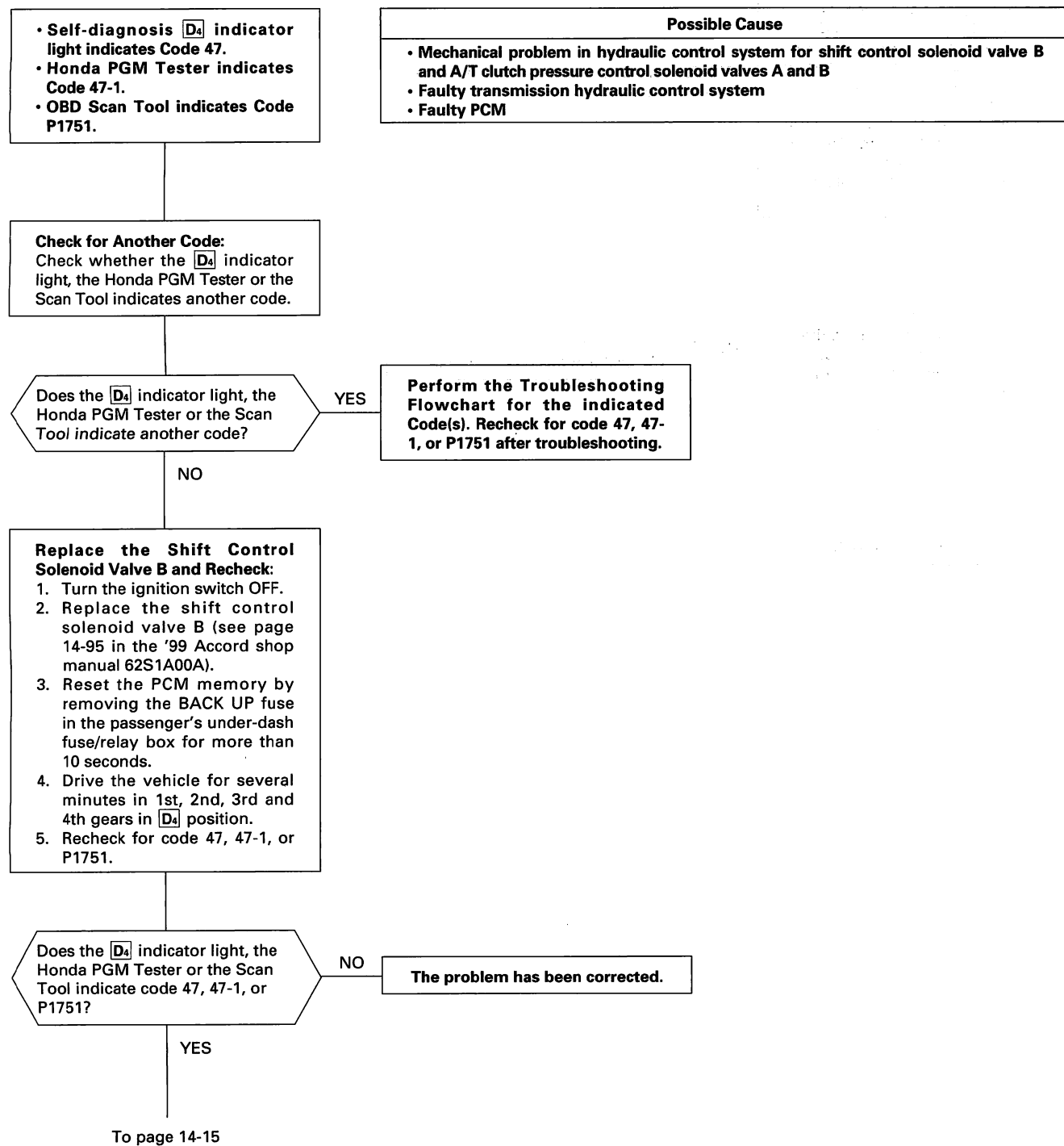
**The problem has been corrected.**

YES

**Replace the transmission.**

# Electrical Troubleshooting

## Troubleshooting Flowchart — Hydraulic Control System (F18B2, F20B6 and F23Z5 Engine Models) – Mechanical Problem in Hydraulic Control System for Shift Control Solenoid Valve B and A/T Clutch Pressure Control Solenoid Valves A and B





From page 14-14

**Replace the A/T Clutch Pressure Control Solenoid Valve A/B Assembly and Recheck:**

1. Turn the ignition switch OFF.
2. Replace the A/T clutch pressure control solenoid valve A/B assembly (see page 14-95 in the '99 Accord shop manual 62S1A00A).
3. Reset the PCM memory by removing the BACK UP fuse in the passenger's under-dash fuse/relay box for more than 10 seconds.
4. Drive the vehicle for several minutes in 1st, 2nd, 3rd and 4th gears in **D<sub>4</sub>** position.
5. Recheck for code 47, 47-1, or P1751.

Does the **D<sub>4</sub>** indicator light, the Honda PGM Tester or the Scan Tool indicate code 47, 47-1, or P1751?

NO

**The problem has been corrected.**

YES

**Overhaul Transmission Hydraulic Control System and Recheck:**

1. Turn the ignition switch OFF.
2. Remove the transmission, and overhaul it for hydraulic control system.
3. Install the transmission.
4. Drive the vehicle for several minutes in 1st, 2nd, 3rd and 4th gears in **D<sub>4</sub>** position.
5. Recheck for code 47, 47-1, or P1751.

NOTE: The shift valve B, the servo control valve and the CPC valve B probably stuck in their valve bodies.

Does the **D<sub>4</sub>** indicator light, the Honda PGM Tester or the Scan Tool indicate code 47, 47-1, or P1751?

NO

**The problem has been corrected.**

YES

**Replace the transmission.**



# Road Test

## Shift Schedules

F18B2 Engine (Except KY model) and F20B6 Engine

**D<sub>4</sub>** Position:

**Upshift**

Throttle Opening	Unit of Speed	1st → 2nd	2nd → 3rd	3rd → 4th
Throttle position sensor voltage: 0.75 V	mph	10 – 12	17 – 20	25 – 29
	km/h	16 – 20	28 – 32	40 – 46
Throttle position sensor voltage: 2.25 V	mph	21 – 23	40 – 42	58 – 62
	km/h	33 – 37	64 – 68	94 – 100
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	32 – 35	56 – 60	88 – 92
	km/h	51 – 57	90 – 96	142 – 148

**Downshift**

Throttle Opening	Unit of Speed	4th → 3rd	3rd → 2nd	2nd → 1st
Throttle position sensor voltage: 0.75 V	mph	16 – 18	——	5 – 7
	km/h	25 – 29	——	8 – 12
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	83 – 87	50 – 54	24 – 28
	km/h	134 – 140	81 – 87	39 – 45

**Lock-up points**

Throttle Opening	Unit of Speed	<b>D<sub>4</sub></b> Position and 4th gear in manual mode: Lock-up points		<b>D<sub>3</sub></b> Position: Lock-up points		2nd and 3rd gears in manual mode: Lock-up points	
		ON	OFF	ON	OFF	ON	OFF
Throttle position sensor voltage: 0.8 V	mph	44 – 47	43 – 45	61 – 63	58 – 60	38 – 40	26 – 29
	km/h	71 – 75	69 – 73	98 – 102	93 – 97	61 – 65	42 – 46
Throttle position sensor voltage: 2.25 V	mph	69 – 73	59 – 63	69 – 73	59 – 63	101 – 104	94 – 98
	km/h	111 – 117	95 – 101	111 – 117	95 – 101	162 – 168	152 – 158
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	101 – 105	95 – 99	101 – 105	95 – 99	101 – 105	95 – 99
	km/h	163 – 169	153 – 159	163 – 169	153 – 159	163 – 169	153 – 159



# F18B2 Engine (KY model)

**D<sub>1</sub>** Position:

**Upshift**

Throttle Opening	Unit of Speed	1st → 2nd	2nd → 3rd	3rd → 4th
Throttle position sensor voltage: 0.75 V	mph	10 – 12	17 – 20	25 – 29
	km/h	16 – 20	28 – 32	40 – 46
Throttle position sensor voltage: 2.25 V	mph	21 – 23	40 – 42	58 – 62
	km/h	33 – 37	64 – 68	94 – 100
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	33 – 37	61 – 65	91 – 95
	km/h	53 – 59	98 – 104	147 – 153

**Downshift**

Throttle Opening	Unit of Speed	4th → 3rd	3rd → 2nd	2nd → 1st
Throttle position sensor voltage: 0.75 V	mph	16 – 18	—	5 – 7
	km/h	25 – 29	—	8 – 12
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	85 – 89	54 – 58	26 – 30
	km/h	137 – 143	87 – 93	42 – 48

**Lock-up points**

Throttle Opening	Unit of Speed	D <sub>4</sub> Position and 4th gear in manual mode: Lock-up points		D <sub>3</sub> Position: Lock-up points		2nd and 3rd gears in manual mode: Lock-up points	
		ON	OFF	ON	OFF	ON	OFF
Throttle position sensor voltage: 0.8 V	mph	48 – 50	47 – 49	61 – 63	58 – 60	38 – 40	26 – 29
	km/h	77 – 81	75 – 79	98 – 102	93 – 97	61 – 65	42 – 46
Throttle position sensor voltage: 2.25 V	mph	69 – 73	59 – 63	69 – 73	59 – 63	101 – 104	94 – 98
	km/h	111 – 117	95 – 101	111 – 117	95 – 101	162 – 168	152 – 158
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	101 – 105	95 – 99	101 – 105	95 – 99	101 – 105	95 – 99
	km/h	163 – 169	153 – 159	163 – 169	153 – 159	163 – 169	153 – 159

(cont'd)

# Road Test

## Shift Schedules (cont'd)

F23F5 Engine

**D<sub>4</sub>** Position:

Upshift

Throttle Opening	Unit of Speed	1st → 2nd	2nd → 3rd	3rd → 4th
Throttle position sensor voltage: 0.75 V	mph	10 – 12	17 – 20	25 – 29
	km/h	16 – 20	28 – 32	40 – 46
Throttle position sensor voltage: 2.25 V	mph	21 – 23	40 – 42	58 – 62
	km/h	33 – 37	64 – 68	94 – 100
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	32 – 36	58 – 62	91 – 95
	km/h	52 – 58	94 – 100	147 – 153

Downshift

Throttle Opening	Unit of Speed	4th → 3rd	3rd → 2nd	2nd → 1st
Throttle position sensor voltage: 0.75 V	mph	16 – 18	——	5 – 7
	km/h	25 – 29	——	8 – 12
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	86 – 89	52 – 56	25 – 29
	km/h	138 – 144	84 – 90	40 – 46

Lock-up points

Throttle Opening	Unit of Speed	<b>D<sub>4</sub></b> Position and 4th gear in manual mode: Lock-up points		<b>D<sub>3</sub></b> Position: Lock-up points		2nd and 3rd gears in manual mode: Lock-up points	
		ON	OFF	ON	OFF	ON	OFF
Throttle position sensor voltage: 0.8 V	mph	46 – 48	45 – 47	61 – 63	58 – 60	38 – 40	26 – 29
	km/h	74 – 78	72 – 76	98 – 102	93 – 97	61 – 65	42 – 46
Throttle position sensor voltage: 2.25 V	mph	69 – 73	59 – 63	69 – 73	59 – 63	101 – 104	94 – 98
	km/h	111 – 117	95 – 101	111 – 117	95 – 101	162 – 168	152 – 158
Fully-opened throttle, Throttle position sensor voltage: 4.5 V	mph	101 – 105	95 – 99	101 – 105	95 – 99	101 – 105	95 – 99
	km/h	163 – 169	153 – 159	163 – 169	153 – 159	163 – 169	153 – 159

# Driveshafts

**Special Tools ..... 16-2**  
**Disassembly ..... 16-3**  
**Reassembly ..... 16-7**

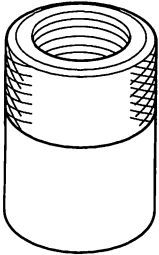


**Outline of Model Change**

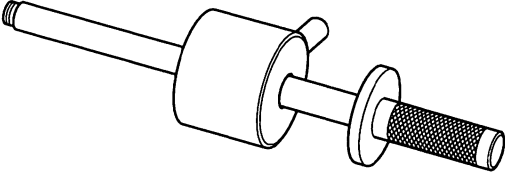
- The replacement procedure for low profile type boot bands has been added.

# Special Tools

Ref. No.	Tool Number	Description	Qty	Remark
①	07XAC – 0010100	Threaded Adapter, 22 x 1.5 mm	1	
②	07XAC – 0010200	Threaded Adapter, 24 x 1.5 mm	1	
③	07936 – 579001	Sliding Hammer Set	1	



① ②



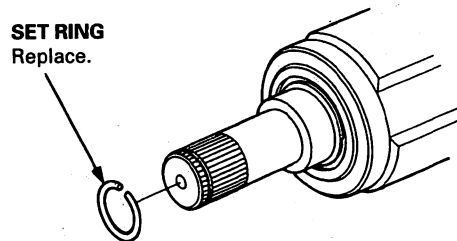
③



## Disassembly

### Inboard Joint Side:

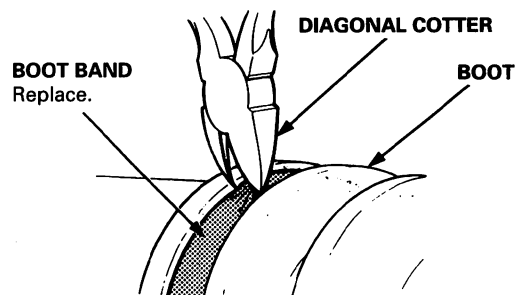
1. Remove the set ring from the inboard joint.



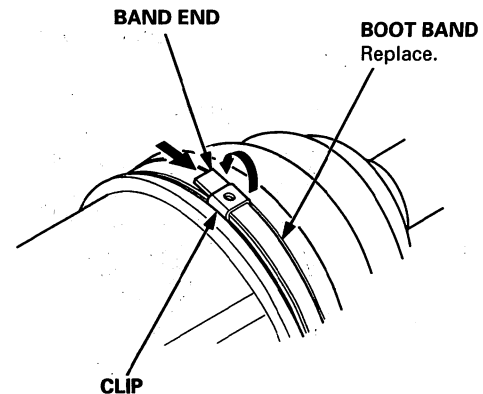
2. Remove the boot bands. Take care not to damage the boot and dynamic damper.

- If the boot band is a welded type, cut the boot band.
- If the boot band is a double loop type, lift up the band bend, and push it into the clip.
- If the boot band is a low profile type, pinch and remove the boot band with a commercially available boot band pincer.
- If the boot band is an ear clamp type, lift up the three tabs with a screwdriver (see page 16-5).

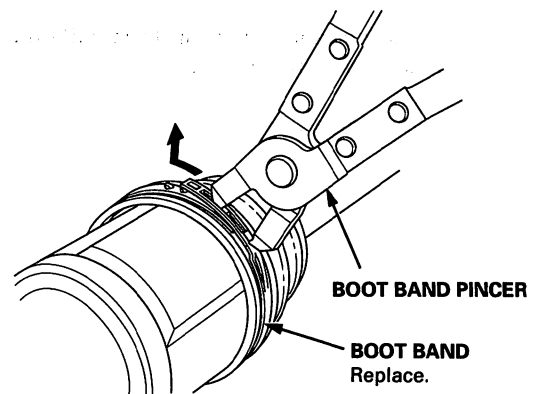
### Welded Type



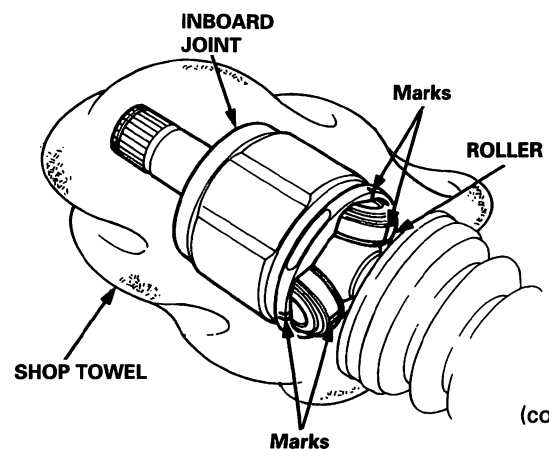
### Double Loop Type



### Low Profile Type



3. Make a mark on each roller and inboard joint to identify the locations of rollers and grooves in the inboard joint. Then remove the inboard joint on the shop towel. Be careful not to drop the rollers when separating them from the inboard joint.

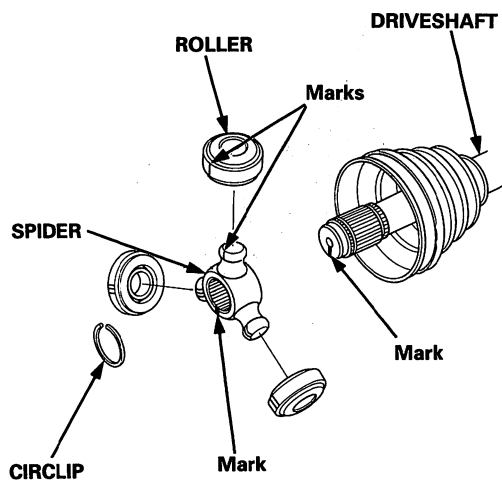


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# Driveshafts

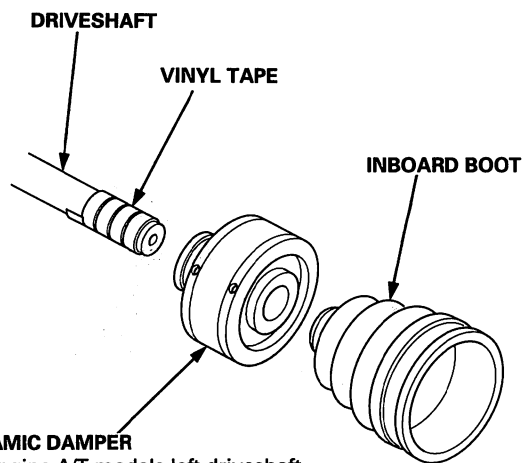
## Disassembly (cont'd)

4. Make a mark on the rollers and spider to identify the locations of rollers on the spider, then remove the rollers.



5. Remove the circlip.
6. Mark the spider and driveshaft to identify the position of the spider on the shaft.
7. Remove the spider.

8. Wrap the splines on the driveshaft with vinyl tape to prevent damage to the boot and dynamic damper.



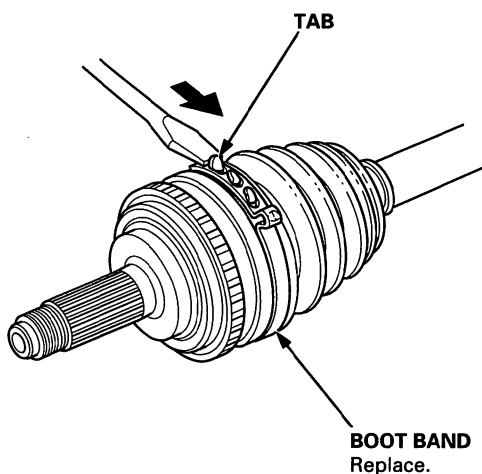
**DYNAMIC DAMPER**  
(L-4 engine A/T models left driveshaft and L-4 engine right driveshaft)

9. Remove the inboard boot and dynamic damper.

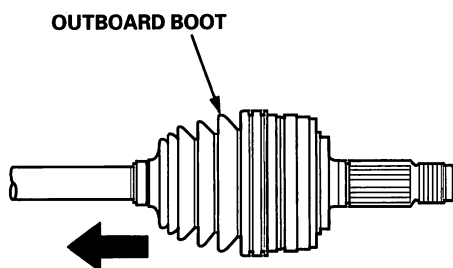


### Outboard Joint Side:

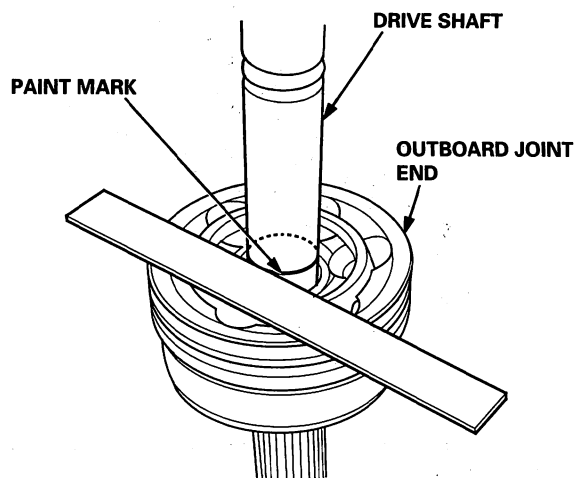
1. Pry up the three tabs with a screwdriver, then remove the boot bands. Take care not to damage the boot.



2. Slide the outboard boot to the inboard joint side. Take care not to damage the boot.

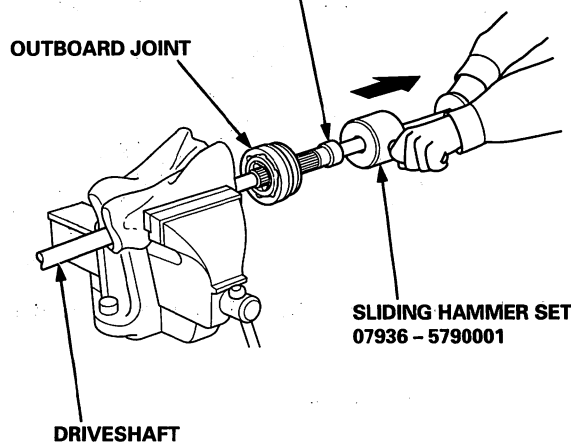


3. Wipe off the grease to expose the driveshaft and the outboard joint race.
4. Make a mark on the driveshaft at the same position of the outboard joint end.



5. Carefully clamp the driveshaft in a vise.

D16B6, D16B7 engine model:  
THREADED ADAPTER, 22 x 1.5 mm  
07XAC - 0010100  
Except D16B6, D16B7 engine model:  
THREAD ADAPTER, 24 x 1.5 mm  
07XAC - 0010200



6. Remove the outboard joint using special tool as shown.
7. Remove the driveshaft from the vise.

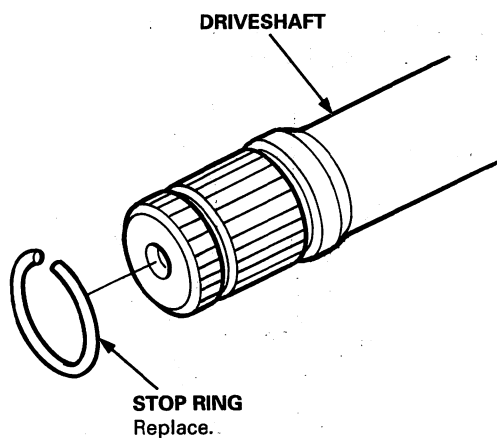
(cont'd)



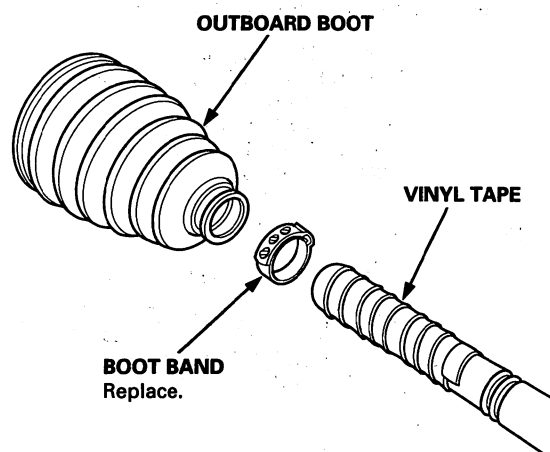
# Driveshafts

## Disassembly (cont'd)

8. Remove the stop ring from the driveshaft.



9. Wrap the splines on the driveshaft with vinyl tape to prevent damage to the boot.



10. Remove the outboard boot. Take care not to damage the boot.
11. Remove the vinyl tape.



## Reassembly

Note these items during reassembly:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
- Thoroughly pack both joints and both joint boots with the joint grease included in the new driveshaft set.
- The uses a TPE (Thermoplastic Polyester Elastomer) outboard joint boot. Use the ear clamp type boot band in the outboard joint boot set.

D16B6, D16B7 engine model:

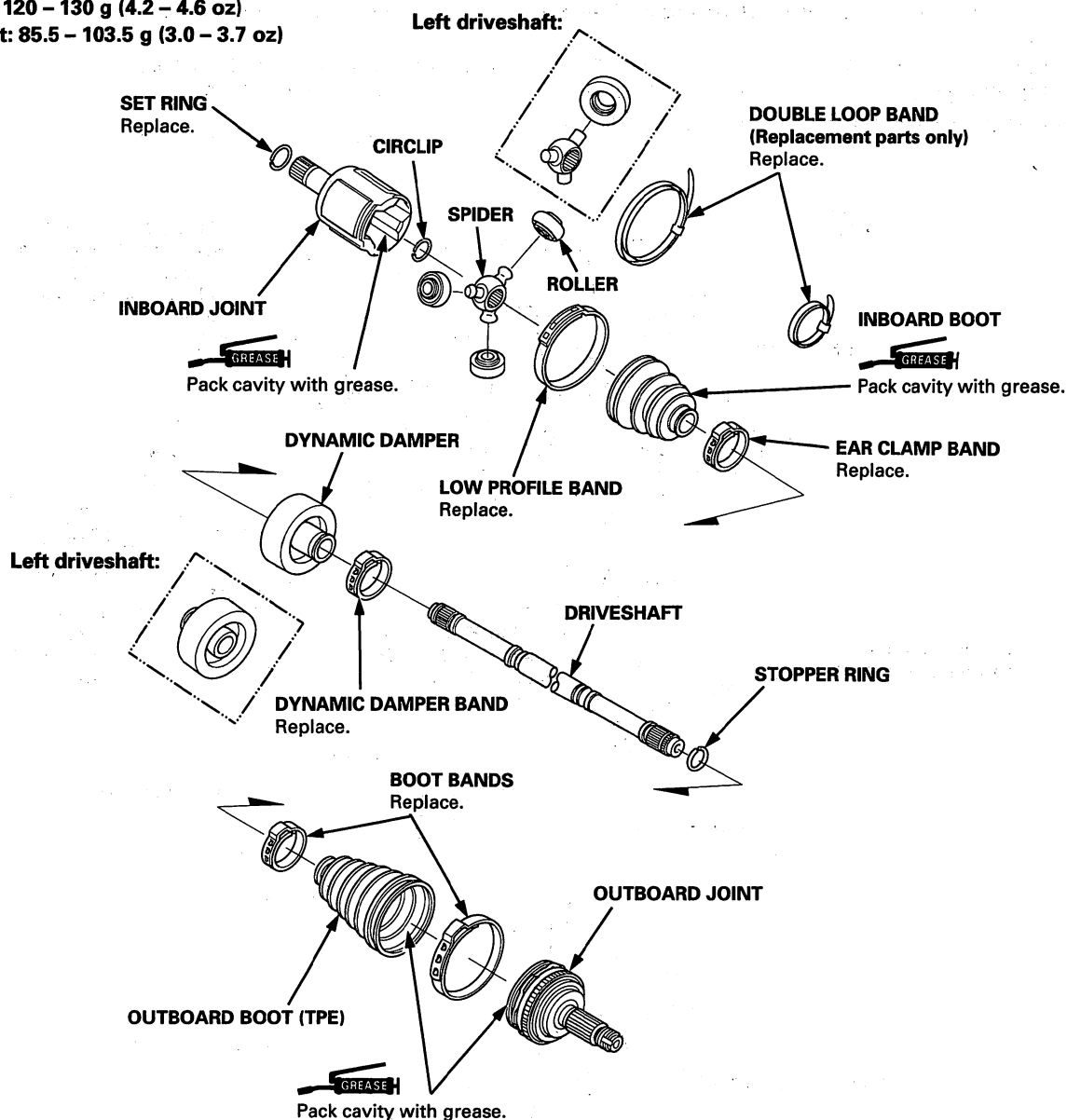
### Grease quantity

#### Inboard joint:

Left side: 125.5 – 135.5 g (4.4 – 4.8 oz)

Right side: 120 – 130 g (4.2 – 4.6 oz)

Outboard joint: 85.5 – 103.5 g (3.0 – 3.7 oz)



(cont'd)

# Driveshafts

## Reassembly (cont'd)

Note these items during reassembly:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
- Thoroughly pack both joints and both joint boots with the joint grease included in the new driveshaft set.
- The uses a TPE (Thermoplastic Polyester Elastomer) outboard joint boot. Use the ear clamp type boot band in the outboard joint boot set.

**F18B2, F18B3, F20B6, H22A7, F23Z5 engine model:**

### Grease quantity

#### Inboard joint:

F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model: 120 – 130 g (4.2 – 4.6 oz)

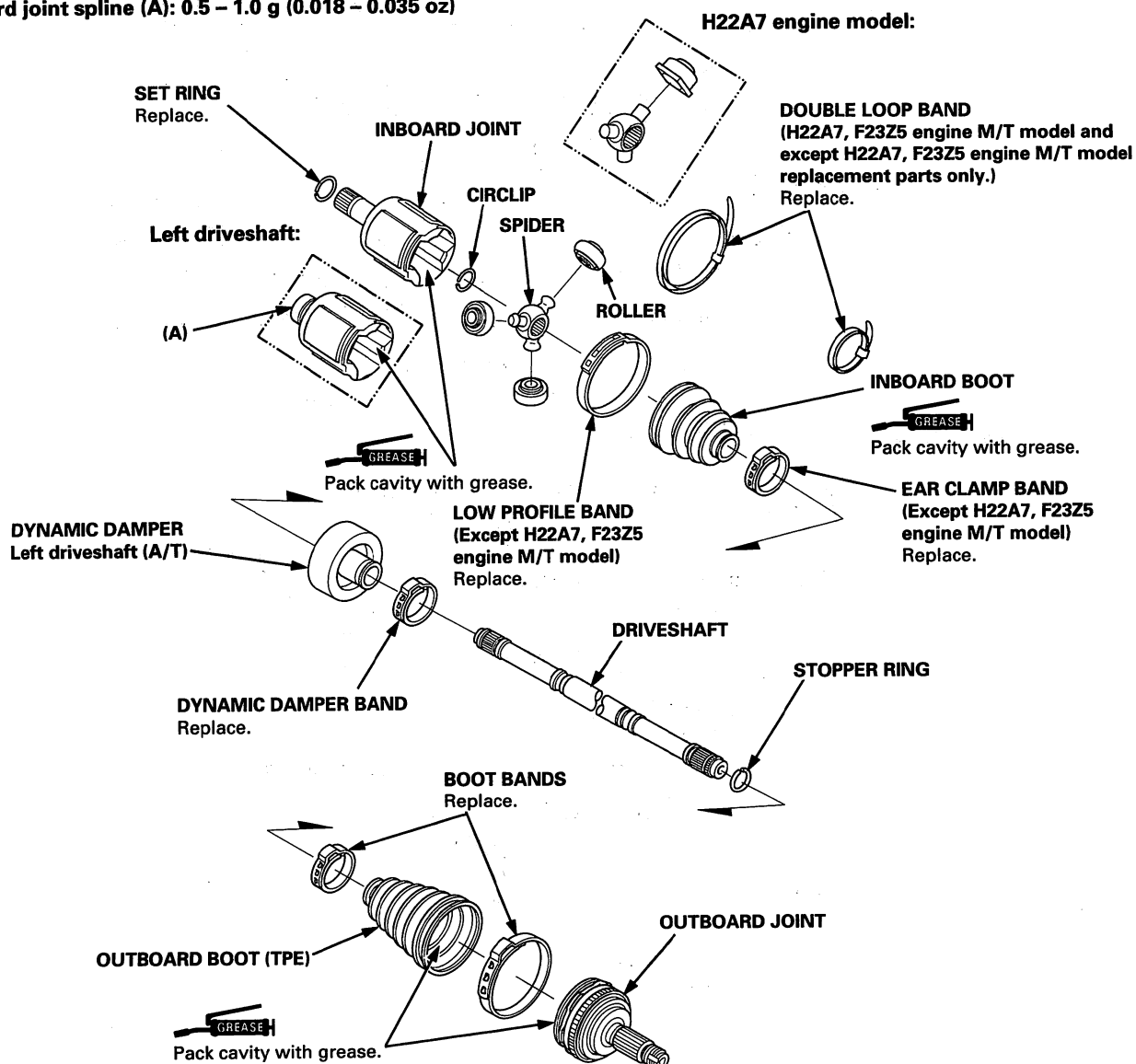
H22A7 engine model and F23Z5 engine M/T model: 130 – 140 g (4.6 – 4.9 oz)

#### Outboard joint:

F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model: 72.4 – 90.5 g (2.6 – 3.2 oz)

H22A7 engine model and F23Z5 engine M/T model: 140 – 150 g (4.9 – 5.3 oz)

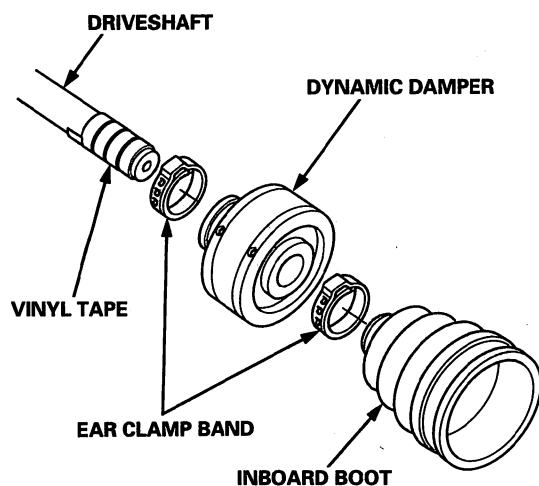
Inboard joint spline (A): 0.5 – 1.0 g (0.018 – 0.035 oz)



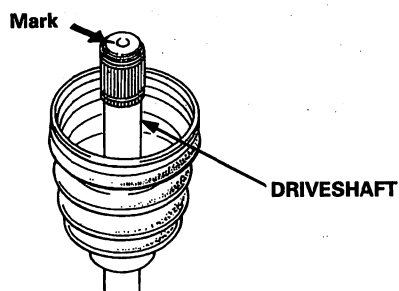
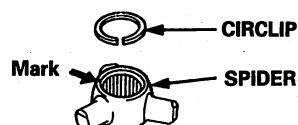


### Inboard Joint Side:

1. Wrap the splines with vinyl tape prevent damage to the boot and dynamic damper.



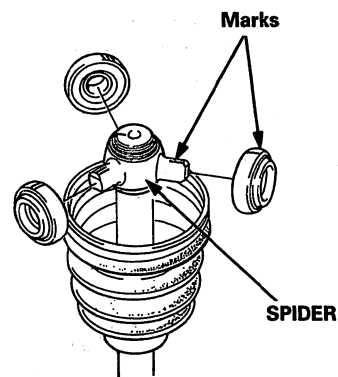
2. Install the dynamic damper, inboard boot and ear clamp bands to the driveshaft, then remove the vinyl tape. Take care not to damage the boot and dynamic damper.
3. Install the spider on the driveshaft by aligning the marks on the spider and end of the driveshaft.



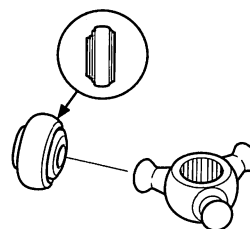
4. Fit the circlip into the driveshaft groove. Always rotate the circlip in its groove to be sure it is fully seated.

5. Fit the rollers to the spider with their high shoulders facing outward, and note these items:

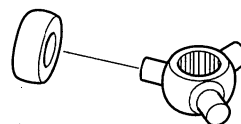
- Reinstall the rollers in their original positions on the spider by aligning the marks.
- Hold the driveshaft pointed up to prevent the rollers from facing off.



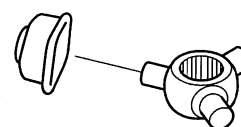
**D16B6, D16B7 (Right driveshaft), F18B2, F18B3, F20B6, F23Z5 engine model:**



**D16B6, D16B7 (Left driveshaft) engine model:**



**H22A7 engine model:**



(cont'd)

# Driveshafts

## Reassembly (cont'd)

6. Pack the inboard joint with the joint grease included in the new driveshaft set.

### Grease quantity

#### Inboard joint:

##### D16B6, D16B7 engine model:

Left side: 125.5 – 135.5 g (4.4 – 4.8 oz)

Right side: 120 – 130 g (4.2 – 4.6 oz)

##### F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model:

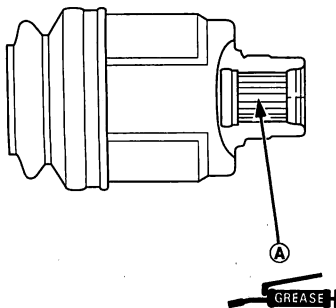
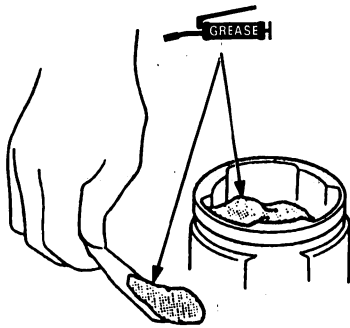
120 – 130 g (4.2 – 4.6 oz)

##### H22A7 engine model and F23Z5 engine M/T model:

130 – 140 g (4.6 – 4.9 oz)

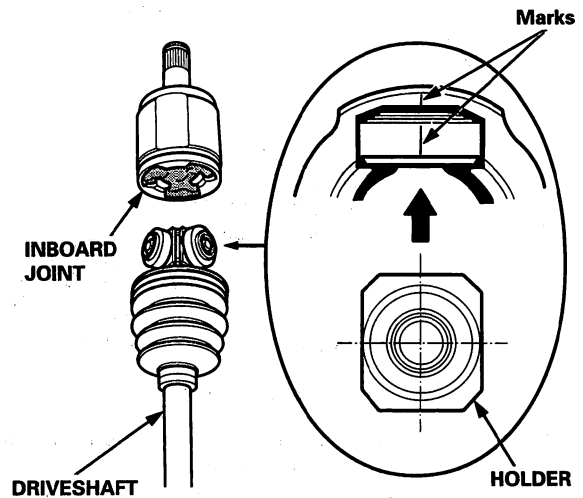
#### Inboard joint spline (A):

0.5 – 1.0 g (0.018 – 0.035 oz)



7. Fit the inboard joint onto the driveshaft, and note these items:

- Reinstall the inboard joint onto the driveshaft by aligning the marks on the inboard joint and the rollers.
- Hold the driveshaft so the inboard joint points up to prevent it from falling off.



8. Adjust the length of the driveshafts to the figure below, then adjust the boot to halfway between full compression and full extension. Make sure the ends of boots seat in the groove of the driveshaft and joint.

##### D16B6, D16B7 engine model:

Left: 802 – 807 mm (31.6 – 31.8 in.)

Right: 523 – 528 mm (20.6 – 20.8 in.)

##### F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model:

Left: M/T: 476 – 481 mm (18.7 – 18.9 in.)

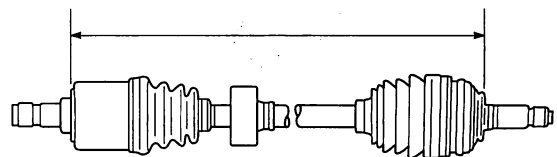
A/T: 842 – 847 mm (33.1 – 33.3 in.)

Right: 485 – 490 mm (19.1 – 19.3 in.)

##### H22A7 engine model and F23Z5 engine M/T model:

Left: 478 – 483 mm (18.8 – 19.0 in.)

Right: 485 – 490 mm (19.1 – 19.3 in.)





9. Position the dynamic damper as shown below.

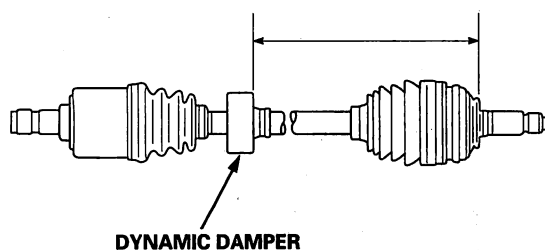
**D16B6, D16B7 engine model:**

Left: 519.3 – 524.3 mm (20.4 – 20.6 in.)

Right: 279.7 – 284.7 mm (11.0 – 11.2 in.)

**F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model:**

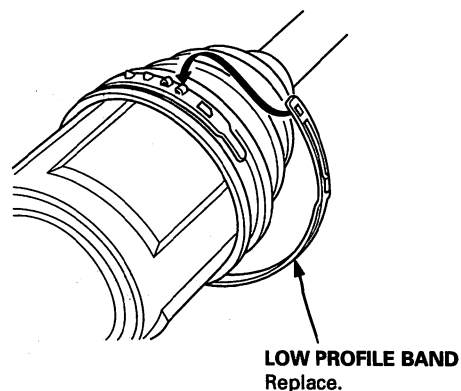
484 – 488 mm (19.0 – 19.2 in.)



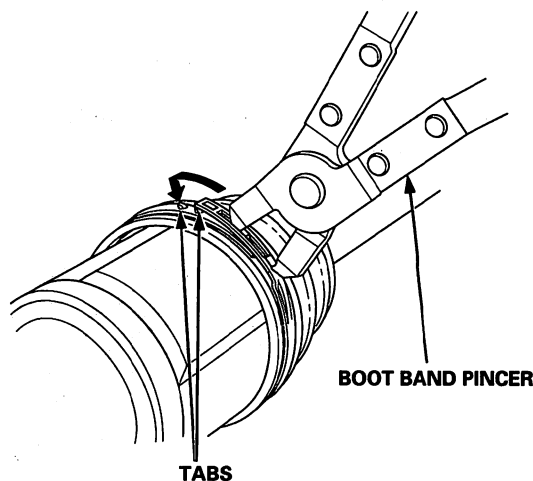
10. Install the boot bands.

- for the double loop type, go to step 13.
- for the low profile type, go to step 11.
- for the ear clamp type, go to step 22.

11. Install the new low profile band onto the boot and dynamic damper, then hook the tab of the band.



12. Close the hook portion of the band with a commercially available boot band pincers or equivalent, then hook the tabs of the band.

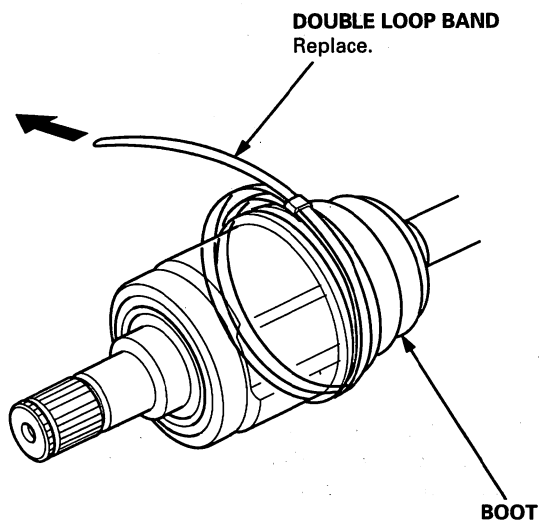


(cont'd)

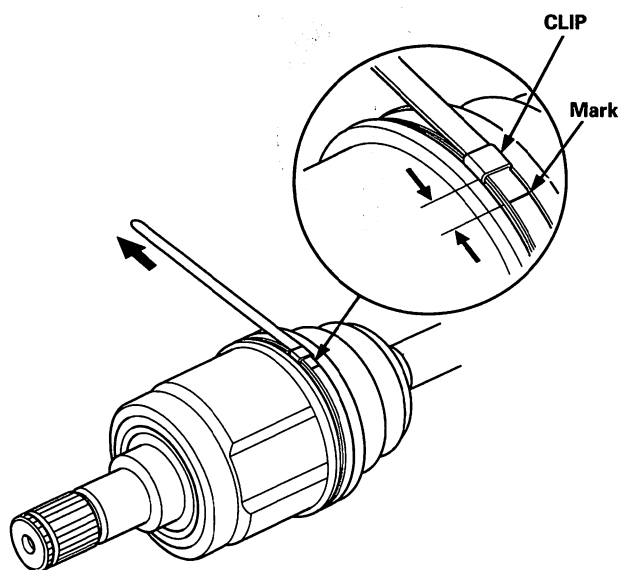
# Driveshafts

## Reassembly (cont'd)

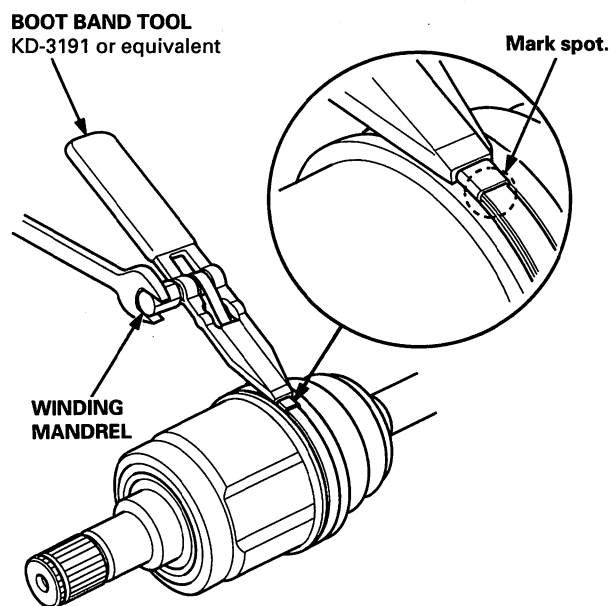
13. Set the new double loop band onto the boot with the band end toward to front of the vehicle.



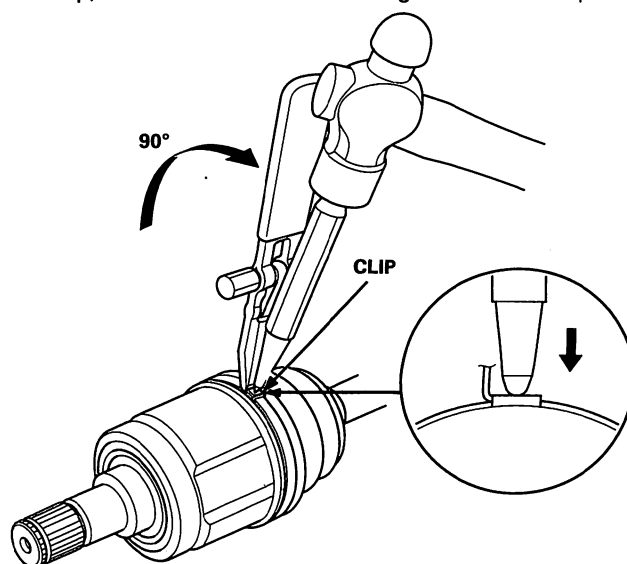
14. Pull up the slack in the band by hand.
15. Make a mark on the band 10 – 14 mm (0.4 – 0.6 in.) from the clip.



16. Thread the free end of the band through the nose section of the commercially available boot band tool KD-3191 or equivalent, and into the slot on the winding mandrel.

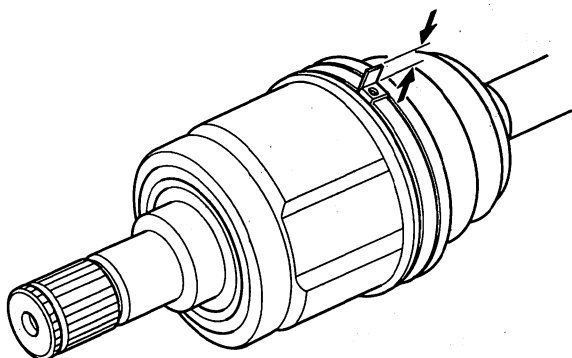


17. Place a wrench on the winding mandrel of the boot band tool, and tighten the band until the marked spot on the band meets the edge of the clip.
18. Lift up the boot band tool to bend the free end of the band 90 degrees to the clip. Center-punch the clip, then fold over the remaining tail onto the clip.





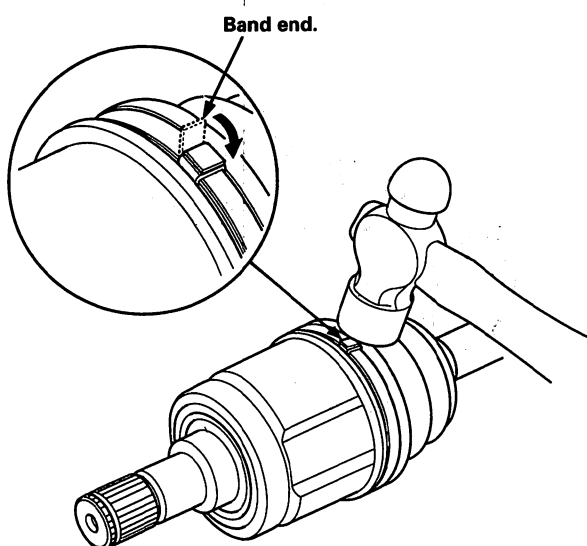
19. Unwind the boot band tool, and cut off the excess free end of the band to leave a 5 – 10 mm (0.2 – 0.4 in.) tail protruding from the clip.



20. Bend the band end by tapping it down with a hammer.

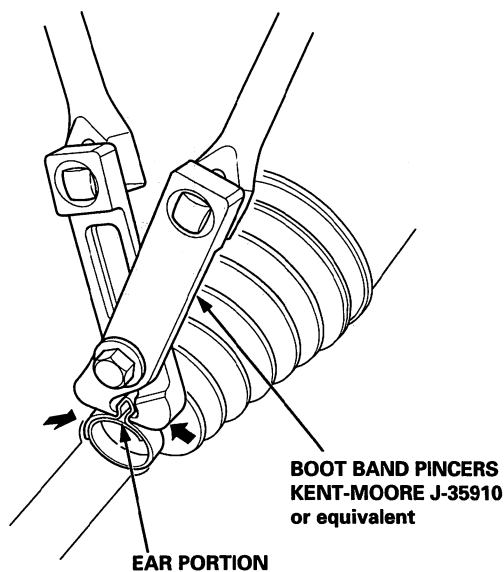
**NOTE:**

- Make sure the band and clip do not interfere with anything, and the band does not move.
- Remove any grease remaining on the surrounding surfaces.

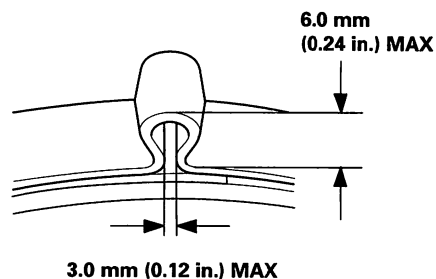


21. Install the boot band on the other end of the boot, repeat steps 11 through 20.

22. Close the ear portion of the band with a commercially available boot band pincers KENT-MOORE J-35910 or equivalent.



23. Check the clearance between the closed ear portion of the band. If the clearance is not within the standard, close the ear portion of the band further.



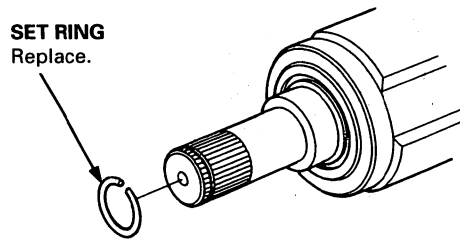
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# Driveshafts

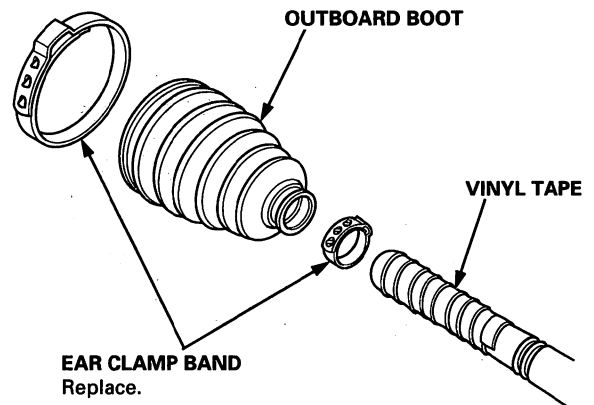
## Reassembly (cont'd)

21. Install the new set ring.

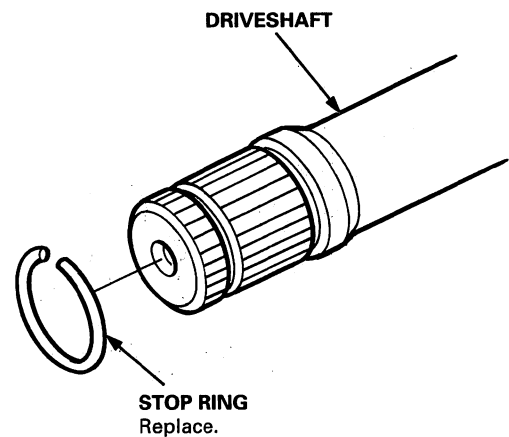


### Outboard Joint Side:

1. Wrap the splines with vinyl tape to prevent damage to the outboard boot.

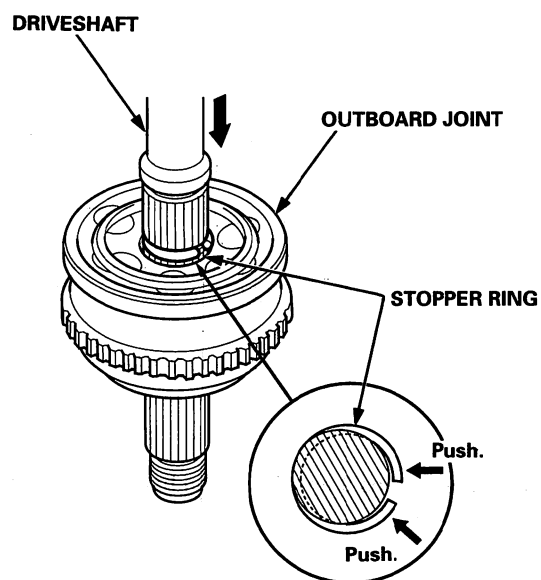


2. Install the new ear clamp bands and outboard boot, then remove the vinyl tape. Take care not to damage the outboard boot.
3. Install the new stop ring into the driveshaft groove.

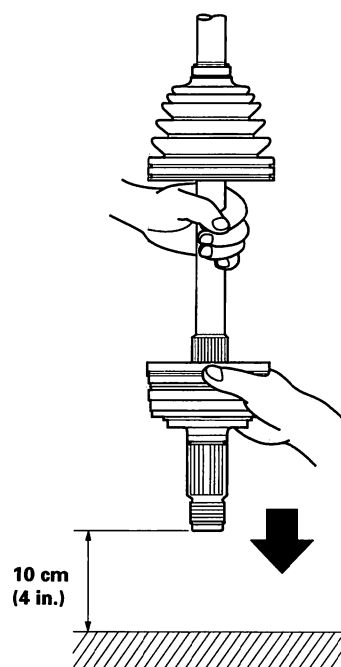




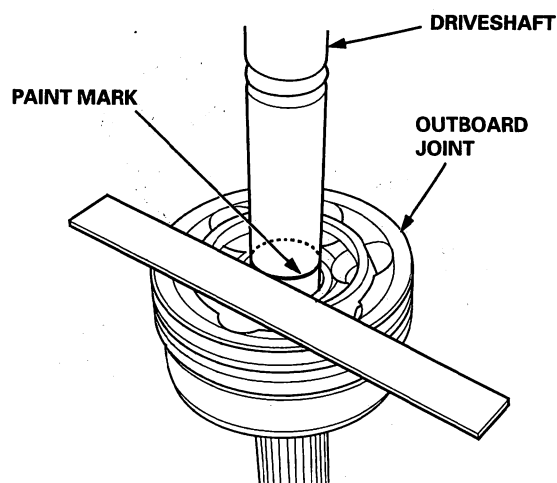
4. Insert the driveshaft into the outboard joint until the stop ring is close to the joint.



5. To completely seat the out board joint, pick up the driveshaft and joint, and drop them from about 10 cm (4 in.) onto a hard surface. Do not use a hammer as excessive force may damage the driveshaft.



6. Check the alignment of the paint mark with the outboard joint.



7. Pack the outboard joint with the joint grease included in the new joint boot set.

**Grease quantity**

**Outboard joint:**

**D16B6, D16B7 engine model:**

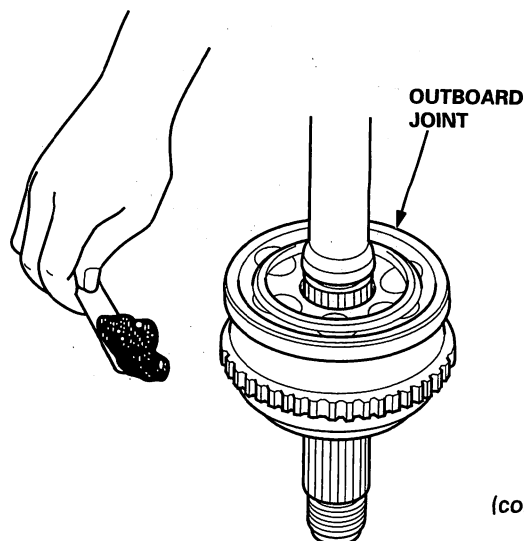
85.5 – 103.5 g (3.0 – 3.7 oz)

**F18B2, F18B3, F20B6 engine model and F23Z5 engine A/T model:**

72.4 – 90.5 g (2.6 – 3.2 oz)

**H22A7 engine model and F23Z5 engine M/T model:**

140 – 150 g (4.9 – 5.3 oz)

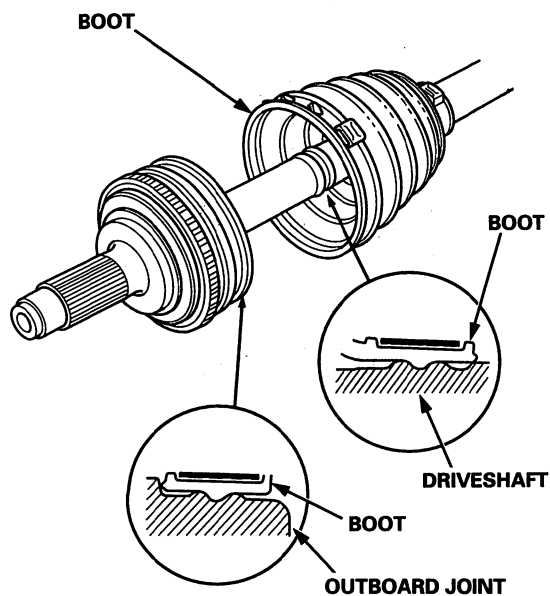


(cont'd)

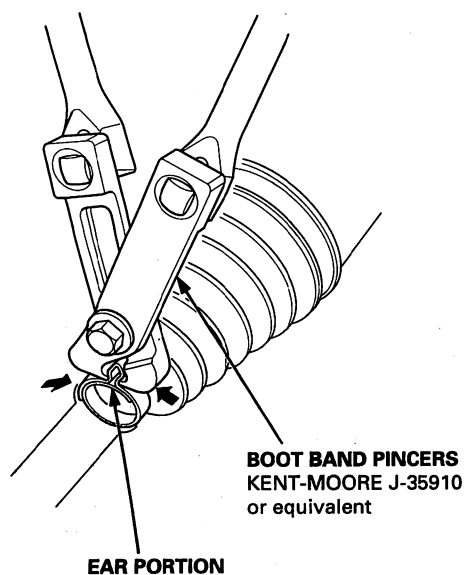
# Driveshafts

## Reassembly (cont'd)

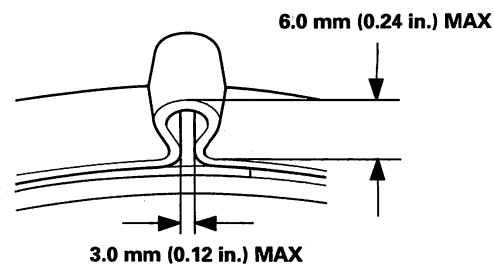
8. Fit the boot ends onto the driveshaft and outboard joint.



9. Close the ear portion of the band with a commercially available boot band pincers.



10. Check the clearance between the closed ear portion of the bands. If the clearance is not within the standard, close the ear portion of the bands further.



11. Repeat steps 9 and 10 for the band on the other end of the boot.

## Body

### Doors

<b>Front Door Outer handle</b>	
<b>Replacement .....</b>	<b>20-2</b>
<b>Label Replacement .....</b>	<b>20-2</b>
<b>Rear Door Outer handle</b>	
<b>Replacement .....</b>	<b>20-3</b>

### Emblems

<b>Replacement .....</b>	<b>20-4</b>
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NOTE: Refer to the 1999 Accord Shop Manual, P/N. 62S1A00B, the 1999 Accord 5Door/Accord 5Door Turbo Diesel Shop Manual Supplement, P/N. 62S1A21, and the 2000 Accord/Accord 5Door Shop Manual Supplement, P/N. 62S1A24 for the items not shown in this section.

### Outline of Model Changes

- The front and rear door outer handle mounting nuts have been changed to the self lock nuts, and the tightening torque of them was reduced to 5 N·m (0.5 kgf·m, 4 lbf·ft).
- The immobilizer label has been changed.
- The VTEC emblem has been added instead of the VTEC sticker (for some models).
- The front "H" emblem has been changed.
- On the RH models, the attachment point of the ACCORD emblem has been changed, and these emblems have been added:
  - Grade emblem A (2.3i)
  - Grade emblem B (S, SE, SE EXECUTIVE)

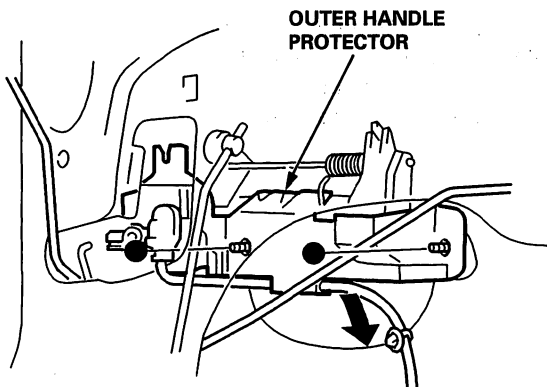
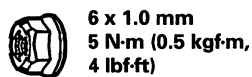


# Doors

## Front Door Outer Handle Replacement

1. Raise the glass fully.
2. Remove:
  - Door panel
  - Plastic cover, as necessary
  - Panel bracket
  - Center lower channel
  - Rod protector (with Super Locking)
  - Lock rod protector (without Super Locking)
3. Disconnect the cylinder rod, the cylinder switch connector, and detach the harness dip.
4. Remove the self lock nuts securing the outer handle, then remove the outer handle protector.

●: Self Lock Nut locations, 2



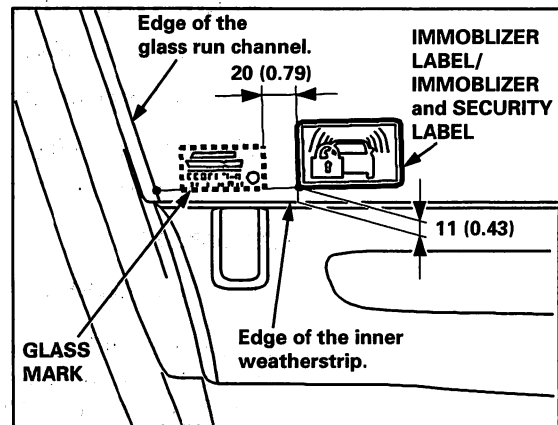
5. If necessary, remove the lock cylinder, then separate the lock cylinder and cylinder switch.
6. Release the inner handle rod from the rod holder. And remove the screws securing the latch.
7. Pull out the outer handle by releasing the hook. Pry the outer handle rod out of its joint using diagonal cutter.
8. Replace the bushing on the outer handle.
9. Install in the reverse order of removal, and note these items:
  - Make sure the cylinder switch harness is routed properly.
  - Make sure the connector is plugged in properly, and each rod is connected securely.
  - Make sure the door locks and opens properly.
  - Replace the self lock nuts with new ones.

## Label Replacement

For some models:

1. Raise the glass fully.
2. Apply the immobilizer/immobilizer and security label on the inside face of the front door glass in parallel with the glass mark where shown.

Unit: mm (in)

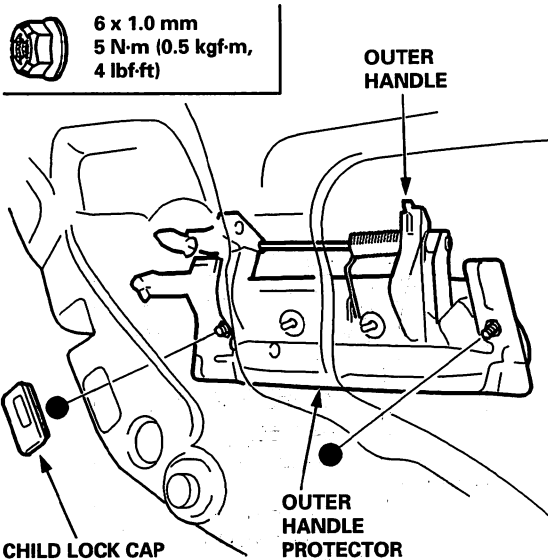




## Rear Door Outer Handle Replacement

1. Raise the glass fully.
2. Remove:
  - Door panel
  - Plastic cover, as necessary
  - Power door lock actuator (without Super Locking)
3. Disconnect the lock rod from the lock crank, and release the inner handle rod and lock rod from the rod holder.
4. Without Super Locking: Remove the rod protector.
5. Remove the screws securing the latch, then move down.
6. Remove the child lock cap, and remove the self lock nuts securing the outer handle protector and outer handle.

• Self Lock Nut locations, 2



7. Remove the outer handle protector from the outer handle.
8. Pull out the outer handle by releasing the hook.
9. Install in the reverse order of removal, and note these items:
  - Make sure the door locks and opens properly.
  - Replace the self lock nuts with new ones.

# Emblems

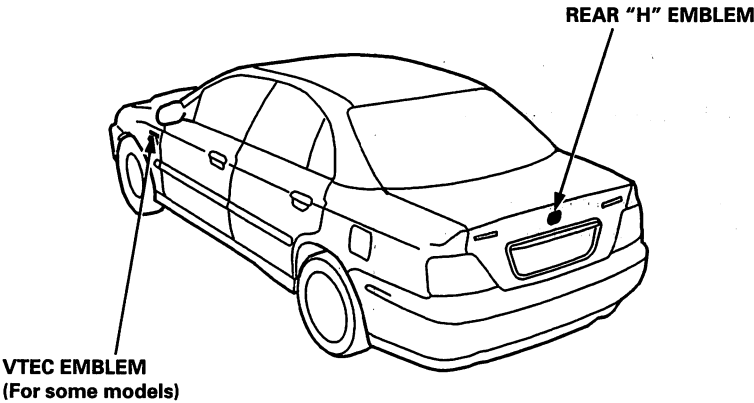
## Replacement

Apply the emblem where shown.

**NOTE:**

- Before applying, clean the trunk lid and both fenders surface with a sponge dampened in alcohol.
- After cleaning, keep oil, grease and water from getting on the surface.

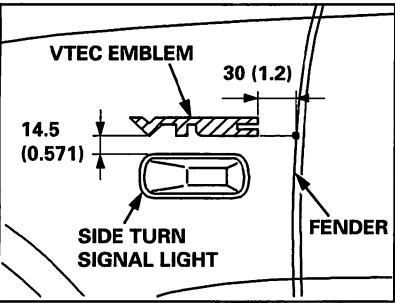
**Attachment Point (Reference):**



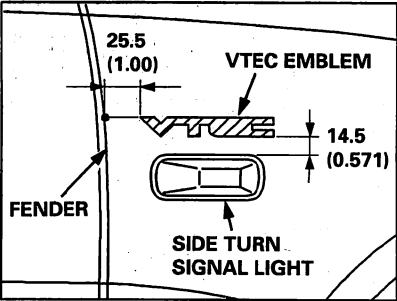
Unit: mm (in)

//// : Adhesive tape (3M 4213, or equivalent)

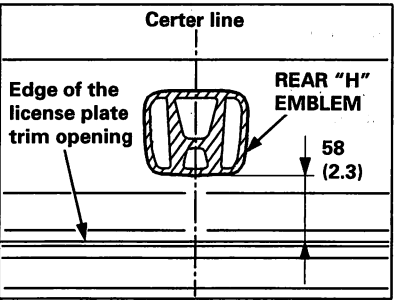
VTEC emblem (Left side)



VTEC emblem (Right side)



REAR "H" emblem





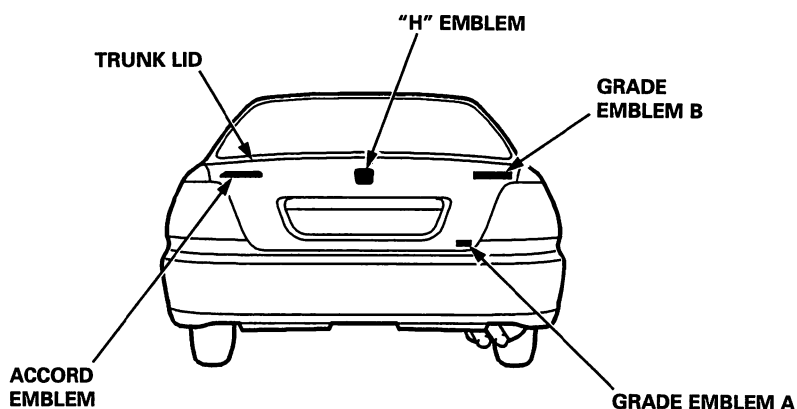
## RHD models:

Apply the emblems where shown.

### NOTE:

- Grade emblem B (SE/SE EXECUTIVE): Put the emblem with the application guide foam and application tape on the trunk lid as shown, then press the emblem into place. Remove the application tape and the application guide foam.
- Before applying, clean the trunk lid surface with a sponge dampened in alcohol.
- After cleaning, keep oil, grease, and water from getting on the surface.

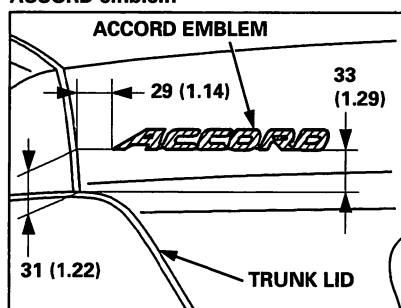
### Attachment Point (Reference):



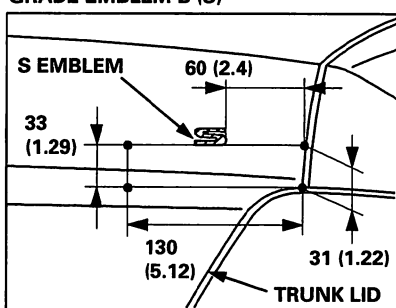
Unit: mm (in)

//// : Adhesive tape (3M 4213, or equivalent)

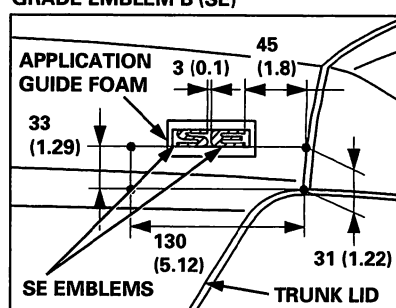
#### ACCORD emblem



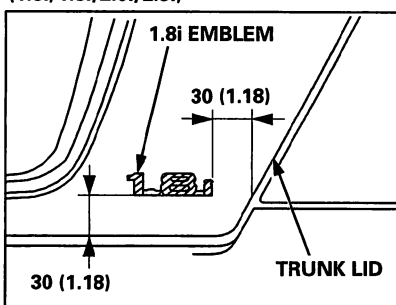
#### GRADE EMBLEM B (S)



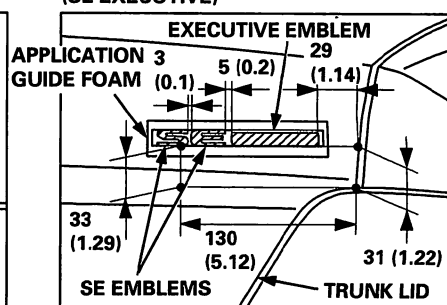
#### GRADE EMBLEM B (SE)



#### GRADE EMBLEM A (1.6i/1.8i/2.0i/2.3i)



#### GRADE EMBLEM B (SE EXECUTIVE)





## Body Electrical

<b>Gauges .....</b>	<b>23-C-1</b>
<b>Lighting System .....</b>	<b>23-D-1</b>
<b>Controls .....</b>	<b>23-E-1</b>
<b>Instruments .....</b>	<b>23-F-1</b>
<b>Security .....</b>	<b>23-G-1</b>
<b>Navigation .....</b>	<b>23-H-1</b>

### Outline of Model Changes

- Hazard warning light has been discontinued.
- Passenger's power window switch has been changed.
- Radio antenna has been changed.
- Ultrasonic system has been added.



## Gauges

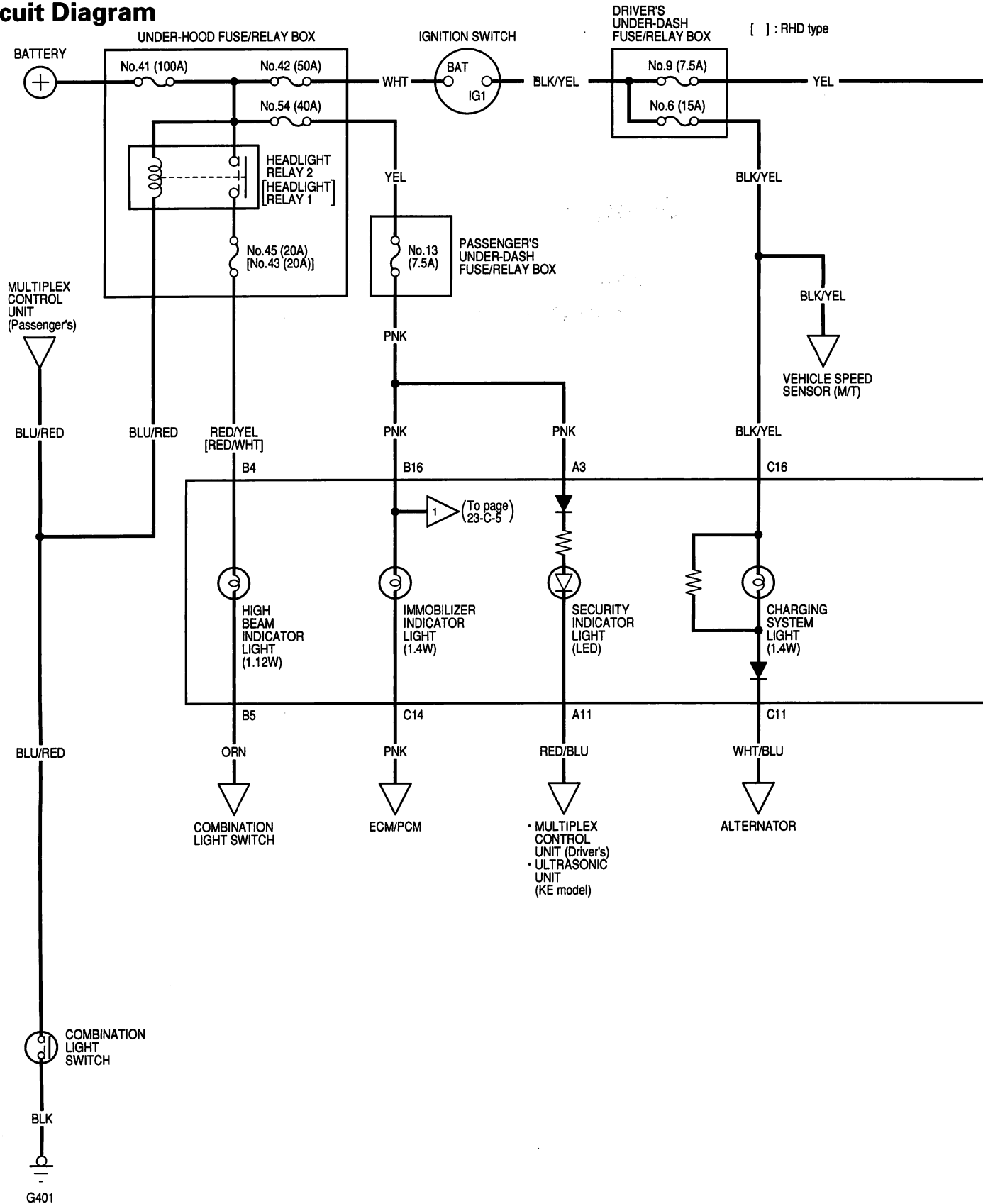
### Gauges

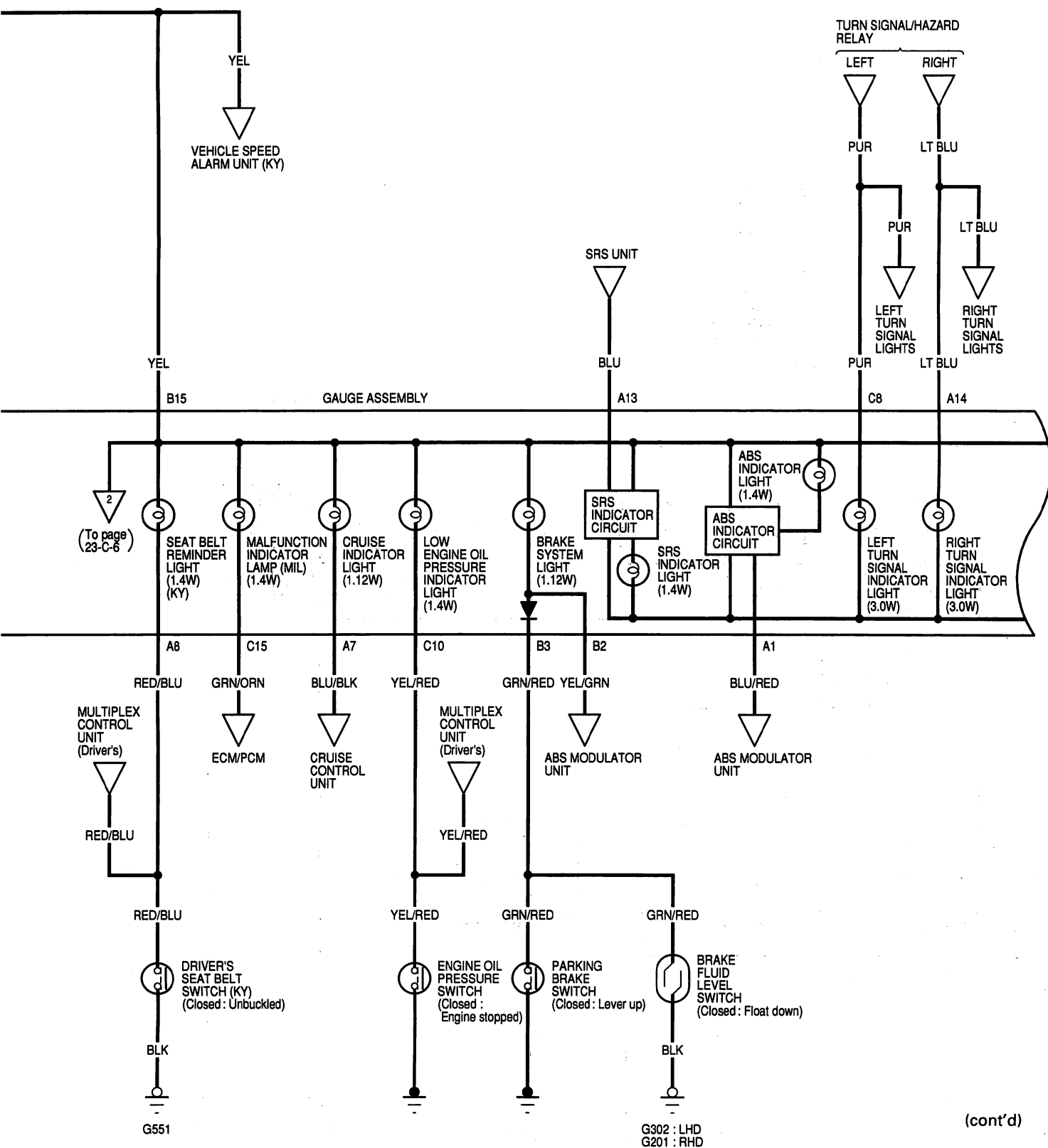
Circuit Diagram ..... 23-C-2



# Gauges

## Circuit Diagram

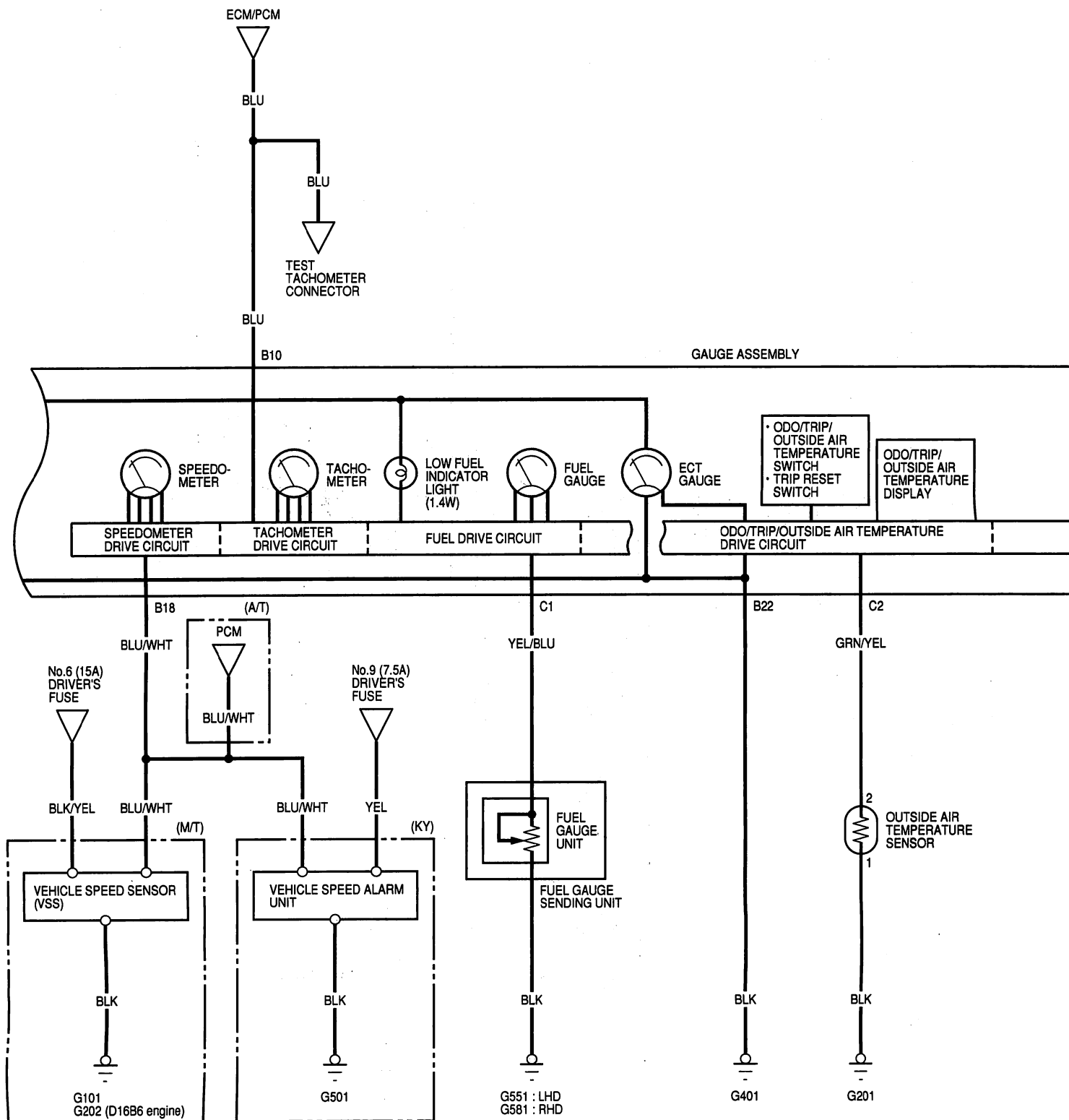


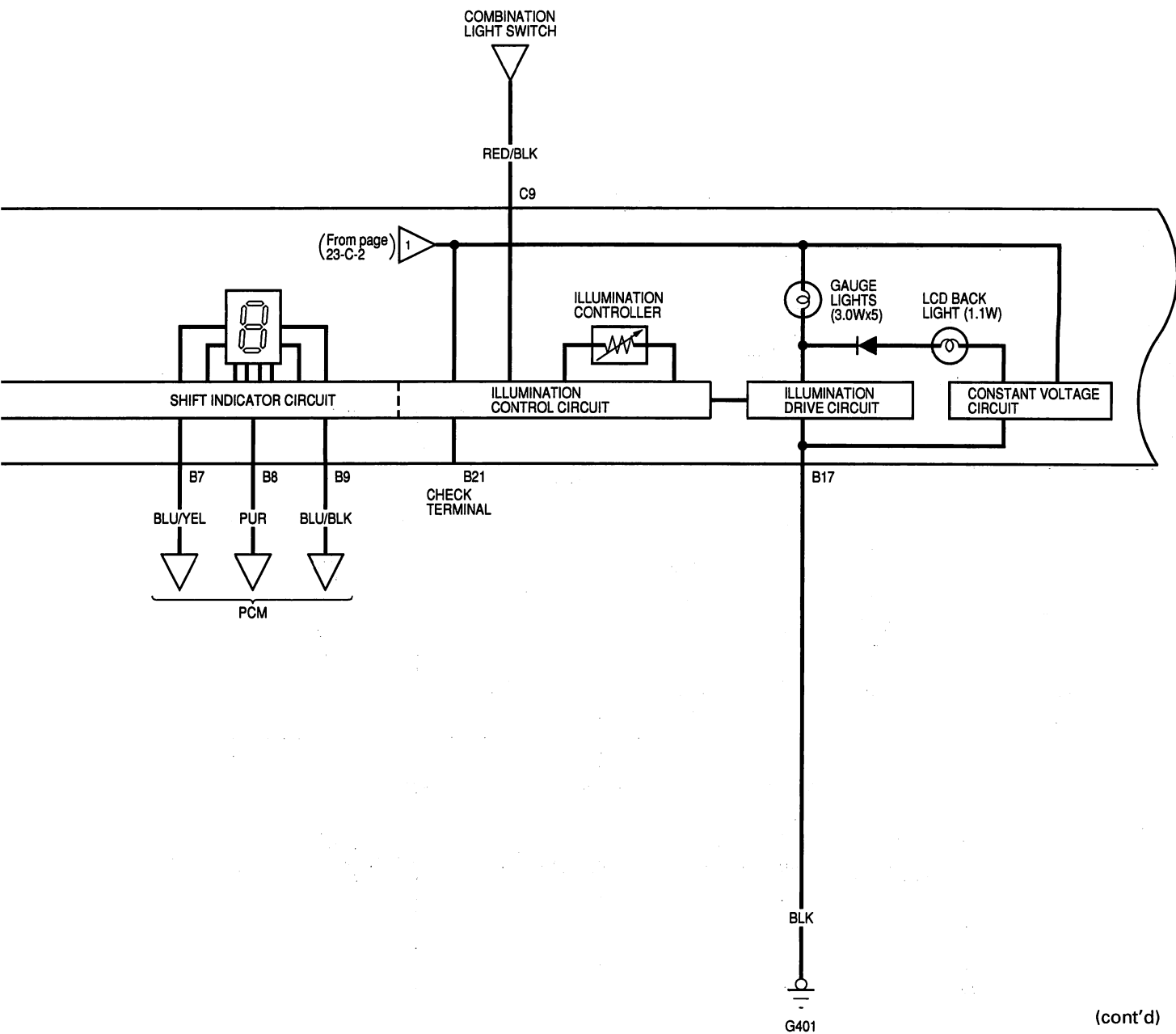


(cont'd)

# Gauges

## Circuit Diagram (cont'd)



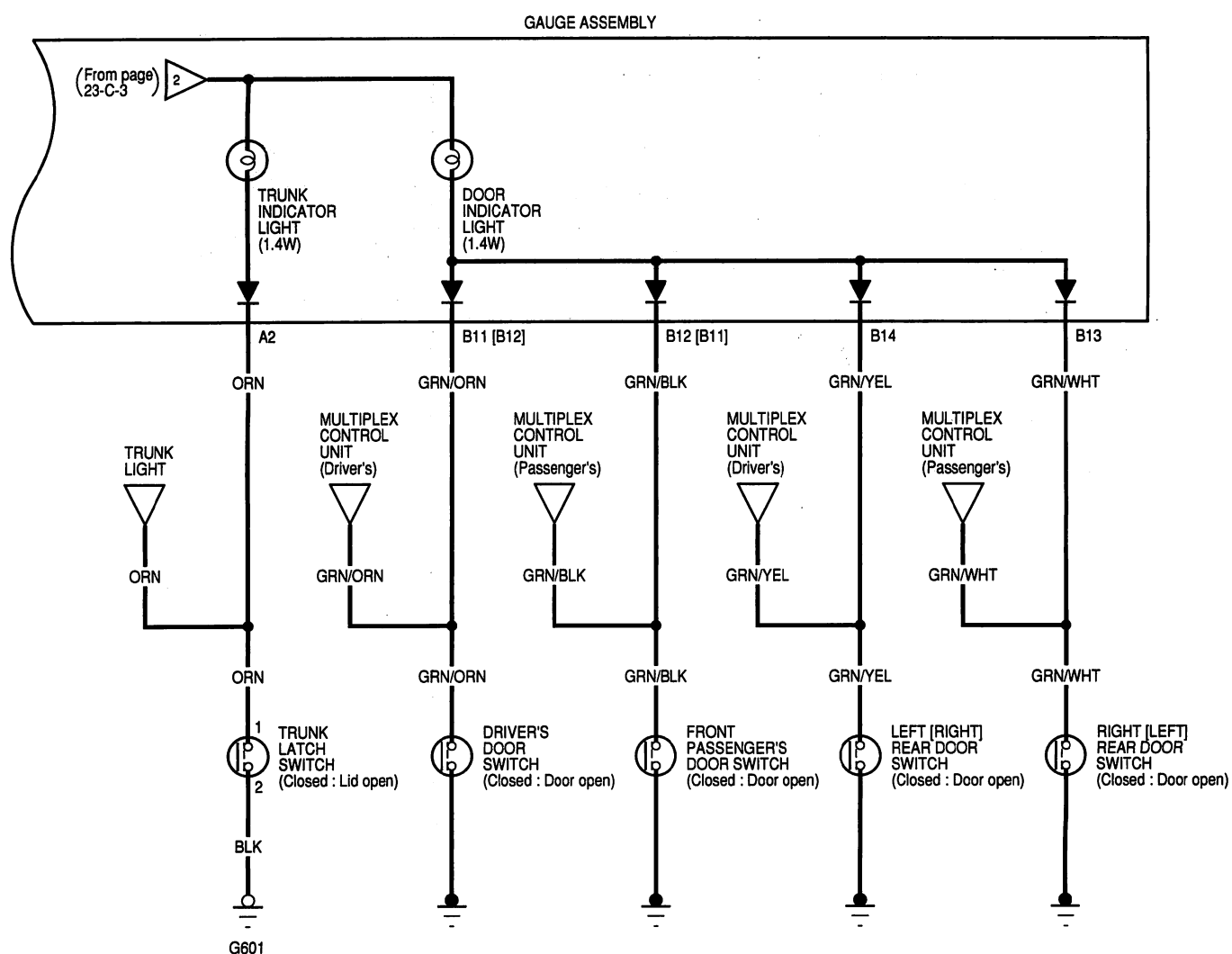


(cont'd)

# Gauges

## Circuit Diagram (cont'd)

[ ] : RHD type



## **Lighting System**

### **Turn Signal/Hazard Flasher System**

**Circuit Diagram ..... 23-D-2**

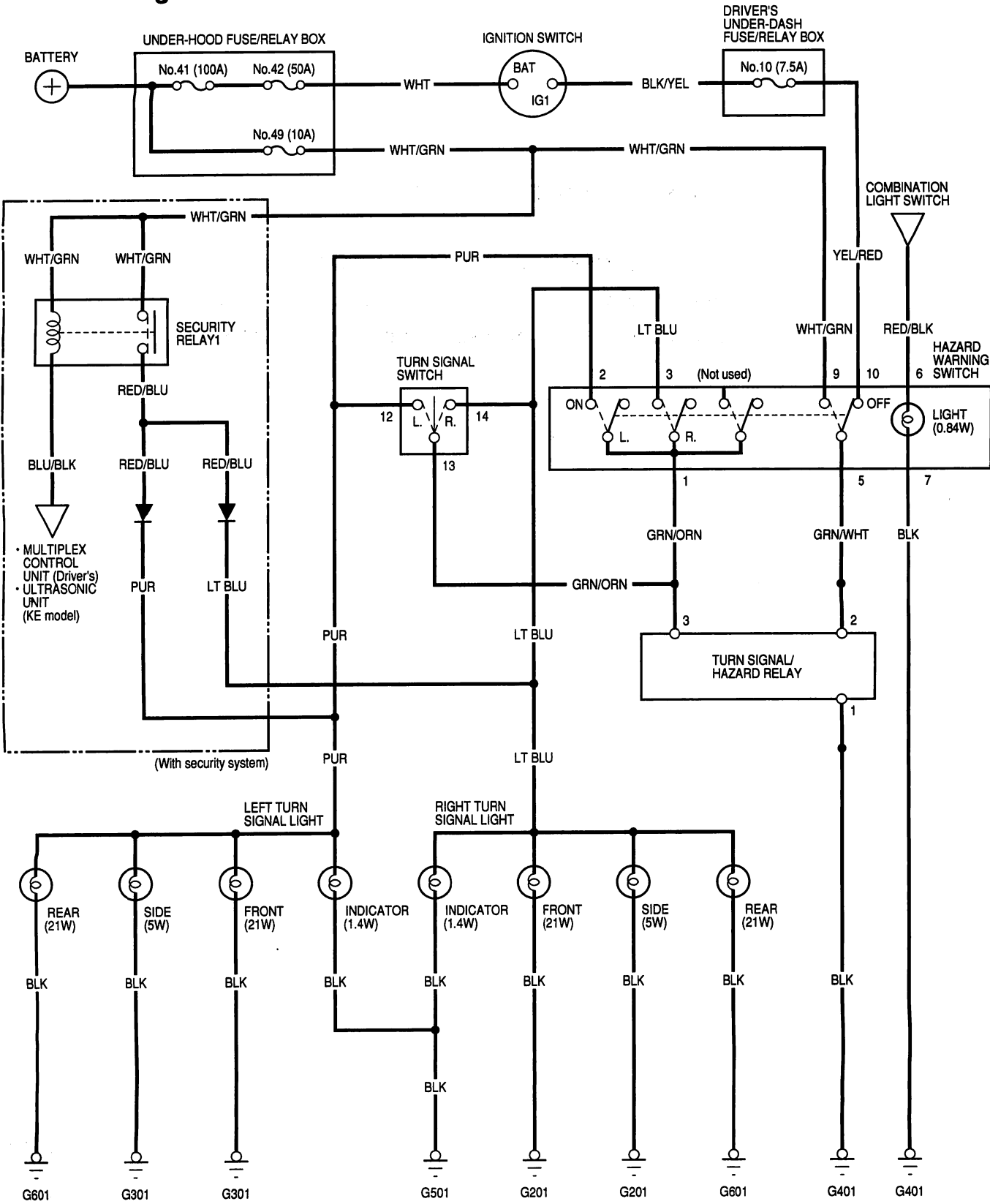
**Hazard Warning Switch Test ..... 23-D-3**





# Turn Signal/Hazard Flasher System

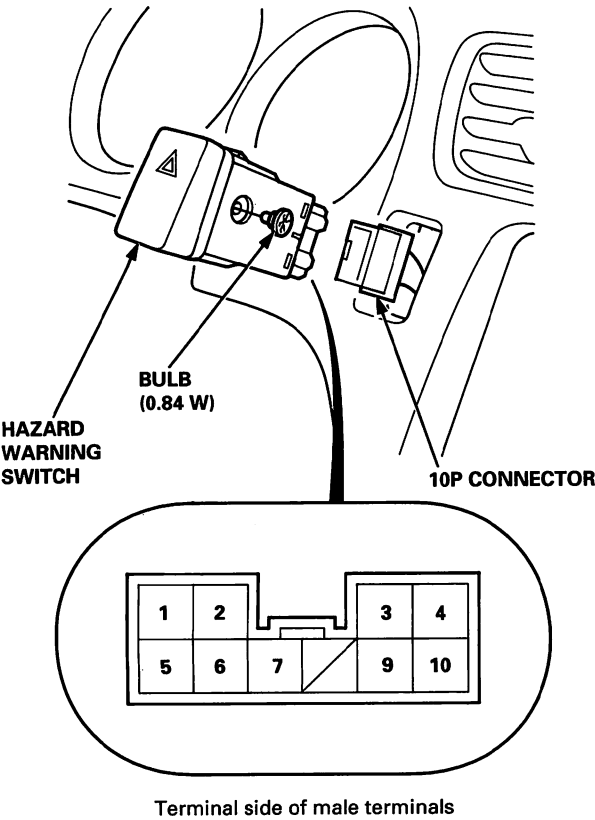
## Circuit Diagram



Hazard Warning Switch Test

1. Carefully pry the hazard warning switch out of the center panel.

NOTE: LHD type is shown, RHD type is similar.



2. Disconnect the 10P connector from the hazard warning switch.
3. Check for continuity between the terminals in each switch position according to the table.

Terminal Position	6	7	1	2	3	4 (*)	5	9	10
OFF									
ON									

\*: Not used

## Controls

### Power Windows

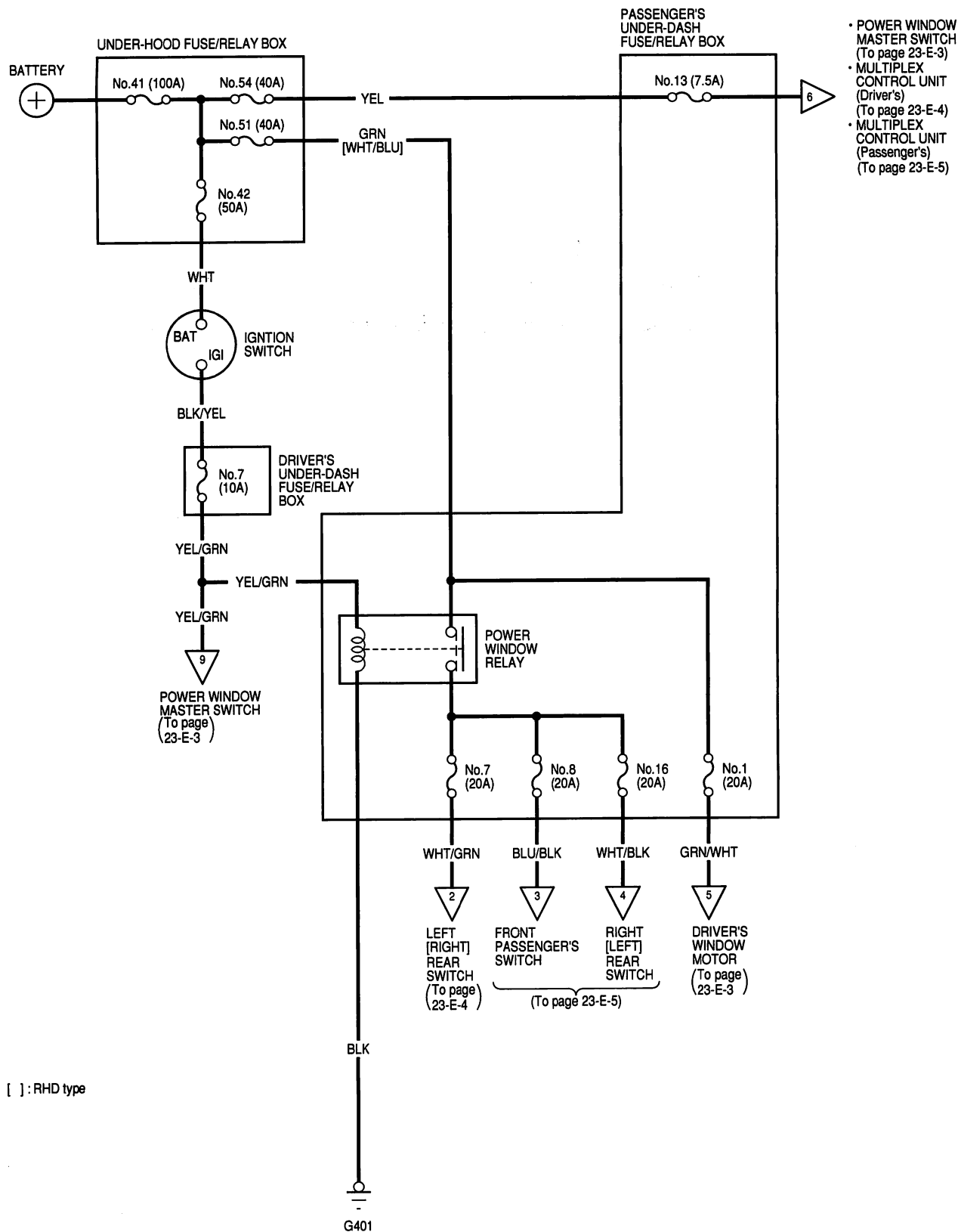
**Circuit Diagram ..... 23-E-2**

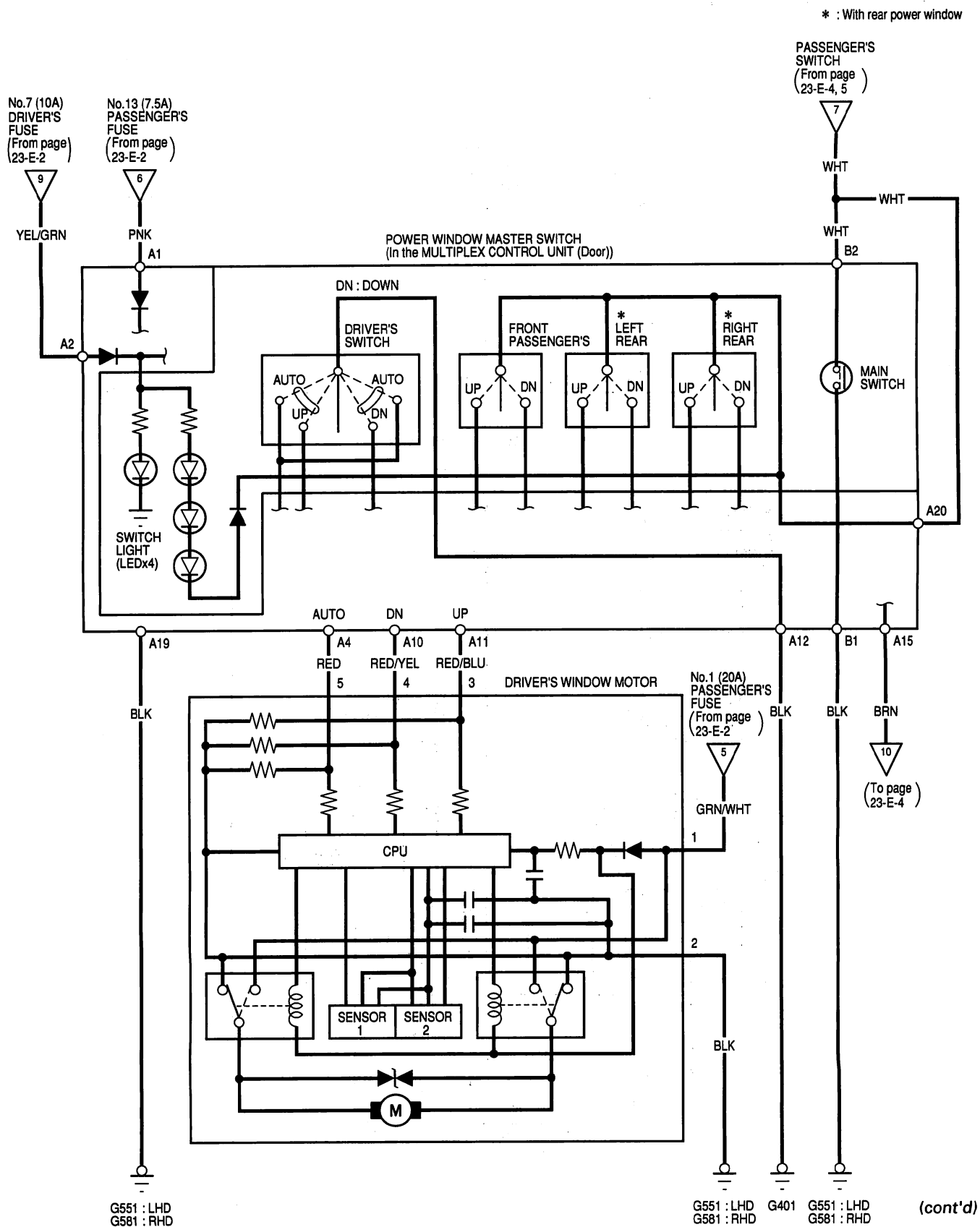
**Passenger's Window Switch Test .... 23-E-6**



# Power Windows

## Circuit Diagram

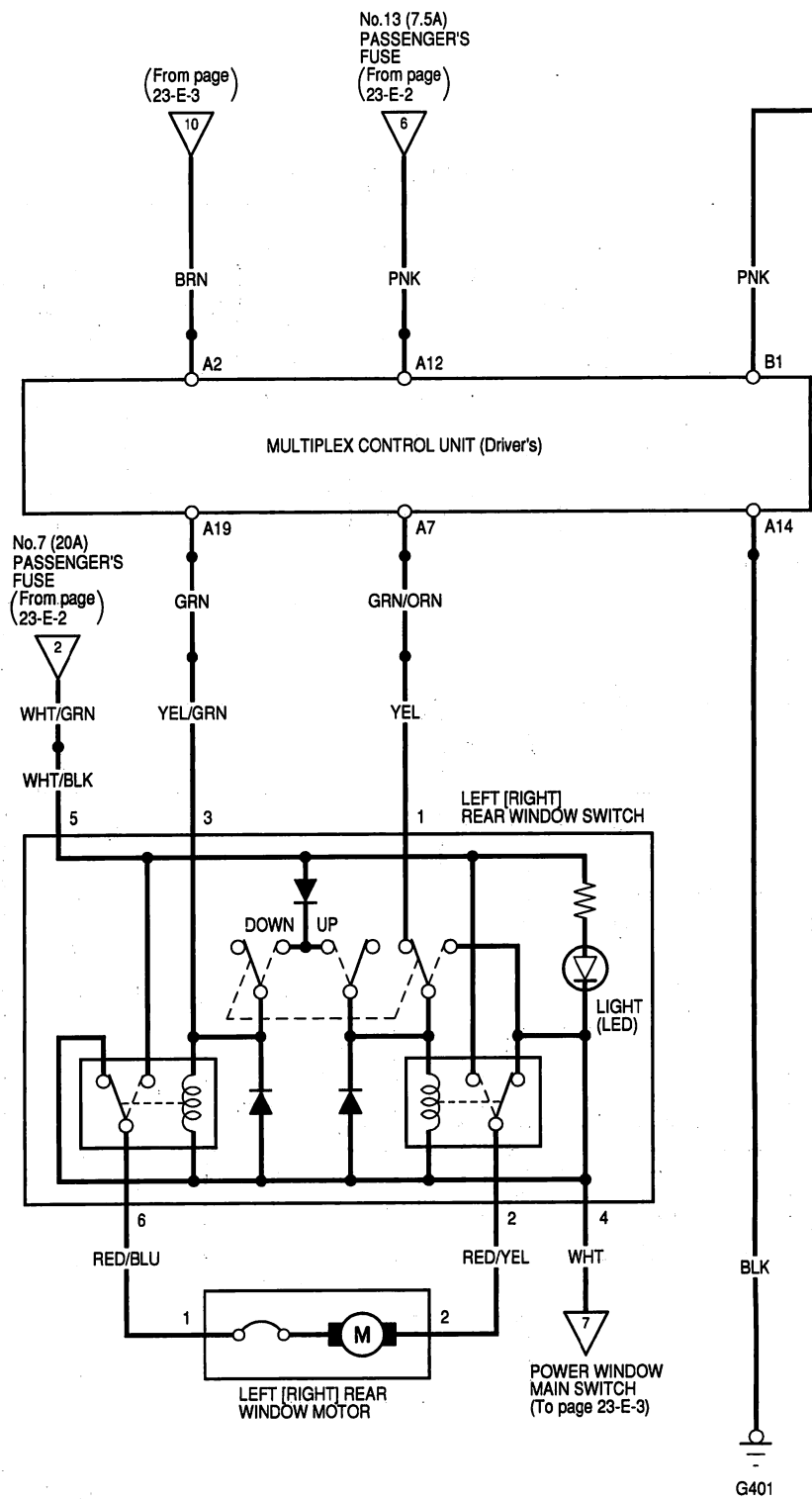




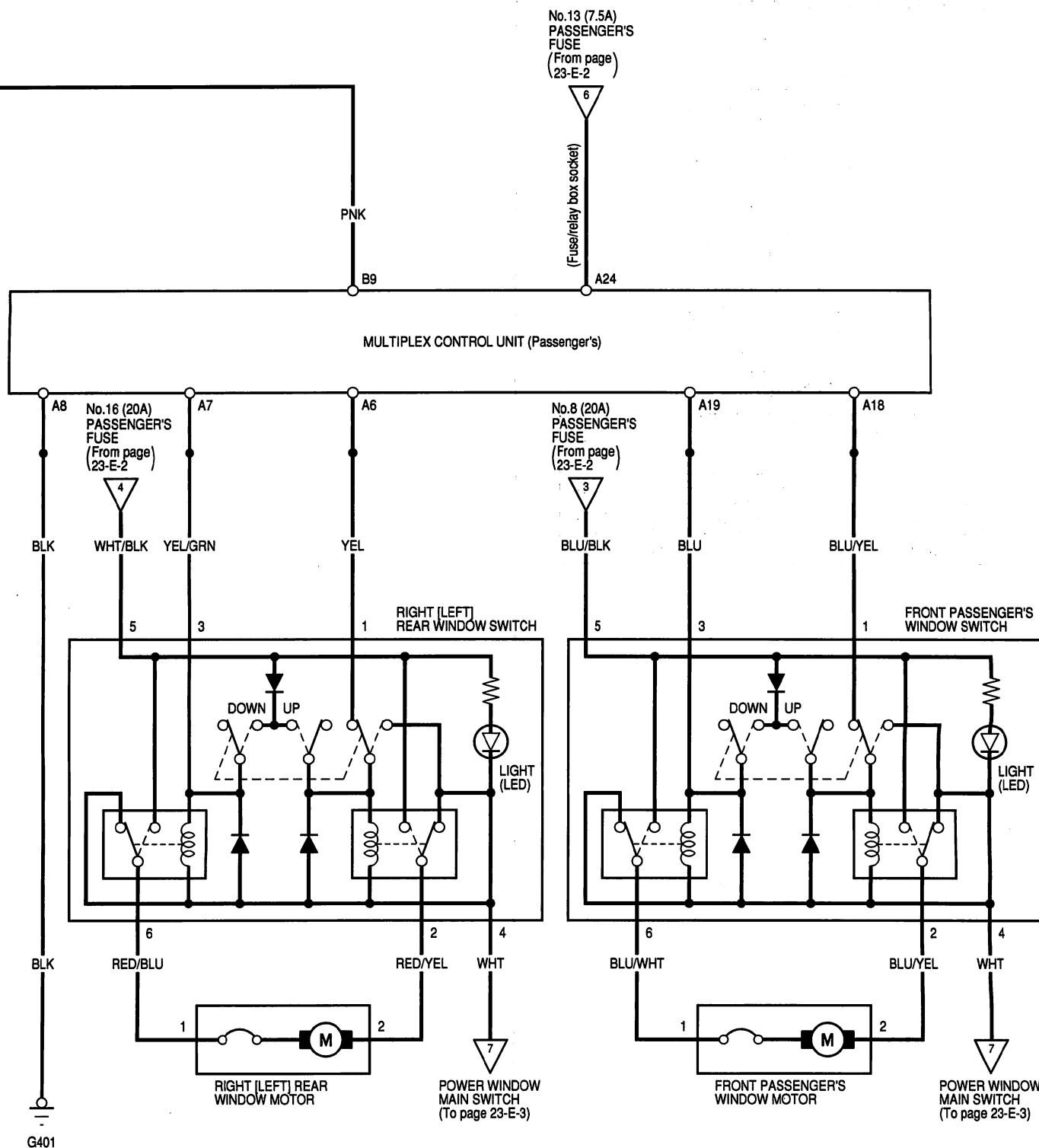
# Power Windows

## Circuit Diagram (cont'd)

[ ] : RHD type



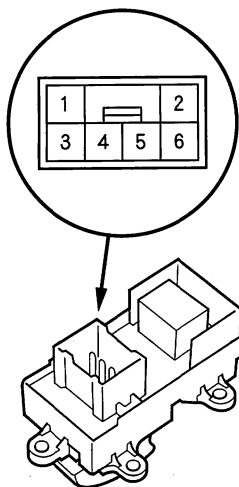
[ ] : RHD type



# Power Windows

## Passenger's Window Switch Test

1. Remove the front passenger's switch.
2. Check for continuity between the terminals in each switch position according to the table.



Terminal Position	1	2	3	4	5	6
UP	○	○	○	○	○	○
OFF	○	○	○	○	○	○
DOWN		○	○	○	○	○



## **Instruments**

### **Stereo Sound System**

**Circuit Diagram (With BOSE Sound System) ..... 23-F-2**

**Circuit Diagram (Without BOSE Sound System) ..... 23-F-4**

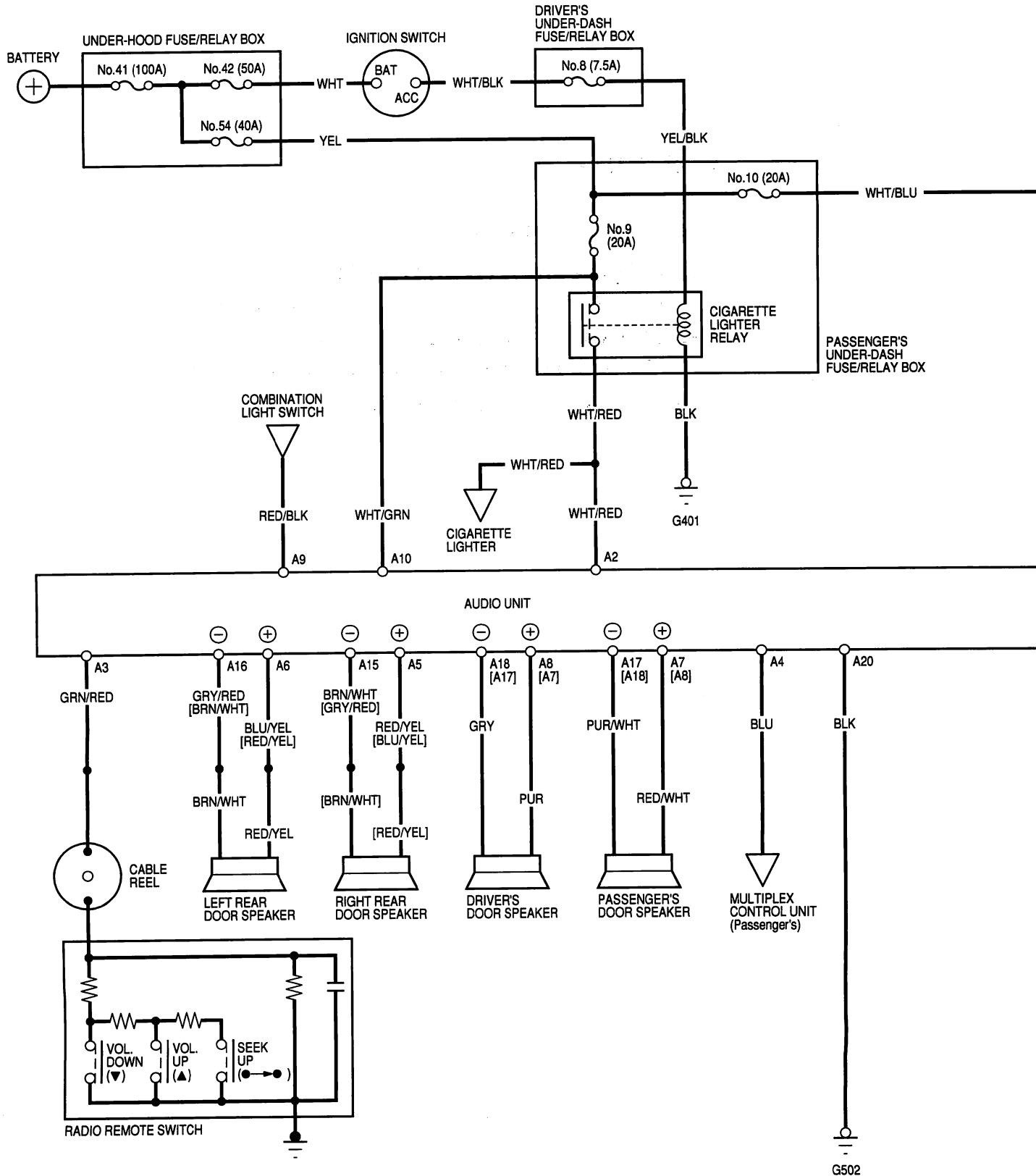
**Radio Antenna Replacement ..... 23-F-5**



# Stereo Sound System

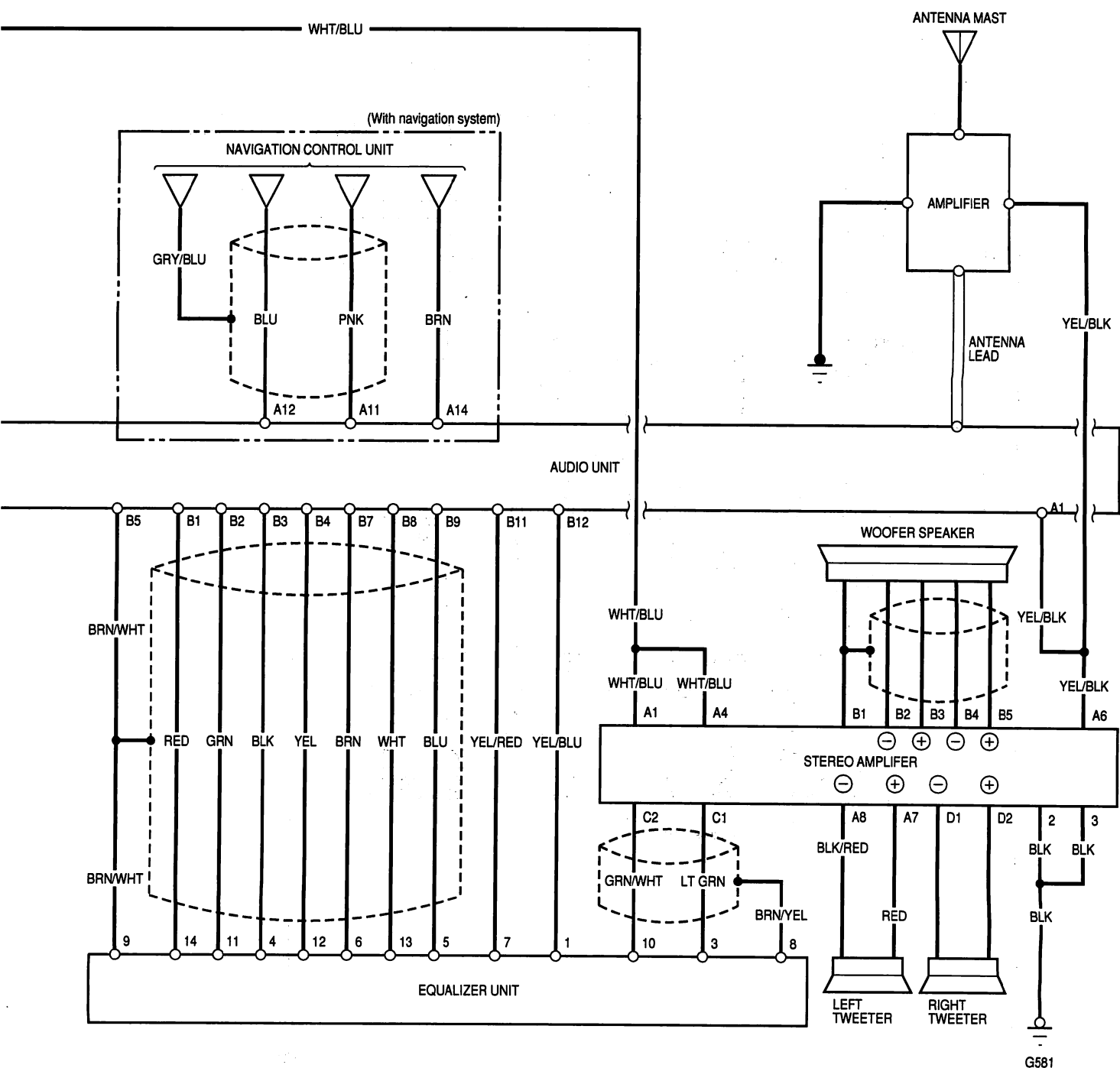
## Circuit Diagram (With Bose Sound System)

[ ] : RHD type





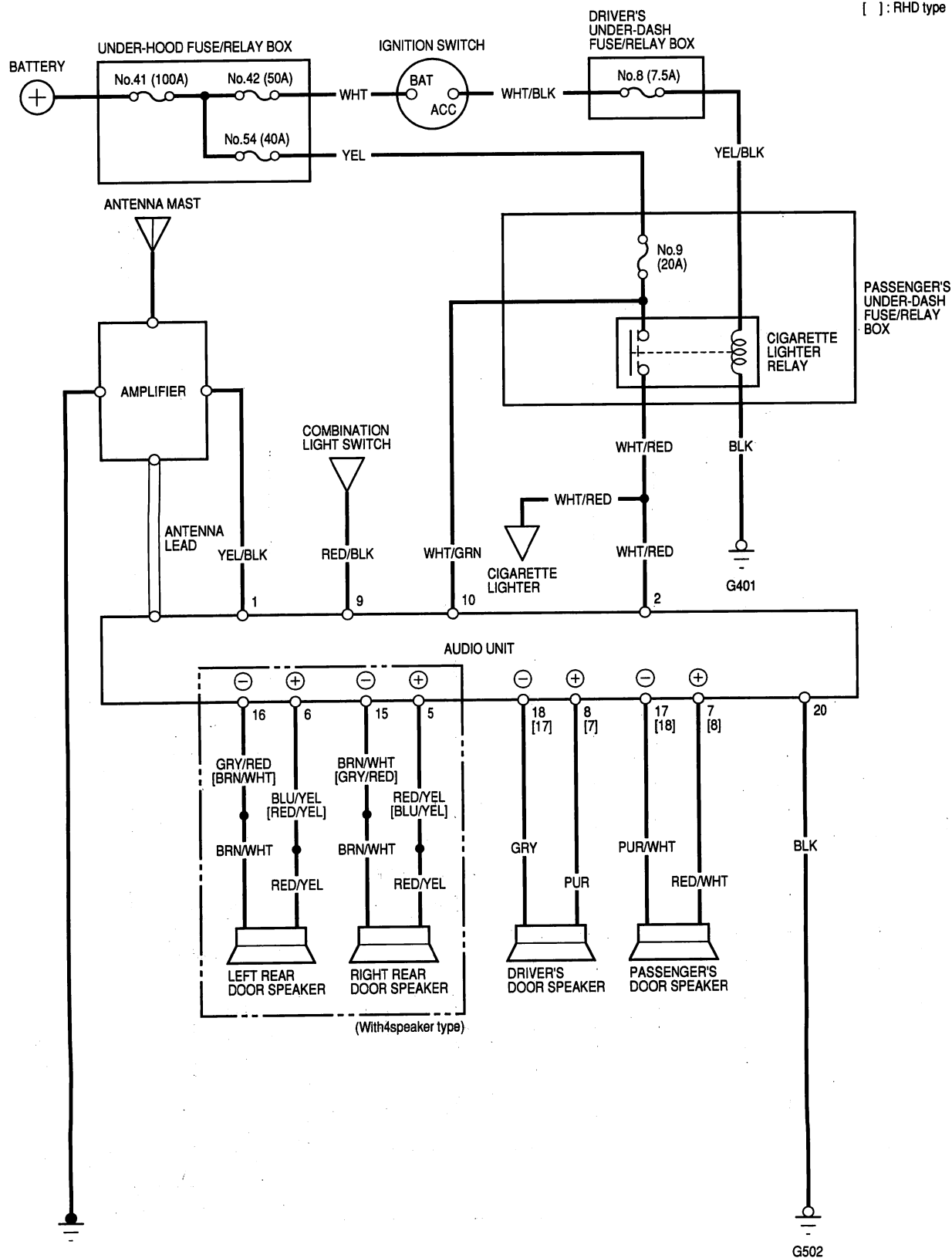
----- : Shielding



## Stereo Sound System

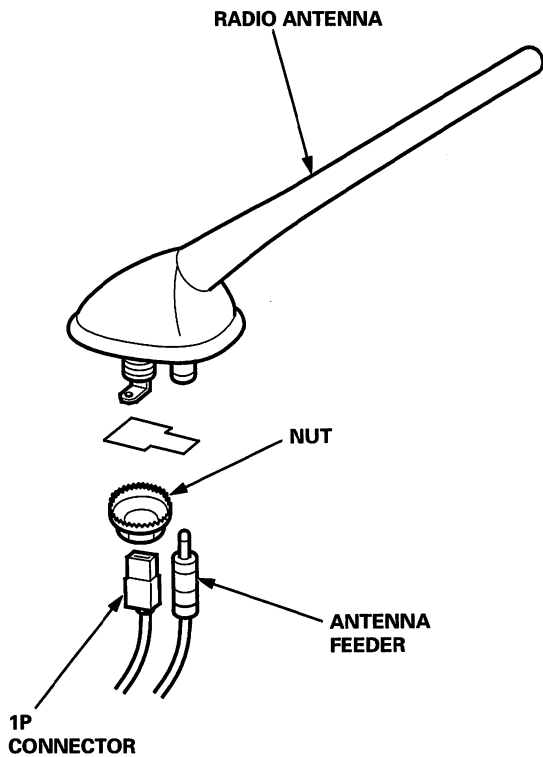
### Circuit Diagram (Without BOSE Sound System)

[ ] : RHD type



## Radio Antenna Replacement

1. Remove the headliner (see section 20).
2. Disconnect the 1P connector and the antenna feeder from the radio antenna.
3. Replace the radio antenna.



## **Security**

### **Keyless Entry/Security Alarm System**

**Circuit Diagram ..... 23-G-2**

**Control Unit Input Test ..... 23-G-7**

### **Ultrasonic System (KE model)**

**Component Location Index ..... 23-G-9**

**Circuit Diagram ..... 23-G-10**

**Ultrasonic Unit Input Test ..... 23-G-11**

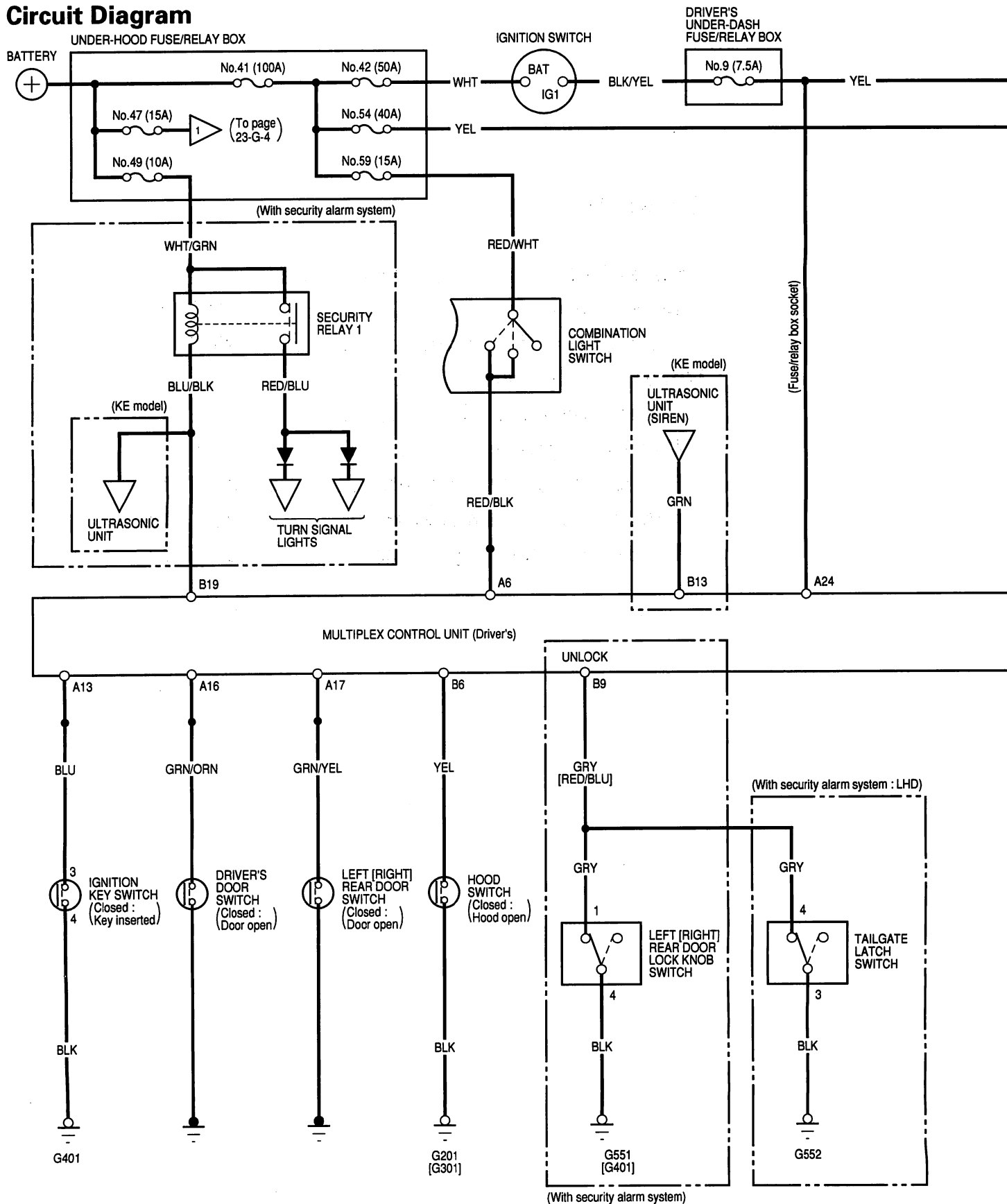
**Ultrasonic Unit Replacement ..... 23-G-12**

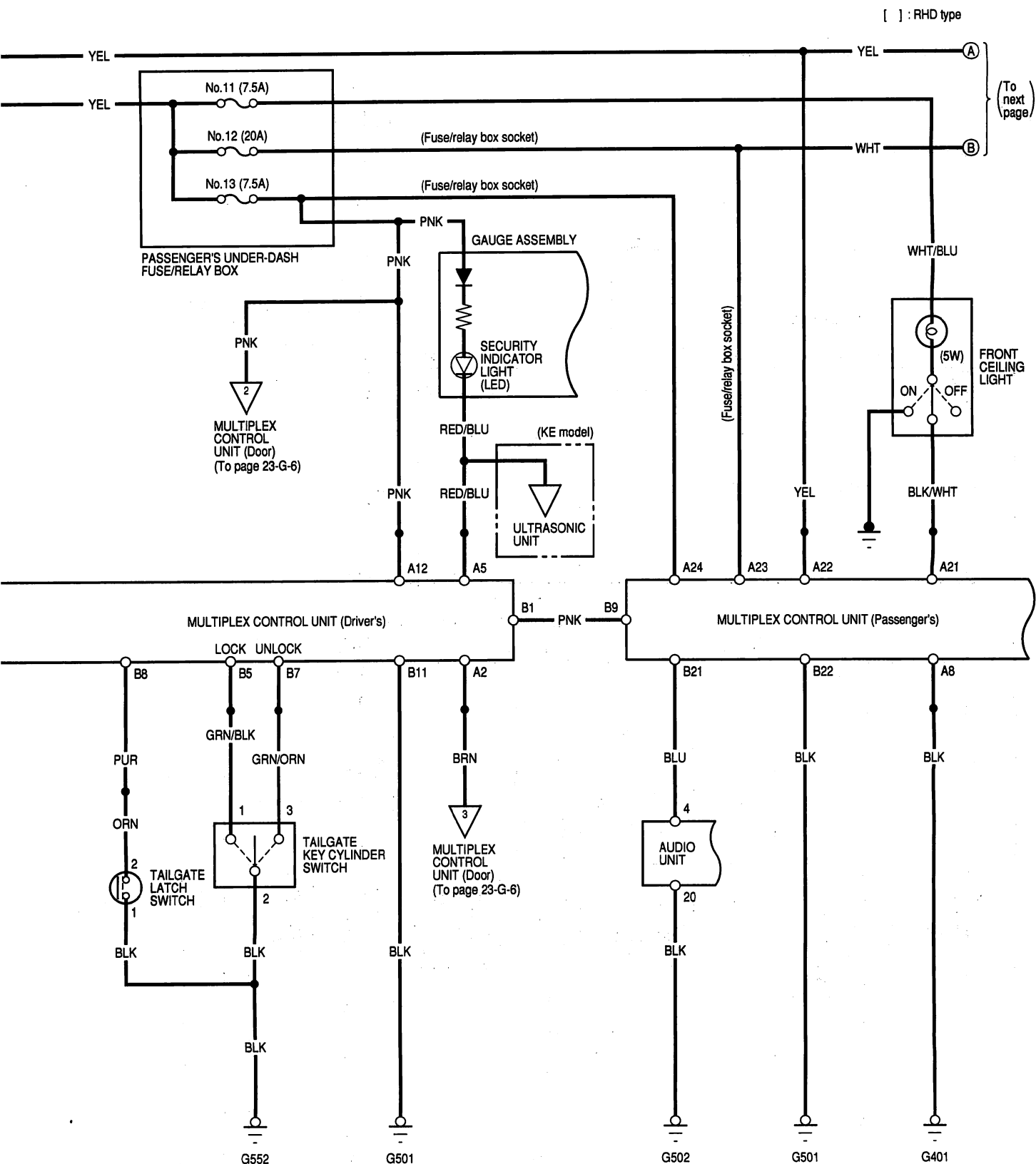
**Ultrasonic Siren Input Test ..... 23-G-13**



# Keyless Entry/Security Alarm System

## Circuit Diagram

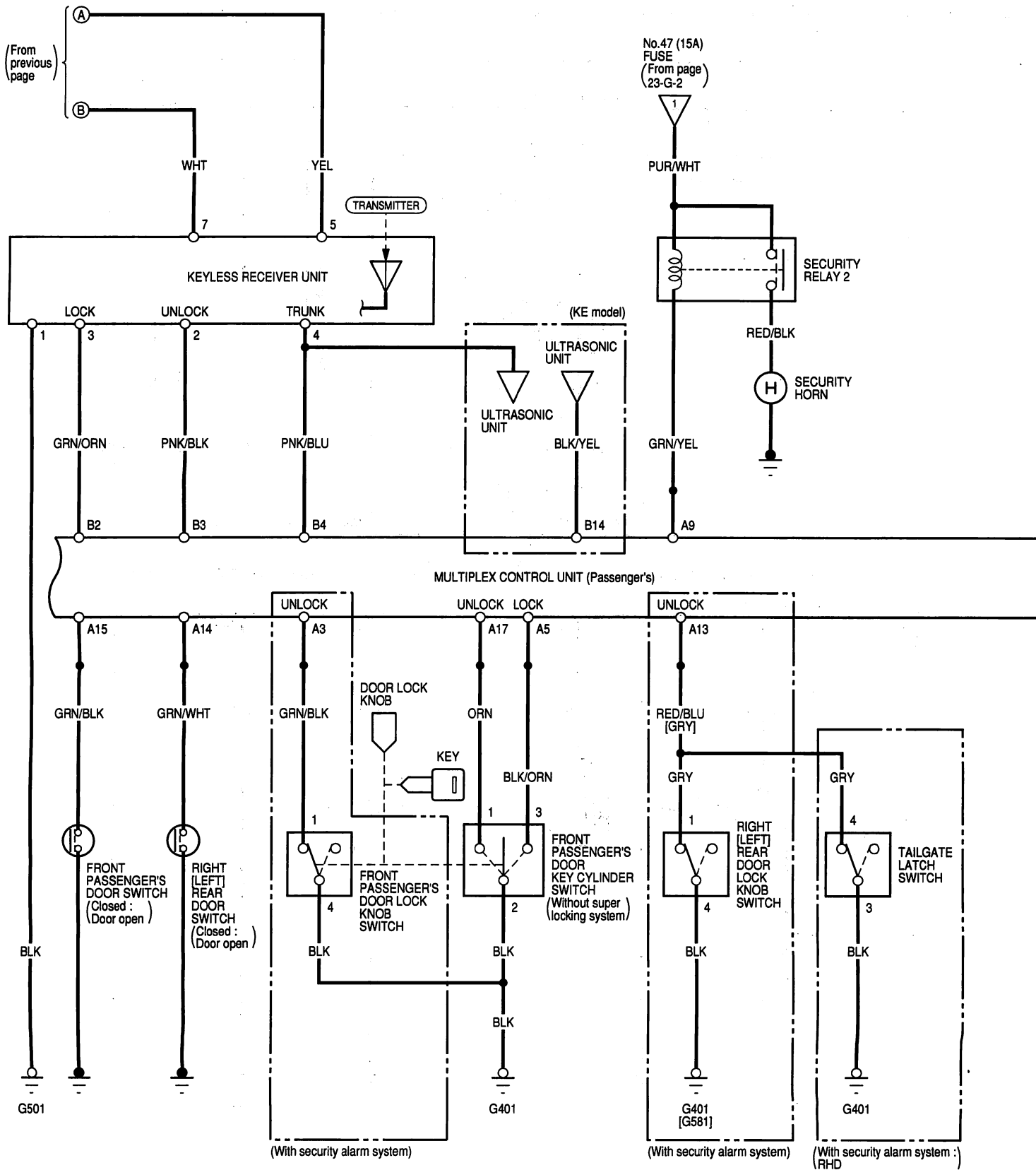






# Keyless Entry/Security Alarm System

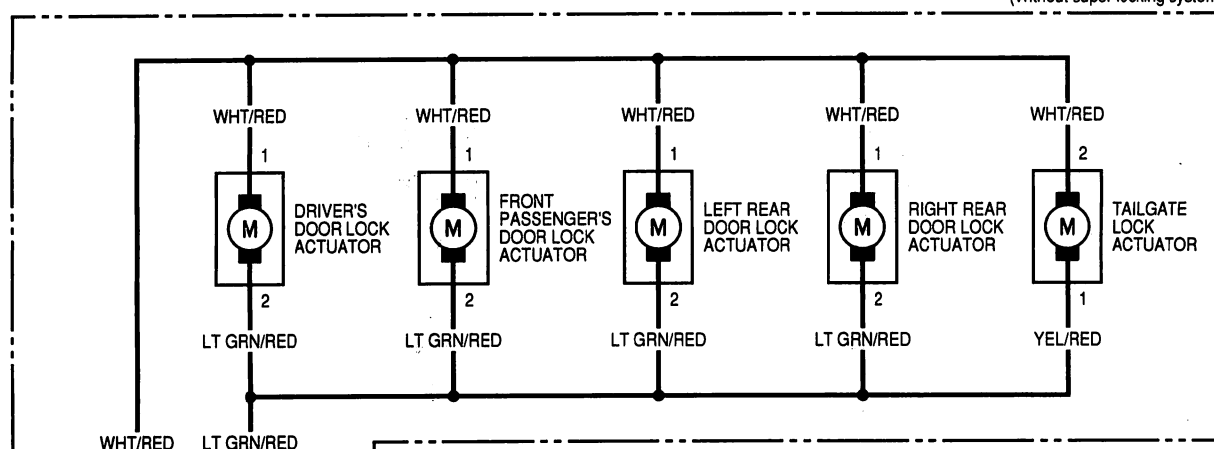
## Circuit Diagram (cont'd)



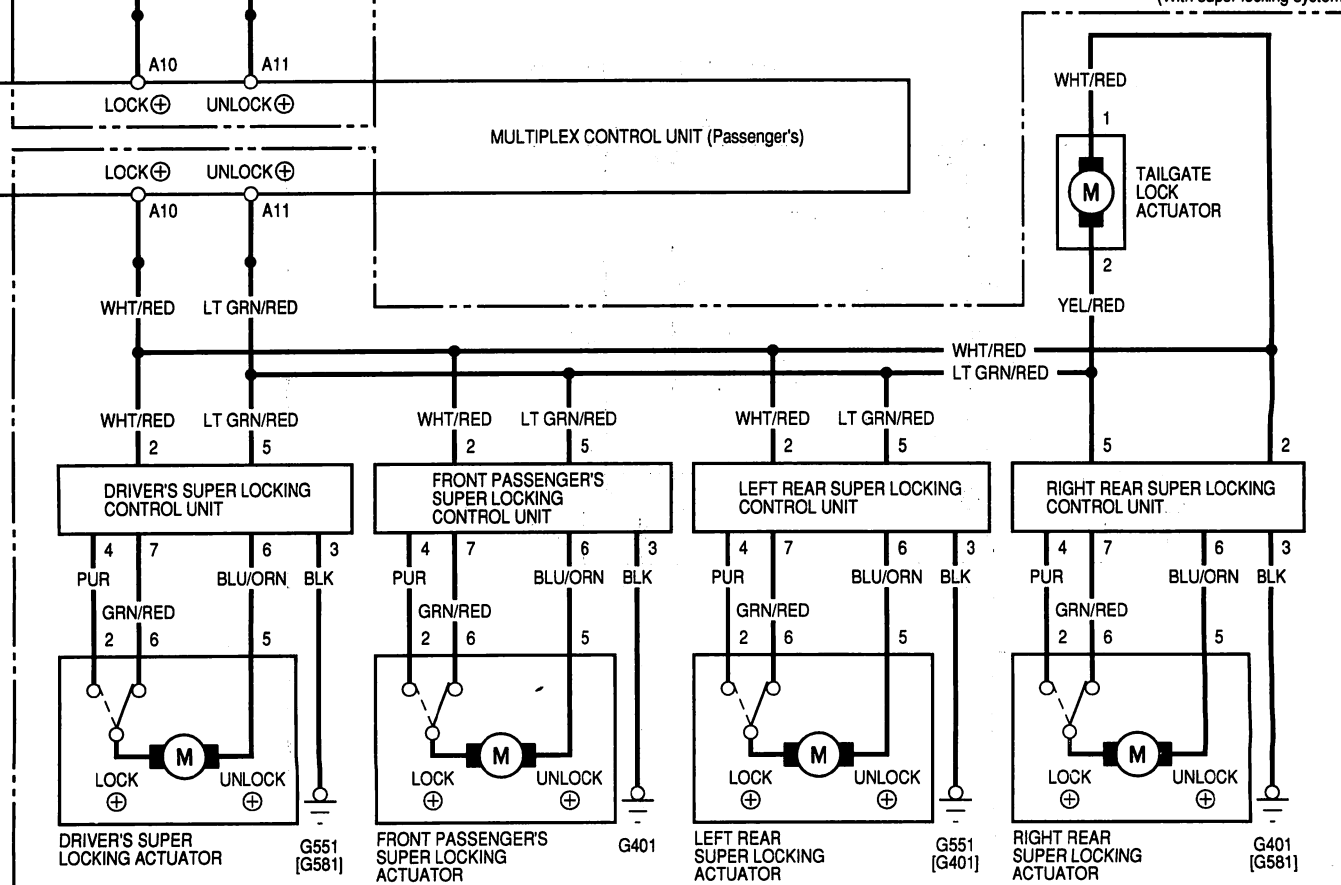


[ ] : RHD type

(Without super locking system)



(With super locking system)

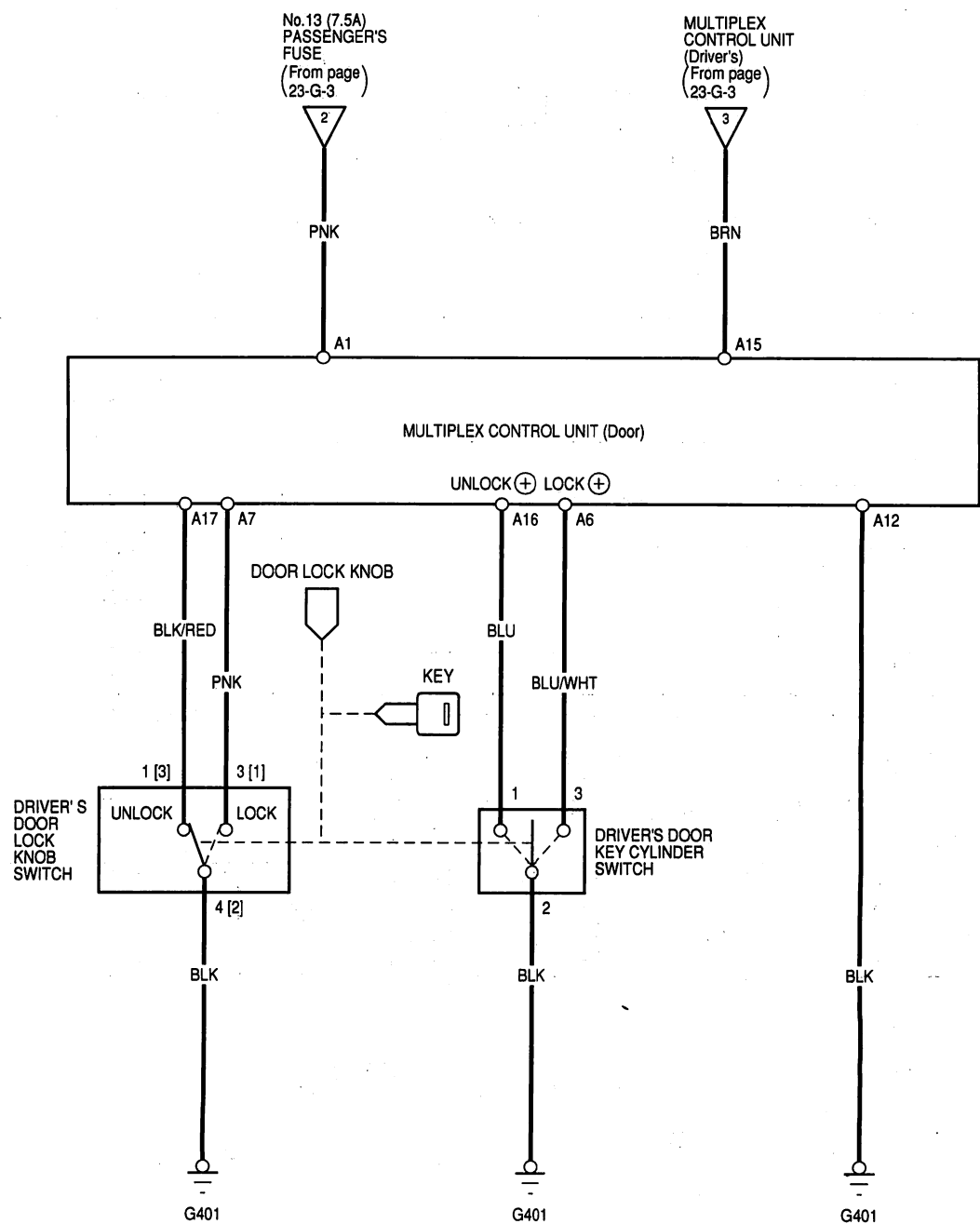


(cont'd)

# Keyless Entry/Security Alarm System

## Circuit Diagram (cont'd)

[ ] : Without super locking system



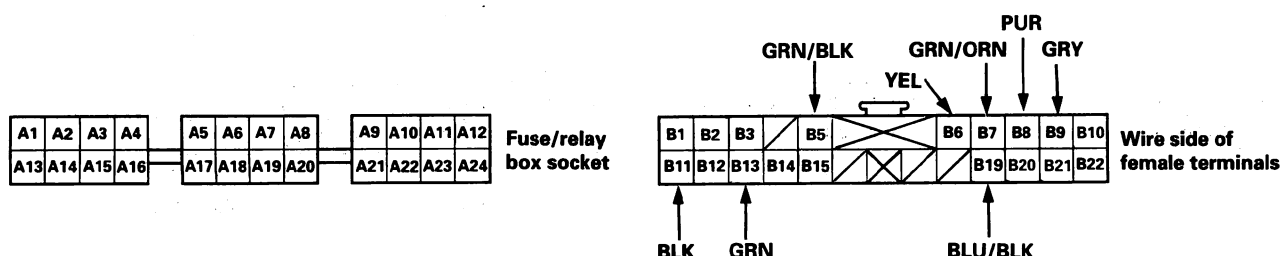


## Control Unit Input Test

NOTE: Before testing, go to the Multiplex Control System Troubleshooting Guide.

### Multiplex Control Unit (Driver's):

1. Remove the driver's under-dash fuse/relay box.
2. Remove the driver's unit from the driver's 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, make the following input tests at the connector and the fuse/relay box socket.
    - If any test indicates a problem, find and correct the cause, then recheck the system.
    - If all the input tests prove OK, the control unit must be faulty; replace it.



Disconnect the connectors from the unit.

Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
B11	BLK	Under all conditions	Check for continuity: There should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (G501)</li> <li>• An open in the wire</li> </ul>
A12	Fuse/relay box socket	Under all conditions	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 13 (7.5 A) fuse in the passenger's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
A24		Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 9 (7.5 A) fuse in the driver's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
A5		Under all conditions	Connect to ground: The security indicator light should come on.	<ul style="list-style-type: none"> <li>• Blown No. 13 (7.5 A) fuse in the passenger's under-dash fuse/relay box</li> <li>• Faulty security indicator light (LED)</li> <li>• An open in the wire</li> </ul>
A6		Combination light switch ON	Connect to ground: The small lights should come on.	<ul style="list-style-type: none"> <li>• Blown No. 59 (15 A) fuse in the under-hood fuse/relay box</li> <li>• Faulty combination light switch</li> <li>• An open in the wire</li> </ul>
B13	GRN	Under all conditions	Check for continuity between the B13 terminal and No. 2 terminal of the ultrasonic unit: There should be continuity.	<ul style="list-style-type: none"> <li>• An open in the wire</li> </ul>
B19	BLU/BLK	Under all conditions	Connect to ground: The turn signal lights should come on.	<ul style="list-style-type: none"> <li>• Blown No. 49 (10 A) fuse in the under-hood fuse/relay box</li> <li>• Faulty security relay 1</li> <li>• An open in the wire</li> </ul>

(cont'd)

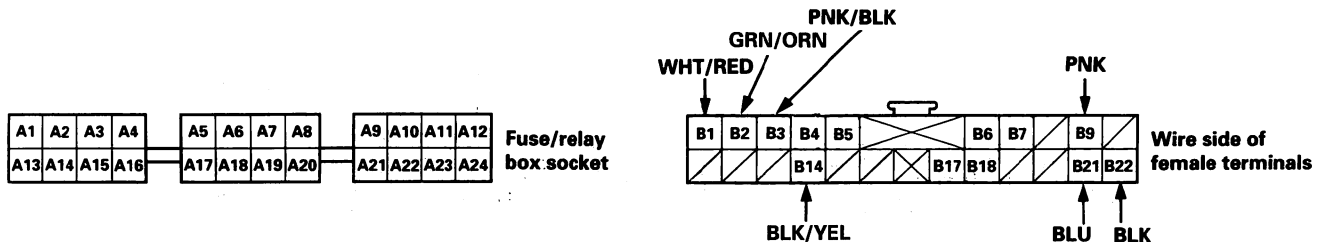
# Keyless Entry/Security Alarm System

## Control Unit Input Test (cont'd)

NOTE: Before testing, go to the Multiplex Control System Troubleshooting Guide.

### Multiplex Control Unit (Passenger's):

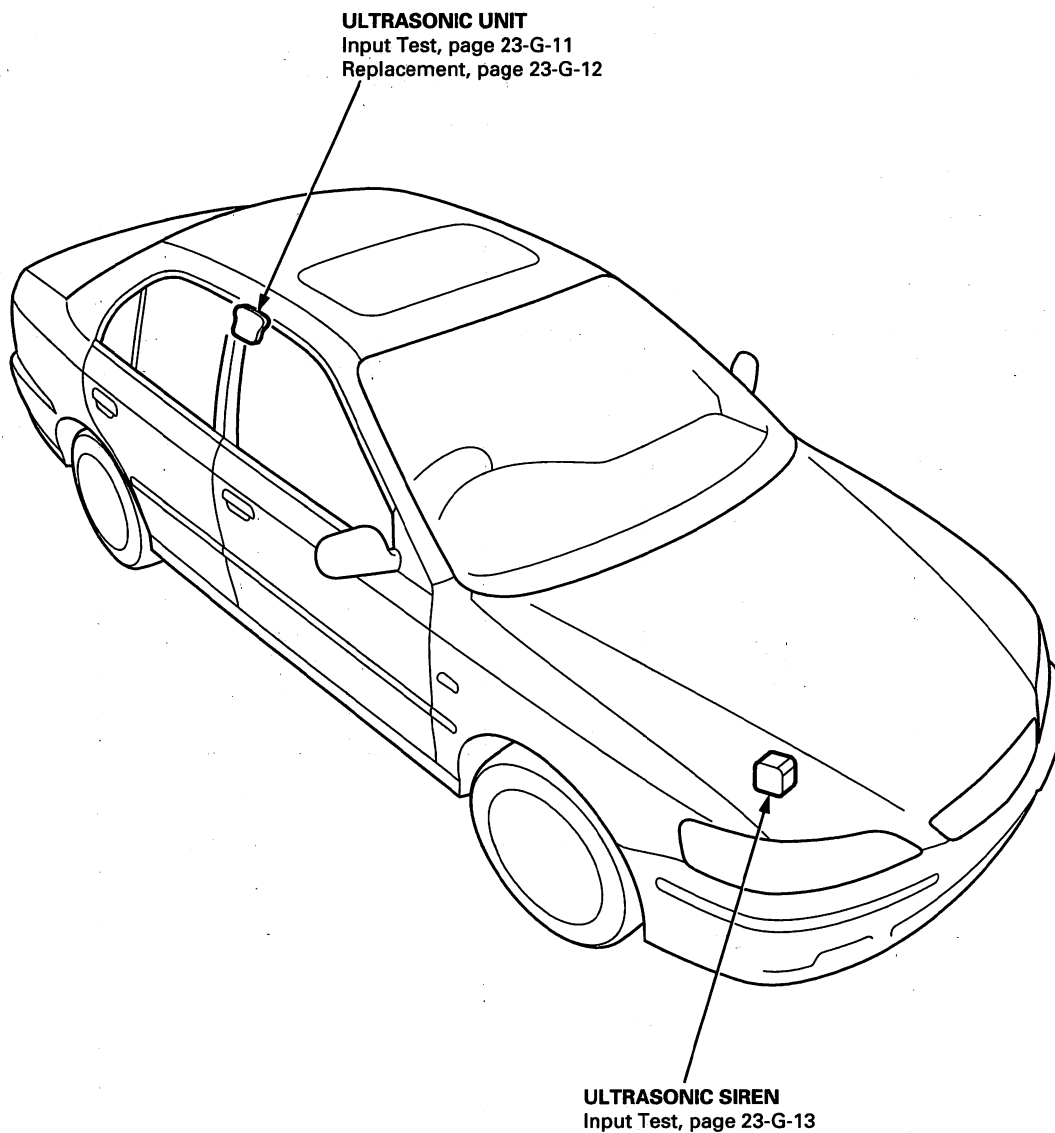
1. Remove the passenger's under-dash fuse/relay box.
2. Remove the passenger's unit from the passenger's under-dash fuse/relay box.
3. Inspect the connector and socket terminals to be sure they are all making good contact.
  - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
  - If the terminals look OK, make the following input tests at the connector.
    - If any test indicates a problem, find and correct the cause, then recheck the system.
    - If all the input tests prove OK, the control unit must be faulty; replace it.



Disconnect the connectors from the unit.

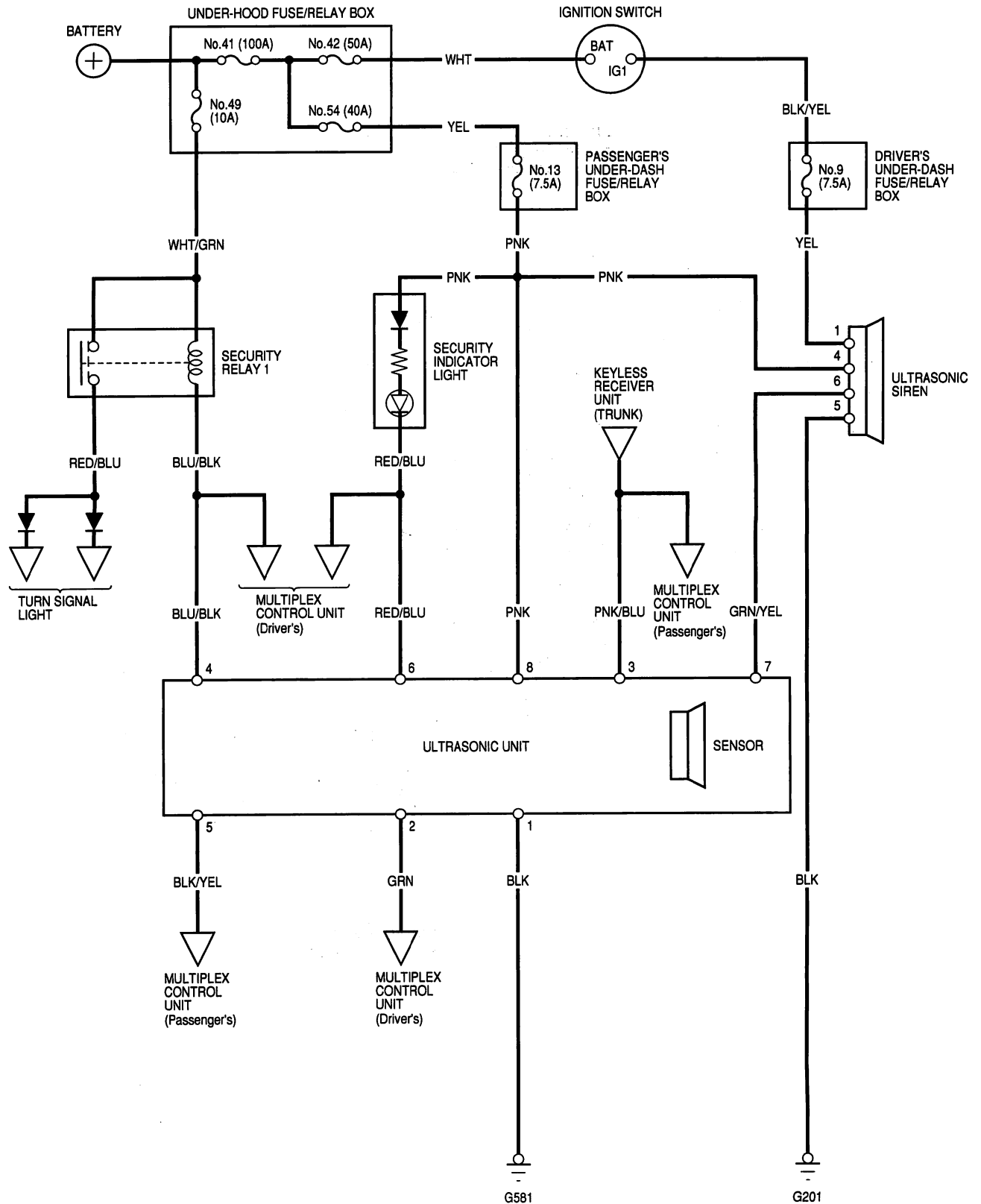
Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A8	Fuse/relay box socket	Under all conditions	Check for continuity: There should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (G401)</li> <li>• An open in the wire</li> </ul>
A9		Under all conditions	Connect to ground: The security horn should sound.	<ul style="list-style-type: none"> <li>• Blown No. 47 (15 A) fuse in the under-hood fuse/relay box</li> <li>• Faulty security horn</li> <li>• Faulty security relay 2</li> <li>• An open in the wire</li> </ul>
A21		Ceiling light switch in "middle" position	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 11 (7.5 A) fuse in the passenger's under-dash fuse/relay box</li> <li>• Blown ceiling light bulb</li> <li>• Faulty ceiling light</li> <li>• An open in the wire</li> </ul>
A22		Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 9 (7.5 A) fuse in the driver's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
A23		Under all conditions	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 12 (20 A) fuse in the passenger's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
A24		Under all conditions	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 13 (7.5 A) fuse in the passenger's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
B14	BLK/YEL	Under all conditions	Check for continuity between the B14 terminal and No. 5 terminal of the ultrasonic unit: There should be continuity.	<ul style="list-style-type: none"> <li>• An open in the wire</li> </ul>
B21	BLU	Under all conditions	Check for continuity between B21 terminal and audio unit No. 4 terminal: There should be continuity.	<ul style="list-style-type: none"> <li>• Faulty audio unit</li> <li>• Poor ground (G502)</li> <li>• An open in the wire</li> </ul>
B22	BLK	Under all conditions	Check for continuity: There should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (G501)</li> <li>• An open in the wire</li> </ul>

## Component Location Index



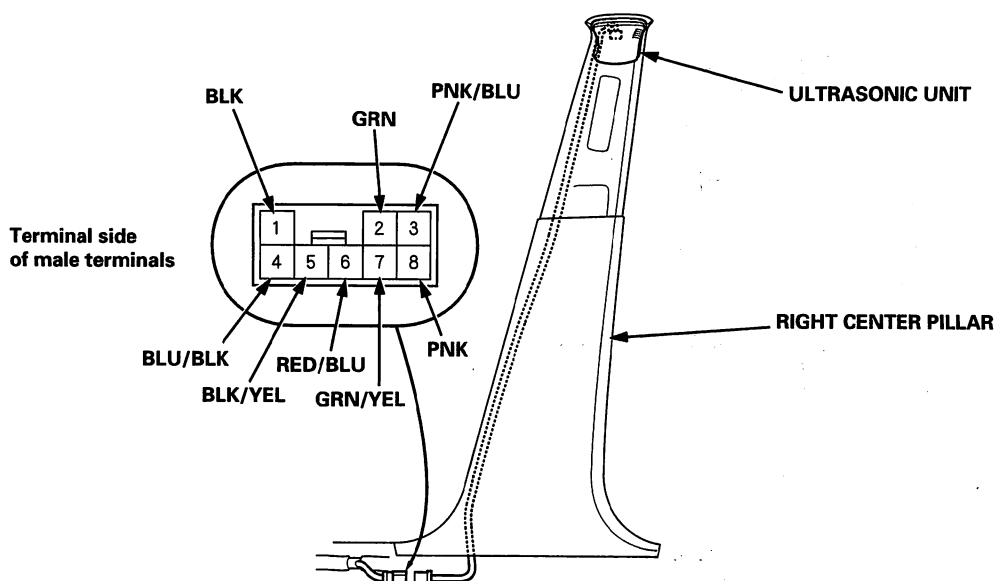
# Ultrasonic System (KE model)

## Circuit Diagram



## Ultrasonic Unit Input Test

1. Remove the right rear side trim (see section 20).
2. Disconnect the 8P connector.
3. Inspect the connector and socket terminals to be sure they are all making good contact.
  - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
  - If the terminals look OK, make the following input tests at the connector.
    - If a test indicates a problem, find and correct the cause, then recheck the system.
    - If all the input tests prove OK, the control unit must be faulty, replace it.



Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
1	BLK	Under all conditions	Check for continuity: There should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (G581)</li> <li>• An open in the wire</li> </ul>
2	GRN	Under all conditions	Check for continuity between the No. 2 terminal and B13 terminal of the driver's multiplex control unit: There should be continuity.	<ul style="list-style-type: none"> <li>• An open in the wire</li> </ul>
3	PNK/BLU	Under all conditions	Check for continuity between the No. 3 terminal and No. 2 terminal of the keyless receiver unit: There should be continuity.	<ul style="list-style-type: none"> <li>• An open in the wire</li> </ul>
4	BLU/BLK	Under all conditions	Connect to ground: The turn signal lights should come on.	<ul style="list-style-type: none"> <li>• Blown No. 49 (10 A) fuse in the under-hood fuse/relay box</li> <li>• Faulty security relay 1</li> <li>• An open in the wire</li> </ul>
5	BLK/YEL	Under all conditions	Check for continuity between the No. 5 terminal and B14 terminal of the passenger's multiplex control unit: There should be continuity.	<ul style="list-style-type: none"> <li>• An open in the wire</li> </ul>
6	RED/BLU	Under all conditions	Connect to ground: The security indicator light should come on.	<ul style="list-style-type: none"> <li>• Blown No. 49 (10 A) fuse in the under-hood fuse/relay box</li> <li>• Faulty security relay 1</li> <li>• An open in the wire</li> </ul>
7	GRN/YEL	Under all conditions	Connect to ground: The ultrasonic siren should sound.	<ul style="list-style-type: none"> <li>• Faulty ultrasonic siren</li> <li>• An open in the wire</li> </ul>
8	PNK	Under all conditions	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 13 (7.5 A) fuse in the Passenger's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>

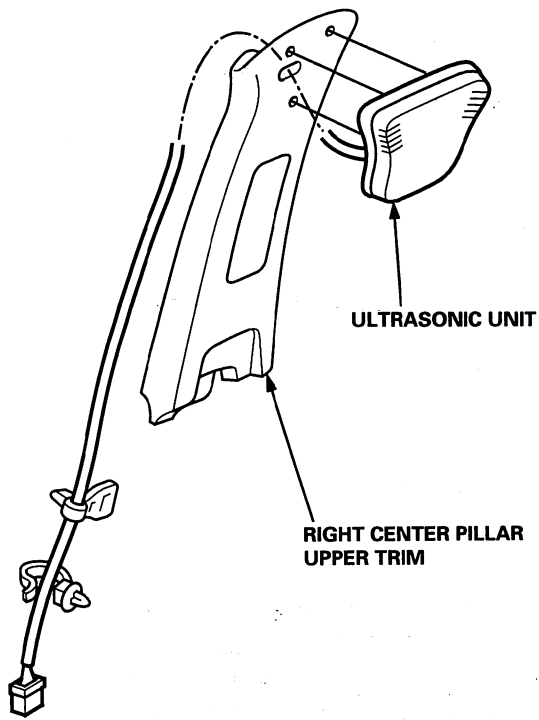


# Ultrasonic System (KE model)

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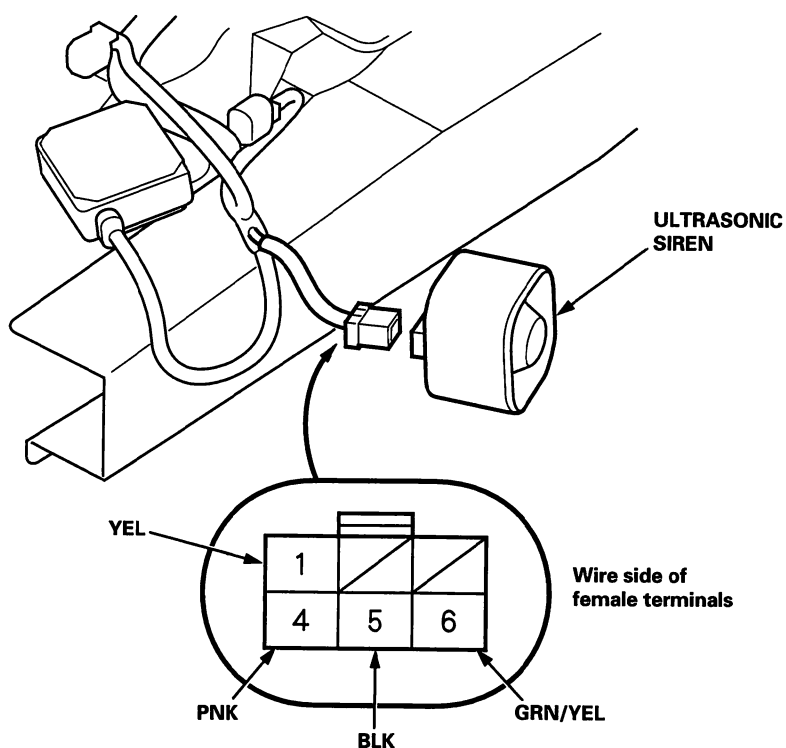
## Ultrasonic Unit Replacement

1. Remove the right center pillar upper trim (see section 20).
2. Remove the ultrasonic unit from the right center pillar upper trim.



## Ultrasonic Siren Input Test

1. Open the hood.
2. Disconnect the 4P connector from the siren.
3. Inspect the connector and socket terminals to be sure they are all making good contact.
  - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
  - If the terminals look OK, make the following input tests at the connector.
    - If a test indicates a problem, find and correct the cause, then recheck the system.
    - If all the input tests prove OK, the control unit must be faulty, replace it.



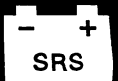
Cavity	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
5	BLK	Under all conditions	Check for continuity: There should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (G201)</li> <li>• An open in the wire</li> </ul>
6	GRN/YEL	Under all conditions	Connect to ground: The ultrasonic siren should sound.	<ul style="list-style-type: none"> <li>• Faulty ultrasonic siren</li> <li>• An open in the wire</li> </ul>
1	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 9 (7.5 A) fuse in the Driver's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>
4	PNK	Under all conditions	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 13 (7.5 A) fuse in the Passenger's under-dash fuse/relay box</li> <li>• An open in the wire</li> </ul>

## Navigation System

<b>Description .....</b>	<b>23-H-2</b>
<b>Circuit Diagram .....</b>	<b>23-H-4</b>
<b>Connector Locations .....</b>	<b>23-H-6</b>
<b>Terminal Arrangement .....</b>	<b>23-H-7</b>
<b>Troubleshooting Guide .....</b>	<b>23-H-11</b>
<b>Picture Diagnosis .....</b>	<b>23-H-12</b>
<b>Troubleshooting .....</b>	<b>23-H-22</b>
<b>CD-ROM .....</b>	<b>23-H-24</b>
<b>Navigation Unit .....</b>	<b>23-H-25</b>

### Outline of Model Changes

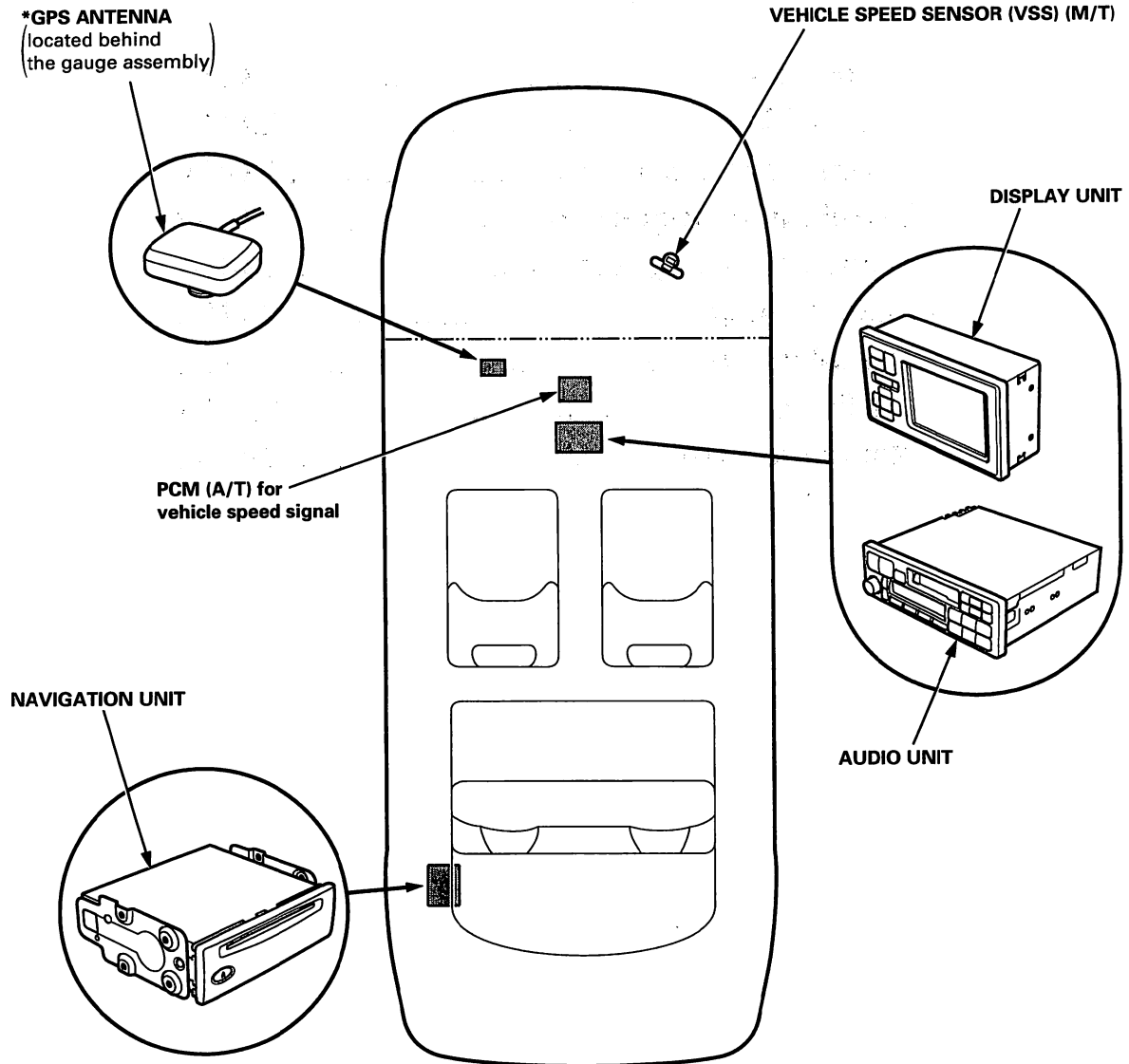
- Display unit operation keys were changed; description was entered.
- Navigation unit was changed; circuit diagram, connector locations, terminal arrangement, troubleshooting, CD-ROM replacement, navigation unit removal/installation were entered.
- Picture diagnosis was changed; all picture diagnosis was entered.



# Description

## Component Locations

The parts with asterisk (\*): LHD type is shown, RHD type is symmetrical.  
The illustration indicates 5-door model.



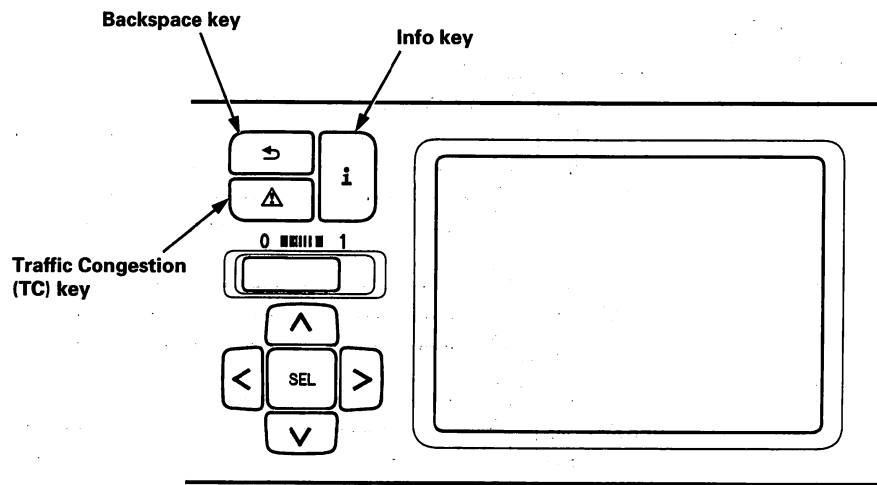
### Audio Unit

The audio unit receives the voice driving instructions from the navigation unit and transmits the instructions through the front speakers even when the audio system is in use.

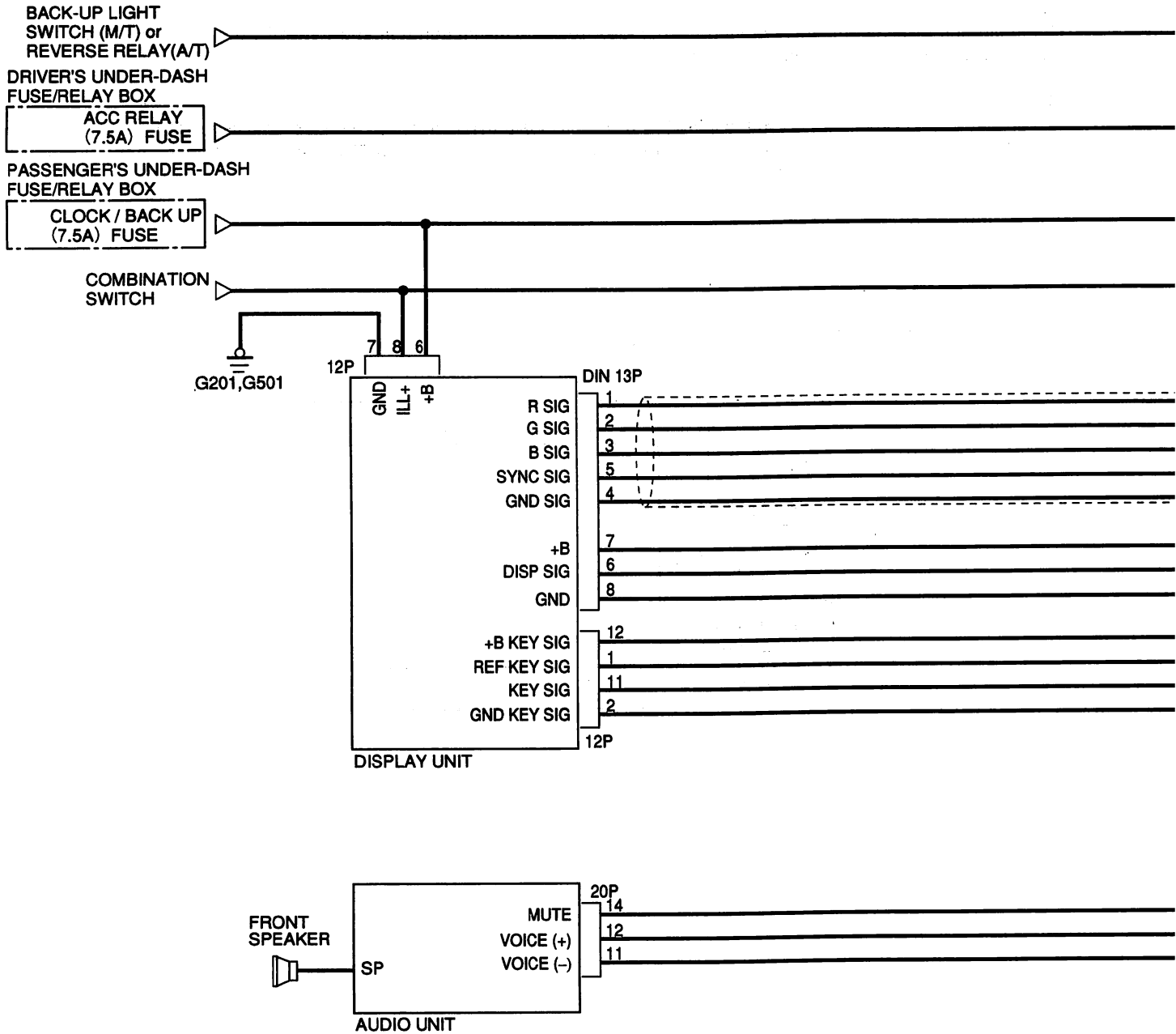
### Display Unit

The display unit uses a liquid crystal display (LCD). The LCD is a five-inch-size, Thin Film Transistor (TFT), stripe type. The color film and fluorescent light are laid out on the back of the liquid crystal film. The display unit transmits the signal from each operation key to the navigation unit.

### Display unit and operation keys



## Circuit Diagram



## DISPLAY UNIT CONNECTORS

## 12P CONNECTOR

1	2				6
7	8			11	12

**Wire side of female terminals**

## DIN 13P CONNECTOR

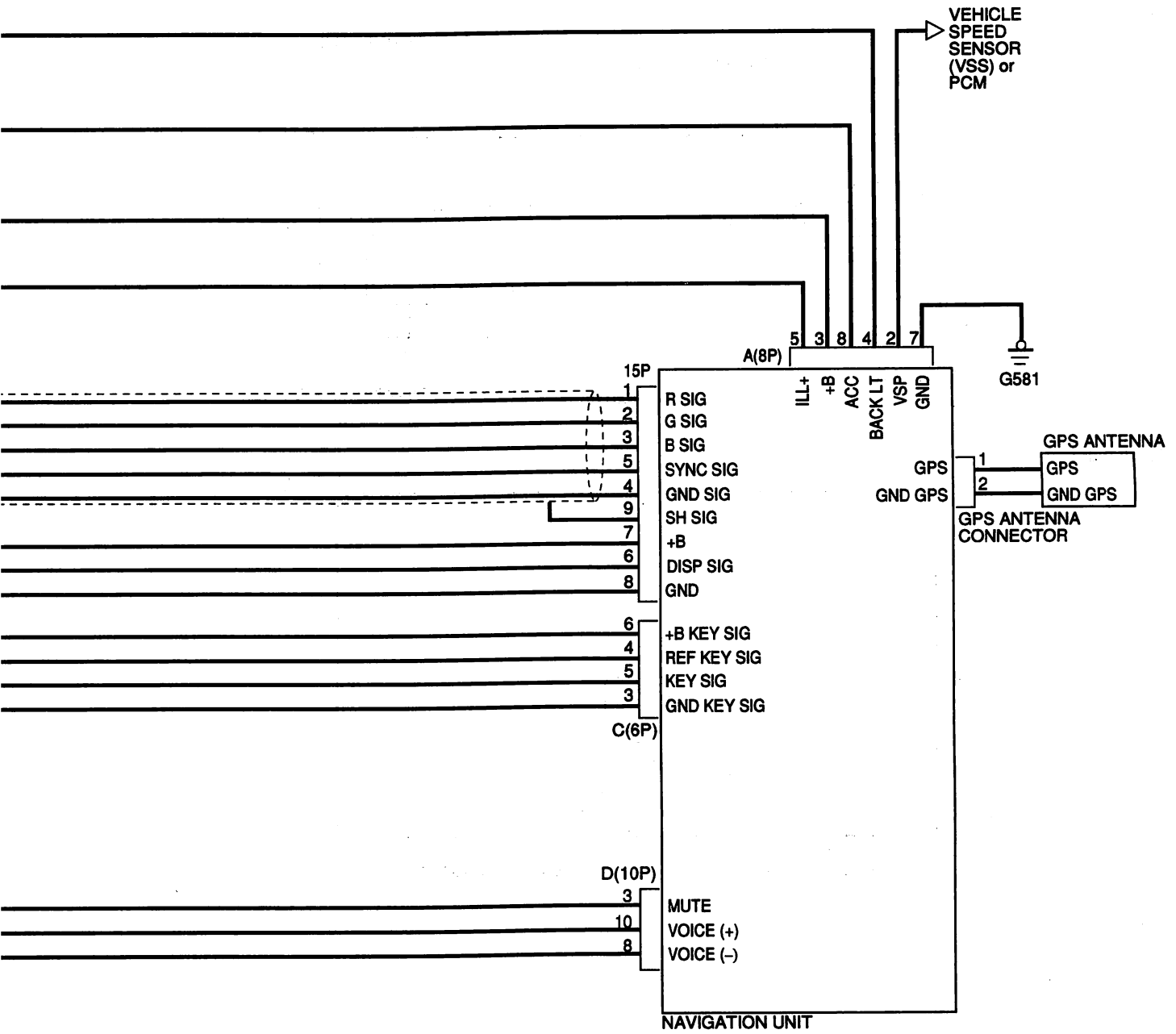
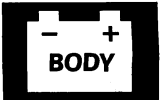


**Terminal side of  
male terminals**

## AUDIO UNIT 20P CONNECTOR

1	2	3	4	5	6	7	8	9	10
11	12		14	15	16	17	18		20

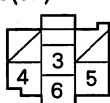
**Wire side of female terminals**



CONNECTOR A(8P)

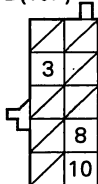


CONNECTOR C(6P)

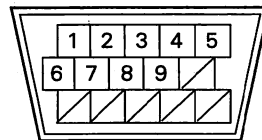


NAVIGATION UNIT CONNECTORS

CONNECTOR D(10P)



15P CONNECTOR



Terminal side of male terminals

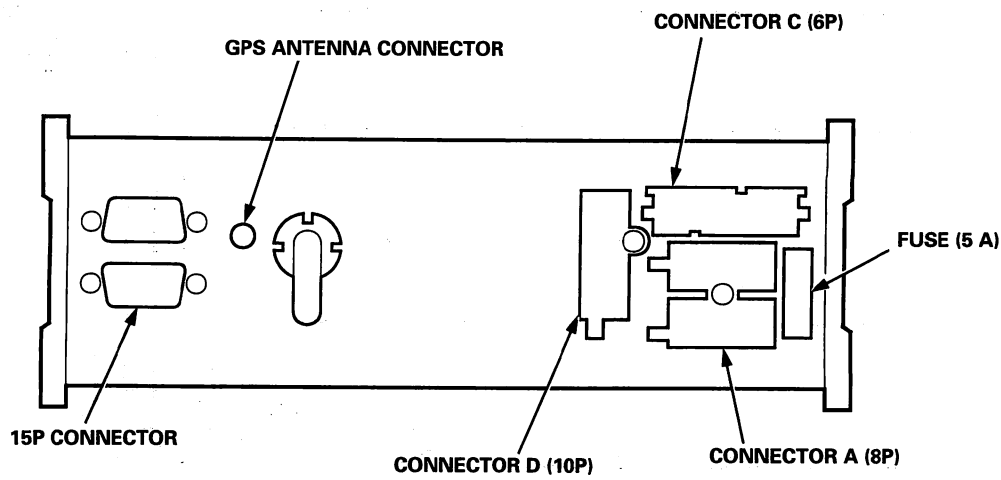
GPS ANTENNA CONNECTOR



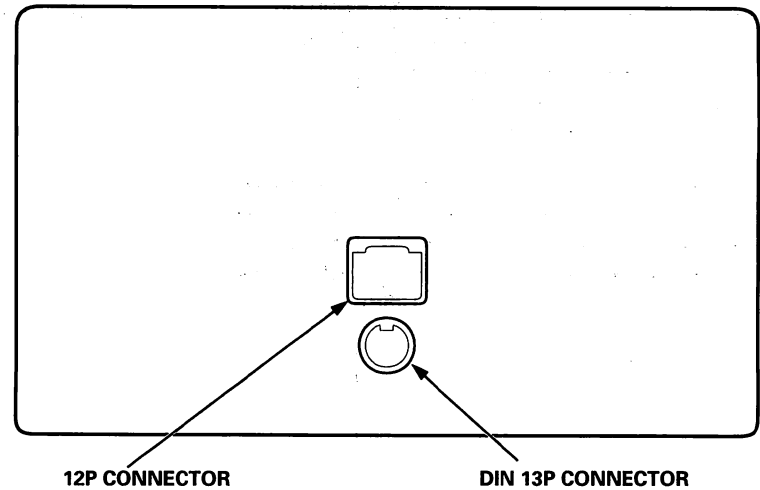
Wire side of female terminals

# Connector Locations

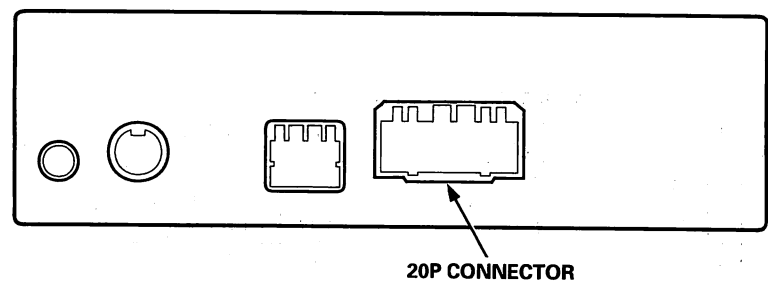
## Navigation unit



## Display unit



## Audio unit

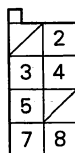




# Terminal Arrangement



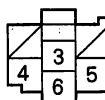
## Navigation unit connector A(8P)



Wire side of female terminals

Terminal number	Wire color	Terminal	Terminal name	Description
2	—	VSP	Vehicle speed pulse	Vehicle speed signal
3	—	+B	+B power source	Power source for navigation unit
4	—	BACK LT	Back light	Reverse signal of shift lever
5	—	ILL+	Illumination	Illumination ON signal
7	—	GND	Ground	Ground for navigation unit
8	—	ACC	Accessory	Power source for accessory

## Navigation unit connector C(6P)

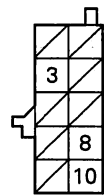


Wire side of female terminals

Terminal number	Wire color	Terminal	Terminal name	Description
3	—	GND KEY SIG	Ground key signal	Ground for operation key signal
4	—	REF KEY SIG	Reference key signal	Operation key reference key signal
5	—	KEY SIG	Key signal	Operation key signal
6	—	+B KEY SIG	+B key signal	Power source for operation key

# Terminal Arrangement

## Navigation unit connector D (10P)



Wire side of female terminals

Terminal number	Wire color	Terminal	Terminal name	Description
3	—	MUTE	Mute	Signal to mute the audio
8	—	VOICE (-)	Voice negative	Voice signal negative
10	—	VOICE (+)	Voice positive	Voice signal positive

## GPS antenna connector

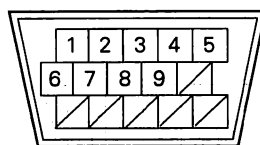


Terminal side of male terminals

Terminal number	Wire color	Terminal	Terminal name	Description
1	—	GPS	GPS	GPS signal
2	—	GND GPS	Ground for GPS signal	Ground for GPS signal



## Navigation unit 15P connector



Terminal side of male terminals

Terminal number	Wire color	Terminal	Terminal name	Description
1	—	R SIG	Red signal	Red color signal
2	—	G SIG	Green signal	Green color signal
3	—	B SIG	Blue signal	Blue color signal
4	—	GND SIG	Ground signal	Ground for color signal
5	—	C SIG	Composite signal	Composite video (vertical/horizontal) synchronizing signal
6	—	DISP SIG	Display signal	Display ON/OFF signal
7	—	+B	+B power source	Power source for display signal
8	—	GND	Ground	Ground for display signal
9	—	SH SIG	Shield signal	Shield for terminal No. 1, 2, 3, 4, 5

## Display unit DIN 13P connector

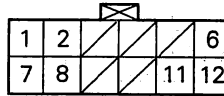


Terminal side of male terminals

Terminal number	Wire color	Terminal	Terminal name	Description
1	—	R SIG	Red signal	Red color signal
2	—	G SIG	Green signal	Green color signal
3	—	B SIG	Blue signal	Blue color signal
4	—	GND SIG	Ground signal	Ground for color signal
5	—	C SIG	Composite signal	Composite video (vertical/horizontal) synchronizing signal
6	—	DISP SIG	Display signal	Display ON/OFF signal
7	—	+B	+B power source	Power source for display signal
8	—	GND	Ground	Ground for display signal

# Terminal Arrangement

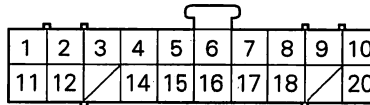
## Display unit 12P connector



Wire side of female terminals

Terminal number	Wire color	Terminal	Terminal name	Description
1	RED/BLK	REF KEY SIG	Reference key signal	Operation key reference signal
2	ORN	GND KEY SIG	Ground key signal	Ground for operation key signal
6	PNK	+B	+B power source	Power source for display unit
7	BLK	GND	Ground	Ground for display unit
8	RED/BLK	ILL+	Illumination	Illumination ON signal
11	BLK	KEY SIG	Key signal	Operation key signal
12	WHT	+B KEY SIG	+B key signal	Power source for operation key

## Audio unit 20P connector



Wire side of female terminals

Terminal number	Wire color	Terminal	Terminal name	Description
11	PNK	VOICE (-)	Voice negative	Voice signal negative
12	BLU	VOICE (+)	Voice positive	Voice signal positive
14	BRN	MUTE	Mute	Signal to mute the audio

# Troubleshooting Guide



NOTE: Circles (○) in the table indicate which parts to inspect.

PROBLEM SYMPTOM	RELATED UNIT, OTHER PROBLEM ITEMS						DIAGNOSIS METHOD								Refer to troubleshooting page
	NAVIGATION UNIT	DISPLAY UNIT	GPS ANTENNA	CD-ROM	AUDIO UNIT	HARNESS	STATIC TEST	DYNAMIC TEST	CALIBRATION	GPS STATUS	SENSOR TEST	KEY BOARD TEST	LCD TEST	ELECTRIC CONTINUITY IN HARNESS	
No picture is shown on the display	○	○				○								○	23-H-22
Display indication is not correct													○		*23-H-30
Map is not shown on the display	○	○		○		○									*23-H-30
Display unit operation key does not work		○				○						○			*23-H-30
Distance of vehicle position mark is not correct	○							○	○		○				*23-H-30
Vehicle position mark does not turn or does not move straight forward (or rotate)	○										○				*23-H-30
GPS mark is not indicated	○		○				○			○					*23-H-30
Guidance voice cannot be heard	○				○	○	○								*23-H-31

\*: Refer to Accord 5 Door/Accord 5 Door Turbo Diesel Shop Manual (P/N62S1A00B).

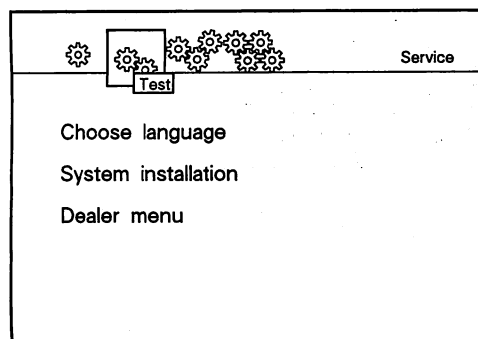
# Picture Diagnosis

Turn the ignition switch to ACC (I) while pushing the info key, then the display indicates the service menu picture.

## NOTE:

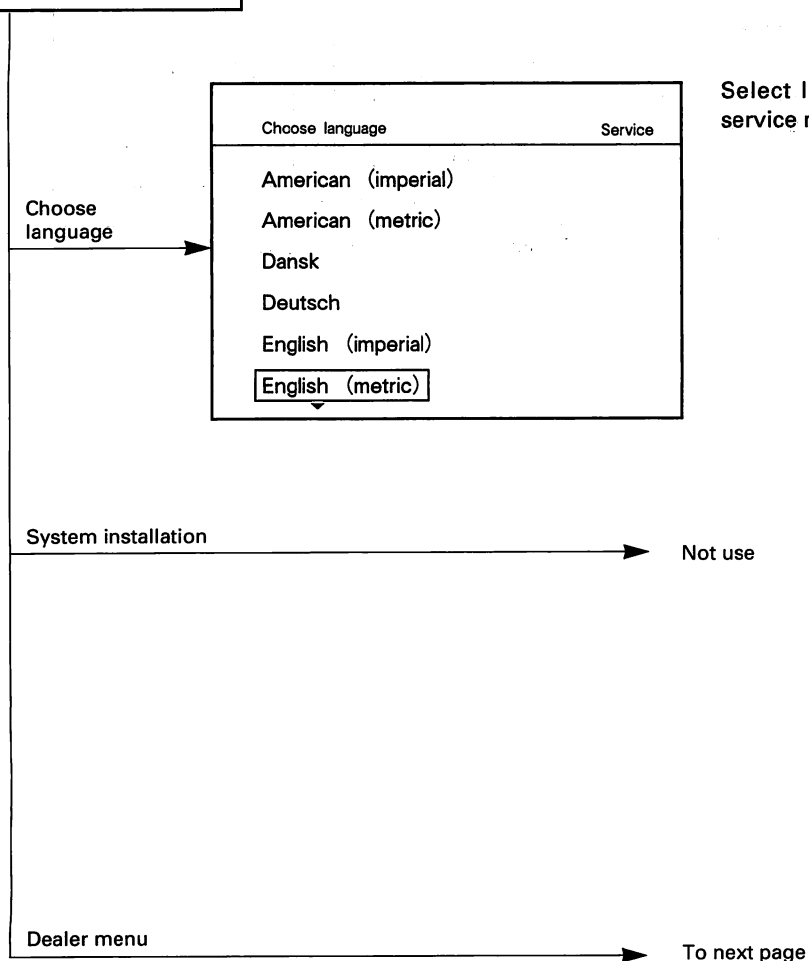
- If the display unit indicates the navigation picture, set the "Standby time" to "off" on the "Settings" menu, then retry operation.
- The picture illustrations are indicated in english.

## Service menu

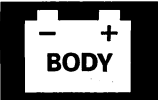


Select the items using the operation keys.

NOTE: Do not use "Version", "Error memory", "Settings" and "System installation". These items are used of the factory only when diagnose the navigation system, select "Dealer menu".



Select language, then return to service menu picture.



**Dealer menu**

Dealer menu	Service
<div>Static test</div> <div>Dynamic test</div> <div>Calibration</div> <div>GPS status</div> <div>Sensor test</div> <div>Keyboard test</div>	

Select the items using the operation keys.  
Push the backspace key to return to service menu picture.

Static test	➔	To page 23-H-14
Dynamic test	➔	To page 23-H-15
Calibration	➔	To page 23-H-16
GPS status	➔	To page 23-H-18
Sensor test	➔	To page 23-H-19
Keyboard test	➔	To page 23-H-19

Dealer menu	Service
<div>LCD test</div> <div>Calibration values</div>	

LCD test	➔	To page 23-H-20
Calibration values	➔	To page 23-H-21

# Picture Diagnosis

## Static test

Static test	Service
Activating voice output ...	
<div>Sound OK</div> <div>Repeat</div> <div>No Sound</div>	

- On the "Static test", diagnose for the GPS antenna. GPS receiver (inside of the navigation unit) and guidance voice output.
- When change to this picture, guidance voice is output from front speakers for first three seconds.
- If you select "Sound OK", guidance voice output becomes OK. If you select "No sound", guidance voice output becomes NG.

NOTE: If the guidance voice data in the memory of the navigation unit is erased by disconnected the battery, guidance voice is not outputted (noise will be heard). In this case, turn the ignition switch OFF to ON (II) and wait until the navigation menu is indicated (guidance voice data is loading during this time). Then perform the "Static test" again.

Static test	Service
OK!	
<div>Continue</div>	

- If "Static test" is OK, this picture is indicated.
- If there is a problem, item's error code in problem is indicated. Those items are;
  - GPS: Disconnected GPS antenna or faulty GPS antenna or GPS receiver (inside of the navigation unit).
  - Radio: Open or short to body ground in the guidance voice signal line.

Continue

Return to dealer menu picture.





## Dynamic test

Dynamic test	Service
drive forward Impulses : OK Rev. light : OK	
OK	

- On the "Dynamic test", diagnose for the vehicle speed signal and back-up light signal.
- When drive the vehicle forward and vehicle speed signal input to navigation unit, the display indicates "Impulses: OK".
- When drive the vehicle backward and back-up light signal input to navigation unit, the display indicates "Rev. light: OK".

Both "Impulses" and "Rev. light" are OK or select "OK"

Dynamic test	Service
OK!	
Continue	

- If both "Impulses" and "Rev. light" are OK, this picture is indicated.
- If there is a problem, item's code in problem is indicated. Those items are;
  - Impulses: Open in the vehicle speed signal wire.
  - Rev. light: Open in the back-up light signal wire.

Continue

Return to dealer menu picture.

# Picture Diagnosis

## Calibration

Calibration	Service
Vehicle type : M22 Tyre : 215/45 R17 new	
<div>Vehicle type</div> Tyre type	

- On the "Calibration", calibrate relationship of vehicle speed pulse and traveling distance by inputting the vehicle type and tyre type.
- "Vehicle type" and "Tyre" indicate current vehicle type and tyre type.
- "Tyre type" can select after performing "Vehicle type".

Vehicle type

Vehicle type	Service
Vehicle type : M22 Tyre : 215/45 R17 new	
<div>M22</div> M23/M20/M18/M16 A23/A20/A18 Special	

Select vehicle type.

- M22: M/T 2.2 ℓ
- M23/M20/M18/M16: M/T 2.3ℓ , 2.0 ℓ , 1.8 ℓ or 1.6 ℓ
- A23/A20/A18: A/T 2.3ℓ , 2.0 ℓ or 1.8 ℓ

NOTE: Do not select "SPECIAL". This item is for tuning at the factory.

Push the  
backspace key

Return to calibration picture.

Tyre type

To next page

Push the backspace key

Return to dealer menu picture.



## Tyre type

Tyre type	Service
Vehicle type : M22	
Tyre : 215/45 R17	
new	
<input type="checkbox"/> new	
<input type="checkbox"/> used	

Select the current tyre is new one or used one.

new or used

Tyre type	Service
Vehicle type : M22	
Tyre : 215/45 R17	
new	
205/50 R16	
195/60 R15	
185/70 R14	
Special	

Select tyre type.

NOTE: Do not select "SPECIAL".  
This item is for tuning at the factory.

Push the  
backspace key

Return to previous picture.

Push the backspace key

Return to calibration picture.

# Picture Diagnosis

---

## GPS status

On the "GPS status", one of following picture is indicated.

GPS status	Service
X Sat. sichtbar 0 sat. received Longitude : XXX° XX' XX"E Latitude : XXX° XX' XX"N	

The vehicle position is identified by received GPS signal.

GPS status	Service
X Sat. sichtbar 0 sat. received No GPS position	

The vehicle position cannot be identified, by the vehicle is behind of the buildings etc..

GPS status	Service
Error : GPS antenna or antenna cable defective	

Open in the GPS antenna wire or faulty GPS antenna.



### Sensor test

Sensor test	Service
Gyro : XXXX Speedom. : XXXXXX km/h : XXXX Direction : forward	

On the "Sensor test", diagnose for following items;

- Oscillation gyro
- Speedometer
- Vehicle speed signal
- Vehicle direction (forward or backward)

### Display item and diagnosis method

Display	Test	Display OK	Corrective measure in event of error
Gyro	Move vehicle and change direction.	Value change during steering motions within the valid range 30 – 994.	Replace the oscillation gyro and/or navigation unit.
Speedom.	Move vehicle forward.	Value increases during motion. (return to after 65535)	Check the wiring for connection and signal.
km/h	Move vehicle forward.	Display roughly matches the speedometer display ( $\pm 15\%$ ).	Conduct calibration.
Direction	Move gear lever into and out of reverse.	Display "backward" when gear lever is in reverse. Display "forward" when otherwise.	Check back-up light wiring.

### Keyboard test

Keyboard test	Service
Key pressed : Congestion	

Check the operation keys by pushing the key.

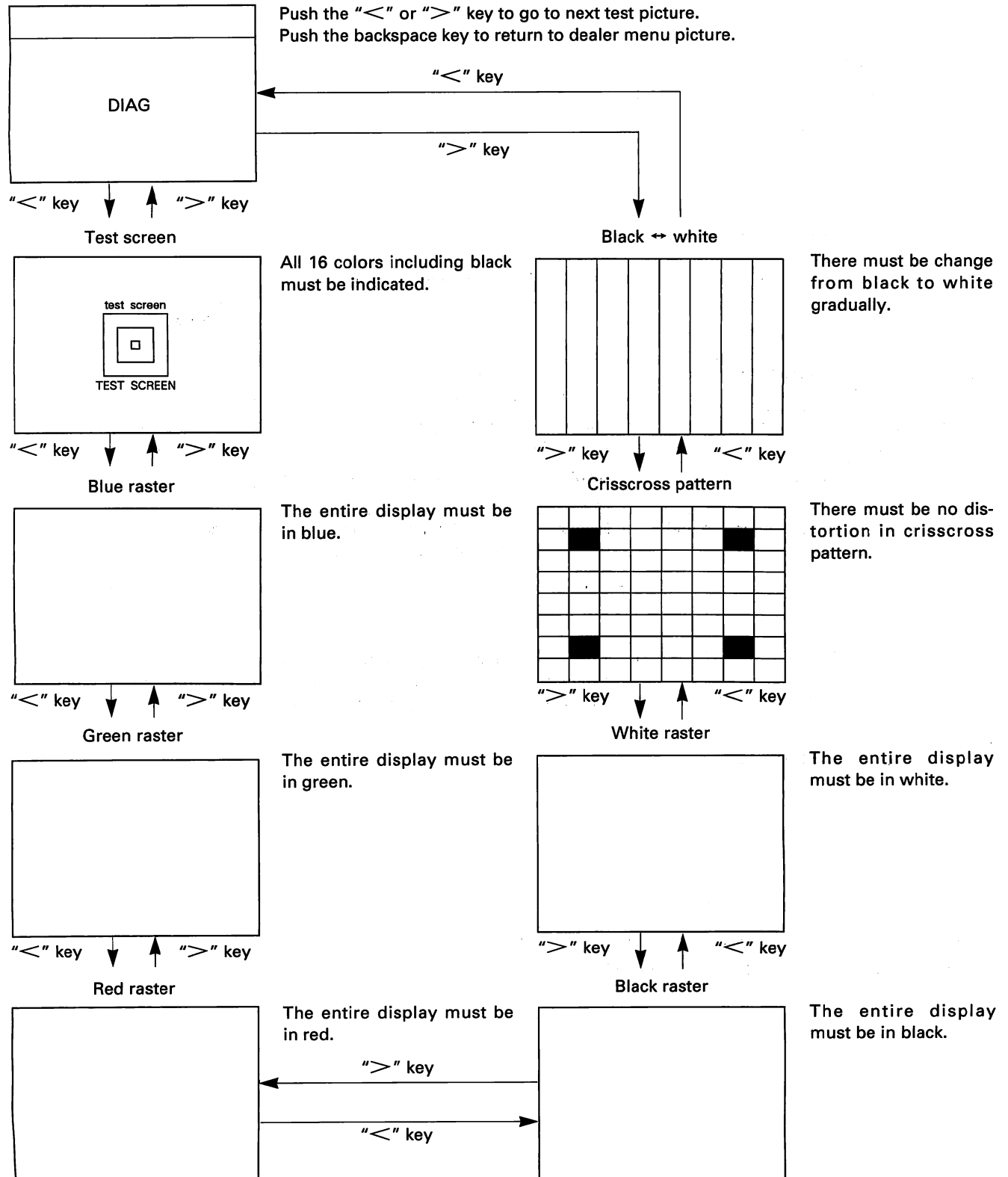
When push the backspace key, indicate "ESC" on the display. When push the backspace key again, return to dealer menu picture.

Operation key	Backspace	TC	Info	^	v	<	>	SEL
Display indication	ESC	Congestion	Info	↑	↓	←	→	SEL

# Picture Diagnosis

## LCD test

LCD test is used to check that the display indicates picture correctly.





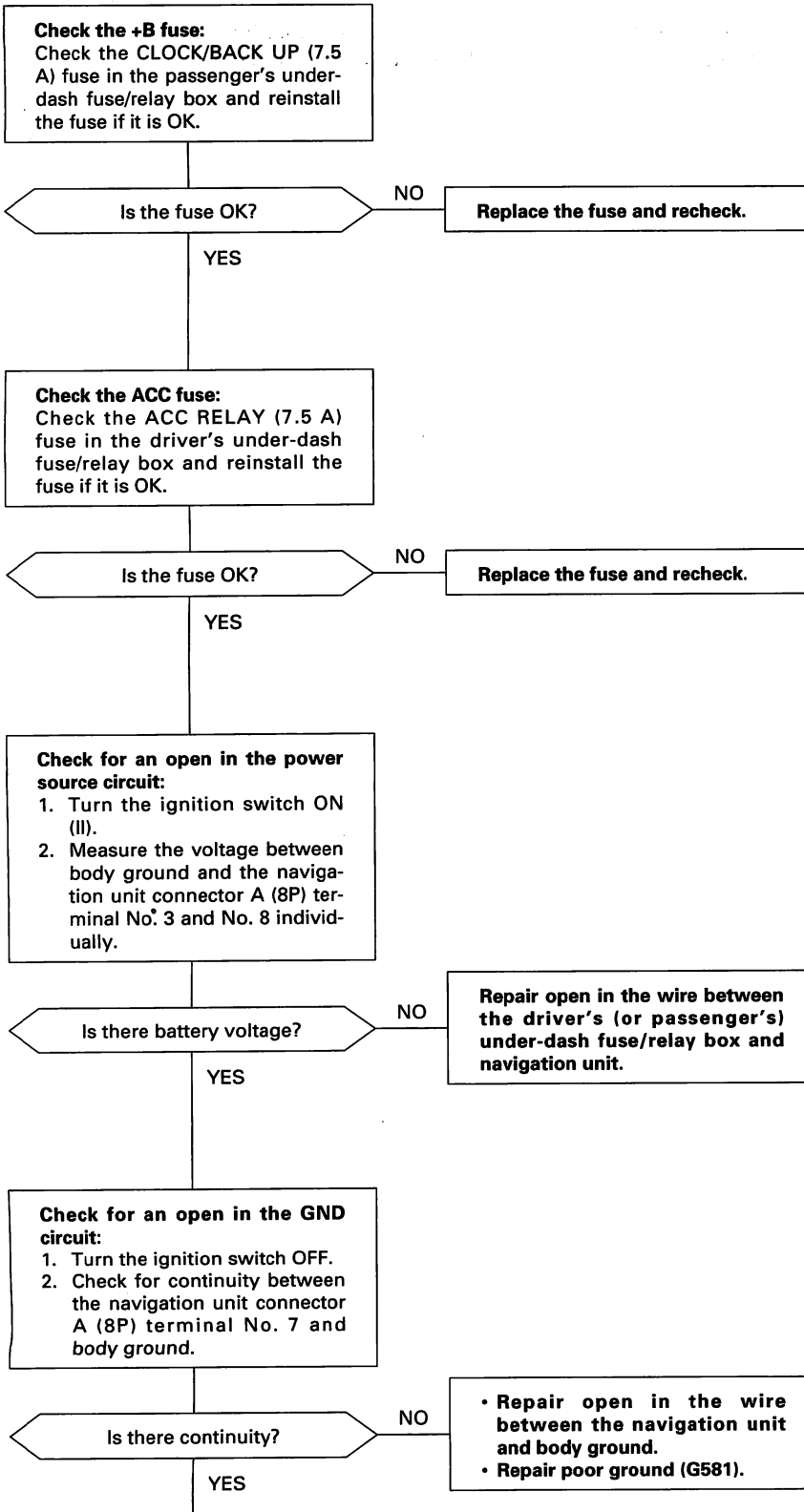
### Calibration values

Calibration values	Service
Nr.1 : XXXXX	
Nr.2 : XXXXX	
Nr.3 : XXXXX	
Nr.4 : XXXXX	

In this picture, you can check the previous calibration values.  
Push the backspace key to return to dealer menu picture.

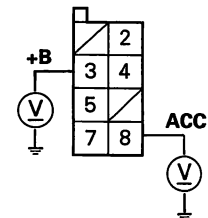
# Troubleshooting

## No picture is shown on the display

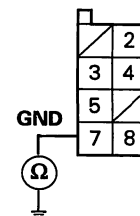


(To page 23-H-23)

NAVIGATION UNIT CONNECTOR A (8P)



Wire side of female terminals





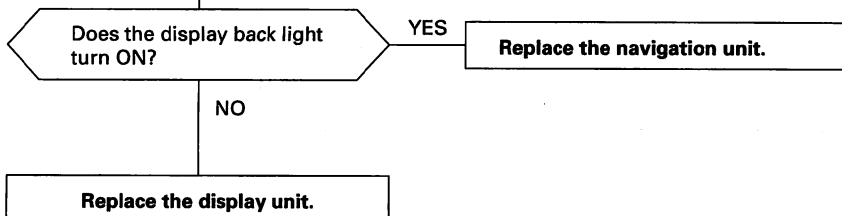
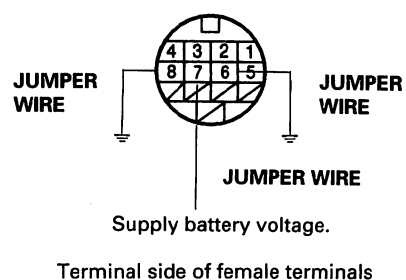


(From page 23-H-22)

- Check the display unit:**
1. Disconnect the display unit DIN 13P connector.
  2. Turn the ignition switch ON (II).
  3. Connect body ground and the display unit DIN 13P connector terminals No. 6 and No. 8 on the display unit individually with a jumper wire.
  4. Supply battery voltage to terminal No. 7.

**NOTE:** To check, shield the display unit from the sun with your hand.

**DISPLAY UNIT DIN 13P CONNECTOR (Unit side)**

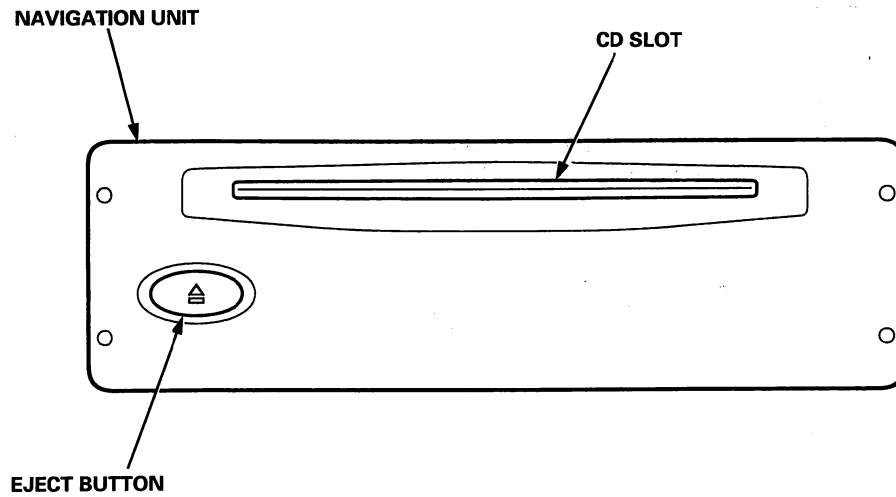


# CD-ROM

---

## Replacement

1. Turn the ignition switch ON (II).
2. Push the eject button.



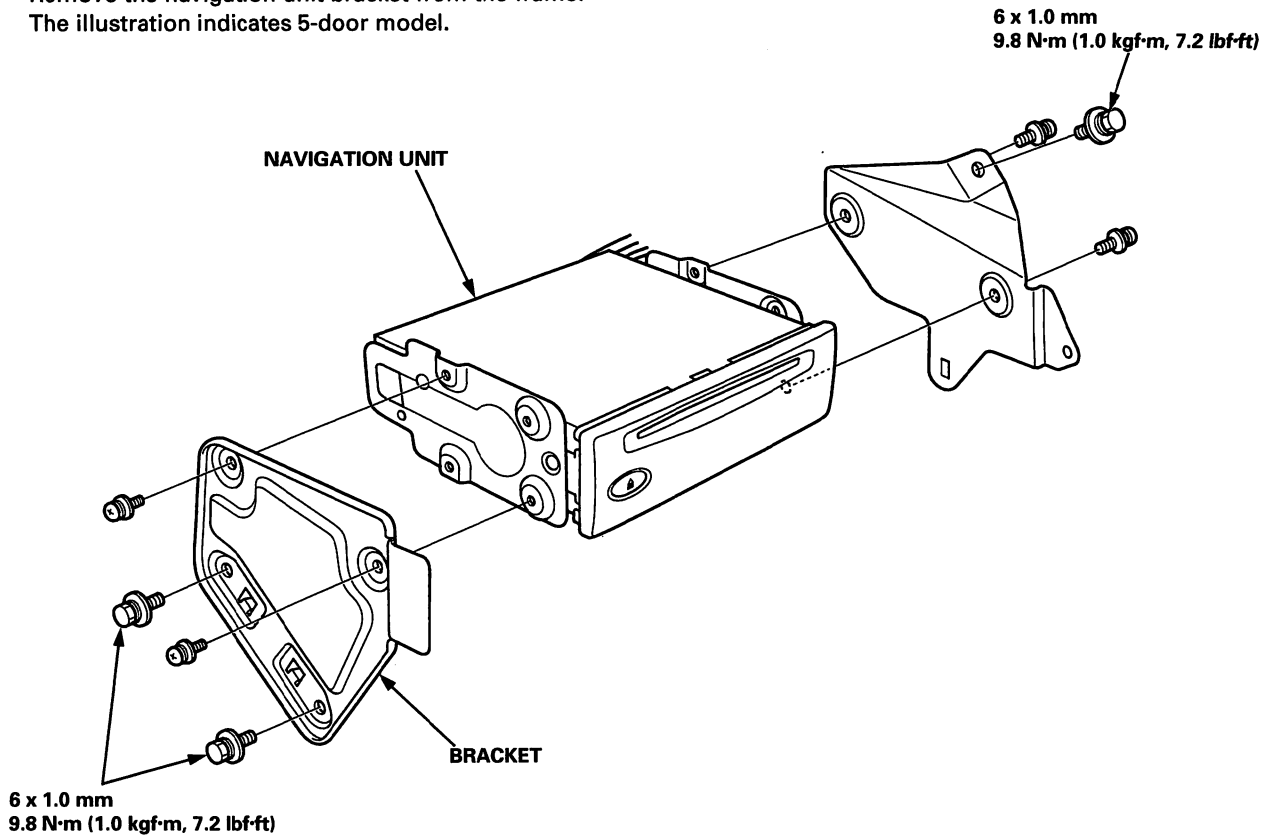
3. Remove the CD-ROM.
4. Insert the CD-ROM with the label facing up carefully into the CD slot until it is automatically pulled into the CD-ROM drive.

# Navigation Unit

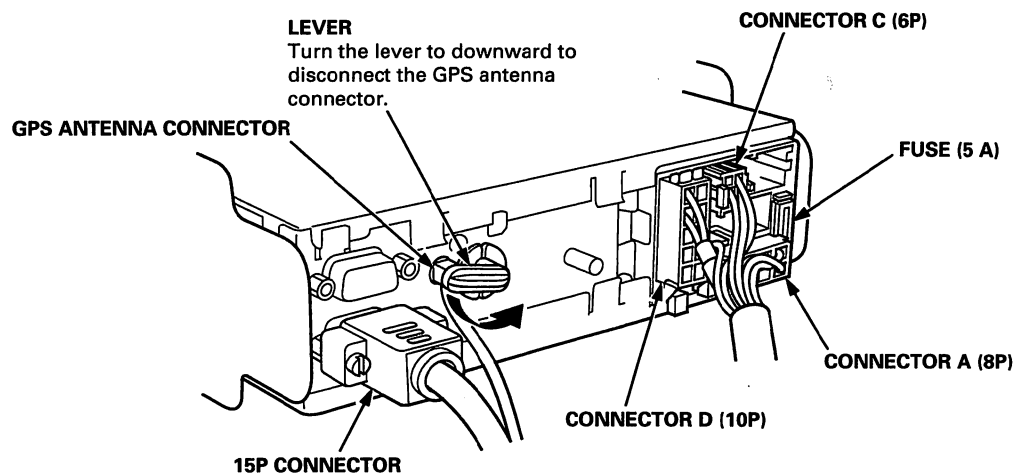


## Removal/Installation

1. Remove the left trunk side trim.
2. Remove the navigation unit bracket from the frame.  
The illustration indicates 5-door model.



3. Remove the navigation unit from the bracket.
4. Disconnect the connectors from the navigation unit.



5. Install the parts in the reverse order of removal.

## Restraints

### Supplemental Restraint System (SRS) Airbag/Seat Belt Tensioner/Side Airbag

**Special Tools ..... 24-2**

#### **Troubleshooting**

**Diagnostic Trouble Code (DTC)**

**Chart ..... 24-3**

**Fuse Box and Connector Locations ... 24-6**

**Flowcharts ..... 24-7**

**Side Impact Sensor Replacement ..... 24-9**

NOTE: Refer to the '99 Accord Shop Manual, P/N 62S1A00B for the items not shown in this section.

#### **Outline of Model Change**

- Side impact sensor has been changed (with Side Airbag types).

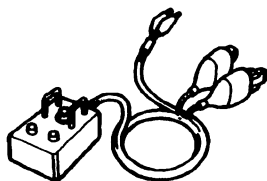


## Special Tools

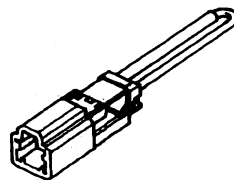
Ref. No.	Tool Number	Description	Qty	Remark
①*1	07HAZ – SG00500	Deployment Tool	1	
②*1	07PAZ – 0010100	SCS Short Connector	1	
③	07SAZ – TB4011A	SRS Inflator Simulator	1	
④	07TAZ – SZ5011A	SRS Simulator Lead C	1	
⑤*2	07TAZ – 001020A	Backprobe Adapter, 17 mm	2	
⑥	07XAZ – S1A0200	SRS Simulator Lead D	1	
⑦	07YAZ – S3A0100	SRS Simulator Lead H	1	

\*1: Included in SRS Tool Set 07MAZ – SM5000B.

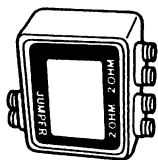
\*2: Use with the stacking patch cords from T/N 07SAZ – 001000A, Backprobe Set.



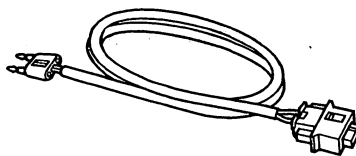
①



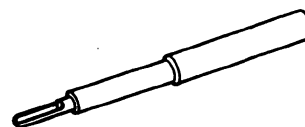
②



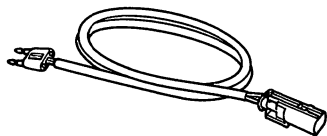
③



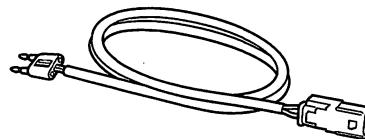
④



⑤



⑥



⑦



## Diagnostic Trouble Code (DTC) Chart

SRS indicator light	DTC	Possible cause	Corrective action	See page
doesn't come on	none (doesn't come on)	Faulty SRS indicator light circuit	Troubleshooting	24-38*1
comes on	none (doesn't go off)	Faulty SRS indicator light circuit, internal failure of SRS unit, faulty SRS power supply (VB line)	Troubleshooting	24-40*1
	1-1	Open or increased resistance in the driver's airbag inflator	Troubleshooting	24-43*1
	1-3	Short to another wire or decreased resistance in the driver's airbag inflator		24-44*1
	1-4	Short to power in the driver's airbag inflator		24-45*1
	1-5	Short to ground in the driver's airbag inflator		24-46*1
	2-1	Open or increased resistance in the passenger's airbag inflator	Troubleshooting	24-47*1
	2-3	Short to another wire or decreased resistance in the passenger's airbag inflator		24-48*1
	2-4	Short to power in the passenger's airbag inflator		24-49*1
	2-5	Short to ground in the passenger's airbag inflator		24-50*1
	3-1	Open or increased resistance in the left side seat belt tensioner	Troubleshooting	24-51*1
	3-3	Short to another wire or decreased resistance in the left side seat belt tensioner		24-52*1
	3-4	Short to power in the left side seat belt tensioner		24-53*1
	3-5	Short to ground in the left side seat belt tensioner		24-54*1
	4-1	Open or increased resistance in the right side seat belt tensioner	Troubleshooting	24-55*1
	4-3	Short to another wire or decreased resistance in the right side seat belt tensioner		24-56*1
	4-4	Short to power in the right side seat belt tensioner		24-57*1
	4-5	Short to ground in the right side seat belt tensioner		24-58*1

NOTE:

\*1: Refer to the '99 Accord Shop Manual, P/N 62S1A00B.

(cont'd)

# Troubleshooting

## Diagnostic Trouble Code (DTC) Chart (cont'd)

SRS indicator light	DTC	Possible cause	Corrective action	See page
comes on	5-1	Internal failure of the SRS unit	SRS unit replacement	24-83*1
	5-2			
	5-3			
	5-4			
	5-5			
	5-8			
	6-1	Internal failure of the SRS unit	SRS unit replacement	24-83*1
	6-2			
	6-3			
	6-4			
	6-5			
	6-6			
	6-7			
	6-8			
	7-1	Internal failure of the SRS unit	SRS unit replacement	24-83*1
	7-2			
	7-3			
	8-1	Internal failure of the SRS unit	SRS unit replacement	24-83*1
	8-2			
	8-3			
	8-4			
	8-5			
	8-6			
	8-7			
	8-8			
	9-1*2	Internal failure of the SRS unit	SRS unit replacement	24-83*1
	9-2*3			

### NOTE:

\*1: Refer to the '99 Accord Shop Manual, P/N 62S1A00B.

\*2: In case of an intermittent failure DTC 9-1, it means there was an internal failure of the SRS unit or faulty SRS indicator light circuit. Do the troubleshooting for intermittent failures.

\*3: In case of an intermittent failure DTC 9-2, it means there was an internal failure or the power supply (VB line). Do the troubleshooting for intermittent failures.



SRS indicator light	DTC	Possible cause	Corrective action	See page
comes on	10-1	Airbags and seat belt tensioners deployed	SRS unit and deployment related parts replacement	24-83*1
	10-2	Left side side airbag deployed		
	10-3	Right side side airbag deployed		
	10-4	Airbags and seat belt tensioners and left side side airbag deployed		
	10-5	Airbags and seat belt tensioners and right side side airbag deployed		
	10-6	Side airbags deployed		
	10-7	Airbags and seat belt tensioners and side airbags deployed		
	11-1	Open or increased resistance in the left side side airbag inflator	Troubleshooting	24-59*1
	11-3	Short to another wire or decreased resistance in the left side side airbag inflator		24-60*1
	11-4	Short to power in the left side side airbag inflator		24-61*1
	11-5	Short to ground in the left side side airbag inflator		24-62*1
	12-1	Open or increased resistance in the right side side airbag inflator	Troubleshooting	24-63*1
	12-3	Short to another wire or decreased resistance in the right side side airbag inflator		24-64*1
	12-4	Short to power in the right side side airbag inflator		24-65*1
	12-5	Short to ground in the right side side airbag inflator		24-66*1
	13-1	Internal failure of the left side side impact sensor	Left side side impact sensor replacement	24-84*1
	13-2			
	13-3	Faulty signal line of the left side side impact sensor	Troubleshooting	24-7
	13-4	Faulty power line of the left side side impact sensor		24-68*1
	14-1	Internal failure of the right side side impact sensor	Right side side impact sensor replacement	24-84*1
	14-2			
	14-3	Faulty signal line of the right side side impact sensor	Troubleshooting	24-8
	14-4	Faulty power line of the right side side impact sensor		24-71*1

NOTE:

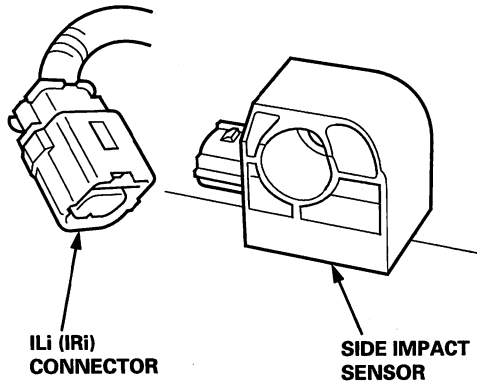
\*1: Refer to the '99 Accord Shop Manual, P/N 62S1A00B.



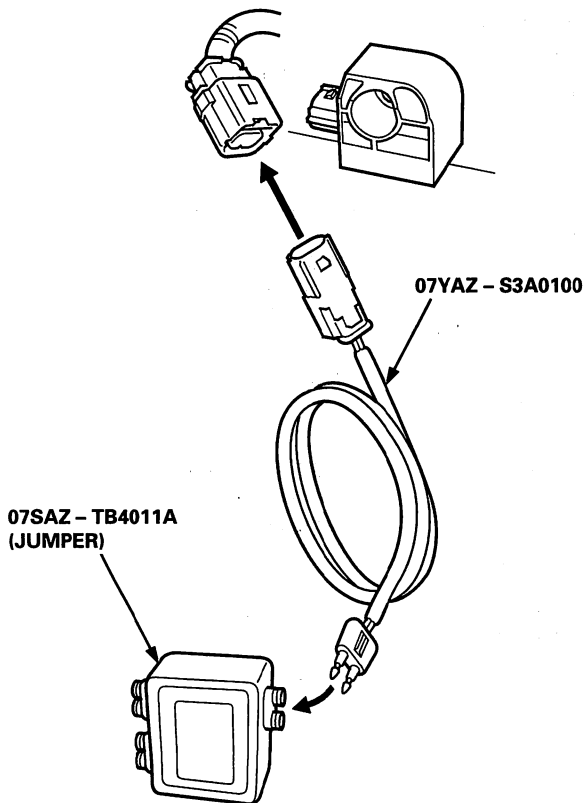
# Troubleshooting

## Fuse Box and Connector Locations

ILi connector (left side) or  
IRi connector (right side):



Connecting the special tool to the ILi (or IRi) connector:





## DTC 13-3

### ⚠ CAUTION

Follow the precautions/procedures described beforehand without fail or the airbags could accidentally deploy and cause damage or injuries.

#### Wiring Diagram:



#### Possible Causes of Failures:

- Faulty signal line between the U2o and ILi connectors.
- Faulty left side side impact sensor.
- Faulty SRS unit.

#### Try to reproduce the SRS indicator light:

1. Erase the DTC memory.
2. Turn the ignition switch ON (II), and check that the SRS indicator light comes on for about 6.5 seconds, and then goes off.

#### Does the SRS indicator light stay on?

YES

NO

Intermittent failure, system is OK at this time. See Troubleshooting Intermittent Failures.

#### Check for poor contact at the ILi connector:

1. Turn the ignition switch OFF, disconnect the negative battery cable, and wait for 3 minutes.
2. Disconnect the SLi connector from the SLo connector.
3. Check for connections between the ILi connector and the left side impact sensor.

#### Is the connections OK?

YES

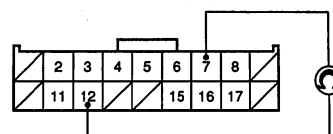
NO

Poor contact at the ILi connector; connect the ILi connector securely.

(A)

#### Check for an open in the SRS floor harness:

1. Disconnect the TL, TR and SR connectors.
  2. Disconnect the ILi connector from the left side impact sensor.
  3. Connect the special tool (jumper) to the ILi connector (see page 24-6).
  4. Disconnect the U2o connector from the SRS unit.
  5. Check resistance between the No. 7 and No. 12 terminals of the U2o connector.
- There should be 0 – 1.0  $\Omega$ .



Wire side of female terminals.

#### Is the resistance as specified?

YES

NO

Open in the SRS floor harness; replace the SRS floor harness.

Faulty left side impact sensor or SRS unit; replace the left side impact sensor. If the problem is still present, replace the SRS unit.

(A)

# Troubleshooting

## DTC 14-3

### ⚠ CAUTION

Follow the precautions/procedures described beforehand without fail or the airbags could accidentally deploy and cause damage or injuries.

#### Wiring Diagram:



#### Possible Causes of Failures:

- Faulty signal line between the U2o and IRi connectors.
- Faulty right side side impact sensor.
- Faulty SRS unit.

#### Try to reproduce the SRS indicator light:

1. Erase the DTC memory.
2. Turn the ignition switch ON (II), and check that the SRS indicator light comes on for about 6.5 seconds, and then goes off.

#### Does the SRS indicator light stay on?

YES

NO

Intermittent failure, system is OK at this time. See Troubleshooting Intermittent Failures.

#### Check for poor contact at the IRi connector:

1. Turn the ignition switch OFF, disconnect the negative battery cable, and wait for 3 minutes.
2. Disconnect the SRi connector from the SRo connector.
3. Check for connections between the IRi connector and the right side impact sensor.

#### Is the connections OK?

YES

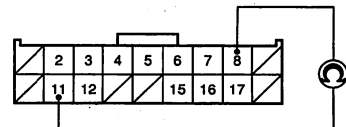
NO

Poor contact at the IRi connector; connect the IRi connector securely.

(A)

#### Check for an open in the SRS floor harness:

1. Disconnect the TL, TR, and SL connectors.
2. Disconnect the IRi connector from the right side impact sensor.
3. Connect the special tool (jumper) to the IRi connector (see page 24-6).
4. Disconnect the U2o connector from the SRS unit.
5. Check resistance between the No. 8 and No. 11 terminals of the U2o connector.  
There should be 0 – 1.0  $\Omega$ .



Wire side of female terminals.

#### Is the resistance as specified?

YES

NO

Open in the SRS floor harness; replace the SRS floor harness.

Faulty right side impact sensor or SRS unit; replace the right side impact sensor. If the problem is still present, replace the SRS unit.

(A)



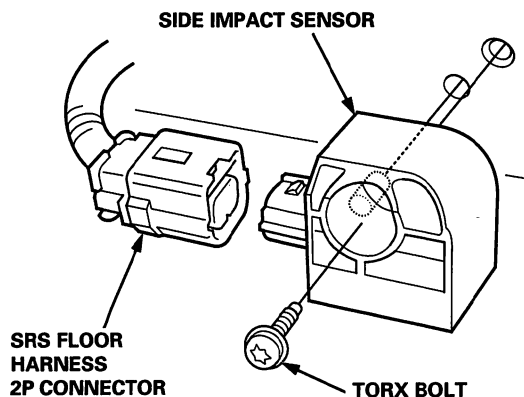
## Replacement

### ⚠ CAUTION

Removal of the airbag must be performed according to the precautions/procedures described before.

#### Removal

1. Disconnect the negative battery cable, and wait at least 3 minutes before beginning work.
2. Remove:
  - Seat assembly
  - Front side trim
  - Center pillar lower trim panel
  - Lower anchor bolt
3. Turn up the carpet, then disconnect the SRS floor harness 2P connector from the side impact sensor.



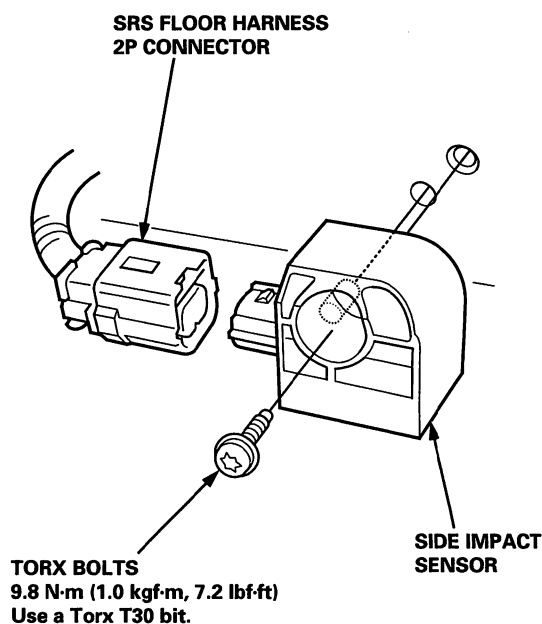
4. Remove the Torx bolt using a Torx T30 bit, then remove the side impact sensor.

#### Installation

### ⚠ CAUTION

Be sure to install the harness wires so that they are not pinched or interfering with other parts.

1. Install the new side impact sensor with a new Torx bolt, then connect the SRS floor harness 2P connector to the side impact sensor.



2. Reconnect the negative battery cable.
3. After installing the side impact sensor, confirm proper system operation: Turn the ignition switch ON (II); the SRS indicator light should come on for about 6.5 seconds and then go off.

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