

NOT FOR

ACURA

RESELL

THIS MANUAL WAS GIVEN OUT FOR FREE
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IF YOU PAID FOR THIS ON EBAY OR ANY PLACE
GET YOUR MONEY BACK.

DONT LET SOME DUMBASS MAKE
MAKE MONEY ON SHIT YOU CAN GET
FOR FREE.

INTEGRA

Service Manual 1998

88hf, SPOONMAN, FFSLIDE

INTRODUCTION

How to Use This Manual

This manual is divided into 23 sections. The first page of each section is marked with a black tab that lines up with its corresponding thumb index tab on this page and the back cover. 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.

Each section includes:

1. A table of contents, or an exploded view index showing:
 - Parts disassembly sequence.
 - Bolt torques and thread sizes.
 - Page references to descriptions in text.
2. Disassembly/assembly procedures and tools.
3. Inspection.
4. Testing/troubleshooting.
5. Repair.
6. Adjustments.

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 is to help prevent damage to the vehicle, other property, 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, not 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 test, figures, and tables.

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Specifications apply to U.S.A. and Canada

HONDA MOTOR CO., LTD.
Service Publication Office

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

*General Info



Special Tools



Specifications

specs

Maintenance



Engine



Cooling



Fuel and Emissions



*Transaxle



*Steering



Suspension



*Brakes
(Including ABS)



*Body



*Heater and
Air Conditioner



*Electrical
(Including SRS)





General Information

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Chassis and Paint Codes

U.S. Model

Vehicle Identification Number

JH4 DB7 55 * W S 000001

Manufacturer, Make and

Type of Vehicle

JH4: HONDA MOTOR CO., LTD.

ACURA Passenger vehicle

Line, Body and Engine Type

DB7: INTEGRA 4-door/B18B1

DB8: INTEGRA 4-door/B18C1

DC2: INTEGRA 3-door/B18C1, B18C5

DC4: INTEGRA 3-door/B18B1

Body Type and Transmission Type

3: 2-door Hatchback/5-speed Manual

4: 2-door Hatchback/4-speed Automatic

5: 4-door Sedan/5-speed Manual

6: 4-door Sedan/4-speed Automatic

Vehicle Grade (Series)

1: Type R

4: RS

5: LS

6: GS

8: GS-R

9: GS-R with leather seats

Check Digit

Model Year

W: 1998

Factory Code

S: Suzuka Factory in Japan

Serial Number

Engine Number

B18B1 - 5300001

Engine Type

B18B1: 1.8 l DOHC Sequential Multiport Fuel-injected engine

B18C1, B18C5: 1.8 l DOHC VTEC Sequential Multiport Fuel-injected engine

Serial Number

Transmission Number

S80 - 3000001

Transmission Type

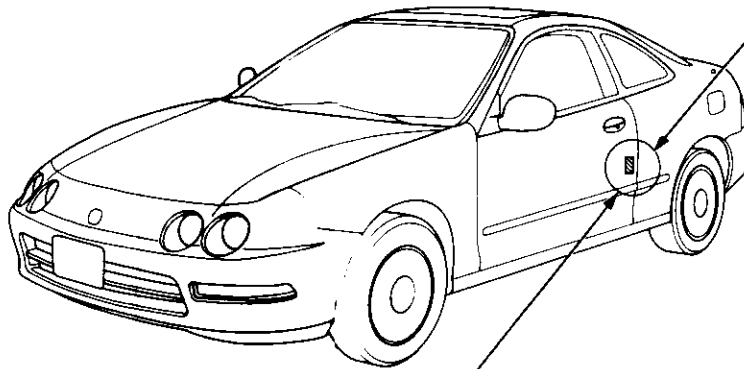
S80: Manual

S4XA: Automatic

Serial Number

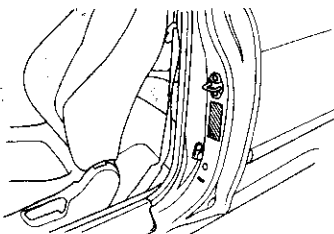
Paint Code

**COLOR
G-82P**



Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification

3-door



4-door



Paint Code

Paint Code	Color
B-74P	Adriatic Blue Pearl
B-90P*3	Supersonic Blue Pearl
G-82P	Cypress Green Pearl
NH-0*3	Championship White
NH-538	Frost White
NH-583M*3	New Vogue Silver Metallic
NH-592P*3	Flamenco Black Pearl
R-505P	Cayenne Red Pearl
R-81*3	Milano Red

*3: 3-door



Canada Model

Vehicle Identification Number _____
 JH4 DC2 3 8 * W S 800001

Manufacturer, Make and Type of Vehicle _____
 JH4: HONDA MOTOR CO., LTD.
 ACURA Passenger car

Line, Body and Engine Type _____
 DC2: INTEGRA 3-door/B18C1, B18C5
 DC4: INTEGRA 3-door/B18B1

Body Type and Transmission Type _____
 3: 2-door Hatchback/5-speed Manual
 4: 2-door Hatchback/4-speed Automatic

Vehicle Grade (Series) _____
 1: Type R
 4: RS
 5: LS
 6: LS with moonroof
 7: GS
 8: GS-R

Check Digit _____

Model Year _____
 W: 1998

Factory Code _____
 S: Suzuka Factory in Japan

Serial Number _____

Engine Number _____
 B18B1 - 570000*

Engine Type _____
 B18B1: 1.8 l DOHC Sequential Multiport Fuel-injected engine
 B18C1, B18C5: 1.8 l DOHC VTEC Sequential Multiport Fuel-injected engine

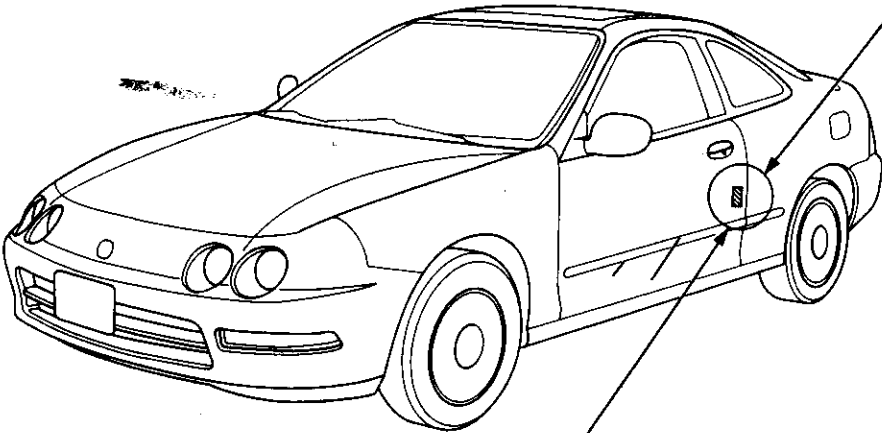
Serial Number _____

Transmission Number _____
 S80 - 3000001

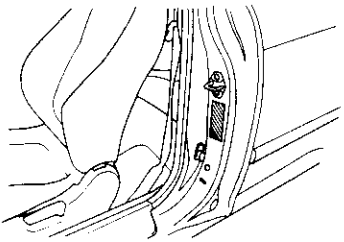
Transmission Type _____
 S80: Manual
 S4XA: Automatic

Serial Number _____

Paint Code _____
COLOR NH-0



Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification

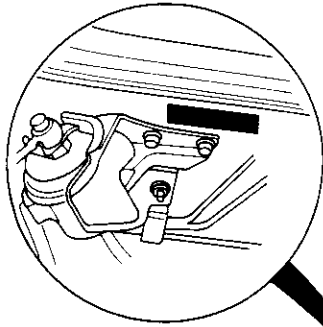


Paint Code

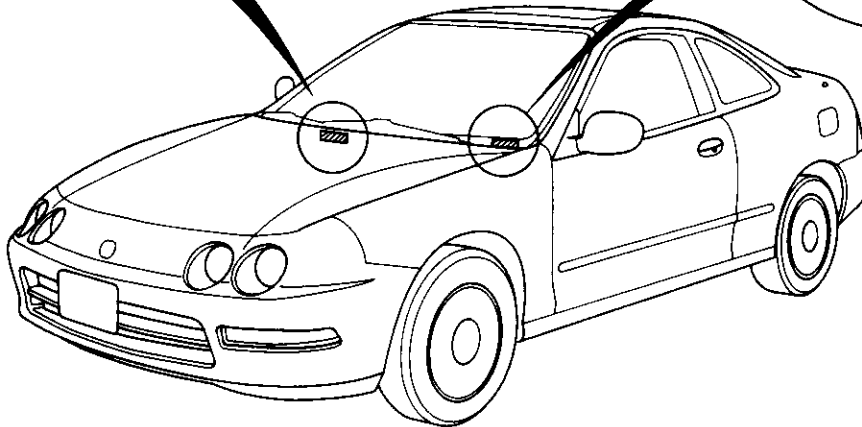
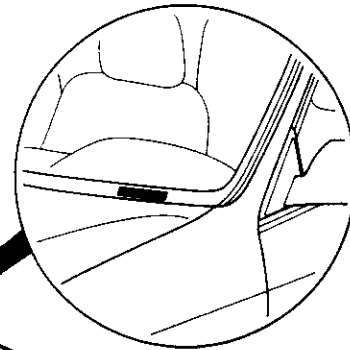
Paint Code	Color
B-90P	Supersonic Blue Pearl
G-82P	Cypress Green Pearl
NH-0	Championship White
NH-592P	Starlight Black Pearl
NH-597M	Citrus Silver Metallic
R-81	Milano Red

Identification Number Locations

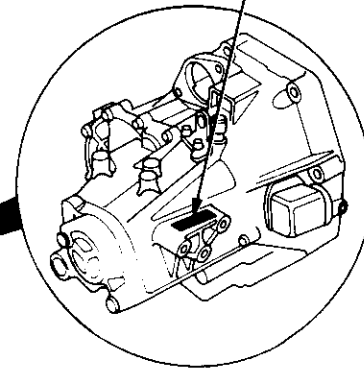
Vehicle Identification Number (VIN)



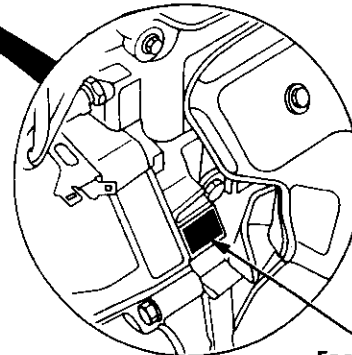
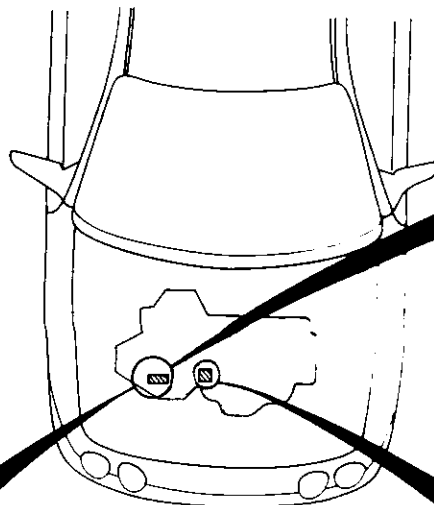
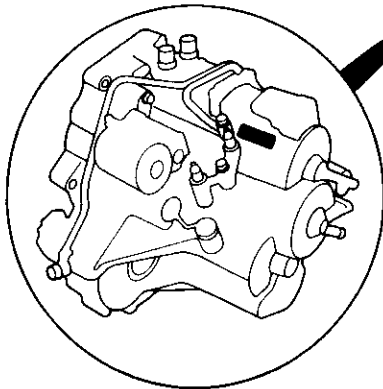
Vehicle Identification Number (VIN)



Transmission Number (Manual)

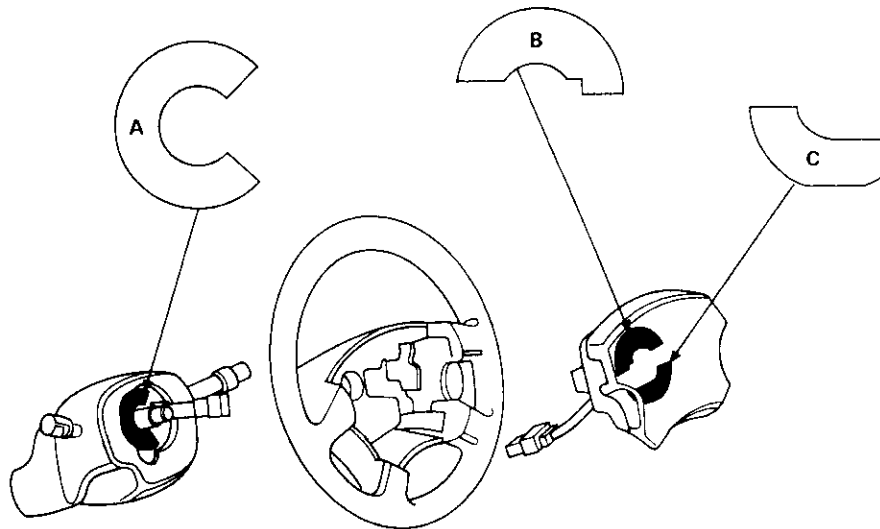


Transmission Number (Automatic)



Engine Number

Warning/Caution Label Locations



A: CABLE REEL CAUTION

SRS

INSTALLATION OF THE SRS CABLE REEL IS CRITICAL TO THE PROPER OPERATION OF THE SRS SYSTEM, REFER TO THE SERVICE MANUAL FOR DETAILED INSTALLATION INSTRUCTIONS.

B: DRIVER MODULE DANGER

⚠ DANGER

EXPLOSIVE/FLAMMABLE

STORAGE TEMPERATURES MUST NOT EXCEED 200°F (93°C). FOR PROPER HANDLING, STORAGE, AND DISPOSAL PROCEDURES REFER TO SERVICE MANUAL, SRS SUPPLEMENT.

FIRST AID

IF CONTENTS ARE SWALLOWED, INDUCE VOMITING. FOR EYE CONTACT, FLUSH EYES WITH WATER FOR 15 MINUTES. IN EVERY CASE, GET PROMPT MEDICAL ATTENTION.

KEEP OUT OF REACH OF CHILDREN.

C: DRIVER MODULE WARNING

⚠ WARNING

THE AIRBAG INFLATOR IS EXPLOSIVE, AND IF ACCIDENTALLY DEPLOYED, CAN SERIOUSLY HURT OR KILL YOU.

- DO NOT USE ELECTRICAL TEST EQUIPMENT OR PROBING DEVICES. THEY CAN CAUSE ACCIDENTAL DEPLOYMENT.
- NO SERVICEABLE PARTS INSIDE. DO NOT DISASSEMBLE.
- PLACE AIRBAG UPRIGHT WHEN REMOVED.
- FOLLOW SERVICE MANUAL INSTRUCTIONS CAREFULLY.

D: SRS INFORMATION

U.S. Model

WARNING

DEATH OR SERIOUS INJURY CAN OCCUR.

- CHILDREN AGES 12 AND UNDER CAN BE KILLED BY THE AIRBAG.
- THE BACK SEAT IS THE SAFEST PLACE FOR CHILDREN.
- NEVER PUT A REAR-FACING CHILD SEAT IN THE FRONT.
- SIT AS FAR BACK AS POSSIBLE FROM THE AIRBAG.
- ALWAYS USE SEAT BELTS AND CHILD RESTRAINTS.

Canada Model

CAUTION

TO AVOID SERIOUS INJURY:

- FOR MAXIMUM SAFETY PROTECTION IN ALL TYPES OF CRASHES, YOU MUST ALWAYS WEAR YOUR SAFETY BELT.
- DO NOT INSTALL REARWARD FACING CHILD SEATS IN ANY FRONT PASSENGER SEAT POSITION.
- DO NOT SIT OR LEAN UNNECESSARILY CLOSE TO THE AIRBAG.
- DO NOT PLACE ANY OBJECTS OVER THE AIR BAG OR BETWEEN THE AIR BAG AND YOURSELF.
- SEE THE OWNER'S MANUAL FOR FURTHER INFORMATION AND EXPLANATIONS.

E: ASSISTANT INFORMATION

U.S. Model

AIR BAG WARNING
FLIP VISOR OVER

F: STEERING COLUMN NOTICE

NOTICE

TO PREVENT SRS DAMAGE, REMOVE STEERING WHEEL BEFORE REMOVING STEERING SHAFT CONNECTING BOLT.

G: MONITOR NOTICE

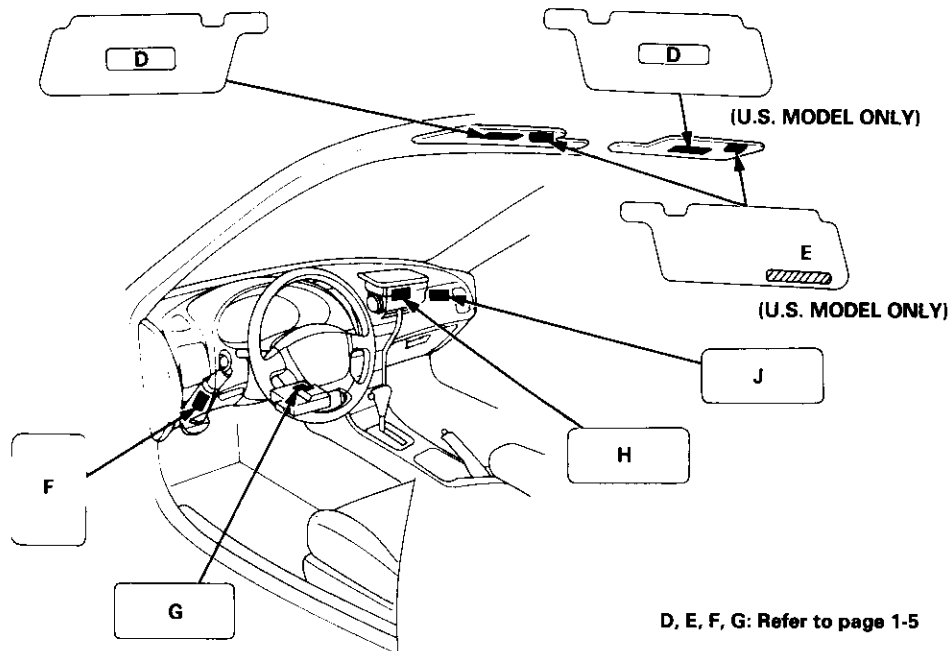
NOTICE SRS

- NO SERVICEABLE PARTS INSIDE
- REFER TO SERVICE MANUAL FOR DETAILED INSTRUCTIONS.

(cont'd)

Warning/Caution Label Locations

(cont'd)



D, E, F, G: Refer to page 1-5

H: FRONT SEAT PASSENGER MODULE DANGER

⚠ DANGER

EXPLOSIVE/FLAMMABLE

STORAGE TEMPERATURES MUST NOT EXCEED 200°F (93°C). FOR PROPER HANDLING, STORAGE, AND DISPOSAL PROCEDURES, REFER TO SERVICE MANUAL, SRS SUPPLEMENT.

FIRST AID

IF CONTENTS ARE SWALLOWED, INDUCE VOMITING. FOR EYE CONTACT, FLUSH EYES WITH WATER FOR 15 MINUTES. IN EVERY CASE, GET PROMPT MEDICAL ATTENTION. KEEP OUT OF REACH OF CHILDREN.

⚠ WARNING

THE AIRBAG INFLATOR IS EXPLOSIVE, AND IF ACCIDENTALLY DEPLOYED, CAN SERIOUSLY HURT OR KILL YOU.

- DO NOT USE ELECTRICAL TEST EQUIPMENT OR PROBING DEVICES. THEY CAN CAUSE ACCIDENTAL DEPLOYMENT.
- NO SERVICEABLE PARTS INSIDE. DO NOT DISASSEMBLE.
- PLACE AIRBAG UPRIGHT WHEN REMOVED.
- FOLLOW SERVICE MANUAL INSTRUCTIONS CAREFULLY.

I: SRS WARNING (ENGINE HOOD)

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

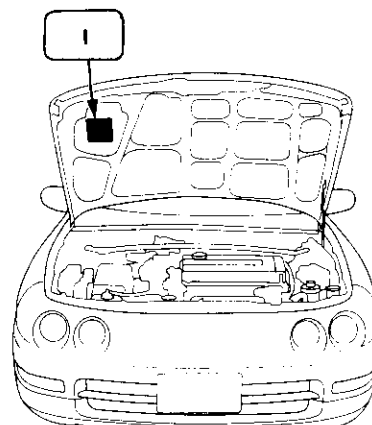
THIS VEHICLE IS EQUIPPED WITH DRIVER AND FRONT SEAT PASSENGER AIRBAGS.

ALL SRS ELECTRICAL WIRING AND CONNECTORS ARE COLORED YELLOW.

TAMPERING WITH, DISCONNECTING, OR USING ELECTRICAL TEST EQUIPMENT ON THE SRS WIRING CAN MAKE THE SYSTEM INOPERATIVE OR CAUSE ACCIDENTAL FIRING OF THE INFLATOR.

⚠ WARNING

THE AIRBAG INFLATOR IS EXPLOSIVE, AND IF ACCIDENTALLY DEPLOYED, CAN SERIOUSLY HURT YOU. FOLLOW SERVICE MANUAL INSTRUCTIONS CAREFULLY.

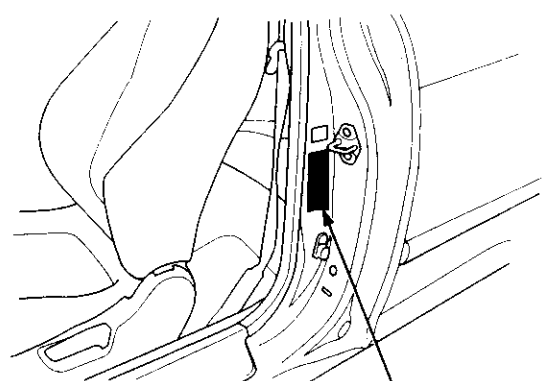
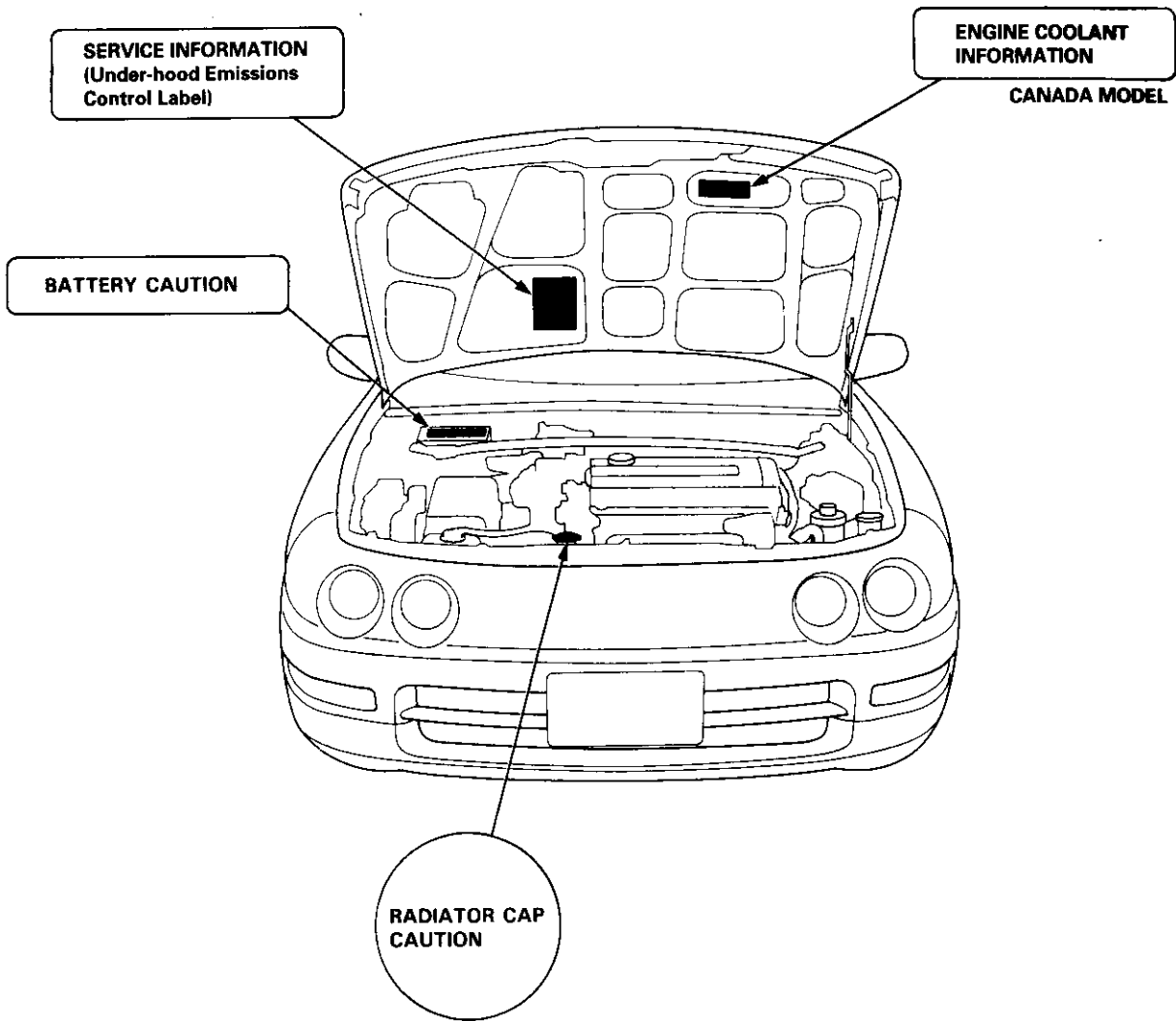


J: PASSENGER AIRBAG CAUTION

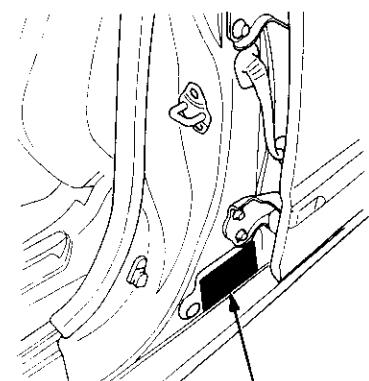
U.S. Model

WARNING

CHILDREN CAN BE KILLED OR INJURED BY A PASSENGER AIRBAG. THE BACK SEAT IS THE SAFEST PLACE FOR CHILDREN. AGES 12 AND UNDER. MAKE SURE ALL CHILDREN USE SEAT BELTS OR CHILD SEATS.



TIRE INFORMATION
(3-door)



TIRE INFORMATION
(4-door)

Under-hood Emissions Control Label

Emission Group Identification

Example:

▷ WHEN ADDING OR CHANGING THE COOLANT, USE **50/50** SOLUTION OF ***ACURA RECOMMENDED** ANTI-FREEZE/COOLANT AND WATER. NEVER DILUTE THE COOLANT, OR THE LIFE OF THE ENGINE MAY BE SERIOUSLY SHORTENED.

▷ REPLACE COOLANT AFTER **36 MONTHS** OR **72,000** km (**45,000** MILES), WHICHEVER COMES FIRST. THEREAFTER, REPLACE EVERY **2 YEARS** OR **48,000** km (**30,000** MILES), WHICHEVER COMES FIRST.

▷ CHECK OR ADD COOLANT AT THE RESERVE TANK, NOT THE RADIATOR.

▷ FOR FURTHER INFORMATION ON THE COOLING SYSTEM, READ THE OWNER'S MANUAL.

*CHECK WITH YOUR ACURA DEALER.

VEHICLE EMISSION CONTROL INFORMATION

THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1998 MODEL YEAR NEW MOTOR VEHICLES.

<p>CATALYST</p> <p>TWC/HO2S(2)/SF/OBD II CERTIFIED</p> <p>VALVE LASH IN: 0.17 ± 0.02 mm (COLD) EX: 0.19 ± 0.02 mm</p> <p>SPARK PLUG GAP 1.2 - 1.3 mm</p> <p>NO OTHER ADJUSTMENTS NEEDED.</p>	
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WHNXV018XA1
 WHNXE0080AAB
 (188,130-96 PROCEDURES)
 1.8L

HONDA MOTOR CO., LTD.

P72-A04

50ST (50 States):

THIS VEHICLE CONFORMS TO THE U.S. EPA AND THE STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1998 MODEL YEAR NEW MOTOR VEHICLES.

49ST (49 States/Federal):

THIS VEHICLE CONFORMS TO THE U.S. EPA REGULATIONS APPLICABLE TO 1998 MODEL YEAR NEW MOTOR VEHICLES.

CAL (California):

THIS VEHICLE CONFORMS TO THE U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1998 MODEL YEAR NEW PASSENGER CARS PROVIDED THAT THIS VEHICLE IS ONLY INTRODUCED INTO COMMERCE FOR SALE IN THE STATE OF CALIFORNIA.

Engine and Evaporative Families

Engine Family: W HNX V 01.8 XA1

Model Year _____
 W: 1998

Manufacturer _____
 HNX: Honda

Type _____
 V: Light Duty Vehicle/Passenger Car

Displacement _____

Sequence Characters _____

Evaporative Family: W HNX E 0080 AAB

Model Year _____
 W: 1998

Manufacturer _____
 HNX: Honda

Type _____
 E: EVAP

Canister Work Capacity (grams) _____

Sequence Characters _____

Lift and Support Points



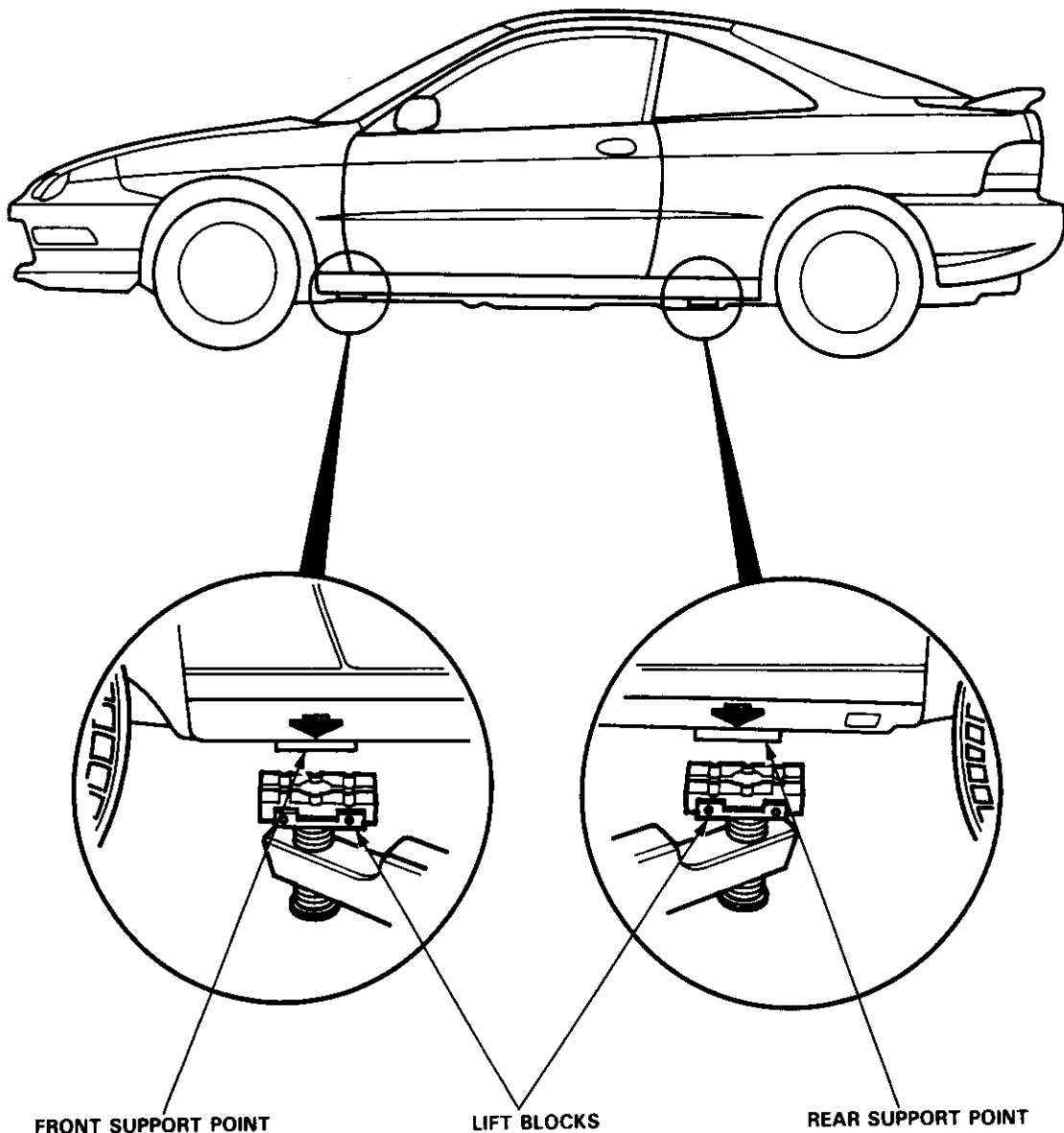
Lift and Safety Stands

▲ WARNING When heavy rear components such as suspension, fuel tank, spare tire hatch and trunk lid are to be removed, place additional weight in the luggage area before hoisting. When substantial weight is removed from the rear of the vehicle, the center of gravity may change and can cause the vehicle to tip forward on the hoist.

NOTE: Since each tire/wheel assembly weighs approximately 30 lbs (14 kg), placing the front wheels in the luggage area can assist with the weight distribution.

1. Place the lift blocks as shown.
2. Raise the hoist a few inches (centimeters), and rock the vehicle to be sure it is firmly supported.
3. Raise the hoist to full height, and inspect the lift points for solid support.

NOTE: Use the same support points to support the vehicle on safety stands.



Lift and Support Points

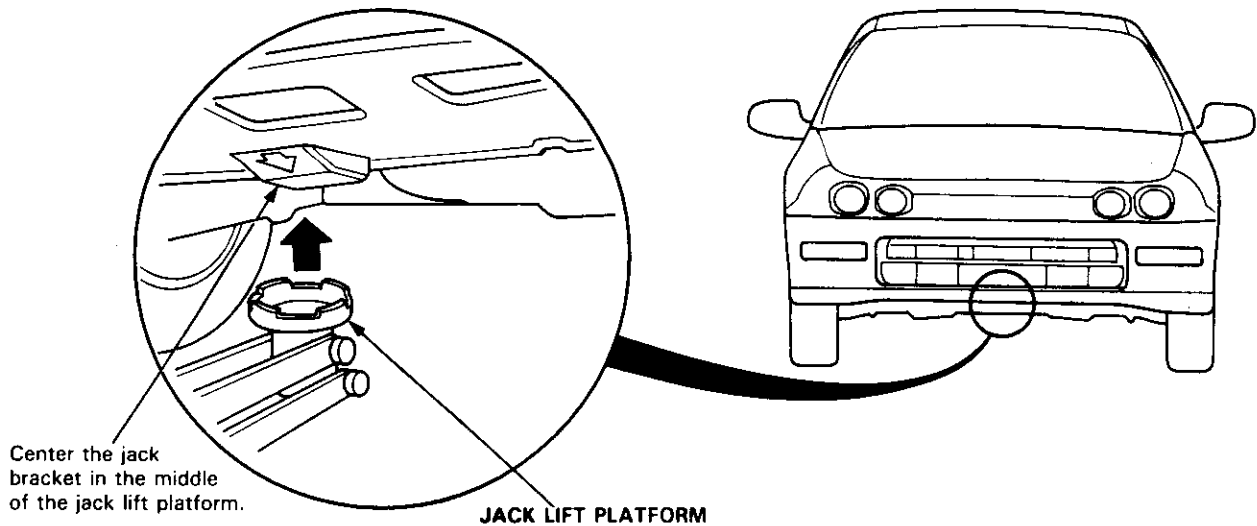
Floor Jack

1. Set the parking brake, and block the wheels that are *not being lifted*.
2. When lifting the rear of the vehicle, put the gearshift lever in reverse (Automatic transmission in **P** position).
3. Raise the vehicle high enough to insert the safety stands.
4. Adjust and place the safety stands so the vehicle will be approximately level, then lower the vehicle onto them.

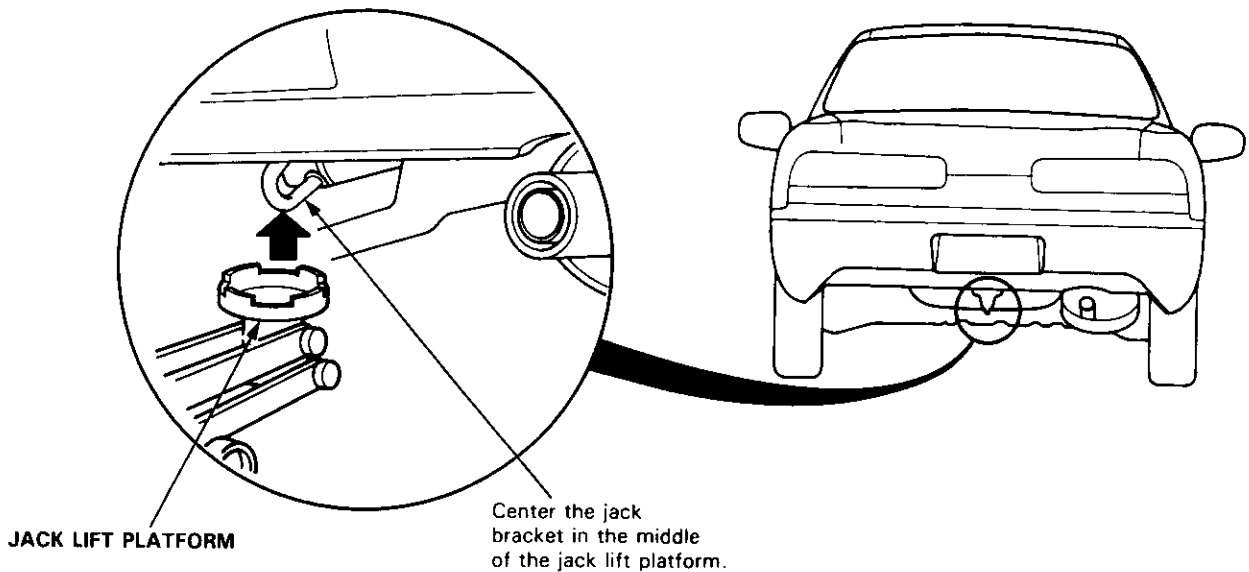
▲ WARNING

- **Always use safety stands when working on or under any vehicle that is supported by only a jack.**
- **Never attempt to use a bumper jack for lifting or supporting the vehicle.**

Front



Rear





If the vehicle needs to be towed, call a professional towing service. Never tow the vehicle behind another vehicle with just a rope or chain. It is very dangerous.

Emergency Towing

There are three popular methods of towing a vehicle:

Flat-bed Equipment — The operator loads the vehicle on the back of a truck. This is the best way of transporting the vehicle.

Wheel Lift Equipment — The tow truck uses two pivoting arms that go under the tires (front or rear) and lifts them off the ground. The other two wheels remain on the ground.

Sling-type Equipment — The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or suspension and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted.

If the vehicle cannot be transported by flat-bed, it should be towed with the front wheels off the ground. If due to damage, the vehicle must be towed with the front wheels on the ground, do the following:

Manual Transmission

- Release the parking brake.
- Shift the transmission to Neutral.

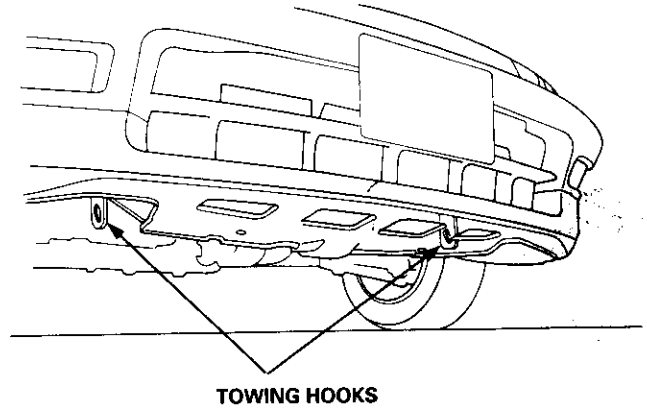
Automatic Transmission

- Release the parking brake.
- Start the engine.
- Shift to **D₄** position, then to **N** position.
- Turn off the engine.

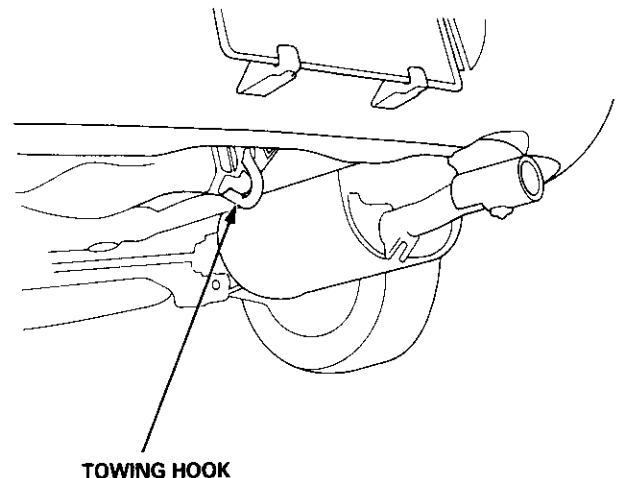
CAUTION:

- Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you cannot shift the transmission or start the engine (automatic transmission), your vehicle must be transported on a flat-bed.
- It is best to tow the vehicle no farther than 50 miles (80 km), and keep the speed below 35 mph (55 km/h).
- Trying to lift or tow your vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

Front:



Rear:



Service Precautions

Parts Marking Locations

To deter vehicle theft, certain major components are marked with the vehicle identification number (VIN). Original parts will have self-adhesive labels or labels attached with a break-off bolt. Replacement body parts will have self-adhesive labels, and replacement engine and transmission parts will be stamped with a code for spare parts.

NOTE

- Be careful not to damage the parts marking labels during body repairs, and mask the labels before repainting.
- Label location letters without parenthesis indicate original parts. Letters with parenthesis indicate replacement parts.

Label Locations

A or (A): Engine

B or (B): Transmission

C or (C): Front Bumper

D or (D): Hood

E or (E): Trunk Lid (4 Door)

F or (F): Tail Gate (3 Door)

G or (G): Rear Bumper

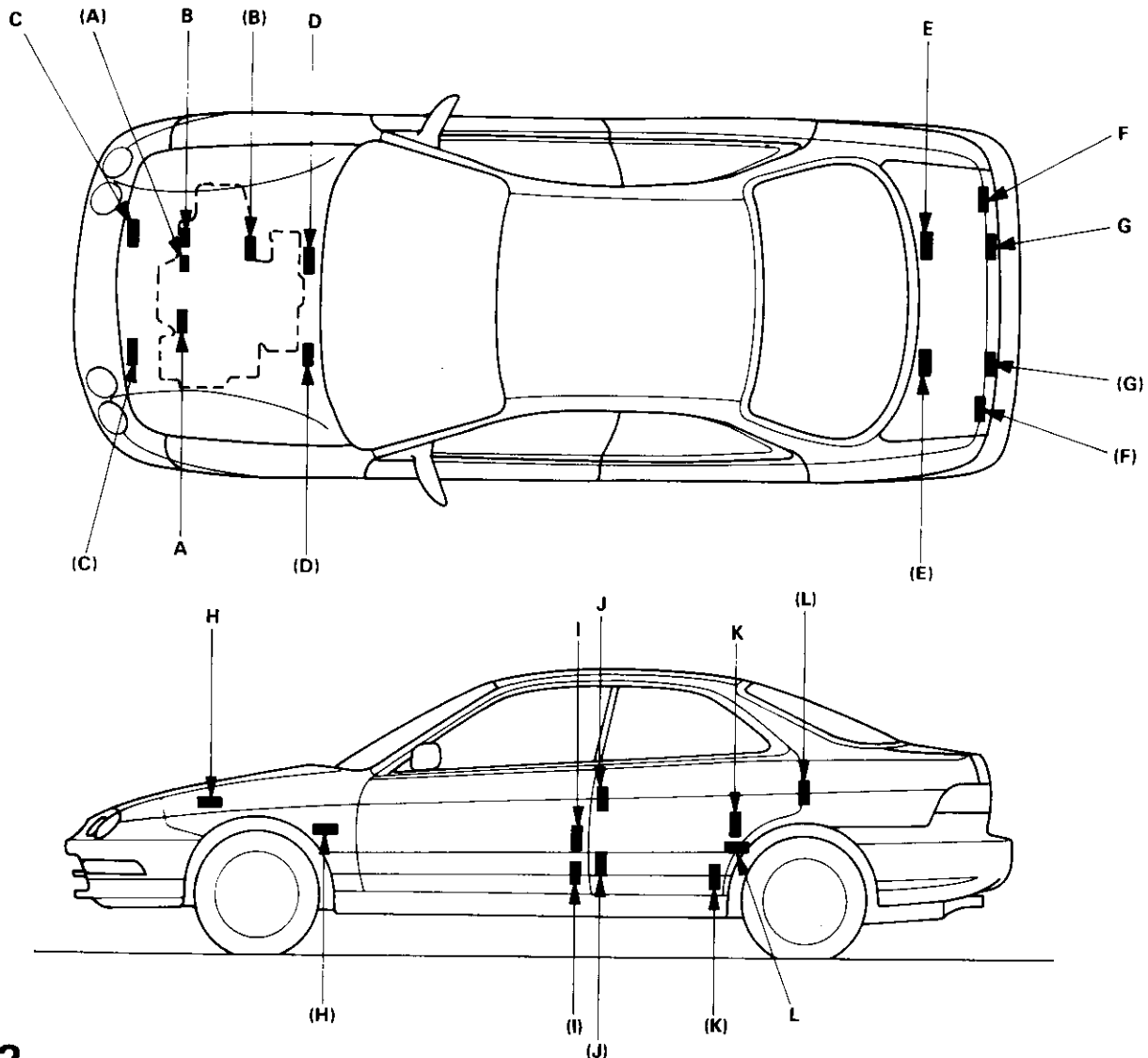
H or (H): Front Fender

I or (I): Front Door

J or (J): Outer Rear Panel (3 Door)

K or (K): Rear Door (4 Door)

L or (L): Outer Rear Panel (4 Door)



Specifications

Standards and Service Limits	3-2
Design Specifications	3-15
Body Specifications	3-18

Standards and Service Limits

Cylinder Head/Valve Train (B18B1 engine) — Section 6

	MEASUREMENT		STANDARD (NEW)		SERVICE LIMIT
Compression	250 rpm and wide open throttle kPa (kgf/cm ² , psi)	Nominal Minimum Maximum variation		1,370 (14.0, 199) 930 (9.5, 135) 200 (2.0, 28)	
Cylinder head	Warpage Height			131.95 – 132.05 (5.195 – 5.199)	0.05 (0.002)
Camshaft	End play			0.05 – 0.15 (0.002 – 0.006)	0.5 (0.02)
	Camshaft-to-holder oil clearance			0.030 – 0.069 (0.0012 – 0.0027)	0.15 (0.006)
	Total runout			0.03 (0.001) max.	0.04 (0.002)
	Cam lobe height	IN EX		33.716 (1.3274) 33.528 (1.3200)	
Valve	Valve clearance (Cold)*	IN		0.08 – 0.12 (0.003 – 0.005)	
		EX		0.16 – 0.20 (0.006 – 0.008)	
	Valve stem O.D.	IN		6.580 – 6.590 (0.2591 – 0.2594)	6.55 (0.258)
		EX		6.550 – 6.560 (0.2579 – 0.2583)	6.52 (0.257)
	Stem-to-guide clearance	IN		0.02 – 0.05 (0.001 – 0.002)	0.08 (0.003)
		EX		0.05 – 0.08 (0.002 – 0.003)	0.11 (0.004)
Valve seat	Width	IN		1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)
		EX		1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)
	Stem installed height	IN		40.765 – 41.235 (1.6049 – 1.6234)	41.485 (1.6333)
		EX		42.765 – 43.235 (1.6837 – 1.7022)	43.485 (1.7120)
Valve spring	Free length (Reference)	IN	NH	41.27 (1.625)	
			CH	41.28 (1.625)	
		EX		44.32 (1.745)	
Valve guide	I.D.	IN		6.61 – 6.63 (0.260 – 0.261)	6.65 (0.262)
		EX		6.61 – 6.63 (0.260 – 0.261)	6.65 (0.262)
	Installed height	IN		13.75 – 14.25 (0.541 – 0.561)	
		EX		15.75 – 16.25 (0.620 – 0.640)	

*: Measured between the camshaft and rocker arm.
 NH: NIHON HATSUJO manufactured valve spring
 CH: CHUO HATSUJO manufactured valve spring

Engine Block (B18B1 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	81.00 - 81.02 (3.189 - 3.190)		81.07(3.192)		
	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	80.98 - 80.99 (3.188 - 3.189)		80.97 (3.188)		
	Clearance in cylinder	0.01 - 0.04 (0.0004 - 0.0016)		0.05 (0.002)		
	Groove width (For ring)	Top	1.030 - 1.040 (0.0406 - 0.0409)		1.06 (0.042)	
		Second	1.230 - 1.240 (0.0484 - 0.0488)		1.26 (0.050)	
Piston ring	Ring-to-groove clearance	Oil	2.805 - 2.820 (0.1104 - 0.1110)		2.84 (0.112)	
		Top	R	0.045 - 0.070 (0.0018 - 0.0028)		0.13 (0.005)
			T	0.040 - 0.065 (0.0016 - 0.0026)		0.13 (0.005)
	Ring end gap	Top	R	0.20 - 0.35 (0.008 - 0.014)		0.60 (0.024)
			T	0.20 - 0.30 (0.008 - 0.012)		0.60 (0.024)
		Second	R	0.40 - 0.55 (0.016 - 0.022)		0.70 (0.028)
			T	0.20 - 0.50 (0.008 - 0.020)		0.70 (0.028)
		Oil	0.20 - 0.45 (0.008 - 0.018)		0.70 (0.028)	
Piston Pin	O.D.	20.994 - 21.000 (0.8265 - 0.8268)		—		
	Pin-to-piston clearance	0.010 - 0.022 (0.0004 - 0.0009)		—		
Connecting rod	Pin-to-rod interference	0.013 - 0.032 (0.0005 - 0.0013)		—		
	Small end bore diameter	Nominal	20.968 - 20.981 (0.8255 - 0.8260)		—	
	Large end bore diameter		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, 4 and 5 journals		54.976 - 55.000 (2.1644 - 2.1654)		
		No. 3 journal		54.970 - 54.994 (2.1642 - 2.1651)		
		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	0.03 (0.001) max.		0.05 (0.002)		
	Bearing	Main bearing-to-journal oil clearance	No. 1, 2, 4 and 5 journals		0.024 - 0.042 (0.0009 - 0.0017)	
No. 3 journal			0.030 - 0.048 (0.0012 - 0.0019)			
Rod bearing-to-journal oil clearance		No. 1, 2, 4 and 5 journals		0.020 - 0.038 (0.0008 - 0.0015)		
		No. 3 journal		0.020 - 0.038 (0.0008 - 0.0015)		

R: RIKEN manufactured piston ring

T: TEIKOKU PISTON RING manufactured piston ring

Standards and Service Limits

Cylinder Head/Valve Train (B18C1, B18C5 engines) — Section 6

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT	
Compression	250 rpm and wide open throttle kPa (kgf/cm ² , psi)	Nominal Minimum Maximum variation	1,860 (19.0, 270) 930 (9.5, 135) 200 (2.0, 28)		
Cylinder head	Warpage Height		141.95 – 142.05 (5.589 – 5.593)	0.05 (0.002)	
Camshaft	End play		0.05 – 0.15 (0.002 – 0.006)	0.5 (0.02)	
	Camshaft-to-holder oil clearance		0.050 – 0.089 (0.0020 – 0.0035)	0.15 (0.006)	
	Total runout		0.03 (0.001) max.	0.04 (0.002)	
	Cam lobe height IN				
	Primary B18C1/B18C5 engine		33.411 (1.3154)/33.088 (1.3027)		
	Mid B18C1/B18C5 engine		36.377 (1.4322)/36.865 (1.4138)		
EX	Secondary B18C1/B18C5 engine		34.547 (1.3601)/34.732 (1.3674)		
	Primary B18C1/B18C5 engine		33.111 (1.3036)/32.785 (1.2907)		
	Mid B18C1/B18C5 engine		35.720 (1.4063)/36.333 (1.4304)		
	Secondary B18C1/B18C5 engine		34.381 (1.3536)/34.691 (1.3658)		
Valve	Valve clearance (Cold)*	IN	0.15 – 0.19 (0.006 – 0.007)		
		EX	0.17 – 0.21 (0.007 – 0.008)		
	Valve stem O.D.	IN	5.475 – 5.485 (0.2156 – 0.2159)	5.445 (0.2144)	
		EX	5.450 – 5.460 (0.2146 – 0.2150)	5.420 (0.2134)	
	Stem-to-guide clearance	IN	0.025 – 0.055 (0.0010 – 0.0022)	0.08 (0.003)	
		EX	0.050 – 0.080 (0.0020 – 0.0031)	0.11 (0.004)	
Valve seat	Width	IN B18C1 engine	1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)	
		B18C5 engine	0.85 – 1.15 (0.033 – 0.045)	2.0 (0.08)	
		EX B18C1 engine	1.25 – 1.55 (0.049 – 0.061)	2.0 (0.08)	
		B18C5 engine	0.85 – 1.15 (0.033 – 0.045)	2.0 (0.08)	
	Stem installed height	IN	37.465 – 37.935 (1.4750 – 1.4935)	38.185 (1.5033)	
		EX	37.165 – 37.635 (1.4632 – 1.4817)	37.885 (1.4915)	
Valve spring	Free length (Reference)	B18C1 engine:			
		IN	Outer	41.05 (1.616)	
			Inner	NH 36.16 (1.424) CH 36.19 (1.425)	
		EX	NH	41.96 (1.652)	
			CH	41.94 (1.651)	
		B18C5 engine:			
		IN	Outer	43.19 (1.700)	
			Inner	36.84 (1.450)	
EX	Outer	41.05 (1.616)			
	Inner	36.16 (1.424)			
Valve guide	I.D.	IN	5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)	
		EX	5.51 – 5.53 (0.217 – 0.218)	5.55 (0.219)	
	Installed height	IN	12.55 – 13.05 (0.494 – 0.514)		
		EX	12.55 – 13.05 (0.494 – 0.514)		
Rocker arm	Arm-to-shaft clearance	IN	0.025 – 0.052 (0.0010 – 0.0020)	0.08 (0.003)	
		EX	0.025 – 0.052 (0.0010 – 0.0020)	0.08 (0.003)	

*: Measured between the camshaft and rocker arm.

NH: NIHON HATSUJO manufactured valve spring

CH: CHUO HATSUJO manufactured valve spring

Engine Block (B18C1, B18C5 engines) — Section 7

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT	
Cylinder block	Warpage of deck surface	0.05 (0.002) max.	0.08 (0.003)	
	Bore diameter	81.00 – 81.02 (3.189 – 3.190)	81.07 (3.192)	
	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	80.98 – 80.99 (3.188 – 3.189)	80.97 (3.188)	
	Clearance in cylinder	0.01 – 0.04 (0.0004 – 0.0016)	0.05 (0.002)	
	Groove width (For ring)	Top	1.030 – 1.040 (0.0406 – 0.0409)	1.060 (0.0417)
		Second	1.230 – 1.240 (0.0484 – 0.0488)	1.260 (0.0496)
Piston ring	Ring-to-piston groove clearance	Top	0.045 – 0.070 (0.0018 – 0.0028)	
		Second	0.040 – 0.065 (0.0016 – 0.0026)	
	Ring end gap	Top	0.20 – 0.35 (0.008 – 0.014)	
		Second	0.40 – 0.55 (0.016 – 0.022)	
Piston Pin	O.D. Pin-to-piston clearance	Oil	0.20 – 0.50 (0.008 – 0.020)	
			0.70 (0.028)	
Connecting rod	Pin-to-rod interference Small end bore diameter Large end bore diameter End play installed on crankshaft	Nominal	—	
			—	
			—	
			0.40 (0.016)	
Crankshaft	Main journal diameter	No. 1, 2, 4 and 5 journals	54.976 – 55.000 (2.1644 – 2.1654)	
		No. 3 journal	54.974 – 54.998 (2.1643 – 2.1653)	
			44.976 – 45.000 (1.7707 – 1.7717)	
	Rod journal diameter		—	
	Taper		0.005 (0.0002) max.	
	Out-of round		0.005 (0.0002) max.	
	End play		0.10 – 0.35 (0.004 – 0.014)	
Bearing	Main bearing-to-journal oil clearance No. 1, 2, 4 and 5 journals No. 3 journal Rod bearing-to-journal oil clearance		0.03 (0.001) max.	
			0.05 (0.002)	
			0.010 (0.0004)	
			0.010 (0.0004)	
Bearing	Main bearing-to-journal oil clearance No. 1, 2, 4 and 5 journals No. 3 journal Rod bearing-to-journal oil clearance		0.45 (0.018)	
			0.05 (0.002)	
			0.05 (0.002)	

Engine Lubrication — Section 8

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US qt, Imp qt)	B18B1 engine	4.6 (4.9, 4.0) for engine overhaul 3.8 (4.0, 3.3) for oil change, including filter 3.5 (3.7, 3.1) for oil change, without filter
		B18C1, B18C5 engines	4.8 (5.1, 4.2) for engine overhaul 4.0 (4.2, 3.5) for oil change, including filter 3.7 (3.9, 3.3) for oil change, without filter
Oil pump	Inner-to-outer rotor clearance	0.04 – 0.16 (0.002 – 0.006)	0.20 (0.008)
	Pump housing-to-outer rotor clearance	0.10 – 0.19 (0.004 – 0.007)	0.20 (0.008)
	Pump housing-to-rotor axial clearance	0.02 – 0.07 (0.001 – 0.003)	0.15 (0.006)
Relief valve	Pressure setting at engine oil temp. 176°F (80°C) kPa (kgf/cm ² , psi)	At idle	70 (0.7, 10) min.
		At 3,000 rpm	340 (3.5, 50) min.

Standards and Service Limits

Cooling — Section 10

	MEASUREMENT	STANDARD (NEW)
Radiator	Coolant capacity ℓ (US qt, Imp qt) [Including engine, heater, cooling line and reservoir]	B18B1 engine M/T: 6.4 (6.8, 5.6) for overhaul 4.4 (4.6, 3.9) for coolant change* A/T: 6.7 (7.1, 5.9) for overhaul 4.7 (5.0, 4.1) for coolant change*
	Reservoir capacity: 0.6 ℓ (0.63 US qt, 0.53 Imp qt)	B18C1 engine M/T: 6.7 (7.1, 5.9) for overhaul 4.7 (5.0, 4.1) for coolant change*
		B18C5 engine M/T: 6.5 (6.9, 5.7) for overhaul 4.5 (4.8, 4.0) for coolant change*
Radiator cap	Opening pressure kPa (kgf/cm ² , psi)	93 – 123 (0.95 – 1.25, 13.5 – 17.8)
Thermostat	Start to open °F (°C)	169 – 176 (76 – 80)
	Fully open °F (°C)	194 (90)
	Valve lift at fully open	8.0 (0.31) min.
Cooling fan	Thermoswitch "ON" temperature °F (°C)	196 – 203 (91 – 95)
	Thermoswitch "OFF" temperature °F (°C)	Subtract 5 – 14 (3 – 8) from actual "ON" temperature

*: Including the coolant in the reservoir and that remaining in the engine.

Fuel and Emissions — Section 11

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Pressure regulator	Pressure with regulator vacuum hose disconnected kPa (kgf/cm ² , psi)	B18B1 engine	270 – 320 (2.8 – 3.3, 40 – 47)
		B18C1 engine	329 – 378 (3.35 – 3.85, 48 – 55)
		B18C5 engine	320 – 370 (3.3 – 3.8, 47 – 54)
Fuel tank	Capacity ℓ (US gal, Imp gal)	50 (13.2, 11.0)	
Engine	Idle speed with headlight and cooling fan off rpm	B18B1, B18C1 engines 750 ± 50 (M/T: neutral) 750 ± 50 (A/T: N or P position)	
		B18C5 engine 800 ± 50 (M/T: neutral)	
	Fast idle rpm	B18B1, B18C1 engines 1,600 ± 200 (M/T: neutral) 1,600 ± 200 (A/T: N or P position)	
	Idle CO %	0.1 max.	

Clutch — Section 12

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height to floor	164 (6 7/16)	—
	Stroke	130 – 140 (5.12 – 5.51)	—
	Pedal play	12 – 21 (1/2 – 13/16)*	—
	Disengagement height to floor	83 (3.27) min.	—
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch disc	Rivet head depth	1.2 – 1.7 (0.05 – 0.07)	0.2 (0.01)
	Thickness	8.3 – 9.0 (0.33 – 0.35)	6.0 (0.24)
Pressure plate	Warpage	0.03 (0.001) max.	0.15 (0.006)
	Diaphragm spring finger alignment	0.6 (0.02) max.	0.8 (0.03)

* Including the pedal play 1 – 10 mm (0.04 – 0.39 in).