

CIVIC



1992-1995 Service Manuals

INTRODUCTION

How to Use This Manual -

This manual is divided into 23 sections. 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.

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.

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HONDA MOTOR CO.,LTD.
Service Publication Office

General Info



Special Tools



Specifications

specs

Maintenance



Engine



Cooling



Fuel and Emissions



* Transaxle



* Steering



Suspension



* Brakes
(Including ABS)



* Body



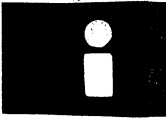
* Heater and
Air Conditioning



* Electrical
(Including SRS)



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



General Information

| | |
|--|-------------|
| Chassis and Paint Codes | 1-2 |
| Identification Number Locations | 1-6 |
| Label Locations | 1-7 |
| Lift and Support Points | 1-10 |
| Towing | 1-13 |

Chassis and Paint Codes

U.S. Model (2-Door Hatchback)

Vehicle Identification Number

2HGEH234*NH500001

Manufacturer, Make and Type of Vehicle

2HG: HONDA OF CANADA MFG., INC.
HONDA Passenger car

Line/Engine and Body Type

EH2: CIVIC 1500/2-Door Hatchback
EH3: CIVIC 1600/2-Door Hatchback

Body and Transmission Type

3: 2-Door Hatchback/5-speed Manual
4: 2-Door Hatchback/4-speed Automatic

Vehicle Grade

4: CX (EH2)
5: DX (EH2)
9: VX (EH2)
8: Si (EH3)

Check Digit

Model Year

N: 1992

Factory Code

H: Ontario Factory in Canada

Serial Number

Engine Number

D15B7-1000001

Engine Type

D15B7: 1500 SOHC 16-valves Multi-point Fuel-injection 100 HP Engine
D15B8: 1500 SOHC 8-valves Multi-point Fuel-injection 70 HP Engine
D15Z1: 1500 SOHC 16-valves Multi-point Fuel-injection 90 HP Engine VTEC-E
D16Z6: 1600 SOHC 16-valves Multi-point Fuel-injection 125 HP Engine VTEC

Emission Group

10: California (D15Z1)
11: California (D16Z6)
12: California (D15B7, D15B8)
13: 49ST (D15Z1)
15: 49ST (D15B7, D16Z6)
16: 49ST (D15B8)

Serial Number

Transmission Number

M24A-1000001

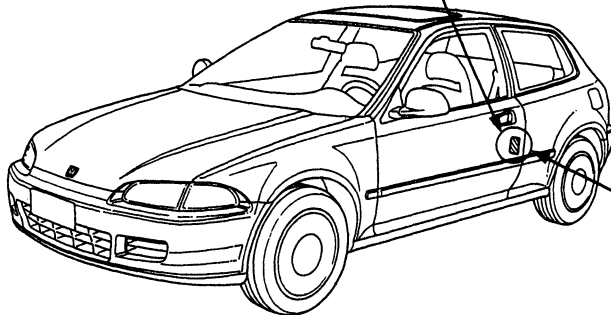
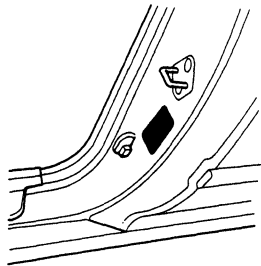
Transmission Type

M24A: 4-speed Automatic Transmission
S20 : 5-speed Manual Transmission

Serial Number

M24A: 1000001~
S20 : 1000001~

Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification



Paint Code

| Paint Code | Color |
|------------|----------------------|
| B-63P | Harvard Blue Pearl |
| B-62P | Captiva Blue Pearl |
| BG28P | Tahitian Green Pearl |
| NH-526M | Flint Black Metallic |
| NH-538 | Frost White |
| NH-561P | Phantom Gray |
| R-81 | Mirano Red |

Paint Code

**COLOR
B-63P**



U.S. Model (4-Door Sedan)

Vehicle Identification Number

JHMEG854*NS000001

Manufacturer, Make and Type of Vehicle

JHM: HONDA MOTOR CO., LTD.
HONDA Passenger car
IHG: HONDA OF AMERICA MFG., INC.
HONDA Passenger car

Line/Engine and Body Type

EG8: CIVIC 1500/4-Door Sedan
EH9: CIVIC 1600/4-Door Sedan

Body and Transmission Type

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

Vehicle Grade

4: DX (EG8)
5: LX (EG8)
9: EX (EH9)

Check Digit

Model Year

N: 1992

Factory Code

L: Ohio Factory in U.S.A. (East Liberty)
S: Suzuka Factory in Japan

Serial Number

Engine Number

D15B7-1000001

Engine Type

D15B7: 1500 SOHC 16-valves
Multi-point Fuel-injection
100 HP Engine
D16Z6: 1600 SOHC 16-valves
Multi-point Fuel-injection
125 HP Engine VTEC

Emission Group

10: California (Suzuka-D15B7, D16Z6)
12: California (Ohio-D15B7)
13: 49ST (Suzuka-D15B7, D16Z6)
15: 49ST (Ohio-D15B7)

Serial Number

Transmission Number

M24A-1000001

Transmission Type

M24A: 4-speed Automatic Transmission
S20 : 5-speed Manual Transmission

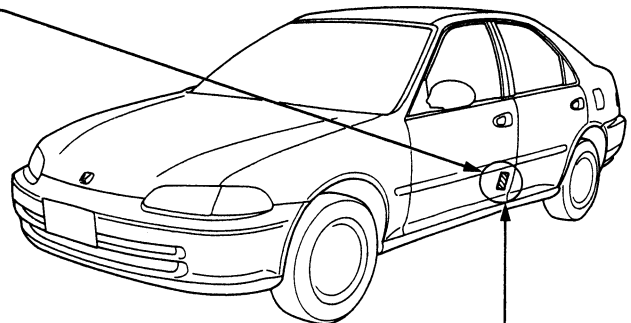
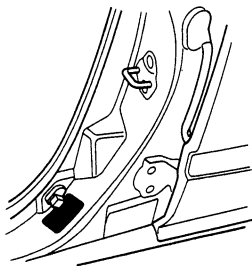
Serial Number

M24A: 1000001~
S20 : 1000001~

Paint Code

| Paint Code | Color |
|------------|-------------------------|
| B-63P | Harvard Blue Pearl |
| G-73M | Opal Green Metallic |
| NH-526M | Flint Black Metallic |
| NH-538 | Frost White |
| NH-561P | Phantom Gray Pearl |
| R-72P | Torino Red Pearl |
| R-75P | Sonoma Red Pearl |
| YR-503M | Rosewood Brown Metallic |

Vehicle Identification Number and Federal Motor Vehicle Safety Standard Certification



Paint Code

COLOR
B-63P

Chassis and Paint Codes

Canada Model (2-Door Hatchback)

Vehicle Identification Number

2HGEH236*NH000001

Manufacturer, Make and Type of Vehicle

2HG: HONDA OF CANADA MFG., INC.
HONDA Passenger car

Line/Engine and Body Type

EH2: CIVIC 1500/2-Door Hatchback
EH3: CIVIC 1600/2-Door Hatchback

Body and Transmission Type

3: 2-Door Hatchback/5-speed Manual
4: 2-Door Hatchback/4-speed Automatic

Vehicle Grade

4: CX (EH2)
5: DX (EH2)
6: VX (EH2)
8: Si (EH3)

Check Digit

Model Year

N: 1992

Factory Code

H: Ontario Factory in Canada

Serial Number

Engine Number

D15B7-1700001

Engine Type

D15B7: 1500 SOHC 16-valves
Multi-point Fuel-injection
100 HP Engine
D15Z1: 1500 SOHC 16-valves
Multi-point Fuel-injection
90 HP Engine VTEC-E
D16Z6: 1600 SOHC 16-valves
Multi-point Fuel-injection
125 HP Engine VTEC

Serial Number

D15Z1, D16Z6: 1700001~
D15B7: 1850001~

Transmission Number

M24A-1000001

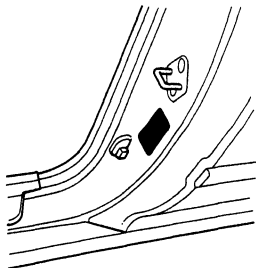
Transmission Type

M24A: 4-speed Automatic Transmission
S20 : 5-speed Manual Transmission

Serial Number

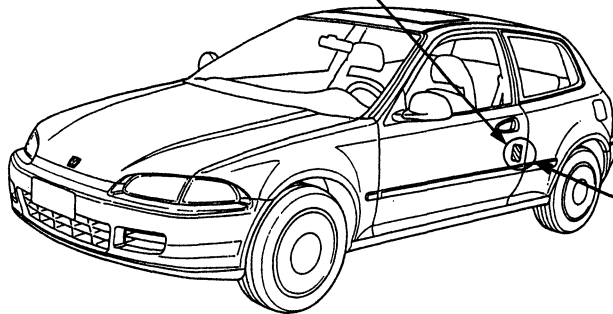
M24A: 1000001~
S20 : 1000001~

Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification



Paint Code

| Paint Code | Color |
|------------|----------------------|
| B-62P | Captiva Blue Pearl |
| BG-28P | Tahitian Green Pearl |
| NH-526M | Flint Black Metallic |
| NH-538 | Frost White |
| NH-561P | Phantom Gray |
| R-81 | Mirano Red |



Paint Code

COLOR
NH-526M



Canada Model (4-Door Sedan)

Vehicle Identification Number

JHMEG854*NS800001

Manufacturer, Make and Type of Vehicle

JHM: HONDA MOTOR CO., LTD.
HONDA Passenger car

Line/Engine and Body Type

EG8: CIVIC 1500/4-Door Sedan
EH9: CIVIC 1600/4-Door Sedan

Body and Transmission Type

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

Vehicle Grade

4: LX (EG8)
5: EX (EG8)
8: EX-V (EH9)
9: EX-V with ABS and SRS (EH9)

Check Digit

Model Year

N: 1992

Factory Code

S: Suzuka Factory in Japan

Serial Number

Engine Number

D15B7-1700001

Engine Type

D15B7: 1500 SOHC 16-valves
Multi-point Fuel-injection
100 HP Engine
D16Z6: 1500 SOHC 16-valves
Multi-point Fuel-injection
125 HP Engine VTEC

Serial Number

Transmission Number

M24A-1000001

Transmission Type

M24A: 4-speed Automatic Transmission
S20 : 5-speed Manual Transmission

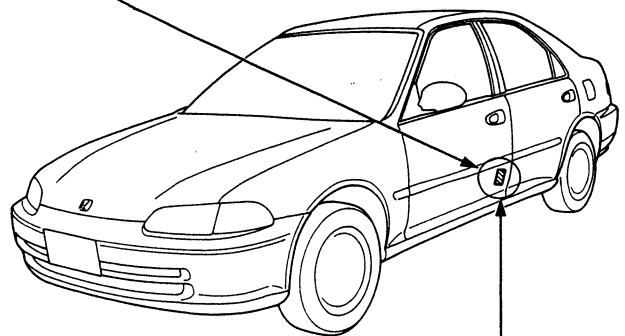
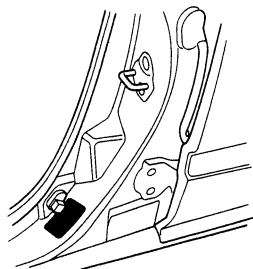
Serial Number

M24A: 1000001~
S20 : 1000001~

Paint Code

| Paint Code | Color |
|------------|-------------------------|
| B-63P | Harvard Blue Pearl |
| NH-526M | Flint Black Metallic |
| NH-537M | Pewter Gray Metallic |
| NH-538 | Frost White |
| NH-561P | Phantom Gray Pearl |
| R-72P | Torino Red Pearl |
| R-81 | Mirano Red |
| YR-503M | Rosewood Brown Metallic |

Vehicle Identification Number and Canadian Motor Vehicle Safety Standard Certification

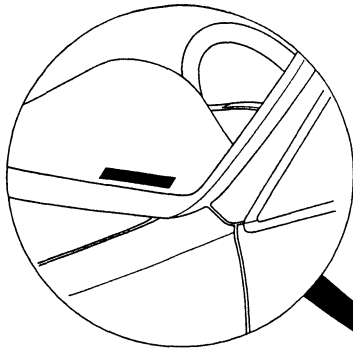


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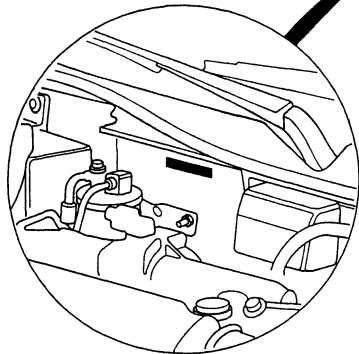
COLOR
B-63P

Identification Number Locations

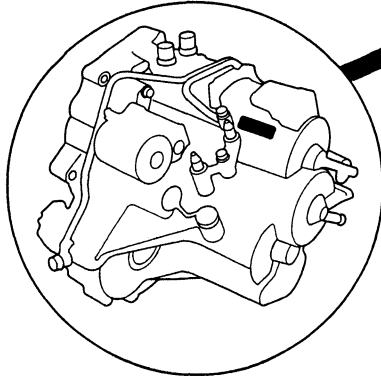
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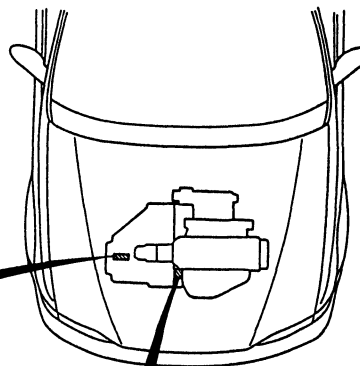
Vehicle Identification Number



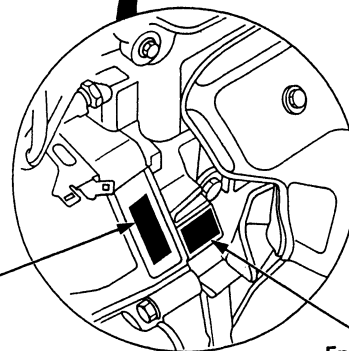
Transmission Number
(Automatic)



Transmission Number
(Manual)



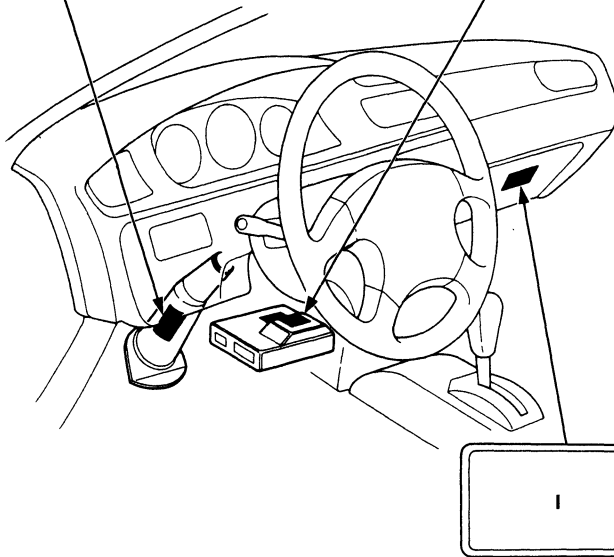
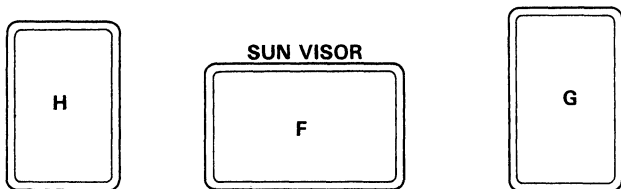
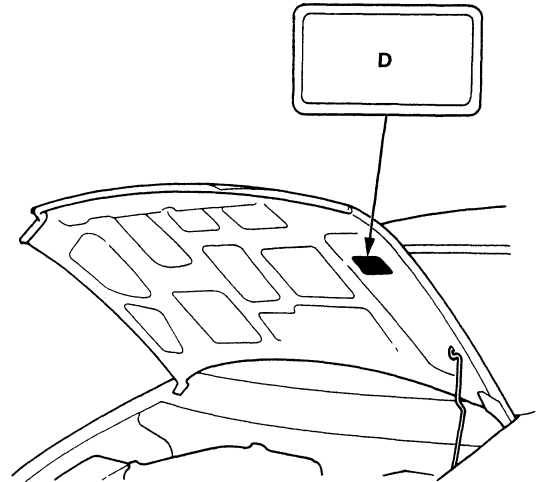
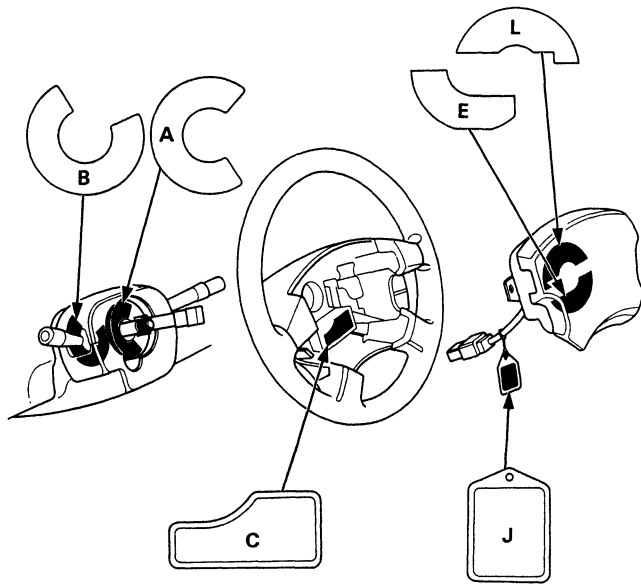
Engine Number





Label Locations

Warning/Caution Labels



A: CABLE REEL CAUTION A

CAUTION: **SRS**
REFER TO THE SHOP MANUAL

B: CABLE REEL CAUTION B

CAUTION: **SRS**
REFER TO THE SHOP MANUAL

C: STEERING WHEEL WARNING

WARNING **SRS**
BEFORE INSTALLING STEERING WHEEL:
● CENTER THE FRONT WHEELS.
● ALIGN THE MARKS. (CABLE REEL)
● READ SERVICE MANUAL.

D: UNDER-HOOD WARNING

WARNING **SRS**
THIS VEHICLE IS EQUIPPED WITH A DRIVER AIRBAG AS A SUPPLEMENTAL RESTRAINT SYSTEM. (SRS)
ALL SRS ELECTRICAL WIRING AND CONNECTORS ARE COLORED YELLOW.
DO NOT USE ELECTRICAL TEST EQUIPMENT ON THESE CIRCUITS. TAMPERING WITH OR DISCONNECTING THE SRS WIRING COULD RESULT IN ACCIDENTAL FIRING OF THE INFLATOR OR MAKE THE SYSTEM INOPERATIVE, WHICH MAY RESULT IN SERIOUS INJURY.

(cont'd)

Label Locations

Warning/Caution Labels (cont'd)

E: MODULE WARNING

WARNING **SRS**
TO PREVENT ACCIDENTAL DEPLOYMENT AND POSSIBLE INJURY:
ALWAYS INSTALL THE PROTECTIVE SHORT CONNECTOR ON THE INFLATOR CONNECTOR WHEN THE HARNESS IS DISCONNECTED.
UNDER NO CIRCUMSTANCES SHOULD DIAGNOSIS BE PERFORMED USING ELECTRICAL TEST EQUIPMENT OR PROBING DEVICES.
NO SERVICEABLE PARTS INSIDE. DO NOT DISASSEMBLE OR TAMPER WITH.
STORE THE REMOVED AIRBAG ASSEMBLY WITH THE PAD SURFACE UP.
FOR SPECIAL HANDLING OR STORAGE REFER TO THE HONDA SERVICE MANUAL.
DISPOSE OF THE ENTIRE UNIT AS DIRECTED.

F: DRIVER INFORMATION

SRS ALWAYS WEAR YOUR SEAT BELT

- THIS CAR IS EQUIPPED WITH A DRIVER AIRBAG AS A SUPPLEMENTAL RESTRAINT SYSTEM (SRS).
- IT IS DESIGNED TO SUPPLEMENT THE SEAT BELT.
- BEFORE DRIVING READ LABEL INSIDE THE CONSOLE BOX.

G: SRS UNIT CAUTION

CAUTION **SRS**

- NO SERVICEABLE PARTS INSIDE.
- DO NOT DISASSEMBLE OR TAMPER.
- DO NOT DROP.
- STORE IN A CLEAN, DRY AREA.

H: STEERING COLUMN CAUTION

CAUTION **SRS**
TO AVOID DAMAGING THE SRS CABLE OR REEL, WHICH COULD MAKE THE SYSTEM INOPERATIVE, REMOVE THE STEERING WHEEL BEFORE REMOVING THE STEERING SHAFT CONNECTOR BOLT.

I: GLOVE BOX INFORMATION

DRIVER'S AIRBAG INFORMATION **SRS**

- SUPPLEMENTAL RESTRAINT SYSTEM (SRS) CAN PROVIDE ADDITIONAL PROTECTION FOR THE DRIVER IN A FRONTAL COLLISION. A FUNCTIONAL DESCRIPTION OF THE SRS IS IN YOUR OWNER'S MANUAL.
- THE SYSTEM MUST BE INSPECTED TEN YEARS AFTER DATE OF MANUFACTURE, AS NOTED ON THE CERTIFICATION PLATE.
- ANY REPAIR, INSPECTION OR NEARBY ACCESSORY INSTALLATION SHOULD BE DONE BY HONDA DEALER.
- IF YOUR SRS INDICATOR:
 - LIGHTS WHILE DRIVING OR FLASHES,
 - FAILS TO LIGHT OR STAYS ON AFTER THE IGNITION IS FIRST TURNED ON,SEE YOUR AUTHORIZED HONDA DEALER.

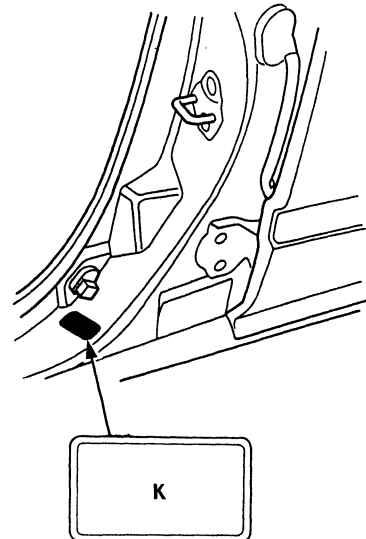
J: STEERING WHEEL WARNING

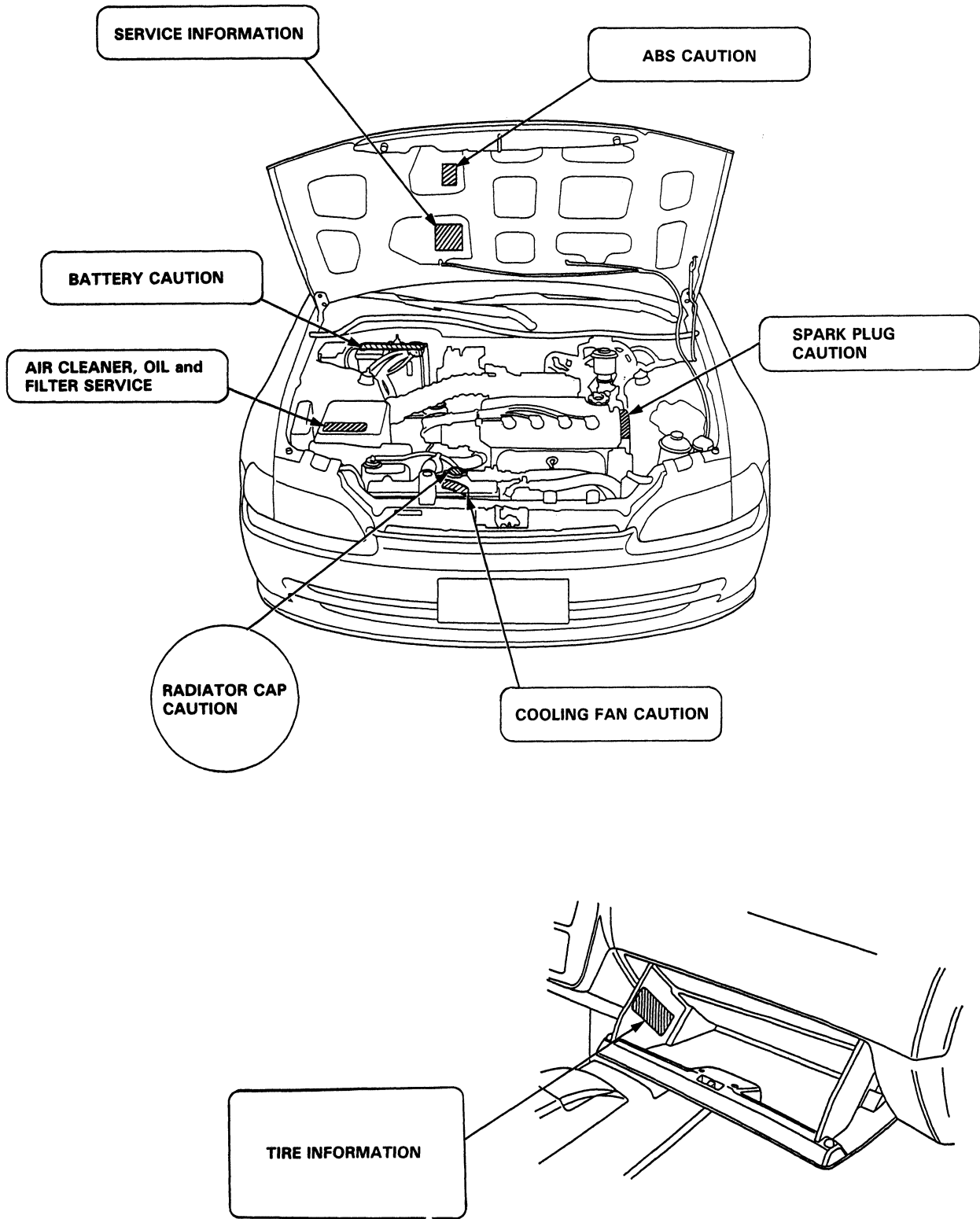
WARNING **SRS**
TO PREVENT ACCIDENTAL DEPLOYMENT AND POSSIBLE INJURY:
ALWAYS INSTALL THE PROTECTIVE SHORT CONNECTOR ON THE INFLATOR CONNECTOR WHEN THE HARNESS IS DISCONNECTED.

K: LABEL **AIRBAG**

L: INFLATOR COVER LABEL

DANGER
EXPLOSIVE/FLAMMABLE **SRS**
CONTACT WITH ACID, WATER, OR HEAVY METALS SUCH AS COPPER, LEAD, OR MERCURY, MAY PRODUCE HARMFUL AND IRRITATING GASES OR EXPLOSIVE COMPOUNDS. STORAGE TEMPERATURES MUST NOT EXCEED 200°F(100°C). FOR PROPER HANDLING, STORAGE, AND DISPOSAL PROCEDURES REFER TO THE HONDA SERVICE MANUAL, SRS SUPPLEMENT.
POISON
CONTAINS POISONOUS SODIUM AZIDE AND POTASSIUM NITRATE.
FIRST AID:
IF CONTENTS ARE SWALLOWED, INDUCE VOMITING. FOR EYE CONTACT, FLUSH EYES WITH WATER FOR 15 MINUTES. IF GASES (FROM ACID OR WATER CONTACT) ARE INHALED, SEEK FRESH AIR. IN EVERY CASE, GET PROMPT MEDICAL ATTENTION.
KEEP OUT OF REACH OF CHILDREN.





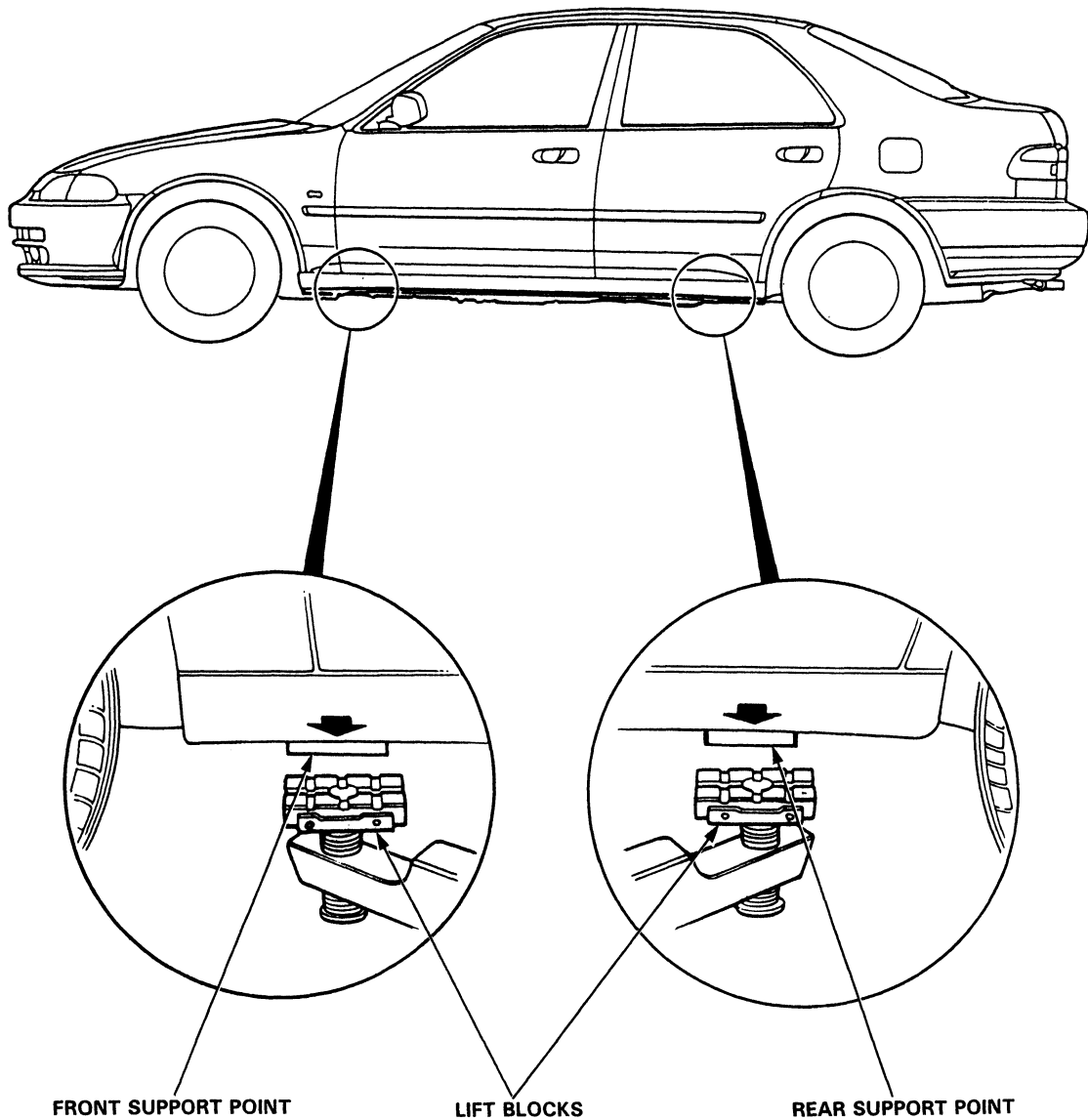
Lift and Support Points

Hoist

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

NOTE: Since each tire/wheel assembly weighs approximately 30 lbs (14 kg), placing the front wheels in the trunk will assist with the weight transfer.

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





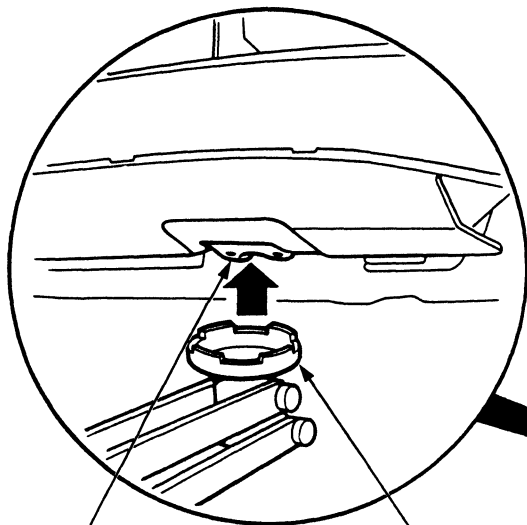
Floor Jack

1. Set the parking brake and block the wheels that are not being lifted.
2. When lifting the rear of the car, put the gearshift lever in reverse (Automatic in PARK).
3. Raise the car high enough to insert the safety stands.
4. Adjust and place the safety stands as shown on page 1-10 so the car will be approximately level, then lower the car onto them.

⚠ WARNING

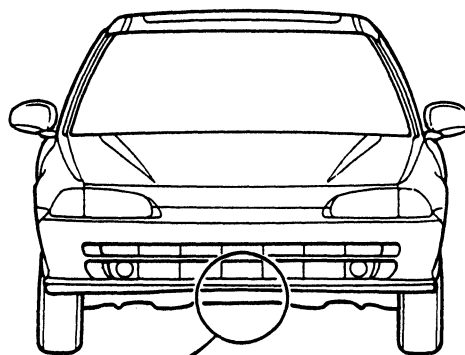
- Always use safety stands when working on or under any vehicle that is supported by only a jack.
- Never attempt to use a bumper jack for lifting or supporting the car.

Front

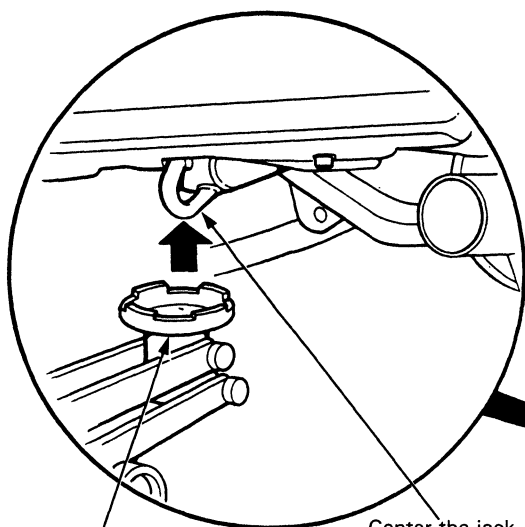


Center the jack bracket in the middle of the jack lift platform.

JACK LIFT PLATFORM

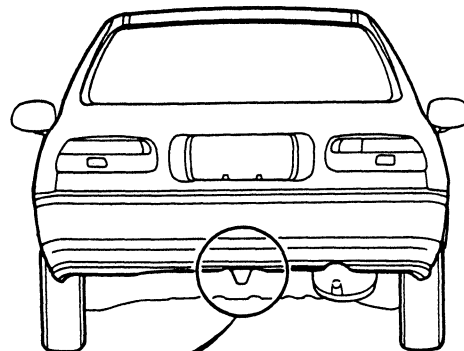


Rear



JACK LIFT PLATFORM

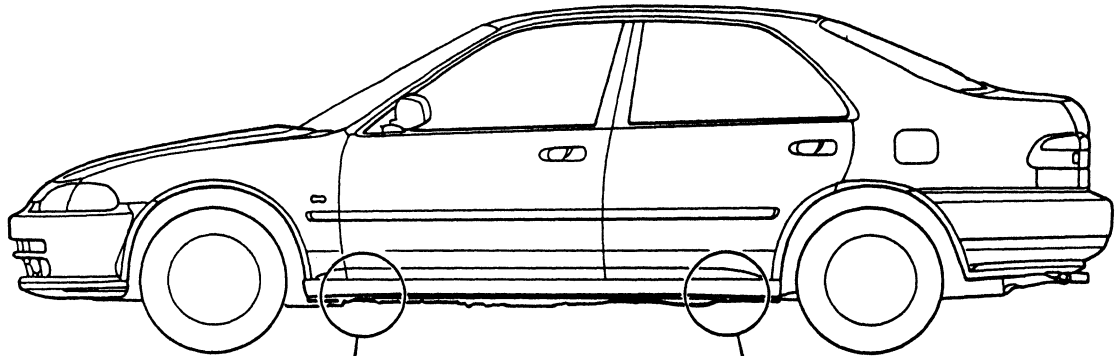
Center the jack bracket in the middle of the jack lift platform.



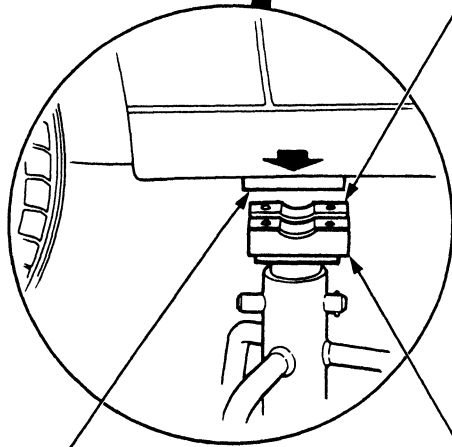
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Lift and Support Points (cont'd)

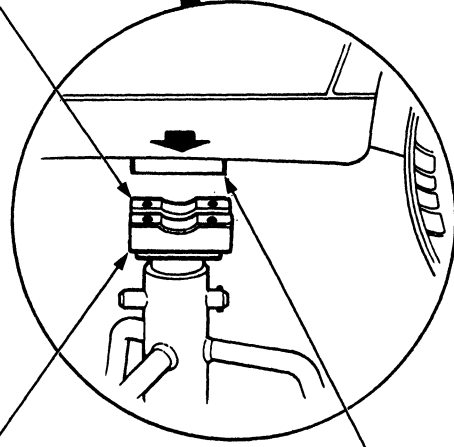
Safety Stands



RUBBER ATTACHMENT



FRONT SUPPORT POINT



REAR SUPPORT POINT

SAFETY STANDS



Towing

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

Emergency Towing

There are three popular methods of towing a car:

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

Wheel Lift Equipment—The tow truck uses two pivoting arms which 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 car off the ground. The car's suspension and body can be seriously damaged if this method of towing is attempted.

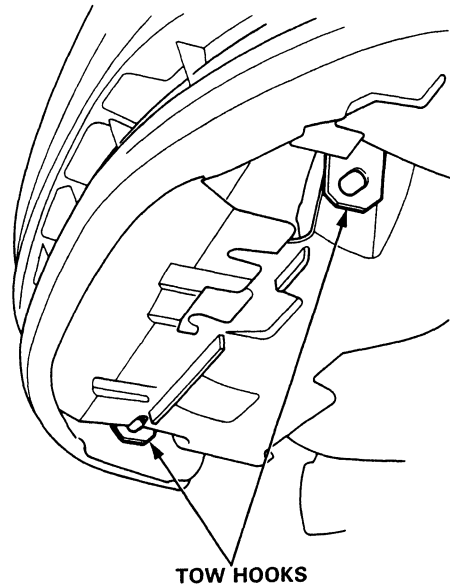
If the car cannot be transported by flat-bed, it should be towed with the front wheels off the ground. If due to damage, the car must be towed with the front wheels on the ground, do the following:

- Release the parking brake.
- Shift the transmission to Neutral (5-speed). If the car has an automatic transmission: Start the engine. Shift to D4, then to Neutral. Shut the engine off.
NOTICE: Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you can not shift the transmission or start the engine (automatic transmission), the car must be transported on a flat-bed.
- It is best to tow the car no farther than 50 miles (80 km), and keep the speed below 35 mph (55 km/h).

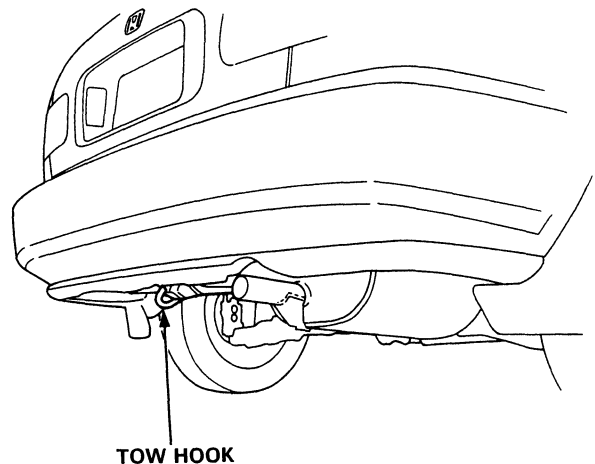
NOTICE: Trying to lift or tow the car by the bumpers will cause serious damage. The bumpers are not designed to support the car's weight.

Front:

CAUTION: On the car equipped with the front spoiler, remove the spoiler when towing.



Rear:





Special Tools

Individual tool lists are located at the front of each section.

Specifications

| | |
|---|-------------|
| Standards and Service Limits | 3-2 |
| Design Specifications | 3-14 |
| Body Specifications | 3-17 |

Standards and Service Limits

Cylinder Head/Valve Train — Section 6

| | MEASUREMENT | | STANDARD (NEW) | SERVICE LIMIT | | |
|---------------|--|---|---|-------------------------------|------------------|-----------------|
| Compression | 250 rpm and wide open throttle kPa (kg/cm ² , psi) | Nominal Minimum Maximum variation | 1,300 (13.0,184) 950 (9.5,135) 200 (2,28) | | | |
| Cylinder head | Warpage Height | D15B7, D15B8 | 94.95—95.05 (3.738—3.742) | 0.05 (0.002) | | |
| | | D15Z1, D16Z6 | 92.95—93.05 (3.659—3.663) | — | | |
| Camshaft | End play | | 0.05—0.15 (0.002—0.006) | 0.5 (0.02) | | |
| | Oil clearance | | 0.050—0.089 (0.002—0.004) | 0.15 (0.006) | | |
| | Runout | | 0.015 (0.0006) max. | 0.03 (0.001) | | |
| | Cam lobe Height | D15B7 | IN | 36.957 (1.4550) | — | |
| | | | EX | 36.996 (1.4565) | — | |
| | | D15B8 | IN | 39.057 (1.4196) | — | |
| | | | EX | 36.198 (1.4251) | — | |
| | | D15Z1 | IN Primary | 38.427 (1.5129) | — | |
| | | | EX Secondary | 32.292 (1.2713) | — | |
| | | D16Z6 | IN Primary | 35.900 (1.4134) | — | |
| EX Mid | | | 38.107 (1.5003) | — | | |
| | | EX Secondary | 36.195 (1.4250) | — | | |
| | | EX | 38.008 (1.4964) | — | | |
| Valve | Valve clearance | IN | 0.18—0.22 (0.007—0.009) | — | | |
| | | EX | 0.23—0.27 (0.009—0.011) | — | | |
| | Valve stem O.D. | IN | 5.48—5.49 (0.2157—0.2161) | 5.45 (0.2183) | | |
| | | EX | 5.45—5.46 (0.2146—0.2150) | 5.42 (0.2134) | | |
| | Stem-to-guide clearance | IN | 0.020—0.05 (0.0008—0.0020) | 0.08 (0.003) | | |
| | | EX | 0.05—0.08 (0.002—0.003) | 0.12 (0.005) | | |
| Valve seat | Width | IN | 0.85—1.15 (0.033—0.045) | 1.6 (0.063) | | |
| | | EX | 1.25—1.55 (0.049—0.061) | 2.0 (0.079) | | |
| | Stem installed height | D15B7, D15B8 | IN | 46.985—47.455 (1.8498—1.8683) | 47.705 (1.8781) | |
| | | | EX | 48.965—49.435 (1.9278—1.9463) | 49.685 (1.9561) | |
| | | D15Z1, D16Z6 | IN | 53.165—53.635 (2.0931—2.1116) | 53.885 (2.1215) | |
| | | | EX | 53.165—53.635 (2.0931—2.1116) | 53.885 (2.1215) | |
| Valve spring | Free length | D15B7 | IN | 51.90 (2.0433) *1 | — | |
| | | | EX | 51.88 (2.0423) *2 | — | |
| | | | D15B8 | IN | 55.28 (2.177) *1 | — |
| | | | | EX | 55.31 (2.178) *2 | — |
| | | | D15Z1 | IN | 48.58 (1.913) | — |
| | | | | EX | 55.28 (2.176) | — |
| | | | D16Z6 | IN | 54.78 (2.157) | 54.02 (2.127) |
| | | | | EX | 58.23 (2.293) *1 | } 57.33 (2.257) |
| | | | | EX | 58.26 (2.294) *2 | |
| | | | | IN | 57.97 (2.282) | 56.95 (2.243) |
| | | EX | 58.41 (2.300) | 57.38 (2.217) | | |
| Valve guide | I.D. | IN | 5.51—5.53 (0.217—0.218) | 5.60 (0.220) | | |
| | | EX | 5.51—5.53 (0.217—0.218) | 5.60 (0.220) | | |
| | Installed height | D15B7, D15B8 | IN | 15.95—16.45 (0.628—0.648) | — | |
| | | | EX | 15.95—16.45 (0.628—0.648) | — | |
| | | D15Z1, D16Z6 | IN | 17.85—18.35 (0.703—0.722) | — | |
| | | | EX | 18.65—19.15 (0.734—0.754) | — | |
| Rocker arm | Arm-to-shaft clearance | IN | 0.017—0.050 (0.0007—0.0020) | 0.08 (0.003) | | |
| | | EX | 0.018—0.054 (0.0007—0.0021) | 0.08 (0.003) | | |

*1: NIPPON HATSUJO made, *2: CHUO HATSUJO made.

Unit of length: mm (in)

Engine Block — Section 7

| | MEASUREMENT | STANDARD (NEW) | SERVICE LIMIT | |
|--|---|-------------------------------|-------------------------------|-------------------------|
| Cylinder block | Wapage of deck surface | 0.07 (0.003) max. | 0.10 (0.004) | |
| | Bore diameter | 75.00—75.02 (2.953—2.954) | 75.07 (2.956) | |
| | Bore taper | — | 0.05 (0.002) | |
| | Reboring limit | — | 0.5 (0.02) | |
| Piston | Skirt O.D. [at D15B7/D15B8: 16 mm (0.63 in), D15Z1/D16Z6: 15 mm (0.59 in) from bottom of skirt] | 74.98—74.99 (2.9520—2.9524) | 74.97 (2.9516) | |
| | Clearance in cylinder | 0.01—0.04 (0.0004—0.0016) | 0.05 (0.002) | |
| | Groove width (for ring) | Top | 1.22—1.23 (0.0480—0.0484) | 1.25 (0.049) |
| | | Second D15Z1 | 1.22—1.23 (0.0480—0.0484) | 1.25 (0.049) |
| | | Except D15Z1 | 1.52—1.53 (0.0598—0.0602) | 1.55 (0.061) |
| | | Oil | 2.805—2.820 (0.1104—0.1110) | 2.85 (0.112) |
| Piston ring | Ring-to-groove clearance | Top D15Z1 | 0.030—0.055 (0.0012—0.0022) | 0.13 (0.005) |
| | | Except D15Z1 | 0.035—0.060 (0.0014—0.0024) | 0.13 (0.005) |
| | Second | | 0.035—0.055 (0.0014—0.0022) | 0.13 (0.005) |
| | | Ring end gap | Top | 0.15—0.30 (0.006—0.012) |
| | Second | 0.30—0.45 (0.012—0.018) | 0.70 (0.028) | |
| | Oil | 0.20—0.70 (0.008—0.028) | 0.80 (0.031) | |
| Piston Pin | O.D. | 18.994—19.000 (0.7478—0.7480) | — | |
| | Pin-to-piston clearance | 0.010—0.022 (0.0004—0.0009) | — | |
| Connect- ing rod | Pin-to-rod interference | 0.014—0.040 (0.0006—0.0016) | — | |
| | Small end bore diameter | 18.96—18.98 (0.746—0.747) | — | |
| | Large end bore diameter | Nominal D15B8 | 48.00 (1.89) | — |
| | | Except D15B8 | 45.00 (1.77) | — |
| | End play installed on crankshaft | 0.15—0.30 (0.006—0.012) | 0.40 (0.016) | |
| Small end bore-to-large end bore parallelism | 0.12 (0.005)/100 max. | 0.15 (0.006/100) | | |
| Crank- shaft | Main journal diameter | D16Z6 | 54.976—55.000 (2.1644—2.1654) | — |
| | | Except D16Z6 | 44.976—45.000 (1.7707—1.7717) | — |
| | Rod journal diameter | 44.976—45.000 (1.7707—1.7717) | — | |
| | Taper | 0.0025 (0.0001) max. | 0.01 (0.0004) | |
| | Out-of round | 0.0025 (0.0001) max. | 0.01 (0.0004) | |
| | End play | 0.10—0.35 (0.004—0.014) | 0.45 (0.018) | |
| | Runout | 0.015 (0.0006) max. | 0.03 (0.0012) | |
| Bearings | Main bearing-to-journal | No. 1 and 5 journals | 0.018—0.036 (0.0007—0.0014) | 0.05 (0.002) |
| | Oil clearance | No. 2, 3 and 4 journals | 0.024—0.042 (0.0010—0.0017) | 0.05 (0.002) |
| | Rod bearing-to-journal oil clearance | | 0.020—0.038 (0.0008—0.0014) | 0.05 (0.002) |

Standards and Service Limits

Engine Lubrication — Section 8

| | MEASUREMENT | STANDARD (NEW) | SERVICE LIMIT |
|--------------|---|---|---------------|
| Engine oil | Capacity ℓ (US qt, Imp qt) | 4.0 (4.2, 3.5) for engine overhaul 3.3 (3.5, 2.9) for oil change, including filter | |
| Oil pump | Displacement ℓ (US gal, Imp gal)/min @rpm | 45.0 (11.89, 9.90) @6,000 | |
| | Inner-to-outer rotor clearance | 0.02–0.14 (0.001–0.006) | 0.2 (0.008) |
| | Pump body-to-outer rotor clearance | 0.10–0.175 (0.004–0.007) | 0.2 (0.008) |
| | Pump body-to-rotor axial clearance | 0.03–0.08 (0.001–0.003) | 0.15 (0.006) |
| Relief valve | Pressure setting 80°C (176°F) at idle kPa (fkg/cm ² , psi) at 3,000 rpm | 70 (0.7, 10) min. 350 (3.5, 50) min. | |

Cooling — Section 10

| | MEASUREMENT | STANDARD (NEW) |
|--------------|---|--|
| Radiator | Coolant capacity ℓ (US gal, Imp gal) including engine, heater, cooling line and reservoir reservoir capacity: 0.4 ℓ (0.42 US qt, 0.35 Imp qt) | D16Z6 M/T: 4.5 (1.12, 0.99) for overhaul 3.6 (0.95, 0.79) for coolant change A/T: 4.7 (1.16, 1.03) for overhaul 3.8 (1.00, 0.84) for coolant change |
| | | D15B7 M/T: 4.5 (1.12, 0.99) for overhaul 3.6 (0.95, 0.79) for coolant change A/T: 4.4 (1.08, 0.97) for overhaul 3.5 (0.92, 0.77) for coolant change |
| | | D15Z1 M/T: 4.4 (1.08, 0.97) for overhaul 3.5 (0.92, 0.77) for coolant change |
| | | D15B8 M/T: 4.5 (1.12, 0.99) for overhaul 3.6 (0.95, 0.79) for coolant change |
| | | |
| Radiator cap | Opening pressure kPa (kg/cm ² , psi) | 95–125 (0.95–1.25, 13.5–17.8) |
| Thermostat | Start to opening °C (°F) | D15Z1 80–84 (176–183) Except D15Z1 76–80 (169–176) |
| | Fully open °C (°F) | D15Z1 95 (203) Except D15Z1 90 (194) |
| | Valve lift at fully open | 8.0 (0.31) min. |
| | | |
| Water pump | Displacement ℓ (US gal, Imp gal)/min @rpm | 125 (33.0, 27.5) @6,000 |
| Cooling fan | Thermoswitch "ON" temperature °C (°F) | 91.0–95.0 (196–203) |
| | Thermoswitch "OFF" temperature °C (°F) | Subtract 3–8 (5–15) from actual "ON" temperature. |