

# INTRODUCTION


## How to Use This Manual

This supplement contains information specifically applicable to the 1987 PRELUDE. Refer to Base shop manuals (No. 62SB000 and 62SB022) as the general source for service procedures applicable to this model. 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.

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 does contain warnings and cautions against some specific service methods which could cause **PERSONAL INJURY**, or could 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 American Honda, might be done, or of the possible hazardous consequences of each conceivable way, nor could American Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by American 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.

\* For these chapters, this supplement contains no new information; refer to the Base shop manuals.

General Info



Special Tools



Specifications

specs

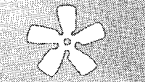
Maintenance



Engine \*



Cooling \*



Fuel \*



Emission Controls \*



Transaxle \*



Steering \*



Suspension \*



Brakes \*



Body \*



Heater and  
Air Conditioner



Electrical



# Outline of Model Changes

## 1800

ITEM	MODELS										DESCRIPTION	REF. SECTION	
	KE	KT	KF	KG	KB	KX	KS	KW	KR	KY			
Models equipped with ET2 Engine				○		○						Newly released models with AT	§3
Manual Transmission	○	○	○	○	○	○	○	○	○	○		Oil Capacity is changed	—
Automatic Transmission						○						Gear Ratio is changed	—
Fuel and Emission Control System (for ET2 Engine)				○		○						New system for models with AT is added	—
Headlights	○											Equipped with Dim-Dip Lighting System	§25

## 2000

ITEM	MODELS									DESCRIPTION	REF. SECTION	
	KQ	KE	KF	KG	KB	KX	KS	KW	KY			
Piston	○	○	○	○	○	○	○	○	○		The piston skirt is coated with molybdenum	—
Manual Transmission						○					Gear Ratio is changed	—
Cruise Control	○										Newly equipped to KQ type	§25
Headlights		○									Equipped with Dim-Dip Lighting System	§25
Door Mirrors	○								○		Equipped with Power Door Mirror	§25

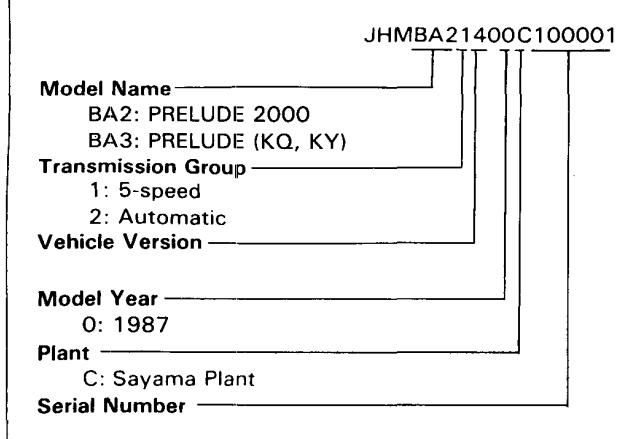


## General Information

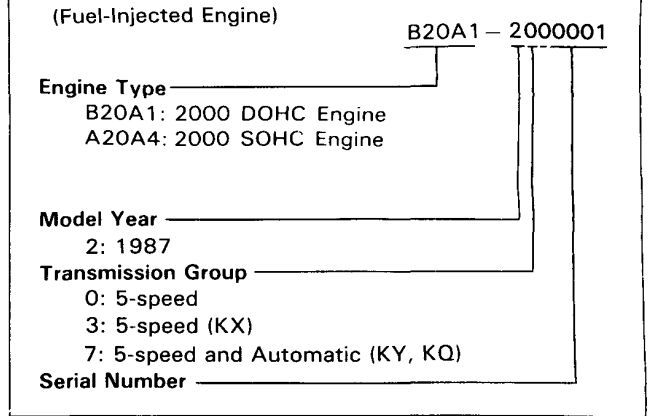
Chassis and Engine Numbers .....	1-2
Identification Number Locations .....	1-3
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Lift and Support Points .....	1-6
Towing .....	1-9
Preparation of Work .....	1-10

# Chassis and Engine Numbers

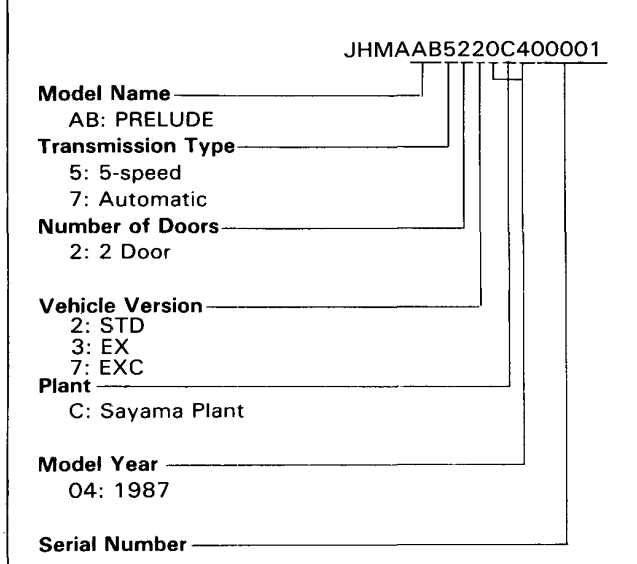
## Vehicle Identification Number (2000)



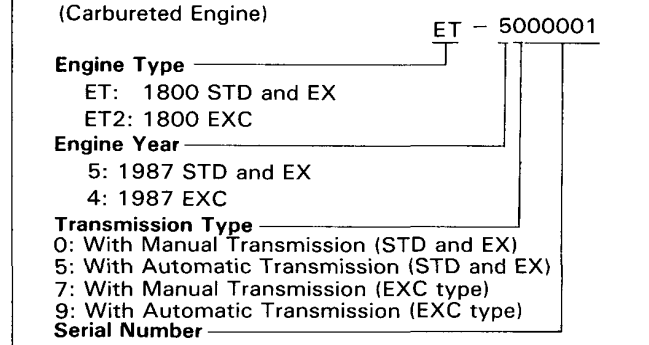
## Engine Serial Number



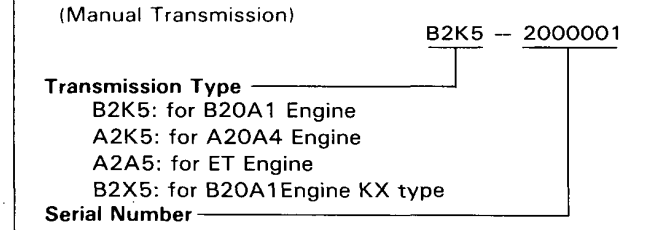
## Vehicle Identification Number (1800)



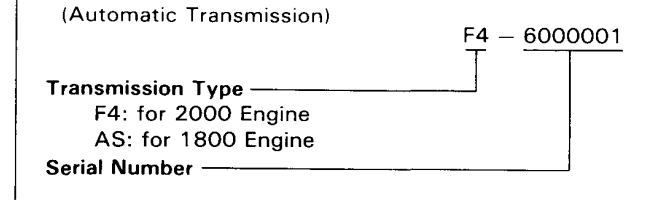
## Engine Serial Number



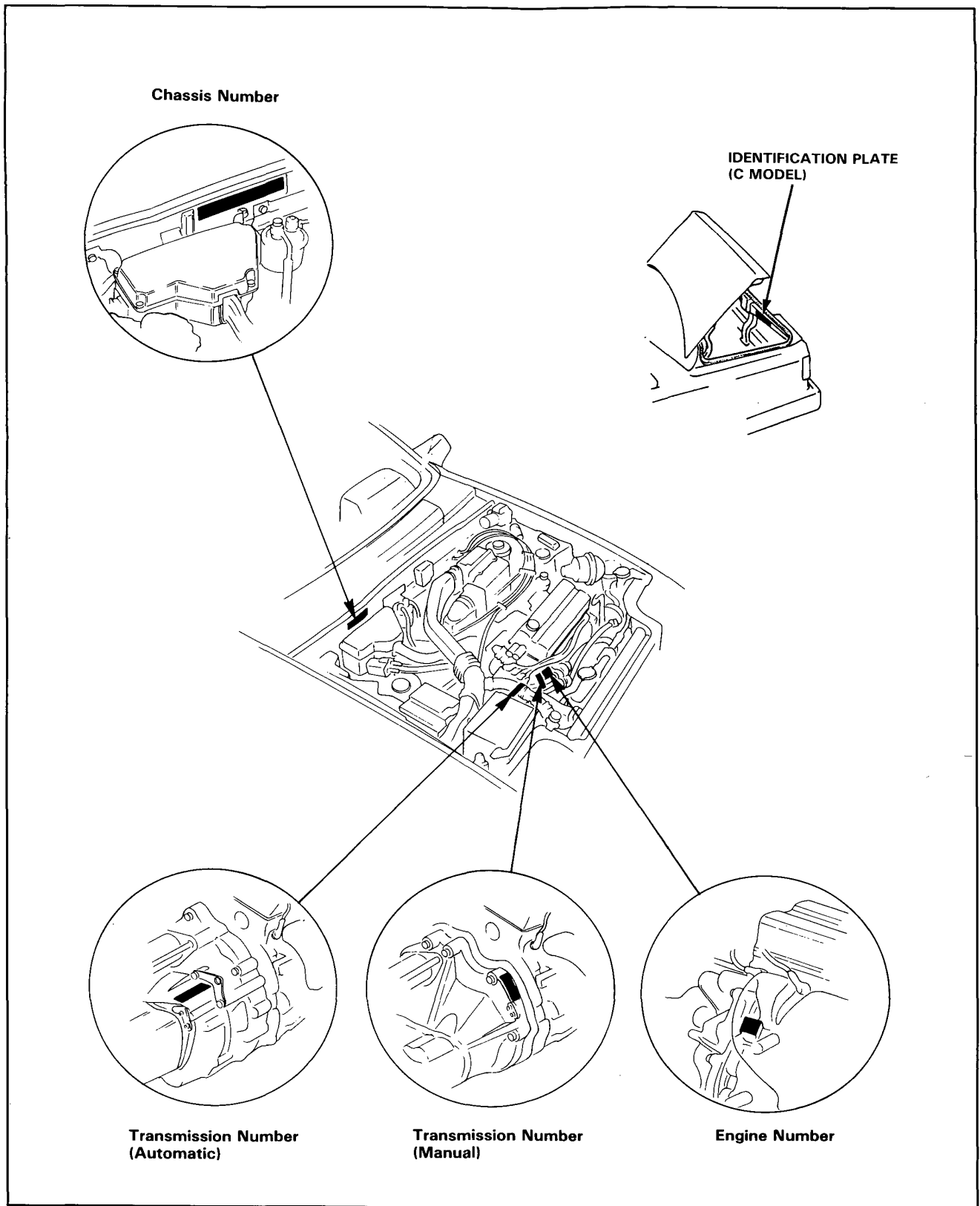
## Transmission Number



## Transmission Number

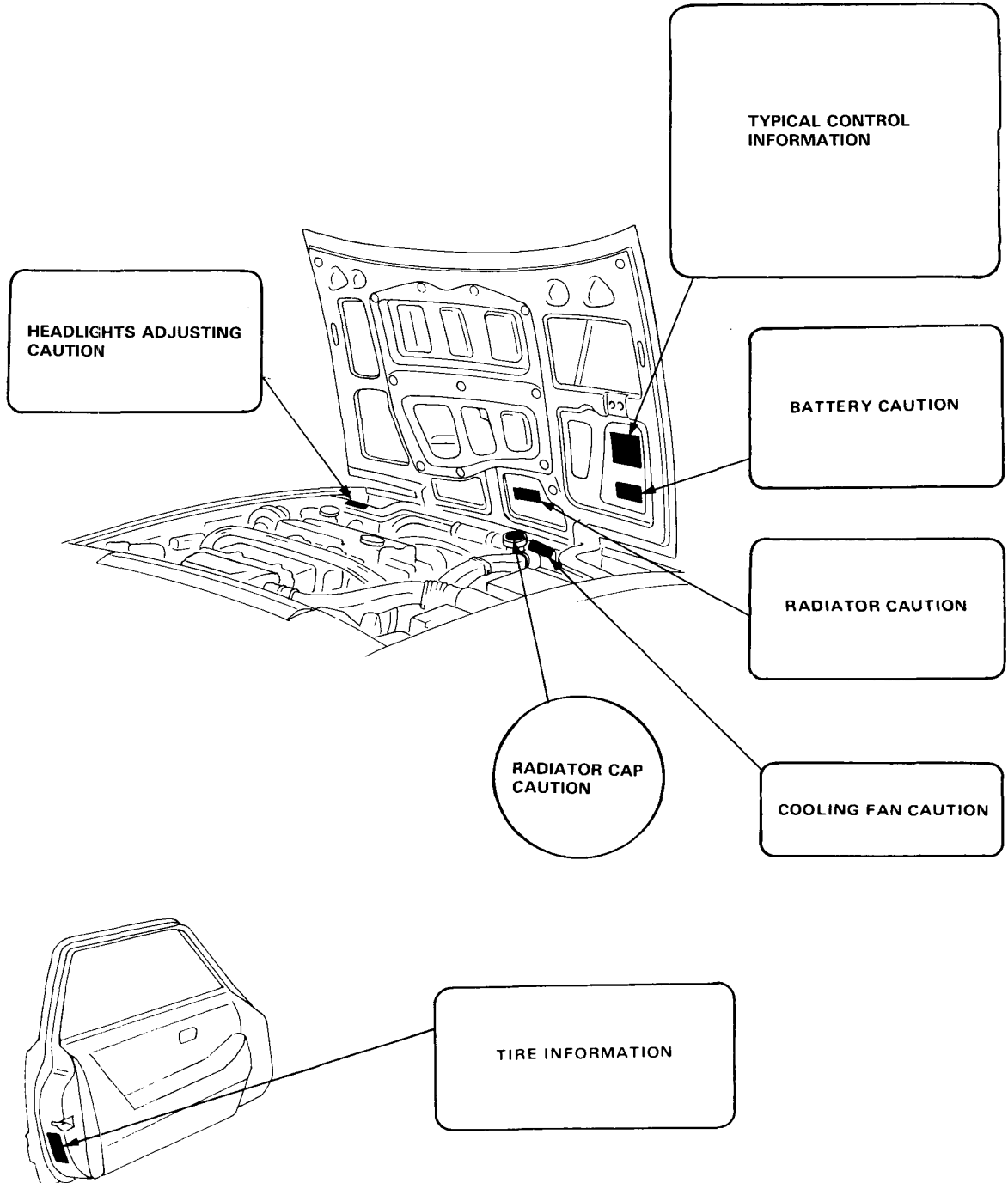


# Identification Number Locations



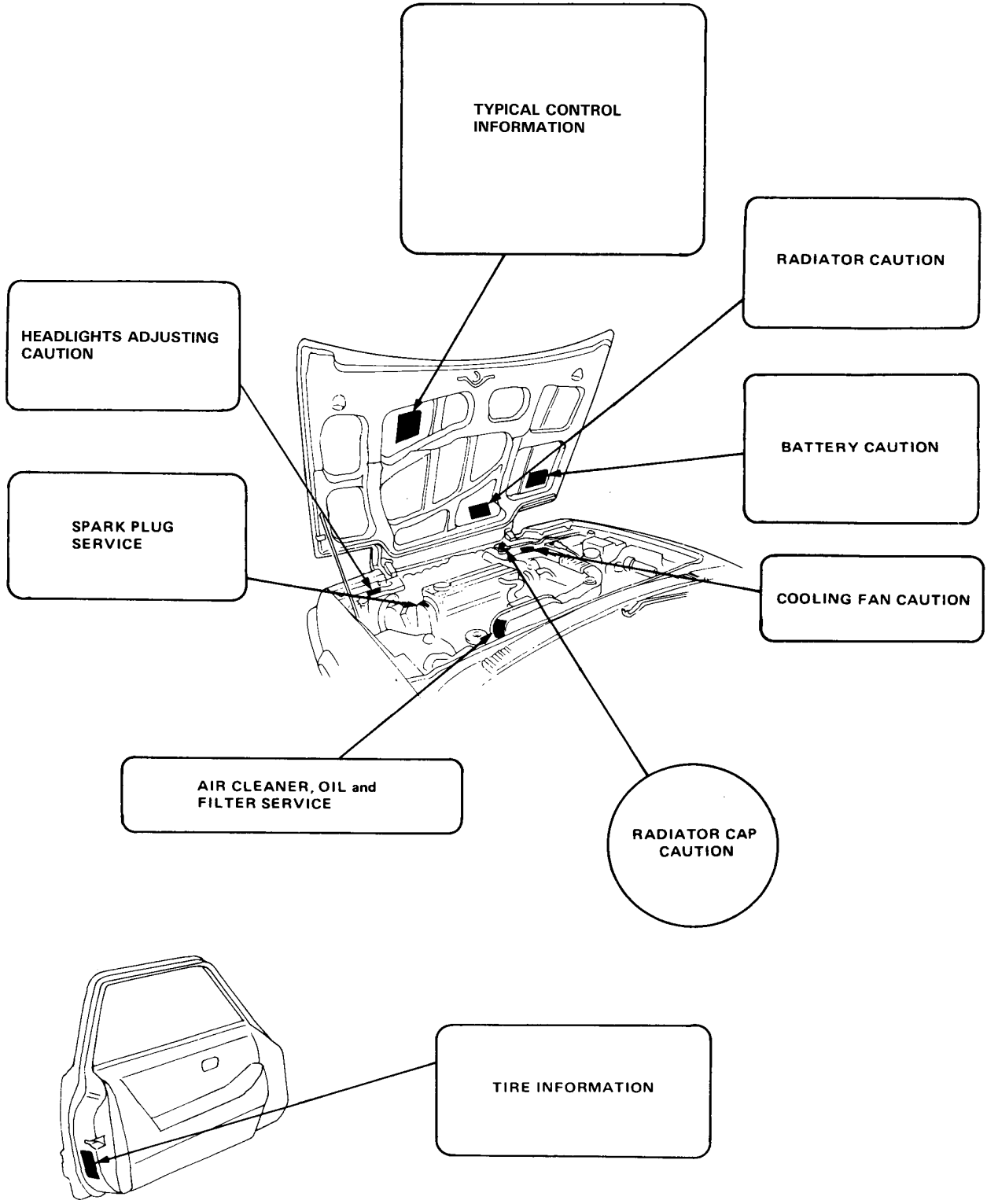
# Label Locations

Fuel-Injected Engine:





**Carbureted Engine:**



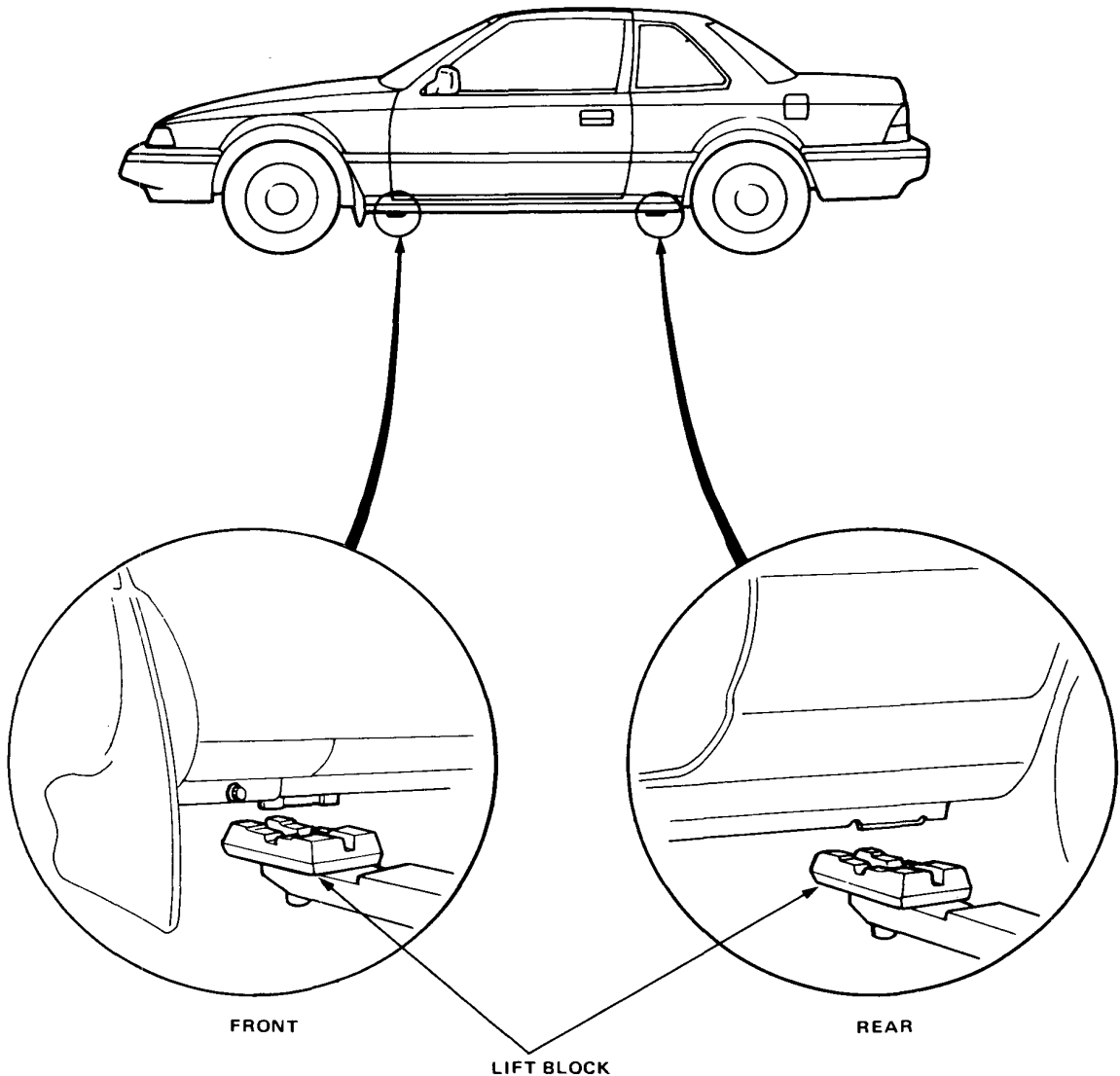
# Lift and Support Points

## Hoist

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.

**WARNING** When heavy rear components such as suspension, fuel tank, spare tire and trunk lid/hatch are to be removed, place additional weight in the trunk 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 weights approximately 13.6 kg (30 lbs), placing the front wheels in the trunk can assist with the weight transfer.







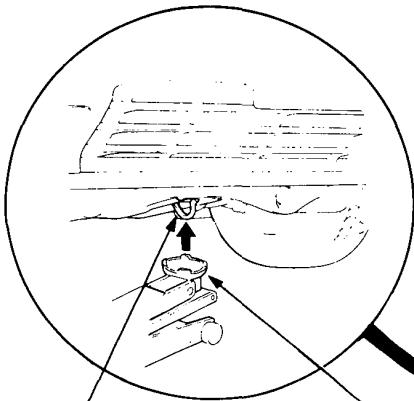
## Floor Jack

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 1-8 so the car will be approximately level, then lower the car onto them.

### WARNING

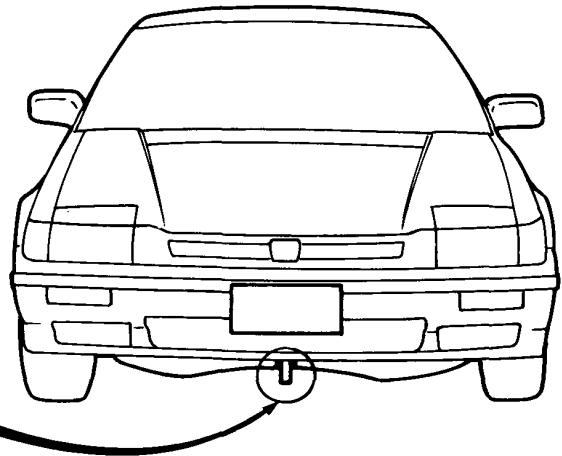
- Always use safety stands when working on or under any vehicle that is supported by only a jack.
- Never attempt to use a bumper jack for lifting or supporting the car.

### Front

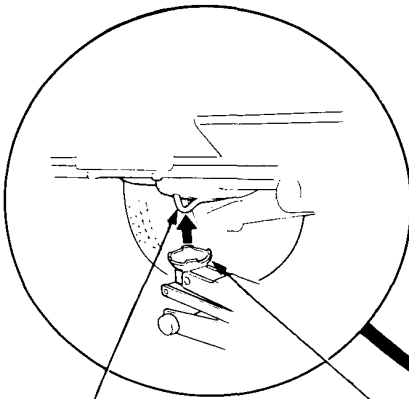


Center the jacking bracket in the middle of jack lift platform.

LIFT PLATFORM

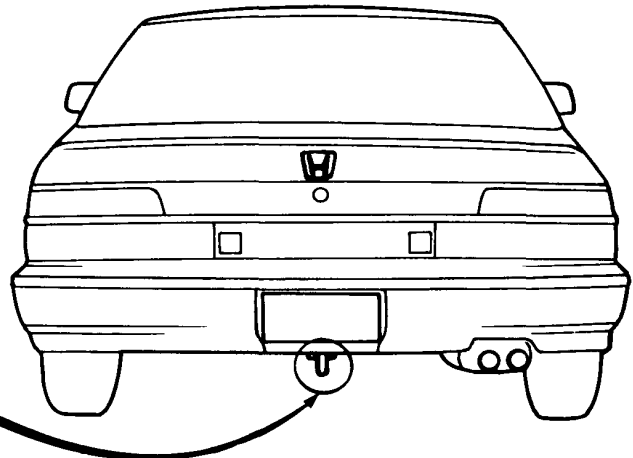


### Rear



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

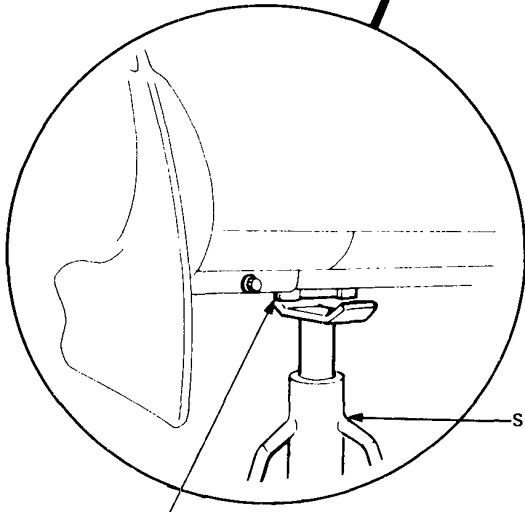
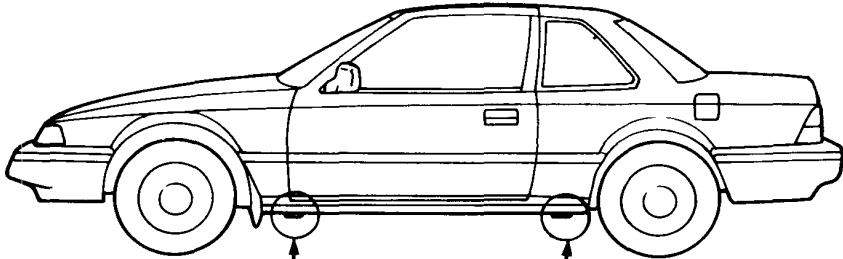
LIFT PLATFORM



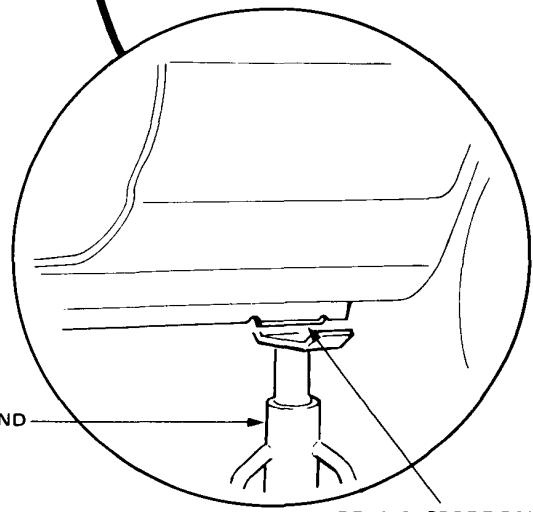
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# Lift and Support Points (cont'd)

## Safety Stands



FRONT SUPPORT POINT



REAR SUPPORT POINT

SAFETY STAND

# Towing

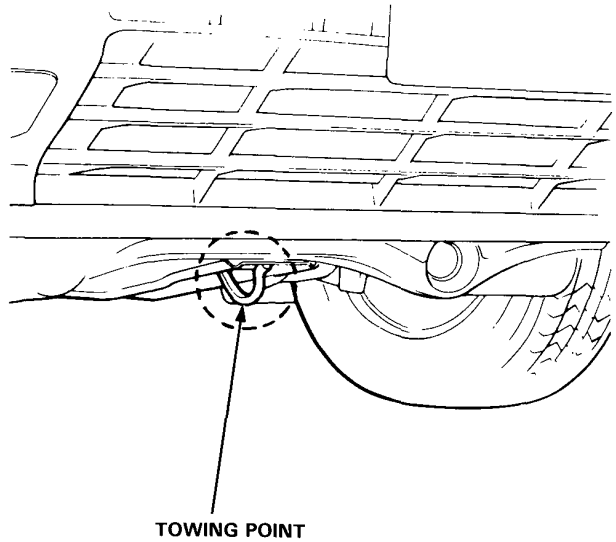


## Towing

If possible, always tow the car with the front wheels off the ground. Do not use the bumpers to lift the car or to support the car's weight while towing. Check local regulations for towing with a chain or frame-mounted tow bar. A chain may be attached to the hook shown in the illustration. Do not attach a tow bar to either bumper.

If the car is to be towed with four wheels on the ground, observe the following precautions:

1. Wheels and axle must not be touching the body or frame.
2. Turn the ignition key to the "I" position and make sure the steering wheel turns freely.
3. Place the transmission in NEUTRAL.
4. Release the parking brake.
5. DO NOT exceed 55KPH (35 MPH) for distances of more than 80 km (50 miles).

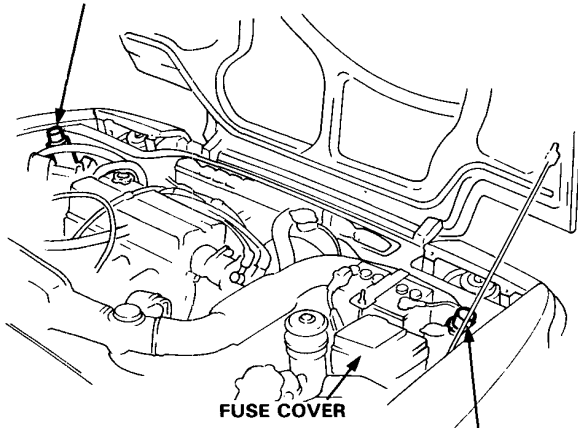


# Preparation of Work

## Special Caution Items For This Car

1. Retractable headlights are installed. For manual raising and lowering, the fuse must be pulled. When raising and lowering is executed without pulling the fuse, danger may be caused by rapid turning of the manual retracting knob.

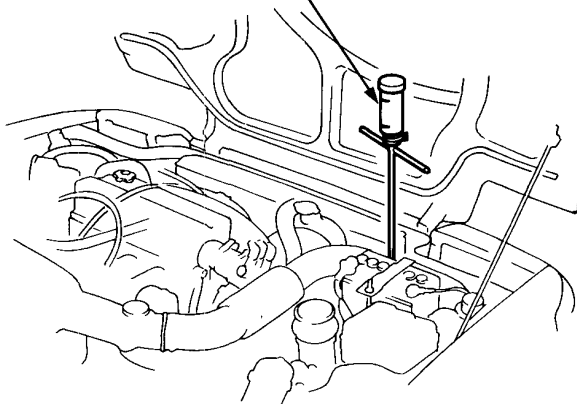
MANUAL RETRACTING KNOB



MANUAL RETRACTING KNOB

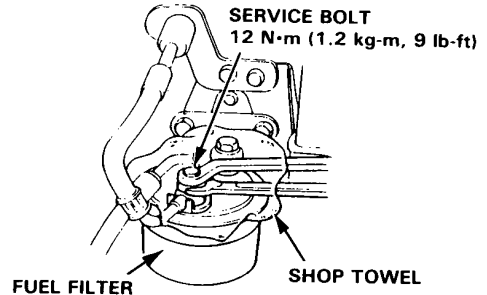
2. For cars equipped with A.L.B., the high-pressure brake fluid must be drained before disassembly of the A.L.B. piping system. When this is not done, danger may be caused by brake fluid squirting out under high pressure. For draining of the high-pressure brake fluid, refer to Section 21.

A.L.B. T-WRENCH  
07907-SB00000

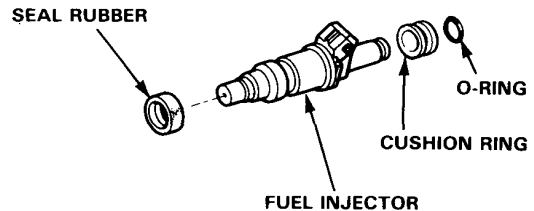


3. Fuel Line Servicing (Fuel-Injected Engines)

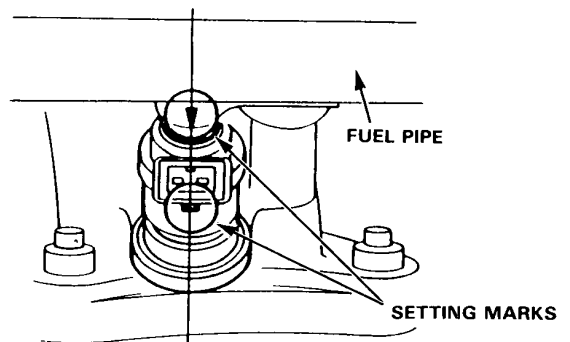
- Relieve fuel pressure by loosening the service bolt provided on the top of the fuel filter before disconnecting a fuel hose or a fuel pipe.



- Be sure to replace washers, O-rings, and seal rubbers with new ones when servicing fuel line parts.
- Always apply oil to the surfaces of O-rings and seal rings before installation. Never use brake fluid, radiator fluid, vegetable oils or alcohol-based oils.



- When assembling the flare joint of the high-pressure fuel line, clean the joint and coat with new engine oil.
- When installing an injector, check the angle of the coupler. The center line of the coupler should align with the setting mark on the injector holder.





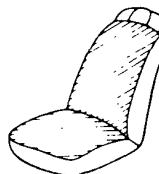
4. Inspection for fuel leakage
  - After assembling fuel line parts, turn ON the ignition switch (do not operate the starter) so that the fuel pump is operated for approximately two seconds and the fuel is pressurized. Repeat this operation two or three times and check whether any fuel leakage has occurred in any of the various points in the fuel line.
  
5. Installation of an amateur radio for cars equipped with PGM-FI and A.L.B.

Care has been taken for the PGM-FI and A.L.B. control units (computer) and its wiring to prevent erroneous operation from external interference, but erroneous operation of the computer may be caused by entry of extremely strong radio waves. Attention must be paid to the following items to prevent erroneous operation of the computer.

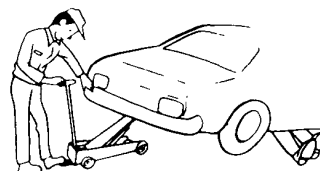
  - The antenna and the body of the radio must be at least 200 mm (7.9 in.) away from the computer. (The computer installation position is under the right side seat and inside the lining on the right of the rear seat.)
  - Do not lead the antenna feeder and the coaxial cable over a long distance parallel to the wiring, and when crossing with the wiring is required, execute crossing at a right angle.
  - Do not install a radio with a large output (max. 10 W).
  
6. Apply liquid gasket to the transmission, oil pump cover, right side cover and water outlet. Use HONDA PARTS NO 08740-99986 as a liquid gasket.
  - Check that the mating surfaces are clean and dry before applying liquid gasket. Degrease the mating surfaces if necessary.
  - Apply liquid gasket evenly, being careful to cover all the mating surface.
  - To prevent leakage of oil, apply liquid gasket to the inner threads of the bolt holes.
  - Do not allow liquid gasket to stand for more than 20 minutes before assembly.
  - Fill the case with clean engine oil or coolant 30 minutes after assembly.

**CAUTION: Observe all safety precautions and notes while working.**

1. Protect all painted surfaces and seats against dirt and scratches with a clean cloth or vinyl cover.



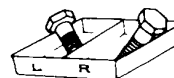
2. Work safely and give your work your undivided attention. When either the front or rear wheels are to be raised, block the remaining wheels securely. Exchange signals as frequently as possible when a work involves two or more workers. Do not run the engine unless the shop or working area is well ventilated.



3. Prior to removing or disassembling parts, they must be inspected carefully to isolate the cause for which the service is called for. Observe all safety notes and precautions and follow the proper procedures as described in this manual.



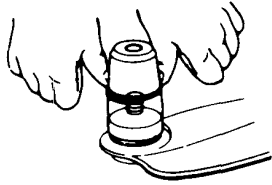
Mark or place all removed parts in order in a parts rack so they can be placed back to their original places or parts from which they were removed or with which they were mated.



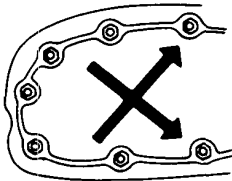
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# Preparation of Work

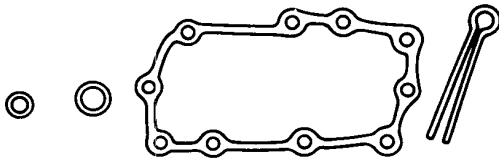
4. Use special tool when use of such a tool is specified.



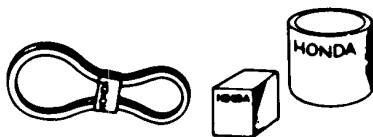
5. Parts must be assembled with the proper looseness or tightness according to the maintenance standards established.
6. When tightening bolts or nuts, begin on center or large diameter bolts and tighten them in crisscross pattern in two or more steps if necessary.



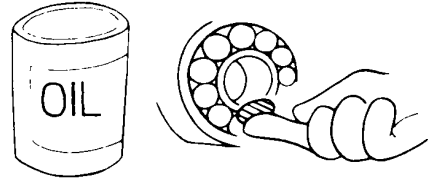
7. Use new packings, gaskets, O-rings and cotter pins whenever reassembling.



8. Use genuine HONDA parts and lubricants or those equivalent. When parts are to be reused, they must be inspected carefully to make sure they are not damaged or deteriorated and in good usable condition.



9. Coat or fill parts with specified grease where specified grease where specified (page 4-2). Clean all removed parts in or with solvent upon disassembly.



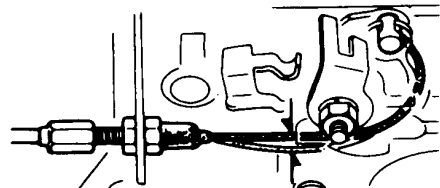
10. Brake fluid and hydraulic components
- When replenishing the system, use extreme care not to allow dust and dirt from entering the inside.
  - Do not mix different brands of fluid as they may not be compatible.
  - Do not reuse drained brake fluid.
  - Brake fluid can cause damage to the painted surfaces. Wipe up spilled fluid at once.
  - After disconnecting brake hoses or pipes from the joint, be sure plug the opening to prevent loss of brake fluid.
  - Clean all disassembled parts only in clean BRAKE FLUID. Blow open all holes and passages with compressed air.



- Keep disassembled parts from air-borne dust and abrasives.
- Check that parts are clean before assembly.

11. Avoid oil or grease getting on rubber parts and tubes.

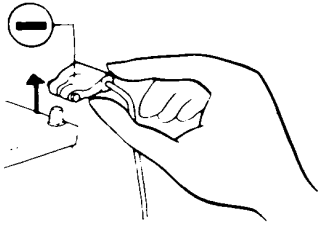
12. Upon assembling, check every possible part for proper installation and movement or operation.



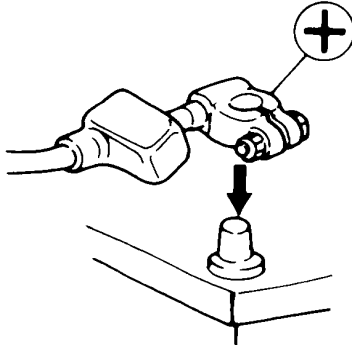


# Electrical

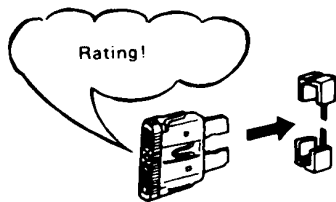
- Before making any repairs on electric wires or parts, disconnect the battery cables from the battery starting with the negative (-) terminal.



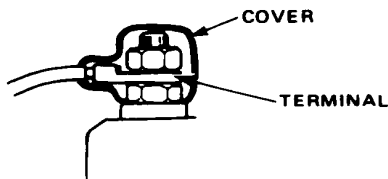
- After making repairs, check each wire or part for proper routing and installation. Also check to see that they are connected properly.
- Always connect the battery positive (+) cable first, then connect the negative (-) cable.



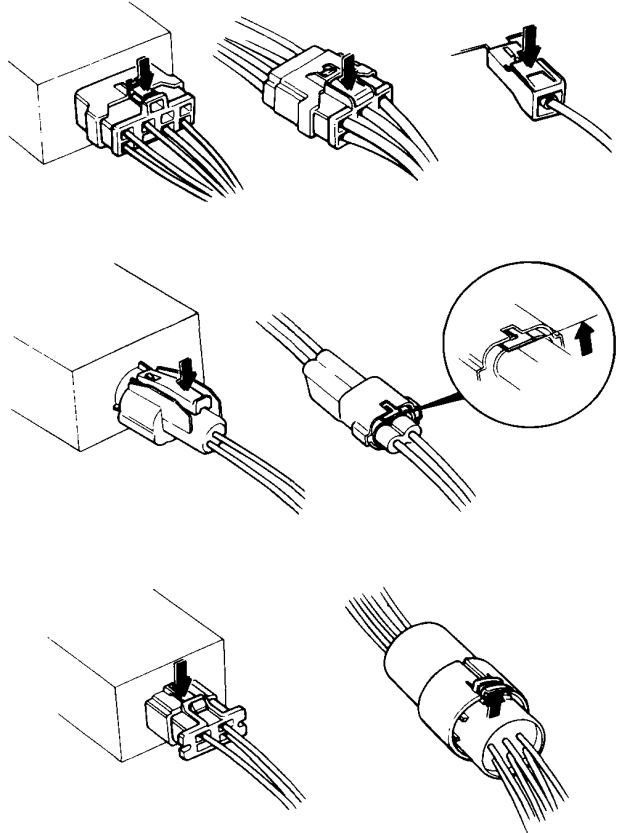
- Coat the terminals with clean grease after connecting the battery cables.
- Don't forget to install the terminal cover over the positive battery terminal after connecting.
- Before installing a new fuse, isolate the cause and take corrective measures, particularly when frequent fuse failure occurs.



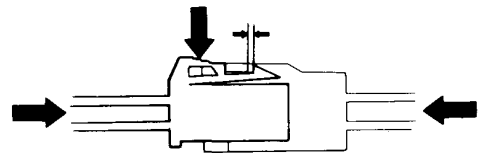
- Be sure to install the terminal cover over the connections after a wire or wire harness has been connected.



- When removing locking couplers, be sure to disconnect the lock before performing work.
- Couplers may be of two types, those in which the lock is pressed to remove, and those in which the lock is pulled up to remove. Be sure to ascertain the type of locking device before beginning work. The following is a depiction of the means of disconnecting various typical couplers.



When disconnecting locks, first press in the Coupler Tightly (to provide clearance to the locking device), then operate the tab fully and remove the coupler in the designated manner.



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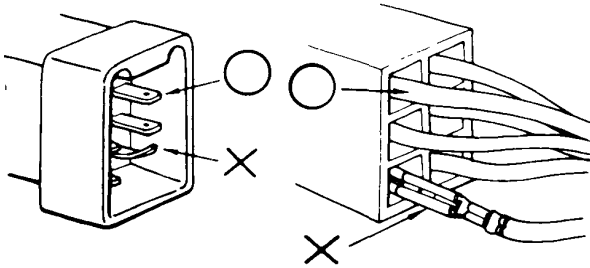
# Preparation of Work

## Electrical (cont'd)

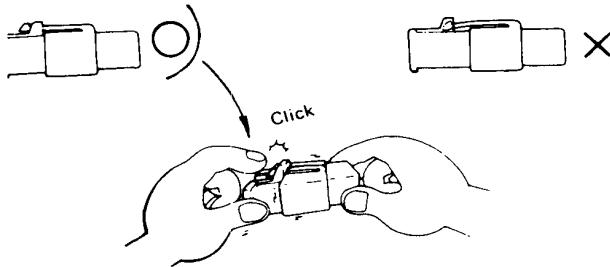
- When disconnecting a coupler, pull it off from the mating coupler by holding on both couplers.
- Never try to disconnect couplers by pulling on their wires.



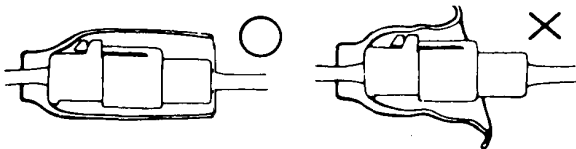
- Before connecting couplers, check to see that the terminals are in place and are not bent or distorted.



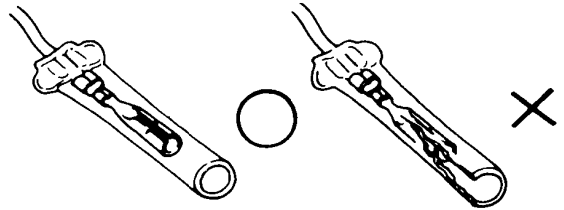
- Insert couplers fully until they will no longer go.
- Some couplers have locking tabs that must be aligned and engaged securely.
- Don't use wire harnesses with a loose wire or coupler.



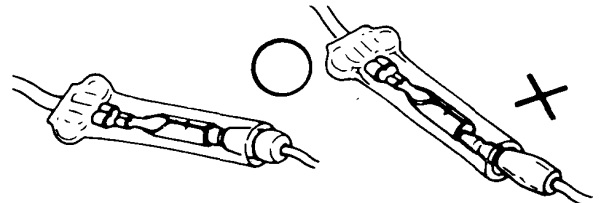
- Place the plastic cover over the mating coupler after reconnecting. Also check that the end is not inverted.



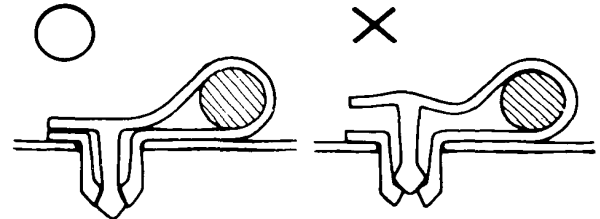
- Before connecting, check each connector cover for breakage. Also make sure that the female connector is tight and not pried open from the previous use.



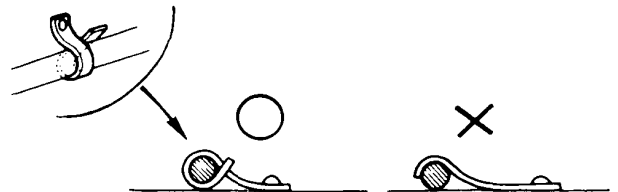
- Insert male connectors into the female connectors fully until they will no longer go.
- Be sure that plastic cover is placed over the connection.
- Don't place the opening of each plastic cover facing up.



- Secure wires and wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wires or wire harnesses.



- A loose wire harness or cable can be a hazard to safety. After clamping, check each wire for security in its clamp.



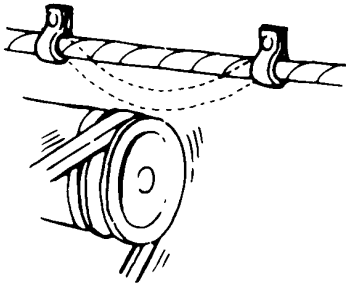
- Do not squeeze wires against the weld or nugget of its clamp when a weld-on clamp is used.



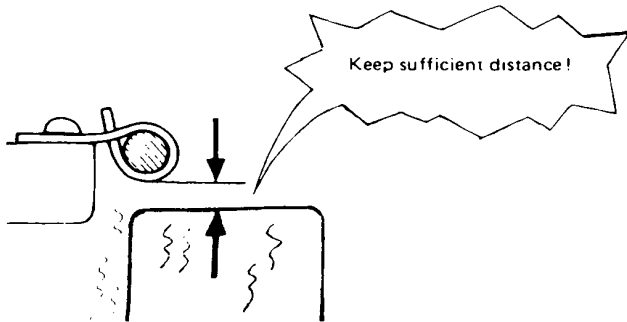




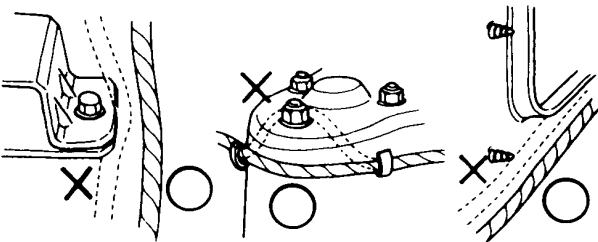
- After clamping, check each harness to be certain that it is not interfering with any moving or sliding parts of the vehicle.
- Keep wire harnesses away from the exhaust pipes and other hot parts.



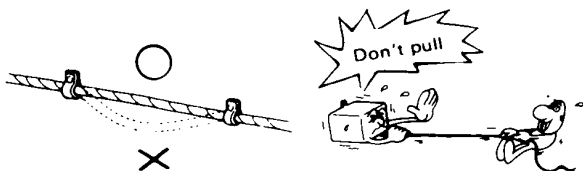
- Always keep a safe distance between wire harnesses and any heated parts.



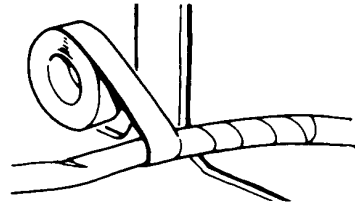
- Do not bring wire harnesses in direct contact with sharp edges or corners.
- Also avoid contact with the projected ends of bolts, screws and other fasteners.



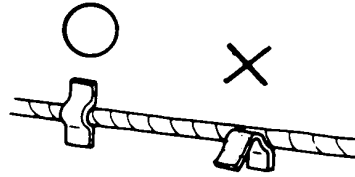
- Route harnesses so they are not pulled taut or slackened excessively.



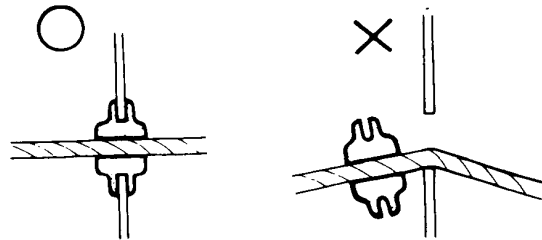
- Protect wires and harnesses with a tape or tube if they are in contact with a sharp edge or corner.



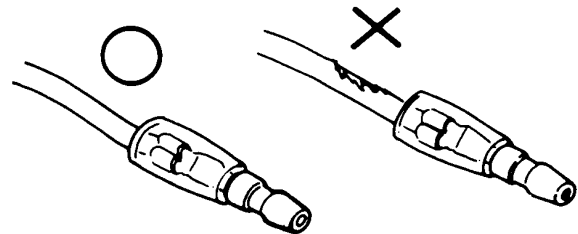
- Clean the attaching surface thoroughly if a plaster is used. Use a spirit wipe if necessary.



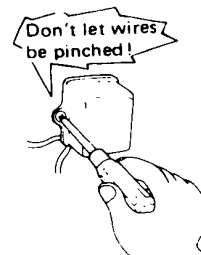
- Seat grommets in their grooves properly.



- Do not damage the insulator when connecting a wire.
- Do not use wires or harnesses with a broken insulator. Repair by wrapping with a protective tape or replace with new ones if necessary.



- After installing parts, make sure that wire harnesses are not pinched.

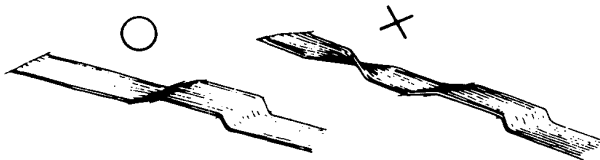


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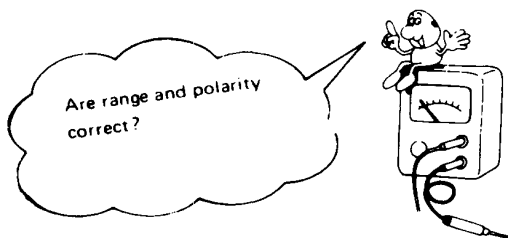
# Preparation of Work

## Electrical (cont'd)

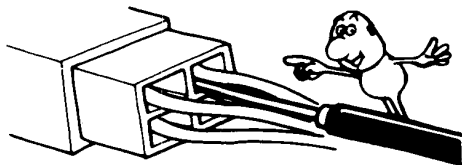
- After routing, check that the wire harnesses are not twisted or kinked.



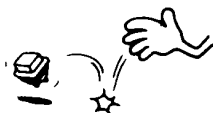
- Wire harnesses should be routed so that they are not pulled taut, slackened excessively, pinched, or interfered with adjacent or surrounding parts in all steering positions.



- When using the Service Tester, follow the manufacturer's instructions and those described in the Shop Manual.



- Do not throw or let parts fall.



- Rust is the enemy of all finished surfaces. Before connecting connectors and couplers, check the terminals and remove, if any, rust using a fine sand paper or emery cloth.



## Symbol Marks

The following symbols stand for:



:Apply engine oil.



:Apply brake fluid.



:Apply grease.



:Apply Automatic Transmission Fluid.



:Apply Power Steering Fluid.



## Special Tools

Special Tools (Common with Other Models) .....	2-2
Optional Tools .....	2-6

# Special Tools

## Special Tools (Common with Other Models)

### 5. Engine Removal/Installation

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07941-6920002	Ball Joint Remover	1	
②	07966-6340011	Engine Block Hanger	1	

### 6. Cylinder head/Valve Train

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07743-0020000	Adj. Valve Guide Driver	1	
②	07757-PJ10100	Valve Spring Compressor Attachment	1	Use changed to 07757-0010000 attachment <B20 A Engine>
③	07757-0010000	Valve Spring Compressor	1	
④	07942-SA50000	Valve Guide Remover, 7.0 mm	1	07942-8230000 may also be used.
⑤	07942-6570100	Valve Guide Remover, 6.6 mm	1	07942-6110000 may also be used.
⑥	07947-SB00100	Camshaft Seal Driver	1	
⑦	07984-SA50000	Valve Guide Reamer, 7.0 mm	1	07984-6890100 may also be used.
⑧	07984-6570100	Valve Guide Reamer, 6.6 mm	1	07984-6110000 may also be used.

### 7. Engine Block

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07749-0010000	Driver	1	07949-6110000 may also be used.
②	07924-PD20002	Ring Gear Holder	1	
③	07947-SB00200	Oil Seal Driver	1	Crankshaft Seal <Carbureted Engine>
④	07948-SB00101	Driver Attachment	1	Crankshaft Seal (Clutch Side)
⑤	07973-SB00100	Piston Base Head	1	} Not included in base set. Use each with the base set.
⑥	07973-SB00200	Pilot Collar	1	
⑦	07973-SB00400	Piston Pin Base Insert	1	
⑧	07973-PE00302	Adj. Piston Pin Collar	1	
⑨	07973-6570002	Piston Pin Insert Base Set	1	

### 8. Engine Lubrication

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07406-0030000	Oil Pressure Gauge Adaptor	1	
②	07746-0010100	Attachment, 32 x 35 mm	1	<A20A and ET Engine>
③	07749-0010000	Driver	1	07949-6110000 may also be used.
④	07912-6110001	Oil Filter Socket Wrench	1	

### 11. Fuel

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAC-SE00200	Fuel Sender Wrench	1	
②	07GAZ-SE00300	R.P.M. Connecting Adaptor	1	<Fuel-Injected Engine>
③	07401-0010000	Float Level Gauge	1	<Carbureted Engine>
④	07406-0040001	Fuel Pressure Gauge Set	1	<Fuel-Injected Engine>
④-1	07406-0040100	Pressure Gauge	(1)	Component Tool
④-2	07406-0040201	Hose Assembly	(1)	Component Tool
⑤	07411-0020000	Digital Circuit Tester	1	<Fuel-Injected Engine>
⑥	07614-0050100	Fuel Line Clip	1	<Carbureted Engine>
⑦	07999-PD6000A	System Checker Harness	1	<Fuel-Injected Engine>

### 13. Clutch

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAG-PF50100	Clutch Disc Alignment Tool	1	<B20A Engine>
②	07708-0010102	10 mm T-Wrench	1	
③	07924-PD20002	Ring Gear Holder	1	
④	07974-6890101	Clutch Disc Alignment Tool	1	<A20A & ET Engine>



#### 14. Manual Transmission <B2>

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07933-6890101	Bearing Remover Attachment	1	
②	07744-0010200	Pin Punch, 3.0 mm	1	
③	07744-0010400	Pin Punch, 5.0 mm	1	07944-6110100 may also be used.
④	07746-0010200	Attachment, 37 x 40 mm	1	
⑤	07746-0010400	Attachment, 52 x 55 mm	1	07949-6340200 may also be used.
⑥	07746-0010500	Attachment, 62 x 68 mm	1	
⑦	07749-0010000	Driver	1	07949-6110000 may also be used.
⑧	07936-6340000	Bearing Remover Set	1	

#### 14. Manual Transmission <A2>

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAC-PG40100	Transmission Housing Puller	1	07GAC-PF40100 may also be used.
②	07933-6890101	Bearing Remover Attachment	1	
③	07744-0010200	Pin Punch, 3.0 mm	1	
④	07744-0010400	Pin Punch, 5.0 mm	1	07944-6110100 may also be used.
⑤	07746-0010400	Attachment, 52 x 55 mm	1	
⑥	07749-0010000	Driver	1	07949-6110000 may also be used.
⑦	07907-PD10000	Socket Wrench, 30 mm	1	
⑧	07923-6890101	Mainshaft Holder	1	
⑨	07936-6340000	Bearing Remover Set	1	
⑩	07947-6110500	Driver Attachment, E	1	Differential Oil seal
⑪	07947-6340000	Oil Seal Driver	1	
⑫	07947-6340500	Driver Attachment, E	1	

#### 15. Automatic Transmission

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAB-PF50100	Mainshaft Holder, Automatic	1	<F4 Transmission>
②	07GAC-PG40100	Transmission Housing Puller	1	07GAC-PF40100 may also be used.
③	07GAE-PG40000	Clutch Spring Compressor Set	1	
③-1	07GAE-PG40100	Compressor Attachment	(1)	} 07960-689000 may also be used.
③-2	07GAE-PG40200	Compressor Bolt Assembly	(1)	
③-3	07960-6120100	Compressor Attachment	(1)	
④	07406-0020003	Oil Pressure Gauge Set	1	
④-1	07406-0020201	Oil Pressure Hose	(3)	Component Tool
⑤	07406-0070000	Low Pressure Gauge	1	
⑥	07936-6890101	Bearing Remover Attachment	1	<AS Transmission>
	07GAC-PF40210	Bearing Remover Attachment	1	<F4 Transmission>
⑦	07746-0010500	Attachment, 62 x 68 mm	1	
⑧	07749-0010000	Driver	1	07949-6110000 may also be used.
⑨	07907-PD10000	Socket Wrench, 30 mm	1	07907-6890100 may also be used.
⑩	07923-6890202	Mainshaft Holder	1	<AS Transmission>
⑪	07936-6340000	Bearing Remover Set	1	
⑫	07947-6110500	Oil Seal Driver Attachment	1	
⑬	07947-6340201	Oil Seal Driver	1	
⑭	07947-6340500	Driver Attachment, E	1	
⑮	07974-6890300	Throttle Cable Adjustment Gauge	1	<Carbureted Engine>
⑯	07998-SA50000	Accelerator Pedal Weight Set	1	
⑯-1	07988-SA50100	Main Pedal Weight (1.0 kg)	(1)	Component Tool
⑯-2	07988-SA50200	Sub Pedal Weight (0.5 kg)	(1)	Component Tool

(cont'd)

# Special Tools

## Special Tools (Common with Other Models)

### 16. Differential

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07746-0030100	Driver	1	07949-6110000 may also be used.
②	07749-0010000	Driver	1	
③	07944-SA00000	Pin Punch, 4.0 mm	1	
④	07947-6110500	Seal Driver Attachment	1	
⑤	07947-6340500	Driver Attachment, E	1	

### 17. Drivershaft <B20 Engine>

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAD-SE00100	Oil Seal Driver Attachment	1	
②	07746-0010400	Attachment, 52 x 55 mm	1	
③	07746-0010500	Attachment, 62 x 68 mm	1	
④	07746-0040900	Pilot, 40 mm	1	
⑤	07749-0010000	Driver	1	
⑥	07947-SD90200	Oil Seal Driver Attachment	1	
⑦	07965-SD90100	Support Base	1	
⑧	07965-SD90200	Support Collar	1	

### 18. Steering

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07916-SA50001	Steering Gearbox Locknut Wrench, 40 mm	1	07916-6920000 may also be used.
②	07941-6920002	Ball Joint Remover	1	
③	07974-SA50800	Ball Joint Boot Clip Installation Guide, B	1	
④	07974-6790000	Tie-Rod Boots Driver	1	

### 19. Power Steering

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAK-SE00100	P/S Joint Adaptor Set	1	
①-1	07GAK-SE00110	P/S Pump Joint Adaptor	(1)	
①-2	07GAK-SE00120	P/S Hose Joint Adaptor	(1)	Component tools
②	07406-0010001	P/S Pressure Gauge Set	1	
②-1	07406-0010101	Bypass Tube Joint	(1)	Component tools
②-2	07406-0010300	Oil Pressure Valve	(1)	
②-3	07406-0010400	Pressure Gauge	(1)	
③	07725-0030000	Universal Holder	1	07725-0010101 may also be used.
④	07746-0010300	Attachment, 42 X 47 mm	1	07949-6110000 may also be used.
⑤	07749-0010000	Driver	1	
⑥	07900-SA50000	P/S Seal Replacement Tool Set	1	Component Tools
⑥-1	07974-SA50100	Piston Seal Ring Guide	(1)	
⑥-2	07974-SA50200	Piston Seal Ring Sizing Tool	(1)	
⑥-3	07974-SA50300	Cylinder End Packing Slider	(1)	
⑥-4	07974-SA50400	End Seal Guide	(1)	
⑥-5	07974-SA50600	Dust Seal Guide*	(1)	
⑥-6	07974-SA50900	P/S Tool Set Case	(1)	
⑦	07916-SA50001	Steering Gearbox Locknut Wrench, 40 mm	1	
⑧	07941-6920002	Ball Joint Remover	1	
⑨	07946-1870100	Attachment, 28 x 30 mm*	1	
⑩	07947-6340300	Driver Attachment	1	
⑪	07953-7190000	Collar Driver**	1	
⑫	07973-6920001	P/S Column Adjustment Guide	1	

\*1800 \*\*2000



**20. Suspension < 2000 >**

Ref. No.	Tool Number	Description	Q'ty	Remarks	
①	07GAF—SE00100	Hub Assembly Pin	1	07949—6110000 may also be used.	
②	07GAF—SE00200	Hub Assembly Driver Attachment	1		
③	07GAF—SE00401	Front Hub Driver Base	1		
④	07410—0010200	Wheel Alignment Gauge ATT., B	1		
⑤	07746—0010400	Attachment, 52 x 55 mm	1		
⑥	07746—0010600	Attachment, 72 x 75 mm	1		
⑦	07749—0010000	Driver	1		
⑧	07941—6920002	Ball Joint Remover	1		
⑨	07946—6920100	Bearing Driver Attachment	1		
⑩	07959—SA50000	Shock Absorber Spring Compressor	1		
⑪	07965—SB00000	Ball Joint Dis/Assebbly Tool Set	1		
⑪-1	07965—SB00100	Ball Joint Remover/Installer	(1)		Component tools
⑪-2	07965—SB00200	Ball Joint Remover Base	(1)		
⑪-3	07965—SB00300	Ball Joint Installer Base	(1)		
⑫	07965—6340301	Front Wheel Bearing Dis/Assembly Tool Base, A	2		
⑬	07965—6920201	Front Hub Dis/Assembly Tool, B	1		
⑭	07974—SA50700	Ball Joint Boot Clip Installation Guide, A	1		
⑮	07974—SA50800	Ball Joint Boot Clip Installation Guide, B	1		

**20. Suspension < 1800 >**

Ref. No.	Tool Number	Description	Q'ty	Remarks	
①	07410—0010200	Wheel Alignment Gauge ATT., B	1	07949-6110000 may also be used.	
②	07749—0010000	Driver	1		
③	07941—6920002	Ball Joint Remover	1		
④	07959—SA50000	Shock Absorber Spring Compressor	2		
⑤	07965—SA00600	Front Hub Dis/Assembly Tool, F	1		
⑥	07965—SA50100	Front Hub Dis/Assembly Tool, A	1		
⑦	07965—SA50500	Front Hub Dis/Assembly Tool, E	1		
⑧	07965—SB00000	Ball Joint Dis/Assembly Tool, Set	1		
⑧-1	07965—SB00100	Ball Joint Remover/Installer	(1)		Component tools
⑧-2	07965—SB00200	Ball Joint Remover Base	(1)		
⑧-3	06965—SB00300	Ball Joint Installer Base	(1)		
⑨	07965—6340100	Front Hub Dis/Assembly Tool Pin, A	1		
⑩	07965—6340301	Front Wheel Bearing Dis/Assembly Tool Base, A	2		
⑪	07965—6920201	Front Hub Dis/Assembly Tool, B	1		
⑫	07965—6920300	Front Hub Dis/Assembly Tool, C	1		
⑬	07965—6920400	Front Hub Dis/Assembly Tool, D	1		
⑭	07974—SA50700	Ball Joint Boot Clip Installation Guide, A	1		
⑮	07946—6920100	Bearing Driver Attachment	1		
⑯	07974—SA50800	Ball Joint Boot Clip Installation Guide, B	1		

**21. Brake**

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAG—SE00100	Brake Booster Adjustment Gauge**	1	Short parts of the Brake Booster Set 07504—6340100
②	07GAZ—SE00100	A.L.B. Hand Pump Assembly**	1	
③	07504—6340100	Brake Booster Tool Set	1	
③-1	07404—5790300	Vacuum Gauge	(1)	
③-2	07406—5790200	Oil Pressuer Gauge	(2)	
③-3	07410—5790100	Pressure Gauge Attachment, C	(1)	
③-4	07410—5790500	Tube Joint Att, I	(2)	

\* 1800 \*\* 2000

# Special Tools

## Special Tools (Common with Other Models)

### 21. Brake

Ref. No.	Tool Number	Description	Q'ty	Remarks
③-5	07510-6340100	Pressuer Gauge Joint Pipe	(2)	Short parts of the Brake Booster Set 07504-6340100  07949-611000 may also be used.
③-6	*07510-6340300	Vacuum Joint Tube, A	(1)	
④	07508-SB00000	A.L.B. Checker	1	
⑤	07749-0010000	Driver	1	
⑥	07907-SB00000	A.L.B. T-Wrench	1	
⑦	07914-SA50000	Snap-ring Pliers	1	
⑧	07921-0010000	Flare Nut Wrench	1	
⑨	07929-SB00000	Modulater Holder	1	
⑩	07947-6890300	Driver Attachment, C	1	
⑪	07960-SA50002	Brake Spring Compressor	1	
⑫	07965-5790400	Cup Guide	1	
⑬	07965-6340301	Front Wheel Bearing Dis/Assembly Tool Base, A	2	
⑭	07967-SB00000	Pulser Driver	1	
⑮	07973-SA50000	Rear Caliper Guide	1	
⑯	07975-SA50002	Brake Booster Rod Adjustment Gauge*	1	
⑰	07999-SB00000	A.L.B. Hand pump Assembly*	1	

\*1800 \*\*2000

### 22. Body

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAZ-SE30100	Torsion Rod Assembly Tool	1	

### 24. Air Conditioner

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07GAB-PJ60100	A/C Clutch Holder	1	07923-PB80001 may also be used.
②	07703-0010200	Torx Bit Driver, T-30	1	07949-6110000 may also be used.
③	07749-0010000	Driver	1	
④	07934-PB80001	A/C Clutch Puller	1	
⑤	07934-SB20000	Shaft Seal Remover	1	
⑥	07947-6340300	Driver Attachment, A	1	

## Optional Tools

Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07780-0012300	Valve Seat Cutter 30°	1	EX
②	07780-0012900	Valve Seat Cutter 30°	1	IN
③	07780-0014000	Valve Seat Cutter 60°	1	IN
④	07780-0014100	Valve Seat Cutter 60°	1	EX
⑤	07780-0010400	Valve Seat Cutter 45°	1	EX
⑥	07780-0010800	Valve Seat Cutter 45°	1	IN
⑦	07781-0010201	Valve Seat Cutter Holder, 6.6 mm	1	
⑧	07781-0010301	Valve Seat Cutter Holder, 7.0 mm	1	



## Specifications

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Frame Repair Chart .....	3-22

# Standards and Service Limits

## Cylinder Head/Valve Train <B20A1 Engine> – Section 6

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Compression		300 min <sup>-1</sup> (rpm) and wide-open throttle	Nominal Minimum Maximum variation	1,226 kpa (12.5 kg/cm <sup>2</sup> , 178 psi) 1,030 kpa (10.5 kg/cm <sup>2</sup> , 149 psi) 196 kpa (2 kg/cm <sup>2</sup> , 28 psi)
Cylinder head	Warpage Height		—	0.05 (0.002)
			132 (5.20)	131.8 (5.19)
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		0.03 (0.001) max.	0.06 (0.002)
	Cam lobe height	IN EX	33.676 (1.3258) 33.737 (1.3282)	— —
Valve	Valve clearance	IN	0.08–0.12 (0.003–0.005)	—
		EX	0.16–0.20 (0.006–0.008)	—
	Valve stem O.D.	IN	6.58–6.59 (0.2591–0.2594)	6.55 (0.258)
		EX	6.55–6.56 (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 (0.04)	
Stem installed height	IN and EX	42.75 (1.683)	43.54 (1.714)	
Valve seat	Width	IN and EX	1.25–1.55 (0.049–0.061)	2.0 (0.08)
Valve spring	Free length	Inner	41.25 (1.622)	40.2 (1.583)
		Outer	44.74 (1.761)	43.74 (1.722)
	Squareness	Inner and Outer	—	1.6 (0.063)
Valve guide	I.D.	IN and EX	6.61–6.63 (0.260–0.261)	6.65 (0.262)

\* ET Engine

## Cylinder Head/Valve Train <ET and A20A4 Engine> – Section 6

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Compression		300 min <sup>-1</sup> (rpm) and wide-open throttle	Nominal Minimum Maximum variation	1,226 kpa (12.5 kg/cm <sup>2</sup> , 178 psi) * 1,323 kPa (13.5 kg/cm <sup>2</sup> , 192 psi) 1,030 kpa (10.5 kg/cm <sup>2</sup> , 149 psi) * 1,127 kPa (11.5 kg/cm <sup>2</sup> , 164 psi) 196 kpa (2 kg/cm <sup>2</sup> , 28 psi)
Cylinder head	Warpage Height		—	0.05 (0.002)
			90 (3.54)	89.8 (3.54)
Camshaft	End play		0.05–0.15 (0.002–0.006)	0.5 (0.02)
	Oil clearance	No. 1,3 and 5 journals	0.050–0.089 (0.002–0.004)	0.15 (0.006)
		No. 2 and 4 journals	0.130–0.169 (0.005–0.008)	0.23 (0.009)
	Runout		0.03 (0.001) max.	0.06 (0.002)
	Cam lobe height	IN A	38.853 (1.5296)	—
		IN B	38.604 (1.5198)	—
		EX	38.796 (1.5274)	—
		* Manual	IN	* 38.353 (1.5296)
		EX	* 38.796 (1.5274)	—
	* Automatic	IN	* 38.668 (1.5224)	—
		EX	* 38.480 (1.5150)	—
Valve	Valve clearance	IN	0.12–0.17 (0.005–0.007)	—
		EX	0.25–0.30 (0.010–0.012)	—
	Valve stem O.D.	IN	6.58–6.59 (0.2591–0.2594)	6.55 (0.258)
		EX	6.94–6.95 (0.2732–0.2736)	6.91 (0.272)
	Stem-to-guide clearance	IN	0.02–0.05 (0.001–0.002)	0.08 (0.003)
		EX	0.06–0.09 (0.002–0.004)	0.12 (0.005)
Stem installed height	IN	48.59 (1.913)	49.34 (1.943)	
	EX	47.66 (1.876)	48.41 (1.906)	
Valve seat	Width	IN and EX	1.25–1.55 (0.049–0.061)	2.0 (0.08)
Valve spring	Free length	IN	49.2 (1.94)	48.2 (1.90)
		EX Inner	39.8 (1.57)	38.8 (1.53)
		Outer	49.8 (1.96)	48.8 (1.92)
	Squareness	Inner and Outer	—	1.75 (0.068)
Valve guide	I.D.	IN	6.61–6.63 (0.260–0.261)	6.65 (0.262)
		EX	7.01–7.03 (0.276–0.277)	7.05 (0.278)
Rocker arm	Arm-to-shaft clearance		0.008–0.054 (0.0003–0.0021)	0.08 (0.003)

**Engine Block <B20A1 Engine> – Section 7**

Unit: mm (in.)

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface	0.07 (0.003) max.	0.10 (0.004)
	Bore diameter	81.01 – 81.02 (3.1894–3.1898)	81.05 (3.1909)
		81.00–81.01 (3.1890–3.1894)	81.04 (3.1905)
	Bore taper	0.007–0.012 (0.0003–0.0005)	0.05 (0.002)
	Reboring limit	–	0.05 (0.002)
Piston	Skirt O.D. ( At 21 mm (0.83 in) from bottom of skirt )	80.98–80.99 (3.1882–3.1886)	80.97 (3.188)
		80.97–80.98 (3.1878–3.1882)	80.96 (3.187)
	Clearance in cylinder	0.02–0.04 (0.0008–0.0016)	0.08 (0.003)
	Piston-to-ring clearance	0.035–0.060 (0.0014–0.0024)	0.13 (0.005)
		0.030–0.055 (0.0012–0.0022)	0.13 (0.005)
Piston ring	Ring end gap	0.25–0.35 (0.010–0.014)	0.6 (0.02)
		0.35–0.45 (0.014–0.018)	0.7 (0.03)
		0.20–0.70 (0.008–0.028)	0.8 (0.03)
Connecting rod	Pin-to-rod interference	0.013–0.032 (0.0005–0.0013)	0.013 (0.0005)
	Large end bore diameter	Nominal 51 (2.01)	–
	End play installed on crankshaft	0.15–0.30 (0.006–0.012)	0.40 (0.016)
Crankshaft	Main journal diameter	54.976–55.000 (2.1644–2.1654)	–
	Taper/out-of-round, main journal	0.005 (0.0002) max.	0.010 (0.0004)
	Rod journal diameter	47.976–48.000 (1.8888–1.8900)	–
	Taper/out-of-round, rod journal	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 (0.0003) max.	0.030 (0.0012)
Bearings	Main bearing-to-journal	No. 1, 2, 4, and 5 Journals	0.024–0.042 (0.0010–0.0017)
	Oil clearance	No. 3 Journal	0.030–0.048 (0.0012–0.0019)
			0.026–0.044 (0.0010–0.0017)
	Rod bearing-to-journal oil clearance		0.05 (0.002)

**Engine Block <ET and A20A4 Engine> – Section 7**

\* ET Engine

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Cylinder block	Warpage of deck surface	0.08 (0.003) max.	0.10 (0.004)
	Bore diameter	82.70–82.71 (3.2559–3.2563)	82.74 (3.2575)
		82.69–82.70 (3.2555–3.2559)	82.73 (3.2571)
		* 80.01–80.02 (3.1500–3.1504)	80.05 (3.1516)
		* 80.00–80.01 (3.1496–3.1500)	80.04 (3.1512)
		0.007–0.012 (0.0003–0.0005)	0.05 (0.002)
	Reboring limit	–	0.5 (0.02)
Piston	Skirt O.D. At 21 mm (0.83 in) from bottom of skirt	82.67–82.68 (3.2574–3.2551)	82.66 (3.254)
		82.66–82.67 (3.2543–3.2574)	82.65 (3.253)
		* 79.98–79.99 (3.1488–3.1492)	79.97 (3.148)
		* 79.97–79.98 (3.1484–3.1488)	79.96 (3.148)
	Clearance in cylinder	0.02–0.04 (0.0008–0.0016)	0.08 (0.003)
	Piston-to-ring clearance (top and second)	0.030–0.055 (0.0012–0.0022)	0.13 (0.005)
	* 0.020–0.045 (0.0008–0.0018)	0.13 (0.005)	
Piston ring	Ring end gap	0.20–0.35 (0.008–0.014)	0.6 (0.02)
		0.25–0.37 (0.010–0.015)	0.6 (0.02)
		* 0.20–0.35 (0.008–0.014)	0.6 (0.024)
		0.20–0.70 (0.008–0.020)	0.8 (0.03)
Connecting rod	Pin-to-rod interference	0.013–0.032 (0.0005–0.0013)	0.013 (0.0005)
	Large end bore diameter	* 0.016–0.032 (0.0006–0.0013)	0.013 (0.0005)
	End play installed on crankshaft	Nominal 48 (1.89) * 45 (1.77)	–
	0.15–0.30 (0.006–0.012)	0.40 (0.016)	
Crankshaft	Main journal diameter	49.970–49.994 (1.9673–1.9683)	–
	Taper/out-of-round, main journal	0.005 (0.0002) max.	0.010 (0.0004)
	Rod journal diameter	44.976–45.000 (1.7707–1.7717)	–
		* 41.976–42.000 (1.6527–1.6535)	–
	Taper/out-of-round, rod journal	0.005 (0.0002) max.	0.010 (0.0004)
	End play	0.10–0.35 (0.004–0.014)	0.45 (0.018)
Runout	0.024 (0.0009) max.	0.04 (0.0016)	
Bearings	Main bearing-to-journal	No. 1, 2, 4, and 5 journals	0.026–0.055 (0.0010–0.0022)
	Oil clearance	No. 3 Journal	0.032–0.061 (0.0013–0.0024)
		*all Journals	0.020–0.049 (0.0008–0.0019)
	Rod bearing-to-journal oil clearance		0.020–0.038 (0.0008–0.0015)

(cont'd)

# Standards and Service Limits (cont'd)

## Engine Lubrication <B20A1 Engine> – Section 8

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US. qt., Imp. qt.)	5.0 (5.3, 4.4) After engine disassembly 4.0 (4.2, 3.5) After oil change, including oil filter 3.5 (3.7, 3.1) After oil change, without oil filter	
Oil pump	Displacement	54 ℓ (10.6 US. gal., 8.9 Imp. gal.) 5,000 min <sup>-1</sup> (rpm)	
	Inner-to-outer rotor radial clearance	0.04–0.16 (0.002–0.006)	0.2 (0.008)
	Pump body-to-rotor radial clearance	0.10–0.19 (0.004–0.007)	0.21 (0.008)
	Pump body-to-rotor side clearance	0.02–0.071 (0.001–0.003)	0.12 (0.005)
Relief valve	Pressure setting 80°C (176°F)	Idle	137 kPa (1.4 kg/cm <sup>2</sup> , 20 psi) min.
		3,000 min <sup>-1</sup> (rpm)	470–559 kPa (4.8–5.7 kg/cm <sup>2</sup> , 67–80 psi)

\* : ET Engine

## Engine Lubrication <ET and A20A4 Engine> – Section 8

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Engine oil	Capacity ℓ (US. qt., Imp. qt.)	4.0 (4.2, 3.5) After engine disassembly * 3.9 (4.1, 3.4) After engine disassembly 3.5 (3.7, 3.1) After oil change, including oil filter 3.0 (3.2, 2.6) After oil change, without oil filter.	
Oil pump	Displacement	40.3 ℓ (10.6 US. gal., 8.9 Imp. gal.) 5,500 min <sup>-1</sup> (rpm)	
	Inner-to-outer rotor radial clearance	0.15 (0.006) max.	0.2 (0.008)
	Pump body-to-rotor radial clearance	0.10–0.18 (0.004–0.007)	0.21 (0.008)
	Pump body-to-rotor side clearance	0.30–0.108 (0.001–0.004)	0.15 (0.006)
Relief valve	Pressure setting 80°C (176°F)	Idle	98 kPa (1.0 kg/cm <sup>2</sup> , 14 psi) min.
		3,000 min <sup>-1</sup> (rpm)	373–451 kPa (3.8–4.6 kg/cm <sup>2</sup> , 54–65 psi)

## Cooling – Section 10

MEASUREMENT		STANDARD (NEW)	
Cooling fan belt (A20A4 Engine)	Deflection midway between pulleys/load	6–9 (0.24–0.35)/98N (10 kg, 22 lb) for used belt 5 (0.20)/98N (10 kg, 22 lb) after replacement of belt	
Cooling fan belt (ET Engine)	Deflection midway between pulleys/load	7–10 (0.3–0.4)/98N (10 kg, 22 lb) for used belt 5–7 (0.2–0.3)/98N (10 kg, 22 lb) for replacement of belt	
Radiator (B20A1 Engine)	Capacity (incl. heater) ℓ (US. Gal., Imp. Gal.) (Includes reservoir tank 0.8 (0.21, 0.18))	Manual 5.9 (1.6, 1.3)	
Radiator (A20A1 Engine)	Capacity (incl. heater) ℓ (US. Gal., Imp. Gal.) (Includes reservoir tank 0.8 (0.21, 0.18))	Manual 5.9 (1.6, 1.5) Automatic 6.7 (1.8, 1.5)	
Radiator (ET Engine)	Capacity (incl. heater) ℓ (US. Gal., Imp. Gal.) (Includes reservoir tank 0.8 (0.21, 0.18))	Except KY: 6.8 (1.8, 1.5) KY: 7.5 (2.0, 1.7)	
Radiator cap	Pressure cap opening pressure	74–103 kPa (0.75–1.05 kg/cm <sup>2</sup> , 11–15 psi)	
Thermostat	Starts to open	Primary: 82°C ± 2 (180°F ± 3) Secondary: 85°C ± 2 (185°F ± 3)	86–90°C (187–194°F)
	Full open	95°C (203°F)	100°C (212°F) OPTIONAL
	Valve lift at full open	8 (0.31) max.	8 (0.31) max.
Water pump	Gear ratio (crankshaft)	1.34	
	Capacity: ℓ per min/at min <sup>-1</sup> (rpm)	124/5,000 (32.7 US. gal., 27.3 Imp.gal.)/5,000 min <sup>-1</sup> (rpm)	
Cooling fan	Fan-to-core clearance	23.0 (0.90)	
	Thermoswitch "ON" temperature	87°–93°C (188°–199°F)	
	Thermoswitch "OFF" temperature	83°C (181°F) or more (hysteresis 2°C (35°F) or more)	

## Fuel <Fuel-Injected Engine> – Section 11

MEASUREMENT		STANDARD (NEW)
Fuel pump	Delivery pressure	230–270 kPa (2.35–2.75 kg/cm <sup>2</sup> , 33–39 psi)
	Displacement	230 cc/min in 10 seconds
	Relief valve opening pressure	441–588 kPa (4.5–6.0 kg/cm <sup>2</sup> , 64–85 psi)
Pressure regulator	Pressure	230–270 kPa (2.35–2.75 kg/cm <sup>2</sup> , 33–39 psi)
Fuel Tank	Capacity	60 ℓ/15.9 US. Gal., 13.2 Imp. Gal.)

Unit: mm (in.)

**Fuel <Carbureted Engine> – Section 11**

MEASUREMENT		STANDARD (NEW)
Fuel pump	Delivery pressure	14.7–19.6 kPa (0.15–0.20 kg/cm <sup>2</sup> , 2.1–2.8 psi)
	Displacement	620 cm <sup>3</sup> /min. at 10V (38 cu. in./10V) 680 cm <sup>3</sup> /min. at 12V (41 cu.in./12V)
Fuel tank	Capacity	60 ℓ (15.8 US. Gal., 13.2 Imp. Gal.)

**Fuel-Injection <Fuel-Injected Engine> – Section 12**

MEASUREMENT		STANDARD (NEW)
Fast idle		1,000–1,800 min <sup>-1</sup> (rpm)
Idle Speed with headlights and cooling fan off	KQ, KX	750 ± 50 min <sup>-1</sup> (rpm)
	Other types	800 ± 50 min <sup>-1</sup> (rpm)
Idle CO	KQ, KX	0.1 % max.
	Other types	1.0 ± 1.0 %

**Carburetor <Carbureted Engine> – Section 12**

MEASUREMENT		STANDARD (NEW)
Carburetor	Choke fast idle	MT AT 2,000 min <sup>-1</sup> (rpm) 1,800 min <sup>-1</sup> (rpm)
	Idle speed with headlights and cooling fan off ↑ : The lower number is if idle is measured at high altitude; the higher number is if idle is measured at low altitude	KX Other types 800 ± 50 min <sup>-1</sup> (rpm) 700 ± 50 min <sup>-1</sup> (rpm) 750 ± 50 min <sup>-1</sup> (rpm)
Idle Co		KS, KX Other types 0.5–2.0 3.0
	Float level (from gasket)	22.5–24.5 (0.89–0.96)

**Clutch – Section 13**

\* : B20A1 Engine

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT
Clutch pedal	Pedal height	176 (6.9) to floor	—
	Stroke	137 (5.4) to carpet	—
		133–143 (5.2–5.6) * 138–143 (5.4–5.6)	—
	Pedal play	23–28 (0.9–1.1)	—
	Disengagement height	86 (3.4) min. to floor 47 (1.9) min. to carpet	—
Clutch arm	Release arm adjustment	5.2–6.4 (0.20–0.25)	—
Flywheel	Clutch surface runout	0.05 (0.002) max.	0.15 (0.006)
Clutch plate	Rivet head depth	1.3 (0.05) min.	0.2 (0.008)
	Surface runout	0.8 (0.03) max.	1.0 (0.04)
	Radial play in splines	0.7–2.1 (0.028–0.083)	4.0 (0.16)
	Thickness	8.1–8.8 (0.32–0.35)	5.7 (0.22)
Clutch release bearing holder	I.D.	31.00–31.059 (1.220–1.223)	31.09 (1.224)
	Holder-to-guide sleeve clearance	0.05–0.15 (0.002–0.006)	0.22 (0.009)
Clutch cover	Unevenness of diaphragm spring	0.8 (0.03) max.	1.0 (0.04)

(cont'd)

# Standards and Service Limits (cont'd)

## Manual Transmission <B2> – Section 14

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil		Capacity ℓ (US. qt., Imp. qt)	1.9 (2.0, 1.7) at assembly 2.0 (2.1, 1.8) at oil change	
Mainshaft	End play		0.14–0.21 (0.006–0.008)	Adjust with a shim.
	Diameter of needle bearing contact area		27.987–28.000 (1.1018–1.1024)	27.94 (1.100)
	Diameter of third gear contact area		37.984–38.000 (1.4954–1.4961)	37.93 (1.493)
	Diameter of ball bearing contact area		27.987–28.000 (1.1018–1.1024)	27.94 (1.100)
	Runout		0.04 (0.0016) max.	0.10 (0.004)
Mainshaft third and fourth gears	I.D.		43.009–43.025 (1.6933–1.6939)	43.08 (1.696)
	End play		0.06–0.21 (0.0024–0.0083)	0.3 (0.012)
	Thickness	3rd 4th	32.42–32.47 (1.2764–1.2783) 30.92–30.97 (1.2173–1.2193)	32.3 (1.272) 30.8 (1.213)
Mainshaft fifth gear	I.D.		43.009–43.025 (1.6933–1.6939)	43.08 (1.696)
	End play		0.06–0.21 (0.0024–0.0083)	0.3 (0.0012)
	Thickness		30.42–30.47 (1.1976–1.1996)	30.3 (1.193)
Countershaft	End play		0.10–0.35 (0.004–0.014)	0.5 (0.02)
	Diameter of needle bearing contact area		33.000–33.015 (1.2992–1.2998)	32.95 (1.297)
	Diameter of ball bearing contact area		24.987–25.000 (0.9837–0.9843)	24.94 (0.982)
	Diameter of low gear contact area		33.984–40.000 (1.3380–1.5748)	33.93 (1.336)
	Runout		0.04 (0.0016)	0.10 (0.004)
Countershaft low gear	I.D.		46.009–46.025 (1.8114–1.8120)	46.08 (1.814)
	End play		0.03–0.08 (0.0012–0.0031)	Adjust with a shim
Countershaft Second gear	I.D.		50.009–50.025 (1.9689–1.9695)	50.08 (1.972)
	End play		0.03–0.08 (0.0012–0.0031)	Adjust with a collar.
	Thickness		32.92–32.97 (1.2961–1.2980)	32.8 (1.291)
Spacer collar (Countershaft second gear)	I.D.		36.48–36.49 (1.4362–1.4366)	36.5 (1.437)
	O.D.		43.989–44.000 (1.7318–1.7323)	43.94 (1.730)
	Length	A	28.98–29.00 (1.1409–1.1417)	–
		B	29.03–29.05 (1.1429–1.1437)	–
Spacer collar (Mainshaft fourth and fifth gears)	I.D.		28.002–28.012 (1.1024–1.1028)	28.06 (1.105)
	O.D.		34.989–35.000 (1.3775–1.3780)	34.94 (1.376)
	Length	A	55.95–56.05 (2.2028–2.2067)	–
		B	26.03–26.08 (1.0248–1.0268)	–
Reverse Idler gear	I.D.		20.016–20.043 (0.7880–0.7891)	20.09 (0.791)
	Gear-to-reverse gear shaft clearance		0.036–0.084 (0.0014–0.0033)	0.16 (0.006)
Synchronizer ring		Ring-to-gear clearance (ring pushed against gear)	0.85–1.10 (0.033–0.043)	0.4 (0.016)
Shift fork	Synchronizer sleeve gear	1, 2, 3 and 4th	7.95–8.05 (0.313–0.317)	–
		5th	5.75–5.85 (0.226–0.230)	–
	Fork-to-synchronizer sleeve	1, 2, 3 and 4th	0.45–0.65 (0.018–0.026)	1.0 (0.04)
		5th	0.25–0.45 (0.010–0.018)	0.8 (0.03)
Reverse shift fork	End gap		13.0–13.3 (0.51–0.52)	–
	Fork-to-reverse idler gear clearance		0.5–1.1 (0.020–0.043)	1.8 (0.07)
	Groove width		7.05–7.25 (0.278–0.285)	–
	Fork-to-fifth/reverse shift shaft clearance		0.05–0.35 (0.002–0.014)	0.5 (0.02)
Shift arm	Width of groove in shift rod guide		12.8–13.0 (0.50–0.51)	–
	Shift arm-to-shift rod guide clearance		0.05–0.35 (0.002–0.014)	0.8 (0.03)
	Width in shift guide		7.9–8.0 (0.311–0.315)	–
	Shift arm-to-shift guide clearance		0.1–0.3 (0.004–0.012)	0.6 (0.02)
Shift rod guide	I.D.		14.000–14.068 (0.5512–0.5539)	–
	Guide-to-shaft clearance		0.011–0.092 (0.0004–0.0036)	0.15 (0.006)
	O.D.		11.9–12.0 (0.469–0.472)	–
	Guide-to-fifth/reverse shift shaft clearance		0.2–0.5 (0.008–0.020)	0.8 (0.03)
Selector arm	Width		11.9–12.0 (0.469–0.472)	–
	Arm-to-shift rod guide clearance		0.05–0.25 (0.002–0.010)	0.5 (0.02)
	End gap		9.9–10.0 (0.390–0.394)	–
	Arm-to-interlock clearance		0.05–0.20 (0.002–0.008)	0.45 (0.018)

**Manual Transmission <A1/A2> – Section 14**

Unit: mm (in.)

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission oil	Capacity † (US. qt., Imp. qt)	2.3 (2.4, 2.0) at assembly 2.4 (2.5, 2.1) at oil change	
Mainshaft	End play Diameter of needle bearing contact area Diameter of third gear contact area Diameter of ball bearing contact area Runout	0.10–0.35 (0.004–0.014) 28.002–28.015 (1.1024–1.1030) 31.984–32.000 (1.2592–1.2598) 24.980–24.993 (0.9835–0.9840) 0.04 (0.0016) max.	0.5 (0.02) 27.95 (1.100) 31.93 (1.2571) 24.93 (0.981) 0.10 (0.004)
Mainshaft third and fourth gears	I.D.  End play Thickness	37.009–37.025 (1.4570–1.4577)  0.03–0.18 (0.0012–0.0071) 30.42–30.47 (1.1976–1.1996)	37.07 (1.459)  0.3 (0.012) 30.3 (1.193)
Mainshaft fifth gear	I.D. End play Thickness	37.009–37.025 (1.4570–1.4577) 0.03–0.13 (0.0012–0.0051) 29.92–29.97 (1.1780–1.1799)	37.07 (1.459) 0.3 (0.012) 29.8 (1.173)
Countershaft	End play Diameter of needle bearing contact area Diameter of ball bearing contact area Diameter of low gear contact area Runout	0.10–0.35 (0.004–0.014) 33.000–33.015 (1.2992–1.2998) 24.980–24.993 (0.9835–0.9840) 33.984–34.000 (1.3380–1.3386) 0.04 (0.0016)	0.5 (0.02) 32.95 (1.297) 24.93 (0.981) 33.93 (1.336) 0.10 (0.004)
Countershaft low gear	I.D. End play	39.008–39.025 (1.5357–1.5364) 0.03–0.08 (0.0012–0.0031)	39.07 (1.538) 0.18 (0.007)
Countershaft Second gear	I.D. End play Thickness	43.008–43.025 (1.6932–1.6939) 0.003–0.10 (0.0012–0.0039) 30.42–30.47 (1.1976–1.1996)	43.07 (1.696) 0.18 (0.007) 30.3 (1.193)
Spacer collar (Countershaft second gear)	I.D. O.D. Length	30.98–30.99 (1.2197–1.2201) 37.989–38.000 (1.4956–1.4961) 30.53–30.55 (1.2020–1.2028)	31.4 (1.236) 37.93 (1.493) 30.51 (1.201)
Spacer collar (Mainshaft fourth and fifth gears)	I.D. O.D. Length	25.002–25.012 (0.9843–0.9847) 31.989–32.000 (1.2594–1.2598) 27.03–27.08 (1.0642–1.0661)	25.06 (0.987) 31.93 (1.257) 27.01 (1.063)
Reverse Idler gear	I.D. Gear-to-reverse gear shaft clearance	17.016–17.043 (0.6699–0.6710) 0.032–0.077 (0.0013–0.0030)	17.09 (0.673) 0.15 (0.006)
Synchronizer ring	Ring-to-gear clearance (ring pushed against gear)	0.73–1.18 (0.031–0.046)	0.4 (0.016)
Shift fork	Synchronizer sleeve gear Fork-to-synchronizer sleeve clearance	6.75–6.85 (0.266–0.270) 0.35–0.65 (0.014–0.026)	6.0 (0.24) 1.0 (0.04)
Reverse shift fork	End gap Fork-to-reverse idler gear clearance Groove width Fork-to-fifth/reverse shift shaft clearance	11.8–12.1 (0.46–0.48) 0.2–1.0 (0.008–0.039) 7.05–7.25 (0.278–0.285) 0.05–0.35 (0.002–0.014)	– 1.7 (0.07) – 0.5 (0.02)
Shift arm	Width of groove in shift rod guide Shift arm-to-shift rod guide clearance Width in shift guide Shift arm-to-shift guide clearance	11.8–12.0 (0.46–0.47) 0.05–0.35 (0.002–0.014) 7.9–8.0 (0.311–0.315) 0.1–0.3 (0.004–0.012)	– 0.8 (0.03) – 0.6 (0.02)
Shift rod guide	I.D. Guide-to-shaft clearance O.D. Guide-to-fifth/reverse shift shaft clearance	14.000–14.068 (0.5512–0.5539) 0.011–0.092 (0.0004–0.0036) 11.9–12.0 (0.469–0.472) 0.2–0.5 (0.008–0.020)	– 0.15 (0.006) – 0.8 (0.03)
Selector arm	Width Arm-to-shift rod guide clearance End gap Arm-to-interlock clearance Arm-to-holder clearance	11.9–12.0 (0.469–0.472) 0.05–0.25 (0.002–0.010) 10.05–10.15 (0.396–0.400) 0.05–0.25 (0.002–0.010) 0.01–0.20 (0.004–0.0079)	– 0.5 (0.02) – 0.7 (0.03) Selection with 5 types of shims

(cont'd)

# Standards and Service Limits (cont'd)

## Automatic Transmission <AS> – Section 15

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT	
Transmission oil	Capacity ℓ (US. qt., Imp. qt)	2.8 (3.0, 2.5) at change 5.6 (5.9, 4.9) at assembly		
Hydraulic pressure	Line pressure at 2,000 min <sup>-1</sup> (rpm)	784–833 kPa (8.0–8.5 kg/cm <sup>2</sup> , 114–121 psi)	735 kPa (7.5 kg/cm <sup>2</sup> , 107 psi)	
	4th clutch pressure at 2,000 min <sup>-1</sup> (rpm)		498 kPa (5.0 kg/cm <sup>2</sup> , 71 psi) with lever released.	
	3rd clutch pressure at 2,000 min <sup>-1</sup> (rpm)	539–833 kPa (5.5–8.5 kg/cm <sup>2</sup> , 64–121 psi)	735 kPa (7.5 kg/cm <sup>2</sup> , 107 psi) with lever in full throttle.	
	1st clutch pressure at 2,000 min <sup>-1</sup> (rpm)	784–833 kPa (8.0–8.5 kg/cm <sup>2</sup> , 114–121 psi)	735 kPa (7.5 kg/cm <sup>2</sup> , 107 psi)	
	Governor pressure at 60 km/h	216–225 kPa (2.2–2.3 kg/cm <sup>2</sup> , 31–33 psi)	211 kPa (2.15 kg/cm <sup>2</sup> , 29 psi)	
	Throttle pressure A	505–519 kPa (5.15–5.3 kg/cm <sup>2</sup> , 73–75 psi)	499 kPa (5.1 kg/cm <sup>2</sup> , 73 psi)	
	Throttle pressure B	784–833 kPa (8.0–8.5 kg/cm <sup>2</sup> , 114–121 psi)	735 kPa (7.5 kg/cm <sup>2</sup> , 107 psi)	
Stall speed	Check with car on level ground	2,400 min <sup>-1</sup> (rpm)	2,100–2,700 min <sup>-1</sup> (rpm)	
Clutch	Clutch initial clearance	1st	0.4–0.7 (0.016–0.028)	–
		2nd	0.65–0.80 (0.026–0.031)	–
		3rd, 4th	0.4–0.6 (0.016–0.024)	–
	Clutch return spring free length	2nd, 3rd, 4th	30.5 (1.20)	28.5 (1.12)
		1st	32.0 (1.26)	30.0 (1.18)
	Clutch disc thickness		1.88–2.0 (0.074–0.079)	Until grooves worn out
	Clutch plate thickness		1.95–2.05 (0.077–0.079)	Discoloration
	Clutch end plate thickness	Mark 1	2.3–2.4 (0.090–0.094)	↑ Discoloration ↓
		Mark 2	2.4–2.5 (0.094–0.098)	
		Mark 3	2.5–2.6 (0.098–0.102)	
		Mark 4	2.6–2.7 (0.102–0.106)	
		Mark 5	2.7–2.8 (0.106–0.110)	
		Mark 6	2.8–2.9 (0.110–0.114)	
		Mark 7	2.9–3.0 (0.114–0.118)	
Mark 8		3.0–3.1 (0.118–0.122)		
Mark 9		3.1–3.2 (0.122–0.126)		
Mark 10		3.2–3.3 (0.126–0.130)		
Transmission	Diameter of needle bearing contact area on main and stator shaft	19.980–19.983 (0.7866–0.7867)	↑ Wear or damage ↓ Wear or damage	
	Diameter of needle bearing contact area on mainshaft 2nd gear	35.975–35.991 (1.4163–1.4169)		
	Diameter of needle bearing contact area on main 4th gear collar	31.975–31.991 (1.2588–1.2594)		
	Diameter of needle bearing contact area on mainshaft 1st gear collar	29.980–29.993 (1.1803–1.1808)		
	Diameter of needle bearing contact area on countershaft (L side)	32.984–33.000 (1.2986–1.2993)		
	Diameter of needle bearing contact area on countershaft 3rd gear	31.975–31.991 (1.2589–1.2595)		
	Diameter of needle bearing contact area on countershaft 4th gear	27.980–27.993 (1.1016–1.1021)		
	Diameter of needle bearing contact area on countershaft reverse gear collar	29.980–29.993 (1.1803–1.1808)		
	Diameter of needle bearing contact area on countershaft L gear collar	29.980–29.993 (1.1803–1.1808)		
	Diameter of needle bearing contact area on reverse idle gear	13.994–14.000 (0.5509–0.5512)		
	Reverse idler shaft holder diameter	14.016–14.034 (0.5518–0.5525)		
	Mainshaft 2nd gear I.D.	41.000–41.016 (1.6141–1.6148)		
	Mainshaft 1st gear I.D.	36.000–36.016 (1.4173–1.4179)		
	Countershaft 4th gear I.D.	33.000–33.016 (1.2992–1.2998)		
	Countershaft 3rd gear I.D.	38.000–38.016 (1.4966–1.4966)		
	Countershaft 2nd gear I.D.	31.000–31.016 (1.2204–1.2210)		
	Countershaft 1st gear I.D.	35.000–35.016 (1.3779–1.3785)		
	Countershaft reverse gear I.D.	36.000–36.016 (1.4173–1.4179)		
	Reverse idler gear I.D.	18.007–18.020 (0.7086–0.7094)		
	Countershaft 2nd gear end play	0.07–0.12 (0.003–0.005)		
	Mainshaft 4th gear end play	0.07–0.12 (0.003–0.005)		
	Mainshaft 2nd gear end play	0.07–0.12 (0.003–0.005)		
	Mainshaft 1st gear end play	0.08–0.24 (0.003–0.009)		
Countershaft 3rd gear end play	0.07–0.12 (0.003–0.005)			



**Automatic Transmission <AS> – Section 15**

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission (cont'd)	Reverse idler gear end play	0.05–0.18 (0.002–0.007)	—
	Countershaft reverse gear end play	0.10–0.20 (0.004–0.008)	—
	Reverse gear hub O.D.	51.87–51.90 (2.0421–0.008)	Wear or damage
	Thrust washer thickness		
	Mainshaft 2nd gear		
	A	3.47–3.50 (0.137–0.138)	—
	B	3.52–3.55 (0.139–0.140)	—
	C	3.57–3.60 (0.141–0.142)	—
	D	3.62–3.65 (0.143–0.144)	—
	E	3.67–3.70 (0.145–0.146)	—
	F	3.72–3.75 (0.147–0.148)	—
	G	3.77–3.80 (0.149–0.150)	—
	H	3.82–3.85 (0.151–0.152)	—
	I	3.87–3.90 (0.153–0.154)	—
	Mainshaft R side bearing	2.95–3.05 (0.1161–0.1200)	Wear or damage
	Mainshaft 1st gear	2.43–2.50 (0.0957–0.0984)	Wear or damage
	Countershaft 3rd gear		
	A	2.97–3.00 (0.1169–0.1181)	—
	B	3.02–3.05 (0.1189–0.1201)	—
	C	3.07–3.10 (0.1209–0.1220)	—
	D	3.12–3.15 (0.1228–0.1240)	—
	E	3.17–3.20 (0.1248–0.1260)	—
	F	3.22–3.25 (0.1268–0.1280)	—
	G	3.27–3.30 (0.1287–0.1299)	—
	H	3.32–3.35 (0.1307–0.1319)	—
	I	3.37–3.40 (0.1327–0.1339)	—
	Countershaft 4th gear thickness		
	A	38.97–39.00 (1.5342–1.5354)	—
	B	39.02–39.05 (1.5362–1.5374)	—
	C	39.07–39.10 (1.5382–1.5394)	—
D	39.12–39.15 (1.5402–1.5413)	—	
E	39.17–39.20 (1.5421–1.5433)	—	
F	39.22–39.25 (1.5441–1.5452)	—	
G	39.27–39.30 (1.5461–1.5472)	—	
Thrust washer thickness (mainshaft 1st gear L side)	1.45–1.50 (0.057–0.059)	1.4 (0.055)	
Mainshaft 1st gear collar length	22.50–22.55 (0.8858–0.8878)	—	
Mainshaft 1st gear collar flange thickness	2.5–2.6 (0.098–0.102)	Wear or damage	
Countershaft reverse gear collar length	14.0–14.1 (0.551–0.555)	—	
Countershaft reverse gear collar flange thickness	2.45–2.50 (0.096–0.098)	Wear or damage	
Countershaft 1st gear collar length	11.0–11.1 (0.433–0.437)	—	
Countershaft 1st gear collar flange thickness	2.4–2.6 (0.095–0.102)	Wear or damage	
Diameter of countershaft one-way clutch contact area	74.414–74.440 (2.9297–2.9307)	Wear or damage	
Diameter of parking gear one-way clutch contact area	57.755–57.768 (2.2738–2.2743)	Wear or damage	
Mainshaft and countershaft feed pipe O.D. (at 20 mm from end)	7.97–7.98 (0.3138–0.3142)	7.95 (0.31)	
Mainshaft sealing ring 32 mm Thickness	1.980–1.995 (0.0780–0.0785)	1.8 (0.071)	
Mainshaft bushing I.D.	6.018–6.030 (0.2369–0.2374)	6.045 (0.238)	
Mainshaft bushing I.D.	9.000–9.015 (0.3543–0.3549)	9.03 (0.356)	
Countershaft bushing I.D.	8.000–8.015 (0.3150–0.3156)	8.03 (0.316)	
Mainshaft sealing ring groove width	2.025–2.060 (0.0797–0.0811)	2.08 (0.082)	
Regulator valve body	Sealing ring contact area diameter	32.000–32.025 (1.2598–1.2608)	32.05 (1.26)
Shifting device and parking brake control	Reverse shift fork thickness	5.9–6.0 (0.232–0.236)	5.4 (0.21)
	Parking brake ratchet pawl	—	Wear or other defect
	Parking gear	—	Wear or other defect
	Throttle cam stopper	18.5–18.6 (0.728–0.732)	—
Servo body	Shift fork shaft bore I.D.		
	A	14.000–14.005 (0.5512–0.5514)	—
	B	14.006–14.010 (0.5514–0.5516)	—
	C	14.011–14.015 (0.5516–0.5518)	—
	Shift fork shaft valve bore I.D.	37.000–37.039 (1.4567–1.4582)	37.045 (1.4583)
Valve body	Oil pump gear side clearance	0.03–0.05 (0.0012–0.0020)	0.08 (0.003)
	Oil pump gear-to-body clearance	Drive: 0.21–0.27 (0.0083–0.0106)	—
		Driven: 0.05–0.09 (0.0020–0.0035)	—
	Stator camshaft needle bearing bore I.D.	24.000–24.021 (0.9449–0.9457)	Damage or dent
	Stator camshaft needle bearing contact and O.D.	26.000–26.013 (1.0236–1.0241)	Damage or dent
	Oil pump driven gear I.D.	14.016–14.034 (0.5518–0.5525)	Damage or dent
	Oil pump shaft O.D.	13.980–13.990 (0.5503–0.5507)	Damage or dent

# Standards and Service Limits (cont'd)

## Automatic Transmission <F4> – Section 15

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT	
Transmission oil	Capacity ℓ (US. qt., Imp.qt)	2.4 (2.5, 2.1) at oil change 5.4 (5.7, 4.8) at assembly		
Hydraulic pressure	Line pressure at 2,000 rpm	834–883 kPa (8.5–9.0 kg/cm <sup>2</sup> , 121–128 psi)	785 kPa (8.0 kg/cm <sup>2</sup> , 114 psi)	
	4th, 3rd, 2nd clutch pressure at 2,000 rpm	441–883 kPa (4.5–9.0 kg/cm <sup>2</sup> , 64–128 psi)	392 kPa (4.0 kg/cm <sup>2</sup> , 57 psi) with lever released 785 kPa (8.0 kg/cm <sup>2</sup> , 114 psi) with lever in full throttle position	
	1st clutch pressure at 2,000 rpm	834–883 kPa (8.5–9.0 kg/cm <sup>2</sup> , 121–128 psi)	785 kPa (8.0 kg/cm <sup>2</sup> , 114 psi)	
	Governor pressure at 60 km/h	191–201 kPa (1.95–2.05 kg/cm <sup>2</sup> , 28–29 psi)	186 kPa (1.90 kg/cm <sup>2</sup> , 27 psi)	
	Throttle pressure A	485–500 kPa (4.95–5.10 kg/cm <sup>2</sup> , 70–73 psi)	481 kPa (4.90 kg/cm <sup>2</sup> , 69.7 psi)	
	Throttle pressure B	834–883 kPa (8.5–9.0 kg/cm <sup>2</sup> , 121–128 psi)	785 kPa (8.0 kg/cm <sup>2</sup> , 114 psi)	
Stall speed	Check with car on lever ground	2,650 rpm	2,500–2,800 rpm	
Clutch	Clutch initial clearance	1st	0.65–0.85 (0.026–0.033)	<p>—</p> <p>—</p> <p>—</p> <p>29.0 (1.14)</p> <p>Until grooves worn out</p> <p>Discoloration</p> <p>↑</p> <p>↓</p> <p>Discoloration</p>
		2nd	0.50–0.70 (0.020–0.028)	
		3rd, 4th	0.40–0.60 (0.016–0.024)	
	Clutch return spring free length	31.0 (1.22)		
	Clutch disc thickness	1.88–2.0 (0.074–0.079)		
	Clutch plate thickness	1.95–2.05 (0.077–0.079)		
	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		2.45–2.55 (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)			
Mark 10	2.95–3.00 (0.116–0.118)			
Transmission	Diameter of needle bearing contact area on main and stator shaft	22.980–22.993 (0.9047–0.9052)	<p>Wear or damage</p> <p>↑</p> <p>↓</p> <p>Wear or damage</p>	
	Diameter of needle bearing contact area on mainshaft 2nd gear	35.975–35.991 (1.4163–1.4169)		
	Diameter of needle bearing contact area on mainshaft 4th gear collar	31.975–31.991 (1.2588–1.2594)		
	Diameter of needle bearing contact area on mainshaft 1st gear collar	30.975–30.991 (1.2195–1.2201)		
	Diameter of needle bearing contact area on countershaft (L side)	38.505–38.515 (1.5159–1.5163)		
	Diameter of needle bearing contact area on countershaft 3rd gear	31.975–31.991 (1.2589–1.2595)		
	Diameter of needle bearing contact area on countershaft 4th gear	27.980–27.993 (1.1016–1.1021)		
	Diameter of needle bearing contact area on countershaft reverse gear collar	31.975–31.991 (1.2589–1.2595)		
	Diameter of needle bearing contact area on countershaft 1st gear collar	31.975–31.991 (1.2589–1.2595)		
	Diameter of needle bearing contact area on reverse idle gear	13.990–14.000 (0.5508–0.5512)		
	Reverse idler shaft holder diameter	14.416–14.434 (0.5676–0.5683)		
	Mainshaft 2nd gear I.D.	41.000–41.016 (1.6142–1.6148)		
	Mainshaft 1st gear I.D.	36.000–36.016 (1.4173–1.4180)		
	Countershaft 4th gear I.D.	33.000–33.016 (1.2992–1.2998)		
	Countershaft 3rd gear I.D.	38.000–38.016 (1.4961–1.4967)		
	Countershaft 2nd gear I.D.	31.000–31.016 (1.2205–1.2211)		
	Countershaft 1st gear I.D.	38.000–38.016 (1.4961–1.4967)		
	Countershaft reverse gear I.D.	38.000–38.016 (1.4961–1.4967)		
	Reverse idle gear I.D.	18.006–18.017 (0.7089–0.7093)		

(cont'd)

# Standards and Service Limits (cont'd)

## Automatic Transmission <F4> – Section 15

	MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Transmission (cont'd)	Mainshaft 4th gear end play	0.10–0.22 (0.0039–0.0087)	—
	Mainshaft 2nd gear end play	0.07–0.15 (0.0028–0.0059)	—
	Mainshaft 1st gear end play	0.08–0.24 (0.0031–0.0094)	—
	Countershaft 3rd gear end play	0.07–0.15 (0.0028–0.0059)	—
	Countershaft 2nd gear end play	0.08–0.40 (0.0031–0.0157)	—
	Reverse idler gear end play	0.05–0.18 (0.0020–0.0071)	—
	Countershaft reverse gear end play	0.10–0.25 (0.0039–0.0098)	—
	Reverse gear hub O.D.	51.87–51.90 (2.0421–2.0433)	Wear or damage
	Thrust washer thickness Mainshaft 2nd gear	A 3.97–4.00 (0.1563–0.1575)	—
		B 4.02–4.05 (0.1583–0.1594)	—
		C 4.07–4.10 (0.1602–0.1614)	—
		D 4.12–4.15 (0.1622–0.1634)	—
		E 4.17–4.20 (0.1642–0.1654)	—
		F 4.22–4.25 (0.1661–0.1673)	—
		G 4.27–4.30 (0.1681–0.1693)	—
		H 4.32–4.35 (0.1701–0.1713)	—
		I 4.37–4.40 (0.1720–0.1732)	—
	Mainshaft right side bearing	2.95–3.05 (0.1161–0.1201)	Wear or damage
	Mainshaft 1st gear	2.43–2.50 (0.0957–0.0984)	Wear or damage
	Countershaft 3rd gear	A 2.97–3.00 (0.1169–0.1181)	—
		B 3.02–3.05 (0.1189–0.1201)	—
		C 3.07–3.10 (0.1209–0.1220)	—
		D 3.12–3.15 (0.1228–0.1240)	—
		E 3.17–3.20 (0.1248–0.1260)	—
		F 3.22–3.25 (0.1268–0.1280)	—
		G 3.27–3.30 (0.1287–0.1299)	—
		H 3.32–3.35 (0.1307–0.1319)	—
		I 3.37–3.40 (0.1327–0.1339)	—
	Countershaft 4th gear collar thickness	A 38.97–39.00 (1.5343–1.5354)	—
		B 39.02–39.05 (1.5362–1.5374)	—
		C 39.07–39.10 (1.5382–1.5394)	—
		D 39.12–39.15 (1.5402–1.5413)	—
		E 39.17–39.20 (1.5421–1.5433)	—
		F 39.22–39.25 (1.5441–1.5453)	—
		G 39.27–39.30 (1.5461–1.5472)	—
	Thrust washer thickness (mainshaft 1st gear L side)	1.45–1.50 (0.0571–0.0591)	1.40 (0.0551)
	Mainshaft 1st gear collar length	24.5–24.55 (0.9646–0.9665)	—
	Mainshaft 1st gear collar flange thickness	2.5–2.6 (0.098–0.102)	Wear or damage
	Countershaft reverse gear collar length	12.00–12.10 (0.4724–0.4764)	—
	Countershaft reverse gear collar flange thickness	2.40–2.60 (0.0945–0.1024)	Wear or damage
Countershaft 1st gear collar length	12.00–12.10 (0.4724–0.4764)	—	
Countershaft 1st gear collar flange thickness	2.4–2.6 (0.095–0.102)	Wear or damage	
Diameter of countershaft one-way clutch contact area	83.339–83.365 (3.2811–3.2821)	Wear or damage	
Diameter of parking gear one-way clutch contact area	66.685–66.695 (2.6254–2.6258)	Wear or damage	
Mainshaft feed pipe O.D. (at 20 mm from end)	6.97–6.98 (0.2744–0.2748)	6.95 (0.2736)	
Countershaft feed pipe O.D. (at 20 mm from end)	7.97–7.98 (0.3138–0.3142)	7.95 (0.3130)	
Mainshaft sealing ring 32 mm Thickness	1.980–1.995 (0.0780–0.0785)	1.800 (0.0709)	
Mainshaft bushing I.D.	6.018–6.030 (0.2369–0.2374)	6.045 (0.2380)	
Mainshaft bushing I.D.	9.000–9.015 (0.3543–0.3549)	9.030 (0.3555)	
Countershaft bushing I.D.	8.000–8.015 (0.3150–0.3156)	8.030 (0.3161)	
Mainshaft sealing ring groove width	2.025–2.060 (0.0797–0.0811)	2.080 (0.0819)	
Regulator valve body	Sealing ring contact area diameter	35.000–35.025 (1.3780–1.3789)	35.050 (1.3799)
Shifting device and parking brake control	Reverse shift fork thickness	5.90–6.00 (0.2323–0.2362)	5.40 (0.2126)
	Parking brake ratchet pawl	—	Wear or other defect
	Parking gear Throttle cam stopper	18.5–18.6 (0.728–0.732)	Wear or other defect
Servo body	Shift fork shaft bore I.D.	A 14.000–14.005 (0.5512–0.5514)	—
		B 14.006–14.010 (0.5514–0.5516)	—
		C 14.011–14.015 (0.5516–0.5518)	—
Shift fork shaft valve bore I.D.	37.000–37.039 (1.4567–1.4582)	37.045 (1.4585)	
Valve body	Oil pump gear side clearance	0.03–0.05 (0.0012–0.0020)	0.07 (0.0028)
	Oil pump gear-to-body clearance	Drive: 0.240–0.265 (0.0094–0.0104)	—
		Driven: 0.063–0.088 (0.0025–0.0035)	—
	Stator camshaft needle bearing bore I.D.	27.000–27.021 (1.0630–1.0638)	Wear or damage
	Stator camshaft needle bearing contact and O.D.	29.000–29.013 (1.1417–1.1422)	Wear or damage
	Oil pump driven gear I.D.	14.016–14.034 (0.5518–0.5525)	Wear or damage
Oil pump shaft O.D.	13.980–13.990 (0.5504–0.5508)	Wear or damage	

(cont'd)

# Standards and Service Limits (cont'd)

## Defferential — Section 16

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Ring gear		backlash	0.14–0.20 (0.006–0.008)	0.25 (0.010)
Differential carrier		Pinion shaft bore diameter	18.000–18.018 (0.7087–0.7094)	18.1 (0.71)
		Carrier-to-pinion shaft clearance	0.016–0.052 (0.0006–0.0020)	0.1 (0.004)
		Driveshaft bore diameter	28.000–28.021 (1.1024–1.1032) * 26.000–26.021 (1.0236–1.0244)	—
		Carrier-to-driveshaft clearance	0.025–0.066 (0.0010–0.0026)	0.12 (0.005)
Differential pinion gear		Side clearance	0.10–0.20 (0.004–0.008)	0.15 (0.006)
		Backlash	0.05–0.15 (0.002–0.006)	Selection with 8 types of washers
		Pinion gear bore diameter	18.041–18.061 (0.7103–0.7111)	—
		Pinion gear-to-pinion shaft clearance	0.057–0.093 (0.0022–0.0037)	0.15 (0.006)

\* A1 type only

Unit: mm (in.)

## Driveshaft — Section 17

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Driveshaft (B20A1 Engine)	Right and Left boots	As installed	498–502.2 (19.6–19.8)	
Driveshaft (A20A4 Engine)	Right boot	As installed	506.0–510.5 (19.9–20.1)	—
	Left boot	As installed	805.0–809.5 (31.7–31.9)	—
Driveshaft (ET Engine)	Right boot	As installed	514.0–518.5 (20.2–20.4)	—
	Left boot	As installed	809.0–813.5 (31.9–32.0)	—

## Steering — Section 18

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Steering wheel		Play	10.0 (0.39) Max.	—
		Pinion-starting torque N-m (kg-m, lb-ft)	0.5–1.7 (0.05–0.17, 0.36–1.20)	—

## Power Steering — Section 19

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Steering wheel		Play	10 (0.39) Max.	—
		Steering assist N (kg, lb)	18 (1.8, 3.97)	—
Power steering		Pump pressure with valve closed (Oil temp./ speed: 40°C (104°F) min/idle. Do not run for more than 5 seconds) kPa (kg/cm <sup>2</sup> , psi)	7845–8826 (80–90, 1138–1280)	—
		Fluid capacity Reservoir At change	0.5 ℓ (0.53 US qt., 0.44 Imp. qt.) approx 1.5 ℓ (1.6 US. qt., 1.3 imp. qt.)	—

## Suspension — Section 20

		MEASUREMENT		STANDARD (NEW)		SERVICE LIMIT
Wheel alignment	Camber			Front 0°00' ± 1	Rear	
					0°00' ± 30'	
	Toe-in			0 ± 3 (0 ± 0.118)	2 ± 2 (0.079 ± 0.079)	
	Kingpin incination			6°50'		
	Steering angle	R/L	Inside	38°30' ± 2°		
			Outside	30°00' ± 2°		
	Side slip		Front	0 ± 3		
			Rear	2 ± 2		
Wheel	Rim runout	Steel	Axial	0–1.0 (0–0.039)		2.0 (0.08)
			Radial	0–1.3 (0–0.051)		1.5 (0.06)
		Alumminum	Axial	0–0.7 (0–0.028)		2.0 (0.08)
			Radial	0–1.0 (0–0.039)		1.5 (0.06)
Wheel bearing	Front wheel bearing axial play			0–0.05 (0–0.002)		—
	Rear wheel bearing axial play			0–0.05 (0–0.002)		Adjustable by the spindle nut

**Brake — Section 21**

		MEASUREMENT	STANDARD (NEW)	SERVICE LIMIT
Parking brake lever		Play in stroke 200N (20 kg, 44 lbs)	To be locked when pulled 4–8 notches	
Foot brake pedal		Pedal height Free play	176 (6.9) to floor 1–5 (0.04–0.20)	— 5 (0.20)
Master cylinder		Piston-to-push rod clearance with A.L.B.	0–0.4 (0–0.016) 0.2–0.6 (0.008–0.024)	— —
Disc brake	Disc thickness	Front Rear	19.0 (0.75) 2000: 21.0 (0.83) 10.0 (0.39)	17.0 (0.67) 2000: 19.0 (0.75) 8.0 (0.31)
	Disc runout		—	0.15 (0.006)
	Disc parallelism		—	0.015 (0.0006)
	Pad thickness	Front Rear	9.5 (0.37) 2000: 11.0 (0.43) 8.0 (0.31)	3.0 (0.11) 1.6 (0.06)
Brake booster	Characteristics	Vacuum (mm Hg)	Pedal pressure kg (lbs)	Line Pressure kg/cm <sup>2</sup> (psi)
		0	20 (44)	12.0 (171) min
		300	20 (44)	48.6 (691) min
		500	20 (44)	72.9 (1.037) min

**Engine Electrical <Fuel-Injected Engine> — Section 26, 27, 28**

		MEASUREMENT	STANDARD (NEW)		
Ignition coil	Rated voltage		12 Volts		
	Insulation resistance		10,000 hms min.		
	Performance: Make sure strong sparks jump across electrodes (3-point tester)				
	Voltage	Camshaft	Secondary Voltage	3-point gap	Condition
	6V 12V	75 min <sup>-1</sup> (rpm) 3,000 min <sup>-1</sup> (rpm)	430 ± 4kV 22 ± 4kV	15–21 mm (0.59–0.83) 13–19 mm (0.51–0.75)	At 80°C (176°F)
Ignition wire	Resistance		25,000 ohms max.		
Spark plug	Type	standard	See page 26-11		
	Gap		1.0–1.1 (0.039–0.043)		
Ignition timing	At idling		See page 26-8		
Battery	Lighting capacity (20-hour ratio)		50 Ampere Hours		
	Starting capacity (5-second ratio)		8.4V minimum at 300 Ampere draw		
Alternator	Output at no-load		14 V at 1,000 min <sup>-1</sup> (rpm) max.		
	Output		14V/70A at 5,500 min <sup>-1</sup> (rpm) max.		
	Coil resistance (rotor)		2.8–3.0 ohms		±0.1 ohms
	Slip ring O.D.		32.5 (1.28)		32.1 (1.26)
	Brush length		10.5 (0.41)		5.5 (0.22)
	Brush spring tension		300–500 g (10.6–18.6 oz)		
Starting motor	MEASUREMENT	1.0 KW, 1.4 KW (ND)		1.0 KW, 1.4 KW (MITSUBA)	
		STANDARD (NEW)	SERVICE LIMIT	STANDARD (NEW)	SERVICE LIMIT
	Mica depth	0.4–0.8 (0.016–0.031)	0.2 (0.008)	0.5–0.8 (0.020–0.031)	0.2 (0.008)
	Commutator runout	0–0.02 (0.0008)	0.05 (0.020)	0–0.02 (0.0008)	0.05 (0.020)
	Commutator O.D.	30.0 (1.18)	29.0 (1.14)	28.0 (1.10)	27.5 (1.08)
	Brush length	1.4 KW: 14.0 (0.55) 1.0 KW: 13.0 (0.51)	1.4 KW: 10.0 (0.39) 1.0 KW: 8.5 (0.33)	1.4 KW: 14.5 (0.57) 1.0 KW	1.4 KW: 9.3 (0.37) 1.0 KW:
Spring pressure (new)	1.7 kg (3.7 lb)	—	2.1 kg (4.6 lb)	—	

(cont't)

# Standard and Service Limit (cont'd)

Unit: mm (in.)

Engine Electrical (Carbureted Engine) — Section 26, 27, 28					
MEASUREMENT		STANDARD (NEW)			
Ignition coil	Rated voltage	12 Volts			
	Insulation resistance	10,000 hms min.			
	Performance: Make sure strong sparks jump across electrodes (3-point tester)				
	Voltage	Camshaft	Secondary Voltage	3-point gap	Condition
	6V	75 min <sup>-1</sup> (rpm)	26 ± 4kV	11–17 mm (0.43–0.67)	At 80°C (176°F)
	12V	3,000 min <sup>-1</sup> (rpm)	17 ± 4kV	9–13 mm (0.35–0.51)	
Ignition wire	Resistance	25,000 ohms max.			
Spark plug	Type	See page 26-11			
	Gap	See page 26-11			
Ignition timing	At idling	See page 26-8			
Battery	Lighting capacity (20-hour ratio)	40 45, 47 or 50 Ampere Hours			
	Starting capacity (5-second ratio)	8V minimum at 150 Ampere draw			
Alternator	Output at no-load	14 V at 850 min <sup>-1</sup> (rpm) max.			
	Output	14V/60A at 3,500 min <sup>-1</sup> (rpm) max.			
	Coil resistance (rotor)	2.8–3.0 ohms			±0.1 ohms
	Slip ring O.D.	32.5 (1.28)			32.1 (1.26)
	Brush length	15.5 (0.61)			5.3 (0.21)
	Brush spring tension	300–500 g (10.6–17.6 oz)			—
Voltage relay	Rated voltage	4.5–5.8V			—
	Relay point gap	0.4–1.2 (0.02–0.05)			—
	Contact spring deflection (pulled in)	0.2–0.6 (0.01–0.02)			—
Voltage regulator	Regulated voltage	13.5–14.5 V			—
	Armature gap	0.5 (0.02) max.			—
	Point gap	0.4–1.2 (0.02–0.05)			—
	Contact spring deflection	0.2–0.6 (0.01–0.02)			—
	Angle gap	0.5 (0.02) max.			—
Starting motor	MEASUREMENT	1.0 KW, 1.4 KW (ND)		1.0 KW, 1.4 KW (MITSUBA)	
		STANDARD (NEW)	SERVICE LIMIT	STANDARD (NEW)	SERVICE LIMIT
	Mica depth	0.5–0.8 (0.020–0.031)	0.2 (0.008)	0.5–0.8 (0.020–0.031)	0.2 (0.008)
	Commutator runout	0–0.02 (0.0008)	0.05 (0.020)	0–0.02 (0.0008)	0.05 (0.020)
	Commutator O.D.	30.0 (1.18)	29.0 (1.14)	30.0 (1.18)	29.0 (1.14)
	Brush length	13.0 (0.51)	8.5 (0.33)	15.0 (0.59)	10.0 (0.39)
	Spring pressure	1.7 kg (3.7 lb)	—	21 kg (46 lb)	—

# Design Specifications

2000

	ITEMS		METRIC	ENGLISH	NOTES		
<b>DIMENSIONS</b>	Overall Length		4,375 mm	172.2 in.	KW		
			4,385 mm	172.6 in.			
	Overall Width		1,690 mm	66.5 in.			
	Overall Height		1,295 mm	51.0 in.			
	Wheelbase		2,450 mm	96.5 in.			
	Tread F/R		1,470/1,470 mm	57.9/57.9 in.			
	Ground Clearance		150 mm	5.9 in.			
			Total 4 2		KS		
<b>WEIGHTS</b>	Curb Weight	EC	1,060 – 1,065 kg	2,337 – 2,348 lb.	5-MT: 5 speed manual transmission 4-AT: 4 speed Automatic transmission with torque converter		
		Other types	1,050 – 1,105 kg	2,315 – 2,436 lb.			
	Max. Permissible Weight (EC)		1535 kg	3,385 lb.			
	Max. Loaded Vehicle Weight (ADR)	5-MT	1,411 kg	3,111 lb.			
		4-AT	1,431 kg	3,155 lb.			
Carrying (loading) Weight Capacity		45 kg	99 lb.				
<b>ENGINE</b>	Type	B20A1 A20A4	Water cooled, 4-cycle D.O.H.C Water cooled, 4-cycle S.O.H.C		KX		
	Cylinder Arrangement		4-cylinder in line, transverse				
	Bore and Stroke	B20A1 A20A4	81.0 x 95 mm 82.7 x 91.0 mm	3.18 x 3.74 in. 3.26 x 3.58 in.			
	Displacement	B20A1 A20A4	1,958 cm <sup>3</sup> 1,955 cm <sup>3</sup>	120 cu.in. 119 cu.in.			
	Compression Ratio	B20A1 B20A1 A20A4	9.5:1 9.4:1 8.8:1				
	Valve Train	B20A1 A20A4	Timing belt driven, double overhead camshaft Timing belt driven, single overhead camshaft				
	Lubrication System		Trochoid pump				
	Fuel Required		Leaded gasoline with 97 research octane number or higher. Unleaded gasoline with 91 research octane number or higher. Leaded or unleaded gasoline with 91 research octan number or higher				
	Engine Wet Weight	B20A1 A20A4	122 kg 123 kg	269 lb. 271 lb.		EC (without cata), KY KQ, KX KS Except radiator, transmission Except radiator, transmission	
	<b>TRANSMISSION</b>	Clutch	5-MT 4-AT 5-MT 4-AT	Single plate dry, diaphragm spring. Torque Converter		( ) KX	
				5 speeds forward, 1 speed reverse, constant mesh. 4 speeds forward, 1 speed reverse with torque converter			
				5-MT			5-MT with KQ, KY
Primary Reduction			1.000	1.000	1.000		
Gear Ratio		I	3.166	3.181	2.529		
		II	1.857(1.772)	1.842	1.481		
		III	1.259(1.214)	1.250	1.030		
		IV	0.967	0.937	0.700		
		V	0.794	0.771	—		
		Reverse	3.000	3.000	1.954		
Final Reduction	5-MT 4-AT	Single helical gear, 4.066 Single helical gear, 4.066					
Clutch Facing Area		176 cm <sup>2</sup>	27.3 sq.in.				
<b>STEERING SYSTEM</b>	Type		Rack and pinion				
	Overall Ratio		14.9 : 1				
	Turns, lock-to-lock		2.84				
	Steering Wheel Dia.		370 mm	14.6 in.			
	Power Steering Oil Capacity		1.5 lit. 1.6 US. qt., 1.3 Imp qt.				
Power Steering Oil		HONDA Genuine Power Steering Fluid					
<b>SUSPENSION SYSTEM</b>	Type, Front		Independent by double wishbones, coil springs				
	Type, Rear		Independent, Mac' Pherson strut, coil springs				
	Shock Absorber	Front/Rear	Telescopic, hydraulic				

# Design Specifications

2000 (cont'd)

	ITEMS		METRIC	ENGLISH	NOTES
<b>WHEEL ALIGNMENT</b>	Wheel Alignment				
	Camber	Front		0°	
		Rear		0°	
	Caster	Front		0°	
	Toe-in	Front	0 mm	0 in.	
	Rear	2 mm	0.080 in.		
	Kingpin Inclination			6°51'	
<b>BRAKE SYSTEM</b>	Type, Front		Self-adjusting power assisted ventilated disc brake type		
	Type, Rear		Self-adjusting power assisted disc brake type		
	Lining Surface Area:	Front/Rear	49.2/21.0 cm <sup>2</sup>	7.7/3.3 sq. in.	(Pad)
	Effective Disc Dia.	Front	207 mm	8.1 in.	
		Rear	208 mm	8.2 in.	
	Parking Brake Kind and Type		Mechanical actuating, rear two wheel brakes		
<b>TIRES</b>	Front/Rear		195/60 R14 85H		
		KQ	185/70 R13 86H		
		KY	185/70HR13		
	Spare		T105/70D14		
<b>ELECTRICAL SYSTEM</b>	Battery		12V - 45 AH, 47 AH		
	Starting Motor		12V - 1.4 KW, 1.0 KW		
	Generator		12V - 65 A		
	Main Fuse		65 A x 1, 35 A x 1		
	Fuses		20 A x 4, 15 A x 7, 10 A x 7		
	Headlights		12V - 60/55 W		
	Turn Signal Lights	Front	12 V - 21 W		
		Rear	12 V - 21 W		
	Stop/Tailights		12 V - 21/5 W		
	Back-up-Lights		12 V - 21 W		
	License Plate Lights		12 V - 5 W		
	Interior Light		12 V - 8 W		
	Trunk Light		12 V - 3.4 W		
	Glove box Light		12 V - 3.4 W		
	Illumination Lights		12 V - 3.4 W		
	Gauge Illumination Lights		14 V - 1.12 W		
	Indicator and Warning Lights		14 V - 1.4 W, 12 V - 1.12 W		
Rear fog light (EC)		12 V - 21 W			



### 1800 European Model

	ITEMS		METRIC	ENGLISH	NOTES	
<b>DIMENSIONS</b>	Overall Length		4,295 mm	169.1 in.	KW	
			4,320 mm	170.1 in.		
	Overall Width		1,690 mm	66.5 in.		
	Overall Height		1,295 mm	51.0 in.		
	Wheelbase		2,450 mm	96.5 in.		
	Tread Front/Rear		1,470/1,470 mm	57.9/57.9 in.		
	Ground Clearance		153 mm	6.0 in.	KS Include bumper KW	
Seating Capacity		Total 4 2				
Overhang Front/Rear		890/955 mm	35.0/37.6 in.	KS Include bumper KW		
		915/955 mm	36.0/37.6 in.			
<b>WEIGHTS</b>	Curb Weight					
	4-AT	STD	980 kg	2,161 lb.	KE	
			990 kg	2,183 lb.	KS & FINLAND	
			985 kg	2,172 lb.	Other types	
		EX	995 kg	2,194 lb.	KE & KX	
			1,000 kg	2,205 lb.	KS	
			1,010 kg	2,227 lb.	FINLAND	
	5-MT	STD	1,005 kg	2,216 lb.	Other types	
			970 kg	2,139 lb.	KE	
			980 kg	2,161 lb.	KS & FINLAND	
		EX	975 kg	2,150 lb.	Other types	
			985 kg	2,172 lb.	KE & KX	
			990 kg	2,183 lb.	KS	
	Weight Distribution Front/Rear		1,000 kg	2,205 lb.	FINLAND	
			995 kg	2,194 lb.	Other types	
	4-AT	STD	595/385 kg	1,312/849 lb.	KE	
			605/385 kg	1,334/849 lb.	KS & FINLAND	
			595/390 kg	1,312/860 lb.	Other types	
			EX	600/395 kg	1,323/871 lb.	KE & KX
				605/395 kg	1,334/871 lb.	KS
				610/400 kg	1,345/882 lb.	FINLAND
		5-MT	STD	605/400 kg	1,334/882 lb.	Other types
				585/385 kg	1,290/849 lb.	KE
				595/385 kg	1,312/849 lb.	KS & FINLAND
EX			585/390 kg	1,290/860 lb.	Other types	
			590/395 kg	1,301/871 lb.	KE & KX	
			595/395 kg	1,312/871 lb.	KS	
		600/400 kg	1,323/882 lb.	FINLAND		
		595/400 kg	1,312/882 lb.	Other types		
		For power steering types 2.4 kg (27 lb.) anti-lock braking device 11.5 kg (25 lb.) has to be added if installed				
Gross Weight						
4-AT	STD	1,280 kg	2,822 lb.	KE		
		1,140 kg	2,514 lb.	KS		
		1,290 kg	2,844 lb.	FINLAND		
	EX	1,285 kg	2,833 lb.	Other types		
		1,295 kg	2,855 lb.	KE & KX		
		1,150 kg	2,536 lb.	KS		
		1,310 kg	2,889 lb.	FINLAND		
			1,305 kg	2,878 lb.	Other types	
<b>WEIGHTS</b>	Gross Weight					
	5-MT	STD	1,270 kg	2,800 lb.	KE	
			1,130 kg	2,492 lb.	KS	
			1,280 kg	2,822 lb.	FINLAND	
		EX	1,275 kg	2,811 lb.	Other types	
			1,285 kg	2,833 lb.	KE & KX	
			1,140 kg	2,514 lb.	KS	
			1,300 kg	2,867 lb.	FINLAND	
			1,295 kg	2,855 lb.	Other types	
	Max. permissible Weight (EC)		1,490 kg	3,285 lb.		
	Carrying (loading) Weight Capacity		45 kg	99 lb.		
<b>ENGINE</b>	Type		Water cooled, 4-cycle S.O.H.C.			
	Cylinder Arrangement		4-cylinder in line, transverse			
	Bore and Stroke		80 x 91 mm	3.15 x 3.8 in.		

# Design Specifications

## 1800 European Model (cont'd)

	ITEMS		METRIC	ENGLISH	NOTES
<b>ENGINE</b>	Displacement		1,829 cm <sup>3</sup>	112 cu. in.	
	Compression Ratio		9.5 : 1 9.1 : 1		KS, KX, KT
	Carburetor Type		Side draft		
	Carburetor, Throttle Bore Dia.		34 mm	1.34 in.	
	Valve Train		Timing belt driven, single overhead camshaft		
	Lubrication System		Trochoid pump		
	Fuel Required		Leaded grade gasoline with 97 research octane number or higher.		KS, KX, KT
	Engine Weight		Leaded or unleaded gasoline with 91 research octane number or higher.		Included oil and coolant
			108 kg	238 lb.	
	<b>TRANSMISSION</b>				
	Clutch	4-AT 5-MT	Torque Converter		
	Transmission	4-AT 5-MT	Single plate dry, diaphragm spring Torque converter with lock up clutch.		
	Primary Reduction		5 speeds forward, 1 speed reverse, constant mesh.		
	Gear Ratio	I II III IV V Reverse	5-MT 1.000 3.181 1.944 1.250 0.933 0.757 3.000	4-AT 1.000 2.380 1.560 (1.500) 1.032 0.777 — 1.954	( ) KX
	Final Reduction	4-AT 5-MT	Single helical gear, 3.875 single helical gear, 4.071		
	Clutch Facing Area		160 cm <sup>2</sup>	24.8 sq.in.	
<b>STEERING SYSTEM</b>	Type		Rack and Pinion		
	Overall Ratio	Power Steering	Integral		
	Turns, lock-to-lock	Power Steering	17.1 : 1 14.9 : 1		
	Steering Wheel Dia.	Power Steering	3.25 2.84		
	Power Steering	Tank Capacity	370 mm	14.6 in.	
	Power Steering	Fluid	1.5 lit.	1.6 US.qt. 1.3 Imp.qt.	
<b>SUSPENSION SYSTEM</b>	Type, Front		HONDA Genuine Power Steering Fluid		
	Type, Rear				
	Shock Absorber Front/Rear		Independent by double wishbones, coil spring. Independent, MacPherson strut, coil spring. Telescopic hydraulic		
	<b>WHEEL ALIGNMENT</b>				
	Wheel Alignment				
	Camber	Front Rear	0° 0°		
	Caster	Front	0°		
	Toe-in	Front Rear	0 mm in 2 mm	0 in. 0.008 in.	
	Kingpin Inclination		6°51'		
	<b>BRAKE SYSTEM</b>				
	Type		Front ventilated and rear non-ventilated disc brake with or without anti-lock braking device.		
	Lining Surface Area	Front/Rear	hydraulic, four-wheel brake, servo assisted		
	Effective Disc dia.	Front/Rear	35.8/20.9 cm <sup>2</sup>	5.5/3.2 sq. in.	
	Parking Brake Kind and Type		190/208 mm	7.5/8.2 in.	
			Mechanically pressing the disk with pads, rear two wheel brakes.		
	<b>TIRES</b>				
	Tire Size	Front and Rear	185/70 HR 13, 185/70 R 13 86H 185/70 R 13 86H		KE, KF, KS-EX, KW-EX KZ-EX
	<b>ELECTRICAL SYSTEM</b>				
	Battery		12 V — 47 AH 12 V — 45 AH		KE
	Starting Motor		12 V — 1.4 KW		
	Generator		12 V — 60 A		
	Main Fuse		65 A x 1,35 A x 2		
	Fuses		20 A x 4,15 A x 12, 10 A x 8		
	Headlights		12 V — 60/55 W		
	Day Time Running Lamp		12 V — 21 W		NORWAY, FILAND Austrian model
	Passing Lights		12 V — 55 W		
	Turn Signal Lights	Front	12 V — 21 W		
		Rear	12 V — 21 W		
		Side	12 V — 5 W		

**1800 European Model (cont'd)**

	ITEMS	METRIC	ENGLISH	NOTES
<b>ELECTRICAL SYSTEM</b>	Licence plate Lights		12 V - 5 W	
	Position Light		12 V - 5 W	
	Back-up Lights		12 V - 21 W	
	Stop/Taillights		12 V - 21.5 W	
	Rear Fog Light		12 V - 21 W	
	Interior Light		12 V - 8 W	
	Trunk Light		12 V - 3.4 W	
	Other dash Lights (heater, radio, cigarette lighter, ashtray)		12 V - 3.4/1.4 W	
	Gauge Lights		12 V - 3.4/1.2 W	

**1800 KY Model**

NOTE: Only the design specifications for models below different from those of the European model are listed. For the other items not given here, refer to the European Model design specification.

	ITEMS	METRIC	ENGLISH	NOTES
<b>WEIGHTS</b>	Curb Weight 4-AT	1,040 kg	2,293 lb.	
	5-MT	1,030 kg	2,271 lb.	
	Weight Distribution Front/Rear			
	4-AT	635/405 kg	1,400/893 lb.	
	5-MT	625/405 kg	1,378/893 lb.	
	Gross Weight 4-AT	1,340 kg	2,955 lb.	
5-MT	1,330 kg	2,933 lb.		
	Carrying (loading) Weight Capacity	45 kg	100 lb.	
<b>ENGINE</b>	Compression Ratio	9.5 : 1		
	Fuel Required	Leaded gasoline with 97 research octane number or higher.		
<b>STEERING SYSTEM</b>	Overall Ratio	14.9 : 1		
	Turns, lock-to-lock	2.84		
<b>BREAK SYSTEM</b>	Type	Front ventilated and rear non-ventilated disc brake, hydraulic, four-wheel brake, servo assisted.		
<b>TIRES</b>	Tire Size Front and Rear	185/70 SR13		
<b>ELECTRICAL SYSTEM</b>	Battery	12 V - 40 A		
	Starting Motor	12 V - 1.0 KW		
	Main Fuse	65 A x 1, 35 A x 1		
	Fuses	20 A x 4, 15 A x 11, 10 A x 8		

**1800 General Export**

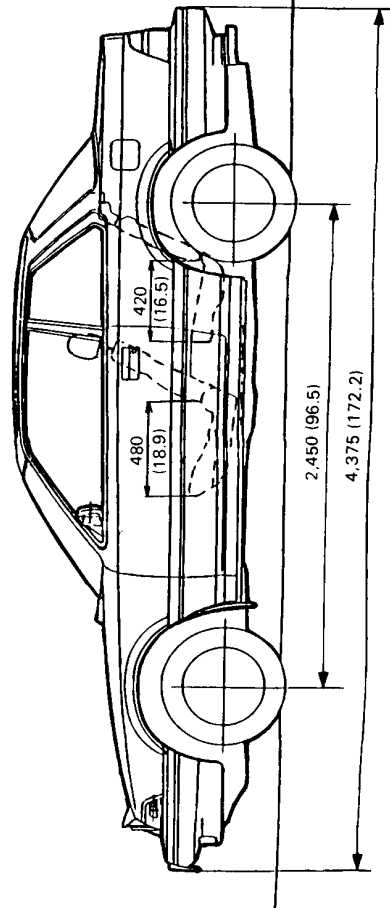
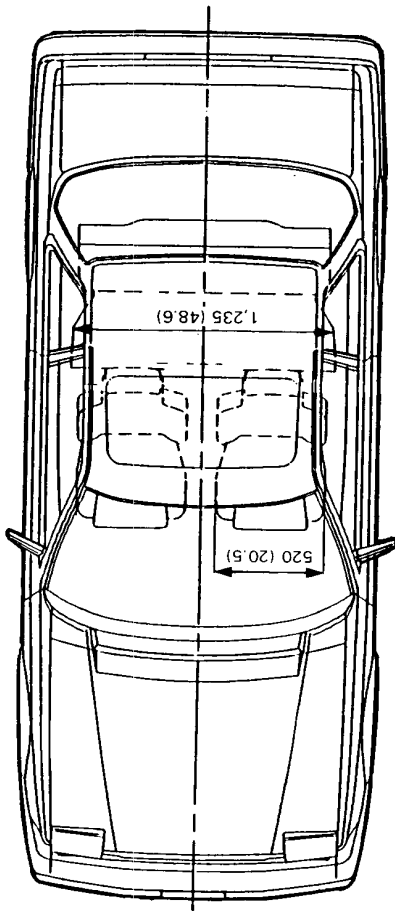
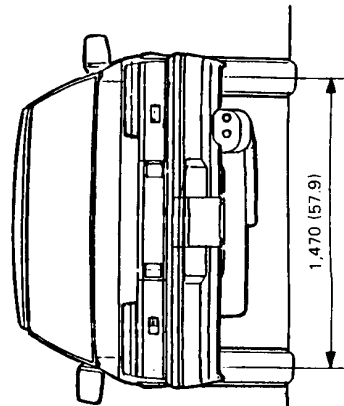
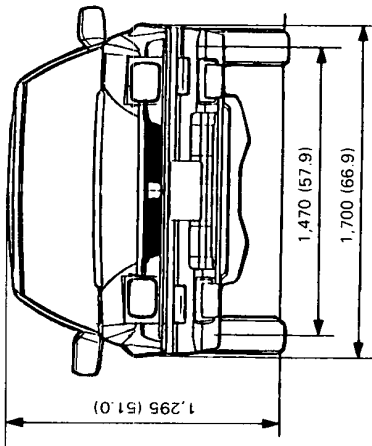
NOTE: Only the design specifications for models below different from those of the European model are listed. For the other items not given here, refer to the European Model design specification.

	ITEMS	METRIC	ENGLISH	NOTES
<b>DIMENSION</b>	Curb Weight 4-AT	980 kg	2,161 lb.	
		EX	1,005 kg	2,216 lb.
	5-MT	STD	970 kg	2,139 lb.
		EX	995 kg	2,194 lb.
	Weight Distribution			
	4-AT	STD	590/390 kg	1,301/860 lb.
		EX	605/400 kg	1,334/882 lb.
	5-MT	STD	580/390 kg	1,279/860 lb.
		EX	595/400 kg	1,312/882 lb.
	Gross Weight 4-AT	STD	1,280 kg	2,822 lb.
	EX	1,305 kg	2,875 lb.	
	5-MT	STD	1,270 kg	2,800 lb.
	EX	1,295 kg	2,855 lb.	
<b>ENGINE</b>	Compression Ratio	9.1 : 1		
	Fuel Required	Leaded or unleaded gasoline with 91 research octane number or higher.		
<b>STEERING SYSTEM</b>	Battery	12 V - 40 A		
	Starting Motor	12 V - 1.0 KW		

# Body Specifications

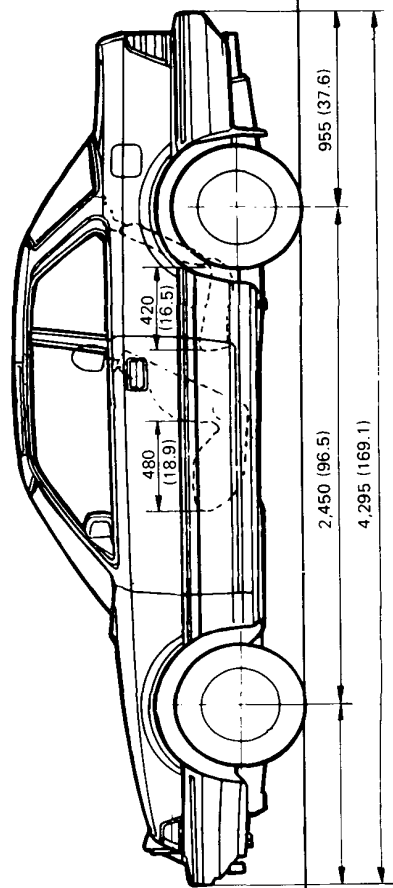
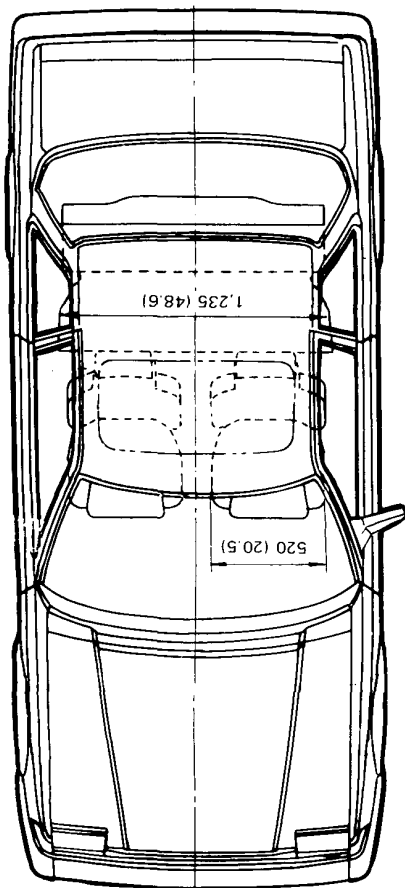
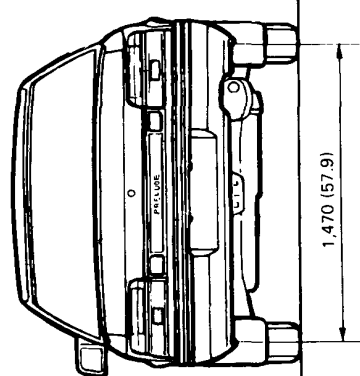
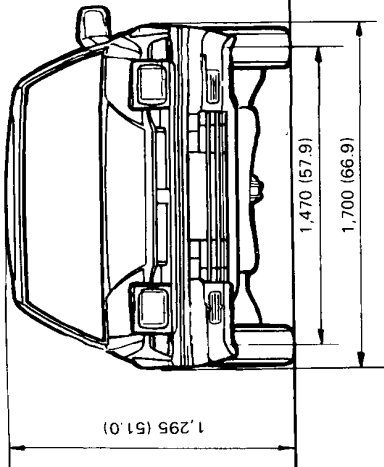
2000 Model

Unit: mm (in.)



1800 Model

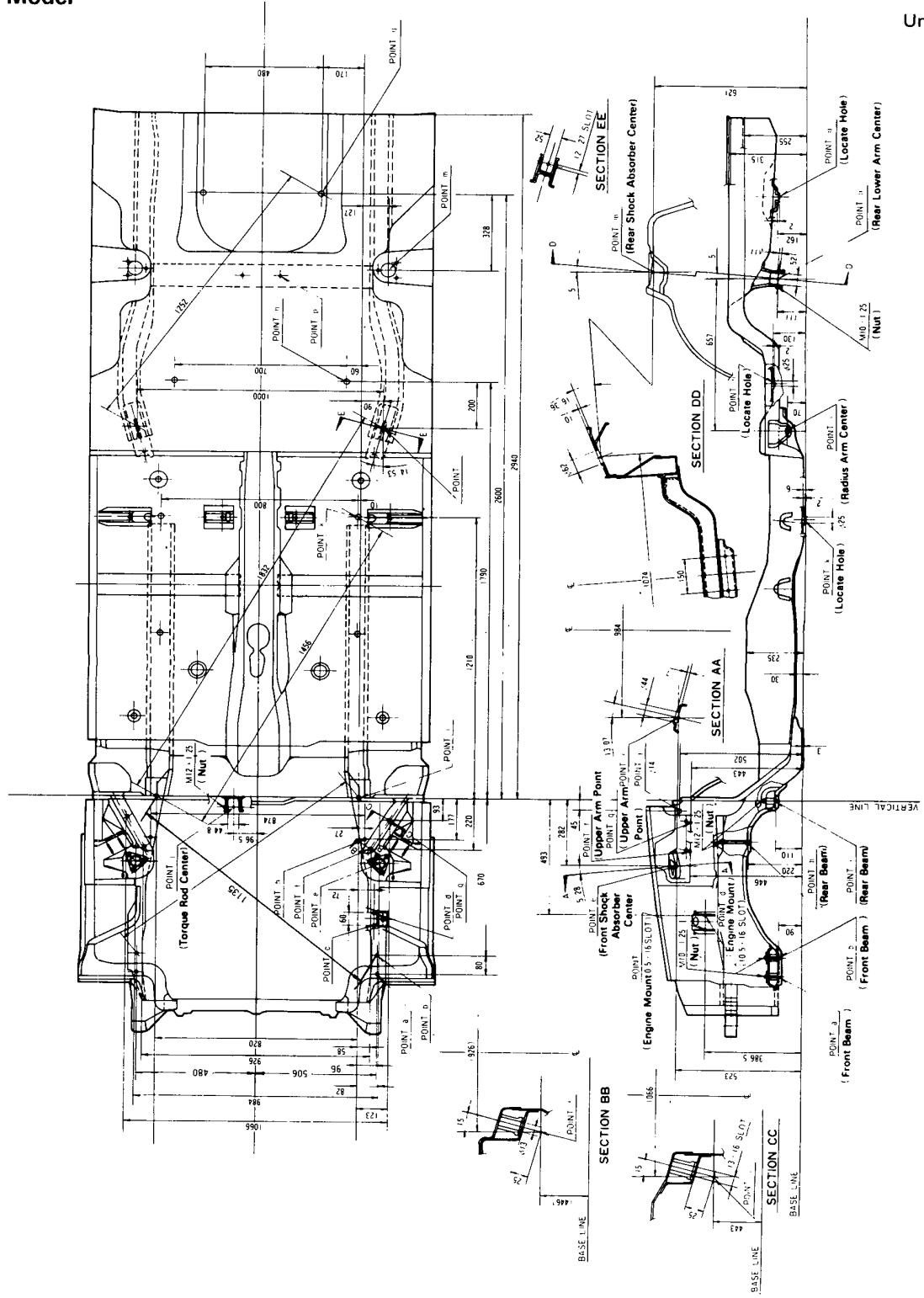
Unit: mm (in.)



# Frame Repair Chart

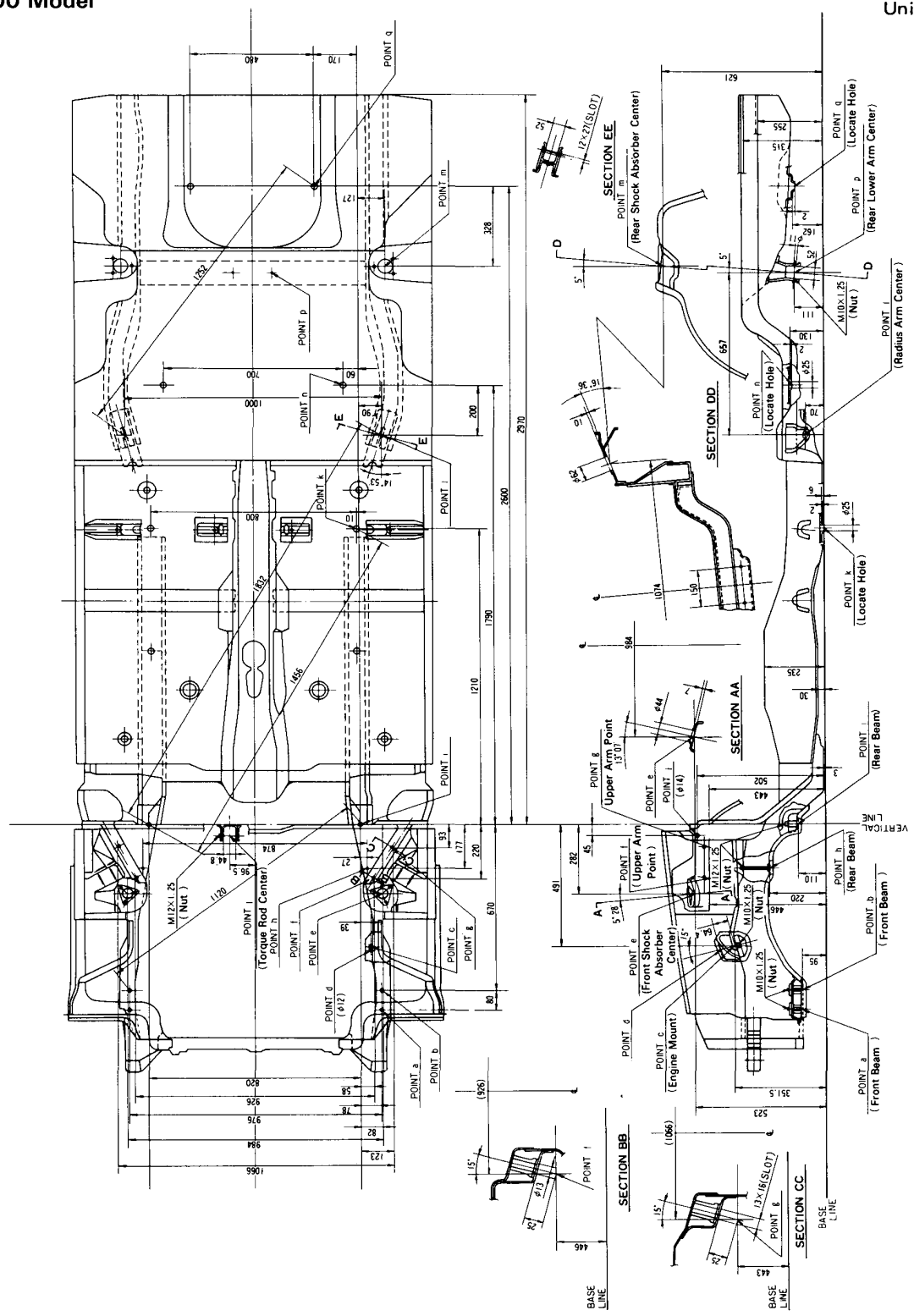
2000 Model

Unit: mm



1800 Model

Unit: mm



## Maintenance

Lubrication Points .....	4-2
Maintenance Schedule .....	4-4



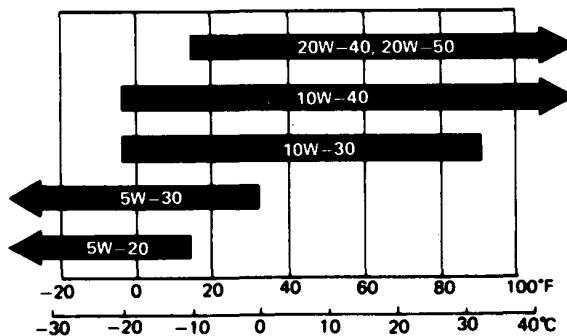


# Lubrication Points

No.	LUBRICATION POINTS	LUBRICANT
1	Engine	API Service Grade: SE or SF SAE Viscosity: See Chart below
2	Transmission Manual Automatic	API Service Grade: SE or SF SAE30, 10W-30, 10W-40 or 20W-40 grade oil DEXRON® Automatic transmission fluid
3	Brake reservoir	Brake fluid DOT 3 or DOT 4
4	Front wheel bearings and seals	Multipurpose Grease
5	Rear wheel bearings and seals	
6	Front stabilizer bar end bushings	
7	Tie rod ball joints	
8	Steering gearbox (Manual)	
8	Steering gearbox (Power)	Honda steering grease P/N 08704-99969
9	Shift lever pivot (Manual)	Multipurpose Grease
10	Select lever (Automatic)	
11	Lower arm ball joints upper and lower	
12	Pedal linkage	
13	Headlight retractors	
14	Steering column bushings Except tilt steering	
15	Power steering reservoir	Honda power steering fluid P/N 08208-99961
16	Caliper Piston seal Dust seal Caliper pin Piston	Silicone Grease
17	Shift rod clevis bushings	Multipurpose Grease
18	Door hinges upper and lower	
19	Door opening detents	
20	Engine hood latch	
21	Hood hinges	
22	Fuel filler lid	
23	Trunk hinges	
24	Front upper arm	
25	Intermediate shaft (B20A Engine)	

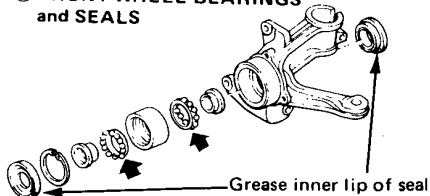
Recommended Engine Oil  
(SE or SF grade Only)

Engine oil viscosity for  
ambient temperature ranges.

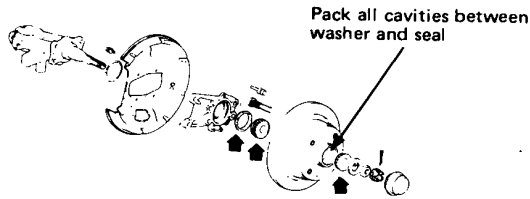




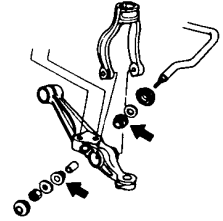
④ FRONT WHEEL BEARINGS and SEALS



⑤ REAR WHEEL BEARINGS and SEALS

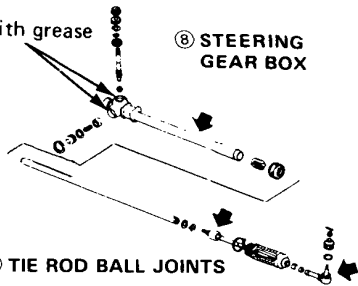


⑥ FRONT STABILIZER BAR END BUSHINGS

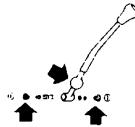


Pack with grease

⑧ STEERING GEAR BOX



⑨ SHIFT LEVER PIVOTS

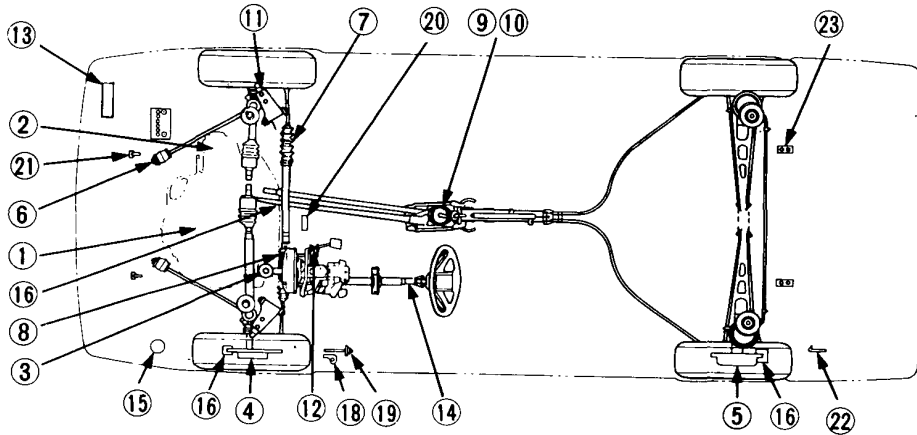


⑪ LOWER ARM BALL JOINT

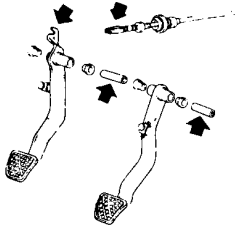


⑦ TIE ROD BALL JOINTS

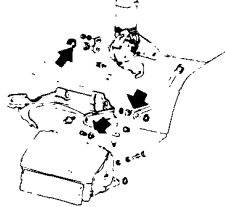
⑩ SELECT LEVER



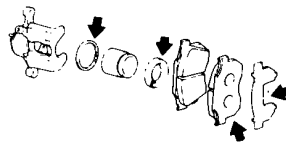
⑫ PEDAL LINKAGE



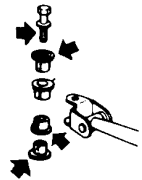
⑬ HEADLIGHT RETRACTORS



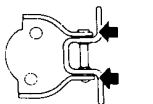
⑭ CALIPERS  
Silicone grease



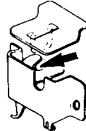
⑮ SHIFT ROD CLEVIS BUSHINGS



⑯ DOOR HINGES



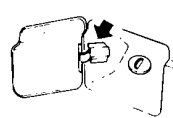
⑰ ENGINE HOOD LATCH



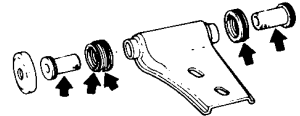
⑱ ENGINE HOOD HINGE



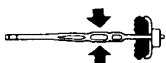
⑲ FUEL FILLER LID



⑳ FRONT UPPER ARM



㉑ DOOR OPENING DETENTS



# Maintenance Schedule

SERVICE AT THE INTERVAL OF LISTED KM (MILES) OR MONTHS, WHICHEVER OCCURS FIRST.						
ITEMS	x 1,000 km	20	40	60	80	100
	x 1,000 miles	12	24	36	48	60
	months	12	24	36	48	60
IDLE SPEED AND IDLE CO	I	I	I	I	I	I
VALVE CLEARANCE	I	I	I	I	I	I
ALTERNATOR DRIVE BELT		I				
■ ENGINE OIL AND OIL FILTER	Replace every 10,000 km (6,000 miles) or 6 months					
■ TRANSMISSION OIL			R		R	
■ RADIATOR COOLANT					R*1	
COOLING SYSTEM, HOSES AND CONNECTIONS		I			I	
E.G.R. SYSTEM (For carburetor type)*2						I
SECONDARY AIR SUPPLY SYSTEM (For carburetor type)*2						I
AIR CLEANER ELEMENT (Dry type)*4	R	R	R	R	R	R
AIR CLEANER ELEMENT (Viscous type)*6			R		R	
FUEL FILTER (Including aux. filter for carburetor type)			R		R	
INTAKE AIR TEMP. CONTROL SYSTEM (For carburetor type)						I
TANK, FUEL LINE AND CONNECTIONS			I		I	
THROTTLE CONTROL SYSTEM (For carburetor type)			I		I	
CHOKE MECHANISM (For carburetor type)			I		I	
CHOKE OPENER OPERATION (For carburetor type with auto choke type)						I
EVAPORATIVE EMISSION CONTROL SYSTEM*3						I
IGNITION TIMING AND CONTROL SYSTEM			I		I	
SPARK PLUGS (For cars using leaded gasoline)	R	R	R	R	R	R
SPARK PLUGS (For cars using unleaded gasoline)			R		R	
DISTRIBUTOR CAP AND ROTOR			I		I	
IGNITION WIRING			I		I	
CRANKCASE EMISSION CONTROL SYSTEM			I		I	
BRAKE HOSES, LINES (Includes ALB hoses and pipes for ALB models)	I	I	I	I	I	I
BRAKE FLUID (Includes ALB fluid for ALB models)			R		R	
FRONT BRAKE DISCS AND CALIPERS	I	I	I	I	I	I
FRONT BRAKE PADS	Inspect every 10,000 km (6,000 miles) or 6 months					
REAR BRAKES		I		I		
PARKING BRAKE	I	I	I	I	I	I
CLUTCH RELEASE ARM TRAVEL	I	I	I	I	I	I
ENGINE EXHAUST SILENCER, SUSPENSION MOUNTING BOLTS	I	I	I	I	I	I
FRONT WHEEL ALIGNMENT	I	I	I	I	I	I
STEERING OPERATION, TIE ROD ENDS, STEERING GEAR BOX AND BOOTS	I	I	I	I	I	I
REAR WHEEL BEARING*5		I		I		
REAR WHEEL BEARING GREASE						R
ALB HIGH PRESSURE HOSES					R	
ALB OPERATION	I	I	I	I	I	I
POWER STEERING SYSTEM	I	I	I	I	I	I
POWER STEERING PUMP BELT			I		I	
CATALYTIC CONVERTER HEAT SHIELD (Cars equipped catalytic converter)						I

R—Replace I—Inspect. After inspection, clean, adjust, repair or replace if necessary \*1 Thereafter, replace every 2 years or 48,000 km (30,000 miles), whichever comes first.

■ REMARK: These service intervals assume routine checking and replenishment has been done, as needed, by the customer.

\*2 Only for cars using unleaded gasoline

\*3 Only for KQ, KY types and for carburetor type using unleaded gasoline

\*4 Except EC and KQ types

\*5 Only for 2000

\*6 EC and KQ types

**CAUTION:** The following items must be serviced more frequently on cars normally used under severe driving conditions. Refer to the chart below for the appropriate maintenance intervals.

"Severe driving conditions" include:

- A: Repeated short distance driving
- B: Driving in dusty conditions
- C: Driving in severe, cold weather
- D: Driving in areas using road salt or other corrosive materials
- E: Driving on rough and/or muddy roads
- F: Towing a trailer

R—Replace

I—Inspect. After inspection, clean, adjust, repair or replace if necessary.

Condition	Maintenance item	Maintenance operation	Interval
A, B, F	Engine oil and oil filter	R	Every 5,000 km (3,000 miles) or 3 months
F	Transmission oil	R	Every 20,000 Km (12,000 miles) or 12 months
A, B, D, E, F	Front brake discs and calipers	I	Every 10,000 km (6,000 miles) or 6 months
A, B, D, E, F	Rear brakes (Only for disc type brakes)	I	Every 20,000 km (12,000 miles) or 12 months
A, B, C, E, F	Clutch release arm travel	I	Every 10,000 km (6,000 miles) or 6 months
B, C, E	Power steering system	I	Every 10,000 km (6,000 miles) or 6 months

# Body Electrical

## Lighting System (KE model)

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Component Location Index .....	25-4
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DIM-DIP Control Unit	
Input/Output Test .....	25-6
Relay Test .....	25-7
Resistor Test .....	25-7

## Cruise Control (KQ and KY models)

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Component Location Index .....	25-9
Troubleshooting .....	25-10
Control Unit Input Test .....	25-11
Main Switch Removal .....	25-13
Main Switch Test .....	25-13
SET/RESUME Switch Test .....	25-14
SET/RESUME Switch Relacement .....	25-15
Brake Light Switch Test .....	25-15
Console Switch Test/Replacement .....	25-16
Clutch Switch Test .....	25-17
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Actuator Test .....	25-18
Actuator Solenoid Test .....	25-19
Actuator/Cable Replacement .....	25-19
Actuator Disassembly .....	25-20

## Power Door Mirrors (KQ and KY models)

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Actuator Test .....	25-23
Door Mirror Replacement .....	25-23

## Combination Switch (KE model)

Testing .....	25-24
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### Outline of Model Changes

- Maintenance procedures for the lighting system newly equipped with DIM-DIP headlights (KE model only) and the combination switch (KE model) are described.
- Maintenance procedures for the cruise control system and power door mirrors already equipped to KQ and KY models are described.

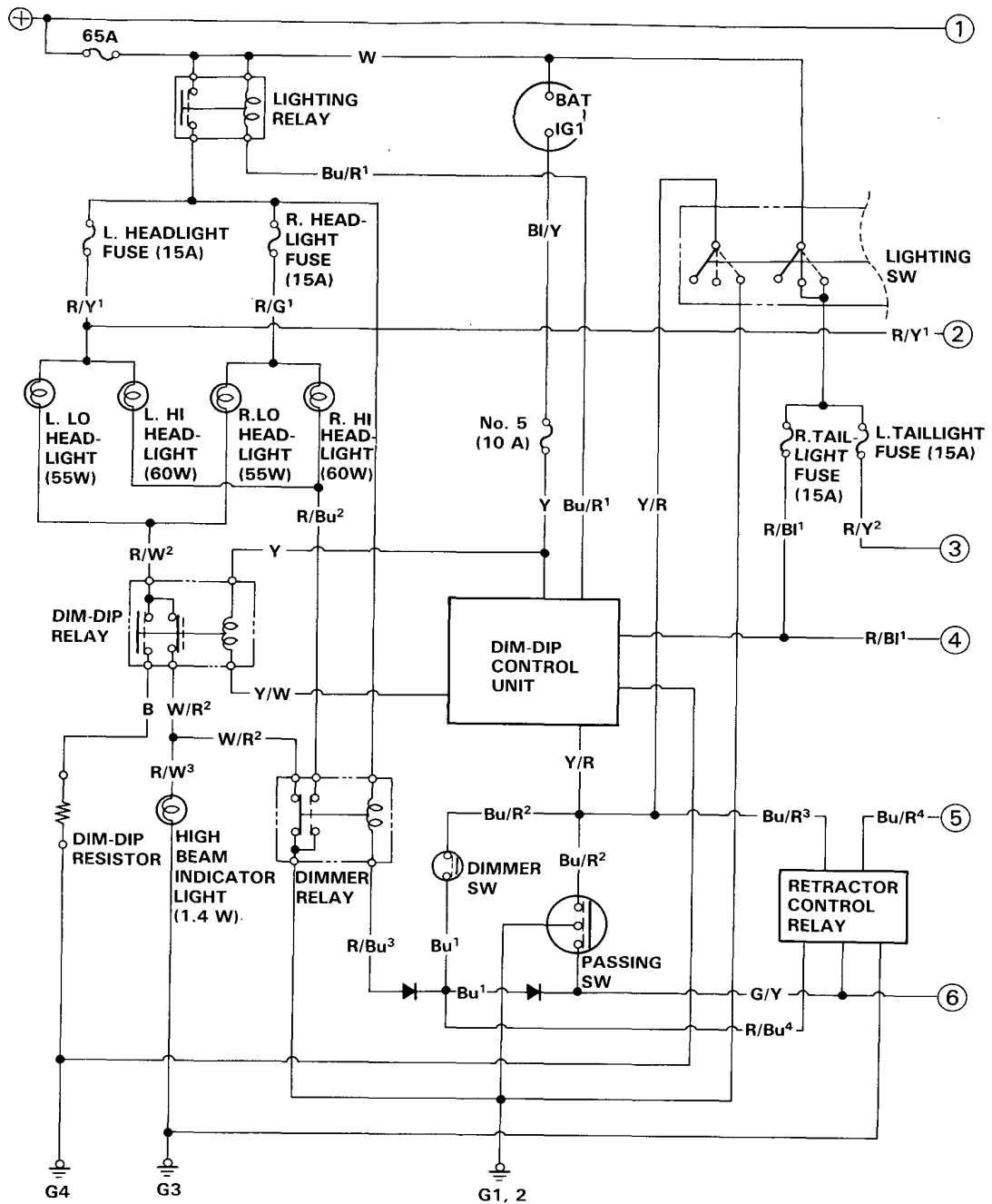


# Lighting System (KE model)

## Circuit Diagram

### Description:

When the lighting switch is set to the first position (•) with the ignition switch ON, the headlights will rise and light up as the DIM-DIP headlights. The light is dimmed to approx. ten percent of the headlights' brightness in the second position (●) of the lighting switch.



NOTE: Several different wires have the same color. They have been given a number suffix to distinguish them (for example Bu/R<sup>1</sup> and Bu/R<sup>2</sup> are not the same).

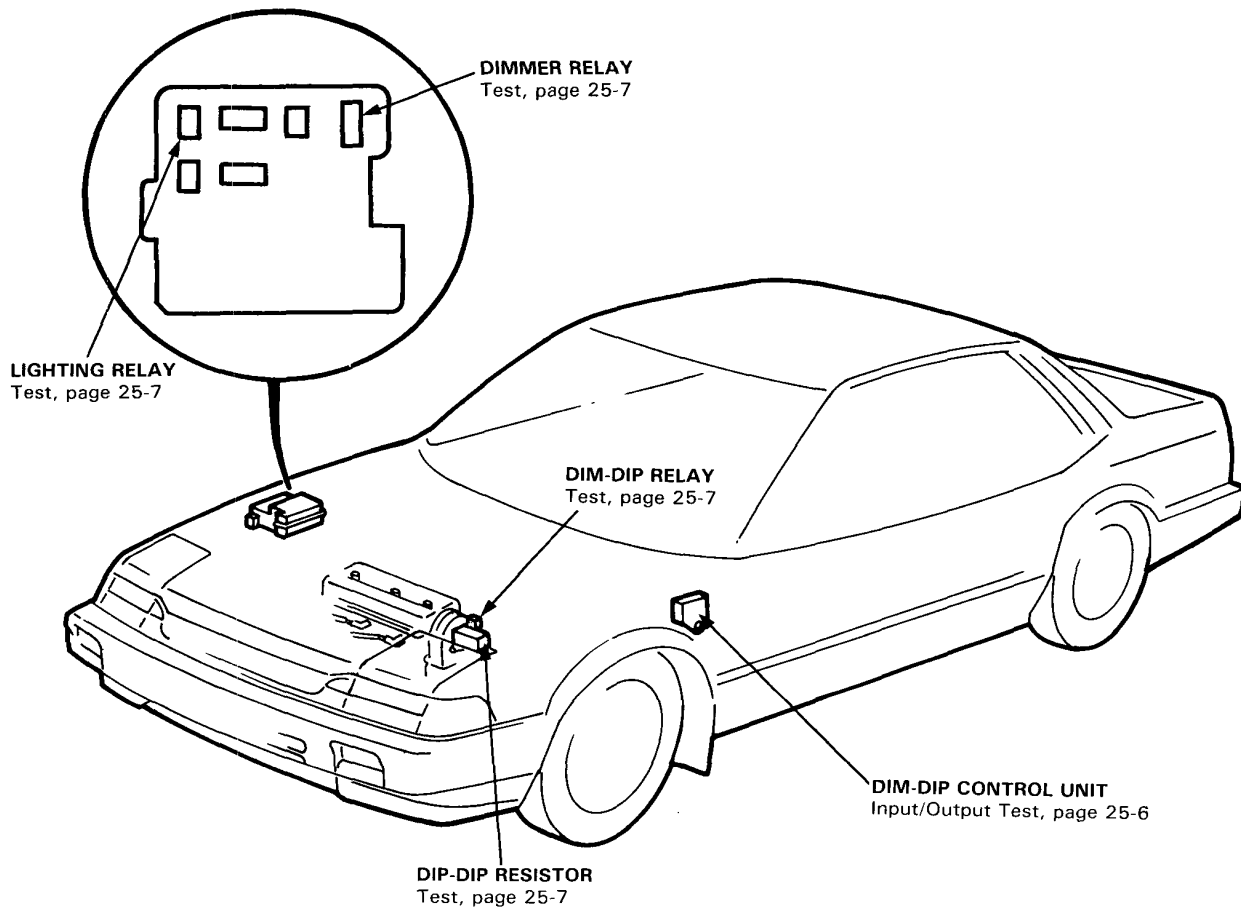


# Lighting System (KE model)

## Component Location Index

NOTE: Refer to the supplementary service manual (No. 62SB022) of Prelude for service procedures indicated by page numbers with superscript “\*”.

- **SYSTEM**  
Troubleshooting, page 25-5
- **LIGHTING SWITCH**  
Removal, page 18-12 thru 18-14 of the base manual (No. 62SB000)  
Test, page 25-2\*
- **RETRACTOR SWITCH**  
Test, page 25-4\*
- **RETRACTOR CONTROL UNIT**  
Tast, page 25-7\* thru 25-13\*  
Warning Output Test, page 25-14\*
- **RETRACTOR CONTROL RELAY**  
Test, page 25-14\*
- **RETRACTOR RELAY**  
Test, page 25-21 of the base manual (No. 62SB000)
- **REAR FOG LIGHT RELAY**  
Test, page 25-46 of the base manual (No. 62SB000)
- **RETRACTABLE HEADLIGHT**  
Replacement, page 22-62 of the base manual (No. 62SB000)  
Adjustment, page 22-63 of the base manual (No. 62SB000)





## Troubleshooting

**CAUTION:** DIM-DIP resistor becomes very hot in use of DIM-DIP headlights; do not touch it or the attaching hardware immediately after they have been turned off.

**NOTE:**

- The numbers in the table show the troubleshooting sequence.
- Before troubleshooting:
  - Check the No. 5 (10A) fuse in the dash fuse box, L./R. headlight fuses (15A) in the under-hood relay box and L./R. taillight fuses (15A) in the auxiliary fuse box.
- Several different wires have the same color. They have been given a number suffix to distinguish them (for example R/W<sup>1</sup> and R/W<sup>2</sup> are not the same).

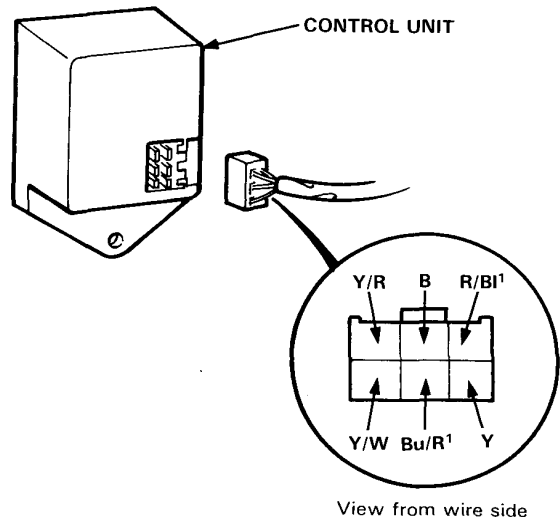
Symptom		Items to be inspected	Retractor relay	DIM-DIP relay	Retractor motor	Lighting switch	Retractor switch	Lighting relay	Retractor control unit	DIM-DIP control unit	DIM-DIP resistor	Blown bulb	Frozen, stuck, or improperly installed retractor linkage	Poor ground	Open circuit in wires or loose or disconnected terminals
Lighting switch "OFF" to "•"	Headlights rise up.	Any lights to be on do not light up.				1								G4 and G5	R
		All lights except headlights light up.						3		2	1			G4	R/BI <sup>1</sup> , Bu/R <sup>1</sup> , R/W <sup>2</sup> and B
	Headlights do not rise up.	All lights to be on light up.	4		3				1				2	G1 and G2	R/Y <sup>1</sup>
Lighting switch "•" to "••"	Headlight is still dimmed.			1		2				3				G3	Y/R
Lighting switch "••" to "•••"	Headlight retract.								1					G3	
Lighting switch "•••" to OFF	Headlight do not retract.								1				2	G3	
Retractor switch ON	Headlights cannot be raised.						1		2					G3	W/BI
Retractor switch OFF	Headlights cannot be raised.						1		2					G3	R/Y <sup>3</sup>
Indicator light is not ON with retractor motors activated.									2			1		G3	R/Bu <sup>5</sup>
Indicator light is ON with retractor motors deactivated.									1						



# Lighting System (KE model)

## DIM-DIP Control Unit Input/Output Test

NOTE: Recheck the connections between the 6-P connector and the control unit, then replace the control unit if all input/output tests prove OK.



### Input Test:

Disconnect the 6-P connector from the control unit.  
Make the following input tests 1-6 at the harness pins.

No.	Wire	Test condition	Test: desired result	Possible cause (if result is not obtained)
1	Bl	Under all conditions	Check for continuity to ground: should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground</li> <li>• An open in the wire</li> </ul>
2	Y	Ignition switch ON	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 5 fuse (10A)</li> <li>• An open in the wire</li> </ul>
3	Bu/R¹	Under all conditions	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Faulty lighting relay</li> <li>• An open in the wire</li> </ul>
4	Y/W	Ignition switch ON	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 5 fuse (10A)</li> <li>• Faulty DIM-DIP relay</li> <li>• An open in the wire</li> </ul>
5	Y/R	Passing switch ON	Check for continuity to ground: should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground</li> <li>• Faulty passing switch</li> <li>• An open in the wire</li> </ul>
6	R/BI¹	Lighting switch "•" or "●"	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown R. Taillight fuse (15A)</li> <li>• Faulty lighting switch</li> <li>• An open in the wire</li> </ul>

### Output Test:

Reconnect the 6-P connector to the control unit.  
Make the following output tests 7 and 8 at the harness pins.

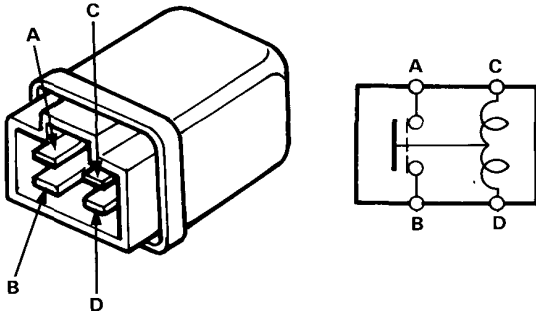
7	Bu/R¹	Lighting switch "•" or "●"	Check for voltage to ground: should be battery voltage.	• Faulty control unit
8	Y/W			



## Relay Test

### Lighting relay:

There should be continuity between A and B terminals, when applying battery voltage to C (positive) and D (negative) terminals. There should be no continuity when the battery is disconnected.

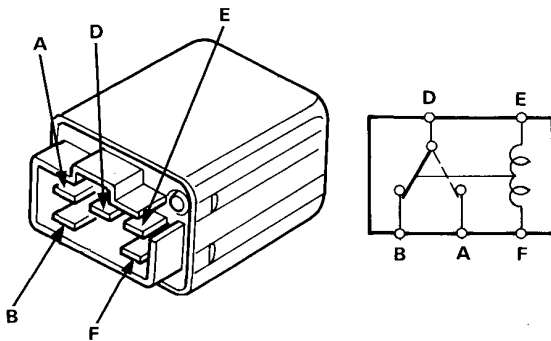


NOTE: This relay is located in the relay box, in the engine compartment.

### DIM-DIP/Dimmer relay:

There should be no continuity between B and D terminals and continuity between A and D terminals, when the battery positive cable is connected to E terminal and negative cable to F terminal.

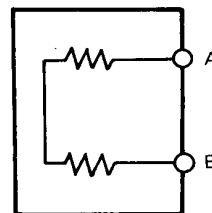
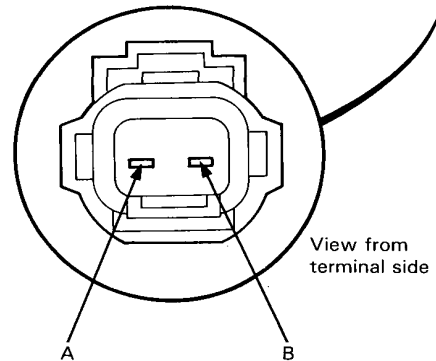
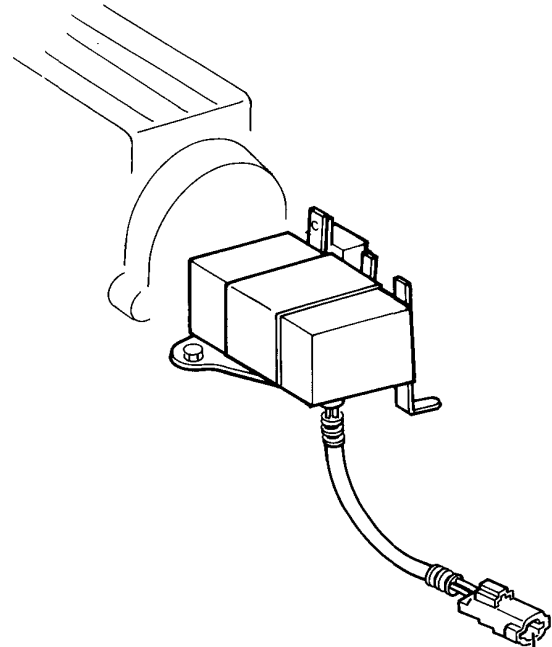
There should be continuity between B and D terminals and no continuity between A and D terminals with the battery disconnected.



## Resistor Test

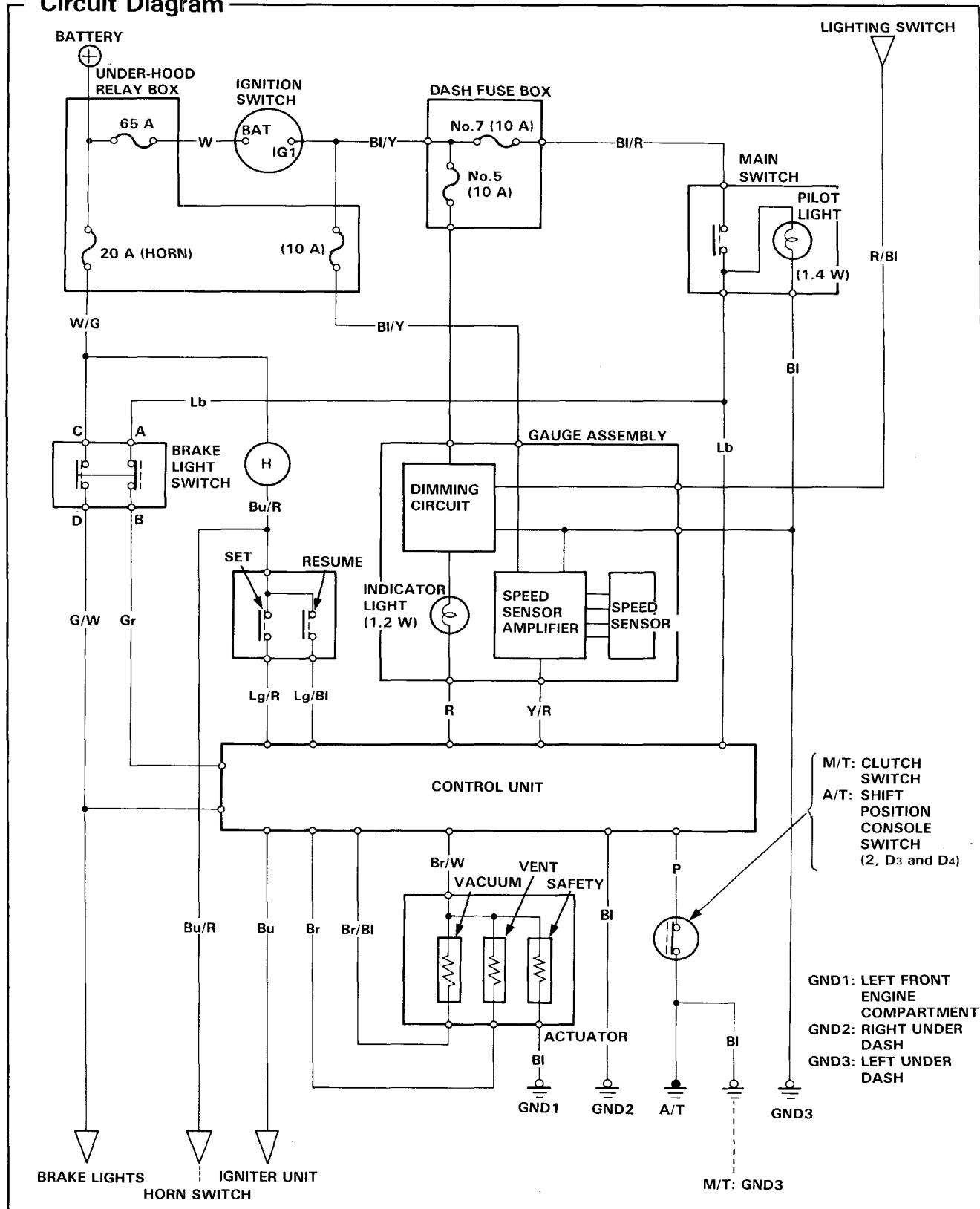
**CAUTION:** DIM-DIP resistor becomes very hot in use of DIM-DIP headlights; do not touch it or the attaching hardware immediately after they have been turned off.

1. Disconnect the 2-P connector from the resistor.
2. Check for continuity between the A and B terminals. (RX100 scale)  
There should be continuity.



# Cruise Control (KQ and KY models)

## Circuit Diagram

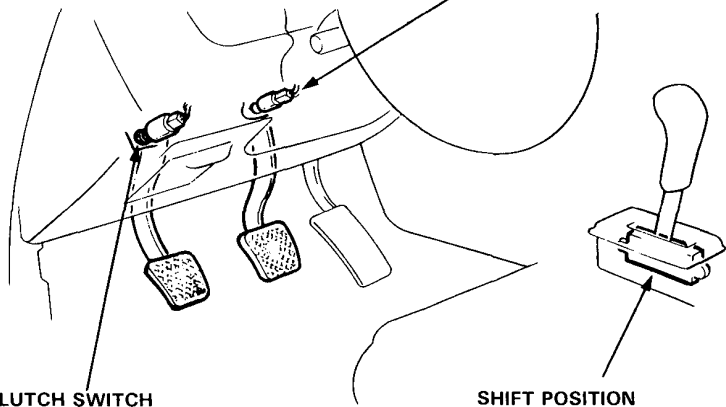




# Component Location Index

### BRAKE LIGHT SWITCH

Test, page 25-15  
Pedal Height Adjustment, section 21 of the base manual (No.62SB000)



### CLUTCH SWITCH

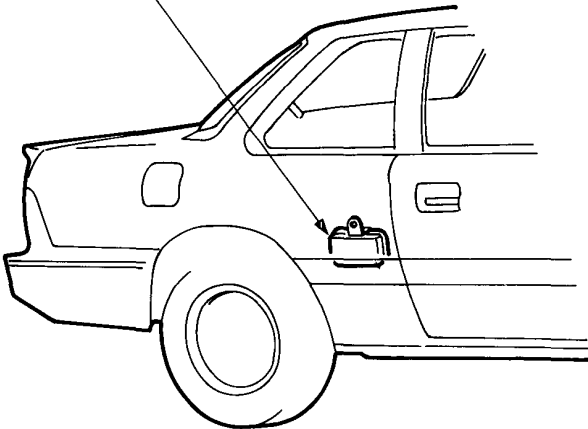
Test, page 25-17  
Pedal Height Adjustment, section 13 of the base manual (No.62SB000)

### SHIFT POSITION CONSOLE SWITCH

Test/Replacement, page 25-16

### CONTROL UNIT

(Located behind right quarter lining)  
Input Test, page 25-11

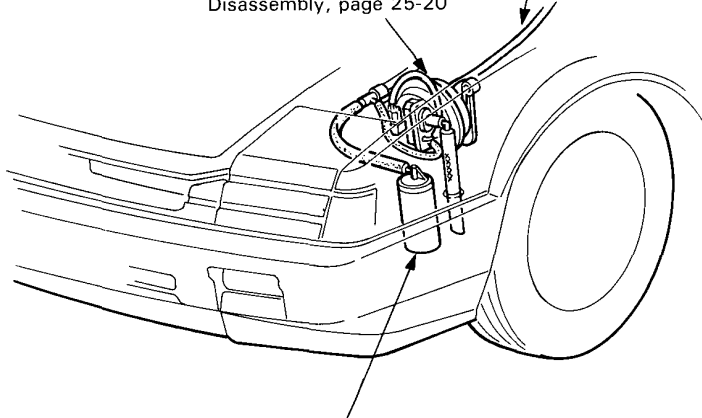


### ACTUATOR CABLE

Adjustment, page 25-17  
Replacement, page 25-19

### ACTUATOR

Test, page 25-18  
Solenoid Test, page 25-19  
Replacement, page 25-19  
Disassembly, page 25-20



### VACUUM RESERVOIR

# Cruise Control (KQ and KY models)

## Troubleshooting

NOTE: The numbers in the table show the troubleshooting sequence.

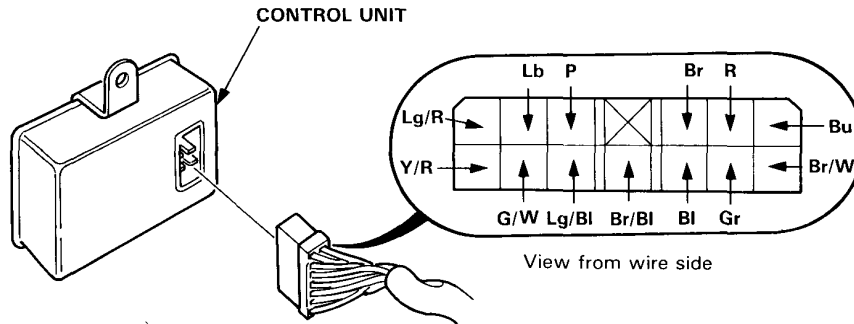
Item to be inspected Symptom	Blown No. 7 (10 A) fuse (in the sash fuse box)	Main switch	Indicator light and its dimming circuit (in the gauge assembly)	SET/RESUME switch	Actuator cable free play	Actuator	Disconnected, clogged or restricted vacuum lines/stuck check valve/ leaky vacuum reservoir	Clutch switch and mounting (M/T)	Shift position console switch (A/T)	Blown 20 A (HORN) fuse (in the under-hood relay box)	Brake light switch	Control unit input	Poor ground	Open circuit in wires or loose or disconnected terminals
Cruise control can't be set.	1	2										3	GND2	
Cruise control can be set, but indicator light does not go on.			1											R
Cruise speed noticeably higher or lower than what was set.												1		
Excessive overshooting and/or undershooting when trying to set speed					1	2						3		
Steady speed not held even on a flat road with cruise control set.					1	3	2					4		
Car does not decelerate or ac- celerate accordingly when SET or RESUME button is pushed.				1								2		
Set speed not cancelled when clutch pedal is pushed. (M/T)								1				2		
Set speed not cancelled when shift lever is moved to N. (A/T)									1			2		
Set speed not cancelled when brake pedal is pushed.										1	2	3		
Set speed not resumed when RESUME button is pushed (with main switch on, but set speed temporarily cancelled).				1								2		



## Control Unit Input Test

Remove the right quarter lining to disconnect the 13-P connector from the control unit.  
Make the following input tests at the harness pins.

NOTE: Recheck the connections between the 13-P connector and the control unit, then replace the control unit if all input tests prove OK.



No.	Wire	Test condition	Test: desired result	Possible cause (if result is not obtained)
1	BI	Under all conditions.	Check for continuity to ground: should be continuity.	<ul style="list-style-type: none"> <li>• Poor ground (GND2).</li> <li>• An open in the wire.</li> </ul>
2	Lb	Ignition switch ON and main switch ON.	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Blown No. 7 (10A) fuse.</li> <li>• Faulty main switch.</li> <li>• An open in the Lb or BI/R wire.</li> </ul>
3	Lg/BI	Resume switch pushed.	Ground each terminal: Horns should sound as the switch is pushed.	<ul style="list-style-type: none"> <li>• Blown 20A (HORN) fuse.</li> <li>• Faulty SET/RESUME switch.</li> <li>• Faulty slip ring.</li> <li>• An open in the wire.</li> </ul>
4	Lg/R	Set switch pushed.		
5	P	M/T: Clutch pedal pushed. A/T: Shift lever in 2, D <sub>3</sub> or D <sub>4</sub> .	Check for continuity to ground: should be continuity.	<ul style="list-style-type: none"> <li>• Faulty or misadjusted clutch switch (M/T).</li> <li>• Faulty shift position console switch (A/T).</li> <li>• Poor ground (GND3).</li> <li>• An open in the wire.</li> </ul>
6	Bu	Start the engine.	Check for voltage to ground: should be battery voltage.	<ul style="list-style-type: none"> <li>• Faulty ignition system.</li> <li>• An open in the wire.</li> </ul>
7	Y/R	Ignition switch ON and main switch ON. Raise the front of the car and rotate one wheel slowly.	Check for voltage between the Lb ⊕ and Y/R ⊖ terminals: should be 0-12-0-12 V repeatedly.	<ul style="list-style-type: none"> <li>• Faulty speed sensor or amplifier in speedometer.</li> <li>• Poor ground (GND3).</li> <li>• An open in the wire.</li> </ul>

## Cruise Control (KQ and KY models)

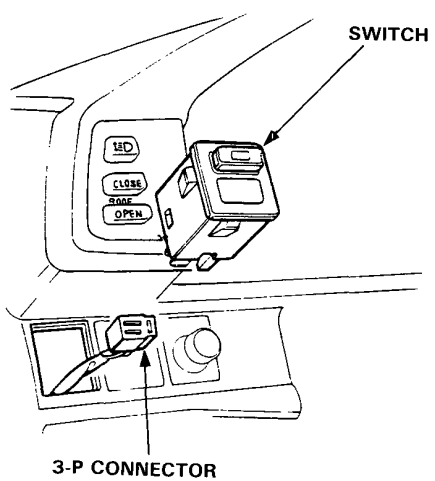
### Control Unit Input Test (cont'd)

8	Gr	Ignition switch ON, main switch ON and brake pedal pushed, then released.	Check for voltage to ground: should be 0 V with the pedal pushed and battery voltage with the pedal released.	<ul style="list-style-type: none"> <li>• An open in the Gr or Lb wire.</li> <li>• Faulty brake light switch.</li> </ul>
9	G/W	Brake pedal pushed, then released.	Check for voltage to ground: should be battery voltage with the pedal pushed, and 0 V with the pedal released.	<ul style="list-style-type: none"> <li>• An open in the wire.</li> <li>• Blown horn frse (20A).</li> <li>• Faulty brake light switch.</li> </ul>
10	R	Ignition switch ON.	Attach to ground: Indicator light in gauges comes on.	<ul style="list-style-type: none"> <li>• Blown bulb.</li> <li>• An open in the wire.</li> <li>• Blown No. 5 (10A) fuse.</li> <li>• Faulty dimming circuit in gauges.</li> </ul>
11	Br	Under all conditions.	Check for resistance to ground: should be 80–120 $\Omega$ .	<ul style="list-style-type: none"> <li>• Open or short in the wire.</li> <li>• Faulty actuator solenoid.</li> </ul>
12	Br/Bl	Under all conditions.	Check for resistance to ground: should be 70–110 $\Omega$ .	<ul style="list-style-type: none"> <li>• Open or short in the wire.</li> <li>• Faulty actuator solenoid.</li> </ul>
13	Br/W	Under all conditions.	Check for resistance to ground: should be 40–60 $\Omega$ .	<ul style="list-style-type: none"> <li>• Open or short in the wire.</li> <li>• Faulty actuator solenoid.</li> </ul>

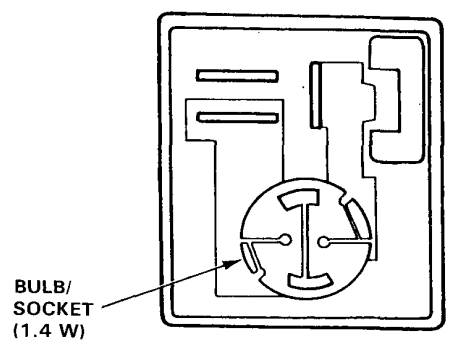


## Main Switch Removal

1. Remove the dashboard lower panel.
2. Disconnect the 3-P connector from behind the instrument panel.
3. Push the switch behind the instrument panel to remove it.



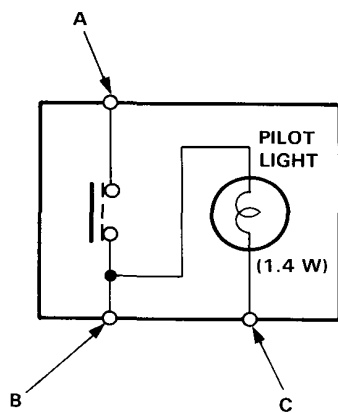
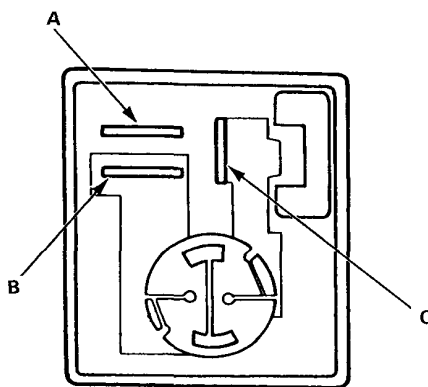
4. Turn the socket 45° counterclockwise to remove it.



## Main Switch Test

1. Remove the main switch from the instrument panel.
2. Check for continuity between the terminals in each switch position according to the table.

Terminal	A	B		C
Position				
OFF		○	○	○
ON	○	○	○	○





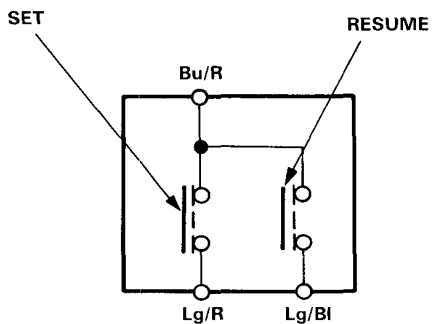
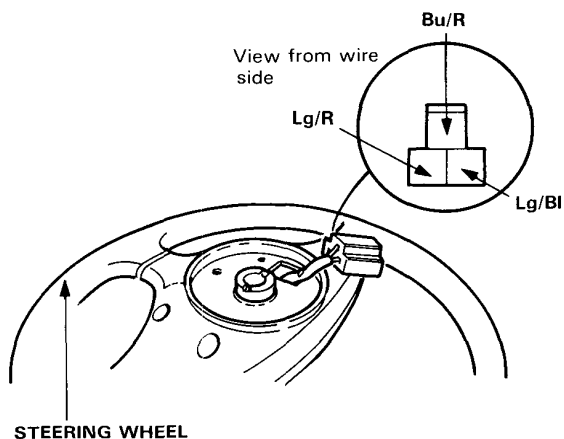
# Cruise Control (KQ and KY models)

## SET/RESUME Switch Test

### Switch Test:

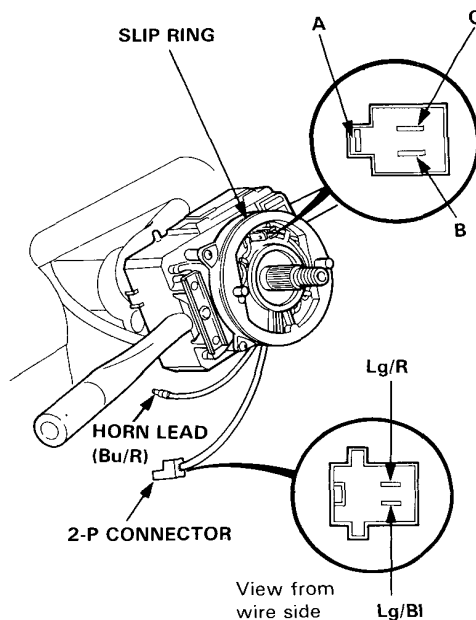
1. Remove the steering wheel, then turn it over.
2. Check for continuity between the terminals in each switch position according to the table.

Terminal	Bu/R	Lg/BI	Lg/R
Position			
SET (ON)	○	—	○
RESUME (ON)	○	○	



### Slip Ring Test:

3. Remove the steering column lower cover, then disconnect the 2-P connector and the horn lead.
4. There should be continuity between the Bu/R and A terminals, the Lg/R and B terminals, and the Lg/BI and C terminals, as you turn the slip ring.

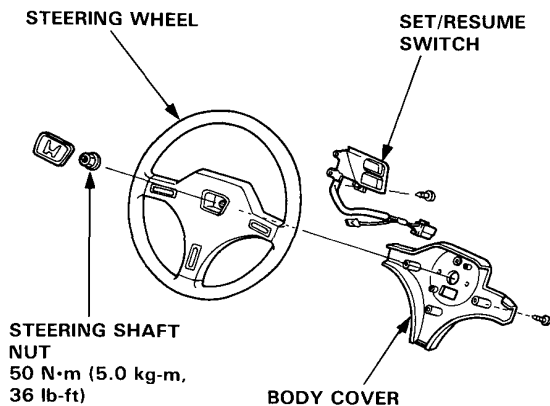


5. Check for open in the combination switch wire (Bu/R).

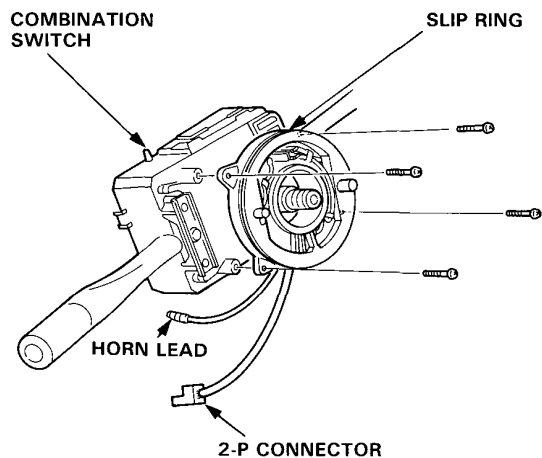


## SET/RESUME Switch Replacement

1. Remove the steering wheel.
2. Separate the body cover by removing the 3 screws.
3. Remove the 3 screws and the SET/RESUME switch from the steering wheel.



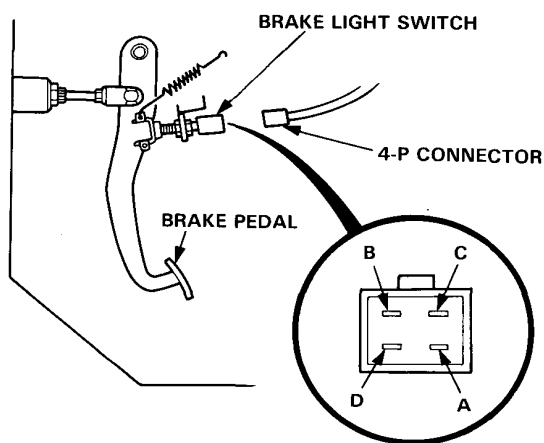
4. If necessary, remove the upper and lower steering column covers, then remove the 4 screws and disconnect the 2-P connector and horn lead to remove the slip ring.



## Brake Light Switch Test

1. Disconnect the 4-P connector from the switch.
2. Check for continuity between the terminals according to the table.

Terminal	A	B	C	D
Brake Pedal RELEASED	○	○		
PUSHED			○	○

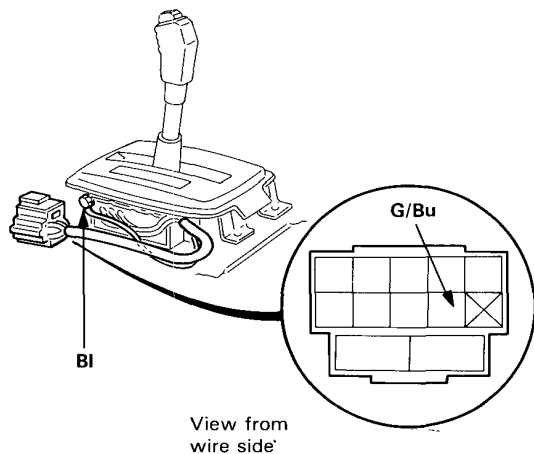


3. If necessary, replace the switch or adjust pedal height (see section 21 of the base manual [No.62SB000]).

# Cruise Control (KQ and KY models)

## Console Switch Test/Replacement

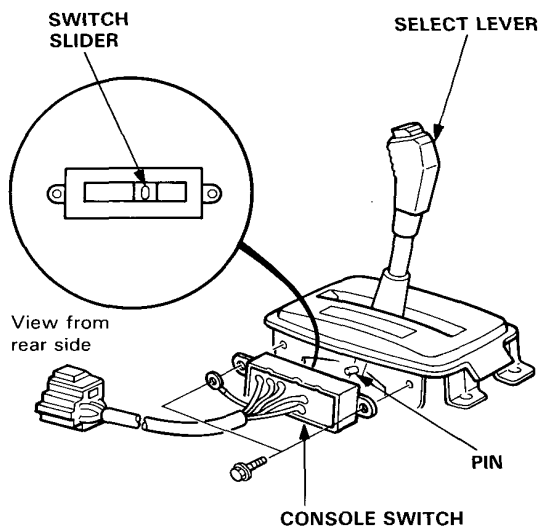
1. Remove the front console and disconnect the 12-P connector from the console switch.
2. Check for continuity between the terminals in each switch position according to the table.



Shift Position Switch (for cruise control)

Terminal	G/Bu	BI
Position		
2	○ — ○	○ — ○
D <sub>3</sub>	○ — ○	○ — ○
D <sub>4</sub>	○ — ○	○ — ○
N		
R		
P		

3. Remove the center console and the 2 bolts to replace the console switch.



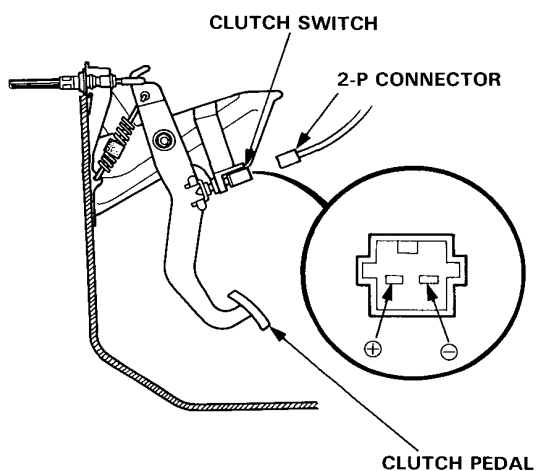
4. Position the switch slider to "Neutral" as shown above.
5. Shift the select lever to "Neutral", then slip the console switch into position.
6. Tighten the switch with the 2 bolts.



## Clutch Switch Test

1. Disconnect the 2-P connector from the switch.
2. Check for continuity between the terminals according to the table.

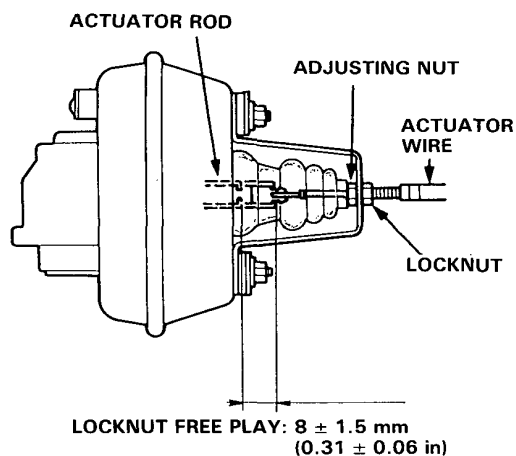
Terminal	⊕	⊖
Clutch Pedal	⊕	⊖
RELEASED	○	○
PUSHED		



3. If necessary, replace the switch or adjust pedal height (see section 13 of the base manual [62SB000]).

## Actuator Cable Adjustment

1. Check that the actuator cable operates smoothly with no binding or sticking.
2. Start the engine.
3. Measure the amount of movement of the actuator rod until the cable pulls on the accelerator lever (engine speed starts to increase). Free play should be  $8 \pm 1.5$  mm ( $0.31 \pm 0.06$  in).



4. If free play is not within specs, loosen the locknut and turn the adjusting nut as required.

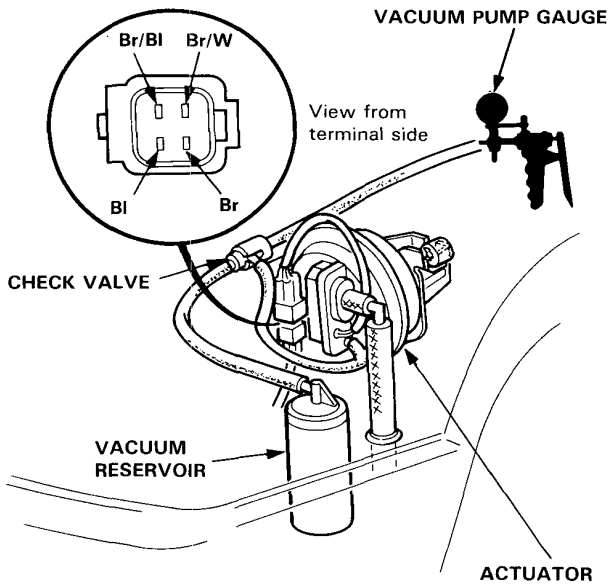
**NOTE:** If necessary, check the throttle cable free play (see section 11 of the base manual [No. 62SB000]), then recheck the actuator rod free play.

5. Retighten the locknut and recheck the free play.

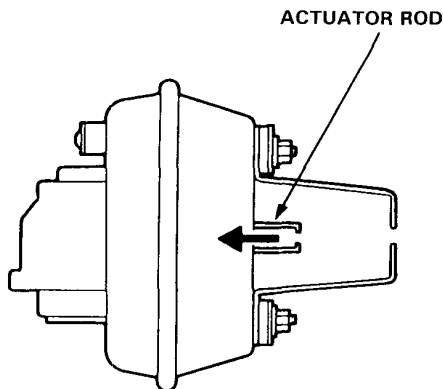
# Cruise Control (KQ and KY models)

## Actuator Test

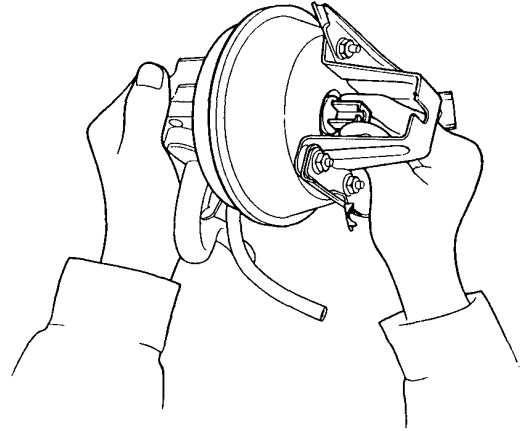
1. Disconnect the actuator cable from the actuator rod and the 4-P connector.
2. Connect battery positive to the Br/W terminal and negative to the Br/BI, Br and BI terminals.
3. Connect a vacuum pump to the check valve. Then apply vacuum to the actuator.



4. The actuator rod should pull in completely. If the rod pulls in only part-way or not at all, check for a leaking vacuum line or defective solenoid.



5. With voltage and vacuum still applied, try to pull the actuator rod out by hand. You should not be able to pull it. If you can, it is defective.



6. Disconnect battery negative from the Br/BI terminal. The actuator rod should return. If the actuator rod does not return, and the vent hose and filter are free, the solenoid valve assembly is defective.
7. Repeat steps 2-6, but this time disconnect battery negative from the BI terminal. The actuator rod should return. If it does not return, and the vent hose and filter are free, the solenoid valve assembly is defective.
8. If the solenoid valve assembly is replaced, be sure to use new O-rings at each solenoid.



## Actuator Solenoid Test

1. Disconnect the 4-P connector from the actuator.
2. Measure resistance between the terminals.

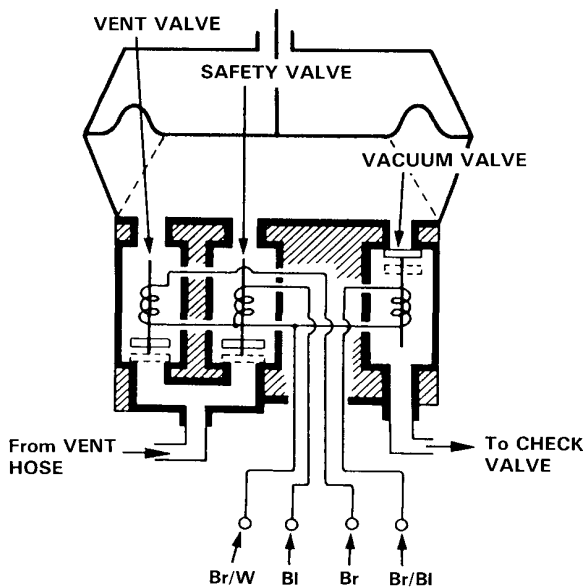
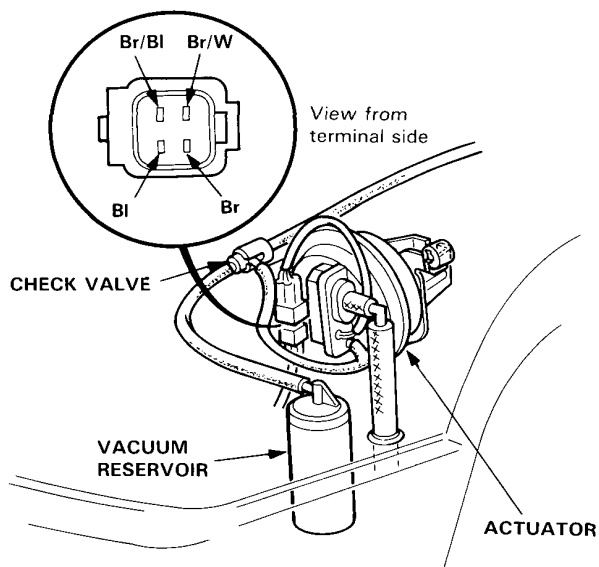
### Resistance

**VACUUM SOLENOID (between Br/W and Br/BI):**  
30–50 Ω

**VENT SOLENOID (between Br/W and Br):**  
40–60 Ω

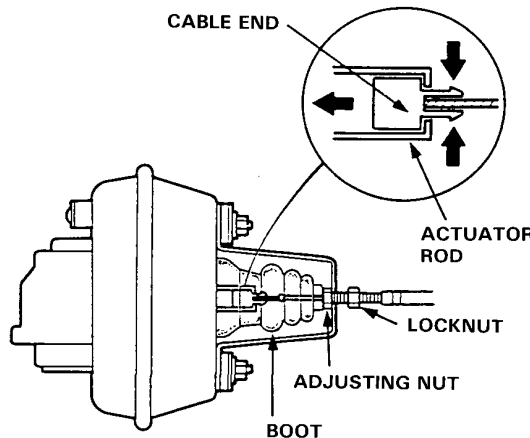
**SAFETY SOLENOID (between Br/W and BI):**  
40–60 Ω

NOTE: Resistance will vary slightly with temperature; specified resistance is at 20° (70° F).

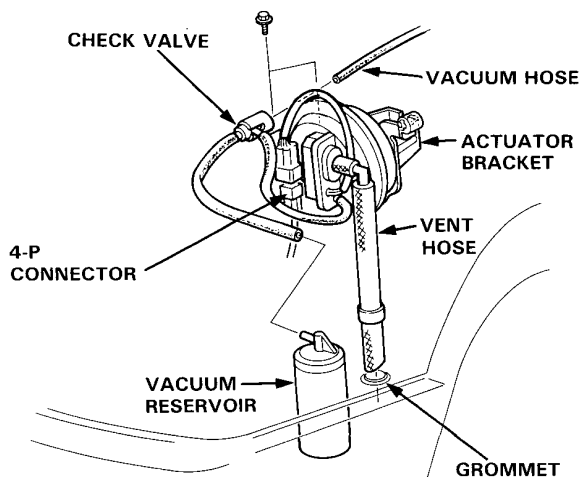


## Actuator/Cable Replacement

1. Pull back the boot and loosen the locknut, then disconnect the cable from the bracket.
2. Disconnect the cable end from the actuator rod.



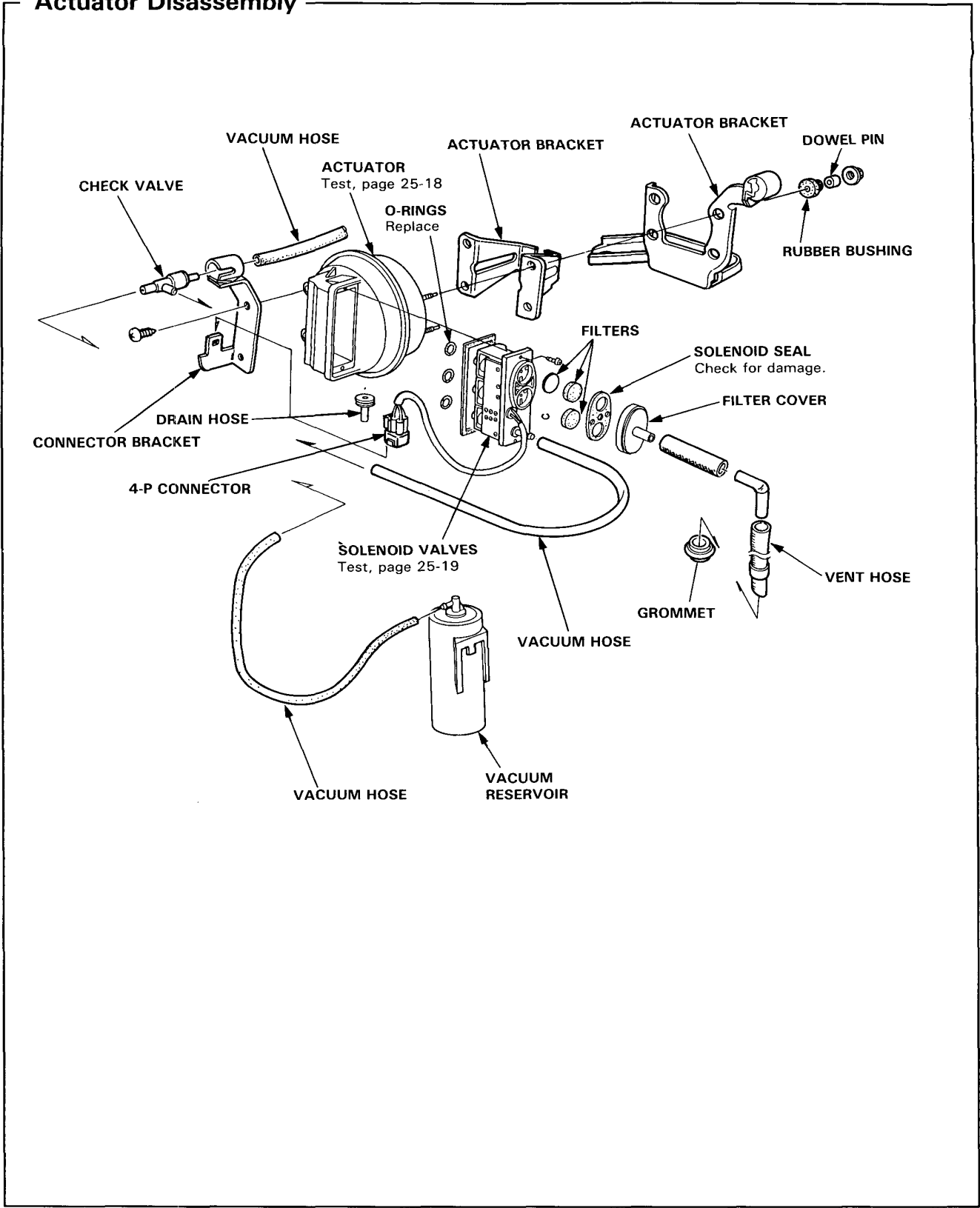
3. Disconnect the 4-P connector from the actuator.
4. Pull the vent hose from the grommet.
5. Disconnect the vacuum hoses from the check valve and the vacuum reservoir.
6. Remove the 2 mount bolts and the actuator with the bracket.



7. If necessary, disconnect the cable end from the linkage over the accelerator pedal, then turn the grommet 90° in the firewall and remove the cable.
8. Install in the reverse order of removal, and adjust free play at actuator rod after connecting the cable.

# Cruise Control (KQ and KY models)

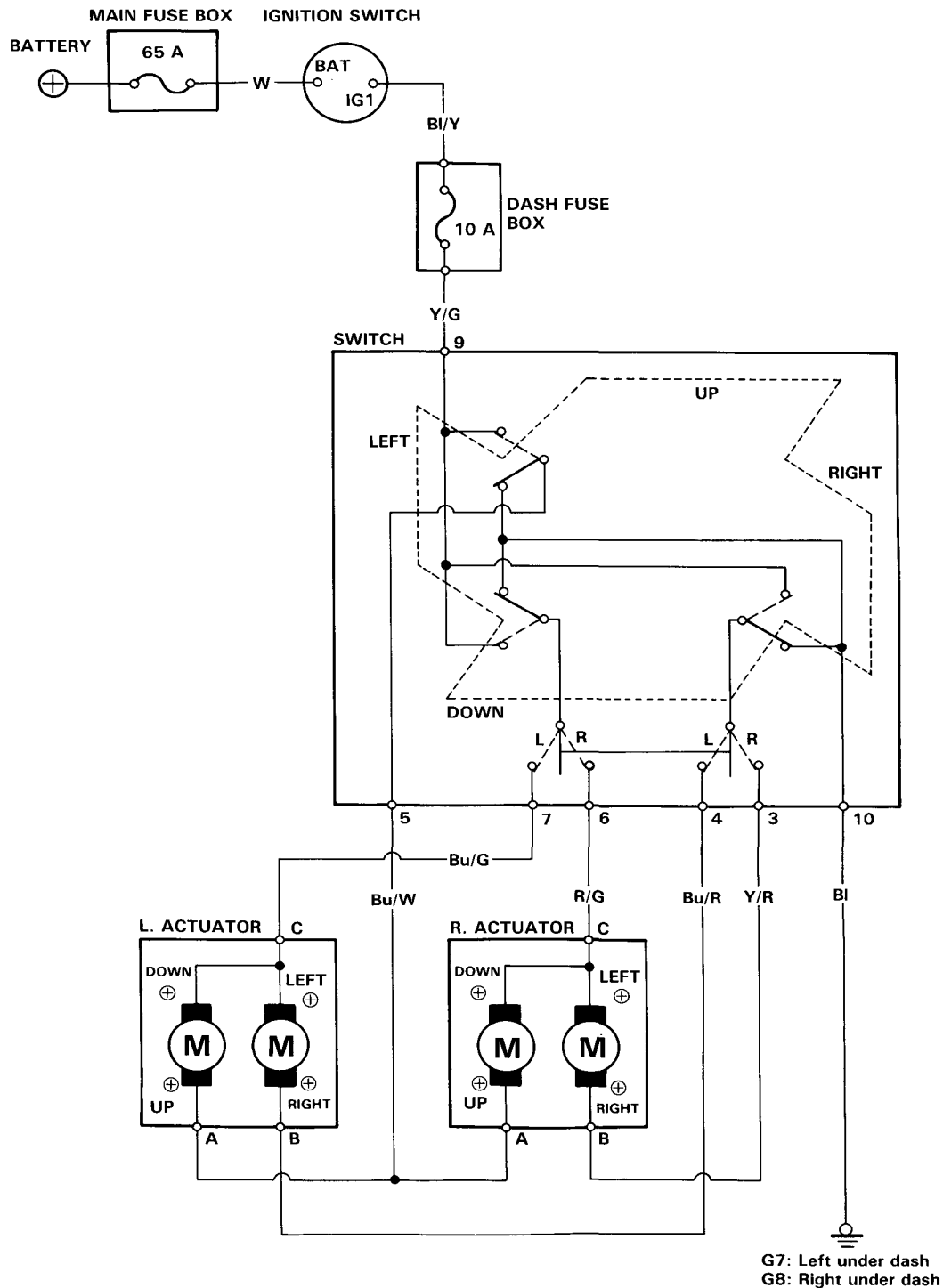
## Actuator Disassembly



# Power Door Mirrors (KQ and KY models)



## Circuit Diagram

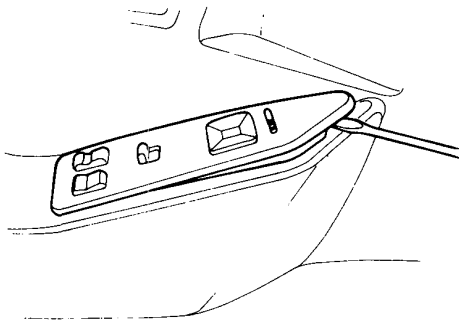




# Power Door Mirrors (KQ and KY models)

## Switch Removal

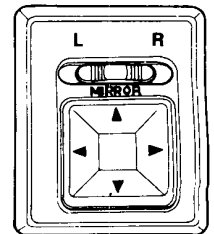
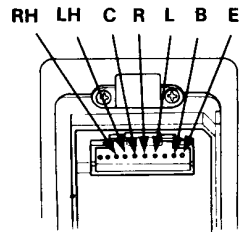
1. Lift the front of the switch using a screwdriver.
2. Clear the tab of the switch rear end from the door panel.
3. Pull up the switch and disconnect the switch connector, then remove the switch.



## Switch Test

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

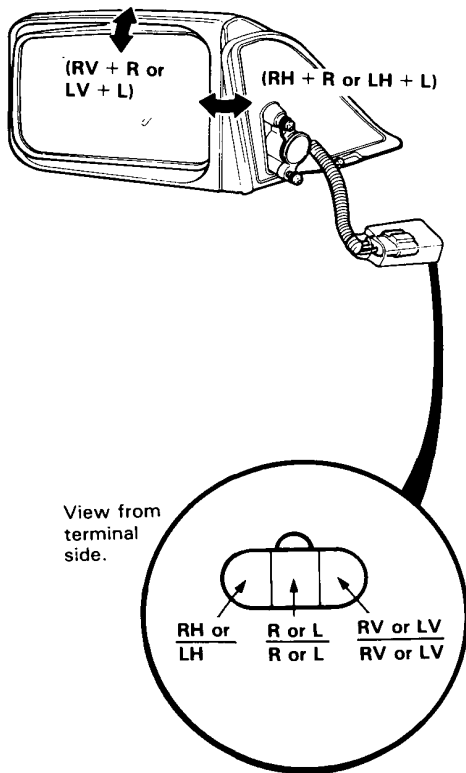
Terminal Position	B	E	C	LH	L	RH	R
L	UP	○		○			
	DOWN	○	○	○	○		
	LEFT	○	○	○			
	RIGHT	○	○	○	○		
R	UP	○	○			○	○
	DOWN	○	○			○	○
	LEFT	○	○			○	○
	RIGHT	○	○			○	○





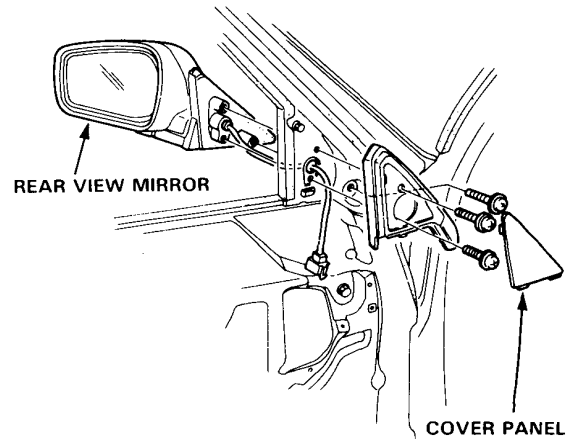
## Actuator Test

1. Connect the battery to the RH or LH and R or L terminals. The mirror is normal if it moves smoothly.
2. Change the connection and make sure that the mirror moves smoothly.
3. Connect the battery to the RV or LV and R or L terminals. The mirror is normal if it moves smoothly.
4. Change the connection and make sure that the mirror moves smoothly.



## Door Mirror Replacement

1. Remove the door trim panel, then disconnect the 3-P connector from the mirror.
2. Carefully pry out the cover panel with a flat screwdriver, then while holding the mirror with one hand remove its mount screws with the other.



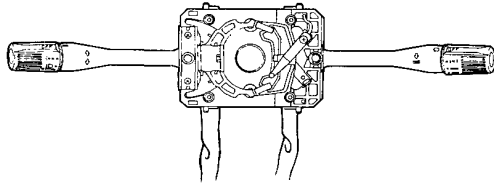
# Combination Switch (KE model)

## Testing

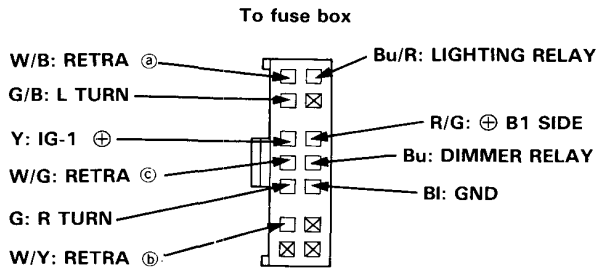
1. Check for continuity between the terminals in each switch position according to the table.
2. There should be continuity between terminals Bu/W and W/Bu of the WIPER Ⓒ.

### CAUTION:

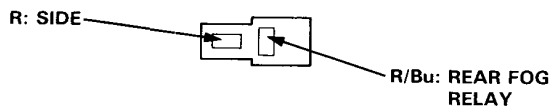
- Make sure the wire leads are not pulled when the lever is moved.
- Check that the lever works freely without binding.



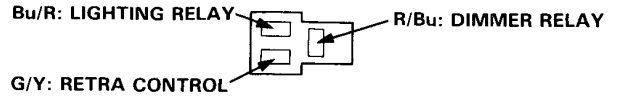
View from wire side



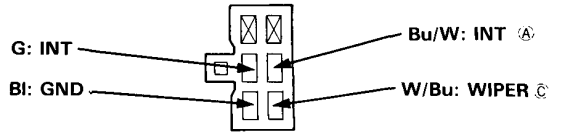
To side wire harness



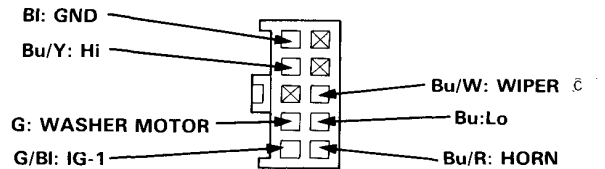
To dashboard wire harness



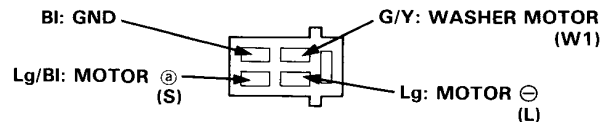
To intermittent wiper relay



To engine compartment wire harness



To heater wire harness





### Lighting Switch

	⊕ B1 (SIDE)	SIDE	RETRA ⊖	RETRA ⊕	RETRA ⊕	LIGHT-ING RELAY	GND	REAR FOG RELAY
OFF			○	○	○			
•	○	○						
●	○	○	○	○		○	○	○
WIRE COLOR	R/G	R	W/G	W/BI	W/Y	Bu/R	BI	R/Bu

### Passing Switch

	LIGHT-ING RELAY	GND	RETRA CONT UNIT	DIODE	DIMMER RELAY
OFF			○	○	○
ON	○	○	○	○	○
WIRE COLOR	Bu/R	BI	G/Y		R/Bu

### Dimmer Switch

	LIGHT-ING RELAY	DIMMER RELAY
HIGH	○	○
LOW		
WIRE COLOR	Bu/R	Bu

### Front Wiper Switch

	IG-1	INT	INT (A)	LO	HI	GND	WIPER MIST
OFF			○	○		○	OFF
INT	○	○	○	○		○	ON
LO				○		○	OFF
HI					○	○	ON
WIRE COLOR	G/BI	G	Bu/W	Bu	Bu/Y	BI	

### Front Washer Switch

	Washer Motor	GND
OFF		
ON	○	○
WIRE COLOR	G	BI

### Rear Wiper Switch

	L	S	GND
OFF	○	○	
ON	○	○	○
WIRE COLOR	Lg	Lg/BI	BI

### Rear Washer Switch

	W1	IG-1
OFF		
ON	○	○
WIRE COLOR	G/Y	G/BI

### Turn Signal Switch

	⊕ IG-1	DIODE		R TURN	L TURN
OFF			○	○	○
ON	R	○	○	○	○
	L		○	○	○
WIRE COLOR	Y			G	G/BI

### Horn Switch

	Horn	GND
OFF		
ON	○	○
WIRE COLOR	Bu/R	

# Ignition Coil

Distributor

Igniter Unit Test ..... 26-2

## Outline of Model Changes

Procedures for the igniter unit test is described.

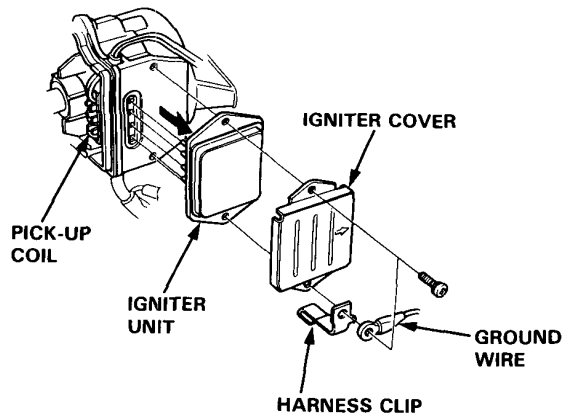


# Distributor

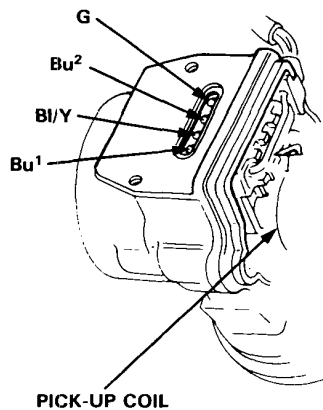
## Igniter Unit Test

### Toyo Denso:

1. Remove the igniter cover and pull out the igniter unit.



2. Check for voltage between the Bu<sup>1</sup> terminal and body ground, then the Bl/Y terminal and body ground, with the ignition switch ON. There should be battery voltage.



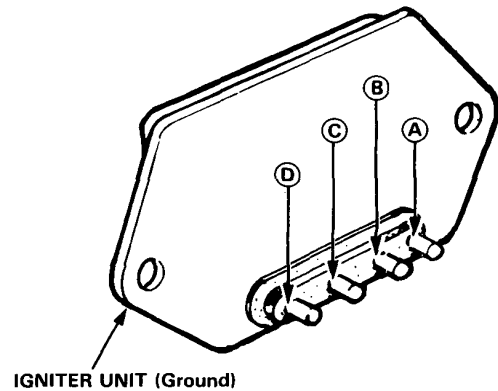
3. Measure resistance between the G and Bu<sup>2</sup> terminals on the pick-up coil. Replace the pick-up coil if the resistance is not within specifications.

NOTE: Resistance will vary with the coil temperature.

### Pick-up Coil Resistance:

Approx. 750 ohms at 20°C (70°F)

4. Check for continuity in both directions between (A) and (B) terminals on the igniter output. (RX100 scale). There should be continuity in only one direction.



5. Connect ohmmeter positive probe to (D) terminal, and negative probe to the igniter unit (ground), then measure resistance on the igniter input.

NOTE: Resistance will vary with the unit temperature.

### Igniter Input Resistance:

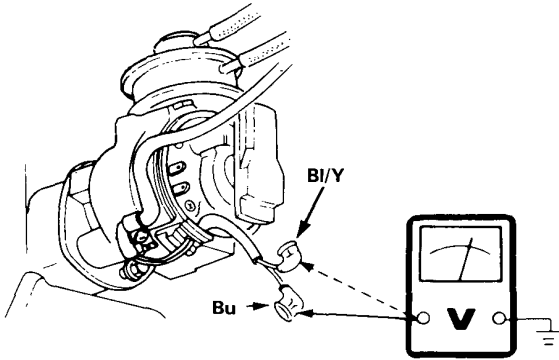
50,000 ohms or more at 20°C (70°F)

NOTE: When installing the igniter, pack silicone grease in the connector housing.



**Hitachi:**

1. Disconnect the lead wires from the igniter unit.  
Check for voltage between the Bu wire and body ground, then the BI/Y wire and body ground, with the ignition switch ON. There should be battery voltage.



2. With the lead wires disconnected, check for continuity between the igniter unit terminals using an ohmmeter. (R x 100 scale)  
There should be no continuity with a positive probe to the BI/Y terminal and a negative probe to the Bu terminal.  
There should be continuity with a positive probe to the Bu terminal and a negative probe to the BI/Y terminal.

