WORKSHOP MANUAL

DAIHATSU
CHARADE
Chassis

FOREWORD

This workshop manual contains essential information regarding the construction, disassembly/reassembly procedures and servicing methods of the power train, suspension, brake system, steering system, body and electrical system of the DAIHATSU CHARADE.
We hope that this workshop manual is consulted to the fullest extent, in combination with the workshop manual of the Type CB Engine, Type CL Engine, and Trouble shooting for Engine control system of Type CB-80 Engine so that quality servicing may be assured at all times.
Furthermore, due to continuing improvements in the design, contents and specifications in this workshop manual may be partly revised without advance notice and without incurring any obligation to us.

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DAIHATSU MOTOR CO., LTD.

WR-00000

SECTION INDEX

DAIHATSU
CHARADE
Chassis

SECTION 1
GENERAL INFORMATION

WR-01001

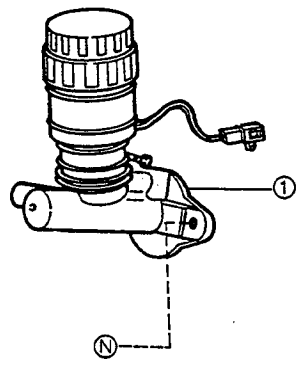
HOW TO READ THIS BOOK

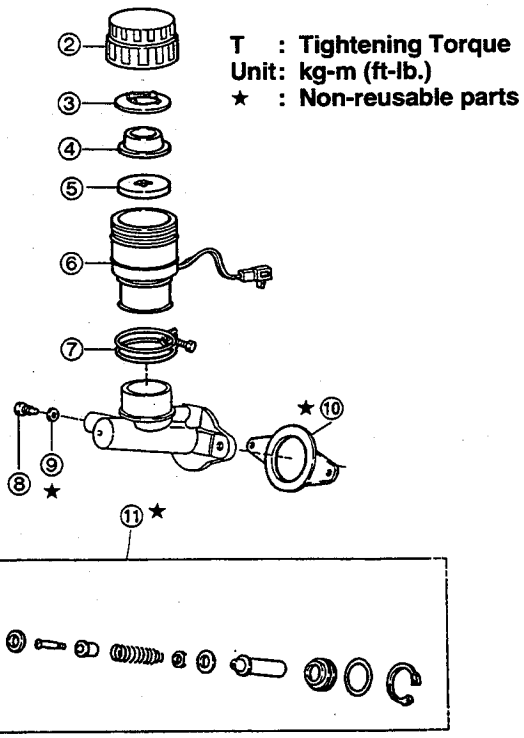
CONTENTS OF EXPLANATION

1. Schematic Diagram of Components

(1) The schematic diagram of components that appears at the beginning of each section describes the nomenclature and installed conditions of each component. Furthermore, the tightening torque is posted in the figure.
(2) Those parts whose reuse is not permitted bear a "★" mark for an identification purpose. Be certain to replace these parts with new ones during the assembly.

(Example)





T : Tightening Torque
Unit: kg-m (ft-lb.)
★ : Non-reusable parts

① Brake master cylinder Ay
② Reservoir filler cap
③ Reservoir cap spacer
④ Reservoir diaphragm
⑤ Switch operating float
⑥ Master cylinder reservoir S/A
⑦ Clamp
⑧ Set bolt
⑨ Gasket
⑩ Gasket
⑪ Master cylinder repair kit

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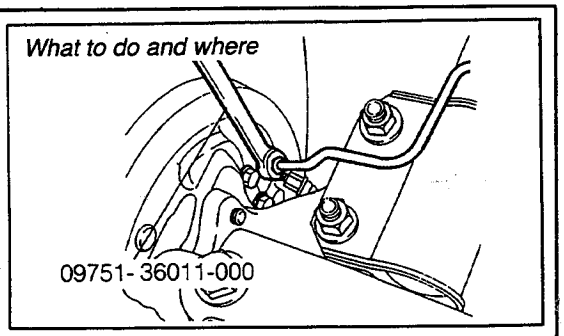
2. Servicing Procedure

(1) In principle, the servicing procedure is described in the following sequence given below: Removal → Inspection → Installation, and Disassembly → Inspection → Assembly.
(2) The explanation covers detailed servicing methods, specifications and notes.
(3) The main point of each item explains the servicing section and servicing procedure, using illustrations.

(Example)

What to do *How to do it*

3. Brake tube installation
   (1) Install the brake tube to the wheel cylinder temporarily by hands.
   (2) Tighten the brake tube to the wheel cylinder, using the following SST.
   SST: 09751-36011-000



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(4) The inspection section in this manual describes only checking operation. Therefore, if you find any mulfunction, replace any defective parts with new ones.

3. Trouble Shooting

(1) As for the three-speed automatic transmission, the trouble shooting table is provided in this book so that you may readily locate causes of troubles.

4. Table of SSTs Used

(1) The SSTs appearing in this book are listed in the appendix of the book.

5. Table of Service Specifications

(1) The service specifications necessary for the service are summarized in the appendix of this book.

6. Table of Tightening Torque

(1) As for those sections where their tightening torque must be controlled during the service, the tightening torque is specified in the appendix of this book.

7. Wiring Diagrams

(1) The vehicle wiring diagrams are posted in the appendix of this book separately for Type CB and Type CL engines.

DEFINITIONS OF TERMS

Specified Value ..... A value which represents the allowable range during the inspection and adjustment.
Limit ..... A maximum or a minimum limit which the value should not exceed or fall below.
Note ..... An item which requires special attention or an item which is prohibited during the service.

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ABBREVIATION CODES

The abbreviation codes that appear in this workshop manual stand for the following, respectively.

Abbreviation code	Original word	Meaning
RH	Right Hand	Refers to right side.
R.H.D.	Right-Hand Drive	Right hand drive vehicle.
LH	Left Hand	Refers to left side.
L.H.D.	Left-Hand Drive	Left-hand drive vehicle.
STD	Standard	When referring to automotive parts, "standard" represents those parts which have been installed originally by the manufacturer and which have standard dimensions.
O/S	Over Size	In instances where fitting becomes too loose due to wear resulting from use for a long period of time or due to frequent removal/installation operations, if fitting part (e.g. piston) in replaced with a part having larger dimensions, the other mating part may be put into use again. "Over sized" parts denote those parts having larger dimensions compared standard parts.
U/S	Under Size	In the same manner as with the "oversized" parts, if fitting part (e.g. bush and bearing) is replaced with a part having smaller bore dimensions, the other mating part may be put into use again. "Under sized" parts denote those parts having smaller dimensions compared with standard parts.
PR	Ply Rating	Represents strength of tires. The larger the ply rating number, the stronger the tire strength.
SAE	Society of Automotive Engineers	For example, automotive oils are designated as SAE so and so number. These designation numbers have been set forth by the Society of Automotive Engineers in the United States of America (SAE). The larger the SAE number, the higher the oil viscosity. Conversely, the smaller the SAE number, the lower the oil viscosity.
API	American Petroleum Institute	The standards set forth by the American Petroleum Institute (abbreviated as API Classification) have been employed to evaluate and classify properties of various oils. Engine oils for gasoline engines are classified as SD, SE, SF and so on, whereas engine oils for diesel engines are classified as CC, CD and so on.
SST	Special Service Tool	Refers to a tool designed for a specific purpose.
T	Torque	Refers to tightening torque.
S/A	Sub-Assembly	Refers to a component comprising more than two single parts which are welded, staked, or studded to each other to form a single component.
Ay	Assembly	Refers to an assembled component comprising more than two single parts or sub-assembly parts.
W/	With	Denotes that the following part is attached.
L/	Less	Denotes that the following part is not attached.
M/T	Manual Transmission	Refers to manual transmission.
A/T	Automatic Transmission	Refers to automatic transmission
ISO	International Organization for Standardization	The standards set forth by the international Organization for Standardization (abbreviated as ISO classification) have been employed to evaluate and classify properties of various component parts and oils etc.

The abbreviation codes that appear in the figure stand for the following, respectively.

Ⓑ	Bolt	Ⓢ	Screw
Ⓝ	Nut	Ⓦ	Washer

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SERVICING OPERATIONS

1. Jacking up

(1) When only the front section or rear section of the vehicle is jacked up, be sure to place chocks at the wheels so as to insure safe operations.
(2) When the vehicle has been jacked up, be sure to support the vehicle at the specified sections using safety stands.

2. In the case of repairs on the electrical system or the removal/installation of the engine, first disconnect the negative ⊖ terminal of the battery. Then, proceed to the operations. (On clock-equipped vehicles, set the time of the clock after the negative ⊖ terminal of the battery is connected.)

3. Repairing fuel system of Type CB-80 engine

Type CB-80 engine employs a high fuel pressure. Therefore, the following notes should be observed.
(1) When the union bolt is removed, take a measure to prevent the fuel from splashing with a cloth or the like. Slacken the union bolt gradually.
(2) Tighten each connecting section to the specified torque.
(3) Attach the specified clip to each connecting section.

4. For increased work efficiency and improved accuracy, be sure to utilize the SSTs (Special Service Tools) effectively.

5. Removal and disassembly

(1) When disassembling complicated components, put stamped marks or mating marks on those sections where such marks do not affect their functions so that the assembling operation may be performed easily.
(2) Each time a part is removed, check the part for the assembled condition, deformation, breakage, roughness and scratches.
(3) Arrange the disassembled parts in the disassembling order. In addition, separate and arrange those parts to be replaced and those parts to be reused.
(4) Thoroughly clean and wash those parts to be reused.
(5) Inspection and measurement of part
Perform thorough inspection and measurement on those parts to be reused, as required.

6. Installation and assembly

(1) Assemble those satisfactory parts, following the proper procedure and specified standards (adjusting values and tightening torque, etc.).
(2) Ensure that seal packings and grease are applied to those sections where such application is needed.
(3) Be sure to use new packings, gaskets, cotter pins and so forth.
(4) Ensure that the specified bolts and nuts only be used. Moreover, where specified, make sure to employ a torque wrench to tighten bolts and nuts to the specified torque.
Make sure to use only genuine parts for every replacement.

7. Adjustment and operation check

Adjust the reassembled or replaced components to the servicing specifications, using gauges and testers, as required.

8. Handling of hose, etc.

(1) Connect fuel hoses and water hoses, etc. securely so that they exhibit no leakage.
(2) When disconnecting fuel hoses, make sure that no fuel is splashed around the hose. (Special care must be exercised as to the engine mount rubber, etc., for there is a possibility that the rubber is deteriorated by the petrol-based liquid.)

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9. Touch-up painting

If paint finish surfaces of the body and bolts should be scratched when bolts, etc. are removed during the body alignment, etc., touch up the scratch with a paint having the same color as that of the body.

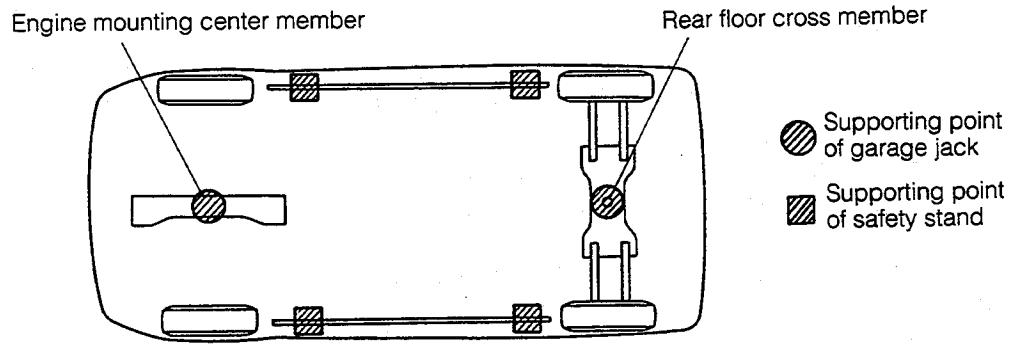
WR-01006

JACKING POINTS AND SUPPORTING POINTS OF SAFETY STANDS

- **Jacking point**

  Front side ..... Engine mounting center member (Place the jack below the member, exercising care of the exhaust pipe.)

  Rear side ..... Center of rear floor cross member



- **Supporting points of safety stands**

  Four supporting points are located at the right and left sides. (The supporting points have been strengthened by spot-welding reinforcements. Never support the vehicle at points other than the specified points.)

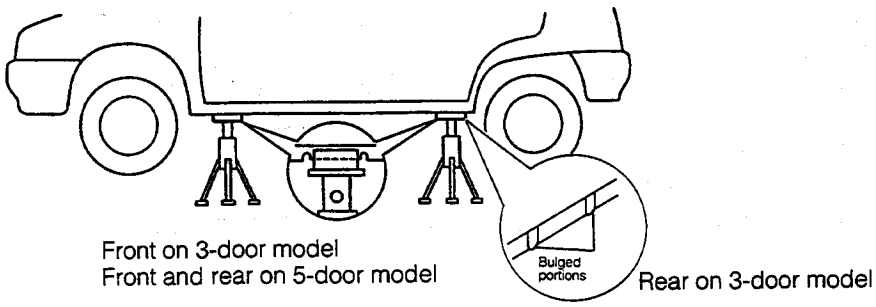


Fig. 1-1

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SUPPORTING POINTS OF TWO-POST LIFT

Align the supporting pads of a two-post lift with the supporting points of safety stands, as indicated in the figure above.

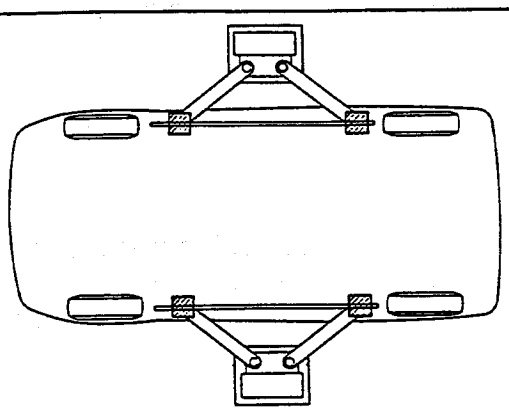

Fig. 1-2

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SECTION 2
CLUTCH

WR-02001

DESCRIPTION

TROUBLE SHOOTING

Symptom	Possible causes	Remedies	Page
Gear shifting is hard or impossible.	• Excessive clutch pedal free travel. • Excessive clutch disc runout, or damaged lining. • Input shaft or disc splined section contaminated or sticking. • Faulty clutch pressure plate.	• Adjust clutch pedal free travel. • Check clutch disc. • Repair, as required. • Replace clutch cover.	2–3 2–8 2–8
Slipping clutch	• Improper clutch pedal free travel. • Worn or oily clutch disc linings. • Faulty pressure plate. • Flattened diaphragm spring.	• Adjust clutch pedal free travel. • Replace clutch disc. • Replace clutch cover. • Replace clutch cover.	2–3 2–7 2–7 2–7
Grabbing and chattering clutch	• Worn or oily clutch disc linings. • Faulty pressure plate. • Flattened disc torsion spring. • Bent diaphragm spring.	• Check clutch disc and replace, as required. • Replace clutch cover. • Replace clutch disc. • Replace clutch cover.	2–8 2–7 2–7 2–7
Clutch noises	• Parts in housing loose. • Worn or contaminated release bearing. • Release fork and linkage seized.	• Repair, as required. • Replace release bearing. • Repair, as required.	2–7
Dragging clutch (Poor clutch disengagement)	• Clutch pedal free travel improperly adjusted. • Flattened diaphragm spring, or worn tip end of spring.	• Adjust clutch pedal free travel. • Replace clutch cover.	2–3 2–7

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CLUTCH PEDAL ADJUSTMENT

1. Check the clutch pedal for the installation height.
   Pedal installation height
   (Distance between pedal pad upper surface's center and dash panel)
   R.H.D. vehicle 189.5 - 194.5 mm (7.46 - 7.66 inch)
   L.H.D. vehicle 181.5 - 186.5 mm (7.15 - 7.34 inch)

2. Adjust the pedal installation height, as required.
   (1) Slacken the lock nut. Turn the stopper bolt until the installation height conforms to the specification.
   (2) Tighten the lock nut.

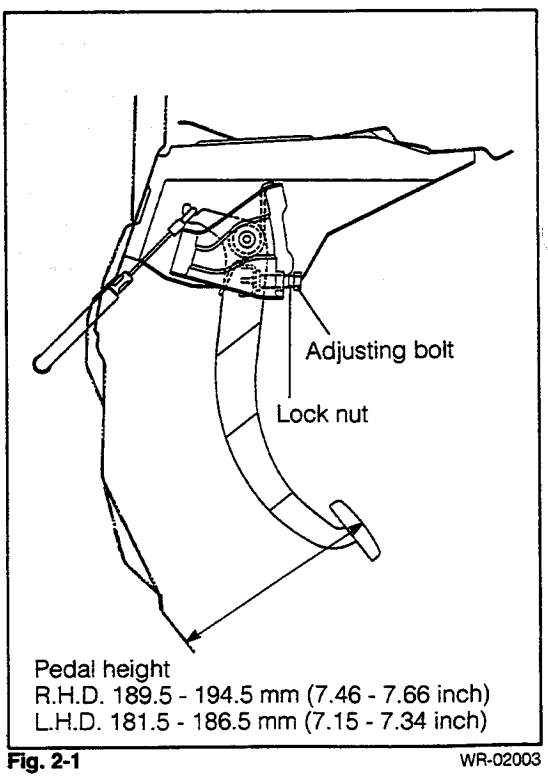

Fig. 2-1 WR-02003