

1992 Mazda B2200 B2600i Workshop Manual

FOREWORD

This workshop manual is intended for use by service technicians of Authorized Mazda Dealers to help them service Mazda vehicles.

For proper repair and maintenance, a thorough familiarization with this manual is important, and it should always be kept in a handy place for quick and easy reference.

All the contents of this manual, including drawings and specifications, are the latest available at the time of printing. As modifications affecting repair or maintenance occur, relevant information supplementary to this volume will be made available at Mazda dealers. This manual should be kept up-to-date.

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Mazda Motor Corporation
HIROSHIMA, JAPAN

APPLICATION:

This manual is applicable to vehicles beginning with the Vehicle Identification Numbers (VIN) shown on the following page.

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VEHICLE IDENTIFICATION NUMBERS (VIN)

JM2UF123 * NO 250001 ~
JM2UF223 * NO 250001 ~
JM2UF323 * NO 250001 ~
JM2UF113 * NO 250001 ~
JM2UF213 * NO 250001 ~
JM2UF313 * NO 250001 ~
JM2UF114 * NO 250001 ~
JM2UF314 * NO 250001 ~
JM2UF414 * NO 250001 ~
JM2UF614 * NO 250001 ~
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GENERAL INFORMATION

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IMPORTANT INFORMATION**BASIC ASSUMPTIONS**

This workshop manual assumes that you have certain special tools that are necessary for the safe and efficient performance of service operations on Mazda vehicles and that you know how to use them properly. It also assumes that you are familiar with automobile systems and basic service and repair procedures. You should not attempt to use this manual unless these assumptions are correct and you understand the consequences described below.

SAFETY RISK

This manual contains certain notes, warnings, and other precautionary information that you should carefully read and follow to reduce the risk of personal injury to yourself or others and the risk of improper service that may damage the vehicle or render it unsafe. If there is no such information in regard to any specific service method, this does not mean there is no possibility that personal safety or vehicle safety will be jeopardized by the use of incorrect methods or tools.

POSSIBLE LOSS OF WARRANTY

The manufacturer's warranty on Mazda vehicles and engines can be voided if improper service or repairs are performed by persons other than those at an Authorized Mazda Dealer.

WARNING ON LUBRICANTS AND GREASES

Avoid all prolonged and repeated contact with mineral oils, especially used oils. Used oils contaminated during service (e.g., engine sump oils) are more irritating and more likely to cause serious effects, including skin cancer, in the event of gross and prolonged skin contact.

Wash skin thoroughly after work involving oil.

Protective hand cleaners may be of value provided they can be removed from the skin with water. Do not use gasoline, paraffin, or other solvents to remove oil from the skin.

Lubricants and greases may be slightly irritating to the eyes.

Repeated or prolonged skin contact should be avoided by wearing protective clothing if necessary. Particular care should be taken with used oils and greases containing lead. Do not allow work clothing to be contaminated with oil. Dry clean or launder such clothing at regular intervals.

9MUGIX-002

HOW TO USE THIS MANUAL

PREPARATION

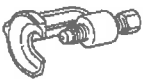

PREPARATION points out the needed **SST** for the service operation that follows. It is best to gather all necessary **SST** before beginning work.

Example:

N TIE-ROD END BOOT AND STEERING GEAR BOOT

TIE-ROD END BOOT AND STEERING GEAR BOOT


PREPARATION

49 0118 850C Puller, ball joint		49 H028 301 Installer, boot	
------------------------------------	---	--------------------------------	---

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SST NUMBER: 49 H028 301

SST NAME: Installer, boot

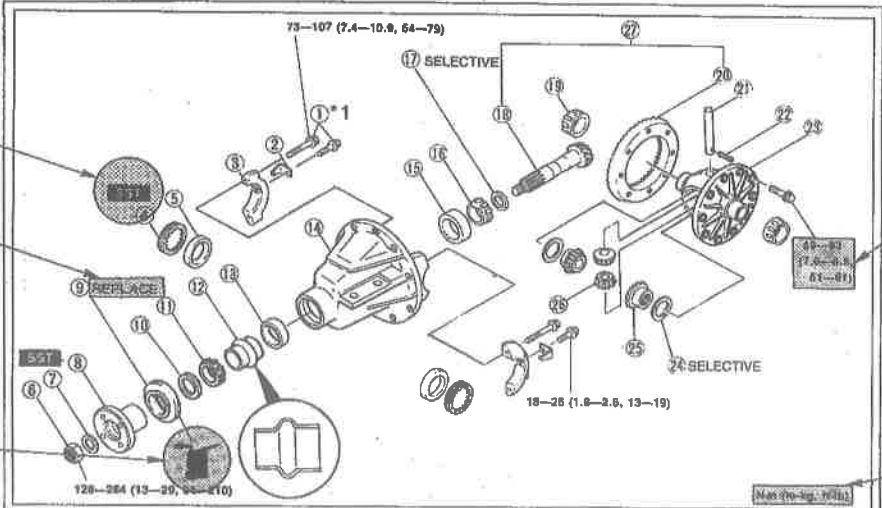
SST ILLUSTRATION: 

9MUGIX-033

REPAIR PROCEDURE

1. Most repair operations begin with an overview illustration. It identifies the components, shows how the parts fit together, and visual parts inspections. If a damaged or worn part is found, repair or replace it as necessary.
2. Expendable parts, tightening torques, and symbols for oil, grease, and sealant are shown in the overview illustration.
3. Pages related to service procedures are shown under the illustration. Refer to this information when servicing the related part.

Example:



SHOWS NEEDS SST: Points to callout 5 (Bearing outer race).

SHOWS EXPENDABLE PARTS: Points to callout 9 (REPLACE).

SHOWS APPLICATION POINT OF OIL, ETC.: Points to callout 8 (Companion flange).

SHOWS TIGHTENING TORQUE SPECIFICATION *2: Points to callout 18-28 (1.8-2.8, 13-19).

SHOWS TIGHTENING TORQUE UNIT: Points to a box containing torque values.

SHOWS VISUAL INSPECTION INFORMATION: Points to callout 16 (Bearing inner race) with instructions: "Inspect for damage or rough rotation".

SHOWS RELATED PAGE FOR SERVICE: Points to callout 8 (Companion flange) with instructions: "Remove page M-21", "Inspect splines".

Legend:

- 1. Bolt
- 2. Lock plate
- 3. Bearing cup
- 4. Adjusting screw
- 5. Bearing outer race
- 6. Locknut
- 7. Washer
- 8. Companion flange
- 16. Bearing inner race
- 17. Spacer
- 18. Drive pinion







Service Procedures:

- Removal..... page M-21
- Inspect splines..... page M-22
- Adjustment of height..... page M-24
- Removal..... page M-22
- Installation..... page M-24
- Adjustment of height..... page M-24

*1: The numbering (ex. ①) shows service procedure.
 *2: Units shown in N-m (m-kg, ft-lb) unless otherwise specified.

SYMBOLS

There are 6 symbols for oil, grease, and sealant. These show the points of applying oil, grease, or sealant during servicing.

Symbol	Meaning	Kind
	Apply oil	New engine oil or gear oil as appropriate
	Apply brake fluid	Only brake fluid
	Apply automatic transmission fluid	Only ATF
	Apply grease	Appropriate grease
	Apply sealant	Appropriate sealant
	Apply petroleum jelly	Appropriate petroleum jelly

9MUGIX-035

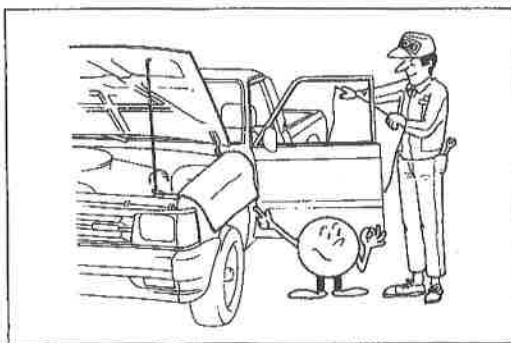
Note

When special oil or grease is needed, this is shown in the illustration.

NOTES, CAUTIONS, AND WARNINGS

As you read through the procedures, you will come across NOTES, CAUTIONS, and WARNINGS. Each one is there for a specific purpose. **NOTES** give you **added information** that will help you to complete a particular procedure. **CAUTIONS** are given to prevent you from making an error that could **damage the vehicle**. **WARNINGS** remind you to be especially careful in those areas where carelessness can cause **personal injury**. The following list contains some general WARNINGS you should follow when you work on a vehicle.

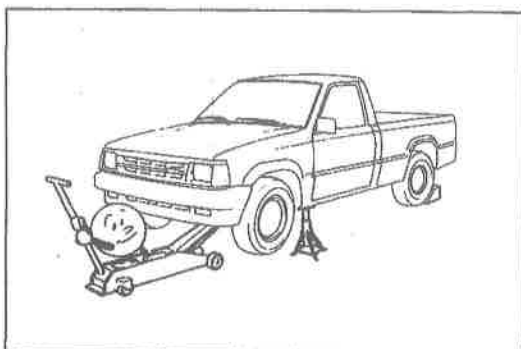
9MUGIX-036



9MUGIX-037

FUNDAMENTAL PROCEDURES**PROTECTION OF THE VEHICLE**

Always be sure to cover fenders, seats, and floor areas before starting work.



9MUGIX-003

A WORD ABOUT SAFETY

The following precautions must be followed when jacking up the vehicle.

1. Block the wheels.
2. Use only the specified jacking positions.
3. Support the vehicle with safety stands.

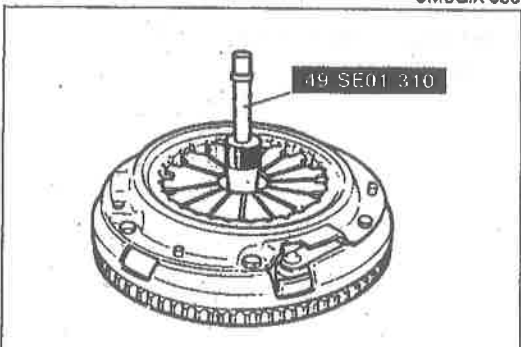
Start the engine only after making certain the engine compartment is clear of tools and people.



9MUGIX-038

PREPARATION OF TOOLS AND MEASURING EQUIPMENT

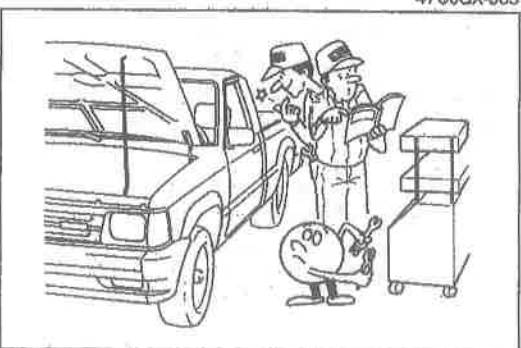
Be sure that all necessary tools and measuring equipment are available before starting any work.



47U0GX-005

SPECIAL TOOLS

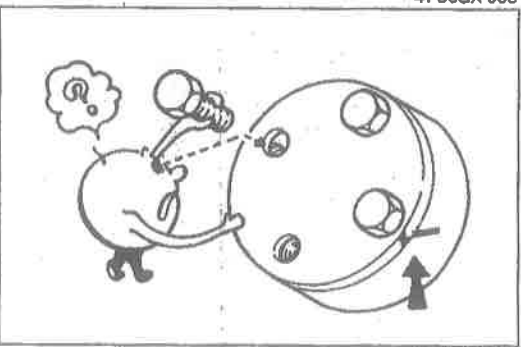
Use special tools when they are required.



47U0GX-006

REMOVAL OF PARTS

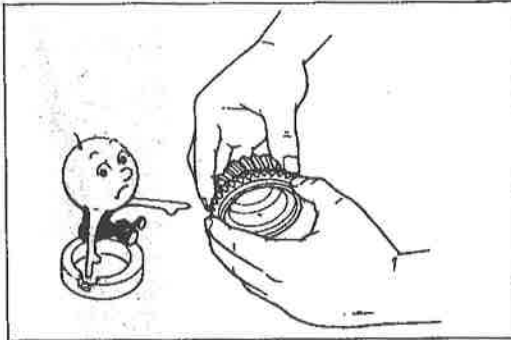
While correcting a problem, try also to determine its cause. Begin work only after first learning which parts and subassemblies must be removed and disassembled for replacement or repair.



9MUGIX-039

DISASSEMBLY

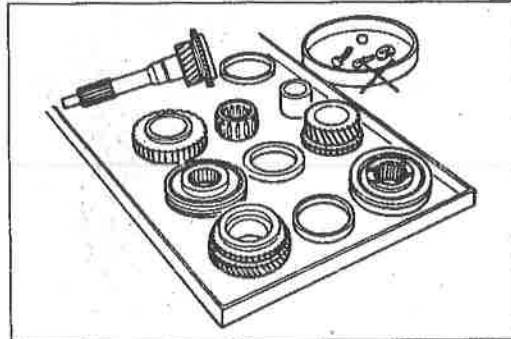
If the disassembly procedure is complex, requiring many parts to be disassembled, all parts should be disassembled in a way that will not affect their performance or external appearance and identified so that reassembly can be performed easily and efficiently.



9MUGIX-040

1. Inspection of parts

When removed, each part should be carefully inspected for malfunctioning, deformation, damage, and other problems.

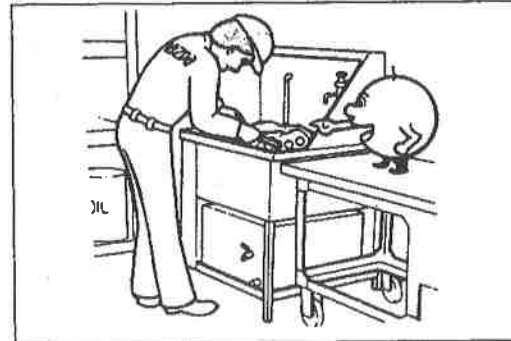


9MUGIX-041

2. Arrangement of parts

All disassembled parts should be carefully arranged for re-assembly.

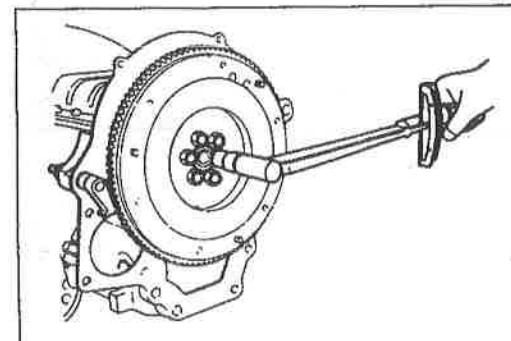
Be sure to separate or otherwise identify the parts to be replaced from those that will be reused.



47U0GX-010

3. Cleaning parts for reuse

All parts to be reused should be carefully and thoroughly cleaned in the appropriate method.



9MUGIX-004

REASSEMBLY

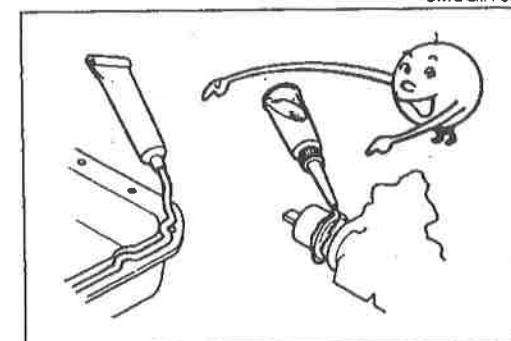
Standard values, such as torques and certain adjustments, must be strictly observed in the reassembly of all parts. Refer to STANDARD BOLT AND NUT TIGHTENING TORQUE in Section TD for tightening torques not mentioned in the main text.

If removed, these parts should be replaced with new ones:

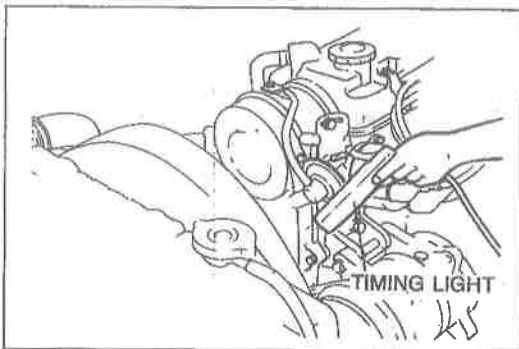
- | | |
|----------------|-----------------|
| 1. Oil seals | 2. Gaskets |
| 3. O-rings | 4. Lock washers |
| 5. Cotter pins | 6. Nylon nuts |

Depending on location:

1. Sealant should be applied to gaskets.
2. Oil should be applied to the moving components of parts.
3. Specified oil or grease should be applied at the prescribed locations (such as oil seals) before reassembly.



9MUGIX-042

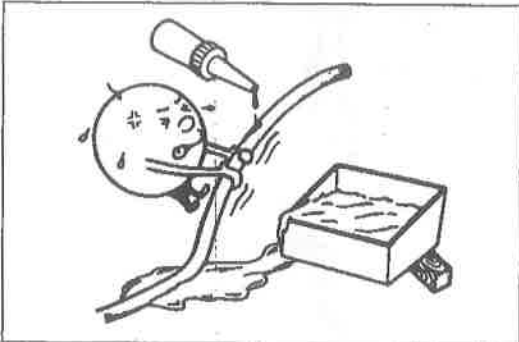


67U0GX-002

ADJUSTMENTS

Use suitable gauges and/or testers when making adjustments.

GI



9MUGIX-005

RUBBER PARTS AND TUBING

Prevent gasoline or oil from getting on rubber parts or tubing.

JACK AND SAFETY STAND (RIGID RACK) POSITIONS

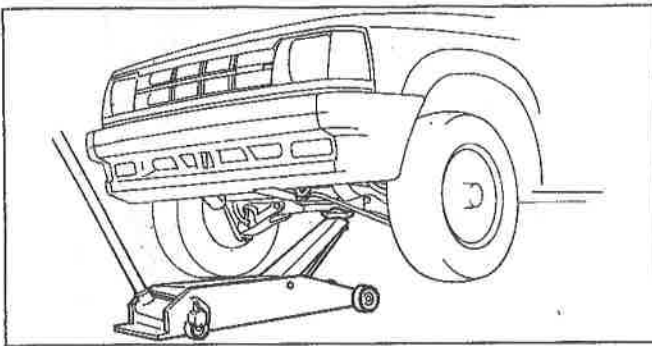
FRONT

Jack position:

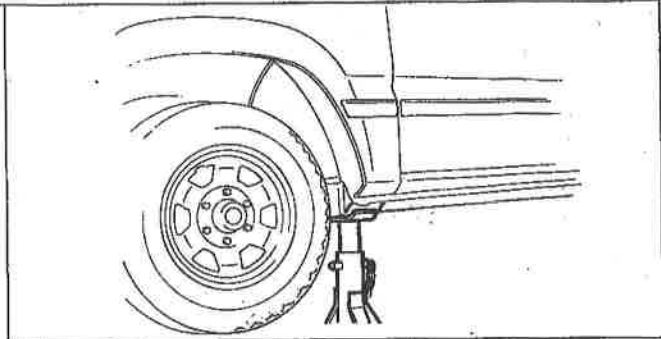
At the center of the crossmember

Safety stand positions:

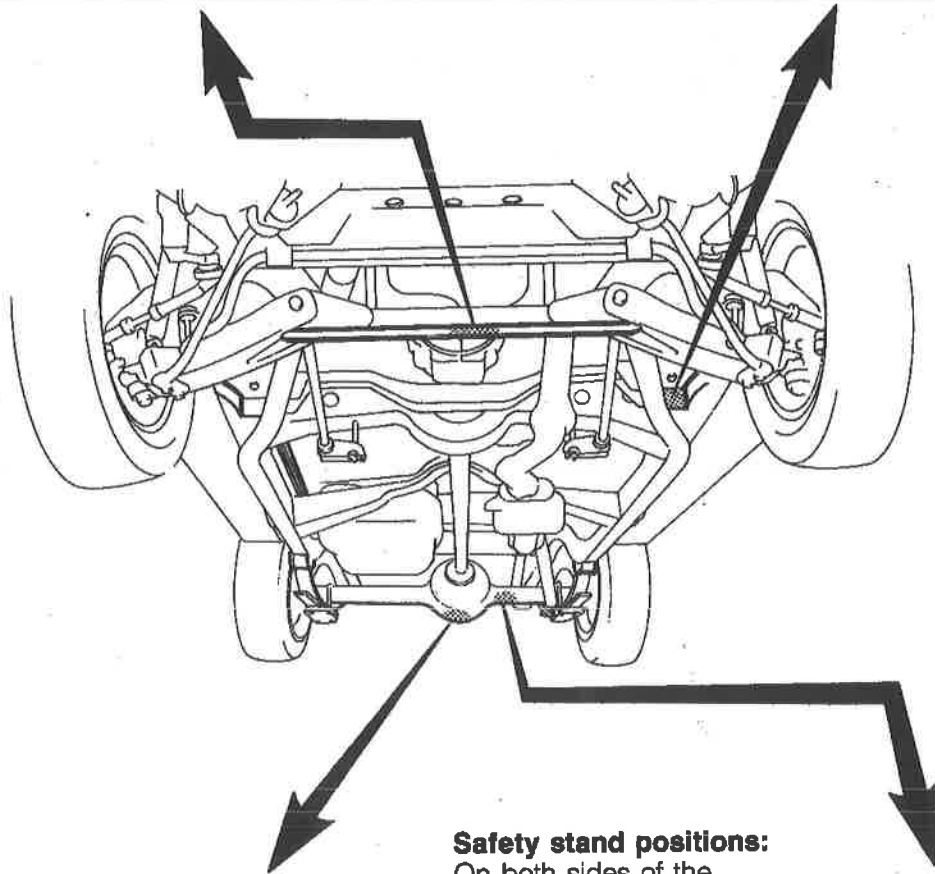
On both sides of the jack point



4EG0GX-018



4EG0GX-019



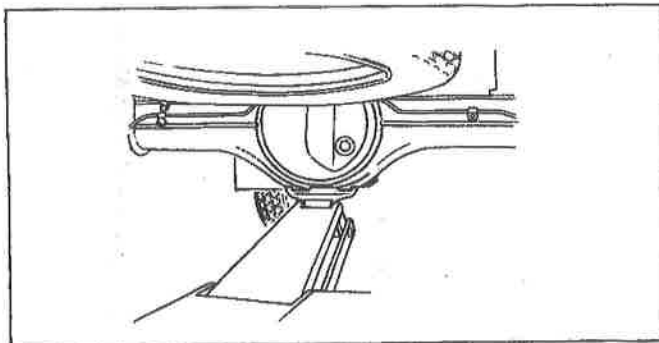
REAR

Jack position:

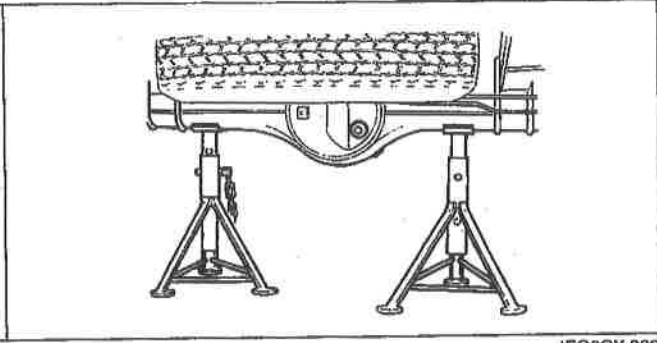
At the center of the differential

Safety stand positions:

On both sides of the differential



4EG0GX-021



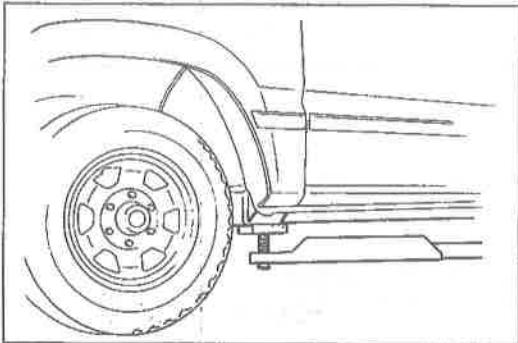
4EG0GX-022

VEHICLE LIFT (2-SUPPORT TYPE) POSITIONS

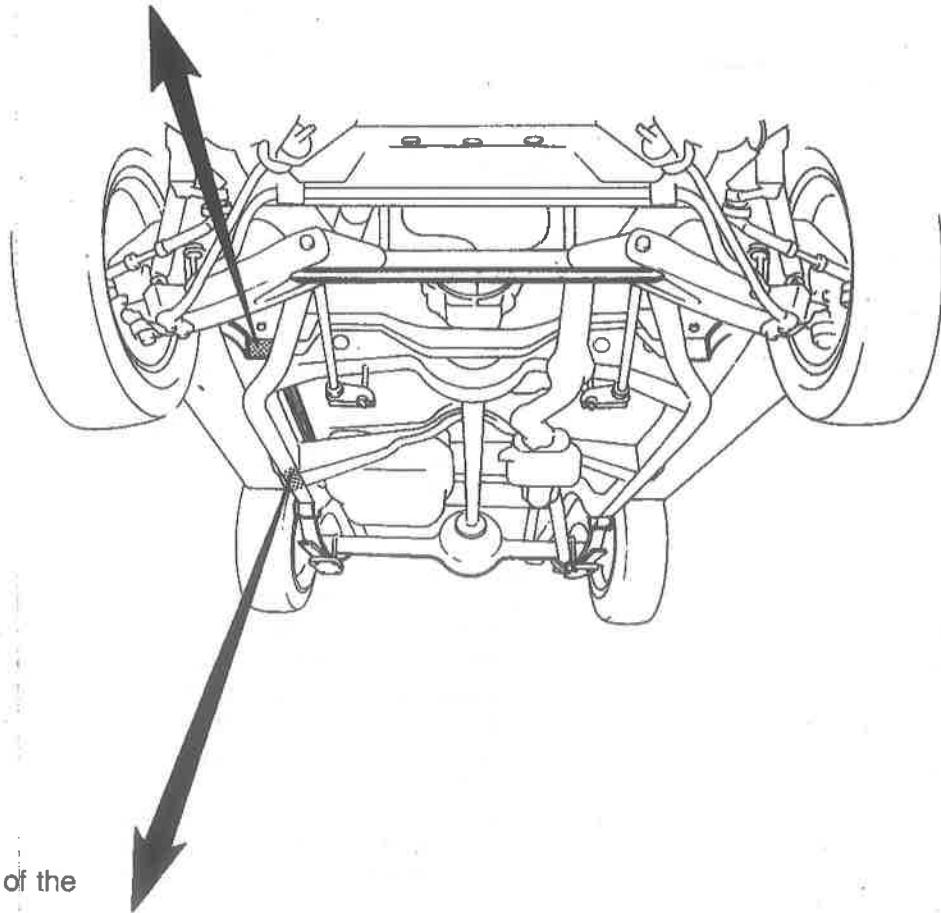
FRONT

Jack point:

On both sides of the jack point



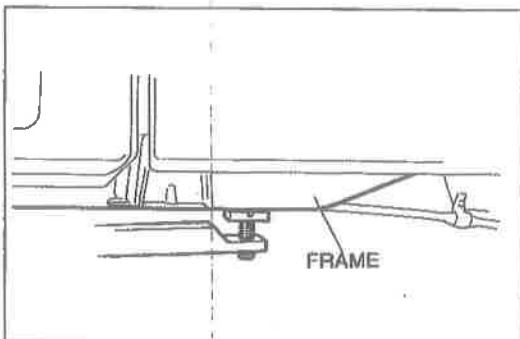
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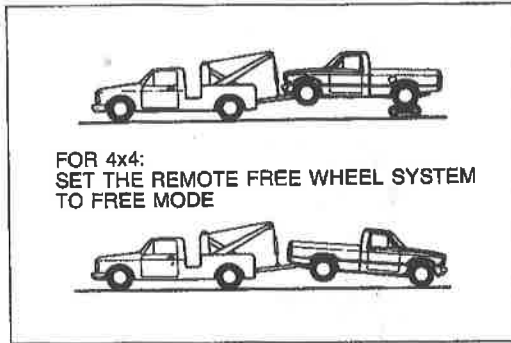
REAR

Leaf-spring:

On both sides of the leaf-spring



4EG0GX-027



0BUGIX-001

TOWING

Proper towing equipment is necessary to prevent damage to the vehicle during any towing operation. Laws and regulations applicable to vehicles in tow must always be observed. Release the parking brake, place the shift lever in neutral, and set the ignition key in the ACC position. As a rule, towed vehicles should be pulled with the driving wheels off the ground.

WITH MANUAL TRANSMISSION

If the transmission, rear axle, and steering system are not damaged, the vehicle may be towed on all four wheels. If any of these components are damaged, use a towing dolly.

WITH AUTOMATIC TRANSMISSION

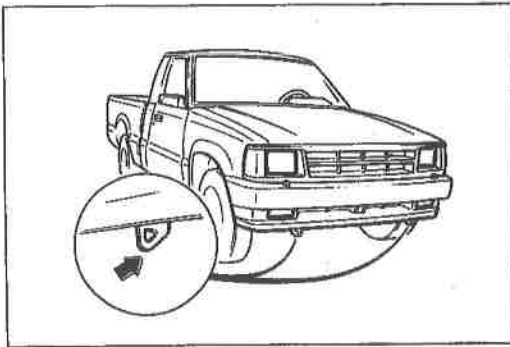
If excessive damage or other conditions prevent towing the vehicle with the driving wheels off the ground, use a wheel dolly. With all 4 wheels on the ground, the vehicle may be towed only forward. In this case, do not exceed the following towing speed and/or distance or transmission damage could result.

	4x2	4x4
Towing speed	45 km/h (30 mph)	56 km/h (35 mph)
Towing distance	15 km (10 miles)	56 km (35 miles)

If towing speed and/or distance will exceed above-mentioned specifications, use one of three methods:

1. Place the rear wheels on a dolly.
2. Tow with the rear wheels off the ground.
3. Disconnect the propeller shaft. (4x4: rear propeller shaft)

If the transmission or rear axle is inoperative, tow the vehicle with its rear wheels off the ground or have the propeller shaft disconnected.

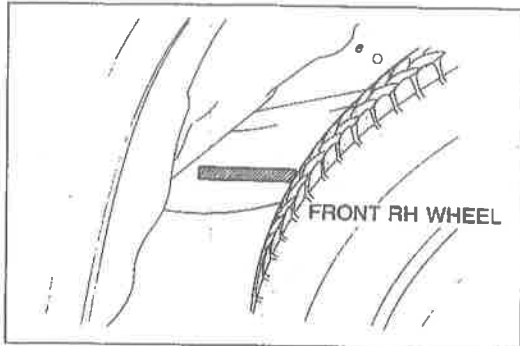


4EG0GX-032

CAUTION

- a) The power assist for the brakes is inoperative while the engine is off.
- b) When either of the towing hooks is used, pull the cable or chain straight away from the hook and do not apply any sideways force to it. To further help prevent damage, do not take up slack too quickly in the cable or chain.
- c) The rear towing hook should be used only in an emergency situation (for example, to pull the vehicle from a ditch, snow, or mud).

CHASSIS NUMBER LOCATION



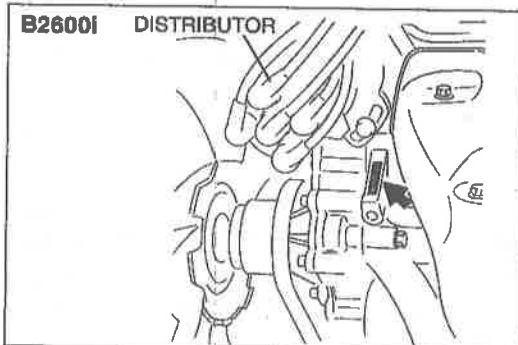
4BG0GX-005

UNITS

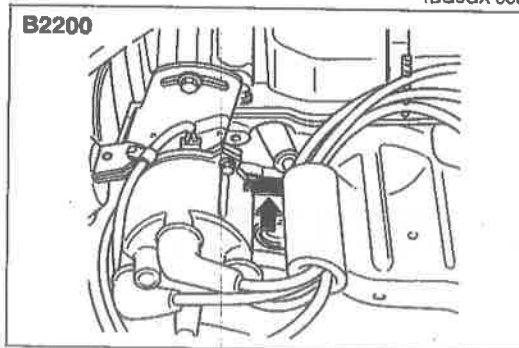
N·m (m·kg, ft·lb) ..	Torque
rpm	Revolutions per minute
A	Ampere(s)
V	Volt(s)
Ω	Ohm(s) (resistance)
kPa (kg/cm ² , psi)	Pressure
	(usually positive)
mmHg (in Hg)	Pressure
	(usually negative)
W	Watt
mm (in)	Length

4BG0GX-008

ENGINE MODEL AND NUMBER LOCATION



4BG0GX-006



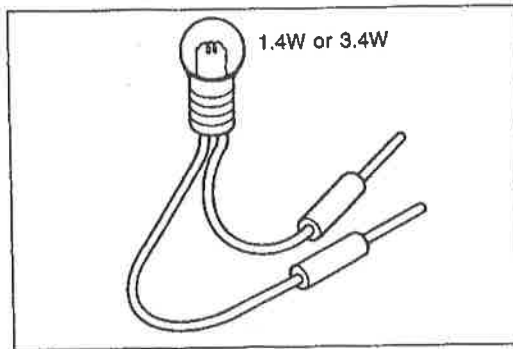
4BG0GX-007

ABBREVIATIONS

ABDC	After bottom dead center
ABS	Anti-lock brake system
ACC	Accessories
A/C	Air conditioner
ACV	Air control valve
ATDC	After top dead center
A/T	Automatic transmission
ATF	Automatic transmission fluid
BAC	Bypass air control
BBDC	Before bottom dead center
BTDC	Before top dead center
EC-AT	Electronically-controlled automatic transmission
ECU	Engine control unit
EEC	Evaporative emission control system
EGR	Exhaust gas recirculation
ELR	Emergency locking retractor
ETR	Electrical tuning radio
EX	Exhaust
Fig.	Figure
HAT	Hydraulically-controlled automatic transmission
HLA	Hydraulic lash adjuster
IC	Integrated circuit
IG	Ignition
IN	Intake
INT	Intermittent
ISC	Idle speed control
LH	Left hand
LSD	Limited-slip differential
MAS	Mixture adjust screw
MIL	Malfunction indicator light
M/T	Manual transmission
MTR	Mechanical tuning radio
OD	Outer diameter
OFF	Switch off
ON	Switch on
PBV	Proportioning by-pass valve
PCV	Positive crankcase ventilation
P/S	Power steering
RFW	Remote free wheel hub
RH	Right hand
SW	Switch
TAS	Throttle adjust screw
TDC	Top dead center
VRS	Vibration reducing stiffener

1BUGIX-001

CAUTION



9BUGIX-003

CAUTION

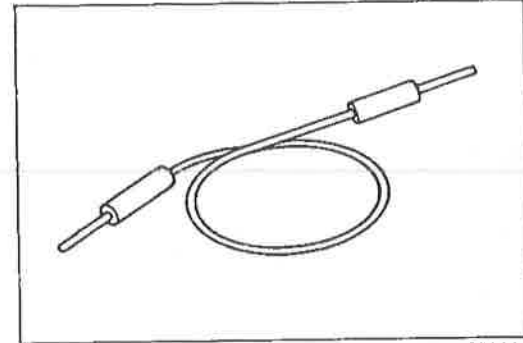
ELECTRICAL TROUBLESHOOTING TOOLS

Test Light

The test light, as shown in the figure, uses a 12V bulb. The two lead wires should be connected to probes. The test light is used for simple voltage checks and for checking for short circuits.

Caution

When checking the control unit, never use a bulb over 3.4W.



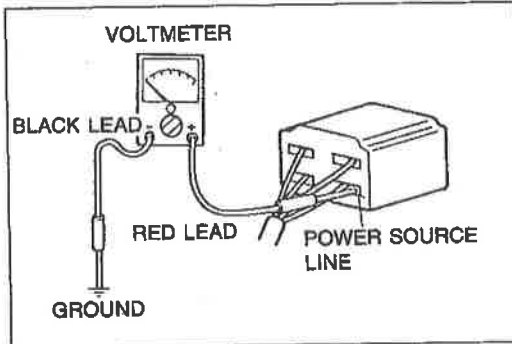
9MUGIX-020

Jumper Wire

The jumper wire is used for testing by shorting across switch terminals and ground connections.

Caution

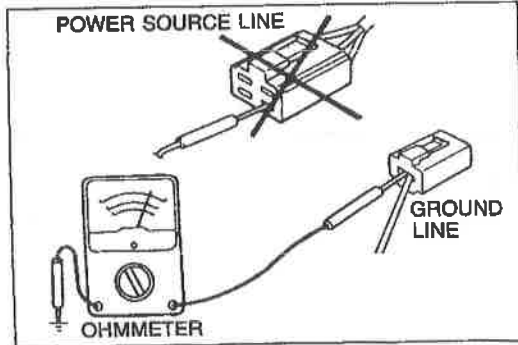
Do not connect a jumper wire from the power source line to a body ground; this may cause burning or other damage to harnesses or electronic components.



9MUGIX-021

Voltmeter

The DC voltmeter is used to measure of circuit voltage. A voltmeter with a range of 15V or more is used by connecting the positive (+) probe (red lead wire) to the point where voltage is to be measured and the negative (-) probe (black lead wire) to a body ground.



9MUGIX-045

Ohmmeter

The ohmmeter is used to measure the resistance between two points in a circuit and also to check for continuity and diagnosis of short circuits.

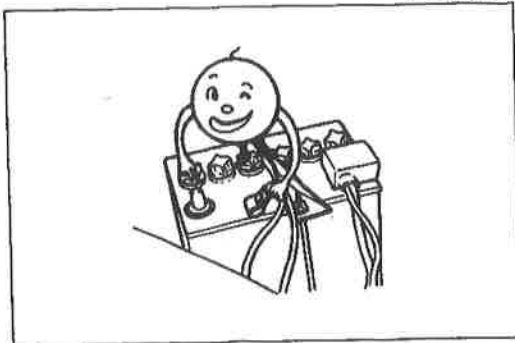
Caution

Do not attempt to connect the ohmmeter to any circuit to which voltage is applied; this may burn or otherwise damage the ohmmeter.

CAUTION WITH ELECTRICAL PARTS

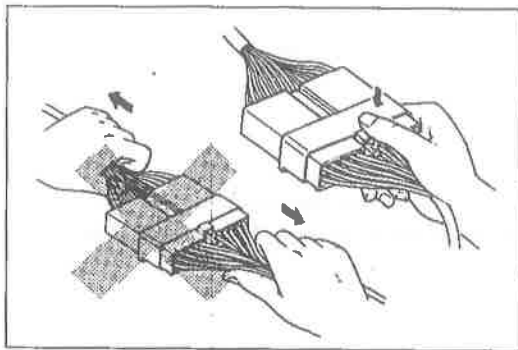
Battery Cable

Before disconnecting connectors or replacing electrical parts, disconnect the negative battery cable.



9MUGIX-022

CAUTION

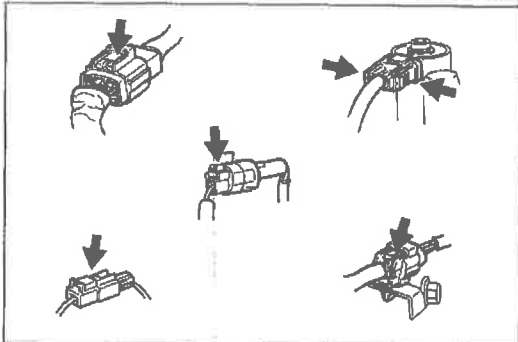


9MUGIX-023

Connectors

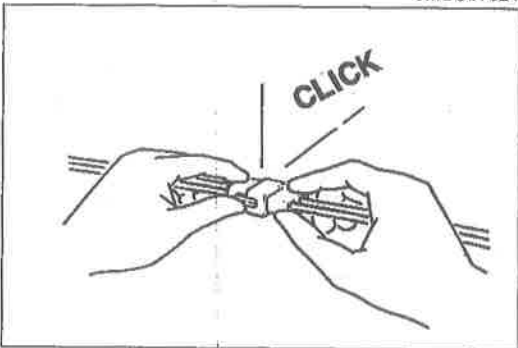
Removal of connector

Never pull on the wiring harness when disconnecting connectors.



9MUGIX-024

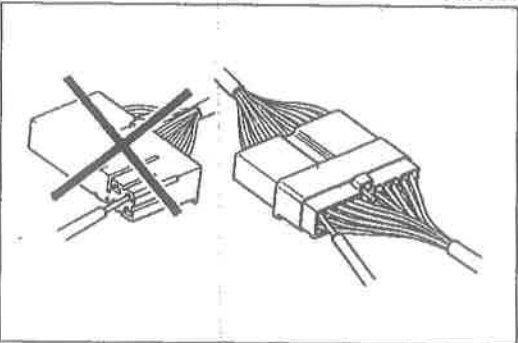
Connectors can be removed by pressing or pulling the lock lever as shown.



9MUGIX-025

Locking of connector

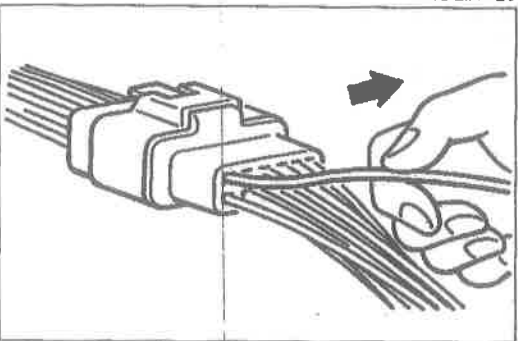
When locking connectors, make sure to listen for a click that will indicate they are securely locked.



9MUGIX-026

Inspection

When a tester is used to check for continuity or to measure voltage, insert the tester probe from the wire harness side.



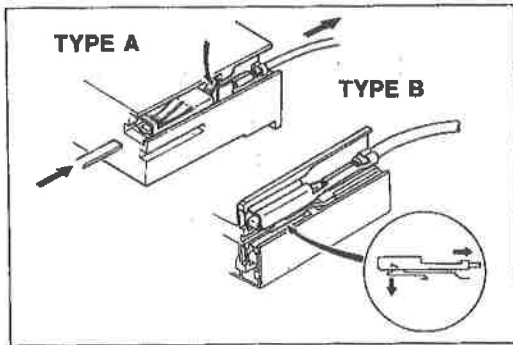
9MUGIX-027

Terminals

Inspection

Pull lightly on individual wires to check that they are secured in the terminal.

CAUTION



Replacement of terminals

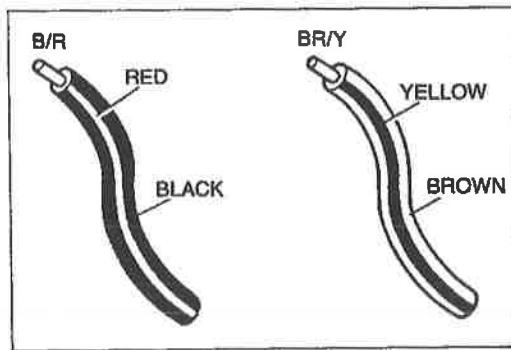
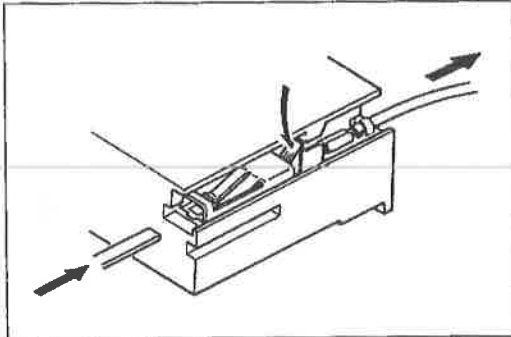
Use the appropriate tools to remove the terminal as shown. When installing the terminal, be sure to insert it until it locks securely.

< Female >

Insert a thin piece of metal from the terminal side of the connector, and then, with the terminal locking tab pressed down, pull the terminal out from the connector.

< Male >

Same as the female type.

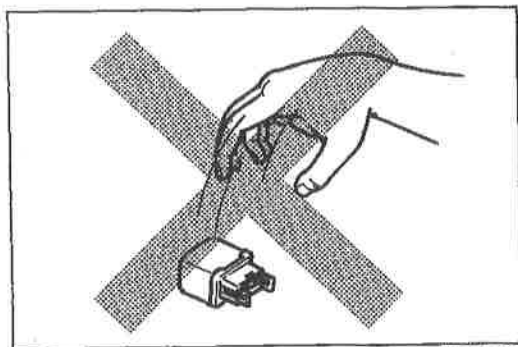


Wiring Harness

Wiring color codes

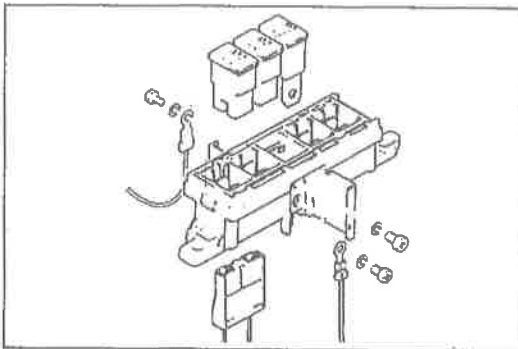
Two-color wires are indicated by a two-color code symbol. The first letter indicates the base color of the wire and the second the color of the stripe.

CODE	COLOR	CODE	COLOR
B	Black	O	Orange
BR	Brown	P	Pink
G	Green	R	Red
GY	Gray	V	Violet
L	Blue	W	White
LB	Light Blue	Y	Yellow
LG	Light Green	—	—

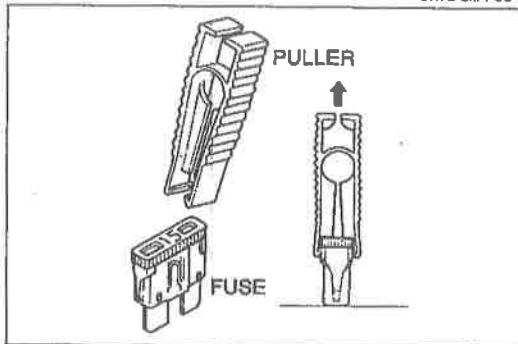


Sensors, Switches, and Relays

Handle sensors, switches, and relays carefully. Do not drop them or strike them against other parts.



9MUGIX-031



9MUGIX-032

Fuse Replacement

1. When replacing a fuse, be sure to replace it with one of specified capacity.
If a fuse again fails after it has been replaced, the circuit probably has a short circuit and the wiring should be checked.
2. Be sure the negative battery terminal is disconnected before replacing a main fuse (80A).
3. When replacing a pull out fuse, use the fuse puller supplied in the fuse box cover.