

GENERAL INFORMATION

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IMPORTANT INFORMATION

BASIC ASSUMPTIONS

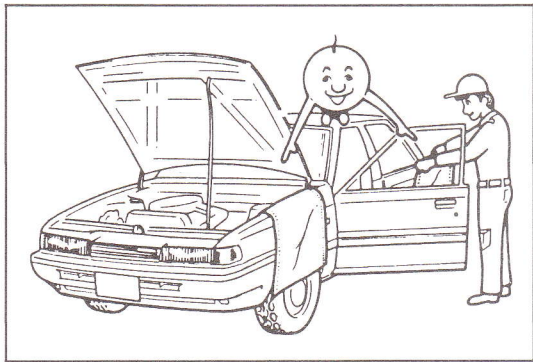
This workshop manual assumes that you have and know how to properly use certain special tools which are necessary for the safe and efficient performance of service operations on Mazda vehicles. The manual also assumes that you are familiar generally with automobile systems and basic service and repair 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, etc., which you should carefully read and follow in order to eliminate the risk of personal injury to yourself or others and the risk of improper service which may damage the vehicle or render it unsafe. The fact that there are no such notes, etc., with respect to any specific service method does not mean that 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 an authorized Mazda dealer.



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FUNDAMENTAL PROCEDURES

As you read through the procedure, 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 that you should follow when you work on a vehicle.

PROTECTION OF THE VEHICLE

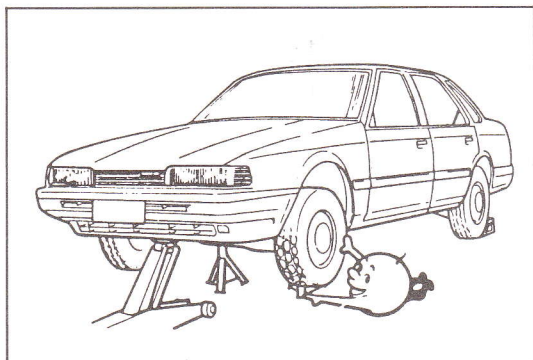
Always be sure to cover fenders, seats, and floor areas before starting work.

A WORD ABOUT SAFETY

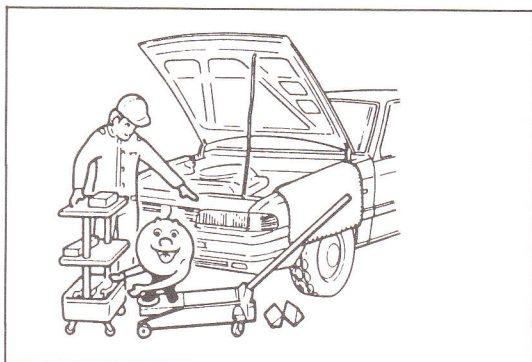
The following precautions must be followed when jacking up the vehicle.

1. Block wheels.
2. Use only specified jacking positions.
3. Support vehicle with safety stands (rigid racks).

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



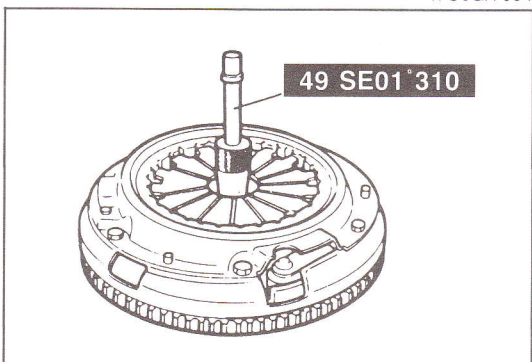
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PREPARATION OF TOOLS AND MEASURING EQUIPMENT

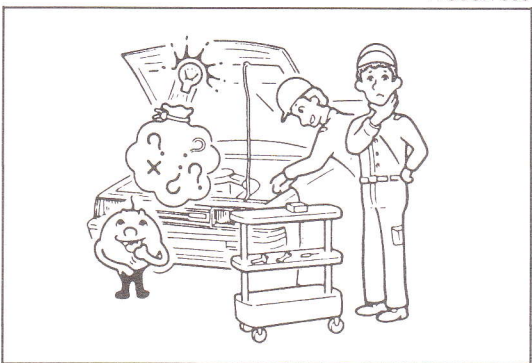
Be sure that all necessary tools and measuring equipment are available before starting any work activity.



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SPECIAL TOOLS

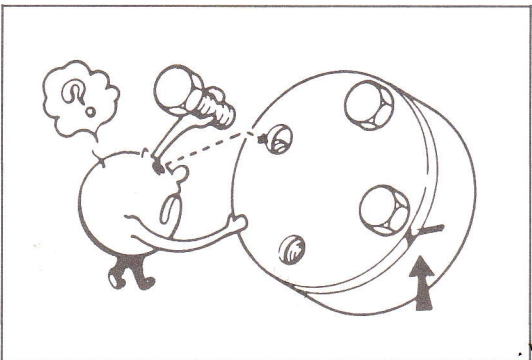
Use special tools when they are required.



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REMOVAL OF PARTS

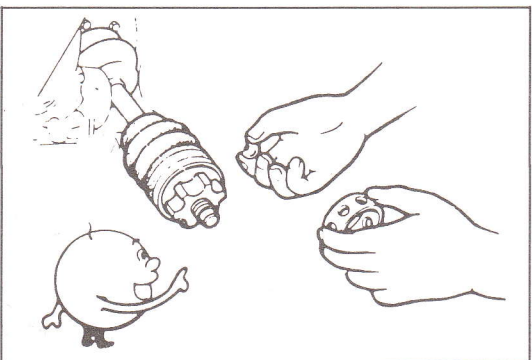
While correcting a problem, try also to determine its cause. Begin work only after first learning which parts and subassemblies must be removed and disassembled for replacement or repair.



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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 be identified so that reassembly can be performed easily and efficiently.



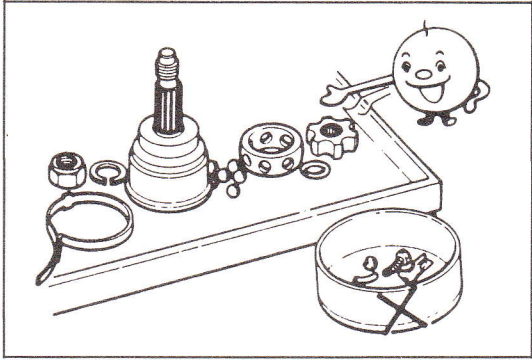
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DISASSEMBLY

1. Inspection of parts

Each part when removed should be carefully inspected for malfunctioning, deformation, damage, and other problems.

G FUNDAMENTAL PROCEDURES

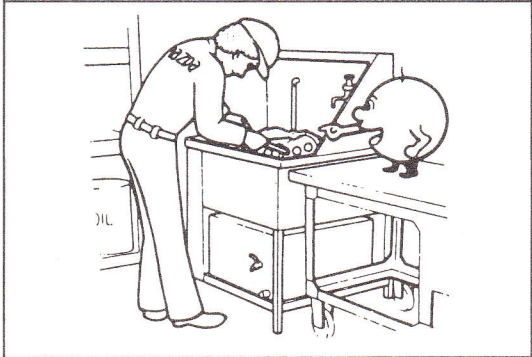


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2. Arrangement of parts

All disassembled parts should be carefully arranged for reassembly.

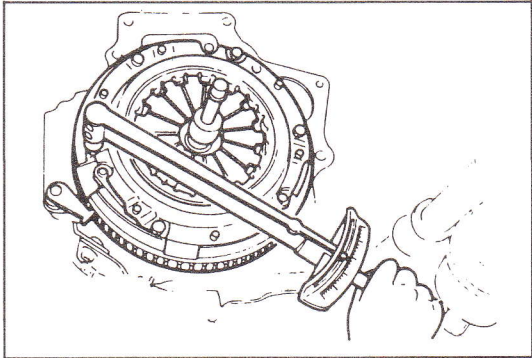
Be sure to separate or otherwise identify the parts to be replaced from those that will be reused.



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3. Cleaning parts for reuse

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



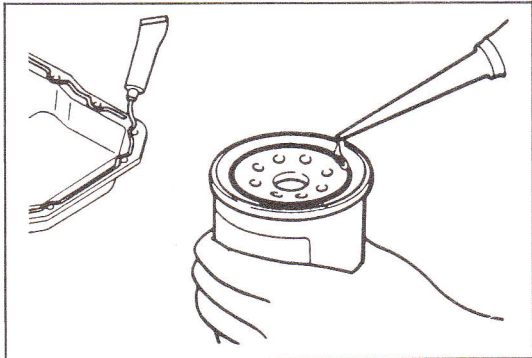
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REASSEMBLY

Standard values, such as torques and certain adjustments, must be strictly observed in the reassembly of all parts.

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

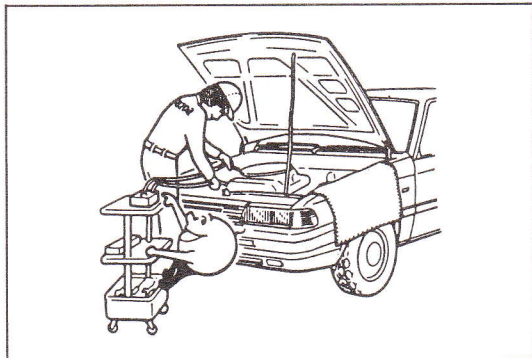
1. Oil seals
2. Gasket
3. O-rings
4. Lock washers
5. Cotter pins (split pins)
6. Nylon nuts



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Depending on where they are;

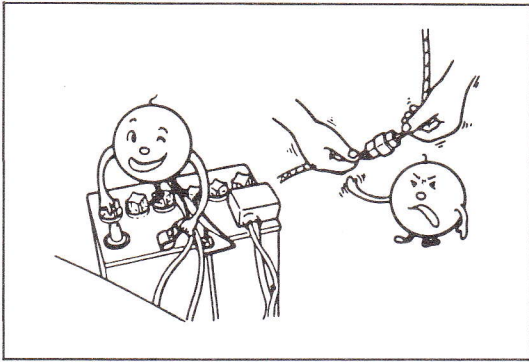
1. Sealant should be applied to gaskets
2. Oil should be applied to the moving components of parts
3. Specified oil or grease should be applied at the prescribed locations (oil seals, etc.) before assembly.



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ADJUSTMENTS

Use suitable gauges and/or testers when making various adjustments.



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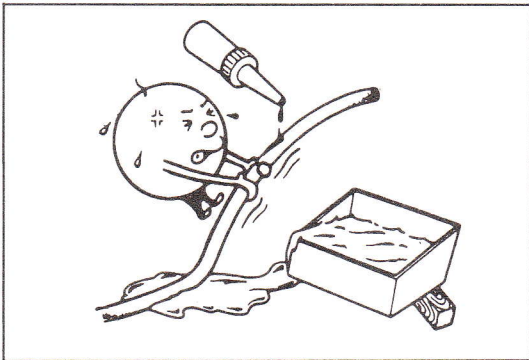
ELECTRICAL SYSTEM

Be sure to disconnect the battery cable from the negative (-) terminal of the battery.

Never pull on the wiring when disconnecting connectors.

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

Handle sensors and relays carefully. Be careful not to drop them or strike them against other parts.



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RUBBER PARTS AND TUBING

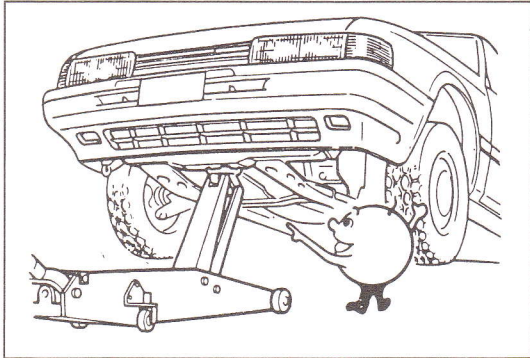
Always prevent gasoline or oil from getting on rubber parts or tubing.

JACK AND SAFETY STAND (RIGID RACK) POSITIONS

FRONT END

Jack position:

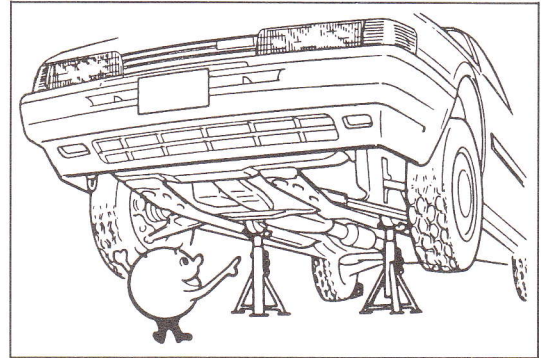
At the center of the crossmember



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Safety stand positions:

On both sides of the body frame

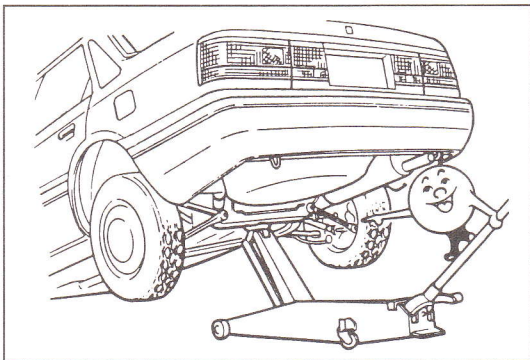


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REAR END

Jack position:

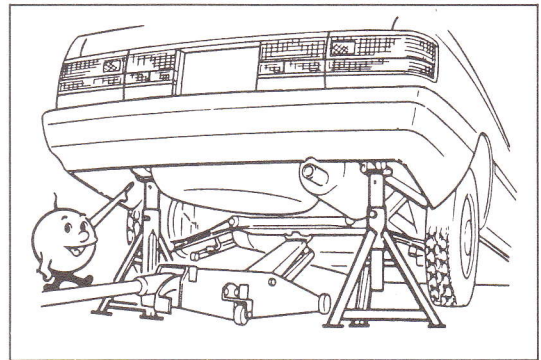
At the center of the rear crossmember



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Safety stand positions:

On both sides of the body frame



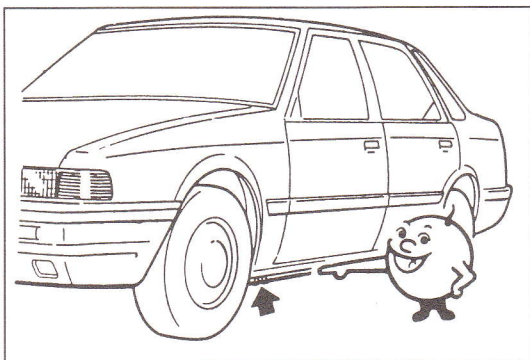
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VEHICLE LIFT (2-SUPPORT TYPE) POSITIONS

FRONT END

Frame

Side sills (front)

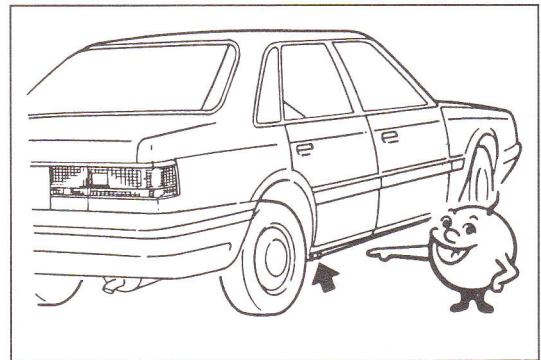


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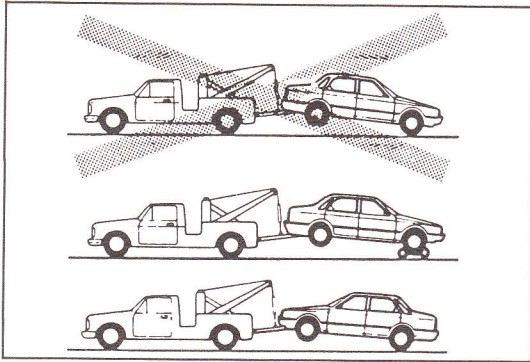
REAR END

Frame

Side sills (rear)



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TOWING

Proper lifting or towing procedures are necessary to prevent damage to the vehicle during any towing operation. State and local laws applicable to vehicles in tow must be followed.

With either automatic or manual transaxle, release the parking brake, place the selector lever (or shift lever) in neutral and set the ignition key in the "ACC" position. As a general rule, towed vehicles should be pulled with the driving wheels off the ground.

If excessive damage or other conditions prevent towing the vehicle with the driving wheels off the ground, use wheel dollies.

Caution

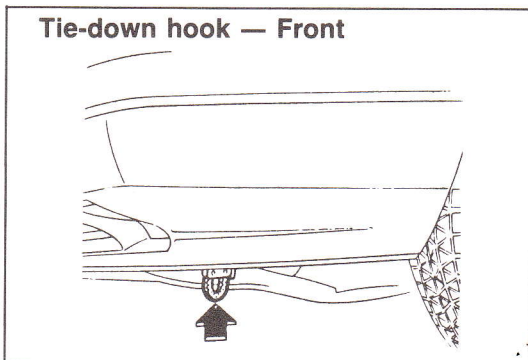
Do not tow the vehicle backward with driving wheels on the ground.

This may damage the transaxle internal parts.

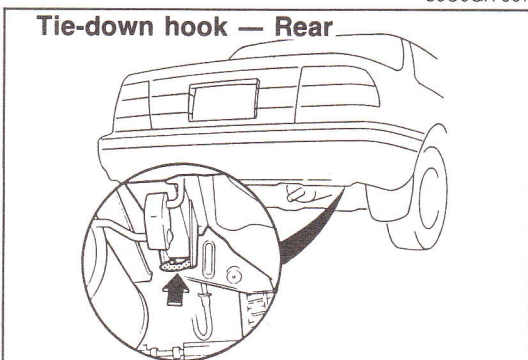
Do not start or run the engine while vehicle is being towed.

(Only for 4WS vehicle)

When towing the vehicle with the front wheels, raised, be sure the rear wheels are in the straight-ahead position.



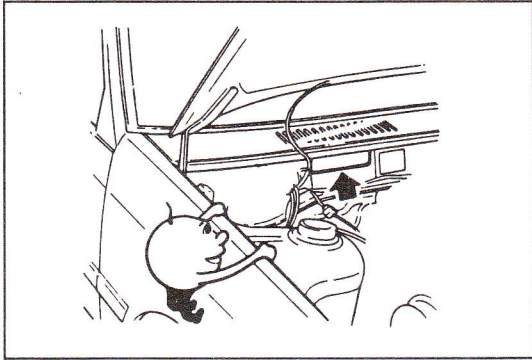
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Caution

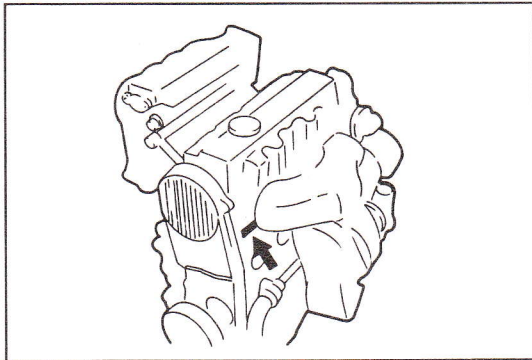
Do not use the hook loops under the front and rear of vehicle for towing purposes. These hook loops are designed ONLY for transport tie-down. If tie-down hook loops are used for towing, front/rear skirt and bumper will be damaged.

CHASSIS NUMBER LOCATION



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ENGINE MODEL AND NUMBER LOCATION



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UNITS

N-m (m-kg or cm-kg, ft-lb or in-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
liters (US qt, Imp qt).....	Volume
oz.....	ounce

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ABBREVIATIONS

A/C.....	Air conditioner
ACC.....	Accessories
ABDC.....	After bottom dead center
ADD.....	Additional fan
ATDC.....	After top dead center
ATX.....	Automatic transaxle
ATF.....	Automatic transaxle fluid
ABS.....	Anti-lock brake system
BBDC.....	Before bottom dead center
BTDC.....	Before top dead center
EX.....	Exhaust
EC-AT.....	Electronically controlled automatic transaxle
ESPS.....	Engine speed sensing power steering
ECPS.....	Electronically-controlled power steering
HLA.....	Hydraulic Lash Adjuster
IG.....	Ignition
IN.....	Intake
IC.....	Integrated circuit
INT.....	Intermittent
LH.....	Left hand
MTX.....	Manual transaxle
M.....	Motor
OFF.....	Switch off
ON.....	Switch on
PCV.....	Positive crankcase ventilation
P/S.....	Power steering
P/W.....	Power window
RH.....	Right hand
ST.....	Start
SW.....	Switch
SST.....	Service special tools
4WS.....	4-wheel steering
2WS.....	2-wheel steering

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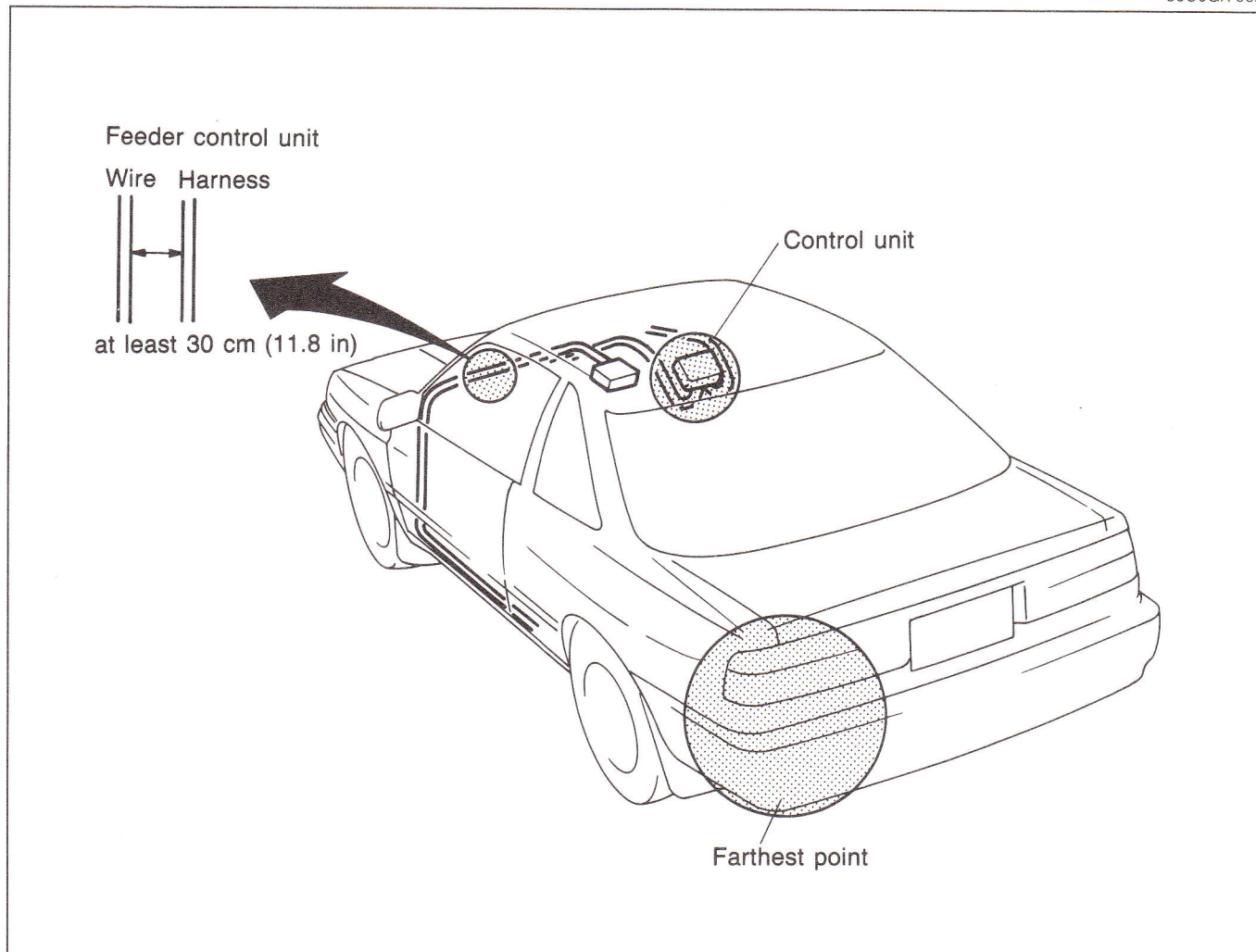
CAUTION**INSTALLATION OF A MOBILE TWO-WAY RADIO SYSTEM**

If a mobile two-way radio system is installed improperly, or if a wrong type is used, the Fuel Injection system and other systems may be affected.

When car is equipped with a mobile two-way radio system, observe the following precautions.

1. Install the antenna at the farthest point from the control unit.
2. Keep the antenna feeder away from the control unit harness as far as possible.
(at least 30cm (11.8 in))
3. Insure that the antenna and feeder are properly adjusted.
4. Do not install a powerful mobile two-way radio system.

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WARNING**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. Proper hand cleaners may be of value provided they can be removed from the skin with water. Do not use petrol, 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.