# SERVICE MANUAL

## DATSUN

## MODEL 330 SERIES
## CHASSIS AND BODY

NISSAN

NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

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QUICK REFERENCE INDEX

# FOREWORD

This service manual has been prepared for the purpose of assisting service personnels of our distributors and dealers in providing effective service and maintenance of the model 330 series.

Since proper maintenance and service are absolutely essential satisfying our customers, this manual should be read carefully. The following matters should be noted for effective utilization of this manual.

1. Please refer to the following SERVICE MANUALS in addition to this manual for complete details of the car, because this manual describes information concerning the chassis and body only.

   - SERVICE MANUAL MODEL L20A, L24 & L26 SERIES ENGINES
   - SERVICE MANUAL MODEL SD22 & SD33 DIESEL ENGINES
   - SERVICE MANUAL NISSAN AUTOMATIC TRANSMISSION MODEL 3N71B
   - SERVICE MANUAL AIR CONDITIONER

2. All part names in this manual conform to the MODEL 330 SERIES PARTS CATALOG, and only the genuine service parts listed in this PARTS CATALOG must be used for replacements.

3. All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication approval.

4. It should be emphasized that those who use this manual are responsible for revising the contents according to the SERVICE JOURNAL and SERVICE DATA AND SPECIFICATIONS issued by the factory, which carry the latest factory approved servicing methods.

5. Rights for alteration of specifications and methods at any time are reserved.

NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

 Printed in Japan

# SERVICE MANUAL

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MODEL 330 SERIES
**CHASSIS & BODY**

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TOKYO, JAPAN

## SECTION GI

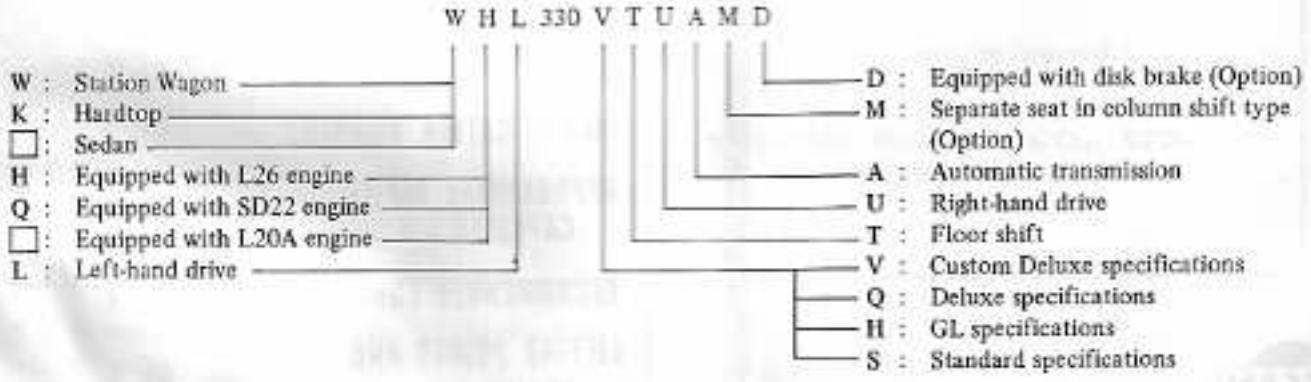
GI

# GENERAL INFORMATION

# MODEL VARIATION

| Car type | Model | Car model | | Engine model | Transmission model | Differential carrier | |
|---|---|---|---|---|---|---|---|
| | | R.H. drive | L.H. drive | | | Model | Gear ratio |
| Sedan | Custom Deluxe | H330VU | HL330V | L26 | R3W71B | H190 | 4.111 |
| | | H330VTU | HL330VT | | F4W71B | | |
| | | H330VUA | HL330VA | | 3N71B | | |
| | | H330VTUA | HL330VTA | | | | |
| | Deluxe | H330QU | HL330Q | | R3W71B | | |
| | | H330QUA | – | | 3N71B | | |
| | | 330QTU | L330QT | L20A | F4W71B | | |
| | Standard | Q330SU | QL330S | SD22 | R4W71B | | |
| | | – | QL330SM | | | | |
| Hardtop | GL | KH330HTU | KHL330HT | L26 | F4W71B | | |
| | | KH330HTUA | KHL330HTA | | 3N71B | | |
| Station Wagon | Custom Deluxe | WH330VTU | WHL330VT | | F4W71B | | |
| | | WH330VTUA | WHL330VTA | | 3N71B | | |

The meaning of prefix and suffix characters:



# IDENTIFICATION NUMBERS

The unit and car serial numbers are stamped and registered at the factory. The engine and car identification numbers are used on legal documents.

These numbers are used for factory communications such as Technical Reports, Warranty Claims, Service Journals, etc.

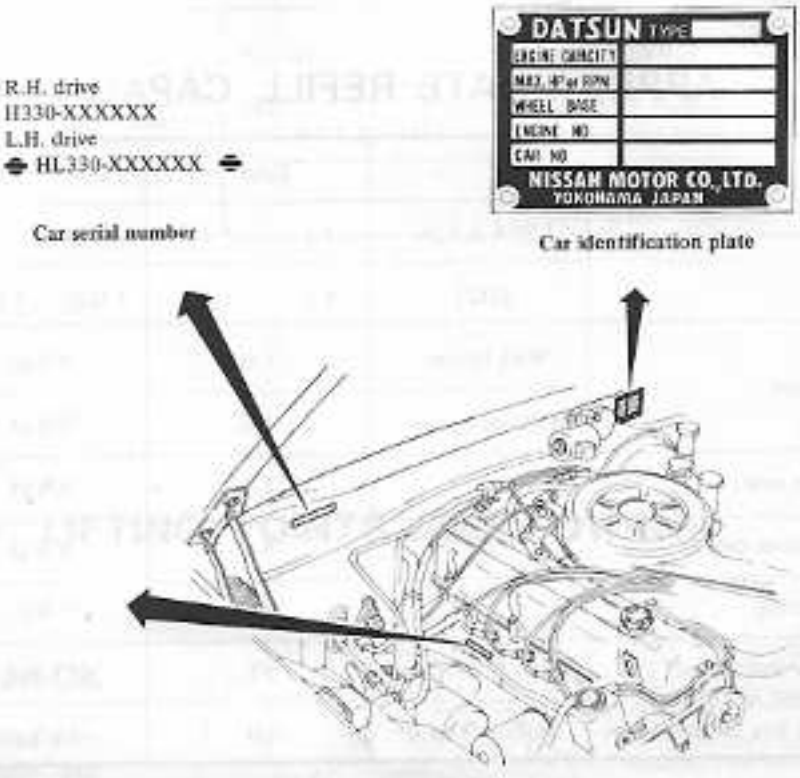



*Fig. GI-1 Identification numbers*

## CAR IDENTIFICATION PLATE

The car identification plate is located at the left side of the cowl top.

The plate contains the car type, engine capacity, maximum horsepower, wheelbase and engine and car serial numbers. See Figure GI-1.

## CAR SERIAL NUMBER

The car serial number is stamped on the right side of the cowl top and is broken down according to car type as shown in the following chart. See Figure GI-1.

| Engine type | Car type | Car serial number (Car model-Serial number) | |
|---|---|---|---|
| | | Right-hand drive | Left-hand drive |
| L26 | Sedan | H330-XXXXXX | HL330-XXXXXX |
| | Hardtop | KH330-XXXXXX | KHL330-XXXXXX |
| | Station Wagon | WH330-XXXXXX | WHL330-XXXXXX |
| L20A | Sedan | 330-XXXXXX | L330-XXXXXX |
| SD22 | Sedan | Q330-XXXXXX | Q330-XXXXXX |

## ENGINE SERIAL NUMBER

The engine serial number is stamped on the cylinder block in the manner shown. The numbers are further broken down according to engine type, as shown in the following chart. See Figure GI-1.

| Engine model | Engine number |
|---|---|
| L26 | L26-XXXXXX X |
| L20A | L20-XXXXXX X |
| SD22 | SD22-XXXXXX |

**Note: The letter following the L26 and L20A engine serial numbers is used only for administrative purposes at the assembly plant.**

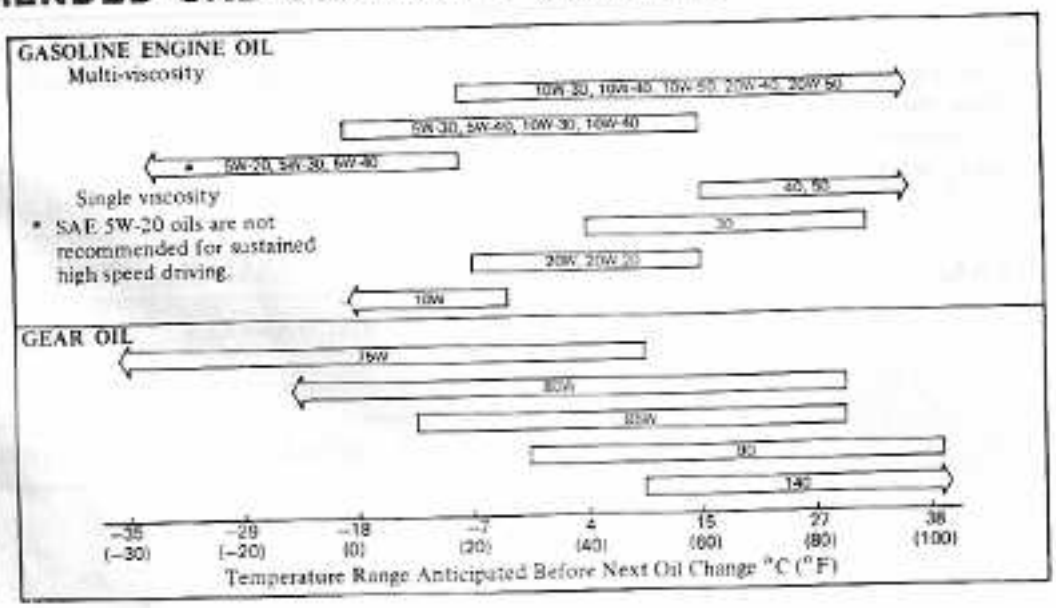
## APPROXIMATE REFILL CAPACITY

| | | Liter | U.S. measure | Imper. measure |
|---|---|---|---|---|
| Engine crankcase | L20A & L26 | 4.1 * 4.7 | 4 ¾qt. * 5 qt. | 3 ⅝qt. * 4 ⅛qt. |
| | SD22 | 5.0 * 6.4 | 5 ¼qt. * 6 ¾qt. | 4 ⅜qt. * 5 ⅝qt. |
| Engine cooling system | With heater | 9.0 | 9 ½qt. | 7 ⅞qt. |
| | Without heater | 8.0 | 8 ½qt. | 7 qt. |
| Manual transmission case | | 1.7 | 3 ⅝pt. | 3 pt. |
| Automatic transmission case | | 5.5 | 5 ¾qt. | 4 ⅞qt. |
| Final drive case housing | | 0.9 | 1 ⅞pt. | 1 ⅝pt. |
| Fuel tank | Sedan & Hardtop | 67 | 17 ¾gal. | 14 ⅝gal. |
| | Station Wagon | 60 | 15 ⅞gal. | 13 ¼gal. |

* Including oil filter

## RECOMMENDED LUBRICANTS

### RECOMMENDED SAE VISCOSITY NUMBER



## RECOMMENDED LUBRICANTS

| Item | | Specifications | Remarks |
|---|---|---|---|
| Engine oil | Gasoline | SAE Classification SD or SE (MIL-L-2104B) | Refer to Recommended SAE Viscosity Chart |
| Gear oil | Transmission and Steering | API GL-4 (MIL-L-2105) | |
| Multi-purpose grease | | N.L.G.I. 2 | Lithium soap base |
| Brake and Clutch fluid | | DOT 3 (F.M.V.S.S. No. 116) | F.M.V.S.S.: Federal Motor Vehicle Safety Standard |
| Antifreeze | | ——— | Permanent antifreeze (Ethylene glycol base) |

# LIFTING POINTS AND TOWING

## PANTOGRAPH JACK

Set pantograph jack furnished with car at positions indicated below. See Figures GI-2, GI-3 and GI-4.

Notes:

a. **Never get under car while it is supported only by jack. Always use safety stands to support frame when you have to get under car.**

b. **Block wheels diagonally with wheel chocks.**

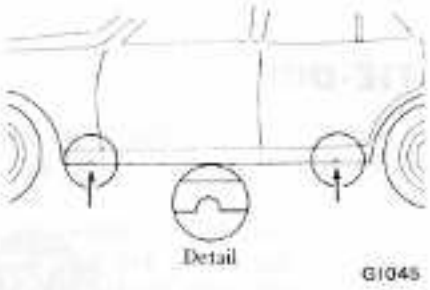



*Fig. GI-2 Jack-up points—Sedan*

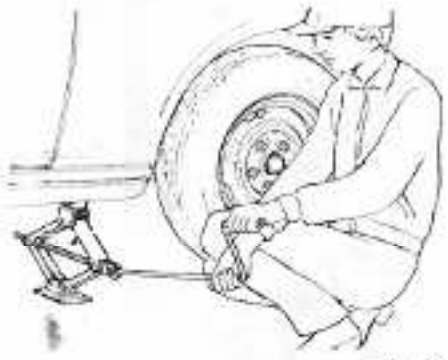



*Fig. GI-3 Jack operation—Sedan*

The station wagon differs from the Sedan in the location of spare tire and in removal and installation procedures as described below:

The spare tire is hanged under the luggage floor. To remove tire, crank winch counterclockwise with jack handle.

To position tire in its place, install a hook in center of wheel and crank jack handle clockwise until tire touches under luggage floor securely. See Figure GI-5.

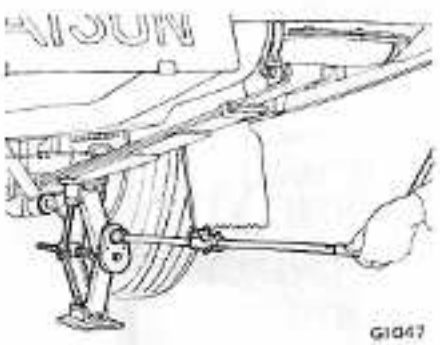



*Fig. GI-4 Jack operation—Station Wagon*


*Fig. GI-5 Lowering the spare tire—Station Wagon*

## GARAGE JACK

Note: When using garage jack, be sure to support car with safety stands.

### FRONT SIDE

1. When jacking up front of car, place chocks behind rear wheels.
2. Set garage jack under front suspension member. Place a block of wood between jack and suspension member. See Figure GI-6.
3. Crank jack gently and raise car just high enough to place safety stands under both side members.

   Place a block of wood between safety stand and side member. See Figure GI-7.
4. Release jack slowly.

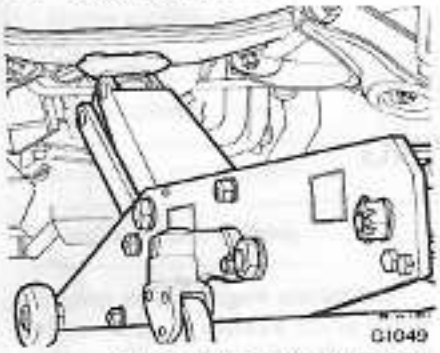



*Fig. GI-6 Front jacking point*


*Fig. GI-7 Front supportable points*

### REAR SIDE

1. When jacking up rear of car, place chocks in front of front wheels.
2. Set garage jack under differential carrier. See Figure GI-8.
3. Crank jack gently and raise car just high enough to place safety stands under both side members.

   Place a block of wood between safety stand and side member. See Figure GI-9.
4. Release jack slowly.


*Fig. GI-8 Rear jacking point*

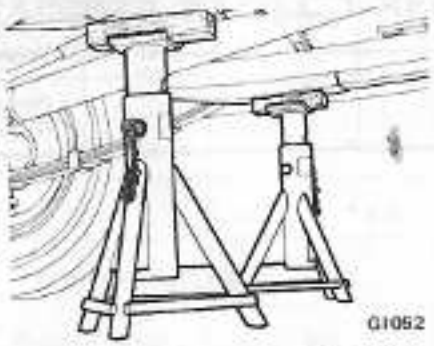



*Fig. GI-9 Rear supportable points*

## TOWING

When car is to be towed forward, connect rope securely to front suspension member. See Figure GI-10. Before towing, make sure parking brake is released.

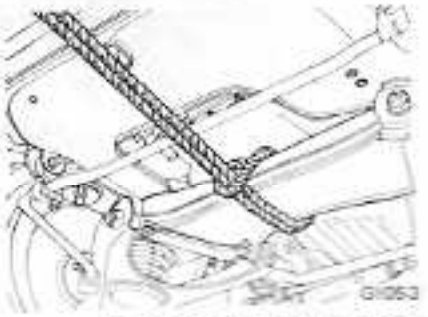



*Fig. GI-10 Front towing point*

To tow another car, connect a rope to rear leaf spring shackle. See Figure GI-11.

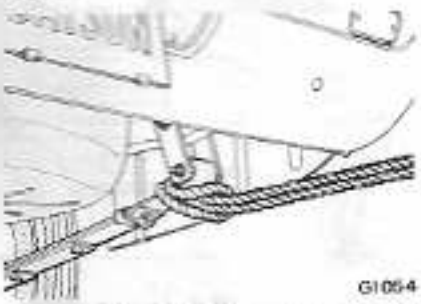



*Fig. GI-11 Rear towing point*

Notes:

a. A towing rope should not be connected to any positions other than those described above.
b. Avoid applying load abruptly to a towing rope, as this may cause damage.

### MANUAL TRANSMISSION

Before towing, make sure transmission is in neutral gear. If rear axle or transmission is inoperative, car should be towed with its rear wheels off the ground, or propeller shaft must be removed.

### AUTOMATIC TRANSMISSION

When car is towed on its rear wheels, make sure transmission is in neutral position.

Do not exceed 30 kg/h (20 MPH) and a distance of 10 km (6 miles). If rear axle or transmission is inoperative, or if speed exceeds that given above, car must be towed with its rear wheels off the ground, or propeller shaft must be removed.

Note: When car is towed with its front wheels on the ground, steering wheel should be secured to maintain a straight ahead position.

## TIE-DOWN

The front two tie-down hooks are located on the front of the side members.

These hooks are not designed for use as towing hooks. For rear tie-down, rear leaf spring shackle should be used. This point can be also used as a towing point.

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SECTION ER

ER

# ENGINE REMOVAL & INSTALLATION

# ENGINE REMOVAL AND INSTALLATION

## CONTENTS



## REMOVAL

It is much easier to remove engine and transmission as a single unit than to remove them separately. After removal, engine can be separated from transmission assembly.

Notes:

a. **Be sure to hoist engine and jack up transmission in a safe manner.**
b. **Fender covers should be used to protect car body.**
c. **When installing, be sure to check that electrical harnesses are connected correctly.**

1. Remove engine hood. Refer to Section BF.

**Note: Have an assistant help you so as to prevent damage to body.**

2. Disconnect battery ground cable.
3. Drain radiator coolant.
4. Disconnect upper and lower radiator hoses from engine.
5. Remove radiator shroud.
6. Remove radiator grille. Then, loosen radiator securing bolts.
7. Remove air cleaner assembly.

**Note: Keep carburetor away from dust and foreign matter by placing cover over air inlet opening.**

8. Disconnect following cables, wires and hoses:

- Battery cable to starter motor
- Wire to starter motor
- Wires to back-up lamp switch
- Engine ground cable
- Wire to distributor
- Wire to oil pressure switch
- Wires to alternator
- Wire to thermal transmitter
- Heater inlet and outlet hoses if so equipped
- Master-Vac vacuum hose at intake manifold if so equipped

### L26 and L20A Engines

a. Disconnect high tension cables.
b. Disconnect fuel hoses.
c. Detach accelerator linkage and choke control wire from carburetor. Refer to Section FE.

### SD22 Engine

a. Disconnect fuel hoses.
b. Detach accelerator linkage and disconnect engine control and idle control wires. Refer to Section FE.
c. Disconnect exhaust tube from cluth housing.
d. Disconnect hose connecting vacuum pump to vacuum tank at pump, if Master-Vac is installed.

9. Remove clutch operating cylinder from clutch housing. Refer to Section CL.

**Notes: On automatic transmission equipped cars;**
**a. Disconnect oil cooler hoses from tube.**
**b. Disconnect vacuum tube.**

10. Disconnect speedometer cable from rear extension housing.
11. Remove transmission control linkage. Refer to Section TM.
12. Disconnect propeller shaft from rear extension housing. Refer to Section PD.
13. Disconnect exhaust front tube from exhaust manifold.

Tightening torque of nuts:
2.0 to 2.6 kg-m
(14 to 19 ft-lb)

14. Support transmission with jack.
15. Remove bolts securing rear engine mounting member to body. See Figure ER-1.
16. Remove rear engine mount and rear engine mounting insulator. See Figure ER-1.

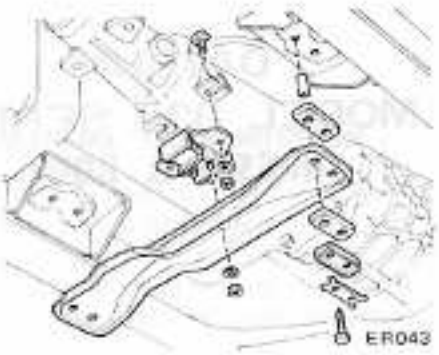



*Fig. ER-1 Removing rear engine mounting insulator*

### Air conditioner equipped model

Note: Never discharge gas from compressor while work is being performed.

a. Disconnect water hoses from engine. See Figure ER-2.

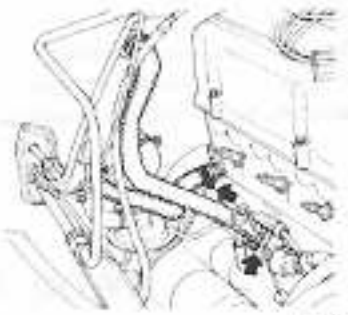
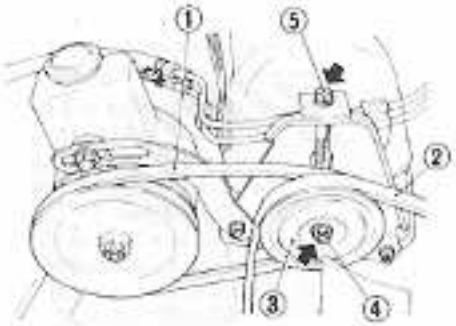



*Fig. ER-2 Air conditioner water hoses*

b. Remove compressor belt. To remove, loosen idler pulley nut and adjusting bolt. See Figure ER-3.




ER267

1 Power steering oil pump belt
2 Compressor belt
3 Compressor idler pulley
4 Compressor idler pulley nut
5 Adjust bolt

*Fig. ER-3 Compressor pulley assembly*

c. Remove compressor retaining bolts and move compressor toward fender to facilitate removal of engine. See Figure ER-4.

ER268

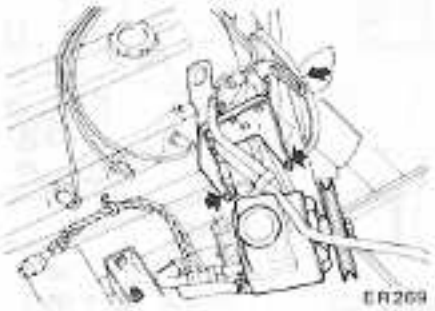
*Fig. ER-4 Moving compressor away from engine*

**Power steering equipped model**

**Note: Never drain power steering oil while work is being performed.**

a. Remove belt from power steering oil pump.

b. Remove oil pump retaining bolts and move oil pump toward fender to facilitate removal of engine. See Figure ER-5.



ER269

*Fig. ER-5 Moving oil pump away from engine*

17. Connect suitable wire or chain to engine slingers and raise engine to take weight off front mounting insulators.

18. Remove bolts securing front mounting insulator to suspension member.

19. Raise engine and transmission, and remove from car as a single unit. See Figure ER-6.

## INSTALLATION

Install in the reverse order of removal, observing the following:

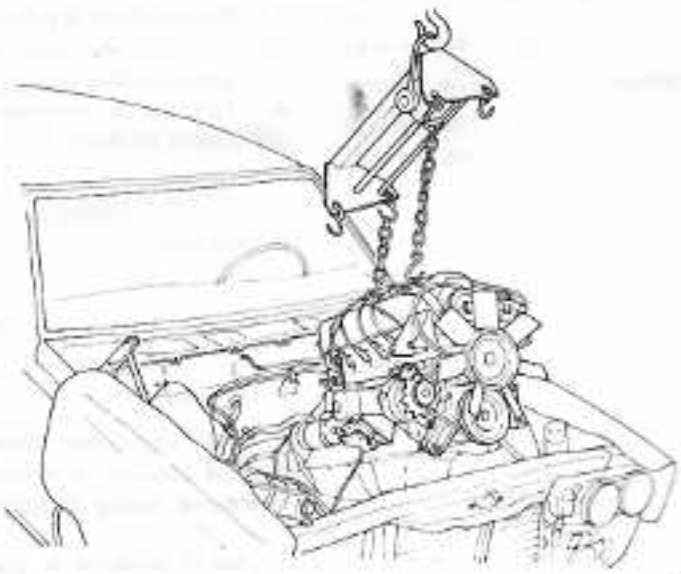
1. When installing, first secure rear engine mounting member to body.

2. Refer to applicable section when installing and adjusting any parts.

- Adjust clutch pedal free play. Refer to Section CL.
- Adjust accelerator and choke control system. Refer to Section FE.
- For installation of power steering oil pump and belt adjustment, refer to Section ST.
- For installation of air conditioner compressor and belt adjustment, refer to Manual for Air Conditioning systems.

3. When installing exhaust front tube on exhaust manifold, be sure to use new gasket.

4. When installing hood following engine installation, be sure that it is properly centered and that hood lock operates securely. Refer to Section BF for Adjustment.



ER270

*Fig. ER-6 Removing engine*

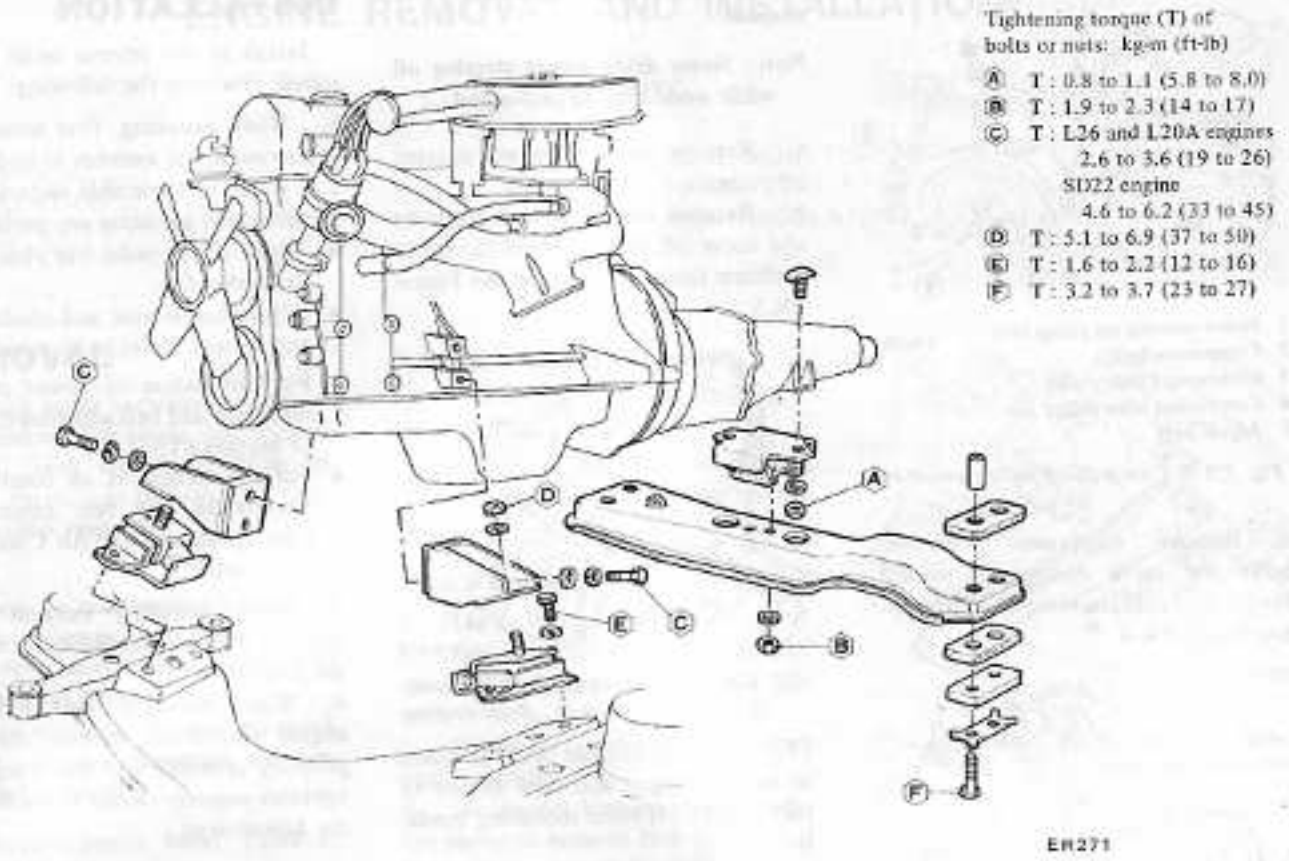



*Fig. ER-7 Structural view of engine mounting*

# ENGINE MOUNTING INSULATORS

## FRONT INSULATOR

Left and right front insulators are identical, and are interchangeable. See Figure ER-7.

### Removal

1. Disconnect battery ground cable.
2. Suspend engine with wire or chain.
3. Loosen front engine mounting insulator upper nuts (both sides).
4. Make sure that wire or chain used to suspend engine is positioned properly so that no load is applied to insulators, and remove bolts completely.
5. Lift up engine, and separate insulators from engine mounting brackets.

### Inspection

If there is damage, deterioration or separation of bounded surface, replace.

### Installation

Install front insulators in reverse sequence of removal, noting the following:

1. Both the left and right front insulators are used in common. However, when installing them, pay attention to their upper and lower directions. See Figure ER-7.
2. Tighten the bolts and nuts correctly and securely. See Figure ER-7.

## REAR INSULATOR

### Removal

1. Support the transmission weight with a jack.
2. Remove nuts securing rear engine mounting insulator to mounting member.
3. Remove bolts connecting rear engine mounting insulator to transmission rear extension housing.
4. Jack up the transmission a little and remove insulator.

### Inspection

If there is damage, deterioration or separation of mating surface, replace.

### Installation

Install rear engine mounting member and insulator in reverse sequence of removal, noting the following:

1. Install insulator in place so that the direction of mounted insulator is the same as that in Figure ER-8.


*Fig. ER-8 Rear insulator*

2. Tighten nuts and bolts correctly and securely. As for tightening torque, see Figure ER-7.

# SERVICE DATA AND SPECIFICATIONS

## Tightening torque

| | | |
|---|---|---|
| Rear engine mounting to body | kg-m (ft-lb) | 3.2 to 3.7 (23 to 27) |
| Rear insulator to rear engine mounting member | kg-m (ft-lb) | 1.9 to 2.3 (14 to 17) |
| Rear insulator to transmission | kg-m (ft-lb) | 0.8 to 1.1 (5.8 to 8.0) |
| Front engine mounting bracket to engine | | |
| L26 and L20A engines | kg-m (ft-lb) | 2.6 to 3.6 (19 to 26) |
| SD22 engine | kg-m (ft-lb) | 4.6 to 6.2 (33 to 45) |
| Front insulator to engine mounting bracket | kg-m (ft-lb) | 5.1 to 6.9 (37 to 50) |
| Front insulator to suspension member | kg-m (ft-lb) | 1.6 to 2.2 (12 to 16) |
| Clutch operating cylinder to clutch housing | kg-m (ft-lb) | 2.5 to 3.0 (18 to 22) |
| Front tube to exhaust manifold | kg-m (ft-lb) | 2.0 to 2.6 (14 to 19) |
| Propeller shaft to companion flange | kg-m (ft-lb) | 2.5 to 3.2 (18 to 23) |