

## GROUP 55

**HEATER, AIR CONDITIONER AND VENTILATION****GENERAL****OUTLINE OF CHANGES**

- The following service procedures have been added to correspond to the addition of the diesel-powered vehicle.

Applicable models: 1900D

1. Removal and installation of the compressor
2. Removal and installation of the refrigerant lines
3. Removal and installation of the condenser and condenser fan motor

**LUBRICANTS**

Items	Specified lubricants	Quantity
Each connection of refrigerant line	SP-20	As required
Compressor refrigerant unit lubricant ml	SP-20	135

## COMPRESSOR

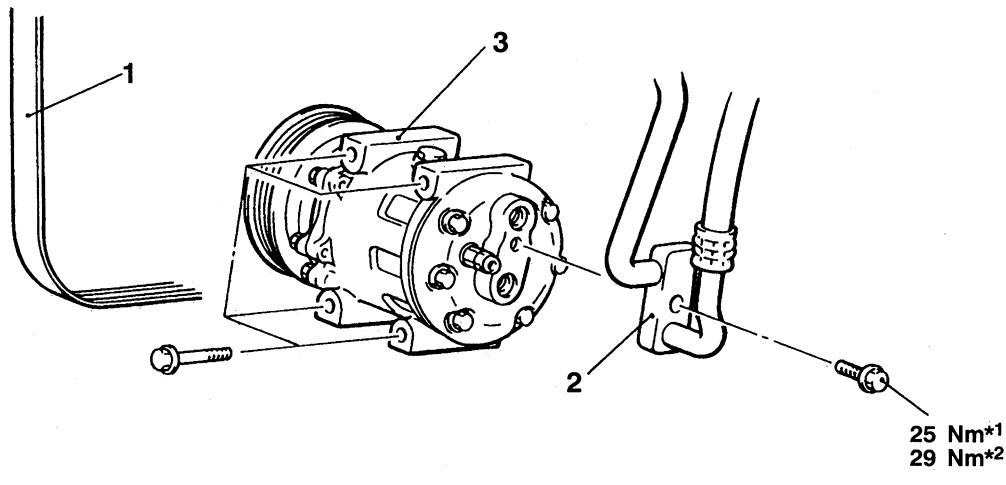
### REMOVAL AND INSTALLATION

#### Pre-removal Operation

- Discharging of Refrigerant
- Under Cover Removal (R.H. side)

#### Post-installation Operation

- Charging of Refrigerant
- Under Cover Installation (R.H. side)
- Drive Belt Tension Adjustment (Refer to GROUP 11A - On-vehicle Service.)



#### Removal Steps

◀A▶

1. Drive belt
2. A/C flexible hose assembly connection

◀B▶ ▶A◀

3. Compressor

#### NOTE

(1) \*1: Indicates flange bolt  
(2) \*2: indicates bolt and washer assembly

### REMOVAL SERVICE POINTS

#### ◀A▶ A/C FLEXIBLE HOSE ASSEMBLY CONNECTION

Plug the disconnected hose and the compressor nipple not to let foreign matter get into them.

#### Caution

Seal the hoses completely. Otherwise, the compressor oil and receiver will absorb water vapour easily.

#### ◀B▶ COMPRESSOR REMOVAL

When doing this work, be careful not to spill the compressor oil.

**INSTALLATION SERVICE POINT****►A◀ COMPRESSOR INSTALLATION**

If a new compressor is installed, first adjust the amount of oil according to the procedures described below, and then install the compressor.

- (1) Measure the amount (X ml) of oil within the removed compressor.
- (2) Drain (from the new compressor) the amount of oil calculated according to the following formula, and then install the new compressor.

New compressor oil amount

$$135 \text{ ml} - X \text{ ml} = Y \text{ ml}$$

**NOTE**

- (1) Y ml indicates the amount of oil in the refrigerant line, the condenser, the evaporator etc.
- (2) When replacing the following parts at the same times as the compressor, subtract the rated oil amount of the each part from Y ml and discharge from the new compressor.

**Quantity**

**Evaporator: 60 ml**

**Condenser: 15 ml**

**A/C flexible hose: 10 ml**

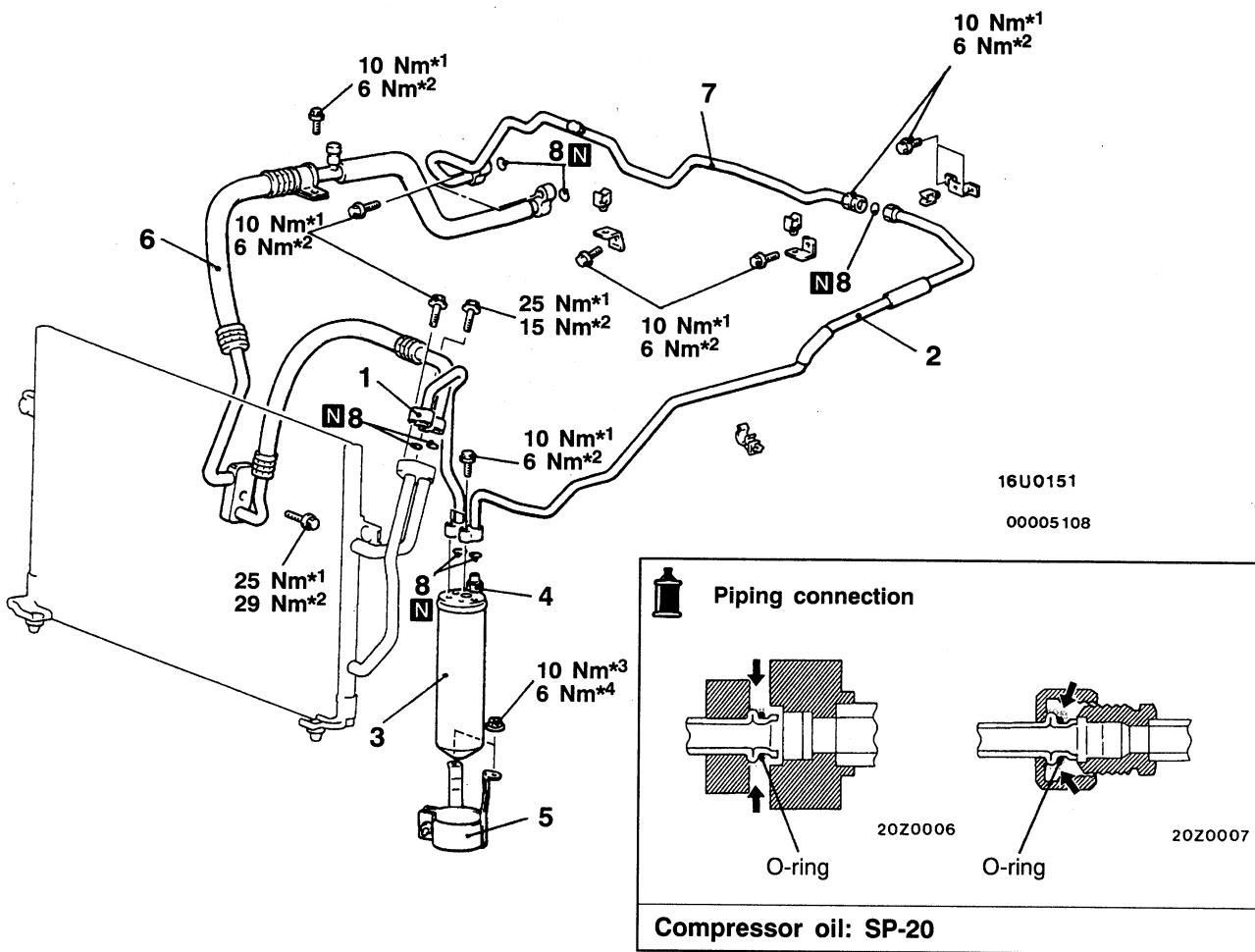
**Receiver: 10 ml**

**REFRIGERANT LINE****REMOVAL AND INSTALLATION**

&lt;L.H. DRIVE VEHICLES&gt;

**Pre-removal Operation**

- Discharging and Charging of Refrigerant

**Removal steps**

- 1. Liquid pipe A
- 2. Liquid pipe B
- A◄ 3. Receiver assembly
- 4. Dual pressure switch
- 5. Receiver bracket
- A◄ 6. A/C flexible hose assembly
- 7. Liquid pipe C
- 8. O-ring

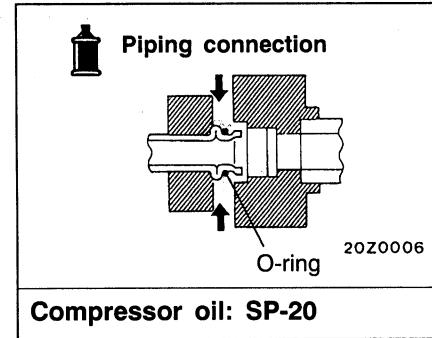
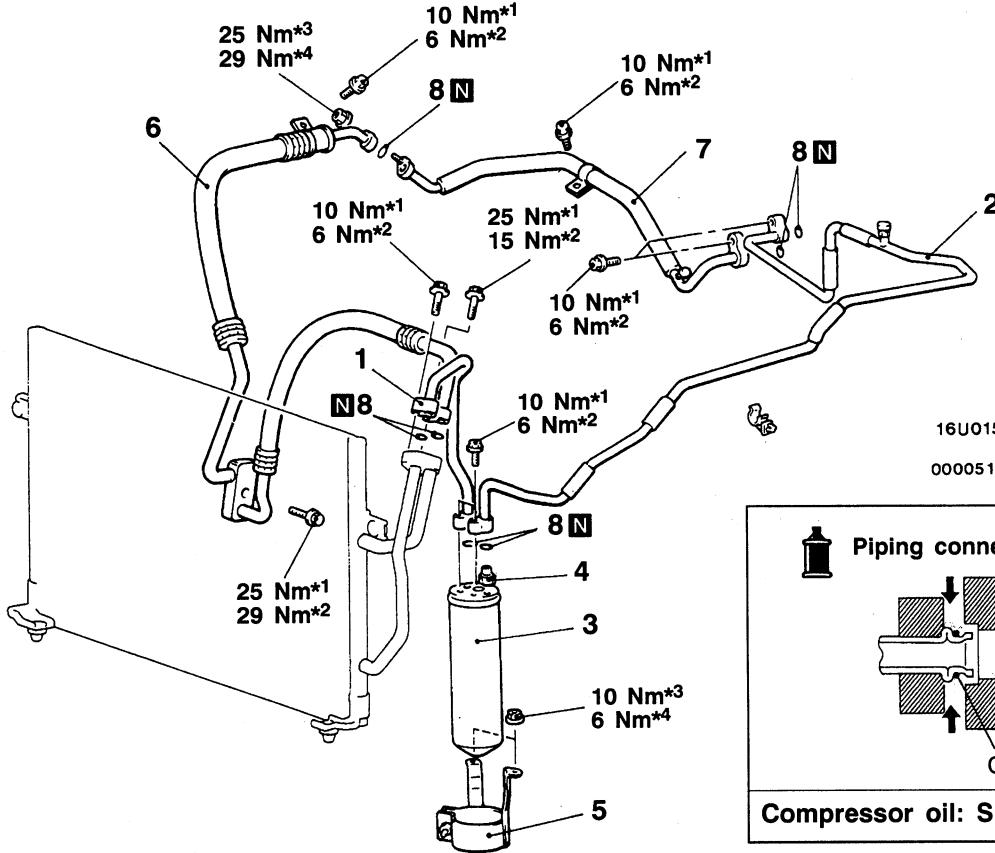
**NOTE**

- (1) \*1: indicates flange bolt
- (2) \*2: indicates bolt and washer assembly
- (3) \*3: indicates flange nut
- (4) \*4: indicates nut and washer assembly

## &lt;R.H. DRIVE VEHICLES&gt;

**Pre-removal Operation**

- Discharging and Charging of Refrigerant

**Removal steps**

- A◀ 1. Liquid pipe A
- A◀ 2. Liquid pipe B
- A◀ 3. Receiver assembly
- A◀ 4. Dual pressure switch
- A◀ 5. Receiver bracket
- A◀ 6. A/C flexible hose assembly
- A◀ 7. Suction pipe
- A◀ 8. O-ring

**NOTE**

- (1) \*1: indicates flange bolt
- (2) \*2: indicates bolt and washer assembly
- (3) \*3: indicates flange nut
- (4) \*4: indicates nut and washer assembly

**INSTALLATION SERVICE POINT****►A◀ A/C FLEXIBLE HOSE ASSEMBLY/RECEIVER ASSEMBLY INSTALLATION**

When replacing the A/C flexible hose assembly or receiver assembly, refill them with a specified amount of compressor oil, and then install them.

**Compressor oil: SP-20**

**Quantity:**

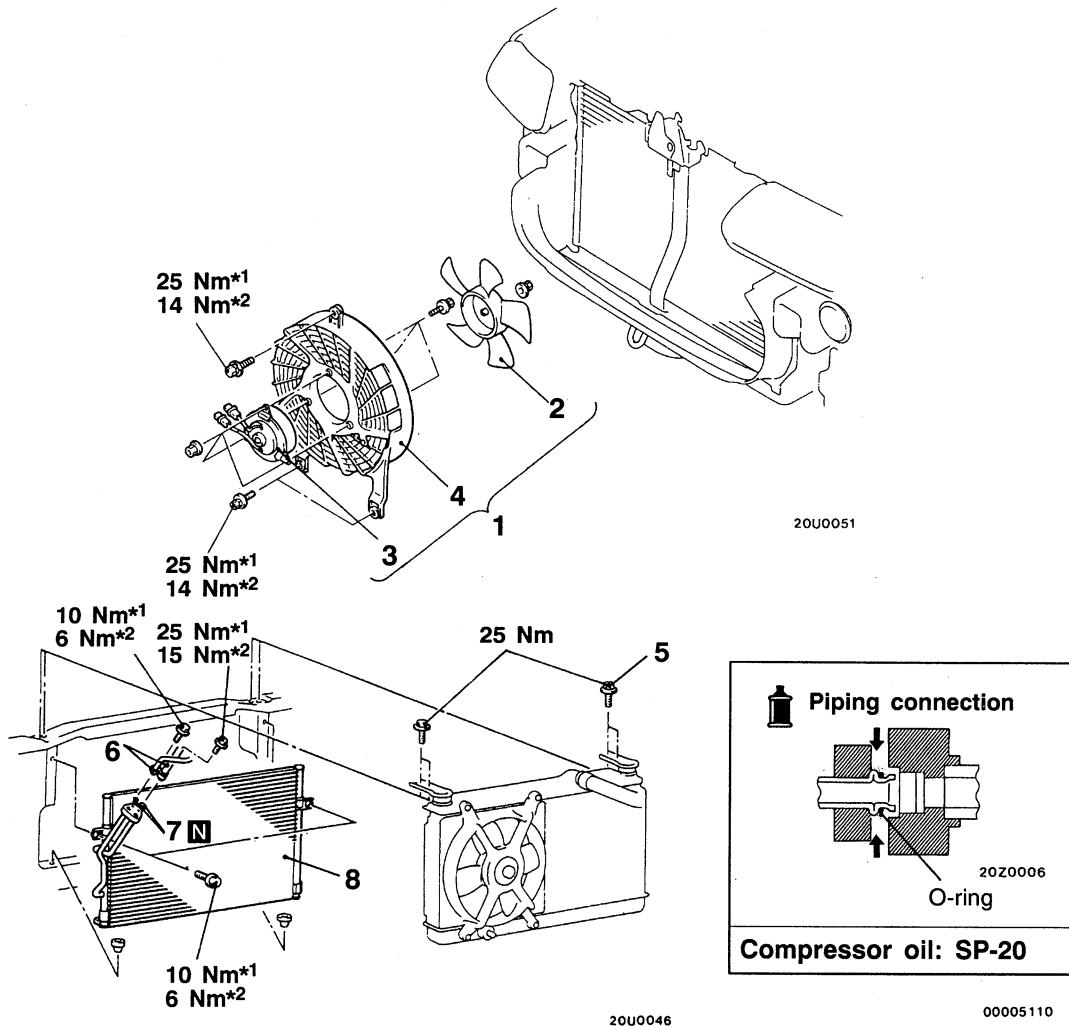
A/C flexible hose assembly: 10 ml  
Receiver assembly: 10 ml

## CONDENSER AND CONDENSER FAN MOTOR

## REMOVAL AND INSTALLATION

## Pre-removal Operation

- Discharging and Charging of Refrigerant



## Condenser fan motor removal steps

- Front bumper
- 1. Fan motor and shroud assembly
- 2. Fan
- 3. Motor assembly
- 4. Fan shroud

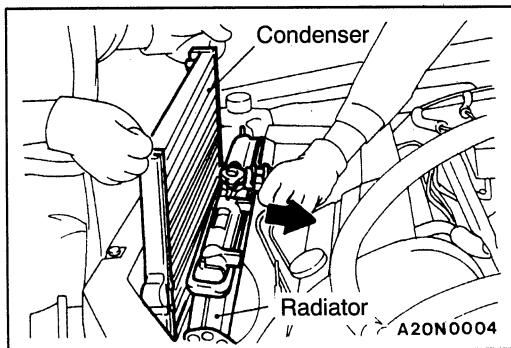
## Condenser removal steps

- 5. Upper insulator installation bolt
- 6. A/C flexible hose assembly connection
- 7. O-ring
- 8. Condenser

◀A▶ ▶A◀

## NOTE

- (1) \*<sup>1</sup>: indicates flange bolt
- (2) \*<sup>2</sup>: indicates bolt and washer assembly



## REMOVAL SERVICE POINT

### ◀A▶ CONDENSER REMOVAL

Move the radiator to the engine side and then lift up the condenser to remove it.

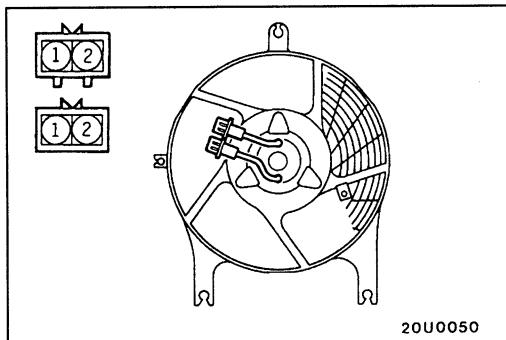
## INSTALLATION SERVICE POINT

### ▶A◀ CONDENSER INSTALLATION

When replacing the condenser, refill it with a specified amount of compressor oil and install it. (to the vehicle).

**Compressor oil: SP-20**

**Quantity: 15 ml**



## INSPECTION

### CONDENSER FAN MOTOR CHECK

Concerning the two connectors, check that the motor runs when battery voltage is applied to the terminal 1 with the terminal 2 earthed.

**NOTES**