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# STEERING

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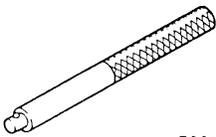
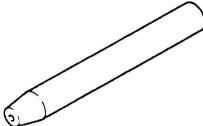
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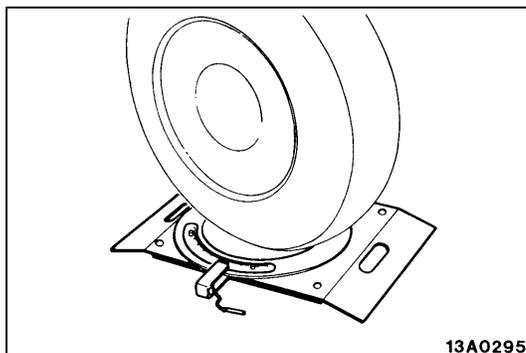


## SERVICE SPECIFICATIONS

Items			Standard value
Steering angle	EVOLUTION-IV	Inner wheel	33°30' ± 2°
		Outer wheel	28°20'
	EVOLUTION-V	Inner wheel	33°10' ± 2°
		Outer wheel	28°10'
Steering gear	Pinion total turning torque Nm {kgf·cm}	Total turning torque	0.9 – 1.7 {9 – 17}
		Torque fluctuations	0.4 {4} or less

## SPECIAL TOOLS

Tool	Number	Name	Use
 B991197	MB991197	Installer bar	Pressfitting of gear housing oil seal
	MB991199	Oil seal installer	
 B991214	MB991214	Oil seal protector	Installation of rack assembly



## ON-VEHICLE SERVICE

### 1. STEERING ANGLE CHECK

Locate front wheels on turning radius gauge and measure steering angle.

**Standard value:**

**Inner wheel**

33°30' ± 2° <EVOLUTION-IV>

33°10' ± 2° <EVOLUTION-V>

**Outer wheel**

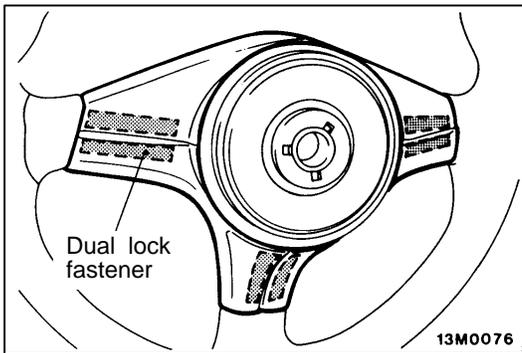
28°20' <EVOLUTION-IV>

28°10' <EVOLUTION-V>

When the angle is not within the standard value, the toe is probably incorrect. Adjust toe (Refer to GROUP 33A – On-vehicle Service) and recheck steering angle.

### 2. OIL PUMP BELT TENSION CHECK AND ADJUSTMENT

Refer to GROUP 11 – Engine Adjustments.

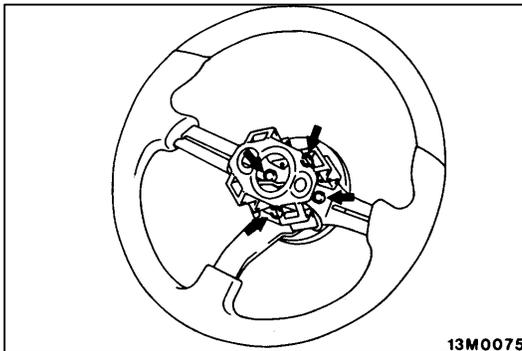


## STEERING WHEEL <EVOLUTION-IV RS>

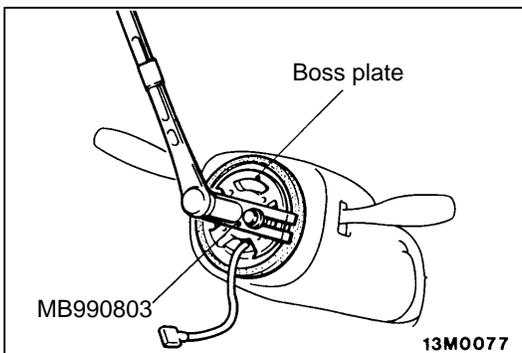
### REMOVAL SERVICE POINT

#### STEERING WHEEL REMOVAL

- (1) Peel off the dual lock fasteners from the steering wheel spokes and remove the horn pad.



- (2) Remove the bolts indicated by arrows in the illustration and remove the steering wheel from the boss plate.



- (3) Using the special tool, remove the boss plate from the steering column.

## POWER STEERING GEAR & LINKAGE

For removal, installation and inspection procedure, follow the conventional procedures except the following.

### INSPECTION

#### PINION TOTAL TURNING TORQUE

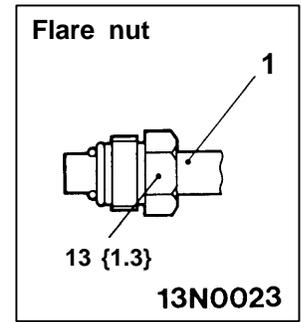
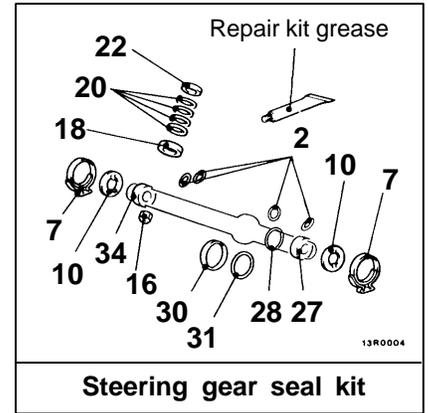
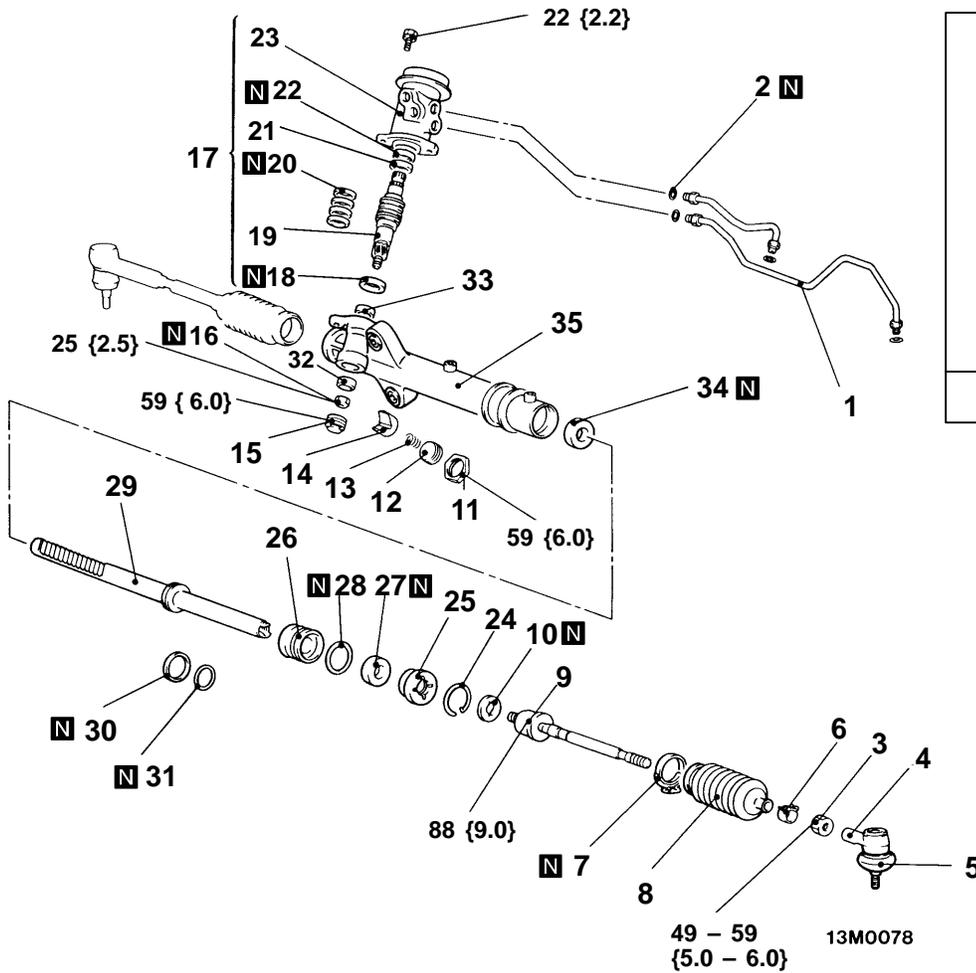
The conventional procedures apply except for the standard value.

#### Standard value:

Total turning torque 0.9 to 1.7 Nm {9 to 17 kgf·cm}

Torque fluctuations 0.4 Nm {4 kgf·cm} or less

DISASSEMBLY AND REASSEMBLY



Unit: Nm {kgf·m}

Disassembly steps

- 1. Feed pipe
- 2. O-ring
- ▶N◀ 3. Lock nut
- ▶N◀ 4. Tie rod end
- ▶M◀ 5. Dust cover
- 6. Clip
- ▶L◀ 7. Band
- 8. Bellows
- ▶K◀ 9. Tie rod
- ▶K◀ 10. Tab washer
- ▶J◀ • Pinion total turning torque adjustment
- 11. Lock nut
- ◀A▶ 12. Rack support cover
- 13. Support spring
- ▶I◀ 14. Rack support
- 15. End plug
- 16. Lock nut
- 17. Valve housing assembly

- ◀B▶ ▶H◀ 18. Lower oil seal
- ◀B▶ ▶H◀ 19. Pinion & valve assembly
- ◀C▶ ▶G◀ 20. Seal ring
- ◀D▶ ▶F◀ 21. Upper bearing
- ◀D▶ ▶F◀ 22. Upper oil seal
- 23. Valve housing
- ◀E▶ ▶E◀ 24. Circlip
- ◀F▶ ▶D◀ 25. Rack stopper
- ◀F▶ ▶D◀ 26. Rack bushing
- ◀G▶ ▶D◀ 27. Oil seal
- 28. O-ring
- ◀F▶ ▶C◀ 29. Rack assembly
- ◀C▶ ▶C◀ 30. Seal ring
- 31. O-ring
- ◀H▶ ▶B◀ 32. Lower bearing
- ◀I▶ ▶B◀ 33. Needle bearing
- ◀J▶ ▶A◀ 34. Oil seal
- 35. Gear housing

**LUBRICANT AND SEALANT APPLICATION POINTS**

Same as before.

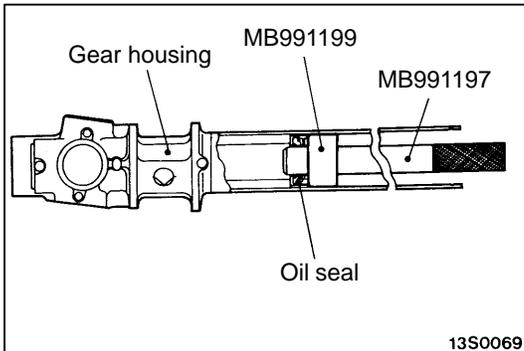
**DISASSEMBLY SERVICE POINT**

Follow the conventional procedures.

**REASSEMBLY SERVICE POINTS**

Follow the conventional procedures except followings.

**▶A◀ OIL SEAL INSTALLATION**

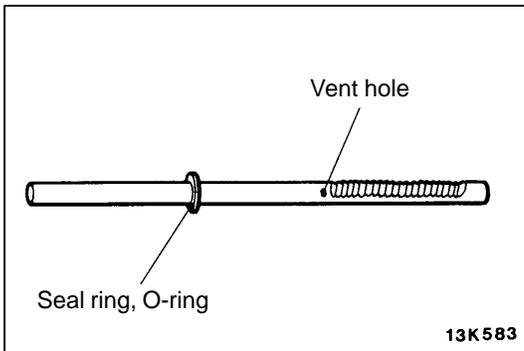


**▶C◀ RACK ASSEMBLY INSTALLATION**

- (1) Apply a coating of repair kit grease to the rack tooth face.

**Caution**

**Do not close the vent hole in the rack with grease.**



- (2) Cover rack serrations with special tool.
- (3) Apply the specified fluid on the special tool, seal ring and O-ring surfaces.

**Specified fluid:**

**MITSUBISHI GENUINE ATF II**

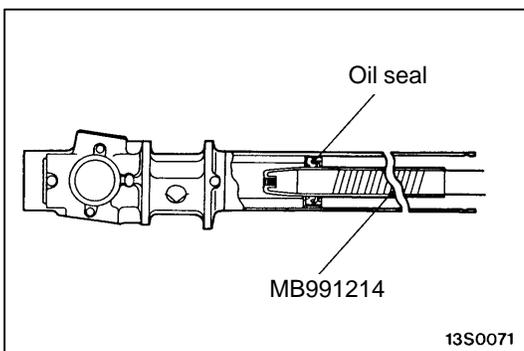
**Caution**

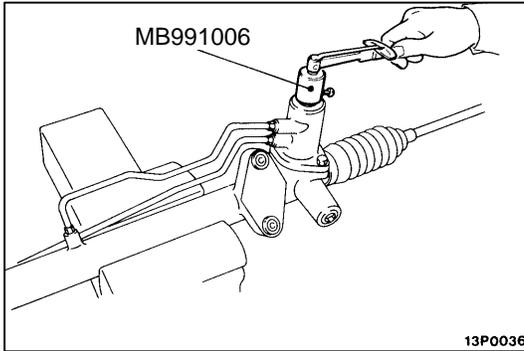
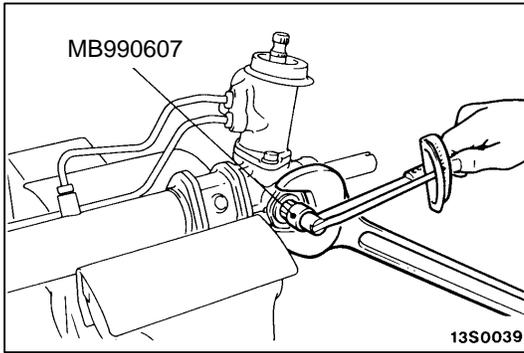
**Do not use ATF-SP II.**

- (4) Slowly insert the special tool-covered rack into the gear housing from power cylinder side.

**Caution**

**When inserting the rack, align the oil seal center with the tip of the special tool to prevent the retainer spring from slipping.**





**▶J◀ ADJUSTMENT OF PINION TOTAL TURNING TORQUE**

- (1) With special tool, tighten rack support cover to 15 Nm {1.5 kgf·m}.
- (2) Return rack support cover approx. 30°.

- (3) Using the special tools, rotate the pinion shaft at the rate of one rotation in approximately 4 to 6 seconds to check that the turning torque and the torque fluctuation confirm to the standard values.

**Standard value:**

**Pinion total turning torque**

**0.9 – 1.7 Nm {9 – 17 kgf·cm}**

**Torque fluctuation 0.4 Nm {4 kgf·cm} or less**

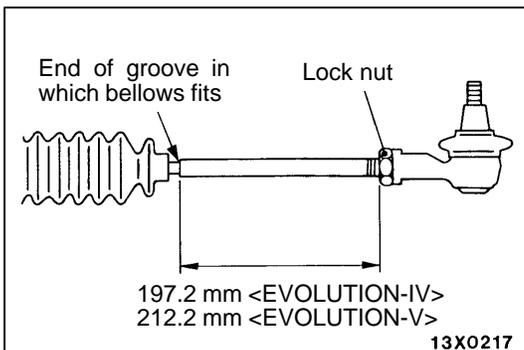
- (4) If either the turning torque or the torque fluctuation deviates from the standard value, turn back the rack support cover within the range of 0 to 30° to adjust it for the standard value.

**Caution**

1. When adjusting, set the standard value at its highest value.
2. Assure no ratcheting or catching when operating rack towards the axial direction.
3. Be sure to measure the turning torque through the whole stroke of the rack.

**NOTE**

If the standard value cannot be obtained by turning back the rack support cover within the specified angle range, check rack support cover components and replace as required.



**▶N◀ TIE ROD END / LOCK NUT INSTALLATION**

Turn down the tie rod until the dimension shown in the illustration is reached; then, temporarily tighten the lock nut.

**NOTE**

The lock nut is to be tightened to the specified torque after toe-in has been adjusted with the steering gear & linkage mounted in the vehicle.

# POWER STEERING OIL PUMP

<EVOLUTION-IV>

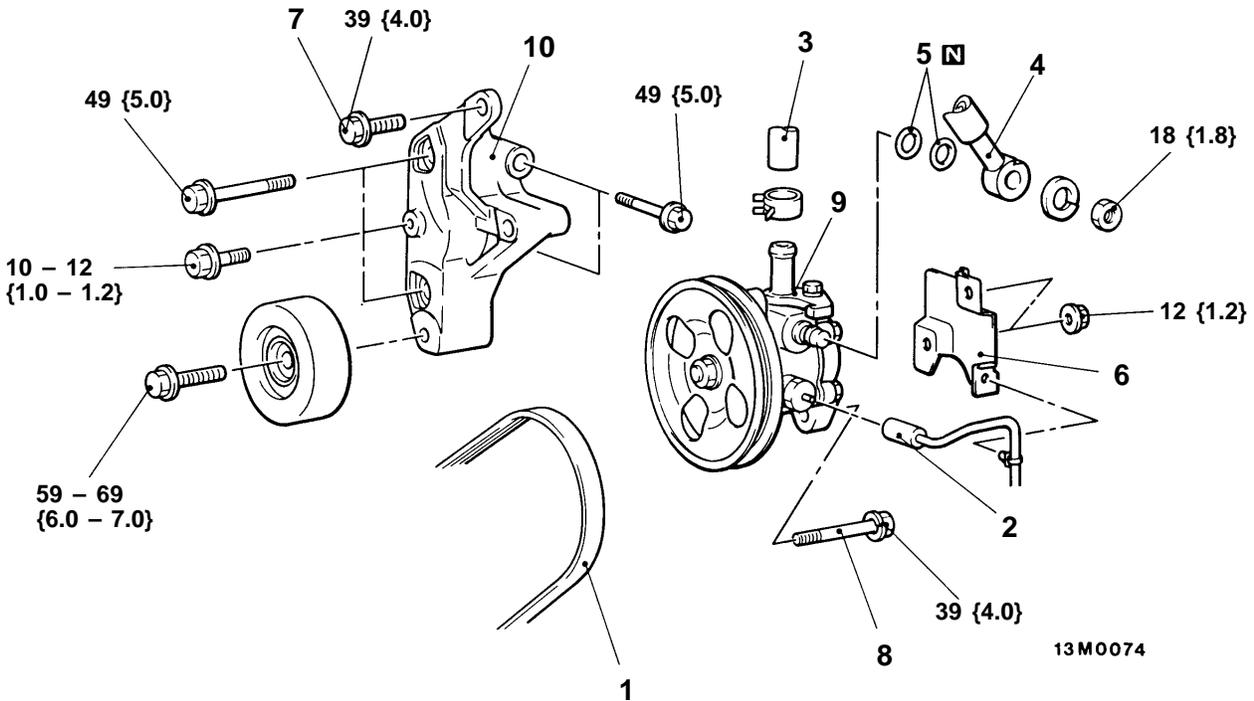
## REMOVAL AND INSTALLATION

**Pre-removal Operation**

- Power Steering Fluid Draining

**Post-installation Operation**

- (1) Power Steering Fluid Supplying
- (2) Drive Belt Tension Adjusting  
(Refer to GROUP 11 – On-vehicle Service.)



Unit: Nm {kgf · m}

**Removal steps**

1. Drive belt
2. Pressure switch connector
3. Suction hose
4. Pressure hose
5. O-ring
6. Heat protector
7. Bolt
8. Bolt
9. Oil pump assembly
10. Oil pump bracket

## &lt;EVOLUTION-V&gt;

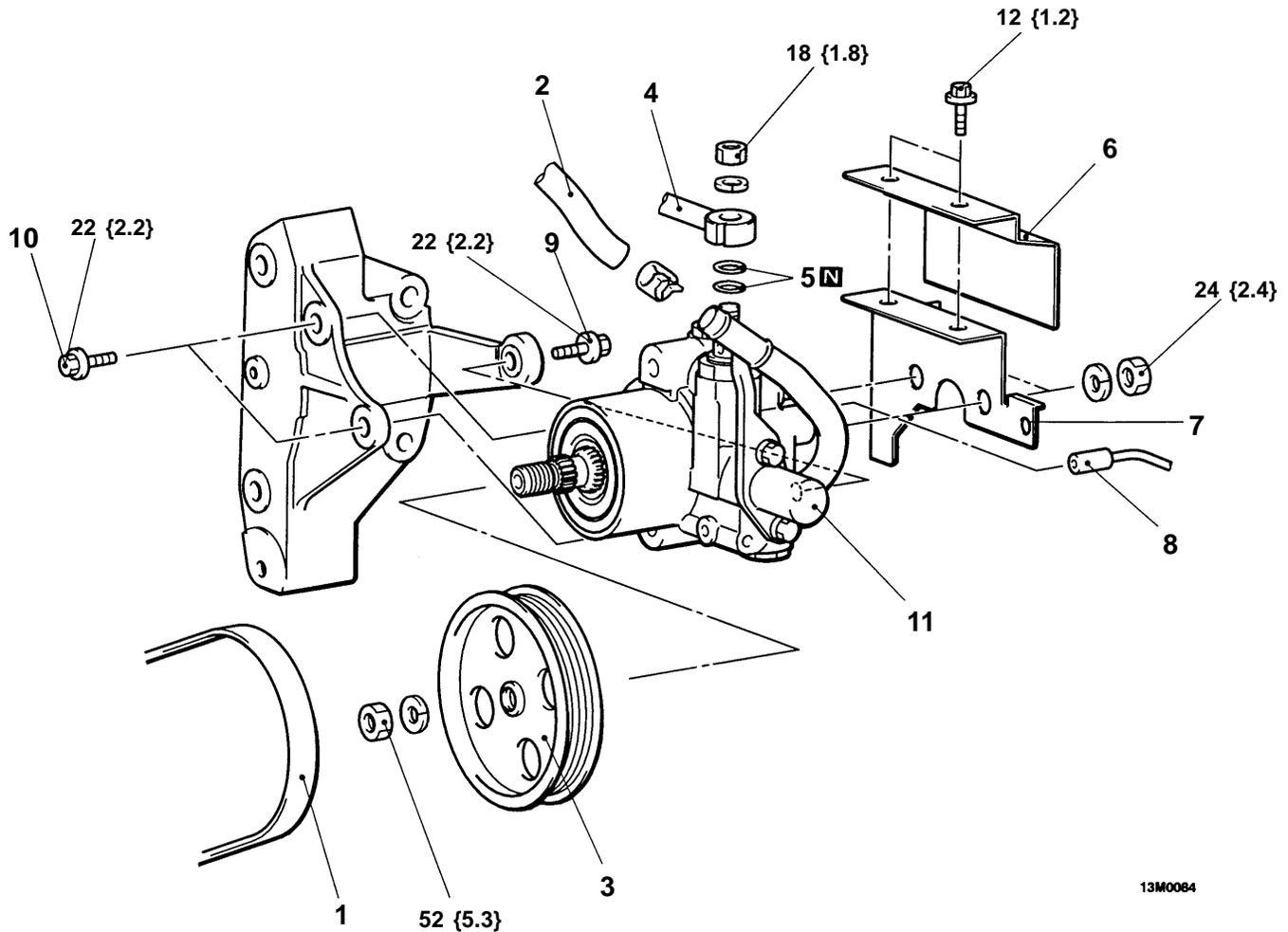
## REMOVAL AND INSTALLATION

**Pre-removal Operation**

- Power Steering Fluid Draining

**Post-installation Operation**

- (1) Power Steering Fluid Supplying
- (2) Drive Belt Tension Adjusting
- (3) Power Steering Fluid Line Bleeding



13M0084

Unit: Nm {kgf·m}

**Removal steps**

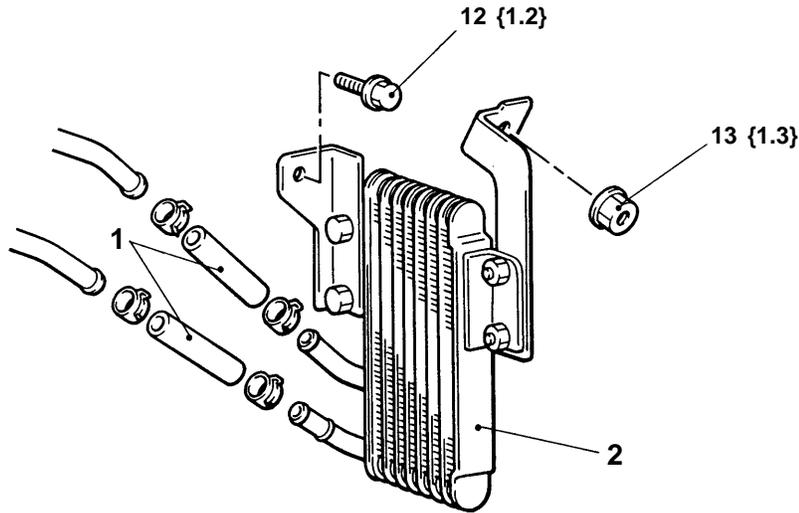
1. Drive belt
2. Suction hose
3. Pulley
4. Pressure hose
5. O-ring
6. Heat protector A
7. Heat protector B
8. Pressure switch connector
9. Bolt
10. Bolt
11. Oil pump assembly

# POWER STEERING FLUID COOLER

## REMOVAL AND INSTALLATION

**Pre-removal and Post-installation Operation**

- (1) Power Steering Fluid Draining and Refilling
- (2) Front Bumper Removal and Installation  
(Refer to GROUP 51.)



13M0073

Unit: Nm {kgf·m}

**Removal steps**

1. Cooler hose
2. Power steering fluid cooler