
STEERING

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GENERAL

OUTLINE OF CHANGES

- Vehicles with a 4G64 engine have been lined up and the power steering pump modified. Accordingly, the following service procedures have been revised <Petrol-powered vehicles>:
 - (1) STEERING ANGLE CHECK <4G64>
 - (2) OIL PUMP PRESSURE TEST <4G63, 4G64>
 - (3) POWER STEERING OIL PUMP REMOVAL AND INSTALLATION
 - (4) POWER STEERING OIL PUMP DISASSEMBLY AND ASSEMBLY
 - (5) POWER STEERING HOSE REMOVAL AND INSTALLATION

SERVICE SPECIFICATIONS

Items		Standard value	Limit
Steering angle <4G64>	Inner wheel	38°00' ± 2° <L.H. drive vehicles> 39°00' ± 2° < R.H. drive vehicles>	—
	Outer wheel	30°30'	—
Oil pump pressure <4G63, 4G64> MPa	Oil pump relief pressure	9.3 – 9.8	—
	Pressure under no-load conditions	0.8 – 1.0	—
	Steering gear retention hydraulic pressure	9.3 – 9.8	—

ON-VEHICLE SERVICE

STEERING ANGLE CHECK <4G64>

Standard values have been set as follows. Still, inspection procedures are the same as before.

Standard value:

Inner wheel

38°00' ± 2° <L.H. drive vehicles>

39°00' ± 2° <R.H. drive vehicles>

Outer wheel 30°30'

OIL PUMP PRESSURE TEST <4G63, 4G64>

Standard values have been set as follows. Still, inspection procedure is the same as before.

Standard value:

Oil pump relief pressure 9.3 – 9.8 MPa

Unladen condition pressure 0.8 – 1.0 MPa

Steering gear holding pressure 9.3 – 9.8 MPa

POWER STEERING OIL PUMP <Petrol-powered vehicles>

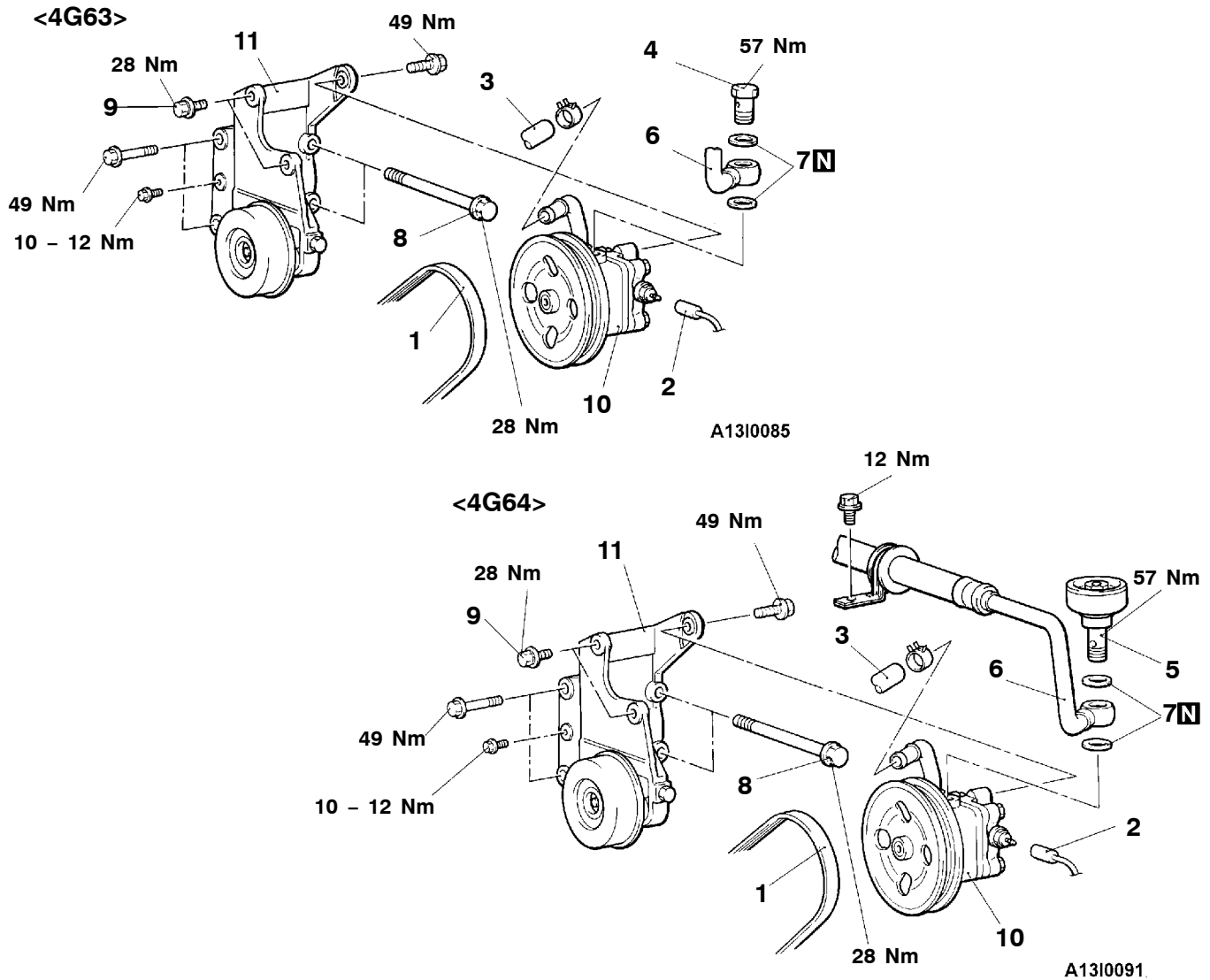
REMOVAL AND INSTALLATION

Pre-removal Operation

- Power Steering Fluid Draining
- Condenser Fan Motor Assembly Removal <6A1>

Post-installation Operation

- Condenser Fan Motor Assembly Installation <6A1>
- Power Steering Fluid Supplying
- Drive Belt Tension Adjusting
(Refer to GROUP 11 – On-vehicle Service.)
- Power Steering Fluid Line Bleeding
- Oil Pump Pressure Check (Refer to P.37A-2.)

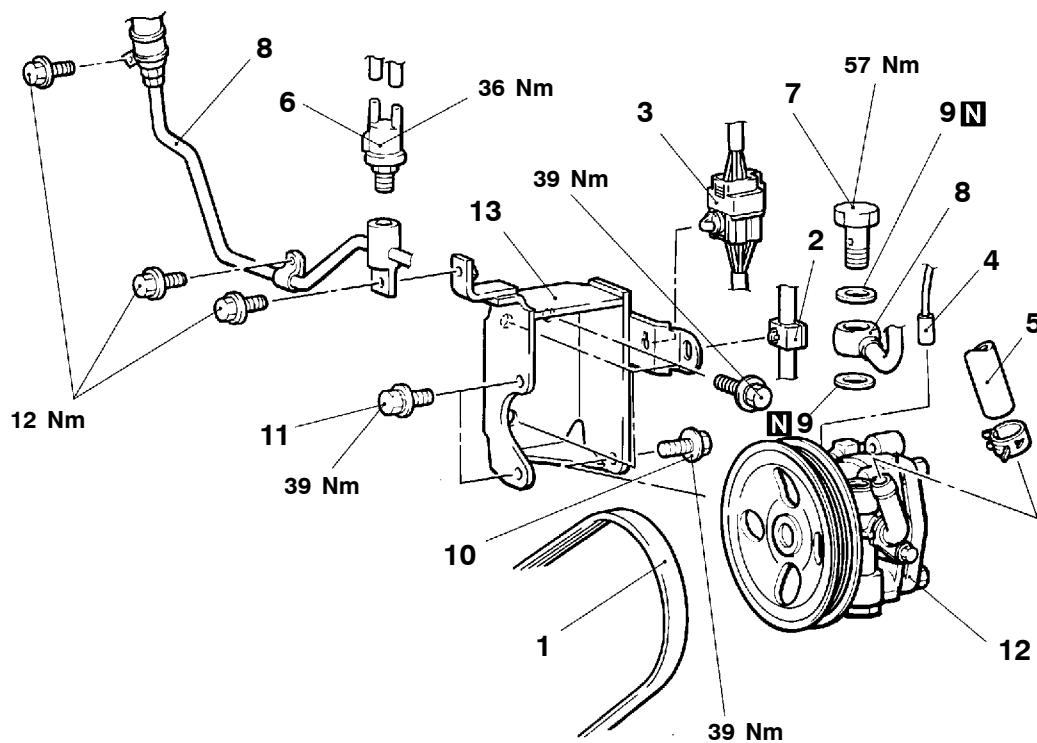


Removal steps

1. Drive belt
2. Pressure switch connector
3. Suction hose
4. Eye bolt
5. Accumulator
6. Pressure hose

7. Gasket
8. Bolt
9. Bolt
10. Oil pump
11. Oil pump bracket

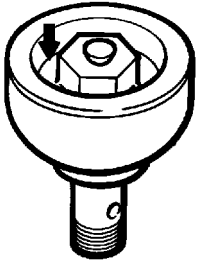
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Removal steps

- | | |
|--|----------------------|
| 1. Drive belt | 7. Eye bolt |
| 2. Power steering oil pressure switch connector harness clip | 8. Pressure hose |
| 3. Harness clip | 9. Gasket |
| 4. Pressure switch connector | 10. Bolt |
| 5. Suction hose | 11. Bolt |
| 6. Air control valve | 12. Oil pump |
| | 13. Oil pump bracket |



AV1333AE

REMOVAL SERVICE POINT**◀A▶ ACCUMULATOR REMOVAL**

Be sure to drill a hole in the position shown to discharge the packed gas when the accumulator is discarded.

Caution

1. **Never handle the accumulator in such ways as putting into fire, disassembling, pressing or welding as high-pressure gas is packed inside.**
2. **When drilling a hole in the accumulator, wear safety glasses against the possible scattering of metal particles by the gas.**

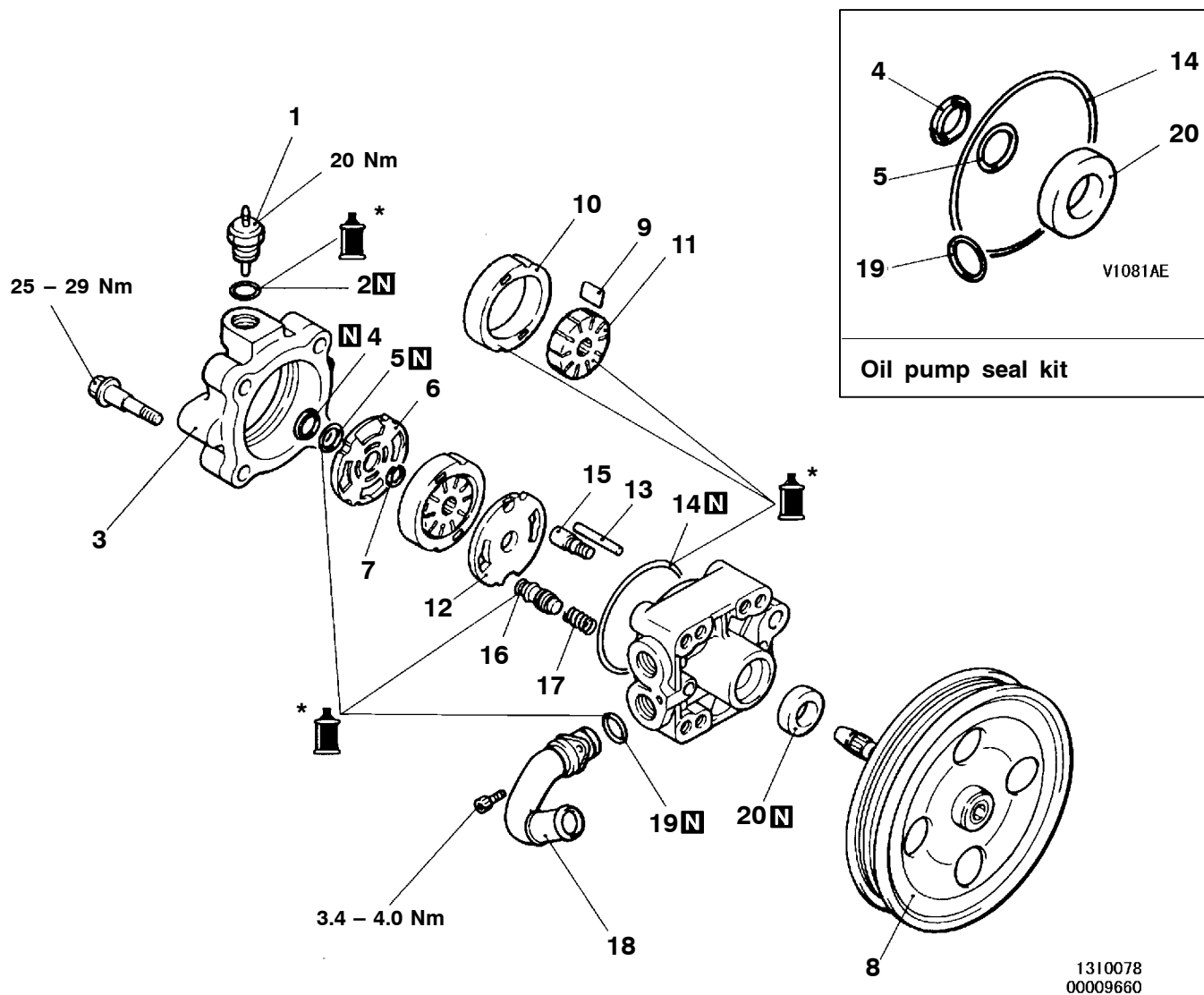
INSPECTION

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- Check the drive belt for cracks.
- Check the pulley assembly for uneven rotation.
- Check the accumulator for cracks and damage.

DISASSEMBLY AND REASSEMBLY

<4G63, 4G64>



NOTE

*: Automatic transmission fluid DEXRON or DEXRON II

Disassembly steps

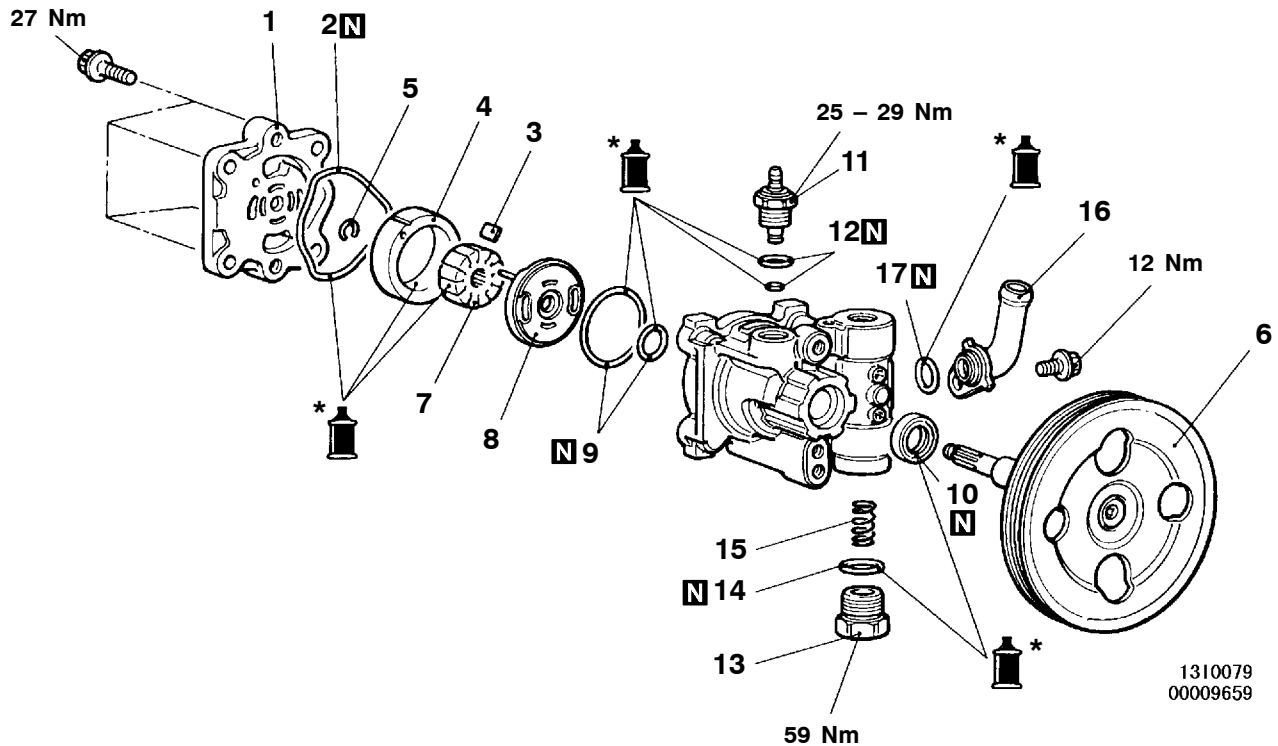
- 1. Terminal assembly
- 2. O-ring
- 3. Rear cover
- ▶A◀ 4. Back-up ring
- ▶E◀ 5. O-ring
- ▶D◀ 6. Side plate (Rear)
- ▶C◀ 7. Snap ring
- 8. Pulley and shaft
- 9. Vane
- 10. Cam ring
- 11. Rotor
- 12. Side plate (Front)

- 13. Lock pin
- 14. O-ring
- 15. Valve sub-assembly
- 16. Spool assembly
- 17. Spring
- 18. Suction connector
- ▶A◀ 19. O-ring
- ▶B◀ 20. Oil seal

Caution

Do not disassemble the terminal assembly and valve sub assembly which cannot be reassembled.

<6A13>



NOTE

*: Automatic transmission fluid DEXRON or DEXRON II

<p>V0558AE</p>	<p>V0557AE</p>	<p>V0556AE</p>
Oil pump seal kit	Oil pump cartridge kit	Oil pump pulley and shaft kit

Disassembly steps

- 1. Pump cover
- 2. O-ring
- 3. Vane
- 4. Cam ring
- 5. Snap ring
- 6. Pulley and shaft
- 7. Rotor
- 8. Side plate
- 9. O-ring
- 10. Oil seal
- 11. Terminal assembly

- ▶A◀ 12. O-ring
- ▶A◀ 13. Inner ring
- ▶A◀ 14. O-ring
- ▶A◀ 15. Flow control spring
- ▶A◀ 16. Suction connector
- ▶A◀ 17. O-ring

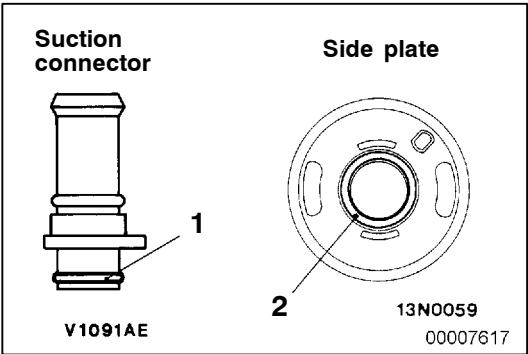
Caution

Do not disassemble the terminal assembly which cannot be reassembled.

REASSEMBLY SERVICE POINTS

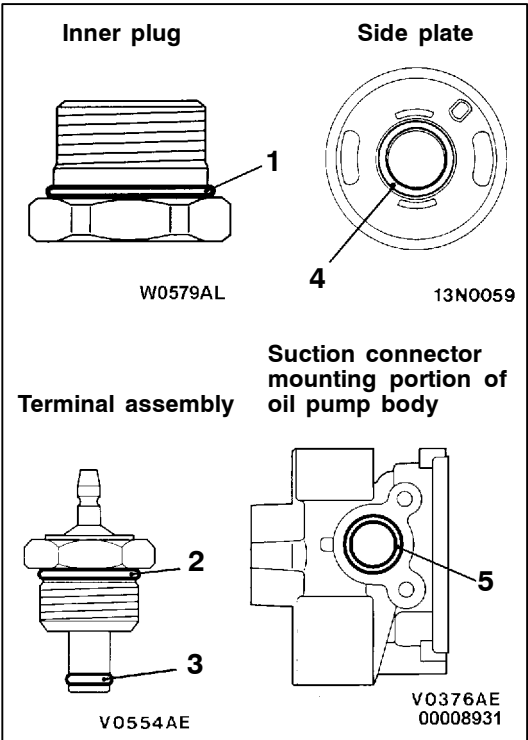
Reassemble in the same way as before other than the listed below.

►A◄ O-RING INSTALLATION



<4G63, 4G64>

No.	ID × Width mm
1	13.3 × 1.6
2	15.0 × 2.0



<6A13>

No.	ID × Width mm
1	19.8 × 2.4
2	14.8 × 1.9
3	3.8 × 1.9
4	14.8 × 2.4
5	15.8 × 2.4

POWER STEERING HOSES <Petrol-powered Vehicles>

REMOVAL AND INSTALLATION

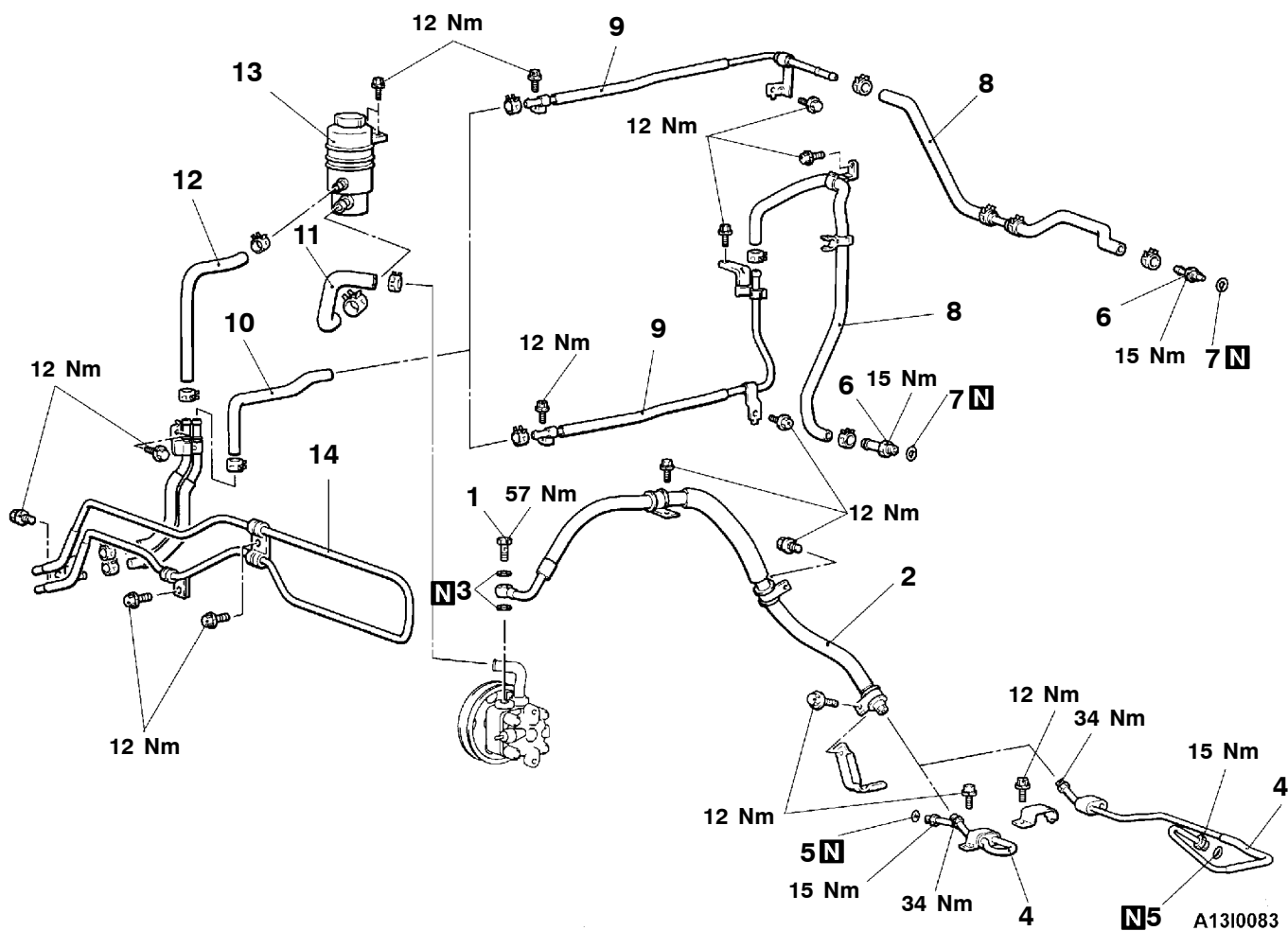
Pre-removal Operation

- Power Steering Fluid Draining
- Front Bumper Removal (Refer to GROUP 51.)

Post-installation Operation

- Front Bumper Installation (Refer to GROUP 51.)
- Power Steering Fluid Supplying
- Power Steering Fluid Line Bleeding

<4G63>

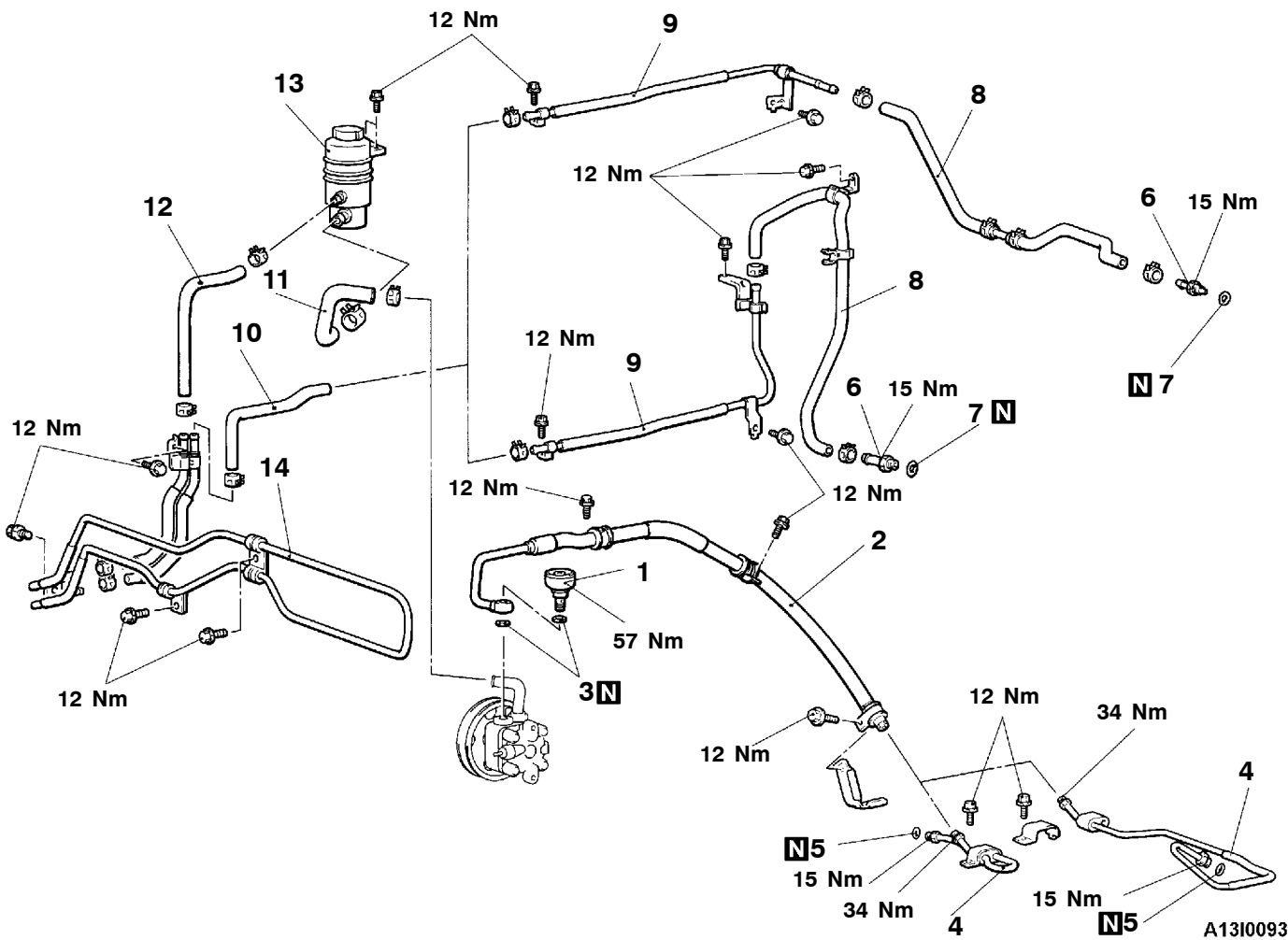


- ▶A◀**

1. Eye bolt
2. Pressure hose
3. Gasket
4. Pressure tube
5. O-ring
6. Return tube
7. O-ring

8. Return hose
9. Return tube
10. Return hose
11. Suction hose
12. Return hose
13. Oil reservoir
14. Cooler tube

<4G64>

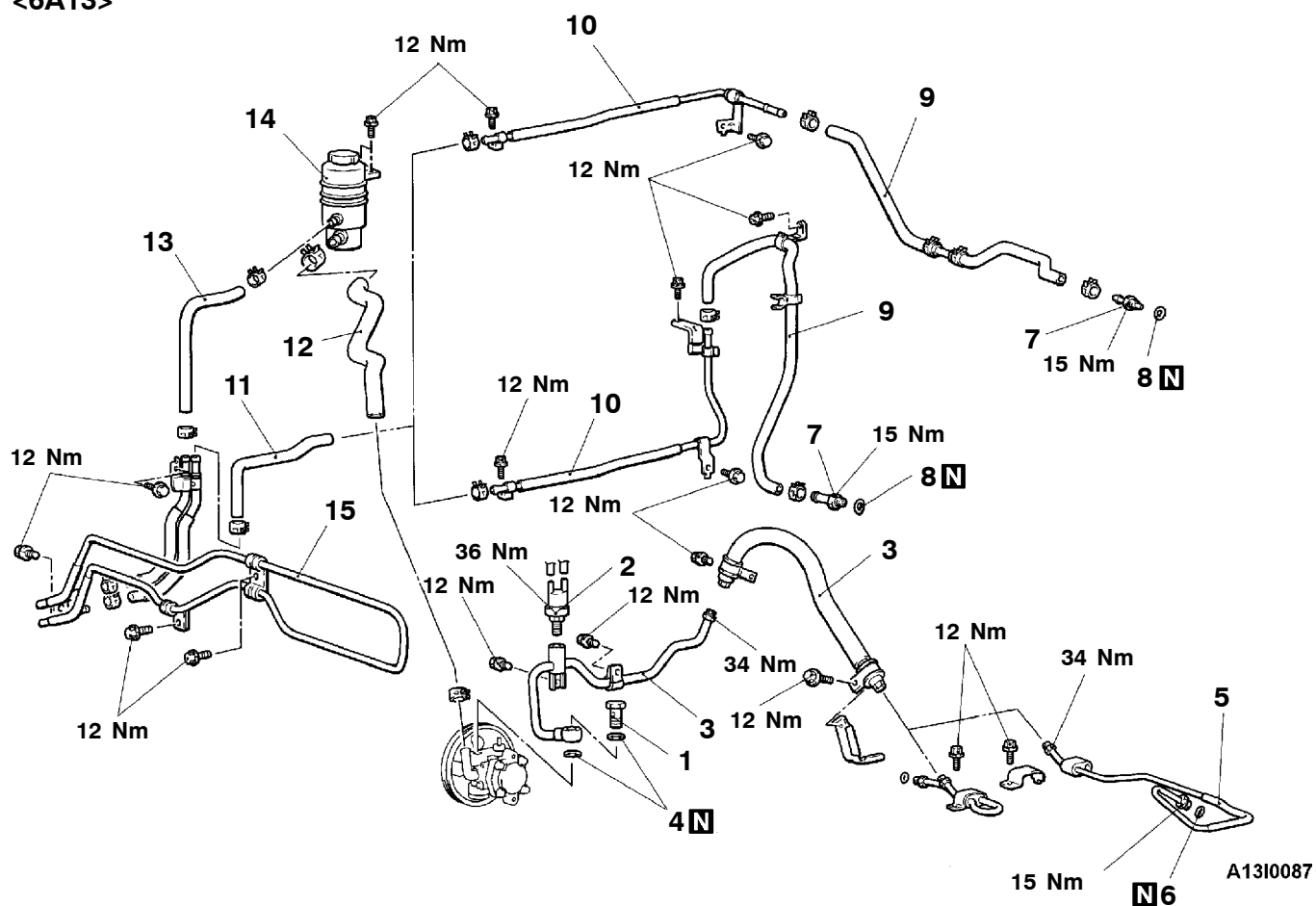


1. Accumulator
2. Pressure hose
3. Gasket
4. Pressure tube
5. O-ring
6. Return tube
7. O-ring

8. Return hose
9. Return tube
10. Return hose
11. Suction hose
12. Return hose
13. Oil reservoir
14. Cooler tube

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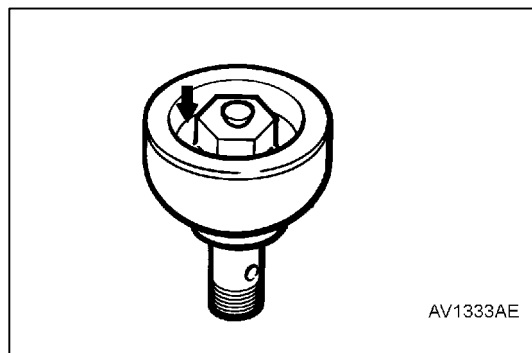
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►A◄

1. Eye bolt
2. Air control valve
3. Pressure hose
4. Gasket
5. Pressure tube
6. O-ring
7. Return tube
8. O-ring

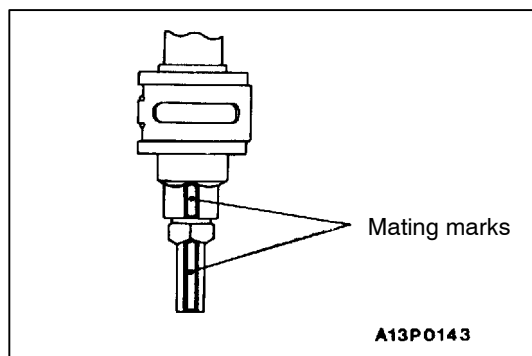
9. Return hose
10. Return tube
11. Return hose
12. Suction hose
13. Return hose
14. Oil reservoir
15. Cooler tube

**REMOVAL SERVICE POINT****◀A▶ ACCUMULATOR REMOVAL**

Be sure to drill a hole in the position shown to discharge the packed gas when the accumulator is discarded.

Caution

1. Never handle the accumulator in such ways as putting into fire, disassembling, pressing or welding as high-pressure gas is packed inside.
2. When drilling a hole in the accumulator, wear safety glasses against the possible scattering of metal particles by the gas.

**INSTALLATION SERVICE POINT****◀A▶ PRESSURE HOSE INSTALLATION**

Align the marks on the pressure hose and pressure pipe, and install the pressure hose.