

Pipe Assembly

POWER ASSISTED SYSTEM (POWER STEERING)

6. Pipe Assembly

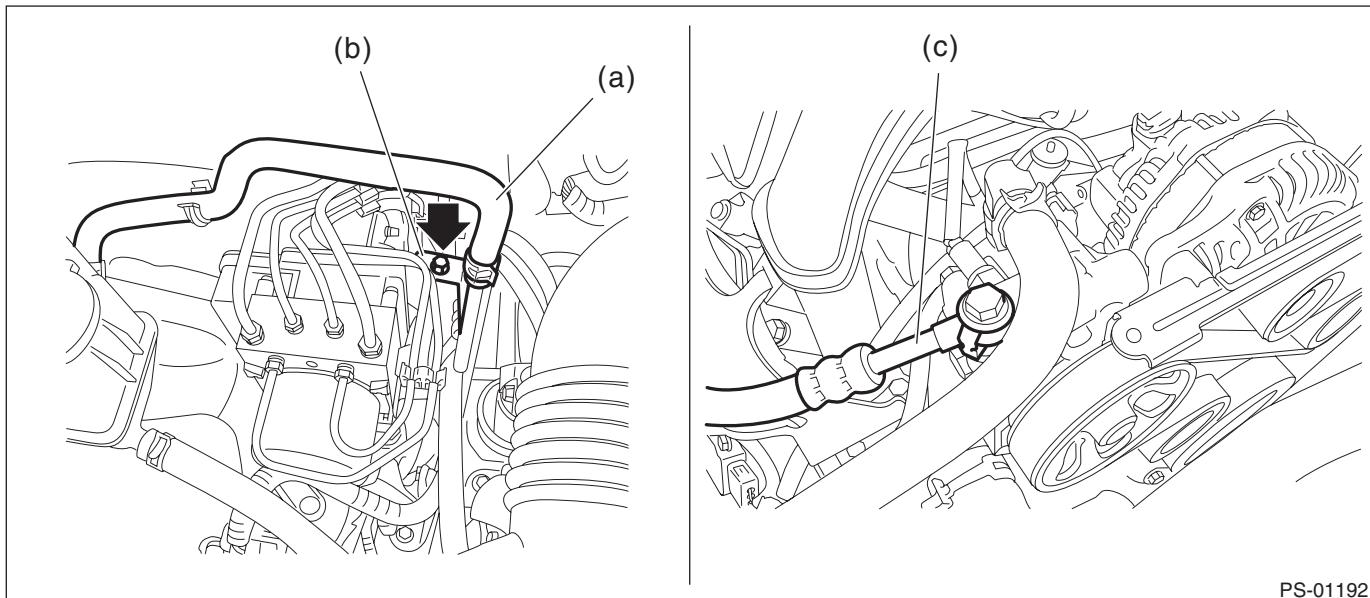
A: REMOVAL

- 1) Set the vehicle on a lift.
- 2) Remove the power steering hose bracket and power steering hose.

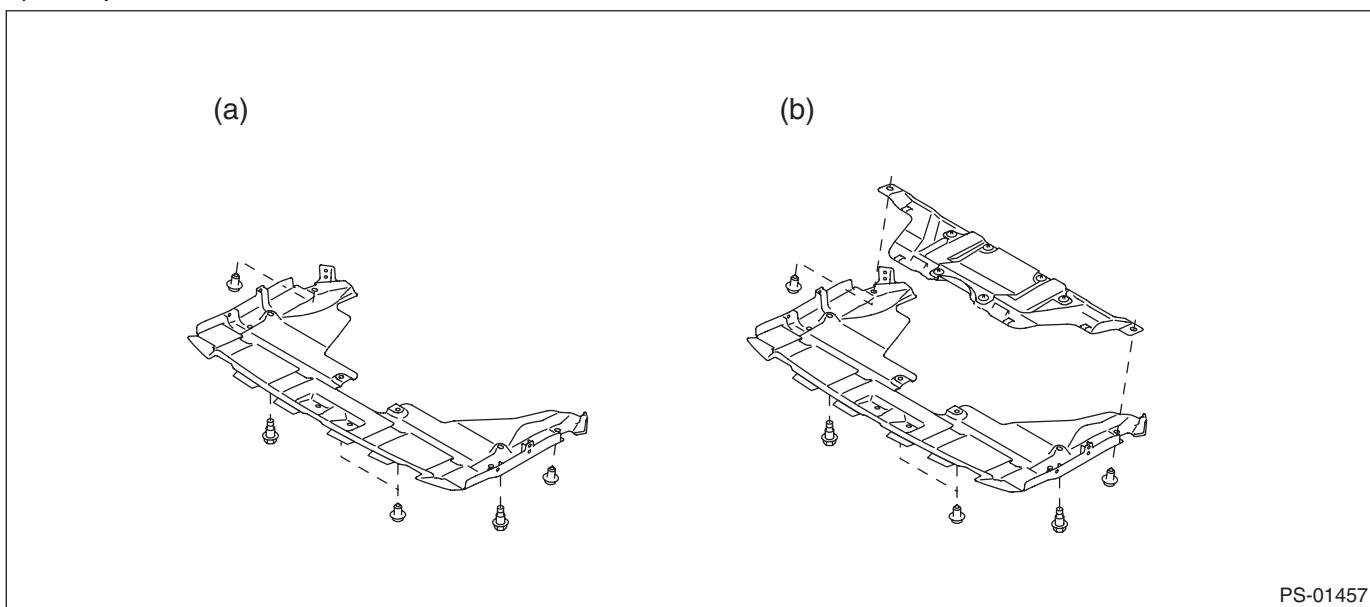
CAUTION:

Plug the removed hose and pipe to prevent foreign matter from entering.

- (1) Remove the clip and disconnect the hose (a) from the pipe.
- (2) Remove the power steering hose bracket (b).
- (3) Remove the hose (c) from power steering pump.



- 3) Lift up the vehicle, and then remove the under cover.



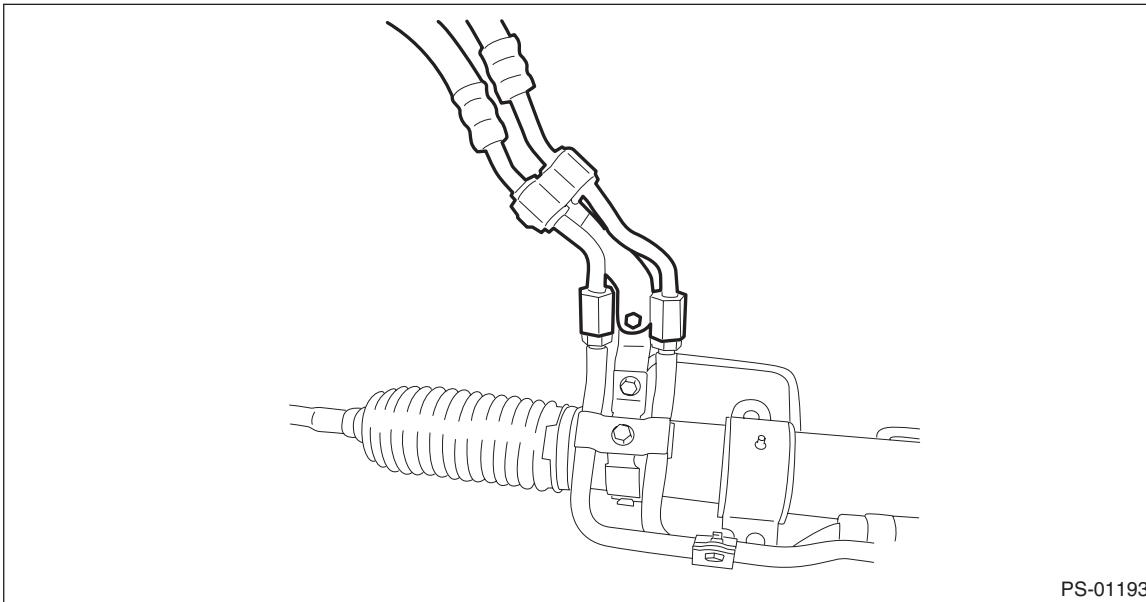
(a) Small type

(b) Medium type

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- 4) Disconnect the hose assembly from the steering gearbox.



B: INSTALLATION

- 1) Install each part in the reverse order of removal.

Tightening torque:

Refer to “COMPONENT” of “General Description”. <Ref. to PS-5, HOSE AND TANK, COMPONENT, General Description.>

- 2) Fill with recommended power steering fluid and perform air bleeding. <Ref. to PS-76, Power Steering Fluid.>

CAUTION:

Never start the engine before filling with fluid; otherwise the vane pump may become seized.

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C: INSPECTION

Check all disassembled parts for wear, damage or other problems. Repair or replace the defective parts as necessary.

Part	Maintenance parts	Corrective action
Pipe	<ul style="list-style-type: none">• O-ring fitting surface damage• Nut damage• Pipe damage	Replace with a new part.
Hose	<ul style="list-style-type: none">• Flare surface damage• Flare nut damage• Outer surface cracks• Outer surface wear• Clip damage• End coupling or adapter deformation	Replace with a new part.

CAUTION:

Although the surface layer materials of rubber hoses have excellent weathering resistance, heat resistance and resistance for low temperature brittleness, they are likely to be damaged chemically by brake fluid, battery electrolyte, engine oil and automatic transmission fluid and their service lives are to be very shortened. Wipe off hoses immediately if any of these come into contact with the hoses. Since resistances for heat or low temperature brittleness are gradually declining according to time accumulation of hot or cold conditions for the hoses and their service lives are shortening accordingly, it is necessary to perform careful inspection frequently when the vehicle is used in hot weather areas, cold weather areas and a driving condition in which many steering operations are required in short time.

Continuous discharge of the relief valve for 5 seconds or more will reduce the service lives of hoses, oil pump, fluid, etc., due to over heating.

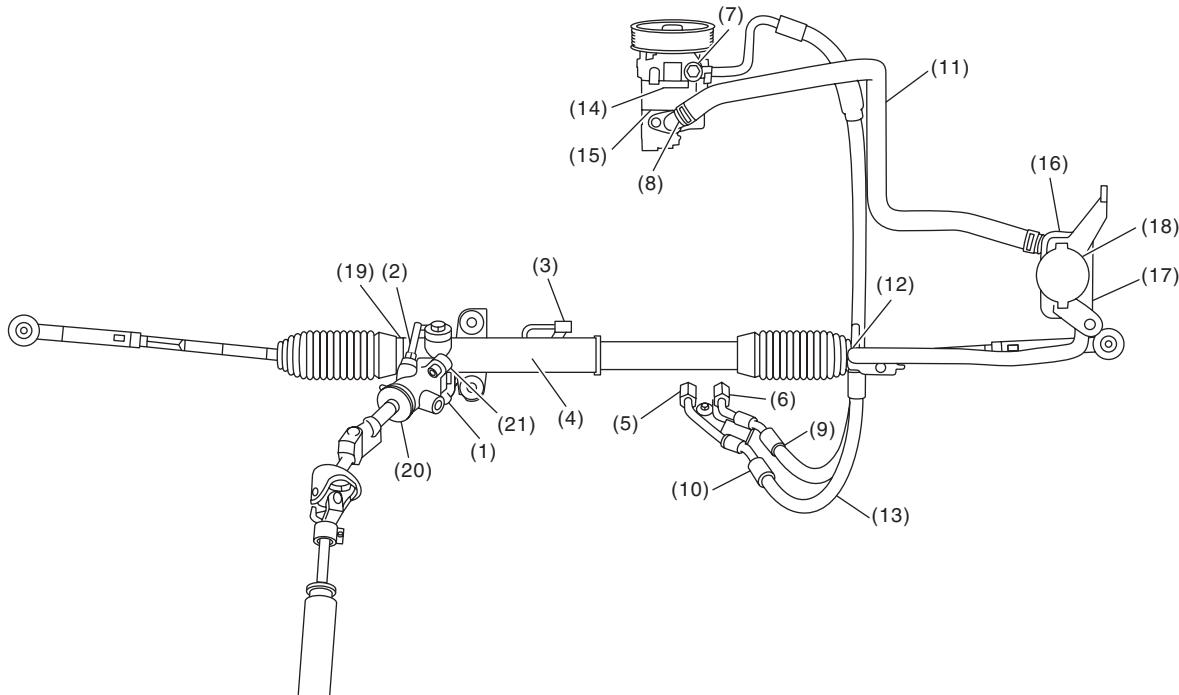
Trouble	Possible cause	Corrective action
Pressure hose burst	Excessive holding time of relief status	Instruct customers.
	Malfunction of the relief valve	Replace the oil pump.
	Poor cold characteristic of fluid	Replace fluid.
Disconnection of the suction hose or return hose	Improper connection	Repair.
	Loosening of the clip	Replace the hose and clip.
	Poor cold characteristic of fluid	Replace fluid.
Fluid slightly leaking out of hose	Wrong layout, tensioned	Replace the hose.
	Excessive play of engine due to deterioration of engine mounting rubber	Replace the parts if defective.
	Improper stop position of pitching stopper	Replace the parts if defective.
Crack on hose	Excessive holding time of relief status	Replace. Instruct customers.
	Power steering fluid, engine oil, electrolyte adhere on the hose surface	Replace. Be careful during service work.
	Too many uses in extremely cold weather	Replace. Instruct customers.

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NOTE:

There are conditions in which a fluid leak is diagnosed, but is not actually leaking. This is because the fluid spilt during the last maintenance was not completely wiped off. Be sure to wipe off spilt fluid thoroughly after maintenance.



PS-01069

Fluid leaking area	Possible cause	Corrective action
Leakage from the connections of pipes and hoses, numbered (1) through (8) in the figure	Insufficient tightening of flare nut, adhesion of dirt, damage to flare or flare nut or eye bolt	Loosen and retighten. Replace if ineffective.
	Improper installation of hose or clamp	Replace.
	Damaged O-ring or gasket	Replace the O-ring, gasket pipe or hose with new part, if still no improvement, replace the gearbox or oil pump as well.
Leakage from hose (9) through (13) in the figure	Crack or damage in hose	Replace with a new part.
	Crack or damage in hose hardware	Replace with a new part.
Leakage from surrounding of aluminum portion of oil pump, (14) and (15) in the figure	Damaged O-ring	Replace the oil pump.
	Damaged gasket	Replace the oil pump.
Leakage from oil tank, (16) and (17) in the figure	Crack in oil tank	Replace the oil tank.
Leakage from filler neck of (18)	Damaged cap gasket	Replace the cap.
	Crack in root of filler neck	Replace the oil tank.
	Fluid level too high	Adjust the fluid level.
Leakage from power cylinder of gearbox area (19) in the figure	Damaged oil seal	Replace the oil seal.
Leakage from (20), (21) in the figure and control valve of gearbox	Damaged gasket or oil seal	Replace the faulty parts.
	Damage in control valve	Replace the control valve.