

# Power Steering Pump



## Removal

NOTE: Before disconnecting the hoses from the pump, place a suitable container under the car.

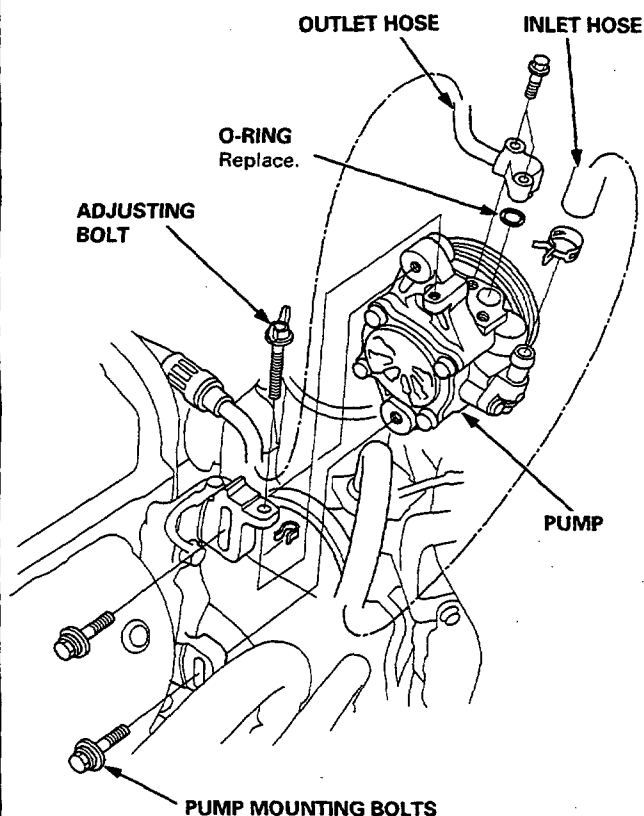
1. Drain the power steering fluid from the reservoir.
2. Remove the belt by loosening the pump adjusting bolt and mounting bolts.
3. Disconnect the inlet and outlet hoses from the pump and plug the hoses.

NOTE: Take care not to spill the fluid on the body or parts. Wipe off spilled fluid at once.

4. Remove the pump mounting bolt, then remove the pump.

NOTE: Do not turn the steering wheel with the pump removed.

5. Wrap the opening of the pump with a piece of tape to prevent any foreign material. See page 17-44 for pump installation.



## Disassembly

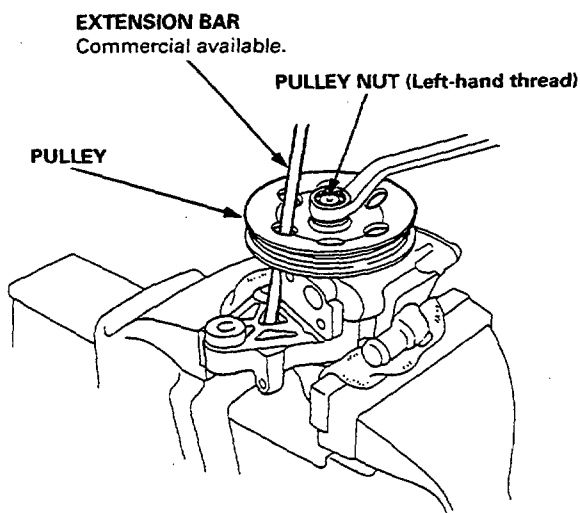
### Pulley Removal

1. Drain the fluid from the pump.
2. Hold the steering pump in a vise with soft jaws.

**CAUTION:** Be careful not to damage the pump housing with the jaws of the vise.

3. Hold the steering pump pulley with an extension bar and remove the pulley nut.
4. Remove the pulley.

NOTE: Pulley nut has left hand thread.



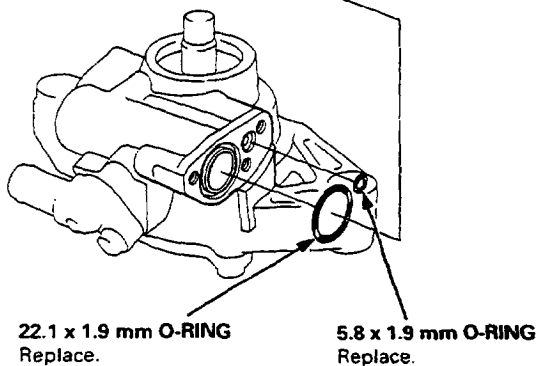
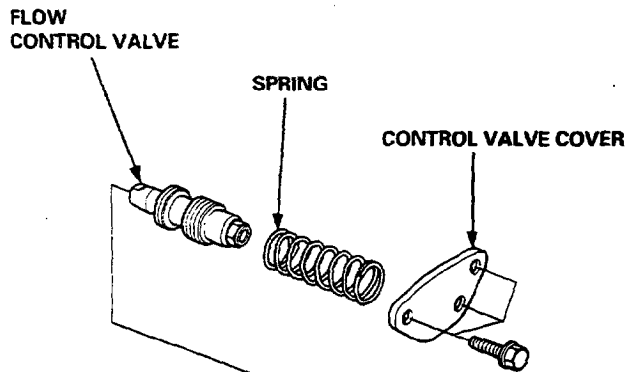
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# Power Steering Pump

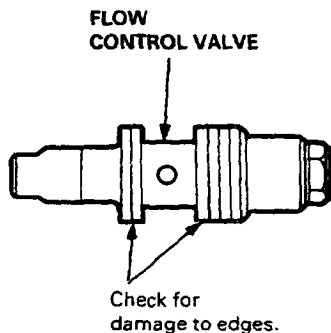
## Disassembly (cont'd)

### Flow Control Valve Removal/Inspection

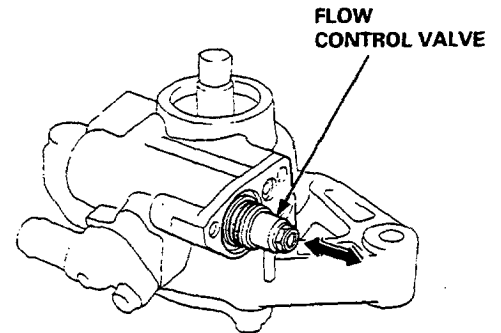
1. Remove the control valve cover by removing the three flange bolts.
2. Remove the spring, flow control valve and O-rings.



3. Check the flow control valve for wear, burrs, and other damage to the edges of the grooves in the valve.

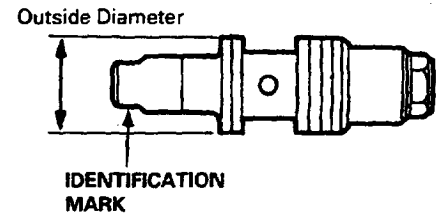


4. Inspect the bore for the flow control valve for scratches or wear.
5. Slip the valve back in the pump and check that it moves in and out smoothly.



— If OK, go on step 6, if not replace the valve and recheck the valve movement.

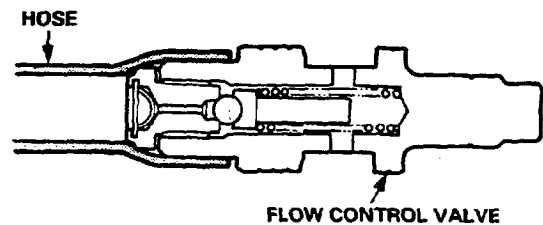
NOTE: The original valve was selected for a precise fit in the pump housing bore, so make sure the new one has the same identification mark.



Mark	Part Name	Outside Diameter mm (in)
A	FLOW CONTROL VALVE A	17.991 – 17.996 (0.7083 – 0.7085)
B	FLOW CONTROL VALVE B	17.996 – 18.001 (0.7085 – 0.7087)

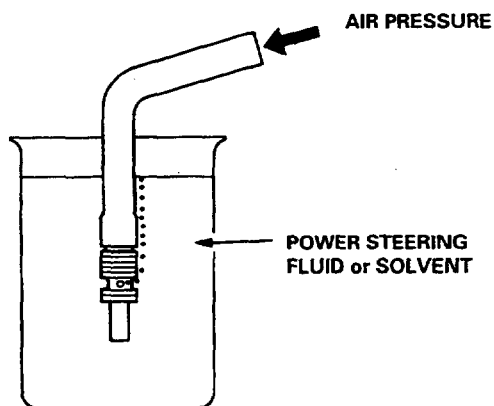
— If the valve movement still incorrect, replace the pump as an assembly.

6. Attach a hose to the end of the valve as shown.

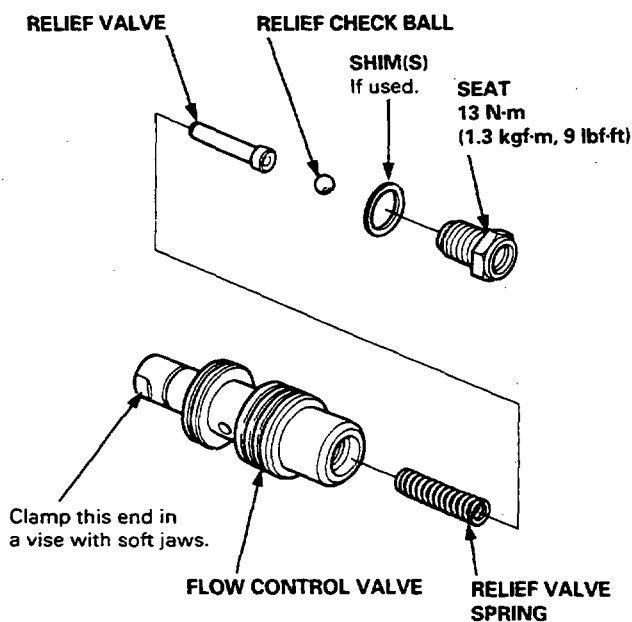




7. Submerge the valve in a container of power steering fluid or solvent, and blow in the hose. If air bubbles leak through the valve at less than 100 kPa (1.0 kgf/cm<sup>2</sup>, 14.2 psi), replace or repair it as follows.



8. Hold the bottom end of the valve with an open end wrench.
9. Unscrew the seat in the top end of the valve, and remove any shims, the relief check ball, relief valve and relief valve spring.



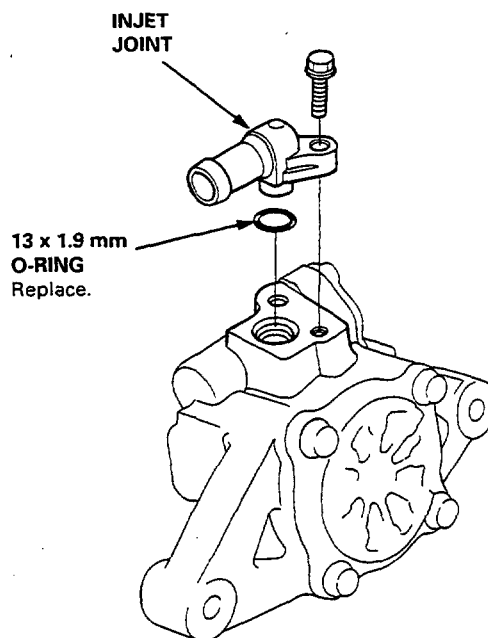
10. Clean all the parts in solvent, dry them off, then reassemble and retest the valve. See page 17-43 for flow control valve installation.

**NOTE:** If necessary, relief pressure is adjusted at the factory by adding shims under the check ball seat. If you found shims in your valve, be sure you reinstall as many as you took out.

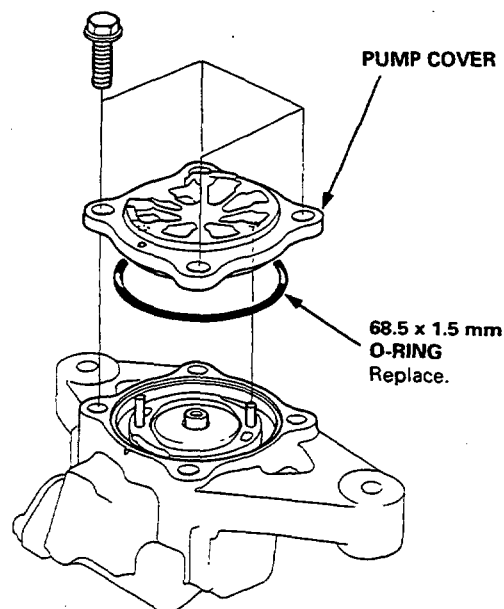
## Pump Rotor Removal

**CAUTION:** The pump components are made of aluminum. Be careful not to damage them when servicing.

1. Remove the inlet joint and O-ring.



2. Remove the pump cover and O-ring.



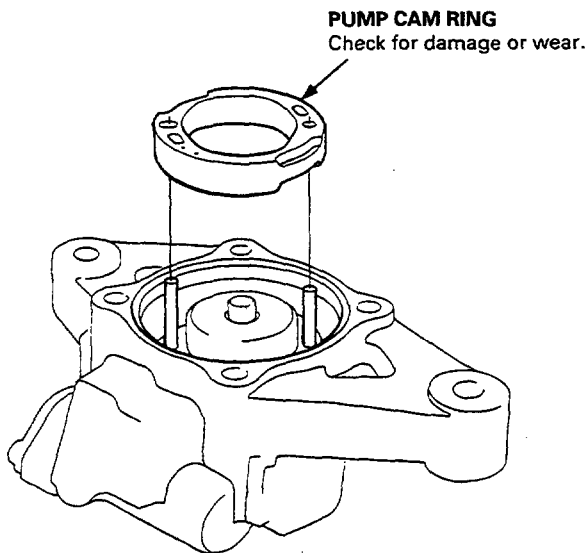
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# Power Steering Pump

## Disassembly (cont'd)

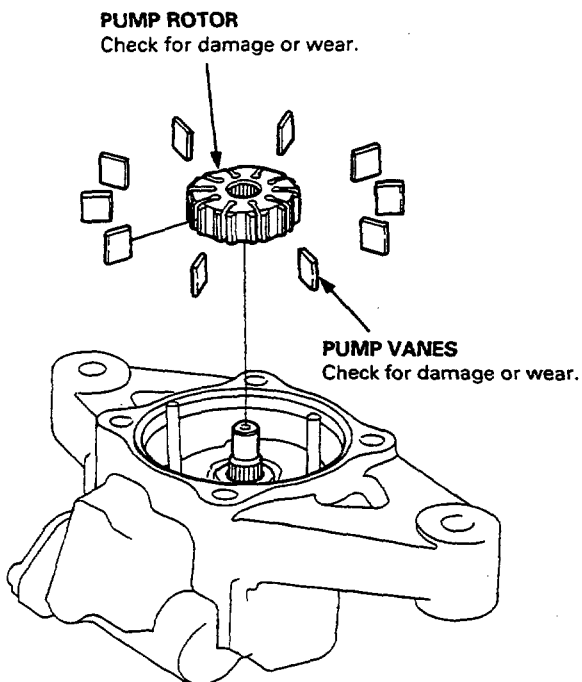
3. Remove the pump cam ring from the pump housing.

NOTE: Replace the pump as an assembly, if the cam ring must be replaced.



4. Remove the pump rotor and vanes.

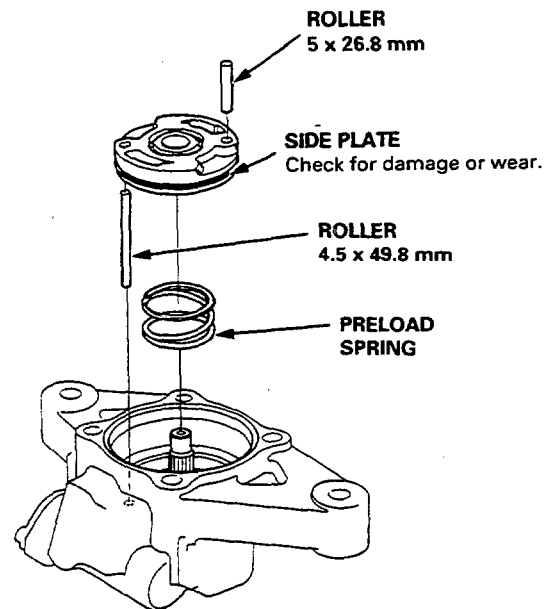
NOTE: Replace the pump as an assembly, if the pump rotor or vanes must be replaced.



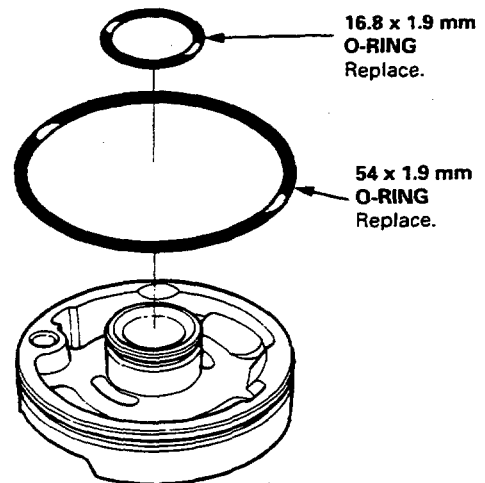
5. Remove the two rollers from the side plate.

6. Remove the side plate and preload spring.

NOTE: Replace the pump as an assembly, if the side plate must be replaced.

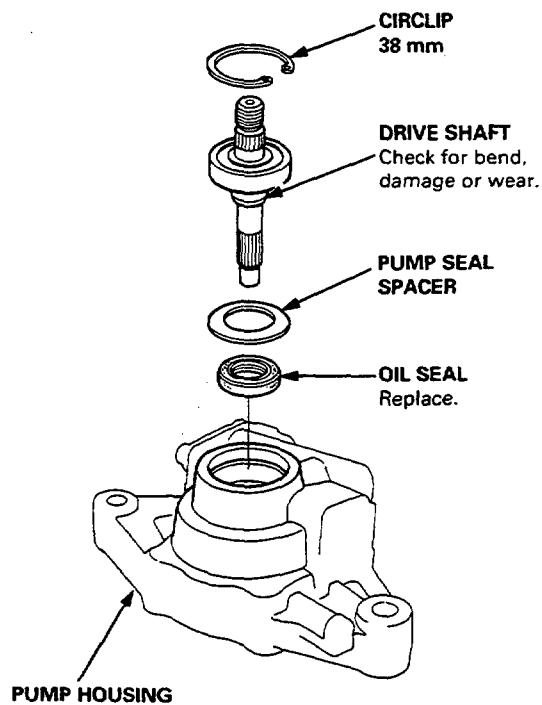


7. Remove the O-rings from the side plate.

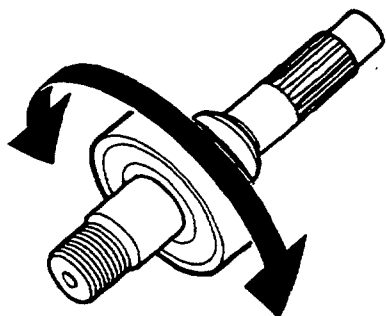




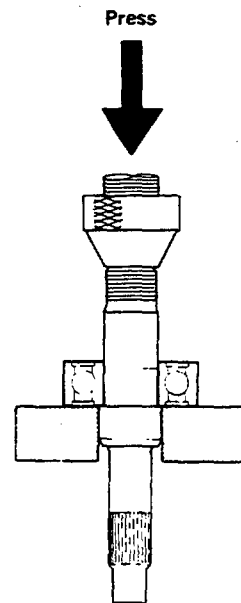
8. Remove the circlip, then remove the drive shaft assembly from the pump housing using a plastic hammer.
9. Remove the seal spacer and oil seal.
10. Inspect the pump housing for damage on the sealing surfaces.



11. Inspect the bearing by rotating the outer race slowly. If any play or roughness is felt, replace the bearing.



12. Remove and discard the bearing using a press.



13. Install the new bearing using a press.

