

# POWER STEERING CONTROL VALVE INSTRUCTIONS

## \*\*\*\*\*Important\*\*\*\*\*

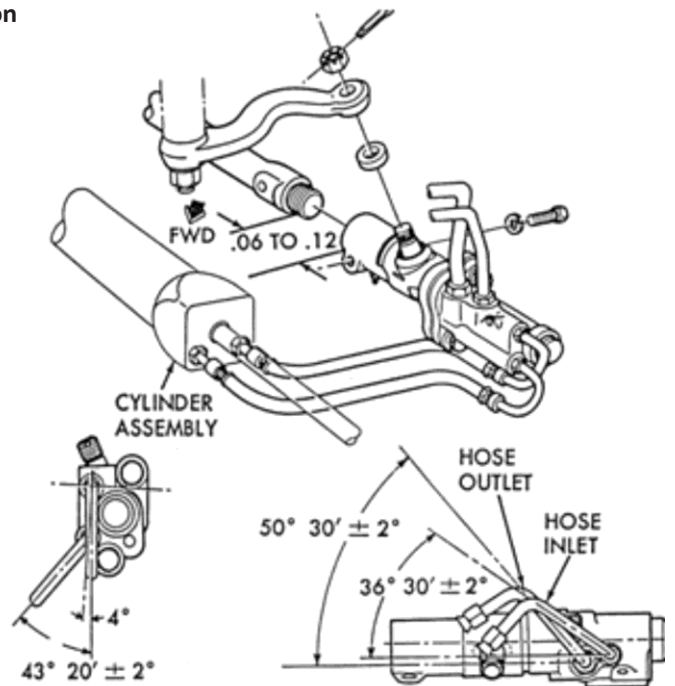
The power steering control valve has been carefully inspected, tested and adjusted to factory specifications. DO NOT add grease as additional grease will void warranty. Please read instructions prior to installation.

### Removal

- Raise the vehicle off the ground and place it securely on jack stands.
- Remove the relay rod to control valve clamp bolt. This 9/16" pinch bolt secures the valve to the relay rod.
- Use a flare nut wrench to disconnect the two pump to control valve hose connections and allow fluid to drain into a catch pan, then disconnect the two remaining valve to power cylinder hoses.
- Remove the control valve ball stud to pitman arm nut and cotter pin. Disconnect the control valve from the pitman arm with a pickle fork tool (tie rod separating fork).
- Turn the pitman arm to the right to clear the control valve and unscrew the valve from the relay rod.
- For the purpose of balancing the power steering valve upon installation, it is also recommended to disconnect the power steering cylinder rod from the frame bracket.

### Installation

- Install the control valve on the vehicle by reversing the removal procedure. Thread the control valve onto the rod until it bottoms out and then back-off until the stud aligns with the pitman arm. There should be between .06" and .12" clearance.
- Install ball stud shaft into pitman arm. Tighten castle nut to 45 lb. ft. and install cotter pin.
- Install pinch bolt being certain that it aligns properly with the machined slot in the relay rod. Torque to 25 lb. ft.
- Reconnect the power steering lines to the control valve. Ensure proper installation with the diagram below. Hoses installed out of position may be subject to chafing. Do not twist hoses unnecessarily during installation.
- Fill the power steering pump reservoir with power steering fluid and let oil remain undisturbed for at least 2 minutes. Start engine and run only for about two seconds. Add oil if necessary. Repeat procedure until fluid level remains constant after running engine.



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## Valve Balancing

- The control valve must be adjusted after installation.
- Remove the dust cap on the end of the control valve. The adjusting nut will be visible.
- With car on a hoist or jack stands, start the engine. One of the following two conditions will exist:
  - If the piston rod remains retracted, turn the adjusting nut clockwise until the rod begins to move out. Then turn the nut counterclockwise until the rod just begins to move in. Now turn the nut clockwise to exactly one-half the rotation needed to change the direction of the piston rod movement.
  - If the rod extends upon starting the pump, move the nut counterclockwise until the rod begins to retract, then clockwise until the rod begins to move out again. Now position the rod to exactly one-half the rotation needed to change the direction of the piston rod movement.
- Do not turn the nut back and forth more than is absolutely necessary to balance the valve. With the valve balanced, it should be possible to move the rod in and out manually.
- Turn the engine off and connect the cylinder rod to the frame bracket. Torque castle nut to 23lb. ft. and install cotter pin.
- Restart the engine with the vehicle on the jack stands. If the front wheels do not turn in either direction from center, the control valve has been properly balanced. Turn the steering wheels from lock to lock a minimum of two times. This will bleed any remaining air out of the power steering system. Please do not put your hands through the steering at this time, turn from the outer steering wheel ring.
- If the wheel turns the opposite direction after getting to the lock, adjust the adjusting nut the opposite direction 1/10 of a turn until you can turn from lock to lock without any reaction.
- Replace dust cap over adjusting nut.
- Check oil level in the reservoir when oil is at operating temperature. Add fluid to proper level.