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GETTING THE AIR OUT! STEERING SYSTEM AIR REMOVAL PROCEDURE

When you replace a component in your power steering system, there will be large pockets of air that need to be expelled from the system and replaced by power steering fluid. The air must be removed in order for your power assist to function correctly. Here is a big tip! You want to get as much air out of your power steering system as you can BEFORE you start the engine. If you immediately start the engine, power steering oil and large air bubbles will be circulated throughout the power steering system. When they reach the pump, the fluid and air will be whipped to a milky froth as they pass through the spinning power steering pump. It then takes a long time for the millions of very tiny air bubbles to recombine, pass up and into the pump reservoir, and be released back to atmosphere.

Jack up the front wheels. With the engine off, rotate the steering wheel full lock to full lock a couple dozen times. (Be sure to check that the wheels aren't hitting your jack and jack stands as they move toward full lock.)

This procedure will actually use the integral power steering gear (or the Corvette assist cylinder) to pump fluid throughout the system with the engine off. You should be able to see large air bubbles rising up through the fluid in the pump reservoir. Refill the reservoir as required during the process. This procedure will get most of the air out. Refill one last time, let the car down and start the engine. Rotate the steering wheel full lock to full lock a few more times. Don't hold at full lock for more than just a few seconds.

Check for leaks. Refill as necessary to the COLD mark on the capstick. Go for a short 10 mile drive. You should be good to go.

If there is still a minor amount of noise. Let the car sit overnight; check the fluid level and then go for another short drive. Now you really should be good to go.

If you continue to have a noisy pump and continue to find milky, frothy, fluid days after this procedure, I would suspect that you have air continuing to enter the system. It is possible that a loose connection on the low pressure return side of the system could allow air to be sucked into the system (yet not leak oil back out.) Check the return line nut torque and check the low pressure hose connections at the gear or Corvette control valve, and also at the pump reservoir spout. It is also possible for a damaged or worn out pump driveshaft seal to allow air to be sucked in past the seal as the pump is rotating.

One last tip: I always recommend that you use genuine GM power steering fluid. It is the only fluid that is specifically formulated to operate with GM power steering pumps. It is available at GM dealers.

Jim