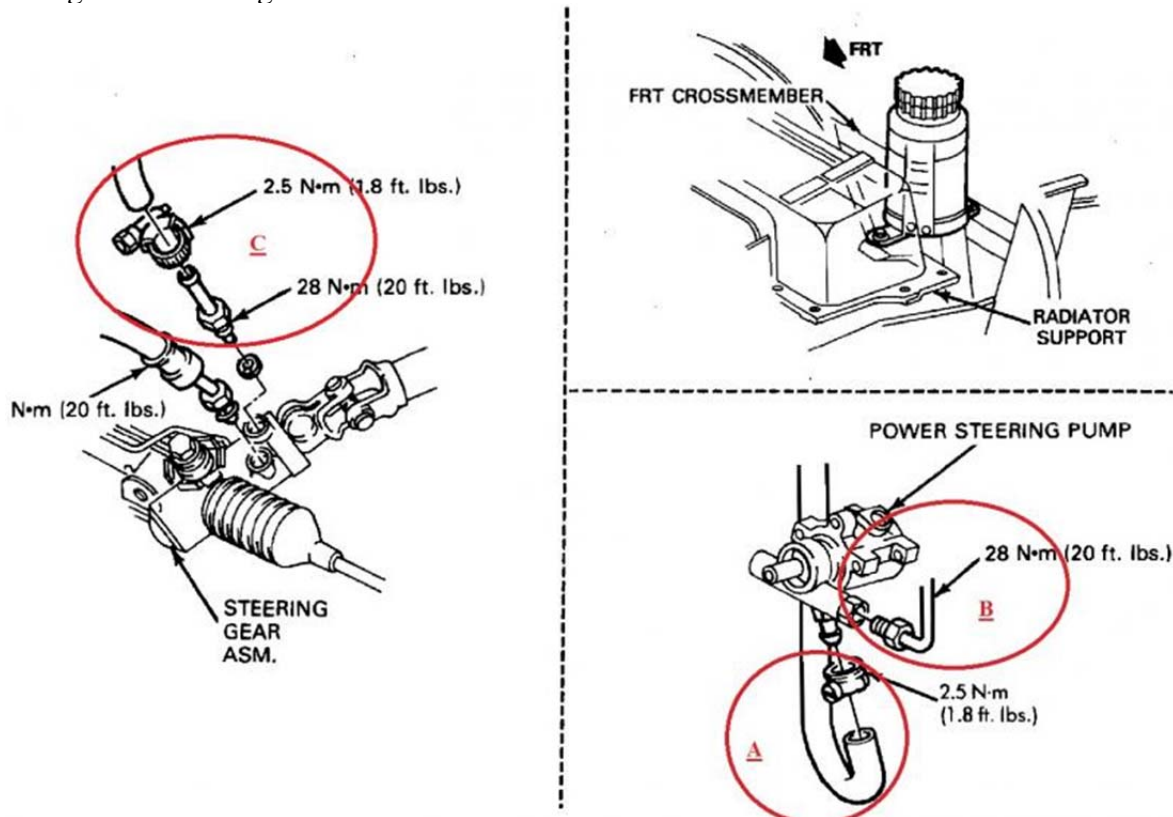


C4 Corvette Power Steering Fluid Change

Prepared by Peter Mihaltian NCRS #47240

The Corvette C4 power steering system fluid should be flushed and replaced with new fluid every two years or 12,000 miles, whichever comes first. C4 rack & pinion systems can develop fluid leaks as well as suffer from the dreaded *morning sickness* if the fluid is not changed out on a regular schedule.



The power steering system flows from the reservoir to pump, to rack and back to reservoir. You can flush the system by intercepting the return fluid before it gets back to the reservoir. The *A line* in the above diagram is the suction line to the power steering pump and runs to the bottom of the reservoir. Accordingly, the *A line* feeds the pump. The *B line* is the pressure line that flows fluid to the rack & pinion. The *C line* is the return line from the rack & pinion to the power steering pump. The *D line* is the return line to the reservoir.

To flush the system, you have to go through the pump and recover the fluid before it gets back to the reservoir. To accomplish this, disconnect the *D line* that is about halfway up on the reservoir, and find a way to catch the fluid that comes out of the line. To flush the system properly, you also have to turn the steering wheel lock-to-lock because the rack is full of fluid too...and, the rack is where most of the dirt and debris is located.

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The flushing process really is more complicated than it seems. Most folks are satisfied with sucking the old fluid out of the reservoir, running the engine and turning the wheels followed by sucking the fluid out again. Generally, that process will get the majority of the old fluid out. However, it will take about a 2 quarts of new power steering fluid to completely flush the system. You can also add some power steering rack & pinion conditioner to prevent the dreaded *morning sickness* that is so common on C4 rack & pinion systems.

You will have to have a second person assist you either by adding fresh fluid to the reservoir as it gets used, or by turning the pump. It is helpful to rig a hose to a plastic container to collect the old fluid.

Follow the steps outlined below to complete a thorough flushing of your Corvette power rack & pinion system:

1. Disconnect the power + line to the distributor. This will allow you to crank the engine and the power steering pump using the starter without actually starting the engine.
2. Disconnect the *D line* at the PS reservoir, Use a pan or large plastic container to catch the fluid which comes from the pump via the *D line*. Additionally, you must plug (*or tape*) the *D line* reservoir inlet stem to prevent fluid from draining out of the reservoir.
3. Crank the engine while turning the steering wheel slowly lock-to-lock.
4. While the engine is being cranked, add fresh power steering fluid to the reservoir being careful to assure that the reservoir *never* runs dry. System capacity is 1.89 qts.
5. Continue to crank the engine, add new fluid and turn the steering wheel from lock-to-lock until the fluid coming out of the *D line* runs clear.
6. **WARNING** !!! the Corvette power steering pump moves fluid *REAL* fast. Accordingly, this process can get *REAL* messy if you are not properly prepared.