Sixth generation Corvette clutch fluid maintenance DIY.

The health of the clutch fluid on the Corvette can have a major impact on the performance of the clutch and the over all driving experience. Since the clutch fluid can contaminate with particulate matter and degrade over time due to moisture absorption, you may not notice the subtle changes. Those that do a great deal of performance driving will more readily notice. The fist indication is that your clutch fluid will become a very dark brown. Now, before everybody panics, the clutch system in the Corvette has components in the seals and the system that will impart a color change. When you go to look at your fluid it will be dark. Don't panic. All contaminated fluid is dark. All dark fluid is not contaminated. With that said, it is not a bad idea to change your fluid out once per year. There is a fairly simple way to get it done using some simple household items and a little bit of time. You can exchange your fluid right from the reservoir under the hood.

Plan on less than 30 minutes to complete. The tools you will need are as follows:

- A syringe or turkey baster.
- Some shop rags and paper towels.
- One to Two quarts of Super DOT4 brake fluid.
- A plastic bag
- A receptacle for the waste fluid

To begin the procedure, open the hood and find the clutch fluid reservoir. It is located next the brake master cylinder and the windshield washer fluid reservoir.

Protect your fender. Brake fluid is hazardous to paint. Make sure you cover up the fender and body areas around the front with a good protective cover. I use a fender cover made of a rubber material and put a sheet or some shop rags on top. The shop rags will absorb anything that may drip on the fender and the fender cover will prevent anything that may drip from soaking through to the paint. I also have painted fluid covers on my car and I need to take extra caution to prevent any fluid from dripping on to these as well.

Once you have covered the area, remove the fluid cap from the clutch fluid reservoir. The cap will remove with a quarter turn counter clockwise. The cap also has a rubber bladder that may be drawn down slightly in to the reservoir. This is used to keep air from finding its way in to the clutch system.

Clean off the cap with a shop rag and press the bladder back down flush.

I prep the area for removal by placing a plastic bag with some paper towel or shop rags in it nearby. I then put an empty water bottle inside the plastic bag to receive the fluid that I remove with the turkey baster.

Squeeze the bulb and put the turkey baster down inside the clutch fluid. Release the bulb and allow the fluid to be drawn up in to the tube. If you are using a turkey baster it is important to realize that the fluid will basically start to drain right back out as soon as you release the bulb so what I do is, draw in the fluid with my left hand. I have a couple of paper towels folded up in my right hand and in one motion, draw in the fluid and raise the baster up from the fluid and cover the bottom with the folded paper towels. This keeps the fluid inside the tube and allows me to transfer the fluid in to the waiting container.

Once you have drained the fluid reservoir you can refill the fluid and put the cap back on. You will not likely be able to get every last drop of fluid out. You will need to repeat this process several more times so don't worry about a small amount of remaining dirty fluid.

Refill the fluid reservoir with new DOT 4 fluid.

The DOT 4 fluid container is protected by a foil film at the top so you will want to remove this ahead of time.

Put the fluid cap back on and make sure that it is sealed up tight.

DO NOT PUMP THE CLUTCH PEDAL WITHOUT THE FLUID RESERVOIR COVER IN PLACE. This will introduce air in to the system that would require having to bleed the clutch. The bleeder valve is not easily accessible on the C6 and this will turn a simple procedure in to a disaster.

Enter your vehicle. With the engine off, proceed to pump the clutch pedal 20 times.

Return to the engine compartment and remove the fluid cover on the clutch reservoir and you will notice that the fluid is now dark again.

You will need to do this about 10 or so more times before you begin to notice the fluid remaining clear after the clutch pedal is pumped.

Once you are satisfied with the cleanliness of the fluid go ahead and button everything back up. Remove the protective covers from your fender and engine area and seal up your waste receptacle and dispose of it properly, it is a hazardous waste.

Take the car out for a test drive and see if you don't notice a crisper more responsive feel to your clutch.

You can pretty much count on your fluid returning to a dark color after a few hundred miles of use. Don't be alarmed by this. As I said earlier, the components of the clutch will discolor the fluid. Don't feel like you need to immediately change the fluid again because you could drive yourself crazy in the process. It will take about 4 quarts of fluid flushed through the system to get it very clear and keep it there. Then, with regular maintenance you can stay on top of it.

At a minimum even if your fluid discolors, consider changing it out once per year and it will keep the feel of your clutch where it should be. If you notice degraded performance or abnormal behavior from your clutch pedal, consider changing out the fluid as your first course of action prior to embarking on a more time consuming or costly fix in the form of a master cylinder or slave cylinder replacement.

Happy motoring.

Paul