

To change or not to change that is the question. As a highly debated topic on this forum, I felt it was necessary to share my experience.

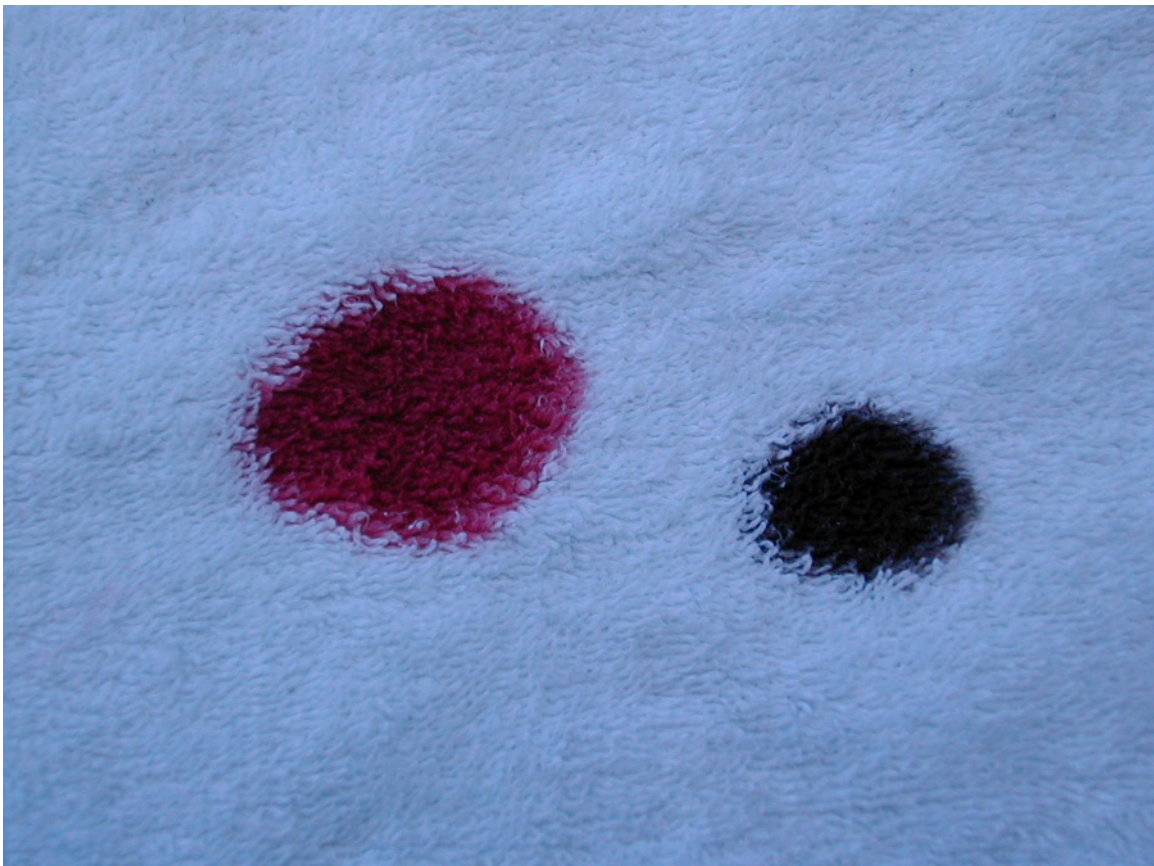
Yes, I am aware the tranny is 'sealed'.

Yes I am aware the claims of 'lifetime' fluid.

Yes I understand Lexus does not recommend changing the fluid nor does your favorite ASE certified Lexus technician.

Whatever. I am keeping my car until at least 250k miles so in my opinion this is absolutely necessary. My car just passed 100k miles.

First, let's look at the evidence. After my first drain and fill of 2 Quarts of fluid, look at the difference between new and old fluid.



Now I am aware this may not tell the whole story. Just because the fluid is black, it does not mean it has lost its viscosity and lubricating ability and it still may feel super slick. So I sent a sample to Blackstone labs for analysis. Here is the result:

Their written analysis and breakdown below:

"We see lifetime oils a lot and the name can be very misleading. Since this fluid was the original fill, these metals are from the original break-in. Most of the metal is from

new parts wearing in when the transmission was new and some of it is just normal accumulation over the last 100,000 miles. Now that this oil was changed, your next report should show some nice improvements as this stuff washes out. Your samples should look more like universal averages, which show typical wear after ~32K miles on the oil. No contamination was found. You are however, starting to lose viscosity at varying temperatures. Therefore, you changed at the appropriate time. Check back in 20,000 miles without draining.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	100,000	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	100,000						
	Sample Date	02/08/14						
	Make Up Oil Added							
ALUMINUM	55	55						19
CHROMIUM	1	1						0
IRON	132	132						54
COPPER	150	150						65
LEAD	95	95						15
TIN	10	10						3
MOLYBDENUM	1	1						1
NICKEL	1	1						1
MANGANESE	3	3						1
SILVER	0	0						0
TITANIUM	0	0						0
POTASSIUM	3	3						2
BORON	53	53						76
SILICON	20	20						18
SODIUM	9	9						6
CALCIUM	121	121						149
MAGNESIUM	1	1						13
PHOSPHORUS	275	275						327
ZINC	9	9						48
BARIUM	3	3						3

Values Should Be\*

PROPERTIES	SUS Viscosity @ 210°F	41.9	41-51				
	cSt Viscosity @ 100°C	4.76	4.5-7.9				
	Flashpoint in °F	385	>320				
	Fuel %	-					
	Antifreeze %	0.0					
	Water %	0.0	<0.1				
	Insolubles %	TR	<0.1				
	TBN						
	TAN						
	ISO Code						

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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It needed to be changed probably 20k miles ago.

Below I describe the procedure I found most efficient. I performed a series of drain and fills and did not do a flush as I was concerned of dislodging something that would affect the solenoids down the road. If I had fewer miles I may have just taken it in to a shop that had the BG PF5 machine and let them do their thing.

Disclaimer: Attempt at your own risk. This is the method that I found most useful and efficient – yours may differ and may not be the exact as described herein. As with any do-it-yourself project, unfamiliarity with the tools and process can be

dangerous. This project should be construed as theoretical advice. I will not be held responsible for any injury due to the misuse or misunderstanding of this DIY project.

Here is an overview of what I did.

1. Drain 2-2.5 quarts/fill 2-2.5 quarts
2. (5000 miles later) Drain 2-2.5 quarts/fill 2-2.5 quarts
3. (5000 miles later) Drain 2-2.5 quarts/fill 2-2.5 quarts. Use fluid check procedure. Make sure ATF temp is below 46°C (115°F) and check fluid by opening overflow tube. Add fluid as necessary.
4. Repeat Steps 1-3. \*\*\*Note\*\*\* You do not need to wait 5000 miles between drain/fills. The fluid will be circulated with one drive down the block. I waited 5k miles because I changed my fluid when I did my engine oil change.

KEY POINT – as long as you replace exactly what you drained, you will have no issues. If you are off ½ quart you should not have a problem. I decided to check the fluid level at step 3 so if I was off more than I thought, I could adjust it accordingly, but I felt it wasn't necessary to do this every time. After step 3, my fluid was perfect so steps 1-2 obviously worked (ie. Replacing the exact fluid that came out).

Ok, here we go...

Stuff needed:

- 12 quarts ATF World Standard (WS) fluid
- Fluid transfer pump or large syringe
- Crescent wrench or 20mm wrench
- 10mm wrench
- 14mm wrench



First, the steps for simple drain/fill:

I used rhino ramps. For the basic drain/fill, leveling the vehicle is not necessary. I actually think more fluid will drain out with the car in this position as the drain plug is to the rear of the tranny...



Remove plastic panel covering tranny. Three 10mm bolts and two plastic 10mm fasteners



Here you will notice the drain plug, 14mm bolt.



Drain fluid. It was soooo black.



\*\*\*Note\*\*\* You have a couple options here. You can drain into a pan then measure the fluid in an empty container OR drain directly into empty container.







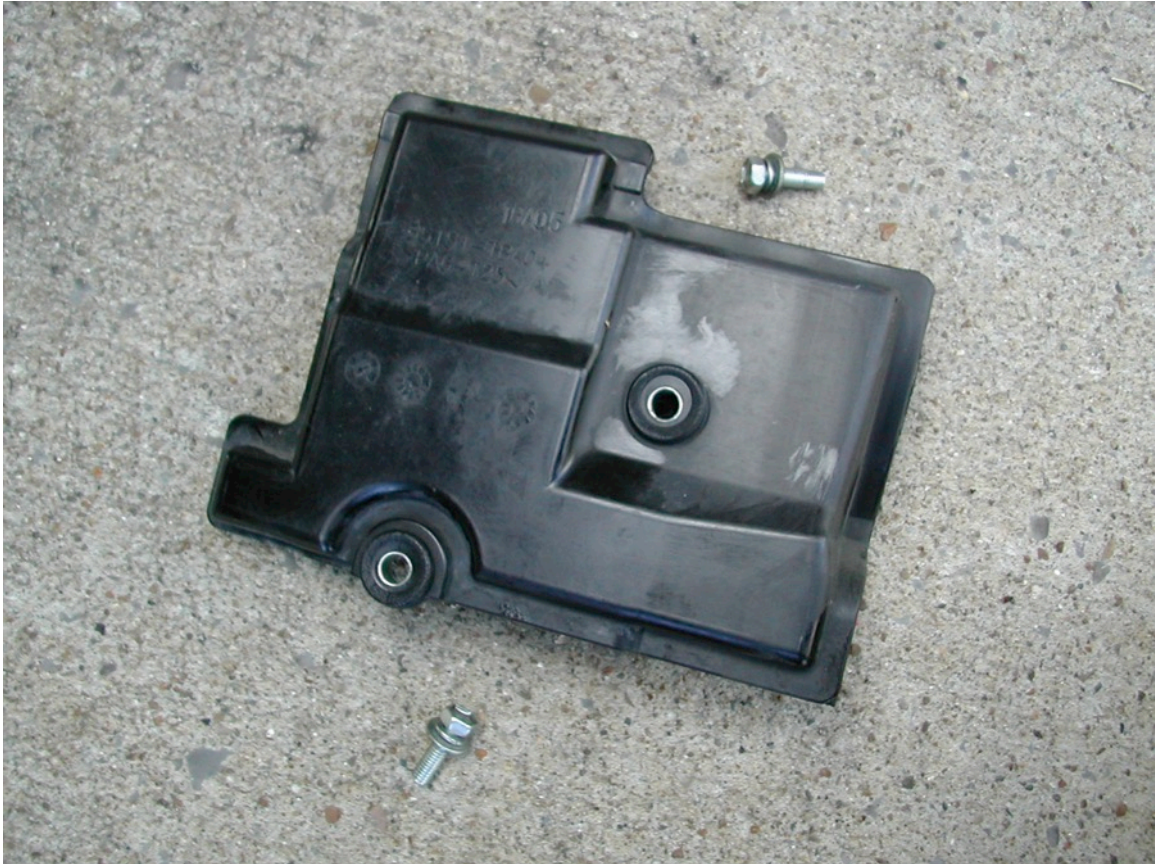
EXACTLY 2.5 quarts came out when I drained mine. Yours may differ.



Replace drain plug. Now you will access the fill hole on the driver's side of the tranny. It is behind a cover, which is held by two 10mm bolts.

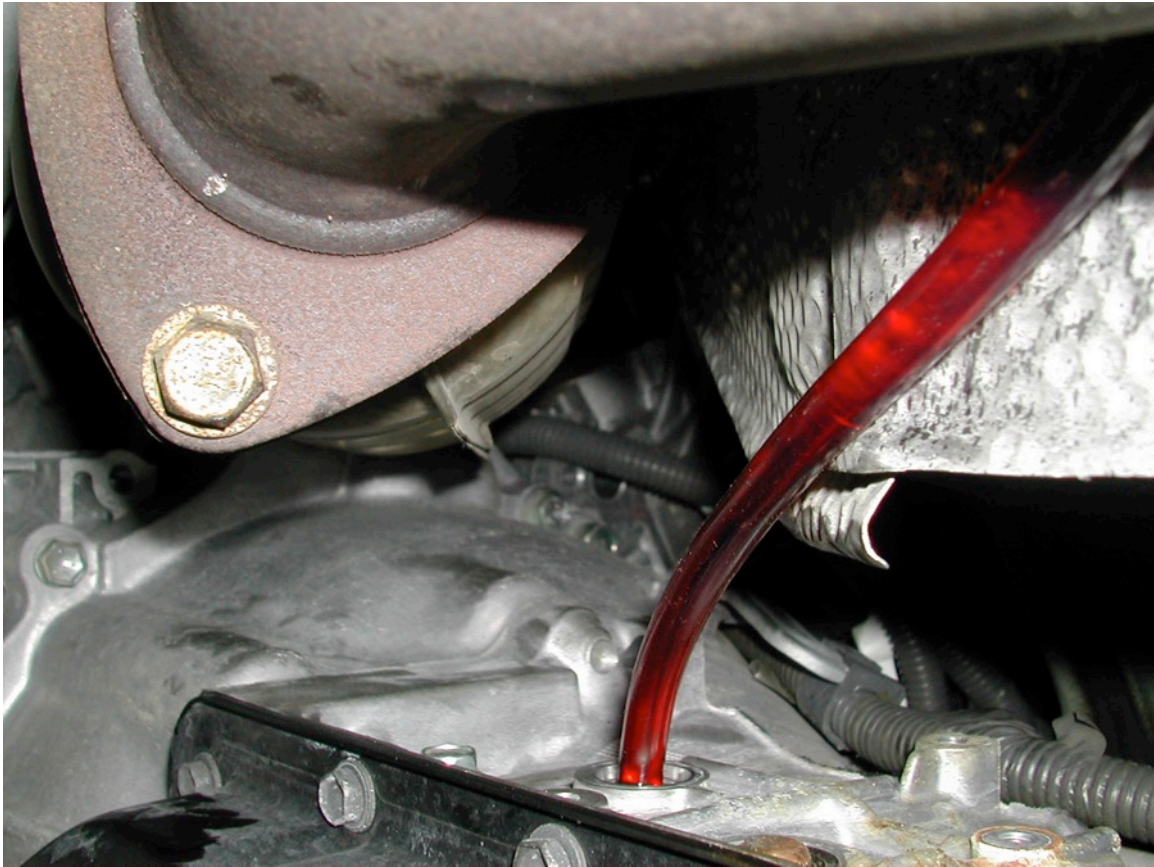


The fill plug is rather large. I used a crescent wrench to remove it. You can also use 20mm wrench. You can see it is stamped WS





Now add the EXACT amount of fluid that came out when you drained the pan. Use a fluid transfer pump or syringe.



Replace everything and you are done.

---→5000 miles later I did another drain/fill

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--→ Another 5000 miles and I did the Drain/fill with check procedure:

This time level the vehicle. I use a combo of rhino ramps and jack stands



Drain/fill fluid. It is best if engine is completely cold on this step.

Now check fluid temperature. Make sure engine is off and electrical systems too (such as air conditioning, audio, lighting)

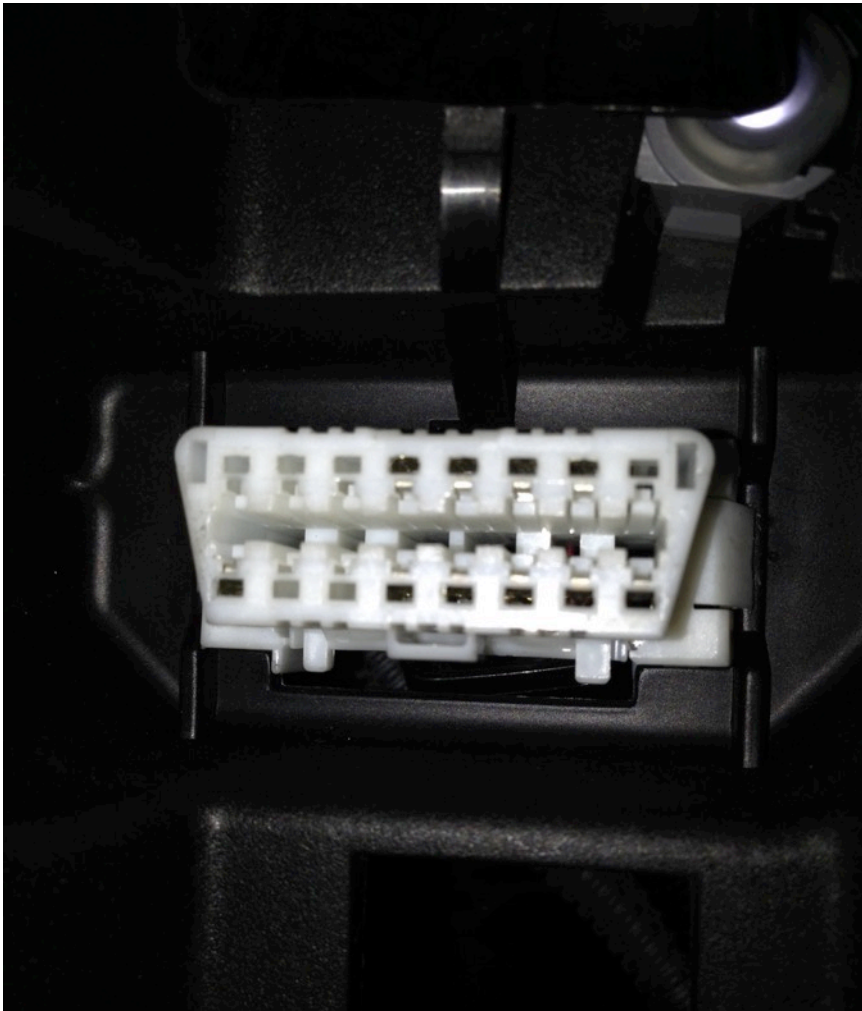
Connect terminals CG (4) and TC (13) of the Data Link Calibrator (DLC3) which is located under your dash.

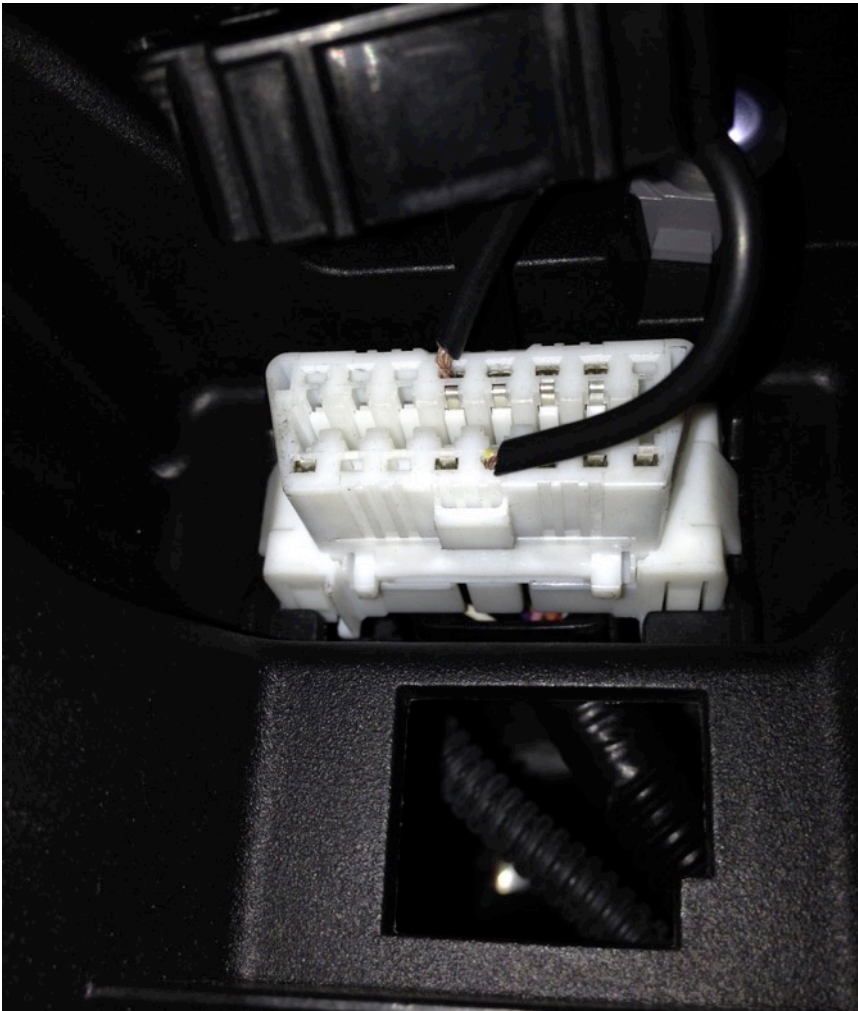












Start your car. The RPMs will bump up higher than normal and a bunch of lights will appear on the dash. Move the shift lever from the P to the S position, shift the gear from 1st to 6th and then return the shift lever return to P position.

Next, move the shift lever to D, and quickly move back and forth between N and D (once within 1.5 seconds) for at least 6 seconds. This will activate the fluid temperature detection mode.



Return the shift lever to P and disconnect terminals 13 (TC) and 4 (CG).

You can remove the wire from OBD2 port. Allow the engine to idle until the fluid temperature reaches 41 to 46°C (106 to 115°F)



When temp is in the correct range, the D-shift indicator on the dash will stay lit.  
check fluid level.

With engine idling, remove overflow plug.



\*\*\*If fluid comes out, replace overflow plug when the fluid just trickles. You are done.

\*\*\*If nothing comes out, you need to add fluid. Reinstall the overflow plug and stop the engine.

Remove the refill plug.

Add 1/2 Quart of fluid.

Allow the engine to idle and wait for 10 seconds.

Repeat the "CHECK FLUID LEVEL" procedure.

\*\*\*\*My advice is when you decide to do the drain/fill with the level check procedure, slightly overfill the tranny with fluid so you do not have to add after you check the level following the temp procedure. In other words if 2 Quarts drain out, add 2.5 quarts. Then you will be done after you check the fluid level the first time.



Good luck.