TECHTALK

EGGENFELLNER H6 ENGINE OIL CHANGE

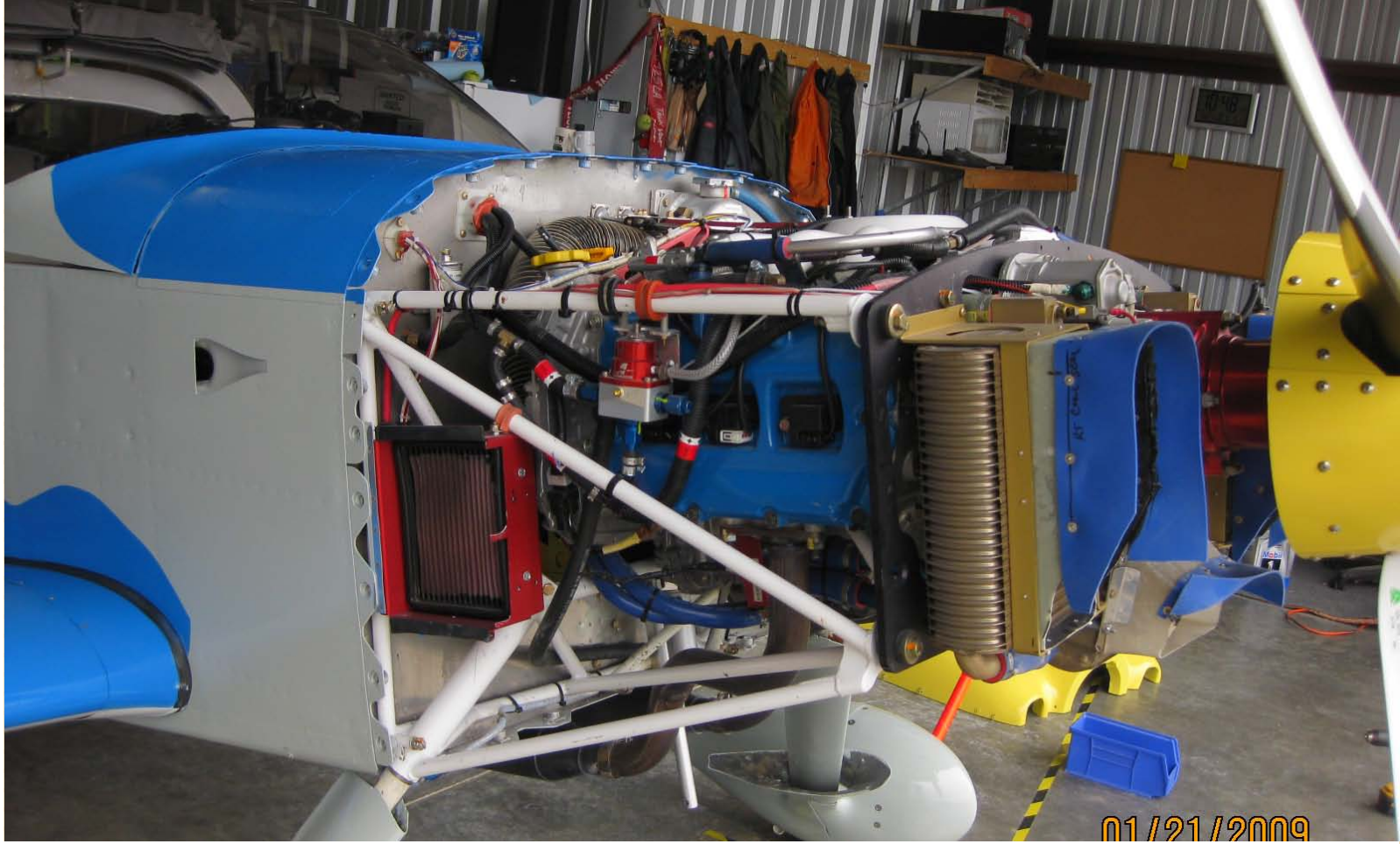
Warm up your engine with a quick flight around the airport or a ground runup till the oil temp comes up

Tools: Oil pan,Wire cutters and rags + gloves

For the no mess oil change I use a Extractor to suck the oil out of the engine….self contained and easy to pour out when you dump it This model had a couple of tubes that pop into the top of unit and make an airtight seal just find the right size that will fit into the dipstick hole and you're in business http://www.pelaproducts.com/

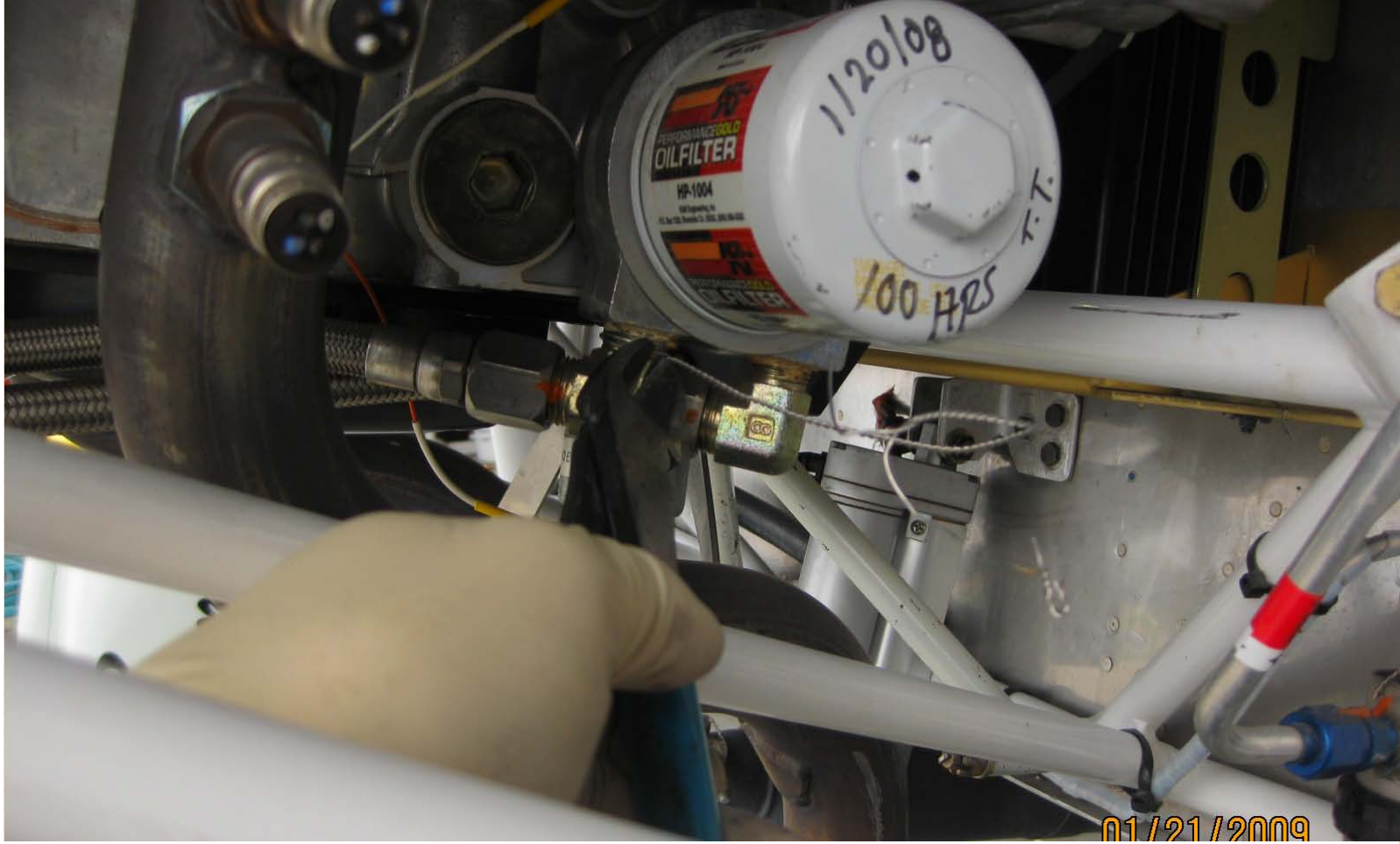
2nd step on your oil change after the oils hot ….

Start by peeling off the cowling so you can get to the hardware you need to replace…



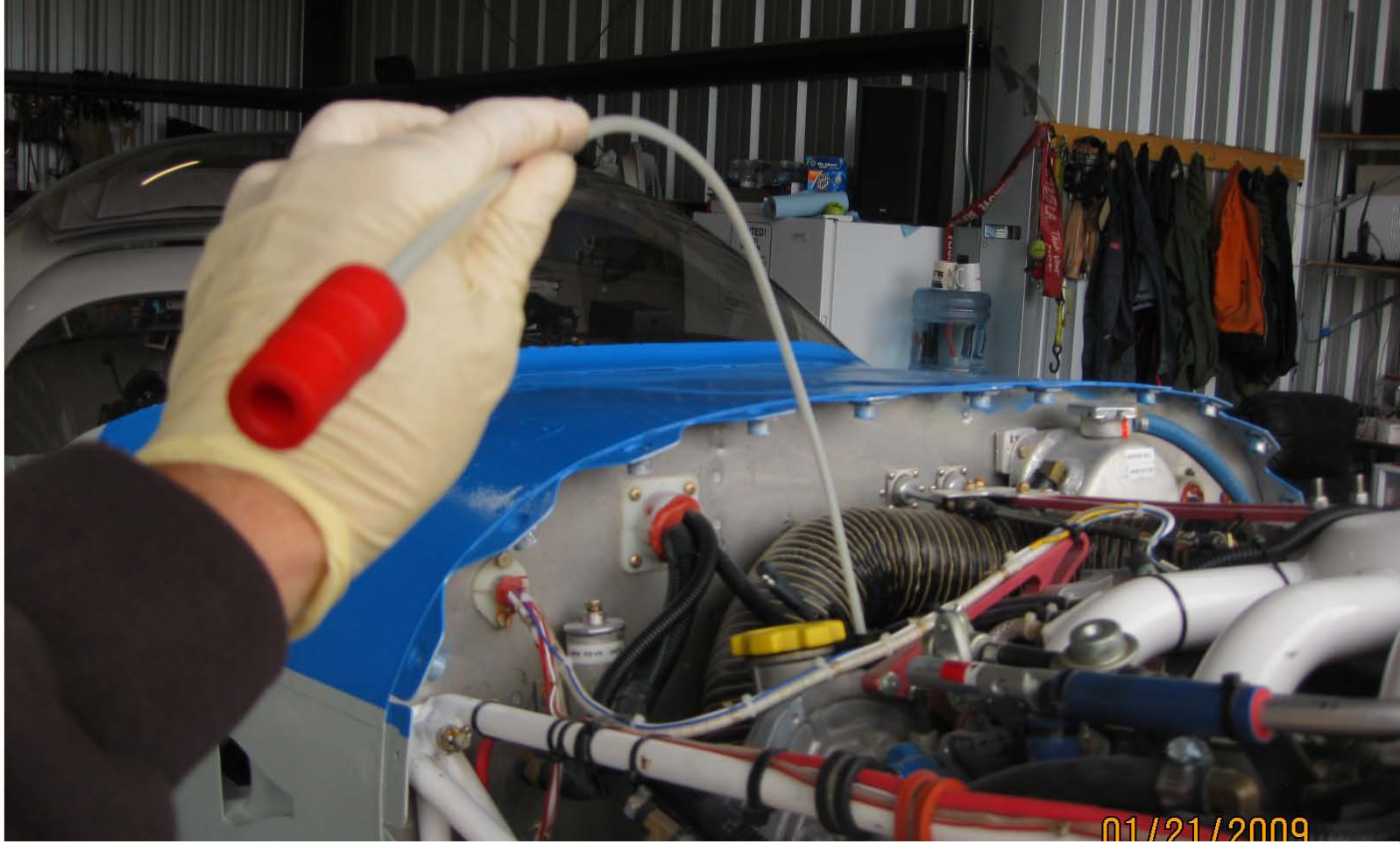
Your ready to start with the cowling off

While you've got the engine exposed, take a look around the area on top and the bottom and see if you have any more maintenance issues-Now's the time to find them since you have the hood off! Check for leaks, chaffing on any wiring, loose clamps , bolts etc. If you find something make a note in your log book so you can take corrective action.



Filter removal

Cutting the safety wire on the filter



Tools in action..

Pull the oil stick & insert the extractor tube in the drip stick hole till it bottoms out

More tools…

Connect the hoses and a few pumps of the handle on the Extrator and …..

Battery tenders on the bench one for each of my PC680's

…your removing your oil

Extractor has oil qtr rings on it

So you can tell how much oil you have pulled out

Level the engine(tailwheelfolks) you can do it before hand if you want

Waiting for the used oil to fill up –I raised the tail to level for checking the sight gage on the PSRU and the oil level when refilling the oil-you nose wheel types don't have this problem!

Quick Drain plug Oil pan -If you don't use the extractor – just remove the bolt with gasket I use both

http://www.quickoildrainvalve.com/SearchResults.asp?Cat=40

Quick drain oil drain from Fumoto Part # F-105N

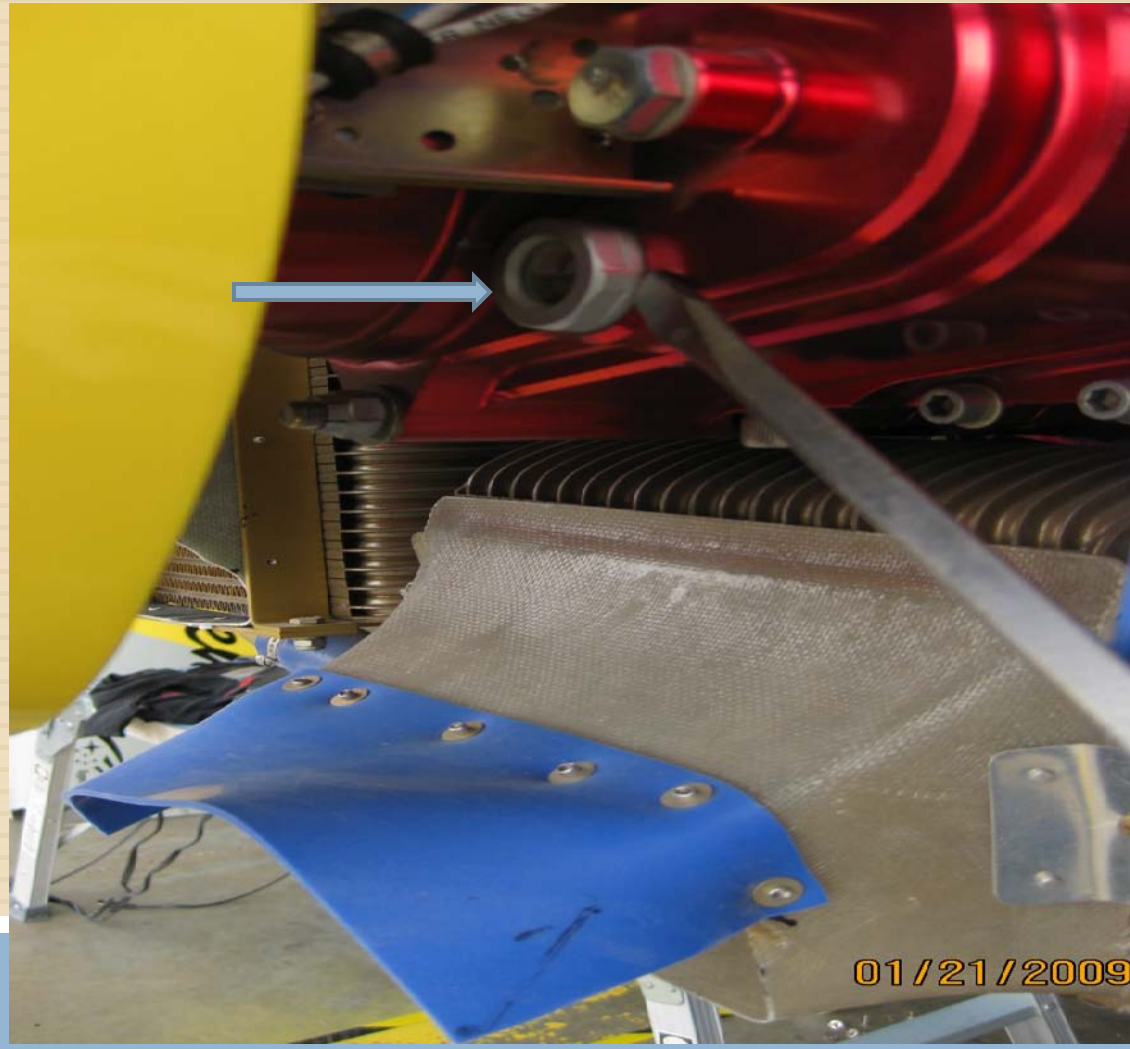
I have a oil quick drain so I'm removing the safety wire

Trick of the trade

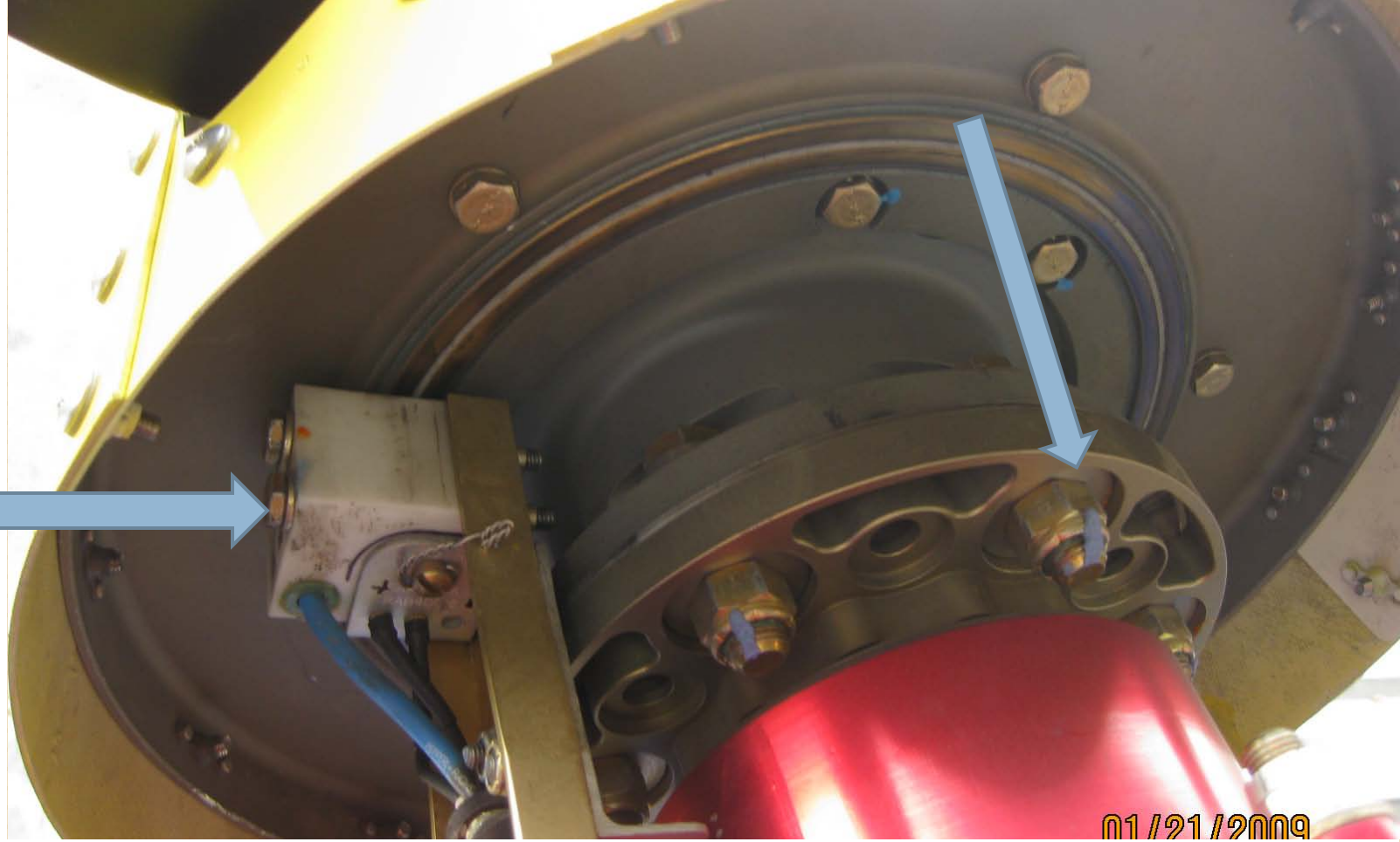
With the Quick drain I add a hose and the oil goes right into the tank

No mess !

PSRU Oil level



Check the oil level in the sight gauge for your PSRU while you changing the oil-, check for any leaks…… Mine's right in the middle good to go!



Prop maintenance

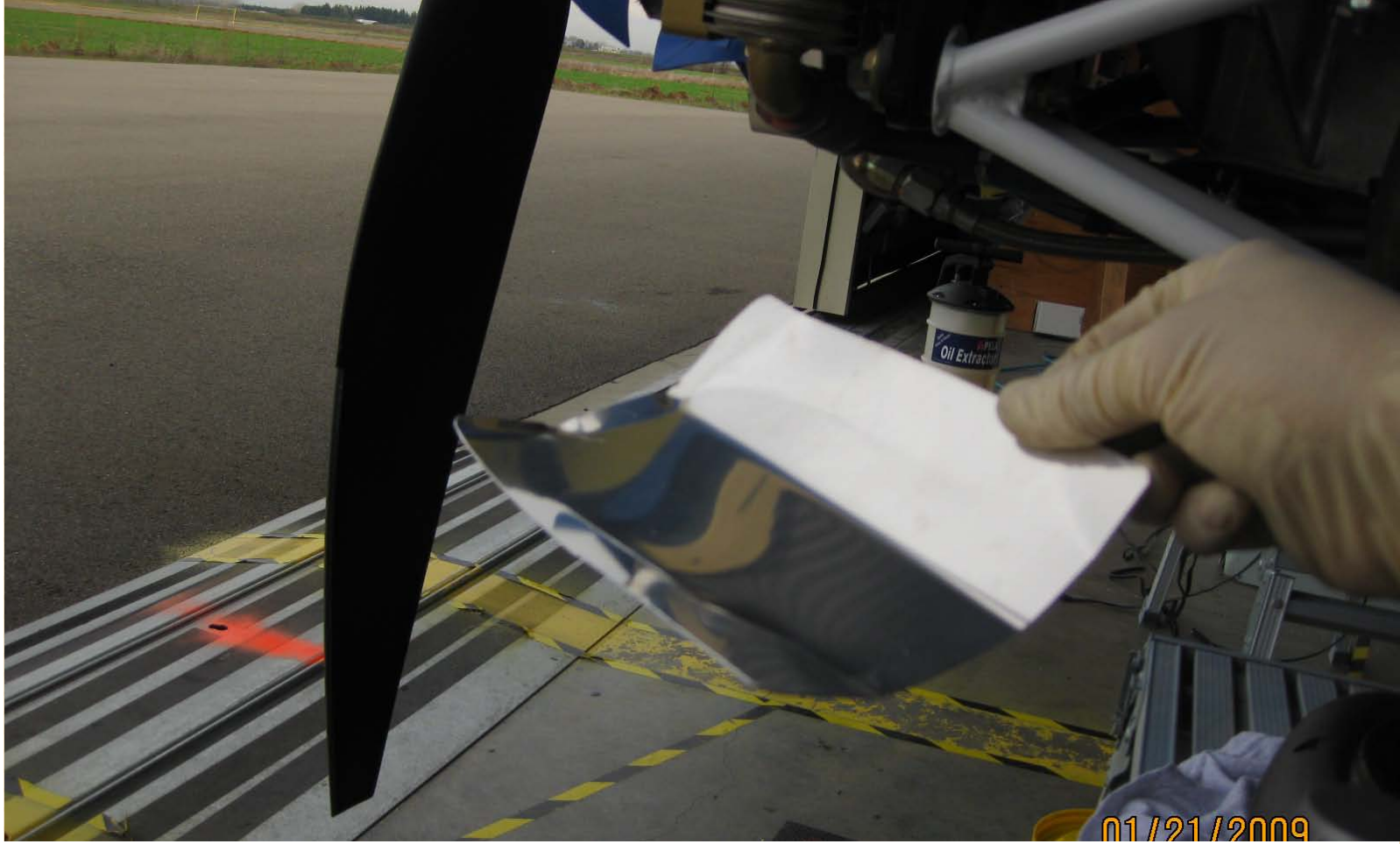
I also take a look at the MT prop brushes to check the wear -I replace mine every 100hrs -Check your prop mounting bolts for tightness Replace brushes if they are worn below 7 mm (0,276 inches).

Filter

I use K&N HP-1004 filters you can pick them up at most auto parts stores

Nice to have the built in safety wire hole –Note: H4 engines use HP-1015 filters

http://www.knfilters.com/news/news.aspx?ID=576



Tech tip…

I made a scrap piece of aluminum for a drain funnel for the oil filter –helps keep the mess down and the oil going in the bucket not your arm! Reusable and free!

Pulling the Filter

Turn the filter a little to start the oil flow and use your tray to route the oil to your drain pan

Remove old Filter

Spin off the filter & put it in the oil drain pan upside down to drain- wait till she finishes draining from the block

Installation-Prep work

Use new oil on the new filter o-ring to lube it and make sure the o-ring is on

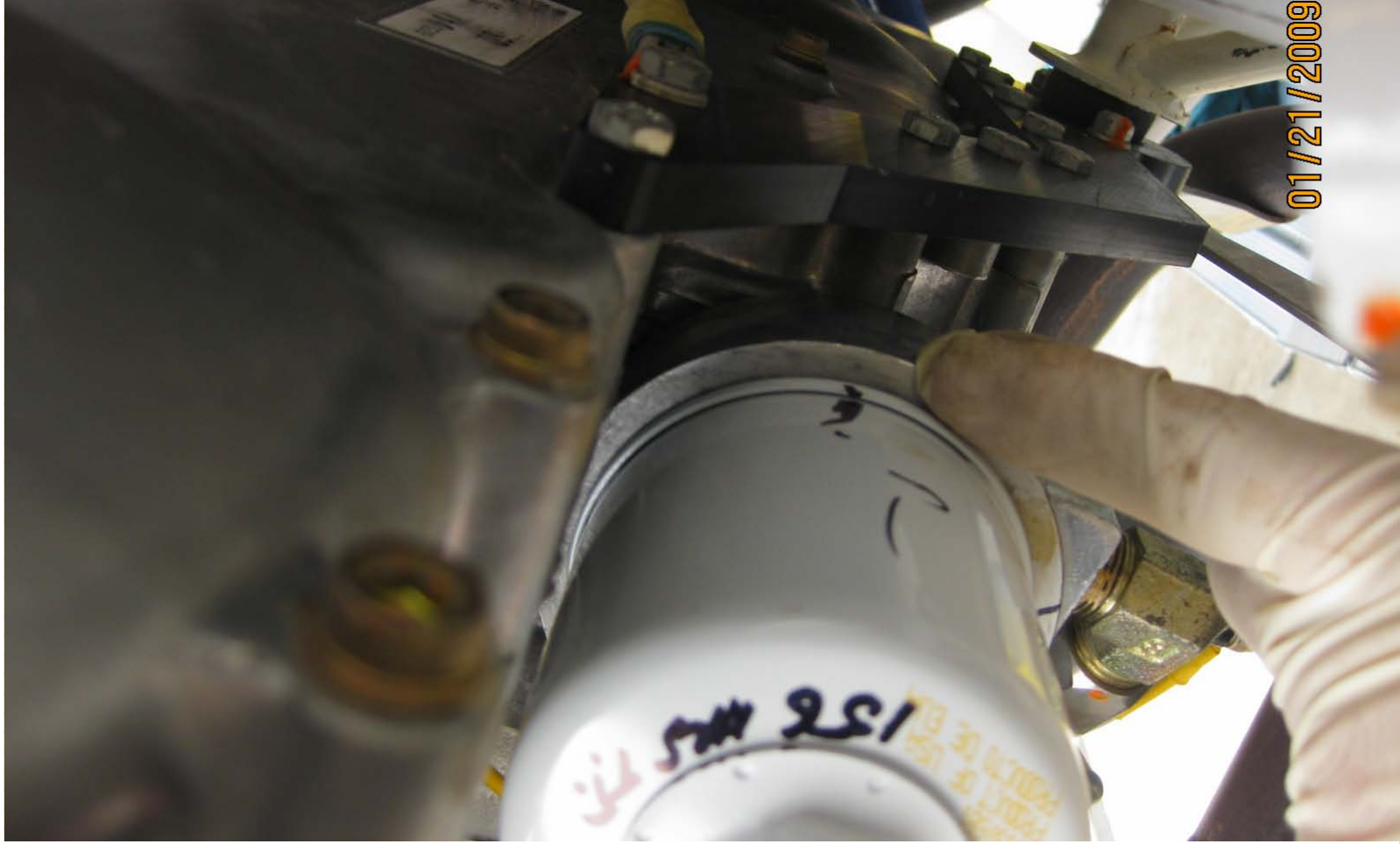
Installation

I run the filter down till its just touching the housing

Tech tip-I put the date and hours on my filter so you know visually when you last did a change

Tighten Filter

I make a mark on the filter with a sharpie to note the rotation amount when I tighten it



Tighten more….

Tighten the filter ½ to ¾ turn by hand and your done….

Tool time!

A Snap-On reversible safety wire pliers and .032 stainless wire-a mechanics best friend! Great tool for safety wiring as you can twist the wire either direction

Wire it up!

Make sure your wire is pulling in the direction to make it tight-

No negative safety's please!

The Big Loop

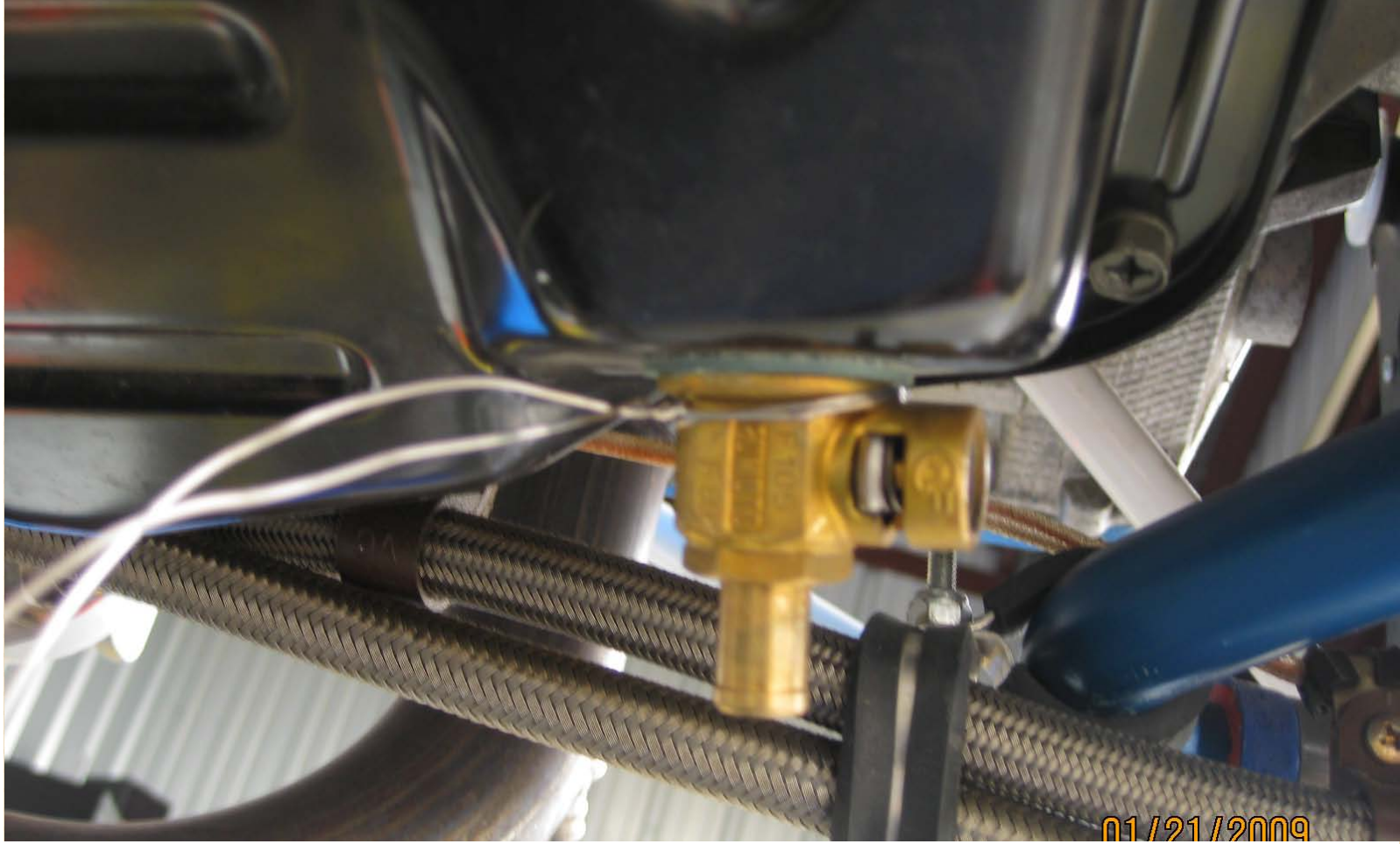
How to make the wire tight: use your pliers on the end of the wire & make a big looping motion-it will tighten the wire down where the arrow is above and get it nice and snug! Next cut &bend the pig tail on the wire end back into it self so you won't stab yourself latter

Cut wire

Leave your self about a ½” wire

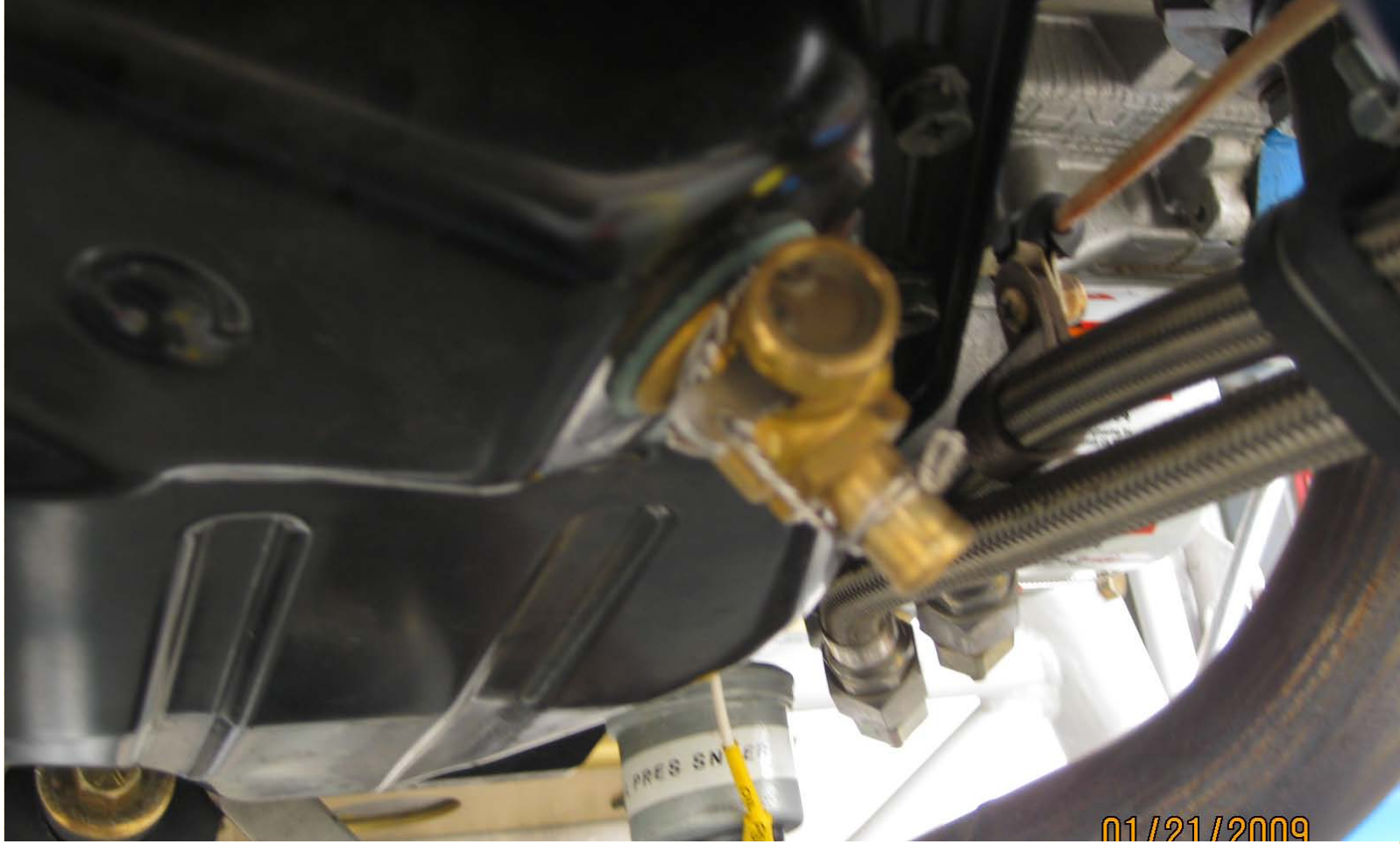
Finish off Safety

Crimp that pig tail! Fold the wire back into it self so it's finished off and won't stick you when your running your hands in the area!



Drain Plug-Install

install drain plug with new gasket-torque and Safety up the drain plug!



Pan oil plug finished

Make sure it's a positive safety

Add Oil

Time to fill it up with your favorite oil …..Mobil 5-30wt is what I use 4 to 5 quarts

Check Oil

Add your cap and dip stick …oil level OK? Clean up area and get ready for a engine run up to check for leaks- For you tail wheel types I drilled an extra hole in my drip stick above the normal fill mark so when she's on her tail I can check the level to full with out raising the tail.

Extra's

Use can use a oil filter cutter to open it up to check for metal – you can pick them online from ATS tools or search eBay: http://www.aircraft-tool.com/shop/detail.aspx?PRODUCT_ID=FC01&ReturnPage=/shop/search_result.aspx?PageNo=1

Filter Guts…

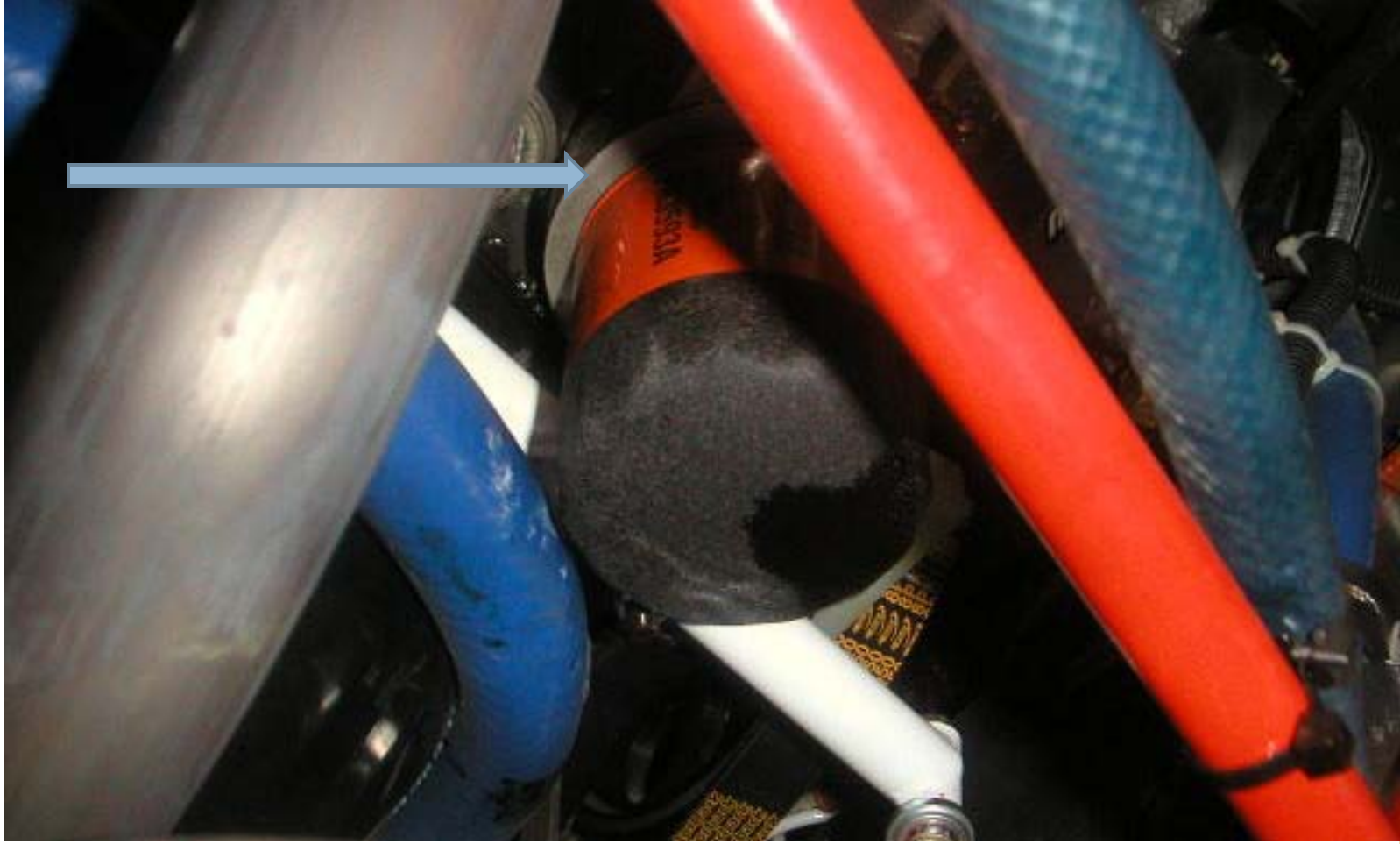
Watch it the edges very sharp! Don't forget to dump out the oil in the filter

What's inside…..

What a K&N oil filter looks like inside, no metal in the pleats –good to go!

Post Maintenance run-up

Take your bird outside and run it up and check for leaks and recheck the oil level after shutdown.. Add oil as required



2.5L Subaru Engine Add-on

Pete Krok sent me this add on for you 2.5 L engine owners to take a look at when you're doing maintenance, next slides address this issue

Oil Leak this area

For those owning the 2.5L 165hp Eggenfellner Subaru engine there is a possibility of oil leakage from the seal just above the oil filter (Photos 1 and 2). At least two engine owners reported this problem The leak was caused by a loose hex nut which holds the in/out oil line assembly onto the engine block. This hex nut can be easily seen and accessed when you remove the oil filter. It is on the same threaded sleeve used by the oil filter. To fix this leak simply remove the oil filter and use a 1 1/8" socket to re-tighten this rather large nut. Then re-install the oil filter.

Safety for filter with no hole for wire

For the 2.5L engine, the oil filter recommended by the factory is a Fram PH3950. This does not have a safety wire attach point. Photo 3 shows how a 3" pipe joint sleeve fits over the Fram filter and how it can be secured with safety wire to an Adel clamp on the supercharger mounting bracket. The pipe joint can be found at Home Depot for about $4 to $5 and is totally reusable. (submitted by Pete Krok).

Congrats you're Done!

Reinstall the cowling and update your logbooks and go flying!

Have fun and fly safe!

Hope the info helps out-

Lee Apaka 30+yr A&P Rv-7 H6 Mt prop