

1942 BMW R75 WH Restoration Project

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So a guy walks into a bar.....seriously that's how this all started. About 7 years ago I went into Bristol Brewery for a beer. Coming to the Springs from Pueblo is a blessing when it comes to barley pop selection. I had a motorcycle shirt on while at the bar and a man approached me to inquire about my taste in motorcycles... or T shirts. Not sure which. As our adult beverage consumption continued, so did our motorcycle dialogue which inevitably turns to what bike(s) each other had. At the time I had started work on a project (still is) that I thought would never become reality due to scarcity of parts. A 1940, armored Harley military prototype model UL (74" flathead) with an armored sidecar carrying a water cooled Colt machine gun. I mentioned my collection over time had gravitated toward military bikes. He told me that he had a WW2 military BMW with a sidecar and machine gun. A 1942 R75WH to be specific. The mother lode for German military motorcycle collectors. Two wheel drive, locking differential, 4 speed -reverse with a hi-low transfer case giving you 8 speeds forward, 2 speed reverse and 23 HP. It is the Dodge Power Wagon of motorcycles of which variants are still in production to this day. We traded contact information and would continue to revive our motorcycle conversations as this gentleman worked at Bristol and I would see him whenever we went into Bristol. He is a BMW enthusiast who was buying a 70s vintage Harley and I was in search of American V twin information and I am an "anything on 2 wheel" enthusiast always open to talking about bikes especially when they are employed at the brewery and there always seems to be a cold beer in front of me. I however would not get to see the BWM until 5 years later.

Fast forward a few years, Bristol had moved their brewery to Ivy wild so there was not a lot of visits to Bristol watering hole for a while. My interest in military motorcycles had continued and so did the number of search engines I had in EBAY trying to source parts for my money pit hobby. One day in June 2015, my "military motorcycle " search engine spit out a 1942 BMW R75 restored military bike. One of only 3 I had seen in about 10 years. Normally I would have just drooled into my morning coffee thinking it would be too expensive a bike to pursue from long distance, that was until I looked at the location...Colorado Springs! It had a week left on the auction but I immediately contacted my friend to see if this was his bike knowing there only a handful of these in the states, let alone the Springs. He advised me that it was previously his bike, the one we had talked about, but he had sold it a year earlier to a BMW collector in the Springs. He gave me the new owners contact information and within 24 hours I was finally staring at this beauty in the flesh. After a good looking over and hearing it start cold on the second kick I was a player. A player is all I was as I was beat out in the closing seconds of the auction by another a buyer. Figuring "not meant to be", I went on about my business until it was time to get back on the roller coaster. A week later it was back on EBay as the buyer was nervous about the bike not having a title. Having been purchased from Blue Moon it was registered in GA. which does not require titles for vintage rolling stock, only registration. The buyer wanted a title. Here we go again. A week later I won the auction. Headed up to the Springs with trailer in tow and arrived

safely. After returning to downtown Pueblo, a friend and I gave the bike a quick once over, checked fluids and put fresh non-ethanol fuel in her. As before it started on the second kick and we began to terrorize downtown Pueblo with the Third Reich greatest wheeled threat. Completely redirected a photo shoot for a wedding at the Union depot after several drive buys. I probably owe that bride an apology. Life was good until.....

Awoke the next morning like it was Christmas in July. Couldn't wait to get out to the shop and see if it had really happened. A cup of coffee and a few kicks later and I was back out for a morning ride getting to know my new war horse. Being an older restoration it was obvious she was in need of re-gasketing, fluid changes, tune ups. All the usual therapy (for me as well as the bike). After riding enough to get the bike hot I was able to do some better diagnosis. Add valve lash adjustment to the therapy list. We had a heavy tapper on the right exhaust. Gave me an excuse to pull rocker covers and see in the belly (oil pan removal) of the beast. Not having any instruction manuals for this I set off to Google. Let me tell ya there aint a lot out there on the big bad net for these machines. However, I was able to obtain valve lash setup and oil quantities as well as drop a portly sum on 4 service, parts and users manuals. Had no idea at that time how much German I would learn much less figure out GOOGLE TRANSLATE don't know diddley about technical translations.

The first OH SHIT moment came while adjusting valve rocker clearance. The right exhaust valve clearance adjusting screw was dialed all the way down with the jam nut hanging in by 2 threads. There was about 3/8" more thread showing than on the other 3 rocker arm adjusters... about the same height as a cam lobe. My heart sank into a beer mug. How many times have I purchased a supposed restored bike only to find crap like this . But wait....it would get worse. Never having had to dissect any one of my previous air head beamers, I was smart enough to know that the cam most likely resided somewhere at a point extrapolated beyond the pushrod covers. Yup, right in the middle of the cases where you can't see, that is unless you pull the heads and cylinders off. Three beers later, two heads, two cylinders layeth on the floor. Good news!!!! The 4 cam lobes were fine. Bad news ☹, the bottom of the front exhaust cam follower (lifter for Yankee's) was eradicated and the cam lobe was traveling up into the follower thusly reducing the aggregate effect of pushrod travel overcompensated for by rocker adjustment. No problem Ill just pull the follower out, figure out where to get a new one, drop it in and Ill be golden. Did I say no problem? One problem. The side of the follower had mushroomed over from the side load of the cam lobe. Couldn't get it out...couldn't push it in because it hits the cam. Time to forget the beer, head straight for the tequila and wait 3 weeks for manuals, new cam, new followers, new pushrods and a various assortment of gaskets and seals to show. In the interim, Ill drop the oil pan. What could go wrong?

1942 BMW's are like VW's in the sense that there is an oil pump suction screen, no real filters per se. Wouldn't matter anyway. The mesh is small enough to filter out the palm full of fragged engine debris and solid sludge that was waiting for me in the bottom of the pan. Did you know that these war machines were designed to be field serviceable? Roughly translated that means that after pulling only two through-frame engine

mounting studs the frame will do a Brokeback yoga configuration with the front wheel on a milk crate and the lower frame rails on the floor allowing the engine and transmission to come out as a complete, easy to handle 250lb assembly. That is, for three nineteen year old Wehrmacht infantrymen. To get the cam out its full on surgery. In the words of the great red rocker Sammy Hagar. MAS TEQUILA.

Three weeks and 4 manuals later (thank God for pictures) my new find was completely gutted in front of me on the surgical table. The cam came out, the damaged follower came out and half of the cast aluminum boss inside the engine case that surrounds the follower cracked off and filled the palm of my hand. After a come to Jesus meeting with my wallet as to trying to buy a new motor vs. repairing this one, vs. a dose of C4 plastique, the case was off to Alabama having been stripped clean in preparation for a certified FAA aluminum tig welder resurrect about 3 cubic inches of internal case casting. Soooooo while the cases are vacationing on the coast of Alabama, Ill open up the transmission/ transfer case and give it a good cleaning in the parts washer. What could go wrong?

We know the Germans over-engineer everything. There is no doubt in my mind these bastards had NO intention of losing this war. Who else could put a 4 speed main shaft cluster, countershaft cluster, shifter drum and dogs, reversing cluster and hi-low range gear cluster with two different shift mechanisms (tank AND foot shift) in a cavity the size of a volley ball? Amazed and scared at the same time. Something wicked this way comes. Out comes the gut pile making sure to snap a pic and log what was removed after each piece because I'm not counting on my German improving very much by the time it goes back together. Some wear discovered on the countershaft gears . Enough so that it's not going back together like that as I have no intentions of doing this over again. By this time HANS-PETER HOMMES has become my new motorcycle parts porn site as he has established himself as the go-to place for military BMW and Zundapp parts and restoration. Having made a payment on his Mercedes buying engine parts I was about to pay for a bathroom remodel on the transmission. You see when you order the countershaft cluster you get a response from him saying you can't order just that part as being a good German, when he reproduced all the transmission gearing, he re-profiled the gear teeth to make them stronger and less whiney (unlike myself at this point). You guessed it. you have to buy all the gears and shift drum so that all things mesh in harmony. KA-CHING!

While I wait the 3 weeks for parts from my new charity, the engine case comes back from vacation in Alabama with a big new glob of molten aluminum where the follower boss went missing. Time to send it off to Precision Hydraulics to have Kenny align , jig and re-machine all follower bores as the new followers are .050 oversize. A week later a resurrected military case comes home to Papa. Off to Pueblo Bearing with a wheel barrow full of bearings and seals for them to match up so this battle bitch project can go in the other direction after 9 months.BTW, I still can't understand how I can rebuild a set of Big Block 427 Chevy heads for less than 2 BMW heads that you can fit on palm of each hand. But....that's another rant.

Notice there has been no mention of adult beverages lately??? I'm on narcotics now.

Engine together minus heads and it goes round and round just as Dad taught me 55 years ago. Thanks Dad. Its times like this when I'm glad you taught me all things gear head and mechanical so I wouldn't be out on a professional baseball field making millions swinging a stick and playing catch.

Its wintertime 2016. A heavy box arrives from Germany. I have added a second tap to my kegarator for nitrous Compass IPA from Bristol. Time to set up in the front room where its 50 degrees warmer than the shop and I am close to my scanner, computer and Google Translate.

About the time the groundhog emerged in Punxatawney, my rebuilt transmission emerged from my indoor office space. Time to marry a transmission to an engine and de-grease an office. Back into shop space we go. What slid out of the yoga stance frame with the assistance of gravity 9 months ago was not quite so cooperative in reverse order. "Endeavor to perceiver"; my favorite line from The Outlaw Josey Wales. I had reassembled this beast in my 26 foot cargo trailer so I could keep the workspace full of warm Carbon Monoxide from the heater so my beer was not the same temperature as the ambient air. Out of the Brokeback yoga stance, it was a rolling assembly again. On go the heads , out come the feeler gage , set lash and timing and install rocker covers. I forgot how bad ass this thing looked. The Gretzin carburetors that these were originally fitted with are made out of UNOBTANIUM. I've seen 1 set . They were 3 thousand American Dollars. Not as much as a new set of transmission gears but I decided to do what all the new age Wehrmacht riders do now and treat myself to a new set of reproduction carbs for a tenth of the cost of the originals (which you can't find anyway)

Seventy degree weather was back. I had D&G paints match the color and luster of the Panzer Gray perfectly and it was time to touch up the chassis and sidecar and repaint fenders and gas tanks. Nowtime for the last 5% of the job that takes 25% of the time. I was into this for 8K in parts and machining so it's time for all the correct reproduction wiring harness(es), and re-bolt the entire machine with the correct blackened fasteners with the correct REIB head-stamp on the bolt. Ya...try finding those. Fast forward through body assembly, wiring, hooking up 3 shifter & Xfer case linkages, locking differential adjustment , tuning the foot and hand gearshift to attempt to be in the same gear at the same time, fabricating correct hoses, rebuilding rear brake cylinder and flushing /adding fluids to 5 different cavities....it was time for the cherry on the top.

There is only one thing I like better than motorcycles and guns. That would be motorcycles with guns. When purchased this battle ax it had a 1 piece cast aluminum movie prop gun swinging from the gunners seat . SACRALIGE!!!. During the last 2 years I had a search engine in GUNBROKER for a real MG-34 . There are plenty of prop guns made from original MG-34 parts but they don't make any noise. TNW takes original MG-34 parts and puts them on their own semi automatic receiver. To use my wife's logic, I saved \$25,000.00 by not buying the full automatic. I'm frugal like that. Throw in 6 original ammo cans and 8 original drum magazines so there is bounty in the

trailer. Did I mention the trailer? Got one, date stamped 1942. I first saw one of these R75 Africa corps bikes at the Davenport Iowa meet. It had in tow three of these trailers with an anti-tank cannon for a caboose. That motorcycle was a little tanner when it left from the flash burn it received over a 3 day event.

Well I had no intent of doing this much typing. After all there are motorcycles to build . So , in goes the new battery. All the Sparky stuff does all the right things at the right time. In goes the dead dinosaur juice. A few yoga moves for me after seeing what the bike could do. I was ready for the ritual kicking marathon of a freshly honed machine with all new other rotating stuff. Drink a Barley Pop while I figure out how to choreograph tickling, twisting, priming and kicking. Second kick a POP! more tickling 4th kick a stumble (the bike not me), another kick and the 2 years of my life that I felt like I had lost came back to be in an instant. To me it sounded like a B17 trying to start all 4 engines at the same time in a small garage. A few seconds later oil had completed its journey, things were quieter and firing more orderly. It was ALIVE!!!! again. Anybody who is reading this and stuck with me through 5 pages of yammering knows that feeling. It's my cocaine. I can't get enough. The feeling of bringing a piece of WW2 military history back to life so generations of people can see it for another 75 years makes it all worthwhile. It's also nice to know that you have put sweat equity into something and made it worth your time and money. Well that's not the case, I'm financially upside down on this for some time to come. But I don't care . The coolness factor far outweighs the monetary value to me. What compounds that feeling is the frame number on this bike was found to be one of the earliest the BMW R75WH registries of bikes still living. I had feelings of remorse at times while rebuilding this machine as my Father was a PFC in the Army from 1944 to 1946 and served in the Battle of the Bulge. I can't help but wonder if man and machine had met 72 years ago. If they had , I'm glad things turned out the way they did. I was never any good at baseball anyway.

Broke back motorcycle yoga



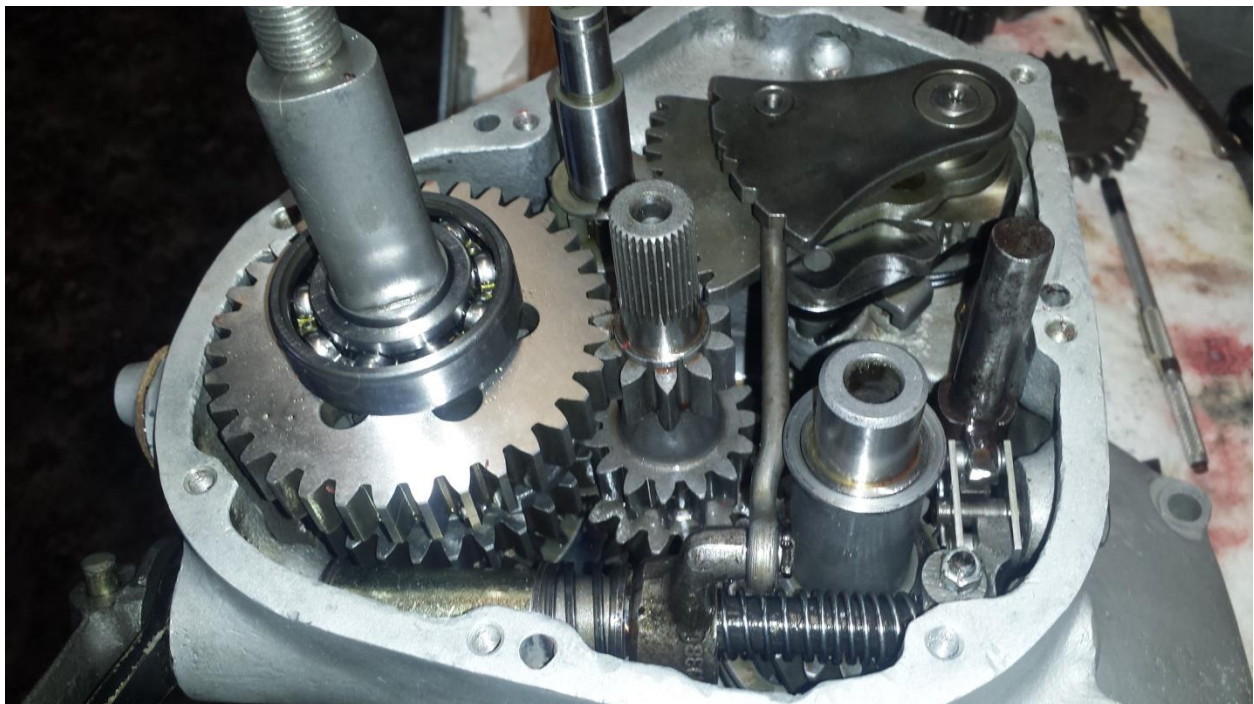
Wiped follower and chunk of engine case (the culprit)



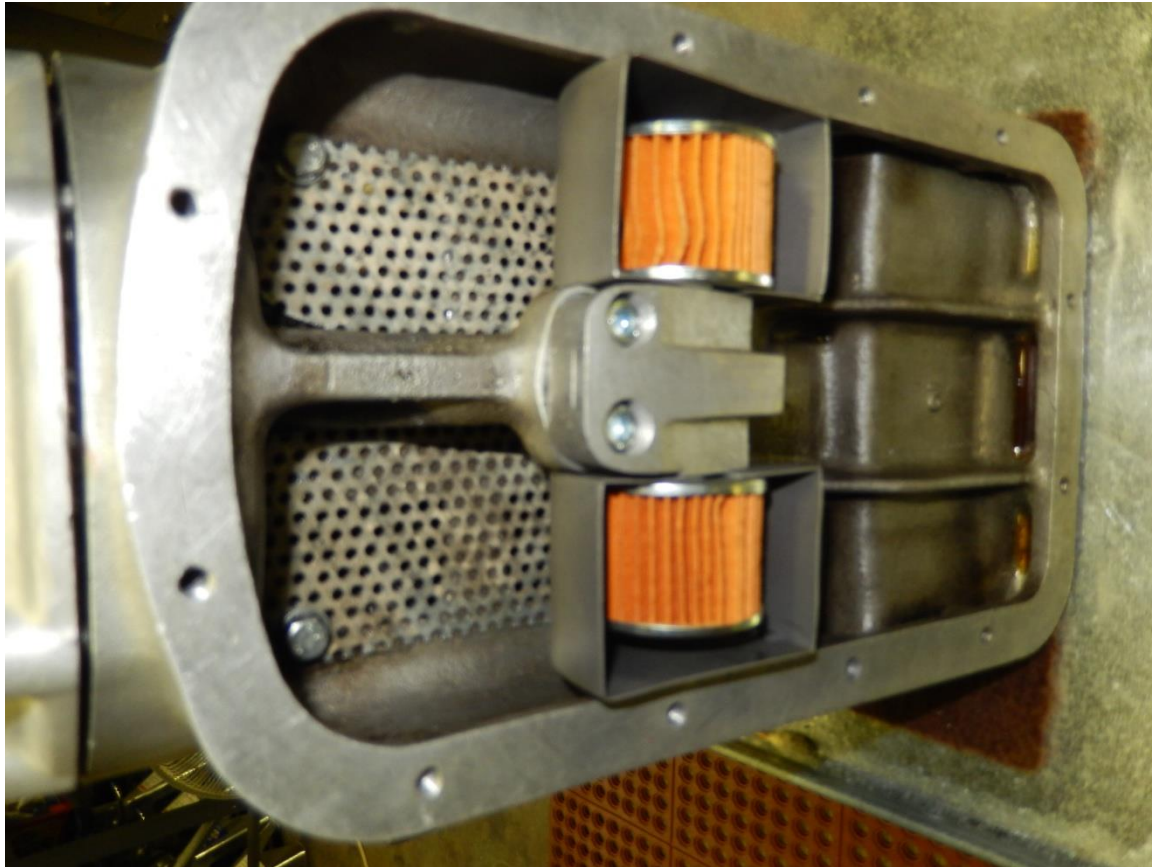
Transmission/transfer case ready for assembly



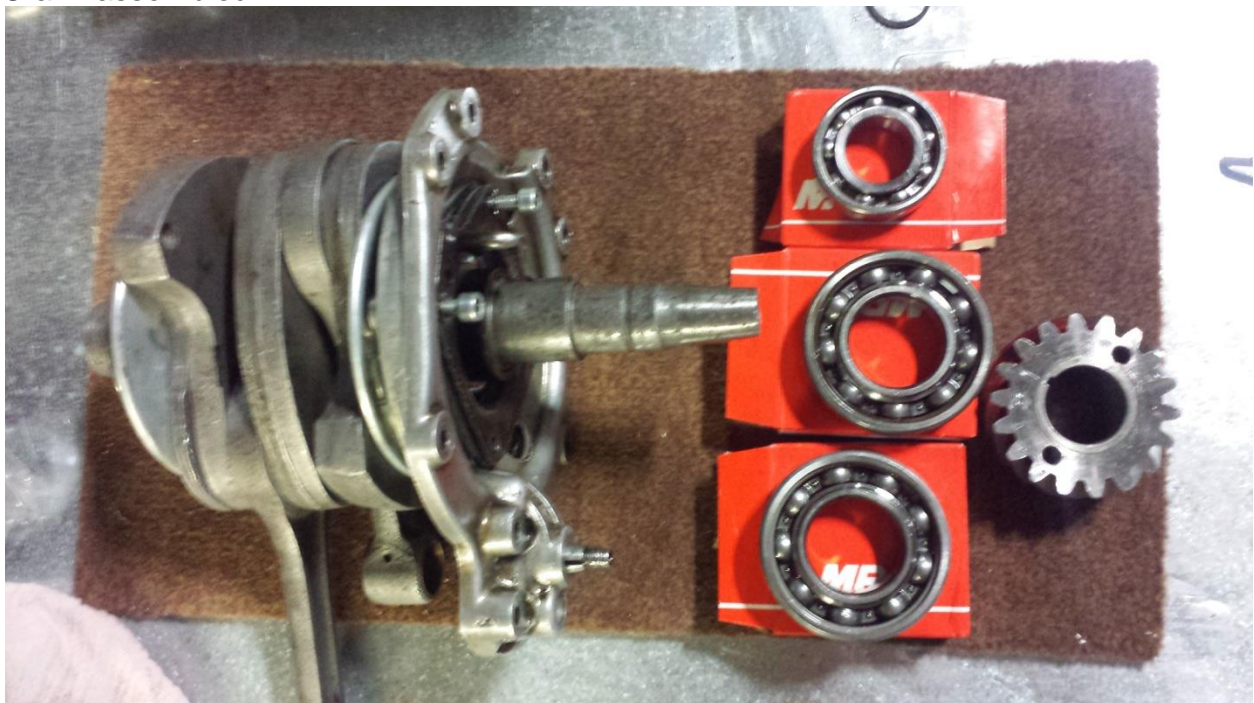
Completed Transmission /Transfer case / dual shifters



Out with the strainer, in with real oil filters



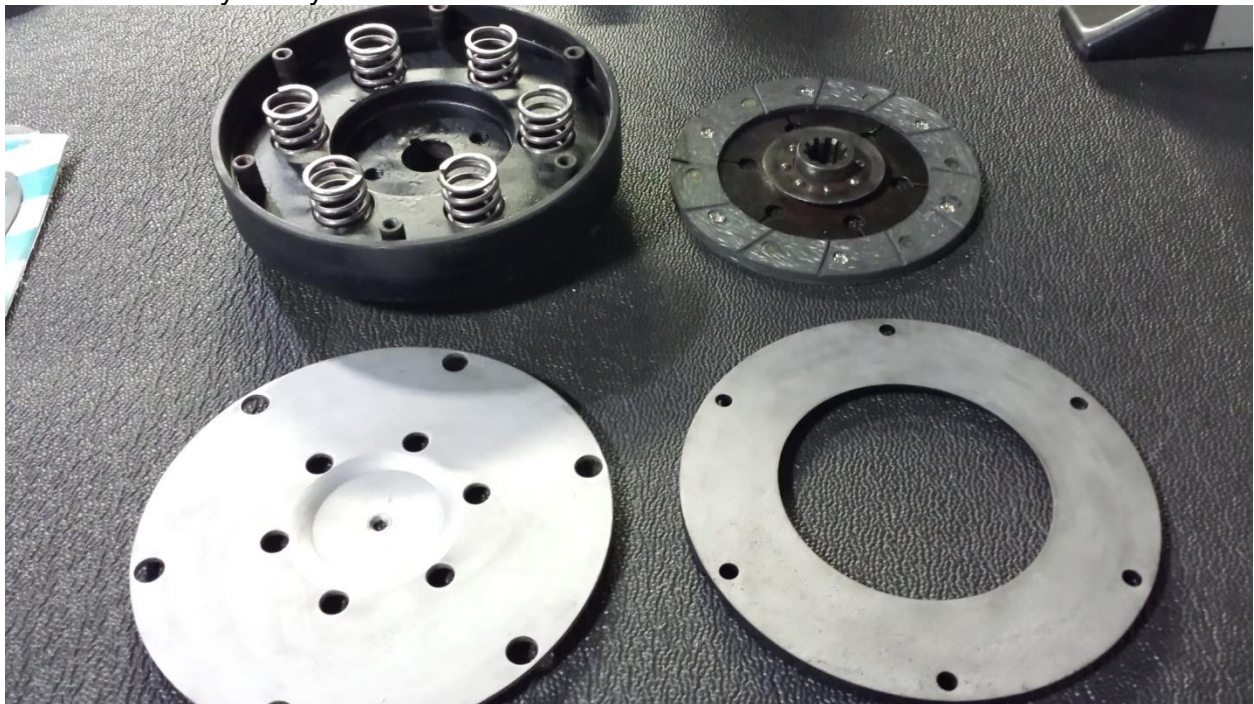
Crank assembled



Partial engine assembly



Clutch assembly ready



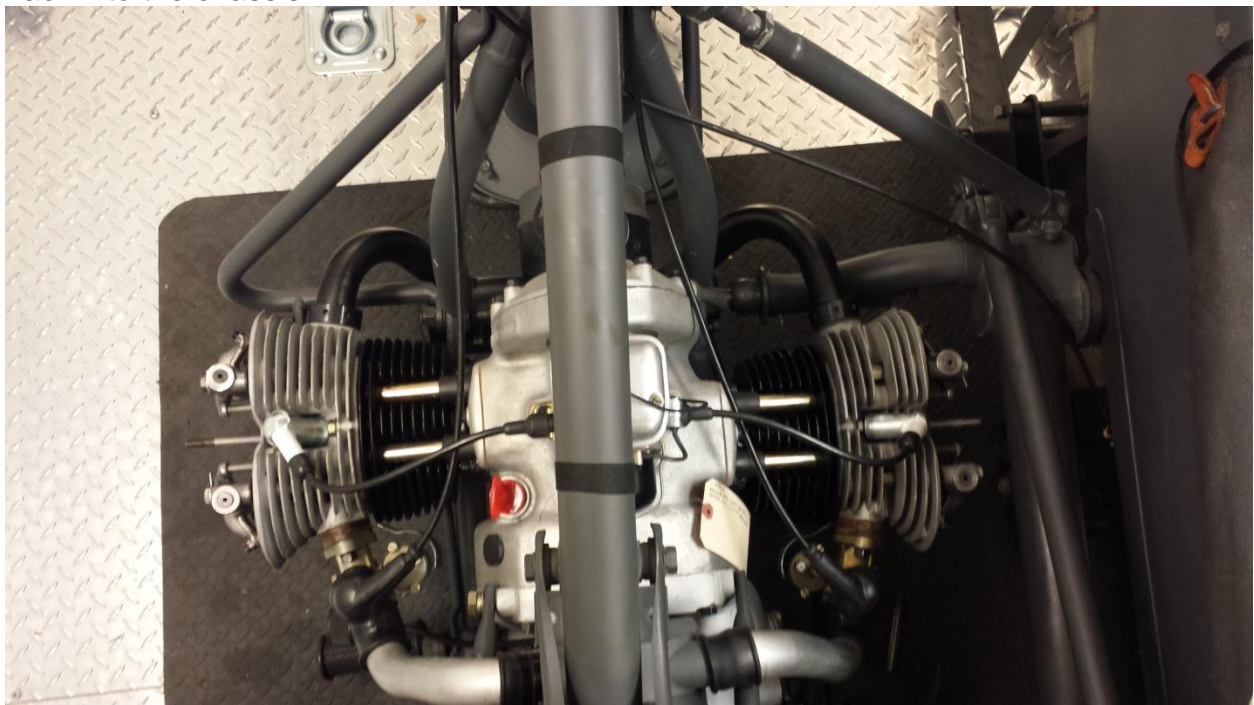
Engine/transmission married again

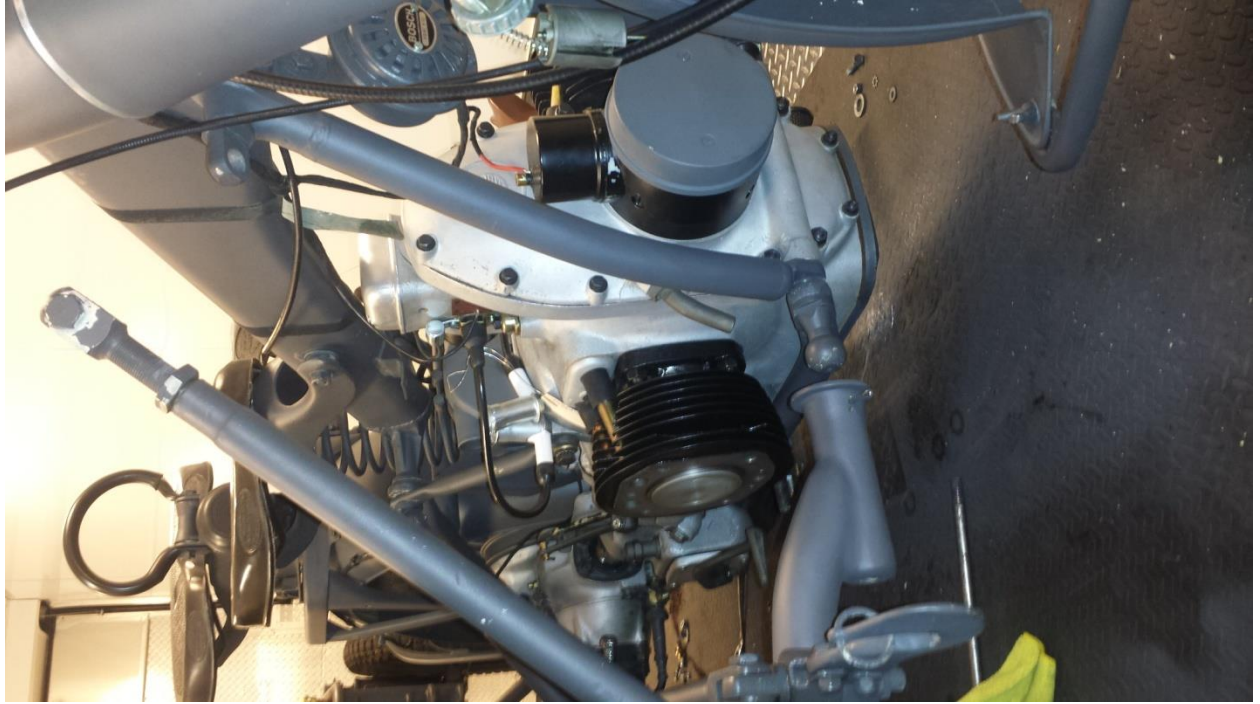


Heads/Cylinders Done



Back into the chassis









Time to celebrate



That's all folks!