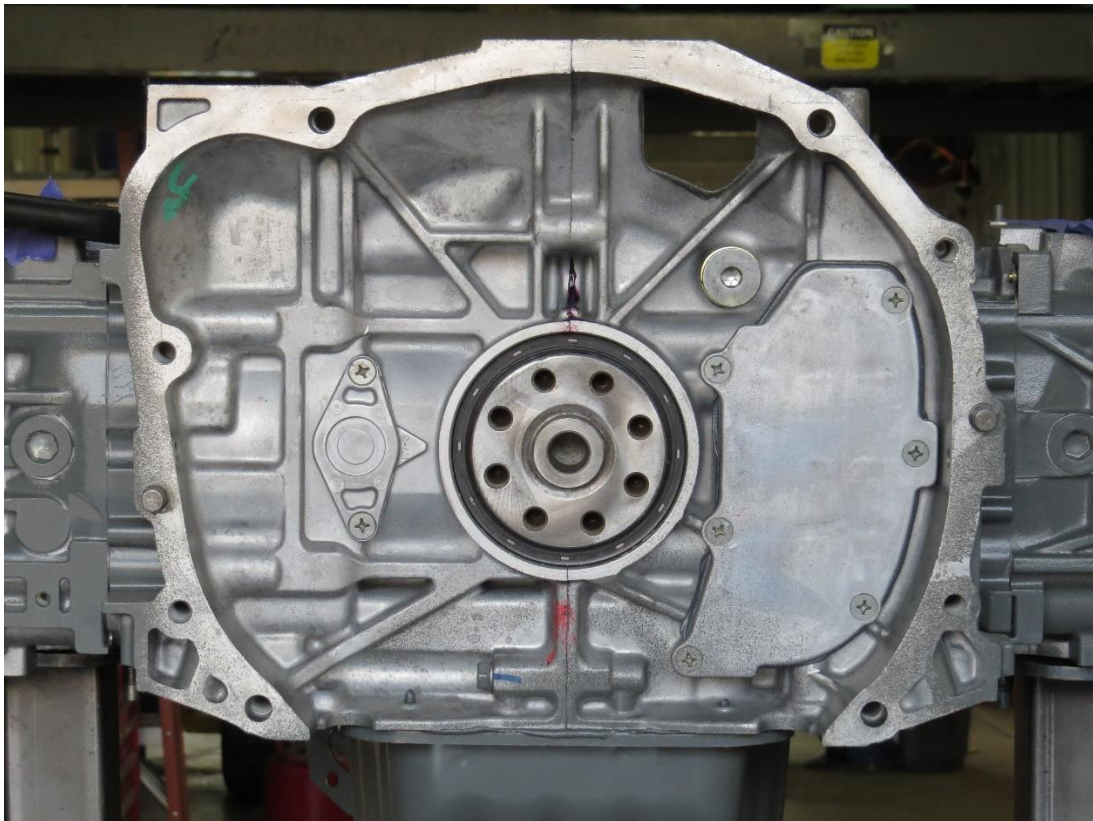


Mounting The Engine Adapter Plate (Manual Transmission)

Now let's tackle the installation of the adapter plate that will allow the Subaru motor to mate to the VW transmission.

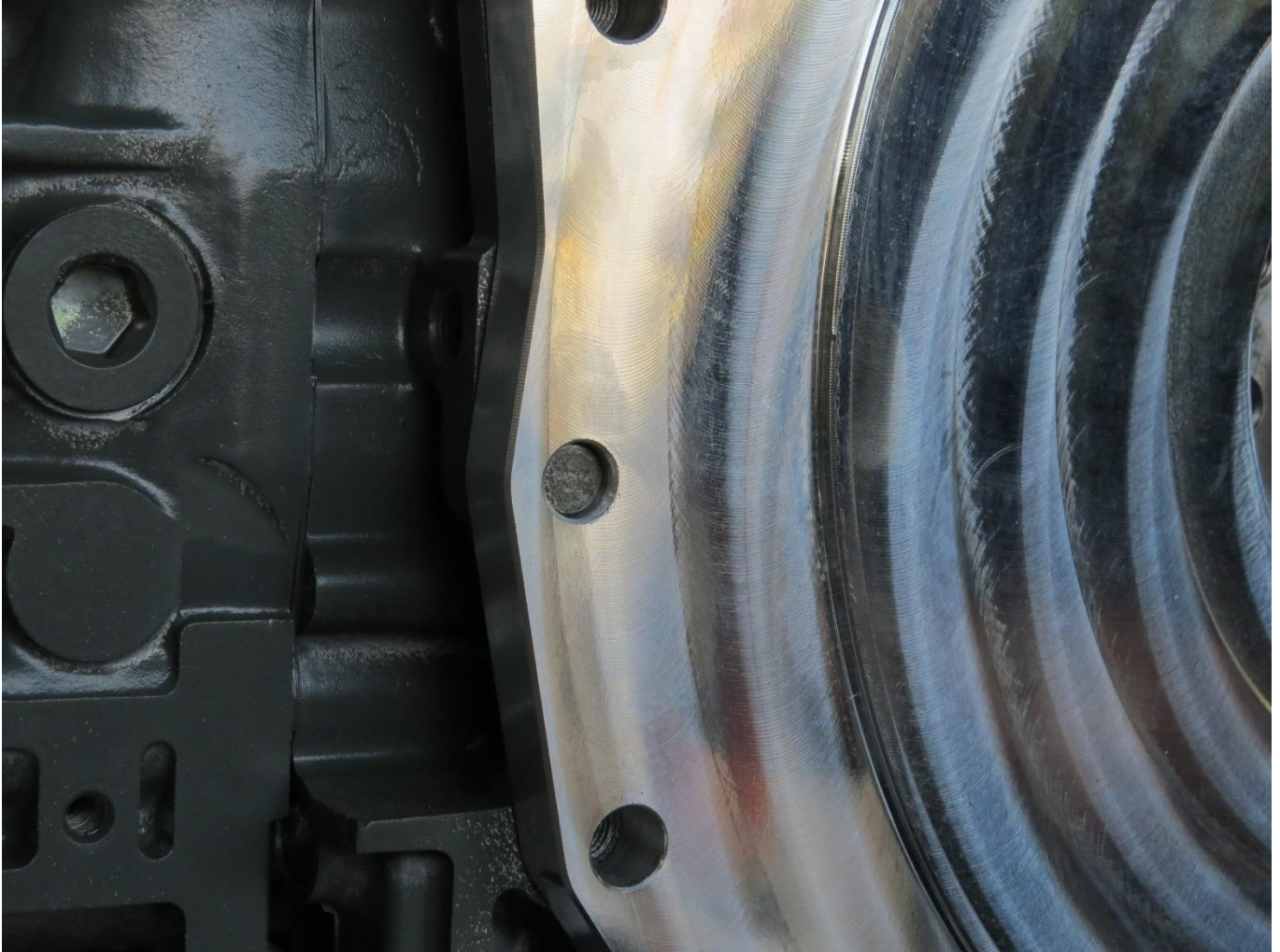
1. If you haven't done so, remove the Subaru flywheel or, if the donor was from an automatic, the flex plate. You can recycle the flywheel/flex plate hardware as the adapter kit comes with the fasteners you'll need for installation.
2. Take a look at the mating surface of the engine block. You should see two dowel pins located at about 3:00 and 9:00 o'clock that help correctly orient the engine to transmission. Clean up any corrosion or dirt on these pins with a small piece of steel wool. If you do not see the dowels in your block, check the transmission of the donor car as the dowels may have remained in the transmission bell housing on engine removal. These dowels are crucial and must be present before attaching the adapter plate.



3. **NOTE:** Looking the rear of the block you'll notice an oil separator plate attached with philips head screws. Some engines came from the factory with plastic plates that were prone to leak. Subaru retrofitted all these plastic plates with metal versions. If your motor has a plastic plate, it is highly recommended to replace it with an upgraded metal plate. These can be obtained at your local Subaru dealer: part number 11831AA210
4. Clean the mating surface of the motor. With the Rocky Mountain Westy logo facing you, align the RMW adapter plate with the dowel pins and press the adapter evenly onto the pins.



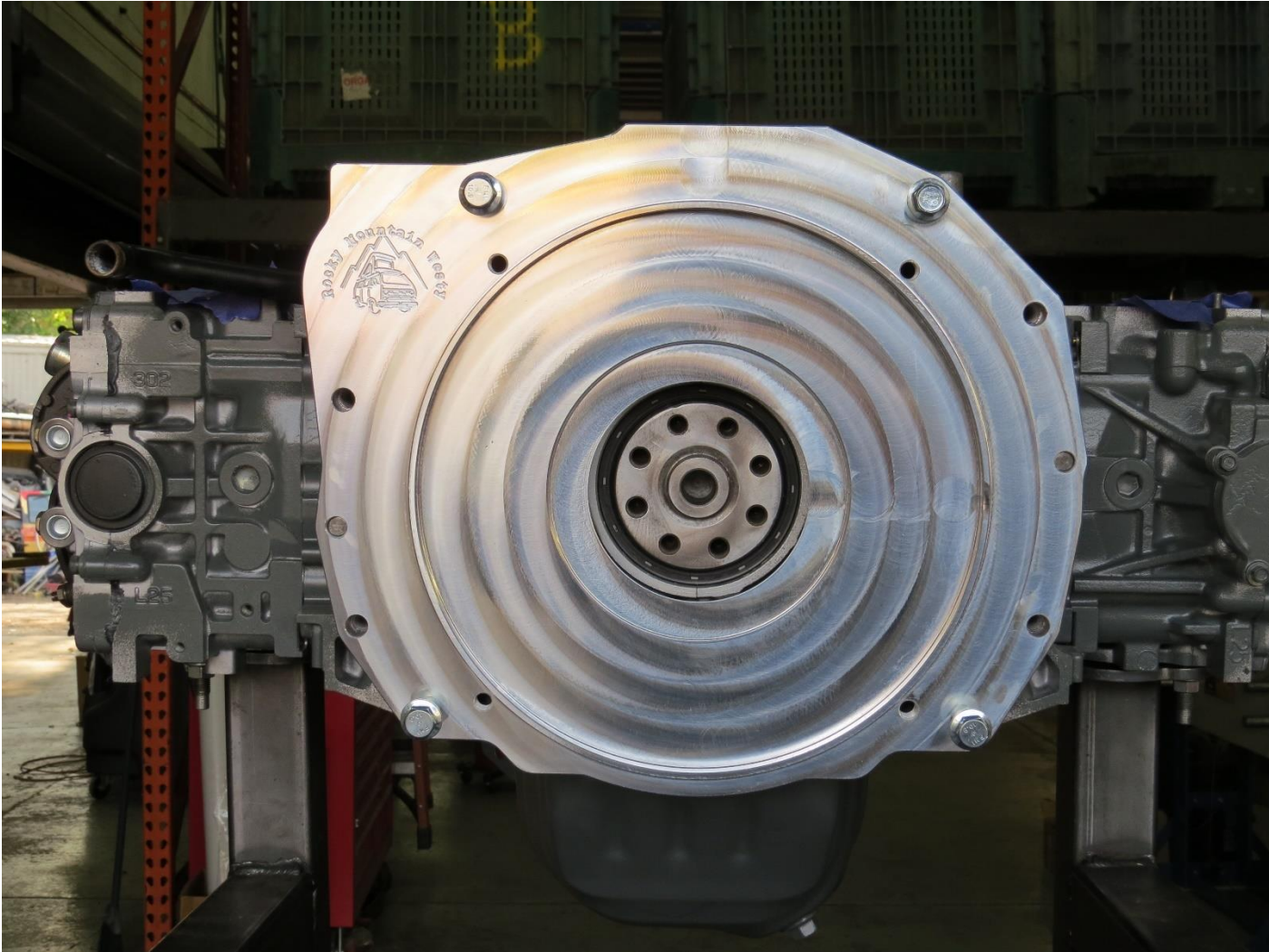
5. Tap the adapter plate with a soft face mallet to ensure it's completely seated on the dowel pins and against the mating surface of the block.



6. Slip (4) M10 washers over (4) M10 x 1.25 X 45 bolts, apply red thread sealant to the ends of the bolts.



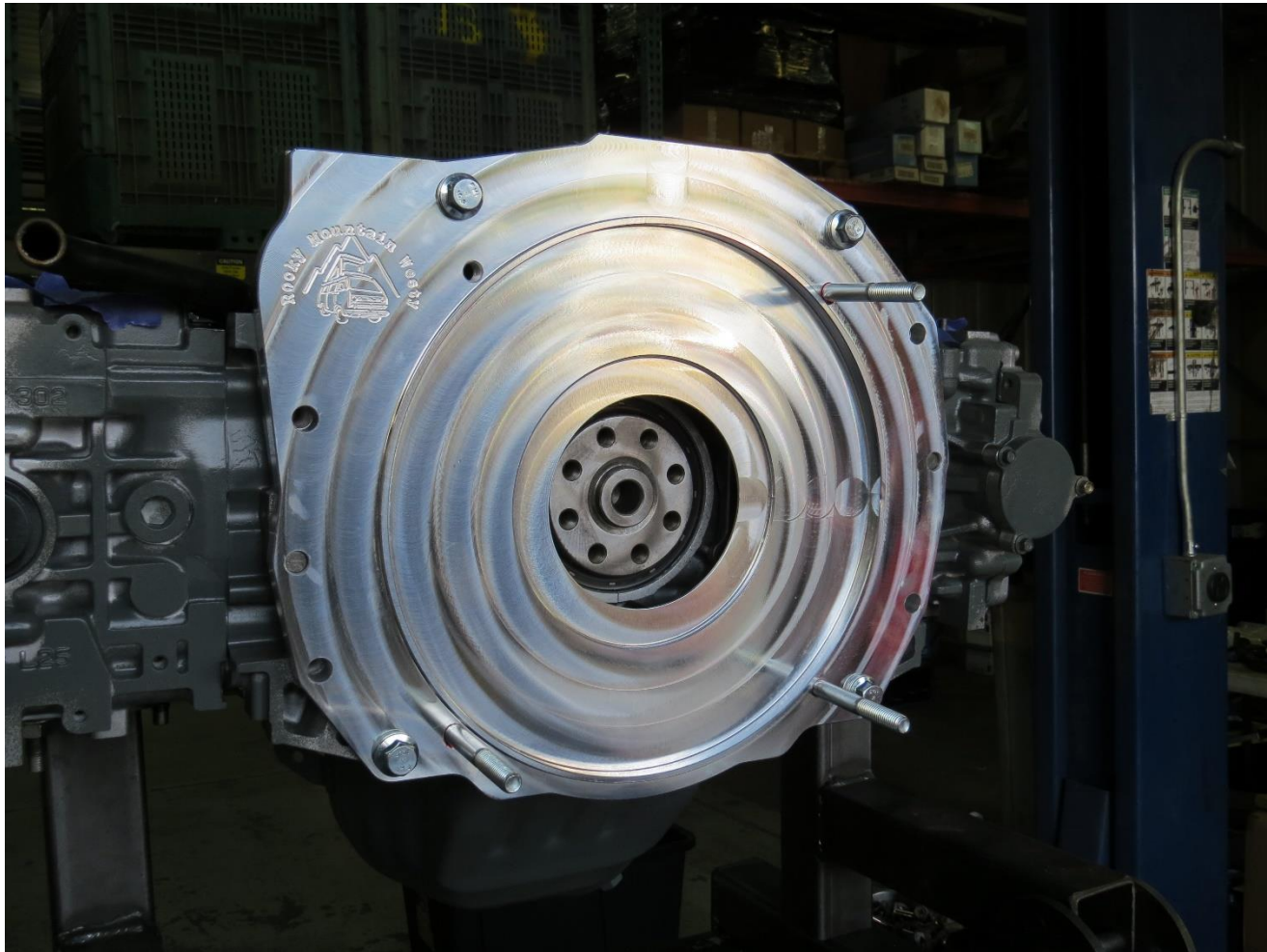
7. Thread the fasteners through the adapter plate and into the block in the location shown in the photo below. Tighten the fasteners evenly, pulling the adapter plate against the block. Torque these bolts to 40 ft/lbs.



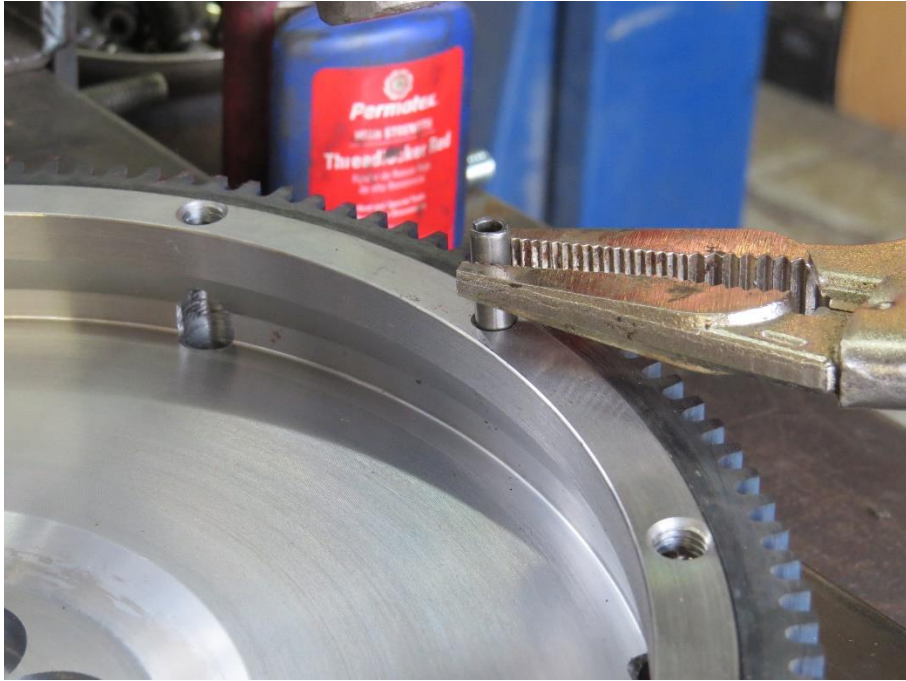
8. Apply a bit of red thread sealant on one end of the threads of the included 3.5" double-threaded studs.



9. Thread the studs into the holes at the 2, 4 and 7 o'clock positions as you face the adapter plate. See photo for reference. You can install two nuts onto the stud tightening them against each other to torque the studs into the plate. **Note: The hole at the eleven o'clock position will use your starter bolt once the engine and trans are mated.**



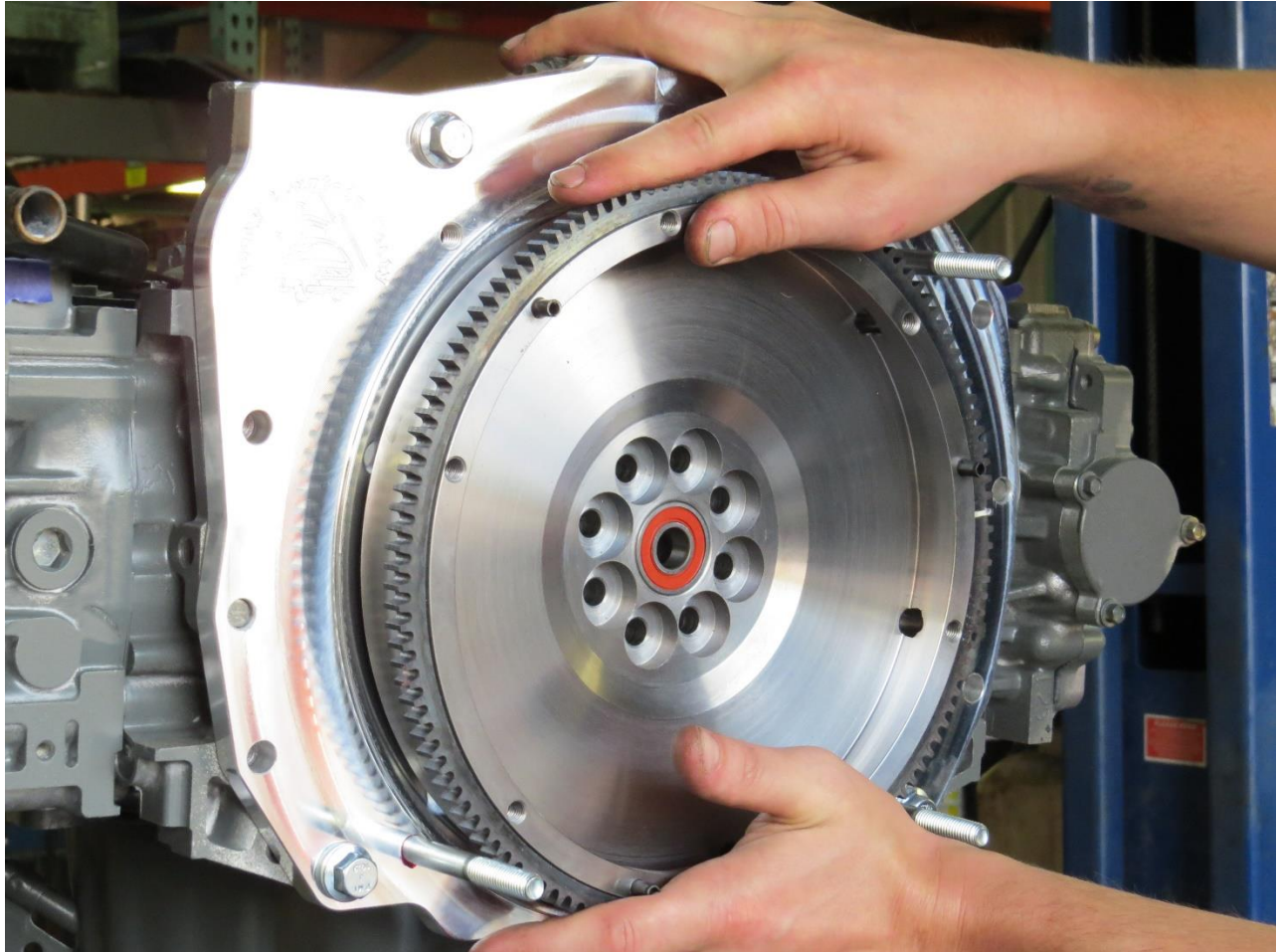
10. The RMW adapter kit include three roll pins that will locate the clutch pressure plate in the flywheel. Install the pins by using a needle nose plier to hold the pin and tap into the flywheel with a hammer. See photos below for pin locations.



11. We recommend cleaning the threads on the crankshaft bolt holes to ensure that you can achieve an accurate torque setting on the flywheel bolts. Apply blue thread sealant to the included flywheel bolts.



12. Lift the flywheel to the crankshaft aligning the holes in the flywheel to the threaded holes in the crankshaft. Hand thread the (8) flywheel bolts. Do not tighten until all bolts are started.



13. Tighten the bolts in increments in a crisscross pattern to a final torque of 51-55 ft/lbs.



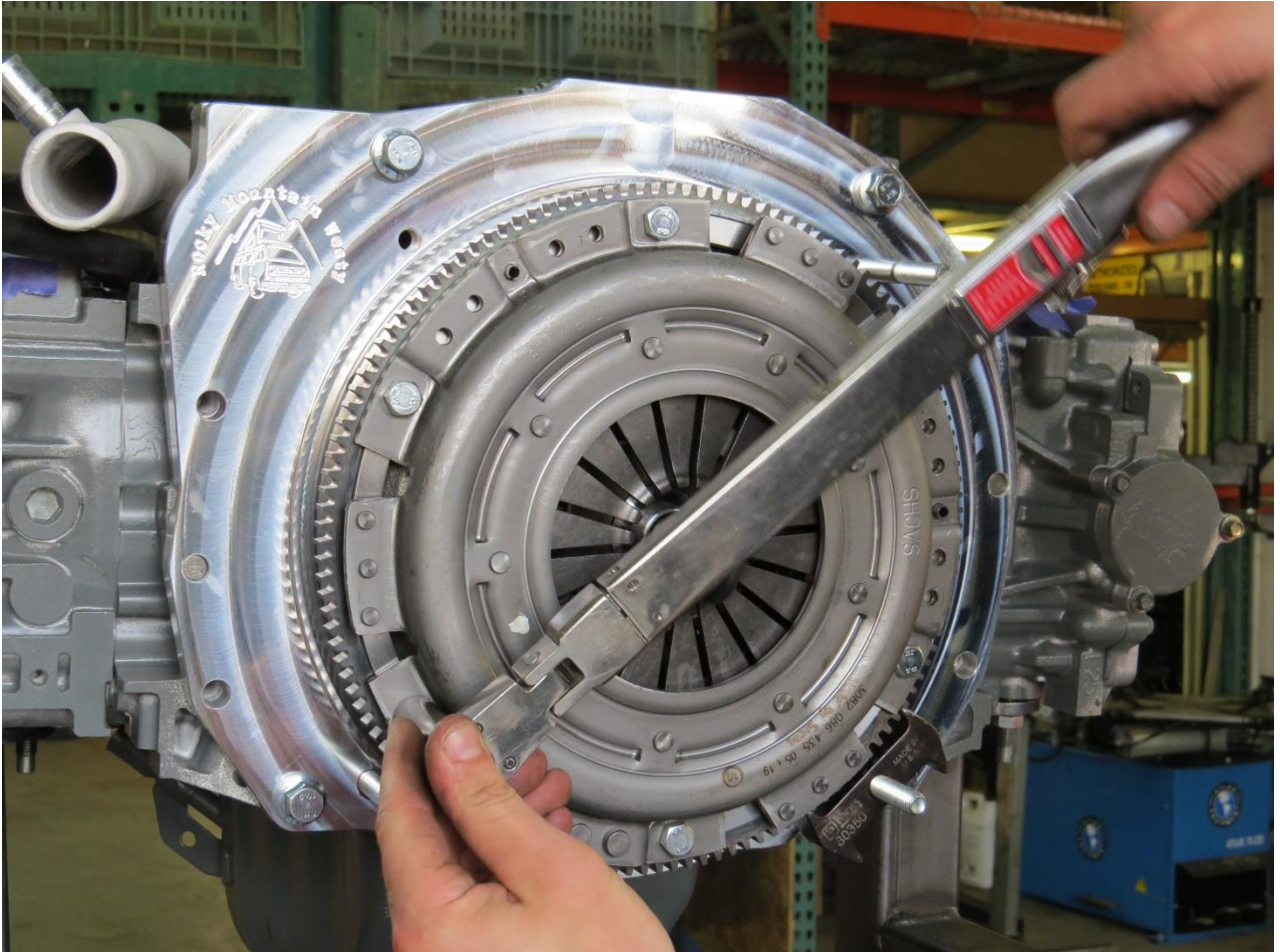
14. The Rocky Mountain Westy conversion flywheel uses a stock Vanagon clutch set. We recommend using a German clutch as we've found them to be superior in their balancing out of the box. You can find them at www.vancafe.com
15. Prep the clutch surface of the flywheel using brake cleaner or other solvent to remove any grease or fingerprints. **Lightly** grease the splines of the included clutch alignment tool with the included grease and insert it through the snout of the clutch friction disc as shown. Slide the clutch tool into the pilot bearing in the end of the crankshaft. Insert the tool fully – the disc will sit on the splines of the tool.



16. Lift the clutch pressure plate up to the flywheel. You'll see that there are three corresponding holes in the pressure plate to slide over the roll pins you just installed. Slide the pressure plate over the tool and line up the roll pins and pressure plate. Push lightly and start hand threading the pressure plate bolts into the flywheel. You'll reuse these bolts from your bus.



17. Once all the bolts are hand tight, ensure that the tool is centered in the pilot bearing and begin to tighten the bolts in a circular pattern. Use just a half turn on each bolt and go round and round until they are all snug and then a final torque of 22 ft/lbs.



18. Remove the clutch alignment tool.

19. You will find a small aluminum plate included in the adapter kit. Use the two included M6 allen-head bolts to bolt the plate to the block in the orientation shown below.



