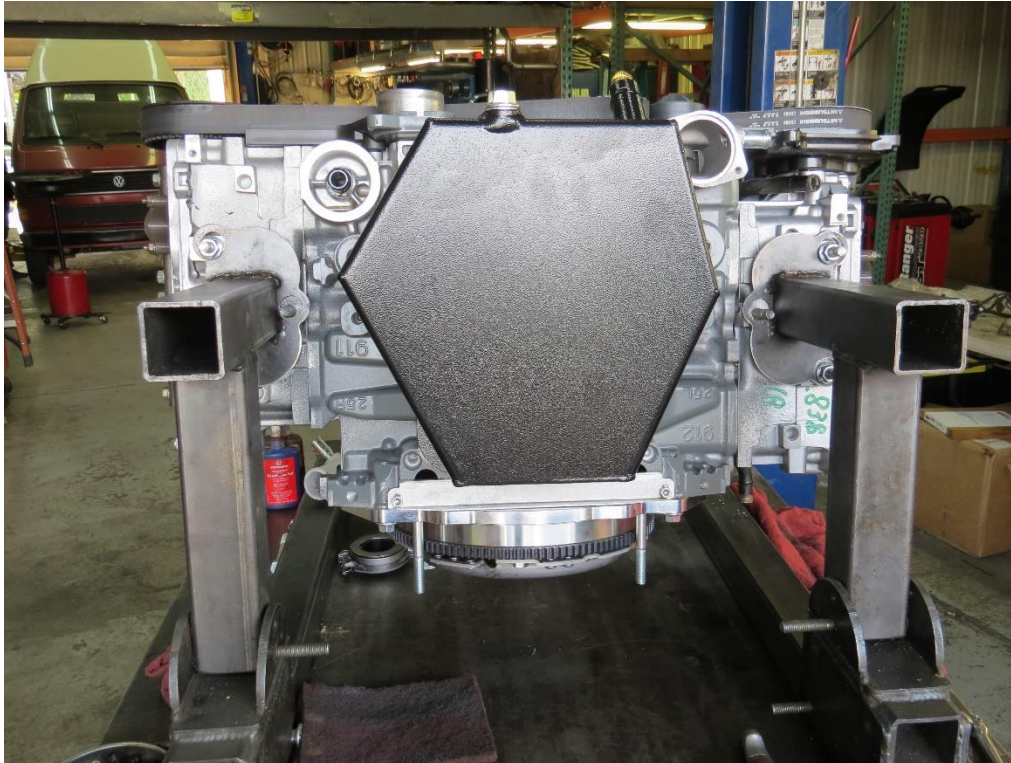




Subaru Shortened Oil Pan Installation



Introduction:

Thank you purchasing the Van Café Subaru Shortened Oil Pan. Designed for the avid adventurer, our custom oil pan regains the 2" lost in a typical Subaru conversion while retaining a full five-quart capacity. Though this pan is easy to install with common hand tools, we recommend you read through these instructions before starting your installation.

We pride ourselves in the products we develop and would not bring an item to market that we did not fully believe in. Please reach out to us at support@vancafe.com if you have any issues or concerns with this part and also take a moment to leave us a great review on our website to show your love for Van Café products!

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What's in the Box

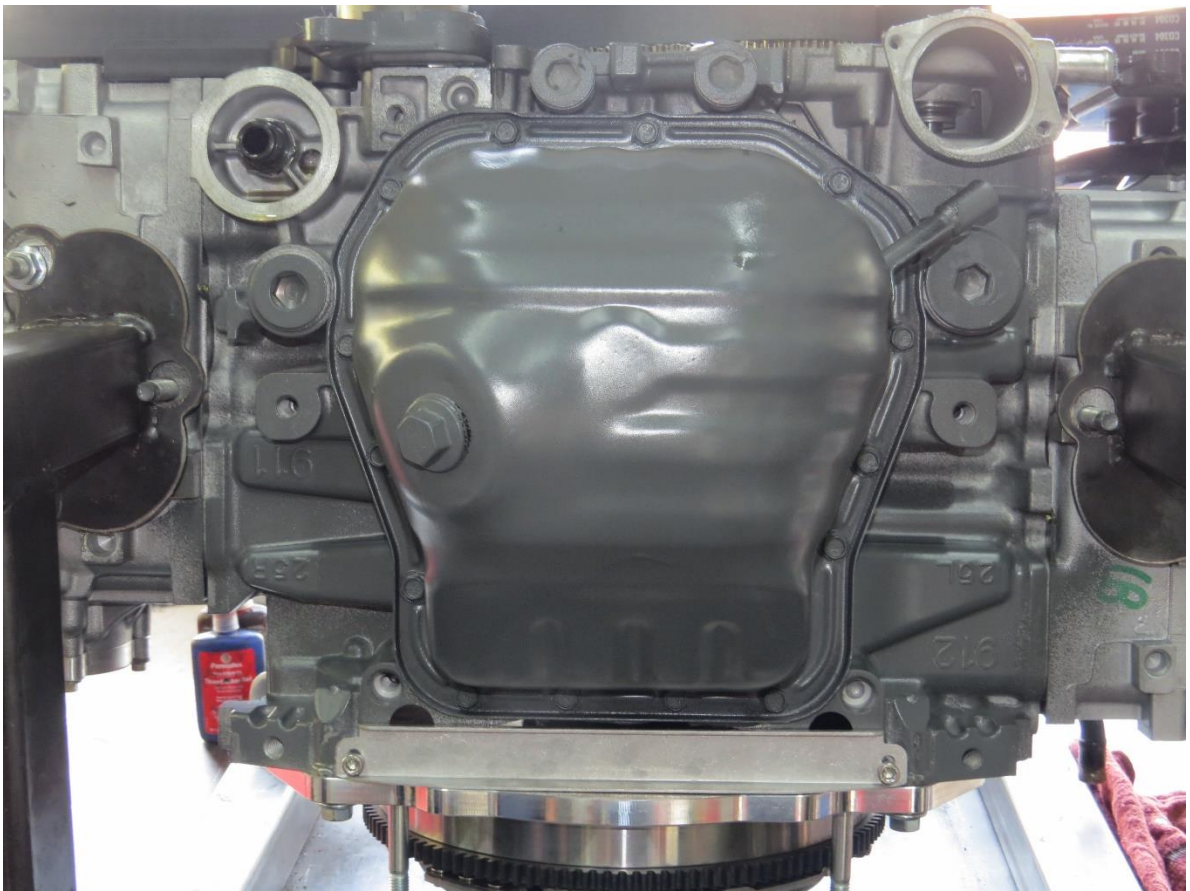
- Custom Shortened Oil Pan
- Shortened Oil Pickup w/o-ring
- (14) M6 Hex bolts
- (14) M6 Split Washers

Tools Required

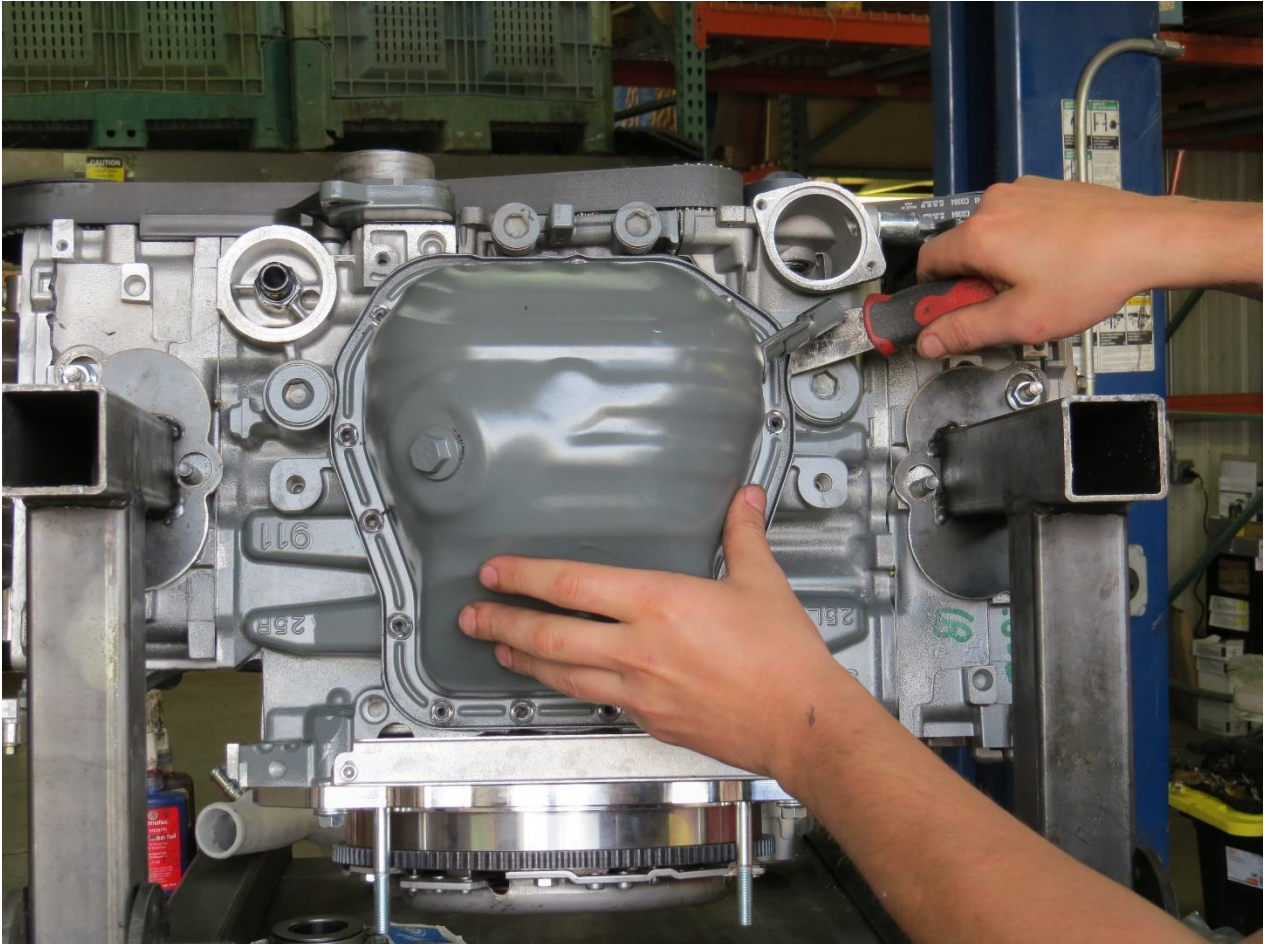
- 10mm driver (For hex bolts)
- 19mm driver (For oil drain plug)
- Plastic Scraper or equivalent (For removing old gasket material from block)
- RTV (We recommend Permatex Right Stuff or Ultra Grey)

Installation

1. Installing the Rocky Mountain Westy oil pan is much easier with the motor on an engine stand as you will be able to rotate the motor upside down to arrange the components without fighting gravity. This being said, if you do invert your engine it is imperative that you prime the engine oiling system before starting the motor for the first time. **Failure to prime the oiling system prior to starting your engine may result in severe damage.**
2. With the motor inverted on the stand in front of you, remove the stock Subaru oil pan with a 10mm driver.



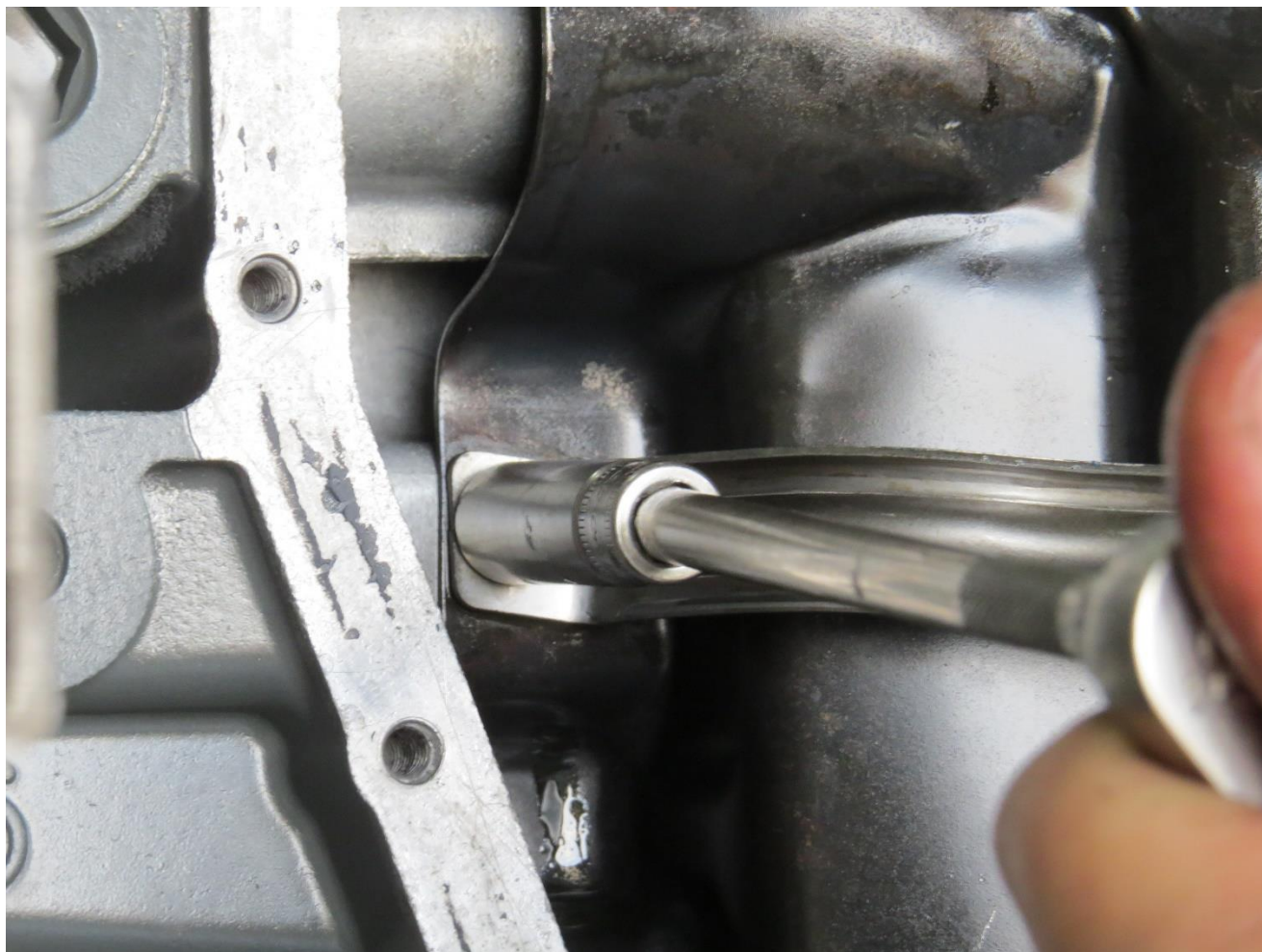
3. Once you have the bolts removed, you may have to use a plastic scraper to wedge the pan apart from the engine block. Do NOT use anything metal here as you will mar the aluminum of the block's sealing surface.



4. The factory oil pickup is held in by three bolts. Remove the two bolts at the pickup flange.



5. Then remove the third bolt at the oil pickup bracket.



6. Reinstall the bolt that went through the bracket back in the same position and tighten to 5 Nm.



7. Carefully clean the mating surface with a scraper...



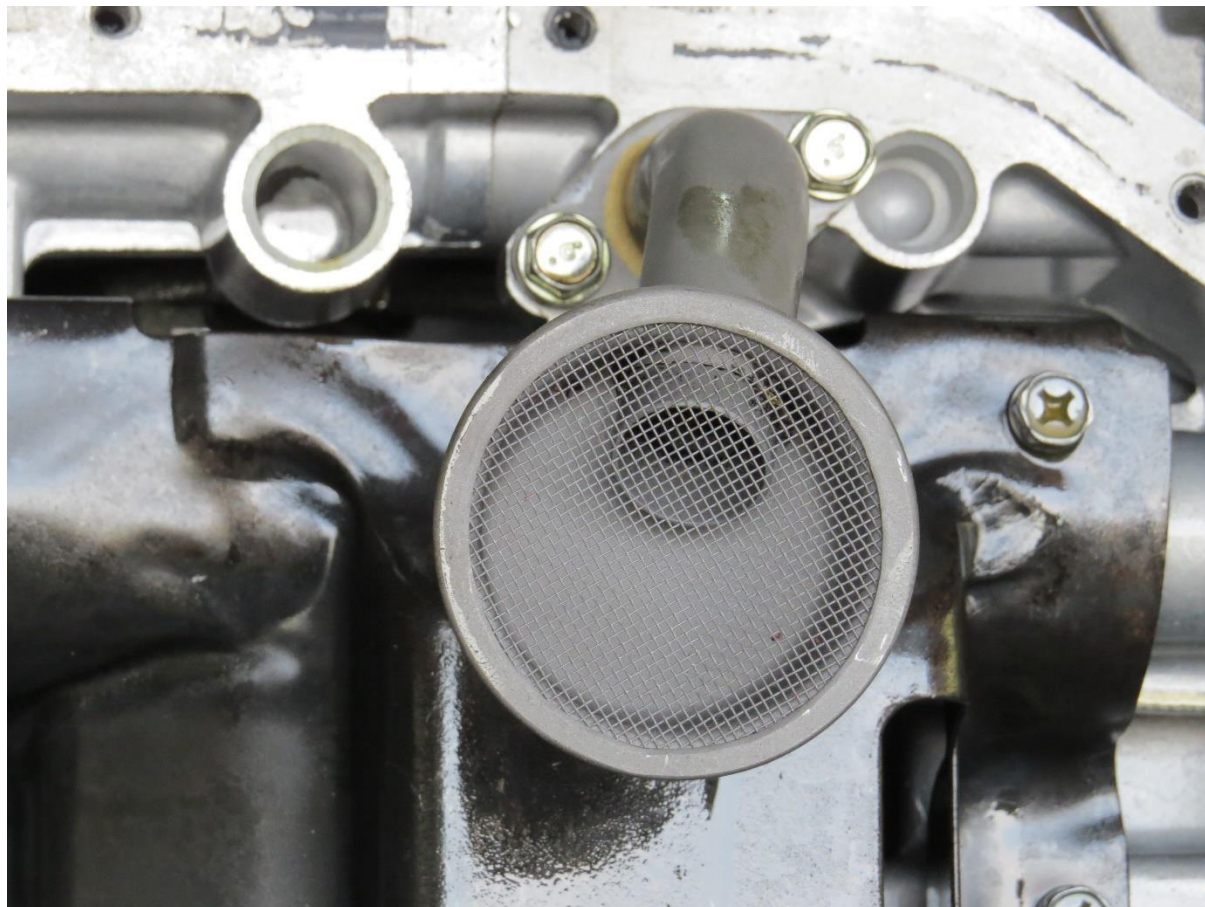
...and finish removing the factory gasket sealant with a 3M pad. The cleaner your surface, the better chance of a leak-free seal: take your time and be thorough!



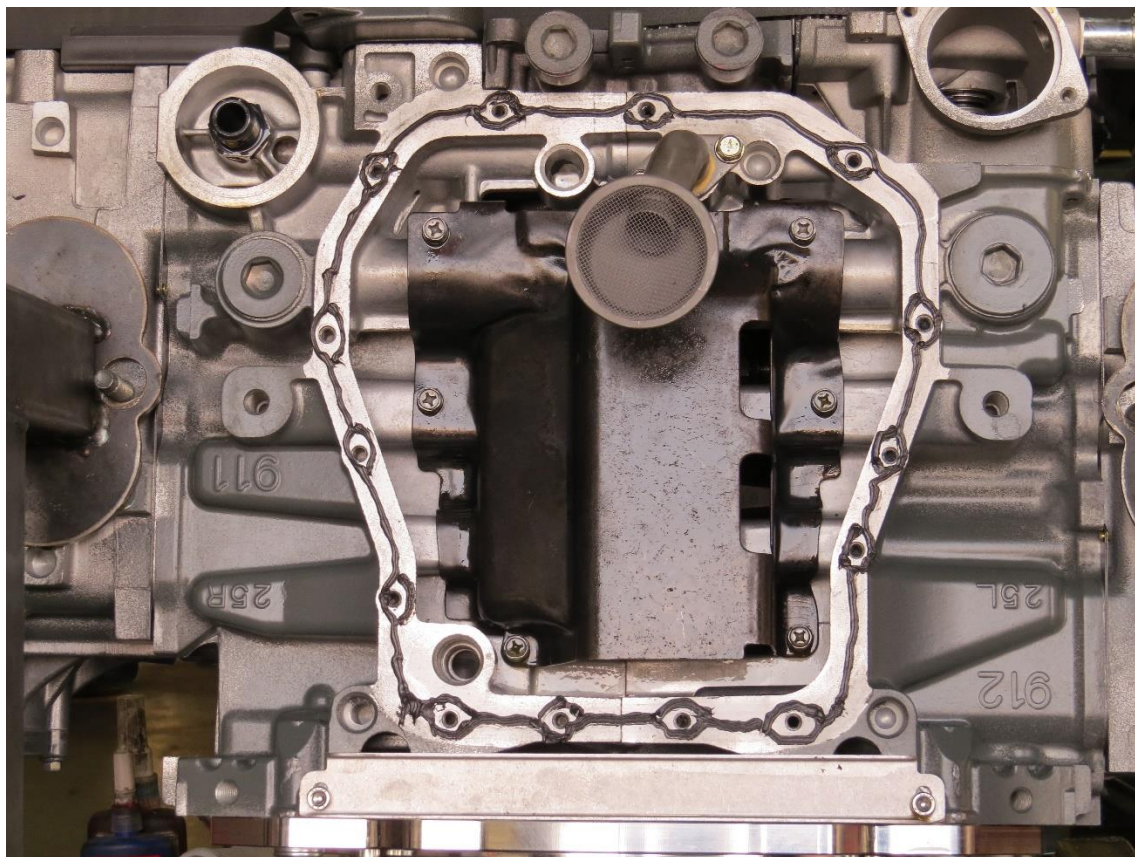
8. Coat the included o-ring with some clean engine oil and slide it over the bottom of the RMW shortened pickup tube. Make sure it seats evenly in the groove at the bottom of the flange.



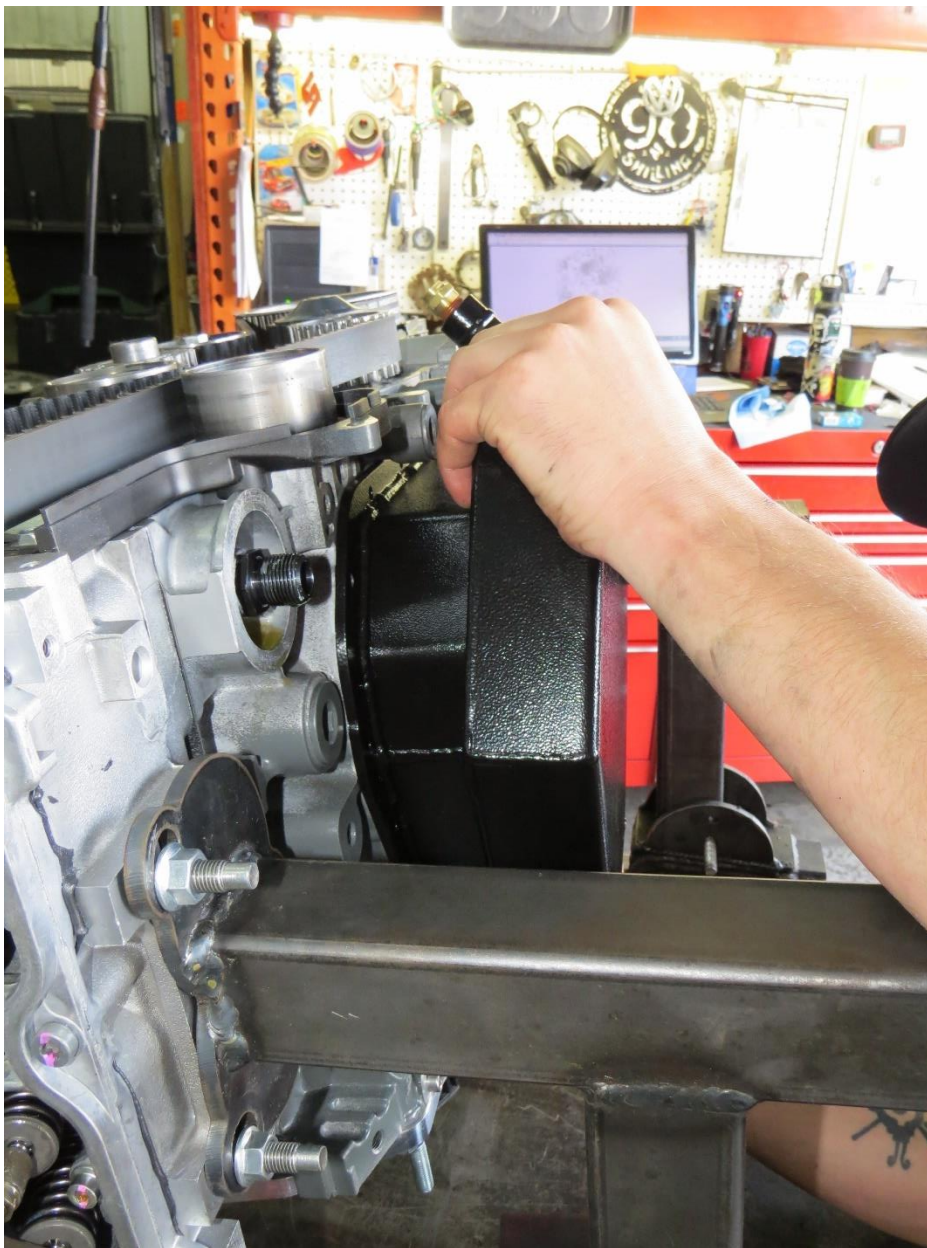
9. Use the two original bolts to bolt the RMW pickup tube to the block making sure the o-ring seats into the block evenly. Make sure the tube is oriented as shown in the photo. Torque these bolts to 10nm.



10. Once the pickup tube is bolted in, test fit the oil pan onto the motor. All good? If so then it's time to add a little sealant and bolt in the pan. Here at the shop we use Permatex "The Right Stuff" gasket maker and apply a small 1/8" bead around the engine to oil pan mating surface. Make sure you circle the bolt holes to ensure proper sealing. DO NOT use too much sealant – more is not better in this instance!



11. Lower the oil pan onto the engine lining up the holes in the pan and block. Start inserting the included M6 hardware into the most accessible bolt holes. Try not to reposition the pan on the block while inserting the bolts to avoid smearing the sealant. Leave all the bolts finger tight until they are all started in their holes.



12. Start to tighten the fasteners in a criss-cross pattern going only one full turn at a time on each bolt. The goal is to attach the oil pan gradually and evenly. Your patience here will reward you with a leak free seal. Torque to 10Nm.

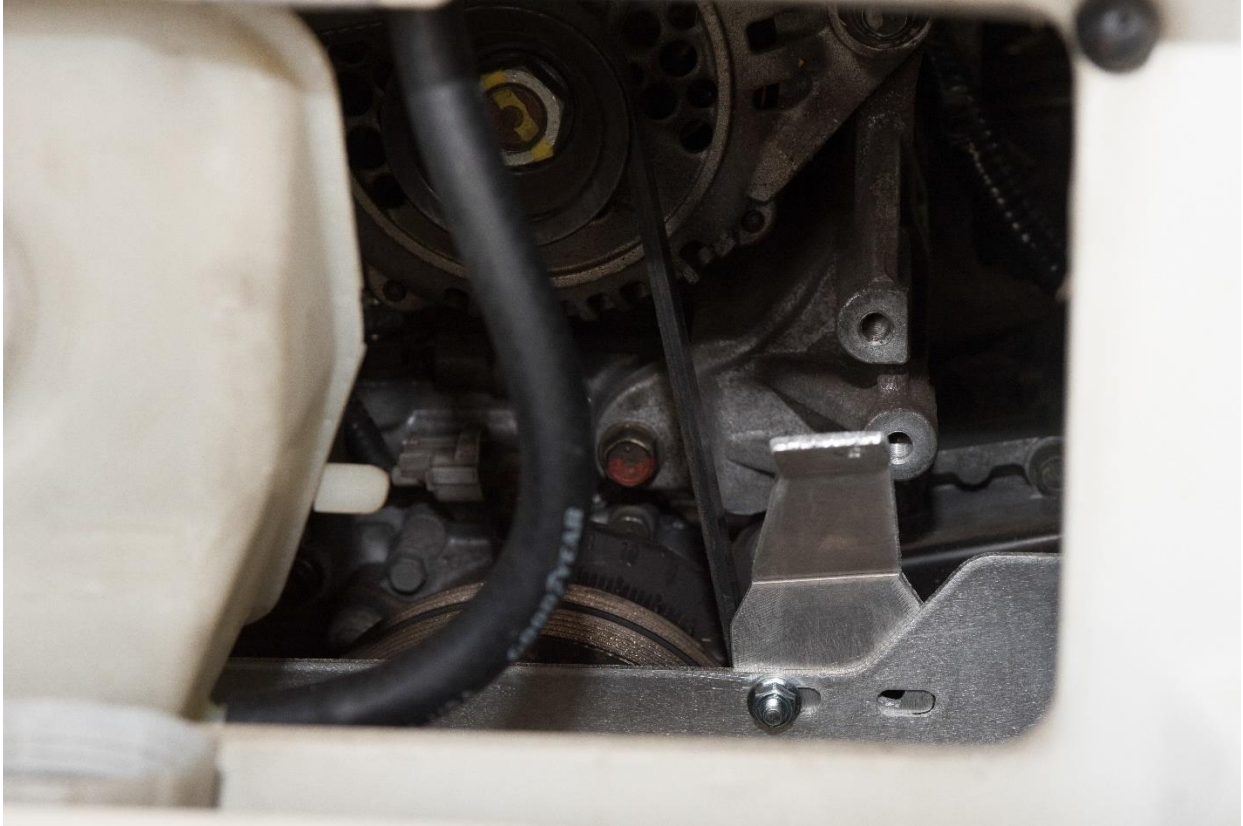


13. You'll be installing the dipstick tube after the exhaust heat shield. We recommend temporarily placing tape over the dipstick tube fitting on the pan to prevent debris intrusion.

14. **Important:** Torque the oil drain plug to 30-35 ft/lbs. We do not pre-torque these bolts before shipping the pans

Oil Dipstick Tube Installation

1. Loosely bolt the bracket onto the engine side of the heat shield using the inside slot as shown in the photo below.



2. Take a look at your dipstick tube and notice that one end is slightly larger in diameter. This side faces up toward the dipstick handle. Remove the tape you placed on the oil pan brass fitting and install the smaller end of the dipstick tube into the oil pan by pushing it firmly. This is a one-way fitting: once you start installing the tube you will not be able to pull it back out so make sure you're sure about which end is correct. Push firmly until you feel the tube hit a stopping point inside the fitting.



3. Slide the included p-clamp over the top of the dipstick in such a way that the flat part of the clamp rests against the heat shield. Insert a bolt from the engine side of the p-clamp and through the bracket and heat shield. Loosely install a washer and nut on the rear side of the heat shield. The dipstick tube will be positioned in between the two bracket mounting bolts. See photo below for reference.



- Slide the black plastic routing clamp over the dipstick tube so that the bolt hole on the clamp lines up with the bolt hole on the righthand side of the bracket. Insert a bolt through the clamp and bracket and loosely install a nut onto the exposed threads.



5. Position the tube so that it runs as vertically straight as possible. Be very aware of the crankshaft pulley and ensure that the dipstick tube clears the pulley with plenty of space. The holes are slotted to allow for positioning away from the pulley. Tighten the fasteners making sure that the dipstick doesn't shift while doing so.
6. With a funnel, pour a small amount of engine oil into the tube. Lubricate the dipstick with engine oil and insert it into the tube. Go slowly and work the lubrication into the tube. There will be some resistance until the sides of the tube are fully coated with oil. If the dipstick becomes difficult to insert, pull it out and re-lube the tube and stick. Once the dipstick is fully inserted, remove it and re-insert it several times. You will notice that the stick will install more and more smoothly each time.



Prime and install your Subaru oil filter and fill the system with approximately five quarts of 5W/30 motor oil for the 2.5 liter and 10W/30 for the 2.2 liter. Be sure to check the level as you get close to full so as not to overfill. **Refer to Subaru specifications pertaining to your specific engine for oil type, weight and service intervals.**