



2015+ WRX Top Mounted Engine Oil Cooler

2025-05-16

PSP-OIL-151

Thank you for purchasing this PERRIN product for your car! Installation of this product should only be performed by persons experienced with installation of aftermarket performance parts and proper operation of high performance vehicles. If vehicle needs to be raised off the ground for installation, the installer must use proper jacks, jack-stands and/or a professional vehicle hoist for safety of the installer and to protect property. If the vehicle is lifted improperly, serious injury or death may occur! Please read through all instructions before performing any portion of installation. If you have any questions, please contact our tech department prior to starting installation. We can be reached in any of the following methods:

Email Tech@PERRIN.com

Instant Chat off the main page of www.PERRIN.com

Or simply call our tech team at 503-693-1702



WARNING: This product can expose you to chemicals including Lead which is known to the State of California to cause cancer birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

GENERAL MODIFICATION NOTE

Modifications to any vehicle can change the handling and performance. As with any vehicle extreme care must be used to prevent loss of control or roll-over during sharp turns or abrupt maneuvers. Always wear seat belts, and drive safely, recognizing that reduced speeds and specialized driving techniques may be required. Failure to drive a vehicle safely may result in serious injury or death. Do not drive a vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Some modifications (and combinations of modifications) are not recommended and may not be permitted in your state or country. Consult the owner's manual, service manual, instructions accompanying these products, and local laws before purchasing and installing these modifications. You are responsible for the legality and safety of the vehicle you modify using these components.

SPECIAL NOTES:

- This part is designed around fitting the PERRIN Strut Bar or other bars that are similarly designed, which use a bar with an OD of 1.0" or 25mm.
- You will need an additional 1/2 quart of oil after installation is complete. Make sure and have oil ready to be added or be prepared to do a full oil change after installation. For additional oil changes, check oil level after adding factory fill level, and add more if needed.
- Each connection where the hose meets the fitting can be rotated to allow better alignment. Rotate hose on fitting by slowly twisting.

Parts Included with the PERRIN WRX Oil Cooler:

QTY	Part#	Description
2	X-PSP-OIL-150-1BK	Bracket Body for Top Mount Oil Cooler
2	X-PSP-OIL-150-2BK	Bracket Cap for Top Mount Oil Cooler
1	X-PSP-OIL-012	Male to Male Oil Filter Adapter for Subaru Engines
1	X-PSP-OIL-006-2	Oil Feel Pipe 50mm Long For Mocal Sandwich Plate M20x1.5 Thread
1	X-PSP-OIL-006-3	Oil Feel Pipe 55mm Long For Mocal Sandwich Plate M20x1.5 Thread
4	X-BLT-M8X16CS-SS	M8 X 16 Socket Head SS Screw
4	X-BLT-M6X14CSB-SSBO	M6 x14 Button Head SS Screw Black
1	X-CON-008	Plastic 1/2"-3/8" Reducer
2	X-CON-M22AN10-SE	M22 to -10AN Adapter Fitting Black
1	X-PSP-OIL-001-1BK	Oil Filter Spacer for Top Mount Oil Cooler Black
1	X-PSP-OIL-004-4	Oil Filter Sandwich Adapter Mocal 22mm w/185F T-Stat
1	X-PSP-OIL-005P	Oil Cooler Core PERRIN 8 Row x 250mm Wide w/ M22 Inlets
2	X-PSP-OIL-016R	Oil Line Assembly for WRX Top Mounted Oil Cooler Right Side (Longer)
1	X-PSP-OIL-016L	Oil Line Assembly for WRX Top Mounted Oil Cooler Left Side (Shorter)
2	X-BLT-00125PPS	1/8NPT Socket Plug Steel
1	X-BLT-M60X4MM-V75	O-ring 60mm ID x 4mm Viton for PERRIN Spacer/Oil Pressure Adapter
1ft	X-HOS-108	3/8" ID Coolant Hose
1	X-PSP-OIL-100stencil	Stencil for all PERRIN Oil Coolers
5	X-BLT-CT080B-18	Zip Tie 8" Long
3	S-14040	Zip Ties Black 21" Long 120lbs

WHICH WAY IS THE RIGHT WAY?

In ALL situations, when describing left and right sides of the vehicle it is always as though you are sitting in the driver's seat looking forward.
Example of a US Market Vehicle: If standing in front of the car, looking at the engine bay, the drivers side is described as the LEFT side the vehicle.

Remove OEM Oil Cooler/Warmer

1. Remove the strut bar from the car and set aside, then disconnect the negative terminal on the battery.
2. Remove the boost tube that connects to the throttle body. **NOTE: This step will vary depending on the year of the car and the brand of front mounted intercooler you have installed.**
3. Let the vehicle cool off for at least 3 hours to ensure engine oil and coolant will not burn you. This also gives enough time for all the oil to drain out of the oil filter.
4. Remove oil filter from engine. If the car is completely cooled off, no oil will spill out. This filter may need to be reused if you are not doing a full oil change at the same time.
5. Remove large center oil feed pipe using a 24mm deep socket and wrench. This will free up OEM oil cooler and some additional oil may drain out.



Above picture is showing the 2015-21 WRX



Above picture shows 2022+ WRX

6. These next few steps should be done quickly to reduce the amount of coolant lost.
 - a. Prepare to bypass OEM oil cooler and catch some amount of coolant.
 - b. Locate the left coolant hose (shown above) and disconnect from OEM metal pipe going into OEM oil cooler.
 - c. Disconnect right side coolant hose from the metal pipe going into OEM cooler. Remove OEM cooler from engine.
 - i. For 2015-21 WRX's, install supplied 3/8" coolant hose onto metal fitting on block, then connect to OEM coolant hose with supplied 1/2"-3/8" connector, then secure with OEM pinch clamps.
 - ii. For 2022+ WRX's, join both hoses with supplied 1/2"-3/8" connector and secure with OEM pinch clamps.
 - d. Route hose around oil filler neck and shown in pictures below.

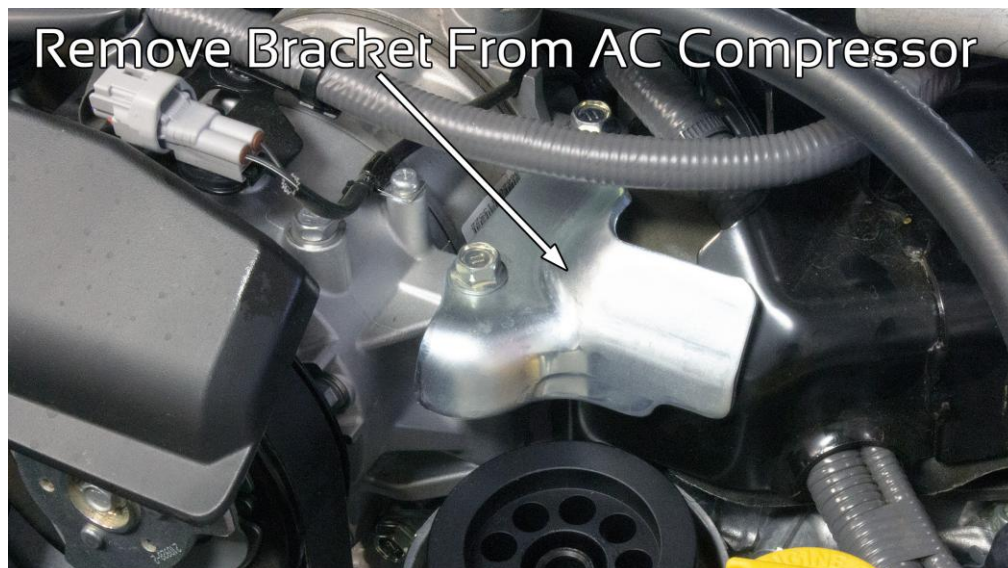


Above picture is showing the 2015-21 WRX

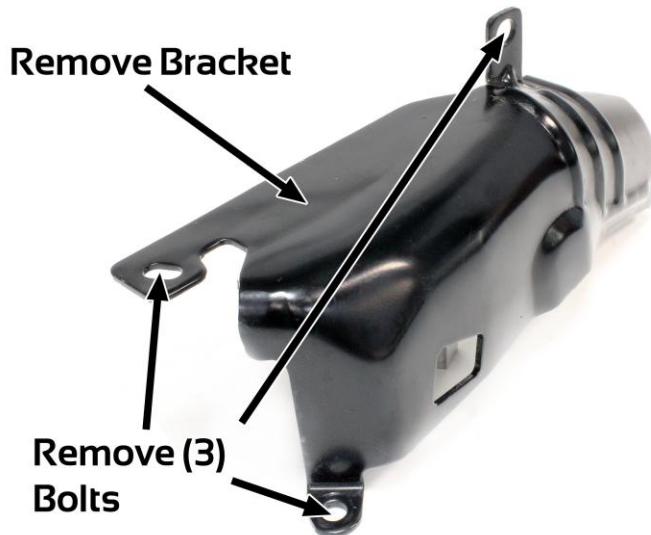


Above picture shows 2022+ WRX

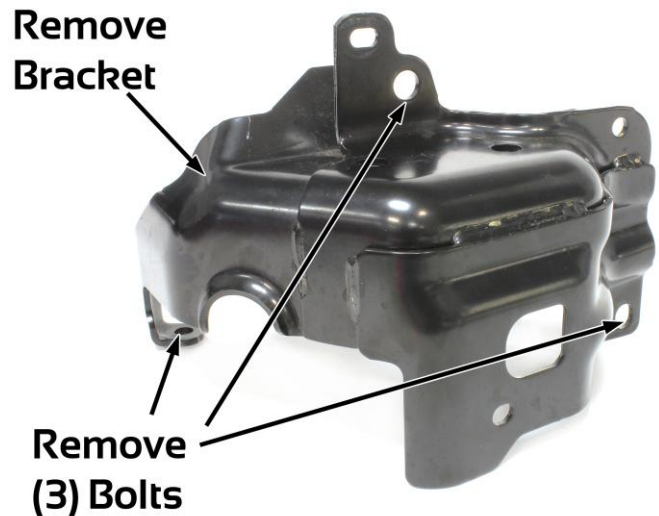
7. If installing on a 2015-21 WRX, skip this step. For 2022+ WRX models, remove silver bracket (as shown below) from AC compressor. Do not re-install bolts that were removed.



8. Locate and remove large black steel bracket that is bolted to the intake manifold and engine. See pictures below showing both 15-21 WRX and 22+ WRX brackets. **NOTE: Removing the oil fill cap makes taking this part off a little easier.**



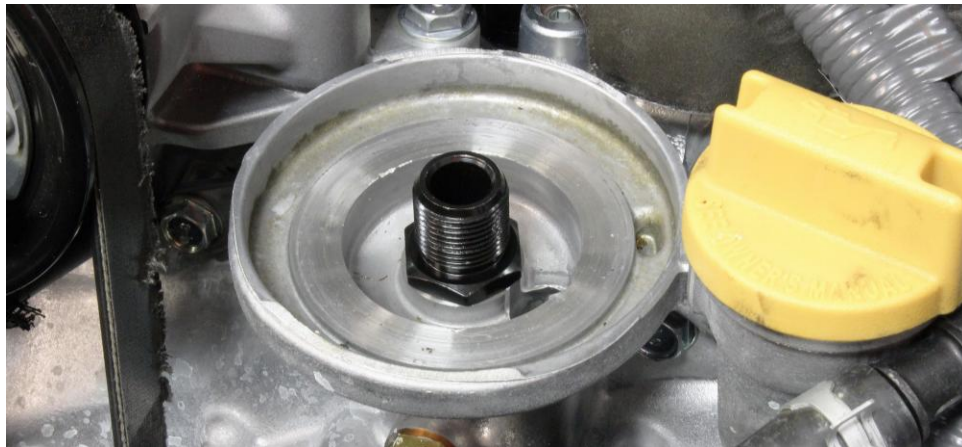
Above picture is showing the 2015-21 WRX



Above picture shows 2022+ WRX

Install PERRIN Top Mount Oil Cooler

1. Install supplied male to male adapter fitting into engine block and tighten to 25ft-lbs.



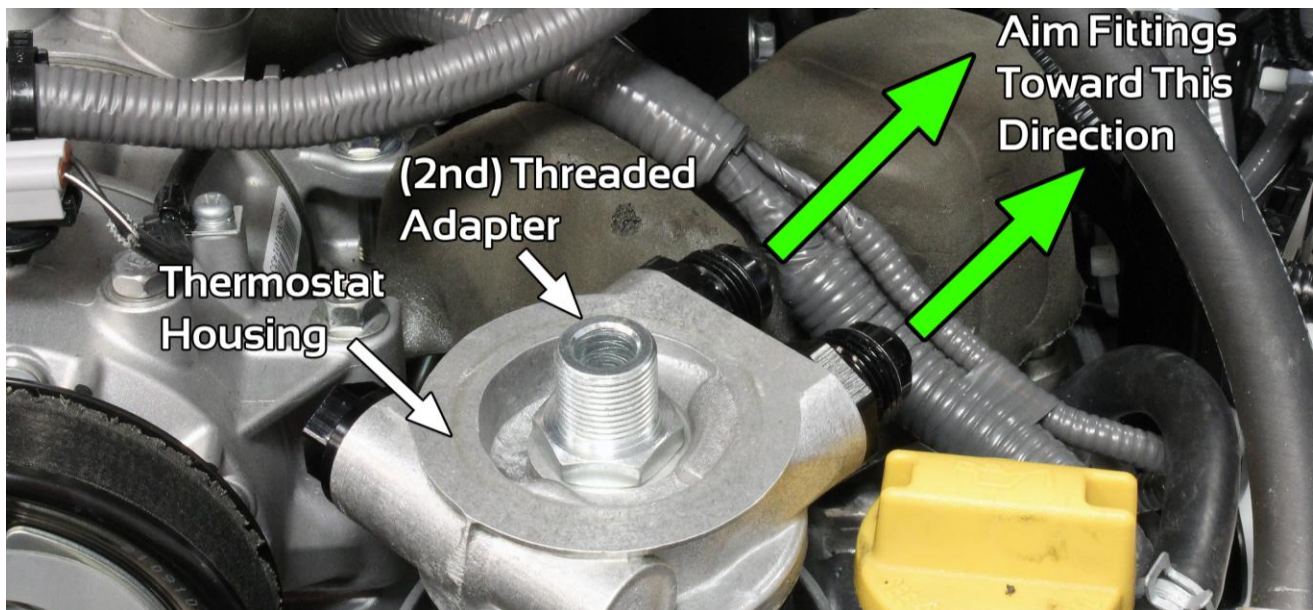
2. Determine if you would like to use the NPT ports on the oil filter spacer and either install sensors or install supplied NPT plugs into each port. NPT fittings are a tapered fitting that seal when they get tight. They are not designed to be bottomed out to sealed. Apply Teflon tape to threads of NPT plugs or sensor, then install into each port and tighten hand tight. Thread fittings in roughly 1/2- to 1 full turn further.



3. Install supplied O-ring into PERRIN Oil Filter spacer, then install to engine as shown below. Then install supplied 55mm long (longer of the two) threaded adapter through spacer and onto the engine. Tighten threaded adapter to 25ft-lbs. The rotation of this spacer is not important unless aftermarket sensors are installed or going to be installed.



4. Install thermostat housing (O-ring seal facing down) on top of PERRIN Oil Filter Spacer, making sure to aim fittings toward the direction shown. Install remaining 50mm long (shorter of the two) threaded adapter through thermostat housing and tighten just enough to allow some rotation of the thermostat housing. Final tightening will occur in future steps.

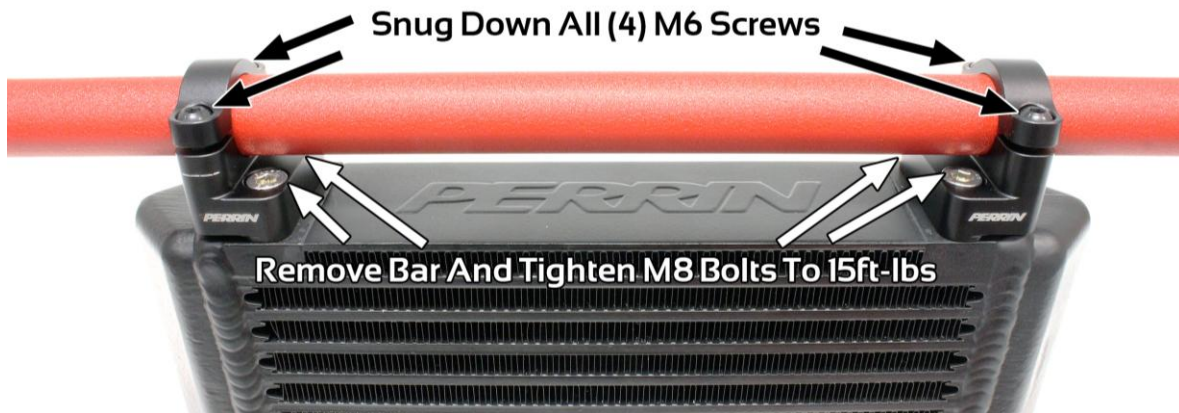


Above picture shows 2022+ WRX. 2015-21 WRX models look slightly different but still have the foam cover over the HPFP.

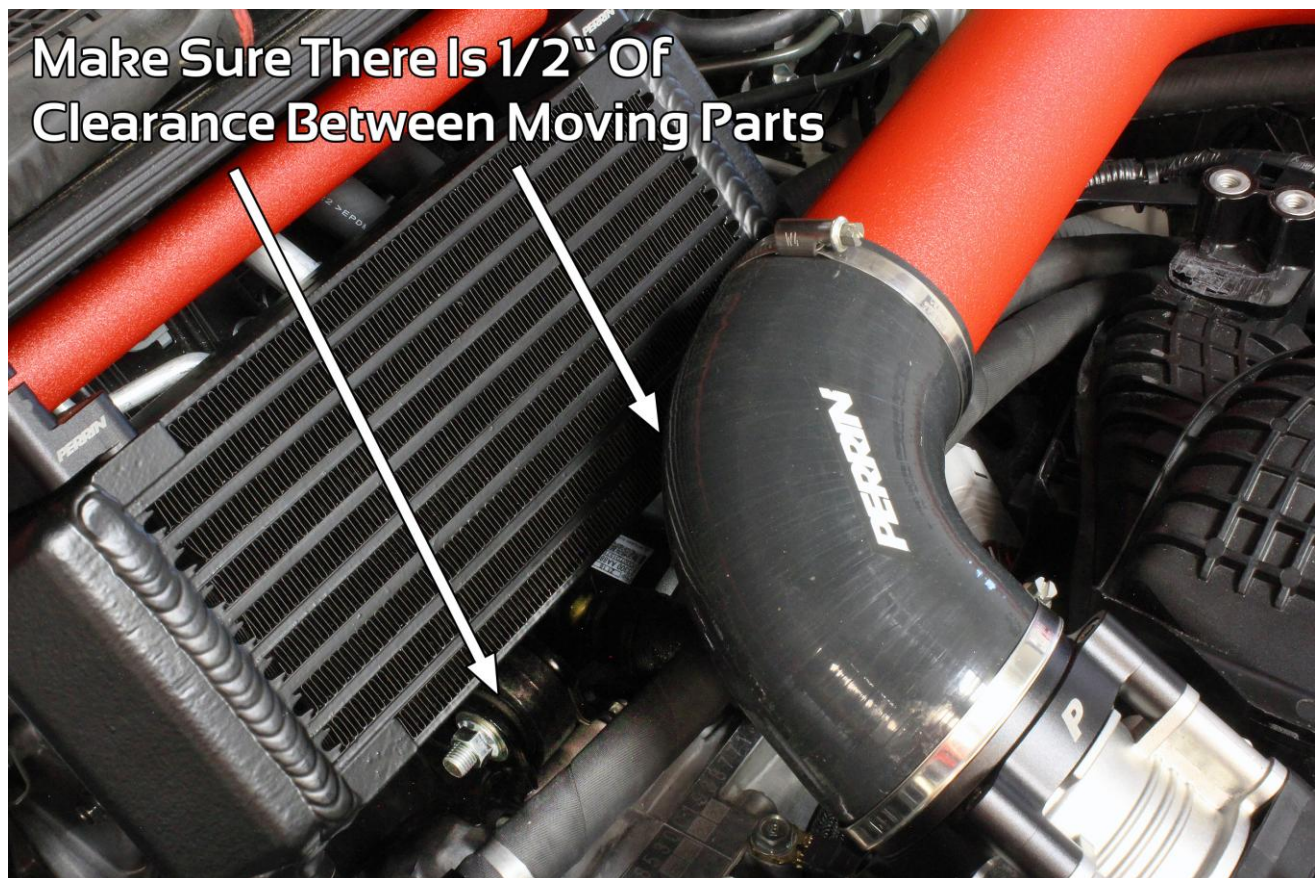
5. Using supplied M8x16 bolts, secure supplied brackets to oil cooler as shown. Lightly tighten bolts so the brackets can just barely move with a little force.
NOTE: Using any other size bolt will cause damage to the oil cooler. Only use supplied M8x16 bolts!



6. Set strut bar over clamps as shown below. Then install caps over bar and snug down all (4) screws. Remove the caps and bar, then tighten M8 bolts into the oil cooler core to 15ft-lbs. This is done to align the brackets with the bar.
7. Reinstall the strut bar to oil cooler making sure it is roughly centered over the oil cooler. Reinstall the caps and tighten them evenly between the front and back, just enough to hold the oil cooler to the bar and allow for a small amount of movement. This is done to allow the oil cooler to be moved around the bar while it is setting in the engine bay.



9. Carefully install the longer oil line to the right side of the core (right side as though it was mounted in the car) and then install the short line to the remaining port on the oil cooler. **NOTE: Make 100% sure fittings are lined up with core to ensure cross threading does not occur. Take your time with threading in slowing and checking as it is tightened. Dripping a small amount of oil on the thread as well as where the black fitting meets the silver tube, is a good idea to aid in fitting threading into oil cooler.**
8. Set entire strut bar/oil cooler assembly back into the engine bay and secure strut bar back to the strut towers temporarily.
9. Route oil cooler hoses roughly as shown in pictures below toward the shock tower and under the wire harness. **NOTE: The oil cooler and hoses will be removed again, so the exact routing is not critical during this step.**
10. Reinstall boost tube that was removed previously to help with checking for clearance around the oil cooler.
11. Rotate the oil cooler and lines until there is at least .5" of clearance around the transmission brackets, clutch slave cylinder and boost tube from front mounted intercooler. Tighten the (2) accessible M6 screws securing PERRIN Mounting Brackets to the strut bar.



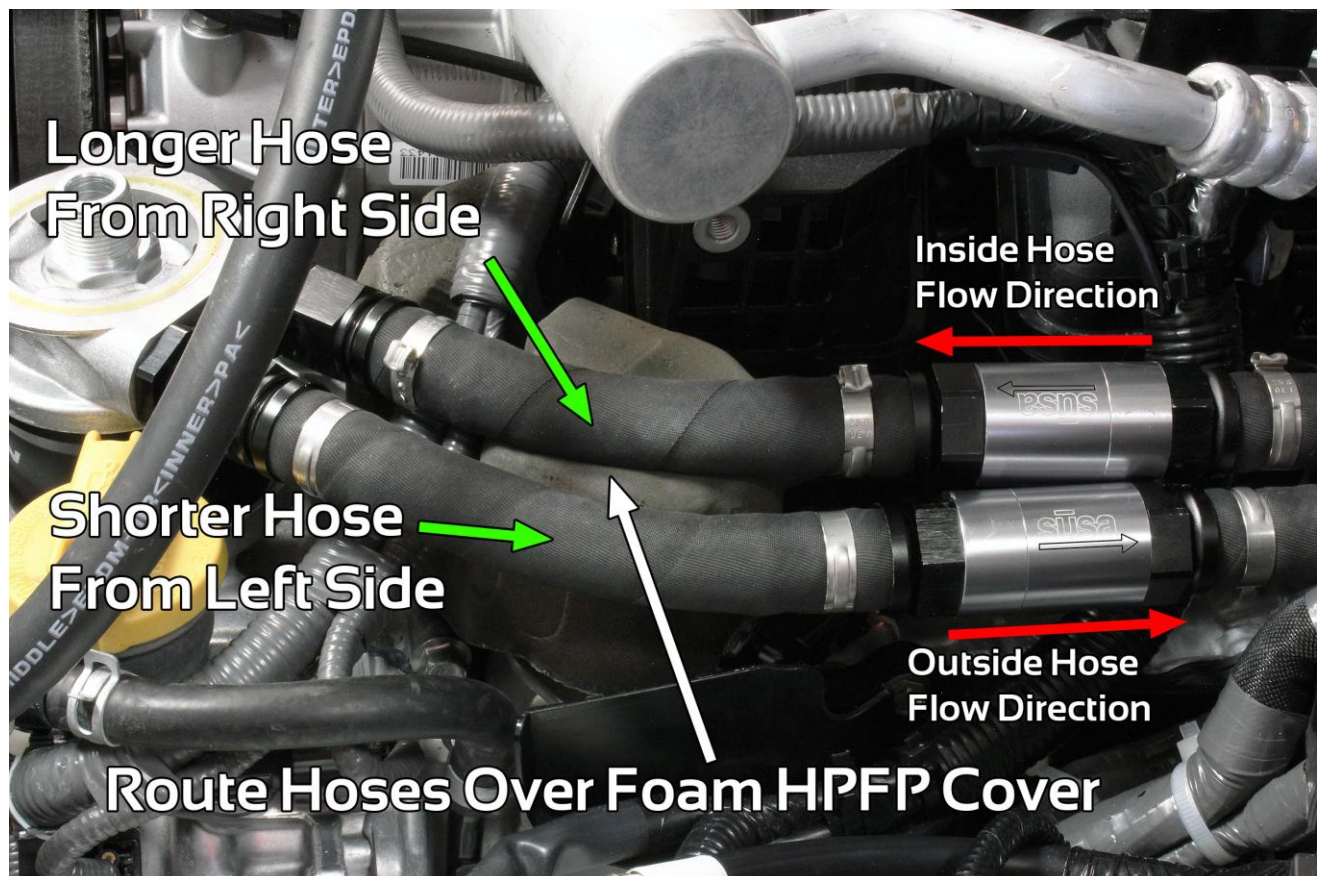
Above picture shows 2022+ WRX. Boost tube on 2015-21 WRX will look different than this.

12. Remove boost tube and strut bar from car and tighten all (4) M6 screws to 8ft-lbs. Reinstall strut bar back to car and tighten nuts securing it to the strut towers. **Note: For cars that use the M8 strut top nuts, tighten to 14ft-lbs. For cars that use the M10 nuts, tighten nuts to 22ft-lbs.**

13. For 2022+ WRX models, locate electrical connector as shown, disconnect from intake manifold and tuck harness down toward engine block.



14. Starting with the shorter hose connected to the left side of oil cooler, route hose around the wire harness and intake manifold, then to outside fitting on thermostat housing.
15. Route longer hose connected to the right side of oil cooler, around wire harness and intake manifold, then toward the inside fitting on the thermostat housing.
16. Install hoses to fittings and tighten hoses into both -10 AN fittings on thermostat housing. NOTE: The hoses will rest on the foam cover on the high-pressure fuel pump (HPFP). You can remove the foam cover but we recommend leaving it to reduce some of the noise from the HPFP.
17. **Before proceeding, check to make sure that the oil lines and their respective check valves match the below picture. It is important that the arrows on the fittings match the hoses as shown. The outside hose (closest to the battery) will have the arrow pointing toward the oil cooler and the inside hose (closest to the engine) will be pointing at the thermostat housing. If the arrows are not pointing in the correct direction, the check valves can be unscrewed from the hose and reoriented.**



18. After all fittings and hoses are tightened, check that hoses are routed nicely and do not have any kinks in them. If you see some kinking in the hose this may be resolved by twisting the hoses at each fitting where the clamps are. This can be done with some effort.



Above picture shows 2022+ WRX. 2015-21 WRX hose routing is the same as shown but with a boost tube that you will have to route under.

19. With hoses routed and safe from rubbing on sharp objects, secure hoses together with supplied zip ties. **NOTE: Do not secure hoses to any part of the chassis!**
20. Adjust the rotation of the thermostat housing to best align the hoses and eliminate any kinks. When desired angle is found, using a thin wall 26mm socket, tighten center bolt to roughly 25ft-lbs. Using a socket to tighten it can be difficult given the clearances of the Mocal thermostat housing and the hex. Tightening with an adjustable wrench or 26mm open ended wrench as shown below is acceptable. Make to tighten enough that you cannot spin thermostat housing by hand.



21. Reinstall oil filter (not supplied) following the manufacturer's installation instructions.
22. Reinstall boost tube that was removed previously and re-check that oil cooler hoses are clear of the tubes. Make any adjustments to the oil lines and boost tubes to ensure able clearance around each hose.
23. Reinstall the negative battery terminal, then turn the key to the on position and apply 100% throttle to your car, then try to start your car with the throttle still at 100% (or floored). Your engine will not start but continue to turn over. Do this for roughly 5 seconds and wait 10 seconds, then do this again for 5 seconds. Repeat this step 2 to 3 more times as this will help prime your engine with oil.
24. Start your car and let it run for 5 seconds, then turn the engine off. **Heavily inspect all oil lines and connections for leaks.** If no leaks are found, start the engine and let it run for 30 seconds, then shut it down and add your additional oil until it meets the proper fill marks on your dip stick.
25. Start engine, let it run for at least 5 minutes, and check one more time for oil leaks.
26. Take car for 10-minute test drive then, recheck all fittings and hardware to ensure it hasn't started leaking or come loose. **NOTE: You will notice that the throttle will feel a little sluggish after installation. This is from the battery being removed and the ECU being restarted. This is normal and to be expected.**
27. If you are unsure how tight you made the fittings on the oil cooler, double check the tightness after 2 hours of driving.

Questions, Comments and Suggestions Contact: Tech@PERRIN.com
Visit Our Website for Instant Chat Options at www.PERRIN.com
Call Our Tech Team at 503-693-1702