

Installation Manual

Product

**FA Motor
Engine Mounts**



Fitment

2015 - 2021 WRX

BEFORE YOU START

Suggested Tools

- Factory Service Manual
- 3/8" Drive Ratchet Handle
- 3" and 6" Extensions
- 17mm Socket
- 14mm Socket
- 12mm Socket
- 12mm Wrench
- 14mm Wrench
- 3/8" Torque Wrench
- Pliers
- Flat Head Screwdriver
- Pick or Pry Bar
- Floor Jack or Lift
- Engine Hoist or Transmission Jack
- Threaded Jack Stand
(if using lift)
- Jack Stands
(if working on the ground)

What's Included

- 2x Engine Mount
- 2x FA Motor Adapter Block



CAUTION: NOTES BEFORE STARTING

This document uses a 2020 STI for the installation process.
Your experience may differ slightly depending on year and model.

Make sure you have all necessary tools before beginning installation. We recommend taking your vehicle to an appropriate shop for the installation of this part if anything in this process is outside of your experience.

Take care on vehicles with aftermarket headers. To avoid damage, the Urethane bushings in these mounts should be shielded from excessive heat generated from aftermarket headers.

Please reference your **Factory Service Manual** for specific part removal instructions on your specific vehicle.

Factory Service Manuals can be purchased at:

<https://techinfo.subaru.com/>

SAFETY CHECK

Always make sure the vehicle is adequately supported on ramps, jack stands, or a lift.

Warning: Never work under a vehicle supported only by a floor jack!

Preparing Engine to Lift

1. Remove air intake inlet
2. Remove top mounted intercooler (*this step may vary with aftermarket intercoolers*)
3. Remove pitch stop mount
4. Lift car off the ground and secure appropriately with jack stands
5. Remove splash guard
6. Remove (4) 12mm bolts securing crash bars and skid plate assembly to sub-frame
 - This can be removed in a singular piece
7. Disconnect air intake connection at turbo inlet
8. Remove steering rack cover by removing (4) 14mm bolts
9. Remove (8) 14mm bolts securing steering rack to the chassis
 - Two brackets will be removed in this process
 - Take note of the orientation when removing for easier reinstallation
 - Once bolts are removed pull steering rack down away from chassis approximately 2"
10. Remove (2) 14mm nuts from transmission mount studs
11. Disconnect JPipe (This step may vary with aftermarket JPipe)
 - OEM JPipe will require removal of heats shields to gain access to nuts and bolts
 - Removal may require replacement of the gasket, in most cases it's a good idea to replace
 - Disconnect JPipe from Catback if necessary and remove entire pipe (*this step may vary based on the JPipe if aftermarket or OEM*)
12. Remove (2) flanged 14mm nuts securing motor mounts to sub-frame
13. The engine is now free to lift

Lifting the Engine

1. Jack the engine up approximately 4"
 - Place jack so it pushes up on the engine where it meets the transmission
 - Place a block of wood on your jack to prevent damage to the transmission case
 - Keep an eye on all connections particularly the radiator hoses and A/C lines to ensure nothing becomes too tight
2. Support engine with a threaded jack stand or a piece of wood can be placed between the engine and the subframe – this is for your safety

Engine Mount Removal and Installation

1. Remove OEM engine mounts by removing the (2) 14mm bolts securing each mount to the block
 - The forward bolt will require a wobble socket through the header
 - You'll be able to work the OEM mount out through the back of the cross member
 - Take note of the positioning of each mount
 - Match the VSC Performance Engine Mount to the corresponding side – this will be noted on the bottom surface of the mount
 - Note the block on the OEM mount located on the rearmost mounting location
2. Position the VSC Performance Engine Mount onto the block and ensure that mounting points sit flush against the block
 - Loosely secure the forward bolt with washer in place first to hold the mount to the case (be careful not to cross-thread or over tighten these bolts – this may cause substantial damage to your block)
 - Slide the spacer in the rearward bolt location then feed the bolt with washer through both the mount and spacer (Note the arrow should point toward the front of the car, and “R” should appear right side up on the right and “L” on the left)
 - Carefully thread the bolts back into the block – be careful not to cross-thread or over tighten these bolts – this may cause substantial damage to your block
 - Torque bolts to 30 ft/lbs.
 - Repeat for second mount
 - When you're done the “L” and “R” should be visible and right side up on their respective right- and left-hand sides
3. Remove wooden support brace between engine and subframe
4. Slowly lower engine watching that the studs on the engine mounts find the slots in the subframe
 - Some manipulation of the stud end of the engine mount may be necessary to ensure proper installation
 - Stud can be pivoted with some force, but do not hit or pry stud, this may cause damage to the threads on the stud
5. Once studs align to slots in the subframe finish lowering the engine
6. Secure Engine Mounts with OEM flanged 14mm nuts and torque to 45 ft/lbs

Reassembly

1. Reinstall steering rack by securing brackets and (8) 14mm bolts and torque to 45 ft/lbs
2. Reinstall steering rack cover with (4) 14mm bolts and torque to 45 ft/lbs

Reassembly

3. Reinstall (2) 14mm nuts on transmission mount studs and torque to 45 ft/lbs
4. Attach downpipe to catback and torque to 25 ft/lbs
5. Reconnect air intake to turbo inlet
6. Install aluminum crash bars with skid plate to chassis and torque to 45 ft/lbs
7. Reinstall splash guard
8. Lower vehicle to access engine bay
9. Reinstall pitch stop mount
 - Secure rear bolt to 43 ft/lbs. and front bolt & nut to 37 ft/lbs
10. Reinstall intercooler

PART 05

Finished

1. Start and run the engine and observe for anything unusual – take the car out for a test drive and you'll notice an increase in NVH (noise, vibration, harshness), which is normal
2. For bigger builds, check the condition of the engine mounts during regular services to ensure bushings have not been damaged from excessive heat. Some vehicles with aftermarket headers may require a heat shield to protect the bushings.

If you have questions or need help with your install or parts questions, please reach out to us:

Email: support@vtcar.com | **Phone:** 802.655.3533

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Do not disassemble, modify, or attempt to repair any products for any reason. If damaged or in need of service, please contact VSC at the phone number or email address below.

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