

VERUS

ENGINEERING

High-Capacity Oil Pan & Baffle – Toyota GR86/Subaru BRZ

Install Manual



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Approvals: E. Hazen

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01	2024/07/29	P. Landolt	Initial release of install manual

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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

Contents

Introduction	3
Overview	3
Difficulty.....	3
Time Required.....	3
Tools Needed	3
Oil Pan Kit Components	4
Toyota GR86/Subaru BRZ High-Capacity Oil Pan & Baffle Install	4

High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

Introduction

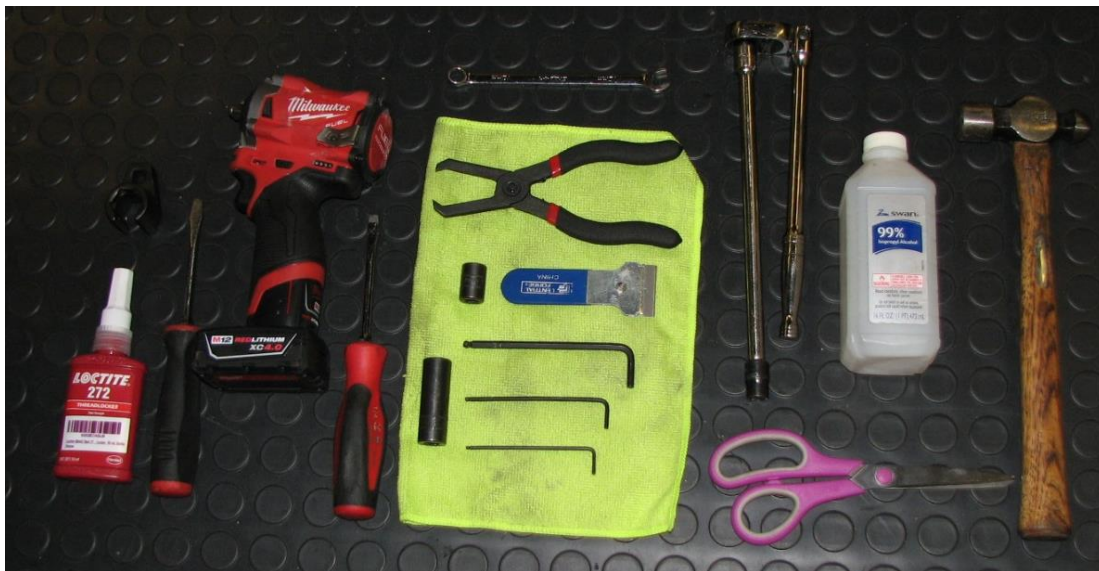
Overview: Detailed instructions on installing the Verus Engineering High-Capacity Oil Pan and Baffle for the GR86 and Subaru BRZ

Difficulty: Moderate

Time Required: 1.5-3 Hour

Tools Needed:

- 10mm Socket
- 12mm Socket
- 14mm Socket
- O2 Sensor Socket or Wrench
- 6-10" Extension
- 2.5mm allen wrench, T-Handle, or Socket
- 4mm allen wrench, T-Handle, or Socket
- 5mm allen wrench, T-Handle, or Socket
- Impact or Ratchet
- Flat Head Screwdriver
- Clip puller/trim tool
- Hammer (Rubber mallet or dead blow preferred)
- Razor Blade Scraper / Gasket Scraper
- Scissors
- Loctite 272 (red)
- Isopropyl Alcohol

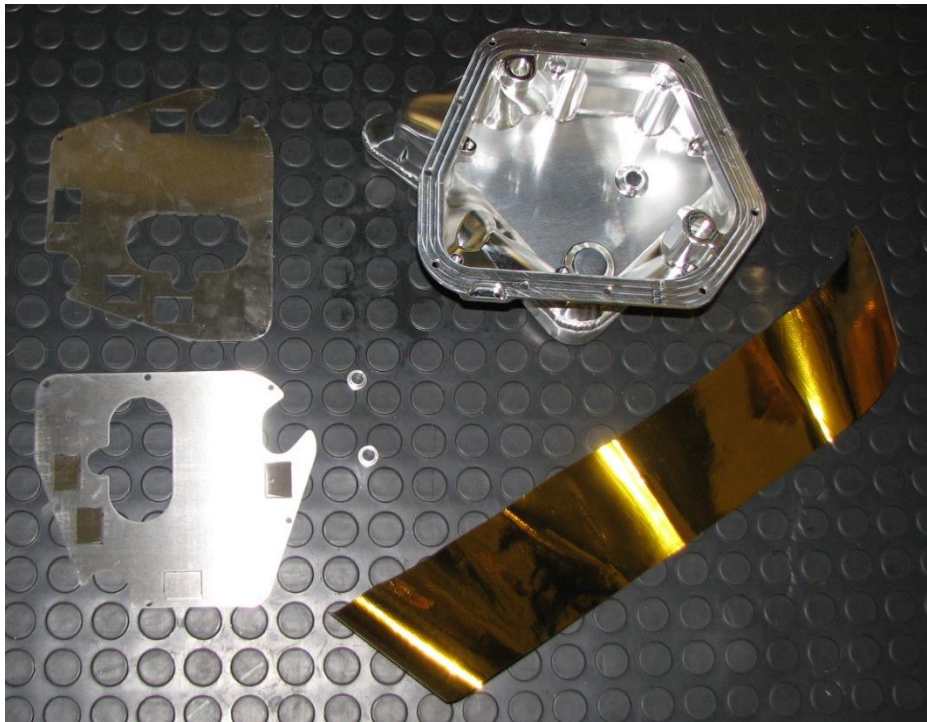


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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

Oil Pan Kit Components

- (1) High-Capacity Oil Pan
- (1) Baffle Plate
- **Hardware Bag**
 - (1) M6 x 1.0 Button Head Cap Screw (BHCS), 10mm long, Stainless
 - (1) M6 Socket Head Cap Screw (SHCS), 12mm long, Stainless
 - (7) M5 x 0.8 BHCS, 12mm long, Stainless
 - (1) M6 x 18mm Washer
 - (1) M6 Lock Washer, Stainless
 - (7) M5 Washer, Stainless
 - (1) Gold Foil 4" x 24"
 - (2) Oil Fitting

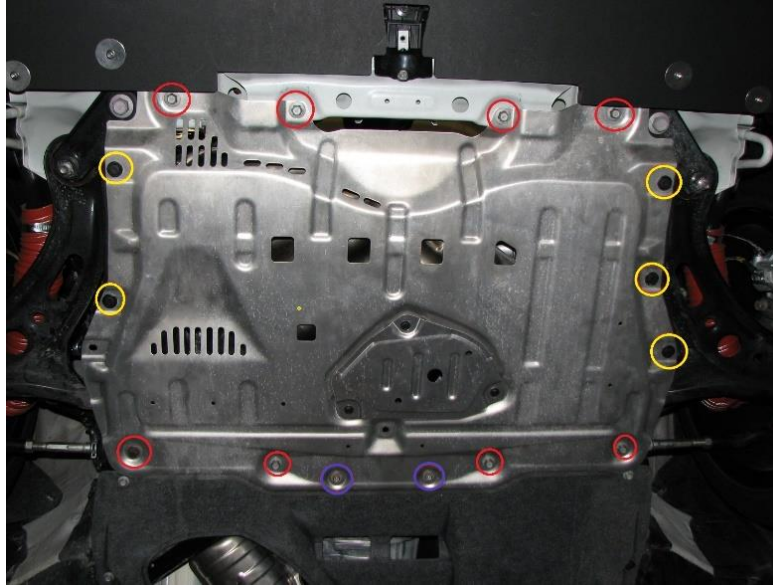
**Toyota GR86/Subaru BRZ High-Capacity Oil Pan & Baffle Install**

1. Verus Engineering is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products. Please seek professional service/guidance if you are uncomfortable/incapable of installing this in a safe manner. Contact us at support@verus-engineering.com if you have any questions/concerns.
2. We begin by gaining access to underneath the car. Jack the car up and support it safely with a jack and jack stands or a lift if you have access to one.

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3. Before removal of the OEM oil pan, we will need to drain the engine oil.
4. After oil has been drained, remove the skid plate. Remove the (5) plastic retention clips circled in yellow, the (8) 12mm head bolts circled in red, and the (2) 10mm head bolts circled in purple.



5. Disconnect the black and grey O2 Sensor connectors that are located towards the front of the engine and remove the wire loom press-in retention clips from each wire set. **Note: This may be easier by disconnecting via the top side of the engine bay.**



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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

6. You will now need to remove the exhaust manifold. Use a deep 14mm socket to remove the exhaust manifold nuts. Locations are circled in red below. **Note: The manifold may take some hammer taps to get off of the studs.**
7. **Caution: It is recommended to use protective gloves when handling the exhaust manifold, as the heat shield edges are very sharp!**



8. Remove the O2 sensors by using an O2 sensor socket or a 22mm wrench.
9. The exhaust manifold will need to have the heat shields removed before we are able to reinstall it. Then remove the (7) bolts using a ratchet or impact driver with a 10mm socket.



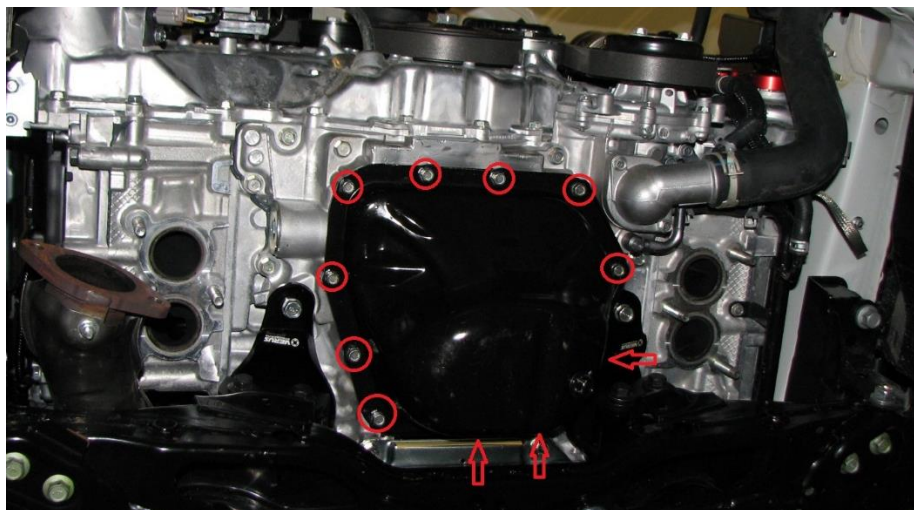
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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

10. Reinstall the O2 Sensors into the exhaust manifold.



11. The exhaust manifold is now ready to be reinstalled on the vehicle so we can set this aside.
12. Remove the (11) oil pan bolts with a ratchet or impact driver using a 10mm socket.



13. Remove the OEM oil pan by carefully prying around the perimeter with a couple of flat blade screwdrivers. **Note: The sealant can be quite hard to remove work slowly and try to not damage the mounting flange on the block.**

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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

14. Now that the OEM oil pan is removed, it is time to prep the new pan. Wipe down the exterior of the High-Capacity Oil Pan with isopropyl alcohol and apply the provided gold foil to tape around the sides in which the exhaust manifold runs. Use scissors to trim multiple pieces to fit.



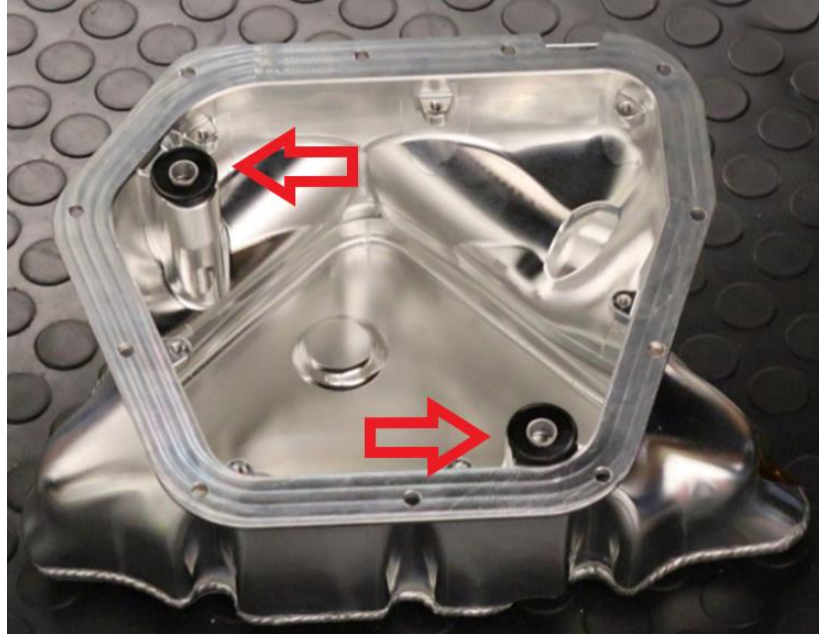
15. Install the (2) provided threaded oil fittings by using a 2.5mm allen wrench. **Note: Do not overtighten.**



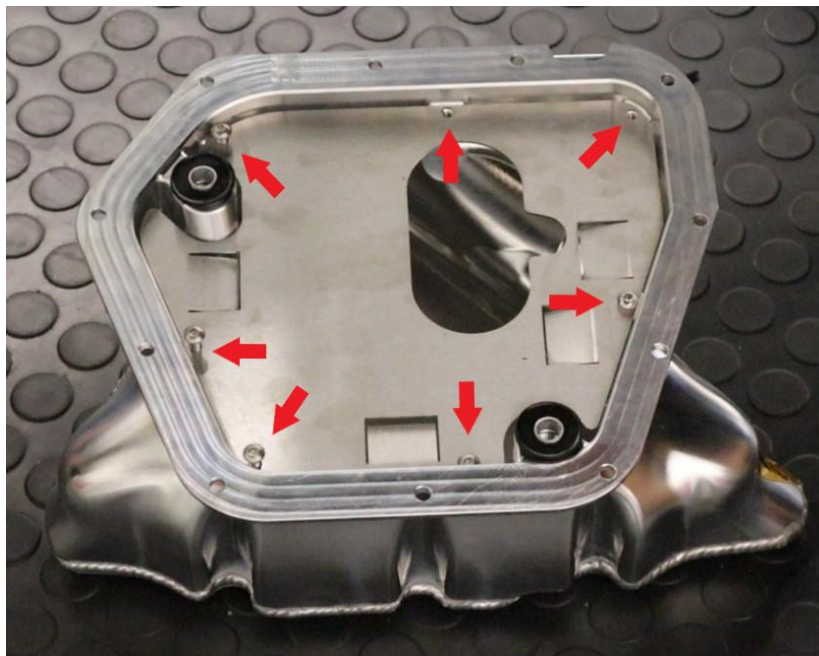
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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

16. From the OEM oil pan, remove the two oil fitting gaskets from the top of the original oil fittings. Place these around the High-Capacity Oil Pan fittings. **Note: You may replace these gaskets if you choose.**



17. Place either the open or louvered (not both) baffle plate into the oil pan. Use a 4mm allen wrench to tighten the (7) M5 x 0.8 x 12mm BHCS and washers with threads coated in Loctite 272 and tighten down to 4 ft-lbs. Do not overtighten.



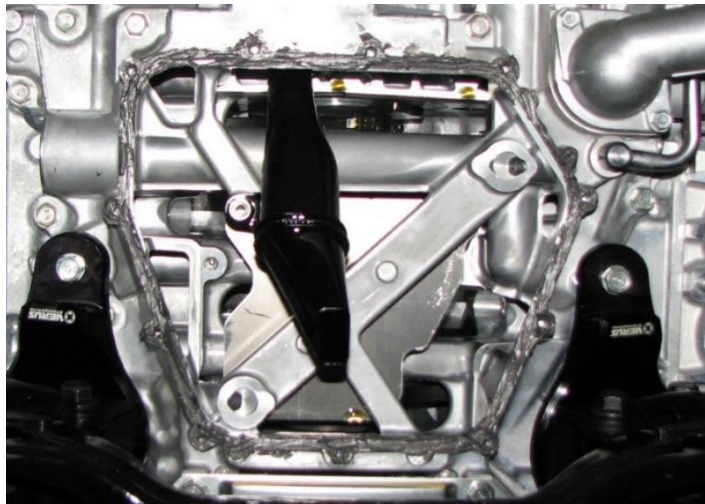
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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual

18. The oil pan is ready to be installed on the car and can be placed aside.
19. Moving back to the engine block, we need to remove the old RTV gasket with a razor blade scraper. **Caution: Be careful not to scrape or gouge the metal surface.**



20. At this time, check the oil pickup tube for debris/silicone before installing the pan. Pull out all debris with needle nose or similar.
21. Create an oil pan gasket using oil grade RTV silicone gasket maker, or OEM three bond, by putting a thin surface on the mounting face of the engine. **Note: It is not recommended to put the gasket maker on the oil pan because the flange is much larger than the flange on the engine.**



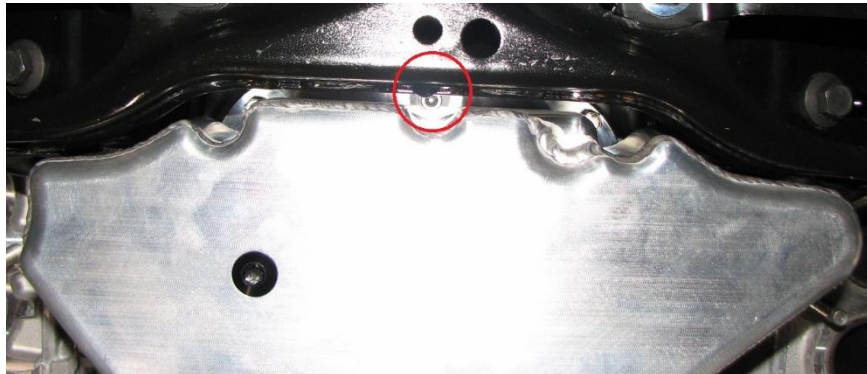
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- 22.** Install the Verus oil pan by re-using factory hardware. Torque to 6 ft-lbs.



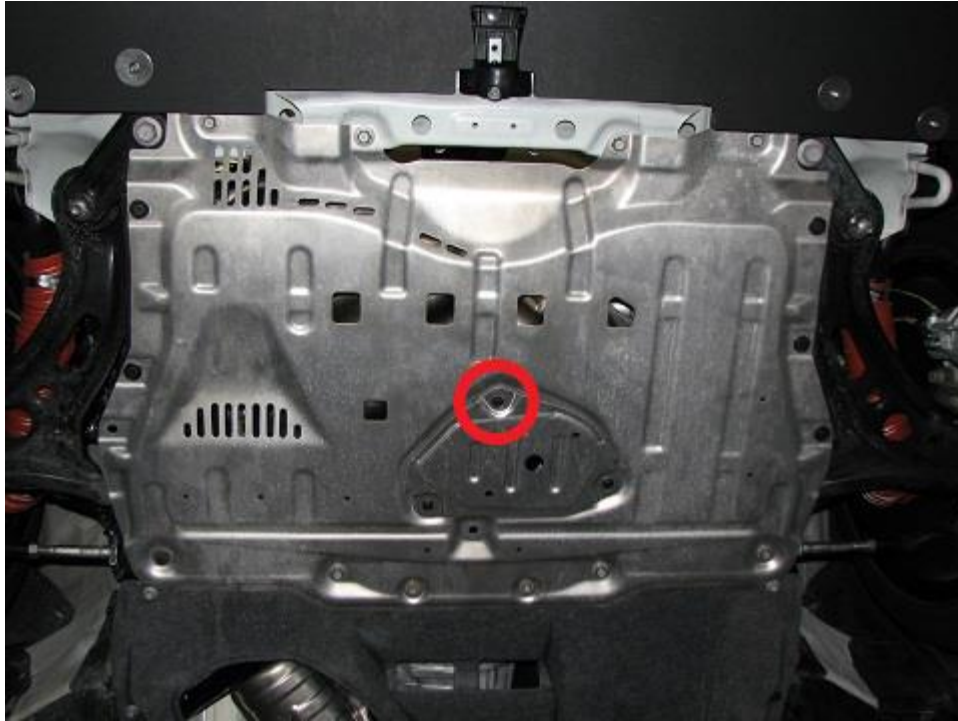
- 23.** You may have issues installing the factory hardware in the rear middle of the pan. If you do, please use the M6 x 12mm long SHCS with lock washer provided in the kit and install using a 5mm allen wrench.



- 24.** Reinstall the exhaust manifold. Orient the manifold 90 degrees clockwise and turn counter-clockwise as you ascend. Reuse the factory hardware and torque to factory specs.
- 25.** Plug in the O2 Sensor connectors and re-attached the wire loom to the bracket.
- 26.** Reinstall the skid plate using the factory hardware.
- 27.** Due to clearance, you may have to replace one of the screws at the front of the engine oil drain plug access panel. We have provided an M6 x 1.0 x 10mm BHCS and M6 x 18mm washer to amend this.

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High-Capacity Oil Pan & Baffle, Toyota GR86/Subaru BRZ – Install Manual



28. Fill your engine with oil. **Note: The oil capacity has increase from ~5.3 quarts to ~7quarts.**
29. Congratulations on installing the Verus Engineering High-Capacity Oil Pan and Baffle on your Toyota GR86 or Subaru BRZ!
30. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; support@verus-engineering.com.



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