

# Rear Diffuser – Toyota GR Corolla

Install Manual



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## **Document Revisions**

Rev	Date	Author	Description	
01	2023/07/27	T. Lang	Initial release of install manual.	



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- 1. Introduction
  - **1.1. Overview:** Detailed instructions on installing the Verus Engineering functional Rear Diffuser on the Toyota GR Corolla.
  - **1.2. Difficulty:** Beginner
  - 1.3. Time Required: 1-1.5 hours
  - 1.4. Tools Needed:
  - **1.4.1.** 10mm wrench
  - 1.4.2. Ratchet
  - 1.4.3. 4mm Allen wrench or socket
  - 1.4.4. Flat head screwdriver
  - **1.4.5.** Bubble or Electronic Level



#### 1.5. Rear Diffuser Components:

- **1.5.1.** Rear Diffuser
- 1.5.2. (2) Side Strake
- **1.5.3.** (1) Left Subframe Bracket
- 1.5.4. (1) Right Subframe Bracket
- 1.5.5. (2) Center C-shaped Bracket
- **1.5.6.** (2) Outer C-shaped Bracket
- **1.5.7.** (1) Hardware Bag
  - 1.5.7.1. (20) M6x1.0 Button Head Cap Screw (BHCS) x 16mm Long, SS
  - 1.5.7.2. (24) M6 Fender Washers, SS
  - **1.5.7.3.** (24) M6x1.0 Serrated Flanged Nuts, SS
  - **1.5.7.4.** (4) M6x1.0 BHCS x 45mm Long, SS
  - **1.5.7.5.** (4) M6x1.0 BHCS x 25mm Long, SS

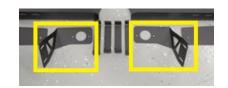


1.5.7.6.	(4) M6 5mm Long Nylon Spacer
1.5.7.7.	(4) M6 10mm Long Nylon Spacer

**1.5.7.8.** (4) M6 15mm Long Nylon Spacer



- 2. Rear Diffuser Install
  - **2.1.** Verus-Engineering is not responsible for damage to you or your vehicle by following this manual and/or installing Verus-Engineering products on your vehicle.
  - **2.2.** We begin by jacking the car up on a level surface. Use of wheel chocks is suggested to keep the front wheels from rolling. Using a lift is also a possibility.
  - **2.3.** First, we will start with the subframe brackets.



**2.4.** Install the subframe brackets using four 16mm BHCS, 18mm washers, and M6 serrated flange nuts as shown below. Utilize the two holes in the subframe directly above the rear lower control arm mounting location. Torque these bolts and nuts to 6 ft-lbs. Note: The below photos show the passenger side bracket location.



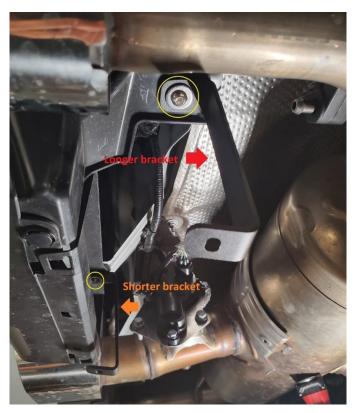


**2.5.** Locate, and remove the clips for the C-shaped bracket installation. The passenger side is shown below. The driver side is a mirror.





**2.6.** Next, install the C-shaped brackets using 16mm BHCS, 18mm washers, and M6 serrated flange nuts as shown below. The longer bracket is used on the outer location while the shorter bracket is used on the inner location. Make sure the side with the slotted hole is facing the ground.



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**2.7.** Next, begin loosely installing the rear diffuser by installing four 16mm BHCS, 18mm washers, and serrated flange nuts into the subframe bracket mounting holes. The bolt heads and washers should be visible from the outside. Do not fully tighten the bolts and nuts yet.



**2.8.** Install both side strakes onto the diffuser with eight 16mm long BHCS, 18mm washers, and M6 serrated flange nuts. Torque to 6 ft-lbs. The bolt heads, and washers should be visible from the outside.

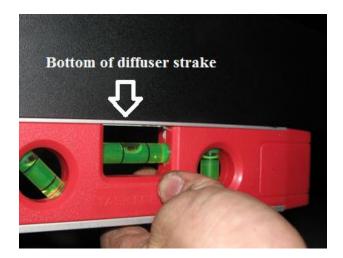


**2.9.** Next, figure out how high the diffuser can sit without making contact with the exhaust. Two lengths of bolts are supplied (25mm long and 45mm long), as well as an assortment of spacers so that this can be achieved.



- **2.9.1.** Utilize the spacers between the rear diffuser and C-shaped brackets to achieve the correct clearance.

- **2.10.** Once you've figured out the correct spacer arrangement, begin installing the appropriate length BHCS (25mm long or 45mm long), with 18mm washers, and M6 serrated flange nuts. NOTE: If you are still running the OEM exhaust, use the 25mm long BHCS without any spacers.
- **2.11.** All the bolts should be installed at this point, but loose. It is now time to tighten all the loose bolts up. The M6 BHCS should be tightened to 6 ft-lbs.
- **2.12.** With the car on the ground and no rake, the diffuser strakes should be level. If the car does have some rake, you need to match the underbody's angle with the level of the bottom of the strake. Shown below is a car with no rake.





- **2.13.** You should also ensure that the diffuser is level laterally (left to right) with a level and while tightening the bolts.
- **2.14.** After ensuring that all bolts are tightened, you are finished!
- **2.15.** Congratulations, you have successfully installed the Verus Engineering Rear Diffuser! You can now benefit from an increase in rear end downforce and a reduction in vehicle drag among other benefits.
- **2.16.** Please contact Verus Engineering with any feedback, concerns, and questions via e-mail, <u>sales@verus-engineering.com</u>.





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