

VERUS

ENGINEERING

Rear Wing and Spoiler – 987 Cayman

Install Manual



Author: Eric Hazen
Release Date: 2019/01/10
Approvals: E. Hazen, P. Lucas

Document Revisions

Rev	Date	Author	Description
01	2019/01/10	E. Hazen	Initial release of install manual

Rear Wing and Spoiler, 987 Cayman – Install Manual

CONTENTS

1. Introduction	<3>
1.1. Overview	<3>
1.2. Difficult	<3>
1.3. Time Required	<3>
1.4. Tools Needed	<3>
1.5. Rear Spoiler / Rear Wing Components	<3-4>
2. Rear Spoiler Install	<4-12>
3. Rear Wing Install	<12-16>

Rear Wing and Spoiler, 987 Cayman – Install Manual

1. Introduction

1.1. Overview: Detailed instructions on installing the Verus Engineering rear spoiler and rear wing on the 987 Porsche Cayman.

1.2. Difficulty: Moderate

1.3. Time Required: 2.5 – 4 hour

1.4. Tools Needed:

- 1.4.1. Drill
- 1.4.2. Assorted Drill Bits
- 1.4.3. Stepped Drill Bit with 13/16" Step
- 1.4.4. 4mm Allen Wrench/Socket
- 1.4.5. Assorted Torx Set
- 1.4.6. 12mm Deep Socket
- 1.4.7. 14mm Deep Socket
- 1.4.8. Ratchet
- 1.4.9. Plastic Panel Popper Tools
- 1.4.10. Level
- 1.4.11. Microfiber Towel
- 1.4.12. Alcohol
- 1.4.13. 5/16", 6 Point Socket
- 1.4.14. 5/16", 12 Point Socket

1.5. Rear Spoiler and Rear Wing Components

- 1.5.1. Rear Spoiler – Assembled
 - 1.5.1.1. Spoiler
 - 1.5.1.2. Weather stripping - Installed
 - 1.5.1.3. Double-sided tape - Installed
 - 1.5.1.4. (2) Uprights - Installed
- 1.5.2. Carbon Fiber Rear Wing – Assembled
 - 1.5.2.1. Rear Wing
 - 1.5.2.2. (2) Wing Mounts - Installed
- 1.5.3. (2) Endplate
- 1.5.4. (2) Spoiler Mount
- 1.5.5. (1) Gurney Flap
- 1.5.6. (1) Spoiler Drill Template
- 1.5.7. Hardware Bag
 - 1.5.7.1. (4) M4x0.7 x 16mm Long Button Head Cap Screw (BHCS) , Stainless
 - 1.5.7.2. (4) Aluminum Endplate Washers
 - 1.5.7.3. (4) #013 O-Ring
 - 1.5.7.4. (4) NAS Wing Mount Bolts
 - 1.5.7.5. (8) NAS Wing Mount Washers

Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual

- 1.5.7.6. (4) NAS Wing Mount Nuts
- 1.5.7.7. (4) M6x1.0 x 12mm Long BHCS, Stainless
- 1.5.7.8. (10) M6 x 18mm OD Washer, Stainless
- 1.5.7.9. (6) M6x1.0 x 20mm Long BHCS, Stainless
- 1.5.7.10. (6) M8 x 24mm OD Washer, Stainless
- 1.5.7.11. (1) Roll of double sided tape

**2. 987 Cayman Rear Spoiler 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.
- 2.2. We begin by removing the rear OEM spoiler. Raise the OEM spoiler so we can access the underside.



- 2.3. Remove all the torx bolts on the underside of the OEM wing.

Rear Wing and Spoiler, 987 Cayman – Install Manual

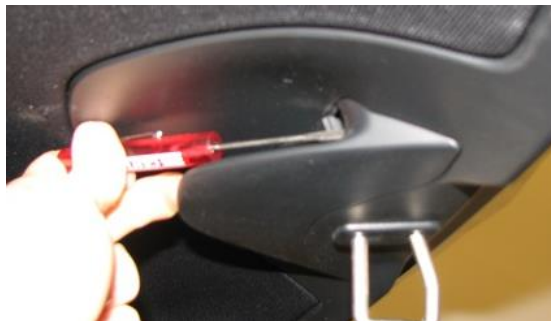


2.4. Remove the nut shown below on each side. This will allow the spoiler to be fully removed.



2.5. With the spoiler removed, pop the trunk so that we can remove the plastic during drilling.

2.6. Remove the little covers near the handle area.



2.7. Remove these torx bolts that reside behind these small covers.

2.8. The trunk liner can now be removed. It does not come off easily though. Plastic panel poppers and significant pulling force is needed to remove this piece.

Rear Wing and Spoiler, 987 Cayman – Install Manual



2.9. To fully remove the panel the light needs disconnected.



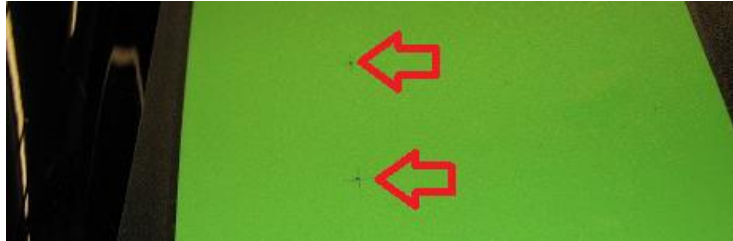
2.10. Lower the trunk and grab the drill template.

2.11. Install the drill template as shown below. The bottom and sides should line up very closely with the OEM trunk's edges.



2.12. Looking close on the template, you may notice cross hairs throughout the template. Ten total crosshairs. Utilize these with a center punch to mark the holes for drilling.

Rear Wing and Spoiler, 987 Cayman – Install Manual



- 2.13.** Before beginning to drill, we recommend laying something between the hatch and the trunk to catch a lot of the shavings.



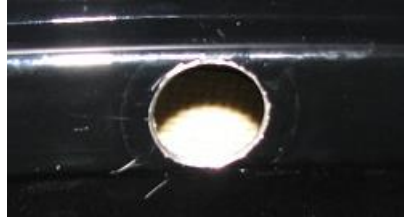
- 2.14.** Another option is to remove the trunk which is not terribly difficult. It involves the (4) bolts on the hinge, removing the wiring harness, and the (2) gas shocks.
- 2.15.** Utilize an 1/8" drill bit to begin and drill the 10 holes. Go through both the hatch and the structure beneath it.
- 2.16.** Increase the drill bit size to 1/4" and increase the size of the holes.



Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual

- 2.17.** From the underside of the hatch, we need to increase the size of the holes through the structure to 13/16". This allows the large washers to pass through and the rubber grommets to be installed.



- 2.18.** At this point, the carbon ducktail is ready to be installed. Before installing the carbon ducktail; we want to ensure the OEM spoiler mounts are fully lowered.



- 2.19.** We also need to permanently disable the spoiler motor so that they do not raise and go through the carbon duck tail.
- 2.20.** To do this, remove the rear plastic cover shown below on each side of the vehicle.



- 2.21.** Pull down on the pillar mounts as shown below. They do not need to be fully removed; just pulled down in the rear.

Rear Wing and Spoiler, 987 Cayman – Install Manual



2.22. The hatch plastic can now be removed. Pull this forward to remove.



2.23. Remove the carpeted piece by pulling it forward.



2.24. Disconnect the below connector; which controls the spoiler mounts.

Rear Wing and Spoiler, 987 Cayman – Install Manual



- 2.25.** By disconnecting, the car will throw a code at speeds above 70 MPH. To permanently remove this, you will need to use the Durametric scan tool and disable the code.
- 2.26.** Install the spoiler mounts on the OEM rear wing mount locations as shown below.



- 2.27.** The spoiler mount should be parallel to the rear bumper. Utilize the supplied M8 washers to properly space the spoiler mounts, we found (2) washers worked well for our shop car.



Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual

- 2.28.** We can now install the carbon duck tail. Note that there are (2) different bolt lengths used and below is the location of the lengths for each bolt. **Ensure the short lengths are used in the correct locations, or damage to the carbon can occur.**



- 2.29.** Pull the backing off the double sided tape on the carbon ducktail before install.



- 2.30.** Use care when installing the bolts! Cross-threading bolts into the bungs can cause permanent damage to the duck tail, bung, or both.



- 2.31.** We recommend starting with the center bolts first, and moving outward. Thread the bolts in by hand first to ensure the bolts are going in smoothly.

- 2.32.** Tightening torque for these 10 bolts will be 6 ft-lbs.

Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual

- 2.33. Install the supplied rubber grommets in the holes as shown below.



- 2.34. With the carbon duck tail installed; we can now install the rear wing on the uprights.

3. Rear Wing Install

- 3.1. The rear wing should have the mounts already installed on it; grab the NAS hardware for installing the rear wing.



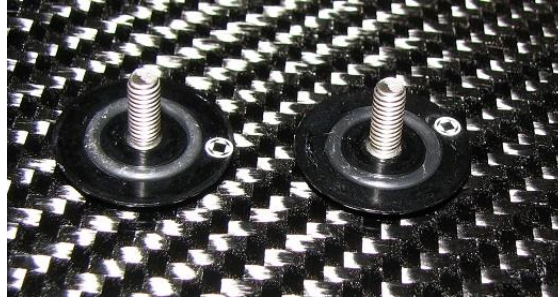
- 3.2. Slide the wing mounts onto the uprights, and bolt the wing on with the AOA chosen. We suggest starting with something around 4-6 initially and adjust from there.



Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual

- 3.3.** With the wing installed; we can install the endplates. Grab an endplate, an M4 x 16mm long FHCS, an o-ring, and an endplate washer. If you dip the o-ring in water, it will stay within the endplate washer better.



- 3.4.** Install the endplate. With a level on the top surface, level the endplate.



- 3.5.** The final part of the install is the gurney flap, which improves performance of the rear wing. We recommend testing without the gurney flap initially.
- 3.6.** If you decide to install the gurney flap, we need to first clean the rear trailing edge of the wing to ensure adhesion of the double sided tape. Utilize a 50/50 mixture of alcohol and water.

Rear Wing and Spoiler, 987 Cayman – Install Manual



3.7. It is ***highly*** recommended to follow 3M's VHB install instructions, which are listed in these steps below. The ambient temperature should be over 50 degrees F. 50% of the ultimate bond strength will be achieved after 20 minutes, 90% after 24 hours, and 100% after 72 hours.

3.8. Install the double sided tape as shown below.



3.9. Clean the gurney flap with the same solution as the wing as we will install the gurney flap to the wing next.

3.10. Install the gurney flap onto the wing; kneading and working it into the double sided tape.

Rear Wing and Spoiler, 987 Cayman – Install Manual



- 3.11. Re-install all the trunk plastics that were removed.
- 3.12. Congratulations on installing our 987 rear spoiler and wing. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; sales@verus-engineering.com.

Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Rear Wing and Spoiler, 987 Cayman – Install Manual



Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.