



BMW 3 Series E92

Functional Aerodynamic Rear Wing Kit

Installation Instructions - [Click HERE to Shop](#)



Skill Level 2

- Moderate -

**Some Experience
Recommended**



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

- Protecta-Sockets (for lug nuts).....[ES#2221243](#)
- **3/8" Drive Ratchet**.....[ES#2765902](#)
- **3/8" Drive Torque Wrench**.....[ES#2221245](#)
- **3/8" Drive Deep and Shallow Sockets**.....[ES#2763772](#)
- **3/8" Drive Extensions**.....[ES#2804822](#)
- Hydraulic Floor Jack.....[ES#2834951](#)
- **Torx Drivers and Sockets**.....[ES#11417/8](#)
- 1/2" Drive Deep and Shallow Sockets.....[ES#2839106](#)
- 1/2" Drive Ratchet
- 1/2" Drive Extensions
- 1/2" Drive Torque Wrench.....[ES#2221244](#)
- 1/2" Drive Breaker Bar.....[ES#2776653](#)
- Bench Mounted Vise
- Crows Foot Wrenches
- **Hook and Pick Tool Set**.....[ES#2778980](#)

Required For This Install

Available On Our Website

- **1/4" Drive Ratchet**.....[ES#2823235](#)
- **1/4" Drive Deep and Shallow Sockets**.....[ES#2823235](#)
- **1/4" Drive Extensions**.....[ES#2823235](#)
- Plier and Cutter Set.....[ES#2804496](#)
- **Flat and Phillips Screwdrivers**.....[ES#2225921](#)
- Jack Stands.....[ES#2763355](#)
- Ball Pein Hammers
- Pry Bar Set.....[ES#1899378](#)
- **Electric/Cordless Drill**
- Wire Strippers/Crimpers
- **Drill Bits**
- Punch and Chisel Set
- **Hex Bit (Allen) Wrenches and Sockets**.....[ES#11420](#)
- Thread Repair Tools.....[ES#1306824](#)
- **Open/Boxed End Wrench Set**.....[ES#2765907](#)

Specialty Tools

- **Trim Removal Tool Kit**.....[ES#517779](#)
- **Rivnut Installation Tool Kit**.....[ES#4487724](#)
- **Automatic Center Punch**.....[ES#1899402](#)
- **Die Grinder w/ Cutoff Wheel**

INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE REAR BUMPER

Step 1: Trim Removal Tool, T25 Torx

Open the trunk and remove the two plastic covers, then remove each screw (arrow in inset photo).



Step 2: T25 Torx

Gently pull back each rear fender liner and remove the screw (arrow) which secures the bumper cover to the fender on either side.



REMOVING THE REAR BUMPER

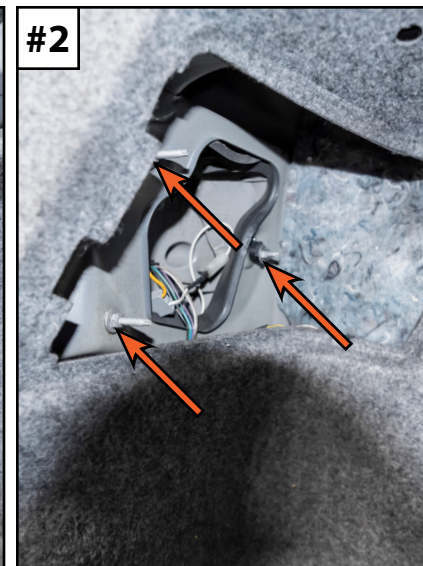
Step 3: T25 Torx

Remove the screws (**RED** circles) which secure the bumper cover to the underside of the vehicle.



Step 4: 10mm Socket & Ratchet

Pull each tail light access panel free (**photo 1**), remove the three nuts (arrows in **photo 2**), disconnect the tail light connector, and carefully remove each tail light from the vehicle and set it aside.



REMOVING THE REAR BUMPER

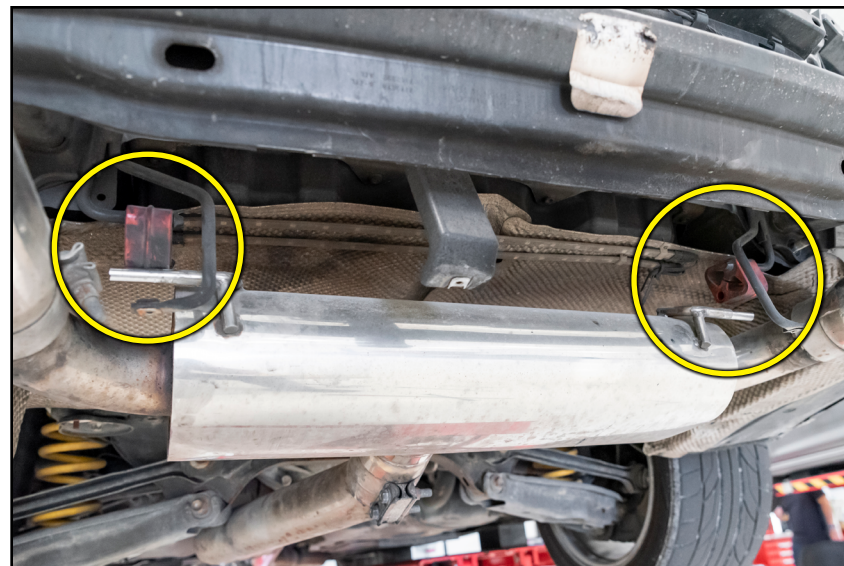
Step 5: Trim Removal Tool

Depress the two tabs under each tail light housing (arrows in inset photo) which secure the bumper cover to the rear of the vehicle. Carefully remove the bumper cover and set it aside.



Step 6: Exhaust Hanger Removal Pliers

Pull the muffler hanger rods free from the rubber isolators (circled in **YELLOW**) on the underside of the crash beam.



REMOVING THE REAR BUMPER

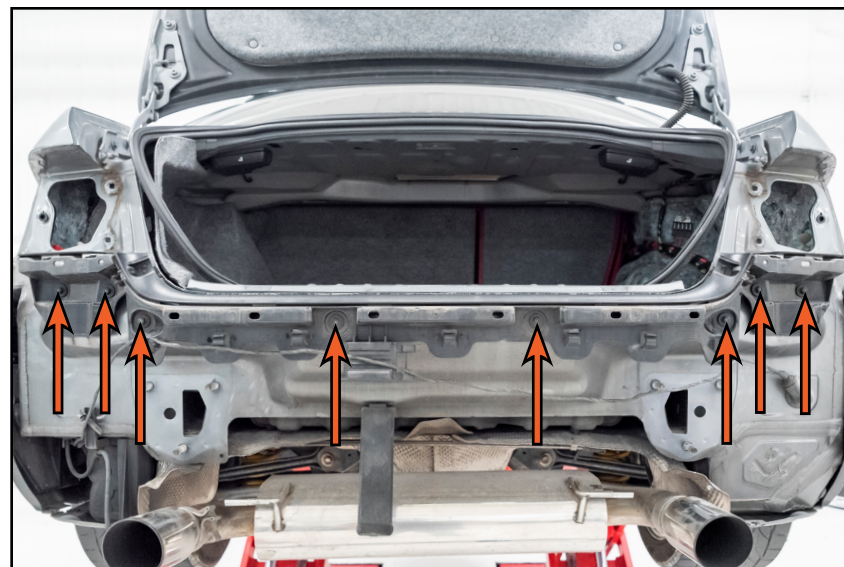
Step 7: 16mm Socket & Ratchet

Remove the six bolts (arrows) which secure the crash beam to the rear of the vehicle. Remove the crash beam and set it aside.



Step 8: 10mm Socket & Ratchet

Remove the eight nuts (arrows) which secure the plastic bumper guide to the vehicle, then pull it free and set it aside.



INSTALLING THE REAR WING KIT

Step 1:

Slide the two base brackets (arrows) onto the studs on the back of the vehicle as shown.



Step 2: Marker, 16mm Socket & Ratchet

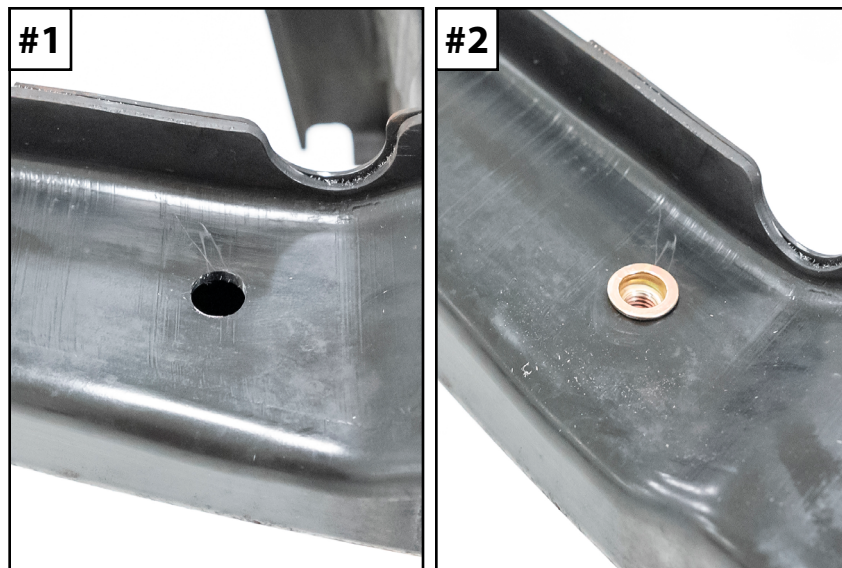
Reinstall the crash beam and tighten the bolts until snug. Mark the top of the crash beam at the center of each hole (arrow in inset photo) using a marker.



INSTALLING THE REAR WING KIT

Step 3: Center Punch, 10mm Drill Bit, Drill, Rivnut Installation Tool

Use a center punch to make an mark at the center of each dot we made, then drill a hole at this location using a 10mm drill bit (**photo 1**). Install one of the provided rivnuts into the hole (**photo 2**).



Step 4: 5mm Hex (Allen), 10mm, 16mm Socket & Torque Wrench

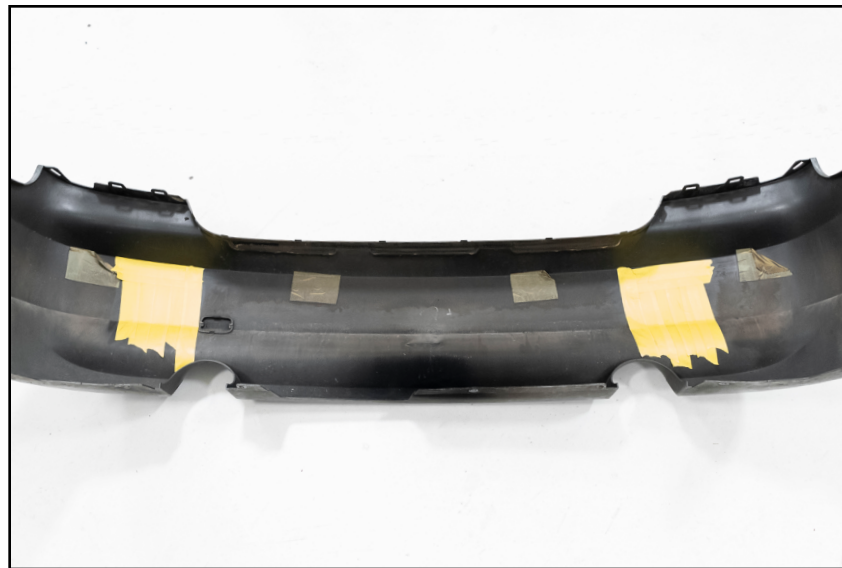
Reinstall the crash beam, torquing the bolts to 66 Nm (49 Ft-lbs), then install the provided M8 bolts through the base brackets and into the rivnuts we just installed. Reinstall the bumper guide (not shown).



INSTALLING THE REAR WING KIT

Step 5: Masking Tape

Next we need to determine where the bumper cover will need trimmed to allow the base brackets to pass through. Apply masking tape to the inside of the bumper cover in the areas shown.



Step 6: Masking Tape, Paint Pen

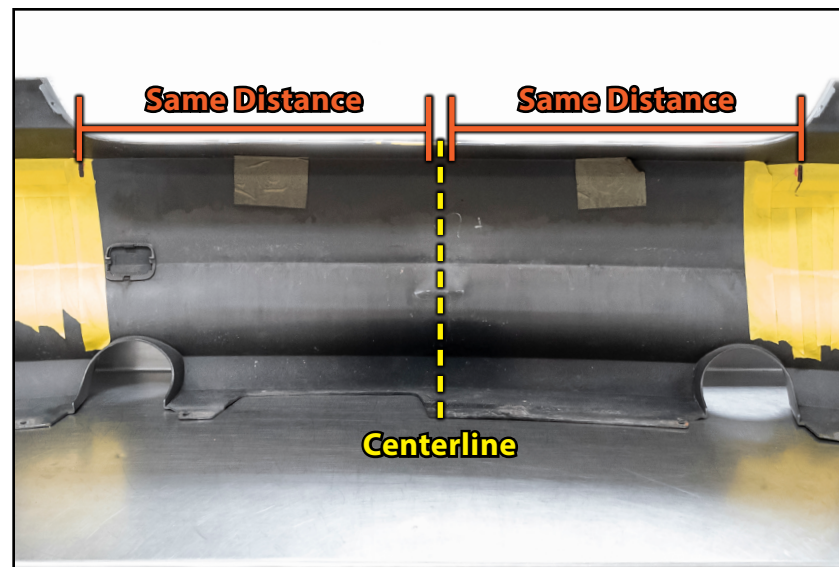
Apply masking tape over the rear face of each base bracket, then dab a paint pen across the taped surface. The goal is for this paint to be transferred to the taped area on the inside of the bumper cover, giving us the locations of where we need to make our first cut.



INSTALLING THE REAR WING KIT

Step 7:

Lift the bumper cover into place, being sure it is perfectly level and centered, then allow the base brackets to touch the inside of the bumper cover, transferring their paint marks. Remove the bumper cover, and measure the marks to ensure they are the same distance from the centerline of the bumper cover, repeat the marking procedure if necessary.



Step 8:

Die Grinder, File

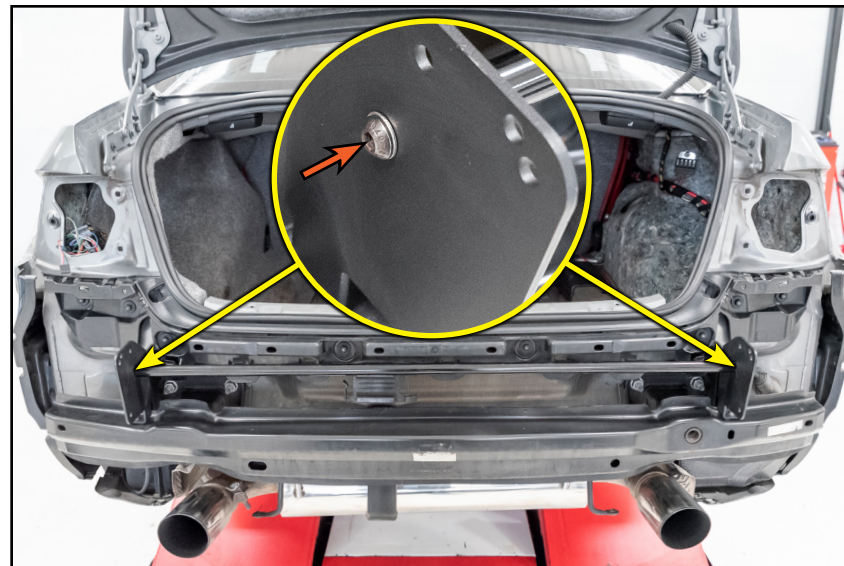
Once you are confident in your markings, cut a small vertical slot at the location of each mark. Test fit the bumper cover to ensure proper alignment, then remove it. Lengthen and widen the slots, test fitting between cuts, until there is adequate clearance for the base brackets on all sides. File any rough edges until you are satisfied with the finish.



INSTALLING THE REAR WING KIT

Step 9: 5mm Hex (Allen) Socket & Ratchet

Slide the threaded rod between the two base brackets, then secure it with the provided M8 bolts and washers (arrow in inset photo), tightening until snug.



Step 10: T25 Torx, 10mm Socket & Ratchet

Reinstall the bumper cover, tail lights, and muffler hangers as shown.



INSTALLING THE REAR WING KIT

Step 11: 13mm Wrench, 5mm Hex (Allen) Socket & Ratchet

Attach the uprights to the inside face of each base bracket using the provided M8 bolts, washers, and nuts (as shown in inset photo).



Step 12: 10mm Wrench, 4mm Hex (Allen) Socket & Ratchet

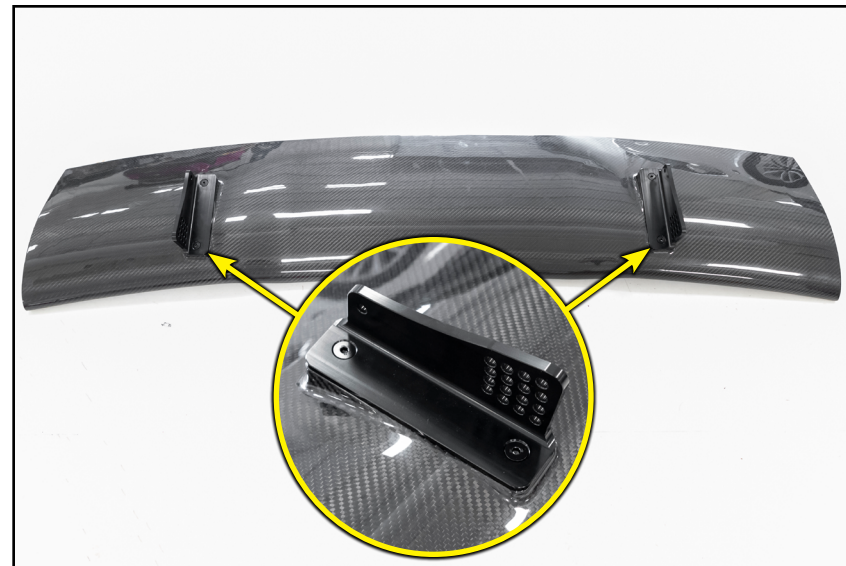
Attached the cross bar to the uprights as shown using the provided M6 bolts, washers and nuts (arrows).



INSTALLING THE REAR WING KIT

Step 13: 5mm Hex (Allen) Socket & Ratchet

Install the wing brackets (arrows) then install the end plates onto the wing (not shown).



Step 14: 13mm Wrench, 5mm Hex (Allen) Socket & Ratchet

Lift the assembled wing onto the uprights, securing it with the included M8 bolts, nuts, and washers.



Congratulations, your installation is complete!

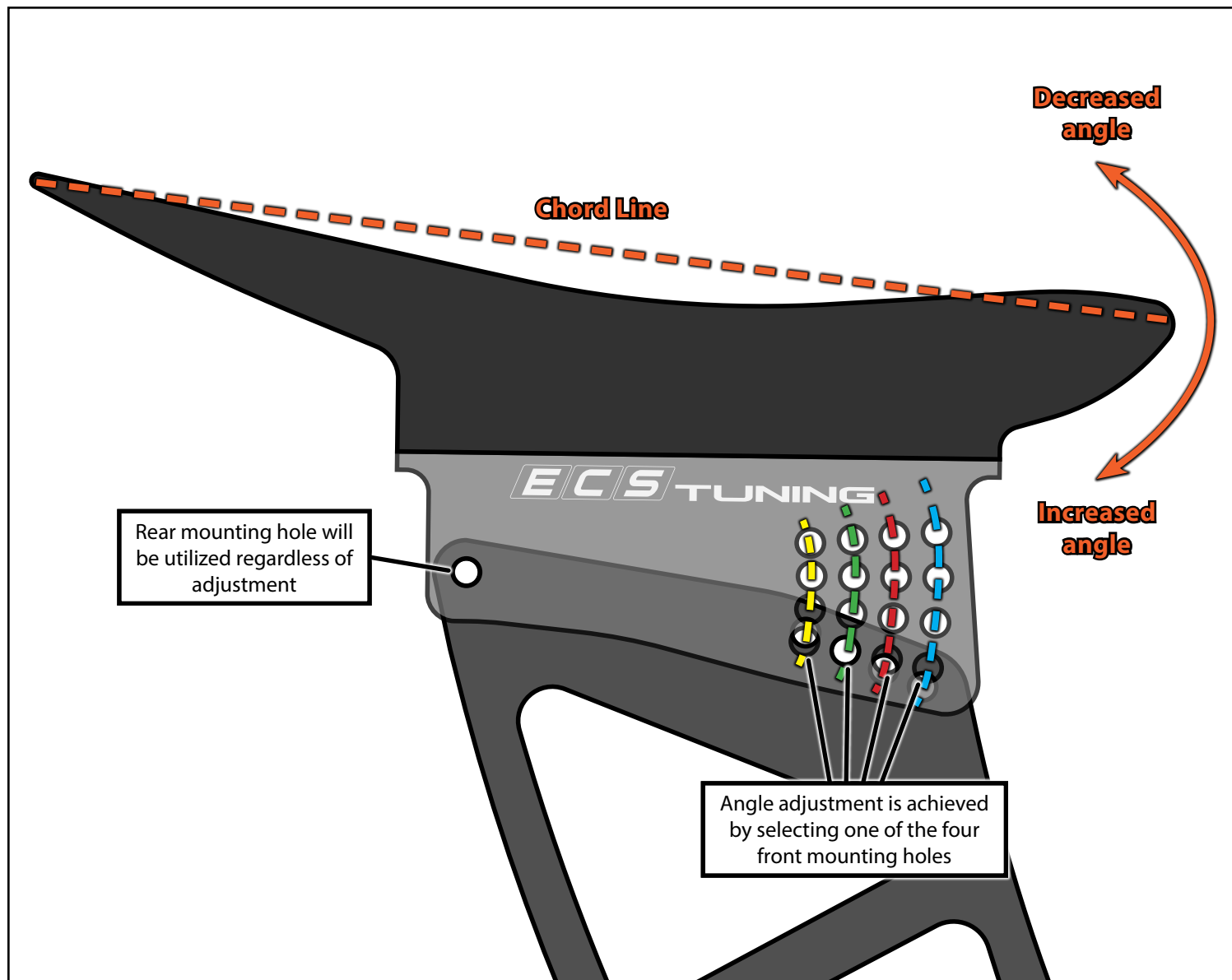
ADJUSTING THE REAR WING

Angle of attack defines the angle at which the wing intercepts the incoming airflow. If you draw an imaginary line between the front and rear edges of the wing (known as the “chord line”), you can clearly see how this angle increases or decreases as you adjust the wing.

- **A higher angle** increases rear downforce at the expense of increased drag.
- **A lower angle** decreases rear downforce but will result in less drag.

Our wing can be adjusted anywhere from ~0 degrees to ~20 degrees of angle, with each of the 16 mounting holes adjusting by ~1.33 degrees.

To adjust the wing, remove the hardware from the front mounting holes, adjust the angle to your desired setting, then reinstall the hardware and tighten until snug.



CARBON FIBER CLEANING AND CARE

ECS Tuning carbon fiber wings are clear coated for excellent finish durability and UV resistance right out of the box.

Carbon fiber can be washed with any gentle cleanser or soap. If it is safe for the paint on your car, it will be safe for the carbon fiber.

Be extra careful not to nick or deeply scratch the clear coat on the carbon fiber. This can lead to water intrusion into the carbon fiber which will damage the finish and the integrity of the wing.

If the clear coat does get nicked or deeply scratched to expose the carbon fiber, seal the damaged area thoroughly with a clear coat touch up or clear nail polish.

To retain UV resistance and protect the finish, we recommend regular waxing with a high quality caranuba wax.

Small surface scratches and light oxidation can be buffed out using the same methods and cautions you would use on the vehicle paint.

Carbon Fiber Cleaning and Care Kit
(available at ecstuning.com)

[ES#2914954](#)



Your Rear Wing Kit installation is complete!



These instructions are provided as a courtesy by ECS Tuning

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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