

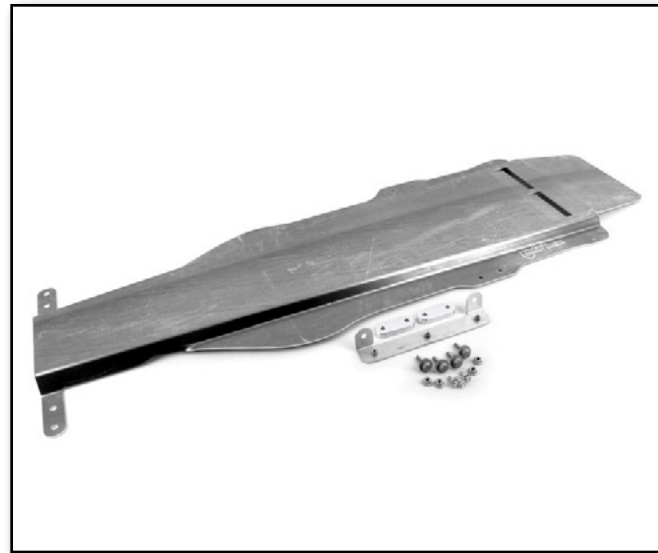
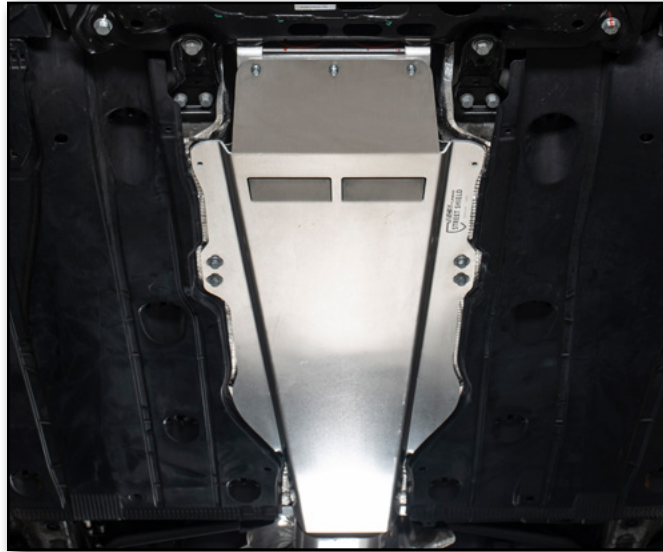


# VW MK7 Street Shield Tunnel Brace Installation Instructions - [ES3221081](#)/[ES3221083](#)



Skill Level 1 - Easy

Basic Skills  
Required



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.

## INTRODUCTION

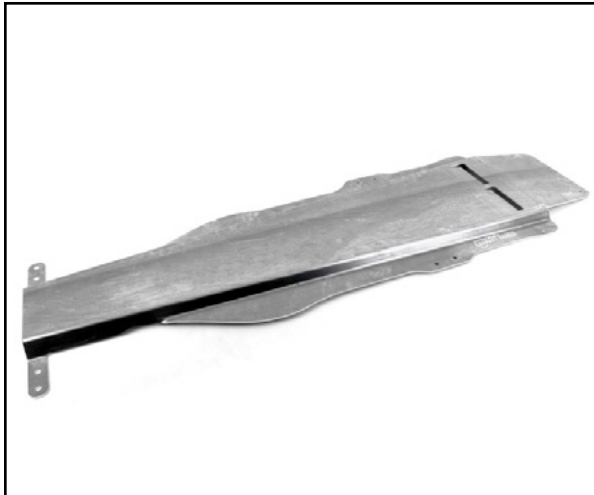
### The Project:

Today we are installing our Street Shield Tunnel Brace for the VW MK7 Golf. Our engineers have meticulously designed this tunnel brace to provide superior fitment and extreme protection for the underside of your vehicle. Give yourself the peace of mind of knowing that your expensive driveline and exhaust components are safely protected from road debris and damage, all while creating a more streamlined underbody. The shield itself is constructed of high strength lightweight aluminum, you can rest assured that this shield not only looks good, but it will hold up in even the worst of conditions. This shield utilizes factory mounting locations and requires no modification to your vehicle in order to install it. Installation is completely reversible and we provide all of the necessary hardware to ensure your installation goes smoothly. Installation can be easily completed in under an hour and requires no special tools, so no matter your skill level you'll find this install to be fun and easy. Thank you for choosing ECS Tuning for the protection of your vehicle, we appreciate your business. ***Now let's get on with the installation!***



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**KIT CONTENTS**

Street Shield Tunnel Brace  
(QTY 1)



Tunnel Brace Bracket  
(QTY 1)



Tunnel Brace Spacer  
(QTY 2)



M8 Bolt  
(QTY 4)



M8 Flange Nut  
(QTY 4)



M6 Bolt  
(QTY 3)

## 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#240941](#)
- 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

- 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](#)

### Available On Our Website

## SHOP SUPPLIES AND MATERIALS

**Standard Shop Supply Recommendations:** We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - [Click Here](#)
- Pig Mats - for protecting your garage floor and work area from spills and stains - [Click Here](#)
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - [Click Here](#)
- Micro Fiber Towels - for cleaning the paint on your car - [Click Here](#)
- Latex Gloves - for the extra oily and dirty jobs - [Click Here](#)
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - [Click Here](#)
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - [Click Here](#)
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

## 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.

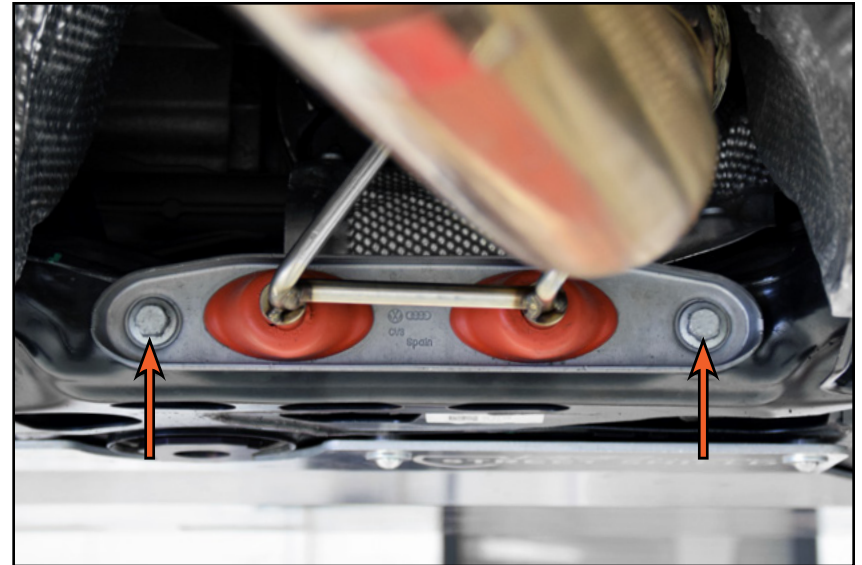


**NEVER** get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

## REMOVING THE ORIGINAL COMPONENTS

### Step 1: 13mm Socket & Ratchet

Remove the two bolts securing the downpipe hanger to the subframe.



### Step 2: 13mm Socket & Ratchet

Slide the tunnel brace bracket between the downpipe hanger and the subframe and reinstall the two bolts to secure it in place. Torque the bolts to 25Nm (18 Ft-lbs).



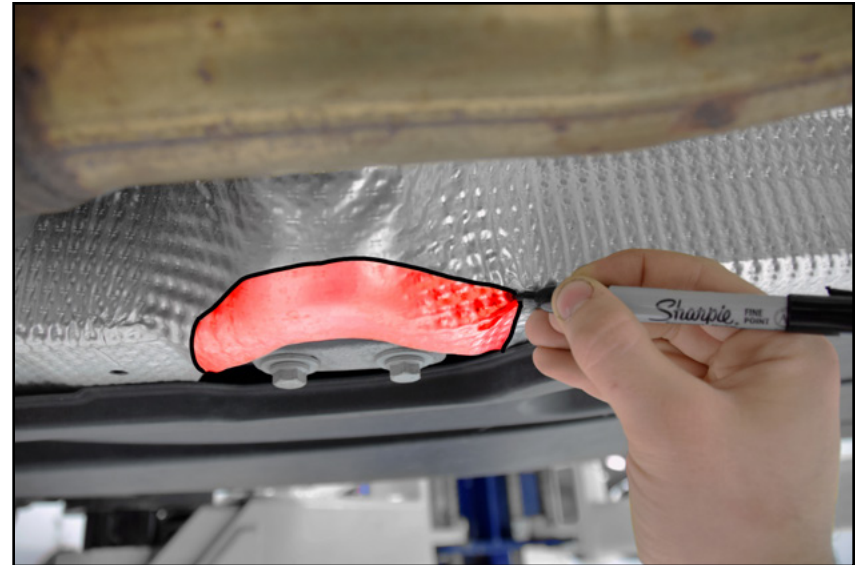


## REMOVING THE ORIGINAL COMPONENTS

### Step 3: Marker



If your vehicle is equipped with 4Motion, the heat shield around the carrier bearing bracket needs to be trimmed flush in order to provide a flat mounting surface for the tunnel brace. Use a marker to trace where you plan to cut.



### Step 4: Tin Snips



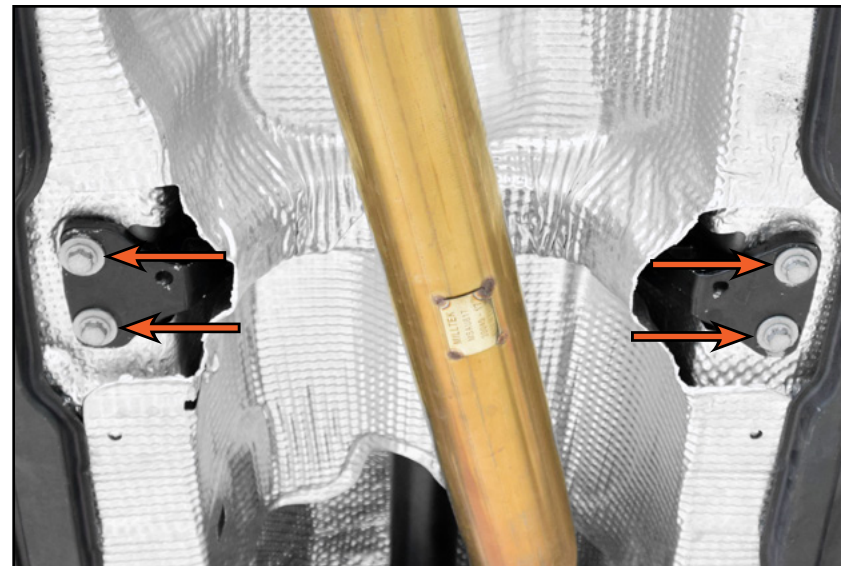
Using tin snips or other suitable tool, carefully trim back the heat shield.



## REMOVING THE ORIGINAL COMPONENTS

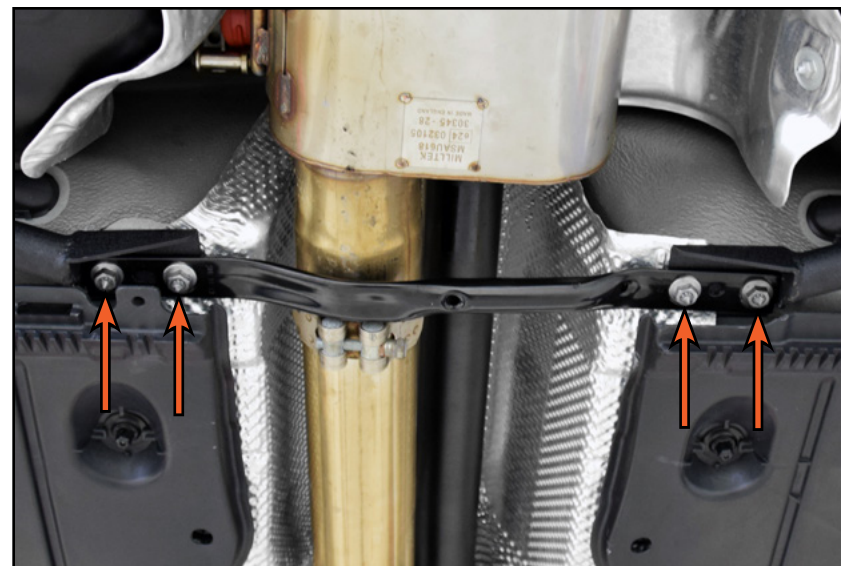
### Step 5: 13mm Socket & Ratchet

Moving towards the rear of the vehicle, locate the four bolts and remove them. On 4Motion vehicles these bolts are used to secure the carrier bearing bracket to the chassis. On FWD models these bolts are used to secure the center cross brace, which we will remove from the vehicle as well.



### Step 6: 13mm Socket & Ratchet

Moving further backward next we must locate the rear cross brace and remove the four nuts securing it to the vehicle.



## REMOVING THE ORIGINAL COMPONENTS

### Step 7:

Remove the cross brace from the vehicle.



### Step 8:

16mm Socket & Ratchet



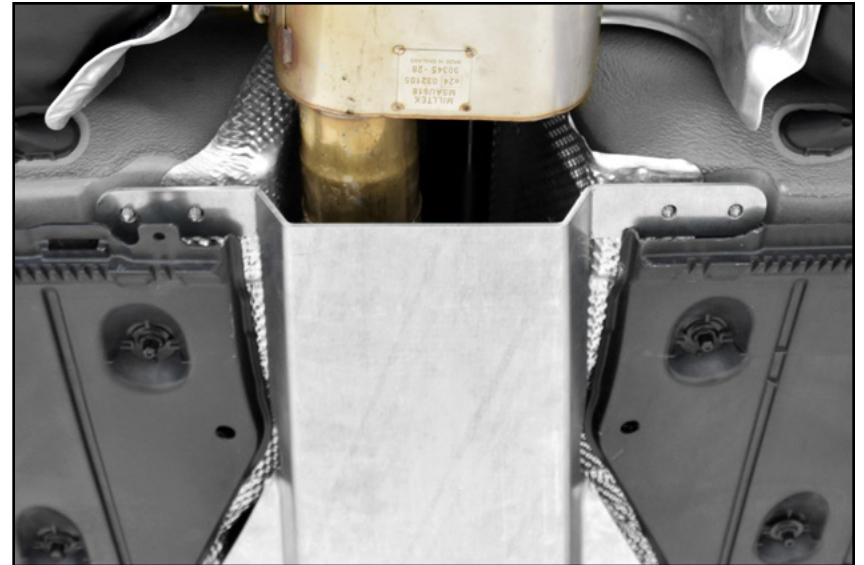
If your vehicle is equipped with our ECS Tuning rear chassis braces, we must remove them in order to install the tunnel brace.



# INSTALLING THE NEW TUNNEL BRACE

## Step 1:

Lift the tunnel brace up and slide it over top of the plastic paneling and align it with the studs on the chassis.



## Step 2: 16mm Socket & Torque Wrench



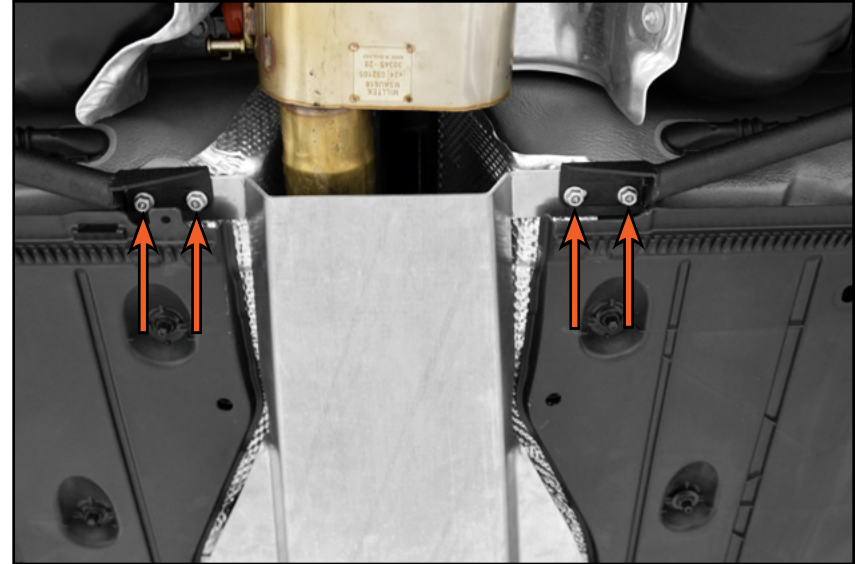
Reinstall the chassis braces (if equipped) so that the new tunnel brace is sandwiched between the braces and the chassis.



## INSTALLING THE NEW TUNNEL BRACE

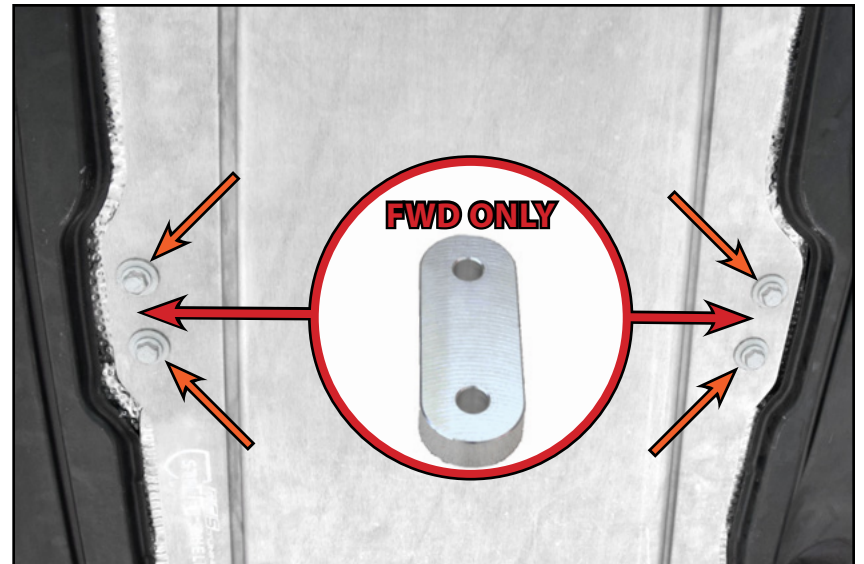
### Step 3: 13mm Socket & Torque Wrench

Install the four new M8 flange nuts which are provided in the kit and torque them to 20Nm (15 Ft-lbs).



### Step 4: 13mm Socket & Torque Wrench

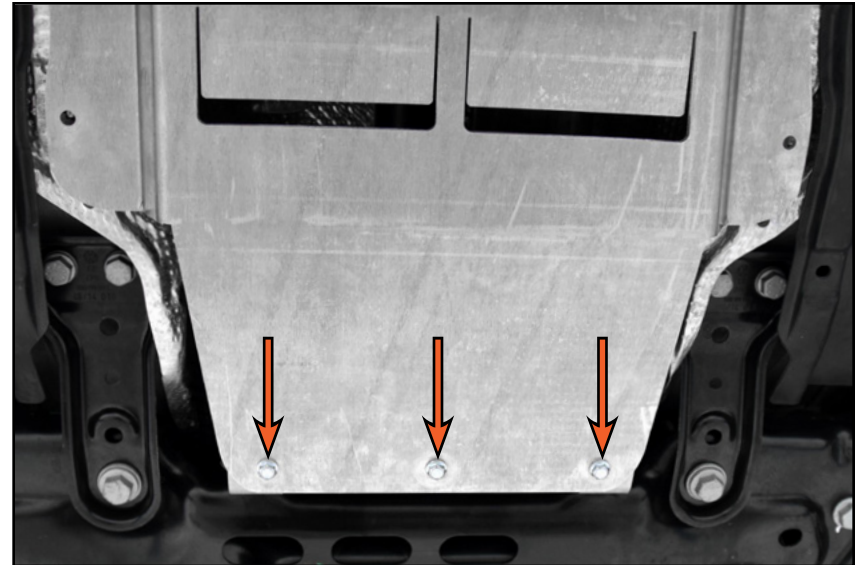
Next we must install the four new M8 bolts which are provided in the kit into the center holes in the tunnel brace and torque them to 25Nm (18 Ft-lbs). On 4motion vehicles, the carrier bearing bracket acts as a spacer, FWD model kits will include two spacers which are designed to be added between the tunnel brace and the chassis.



## INSTALLING THE NEW TUNNEL BRACE

### Step 5: 10mm Socket & Torque Wrench

Install the three M6 bolts which are provided in the kit into the front holes and tighten them to 25Nm (18 Ft-lbs).



### Step 6:

The last two remaining holes are meant to be left empty, accommodating the protruding threads of the two longer heat shield fasteners. Ensure that the threads are properly aligned with the holes.



***Congratulations, your installation is complete!***

**TORQUING TIPS**

**Torque to Yield or “Stretch” Bolts**

Many bolts will have a torque specification listed in the format - xx Nm (xx Ft-lbs) + xx degrees. These bolts are torque to yield bolts, commonly referred to as “stretch” bolts. The correct procedure for torquing these bolts is:

**Stage One** - Torque the bolt(s) to the initial Nm or Ft-lb specification. If there is more than one, be sure to torque them in the correct sequence.

**Stage Two** - Tighten or “stretch” the bolt(s) the additional specified number of degrees. If there is more than one, be sure to follow the correct sequence.

**Note** - Some bolts may have two or more stages of torquing before the final stage of “stretching” the bolts.

When tightening more than one bolt in a specified sequence, be sure to mark each fastener with paint *immediately* after performing the final stage or “stretching” of the bolts. This will ensure that you keep track of which bolts have already been “stretched”.

All Torque to Yield bolts should only be used once and should be replaced each time they are removed. If they are reused, they will not be able to achieve the proper clamping force with the specified torque.

**Lubrication**

Torque specifications are always listed for a dry fastener (*no* lubrication) unless specified otherwise.

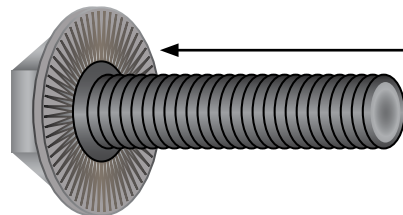
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

Lubricating a fastener that is intended to be installed dry and then torquing it to factory specifications will increase the clamping force and stress on the fastener and components, which can result in damage or failure.

Do not lubricate the threads of any fastener unless it is specifically recommended by the manufacturer.

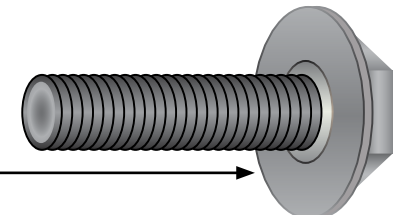
**Ribbed vs. Non-Ribbed Bolts**

Ribbed and Non-Ribbed bolts in the same location generally require a different torque specification.



A ribbed bolt is identified by the ribs on the contact surface

A non-ribbed bolt is identified by the smooth contact surface



## SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.



## Your Street Shield Tunnel Brace 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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