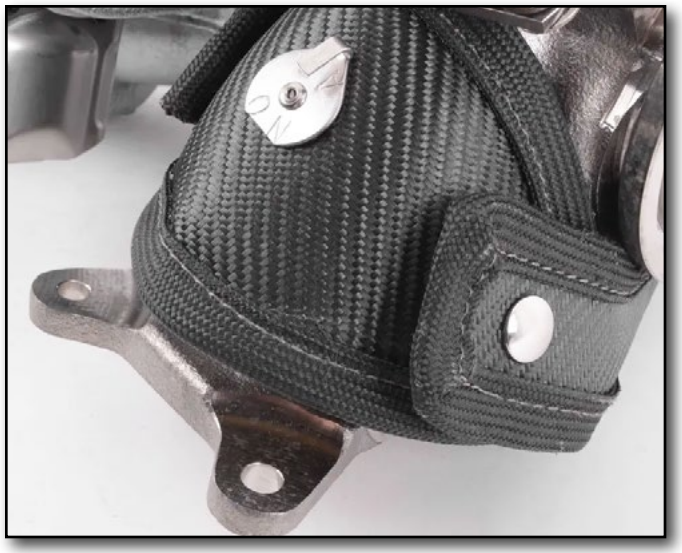
VW MK7, Audi A3/S3 1.8T/2.0T Gen3 Turbo Blanket Installation Instructions - ES3102387

Skill Level 1 - Easy

Basic Skills Required



INTRODUCTION

Volkswagen/Audi 1.8T/2.0T Gen3 Turbo Blanket

Are you looking to get the most out of your turbo? If so, then our new ECS Tuning Turbo Blanket is the answer! How does it work? The expansion and flow of exhaust gas increases as it gets hotter, so keeping the heat in a turbocharger makes it work more efficiently. This is exactly what our ECS Tuning Turbo Blanket does, allowing the turbo to spool faster, resulting in decreased turbo lag. As an added benefit, under hood temperatures are reduced as well! Our turbo blanket is constructed with stainless steel hardware, double reinforced seams, a silica woven liner, and an aluminum impregnated glass outer shell.

Turbo Blanket installation is simple in the way it fits, but you'll be working in some fairly tight quarters, which may make the job seem difficult. The best advice we can give you before you start is take your time. Don't tackle it when you're in a hurry or have a deadline. It'll only take you a couple of hours or less, but patiently working the blanket in place until you access the snaps and safety wire is what takes the most time, and can be frustrating if you try to hurry. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

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KIT CONTENTS

Use this photo for installation reference. It is possible that the safety wire hooks may rotate during shipment. Before you begin, be sure the safety wire hooks on your blanket are oriented as shown in this picture. Use the flat side on each hook base as an additional visual aid to orientation.

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
- **⅜" Drive Ratchet** ..... ES#2765902
- ⅜" Drive Torque Wrench ..... ES#2221245
- **⅜" Drive Deep and Shallow Sockets** ..... ES#2763772
- ⅜" Drive Extensions ..... ES#2804822
- **Hydraulic Floor Jack** ..... ES#2834951
- **Torx Drivers and Sockets** ..... ES#11417/8
- ½" Drive Deep and Shallow Sockets ..... ES#2839106
- ½" Drive Ratchet
- ½" Drive Extensions
- ½" Drive Torque Wrench ..... ES#2221244
- ½" Drive Breaker Bar ..... ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set ..... ES#2778980

Required For This Install

- **¼" Drive Ratchet** ..... ES#2823235
- **¼" Drive Deep and Shallow Sockets** ..... ES#2823235
- ¼" 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

Specialty Tools

- **Safety Wire Pliers** ..... ES#3102852

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.

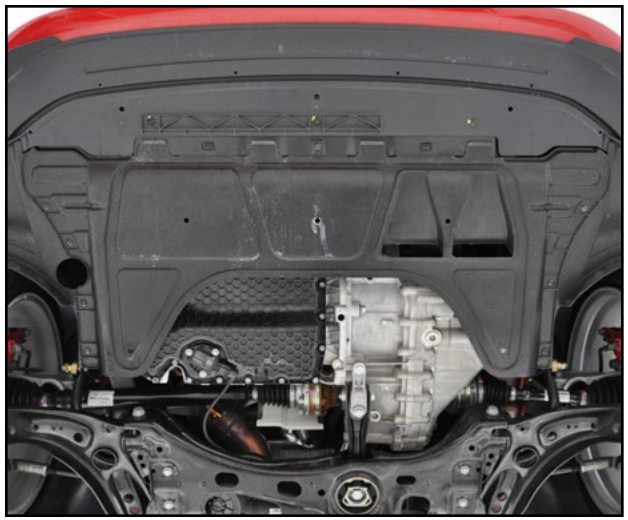
GENERAL PREPARATION AND SAFETY INFORMATION

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.

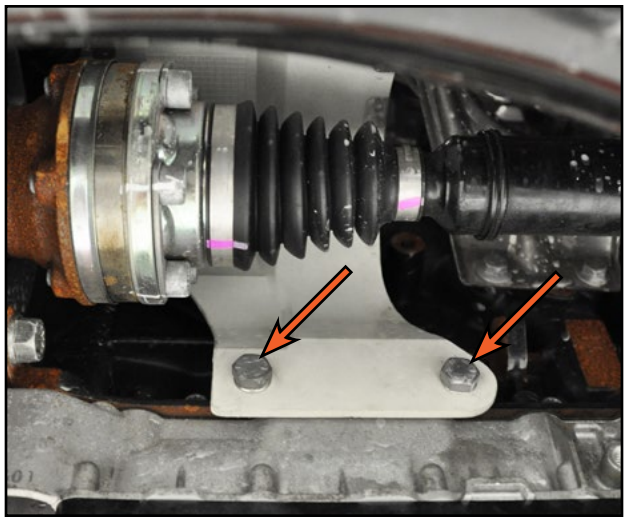
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- 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.

INSTALLATION TIPS, TRICKS, & WARNINGS



On some models (such as this MK7 GTI) the lower insulation panel does not need to be removed. Others may have a full length panel or skid plate which you will have to remove for access from underneath.



On FWD models, this RH inner CV boot shield is held on by two bolts (arrows) and can be easily removed, providing additional access to the bottom of the turbo.

On some models, such as the Golf R, it is much easier to snap one side of the blanket together, then guide the other side through between the turbo and cylinder head.

CAUTION: Wait for your engine to cool before starting this install to minimize the risk of burns.

NOTE

During the first several heat cycles, the turbo blanket will smoke due to the curing process.

TECH TIP

It is OK to fold and flex the blanket ***lightly*** during installation, but keep it to a minimum. Excessive flexing of the fibers can weaken them, especially after the blanket has been heat cycled.

TECH TIP

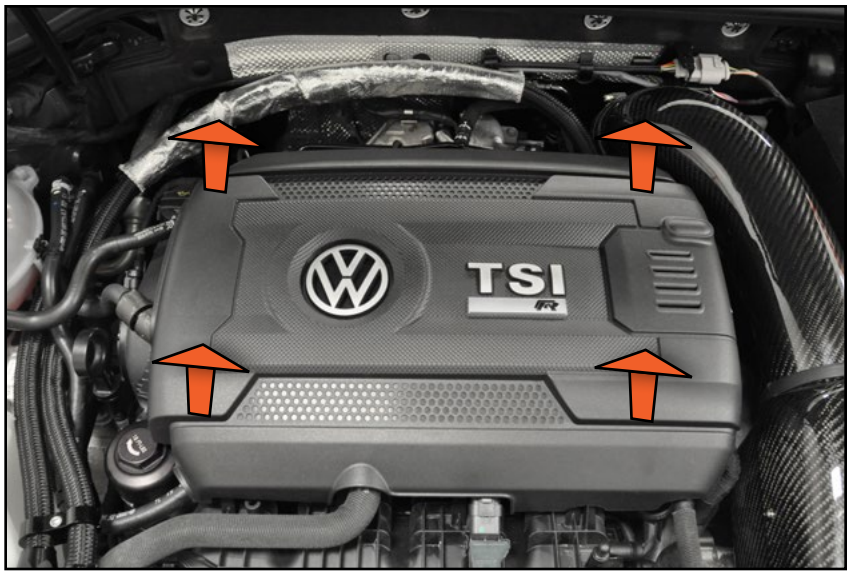
This turbo blanket is significantly easier to install if the downpipe is removed. You may find that it's worth it to install both of these upgrades at the same time.

Now let's get to it!

TURBO BLANKET INSTALLATION

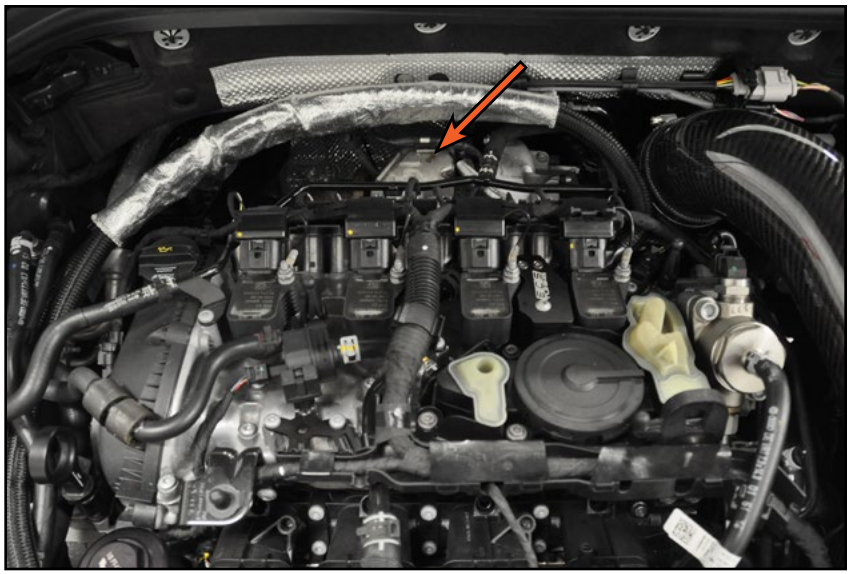
Step 1:

To begin with, you'll need to remove the engine cover by pulling up at the four corners.



Step 2:

The turbocharger is located on the exhaust manifold near the firewall, and there is a heat shield above it. Locate the heat shield (arrow) then proceed to step 3.



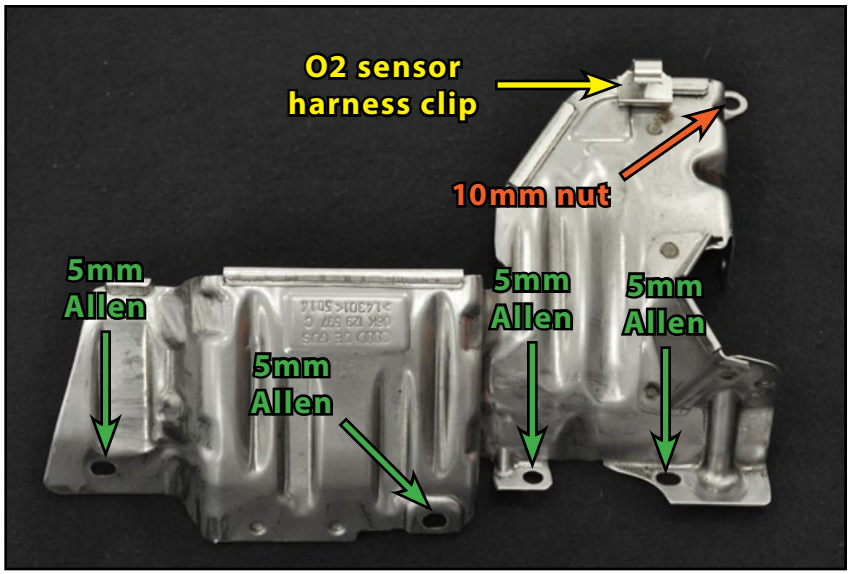
NOTE

We are installing this on a Golf R, but the overall procedure is the same regardless of make or model. We also have our catch can kit installed on this car (the hoses that run along the firewall), but these are easy to work around if you have one too.

TURBO BLANKET INSTALLATION

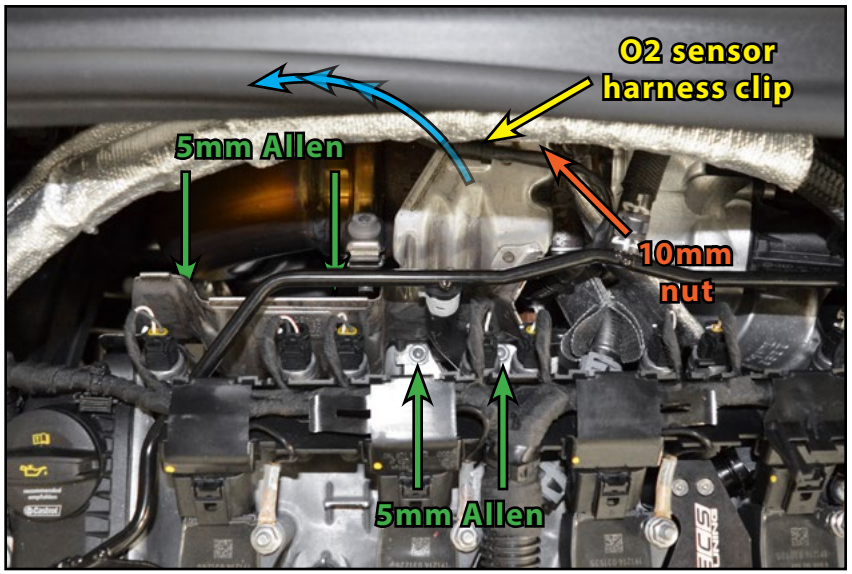
Step 3:

Please inspect the photo on the right. This is the turbo heat shield off the car, oriented as it would be installed. It is secured in place by five mounting bolts, some of which are difficult to see with it on the engine. There are four hex (Allen) bolts which hold it on along the bottom, and one 10mm nut which secures it to the top of the turbocharger.



Step 4: 10mm Socket & Ratchet, 5mm Hex (Allen)

Now, back to the car. Release the oxygen sensor harness from the clip (**YELLOW**), remove the nut on the top of the heat shield (**ORANGE**), then remove the four remaining hex (Allen) bolts (**GREEN**). Remove the heat shield from the engine bay in the direction shown in the photo (**CYAN**).



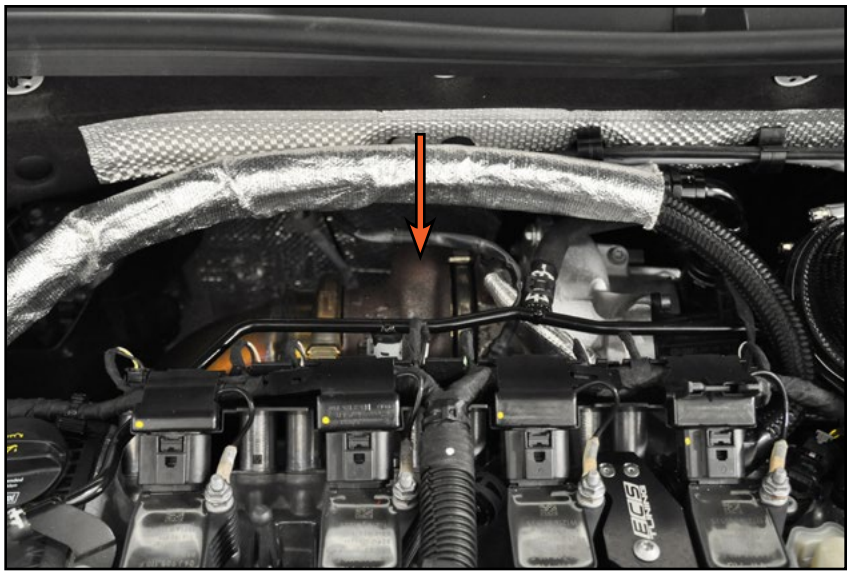
NOTE

The two hex (Allen) bolts along the back side are more difficult to see, but you'll find they are relatively easy to get to.

TURBO BLANKET INSTALLATION

Step 5:

Now that the heat shield has been removed you will be able to access to the top of the turbocharger.



STOP

We recommend that you read through to the end of these instructions and familiarize yourself with the entire procedure ***before*** continuing.

Step 6:

We're ready to install the blanket, but it's difficult to show the remainder of the installation on the car, so we're going to switch over to pictures with the turbocharger on a bench.

The overall installation is pretty simple. The blanket saddle naturally forms the shape of the turbocharger and slips down onto it from the top. The two legs slide down between the turbo and cylinder head, straddling the exhaust runner.

TURBO BLANKET INSTALLATION

Step 7:

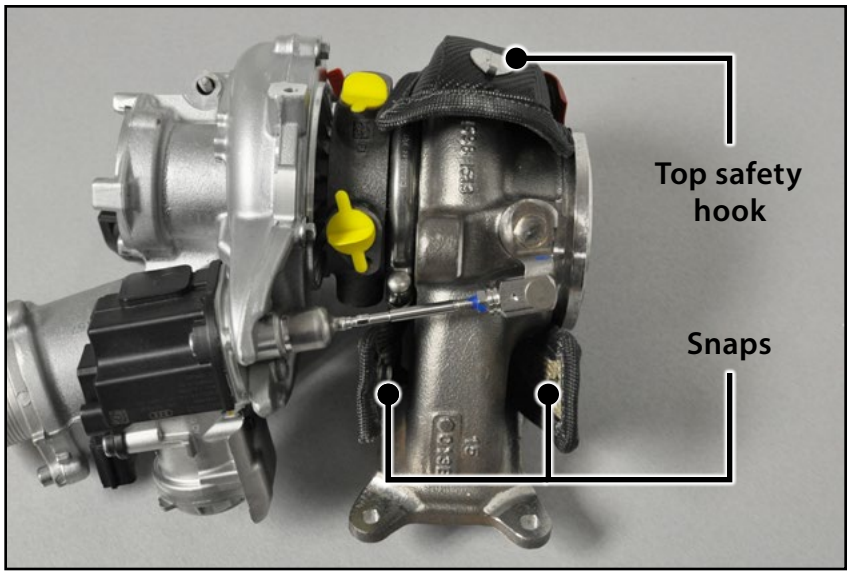
Once it is fully seated in place, you can see here how the blanket fits perfectly around the turbo.

NOTE

Your car will have an oxygen sensor installed in the top of the turbo, which the blanket is designed to fit around.

Step 8:

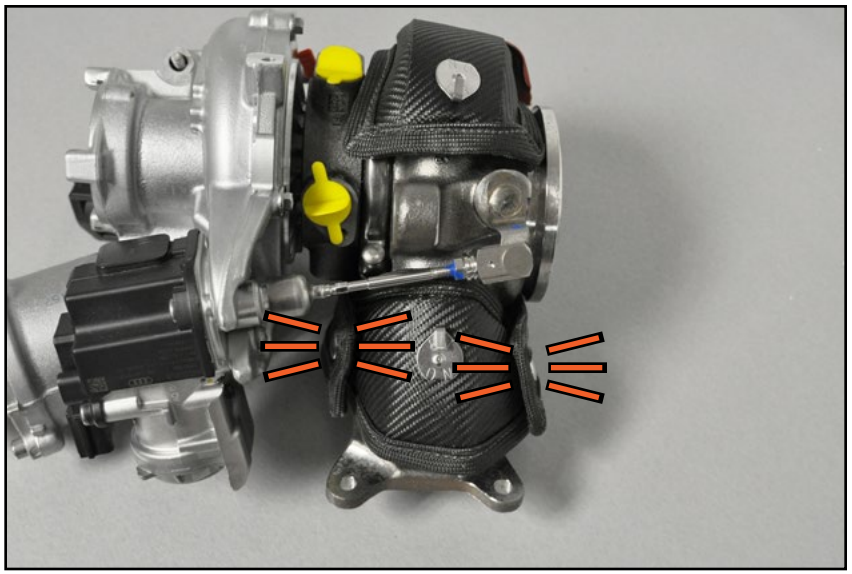
The next step is to get underneath the car to access the bottom of the turbo. As shown here, you'll see the legs of the saddle hanging down over the exhaust runner and the top safety hook along the back side. Each of the legs has a button snap on the end.



TURBO BLANKET INSTALLATION

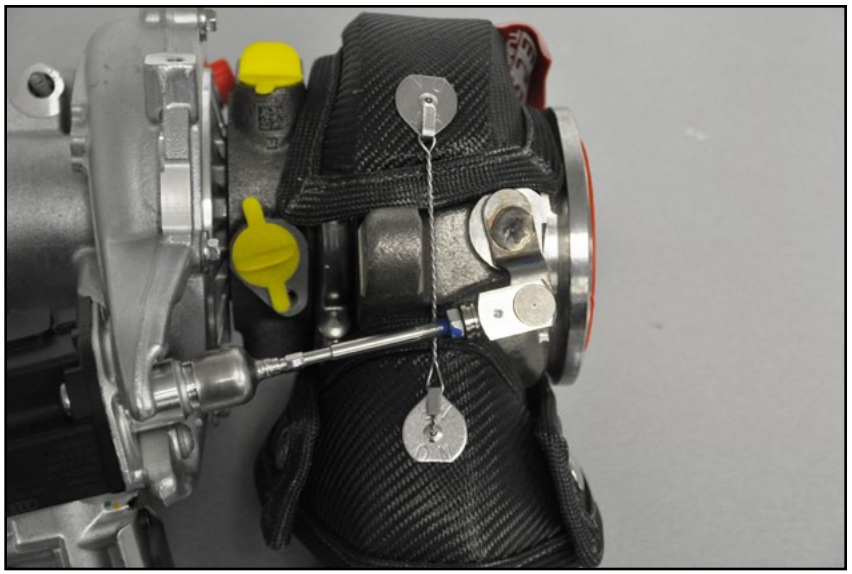
Step 9:

Wrap the blanket cinch strap the around the bottom of the exhaust runner and snap it onto the legs of the saddle. When installed correctly, the closed ends of the safety hooks will be facing each other.



Step 10:

Now it's time for the safety wire. First take a look at the installed wire. It runs between the two safety hooks, underneath the wastegate actuator rod. The goal of installing this wire is to hold the saddle and cinch strap together so they match the contour of the turbocharger as designed. The Turbo Blanket is designed to fit with an air gap between the blanket and turbo. It should NOT be installed tightly or with excessive force or strain on the wire, which would reduce its efficiency and weaken the safety hooks and the surrounding fibers of the blanket.



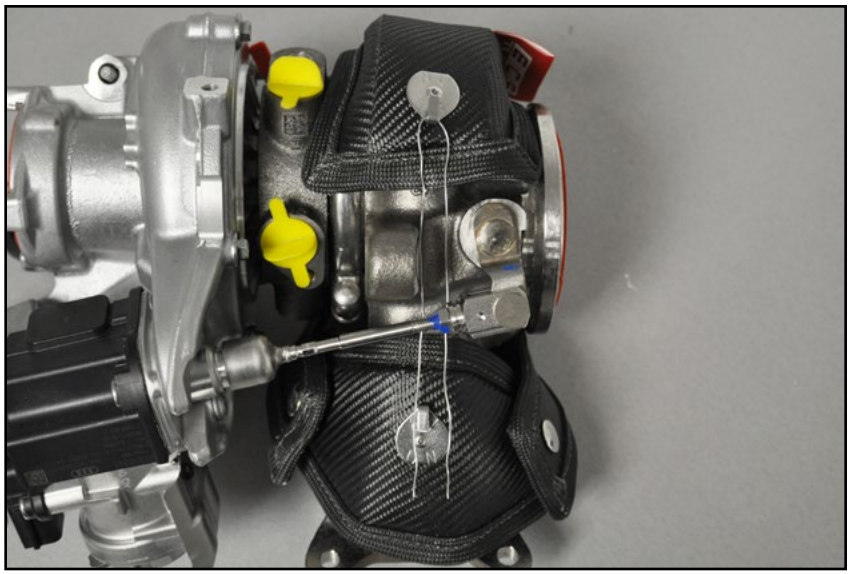
NOTE

The only way to attain an effective, tight twist like the one shown in the picture is through the use of safety wire pliers, which we will use and demonstrate for this installation.

TURBO BLANKET INSTALLATION

Step 11:

To install the wire, fold it in half, hang it over the top safety hook, run it underneath the wastegate actuator rod, then extend it over the bottom safety hook.



NOTE

Only 12” of wire is required. If the included wire is longer, trim it to length before installing.

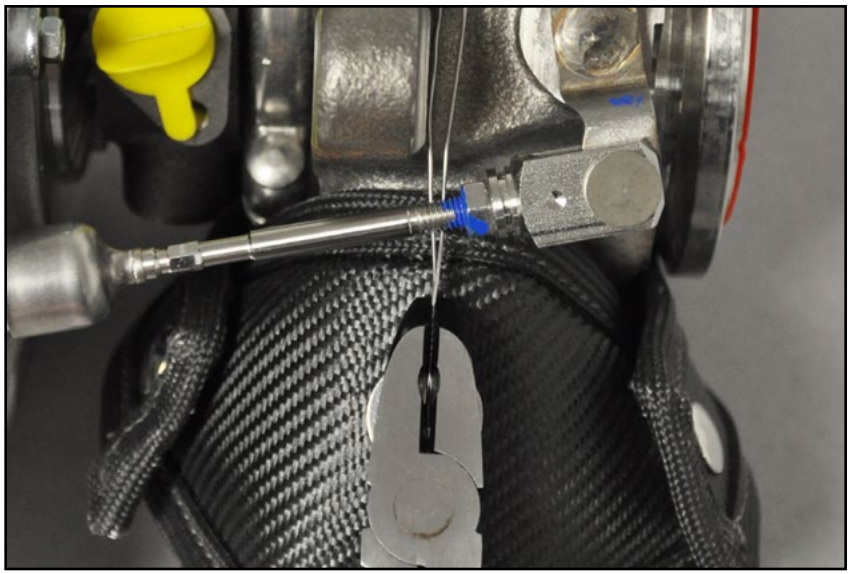
Step 12:

Using one hand, pull the saddle and cinch strap lightly together so they fit the contour of the turbo. Remember, the blanket is designed to work with an air gap between it and the turbo. Now grab both sides of the wire with the end of the safety wire pliers.

TURBO BLANKET INSTALLATION

Step 13:

The key is to grab the wire approximately half way in between the bottom safety hook and the wastegate actuator rod as shown here.



Step 14:

Lock the safety wire pliers onto the wire with the following procedure:

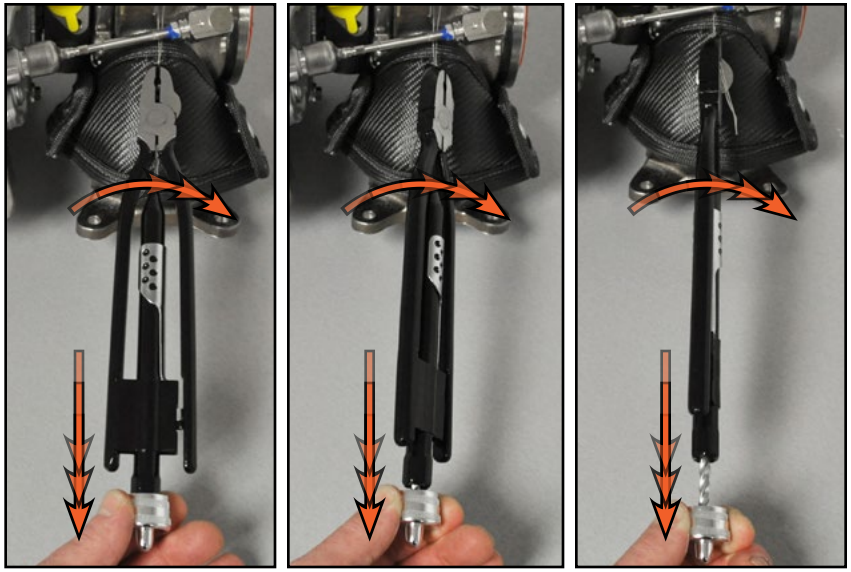
- Squeeze the safety wire plier handles together until the retaining hook on the end of the handle is bottomed out. You'll have to squeeze fairly hard)
- Holding the handles together, slide the chrome retaining sleeve downward, then hold the sleeve down while you release pressure on the handles.

TURBO BLANKET INSTALLATION

Step 15:

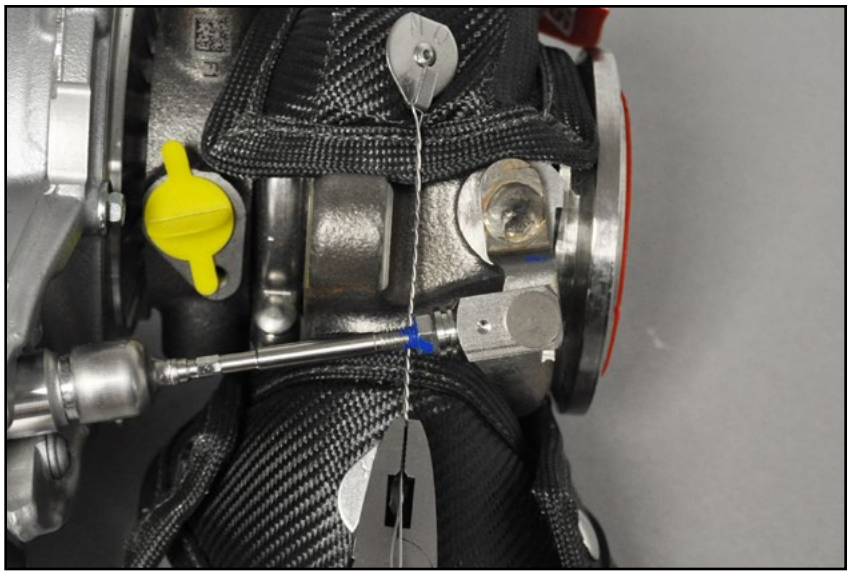
Grab a hold of the knurled chrome knob at the end of the pliers and pull it toward you. As you pull, the pliers will rotate and twist the wire.

When the knob will not extend any further, hold the pliers and release the knob. It will return into the plier body then you can twist the wire again.



Step 16:

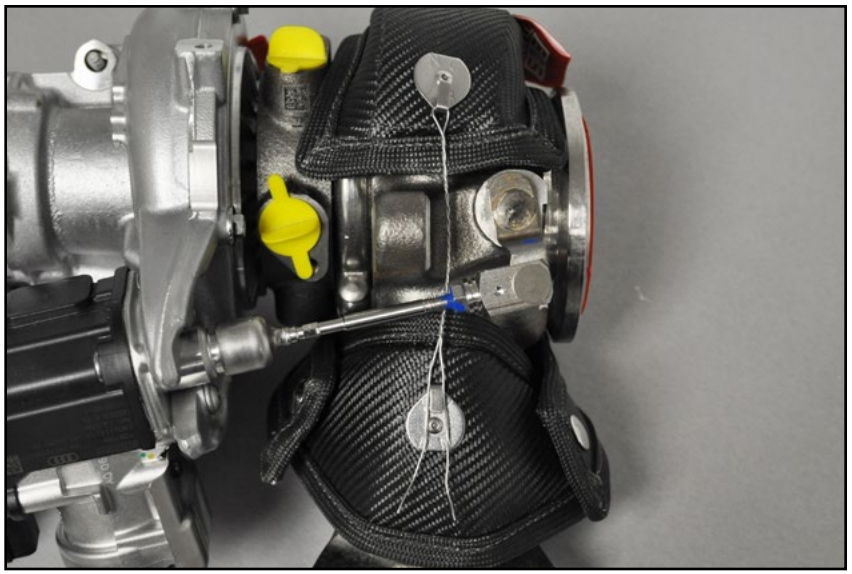
Continue to rotate the wire just until you have a nice even twist between the top safety hook and the end of the pliers. It is not necessary to create a tight loop where the wire attaches to the hook (see the loop at each safety hook in step 10).



TURBO BLANKET INSTALLATION

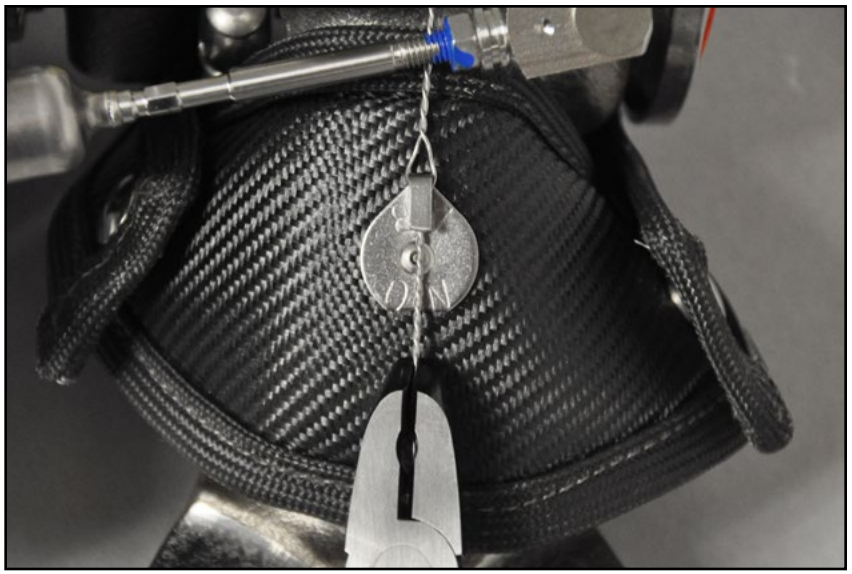
Step 17:

Now release the pliers and extend the wire ends over the bottom safety hook.



Step 18:

Engage the pliers again and twist the wire until it is secure on the bottom safety hook. It is not necessary to create a tight loop where the wire attaches to the hook (see the loop at each safety hook in step 10).



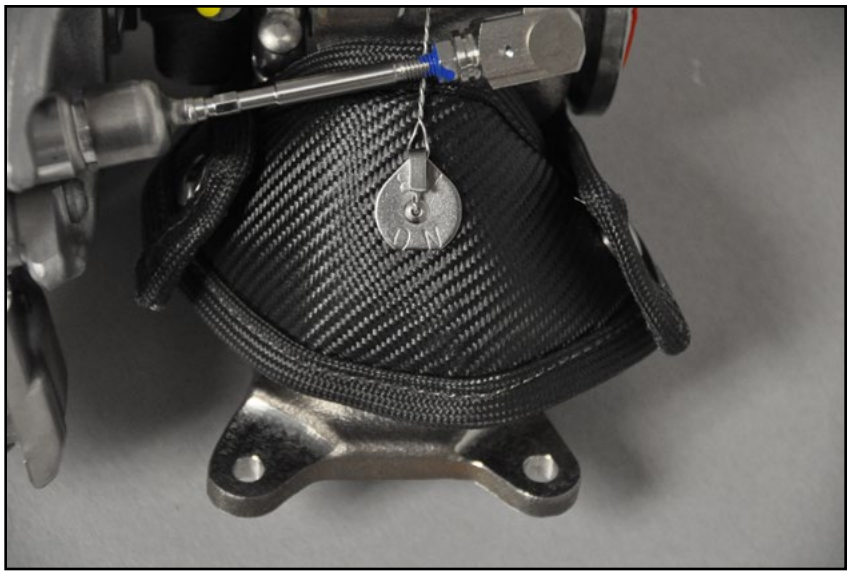
NOTE

If you experience trouble with the wire installation or need another piece, any basic mechanics wire will work.

TURBO BLANKET INSTALLATION

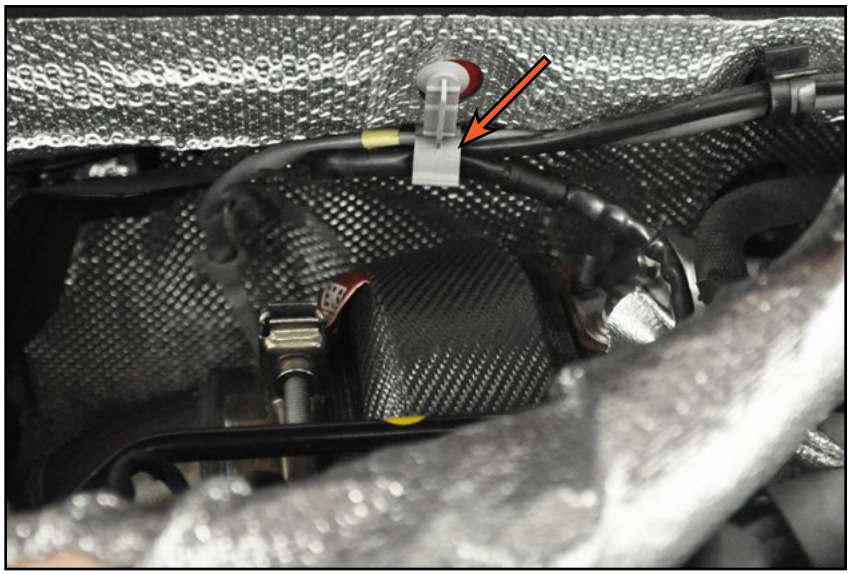
Step 19:

Finally, snip the end of the wire so it does not snag or tear the blanket.



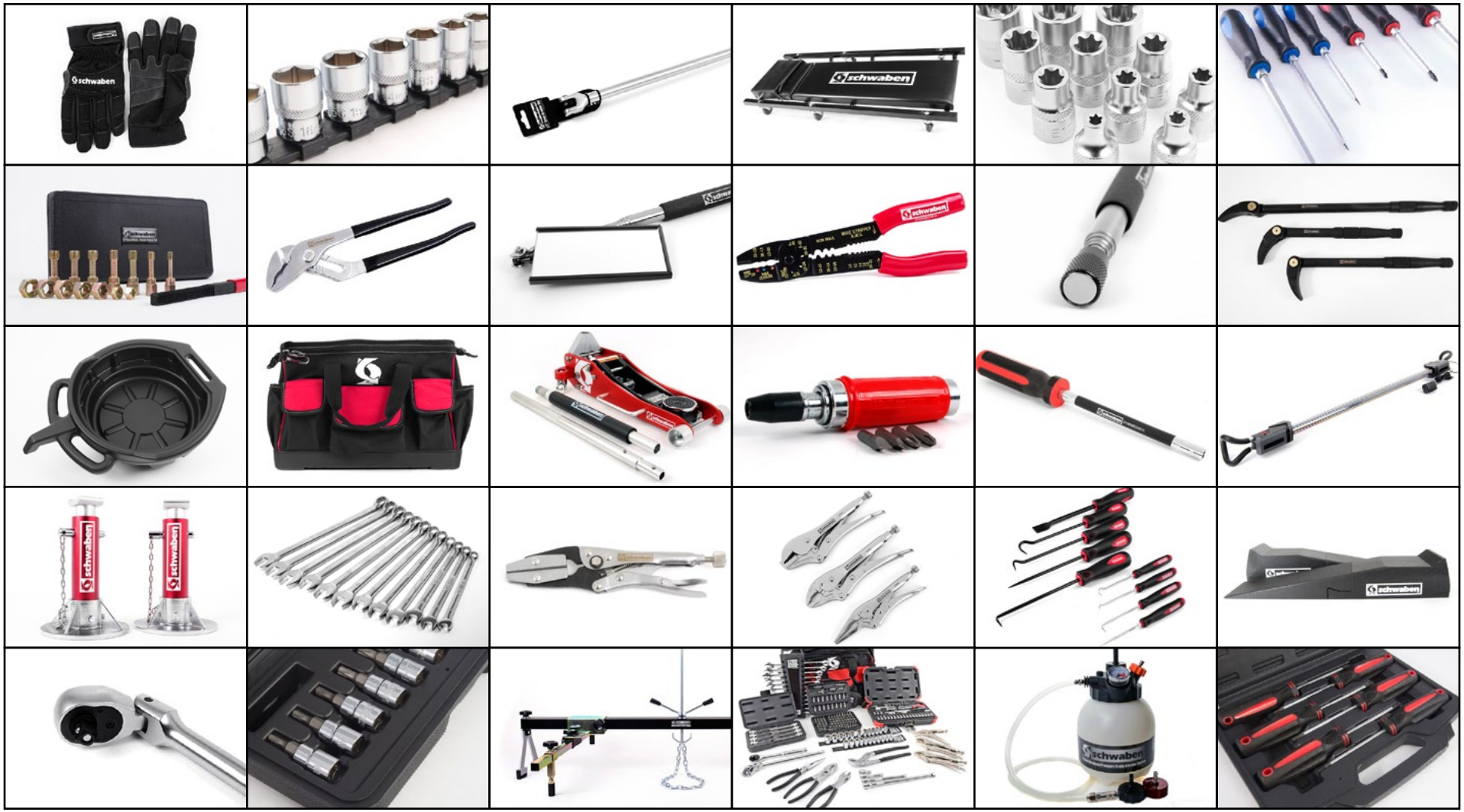
Step 20:

You may choose to reinstall the original heat shield or leave it off. If you leave it off, secure the oxygen sensor harness into the clip on the firewall.



Your installation is complete!

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 1.8T/2.0T Gen3 Turbo Blanket 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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