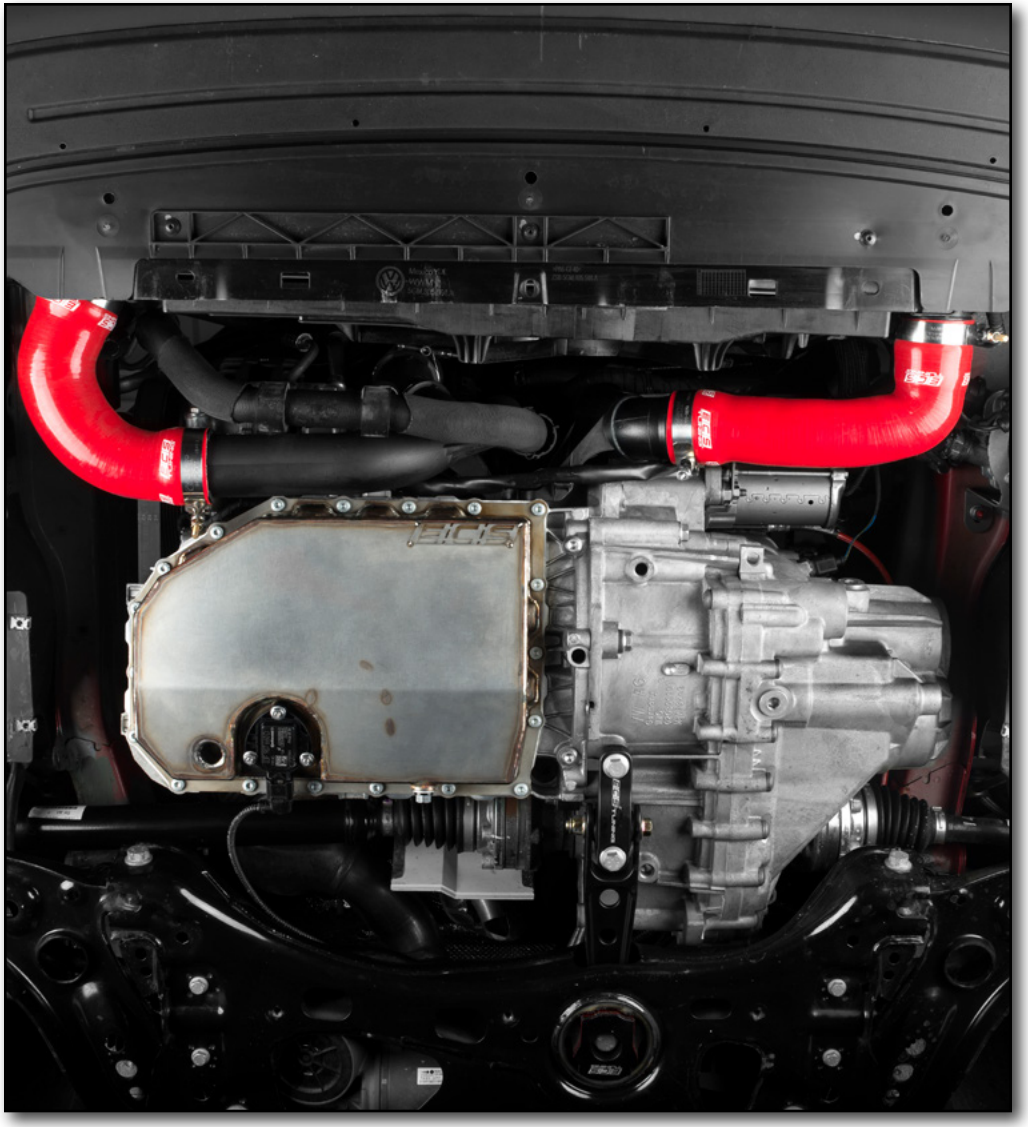
VW Audi Gen1/Gen3 TSI Stainless Steel Oil Pan Installation Instructions - Click HERE to Shop

Skill Level 1
- Easy -
Basic Skills Required



INTRODUCTION

The Project:

Never fear the road again - or anything it throws in your path. ECS Tuning's Stainless Steel Oil Pans are as tough as they come. The latest addition to our ECS Tuning product line, these practically indestructible pans are the perfect armor plate for your TSI Volkswagen or Audi engine. Thick T304 Stainless Steel makes up the entire pan and they're completely TIG welded for high quality, consistent welds, and the ability to withstand the unexpected. To top it all off, the beautiful construction provides an ultra cool fabricated look that sets these apart from any other pan, and makes them the perfect dress up for any engine!

Installing our new Stainless Steel oil pan is a routine operation that will only take you a couple of hours. If you're due for an oil change, it's even better, since you can "knock out two birds with one stone". The pan is available separately, or as a complete kit with sealant, mounting bolts, oil level sensor nuts, and an ECS Tuning Magnetic Drain Plug. Keep in mind that if you purchase the pan only, it requires a special sealant and if you are replacing a factory plastic pan, you cannot use the original bolts. Our pan requires bolts which are much shorter than the ones used on a factory plastic pan.

One more thing - we also offer the pan with complete oil service kits specifically for your vehicle, including the filter and the additional oil required for the increased pan capacity.

Thank you for looking to ECS Tuning for all your performance and repair needs. We appreciate your business!

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KIT CONTENTS

The complete ECS Tuning Stainless Steel Oil Pan kit comes with the following:

(1) ECS Tuning Stainless Steel Oil Pan

(1) ECS Tuning Magnetic Drain Plug

(1) Sealant Tube

(20) M6 x 16 Oil Pan Bolts

(3) M6 Oil Level Sensor Nuts

If your vehicle is not equipped with an oil level sensor, you must order a level sensor block off plate and seal for this oil pan.

Block off plate .....ES#3140168
Block off plate seal .....ES#274942

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

- **Drain Plug Tool** ES#3108058
- **Oil Drain Pan** ES#2748892

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.

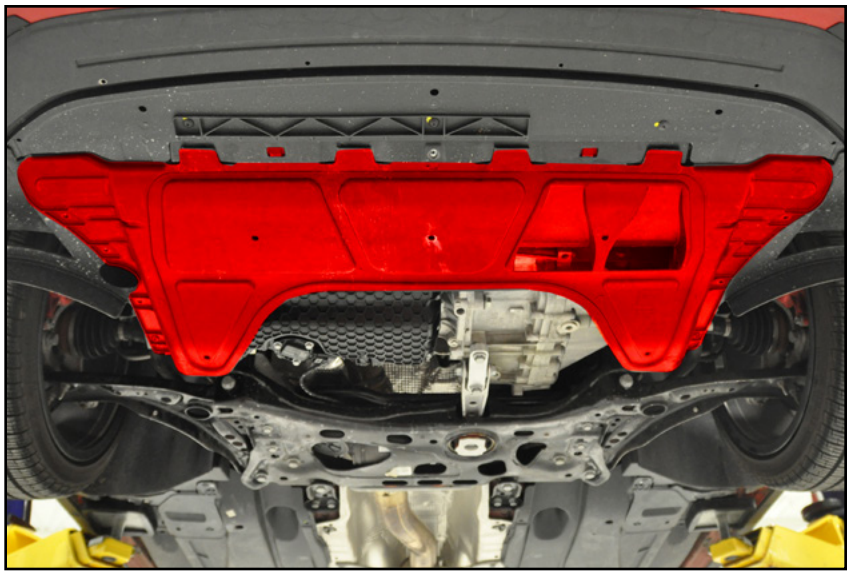
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.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

INSTALLING THE STAINLESS STEEL OIL PAN

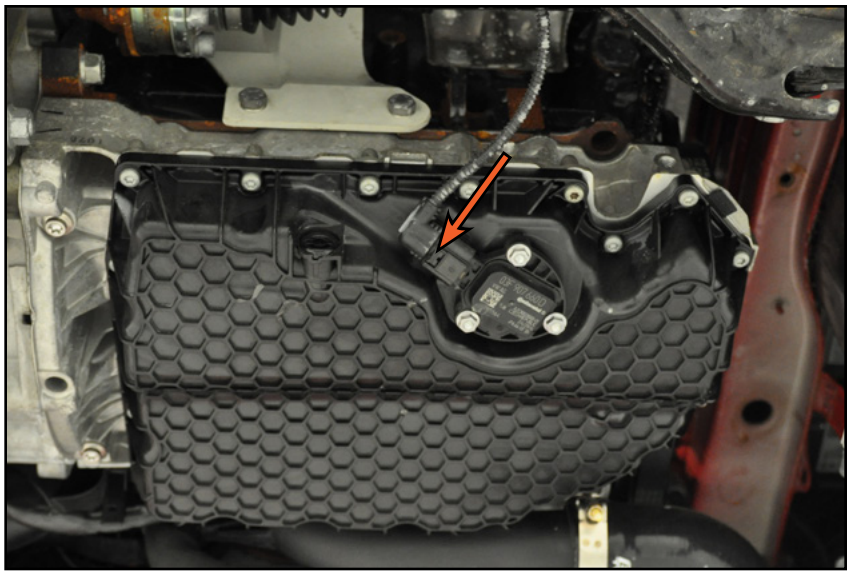
Step 1: T25 Torx, Flat Head Screwdriver

Safely raise and support the vehicle, then remove the insulation panel or skid plate, depending on what you have installed. The MK7 pictured here is equipped with the original lower insulation panel (highlighted in **RED**).



Step 2:

If equipped, disconnect the oil level sensor connector by pressing in the locking tab (arrow) to release it, then sliding it off. Secure the wire up out of the way.



INSTALLING THE STAINLESS STEEL OIL PAN

Step 3: Oil Drain Plug Tool -OR- Socket and Ratchet

Remove the oil drain plug and drain the engine oil.

If your vehicle has a plastic oil pan, such as the one shown here on our MK7, the drain plugs require a specialty OE tool. Simply insert the tool into the drain plug, then rotate it counter-clockwise approximately one full turn and it will twist out of the oil pan. Be sure to catch the oil in a drain pan so it can be safely disposed of.

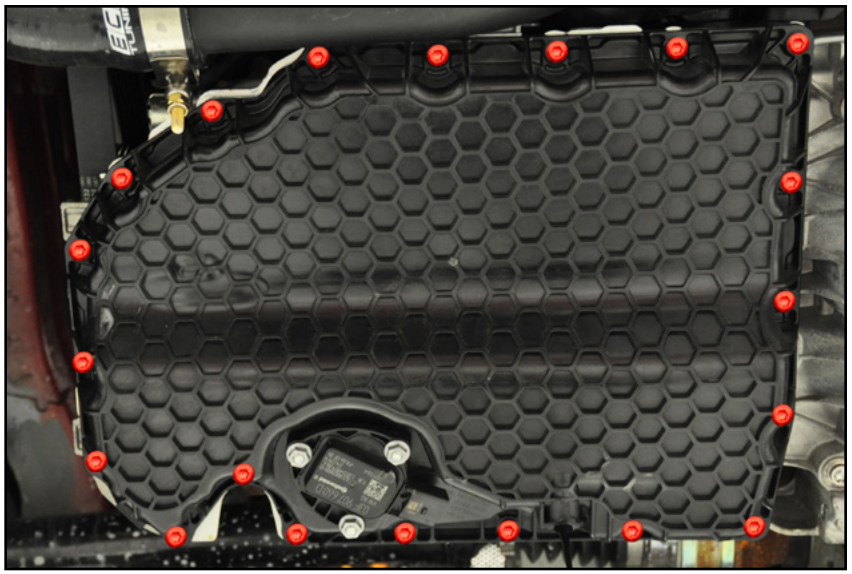
If your car is equipped with a steel pan, loosen and remove the traditional drain plug using the appropriate sized socket and ratchet.

Step 4: T30 Torx Socket, Extension & Ratchet

Remove the 20 oil pan bolts (highlighted in **RED**) from the perimeter of the pan and lower it from the engine.

Plastic pans are equipped with a rubber seal and will separate easily from the engine block.

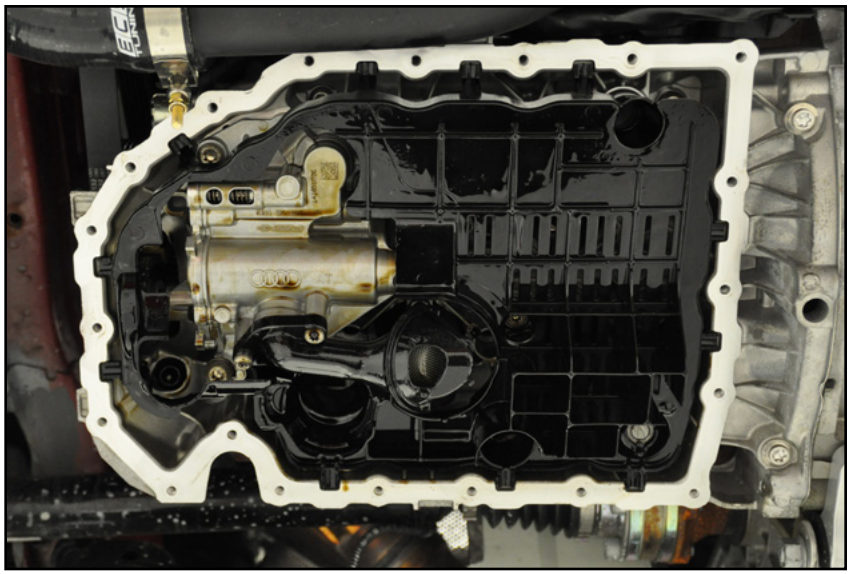
Steel pans do not utilize a gasket and are sealed onto the block. This type of pan will require that you carefully pry between the pan and engine block to separate the pan and remove it.



INSTALLING THE STAINLESS STEEL OIL PAN

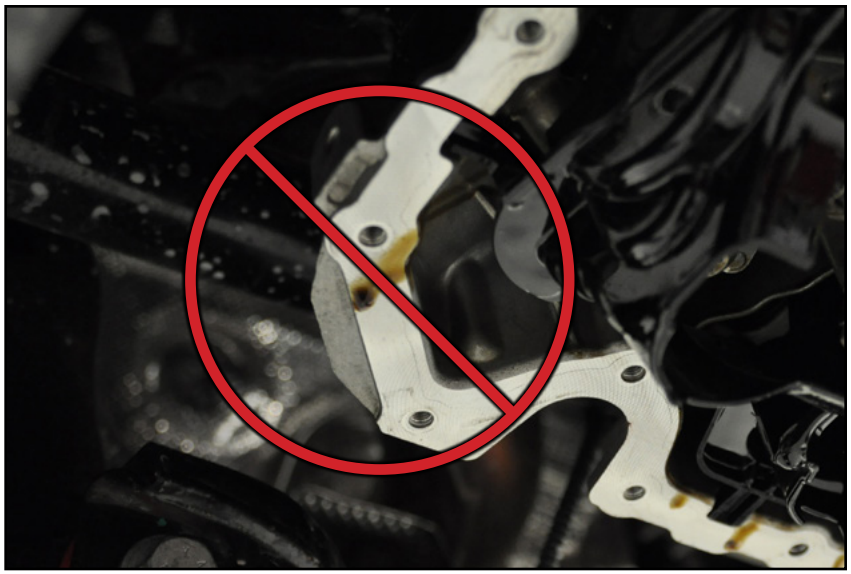
Step 5:

Carefully scrape off any remaining gasket residue and throughly clean the oil pan mounting surface.



Step 6:

Be sure that the surface of the engine block is free of any old sealant, and wipe it clean using a rag and brake cleaner. The brake cleaner will remove any oily residue, which is necessary for the new sealant to work properly. Before you install your new oil pan, make sure that no oil has dripped out and ran across the sealing surface.



INSTALLING THE STAINLESS STEEL OIL PAN

Step 7:

Prepare the oil pan bolts for installation. Our oil pan uses same M6 x 16mm bolts found on steel oil pans, however, the bolts found on plastic oil pans are too long to properly install the new oil pan and must be replaced. The oil pan uses a rapid curing sealant and once it is applied to the sealing flange, the pan must be installed immediately.

YES

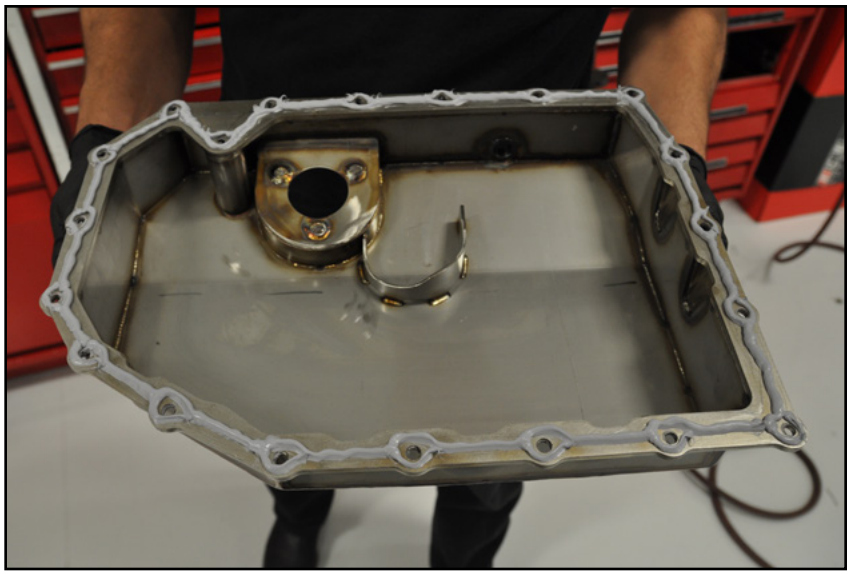
The M6 x 16 Torx bolts found on steel pans are **required** for the stainless steel oil pan.

NO

OE Plastic oil pans use M6 x 25 Torx bolts. These are **too long** for the stainless oil pan and must be replaced.

Step 8:

Wipe the mounting surface of the new oil pan clean using a rag and brake cleaner, then apply approximately a 1/4" bead of sealant around the perimeter of the flange and around each bolt hole as shown.



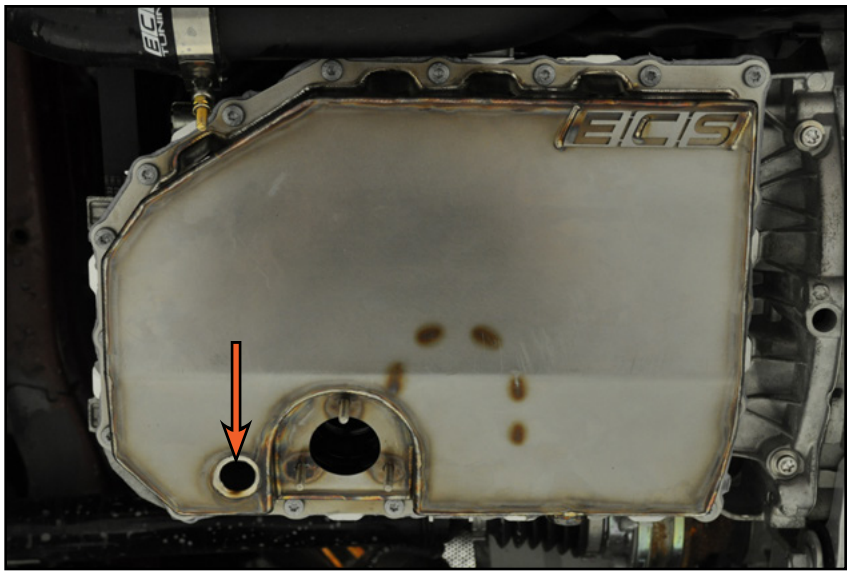
NOTE

If you purchased the oil pan only and are supplying your own sealant, be sure and use a correct rapid-cure sealant designed specifically for form-in-place gaskets.

INSTALLING THE STAINLESS STEEL OIL PAN

Step 9: T30 Torx Socket, Extension & Ratchet

Position the oil pan into place, then install the 19 bolts around the perimeter of the pan. Thread them in just until they are fully seated and draw the pan against the engine block. Install the last bolt through the hole in the bottom of the pan (arrow).

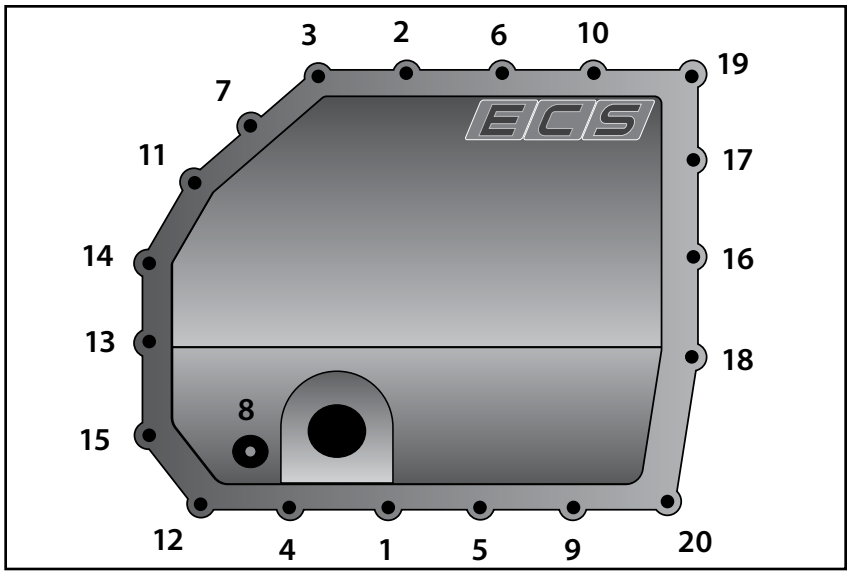


Step 10: T30 Torx Socket, Extension & Torque Wrench

Torque all of the bolts in two steps, using the sequence shown on the right.

Step 1: Torque each bolts to 8 Nm (6 Ft-lbs).

Step 2: Tighten each bolt an additional 45 degrees.

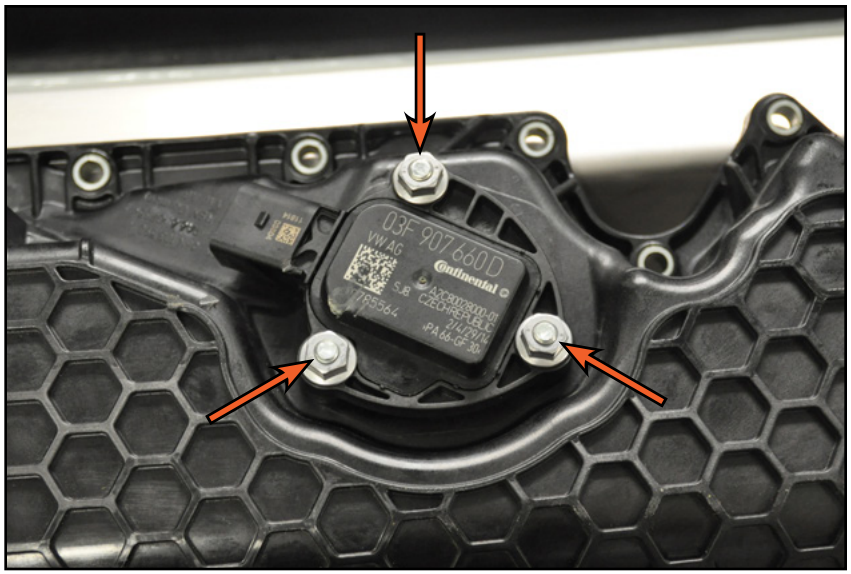


If your original oil pan is not equipped with a level sensor, skip to step 14.

INSTALLING THE STAINLESS STEEL OIL PAN

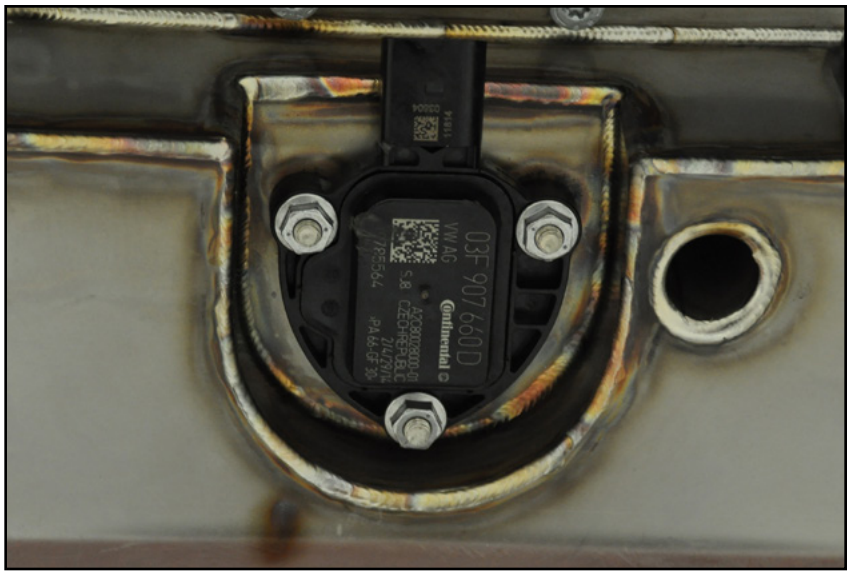
Step 11: 10mm Socket & Ratchet

Remove the three nuts and pull the oil level sensor out of the bottom of the original oil pan.



Step 12: 10mm Socket & Torque Wrench

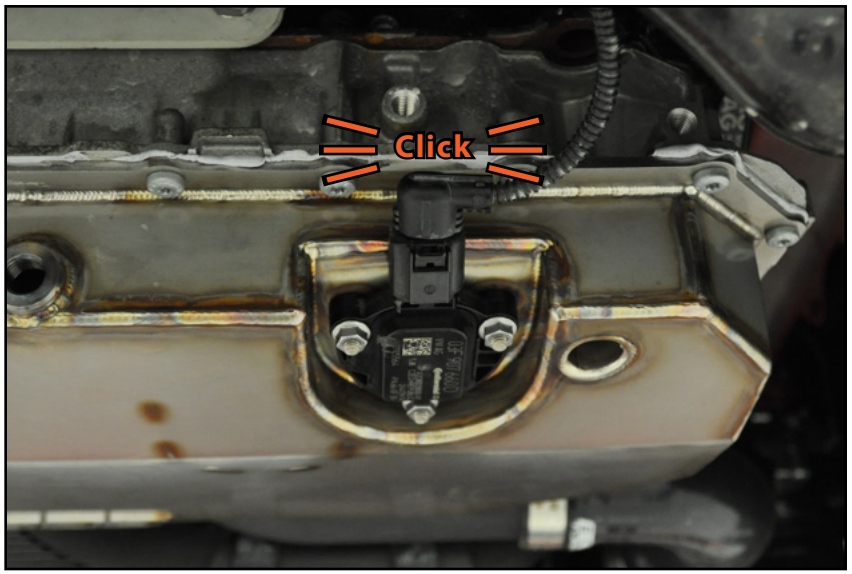
Make sure the seal on the oil level sensor is clean and in good condition, then install the sensor into the new oil pan and torque the nuts to 9 Nm (6.6 Ft/lbs).



INSTALLING THE STAINLESS STEEL OIL PAN

Step 13:

Re-connect the oil level sensor.



Skip ahead to step 15 to continue your installation.

Step 14: 10mm Socket & Torque Wrench

Install the oil level sensor block off flange and seal and torque the nuts to 9 Nm (6.6 Ft-lbs).

INSTALLING THE STAINLESS STEEL OIL PAN

Step 15: 14mm Socket & Torque Wrench

Install the new ECS Tuning magnetic drain plug and torque it to 30 Nm (22 Ft-lbs).

TECH TIP

Change your oil filter now for a complete service!

Step 16:

Allow the sealant to cure for at least an hour, then fill the engine oil and run the engine until it reaches operating temperature. Check to make sure that you do not have any leaks.

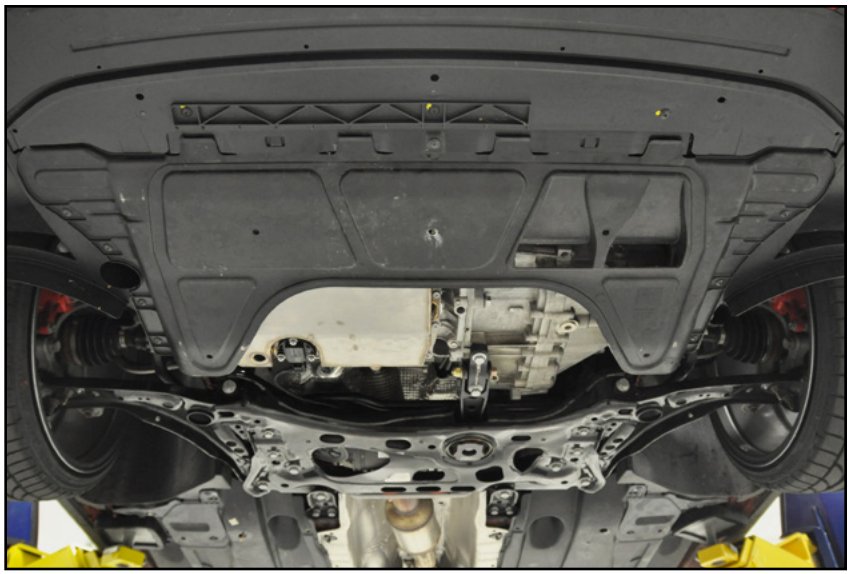
NOTE

Don't forget that this new oil pan has a larger capacity than the original. Be sure to add additional oil as necessary to make sure the oil level is "full" on the dipstick.

INSTALLING THE STAINLESS STEEL OIL PAN

Step 17: T25 Torx, Flat Head Screwdriver

Reinstall your insulation panel or skid plate.



Congratulations, your installation is complete!

Don't forget, if you have an original insulation panel on your car, this is the perfect time to install one of our Street Shield Skid Plates to compliment your new oil pan!

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.

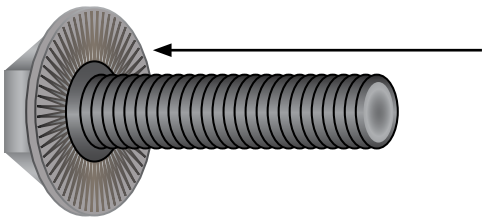
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

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.

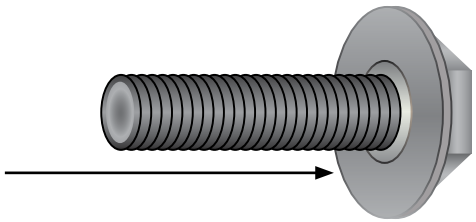
Ribbed vs. Non-Ribbed Bolts

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



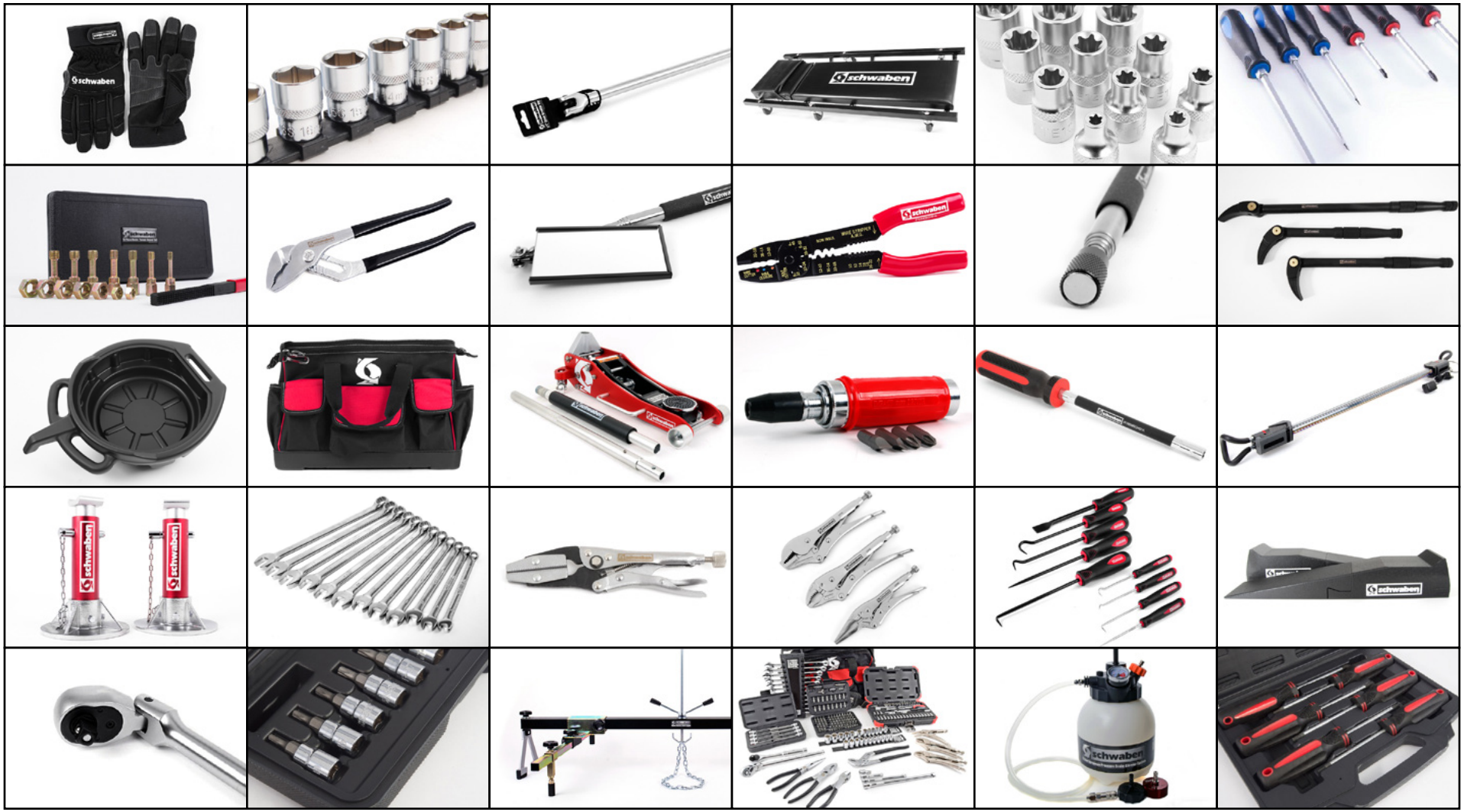
TORQUE SPECIFICATIONS

Oil Pan Bolts..... *Stage One:* 8 Nm (6 Ft-lbs)
Stage Two: Tighten an additional 45 degrees..... (Page 12)

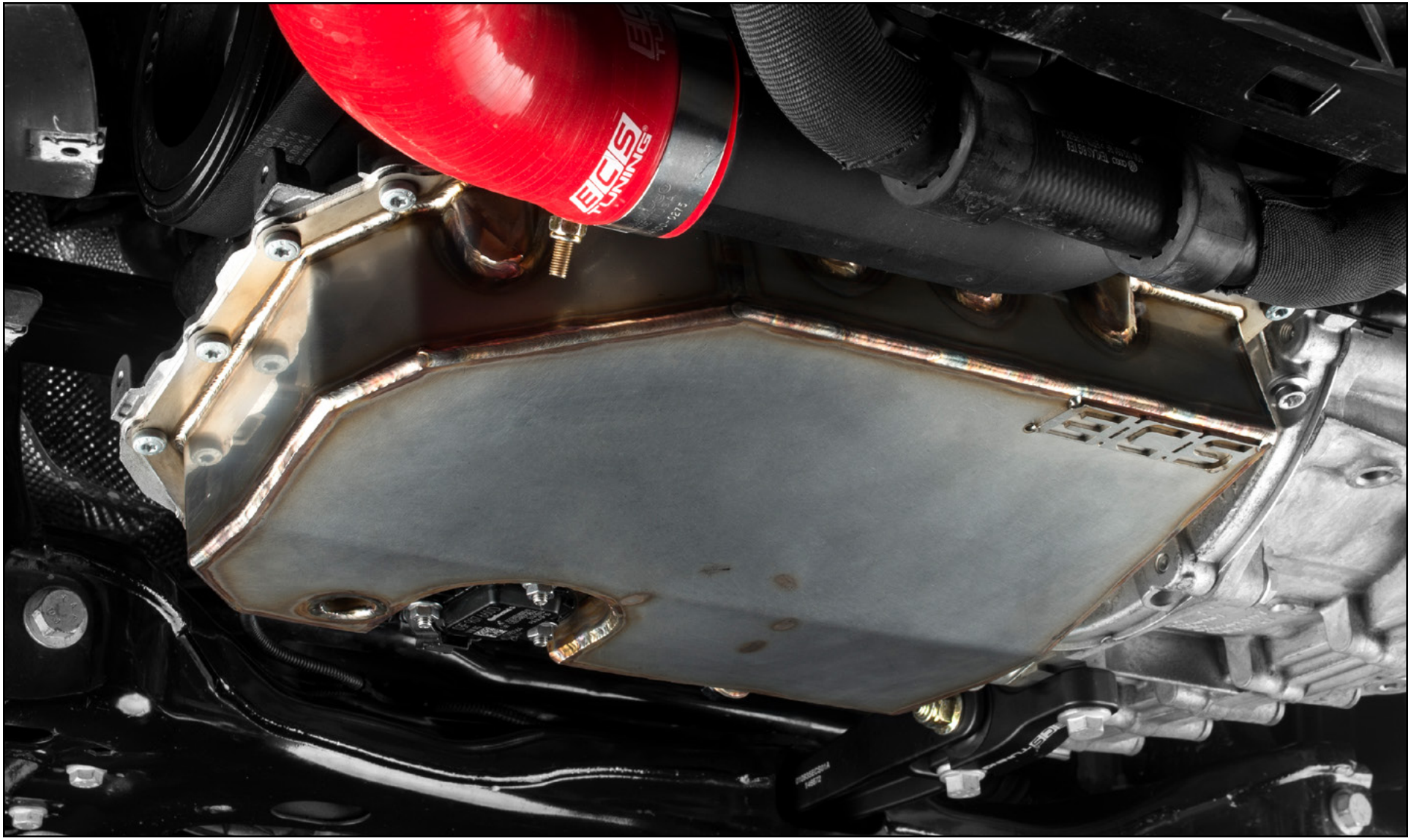
Oil Level Sensor -OR- Back Off Plate Nuts..... 9 Nm (7 Ft-lbs) ..... (Page 13)

Oil Drain Plug ..... 30 Nm (22 Ft-lbs)..... (Page 15)

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 Stainless Steel Oil Pan 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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