



ECS Tuning BMW M52/M54 Performance Power Steering Pulley Installation



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

ECS Tuning BMW M52/M54 Power Steering Pulley ES#2795558

ECS Tuning Performance Power Steering Pulley features:

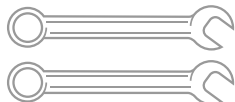
- High strength, T6061 T6 billet aluminum
- Anodized for corrosion protection
- Direct replacement - no additional hardware needed
- Can be used for standard pulley replacement or a performance upgrade
- Made in the USA

EASY



**BASIC SKILLS
REQUIRED**

MODERATE



**SOME EXPERIENCE
RECOMMENDED**

ADVANCED



**ADVANCED SKILLS &
EXPERIENCE REQUIRED**

PROFESSIONAL



**PROFESSIONAL SKILLS &
SPECIALTY TOOLS REQUIRED**

Installing an ECS Tuning Performance Power Steering Pulley is an afternoon project that can be completed with relative ease. It rewards you with the performance and dependability of our meticulously engineered products, and it is an excellent opportunity to replace worn drive belts at the same time. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for purchasing our ECS Tuning Performance Power Steering Pulley. We appreciate your business!

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REQUIRED TOOLS

NOTE

We recommend that you have a complete selection of tools and equipment necessary for automotive repair. Below is a list of the specific tools that will be required to install your ECS Tuning Performance Power Steering Pulley. Additional tools may be required for any issues that arise during installation such as rust, corrosion, or broken and stripped fasteners.

These tools are available at ecstuning.com

- 3/8" Drive Torque Wrench [ES#2221245](#)
- Flat Blade Screwdriver(s) [ES#2225921](#)
- Flashlight or Trouble Light
- 3/8" Drive Ratchet or Breaker Bar
- 3/8" Drive Sockets: 13mm, 16mm,
- Allen Wrench or Socket: 8mm

SHOP SUPPLIES AND MATERIALS

- Hand Cleaner/Degreaser..... Available at ecstuning.com..... [ES#2167336](#)
- Shop Rags Available at your local auto parts store
- Aerosol Spray Lubricant/Penetrating Oil..... Available at your local auto parts store
- Emery Cloth or Sandpaper Available at your local auto parts store
- Grease (any type) Available at your local auto parts store

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

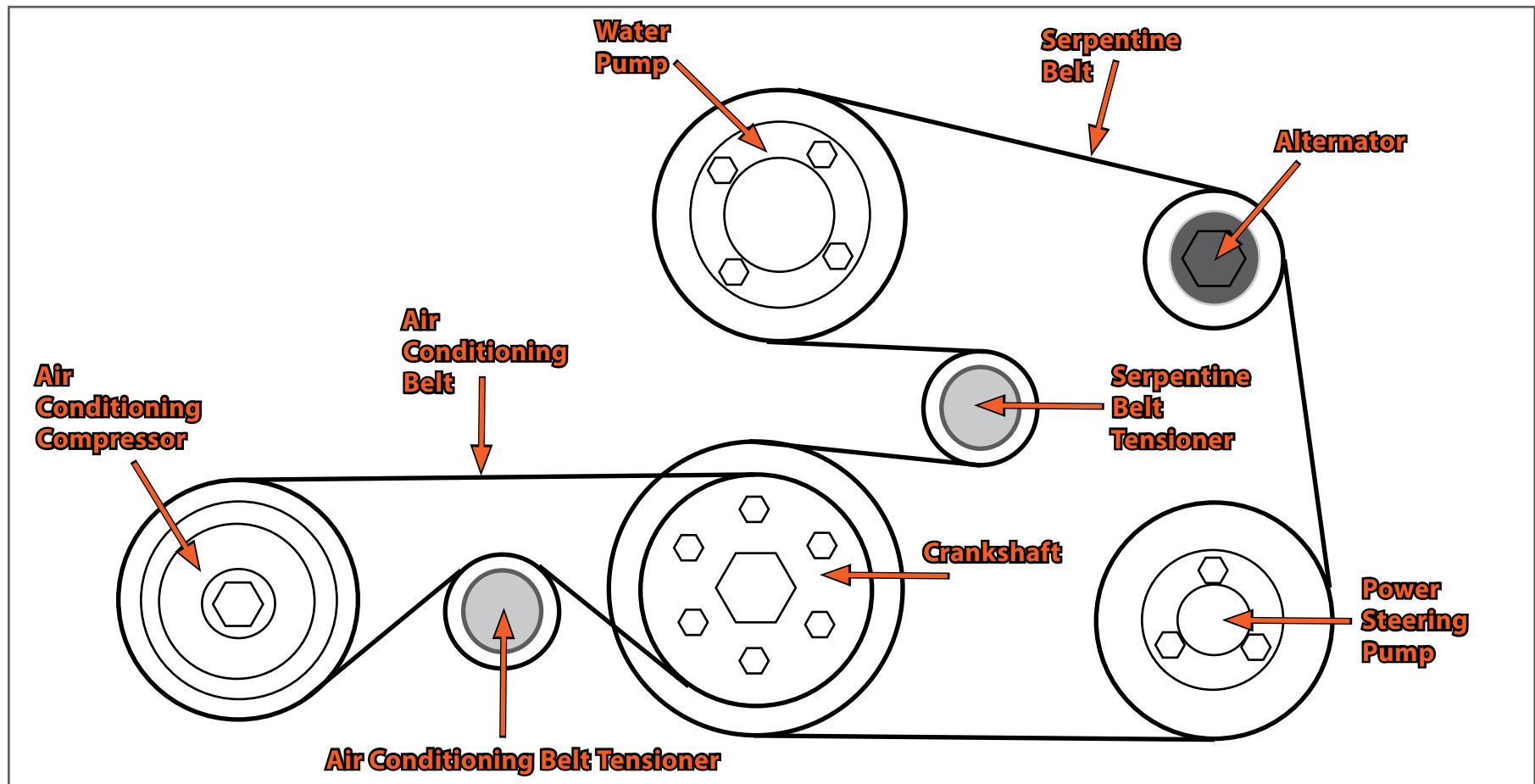
ECS Tuning cares about your health and safety. Please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- 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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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. Always make sure that the vehicle is securely supported on jack stands.

BELT ROUTING AND COMPONENT LOCATION



Inspect your serpentine and air conditioning belts before beginning this installation (see page 11 step 10). If they need replaced, be sure to order them so you have everything you need to complete the job. Belts for your application are available at ecstuning.com.

INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 1:

Safely lift and support your vehicle and remove any lower insulation panels or skid plates that are installed on your car.

Begin by loosening the three bolts (arrows) on the original power steering pulley using a 13mm socket. Do not remove the bolts at this time.

TECH TIP

Leaving the belt on for this step will help hold the pulley to keep it from turning while loosening the bolts. If it does slip a little, you will be able to hold it with your hand as needed to loosen the bolts.



Step 2:

Using a small flat blade screwdriver, pry off the dust cap on the serpentine belt tensioner pulley.



INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 3:

Engage the center bolt of the serpentine belt tensioner pulley using the appropriate socket (see note below) on the end of a long handle 3/8" ratchet or breaker bar.

NOTE

Depending on model year and engine, the center bolt of the tensioner will require either a 3/8 drive 16mm shallow socket or an 8mm allen socket.



Step 4:

Push the ratchet towards the passenger side of the car, which will cause the tensioner to swing downwards, loosening the tension on the belt. As soon as there is enough slack in the belt, lift it off the power steering pulley, then slowly allow the tensioner to swing back up to its rest position. Position the belt out of the way above the power steering pulley.



INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 5:

Remove the three power steering pulley bolts (loosened in step one).



Step 6:

Remove the original pulley off the power steering pump.

TECH TIP

If the pulley is stuck due to rust build up on the pulley hub, use a small amount of penetrating oil and gently lever between the pulley and the power steering pump to loosen and remove it.



INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 7:

Clean the rust and corrosion buildup from the pulley hub using a small piece of sandpaper or emery cloth.

NOTE

This is very important even if the original pulley was not rusted or stuck. The new ECS Tuning pulley has a tighter tolerance and the hub must be clean to prevent damage or distortion when tightening the bolts.



Step 8:

Apply a thin layer of grease to the pulley hub. This will allow for easier installation and provide protection from corrosion between the hub and the new pulley.



INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 9:

Install the new ECS Tuning Power Steering Pulley onto the pump and thread in all three bolts by hand until they are fully seated.

NOTE

The pulley should easily slip all the way onto the hub, allowing for easy installation of the bolts. If the pulley is difficult to install in any way, remove it and check for rust or corrosion on the hub (see step seven).



Step 10:

Before proceeding read the following serpentine belt information:

- If your new power steering pulley is an underdrive pulley, a shorter belt may be required. Check the specific belt requirements at ecstuning.com and see pages 13-14 "Serpentine Belt Replacement".
- If your new pulley is a standard drive pulley, closely check the condition of your serpentine belt both visually and with a belt wear tester ([ES#2642871](#)). Any cracks or wear on the ribs of the belt mean it should be replaced. For replacement see pages 13-14 "Serpentine Belt Replacement".
- If you are re-using the existing belt, continue with step 11.



INSTALLING THE PERFORMANCE POWER STEERING PULLEY

Step 11:

Using the same method as used when removing the belt, swing the serpentine belt tensioner downwards until there is enough slack in the serpentine belt to loop it over the power steering pulley. Make sure the belt is properly lined up on all the pulleys then allow the tensioner to swing back up to tighten the belt.

NOTE

Use a trouble light or flashlight to inspect the belt positioning on all pulleys. If the serpentine belt is not properly aligned and seated in each pulley, it may be damaged upon starting the engine.



Final Installation Steps:

Torque the power steering pulley bolts to 22 Nm (16 Ft-lbs).

Install the dust cap on the tensioner pulley.

Start the engine and make sure the belt runs true.

Re-install any lower insulation panels or skid plate.



SERPENTINE BELT REPLACEMENT

Step 1:

In order to replace the serpentine belt, the air conditioning compressor belt must be removed. First remove the dust cap on the air conditioning belt tensioner.



Step 2:

Using an 8mm allen socket and the same method used for releasing the serpentine belt tension, swing the air conditioning belt tensioner downward and remove the belt.



SERPENTINE BELT REPLACEMENT

Step 3:

Carefully guide the serpentine belt around the radiator fan and out through the top of the engine compartment.



Step 4:

Guide the new belt back in place. Refer to page 6 for routing.

Re-install the air conditioning belt and pulley dust cap.

Complete the pulley installation on page 12.

ECS Tuning carries a complete selection of belts, pulleys, and hardware for your BMW. Visit our web site and select your vehicle>engine>drive belts for a full product listing.



Your ECS Tuning Performance Power Steering Pulley installation is complete!



These instructions are provided as a courtesy by ECS Tuning.

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