

How to rebuild W211 Supercharger Drive Belt Idler Pulley

Replacement cost ~\$540. Rebuild cost \$27 plus one sheet sandpaper.

To avoid removing the fan shroud, use a T-50 torx bit with an 8mm box-end (not open-end) wrench over the bit. Use a larger box-end wrench for leverage. *Wear eye protection*. Use mechanical empathy when reinstalling the bolt. If you are not a good judge of torque, loosen the fan shroud and use a torque wrench.

Tools: T-50 Torx, 24mm socket, 30mm socket, internal circlip pliers, 60 or 100 grit sandpaper.

Parts: Dayco 89012 pulley or equivalent, NSK 6203 ZZC3 bearing or equivalent.

Replacement pulley dimensions: 90mm O.D., 17mm I.D., 6-rib, 22mm belt, 25-28mm width.

One pulley flange must be sanded down flat to give a 26mm width. Factory plastic pulley below; note inside flange is narrower than outside flange.

After the fact: Dayco 89130 is a direct replacement, no sanding required.





Separate the assembly. Note orientation of the aluminum pulley; circlip side is towards head of bolt.



Remove internal circlip.



Use 24mm socket and vise to start pressing out the old bearing.



Use 24mm socket and hammer to finish tapping out the bearing.

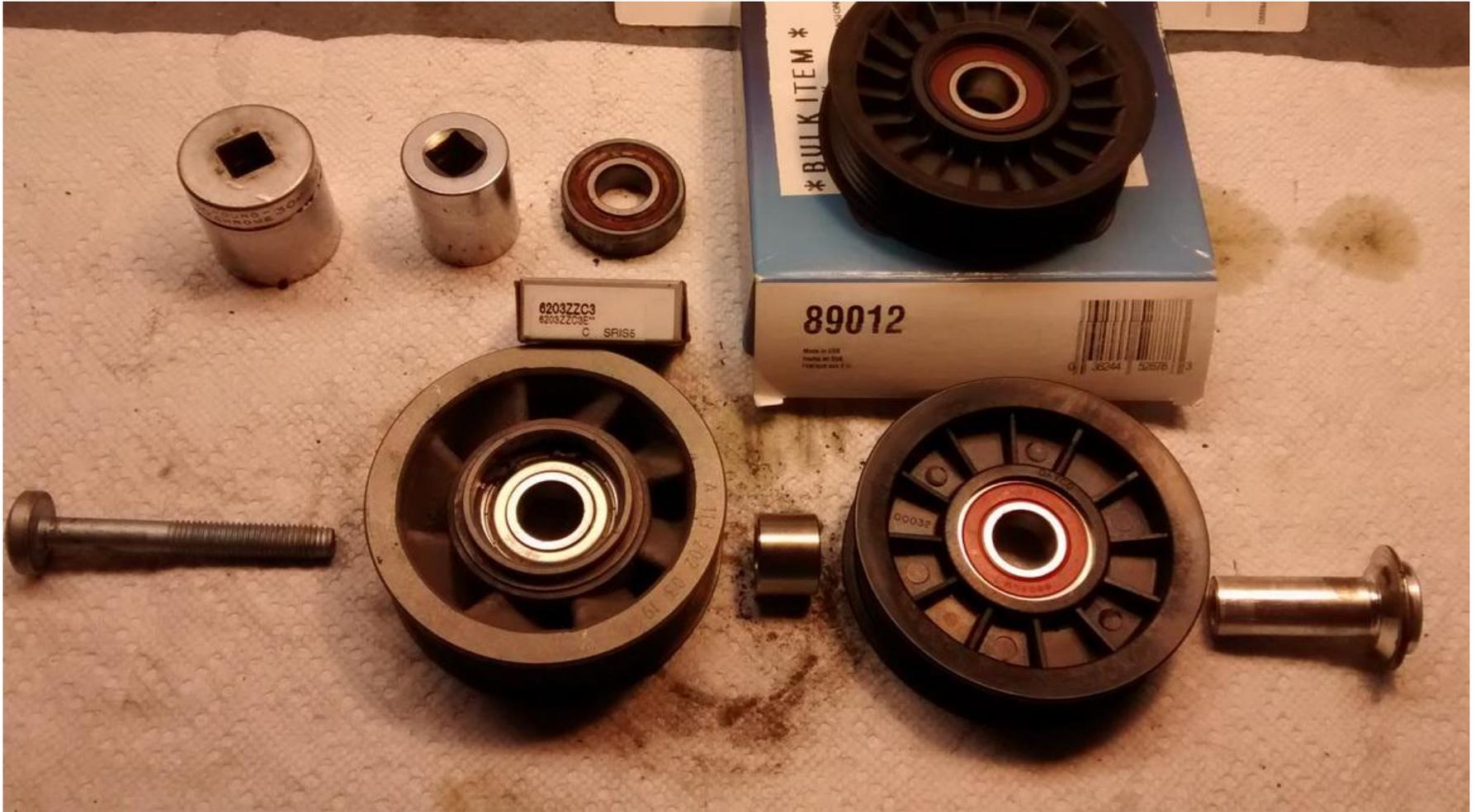
Clean aluminum pulley bearing bore thoroughly. Place aluminum pulley in 225 degree F oven for approximately 20 minutes. While pulley is in oven, place bearing in freezer. When time is up, remove pulley from oven, place on wife's favorite wooden cutting board, and drop the bearing into the bore. Bearing should slip right in. If necessary, use the 30mm socket to finish pressing the bearing into the bore. After cooling, re-install the circlip. Ensure the circlip is seated in its groove!

Do you really need to be reminded that the aluminum pulley is hot when it comes out of the oven?

The stock plastic pulley has one flange machined flat to provide a small gap between it and the aluminum pulley. The new pulley needs one flange sanded flat. Take the sheet of sandpaper (60 or 100 grit), place on flat surface, and sand one flange of the pulley until it is flat. Should take 10-15 minutes to do so. Ensure no grit is left on the pulley or bearing upon completion.



Parts laid out for reassembly.





Reassemble the idler pulley.
Remember the circlip side of the aluminum pulley goes towards the bolt head.



Note the small gap between the two pulleys. Ready to re-install on the car.