

Volkswagen Cabriolet DIY Guide

Adding a Serpentine Belt Setup

This how-to was originally hosted at VWvortex.com's [ZeroForum](#) and was posted by "stevelangford". The original link no longer exists; however, the new URL should be <http://forums.vwvortex.com/showthread.php?1642612> . Note: All but one photo no longer exist.

Many had asked about a serpentine belt swap for the Mk1, and especially on the Cabriolet because many Cabriolets came with power steering and air conditioning; such cars suffer [from] the continuous burning of A/C and alternator belts.

I did this before on my previous Cabriolet and did it the hard way, which requires the cutting (notching) of the front core support and swapping the radiator for a smaller Rabbit one.

Finally, someone found the way of doing this without the notching of the front core and using the Cabby radiator.

I just performed this procedure in my latest Cabriolet and [it] took me a half a day, but it does require some fabrication but at the end the benefits are incredible:

- very quiet (sounds like a new car)
- super reliable (forget about belt issues)
- self adjusting
- replacing the belt if needed takes minutes
- looks very clean
- benefit of a better charging system

Parts list:

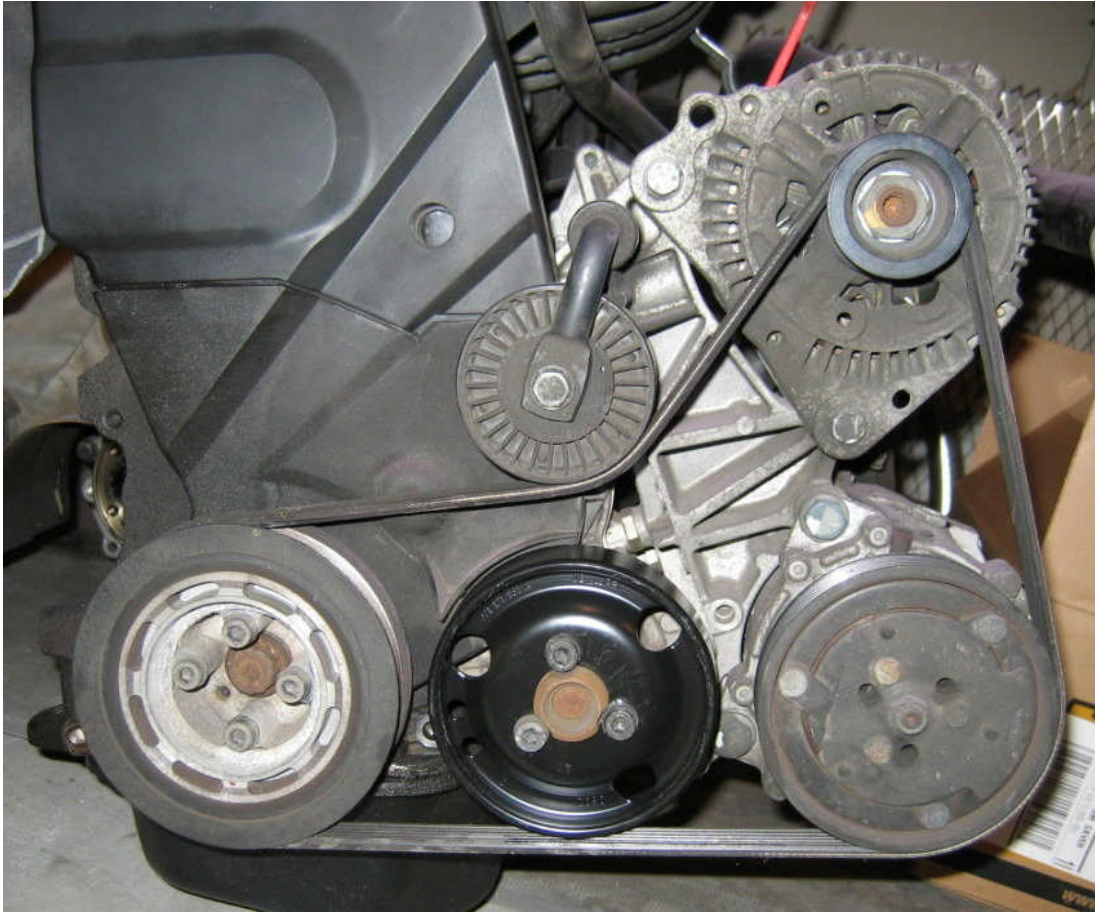
- Mk3 2.0 alt A/C bracket with tensioner idler
- G60 A/C compressor
- Mk3 2.0 alternator
- 49.5" 6 groove serpentine belt
- VR6 water pump pulley
- Mk3 2.0 or Corrado G60 crank pulley and bolts

Depending on the battery you have, you may need a smaller one because the radiator needs to be moved to the next position (towards the driver side); very easy, you don't even need to drain or disconnect anything to move the radiator, just remove the 2 top 10 mm bolts, pull radiator up, move to the right to the next location on the front core support and bolt them down. My battery was new and AutoZone swapped mine for a smaller one with more cranking amps and fits nice; the one that the '91 Cabriolet calls for was too big.

Here is the procedure, previously posted by "mk2.slow"; note that he posted for an ABA block but the procedure is the same. Also, he used a Mk3 A/C compressor and had to adapt the A/C lines; if you use the G60 (Corrado) compressor, [it] is a direct fit of the lines.

I'm not using power steering in this Cabriolet, but if you want to use it, you need a smaller V-belt from crank to power steering pump without going thru the water pump, which makes for a simpler setup.

If you just swap all the above-mentioned parts, the water pump pulley is not going to be touched by the belt, as show in the next picture. Besides, the A/C compressor protrudes too much and will not fit unless, as mentioned above, you cut the core and swap the radiator.



pictured borrowed from "billk"
<http://mysite.verizon.net/e.sese/vortex/ac4.jpg>

Finally! I got the A/C working on my swap. It's an 89 Jetta w/ a 96 OBD2 ABA. Here's what I did:

1. I cut the bottom alternator mounting point off of the bracket.
2. Mounted the bottom pivot point of the compressor where the top mount used to go.
3. Fabricated a mounting bracket for the alt lower compressor upper mounting points.
4. Used a 49½" belt from Napa (25-060490 made by Gates).



See the horn I cut off.



Here's the bracket and the orientation of the acc.



Notice how high the alt sits.



By swinging the compressor up so high, I put more belt on the water pump pulley (VR6). I also made it so that it clears the lower radiator hose.

I used compression fittings to put the Mk3 ac line ends on the Mk2 lines. I will probably have them welded on in the future. I didn't want anything permanent in there since I didn't know if it would work.

A thermometer in the center vent reads close to 40 degrees. I think if I fix the foam on my blend doors, it will even blow colder! Here's a better shot of what I cut off. Notice that the hole I drilled is not perfectly centered. You want the edge of the bracket you make to line up with the edge of the bottom A/C mount.



This is a picture of the fabricated bracket bolted to the modified OE bracket. Notice how the bolt goes all the way through and exits at the apex of the "V" bracing.



Here's the bolt from the bottom. By locating where it is I took advantage of a relatively flat spot.



Compressor installed. Make sure the wires have clearance. This in itself does not look too strong. Once the alt is installed, the bracket is locked in by 3 bolts, which makes it very firm. I couldn't get any of the components to budge.



Here's one of the components installed off the car. The alternator is now only held on at the bottom mount with a bolt on the pulley side flange, instead of going all the way through. I had to use a "spacer" to get it to reach the bracket. This turned out to be a nut and 2 washers. It seems to work fine. I will replace it with proper hardware when I get a chance. I was using hardware I had on hand.



What I did different from the above-mentioned post:

Not much different, only is that I cut a little bit more on the bracket to swing the compressor up even further to get even more wrap on the VR6 water pump pulley and the alternator down even tighter; still took a 49.5 belt.

Had to move the radiator one step to the driver's side and replace my battery (almost new, so they swapped for free at AutoZone) for one with more cranking power but smaller footprint.

I did cut a little bit more of the bracket so the compressor swings up a little bit more so is putting more belt wrap on the water pump pulley, and the compressor and alternator sit even tighter and closer to the block.

The bracket that bolts to the aluminum bracket that I made was a little thicker metal for extra strength.

*** * Remember, **you** are responsible for working on **your** car; Cabby-Info.com, stvelangford, VAG, VWoA, or anyone else are not responsible if **anything** goes wrong while **you** are working on, in and under **your** car!
Use this information at your own risk!* ***