

Volkswagen Passat Driveshaft Removal (B5 TDi)

About this guide

This document is intended as an amateur maintenance guide to assist you with removal of the driveshaft in your VW Passat. The removal procedure itself will be similar to other models in the VW range; this guide is specific to the B5 TDi. Driveshaft removal is required when needed to replace, or carry out a repair on the CV joints.

Tools Required

- Car Jack
- Axle Stand(s)
- 18 inch long ½ inch drive breaker bar (Recommended)
- ½ inch Ratchet Handle
- ¼ inch Ratchet Handle
- ½ inch 15,17mm Sockets
- Sockets for Driveshaft (see notes) – factory is M8 (**gearbox**) and M16 Allen (**hub**)
- 15mm Spanner (for pinch bolt)
- Claw Hammer
- Punch / Screwdriver (optional)



Above is a picture of all the tools required, the tools in the red square are not required to carry out this work, however I'd recommend a full set of them so that if your model is a changeover you are covered for different sizes of nut and bolt.

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This document is intended as a guide only for amateur DIY. I take no responsibility for any injuries or damage that can occur to your vehicle and recommend the use of a trained professional to carry out the work

Procedure

Step 1

Use a screwdriver (covered in tape), or hubcap removal tool to remove the hubcap on the wheel



Step 2

Using the breaker bar with a 17mm socket attached, loosen the wheel nuts but don't remove them. Once they are loosened use the breaker bar and the relevant required socket (see notes) to loosen the driveshaft nut, this will need to be turned towards the back of the car if working on the right hand side or the front if working on the left hand side of the vehicle. (**Remember, left to loosen and right to tighten**)



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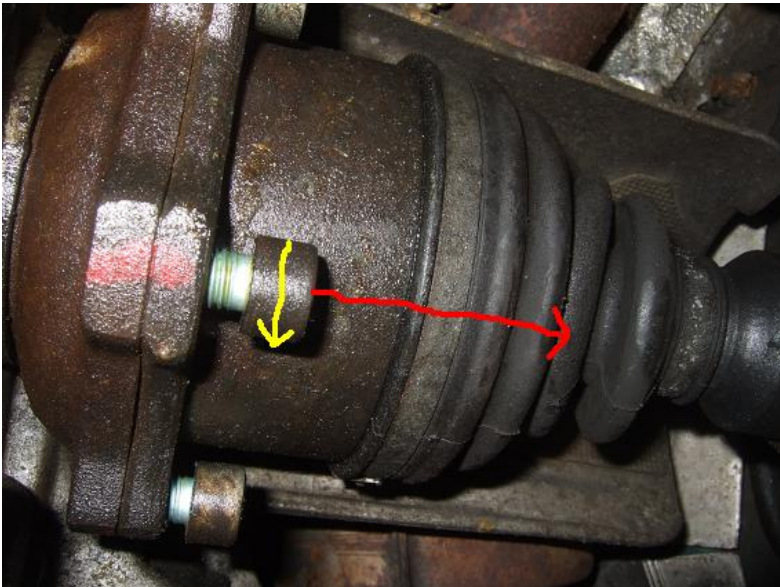
Step 3

Once the nuts are loosened, jack up the vehicle to a high point so that the front end is approximately 40-50cm from ground (wheels will be approx 10cm off the floor) after this. Using good quality Axle stands place it under the bottom suspension arm and lock the pin, once it's off the ground. Remove the wheels completely



Step 4

Go under the vehicle, using a ¼ inch drive Ratchet handle with an appropriate hex bit (see notes), loosen and remove the driveshaft bolts that attach the driveshaft to the gearbox. The picture shown is the orientation in which the bolt needs to be turned for the OSF driveshaft (right hand side). There are a total of 6-bolts holding these in. Turn the wheels to rotate the driveshaft



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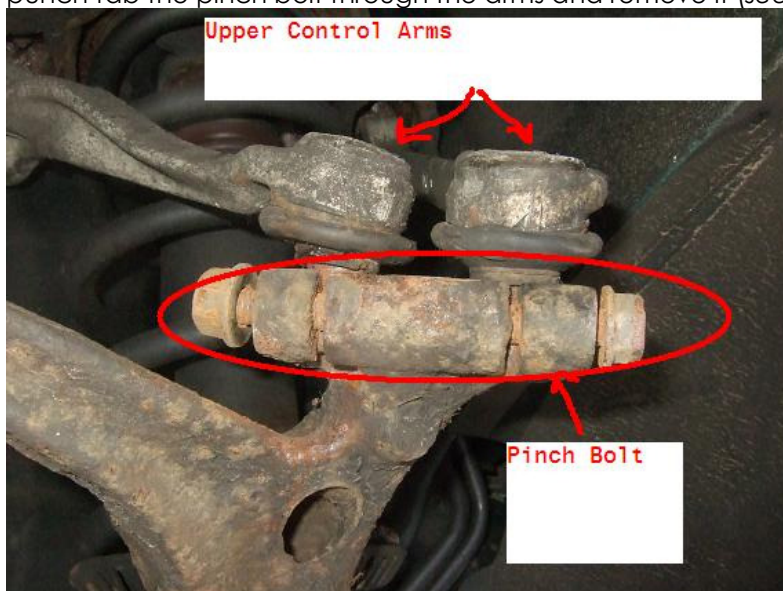
Step 5

You may find difficulty stopping the wheel from turning whilst removing the bolts if you don't have a helper. You can use the Breaker Bar and place it in between the stabiliser bars and the wheels to lock or have a helper put their foot on the footbrake



Step 6

Once you have loosened and removed all of the driveshaft gearbox bolts, come out from underneath the car and remove the nut attached to the pinch bolt with an appropriate spanner (mine was 15mm). Once the nut is removed, using a screwdriver or punch tab the pinch bolt through the arms and remove it (see notes)



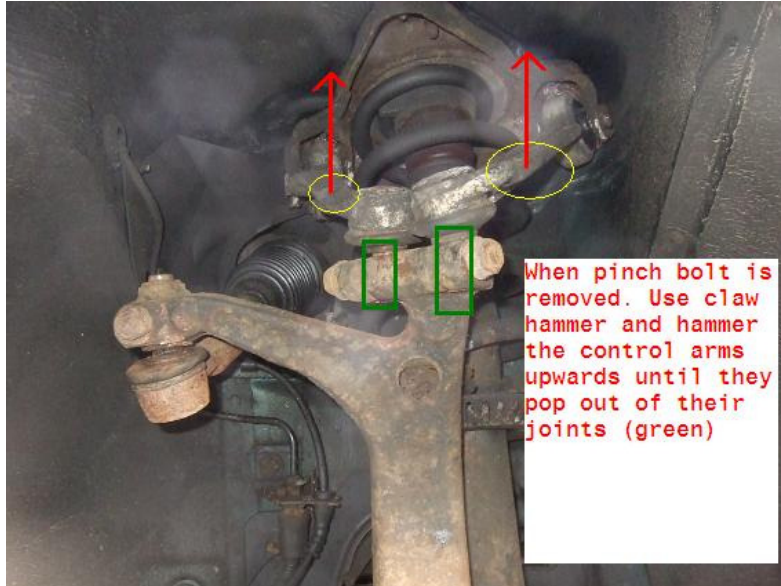
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Step 7

Once you have removed the pinch bolt and nuts, use the hammer and tap control arms to remove the ball joints. This will allow you to remove the driveshaft. It will then fall down and rest on the suspension components leaving you with the hub side of the driveshaft still attached.



Step 8

Once the gearbox is disconnected from the driveshaft, unscrew the hub bolt and gently tap on the head with the claw hammer with one hand while slowly pulling the driveshaft away from the hub. This will slide the driveshaft off the spines on the hub. Keep doing this until it is almost out, to remove the driveshaft completely, pull outwards on the hub and manoeuvre the driveshaft off the hub.



The driveshaft is now removed ready for replacement or repair. Refitting is a reversal of the above process. Make sure all nuts are torqued up to the correct specifications and new bolts/nuts are re-used so the existing ones do not perish. Use lubricants such as copper grease on the new nuts and bolts to assist future repairs and reduce risk of seizing

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Notes

Driveshaft Bolts

Different bolts may have been used for the driveshaft depending on previous car owners and changeovers on the car models. The factory standard bolt is an M16 hex bolt. My specific model had a 24mm socket for the driveshaft bolt on one side and used an M17 hex bolt on the other. It is recommended to remove the hub caps on the wheels you will be removing the driveshaft for so you do not get any unexpected surprises

Gearbox Bolts

As with the main hub, different variations require different size nuts, the standard fit is an M16 nut. Mine was smaller. I also used a ¼ inch ratchet as the ½ drive would have been too big to fit in. Make sure that when putting the socket inside the nuts to tap on them with the claw hammer so they fit all the way inside the head. This reduces the chance of stripping the head or snapping the socket

Pinch Bolts

The pinch bolts are renowned for failing on the Passat and similar models in the Volkswagen family. If they are exposed to harsh environments with salt water and air the threads will rust and seize the bolts. Before carrying out the repair, it is worthwhile trying to remove the bolts before undertaking this repair to stop any unforeseen surprises.

If your bolt is seized, suggested removal options would be put some lubricating oil on the bolt itself and hitting the support arm with a hammer to loosen rust (or an air-hammer). If this doesn't work you can use an air chisel to hammer the screw out of the threads. As a last resort you can heat up the surround area to expand the metal and allow removal of the bolt (this is a last resort as it will require replacement of the control arms).

Torque Values

Driveshaft Bolts (M8 for Gearbox)	40 Nm 30 Lb/ft
Driveshaft Bolts (M10 for Gearbox)	77 Nm 57 Lb/ft
Driveshaft Bolt (M14 for Hub)	115 Nm 85 Lb/ft then angle tighten another 180 degrees
Driveshaft Bolt (M16 for Hub)	190 Nm 140 Lb/ft then angle tighten another 180 degrees
Wheel Nuts	120Nm 89 Lb/ft

Thanks to Karl ([desertstorm](#)) from the UKPassats community who provided me with the torque values for the car