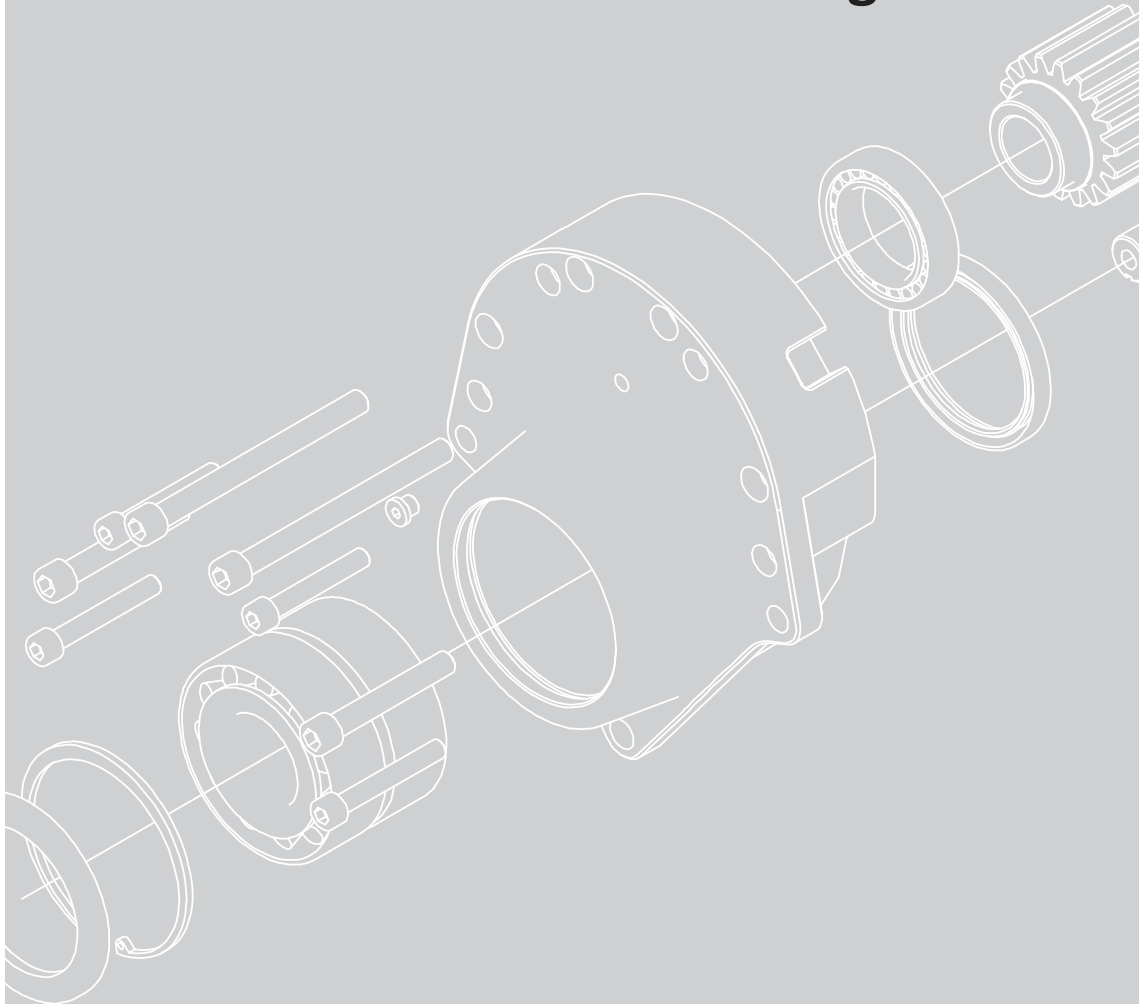


INSTALLATION INSTRUCTIONS

for TIBUS Bolt-on Portals

for Mercedes Benz G-wagon



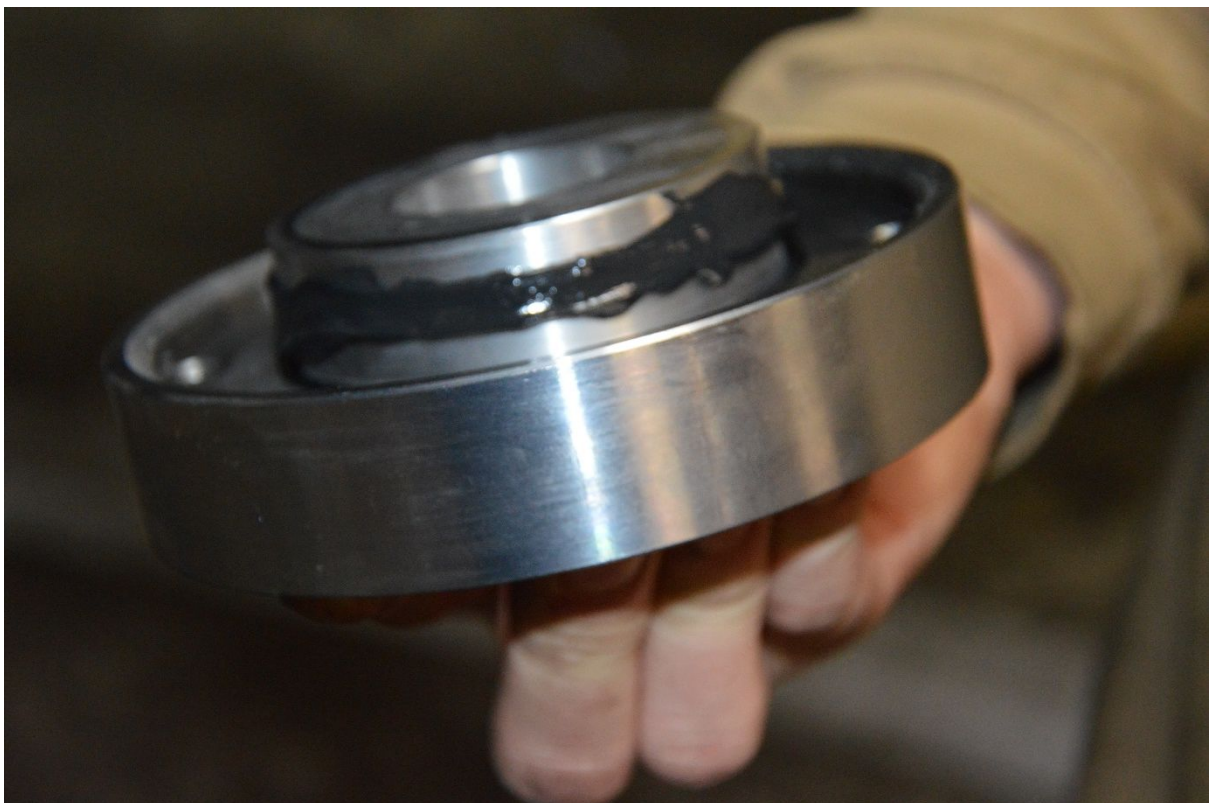
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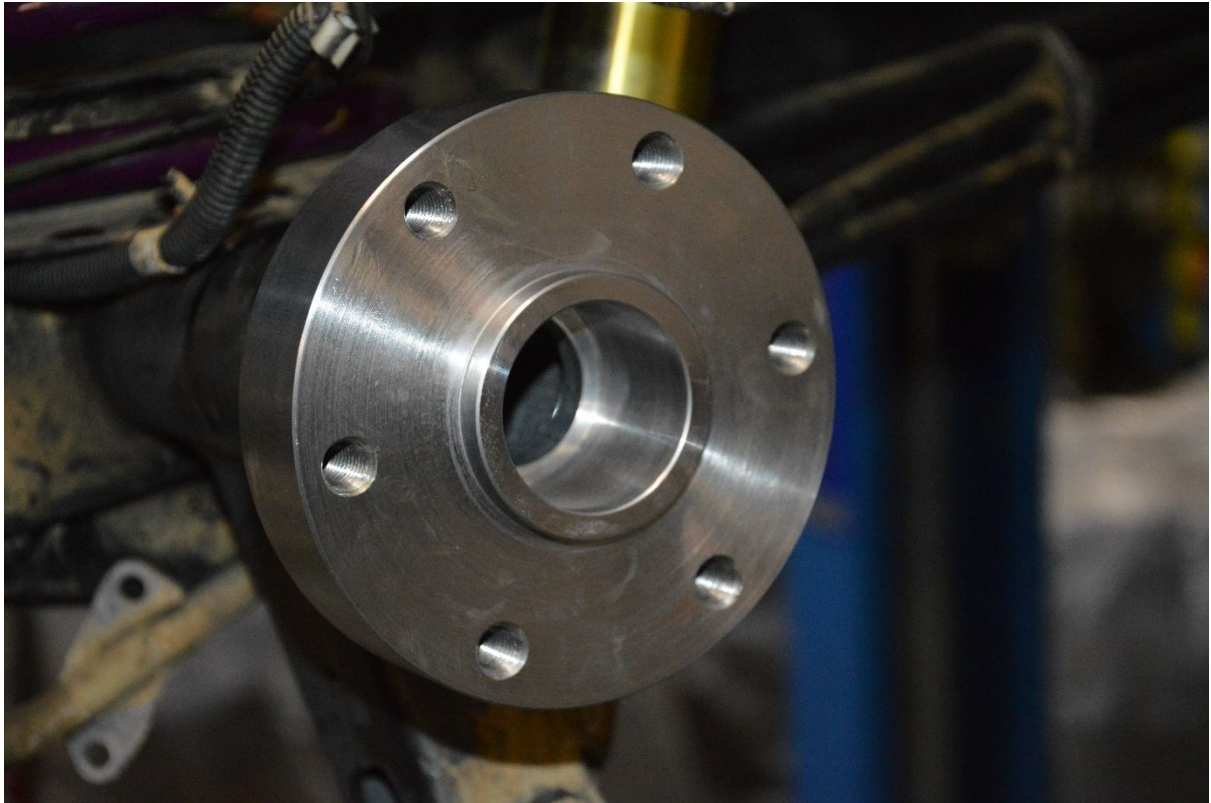
Portal installation instruction Mercedes G-wagon

Rear axle



This is the flange of the rear axle with drum brake when all parts are removed

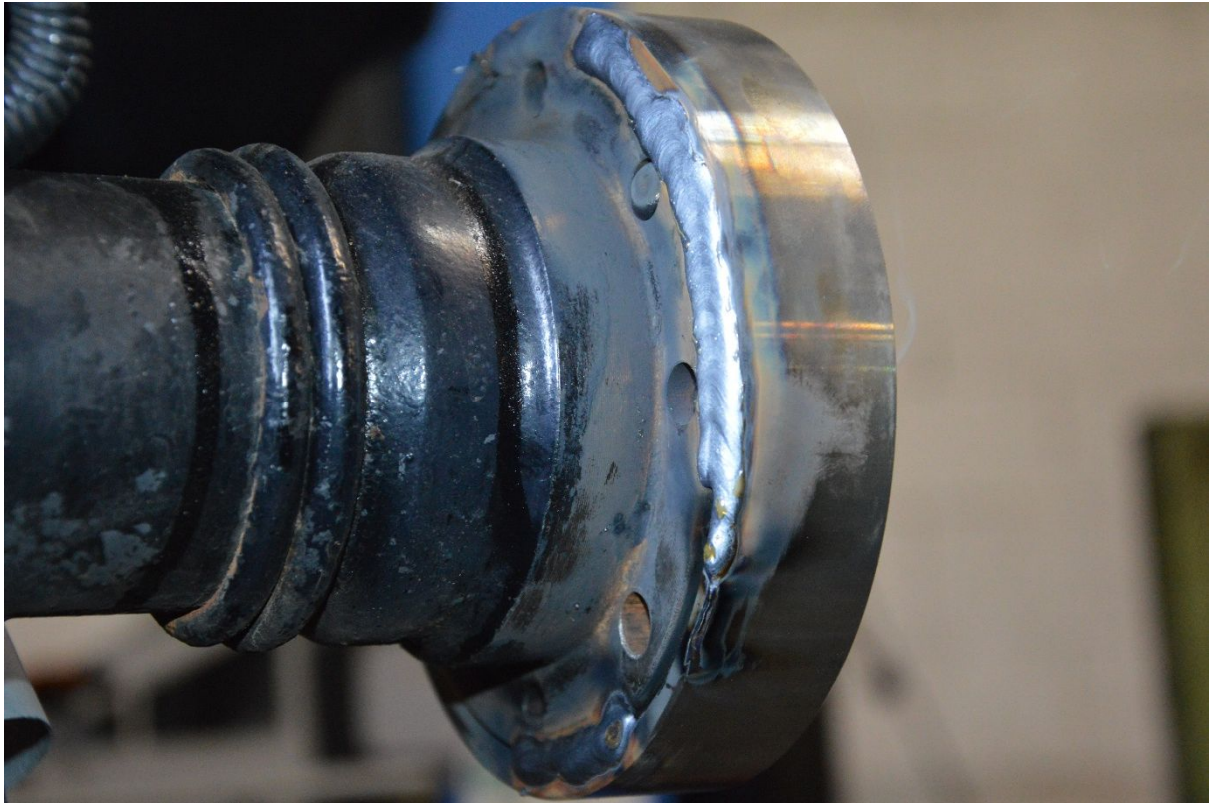




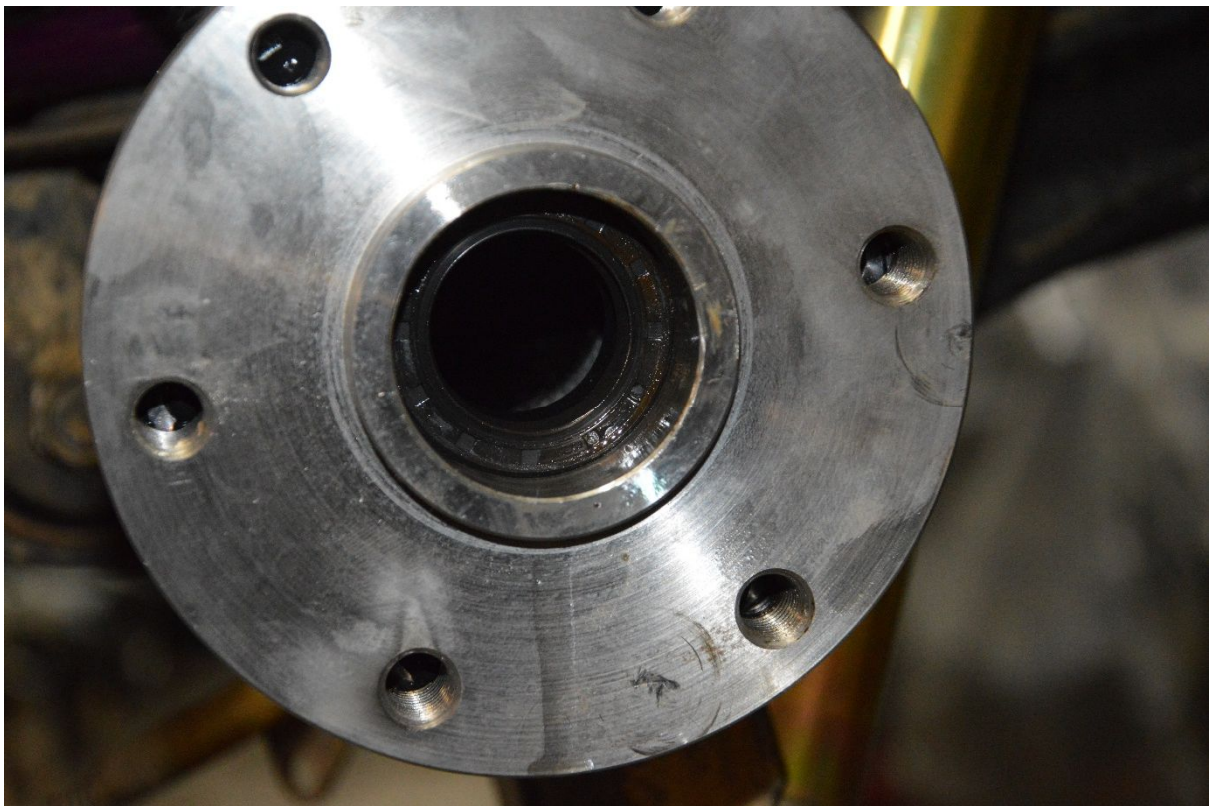
Stick the flange on and make sure the holes are on the right spot!



Fix the flange



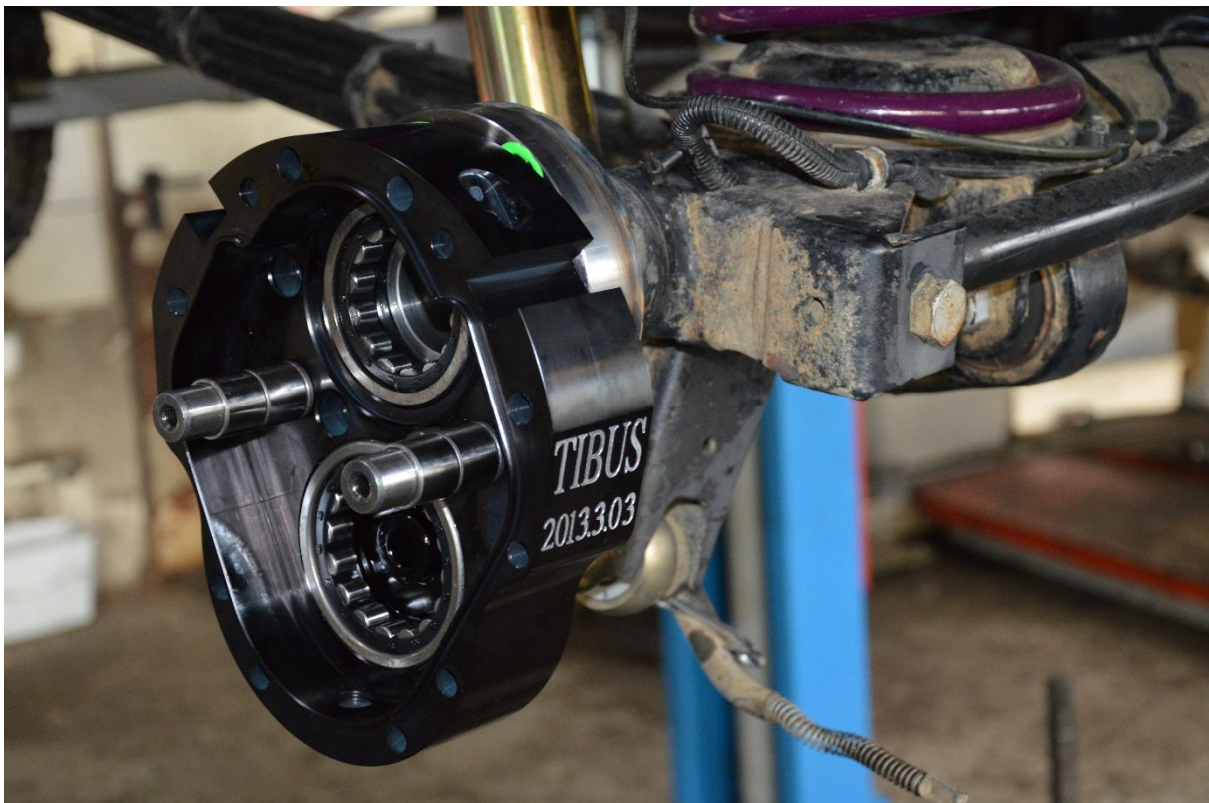
The weld the flange on



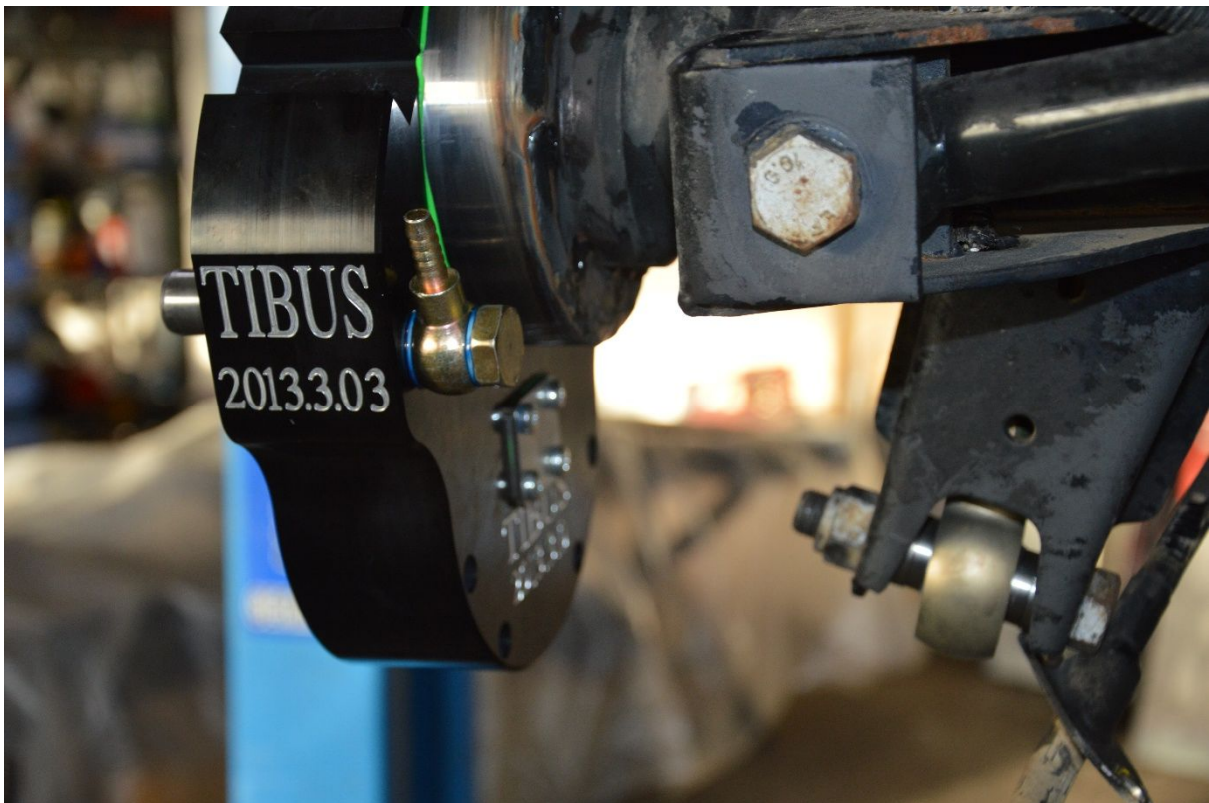
Put now the provided oil seal into the flange. Now stick the axle shafts in and make sure they stick around 65mm out. Make sure the seal is on the right place. Put the axle shaft in before you mount the upper gear!



Apply sealant on the flange



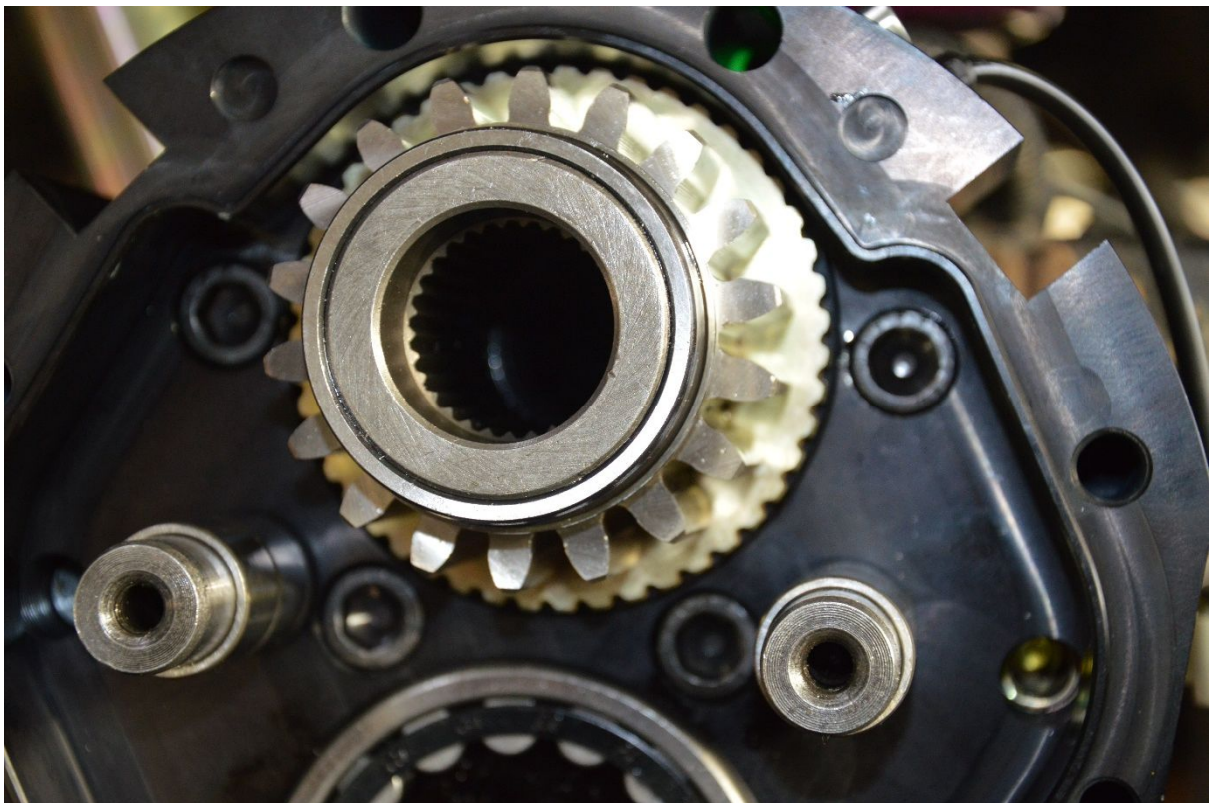
Mount the portal box. At this stadium only the four inner bolts. Apply thread locker to the bolts!!!

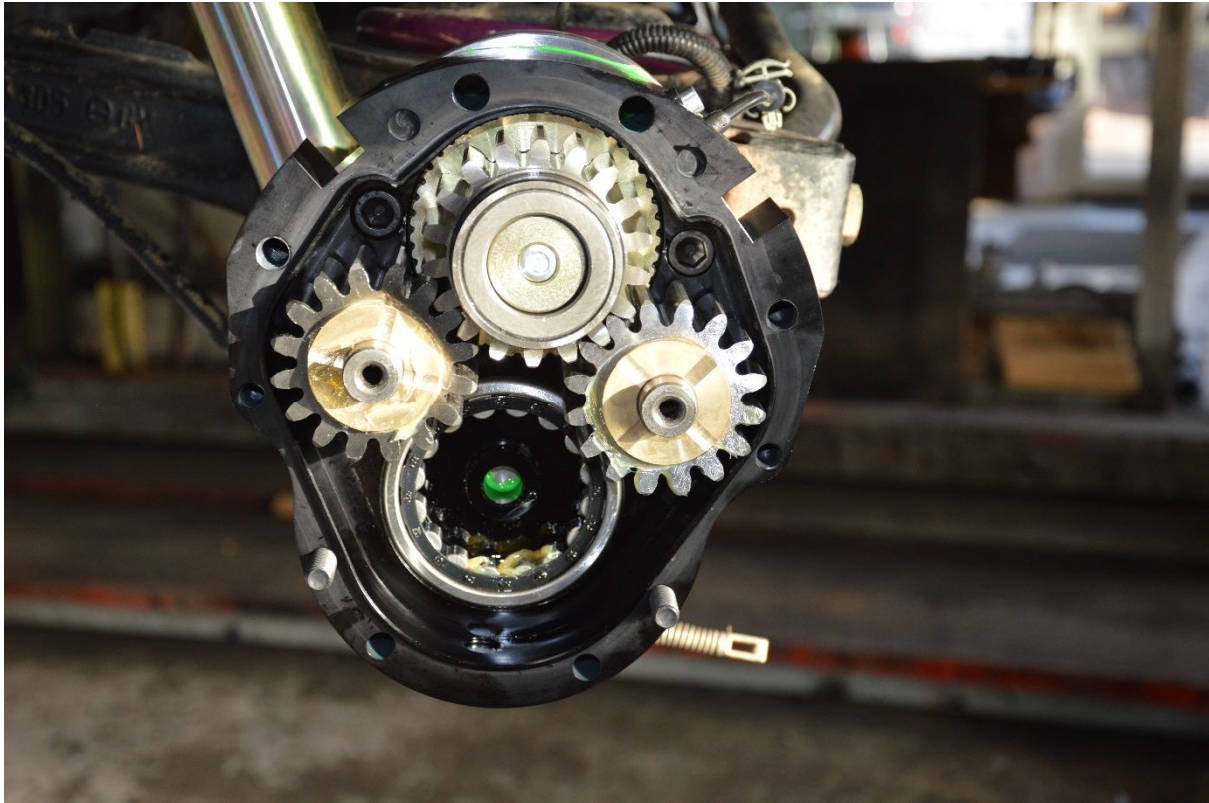


The rear hole is covered if the CTIS system is not installed. See the connection to the vent. Canister



This is the upper gear with the ABS ring installed



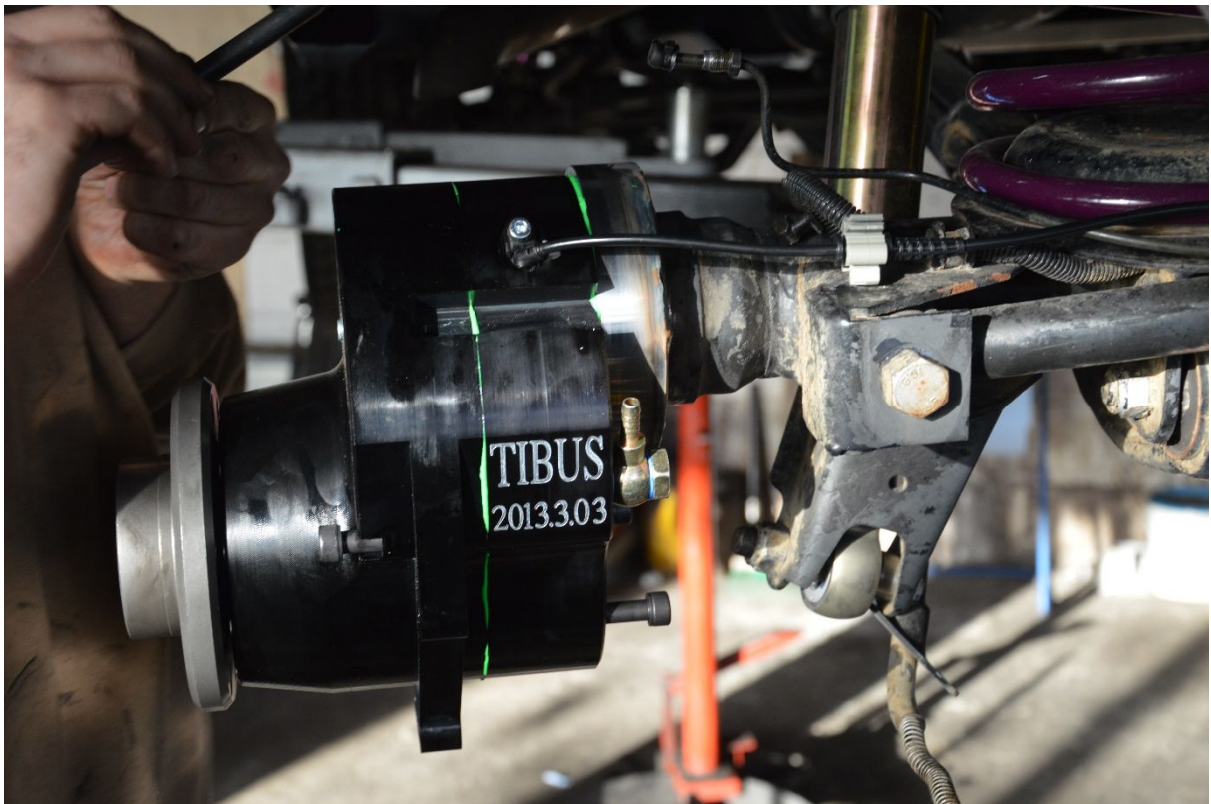


Before you install the side gears make sure you have installed the trust washers before. Both side of the side gears are protected by trust washers. Note: the upper and lower washer have different bore! The inner hole of the lower washer is bigger!

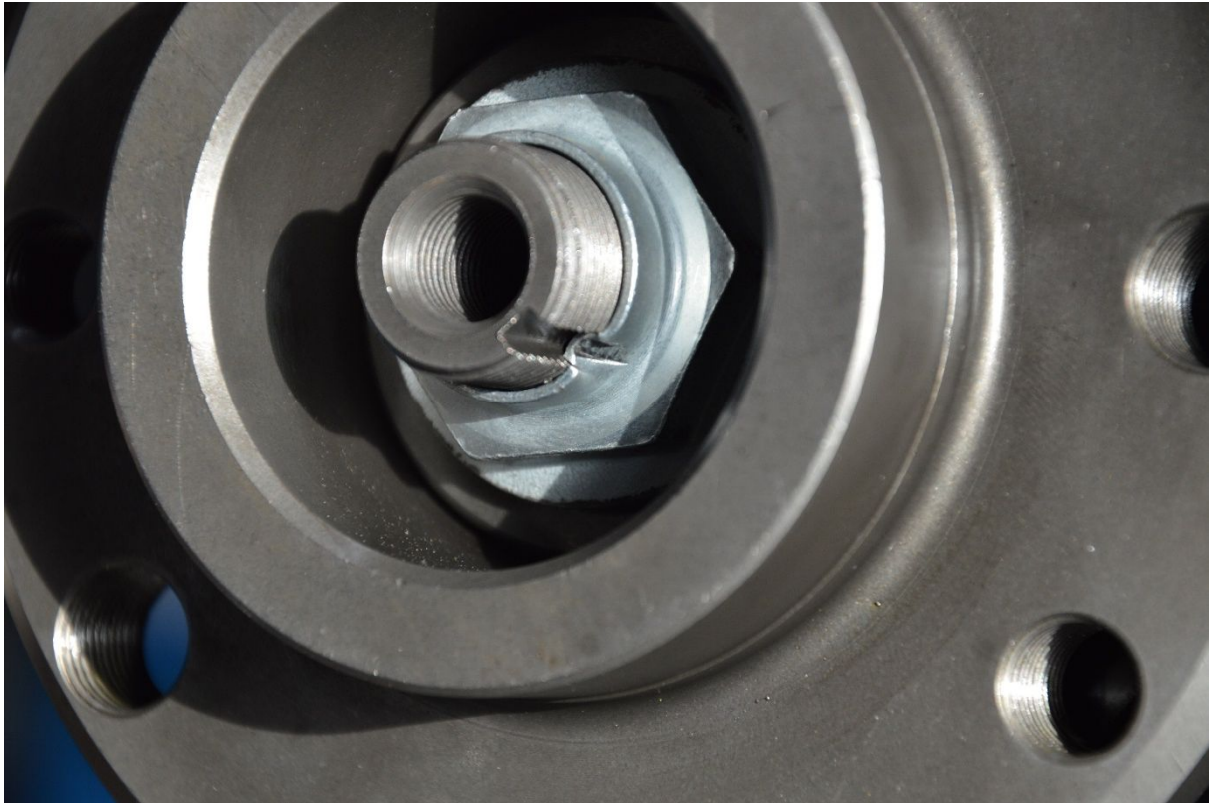




Put now the front cover on. If you like to use CTIS make sure the seals are installed in the lower gear. They are not installed on this picture!



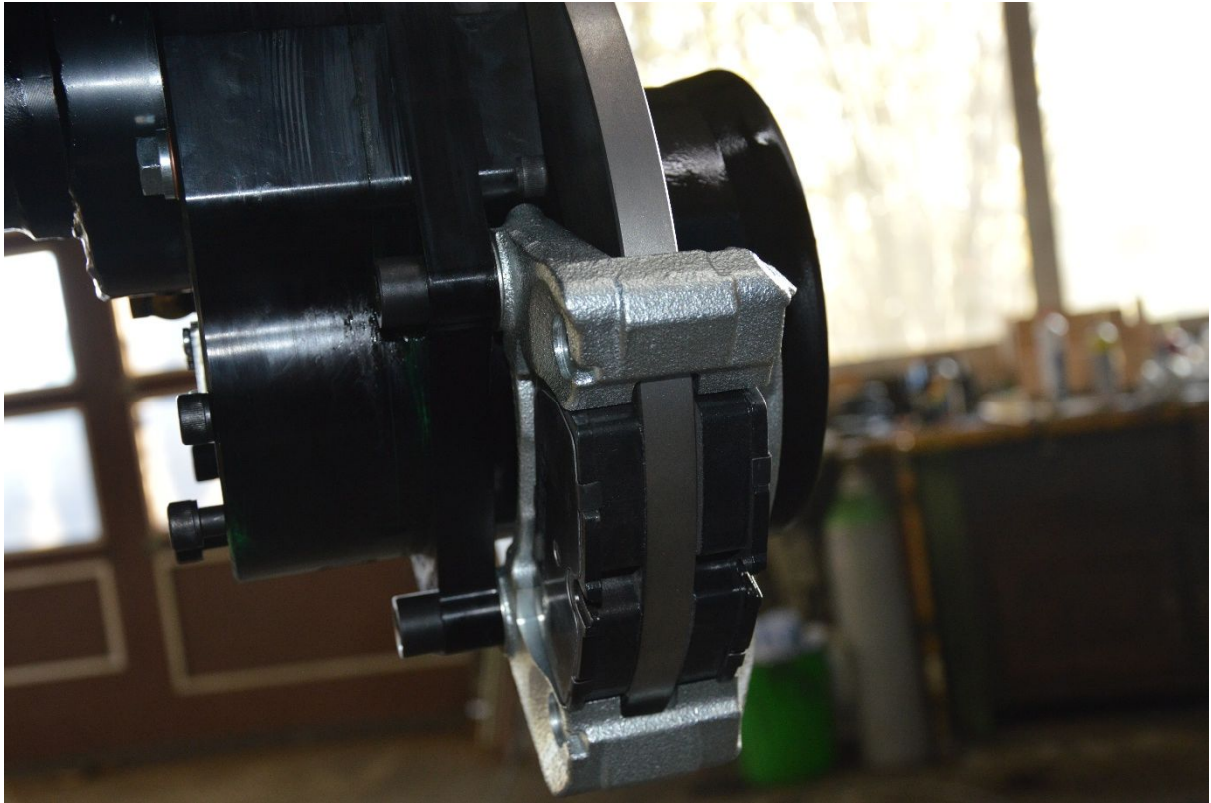
Here you can see the ABS sensor



Make sure the center nut is well tight and secured.



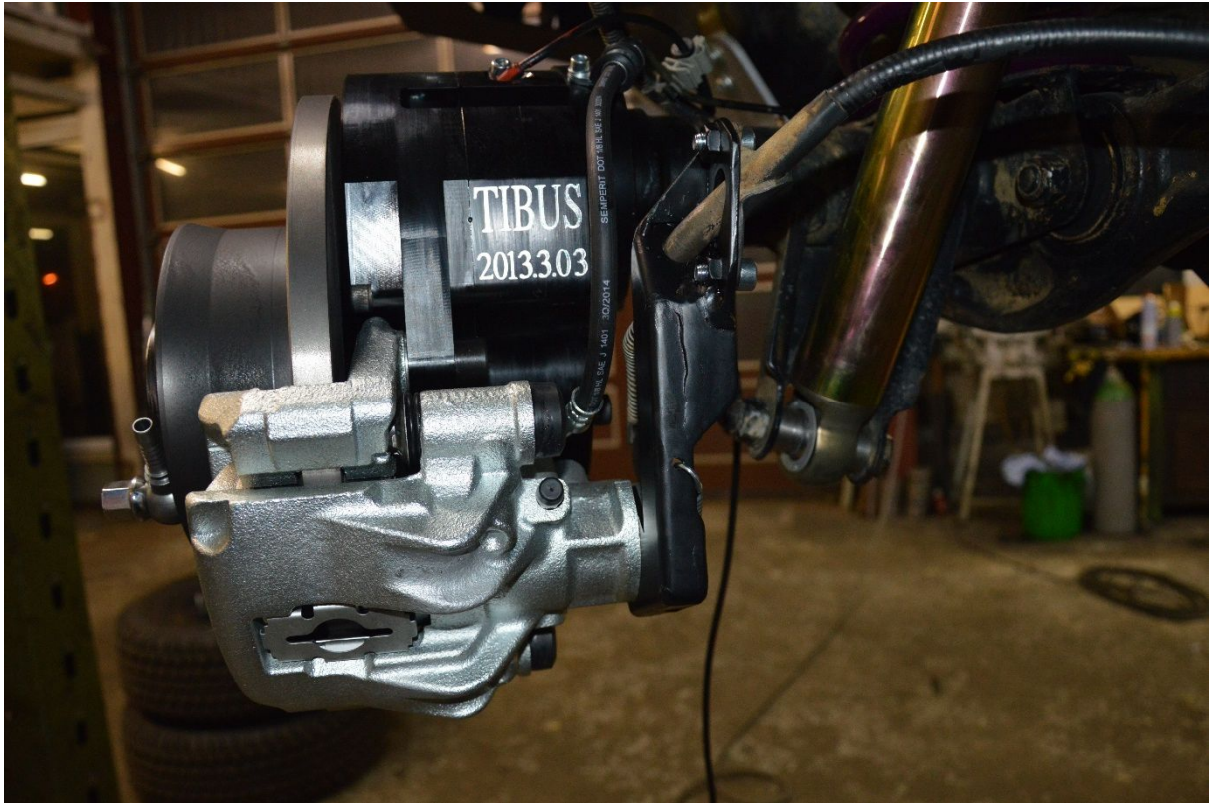
Stick the provided brake rotor on. Put some grease behind to prevent corrosion



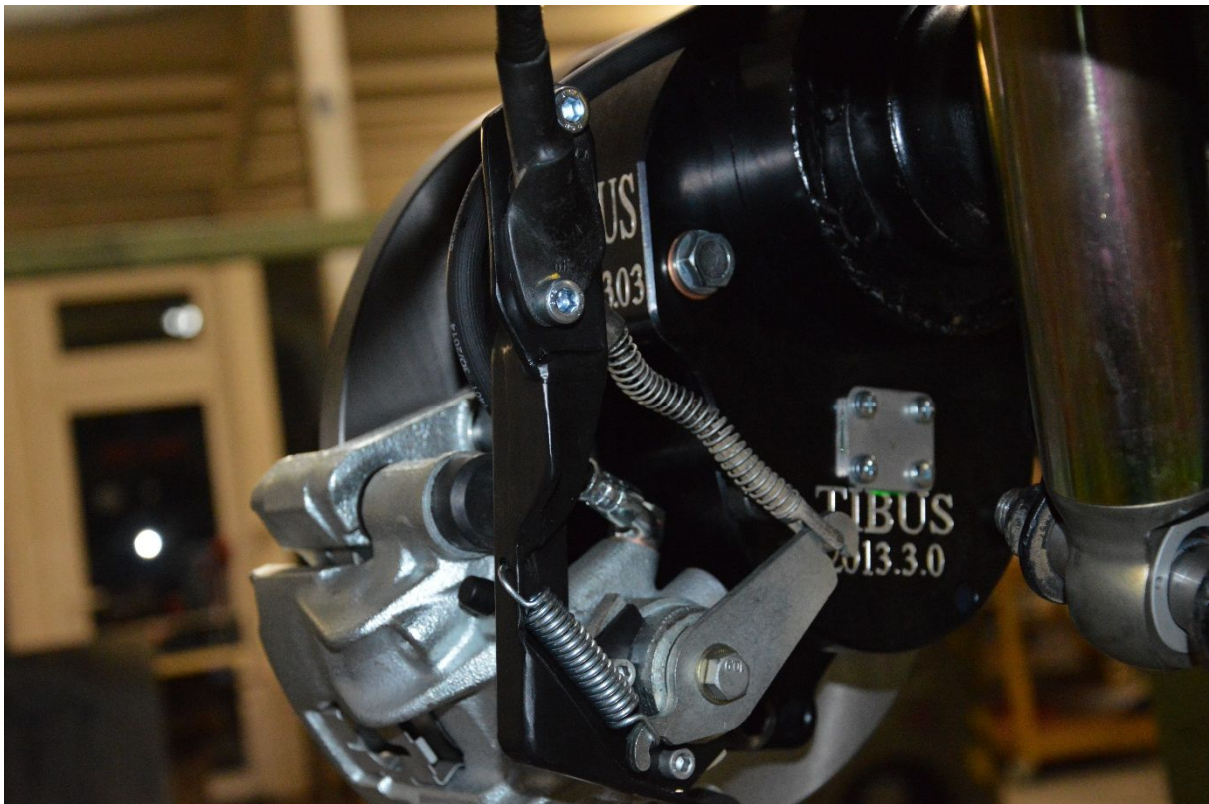
Mount the bracket for the brake caliper and make sure it is centered and does not touch the rotor.



Mount the brake caliper and fix the brake hose.



Remove the existing bracket of the brake caliper and mount the provided caliper. It might be necessary to make your own bracket



It is easy to remove and relocate the lever. Just remove the bolt and the lever will come off.

Important Notice!

In some cases the Mercedes brake cable does not move enough to bring enough brake power. If you adjust to tight, **the brake will not lose completely and will run hot**. In this case you have to make changes on the lever inside of the car or you can use an electric system to pull the brake cable.

Please ask. We will assist you to solve this problem.

Please use a thread locker on all bolts and make sure everything is tight and save.

Mounting the front portals

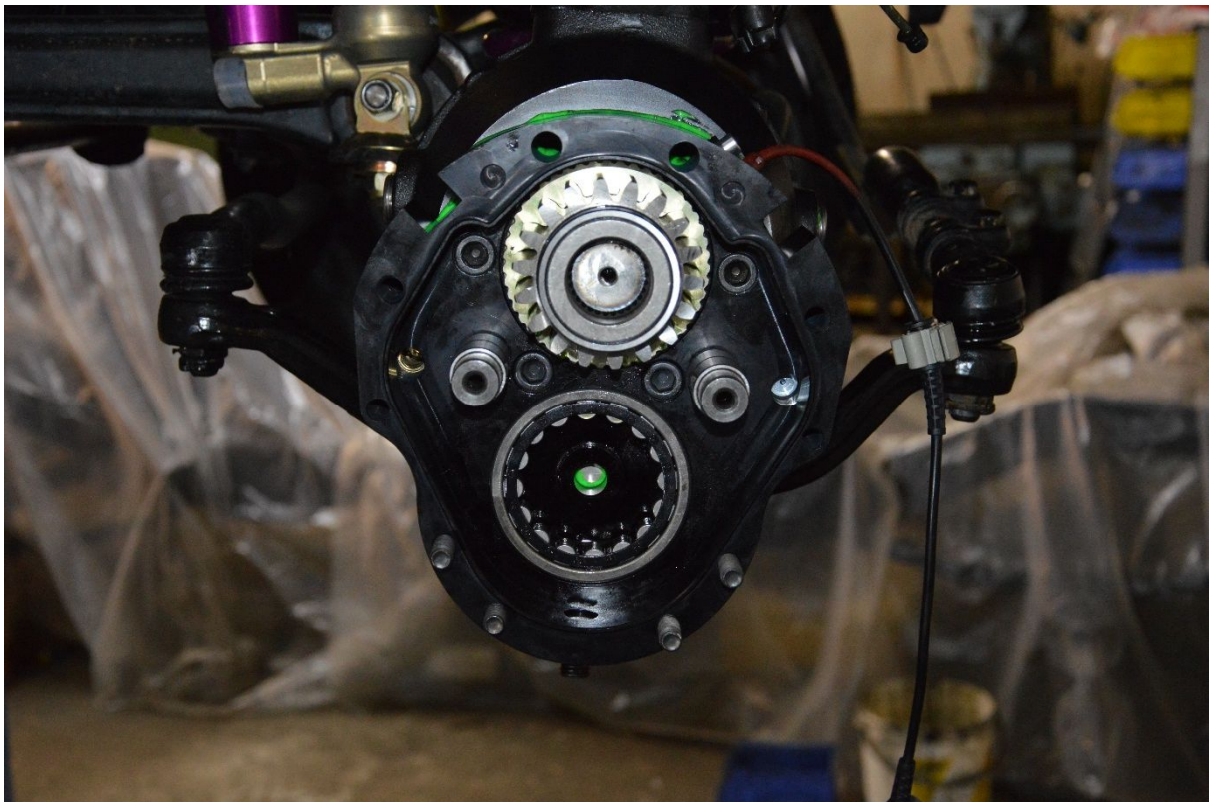
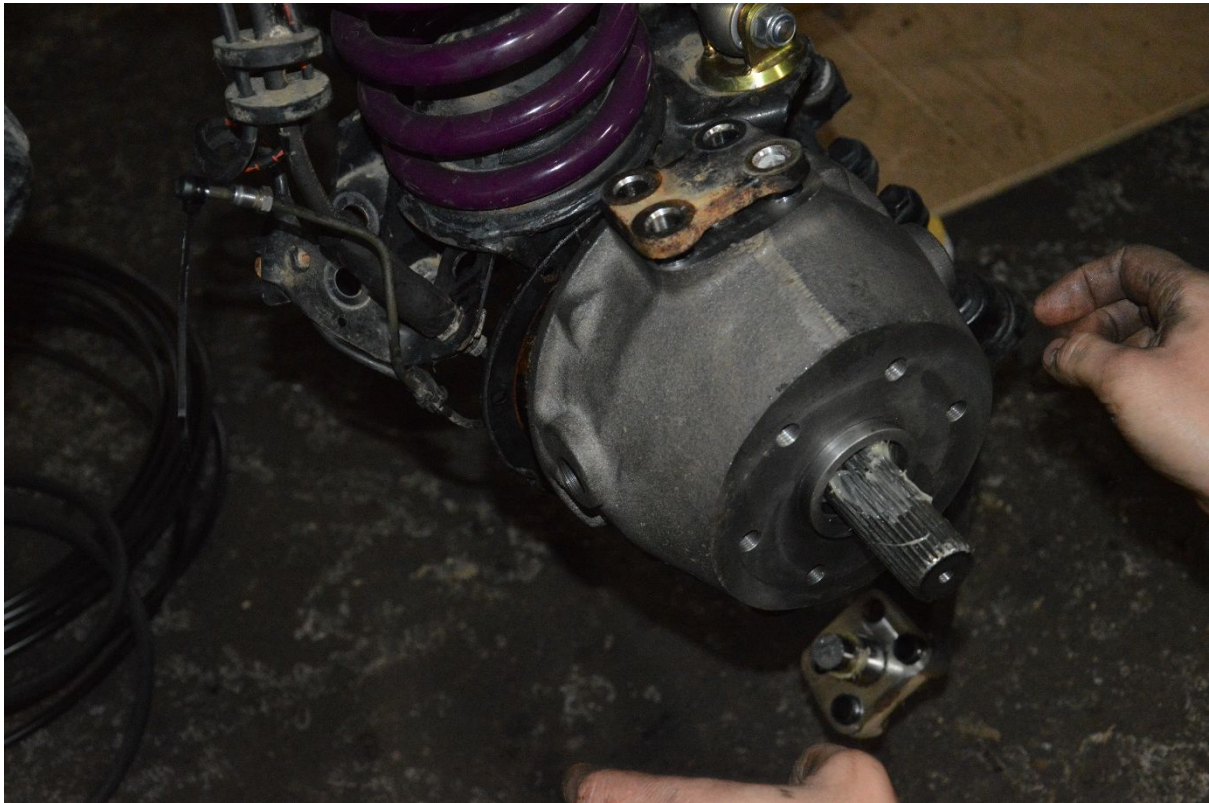
Remove the brakes and the original steering knuckle.

Check the Mercedes instructions how to do this and how to reinstall and adjust the new knuckle. It is necessary to adjust the knuckle bearings with shims. In most cases you can use the existing shims but in case you need other shims you have to order them from your Mercedes dealer. These are original Mercedes parts.



This is the new steering knuckle

Once the knuckle is removed you can pull the axle shaft out. Remove the CV-joint and stick the new CV on. Do not forget to fill the CV with grease.



If this is done mount the portal according to the instructions for the rear axle.

You have to use the existing brake parts of your car.



Locate the vent canister on a high point. The big hose comes from the bottom of the canister to the back connection of the portals. On the top of the canister are 2 connectors. One comes from the top of the portal into the top of the canister. The other connection on the canister is a open hose and you have to route this into a safe place where no water can come in.

This vent system is necessary to prevent pressure in the portal housing which would cause oil leaks.

Connect the ABS sensors. On the newer Mercedes models it is important to have the left sensor on the left side and the right on the right. If you did it wrong your ECM will tell you that one wheel is turning the opposite direction. It might be possible to reprogram your ECM to the bigger tires to make sure the system works well.

If you need more assistance give me a call or send an email.

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