

# 42 Draft Designs

## 5x-5x VW/Audi Wheel Adaptor Installation Instructions

The following instructions document the installation of 42 Draft Designs Wheel Adaptors. Before you begin, read these instructions thoroughly and confirm that you have the proper tools for the job. Inspect your adaptors and wheel hardware to confirm that you have chosen the correct configuration for your new wheels. Follow these instructions carefully and exactly. Items in **RED** are critical to your safety.

**Tools Recommended:** 17mm, 19mm, and 22mm sockets, ½" drive ratchet and short extension, ½" drive torque wrench, wire brush, all-purpose lubricating oil

**Warning!** Do not use an impact gun during this installation! All hardware must be tightened to exact torque specs using a torque wrench. Over-tightening wheel adaptor hardware can seriously damage the adaptor and may lead to a dangerous failure. Safety first – ditch the impact gun.



### Contents:

- (2) Studded Wheel Adaptors
- (2) Centering Rings
- (4) Centering Ring O-Rings
- (10) Adaptor Mounting Bolts
- (10) Lug Nuts

## 1. Lift the vehicle

This installation may be performed on a lift or one-wheel at a time using a floor jack and a single jack stand. Whichever method you choose, take the following precautions to ensure your safety:

- NEVER use the stock jack! It's dangerous.
- Always lift the car on a flat concrete surface! Jack stands will sink into asphalt.
- NEVER work on the car when supported by only a floor jack.
- Always test to be sure the car is sitting solid on the jack stands. It cannot wobble or teeter.
- When using a 4-post lift, always use the factory lift points.

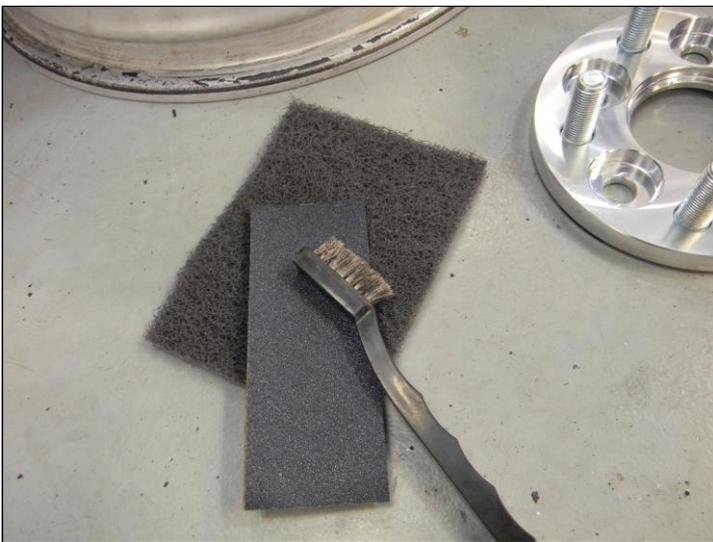
Before lifting the vehicle, crack the lug bolts loose. If you don't loosen the lug bolts now you won't be able to loosen them when the wheels are off the ground.

## 2. Remove the wheel

Remove your existing wheel using the appropriate tools. Remove any hubcentric rings, wheel spacers, or existing adaptors from the hub. If your wheel is stuck to the hub, loosely re-install a single lug bolt or nut. The only way to remove a stuck wheel is to kick the tire inwards towards the other side of the car. Kick the tire at 3 o'clock, rotate the wheel 90°, kick the tire again, rotate and repeat until the wheel breaks loose. Resist the urge to use a baseball bat, a pry bar, or anything else that may damage your wheel or hub.

## 3. Prepare the hub

Inspect the bare hub for rust and corrosion. It's important to clean the hub before installing a wheel adaptor. Cleaning the hub means breaking the loose rust and corrosion from the surface. It's not necessary to grind, file, or sand the hub to bare metal. We recommend using a wire brush, coarse Scotch-Brite pad, or 100-grit sandpaper to clean the hub. Once clean, your hub should look like the hub pictured below.



## 4. Install the wheel adaptor

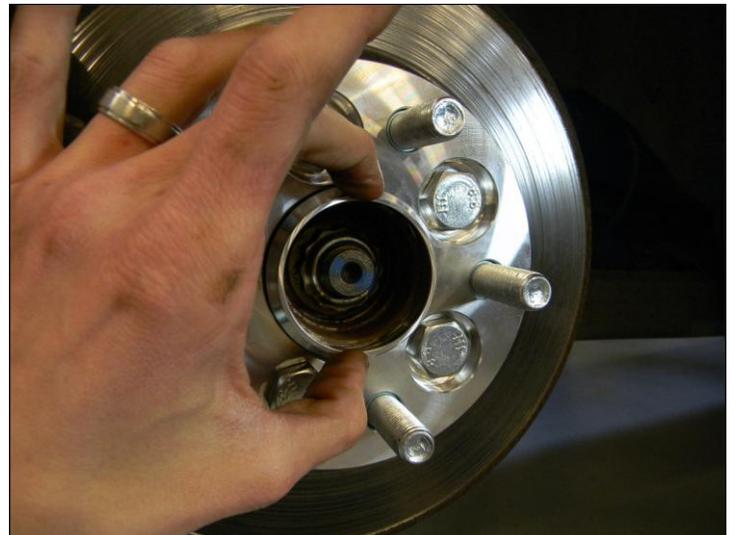
Slide the wheel adaptor over the factory hub. Align the holes and start your mounting bolts by hand. Using a ratchet and short extension, thread the mounting bolts into the hub and lightly tighten. (1-2-3-4-5) Hex head lug bolts will require a 22mm socket. Short head lug bolts will require a 17mm socket. Set your torque wrench to 90 ft/lbs and install the appropriate socket, without the extension if possible. Have a friend fully depress the brakes and torque the mounting bolts to 90 ft/lbs in a star pattern. (1-2-3-4-5)

**Mounting bolts must be equally tightened to 90 ft/lbs with a torque wrench!**



## 5. Install the centering ring

Before installing the centering ring, place a few drops of lubricating oil on the o-rings. Spread the oil along the entire o-ring. Press the centering ring into the counterbore with your hand. The ring should fit snug within the adaptor and around the hub. Excessive force should NOT be necessary.



## 6. Install the wheel

Inspect the mounting surface on the back of your new wheel. It should be clean, flat and free of corrosion like the wheel pictured below. If necessary, clean the wheel mounting surface with the same materials used to clean the hub. Slide the new wheel onto the studs and hold in place. The wheel should sit flat against the adaptor and snug around the centering ring. Start your lug nuts by hand and thread them into the wheel using a loose socket. Tighten the lug nuts using a ratchet (1-2-3-4-5) and move on to your other three wheels. When all four adaptors and wheels are installed, lower the car to the ground.

With the wheels sitting on flat ground and the emergency brake tight, set your torque wrench to 90 ft/lbs and install the correct socket for your lug nuts. **Tighten your lug nuts evenly to 90 ft/lbs in a star pattern (1-2-3-4-5), one wheel at a time.**



7. **You're done!** Go for a drive and enjoy your new wheels!

### Helpful Tips:

There are a few more things to keep in mind before and after installing your wheel adaptors:

- **NEVER** apply anti-seize, loctite, penetrating oil, lubricant, or **ANYTHING** to any of your wheel mounting hardware. Anything present on the threads will alter the sensitivity of your torque wrench and result in improper tightness. Safety First!
- If you take your car to a professional for a repair that requires the wheels to be removed, there is no guarantee the technician will know NOT to use an impact gun on your adaptors. Whenever someone is scheduled to remove your wheels, be sure they are aware of the dangers of using an impact gun on your adaptors. Keep these installation instructions in your glove box and pass them along to your technician. Be pushy, even demanding if necessary. Safety First!
- If you live in a winter climate and worry about your adaptor sticking to the hub over time, consider applying a thin layer of anti-seize compound to the hub and wheel adaptor mating surfaces. This layer will prevent galvanic corrosion which causes dissimilar metals to stick together. If you run winter wheels or live in a beautiful climate, skip this step. You can learn more about galvanic corrosion by visiting the Wheel Adaptor FAQ on our website.

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