Ball Joint Disc Brake Kit Installation Guide

Products: #4175, 4177, 4190, 4194, 4287, 4292

- **1** Chock rear tires and apply emergency brake. Loosen front wheel lugs, lift front of the car, place jack stands under the front axle, and lower the car onto the jack stands.
- **2** Remove front wheels, grease caps (cotter pin and speedo cable-left side), spindle nuts (reverse threads-left side), slide brake drums off the spindles.
- **3** Remove rubber flex brake hoses from the hardlines, be careful not to round off the hex nut on the original hardline; it is best to use a brake line wrench for this job. You will also need to remove the spring clips that holds the rubber flex hoses in place. (Save clips for reassembly)
- **4** Remove the three bolts and washers that secure the backing plates to the spindles, then slide the assemblies off the spindles. (Save bolts and washers for reassembly)
- **5** Remove existing spindles.
- **6** Clean and inspect the ball joints, and tie-rod ends maintenance, or replace as needed. Refer to factory VW specs for maintenance service.
- **7** Install the new spindles per factory specs.
- **8** Secure the outer tie-rod ends to the spindles Torque the slotted nuts to 22 ft.-lbs. and install the cotter pins.
- **9** Test-fit the new inner bearing on the spindle prior to installation. If needed, use emery cloth to smooth the spindle and bearing journal until the bearing slides on smooth and free.
- **10** Install the inner and outer bearing races into the rotor. Be careful not to press the races in too far as this could damage or destroy the rotor.

<u>NOTE:</u> Removing and reusing existing bearings, bearing races, and seals is possible, however to ensure the very best results, it's recommended to always replace with new.

- **11 -** Pack the wheel bearings using Disc Brake wheel bearing grease.
- **12 -** Install the inner wheel bearing and then the bearing seal use a rubber mallet if necessary.
- **13** Apply a thin layer of grease on the spindles and threads.



(#4287 Shown)

- **14** Install the rotor assemblies on the spindles, slide the outer wheel bearings into place and install the spindle nuts and washers. Adjust bearing free-play and torque per factory specs.
- **15** Install the disc brake calipers onto the spindles with the supplied hardware make sure the brake lines are positioned on top of the calipers. Install the new brake lines and secure using the factory spring clips.

<u>NOTE:</u> Shock absorbers or limiting straps should be installed prior to installing brake lines.

- **16** Bleed the brakes starting at the passenger side-front following factory brake bleeding procedures. Be sure to keep the brake fluid level topped off during the process. The brake pedal should be firm and solid. If your pedal is not firm and solid check for leaks and re-bleed the system.
- 17 Install bearing grease caps and speedo cable.
- **18** Clean the rotor with brake cleaner. Install your wheels and torque to factory specs.

<u>NOTE:</u> Check for possible clearance issues throughout the entire range of wheel travel up and down, as well as lock to lock on the steering wheel prior to driving.

- **19 -** Confirm steering alignment is within factory VW specs adjust as needed.
- **20** Time for the test drive slowly apply brakes to break-in the pads and rotors.

