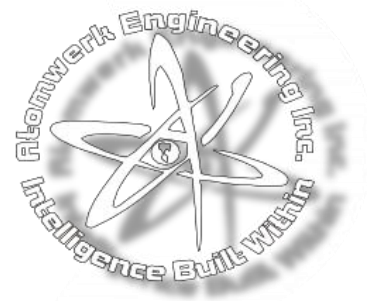


Atomwerk Drop/Raise Plates

Congratulations! You have just purchased a set of genuine Atomwerk Drop/Raise Plates!



Parts List

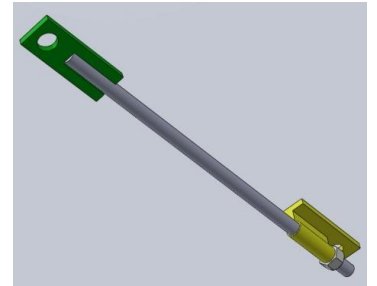
- Introductory Drop/Raise Plates
- Racing Raise/Drop Plates
- 4 Bushings
- 2 End Caps
- Grade 8 Fasteners
- Stainless Steel Fasteners
- Spring Plate Loader Tool
- Short Shocks

Tools Needed

- Jack
- Jack stands
- Metric wrench/allen set
- Regular mechanic's tool set
- Soft mallet
- Anti cease grease
- Sil glide or pro-thane for bushings
- Flat-head screw driver
- Spring Plate Loader Tool
- C-clamp
- Angle finder

Directions

- First of all it is important to understand that *installing spring plates is very dangerous* and should not be attempted by amateurs. The spring plates are under a lot of load and can be dangerous to lethal if the proper precautions are not taken. Install at your own risk!!!
- Save yourself frustration and expect to index your plates and torsion bars at least three times. Set each side the best you can, and expect that it will be set a little uneven and one side should be readjusted (this is because torsion-bar spring-stiffness is almost never exactly the same from side to side).
- The spring plate and torsion bar have a tight fit. This is because the Drop/Raise plate is a new and unworn part and because a loose fit may cause premature wear on the teeth. With this in mind, it is possible that the splines on the teeth on the spring plate will need a little working (no



Spring Plate Loader Tool



Fig. 1: Front View

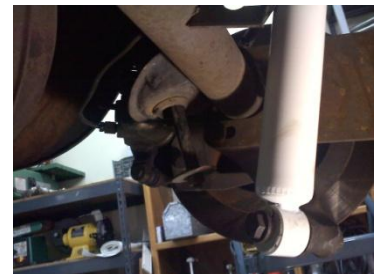


Fig. 2: Rear View

two torsion bars are 100% dimensionally the same). Have your triangular file handy just in case it is too tight. A few passes on all the teeth will inevitably get you the perfect fit.

- Lube up the splines so the spring plate will install easier.

Spring Plate Removal

- Jack up car and set on jack stands, making sure that car is level.
- Bugs: Remove a few bolts off of the fender so that the torsion bar can clear fender and be removed.
- Swing Axles: Remove bolts from the end cap, axle, and remove shock.
- IRS: Remove bolts from the end cap, trailing arm and move it out of the way, and remove shock.
- Put on Spring Plate Loader Tool to top shock mount and to top bolt on spring plate.
- Torque the tool until the spring plate just barely comes off of the lower stopper.
- Place long and stout flat head screw driver or pry bar in between the spring plate and the torsion housing so that the spring plate can be pried and guided over the bottom stopper as the Loader Tool is untorqued.
- Continue untorquing the Loader Tool. If the spring plate starts to rest on the bottom stopper you can pry the spring plate more. The more that you untorque the Loader Tool more friction will be present so that the spring plate is less prone to returning to factory position. You can walk it off the lower stopper. (Do not try this without the Loader Tool - EVER!!!)
- Pull off spring plate by hand and Loader Tool once the Loader Tool is completely untorqued and spring plate has cleared the bottom stopper and is resting below, under no load.
- Remove spring plate and torsion bar.
- Swing Axles: Strap axle out of the way.
- IRS: Strap trailing arm out of the way.

Indexing

- 21 3/4" torsion bars: Install inside bushing along with the Drop/Raise Plate and clamp it to the bottom stopper with a c-clamp.
- 24 11/16" and 26 9/16" torsion bars: Install both bushings and housing and with the Drop/Raise Plate and clamp it to the bottom stopper with a c-clamp.
- Place angle finder on the bottom of the Drop/Raise Plate and note the angle that you want (between 18 and 22 degrees unless stiffer torsion bars are used). Be precise with your angle.
- Install the torsion bar through the front. It will slip in through the spline stub and engage first on the inside splines. If you are lucky it will also engage on the splines on the spring plate. However, chances are that it won't.
- If you keep rotating the torsion bar on the inside splines you will find that "magic spot" (the spot where both the inside splines and outside splines line up at a predetermined angle) without having to think too much about it.
- Once you find this spot just smack the torsion bar in with a soft



Fig. 3: Strap axle out of way

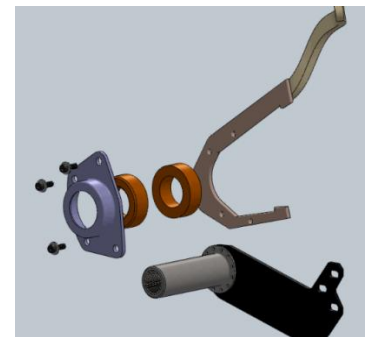


Fig. 4: Exploded view

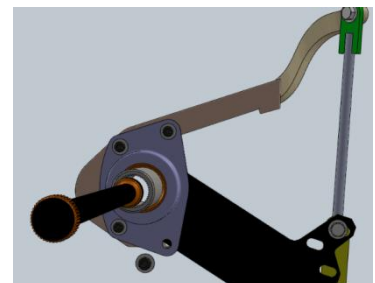


Fig. 5: Loader tool installed and torsion bar

- mallet.
- 21 3/4" torsion bars: Install the outside bushings and housings and install 3 bolts and just hand snug them.
 - Install Spring Plate Loader tool to upper shock mount and top bolt of the Drop/Raise Plate and torque up the plate.
 - Once the plate clears the lower stopper the Loader Tool should pull the plate into position above the stopper.
 - Clamp plate to lower stopper with c-clamp so to prevent surprise hops off the stopper.
 - Smack spline stub and torsion bar with soft mallet to finalize position.
 - 24 11/16" and 26 9/16" torsion bars: Tighten bolts with zig-zag pattern. Tighten the set screw if you have one or install dust cover
 - Loosen up the spring plate loader tool until spring plate rests on the bottom stopper and remove tool (Do not remove c-clamp).
 - Swing Axles: Slide axle into location and torque all bolts to factory specs.
 - IRS: Bolt on your tailing arm and torque to factory specs.
 - Bolt on shock and torque to factory specs.
 - Bolt on your wheel... to factory specs.
 - Lower the car to the ground and drive the car around for approximately 5+ miles to allow the suspension to fully settle.
 - **THIS IS THE IMPORTANT PART:** While car is still lowered visually verify that the gap between the lower stopper and spring plate is approximately 0.25" to 0.5". If it is not, you have not installed the plate correctly and you will need to reinstall the plate at a different angle.
 - Enjoy your restored torsion in your suspension VW. It has been slammed or raised the right way with Atomwerk products!

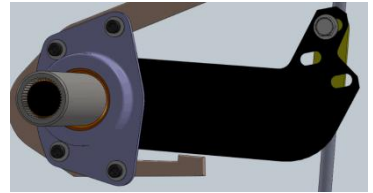


Fig. 6: Spring plate lifted, 4th bolt installed and all tightened

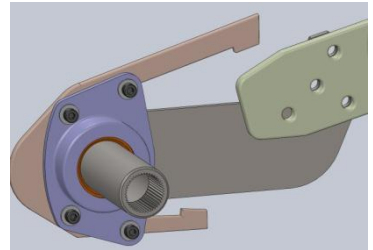


Fig. 7: Install remaining parts



Fig. 9: Distance of a properly installed Drop/Raise Plate