

Thank you for purchasing the Brute Performance steering rack improvement kit.

Please have a qualified professional install these parts. Brute Performance is not responsible for improper installation which can result in steering failure.

Enclosed is a general guideline of installation.

The most important parts can be installed with the rack in the machine

The end shaft bushing along with the pinion bearing may require rack removal to ease installation.

The concept of this design will allow the rack to function smoothly with no added drag.

It will significantly reduce the chance of broken teeth and damage due to hard impacts.

What we're doing here is adding an additional backing point to the shaft to keep the mesh of pinion and shaft together, resulting in a much stronger setup less likely to bend and chip.

To start your installation process, locate and remove your steering rack cap.

Under the cap you will have a spring, and the OEM bushing (spring will not shoot out anywhere)

Remove your OEM bushing and set aside. Keep your spring handy.



Machine work to the cap should be performed on a lathe to ensure a centered straight hole

The bolt provided is a standard 3/8 -16 course thread

Once you have machined or have received your machined cap back from us, you can resume installation.

Install the new (grey) bushing, tensioner slug, spring, cap and tensioner bolt in the order shown.

During installation it is recommended to thoroughly clean, inspect, and re-grease your moving rack components.

Once all pieces are installed and cap is tight, you can adjust the tension bolt.

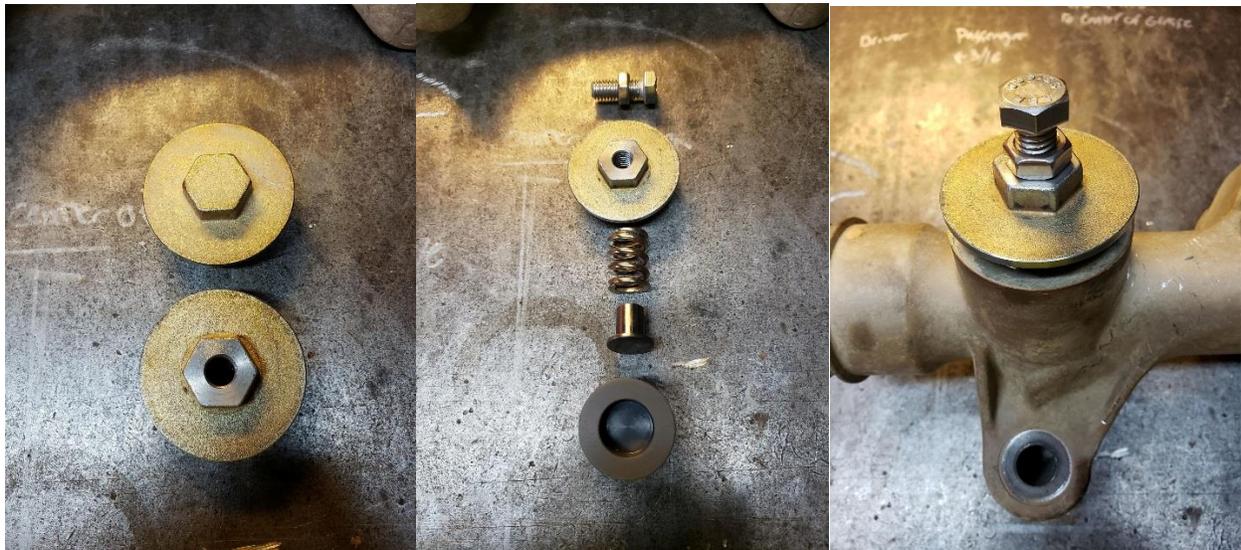
Proper adjustment will entail cycling the rack back and forth while setting tension.

IT IS IMPORTANT NOT TO OVERTIGHTEN THE ADJUSTING BOLT.

ALL YOU WANT IS FINGER TIGHT PRESSURE ON THE BOLT.

OVERTIGHTING THE BOLT WILL RESULT IN PREMATURE WEAR AND STIFF STEERING.

We want the factory spring tension to do its thing with little to no back and forth movement.



Removal and installation of the bushing may require complete disassembly of the steering rack.

If you have chosen to remove the rack to replace your driver rack side bushing here's a pro tip to removing the retainer

Use a pointed carbide bit to start a hole right above the snap ring.

Next you'll take a pointed punch or pick to finish making a hole in the groove of the snap ring.

Removal and installation of the bushing is straight forward. Take it out and put your new one in!



Removal and installation of the pinion bearing may require rack removal

Please note your original bearing probably was not greased and has no shielding on the bearing resulting in harsh steering or failure to the bearing itself.

Along with chipped teeth and bending of the rack shaft, this is the other common problem for our steering racks.

Bearing will prematurely wear out due to no grease and the pinion will actually rip out of the rack housing

Remove the pinion seal.

Bearing is a press fit into the housing, it is recommended to use heat to expand the aluminum housing to ease removal and installation of the pinion assembly

Once pinion is removed bearing can be changed.

The new bearing provided has rubber shielding on each side to keep grease in and water out to assure long life.

