



PolyBronze™ Spring Plate Bearings - Installation Instructions

Part #2061500

Protected by US Patent 7,325,796

Cars applicable:

'68 – '89 911/912/930 with factory fixed or factory adjustable spring plates

Parts list:

Qty	Description
2	Inner Bronze Bearing
2	Outer Bronze Bearing
4	Bearing Race
16	1.9 mm Spacers

Required but not included:

JB Weld brand 2 part steel epoxy (or equivalent)
Urethane based adhesive caulk (usually not required)

Introduction –

PolyBronze Spring Plate Bearings replace factory rubber spring plate bushings. The bearings provide precise suspension movement without deformation under heavy corner loads. They are very low friction and will not squeak.

PolyBronze Spring Plate Bearings are provided with integrated grease fittings making periodic re-lubrication easy.

Note – PolyBronze Spring Plate Bearings should be lubricated at installation and 5,000 mile intervals or annually. Race cars lubricate more frequently. Use quality moly grease.



Step-by-Step Installation -

1 – Remove rubber bushings from spring plates.

With spring plates removed from car, secure spring plate in a bench vise.

Use a propane torch to heat the inside of the spring plate tube until a small amount of rubber smoke is visible. The heat will allow the rubber to pull away from the metal easily.

Use a flat blade screwdriver to separate the rubber bushings from the spring plate. Pry the bushings off.

Use a razor knife to remove any remaining large bits of rubber.

Use sandpaper or a chemical paint stripper to remove the last bit of remaining rubber. The spring plate tube must be completely clean of rubber, dirt and grease.



2 – Clean up spring plate tube.

Smooth any surface irregularities or ridges on the spring plate tube using a file or fine sandpaper. This is an excellent opportunity to have your spring plates re-plated.

The spring plate shaft should be clean and grease free. Use degreaser as needed to ensure good adhesion in step 3.



3 – Fit bearing races onto spring plates.

To accommodate for manufacturing variation in spring plate shaft, races are made slightly oversize. Races are glued to the spring plate and the gap filled using JB Weld (JB Weld is a two-part steel epoxy, not included).

Coat the inside of the race with a thin layer of JB weld. Similarly apply a thin coat to the entire mating surface of the spring plate. Your goal is smooth thin layer on both mating surfaces that will completely fill the space between race and control arm with no voids.

Note - Do not glue race to the flat portion of the spring plate, this would interfere with height adjustment

Press race on with a twisting motion until race butts against the spring plate flat section.

VERY IMPORTANT – Be sure to clean ALL adhesive off the race. Even a tiny amount will interfere with the bearing fit.

Allow the JB Weld to cure.



4 - Install bearings into the spring plate cover plates.

Clean any dirt and grease out of the inside of the cover plate.

Use a bearing labeled "O". **BE SURE TO WET THE POLYURETHANE** with a soap and water solution to lubricate and ease installation. Press the bearing into the cover plate. The press fit should require about 75-150 lbs. Tip – get the bearing started, then use a bench vise to press it all the way on until the bearing flange is flush against the mount.

If the bearing is loose in the cover plate, the fit can be assisted using urethane-based adhesive caulk. Apply a layer between the red polyurethane surface and the spring plate cover.

Align the grease nipple such that it is on the narrow end of the spring plate cover as shown.



5 – Install bearings into the torsion bar tube.

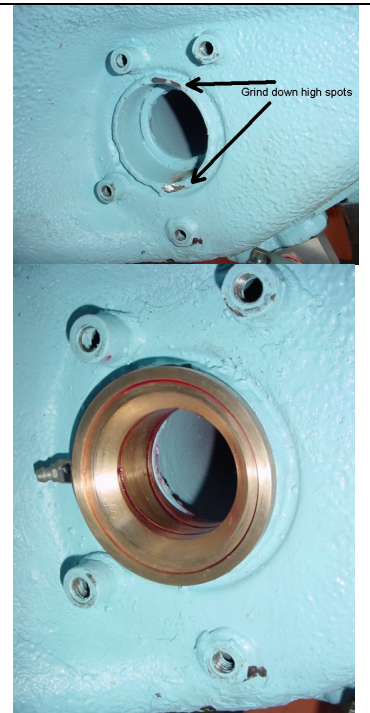
Clean any dirt, rubber residue, welding slag and grease out of the inside of the torsion bar tube.

It may be necessary to smooth the outer lip of the torsion tube. Any welds that stand proud of the tube should be ground down. Touch up with paint to prevent rust.

Use a bearing labeled “I”, BE SURE TO WET THE POLYURETHANE with a soap and water solution to lubricate and ease installation. Orient the grease nipple such that it is facing the front of the car as shown.

Press the bearing into the torsion bar tube. Tip – get the bearing started, then use the cover plate and bolts to press the bearing into place. Use a piece of wood between cover plate and bearing. DO NOT USE A HAMMER or other striking tool.

If the bearing is loose in the torsion tube, the fit can be assisted using urethane-based adhesive caulk. Apply a layer between the red polyurethane surface and the torsion tube.



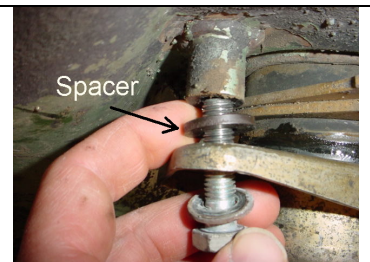
6 – Determine spacer requirement

Due to chassis variation, spacers are required between chassis and spring plate cover. Spacer requirement for driver and passenger sides may vary and are typically 0 to 2 spacers under each spring plate cover bolt.

Test-fit spring plates into car without torsion bars. Lubricate PolyBronze bearing surfaces with quality moly grease. Install cover plate using 1 spacers under cover plate at each bolt to create 1.9 mm spacing. Tighten cover plate bolts.

Check that spring plate moves freely without binding. Ideally the spring plate should have 0.5 – 2mm of lateral play, no more. Add or remove spacers as needed to achieve desired lateral play.

Note - late-style factory adjustable spring plates ('77 and forward) are thicker than early non-adjustable spring plates. Retrofitting into an early car will require additional spacers (washers).



7 – Install spring plates with torsion bars.

Using the same spacers determined in step 6, install spring plates with torsion bars.

8 – Lubricate PolyBronze spring plate bearings.

Using a grease gun loaded with quality suspension-grade grease, inject grease into each nipple. Inject enough grease so that a bit squeezes out of each bearing.

Re-lubricate annually or every 5,000 miles. Race cars lubricate more frequently.

