

# General Purpose Control Arm Bushing Instructions

(Diagram may not represent your exact bushing assembly)

**ENERGY SUSPENSION**  
1131 VIA CALLEJON, SAN CLEMENTE, CA 92673

It is recommended that if you are unfamiliar with this type of work that you refer to a qualified service center specializing in this type of work. It is also recommended that if you choose to do this work yourself that a factory service manual be obtained for the proper procedures pertaining to removal, replacement and proper torque specifications for your vehicle. This instruction set is intended as a guideline for the safe installation of Energy Suspension's polyurethane bushings, once you have removed the factory components from your vehicle.

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**If your new bushing kit does not have new shells and/or sleeves, you must reuse the original shells and /or sleeves. Do not press out shells. Leave shells in arm.** To remove the old rubber from the factory shells and inner sleeves, apply light heat evenly around the outside of the control arm, (Fig 1) just enough to break the bond with the rubber. When you see light smoke coming from the sides of the bushing the bond should be broken. At no time should there be any flames coming from the rubber, if there are any flames, you need to back off with the heat. Just push the old rubber and inner metal sleeve out. Let the outer metal shells and sleeves cool off before cleaning. **If your new bushing kit has new shells and/or sleeves, you will need to press out the old shells.** Before removing old bushings from upper control arm measure from outside of shell to outside of shell and record this dimension for later use. This should be the same measurement after the new metal shells are pressed in.. (Fig.3) Note the locations of any washers on cross-shaft prior to removal. All washers, or spacers on shaft must be reused, and installed in correct location before installing new bushings. To keep from bending the flanges of the arm during installation of the new shells, use a piece of angle iron or channel cut to the size of the inside width of the flanges. Note: When a control arm shaft is used, it must be in position before installing bushings and/or new shells. Before removing old bushing from lower control arm measure outside of shell to outside of shell and record this dimension for later use. (Fig. 4) You will need to find something to put between the flanges before pressing out the old bushings and for pressing in the new shells. Use either metal channel, tubing, or thick wall PVC tubing for spacers. Grease I.D. of shell. Grease bushing and install in shell. Grease sleeve and install in bushing. Re-torque to hardware to factory specifications.

2 washers used on bushing with cam bolts must be reused

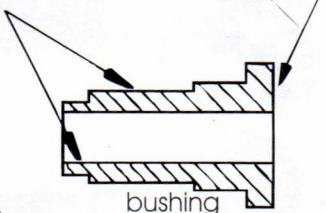
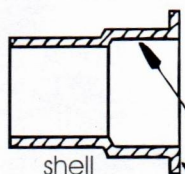
Grease I.D. and O.D. of bushing lightly

Grease outside flange of bushing lightly

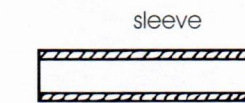
**IMPORTANT:** Coat urethane bushing, sleeve and shell I.D. Lightly with supplied grease. (all surfaces of bushings that contact metal)



Note:  
When reusing original shells, make sure inside surfaces are free of all old bushing material.



Grease flange and I.D. of shell lightly



Grease O.D. of sleeve lightly



See Fig.2 for removal of factory cap washers.

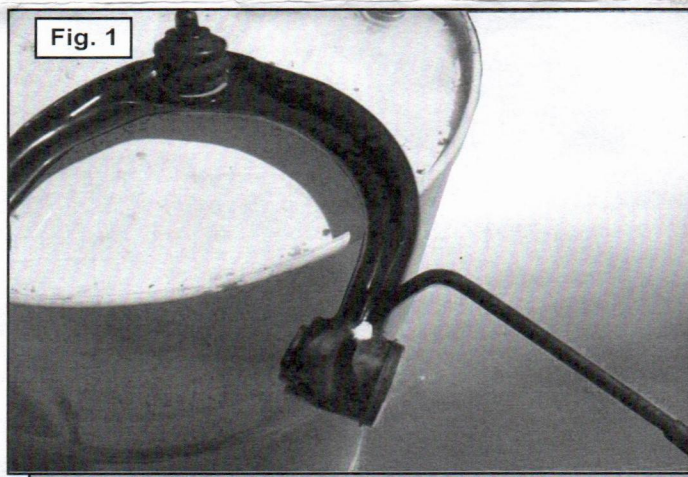
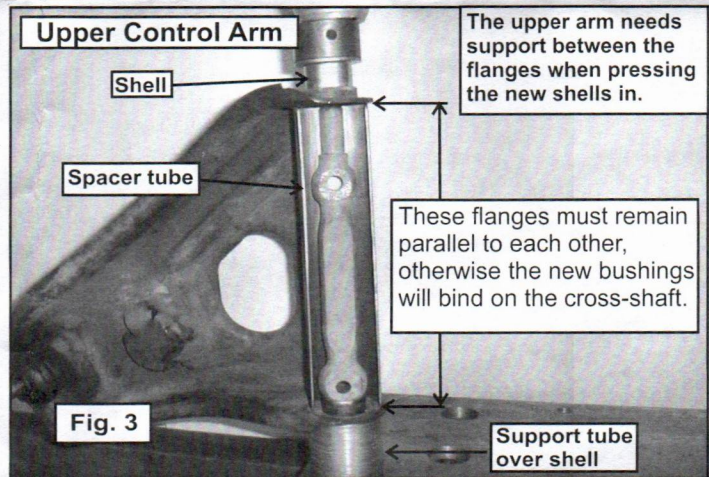


Fig. 1



Upper Control Arm

The upper arm needs support between the flanges when pressing the new shells in.

These flanges must remain parallel to each other, otherwise the new bushings will bind on the cross-shaft.

Fig. 3

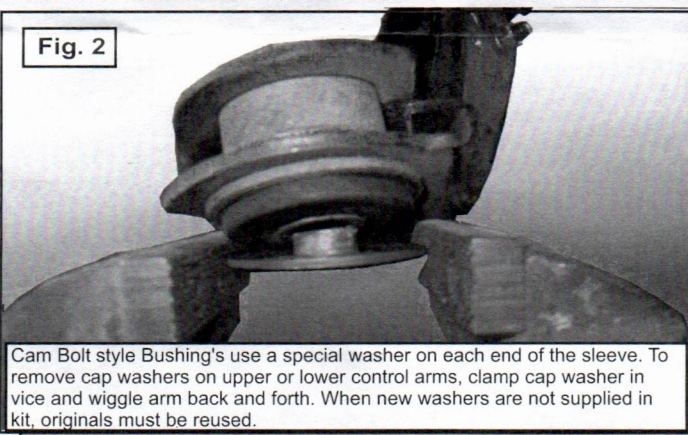
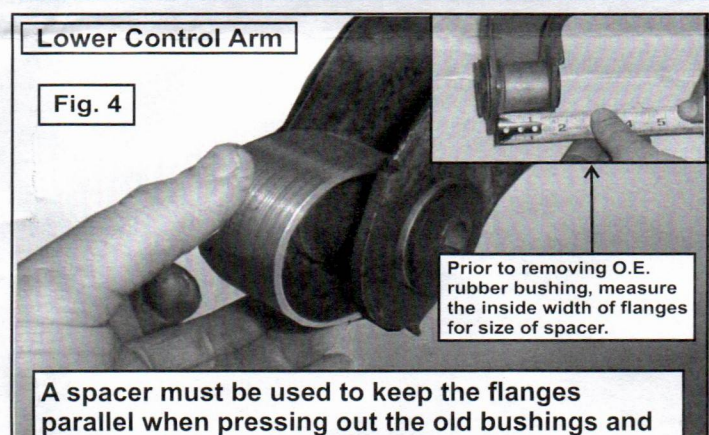


Fig. 2

Cam Bolt style Bushing's use a special washer on each end of the sleeve. To remove cap washers on upper or lower control arms, clamp cap washer in vice and wiggle arm back and forth. When new washers are not supplied in kit, originals must be reused.



Lower Control Arm

Fig. 4

Prior to removing O.E. rubber bushing, measure the inside width of flanges for size of spacer.

A spacer must be used to keep the flanges parallel when pressing out the old bushings and pressing in the new shells.



# Installation Instructions for Set # 3.3191 63-82 Corvette

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1. Using an 11/16" bit, drill out flared end of inner metal retainer.

2. Remove retaining washer and tap out inner retainer sleeve, inner metal shell and old rubber bushing.

**Note: Do not remove outer metal shell that is pressed into the trailing arm. See Fig. 1 This outer metal shell must be reused!**

3. Clean inside of inner metal shell of any old rubber or rust. When installing polyurethane bushings, apply grease as instructed: Apply light coat of grease to I.D. of the metal shell. Apply light coat of grease to the I.D. and O.D. of bushings (all surfaces that contact metal). Apply light coat of grease to the O.D. of sleeve. Apply light coat of grease to the faces of the bushings before the cap washers are installed.

4. Refer to (Fig. 2) for assembly of your new polyurethane bushings.

5. After applying grease to all necessary parts, use a press or vice (Fig. 3) to install the cap washers into the inner sleeve. The cap washers are not a press fit, the excess grease will help hold the cap washers in place. Be sure to have the cap washers square with the new inner sleeve when assembling together (Fig. 4).

6. Reassemble your trailing arm and install back into your vehicle according to the factory service manual. When finished, Energy Suspension recommends a four wheel alignment at a qualified service center.

(If your original outer metal shell is unuseable, get new replacements from GM, P/N 3743857).

Fig. 1

Do not remove outer metal shells from rear trailing arm. They must be reused.

Trailing Arm

Inner metal shells  
(Must reuse O.E.M. Shell)

Fig. 2

3044 Trailing arm bushings.  
4 bushings supplied.

15P10771 Sleeve.  
(.750" O.D. X .532" I.D. X 2.00" LG)  
2 sleeves supplied.

15.03.103 Cap washer.  
(1.625" O.D. X .437" I.D.)  
4 cap washers supplied.

Fig. 3

Fig. 4

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15/SEP/22 BRH ECN 22080

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# Instruction Sheet

Set # 3-1108 (Gold plated) Set# 3-1132 (Chrome Plated)  
GM Multi-application transmission mount. One and two bolt style.

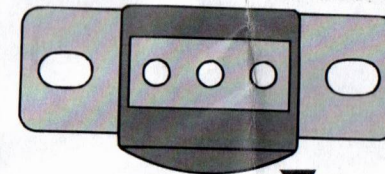
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Upper preload plate must be used.  
(It is not a spacer.)

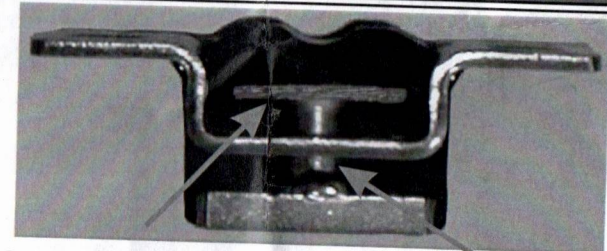
1036 - Gold  
1159 - Chrome

If your vehicle has  
two (2) flanged bolt  
heads that hold the  
mount to the  
transmission case,  
**DO NOT** use  
supplied flat  
washers.



Install mount  
with radius  
toward rear of  
vehicle

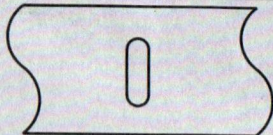
The urethane transmission mount was designed  
for use as a two bolt or single center bolt mounting  
application. On the single bolt style, one of the  
supplied bolts will not be used. Do not use this  
extra bolt assembly anywhere else as most of the  
other positions are metric.



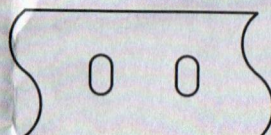
Side view (cutaway) showing safety interlock

## Crossmember center section diagram

Single stud style



2 bolt style



Before installing the new mount, be sure to check the transmission  
crossmember for cracks or damage at the slotted hole areas.  
Repair or replace the crossmember if any damage is evident. On  
high performance(race condition) applications, reinforcing the area  
around the mounting point of the crossmember is recommended.  
This type of crossmember has an inherent problem with stress  
cracks around the bolt holes. Always check the front engine mounts  
and replace if necessary.

**Tighten all fasteners to factory specifications.**

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3/04/97 KN

Updated 29/NOV/01 JTL  
Updated 5/FEB/02 BRH  
Updated 27/FEB/04 NJ  
Updated 24/MAY/17 BRH ECN 17043



# INSTRUCTION SHEET

## Corvette Endlink Sets

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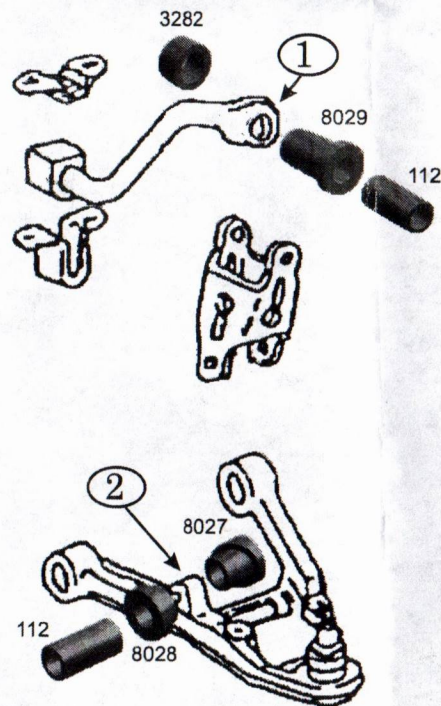
**LOCATION 1)** The outer metal shell of this bushing must be reused. **DO NOT** remove from the front swaybar eye.

**LOCATION 2)** Complete bushing assembly including outer metal shell must be removed before new urethane part can be installed. (Can be tapped out with a hammer) **NOTE: DO NOT** remove shell from front sway bar.

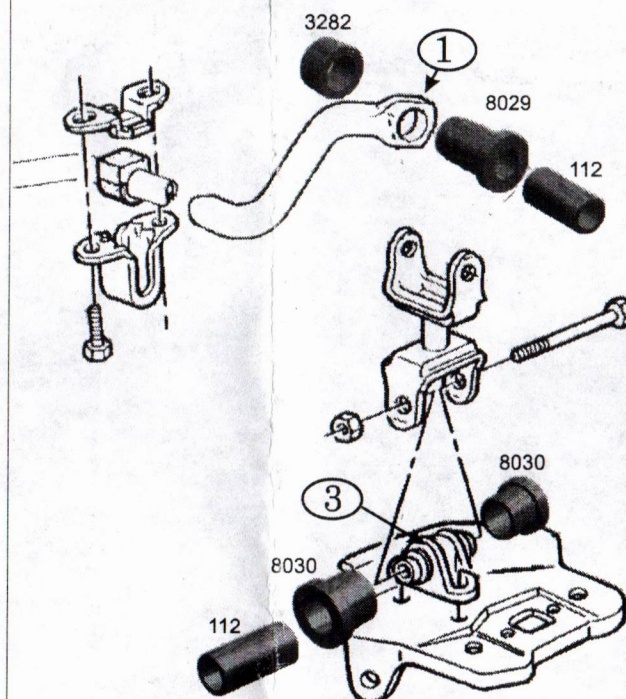
**LOCATION 3)** Rubber is bonded to the inside diameter of this bracket. With the bracket removed from the vehicle, heat must be applied to remove the rubber. Use caution when heating bracket. Do not overheat the aluminum.

These instructions for endlinks only. Sway bar bushings must be purchased separately.

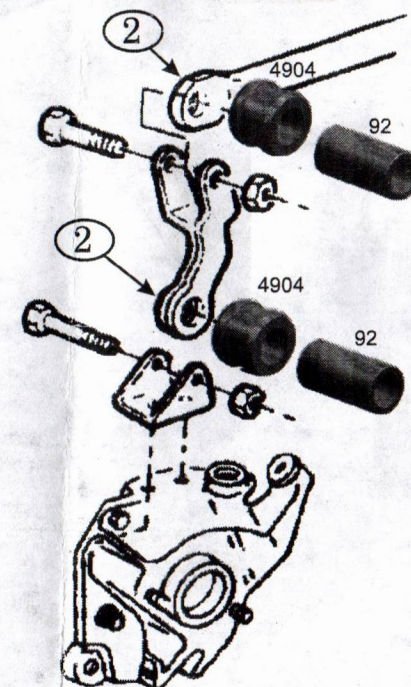
Front Set for 1988-95



Front Set for 1984-87



Rear Set for 1963-96





# Installation Instructions for Set # 3-7101, 3-7102 63-74 Corvette (1-1/2" rod eye) 75-82 Corvette (1-3/4" rod eye)

## Parts list:

- 8 - 7005 bushings (vehicles with 1-1/2" O.D. Rod eye)
- 8 - 7115 bushings ( vehicles with 1-3/4" O.D. Rod eye)
- 4 - 15.10.53.39 (.875" x .625" x 1.675" sleeve)
- 4 - 15.03.99.39 (1.295" x .500" cap washers)
- 2 - 15.08.88.40 (1/8" Dia. x 1-1/4" Lg. Cotter pin)
- 2 - 9-11108 grease.

The parts in this list are packaged as set 3.7118 also sold in master set 3.18123

**Note:** It is recommended that a factory service manual be purchased prior to performing any work on your car or truck.

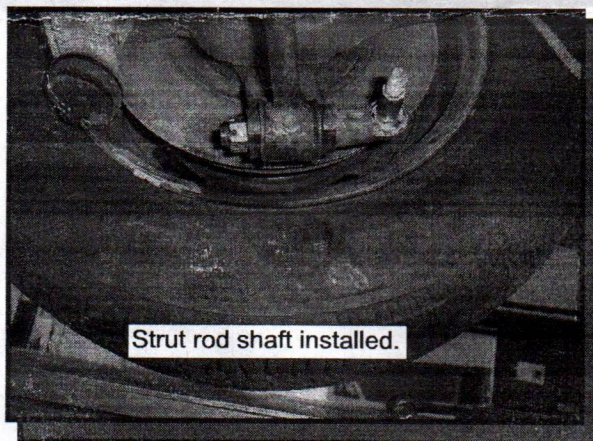
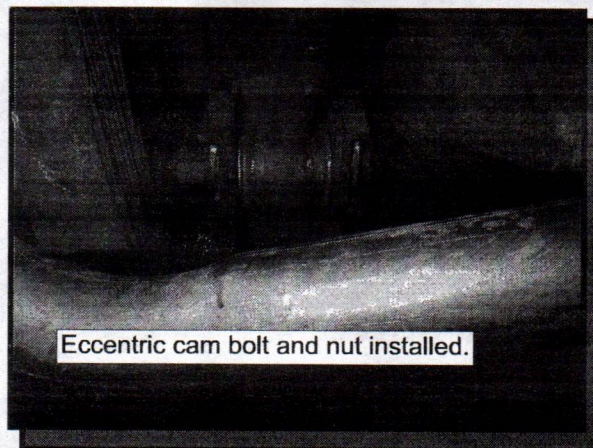
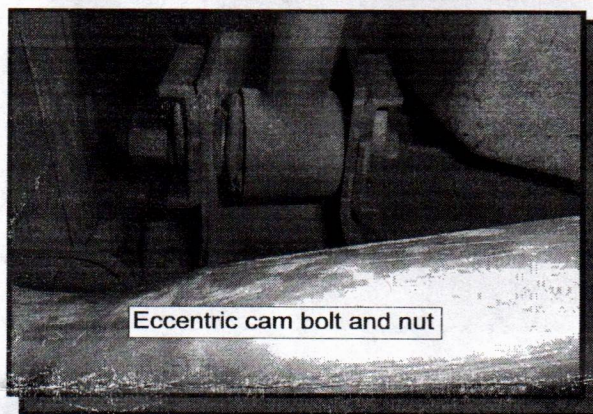
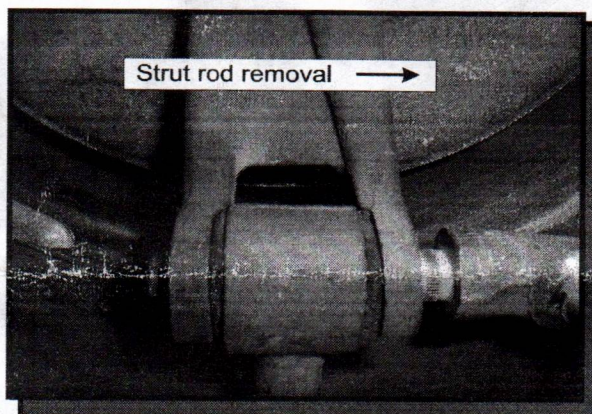
1. Properly support vehicle on the frame.
2. Disconnect the shock lower eye from strut rod shaft.
3. Remove strut rod shaft cotter pin and nut. Remove shaft by pulling toward front of vehicle.
4. Mark position of the eccentric cam bolt assembly and brackets, so they may be reassembled in same position.
5. Loosen eccentric cam bolt and nut. Pull strut rod down out of bracket and remove old cap washers.
3. Remove the old rubber bushing and sleeves from the strut rod ends. A press may be needed depending on the condition of the old rubber bushings.
4. Clean the strut rod ends and grease the inside of the eyes. Grease all sides of the bushings that contact metal and outside of the supplied metal sleeve.
5. Press in the Energy Suspension bushings. Note: the bushings have a part number engraved in them. The engraved side on each bushing must be facing each other when fully assembled.
6. Install the supplied cap washers on each side of the strut rod and slide into bracket. Install cam and bolt assembly and adjust cam to line up with marks on bracket. Torque cam bolts to 65 Lb.
7. Install other end of strut rod into spindle fork and insert strut rod shaft into fork so that both flats line up properly. Install slotted nut. Torque strut rod shaft to 75 Lb. Plus additional torque needed to line up cotter pin hole. Then install new cotter pin through rod bolt.
8. Install lower shock eye onto strut rod shaft with washer and nut and torque to 35ft lb.
9. Energy Suspension recommends a four wheel alignment at a qualified service center.

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**17326**  
1/AUG/11 MAM

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# Installation Instructions for Set # 3-10102 63-82 Corvette

## Parts list:

- 2 - 8052 Power steering ram bushings.
- 1 - 15.10.152.39 (.500"O.D. X .375" I.D. X 1.125" LG. sleeve)
- 2 - 15.03.01.39 (1.250"O.D. X .375" I.D. cup washer)
- 1 - 15.05.22.40 (3/8-16" slotted nut)
- 1 - 15.08.87.40( 1/16" x 3/4" cotter pin)

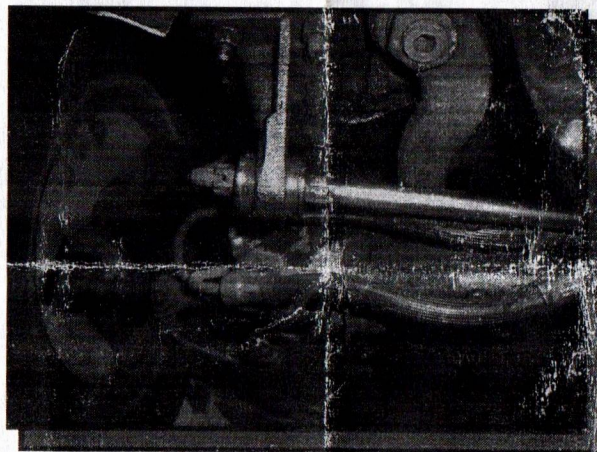
Remove cotter pin and slotted nut from steering ram.  
**Do not grip polished rod with any tools.** Remove old rubber bushings, washers and sleeve. Install new polyurethane bushings, washers and sleeve. Tighten new slotted nut until washer bottoms on the sleeve. Then turn nut until slot is aligned with hole in ram and insert new cotter pin.

**17361**

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