READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.
CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.

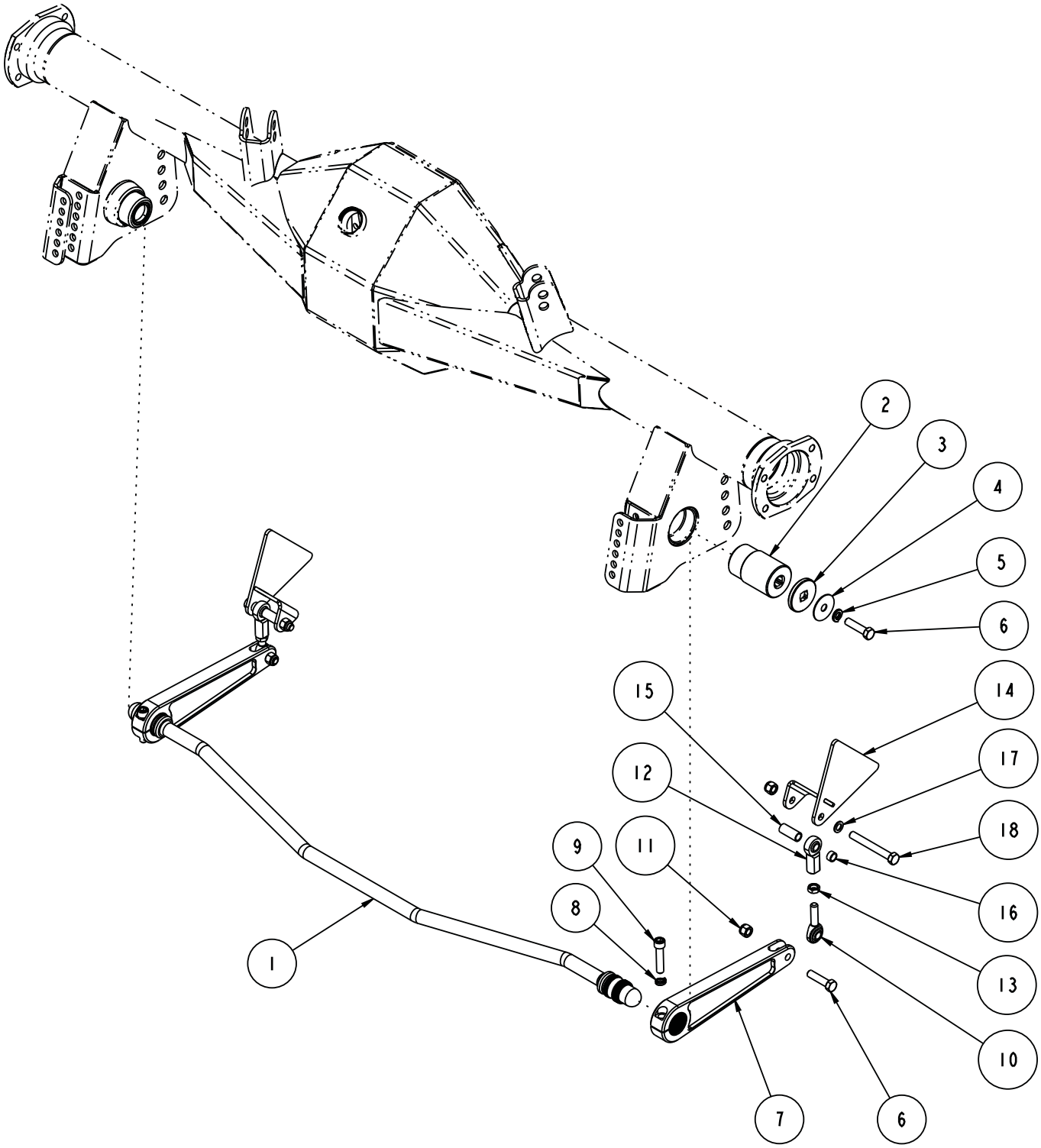
INSTALLATION GUIDE

CHRIS ALSTON'S Chassisworks
THE HOME OF HIGHER TECHNOLOGY

5821-F20
g-Bar Splined-End Anti-Roll Bar
1970-1981 Camaro and Firebird
(Mini-Tubbed)

Description: Splined-end anti-roll bar for mini-tubbed 1970-1981 Firebird/Camaro g-Bar rear suspension.
Includes: 3/4” diameter bent-tube anti-roll bar, billet-aluminum arms, pivot sockets, endlink assemblies, and frame brackets.

Notes: Threaded mounting socket is part of lower axle-housing bracket and ships with g-Bar suspension system. Installation of chassis mounts requires welding.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ITEM	QTY	PART NO.	DESCRIPTION
1	1	7959-0090	ANTI-ROLL BAR ASSEMBLY, ∅3/4, BALL PIVOT, G-BAR, 70-81 CAMARO, MINI-TUB
2	2	3701	PRELOAD ADJUSTER ASSEMBLY BALL END ANTIROLL BAR
3	2	1262	LOCKING RING, 1 7/8-20 THREAD 1/2 DRIVE, BALL END ANTIROLL BAR
4	2	3157-038F-C	FENDER WASHER, 3/8 x 1 1/2, ZINC PLATED
5	2	3108-038L-C	LOCK WASHER, HELICAL SPRING ∅3/8, STEEL, ZINC
6	4	3100-038F1.50Y	HEX BOLT, 3/8-24 x 1 1/2, GRADE 8, YELLOW ZINC
7	2	1468	ANTI-ROLL STRAIGHT ARM, 1 1/4-48 SPLINE, 8.20 LONG
8	2	3108-038H-C	HIGH COLLAR LOCKWASHER, 3/8 STEEL, CLEAR ZINC
9	2	3103-038C1.75C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-16 x 1 3/4, CLEAR ZINC
10	2	3111-038X038-RT	ROD END, 3/8-24 RIGHT x 3/8 BORE, MALE, TEFLON, CM6T
11	4	3101-038-24C	LOCKNUT, 3/8-24, GRADE 5, NYLON INSERT, CLEAR ZINC
12	2	3127-038X038-RT	ROD END 3/8 x 3/8 BORE RIGHT, FEMALE, CF6T
13	2	3102-038-24RC	JAM NUT, 3/8-24 RIGHT, CLEAR ZINC
14	2	5340	FRAME BRACKET, ANTI-ROLL BAR, G-BAR, 64-70 MUSTANG
15	2	3140-1216-038	SLEEVE, ∅1/2 x .384 x 1 3/16
16	2	3140-1216-008	SLEEVE, ∅1/2 x .384 x 1/4
17	2	3109-038-S-2-Y	AIRCRAFT WASHER 3/8 x .062 THICK
18	2	3100-038F3.00Y	HEX BOLT, 3/8-24 x 3, GRADE 8, YELLOW ZINC

DESCRIPTION: ANTI-ROLL BAR, SPLINED, MINI-TUB, 70-81 CAMARO, G-BAR

Chris Alston's CHASSISWORKS INC.
8661 YOUNGER CREEK DRIVE
SACRAMENTO, CA 95828
(916) 388-0288 FAX 388-0295

PART NO. 5821-F20

11/12/10 | DWG: 915821-F20

PARTS LIST

Prior to beginning installation use the following parts lists to verify that you have received all components required for installation.

Splined-End Anti-Roll Bar - 300-0150

Qty	Part Number	Description
1	7959-0090	Anti-roll bar 3/4” diameter, 1-1/4” 48 spline with 1” ball pivot ends

Mounts and Hardware - 300-0161

Qty	Part Number	Description
2	1468	ARB arm, 8.2” length, 0° offset, 1-1/4-48 spline, fits 3/8” rod end, left
2	3701	Preload adjuster assembly with bearing for ball end anti-roll bar
2	5340	Frame bracket anti-roll bar F20
90300-0161.12 - Bag 1 of 2		
2	1262	Lock ring with 1-7/8”-20 thread
2	3100-038F1.50Y	Bolt 3/8-24 x 1-1/2” hex cap screw
2	3108-038L-C	Lock washer 3/8 regular .377 x .680
2	3157-038F-C	Fender washer 3/8 x 1-1/2” x .073 thick
90300-0161.22 - Bag 2 of 2		
2	3100-038F1.50Y	Bolt 3/8-24 x 1-1/2” hex cap screw
2	3100-038F3.00Y	Bolt 3/8-24 x 3” hex cap screw
4	3101-038-24C	Locknut 3/8-24 nylon insert
2	3102-038-24RC	Jam nut 3/8-24 right, Grade 5
2	3103-038C1.75C	Socket head 3/8-16 x 1-3/4” cap screw
2	3108-038H-C	Lock washer 3/8 high collar .377 x .550 od
2	3109-038-S-2-Y	Aircraft washer, 3/8 small OD
2	3111-038X038-RT	Rod end 3/8 right x 3/8 bore male
2	3127-038X038-RT	Rod end 3/8 right x 3/8 bore female
2	3140-1216-008	Sleeve 3/8 ID x 3/4 OD x 1/4” long
2	3140-1216-038	Sleeve 3/8 ID x 3/4 OD x 1-3/16” long

INSTRUCTIONS

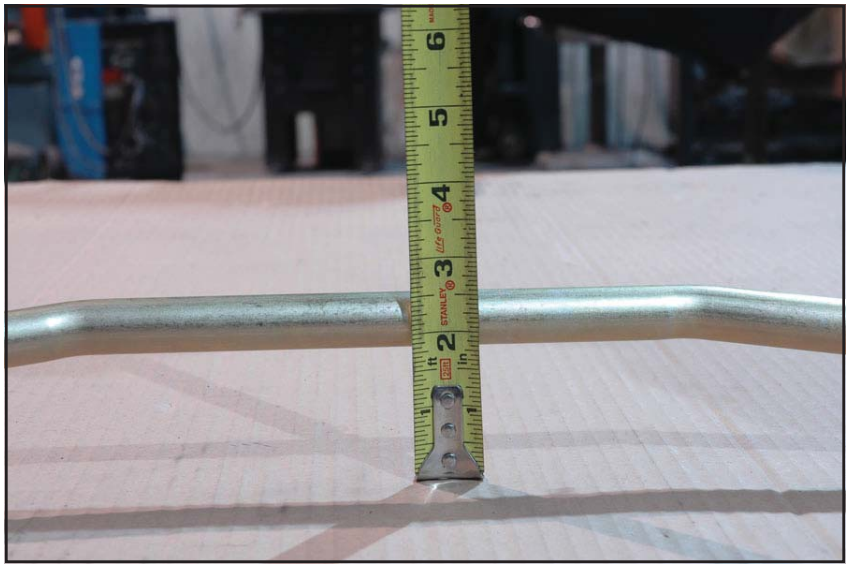
Anti-Roll Bar Assembly

Anti-roll bar must be assembled to correctly position bend for maximum center section clearance.

1. Place billet arms and anti-roll bar on a flat working surface. The arm' bolt counter-bores should be facing down. The 4-degree offset spline bore must make the arms angled outward away from each other.
2. Orient the anti-roll bar with the bend pointing the opposite direction that arms extend.
3. Rotate bar approximately 45 degrees, so that bent section is raised and insert a splined-end into the first arm until the splines are slightly engaged.
4. With the inserted arm laying flat on the table, raise the opposite end of the bar and slightly engage the splines. Make sure the arms are indexed the same so that they are flat to each other.

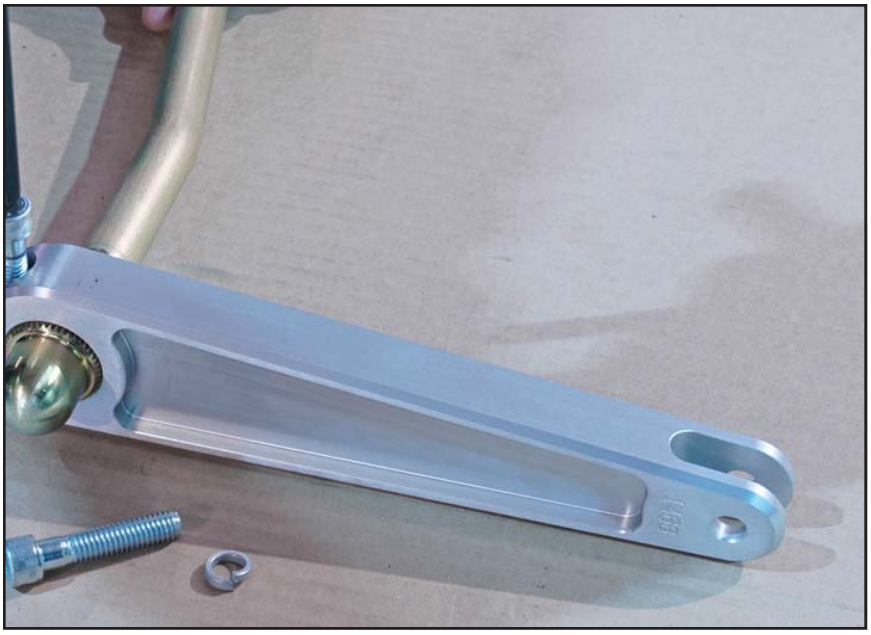
5. When correctly indexed, the top of the bend should be approximately 2-1/2 to 2-5/8" from the working surface. If the bend height is outside this range, disengage splines, rotate bar, reassemble, and then measure again.

   Note: Assembly orientation is upside down from actual installation orientation.



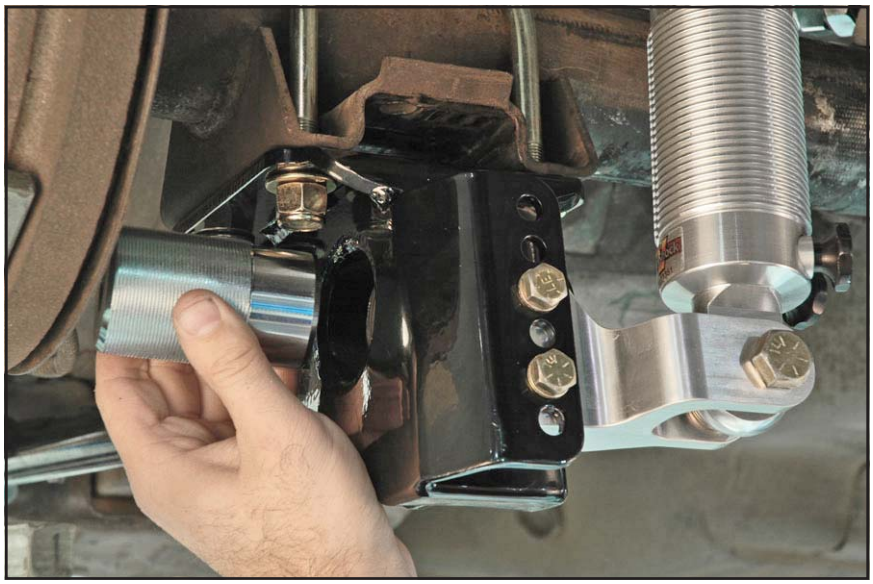
6. Secure arms with 3/8-16 x 1-3/4” socket head cap screws and high-collar lock washers. Use a small amount of Loctite® on the threads.

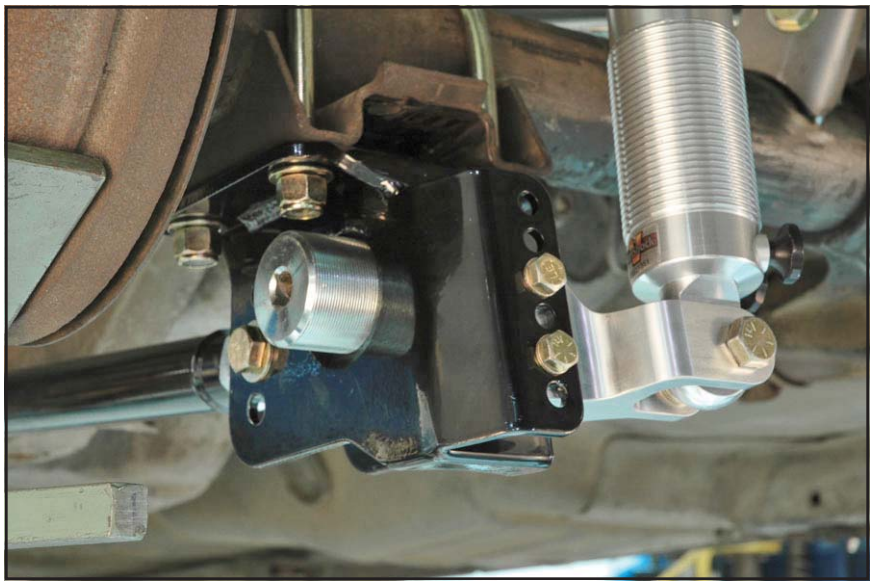
   Note: This pinch-bolt configuration applies pressure against the spline to remove all play.



Preload Adjuster Assembly

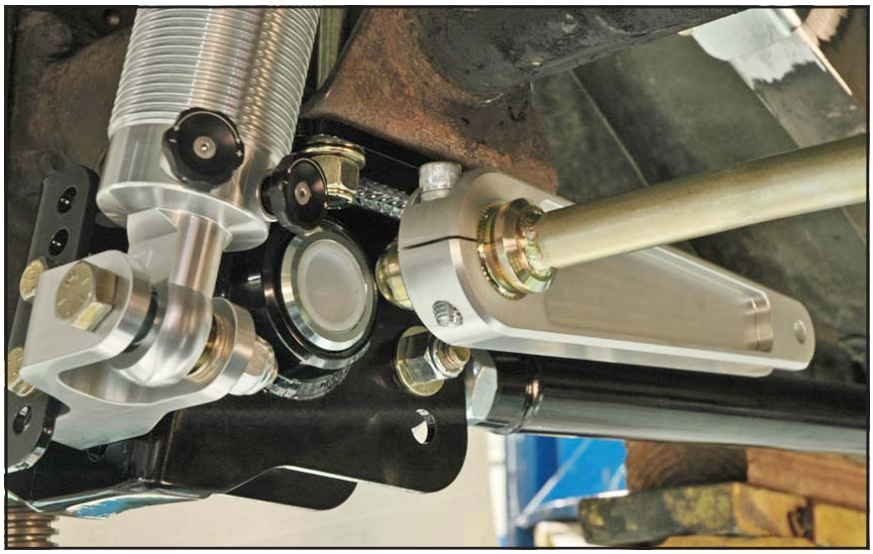
7. Make sure 1-7/8” female threads in lower axle brackets are clear before beginning assembly. Use a wire-tooth brush in a rotating motion to clean the bores. The fine thread is easily seized up by debris or powder-coat residue.
8. Apply a small amount of Anti-Seize to the external threads of the preload adjuster assemblies.



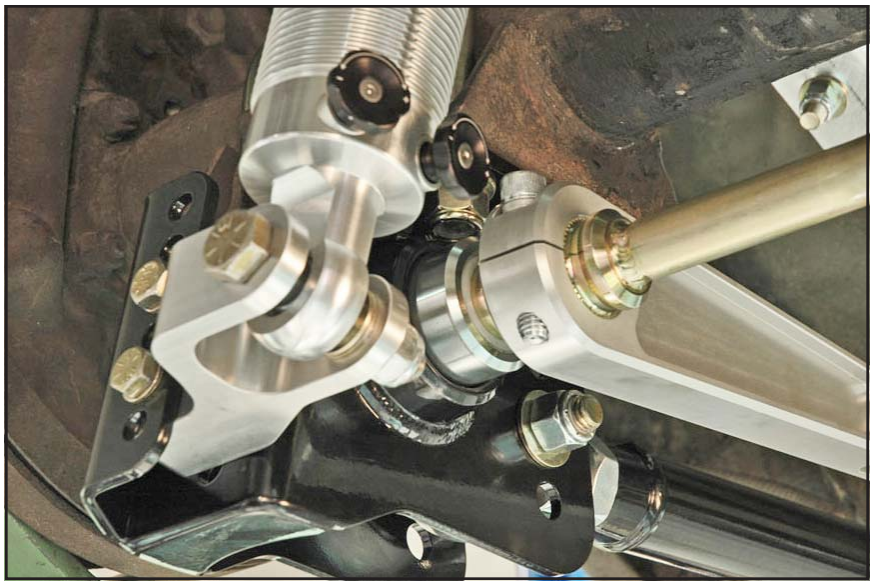


9. Using a 1/2-inch drive ratchet and extension, thread the preload adjuster assemblies into the threaded sockets on the lower axle bracket. Continue until they are even with the socket edge closest to the rearend center section. Do not forcefully thread the assembly together. Doing so will damage the threads.

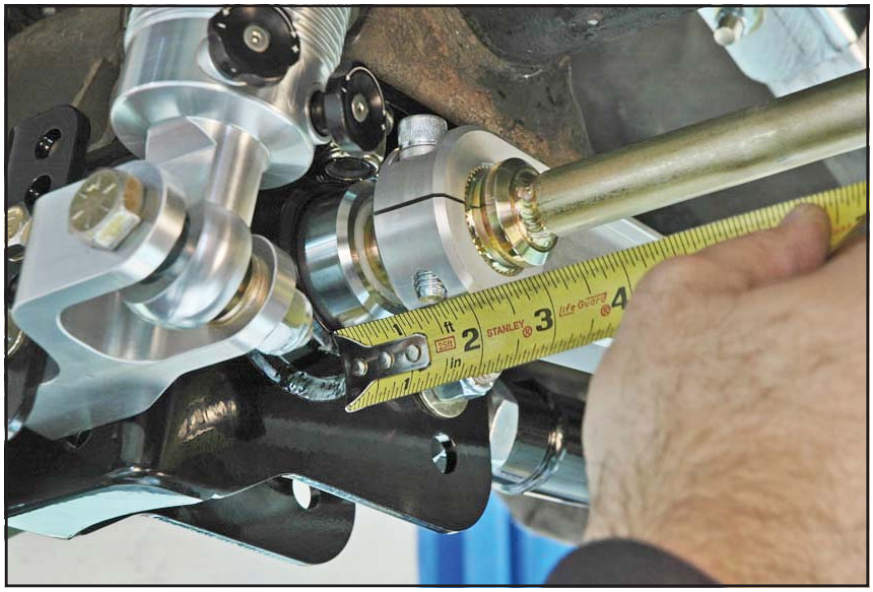
10. Place the anti-roll bar assembly between the preload adjusters with the arms toward the front of the car and the pinch-bolt heads facing up.



11. Continue to tighten both adjusters evenly until the ball end of the anti-roll bar is bottomed out against the bearing.

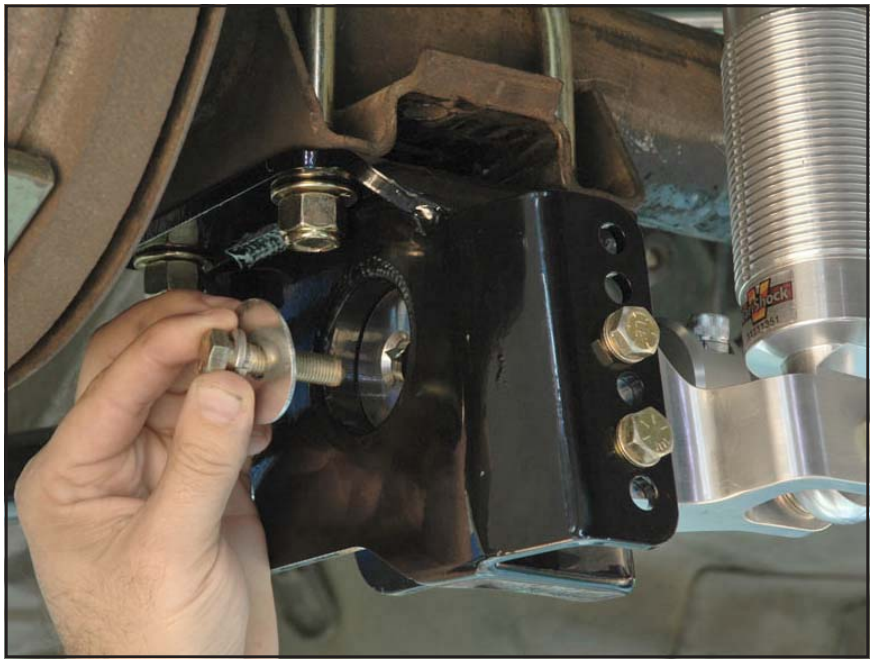


12. Verify that the anti-roll bar is centered. Billet arms must be equal distance from the axle brackets. Then, tighten both preload adjusters an additional 1/4 turn. Do not overtighten. Doing so will cause the anti-roll bar to flex.



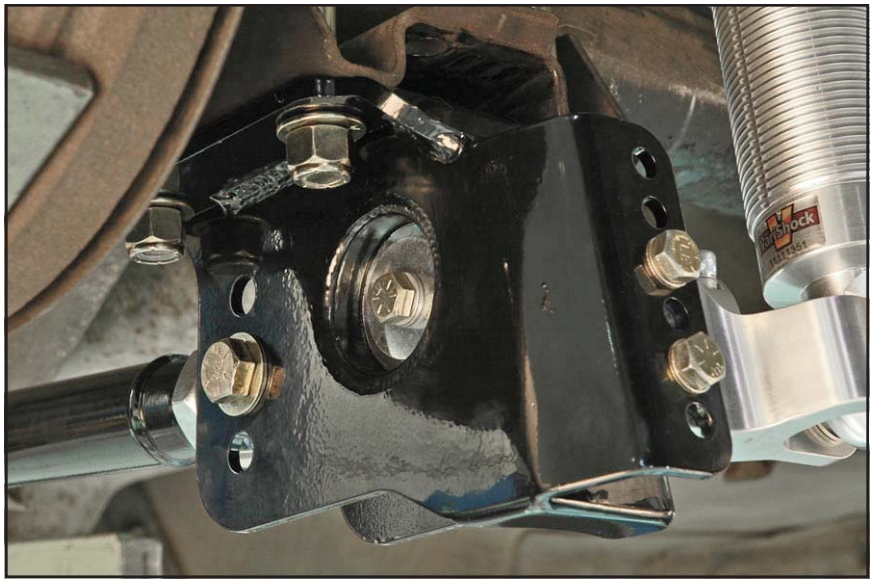
13. Thread the locking ring into the axle bracket socket so that it is tight against the preload assembly.

14. Secure with 3/8” fender washer, lock washer, and 3/8-24 x 1-1/2” hex bolt.



15. Tighten to 35 lb-ft.

16. Repeat steps for opposite side.

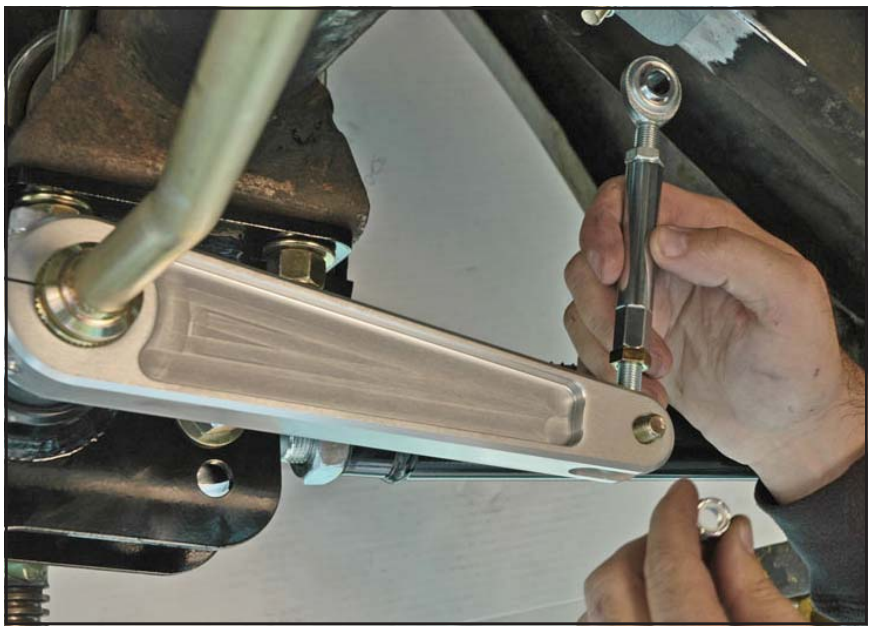


Endlink Adjuster Assembly

17. Thread 3/8”-24 jam nuts onto each male rod end until 3/4” of threads have passed the jam nut. This will position the jam nut at approximately half travel.

18. Apply a small amount of anti-sieze to the threads of the male rode end, thread it into the female rod end until the jam nut makes contact.

19. Attach the endlink adjuster assemblies to the billet arms. Use 3/8-24 x 1-1/2” hex bolts and lock nuts provided. Torque mounting hardware to 35 lb-ft.



Frame-Clevis Welding

Following images are for reference only. Different linkage assembly is shown.

20. Raise the rearend housing to ride-height position.

21. Temporarily install the endlink using the 3/8-24 x 3” bolts and sleeves. The long sleeve will be placed toward the inside on the bracket against the rod end, the short sleeve is toward the outside of the frame rail.

22. Position the endlink frame clevis against the frame.

23. Mark the outline of the clevis base onto the frame rail, and then move the clevis out of the way.

24. Using a scotch-brite wheel to clean the weld area on the frame rail and to remove the zinc coating along the edges of the endlink frame bracket.

25. With the endlinks still attached, place the frame brackets into position and tack weld to the frame rails.

26. Repeat procedure for opposite side of vehicle.

27. Check for any clearance issue with the anti-roll bar throughout the suspension's range of travel. This must be done without springs installed on the shocks or without air pressure if using ShockWaves®.


Ride Height


Full Extension


Full Compression

28. Unbolt the endlink assembly from the frame sleeve mount.
29. Weld completely around to frame joints.
30. Spray paint bracket and weld area to protect against rust.
31. Install adjuster link assembly onto frame mounted sleeve.
32. Torque mounting hardware to 35 lb-ft.

33. Adjuster links should be in a neutral position, meaning that there is NO preload placed upon the anti-roll bar. If there is any preload present, adjuster links will be difficult to turn by hand. If necessary, adjust one of the link assemblies to a shorter length until preload is neutral. Do NOT add preload to chassis using adjuster links.
34. Rotate each rod end body so that it is centered within its clevis, then tighten jam nuts.
35. Verify that all mounting hardware is correctly installed and torqued to specification.

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Chris Alston's Chassisworks
8661 Younger Creek Drive
Sacramento, CA 95828
Phone: 916-388-0288
Technical Support: tcptech@cachassisworks.com

CHRIS ALSTON'S Chassisworks
THE HOME OF HIGHER TECHNOLOGY