

INSTALLATION GUIDE



6271

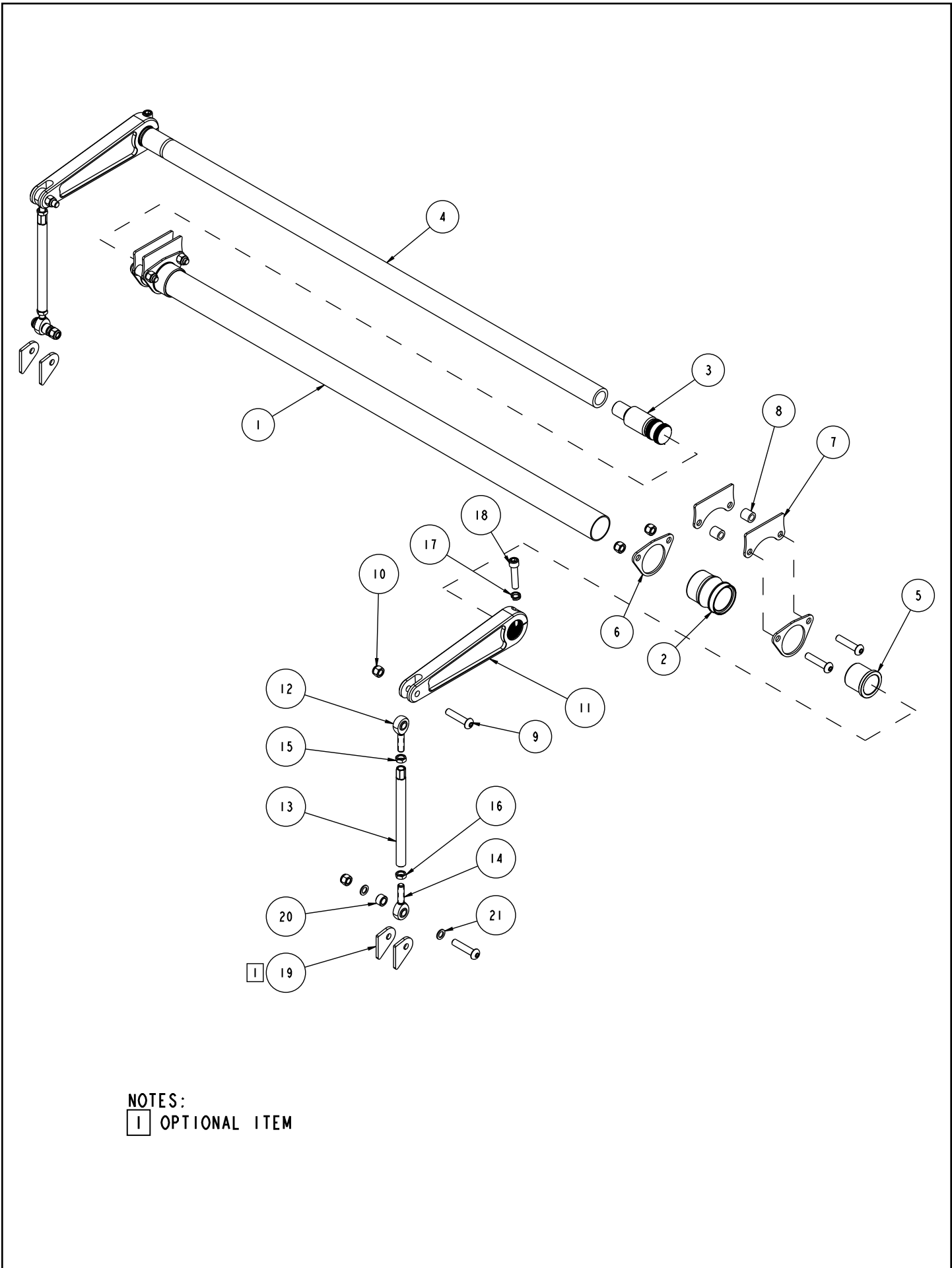
Anti-Roll Bar, Splined Ends with Bolt-On Style Mounts



Description: Bolt-on style, splined, anti-roll bar with weld-on frame mounts and billet arms.

Includes: 1-1/4" diameter tube anti-roll bar, billet-aluminum arms, billet-steel bearing housing, and endlink assemblies. Maximum width is 40".

Notes: Welding is required for assembly of the anti-roll bar, mounting tube, and chassis mount tabs.



NOTES:
 1 OPTIONAL ITEM

ITEM	QTY	PART NO.	DESCRIPTION
1	1	A26.065-036.000	CROSS TUBE, ANTI-ROLL BAR BOLT-ON 36"
2	2	1170	HOUSING, Ø1.50 FLANGED BEARING, Ø1 5/8 TUBE, .885 SHOULDER
3	2	1161-0.870	SHAFT ADAPTER 1 1/4-48 SPLINE x .870
4	1	A20.188-036.000	CUT TUBE, Ø1 1/4 x .188 WALL 4130 x 36
5	2	3155-1.260-4848	BEARING, Ø1.73 OD x .20 FLANGE, Ø1.260 ID x 1.505 OD x 1.50 LONG
6	4	2728	HOUSING RING BRACKET, ANTI-ROLL BAR BUSHING
7	4	2729	CHASSIS MOUNTING TAB, 4130, ANTI-ROLL BAR
8	4	D10.120-000.625	SLEEVE, Ø5/8 x .120 WALL x .625
9	8	3104-038C1.75C	BUTTON HEAD CAP SCREW 3/8-16 x 1 3/4, CLEAR ZINC
10	8	3101-038-16C	LOCKNUT 3/8-16, GRADE 5, NYLON INSERT, CLEAR ZINC
11	2	1468	ANTI-ROLL STRAIGHT ARM, 1 1/4-48 SPLINE, 8.20 LONG
12	2	3126-038X038-L	ROD END, 3/8-24 LEFT x 3/8 BORE, 4130, MALE JMX6
13	2	1056	ADJUSTER, 7.0 x 3/8-24, ANTI-ROLL BAR
14	2	3126-038X038-R	ROD END, 3/8-24 RIGHT x 3/8 BORE, 4130, MALE, JMX6
15	2	3102-038-24LY	JAM NUT, 3/8-24 LEFT, YELLOW ZINC
16	2	3102-038-24RC	JAM NUT, 3/8-24 RIGHT, CLEAR ZINC
17	2	3108-038H-C	HIGH COLLAR LOCKWASHER, 3/8 STEEL, CLEAR ZINC
18	2	3103-038C1.75C	SOCKET HEAD CAP SCREW, GRADE 8, 3/8-16 x 1 3/4, CLEAR ZINC
19	4	2121	CLEVIS TAB Ø3/8 HOLE
20	2	1055	SLEEVE Ø5/8 x .120 DOM x .375
21	4	3109-038-S-2-Y	AIRCRAFT WASHER 3/8 x .062 THICK

DESCRIPTION		SPLINED ANTI-ROLL BAR, BOLT-ON, DRAG-RACE	
<i>Chris Aston's</i> CHASSISWORKS INC. 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295		PART NO.	6271
		3/10/09	DWG: 916271

PARTS LIST

PRIOR TO INSTALLATION:

Use the following parts list to verify you have received all components required for installation.

Item	Qty	Part Number	Description
1	1	A26-065-036.000	Cross tube 4130 1-5/8 x .065 x 36" long
2	2	1170	Bearing housing for 1.50"-OD flanged bearing and 1-5/8" tube
3	2	1161-0.870	Tube adapter flat-end .870 x 1-1/4"-48 spline
4	1	A20.188-036.00	Anti-roll tube 4130 1-1/4 x .188 x 36" long
5	2	3155-1.260-4848	Flanged bearing 1.260 ID x 1.5 OD x 1.5" long
6	4	2728	Bearing-housing bracket
7	4	2729	Chassis mounting tab
8	4	D10.120-000.625	Chassis-mount sleeve 5/8 x .120 wall x .625" long
9	8	3104-038C1.75C	Button-head 3/8-16 x 1-3/4" cap screw
10	8	3101-038-16C	Locknut 3/8-16 nylon insert
11	2	1468	Anti-roll-bar billet arm, 48 spline, 8.2" center length
12	2	3126-038x038-L	4130 Teflon®-lined rod end 3/8" left hand male
13	2	1056	Adjuster rod 7" anti-roll bar
14	2	3126-038x038-R	4130 Teflon®-lined rod end 3/8" right hand male
15	2	3102-038-24LY	Left-hand jam nut 3/8-24
16	2	3102-038-24RC	Right-hand jam nut 3/8-24
17	2	3108-038H-C	Lockwasher 3/8" high collar
18	2	3103-038C1.75C	Socket-head 3/8-16 x 1-3/4" cap screw
19	(4)	2121	Housing-mount clevis tab (optional kit 6221)
20	2	1055	Sleeve 5/8 x .120 wall x .375" long
21	4	3109-038-S-2-Y	Aircraft washer 3/8"small OD

INSTRUCTIONS

The 4-link, locator, and shocks must be completely installed with the rear end at ride height and centered in the chassis before starting. This anti-roll bar requires considerable space above the rear end. Frame modification may be required.

Anti-roll Bar Overall Length

When the anti-roll bar is being used with the Eliminator II (6246) and Avenger (6206 or 6260) 4-link systems the overall outside width will be equal to the outside 4-link bracket width.

When installing the anti-roll bar on other rear suspensions make it as long as possible, allowing clearance for the billet arms to pivot during suspension travel. Use the optional adjuster-rod tab kit (6221); refer to Item 19 (2121) on the exploded drawing to attach the links to the rear end housing.

1. Record the overall outside width needed here. _____

Cutting the Tubes to Length

2. To determine the correct length of the inner anti-roll-bar 1-1/4 OD tube, use the overall width determined above; then subtract 5-15/16". Example: overall anti-roll bar width is 24" minus 5-15/16", equals inner tube length of 18-1/16". Cut the inner anti-roll-bar tube to the calculated length.
3. The outer 1-5/8" OD cross tube will be 5-25/32" shorter than the overall length. Example: Overall anti-roll-bar width is 24" minus 5-25/32" equals 18-7/32" the length of the 1-5/8 OD cross tube.

Assembling the Inner Tube with Splined Adapters

4. At each end of the 1-1/4 OD inner tube, drill three evenly spaced 5/16" holes, 1/2" from the end. These holes will be used to rosette weld the splined adapters to the center tube and hold their correct position.
5. Insert ONE of the splined adapters into the inner tube. Weld the holes to form rosette welds, filling the hole from the adapter to the outer surface of the tube. You can now TIG weld the circumference of the joint.
6. After the weld is completely cooled, slide a billet arm (#1468) onto the adapter. Secure the arm with the 3/8-16 x 1-3/4" socket head cap screw and high-collar lock washer. When tightened the bolt pinches the joint closed and removes all freeplay.
7. Slide the second splined arm (#1468) onto the loose adapter and secure with a 3/8" socket head and high-collar lock washer. The arm must be oriented so that both bolt heads will be facing the same direction.
8. Insert the second splined adapter with the arm attached, into the anti-roll bar tube. Set the assembly onto a flat surface with both arms forward to correctly index the splines.
9. Through each 5/16"-diameter hole, rosette weld the second splined adapter to the inner tube.
10. Once the rosette welds are complete, remove both billet arms and TIG weld along the circumference of the second joint. This needs to be a good quality weld.

Bearing Housing Weld Assembly

11. Assemble bearing-housing brackets and bearing housings first. Slide one of the bearing-housing brackets (2728) over the side of the bearing housing with the longer machined end (inner side). Make sure it is tight against the shoulder. Tack weld the ring to the bearing housing in three places.
12. Place a second bracket over the opposite end of the bearing housing. Use one flat side of the ring to ensure the two rings are clocked the same. Push the ring tight against the shoulder and tack weld it in three places.
13. Finish welding the rings to the bearing housing. Repeat this for the second bearing housing and then set aside to completely cool.
14. Slide one of the housing assemblies over the 1-5/8 x .065" cross tube and tack weld it in three places along the outside-diameter joint. Make sure the bearing housing is tight against the end of the cross tube. A pipe clamp can be used for this step.
15. Finish welding the first bearing housing to the cross tube, and then let the assembly completely cool. DO NOT WELD THE SECOND BEARING HOUSING TO THE TUBE AT THIS TIME.

Chassis-Mount Weld Assembly

16. Place the 5/8"-long chassis-mount sleeves between two of the chassis mount tabs. Use 3/8-16 button-head bolts (Item 8) and 3/8-16 standard nuts (not included) to hold them. Weld the spacers to the tabs. Repeat this for the second set.

Verify Cross-Tube Assembly Fit

17. Push one of the billet arms over the splined end of the anti-roll bar until it is flush along the outside edge. Secure it with a 3/8-16 x 1-3/4" socket-head cap screw.

18. Press the flanged bearing into each of the bearing housings.
19. Bolt a chassis-mount assembly to each of the bearing housings and secure with the 3/8-16 x 1-3/4" button-head bolts and locknuts.
20. Slide the cross-tube assembly over the anti-roll bar followed by the unwelded bearing-housing assembly. Make sure the flanged bearing is tight against the installed billet arm.
21. Prior to installing the second billet arm, set the assembly on a flat surface to make sure the arms are clocked the same and then secure with a 3/8" socket-head cap screw.
22. Slide or tap the unwelded bearing-housing assembly outward until it contacts the billet arm. Each bearing-housing assembly must be seated tightly against the billet arms to ensure there is no side-to-side movement during operation.
23. Set the complete assembly on a flat surface. The chassis mount tabs and billet arms should be clocked the same on both ends of the assembly. Once correct positioning has been verified, tack weld the unwelded bearing-housing assembly to the cross tube.
24. Unbolt the billet arm from the tack-welded end of the cross tube and remove the flanged bearing from the bearing housing before finish welding around the outside-diameter joint.
25. Once the parts are cooled, reinstall the flanged bearing and reassemble the anti-roll bar with arms into the cross-tube assembly. Use the 3/8" high-collar lock washers on socket-head caps screw at this time.

Adjuster Rod Assembly

26. Screw a 3/8" rod end with a jam nut into each end of the adjuster rod. The left-hand threaded end of the adjuster rod is indicated by the machined hex.
27. Install the adjuster rod assembly onto the rear-end housing clevis with 3/8"-diameter hole. If needed, use the 3/8"-long housing-mount sleeves to take up the excess gap.

Position the Anti-Roll Bar

28. With the billet arms pointing rearward, place the anti-roll-bar assembly above and forward of the rear-end housing at its approximate installation position while the adjuster rods are attached to the billet arms. Use the 3/8-16 x 1-3/4" button-head bolts, aircraft washers and locknuts to secure the adjuster rods to the arms.
29. The cross tube will need to be repositioned at this time to ensure the arms are level to the ground with the suspension at the ride-height position. If needed the links can also be shortened from the right-hand-threaded end and re-tapped with a 3/8-24 NF tap.
30. Clamp the anti-roll-bar assembly to the frame, crossmember, or other suitable mounting area. **The chassis-attachment weld area must be strong enough to adequately support the anti-roll-bar assembly while under load.** Additional cage or frame members may have to be added.
31. The chassis-mount tabs may have to be ground to achieve a close fit against the chassis. Once correctly fit, grind the chassis weld area clean, and then tack weld the tabs to the chassis.

Verify Clearance and Travel

32. Remove the springs and rubber bumpers from the coil-over shocks and reattach the shocks.
33. Move the rear end through its total range of travel to verify that nothing binds all moving components have adequate clearance.
34. Verify that the arms do not go over center when the suspension is fully extended.
35. After you are sure there is no binding or interference, unbolt the assembly from the tabs and finish welding the mounting tabs to the chassis.

Final Adjustment

36. The car must be 100% complete, at race weight with the driver in the car, and have the proper tire pressure. Make sure the vehicle is on a level surface. Disconnect one lower end of the anti-roll-bar adjuster rod and set the suspension links to zero preload. Adjust the detached adjuster rod to be able to easily insert the bolt without loading the anti-roll bar.
37. Anti-roll-bar equipped cars usually require almost no suspension-link preload. **DO NOT USE THE ANTI-ROLL BAR TO PRELOAD THE CHASSIS.** If the chassis does not launch straight, add preload using the suspension links as normal.

WARRANTY NOTICE:

There are NO WARRANTIES, either expressed or implied. Neither the seller nor manufacturer will be liable for any loss, damage or injury, direct or indirect, arising from the use or inability to determine the appropriate use of any products. Before any attempt at installation, all drawings and/or instruction sheets should be completely reviewed to determine the suitability of the product for its intended use. In this connection, the user assumes all responsibility and risk. We reserve the right to change specification without notice. Further, Chris Alston's Chassisworks, Inc., makes **NO GUARANTEE** in reference to any specific class legality of any component. **ALL PRODUCTS ARE INTENDED FOR RACING AND OFF-ROAD USE AND MAY NOT BE LEGALLY USED ON THE HIGHWAY.** The products offered for sale are true race-car components and, in all cases, require some fabrication skill. **NO PRODUCT OR SERVICE IS DESIGNED OR INTENDED TO PREVENT INJURY OR DEATH.**

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