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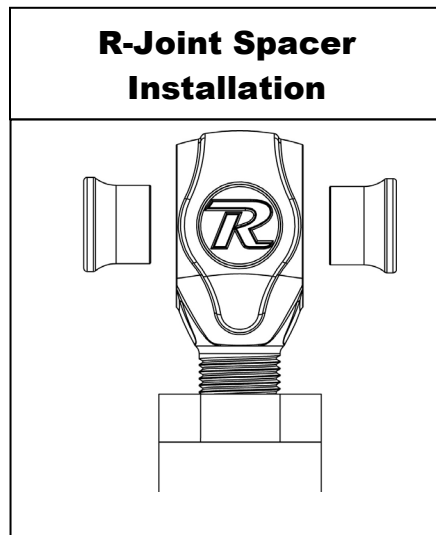
Part # 12167199
60-64 Galaxie Rear AirBar

Components:

- 2 90000568 Lower axle mount spacer
- 2 90000615 Lower axle mount
- 1 90000567 Upper cradle assembly
- 2 90001624 Lower billet Shockwave mount
- 2 70002825 Lower Shockwave stud
- 4 90002067 Aluminum spacer for stud
- 2 90000144 Axle tabs
- 2 90000524 Axle tabs
- 2 90002844 Upper bars – TW 9.875” (C-C length 12.0”)
- 2 90002845 Lower bars – WW 23.25”
- 2 70013364 RH R-Joint Threaded Housing End (installed in bars)
- 2 99752004 3/4”-16 jam nut – for R-Joint
- 14 70013334 R-Joint Spacers
- 4 70013768 Front Lower R-Joint Spacer
- 4 99566001 U-Bolts / nuts & washer - Lower axle bracket
- 2 90001280 Front Lower Bar T-Bushing – **63-34 ONLY**
- 2 70010694 Jig brackets for upper bar installation

R-Joint Components (installed in bar ends)

- 70013279 Retaining Ring
- 70012380 Wavo Wave Spring
- 70013275 R-Joint Center Ball
- 70013276 R-Joint Composite Center Ball Cage



AirBAR

Hardware Kit: (Part # 99010020)

Lower Shock Mount

2	1/2"-13 x 1 1/4" Gr. 5 bolt	Billet mount to axle bracket
2	1/2"-13 x 1 3/4" Gr. 5 bolt	Billet mount to axle bracket
4	1/2"-13 Nylok nut	Billet mount to axle bracket

4 Link Bars

6	5/8"-11 x 2 3/4" Gr.5 bolt	Bar ends
6	5/8"-11 Nylok jam nut	Bar ends

Upper Shock Mounting

2	1/2"-13 x 2 1/4 Gr.5 bolt	Upper Shockwave mount
2	1/2"-13 Nylok jam nut	Upper Shockwave mount

Upper cradle assembly

16	3/8"-16 x 1" Thread forming bolt	Upper cradle assembly
16	3/8" SAE flat washer	Upper cradle assembly

Upper bar installation jig

2	3/8"-16 x 3/4" Gr. 5 bolt	Upper Bar Jig
2	3/8"-16 nut	Upper Bar Jig

63-64 Lower Bar ONLY

2	9/16"-12 x 4 1/2" Bolt	63-64 Front Lower Bar
4	9/16" SAE flat washer	63-64 Front Lower Bar
2	9/16"-12 Nylok Jam Nut	63-64 Front Lower Bar

Shock Stud

2	7/16"-20 Nylok Nuts	Shock Stud
2	7/16" SAE Flat Washer	Shock Stud
2	5/8" SAE Flat Washer	Shock Stud

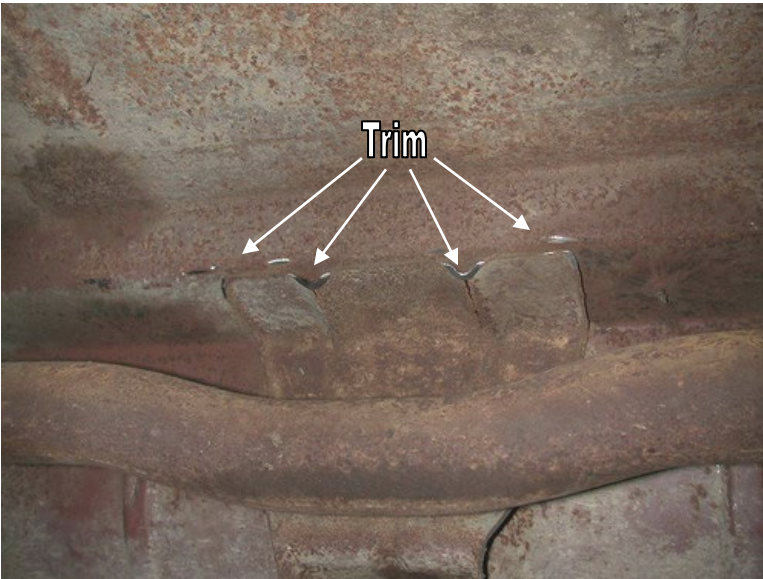
AirBAR

1. Raise the vehicle to a safe and comfortable working height. Use jack stands to support the vehicle with the suspension hanging freely.
2. Support the axle and remove the leaf springs, shocks, pinion snubber and tail pipes. Refer to the factory service manual for proper disassemble procedures. Keep the factory front leaf spring mounting bolts; they will be reused.



3. On the inside of the frame rail there are two tabs that must be ground smooth.

4. You must also trim these grooves in the pan at a 45 deg. angle to allow the upper cradle assemble to slide into place. They are located just in front of the axle above the crossmember.



5. Slide the cradle into place with the upper Shockwave mount toward the rear of the vehicle.

6. You may need to grind the welds smooth on the bottom of the frame to allow the cradle to sit properly.

7. The bolt hole just in front of the Shockwave mount will align with a hole in the frame to position the cradle. Drill the rest of the holes with a 5/16" bit one at a time while threading in a 3/8" x 1" self-tapping bolt. Be careful not to over tighten these bolts.

THERE ARE 2 DIFFERENT FRONT LEAF SPRING BOLT SETUPS DEPENDING ON THE YEAR OF THE CAR. TYPICALLY, THE 60-62 HAVE A 9/16" SHOULDER BOLT, 63-64 HAS A 3/4" SHOULDER BOLT. THE COMPONENTS USED TO MOUNT THE FRONT OF THE LOWER BARS WILL VARY DEPENDING ON THE YEAR OF YOUR CAR.

60-62



8. The 60-62 years use a 9/16" bolt, it will be reused to attached the lower bars. The Front Lower uses the WIDE(70013768) R-Joint Spacers inserted into each side of the R-Joint.



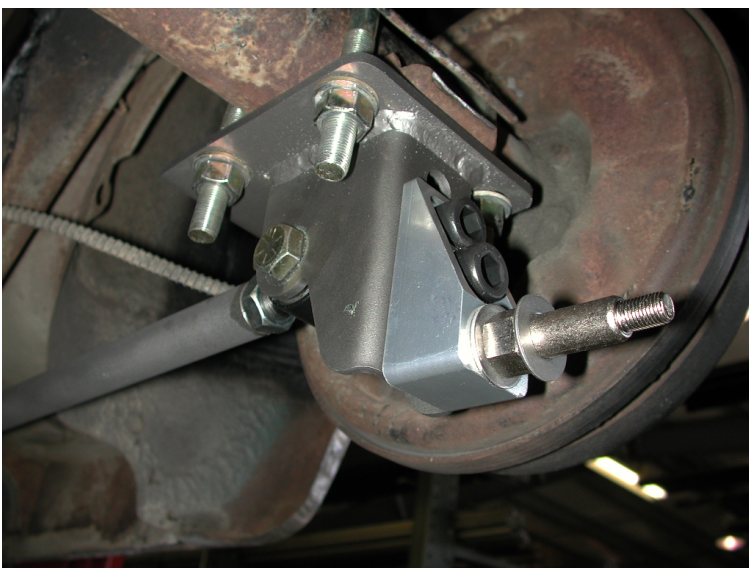
9. With the R-Joint spacers installed, hold the front of the lower bar in the factory leaf spring mount and reinstall the OEM Bolt setup.



10. The 63-64 years use a 3/4" bolt, it will be replaced with the 9/16" x 4 1/2" bolt supplied in the kit. The bolt hole in the frame will need to be drilled out to 9/16". The Front Lower uses the WIDE(70013768) R-Joint Spacers inserted into each side of the R-Joint with the LARGE Aluminum T-bushing in the leaf spring hole.



11. With the R-Joint spacers installed, hold the front of the lower bar in the factory leaf spring mount. Install a 9/16" flat washer on each of the (2) 9/16" x 4 1/2" bolts. Insert the 9/16" x 4 1/2" bolt into the LARGE aluminum t-bushing. Insert the bolt/t-bushing through the R-joint/spacers and through the drilled out hole. The Aluminum T-bushing should nest into the leaf spring hole.



12. Secure the axle mount to the leaf spring pad using the supplied U-bolts. There is an aluminum bushing that will slide over the alignment pin.

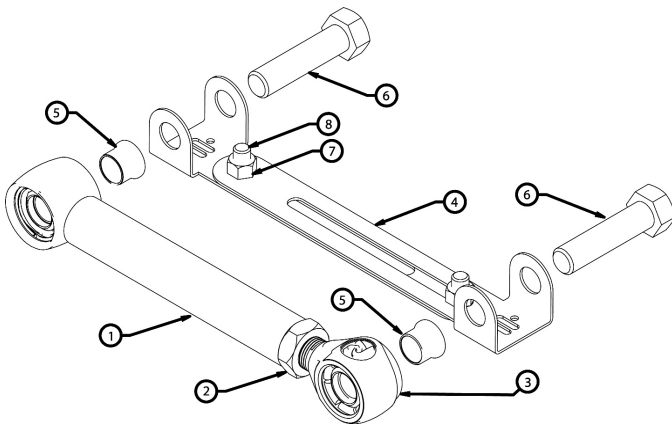
13. Bolt the lower Shockwave mount to the axle mount using the 1/2" bolts.

14. Apply anti-seize to the shock stud and screw it into the lower shockwave mount.

15. The Axle end of the bar gets a NARROW(70013334) R-Joint Spacer inserted into each side of the R-Joint. The bar is attached to the Axle Mount in the **MIDDLE HOLE** using the OEM hardware. Swing the lower bar up to the axle mount and insert a 5/8" x 2 3/4" bolt and nylok. This bar should measure 23 1/4" C-C. **Do not tighten any bolts yet.**

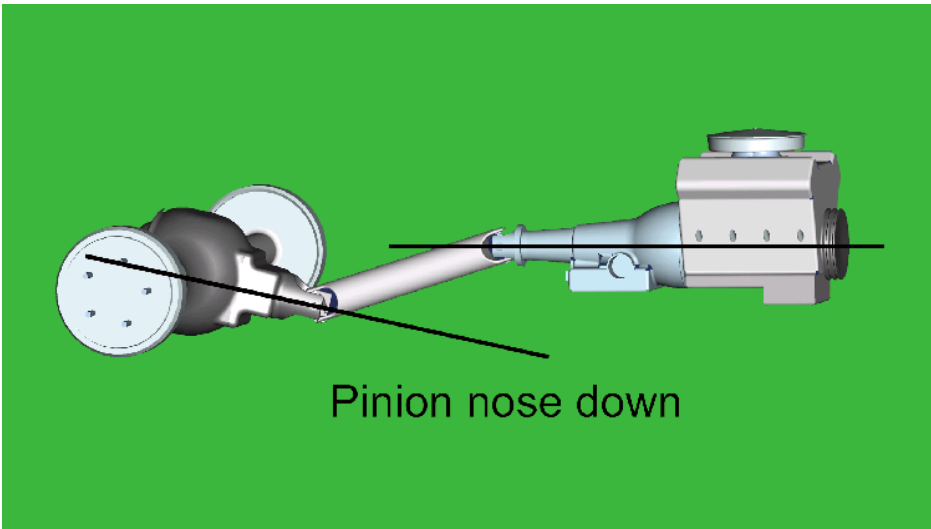
Upper Bar Installation Jig

- This jig has been supplied to aid in the installation of the upper 4 link bar. It can be temporarily used to properly align, locate and weld the tabs onto the axle. It will also ensure that the mounting bolts are parallel to the ground.
- Follow the diagram below to set the jig to the same length as the upper bar, use the 3/8" x 3/4" bolt and nuts to set the length.
- Position the axle at ride height. Center the axle left to right between the quarter panels. Set pinion angle.
- Bolt one end of the jig to the cradle using a 5/8" x 2 3/4" bolt.
- Using another 5/8" x 2 3/4" bolt, fasten the axle tabs to the other end. The tabs must be bolted to the **outside** of the jig.
- Swing the bar down letting the tabs rest onto the axle. Trim the brackets as necessary to minimize the gap to be welded.
- Check pinion angle, ride height and axle center. Tack-weld the tabs in place.
- Remove jig and install upper bar **using a spacer on each side of the heim end**.
- Repeat this process for the other side.
- Recheck pinion angle, ride height and axle center. (Sound familiar?)
- After the tabs have been tack welded on both sides, remove the upper bars to avoid melting the rubber bushings. Let the axle drop down for better access to the tabs. Lay 1" welds on the inside and outside of the tabs. Skip around from one side to the other to avoid overheating the tube.
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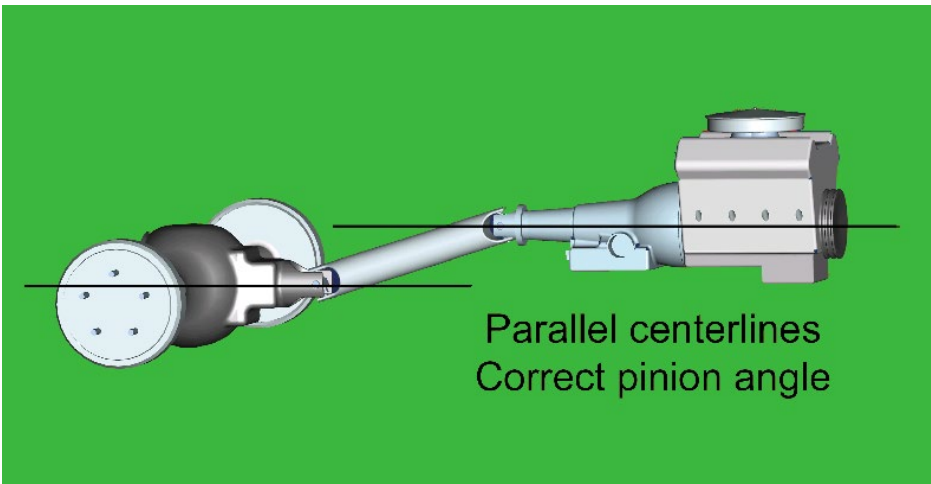


Item #	Description
1.	Upper bar
2.	3/4"-16 jam nut
3.	R-Joint
4.	Alignment jig
5.	R-Joint spacer
6.	5/8"-11 x 2 3/4" bolt
7.	3/8"-16 nut
8.	3/8"-16 x 3/4" bolt

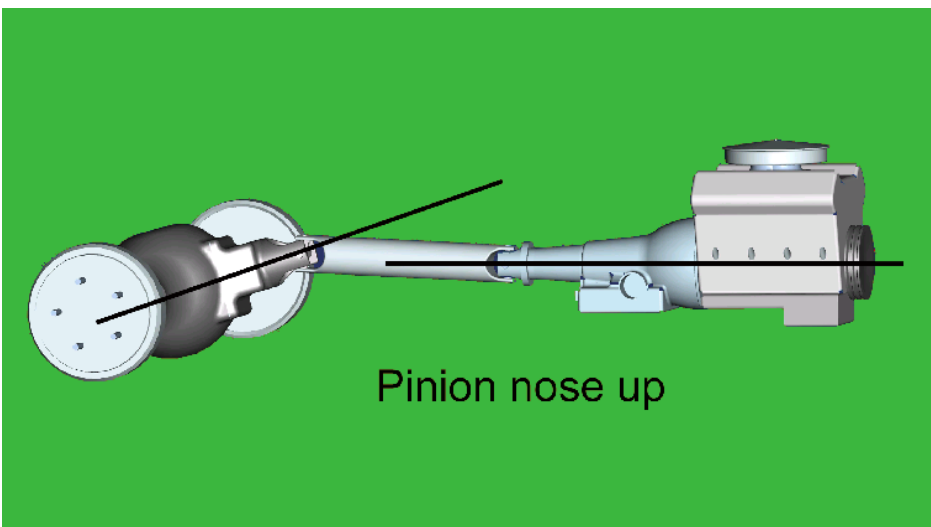




Pinion nose down



Parallel centerlines
Correct pinion angle



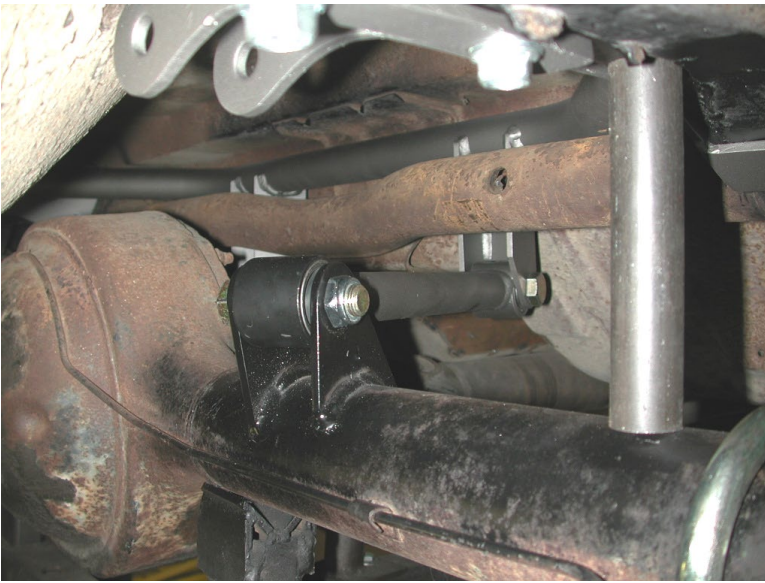
Pinion nose up

How do you set the pinion angle? On a single-piece shaft you want to set it up where a line drawn through the center of the engine crankshaft or output shaft of the transmission and a line drawn through the center of the pinion are parallel to each other but not the same line.

Your transmission angle should be around 3 degrees down in the rear. If it is more or less than 3 degrees, you might want to consider changing it. Too little angle on the transmission reduces the amount of oil getting to the rear bushing. Too much transmission angle will increase the working angles of the u-joints which will increase the wear. With the transmission at 3 degrees down in the rear, you will want to set the pinion 3 degrees up in the front.

A simple way to do this is to place a digital angle finder or dial level on the front face of the lower engine pulley or harmonic balancer. This will give you a reading that is 90 degrees to the crank or output shaft unless you have real problems with your balancer. At the other end, you can place the same level or angle finder against the front face of the pinion yoke that is also at 90 degrees to the centerline. If you rotate the yoke up or down so both angles match, you have perfect alignment.

Road testing will tell you if you have it right. If you accelerate and you get or increase a vibration, then the pinion yoke is too HIGH. Rotate it downward in small increments of a degree or two until the problem goes away. If you get or increase a vibration when decelerating, then the pinion yoke is too LOW. Rotate it upward to correct it.



16. Bolt the axle tabs to the upper bar jig using a 5/8" x 2 3/4" bolt and nyloc as shown in the picture. The upper bar should measure 12" C-C.

17. Bolt the other end into the upper cradle and let the tabs rest on top of the axle. **Do not weld yet.** You must first set pinion angle (which is explained on the next page) and center the axle.

18. Centering the axle is best done by hanging a plum off of the axle and measuring out to the axle flange.



19. This must all be set at **ride height**, which will occur with 14.5" from c-c on the Shockwave mounts. As you can see in the above picture, we have tack welded a 5" long spacer between the axle and frame to maintain ride height, axle center, and pinion angle while welding in the tabs.

You can now tighten all of the 4 link bolts.



20. Apply thread sealant to the air fitting and screw it into the top of the Shockwave.

21. Attach the top of the Shockwave/CoilOver to the cradle with a 1/2" x 2 1/4" bolt and nyloc. Place the washer over the shock stud, and then slide the Shockwave over the stud. Another washer and nyloc will hold in tight.

22. Remove the spacer.

23. Double-check all clearances with parking brake cable, vent tubes, brake lines, etc.

24. Ride height should be around 70psi but will vary to driver preference.