

Part # 11167199
67-69 GM "F" Body AirBar

Components:

1	90000527	Upper cradle assembly
1	90002077	Lower axle bracket - Driver
1	90002078	Lower axle bracket - Passenger
2	90001624	Lower billet Shockwave mount
2	90001617	Lower Shockwave stud - .625"
4	90002067	Aluminum spacer – lower shock bearing
2	90000144	Axle tabs (Short Tab-Inside)
2	90000524	Axle tabs (Tall Tab-Outside)
2	90000523	Shock block off plate
2	90001001	Upper bars – TW 7.375" (C-C length 9.250")
1	90001029	Lower bar – WW 24.75" – Passenger side
1	90002328	Lower bar – WW24.75" – Driver side
2	99250001	1/4"-28 straight grease fitting
2	90001589	Threaded Kevlar lined Heim end
4	90000552	Aluminum spacers for Heim end
2	99752004	3/4" SAE jam nut – for rod end
4	90001942	Rubber bushings – pressed into bars
4	90001090	Poly bushing for lower bar
2	90000526	Inner bushing sleeve – lower bar
2	90001844	Trunk backer plate for sway bar bracket
2	70010694	Jig brackets for upper bar installation
2	90001107	Front Tab Backer



Hardware Kit # 99010017:

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
6	5/8"-11 x 2 3/4" Gr.5 bolt	Bar ends
6	5/8"-11 Nylok jam nut	Bar ends
2	1/2"-13 x 2 1/4" Gr.5 bolt	Upper Shockwave mount
2	1/2"-13 Nylok jam nut	Upper Shockwave mount
18	3/8"-16 x 1" Thread forming bolt	Upper cradle assembly
30	3/8" SAE flat washer	Upper cradle assembly/Front cradle backer
8	7/16"-20 Nylok nut	T bolts for lower axle mount
8	3/8"-16 x 1 1/4" Gr.5 bolt	Trunk backer plate for sway bar bracket
8	3/8"-16 Nylok nut	Trunk backer plate for sway bar bracket/Front cradle backer
2	3/8"-16 x 3/4" Gr. 5 bolt	Upper bar installation jig
2	3/8"-16 nut	Upper bar installation jig

AirBAR[®]

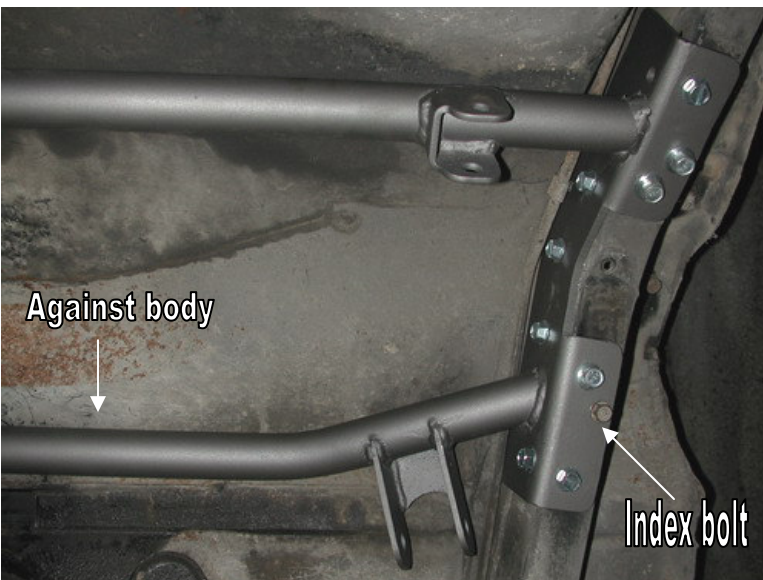
by Air Ride Technologies

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 and tail pipes. Refer to the factory service manual for proper disassemble procedures. Keep the factory upper shock bolts, bump stop bolts, U-bolts, and front leaf spring mount and bolts.



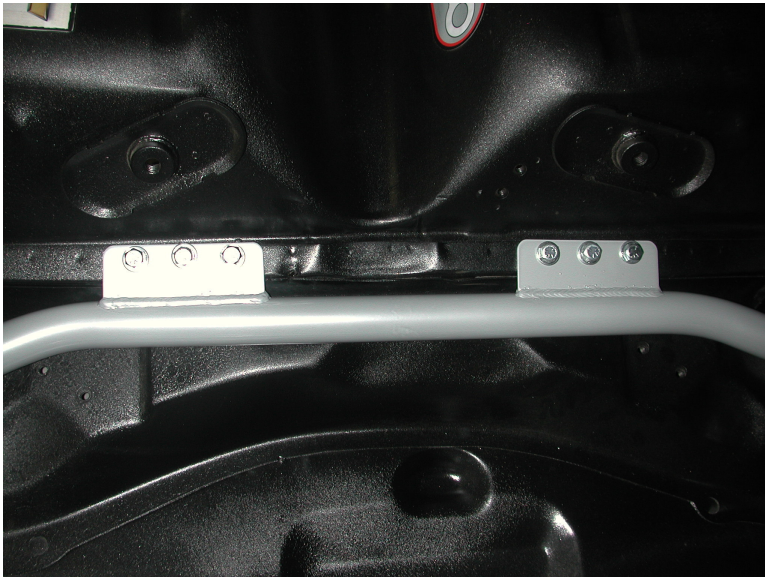
1. To allow maximum drop, the factory pinion snubber must be removed. For a clean cut use a cut off wheel and smooth any burrs.

1. Lower the axle enough to slide the upper cradle into place. On most cars the location of the cradle will index off of the factory bump stop bolt hole. If your car has the bump stop beside the frame, slide the cradle forward until the front tube touches the body.



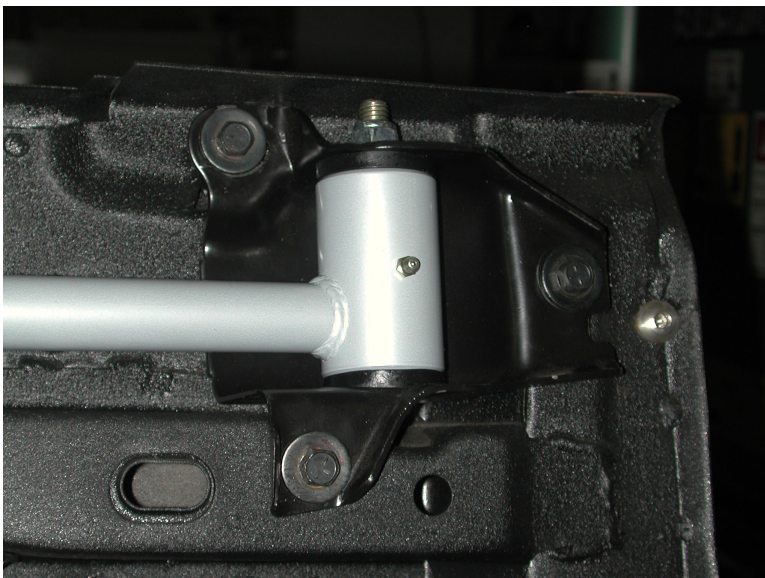
3. A series of self-tapping 3/8" bolts are used to hold the cradle in place. First drill the holes with a 5/16" bit and then thread the bolts into the frame.

Note: Newer cradles will have a sway bar bracket welded to the upper cradle. The will attach to the trunk pan with a 3/8" x 1 1/4" bolt and Nylok nut. A backer plate is supplied to be installed inside the trunk.



4. The two forward tabs grab the pinch weld and have a backer plate on the inside of the car under the back seat. These are attached using (6) 3/8" x 1 1/4" bolts washers and Nylok nuts.

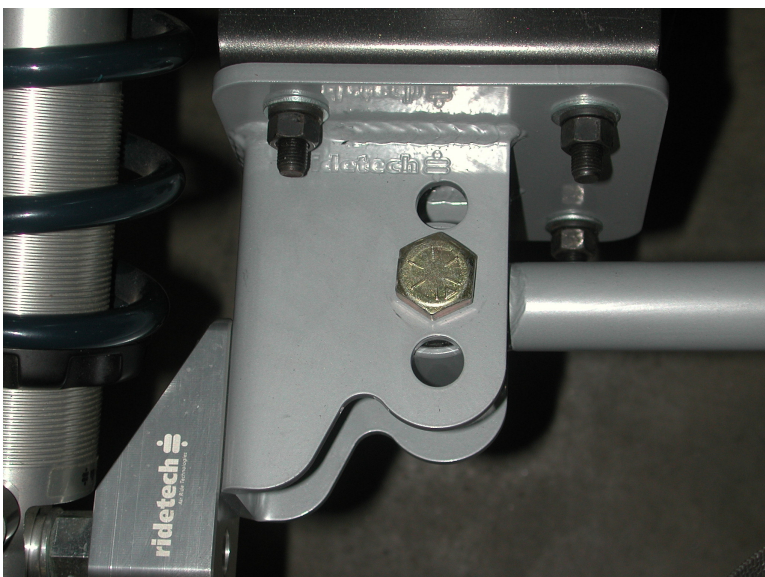
Note: Newer cradles will have a sway bar bracket welded to the upper cradle. The will attach to the trunk pan with a 3/8" x 1 1/4" bolt and Nylok nut. A backer plate is supplied to be installed inside the trunk.



5. Install the large end of the lower bar (the long one) into the factory spring mount using the factory hardware. The bar is offset to the inside of the car to allow for tire clearance. Do not over tighten this bolt; it should be snug.

6. This bushing is polyurethane and is lubricated at the factory with lithium grease. Future lubrication can be done using any non-petroleum based lubricant.

7. Bolt the bar and mount back onto the car using the factory hardware.

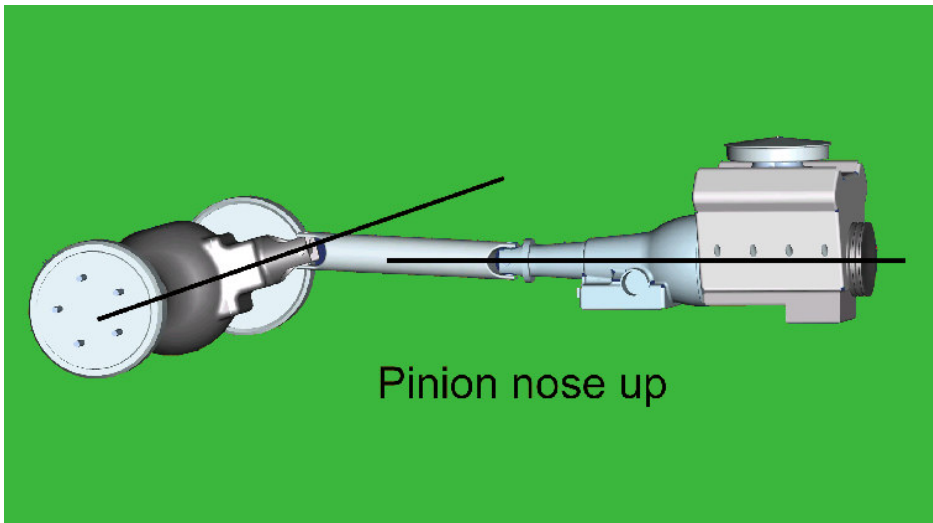
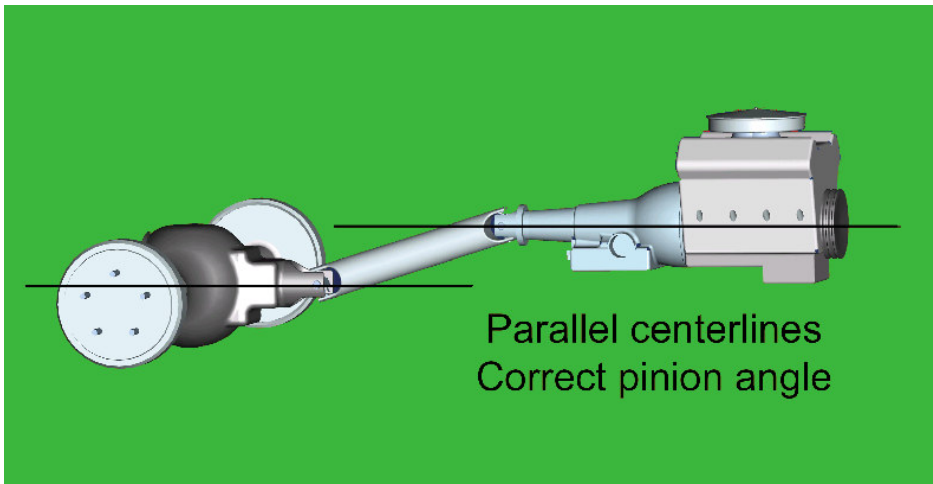
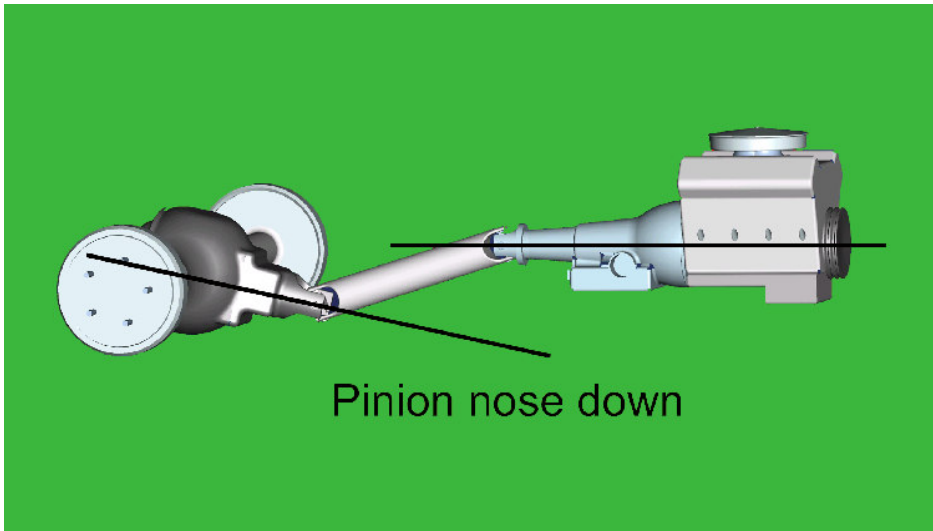


8. The lower axle bracket will be fastened to the leaf spring pad using the factory T-bolts. The bar mount is offset to the inside of the car to provide more wheel and tire clearance. New 7/16" nylocs are supplied.

9. Bolt the lower Shockwave mount to the lower holes of the axle bracket if you have a monoleaf car. If you have a multileaf car the bottom of the billet mount will be flush with the axle bracket.

10. Swing the lower bar up to the axle bracket and insert 5/8" x 2 3/4" bolt. The standard hole is the center hole like in the picture. Thread 5/8" Nylok onto the bolt but **do not tighten** yet.

11. This end of the bar as well as the upper bars are rubber and do not require lubrication.



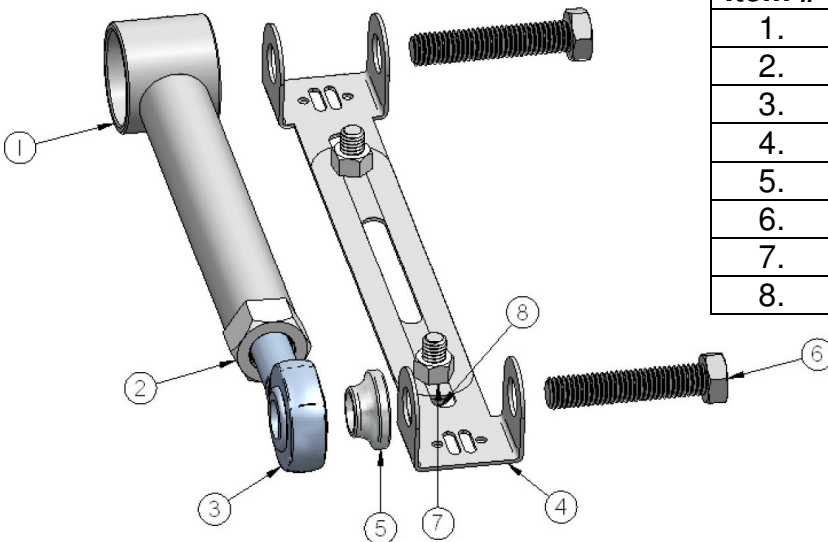
12. How do you set the pinion angle? On a single-piece shaft you want to set it up where a line drawn through the center of the engine crankshaft or output shaft of the transmission and a line drawn through the center of the pinion are parallel to each other but not the same line.

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.

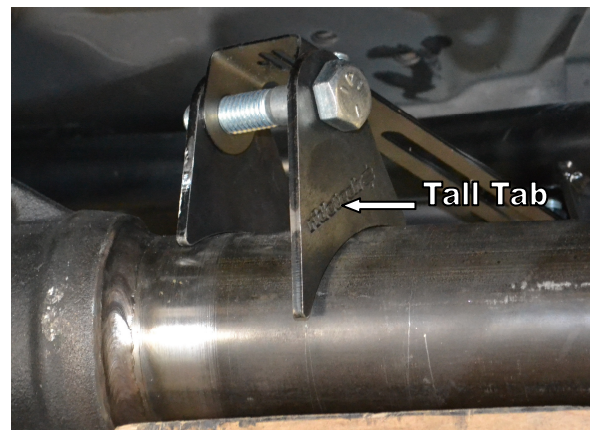
Road testing will tell you if you have it right. If you accelerate and you get or increase a vibration, then the pinion yoke is too HIGH. Rotate it downward in small increments of a degree or two until the problem goes away. If you get or increase a vibration when decelerating, then the pinion yoke is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

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 tall tab goes to the outside of the car with the long tail to the rear of the car. The short tab goes to the inside of the car with the long tail to the front of the car.** 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.
- 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.



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





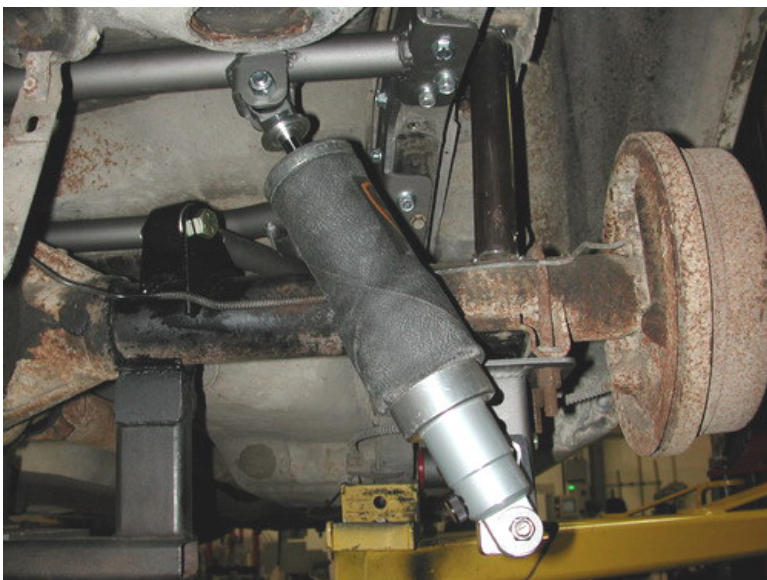
13. Check the length of the upper bar; it should be 9 1/4" C-C. Bolt the axle tabs to the setting jig as specified on the previous page. Then place the other end into the cradle. Both ends use a 5/8" x 2 3/4" and should not be fully tightened yet. For now just the let axle tabs sit on the axle.

14. Before welding these tabs to the axle you will need to center the axle and set pinion angle. We used a plum on the outside of the quarter panel to center the axle left to right. Setting the pinion angle is explained on a previous page. **This must be done at ride height.**



15. One helpful trick to help maintain ride height and pinion angle while adjusting is to tack weld a spacer between the axle and the outside of the frame as shown in the picture. This spacer should be 8 1/2" tall giving the Shockwave an eye-to-eye measurement of 14 1/2" to 15".

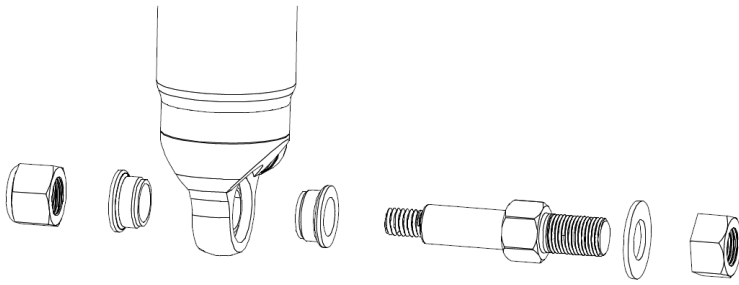
16. After double-checking pinion angle, ride height, and axle center the tabs can be tack welded. Remove the bar to avoid frying the bushing and finish welding the tabs to the axle.



17. Apply thread sealant to the air fitting and screw it into the Shockwave.

18. Install the Shockwave or CoilOvers using the 1/2" x 2 1/4" bolt and Nylok nut on top and the 7/16" Nylok nut on the lower stud mount.

19. You can now go back and snug all of the Nylok nuts. This must be done at ride height.



20. You can now remove the spacer from between the axle and frame.

21. We have supplied a plate to cover the factory shock holes. It will use the factory hardware.

22. The installation is complete but you want to check clearance of the brake lines, parking brake cables, vent tubes and exhaust. For the exhaust you can either install a turndown or reroute the exhaust under the axle. Stainless Works makes a tail pipe specific for use with the AirBar. 1-800-878-3635

23. This system is designed to be use with a Shockwave or CoilOver with a 14.5" ride height.

Should I weld my AirBar 4 link assembly in?

Since we get this question quite often, it deserves a proper explanation.

The AirBar has been designed for bolt-in installation. We have paid special attention to interfacing with key structural areas of each vehicle, fastening bracketry in at least two planes to properly distribute load paths, and to using appropriate fasteners that roll, rather than cut, threads into the vehicle structure.

Having said that, you could potentially encounter a vehicle that has rust or collision damage in these areas. Or maybe you intend to consistently place the vehicle in severe racing applications with sticky racing slicks and high speed corners. In these cases it is perfectly acceptable to weld the AirBar components into your vehicle. Even in these severe cases we recommend that you install the entire AirBar assembly first [including the fasteners], and then use short 1" long tack welds to secure your installation. Remember that the vehicle structure metal is typically much thinner [.060"-.120"] than the .188" thick AirBar brackets. If you burn through the vehicle sheet metal structure you may end up with an installation that is weaker than before you tried to weld it.

The other reason to weld in your AirBar assembly is...you simply want to. You're a welding kind of guy...that's the way you've always done it...you have the skills and equipment to do it. In that case...weld away with our blessing!