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ABAR20500 70-81 Camaro Rear AirBar

SKW7000 Rear Shockwaves

2	SKW5001SA	Smooth shocks (long)
2	SKW7114	Rear Bellows with ends crimped on
2	SKW013	Internal bump stop
4	SKW114	ShockWave small O-ring
4	SKW227	ShockWave large O-ring
2	SKW047	Upper eye mount
2	SKW049	1/2" x 3/4" sleeves upper eye mount
2	SKW052	5/8” x 3/4" sleeves lower eye mount
8	SKW051	Poly bushing halves
2	FIT4201	1/4" x 1/4" swivel 90 fitting

Air Bar Components

2	A739-1	Lower bar axle mount
1	A727D-1	Driver side upper cradle assembly
1	A727P-1	Passenger side upper cradle assembly
2	BARWW24.750”	Lower bars
2	BARTW7.500”	Upper bars (C-C length 9.250”)
4	ROD302	Rubber bushings pressed into bars
4	DAYM02206	Poly bushing for lower bar
2	A648	Lower bar bushing sleeve
2	ROD1000	Threaded rod end
2	SKW005	Lower billet Shockwave mount
2	S0001	Lower Shockwave stud
2	A725	Inner axle tabs (Short)
2	A724	Outer axle tabs (Long)
2	A728	Axle tab braces
4	A740-1	Upper cradle reinforcement plates

Hardware

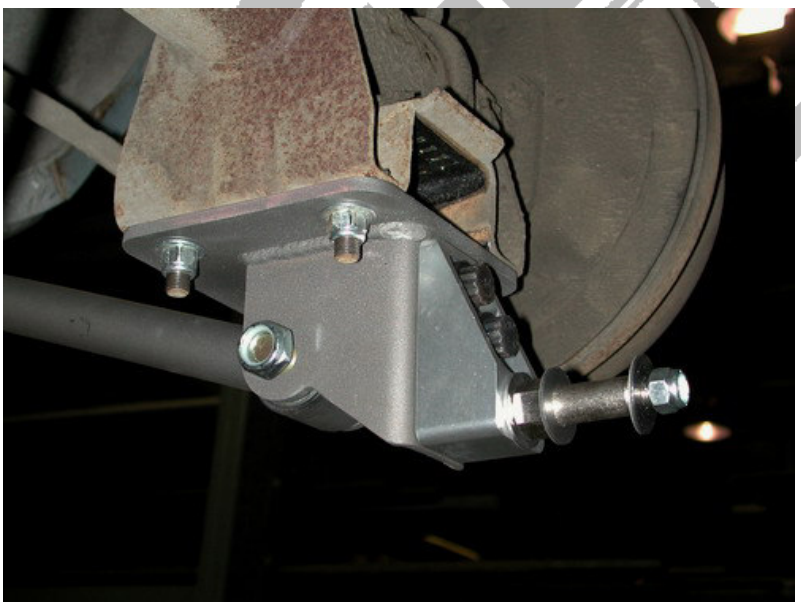
8	7/16” SAE Nyloc nut	Lower bar axle mount
8	7/16” SAE flat washer	Lower bar axle mount
10	3/8” x 1” thread forming screw	Upper cradle assembly
22	3/8” SAE flat washer	Upper cradle assembly & reinforcement plates
12	3/8” USS Nyloc nuts	U-bolts and reinforcement plates
2	3/8” x 3” square U-bolts	Upper cradle assembly
2	1/2” x 1 ¼” SAE Gr. 8 bolt	Billet mount to axle bracket
2	1/2" x 1 ¾” SAE Gr. 8 bolt	Billet mount to axle bracket
4	1/2” SAE Gr. 8 Nylok nut	Billet mount to axle bracket
6	5/8” x 2 ¾” SAE bolt	Upper and lower bars
6	5/8” SAE Nyloc jam nut	Upper and lower bars
2	1/2" x 2 ¼” SAE bolt	Upper Shockwave mount
2	1/2" SAE Nyloc jam nut	Upper Shockwave mount

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, tail pipes, bump stops and pinion snubber. Refer to the factory service manual for proper disassemble procedures. Keep the factory U-bolts and the front leaf spring mounts and bolts. They will be reused.

3. Fasten the large end of the lower bar to the factory leaf spring hanger using the factory hardware. Then reattach the hanger to the car. These two larger bushings are polyurethane and are lubricated at the factory. Future lubrication can be done with any non petroleum based lubricant such as lithium or silicone.



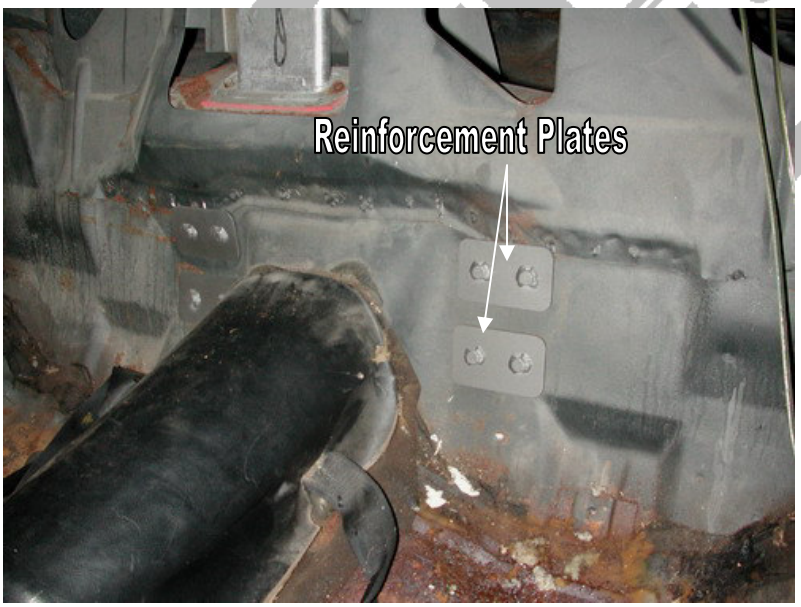
4. Bolt the lower bar axle mount to the leaf spring pad using the factory studs and U-bolt. New 7/16" Nyloc nuts are supplied.

5. Attach the Billet ShockWave mount to the axle mount using the ½" bolts and Nyloc nuts. It will be easiest to do this before attaching the lower bar.

6. Swing the small end of the lower bar up to the axle and secure with 5/8" x 2 ¾" bolt and Nyloc**. Do not tighten yet.**

7. Raise the upper cradle into position against the body and clamp in place. The contour of the plate will match the contour of the body. On cars that came with a factory sway bar the two forward holes on the bottom will already be there. The rest of the holes must be drilled with a 5/16” bit. Use the 3/8” x 1” thread forming bolts to secure the assembly.

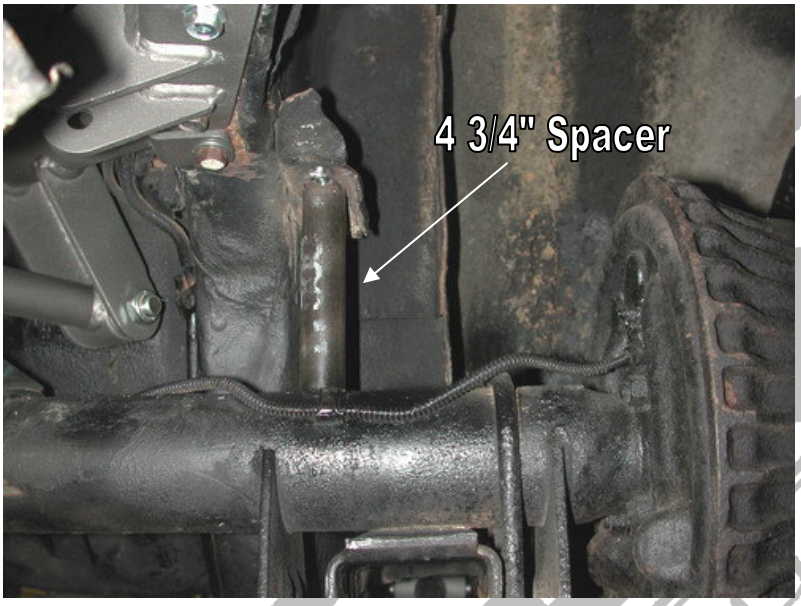
8. Using the cradle as a template, drill four 3/8” holes in the floor pan.



9. From the inside of the car drop the reinforcement plates through these holes. Secure the assembly with 4 3/8” Nyloc nuts and flat washers. You may need to flatten part of the seam just above the top two holes.

10. Bolt the upper bar to the cradle using a 5/8” x 2 ¾” bolt and Nyloc nut.

11. Bolt the two axle tabs to the other side of the bar also using a 5/8” x 2 ¾”. The shorter tab will go to the inside. Pinion angle, axle center, and ride height must all be set before welding the tabs to the axle.

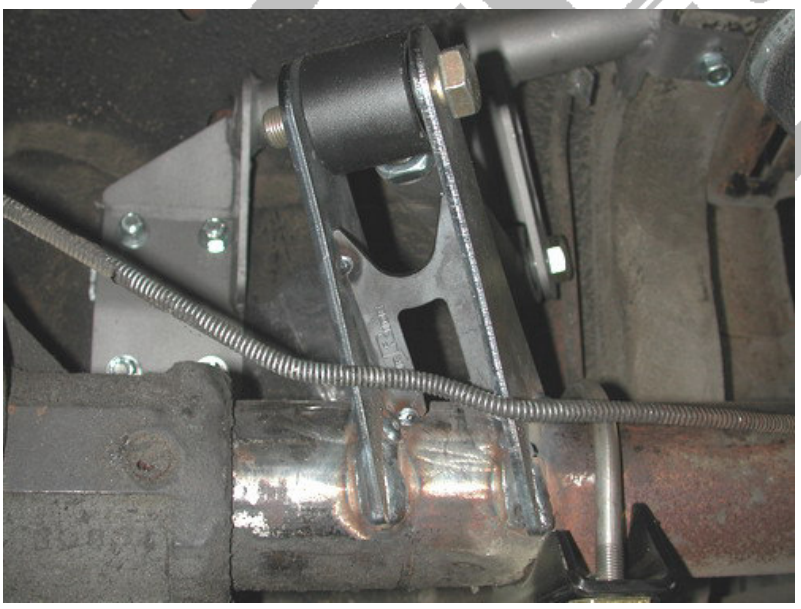


12. To center the axle drop a plum off the quarter panel and measure into the axle.

13. Ride height is determined by measuring 14 ½” center-to-center on the Shockwave.

14. Setting pinion angle is described on the next page.

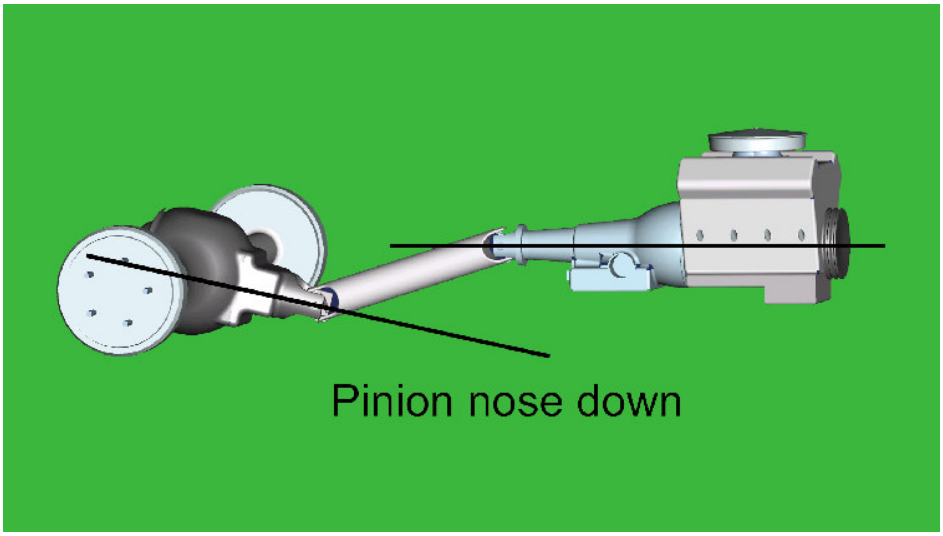
15. One trick to help maintain these settings is to tack weld a 4 ¾” spacer between the bump stop pad and the axle.

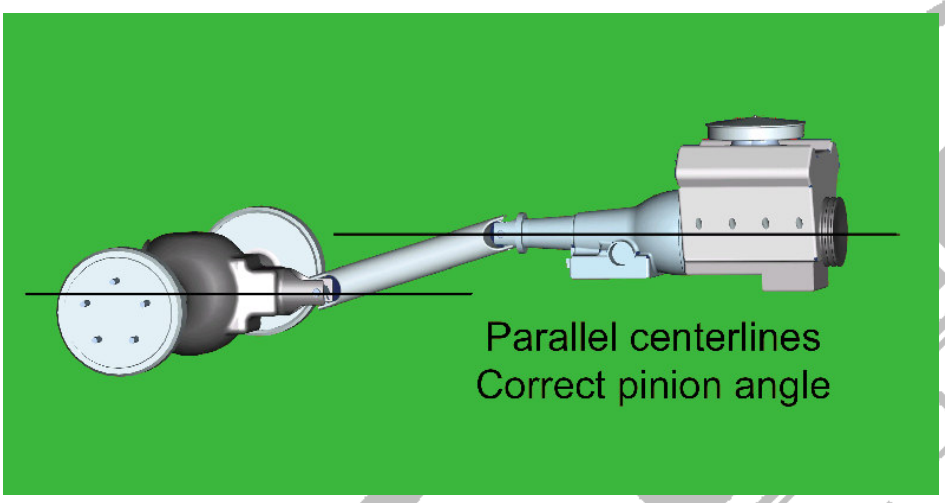


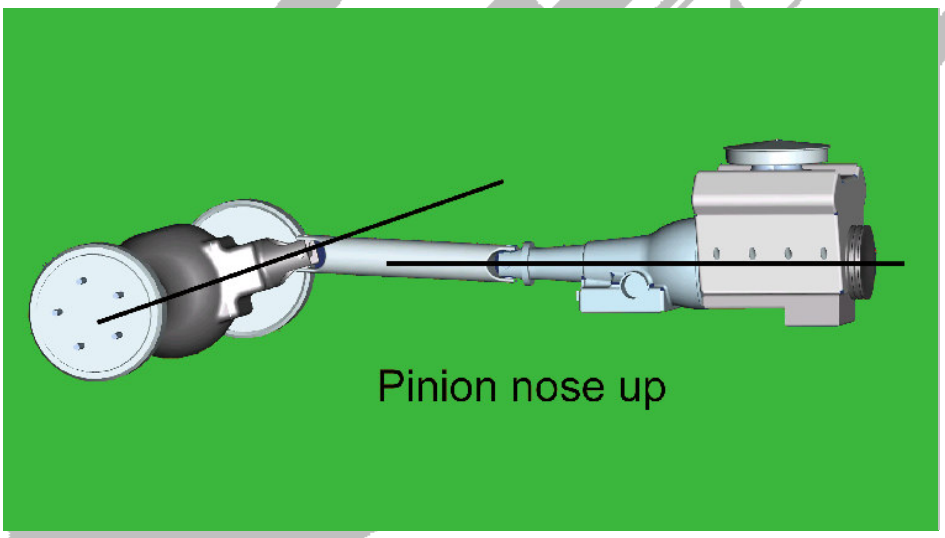
16. Once everything is double-checked the tabs can be tack-welded into place. Then tack in the axle tab brace between the two tabs.

17. To avoid heating the rubber bushing, remove the upper bar. The tabs and brace can now be welded solid. Only weld 1” at a time and skip around to avoid warping the axle tube.

18. Reinstall the upper bar and snug all of the Nyloc nuts with the axle still at ride height. These bushings are rubber and do not require any lubrication.







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.

19. Apply thread sealant to an elbow air fitting and screw it into the top of the Shockwave.

20. Screw the lower Shock stud into the billet mount. Bolt the Shockwave to the stud with the Nyloc nut. There should be one washer on either side of the bushing. The top eyelet will bolt to the cradle using a ½" x 2 ¼" bolt and Nyloc jam nut.

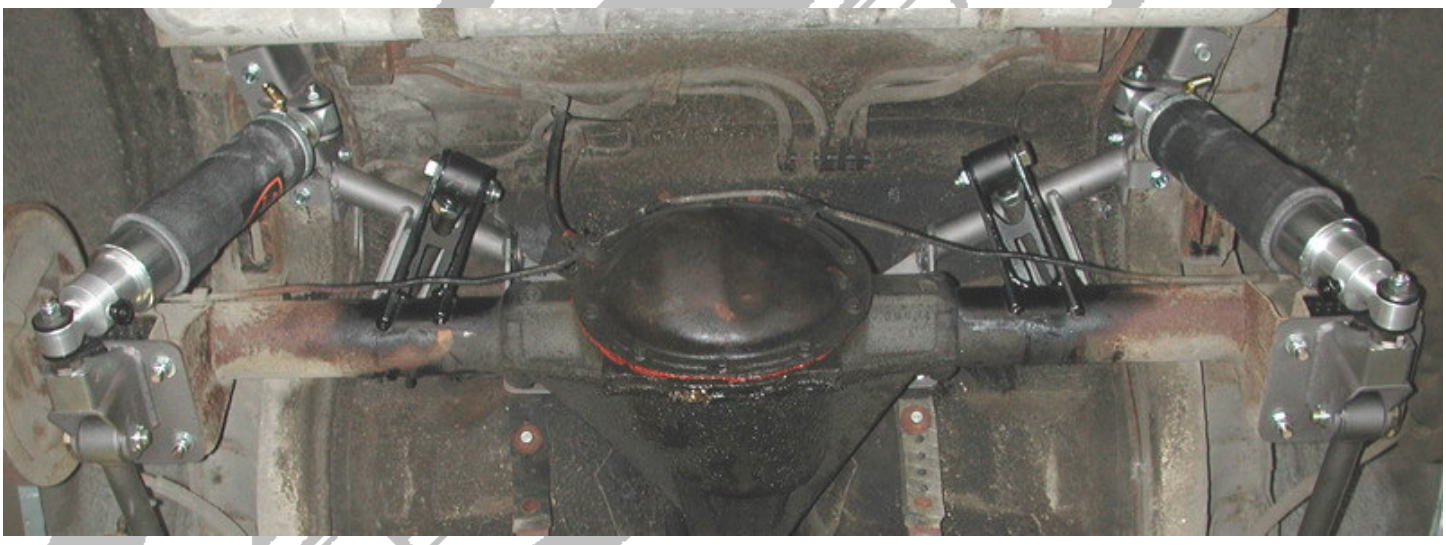
21. The 4 ½" spacer can now be removed.

22. The exhaust will have to be rerouted.

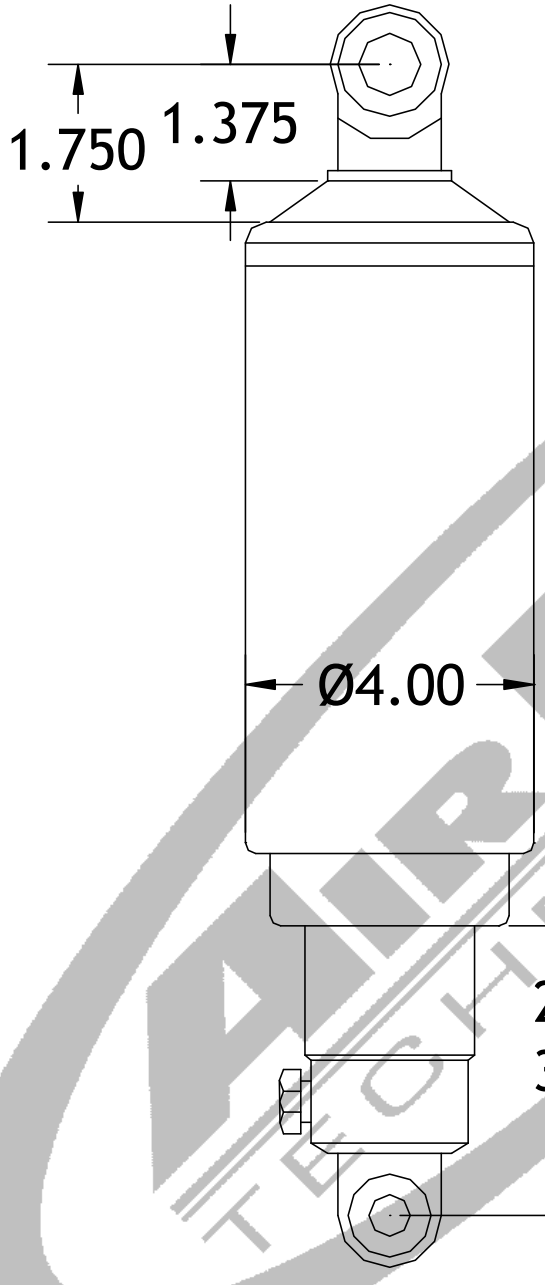
23. The factory rear sway bar will not work, but most aftermarket ones will.

22. Double check to make sure the air spring cannot rub on anything at any time. This will cause failure and is not warrantable.

23. Driving height should be around 80 psi and there should be approximately 3 clicks on the shock knob. These numbers will vary to driver preference.



SKW 7000



Compressed Height	11.5”
Ride Height	14.5”
Extended Height	16.5”

2.625" WITH 10.66" SHOCK
3.375" WITH 11.56" SHOCK
5.00" WITH 13.50" SHOCK

The care and feeding of your new ShockWaves

1. Although the ShockWave has an internal bumpstop, **DO NOT DRIVE THE VEHICLE DEFLATED RESTING ON THIS BUMPSTOP. DAMAGE WILL RESULT.** The internal bumpstop will be damaged, the shock bushings will be damaged, and the vehicle shock mounting points may be damaged to the point of failure. **This is a non warrantable situation.**

2. Do not drive the vehicle overinflated or "topped out". Over a period of time the shock valving will be damaged, possibly to the point of failure. **This is a non warrantable situation!** If you need to raise your vehicle higher that the ShockWave allows, you will need a longer unit.

3. The ShockWave is designed to give a great ride quality and to raise and lower the vehicle. **IT IS NOT MADE TO HOP OR JUMP!** If you want to hop or jump, hydraulics are a better choice. This abuse will result in bent piston rods, broken shock mounts, and destroyed bushings. **This is a non warrantable situation.**

3. Do not let the ShockWave bellows rub on anything. Failure will result. **This is a non warrantable situation.**

4. The ShockWave product has been field tested on numerous vehicles as well as subjected to many different stress tests to ensure that there are no leakage or durability problems. Failures have been nearly nonexistent unless abused as described above. If the Shockwave units are installed properly and are not abused, they will last many, many years. **ShockWave units that are returned with broken mounts, bent piston rods, destroyed bumpstops or bushings, or abrasions on the bellows will not be warrantied.**

Adjusting shock valving

The knob on the bottom of the Shockwave will adjust the dampening characteristics of the shock absorber. There are 16 clicks total, 1 is located fully counter clockwise and being the softest setting. We recommend starting with about 3-4 clicks. This can be fine tuned to driver preference.