



350 S. St. Charles St. Jasper, In. 47546
Ph. 812.482.2932 Fax 812.634.6632
www.ridetech.com

STR2400 55-57 Chevy Street Challenge Package

- | | | |
|---|------------------------|---|
| 1 | SKW1019DA-LUCA | Front Double adjustable Shockwaves with upper and lower StrongArms |
| 1 | ABAR20300DA | Rear AirBar with Double adjustable 7000 series Shockwaves |
| 1 | APOD4100LE3 | 5 gallon AirPod w/ LevelPro control system |
| 1 | REM8500 | Two key fob remotes with antenna |
| 1 | SWA7500 | Front MuscleBar sway bar with mounting kit |
| 1 | SPINDLE1100 | 2" Drop Spindle |
| 1 | TRA1002 | Billet Tie Rod Adjusters |
| 1 | Street Challenge Shirt | |

Air Ride Technologies





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SKW1019DA-LUCA 55-57 Chevy Shockwave with Upper and Lower StrongArms

SKW1005 Front Shockwaves

2	SKW1500	255 bellow
2	SKW4102BDA	4.1" stroke bearing shock Double adjustable
2	SKW013	Internal bump stop
4	SKW1701CHA	Bead ring
2	SKW1751CHA	255 upper mount
2	SKW1761CHA	Lower mount for 255
4	SKW114	Small o-ring
4	SKW228	Large o-ring
2	SKW086	Short swivel stud top
2	FIT4201	1/4 x 1/4 swivel elbows
2	5/8" SAE Nylok jam nut	
2	5/8" SAE flat washer	

LCA1019 Lower StrongArms

1	A693D-1	Driver side lower control arm
1	A693P-1	Passenger side lower control arm
2	BAL1024	Lower ball joint
4	BAL1013	Lower control arm bushing
4	SKW080	Aluminum Spacer
2	1/2" x 3 1/4" SAE gr.8 bolt	
2	1/2" SAE nyloc nut	

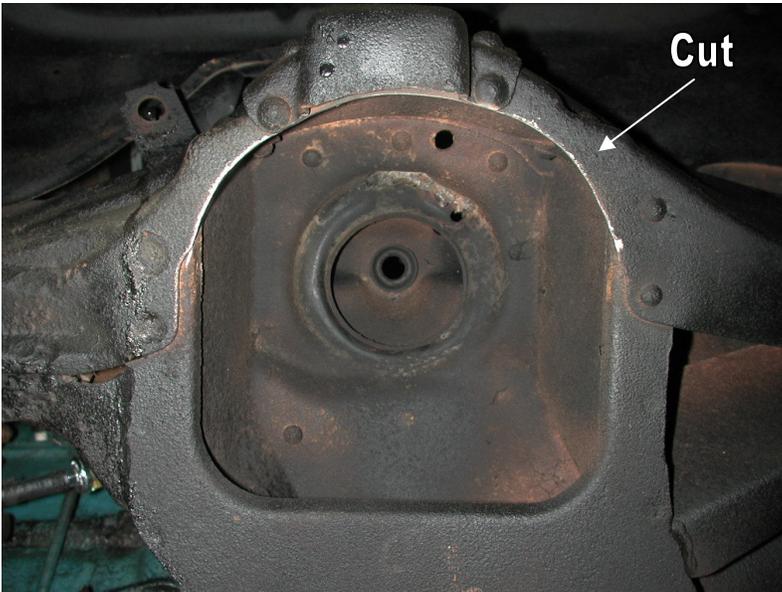
UCA1019 Upper StrongArms

1	A668D-1	Driver side upper control arm
1	A668P-1	Passenger side upper control arm
2	BAL1011	Upper ball joint
4	BAL1014	Upper bushing
4	A670	Cross shaft outer spacer
4	A671	Cross shaft inner spacer
4	3/8"-24 x 1 1/2" bolts	Cross shaft bolt
2	3/8" lock washer	

STRONG **ARMS**™
by Air Ride Technologies

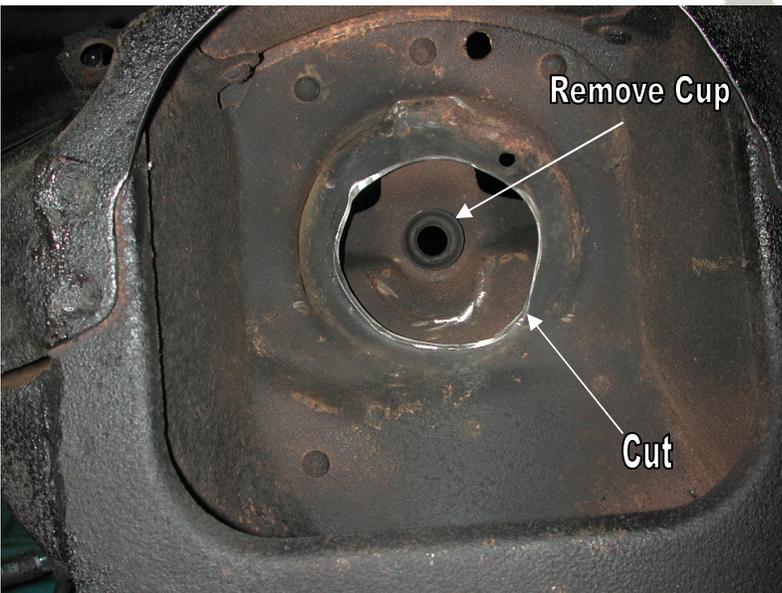
Installation Instructions for SKW1019DA-LUCA

1. Raise and support vehicle at a safe, comfortable working height. Let the front suspension hang freely
2. Remove the coil spring, shock absorber and lower control arms. Refer to a factory service manual for proper disassembly procedure. Also remove the cross shaft from the lower control arms. They will be reused in the StrongArms.



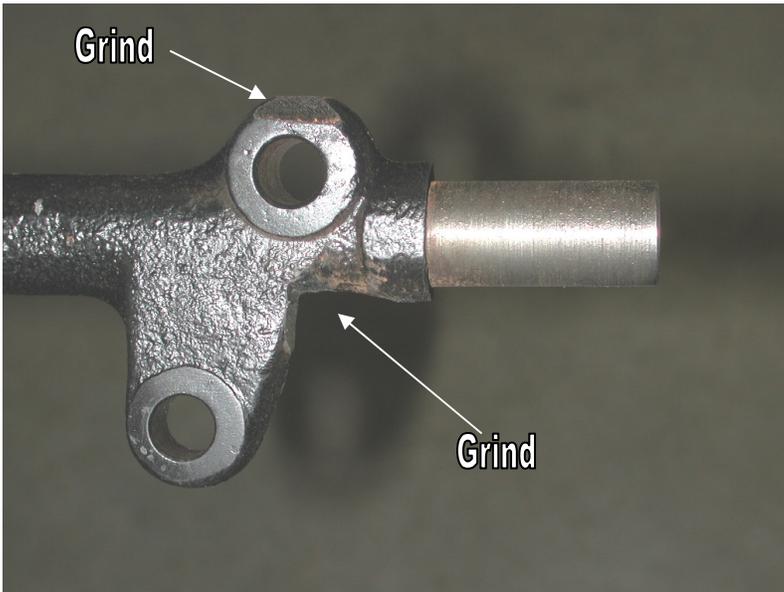
3. For air spring clearance some trimming must be done on the outer lip of the coil spring pocket. This is what it should look like after cutting.

4. This is best done with a cut off wheel or plasma cutter. Grind all cuts smooth when finished.



5. The domed portion of the Shockwave will hit the coil spring retainer. This lip must be removed.

6. The factory upper bushing cup must also be removed.



7. Install the cross shaft on to the lower StrongArm using the factory hardware. Some grinding must be done on the cross shaft to be able to slide it into the StrongArm.

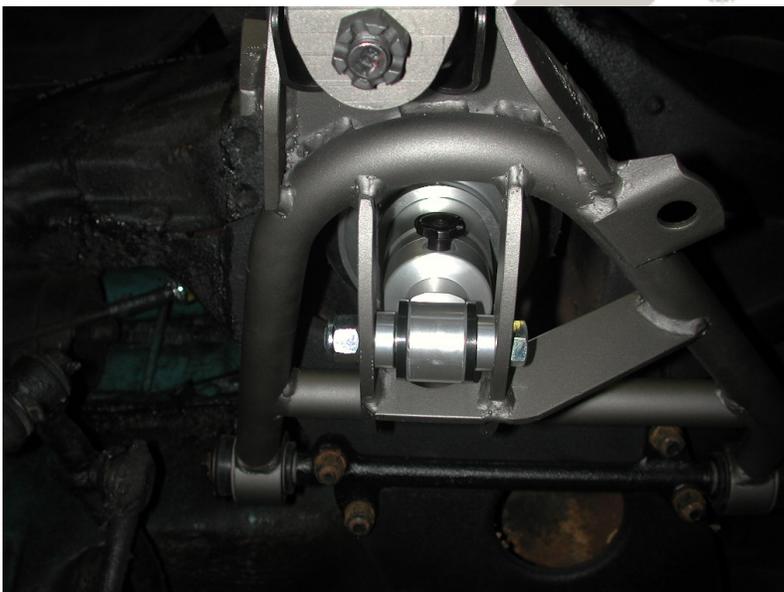
Note: There is a driver and passenger side lower cross shaft. The extended length of the shaft should go to the front of the vehicle.



8. Install the ball joints in the lower arm pointing down.

9. Bolt the lower StrongArm to the car. Note that the sway bar mount will face toward the front of the vehicle.

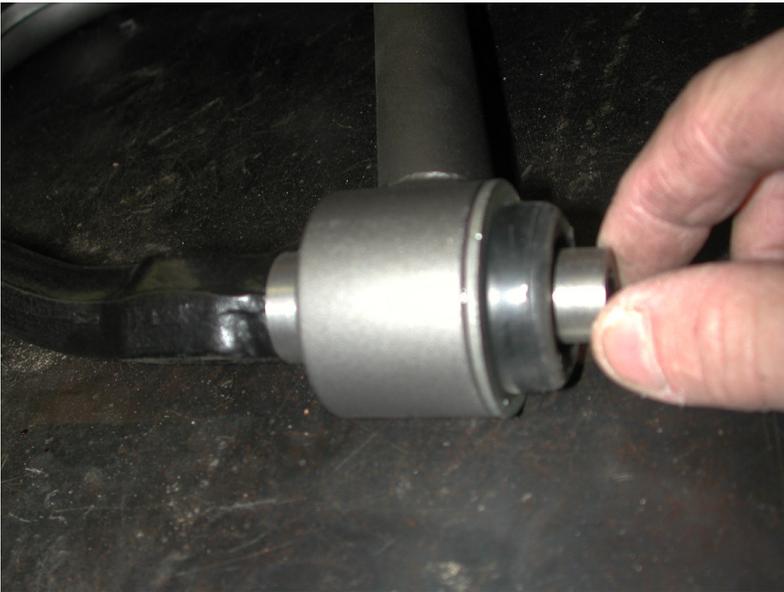
10. Apply thread sealant to the air fitting and screw it into the top of the Shockwave.



11. Place the Shockwave into the coil spring pocket and insert the stud through the factory shock hole. Check clearance of the air fitting. The bellow can be rotated by loosening the two setscrews at the bottom. The airline must also be routed at this time.

12. Bolt the lower arm to the spindle.

13. Bolt the Shockwave to the lower arm using the supplied 1/2" x 3 1/4" bolt and nyloc. An aluminum spacer on both sides of the eye will center the Shockwave.

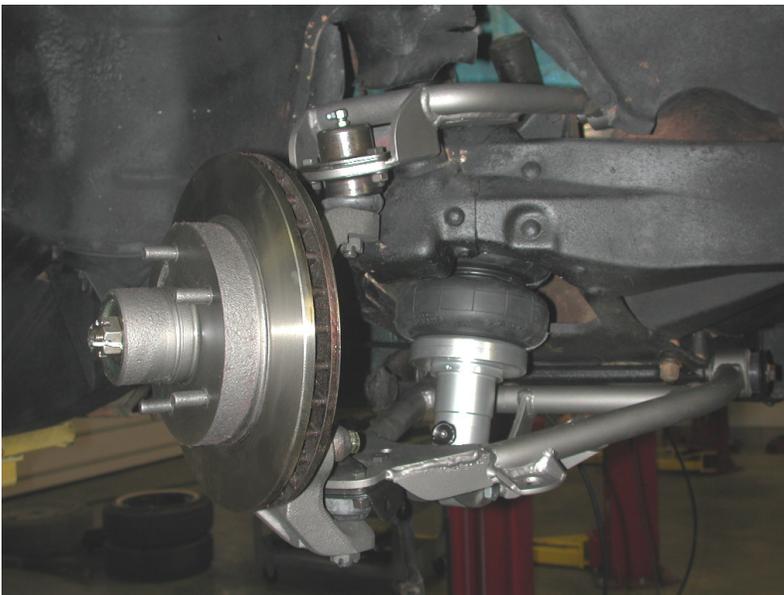


14. Remove the upper control arm and cross shaft.

15. After placing larger sleeve over the end of the upper cross shaft, slide the cross shaft through the StrongArm. Then press the bushing over the shaft. Insert the smaller sleeve inside the bushing and tighten the assembly with the 3/8"-24 x 1 1/2" bolt.

16. Install the ball joint into the upper StrongArm also facing down.

17. Bolt the upper StrongArm to the frame and spindle using the factory frame bolts.



18. Double check air spring clearance through full suspension travel. If any part of the Shockwave touches the frame at anytime it will damage the unit. **This is not a warrantable situation.**

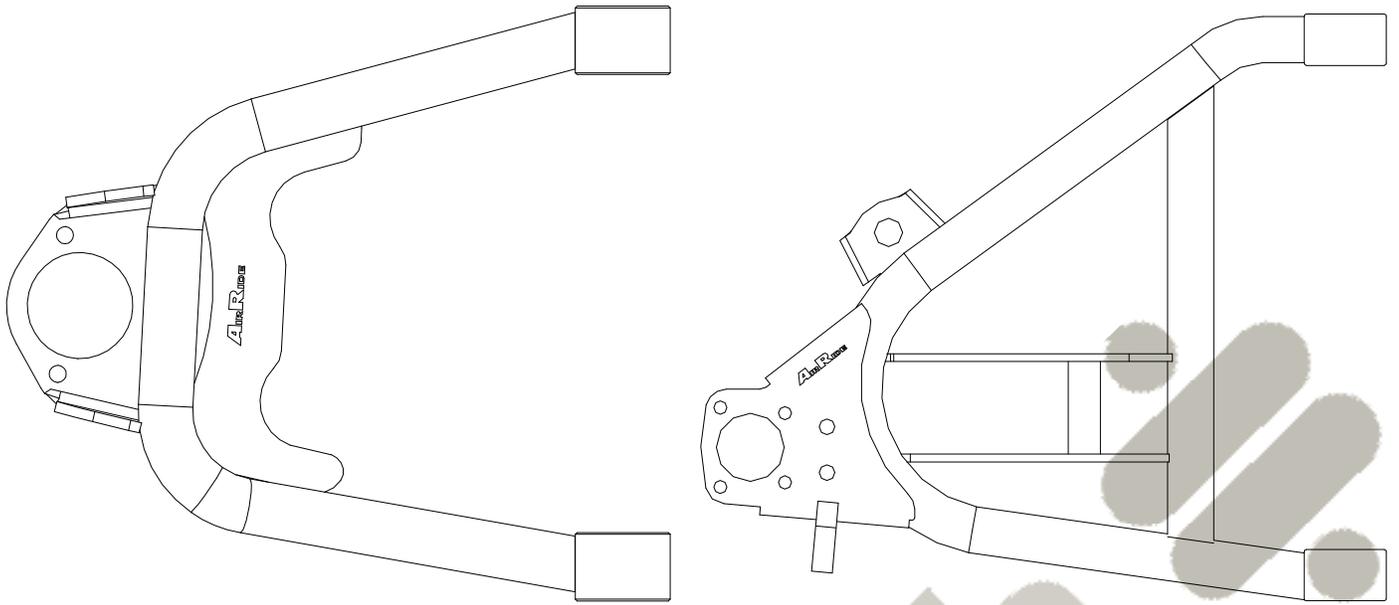
19. There are holes on the lower arm near the ball joint to mount the factory bump stop. Although it is not needed unless you are having tire clearance issues.

20. Reassemble the rest of the front suspension. Refer to the factory service manual for proper assembly procedures.

21. Grease the ball joints.

22. Ride height pressure should be around 105psi but will vary to driver preference.

LUCA1019 Upper and Lower Driver Side StrongArms



ridetech
Air Ride Technologies

SHOCKWAVE™ by Air Ride Technologies

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

Adjusting shock valving

The knobs on the Shockwave will adjust the dampening characteristics of the shock absorber. One knob is for compression and the other for rebound, they are labeled accordingly. There are 16 clicks per knob, 1 is located fully counter clockwise and being the softest setting. We recommend 1 click for every 10psi. This can be fine tuned to driver preference.



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ABAR20300 55-57 Chevy Rear AirBar

SKW7001DA Rear Double Adjustable Shockwaves

2	SKW4102DA	Short Double Adjustable Shocks
2	SKW7114	Rear bellows with ends crimped on
2	SKW013	Internal Bumpstop
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 installed in top
2	SKW052	5/8" Sleeves installed in shock
8	SKW051	Poly bushing halves
2	FIT4201	1/4" x 1/4" swivel 90 fitting

AirBar Components

1	A114	Driver side lower axle bracket
1	A687P-1	Passenger side lower axle bracket
1	A684-1	Upper crossmember
1	A683D-1	Upper shock mount
1	A683P-1	Upper shock mount
4	A680	Heim end spacer for diagonal bar
1	A679D	Lower shockwave mount
1	A679P	Lower shockwave mount
4	ROD302	Pressed into bars
4	BARTW16.625	Parallel Bars C-C 18.50"
1	BARTT26.750	Diagonal bar C-C 30.25"
2	S0001	Shock studs
1	A206	Brake line tab
4	ROD1000	Rod end
2	ROD150	Heim end for Diagonal link

Hardware List:

4	1/2" x 3/4" Gr. 8 bolt	Lower Shockwave Mount
10	5/8" SAE Gr.8 Nyloc Jam nut	
8	5/8" x 2 3/4" SAE Grade 8 bolt	Bar ends
2	5/8" x 3" SAE gr.8 bolt	Bar ends with diagonal link mounts
2	1/2" x 2 1/4" SAE bolt	Upper Shockwave mount
2	1/2" SAE Nyloc jam nut	
20	3/8" x 1" type F thread forming bolt	Crossmember and upper Shockwave mount
20	3/8" Lock washer	
2	#10 x 3/4" Tek screws	Brake line bracket

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, bump stops, pinion snubber and tail pipes. Refer to the factory service manual for proper disassemble procedures.



3. The parking brake brackets will be in the way of the 4 link and must be removed. Loosen the parking brake adjustment nut and remove the cable from the frame bracket. The tack weld can be broke loose with a hammer and chisel. Grind the remains of the weld smooth.

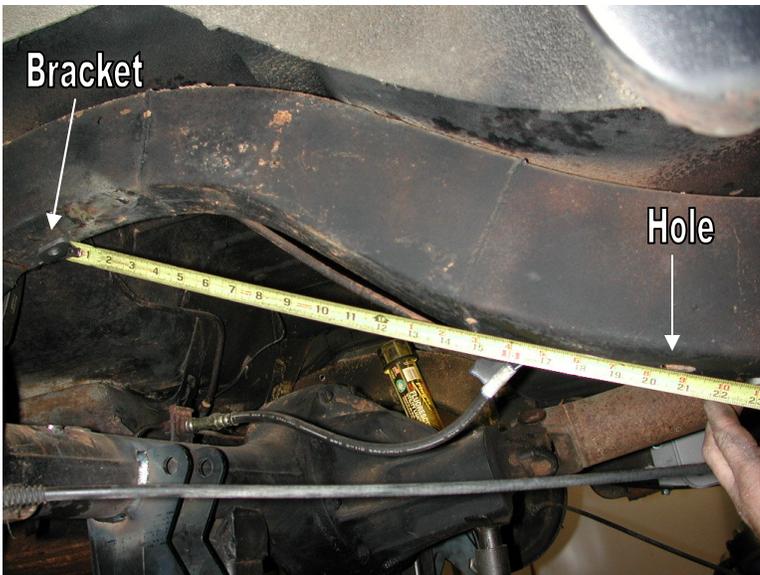


4. The rear brake line bracket on the passenger side fame rail must also be removed.



5. Use a couple clamps to secure the crossmember between the frame rails. Slide it forward to the edge of the body mounts. Drill the holes with a 5/16" bit and thread the 3/8" x 1" self-tapping bolts in one at a time.

Do not over tighten the self-tapping bolts; they can be stripped.

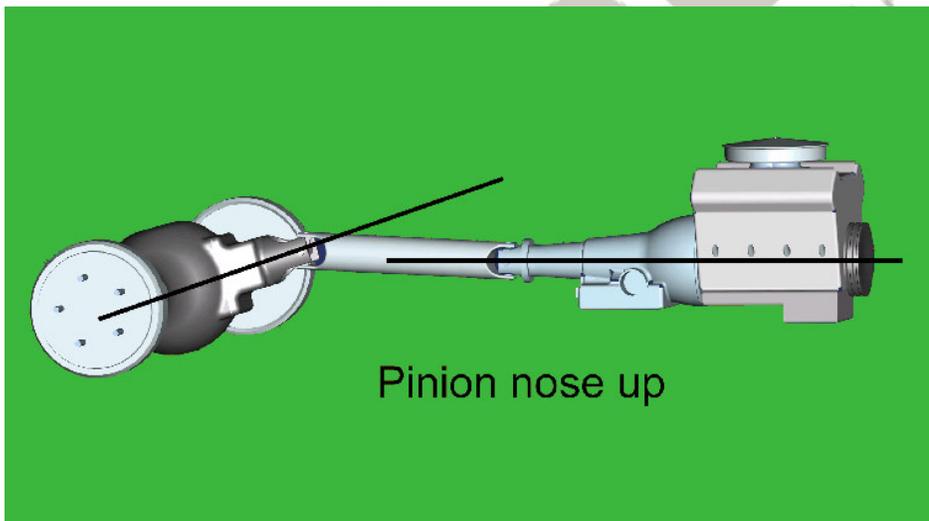
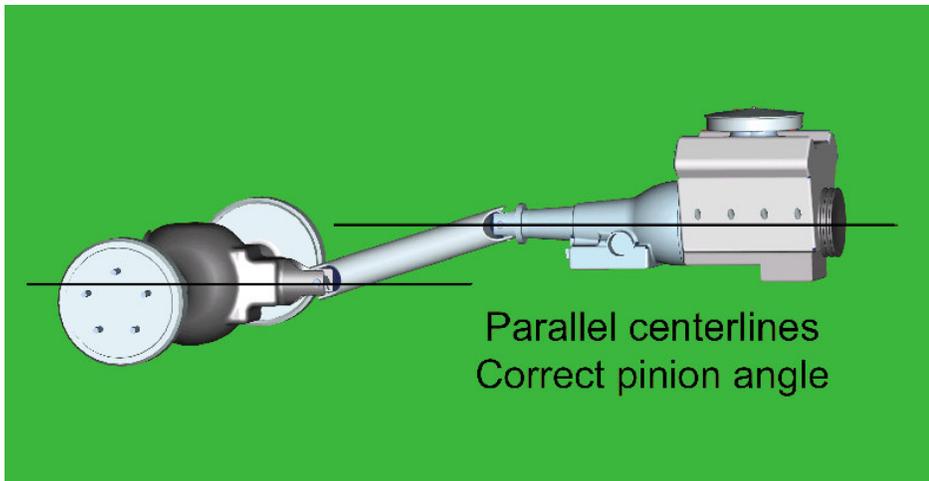
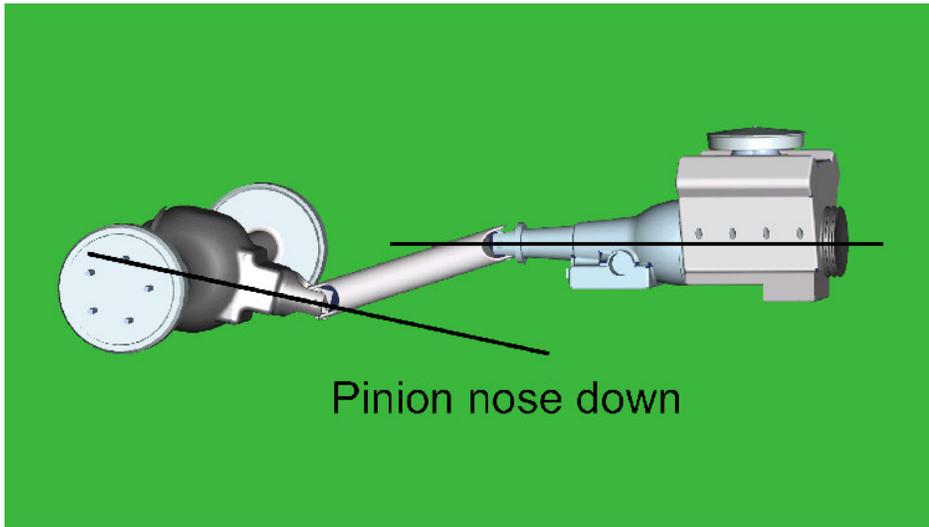


6. The location of the upper Shockwave mount is determined by measuring 20 1/4" from the edge of the bracket to the large hole in the bottom of the frame.



7. Use a clamp to hold the bracket against the inside of the frame and drill the holes with a 5/16" bit. Thread a 3/8" x 1" self-tapping bolt into the frame after drilling each hole.

8. Note there is a driver and passenger side bracket and are stamped accordingly. When using the correct bracket the Shockwave will be perpendicular with the ground.



9. 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.



10. Pinion angle must be set at ride height. At ride height there should be 4 1/2" between the axle and frame.

11. One trick to help maintain these setting while welding in the axle bracket is to tack weld a 4 1/2" long spacer between the axle and frame.

12. After setting the pinion angle, make sure the axle is centered. This can be done by measuring from the axle flange in to the frame rail.



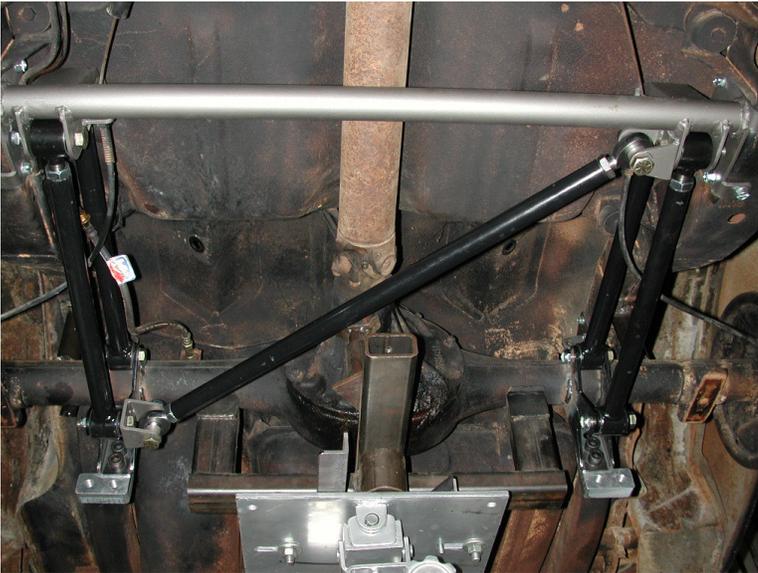
13. Install the 4 link bars into the crossmember and axle bracket, but **do not tighten the bolts yet**. Use the 5/8" x 2 3/4" bolts and nylocs supplied. Check the length of the bars; they should be 18 1/2" C-C.

14. There is a driver and passenger side bracket. The passenger side bracket has the diagonal link bracket welded to it. These rod ends will use a 3" bolt. You can use a large hose clamp to hold these in place temporarily.



15. Swing the axle bracket up to the axle. These brackets must be centered and aligned with the crossmember mounts before welding. The brackets should be 31 5/8" apart on the outside measurement. Then just center it between the axle flanges.

16. Tack weld the bracket to the axle. Double-check axle center, bracket alignment, and pinion angle. Remove the bars to avoid frying the bushings. Then finish welding the bracket 1" at a time in different spots to avoid warping the axle.



17. Bolt the lower Shockwave mount to the axle bracket using the 5/8" x 3/4" Allen bolt. Apply anti-seize to the threads. It is easier to remove the bars to install these bolts.

18. There is a driver and passenger side bracket, the correct bracket will offset the Shockwave toward the wheel.



19. Bolt the diagonal link into place with a spacer on both sides of it using a 5/8" x 2 3/4" bolt and nyloc. It should measure 30 1/4" C-C.

20. Install the parking brake cable into the new tab on the crossmember.

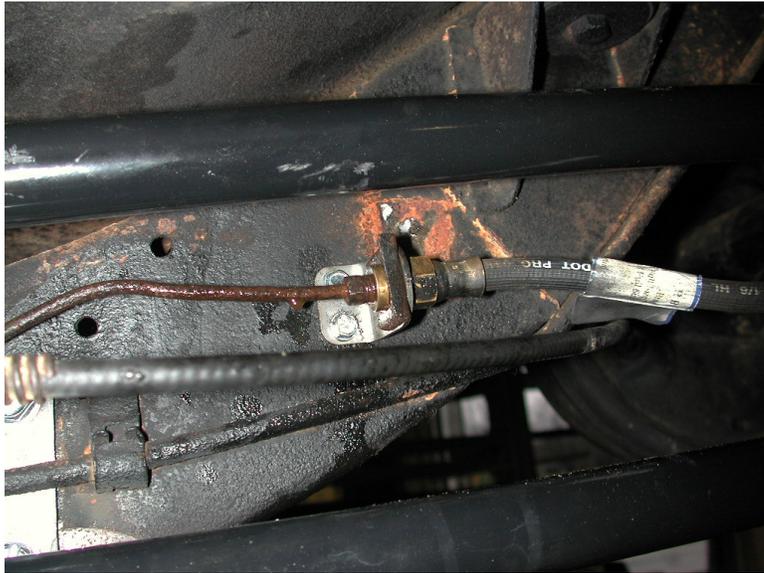
21. With the axle at ride height snug all the 4 link bolts. These bushings are rubber and do not require lubrication.



22. Apply thread sealant onto the air fitting and screw it into the top of the shockwave. Loosening the setscrews at the bottom of the bellows will allow you to move the fitting location.

23. Screw the stud into the lower billet mount. Place the washer over the stud then the Shockwave followed by another washer. Apply anti-seize to the threads and then nyloc nut.

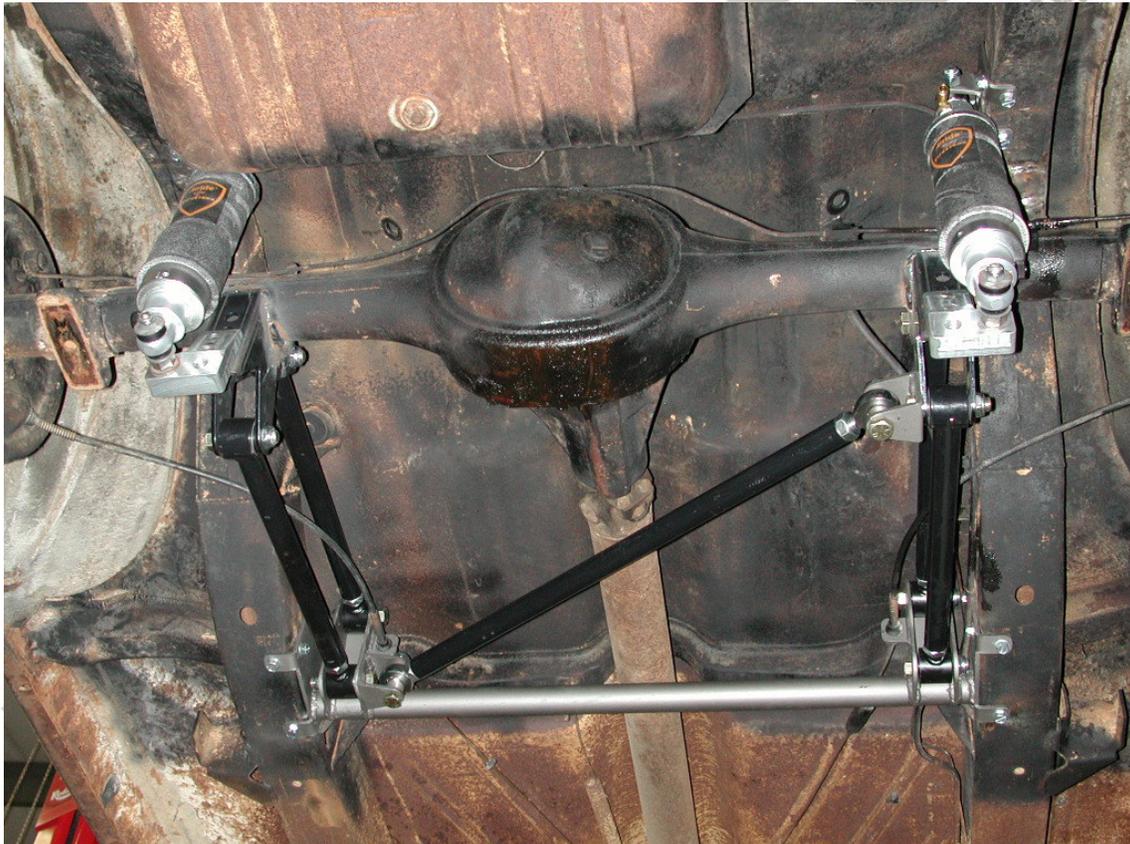
24. The Shockwave is held to the upper mount using a 1/2" x 2 1/4" bolt and nyloc.



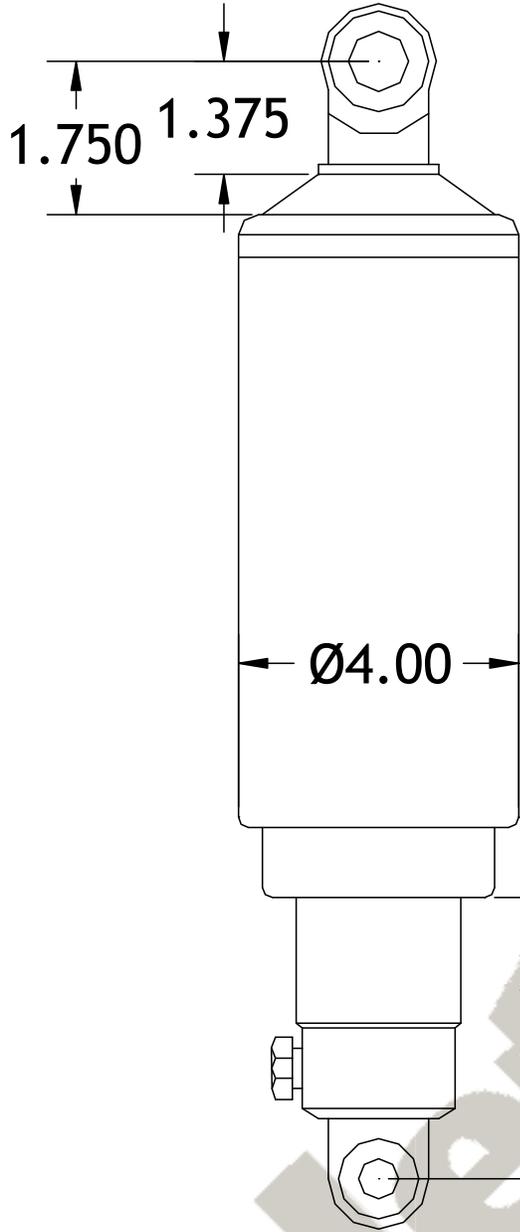
25. Remove the spacer from between the axle and frame.

26. A new brake line tab is supplied and will mount just below the original. Make sure it clears the bar through full suspension travel.

27. Driving height will be with approximately 13" from center eye to center eye. This should occur 75psi but will vary to driver preference.

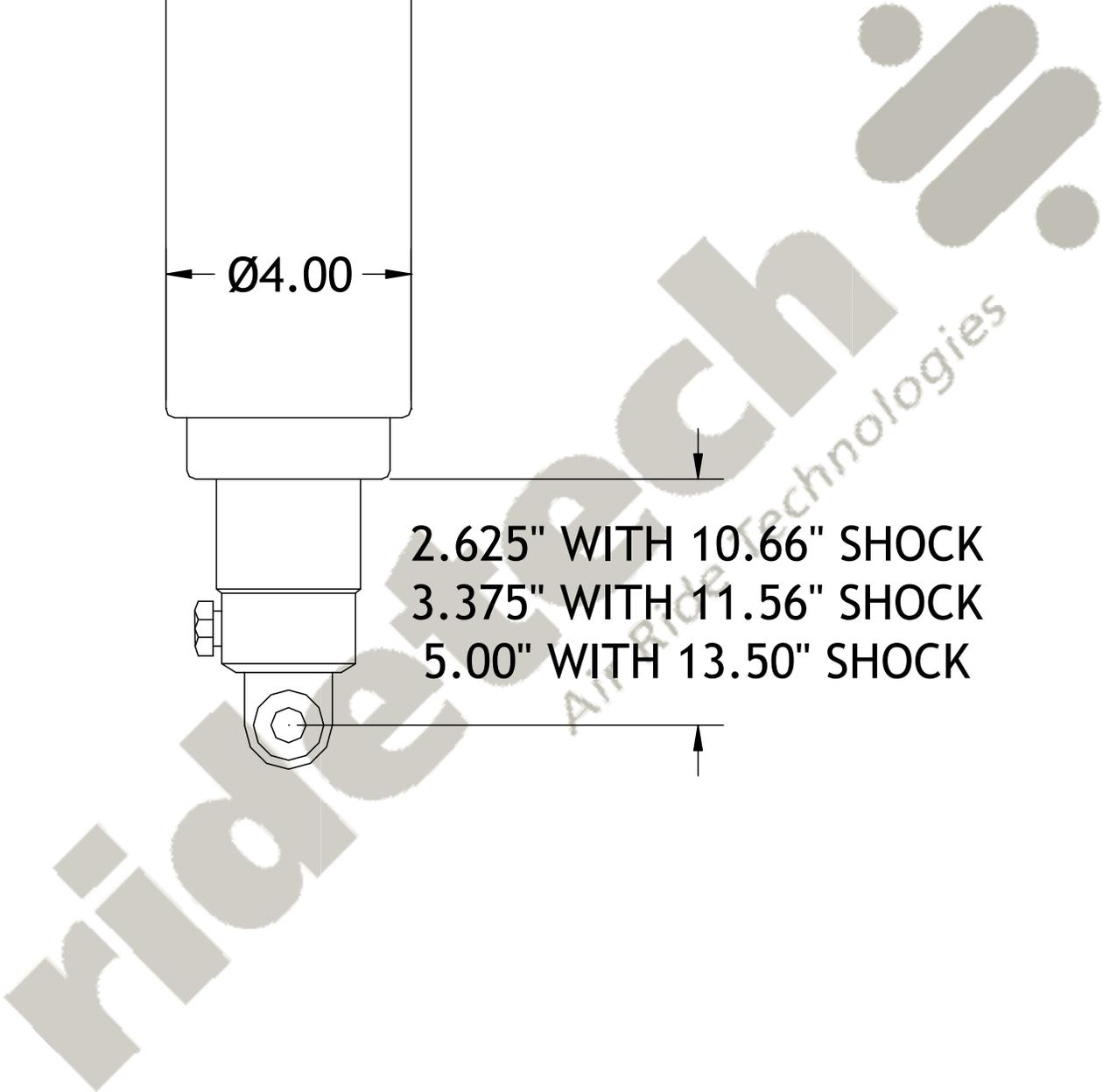


SKW 7000



Compressed Height	10.66"
Ride Height	13"
Extended Height	14.76"

- 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

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SWA7500-P 55-57 Chevy Front MuscleBar

- 1 A987 Sway Bar
- 2 ENG95113 Bushing and strap kit
- 2 A983 Frame plate
- 4 A954 Aluminum step washer
- 2 BAL1032 10mm straight PosiLink
- 2 BAL1034 10mm 90 degree PosiLink
- 1 Tube of lithium grease

Hardware:

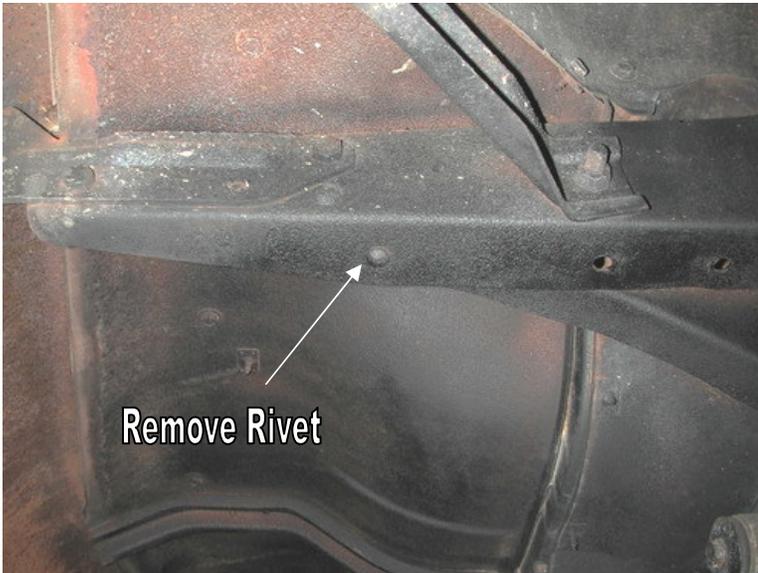
- | | | |
|----|------------------------|------------------------|
| 2 | 10mm x 1.5 stud | PosiLink (Use Loctite) |
| 2 | 10mm lock washer | 90 degree PosiLink |
| 2 | 10mm Nylok nut | Straight PosiLink |
| 8 | 3/8" x 1 1/4" USS bolt | Frame plate |
| 8 | 3/8" USS Nylok nut | Frame plate |
| 18 | 3/8" SAE flat washers | Frame plate & PosiLink |

MUSCLEbar™

POSI • Link™

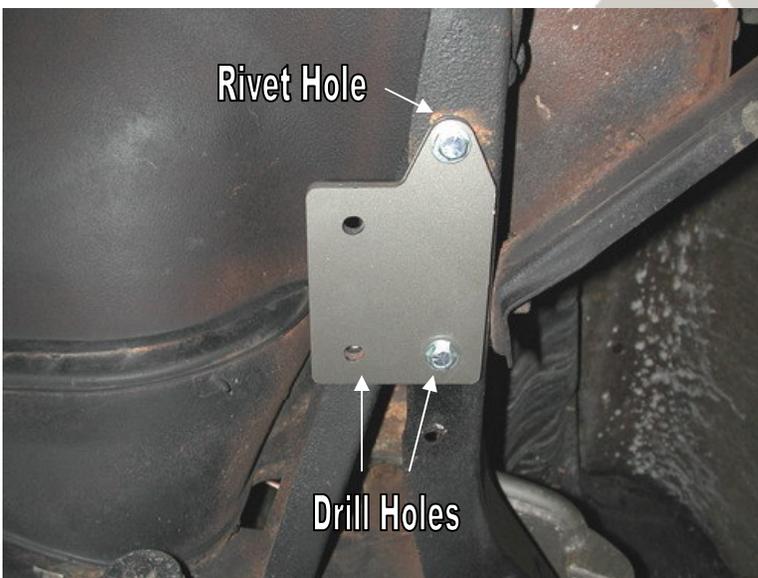
SWA7500 Installation Instructions

This sway bar is designed for use with Air Ride Technologies StrongArms.



1. The sway bar frame plate will index off of this factory support brace rivet. Remove the rivet by grinding the head smooth, then drive it out with a hammer and punch.

2. Drill hole to 3/8".



3. Using a 3/8" x 1 1/4" bolt, flat washer and Nylok nut, bolt the frame plate to the bottom of the frame rail.

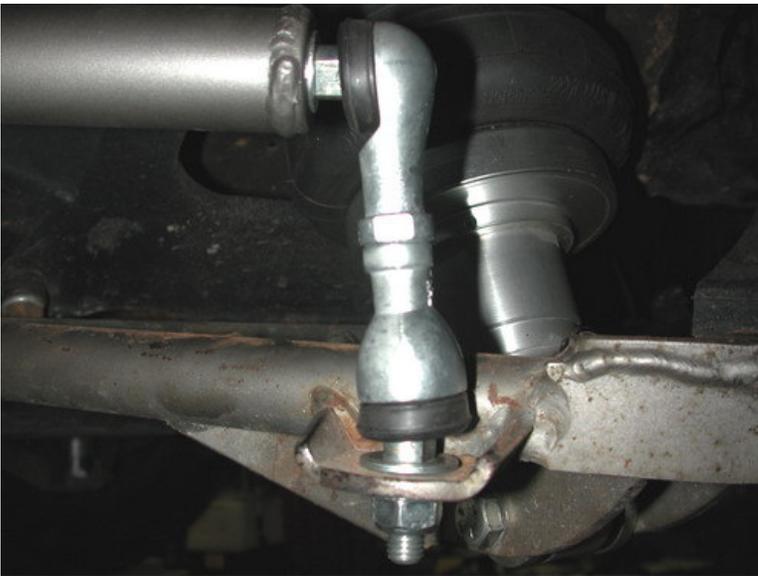
4. Make sure the side of the plate is aligned with the outside of the frame rail. Drill the remaining holes.

5. Bolt the outside rear hole of the plate to the frame using a 3/8" x 1 1/4" bolt, Nylok nut and flat washer.



6. Apply lithium grease to the poly bushing. Install the bushing over the sway bar, and then place the bushing strap over the bushing.

7. Bolt the sway bar to the frame plate using two 3/8" x 1 1/4" bolts, Nylok nuts and flat washers. Do not tighten yet.



8. Bolt the 90 degree end of the PosiLink to the sway bar. A 3/8" flat washer and 12mm lock washer must be installed between the PosiLink and the bar.

9. Bolt the straight end of the PosiLink to the lower control arm. An aluminum step washer must be installed on each side of the control arm tab. Fasten with a 12mm Nylok nut. Then tighten the bushing frame bolts.



Your MuscleBar installation is now complete. If you have any further questions, please call our technical support line at 812-482-2932.



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APOD4100LE3 LevelPro AirPod Compressor System

- 1 5 gallon AirPod
- 1 CON8002 RidePro E3 Display
- 2 6-32 x 3/8" Phillips pan head screw for display
- 1 WIR3400 Display Harness
- 1 WIR8360 Height sensor harness (2 short – 2 long)
- 4 SEN001 Height sensor
- 10 Heat shrink tubes
- 4 SEN002 Hardware kit for height sensor (includes the following)
 - 1 Steel linkage rod
 - 2 Rubber rod ends
 - 2 1/4" sensor bolts w/ Nyloc nuts & flat washers
 - 1 Mounting tab
- 1 WIR External power harness
- 1 WIR5000 Fuse holder
- 1 WIR5040 40 amp fuse
- 1 #10 Yellow butt connector
- 1 #10 5/16" eye connector
- 2 ARL2000 30' roll of 1/4" airline
- 4 FIT4201 1/4"npt x 1/4"airline fitting
- 1 Installation Guide

airpodTM
by Air Ride Technologies