

Part # 12100109 67-70 Mustang Complete CoilOver Kit

Air Ride Technologies

Front Components:

1 12103509 Non Adjustable Front CoilOvers

1 12102899 Lower StrongArms

1 12103699 Upper StrongArms

Rear Components:

1 12106509 Non Adjustable Rear CoilOvers

1 12107199 Bolt-on 4 Link





Part # 12103509 67-70 Mustang Front NA CoilOvers

For Use w/ Upper StrongArms

Shock Assembly:

2	24029999	2.6" Stroke non adjustable shock
2	70008676	2" threaded stud top for NA shock
2	90001628	.5" I.D. bearing
4	90001995	bearing snap ring

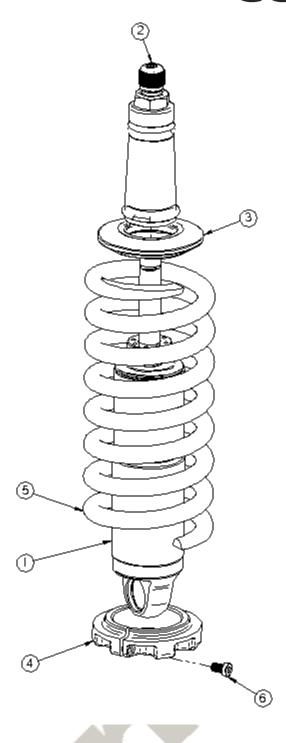
Components:

2	59080700	Coil spring – 8" long / 700 # rate
2	90002312	2" stud top base
2	90002222	Spring retainer kit (included upper and lower spring retainer, screw & clip)
2	90001902	Aluminum cap for Delrin ball
2	90001903	Delrin ball upper half
2	90001904	Delrin ball lower half
2	90001645	Upper Shockwave mount
2	90000506	Aluminum Upper plate

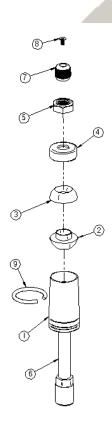
Hardware:

2	99562003	9/16" SAE Nylok jam nut	Stud top hardware
6	99311012	5/16" x 1" USS Flange bolts	Upper mount to strut tower

COILOVER

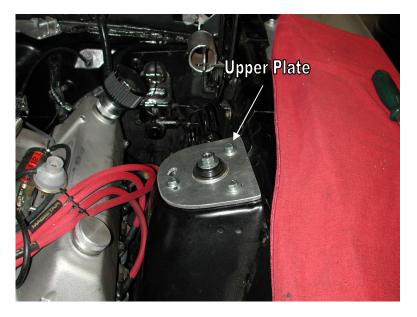


- 1. Impact Forged, Monotube shock
- 2. Rebound adjustment knob (SA Only)
- 3. Upper coil spring retainer
- 4. Lower coil sprig retainer
- 5. High tensile coil spring
- 6. Set screw



- 1. Stud top base
- 2. Lower Delrin ball half
- 3. Upper Delrin ball half
- 4. Aluminum cap
- 5. 9/16" Nylok jam nut
- 6. Threaded stud
- 7. Adjustment knob
- 8. Screw
- 9. Snap ring

COILOVER



1. Place the upper plate on top of the strut tower. While holding the upper Shockwave mount up to the bottom of the strut tower, fasten the assembly with three 5/16" x 1" flange bolts.



- 2. Place the stud up through the upper mount. (See diagram)
- 3. Attach the bottom of the shock to the upper arm w/ the hardware supplied w/ the upper arm.



Part # 12102899 67-70 Mustang Lower StrongArms

Components:

1	90000110	Driver side lower arm	90000734
1	90000111	Passengers side lower arm	
2	9000895	Lower ball joint	
2	90002283	Thick washer for ball joint	5
4	90000112	Eccentric eliminator	lie.
2	90000108	Inner bushing sleeve	90000109
4	90001086	Poly bushing half	9000109
2	90001045	Control arm pivot bearing	
2	90000734	Bearing housing	
2	90000109	Bearing retaining plate	
2	90000733	Bearing retaining plate Aluminum bearing spacer	
2	90000732	Bearing stud (Set to 2- 15/16")	90001045
	_		

90000734

90000733

90002283

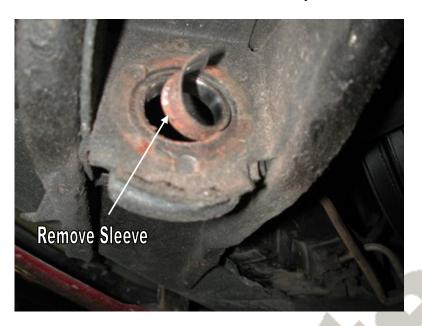
Hardware:

2	99501017	1/2" x 4 1/2" SAE Gr.8 bolt	Lower arm to frame
2	99502002	1/2" SAE Nylok nut	Lower arm to frame
6	99371019	3/8" x 1 1/2 USS SHCS	Bearing housing
6	99373005	3/8" lock washer	Bearing housing
2	99752004	3/4"-16 Jam nut	Stud to arm
2	99752001	3/4"-16 Lock nut	Stud to bearing
2	99753002	3/4" flat washer	Stud to bearing



Installation Instructions

- 1. Raise and support vehicle at a safe, comfortable working height. Let the front suspension hang freely.
- 2. Remove the coil spring, shock absorber, upper shock bracket, strut rod, sway bar, upper and lower control arms. Refer to factory service manual for proper disassembly procedure.



- 3. Be sure to remove the outer bushing sleeve from the strut rod frame mount.
- 4. Remove any excess undercoating or rust.

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- 5. Using the bushing retainer as a template, mark the holes to drill with a center punch.
- 6. Remove the retainer and drill the holes with a 3/8" bit.
- 7. Place the bearing inside the bearing housing, then clamp it to the frame with the bearing retainer and the 3/8" x 1 ½" SHCS and lock washers.



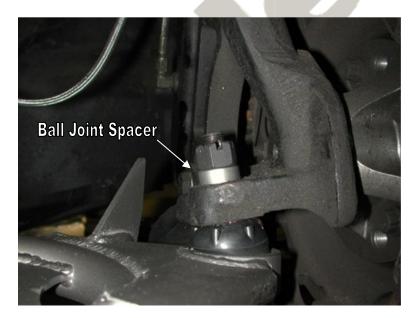


- 8. The bearing stud should already be threaded into the lower arm, factory set at 2-15/16" (measuring from the end of the arm to the bearing).
- 9. Slide the stud through the bearing, then slide the aluminum spacer over the stud with the larger end toward the front of the car. Secure the assembly with a ¾" Nylok Nut and flat washer.

Note: We caster setting should set at around 3.5 degrees positive. Vehicle must be aligned before driving.



- 10. Attach the other end of the lower control arm to the factory frame mount using a $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " bolt and Hex nut.
- 11. Eccentric eliminator plates are includes and one must be installed on each side of the frame. Start out with it in the center, make sure both plates are in the same position.



12. Slide the ball joint boot over the ball joint, then place the spindle over the ball joint stud. A ball joint spacer will be necessary to align the castle nut with the cotter pin hole.

Note: Before installing the spindle, turn the ball joint stud so that the cotter pin hole faces front to back. This will make it easier to install/remove the cotter pin.



Part # 12103699 67-70 Mustang Upper StrongArms

For Use w/ Shockwaves or CoilOvers

Components:

2	90000115	Upper StrongArm
2	90000930	Upper ball joint
2	90000931	Billet Aluminum drop cross shaft
4	90001589	Heim ends
2	90000113	Alignment shim

Hardware:

4	99621002	5/8" x 1 3/4" SAE Gr.8 bolt	Rod end to cross shaft
4	99623001	5/8" SAE flat washer	Rod end to cross shaft
4	99623002	5/8" lock washer	Rod end to cross shaft
4	99501011	½" x 2 ½" SAE Gr.8 bolt	Cross shaft to body
4	99502004	½" SAE nut	Cross shaft to body
8	99503001	½" SAE flat washer	Cross shaft to body
4	99503002	½" lock washer	Cross shaft to body
2	99501010	1/2" x 2 1/4" SAE Gr.8 bolt	Shockwave/CoilOver to upper arm
2	99502002	1/2" SAE Nylok nut	Shockwave/CoilOver to upper arm
4	99752004	3/4"-16 jam nut	Heim ends

STRONGARMS by Air Ride Technologies



- 1. Bolt the upper StrongArm to the body using ½" x 2 ½" bolts, flat washers and lock washers. A shim is supplied and may need to be installed between the body and the arms to achieve proper alignment.
- 2. The arms are preset at the factory so the alignment should be close, but the vehicle must be aligned before driving.

Note: The upper arm mounting holes on many cars have been redrilled 1" lower. This is done to improve the handling. Our cross shaft has the drop built into it, make sure to use the factory mounting holes.



- 3. Bolt the upper arm to the spindle using the hardware and cotter pin supplied.
- 4. Attach the Shockwave to the upper StrongArm using a ½" x 2 ¼" bolt and Nylok nut.
- 5. This control arm is designed to work with our MuscleBar sway bar. The end link will attach to the **rear** mounting tab on the upper arm.



Part # 12106509 67-70 Mustang Non Adjustable Rear CoilOvers

For Use w/ RideTech 4 Link

Shock Assembly:

2	24059999	5" stroke non adjustable shock
2	90002021	1.7" eyelet – Non adjustable
4	90001994	.625" I.D. bearing
8	90001995	Bearing snap ring

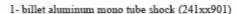
Components:

4 90001994 .625" I.D. bearing	
8 90001995 Bearing snap ring	
	gies
Components:	.09
2 59120175 Coil spring – 12" long / 175 # rate	010
2 90002222 Spring retainer kit	Shir
8 90002043 Aluminum spacer for bearings	Lec.
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In the box.....

Thank you for purchasing our product. In the box you will find the following components.



- 1- Upper spring seat Sold as pair (90002222)
- 1- Upper spring seat clip (90002057)
- 1- set of 5/8"-1/2" bearing spacer kit (90002044)



Assembly...



First using the supplied lower adjuster nut(90002222) thread the nut onto the shock from the bottom side as seen in figure 1



Next slide the upper spring mount (90002222) over eyelet as seen in figure 4.



Next install coil spring over the top of the shock as seen in figure 2 NEED COILS? FLIP SHEET OVER



Install upper spring mount retainer clip (90002057) into the groove on the upper eyelet as seen in figure 5.



Before the upper spring mount can be installed screw the adjuster knob on the upper eye mount to the firmest setting (clockwise) as seen in figure 3.



The included set of bearing spacers (900002044) are used to adapt the coil-overs to just about any application. The supplied spacers allow the coil-overs to accept 5/8" or 1/2" bolts.

Shock adjustment 101

How to adjust your new shocks. The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet. Begin with the shocks adjusted to the number 3 position. The first two settings are generally too soft for street use. The softest setting, is found by turning the knob in the counter-clockwise direction until the positive stop is located (this is setting #1). Rotating the knob in the clockwise direction increases damping stiffness. Each of the 24 settings is indicated by a detent that can be felt when turning the knob, and an audible click as the knob gently locks into position.

Take it on a drive....

Now if the car feels bouncy generally the vehicle will need a few more clicks (clockwise), again this will increase the stiffness of the shock.





Counterclockwise = Softer





Part # 12087199 64-70 Mustang Rear AirBar

Components:

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1	90000513	Lower Shockwave mount
1	90000514	Lower Shockwave mount
2	90000144	Axle tabs
2	90000155	Axle tabs
2	90000515	Lower axle mount
1	90000518	Upper cradle assembly
2	90000511	"T" bolt plate
2	90001001	Upper bars – TW 7.375" (C-C length 9.50")
2	90001025	Lower bars – WW 21.75"
2	90001589	Threaded Kevlar lined Heim end
2	99752004	3/4"-16 jam nut – for rod end
4	90000552	Aluminum spacer for Heim end
4	90001085	Poly bushing for lower bar
2	90000519	Lower bar bushing sleeve
4	90001942	Rubber bushings pressed into bars
1	90000129	Pinion snubber reinforcement plate
4	99566001	U-bolt 9/16" x 3" w/nuts and washers
2	90002285	Square corner U bolts - Upper cradle to car

Hardware Kit: (Part # 99010016)

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6	5/8" x 2 3/4" SAE Gr.8 bolts Bars t	to cradle and brackets
6	5/8" SAE Gr.8 Nylok jam nut	Bars to cradle and brackets
4	3/8" USS Nylok nut	Upper cradle to car
4	3/8" SAE flat washer	Upper cradle to car
4	1/2" x 2 1/4" SAE gr.8 bolt	Shockwaves to mounts
4	½" SAE Nylok jam nut	Shockwaves to mounts
4	½" x 1 ½" Gr. 8 bolt	Shockwave brackets to axle brackets
4	1/2" SAE Nylok nuts	Shockwaves to mounts
2	5/8" SAE Nylok nuts	"T" Bolt
2	5/8" SAE flat washer	"T" Bolt
2	5/16" x 1" USS bolt	Upper cradle to pinion snubber mount
2	5/16" flat washer	Upper cradle to pinion snubber mount
2	5/16" Lock washer	Upper cradle to pinion snubber mount
2	7/16" x 1 1/4" USS bolt	Upper cradle to floor pan
2	7/16" USS Nylok nut	Upper cradle to floor pan
4	7/16" SAE flat washer	Upper cradle to floor pan



- 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. Hang on to the front leaf spring bolts, they will be reused.

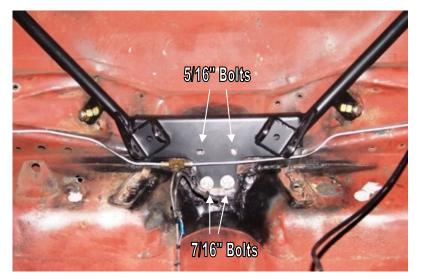


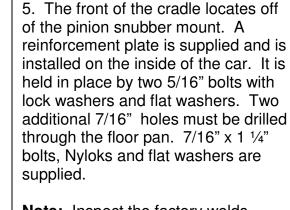
3. The square U-bolts hold the upper cradle in place and will slide through two existing holes. Some cars may not have these holes. In this case use the cradle as a template.

Note: You may need to open the holes up a bit to turn the bolt into place.

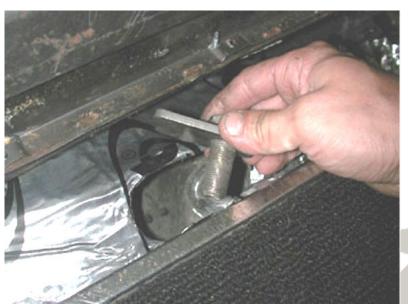


4. Lower the axle and slide the cradle assembly into place. The cradle will be held in place with two 3/8 nylocs and flat washers. Do not tighten these until all the bolts in the cradle have been started.





Note: Inspect the factory welds holding the pinion snubber mount to the floor pan, re-weld if necessary.



6. This T bolt will be inserted from the inside of the vehicle down through the factory shock hole. A 5/8" nyloc and flat washer will hold the cradle up tight to the bottom of the car.

Note: Cars equipped with the "Drag Pack" option will have staggered shocks. You will have to remove the plate covering the original shock hole.

7. Tighten all the upper cradle bolts.



8. The lower axle mount will bolt to the leaf spring pad via the supplied U bolts.

Note: To ease the rest of the install; leave all bolts loose until the lower bars are in place.



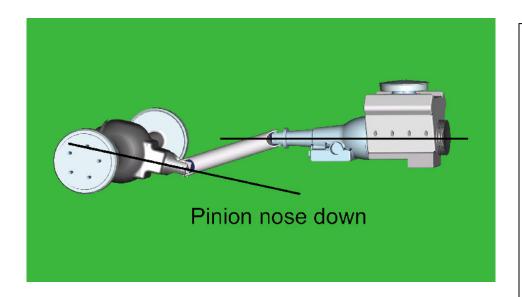
- 9. The large end of the lower bar (the longer one) will bolt into the front stock leaf spring mount using the stock hardware.
- 10. This bushing in polyurethane and is lubricated at the factory with lithium grease. Future lubrication can be done with any non-petroleum based lubricant. The other bushings are rubber and do not require lubrication.
- 11. Swing the bar up to the axle mount and insert 5/8" x 2 3/4" bolt and thin nyloc. Do not tighten just yet.

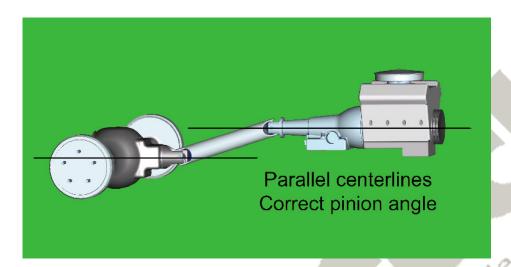
- 12. Bolt the lower Shockwave mount to the bottom two holes of the lower axle mount using two 1/2" x 1 1/2" bolts with Nylok nuts. The U shaped bracket will point towards the inside of the car.
- 13. Raise the axle to ride height. There should be approx. 14 1/2" from center eye to center eye on the Shockwave mounts.

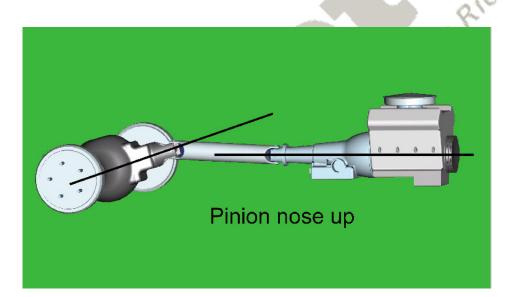
- 14. Bolt the axle tabs to the upper bar using the 5/8" x 2 3/4" bolt and nyloc as shown in the picture. The upper bar should measure 9.5". Bolt the other end to the cradle.
- 15. For now just lay the upper tabs on the axle. Pinion angle and axle center must first be set. Centering the axle is best done by leveling the car and hanging a plum off of the quarter and measuring to the axle. Pinion angle is explained on the next page.











16. 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 voke 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.



- 17. Once all of the angles are set, tack weld the upper tabs to the axle. To avoid frying the bushing remove the upper bar first then weld solid.
- 18. Install upper bars. With the vehicle at ride height snug all 4 link bar bolts.
- 19. Apply thread sealant to the air fitting and screw it into the top of the Shockwave. Bolt the Shockwave into place using
- 1/2" x 2 1/4" bolts with nylocs.
- 20. 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.
- 21. Ride height air pressure should be around 75-80 psi, with about 3-4 clicks in the shocks.