



350 S. St. Charles St. Jasper, In. 47546

Ph. 812.482.2932 Fax 812.634.6632

www.ridetech.com

Part # 11380299

99-06 Silverado Level 2 Complete Air Suspension System

Front Components:

- | | | |
|---|----------|--|
| 1 | 11383001 | Master Series Single Adjustable Front Shockwaves |
| 1 | 11382899 | Front Lower StrongArms |
| 1 | 11383699 | Front Upper StrongArms |

Rear Components:

- | | | |
|---|----------|---|
| 1 | 11386799 | Rear AirBar – Bolt-on 4 Link |
| 1 | 11380801 | Rear Master Series Single Adjustable Shockwaves |

Compressor System:

- | | | |
|---|----------|---|
| 1 | 30334100 | 5 gallon RidePro Digital Compressor Kit |
|---|----------|---|



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Part # 11383001

99-06 GM Silverado Front Master Series SA Shockwaves

For Use w/ StrongArms

ShockWave Assembly:

2	24090199	Master Series double convoluted assembly -255 type
2	24139999	3.5" stoke Master Series single adjustable shock
2	70008913	Locking ring
4	90001994	.625" I.D. bearing
8	90001995	Bearing snap ring
2	90002024	1.7" Adjustable eyelet

Components:

4	90002043	Aluminum Spacer ½" ID
2	90000097	Upper Shockwave Mount
2	90000359	Upper Stepped Washer
2	31954201	¼"npt x ¼" tube swivel elbows

Hardware:

2	99501018	½"- 13 x 1 ½" Carriage Bolt	Upper Shockwave Mount to frame
2	99502001	½"- 13 Nylok	Upper Shockwave Mount to frame
4	99503001	½" SAE Flatwasher	Upper Shockwave Mount to frame
2	99501010	½" – 20 x 2 ¼" Hex Head Bolt	Upper Shockwave to bracket
2	99502003	½" – 20 Jam Nylok	Upper Shockwave to bracket

SHOCKwave[®]

by Air Ride Technologies

Installation Instructions

1. Raise and support truck at a safe, comfortable working height. Let the front suspension hang freely.
2. Remove the coil spring, shock absorber, bump stop, upper control arm, and lower control arm. Refer to factory service manual for proper disassembly procedure.



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

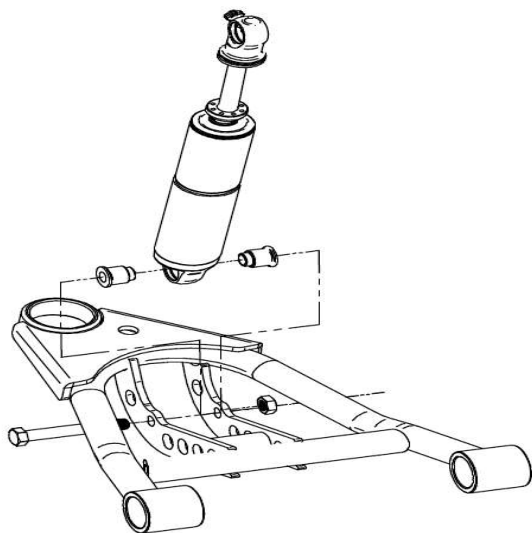
4. Insert the carriage bolt through the square hole in the upper mount.

5. Bolt the top of the ShockWave to the upper mount using a 1/2" x 2 1/4" bolt and Nylok jam nut. Two 1/2" washers must be installed on each side of the bearing.



6. Raise the Shockwave up to the coil spring mount with the carriage bolt sticking through the factory shock hole. The hole in the frame is larger than the bolt, so a step washer is supplied. This should be installed on top of the frame, followed by a 1/2" Nylok nut.

Note: The kidney bean shaped cutout in the upper bracket will match a protrusion in the coil spring pocket. This will clock the Shockwave so that when the suspension moves the bearing will rotate on the bolt. **If this is not installed properly it will damage the Shockwave.**



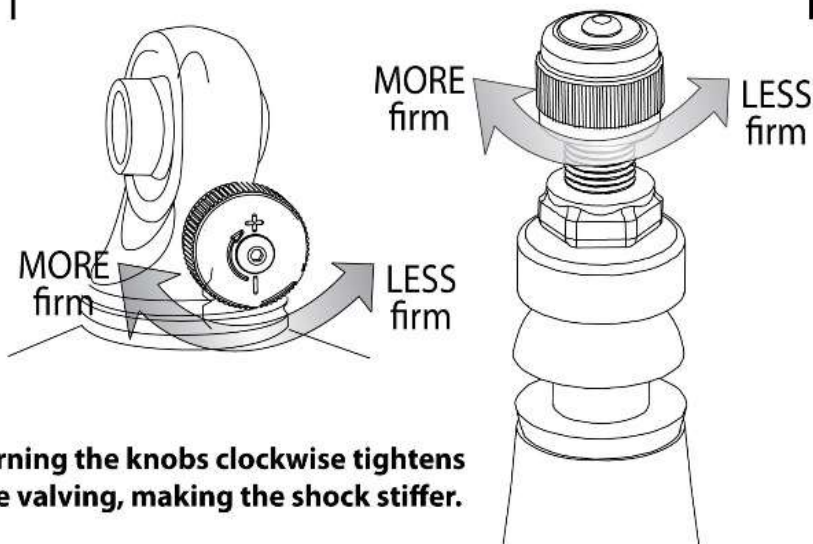
8. Attach the Shockwave to the lower arm using a 1/2" x 3" bolt and Nylok nut. An aluminum spacer must be installed on each side of the bearing.

Shock Adjustment Instructions



Rebound Adjuster

The rebound adjustment is made on the shaft end of the shock.



Turning the knobs clockwise tightens the valving, making the shock stiffer.

Rebound is the force required to open or "expand" the shock absorber back to its original position.

Adjusters knobs on a ring mount have 30 clicks of adjustment. On a stud top mount there are 20 clicks of adjustment.

Because of the fine adjustment range RideTech recommends adjusting 3-4 clicks minimum when making a shock valve change.

All RideTech Shocks are shipped from the factory at the FULL SOFT position.

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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 warrantied.**



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Part # 11382899

99-06 Silverado Front Lower StrongArms

For Use w/ Shockwave or CoilOver

Components:

1	90000106	Driver side lower arm
1	90000107	Passenger side lower arm
2	90000901	Lower ball joint (includes boot, grease fitting, castle nut & cotter pin)
2	90000198	3" inner bushing sleeve
2	90000199	3.5" inner bushing sleeve
8	90001085	Poly bushing half
2	90000921	90 degree 12mm PosiLink
2	90000922	Straight 12mm PosiLink
2	90000095	PosiLink T Bushing
2	90000096	PosiLink Spacer
4	90002062	Aluminum shock spacer
4	99250001	1/4"-28 grease fitting – Use Lithium grease on frame bushings

Hardware Kit:

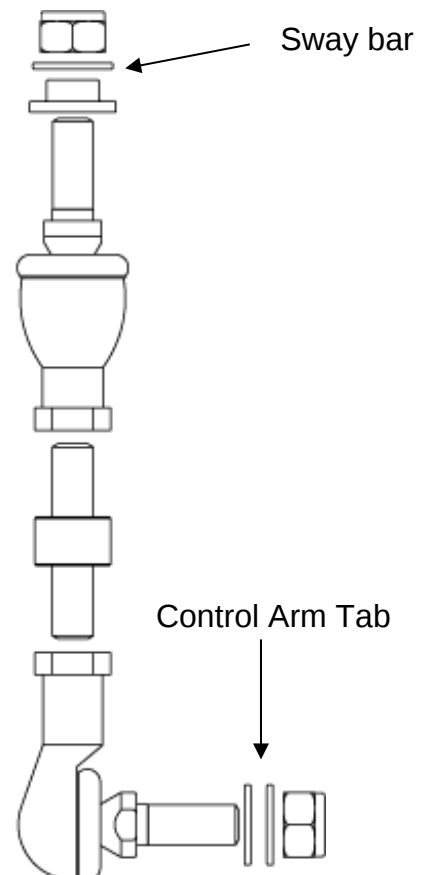
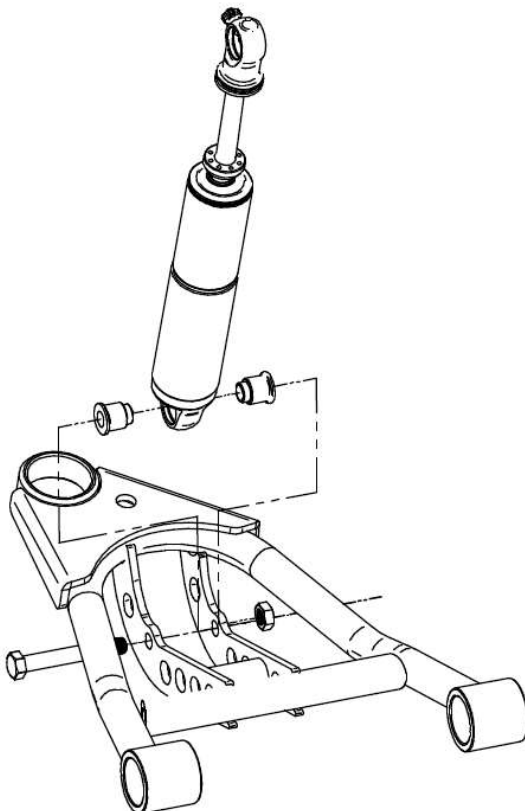
2	99122003	12mm x 1.75 x 60mm stud	PosiLink (Use Loctite)
4	99122001	12mm x 1.5 Nylok nut	PosiLink
6	99433002	7/16" SAE Gr.8 flat washer	PosiLink
2	99501024	1/2"-13 x 3" Gr. 5 bolt	Shock to lower arm
2	99502001	1/2"-13 Nylok nut	Shock to lower arm



Installation Instructions

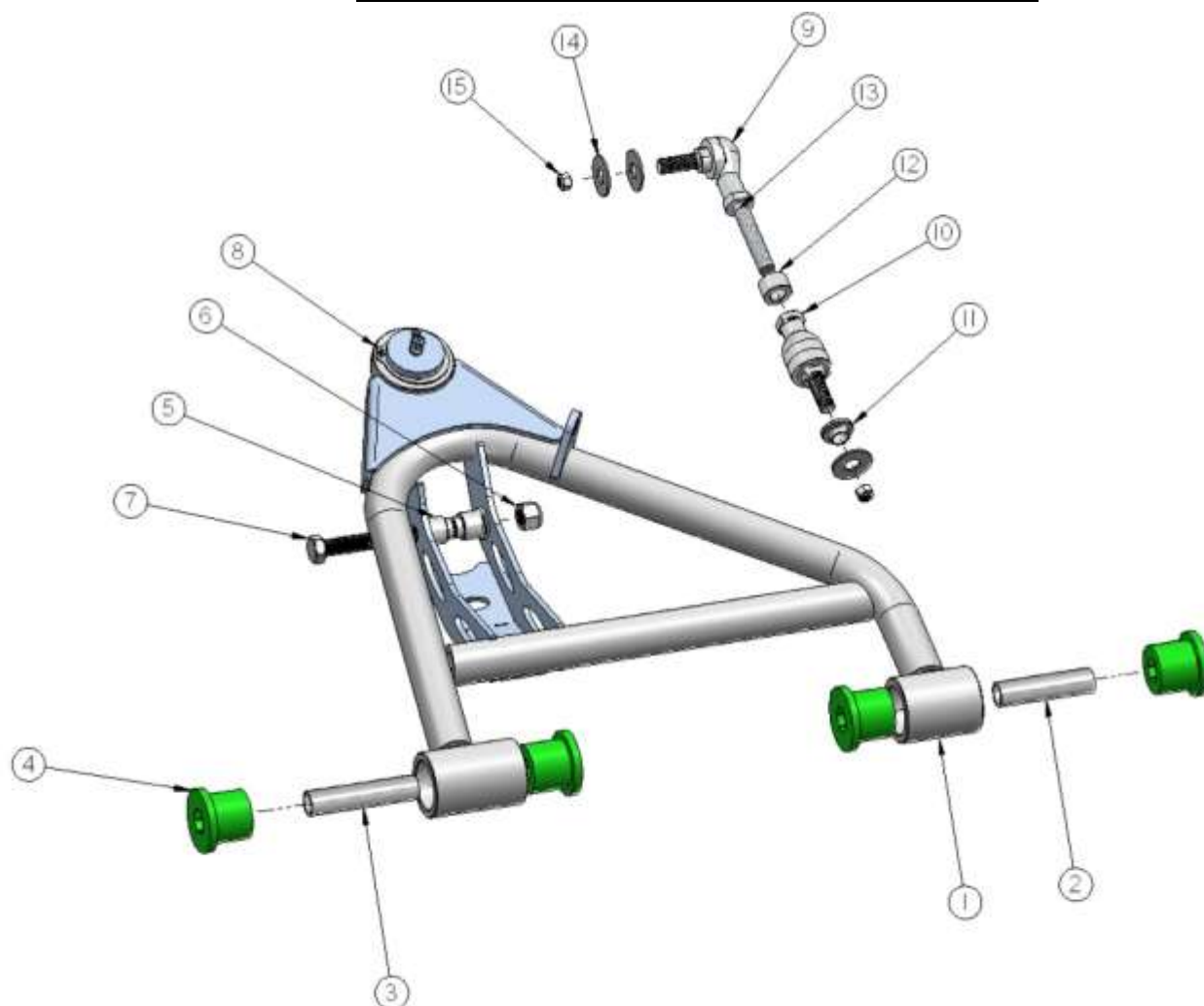


1. After removing the factory lower control arm, clean the bushing mounting surfaces on the frame and lubricate with Lithium grease.
2. Fasten the lower arm to the frame using the factory hardware.
3. Slide the ball joint boot over the stud, then push the stud down through the spindle. Secure w/ the new castle nut and cotter pin supplied.
4. Attach to the shock to the lower arm using the $\frac{1}{2}$ " x 3" bolt and aluminum spacers supplied.
5. Screw the Zerk fitting into the ball joint and grease.



99-06 Silverado CoolRide Driver Side StrongArm

Item #	Description	Qty.
1.	Driver side arm	1
2.	Inner bushing sleeve – 3"	1
3.	Inner bushing sleeve – 3.5"	1
4.	Poly bushing half	4
5.	Aluminum shock spacer	2
6.	½"-13 Nylok nut	1
7.	½"-13 x 3" Gr. 5 bolt	1
8.	Ball joint	1
9.	90 degree 12mm PosiLink	1
10.	Straight 12mm PosiLink	1
11.	PosiLink T Bushing	1
12.	PosiLink Spacer	1
13.	12mm x 1.75 x 60mm stud	1
14.	7/16" SAE Gr.8 flat washer	3
15.	12mm x 1.5 Nylok nut	1





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Part # 11383699
99-06 Silverado Upper Strong Arms

Components:

2	90000630	Upper StrongArm
2	90000902	Ball joint (includes boot, grease fitting, castle nut & cotter pin)
8	90001086	Poly bushing half
4	90001097	Inner bushing sleeve
4	99250001	1/4"-28 grease fitting – Use Lithium grease on frame bushings

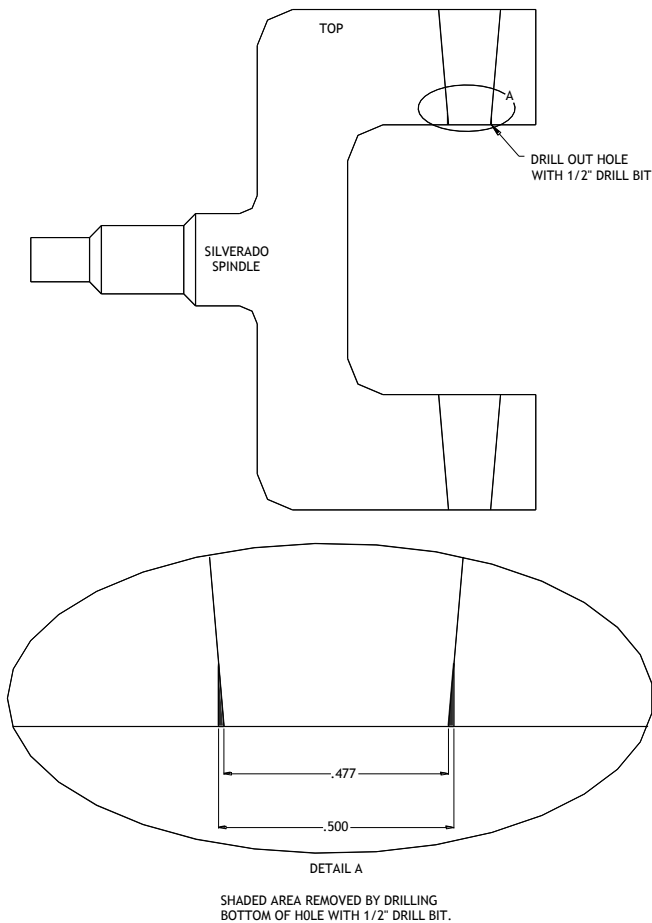
STRONG ARMS™

by Air Ride Technologies



1. After removing the factory upper control arm, clean the bushing mounting surfaces on the frame and lubricate with lithium grease.
2. Drop ball joint down through upper arm. Install boot and fasten w/ the hardware supplied.
3. Bolt the arm to the frame using the factory camber bolts.

Note: The truck must be realigned before driving.

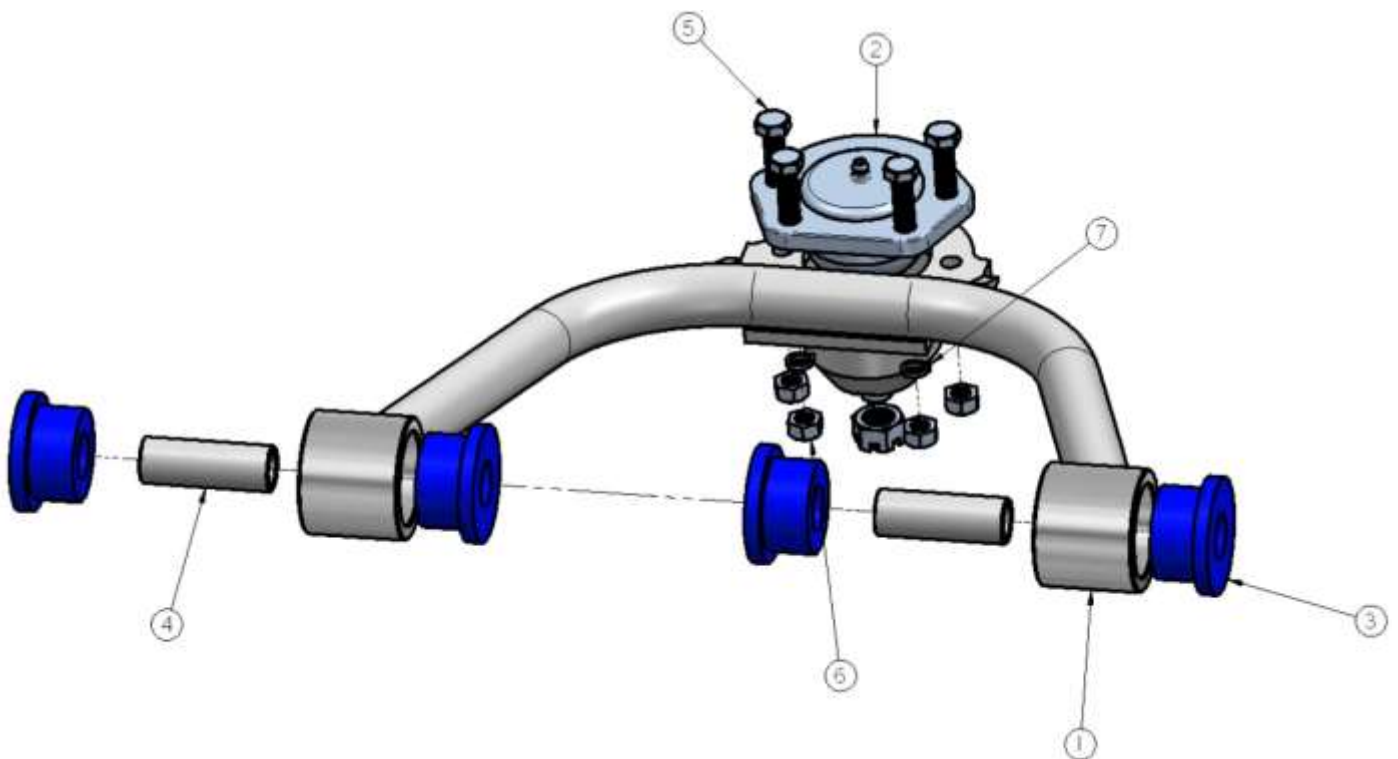


4. Push the stud through the spindle, secure w/ the new castle nut and cotter pin.
5. Secure the brake line and ABS harness to the upper control arm. Allow enough slack for full suspension travel.
6. Screw Zerk fitting into ball joint and grease.
7. Lubricate the frame bushings w/ Lithium grease.

STRONG ARMS™

by Air Ride Technologies

Item #	Description	Qty.
1.	Passenger side arm	1
1.	Driver side arm	1
2.	Ball Joint	2
3.	Poly bushing half	8
4.	Inner bushing sleeve	4
5.	5/16"-24 x 1" hex bolt	8
6.	5/16"-24 nut	8
7.	5/16" lock washer	8





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Part # 11386799
99-06 Silverado Rear AirBar

Components:

2	90009000	Tapered sleeve air spring
1	90000304	Lower bridge assembly
1	90000307	Upper bridge assembly
2	90000311	C-notch spacer for 2000 & older trucks
1	90000209	Carrier bearing bracket
1	90000310	¼" transmission spacer
2	90000070	Air spring roll plate
2	90000042	Upper axle bracket
1	90000308	Panhard bar axle bracket
1	90000207	Driver side c-notch frame section w/ shock mount
1	90000208	Passenger side c-notch frame section w/ shock mount
1	90000305	Driver side upper frame bracket
1	90000306	Passenger side upper frame bracket
2	90001038	Lower bar – WW 33.250"
2	90000987	Upper bar - TW 23.625" (C-C 25.375")
1	90000971	Panhard bar - TW 20.500" (C-C 22.250")
2	90000198	Inner bushing sleeve - 3/4" O.D. x 5/8 I.D. (installed in lower bar)
4	90001085	Poly bushing half - (installed in lower bar)
3	90001584	Threaded rod end - 5/8" x 3/4" (w/ rubber bushing pressed in)
8	90001942	Rubber bushing - Pressed into bars & rod ends
2	90001082	Short bump stop
2	90001617	.625" shock stud
1	99010008	Hardware kit



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Hardware Kit – Part # 99010008

4	3/8 x 3/4 uss bolts	upper air spring mounting
6	3/8 lock washer	air spring mounting
6	3/8 x 1 uss bolt	air spring mounting & carrier bearing plate
4	3/8 nyloc nuts	carrier bearing plate
10	3/8 sae flat washers	carrier bearing plate & air spring mounting
6	7/16 x 1 1/4 uss bolt	upper frame bar mount
12	7/16 uss flat washer	upper frame bar mount
6	7/16 uss nyloc nuts	upper frame bar mount
46	1/2 x 1 1/2 uss bolts	C-notch to frame & upper bridge
92	1/2 sae flat washers	C-notch to frame & upper bridge
48	1/2 uss nyloc nuts	C-notch to frame, upper bridge & shocks
2	1/2 x 2 1/2 uss bolts	lower shock mounting
1	5/8 lock washer (gr. 8)	Heim end to axle cover brk.
8	5/8 x 2 3/4 sae bolts (gr. 8)	rod ends to brackets & panhard bar axle bracket
7	5/8 sae nyloc jam nuts (gr. 8)	rod ends to brackets
8	5/8 x 6 sae bolts (gr. 8)	bridge to axle
8	5/8 sae nyloc nuts (gr. 8)	bridge to axle
16	5/8 sae flat washers (gr. 8)	bridge to axle
5	3/4 sae jam nuts	lock nuts for rod ends
5	m8x40mm bolts	panhard bar mount to axle cover
5	m8 flat washers	panhard bar mount to axle cover
5	m8 lock washers	panhard bar mount to axle cover

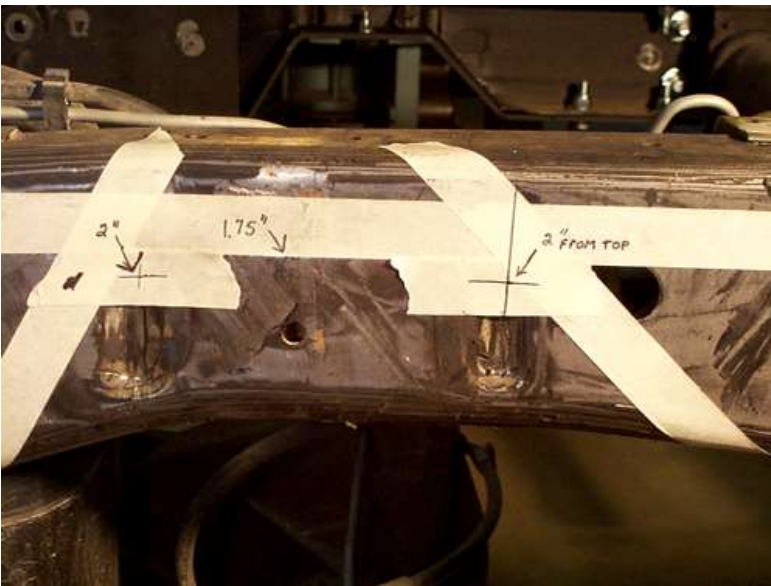
NOTE: oem spring hanger bolt is used for lower front bar to spring hanger!

99-01GM Sierra / Silverado rear AirBar installation

1. Raise truck to a comfortable working height and support safely with jackstands under the frame. Place these stands ahead of the leafspring mount **and** at the rear of the frame to support it when the C notch is installed.



2. The C notch frame section will be installed first. Note that the front edge of the C notch is butted up to the round tube crossmember. Place the C notch against the framerail to scribe the outline for cutting the framerail. Be sure to "round" the corners of the cut to avoid any stress points.



This is the layout for cutting the frame for the C notch. Using a 1/2" drill to make the corners produces a rounded corner which is much less susceptible to a stress crack.



3. Using a saw or a cutoff wheel, trim the framerail on the marked lines.



4. Install the C notch onto the framerail. The C notch fits between the tube style crossmembers located in front of and behind the axle, so there is only one way they will fit. **[NOTE: on 1999 and 2000 model trucks the framerail is approx. 1/4" shorter in height than the later models. A spacer plate is provided to adapt our notches to these applications. It is installed between the bottom of the frame and the C notch.]** Using the holes in the C notch as a template, drill through the framerail and attach using the included hardware.

6. After the C notches are installed, the jackstands placed at the rear of the truck can now be moved to support the axle housing. When this is done the leafsprings can be removed.



7. After the leafsprings are removed the lower axle bracket bridge can be installed. This will require an assistant to hold the assembly while the fasteners are installed. This piece has "ears" that will locate into the bottom of the oem leafspring pad on the axle tube. The axle brackets are contoured to fit around the axle tube very snugly. An excess of powdercoating or dirt on the axle tube may require cleaning or filing for best fit. The lower bridge assembly is combined with the upper axle brackets to "sandwich" the axle tube for maximum strength. Be sure to use the supplied grade 8 axle bolts, washers,



8. After the axle bridge assembly is installed, the upper bar frame brackets can be installed. These brackets will use 2 of the leafspring hanger rivet holes and one additional drilled hole for attachment. Grind the heads off of two of the leafspring hanger rivets and punch them out. You may have to run a drill through the rivets holes to clean them up. Use the bracket as a guide to drill the additional attachment hole.

9. The bottom 4 link bar [longer] is installed into the oem leafspring hanger. NOTE: This system is designed to use the OEM leafspring hanger. DO NOT use an aftermarket "dropped" leafspring hanger. It will affect the position of the lower bar resulting in poor bar angle, pinion angle and vibration.

The shorter bars are installed into the upper frame and axle bar brackets. Be sure to use the supplied grease to lubricate these bushings during assembly.



10. Install the panhard bar axle bracket as shown. You MUST use the fasteners that are supplied with the system. The original bolts are too short and are not strong enough.



11. The upper airspring crossmember can now be installed. It is bolted into the top flange of the C notch assemblies with the panhard bar bracket on the drivers side. This will position the airspring mounts behind the crossmember. The brakeline junction box may need to be relocated slightly. The panhard bar can now be installed.



12. Install the airsprings into the mounts. Be sure to use the round roll down plate provided between the airspring and the lower bridge mount to avoid damage to the airspring when deflated.



13. The shocks are installed as shown to the left. [your upper shock mount may appear slightly different] Note the routing of the parking brake cable.



14. This photo shows how the bed brace and the exhaust heat shield are trimmed for clearance. The bed will need to be reinstalled to mark the exact location of the cut.



15. The bed brace will also need to be trimmed for clearance of the C notch reinforcement. A cutoff wheel does a good job here.



20. The driveshaft carrier bearing will need to be relocated to optimize driveline angles at your new lower ride height. The oem carrier bearing bracket is sectioned as shown in the picture to the left. The new carrier bearing bracket is then bolted onto the remaining tabs. The carrier bearing mount is rotated 180 degrees and attached to the supplied bracket as shown in the picture on the right.



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Your AirBar installation is now basically complete. Recheck all fasteners for proper tightness and check the airsprings for abrasion throughout the full range of suspension travel. NOTE: If you are using an aftermarket wheel and tire combination, the overall height of your tires MUST be at least 28". Shorter tires will allow the chassis to touch the ground at full deflation. This IS NOT an acceptable condition and MUST be resolved by either using taller tires or a taller bumpstop. Taller tires are recommended.

IT IS THE FINAL RESPONSIBILITY OF THE INSTALLER/CUSTOMER TO ENSURE THAT THE AIRSPRING DOES NOT RUB ON ANYTHING AT ANYTIME AND TO ENSURE THAT PROPER GROUND CLEARANCE IS MAINTAINED AT ALL TIMES!



Part # 30334100 - 3 Gallon LevelPro Compressor System

Recommended Tools



Components:

2	31920020	Thomas 319 Compressor
1	31934001	4 way RidePro air valve assembly
1	31913100	3 gallon Aluminum tank
5	31988150	Air pressure sensor
1	31398001	RidePro LevelPro ECU
1	31398002	RidePro LevelPro Display
2	99064002	6-32 x 3/8" Phillips pan head screw for display
1	82010000	Installation Guide

Wiring & Hardware:

1	31900031	Display Harness
1	31900020	Air valve wiring harness
1	31900006	Air pressure sensor wiring harness
1	31900048	Main power / compressor harness
2	90001924	Fuse holder
2	90001922	20 Amp fuse
6	99104001	10-24 x 1" phillips screw
6	99102002	10-24 Nylok nut
6	99103001	#10 SAE flat washer
2	90001913	12-10 Gauge Butt Connector
2	90001916	#10 x 5/16" Ring Terminal

Airlines & Fittings:

2	31940002	1/4" DOT airline - 30' roll
6	31954201	1/4"npt x 1/4"tube elbow fitting - air springs / tank
7	31954000	1/4"npt x 1/4" tube straight fitting - air valve
2	31952150	1/8"npt female x 1/4" tube straight fitting - compressor
2	31957003	1/8"npt nipple (install between FIT2150 & compressor)
3	31957004	1/4"npt plug - plug extra supply port
1	31954400	1/4" air line tee- compressors to check valve fitting
1	31959301	Check Valve- SCREWS INTO TANK FOR COMPRESSOR LINE

THE CHECK VALVE SUPPLIED SCREWS INTO THE AIR TANK WITH AN AIR FITTING THREADING INTO IT. THE COMPRESSOR LINES WILL FEED INTO THE CHECK VALVE.

