



Part # 11320210
78-88 GM "G" Body Complete HQ Series CoilOver System

Front Components:

1	11323510	Front HQ Series CoilOvers
1	11329599	Front Tru-Turn Suspension Package
1	11329100	Front MuscleBar

Rear Components:

1	11326699	Rear Upper Strong Arms
1	11324499	Rear Lower Strong Arms
1	11326110	Rear HQ Series CoilOvers
1	11329102	Rear MuscleBar
1	85000000	Spanner Wrench



Part # 11323510
78-88 GM "G" Body HQ Series Front CoilOvers
For Use w/ StrongArms

Shock Assembly:

2	24139999	3.6" stroke HQ Series shock
2	90009988	2" adjustable threaded stud top
2	90001994	.625" I.D. bearing
4	90001995	Bearing snap ring

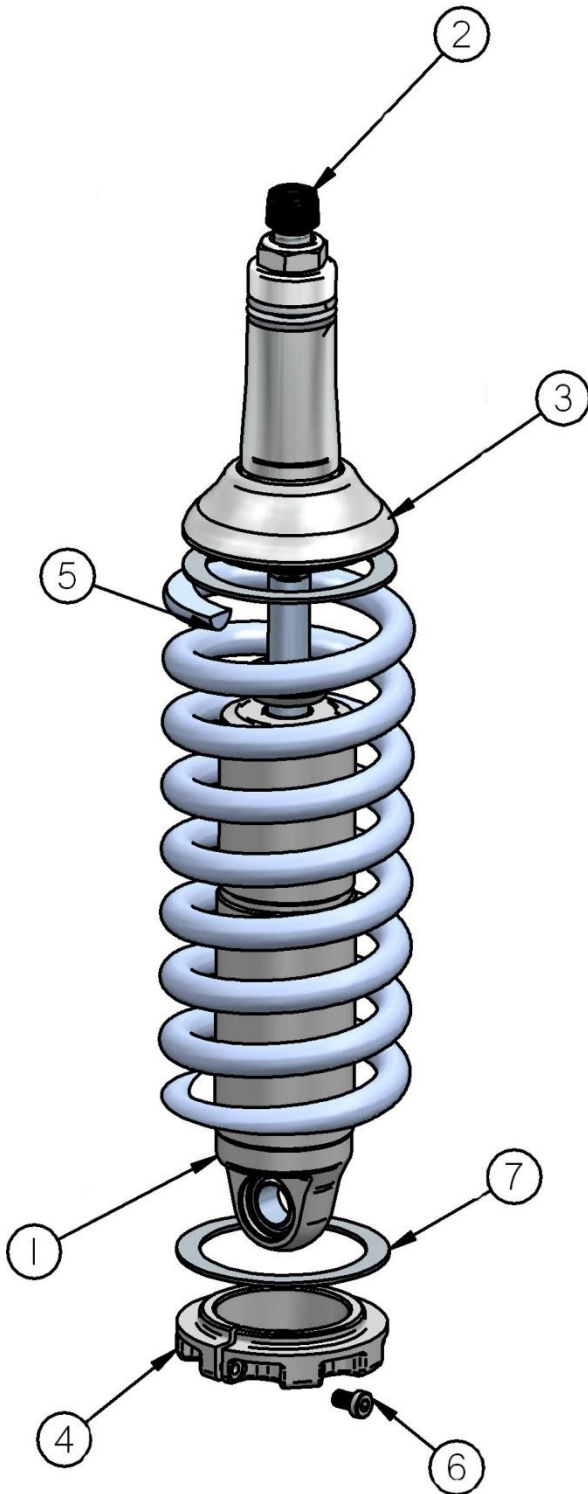
Components:

2	59080700	Coil spring – 8" long / 700 # rate
2	90002312	2" stud top base
2	90002222	Spring retainer kit
2	90002070	¾" Dropped upper mount
2	90001902	Aluminum cap for Delrin ball
2	90001903	Delrin ball upper half
2	90001904	Delrin ball lower half
4	70010828	Delrin Spring Washer

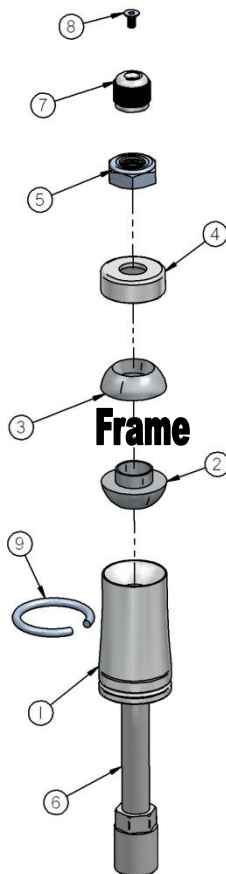
Hardware:

2	99562003	9/16" SAE Nylok jam nut	Stud top hardware
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COILOver

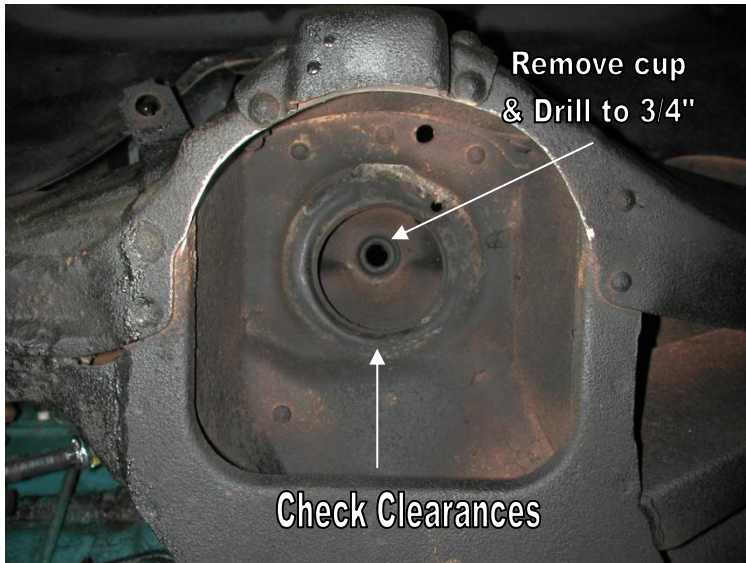


1. Impact Forged, Monotube shock
2. Rebound adjustment knob (SA Only)
3. Upper coil spring retainer 3/4" drop
4. Lower coil spring retainer
5. High tensile coil spring
6. Set screw
7. Delrin Spring Washer



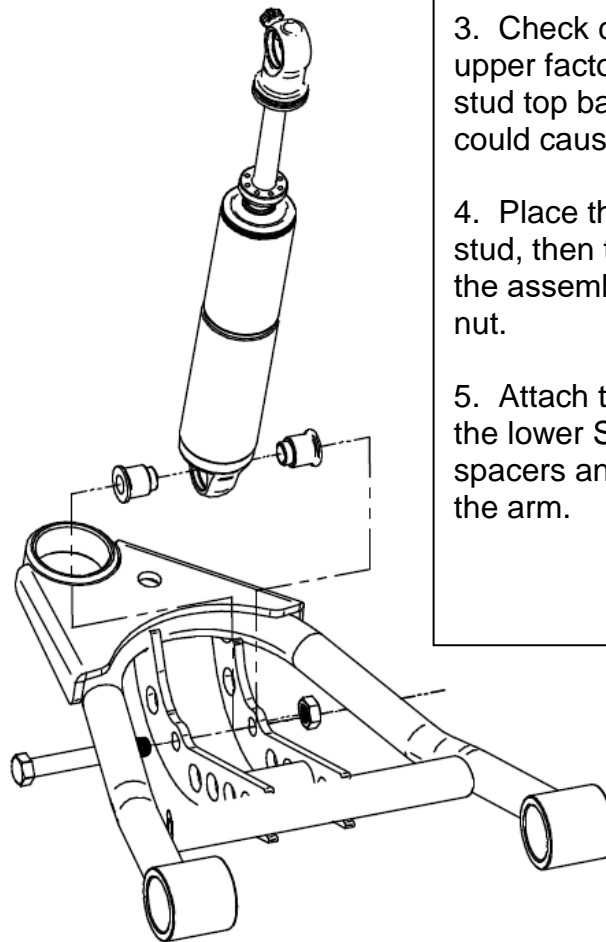
1. Stud top base
2. Lower Delrin ball half
3. Upper Delrin ball half
4. Aluminum cap
5. 9/16" Nylok jam nut
6. Threaded stud
7. Adjustment knob (SA Only)
8. Screw
9. Snap ring

COILOver



1. To allow the step in the lower Delrin ball half to slide into the factory shock hole, the bushing cup (if your car has one) will need to be removed and the hole may need to be drilled out to $\frac{3}{4}$ ".

2. Assemble the CoilOver then place into the coil spring pocket w/ the stud and lower Delrin ball sticking through the factory shock hole.



3. Check clearance between the upper factory spring retaining lip and stud top base. Allowing this to hit could cause the shock to break, this

4. Place the upper Delrin ball over stud, then the aluminum cap. Secure the assembly w/ the 9/16" Nylok jam nut.

5. Attach the bottom of the shock to the lower StrongArms using the spacers and hardware supplied w/ the arm.

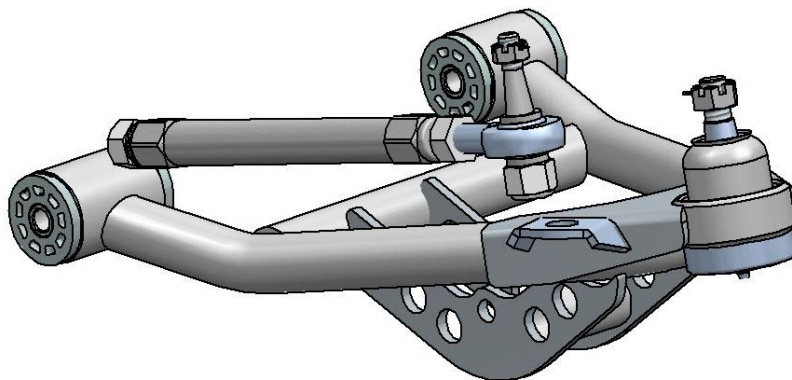
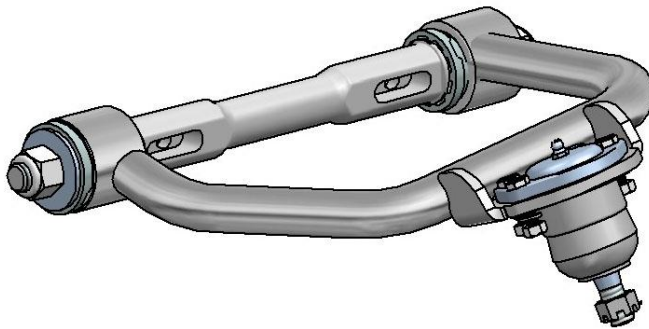
ridetech



Part # 11329599
78-88 GM "G" Body Tru-Turn Suspension Package

Front Components:

- | | | |
|---|----------|-------------------|
| 1 | 11323699 | Upper Strong Arms |
| 1 | 11322899 | Lower Strong Arms |
| 1 | 11329500 | Tru Turn System |





Part # 11323699
78-88 GM "G" Body Upper StrongArms

Components:

1	90002379	Drivers side arm
1	90002380	Passenger side arm
2	90000913	Upper ball joint
2	90000914	Caster Adjustable Cross shaft w/Hardware
2	70010826	Delrin Bushing – no ledge
2	70010827	Delrin Bushing – small ledge
4	70010759	Delrin Bushing – outer
4	90002737	Cross shaft T-washer
4	70011955	Zero Offset Caster Slugs

Hardware:

4	99433002	7/16" SAE Flatwasher	Cross shaft to Frame
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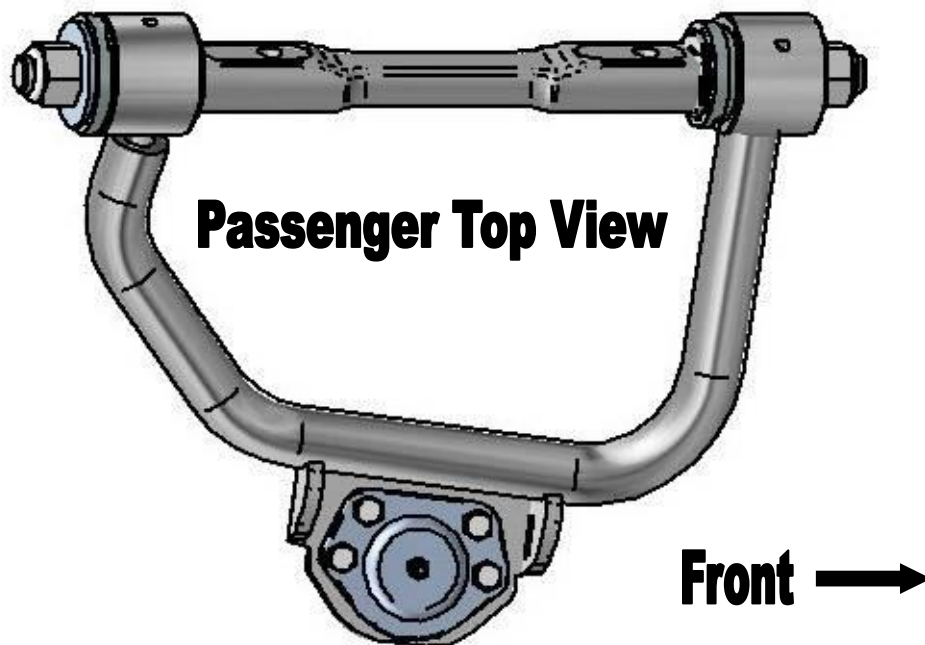


1. Fasten the upper arm to the frame using the OEM hardware with the supplied Washer under the nut. Reinstall the current alignment shims, but **vehicle must be realigned.**

2. Drop ball joint down through upper arm. Slide ball joint boot over stud, then place boot retainer over the boot. Clamp assembly tight w/ the hardware supplied.

3. Fasten the ball joint to the spindle w/ the new castle nut and cotter pin supplied.

4. Tighten the cross shaft nuts enough to create drag on the delrin bushings, the arm should still move.

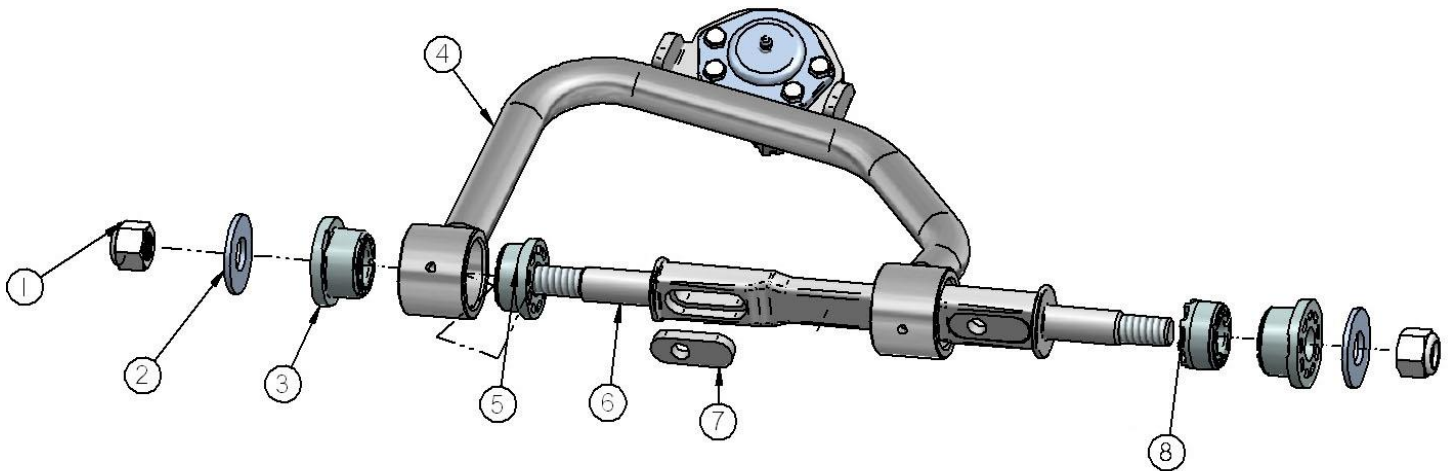


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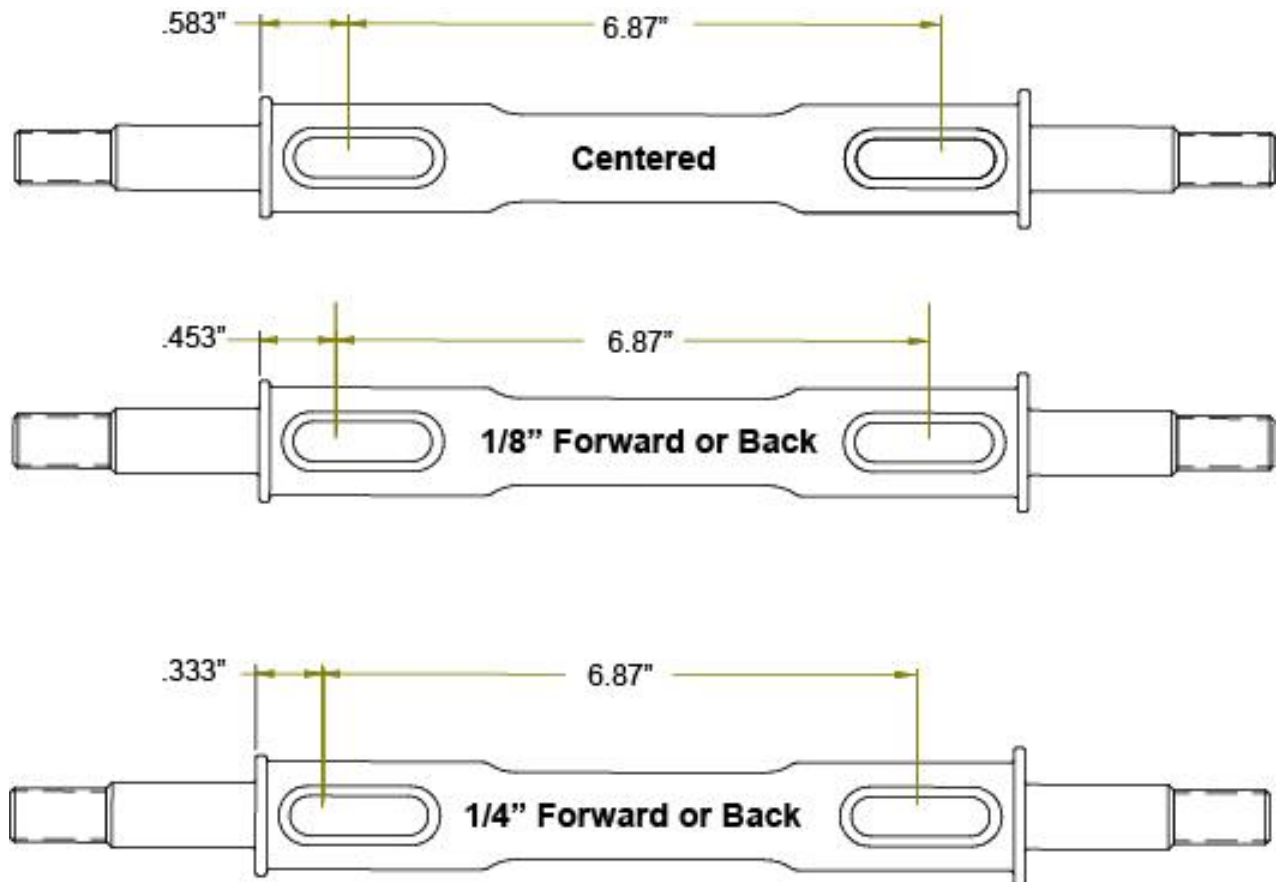
Passenger Side – Top View

Item #	Description	Qty.
1.	5/8 – 18 Toplock Jam Nut	4
2.	T-Washer	4
3.	Outer Delrin bushing	4
4.	Passenger side arm	1
4.	Driver side arm	1
5.	Inner Delrin bushing w/ledge	2
6.	Caster Adjustable Cross shaft	2
7.	Caster Slug	2
8.	Inner Delrin bushing no ledge	2



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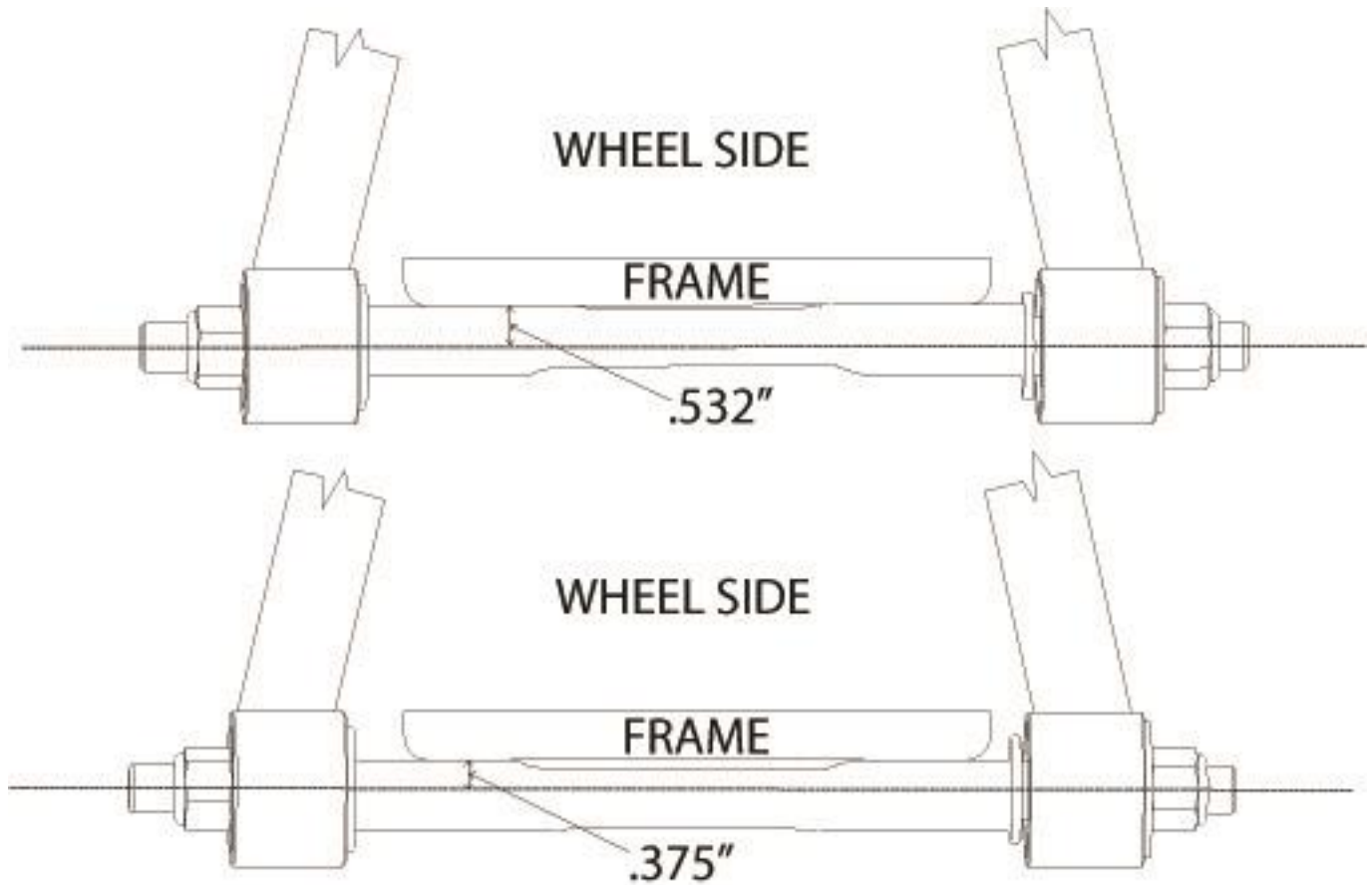
These Strong Arms come equipped with a changeable caster slug setup. This allows you to add or remove caster from the front suspension, if desired. The caster slugs that come in the kit are setup to put the control arm in the centered position, which is approximately 5 degrees of caster. The caster slugs allow you to add or remove caster without having to use a stack of shims. If more or less caster is desired, optional caster slugs can be purchased from your Ridetech dealer or Ridetech.

Caster Explained:

To understand caster you need to picture an imaginary line that runs through the upper ball joint and extends through the lower ball joint. From the side view the imaginary line will tilt forward or backward. The tilting of this imaginary line is defined as caster.

Caster is measured in degrees by using a caster camber gauge. If the imaginary line described above tilts towards the back of the car, at the top, then you will have positive caster. If the imaginary line tilts forward then you would have negative caster.

Positive caster provides the directional stability in your car. Too much positive caster will make the steering effort difficult. Power steering will allow you to run more positive caster. Negative caster requires less steering effort but can cause the car to wander down the highway.



Offset Upper Cross Shaft

The cross shaft that is used in the upper control arm is offset. The offset combined with the caster slug option allows you to achieve the alignment setting you desire with minimal shims. To change the direction that the Icon faces, simply spin the cross shaft in the control arm.

If you are after an aggressive **Track or Autocross Alignment**, bolt the control arm to the frame bracket with the arm offset to the inside of the car (like the top illustration). The Ridetech Icon will be facing the engine.

If a **Street Alignment** is desired, bolt the control to the frame bracket with the arm offset to the outside of the car (like the bottom illustration). The Ridetech Icon will be facing the wheel.



Part # 11322899
78-88 GM "G" Body Lower StrongArms
For Use w/ Shockwaves or CoilOvers

Components:

1	90002377	Driver side lower arm
1	90002378	Passenger side lower arm
2	90000896	Ball joint
2	90000572	Inner bushing sleeve
2	90000573	Inner bushing sleeve
8	70010759	Delrin bushing half
4	90002062	Aluminum spacer – Shock to lower arm

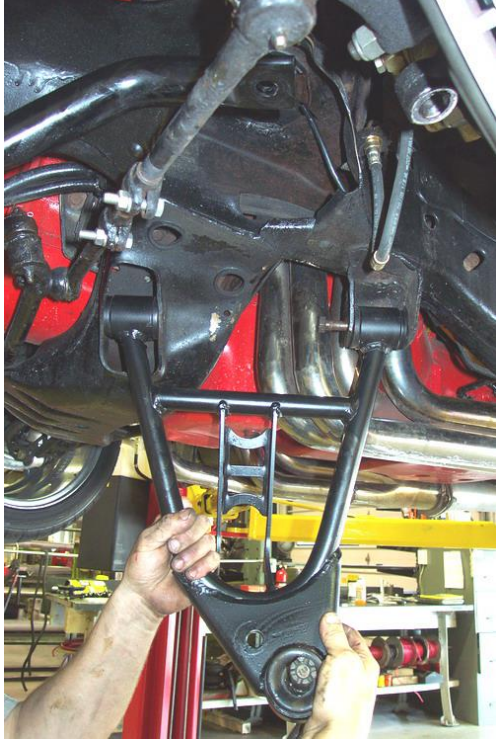
Hardware:

2	99501024	½"-13 x 3 ¼" Gr.5 bolt	Shockwave to lower arm
2	99502001	½"-13 Nylok nut	Shockwave to lower arm

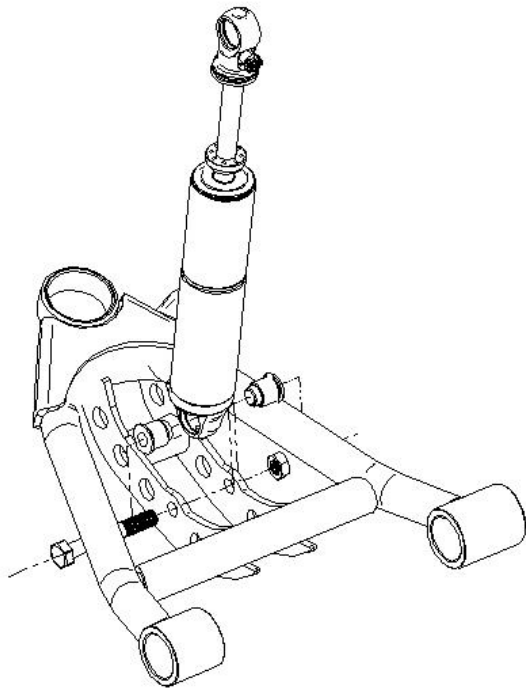
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Installation Instructions



1. After removing the factory lower control arm, clean the bushing mounting surfaces on the frame to make sure they are fairly smooth.
2. Fasten the lower arm to the frame with the factory hardware.

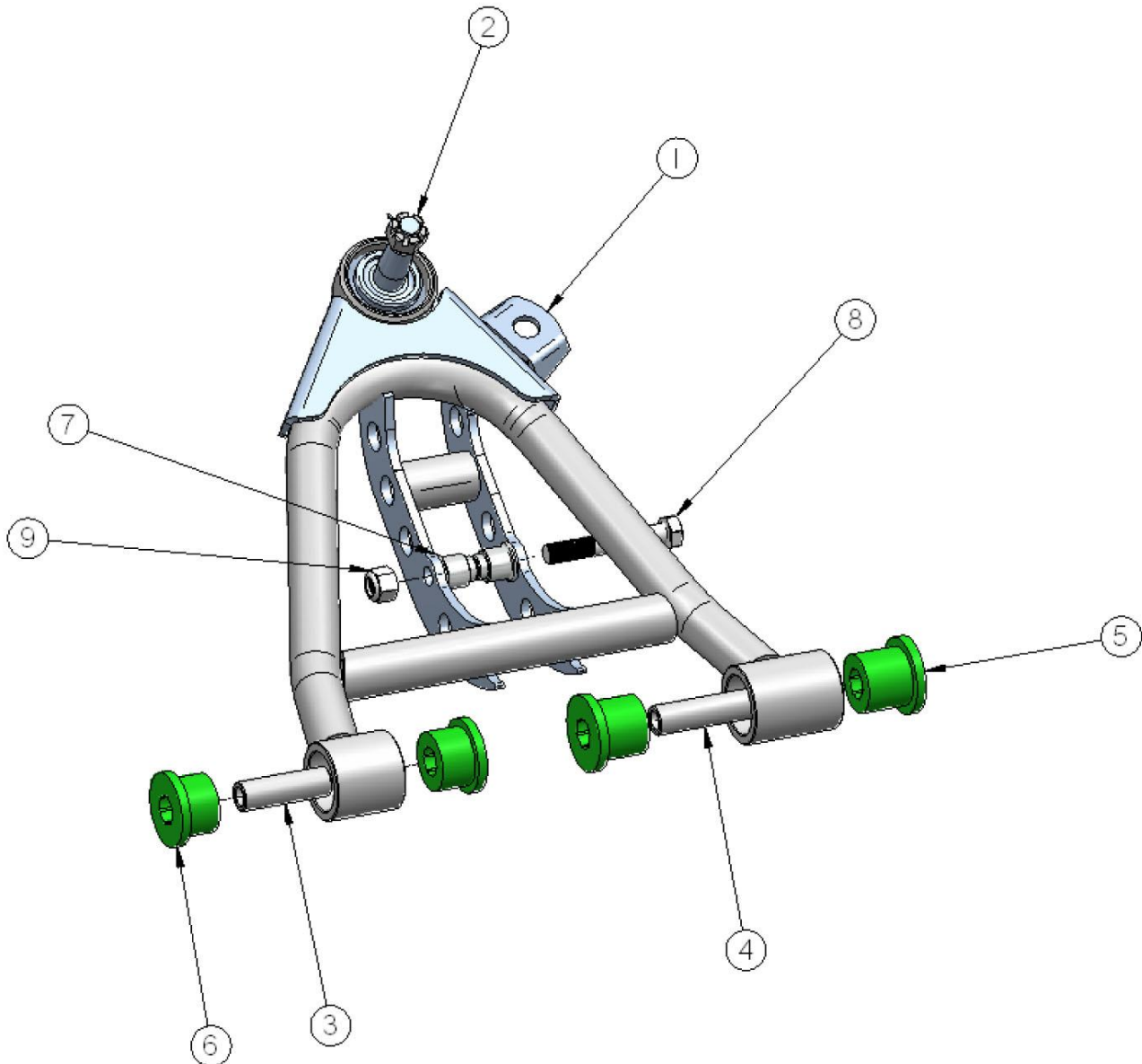


3. Swing the lower StrongArm up to the shock and secure with the $\frac{1}{2}$ " x $\frac{3}{4}$ " bolt and Nylok nut, an aluminum spacer must be installed on each side of the bearing.
4. Slide the ball joint boot over the stud, then push the stud up through the spindle. Secure w/ the new castle nut and cotter pin supplied.
5. Grease the ball joints.

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Item #	Description	Qty.
1.	Driver side arm	1
2.	Ball Joint	1
3.	Inner bushing sleeve – narrow	1
4.	Inner bushing sleeve – wide	1
5.	Delrin bushing half	2
6.	Delrin bushing half	2
7.	Aluminum bearing spacer	2
8.	1/2"-13 x 3 1/4" bolt	1
9.	1/2"-13 Nylok nut	1

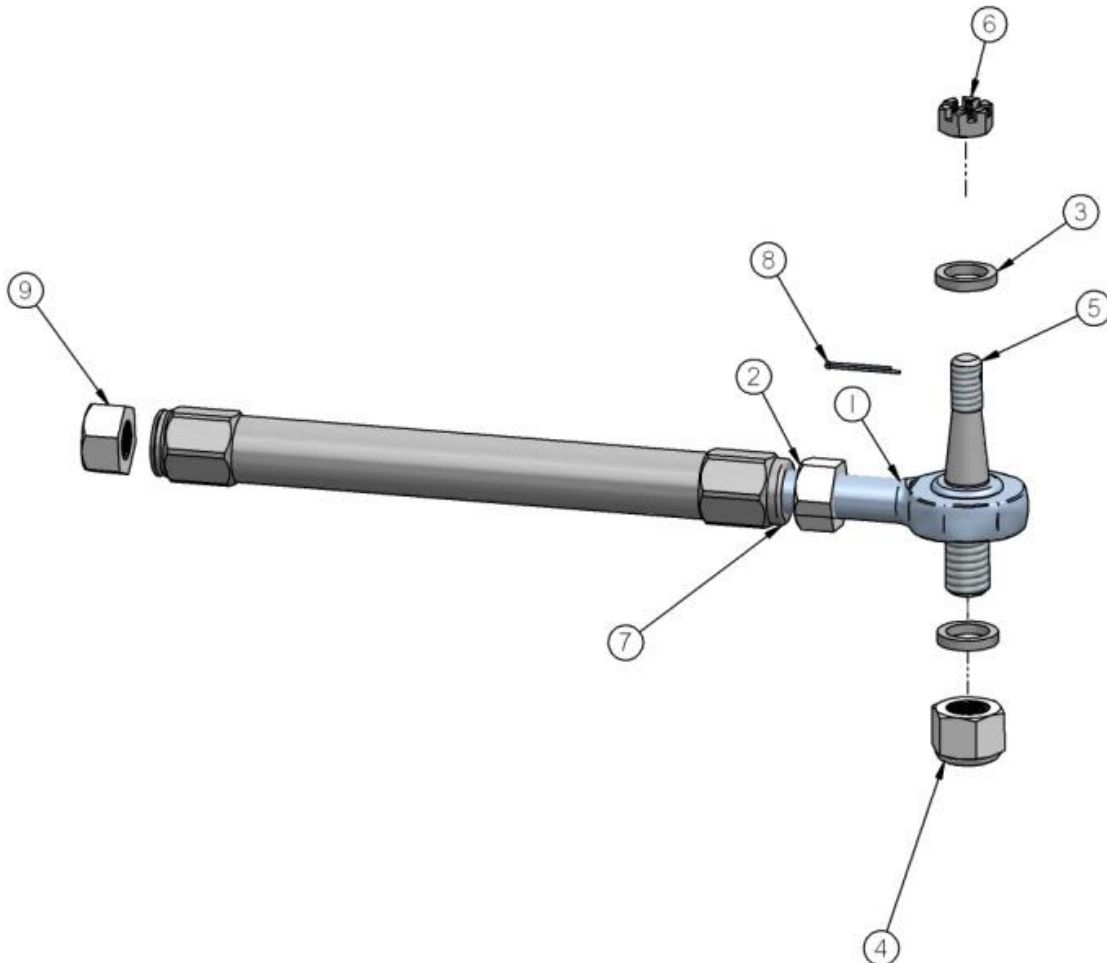




Part # 11329500
78-88 G-Body TruTurn System without Spindles



Item #	Part #	Description-Specification	Qty.
1.	90001590	Heim end	2
2.	99800002	5/8"-18 RH jam nut	2
3.	90002373	Heim End Spacer	4
4.	99622003	5/8"-18 Lock Nut-35 ft lbs	2
5.	90002374	Tie Rod Stud	2
6.	99432005	7/16"-20 castle nut-35 ft lbs	2
7.	90002375	Adjusting sleeve	2
8.	99952002	3/32" cotter pin	2
9.	99800003	5/8"-18 LH jam nut	2





Installation instructions:

NOTE: The number in (#) is the number of the part in the drawing on the previous page.

1. Raise and safely support the front of your vehicle at a comfortable working level
2. Remove existing outer tie rod and adjuster leaving the inner tie rod.
3. Install the (5) Tie Rod Stud into your factory spindle using the (6)7/16" castle nut. Torque the nut to 35 ft lbs and install (8) cotter pin. **NOTE:** If none of the holes line up tighten the nut until you can get the hole to line up with a slot.
4. Install the (7) Right Hand thread nut onto the (1) heim end and (9) Left hand nut onto the factory tie rod.
5. Antiseize the threads on the factory tie rod and heim end to prevent the threads from galling.
6. The left hand threaded side of the (7) adjuster goes onto the factory tie rod; it has a groove cut into the end of the adjuster. You will want the thread engagement the same on the tie rod end and the heim, the easy way to do this is set then nut on the tie rod 1 1/4" from the end of the tie rod and thread the adjuster on so that it touches the nut.
7. Install the heim end into the other end of the adjuster. Start by threading the lock nut all the way on the heim end and thread the heim end into the adjuster so that it touches the nut.
8. Install the heim end side of the tie rod onto the tie rod stud using the (3) aluminum spacer on top and bottom of the heim end and then install the (4)5/8" lock nut. Torque nut to 35 ft lbs.
9. Set the center to center length of the tie rod assembly to 17 3/4" by turning the adjuster out. This will get you close on the toe setting but it will need to be aligned.
10. Adjust the camber and toe roughly until you can get the vehicle to a proper alignment shop. The recommended alignment settings are:

Camber - -.5 to -1.5 [within .3 from side to side]

Caster – 4 to 7 degrees positive

Toe - 1/16" to 1/8" toe in

Feel free to experiment with alternative alignment settings that may be more appropriate for your particular driving style.

Installation notes:

- A. **MAKE SURE** that the cotter pins are properly installed in all appropriate places [C] to ensure that the castle nuts do not become loose and fail. These are VERY important connections!



**11329100 78-88 GM "G" Body
Front MuscleBar**

Components:

1	90001825	Front sway bar (37.125")	
1	90001821	Driver side arm	
1	90001822	Passenger side arm	
2	90001819	Frame plate	
2	90001820	Frame bracket	
2	90000926	10 mm 90 degree PosiLink	
2	90000924	10 mm Straight PosiLink	
2	90001823	PosiLink Spacer (2.5")	
4	90000717	T-bushing (PosiLink to lower arm)	
2	90001099	Polyurethane frame bushing	
2	99250001	1/4" - 28 straight grease zerk	
1	90001092	Tube of Lithium grease	
2	99115009	10mm x 1.5 x 90mm stud (use Loctite)	In PosiLink

Hardware Kit: 99010049

2	99111001	10 x 1.5 x 30mm Flat head Allen bolt	Frame plate to frame
2	99111002	10 x 1.5 x 30mm bolt	Frame bracket
4	99373003	3/8" SAE flat washer	Frame bracket
4	99373005	3/8" lock washer	Frame bracket
2	99373007	3/8" x 1" Self-tapping screws	Frame bracket
6	99371017	3/8" x 1" Button head Allen bolt	Sway bar arm to bar
6	99373003	3/8" SAE flat washer	Sway bar arm to bar
6	99373005	3/8" lock washer	Sway bar arm to bar
4	99112002	10mm Nylok nut	PosiLink
4	99373003	3/8" flat washers	PosiLink

MUSCLEbar™

POSI•Link™

11329100 Installation Instructions

1. This sway bar was designed for use with our lower StrongArms. Installation with other control arms may require modification.
2. Remove the end links from the factory sway bar. Then remove the bolts attaching the sway bar to the frame.



3. Bolt the frame plate to the frame using the factory sway bar holes. The front hole will use a 10mm x 30mm flat head Allen screw. The rear hole will use a standard 10mm x 30mm hex bolt.

4. Using the bracket as a guide, drill the front hole with a 5/16" bit. Then thread in 3/8" self-tapping screw.



5. Slide the poly bushing over the bar and lubricate with the lithium grease supplied.

6. Slide the bracket over the bushing and fasten the bar to the frame using the 10mm x 30mm hex bolt and 3/8" self-tapping screw.

Note: Future lubrication should only be done with non-petroleum based lubricants.



7. Bolt the sway bar arm to the bar using 3/8" x 1" Button head screws with flat washers and lock washers.



8. Fasten the 90 degree end of the PosiLink to the sway bar arm using a 10mm Nylok nut and flat washers

Note: There are two holes in the sway bar arm. For Shockwave/CoilOver arms use the front hole with the nut on the inside of the arm. For coils spring arms, use the rear hole with the nut on the outside of the arm(shown in picture).

9. Two T-bushing will be used on each side to attach the straight end of the PosiLink to the lower control arm. Secure with a 10mm Nylok nut.

10. Check PosiLink alignment through full suspension travel to ensure that it does not bind.



Part # 11326110
78-88 GM "G" Body Rear CoilOver Kit
HQ Series

Shock Assembly:

2	24159999	5" stoke HQ Series shock
2	90002024	1.7" Eyelet
4	90001994	.625" bearing
8	90001995	Bearing snap ring

Components:

2	59120150	Coil spring – 12" long / 150 # rate
2	90002222	Spring retainer kit
8	90002043	Aluminum spacer - .5" I.D.
4	70010828	Delrin Spring Washer
2	90002327	Upper shock bracket
1	90002325	Driver side lower shock bracket
1	90002326	Passenger side lower shock bracket
2	90002158	Lower Shock Bracket

Hardware:

4	99311001	5/16"-18 x 1" Gr. 5 bolt	Upper bracket to frame
4	99312003	5/16"-18 Nylok nut	Upper bracket to frame
8	99313002	5/16" SAE flat washer	Upper bracket to frame
2	99501027	1/2"-13 x 3 3/4" Gr. 5 bolt	Shock bracket to trailing arm bracket
6	99501002	1/2"-13 x 1 1/2" Gr.5 bolt	Shock bracket
4	99501003	1/2"-13 x 2 1/2" Gr. 5 bolt	Shock to upper & lower brackets
12	99502001	1/2"-13 Nylok nut	Lower shock bracket
8	99503001	1/2" SAE flat washer	Lower shock bracket

COILOver

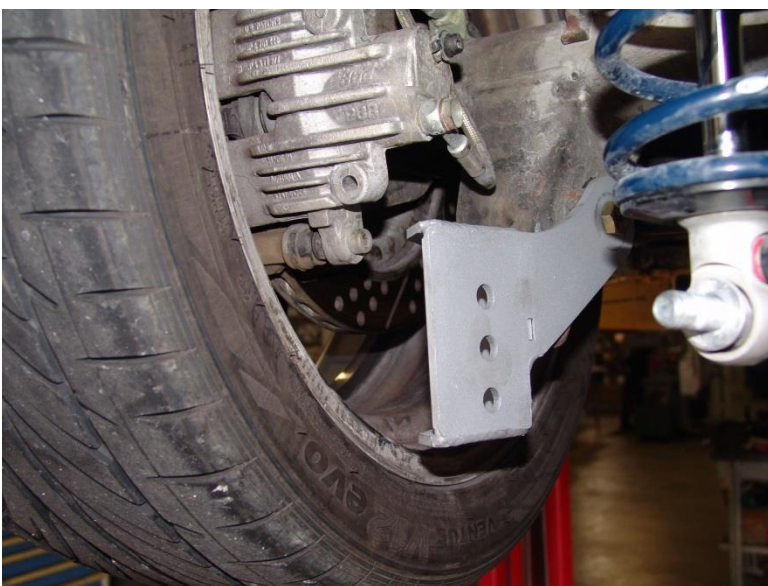
Installation Instructions

1. Raise and safely support the vehicle by the frame rails.
2. Using a jack, slightly raise the axle approximately 1". Remove the shock absorbers.
3. Lower the axle down enough to remove the coil springs.
4. The exhaust tail pipes may need to be removed and/or modified for Shockwave installation.



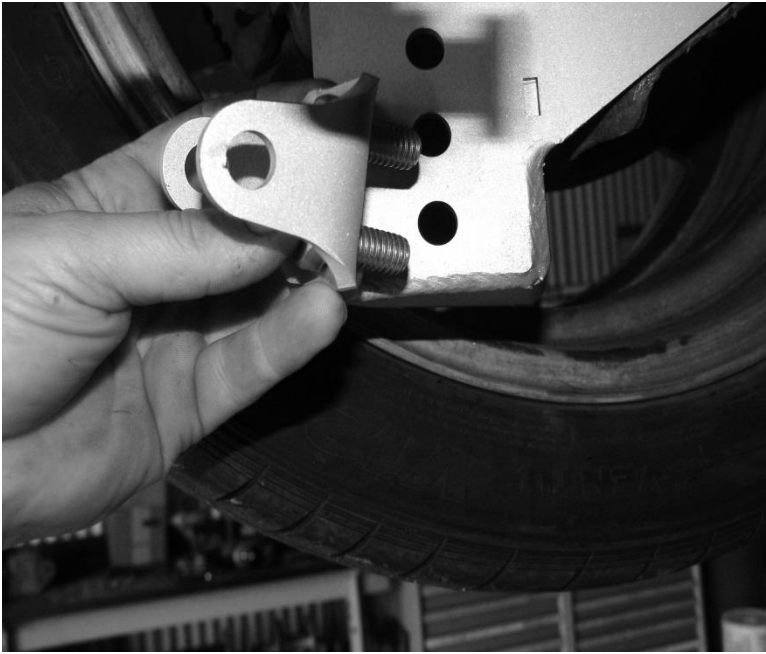
5. Fasten the new upper shock bracket into the factory shock location using the 5/16" x 1" bolts, flat washers and Nylok nuts supplied.

Note: Position the bracket to offset the shock toward the center of the car.



6. Remove the lower trailing arm mounting bolt. (Do one side at a time to keep the axle from rotating).

7. Place the new lower shock bracket up against the factory lower shock bracket. Use a 1/2" x 1 1/2" bolt, Nylok nut and flat washers to fasten the new bracket to the factory bracket. Install the longer 1/2" x 3 3/4" bolt through the lower trailing arm mount, secure w/ the supplied flat washers and Nylok nuts.



8. Install the Lower Bolt on Shock Bracket in the top 2 holes using (2) $\frac{1}{2}$ " x $1 \frac{1}{2}$ " Hex Bolts, and (2) $\frac{1}{2}$ " Nylok Nuts.

The lower Bracket has 3 holes. The top 2 holes are the holes that the kit will normally use. If a lower ride height is desired, the bottom 2 holes can be used.



9. Install the aluminum spacers into the upper and lower eyes of the shock.



9. Fasten the shock to the upper bracket using a $\frac{1}{2}$ " x $2 \frac{1}{2}$ " bolt and Nylok nut.

10. Fasten the ShockWave to the lower bracket using a $\frac{1}{2}$ " x $2 \frac{1}{2}$ " bolt and Nylok nut.

12. Double check CoilOver clearances throughout full suspension travel.

13. Ride height on this shock is 14.5" from center eye to center eye.



Part # 11326699
78-88 GM "G" Body Rear Upper StrongArms

Components:

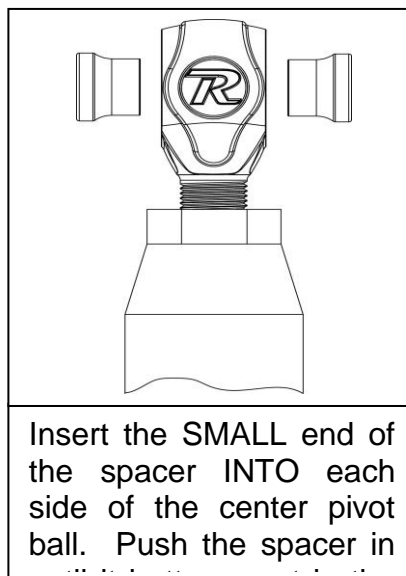
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|---|----------|----------------------------------|
| 2 | 90001118 | Upper StrongArm (Set to 11.125") |
| 2 | 70013364 | R-Joint threaded rod end housing |
| 4 | 70013784 | R-Joint Spacers |

R-Joint Components

- | | |
|----------|------------------------------------|
| 70013279 | Retaining Ring |
| 70013280 | Wavo Wave Spring |
| 70013276 | R-Joint Composite Center Ball Cage |
| 70013275 | R-Joint Stainless Center Ball |

Hardware:

- | | | | |
|---|----------|------------------------------|------------|
| 2 | 99752004 | 3/4" SAE Jam nut | Heim end |
| 4 | 99501006 | 1/2" x 3 1/2" USS Gr. 8 bolt | StrongArms |
| 4 | 99502001 | 1/2" USS Gr. 8 Nut | StrongArms |



Installation Instructions

New R-Joints will be quite stiff (75-90 in/lbs breakaway torque) until they "break in" after a few miles of use. After the break in period they will move much more freely. Because the composite bearing race contains self-lubricating ingredients, no additional lubrication is needed or desired. Any additional lubrication will only serve to attract more dirt and debris to the R-Joint and actually shorten its life.



1. The length of the upper bar should be set from the factory at 11.125" center to center. Ensure that the jam nut is tight.
2. Insert the Spacers into the R-Joints. Refer to Diagram 1 on Page 1.
3. Using the 1/2" x 3 1/2" bolt and Nylok nut supplied, fasten the R-Joint end to the frame bracket. An aluminum spacer must be installed on each side of the Heim end.



4. Fasten the other end of the bar to the axle using the factory hardware.
- Note:** Inspect the rubber bushing in the axle for wear or cracked. Replace with factory replacement bushing if needed.



Part # 11324499
78-88 GM "G" Body Rear Lower StrongArms

Components:

2 90002858 Lower StrongArm – WW 19.250"

8 70013784 R-Joint Spacers

R-Joint Components

70013279 Retaining Ring

70013280 Wavo Wave Spring

70013276 R-Joint Composite Center Ball Cage

70013275 R-Joint Stainless Center Ball

Hardware:

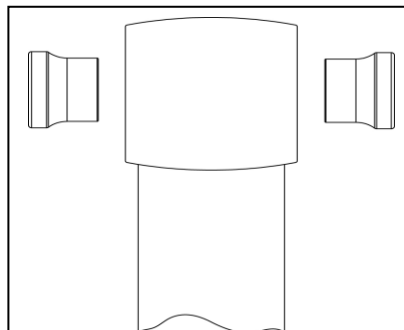
4 99431003 7/16" x 3" USS bolt Swaybar to lower bars

4 99432001 7/16" USS Nylok nut Swaybar to lower bars

8 99433002 7/16" SAE flat washer Swaybar to lower bars

4 99501006 1/2" x 3 1/2" USS Gr. 8 bolt StrongArms to frame

4 99502001 1/2" USS Gr. 8 Nylok nut StrongArms to frame



Insert the **SMALL** end of the spacer **INTO** each side of the center pivot ball. Push the spacer in until it bottoms out in the center pivot.

STRONG ARMS™

by Air Ride Technologies

Installation Instructions



1. Remove the sway bar (if equipped) and factory lower trailing arm. Do one side at a time to keep the axle from rotating.
2. Insert the Spacers into the R-Joints. Refer to Diagram 1 on Page 1.
3. Attach to front on the lower StrongArm to the frame using the ½" x 3 ½" bolts and Nylok nuts supplied.
4. This arm has holes in the tube for sway bar attachment. Mount the bar so that the holes are closest to the axle. New 7/16" x 3" bolts are supplied to reattach the sway bar.



5. Attach to rear of the lower StrongArm to the frame using the ½" x 3 ½" bolts and Nylok nuts supplied.

Note: Tighten the bolts enough to remove any lateral movement.

New R-Joints will be quite stiff (75-90 in/lbs breakaway torque) until they "break in" after a few miles of use. After the break in period they will move much more freely. Because the composite bearing race contains self-lubricating ingredients, no additional lubrication is needed or desired. Any additional lubrication will only serve to attract more dirt and debris to the R-Joint and actually shorten its life.

Ride Height

We have designed most cars to have a ride height of about 2" lower than factory. To achieve the best ride quality & handling, the shock absorber needs to be at 40-60% overall travel when the car is at ride height. This will ensure that the shock will not bottom out or top out over even the largest bumps. Measuring the shock can be difficult, especially on some front suspensions. Measuring overall wheel travel is just as effective and can be much easier. Most cars will have 4-6" of overall wheel travel. One easy way to determine where you are at in wheel travel is to take a measurement from the fender lip (center of the wheel) to the ground. Then lift the car by the frame until the wheel is just touching the ground, re-measure. This will indicate how far you are from full extension of the shock. A minimum of 1.5" of extension travel (at the wheel) is needed to ensure that the shock does not top out. If you are more than 3" from full extension of the shock then you are in danger of bottoming out the shock absorber.

Adjusting Spring Height

When assembling the CoilOver, screw the spring retainer tight up to the spring (0 preload). After entire weight of car is on the wheels, jounce the suspension and roll the car forward and backward to alleviate suspension bind.

- If the car is too high w/ 0 preload then a smaller rate spring is required. Although threading the spring retainer down would lower the car, this could allow the spring to fall out of its seat when lifting the car by the frame.
- If the car is too low w/ 0 preload, then preload can then be added by threading the spring retainer up to achieve ride height. On 2.6" - 4" stroke shocks, up to 1.5" of preload is acceptable. On 5-7" stroke shocks, up to 2.5" of preload is acceptable. If more preload is needed to achieve ride height a stiffer spring rate is required. Too much preload may lead to coil bind, causing ride quality to suffer.



Part Number - 11329102
78-88 GM "G" Body Rear MuscleBars

Components:

1 70001759 Rear sway bar

Hardware Kit (70001760) Includes:

4 7/16" x 3" bolts
4 7/16" Nylok nuts
8 7/16" flat washers

11329102 - Rear Bar Instructions

1. Look at the current sway bar installation.
2. Support the vehicle by the frame with lift jacks or jack stands, allowing the suspension to be unsupported.
3. Remove the four bolts holding the sway bar to the trailing arms.
4. Remove the factory sway bar from the vehicle.
5. Place the new sway-bar up to the trailing arms and push the bolts through the sway bars.
6. Tighten up the new bar.
7. Double check that all fasteners are tightened.

Your installation is finished. Enjoy your new sway bars!



ridetech

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 install delrin washers then coil spring over the top of the shock as seen in figure 2



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.



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



Install upper spring mount retainer clip (90002057) into the groove on the upper eyelet as seen in figure 5. Then reinstall adjuster to complete assembly.



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- Single Adjustable

Rebound Adjustment:

How to adjust your new shocks.

The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.

You must first begin at the ZERO setting, then set the shock to a soft setting of 20.



-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.



-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

Take the vehicle for a test drive.



-if you are satisfied with the ride quality, do not do anything, you are set!



-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

Take the vehicle for another test drive.



-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.



-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

Note:

One end of the vehicle will likely reach the desired setting before the other end. If this happens stop adjusting the satisfied end and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.