



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

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Part # 11060210
59-64 Impala CoilOver System

Front Components:

1	11053510	HQ Series Front Coilovers
1	11052899	Front Lower StrongArms
1	11053699	Front Upper StrongArms
1	111059100	Front MuscleBar (Instructions In Box)

Rear Components:

1	11054699	Rear Coil Spring Kit for StrongArms
1	11050701	HQ Series Rear Shocks
1	11054499	Rear Lower StrongArms
1	11066699	Rear Upper StrongArm & Panhard Bar Kit
1	11059102	Rear MuscleBar (Instructions In Box)

Components:

1	85000000	Spanner Wrench
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Part # 11053510
58-64 Impala HQ Series Front CoilOvers
For Use w/ StrongArms

Shock Assembly:

- | | | |
|---|----------|------------------------------------|
| 2 | 24139999 | 3.6" stroke HQ Series shock |
| 2 | 90009989 | 2.75" adjustable threaded stud top |
| 2 | 90001994 | .625" I.D. bearing |
| 4 | 90001995 | Bearing snap ring |

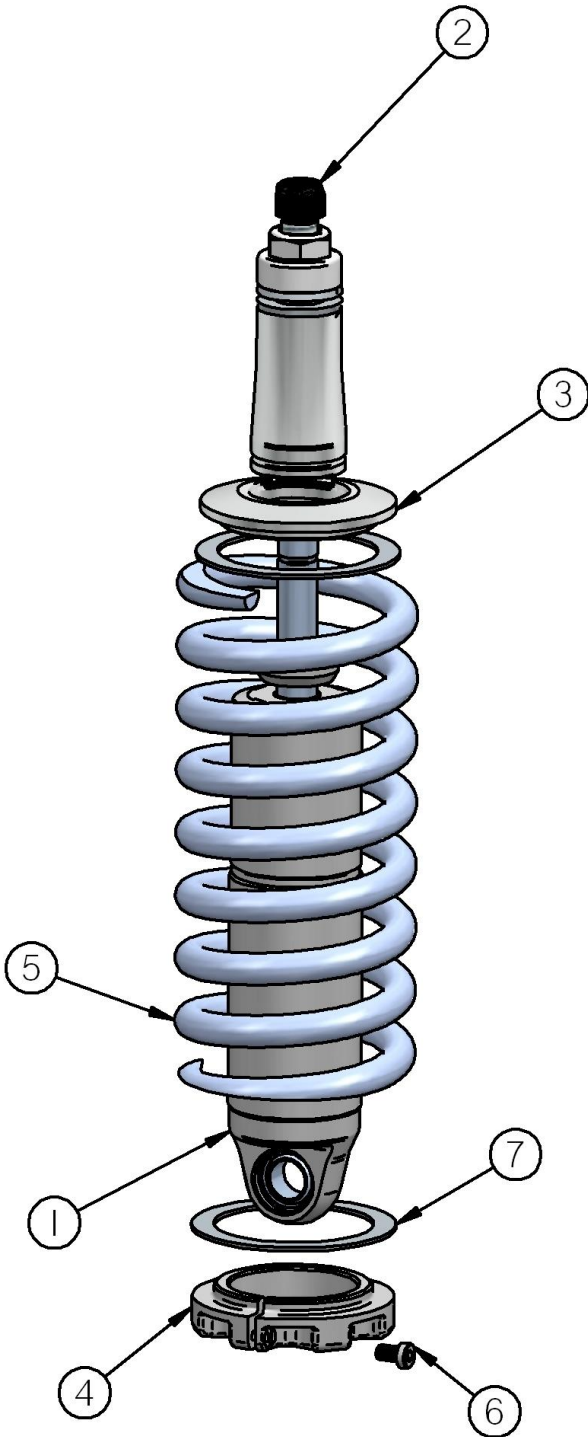
Components:

- | | | |
|---|----------|------------------------------------|
| 2 | 59080750 | Coil spring – 8" long / 750 # rate |
| 2 | 90002313 | 2.75" stud top base |
| 2 | 90002222 | Spring retainer kit |
| 2 | 90001902 | Aluminum cap for Delrin ball |
| 2 | 90001903 | Delrin ball upper half |
| 2 | 90001904 | Delrin ball lower half |
| 2 | 70010828 | Delrin Spring Washer |

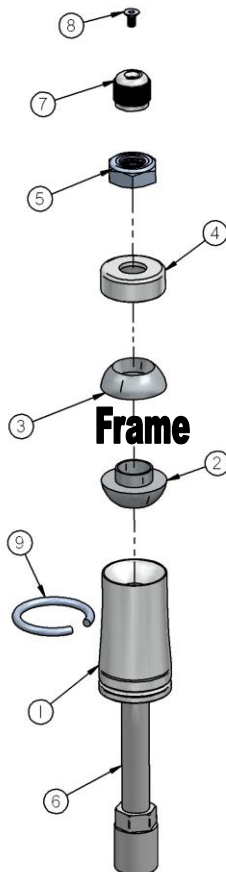
Hardware:

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

COILOver

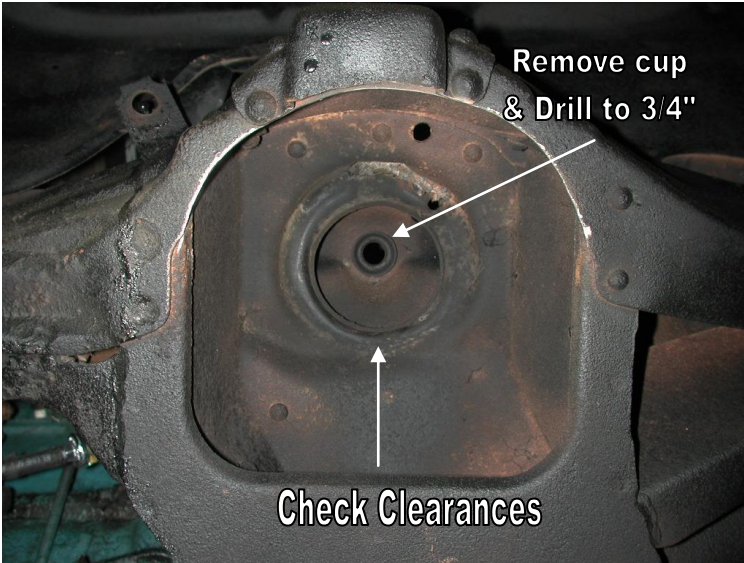


1. Impact Forged, Monotube shock
2. Rebound adjustment knob (SA Only)
3. Upper coil spring retainer
4. Lower coil spring retainer
5. High tensile coil spring
6. Set screw
7. Delrin Spring Washer



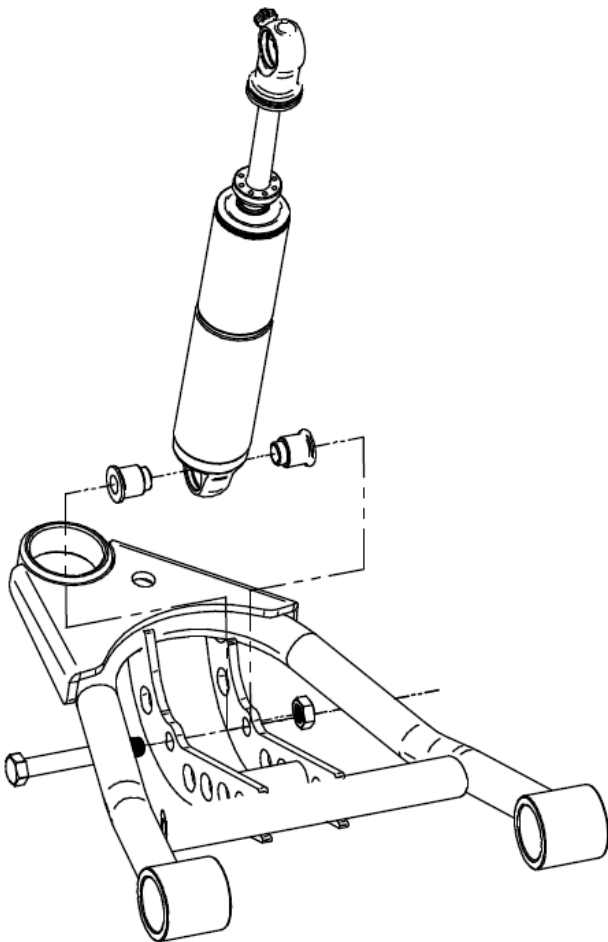
1. Stud top base
2. Lower Delrin ball half
3. Upper Delrin ball half
4. Aluminum cap
5. 9/16" Nylok jam nut
6. Threaded stud
7. Adjustment knob (SA Only)
8. Screw
9. Snap ring

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.



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Part # 11052899
58-64 Impala Front Lower StrongArms
For Use w/ Shockwaves or CoilOvers

Components:

1	90000474	Driver side lower Arm
1	90000475	Passenger Side Arm
2	90000676	Cross shaft
2	90000677	Cross shaft clamp
4	90000906	Lower control arm bushing
1	90000476	Driver side steering stop
1	90000477	Passenger side steering stop
2	90002586	Ball joint
4	90002062	Aluminum bearing spacer
2		Grease Fittings

Hardware Kit:

2	99371011	3/8" x 6 1/2" USS bolt	Sway bar end link
2	99372002	3/8" USS Nylok nut	Sway bar end link
4	99311001	5/16" X 1" USS bolts	Steering stop to lower arm
4	99313002	5/16" SAE flat washer	Steering stop to lower arm
4	99312003	5/16" Nylok Nut	Steering stop to lower arm
4	99431004	7/16" x 2" SAE Gr.8 bolt	Lower arm cross shaft clamp to frame
4	99431006	7/16" x 1 1/4" SAE Gr. bolt	Lower arm cross shaft
4	99503004	1/2" Fender washer	Lower arm cross shaft
8	99433003	7/16" lock washer	Lower arm cross shaft & clamp
2	99501024	1/2"-13 x 3 1/4" Gr. 8 bolt	Shockwave to lower arm
2	99502001	1/2"-13 Nylok	Shockwave to lower arm

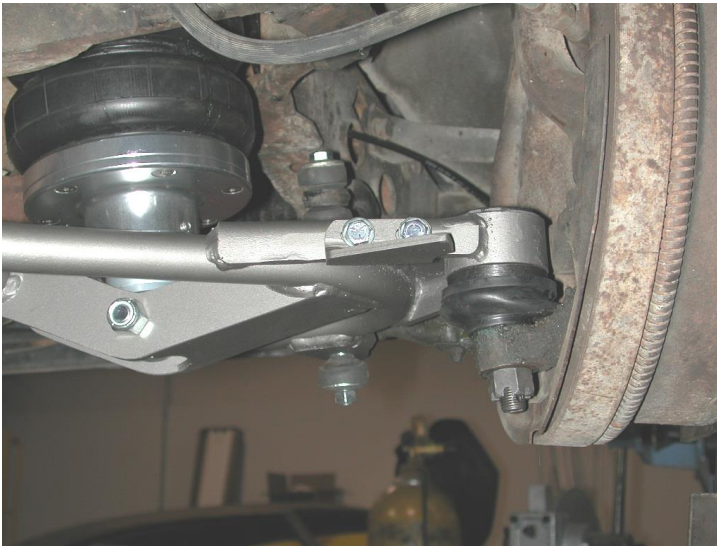
STRONG ARMS™

by Air Ride Technologies

Installation Instructions

Note: These arms will not work with stock 1958 spindles.

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



3. Bolt the lower StrongArm shaft to the frame. $7/16"$ x $2"$ bolts, lock washers and flat washer will be used to fasten the aluminum clamp to the frame.

4. Slide the ball joint boot over the ball joint stud. Slide the stud through the spindle, secure assembly w/ new castle nut and cotter pin supplied.

5. Attach the adjustable steering stop to the lower arm using two $5/16"$ x $1"$ bolts. This can be adjusted to maintain tire/shock clearances.



6. Attach the ShockWave to the lower StrongArm using the $1/2"$ x $3 1/4"$ bolts and aluminum spacers provided.

7. The sway bar end link must be shortened to $2"$ tall optimize clearance and alignment. Use the shorter $3/8"$ x $6 1/2"$ bolt supplied. (Discard if using RideTech MuscleBar)

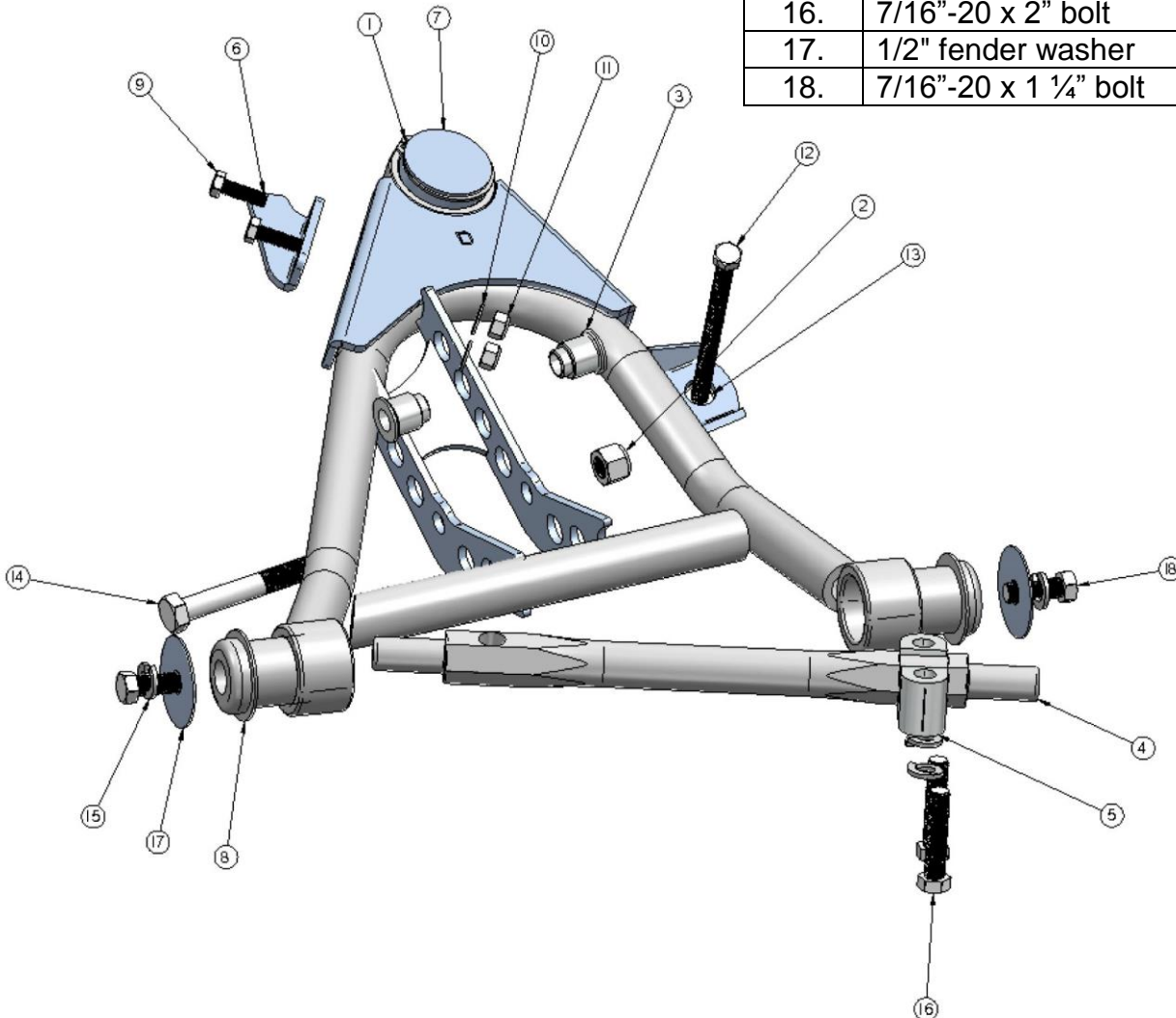
8. Check all clearance with brake lines, airlines, tie rod, sway bar, and tire through full suspension travel and turn wheel lock to lock.

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58-64 Chevy Drivers Side Lower Strong Arm

Item #	Description	Qty.
1.	Passenger side arm	1
1.	Driver side arm	1
2.	1/2"-13 Nylok nut	2
3.	Aluminum bearing spacer	4
4.	Cross shaft	2
5.	Aluminum shaft clamp	2
6.	Steering stop bracket	2
7.	Ball joint	2
8.	Cross shaft bushing	4
9.	5/16"-18 x 1" bolt	4
10.	5/16" flat washer	4
11.	5/16"-18 Nylok nut	4
12.	3/8" x 6 1/2" bolt	2
13.	3/8" USS Nylok nut	2
14.	1/2"-13 x 3 1/4" bolt	2
15.	7/16" lock washer	8
16.	7/16"-20 x 2" bolt	4
17.	1/2" fender washer	4
18.	7/16"-20 x 1 1/4" bolt	4





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Part # 11053699
58-64 Impala Front Upper StrongArms

Components:

1	90000478	Passenger side Upper Arm
1	90000479	Driver side Upper Arm
2	90000905	Ball Joints
2	90000907	Cross shaft bushing
2	90000927	Upper Cross Shaft

Hardware:

4	99371014	3/8" x 1 1/4" SAE Gr. 8 bolt	Upper cross shaft
4	99373001	3/8" Fender washer	Upper cross shaft

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Installation Instructions

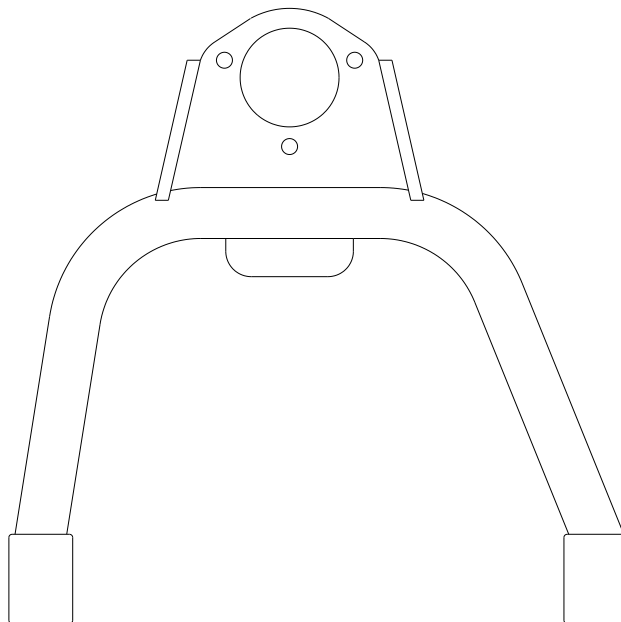


1. Drop the ball joint down through the ball joint plate, secure w/ the hardware supplied.

2. Fasten the upper arm to the frame using the factory hardware. Reinstall the current alignment shims, but **vehicle must be realigned**. This arm was designed with an extra 2 degrees of positive caster allowing the car to be aligned with up to 4 degrees of positive caster. (This will vary from car to car.)

3. Insert the ball joint stud through the spindle and install new castle nut and cotter pin supplied.

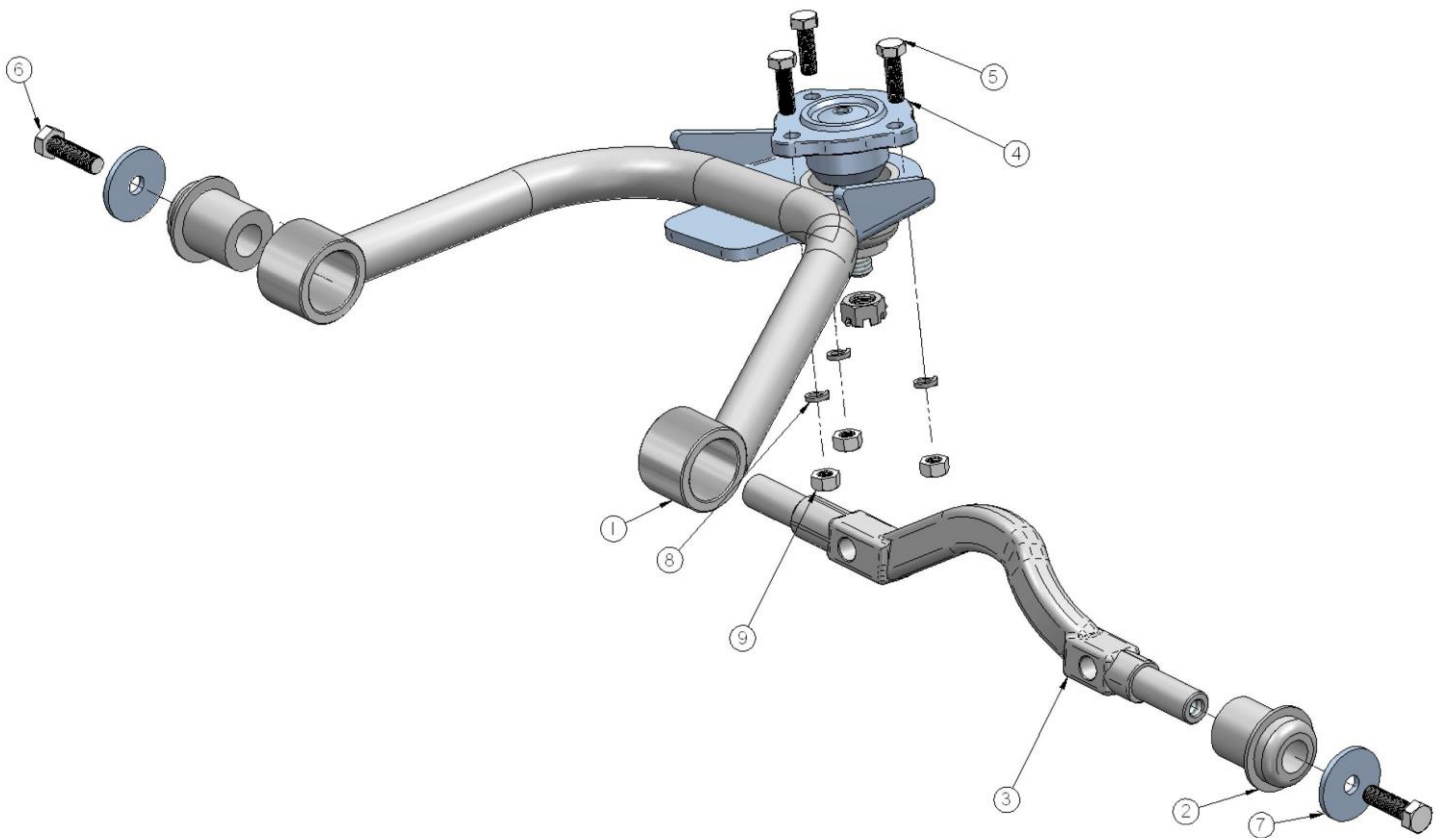
58-64 Impala Driver Side Upper StrongArm



STRONG ARMS™

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Item #	Description	Qty.
1.	Passenger side arm	1
1.	Driver side arm	1
2.	Cross shaft bushing	4
3.	Cross shaft	2
4.	Ball joint	2
5.	5/16"-24 x 1" hex bolt	6
6.	3/8"-24 x 1 1/4" hex bolt – Gr. 8	4
7.	3/8" x 1 1/2" washer	4
8.	5/16" lock washer	6
9.	5/16"-24 hex nut	6



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Part # 11050701

58-64 Chevy Impala Rear HQ Series Shock Kit

Shock:

2	22989999	HQ Smooth Body Shock Cartridge
2	70011139	5/8" ID Shock Bushing
2	70011138	3/4" ID Shock Bushing
2	90002103	5/8" ID Shock Sleeve
2	90002068	Wide Trunnion

Hardware:

4	99311001	5/16" x 1" USS bolt	Shock to frame
4	99312003	5/16" USS Nylok nut	Shock to frame
8	99313002	5/16" SAE flat washer	Shocks to frame
2	99502002	1/2" SAE Nylok Nut	Shock to lower stud
2	99503001	1/2" SAE flat washer	Shock to lower stud



1. Attach shock T-Bar to frame using 3/8" x 1 1/4" bolts, Nylok nuts and flat washers.



2. Attach the bottom of the shock to factory shock stud using the 1/2" Nylok nut & flat washer supplied. Install one aluminum spacer on each side of the bearing.



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Part # 11054499

58-64 Impala Rear Lower StrongArms

For Use with CoolRide or Coil Springs

Components:

2	90000466	Lower control arm w/ air spring mount
4	90001085	Poly bushing half – 1.5" O.D x 1.5" long
4	90001086	Poly bushing half – 1.5" O.D. x 1" long
4	90000467	Bushing sleeve – 2.5" long

Hardware:

4	99621005	5/8" x 3 1/2" SAE Gr.8 bolt	Lower arm
4	99622006	5/8" SAE Nylok jam nut	Lower arm

Installation Instruction

1. Raise and support vehicle at a safe and comfortable working height.



2. Fasten the lower StrongArms to the frame and axle using the 5/8" x 3 1/2" bolt and Nylok nuts supplied.

3. Thread the 3/8" x 3/4" bolt with washer and lock washer about half way into the air spring. Slide bolt into slot on lower arm and tighten.

Note: Do one side at a time to keep axle from rotating.



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Part # 11066699
59-64 Chevy Impala Rear Upper Strong Arm & Panhard Bar Kit

Components:

- 1 90001119 Upper control arm – (set at 13.75")
- 1 70013364 R-Joint threaded rod end housing
- 2 70013544 R-Joint Spacers
- 1 90001085 Poly bushing half – 1.5" O.D. x 1.5" long
- 1 90001086 Poly bushing half – 1.5" O.D. x 1" long
- 1 90000467 Bushing sleeve – 2.5" long

Panhard:

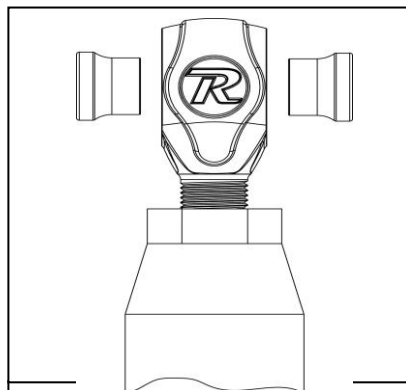
- 1 90002849 Panhard bar (Set at 31.500")
- 1 90001946 Panhard Kevlar lined Heim end – 3/4" I.D.
- 2 90000460 Aluminum T bushing – for heim end
- 2 70013334 R-Joint Spacers
- 1 90000461 Panhard bar stud

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 | 99603003 | 5/8" USS flat washer | Panhard bar stud |
| 1 | 99563001 | 9/16" USS flat washer | Panhard bar stud |
| 1 | 99561001 | 9/16" x 2 1/2" SAE Gr.8 bolt | Panhard bar to frame |
| 2 | 99562001 | 9/16" SAE Nylok nut | Panhard bar |
| 2 | 99752004 | 3/4"-16 Jam nut | Heim end & R-Joint |
| 2 | 99621005 | 5/8" x 3 1/2" SAE Gr.8 bolt | Upper arm |
| 3 | 99622006 | 5/8" SAE Nylok jam nut | Upper arm / Panhard bar stud |



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.

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Installation Instructions



1. Insert the LONG R-joint Spacers into the R-joint. The Small Diameter goes into the R-joint. Bolt the upper StrongArm to the frame using the 5/8" x 3 1/2" bolts and Nylok nuts supplied.

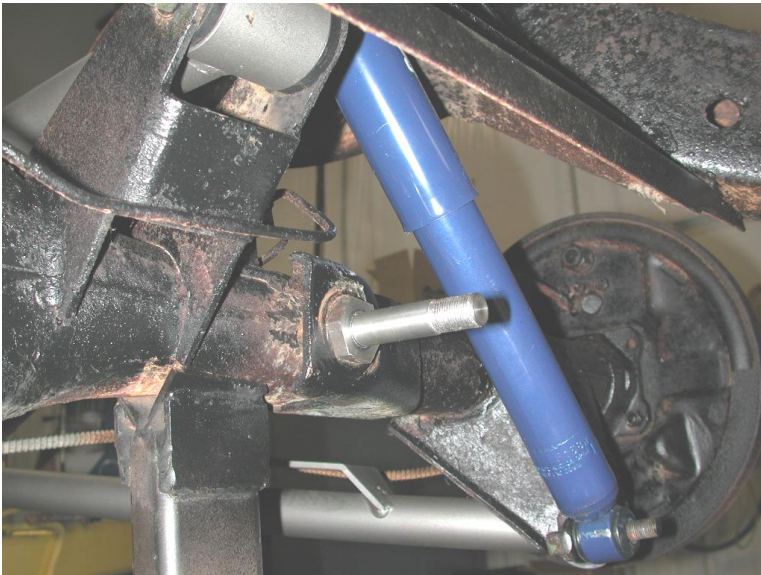
2. Using a 5/8" x 3 1/2" bolt fasten the poly bushing end of the upper bar to the axle bracket.

Note: Some vehicles have two factory upper arms and need a second tubular arm.



3. Install the 3/4" jam nut onto the end of the Heim end, then screw Heim end into the end of the panhard bar.

4. Press the aluminum T-bushings into the Heim end. Fasten the Heim end to the frame bracket using the 9/16" x 2 1/2" bolt and Nylok nut supplied.



5. Bolt the new panhard bar stud onto the axle in factory stud location using the 9/16" Nylok nut and flat washer supplied.

6. Install a Narrow R-joint Spacer into the R-joint. The Small Diameter goes into the R-joint. Slide the R-joint onto the stud and fasten in place with a 5/8" flat washer and nylok nut.

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.

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Part # 11054799 58-64 Impala Rear Coil Spring Kit

Components:

2	59130375	Coil spring – 13" free length, 5" O.D., 375# rate
2	90002079	Lower spring retainer

Hardware:

2	99371001	3/8" x 3/4" USS bolt	Spring retainer to lower arm
2	99373005	3/8" lock washer	Spring retainer to lower arm

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1. Attach the spring retainer to the lower trailing arm using the 3/8" x 3/4" bolt and lock washer.



2. Support the axle, then remove the lower shock nut, and pull the shock off the stud. This will allow the axle to drop low enough to install the spring into the pockets.



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.

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.