

Part # 11040298 58 Impala Air Suspension System

Front Components:

1	11053001	HQ Series Front Shockwaves
1	11052899	Front Lower StrongArms

- 1 11053699 Front Upper StrongArms
- 1 11059100 Front MuscleBar

Rear Components:

1 11054699 Rear CoolRide Kit for Strong	Arms
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- 1 11050701 HQ Series Rear Shocks
- 1 11054499 Rear Lower StrongArms
- 1 11046699 1958 Rear Upper StrongArm
- 1 11059102 Rear MuscleBar





Part # 11053001 - 58-64 GM B-Body Front HQ Series Shockwave



Recommended Tools





1000 Series Bellow, 2.75" Stud/Eye 2.9" Shock **Installation Instructions**

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ShockWave Dimensions:

Center of bearing to Center of bearing:

Compressed: 10.35" 11.75"

Ride Height:

Extended: 12.65"

THE DELRIN BALL REQUIRES A 3/4" HOLE FOR THE FLANGE TO GO THROUGH. THIS CAN BE DRILLED WITH A UNIBIT.

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Major ComponentsIn the box

ltem #	Part #	Description	QTY	
1	24129999	2.9" Stroke HQ Series Shock	2	
2	90009989	2.75" Stud Top (Installed on Shock) - Includes Adjuster Knob & Screw 2		
3	24090199	1000 Series 6.5" Double Convoluted AirSpring 2		
4	70010893	AirSpring Locking Ring (Installed on shock)	2	
5	99055000	Locking Ring Set Screw (Installed on shock)	2	
6	90002067	Spacers - INCLUDED WITH STRONGARMS	4	
7	90002313	2.75" Aluminum Stud Top Base	2	
8	90001904	Bottom Delrin Ball	2	
9	90001903	Top Delrin Ball	2	
10	90001902	Delrin Ball Aluminum Top Cap	2	
11	99562003	9/16"-18 Thin Nylok Nut	2	
12	90009972	Adjuster Knob - (90009989 assembly)	2	
13	90009969	#4-40 X 1/4" SS, 18-8 Pan Head Torx Cap - (90009989 assembly)	2	
	70012161	2.75" Stud Top Metering Rod (installed in stud top)	2	
	90001994	5/8" ID Bearing (installed in shock and eyelet)		
	90001995	Bearing Snap Ring (installed in shock and eyelet)	8	
THE DELRIN BALL REQUIRES A 3/4" HOLE FOR THE FLANGE TO GO THROUGH. THIS CAN BE DRILLED WITH A UNIBIT. WARNING: ATTEMPTING TO REMOVE THE AIR FITTING WILL DAMAGE IT AND VOID THE WARRANTY.				





ShockWave Installation







1. Drill the OEM shock hole out to 3/4". This can be done with a Unibit.

2. The Shockwave stud top will come in contact with the coil spring retainer, so it must be opened up towards the engine. Image 2 has a white line illustrating where to cut the opening for stud top clearance. A die grinder works well here.

3. Image 3 shows the spring retainer trimmed out.

Note: It may be helpful to go ahead and install the lower StrongArms and Shockwaves to check if any more trimming is necessary.





ShockWave Installation





Note: The airline must also be routed at this time. It can be ran through the frame toward the rear of the vehicle.

4. The air fitting location can be rotated by twisting the bellow assembly separate of the shock. Place the Shockwave into the coil spring pocket with the stud sticking through the OEM shock hole. See assembly **Diagram 4.** OEM Shock hole **must** be drilled out to ³/₄"

- **1.** Stud top aluminum base
- 2. Delrin ball lower half
- 3. Delrin ball upper half
- 4. Aluminum cap
- 5. 9/16" SAE Nylok jam nut
- 6. Threaded stud (screwed onto shock shaft)
- 7. Rebound adjusting knob
- 8. Screw

5. Raise the lower arm up to the Shockwave and bolt them together using the 1/2" x 3 ¼" bolt and Nylok supplied w/ the lower arms. An aluminum spacer will be on each side of the bearing. Torque to 75 ftbs.

6. Raise the lower control arm to full compression and double-check to make sure the Shockwave does not rub on anything at anytime. Allowing the Shockwave to rub on anything will cause failure and is not a warrant-able situation.

7. The best ride quality will occur around 50-60% suspension travel; depending on vehicle weight this typically occurs around 105-110 psi.

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Notes and Care of your Shockwaves

NOTES:

WARNING: ATTEMPTING TO REMOVE THE AIR FITTING WILL DAMAGE IT AND VOID THE WARRANTY.

TIGHTENING THE TOP 9/16"-18 NUT: SNUG THE NUT DOWN AGAINST THE TOP CAP. YOU NEED TO BE ABLE TO ARTICULATE THE SHOCK BY HAND.

You can clock the airfitting location on the ShockWave by turning the AirSpring assembly of the shock. Make sure the fitting doesn't contact the frame.

When cutting the airline, use a razor blade. The cut needs to be a clean cut and square for the airline to seal properly.

The Locking ring on the shock is **NOT** adjustable. These rings are set at the factory to optimize the AirSpring stroke with the shock stroke.

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 that 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.





Shock Adjustment

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. **CONTINUE ON NEXT PAGE.**

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.

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

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 9000677 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 ¼" 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



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 $\frac{1}{2}$ " x 3 $\frac{1}{4}$ " 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 $\frac{1}{2}$ " 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.



58-64 Chevy Drivers Side Lower Strong Arm





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 ¼" SAE Gr. 8 bolt Upper cross shaft
- 4 99373001 3/8" Fender washer Upper cross shaft





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



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Part # 11059100 58-64 Impala Front MuscleBar w/ PosiLinks

- 1 90000127 1 ¼" Diameter sway bar
- 2 90000124 Sway bar arm

Components:

- 1 90000736 Driver side frame bracket
- 1 90000737 Passenger side frame bracket
- 2 90001098 1 ¹/₄" I.D. Polyurethane bushing
- 2 90000922 12mm straight PosiLink
- 2 90000921 12mm 90 degree PosiLink
- 2 90000089 T-bushing for lower control arm
- 1 90001092 Tube of lithium grease
- 2 99250001 ¹/₄" 28 straight grease fitting
- 2 99125001 12 x 1.75 x 45mm stud In PosiLink (use Loctite)

Hardware Kit: 99010039

4	99122001	12mm Nylok nut	PosiLink
2	99433002	7/16" SAE flat washer	PosiLink to lower arm
6	99431001	7/16" x 1" USS bolt	Frame bracket to frame
6	99432001	7/16" USS Nylok nut	Frame bracket to frame
12	99433002	7/16 SAE flat washer	Frame bracket to frame
4	99371003	3/8" x 1" USS bolt	Frame bracket to frame
4	99372002	3/8" USS Nylok nut	Frame bracket to frame
8	99373003	3/8" SAE flat washer	Frame bracket to frame
8	99371017	3/8" x 1" USS button head	Attaches sway bar arm to bar
8	99373005	3/8" lock washer	Attaches sway bar arm to bar





*****This sway bar is designed for use with our StrongArms******



 Apply lithium grease to the polyurethane bushing and slide it over the sway bar.
Note: Do not use petroleum based lubricants on polyurethane.
Place the frame bracket over the poly bushing. Bolt the assembly to the frame, the rear two holes in the bracket will align with the factory sway bar mounting holes.



3. Two of the three holes on the front of the bracket will align with existing holes. The outer hole must be drilled to 7/16".

4. Bolt the sway bar arm to the bar using four 3/8" x 1" button head bolts and lock washers. The holes in the frame may need to be drilled out slightly.

5. Attach the 90 degree end of the PosiLink to the arm using a 12mm Nylok nut.



6. Attach the straight end to the lower control arm. A T-bushing is required between the PosiLink and the lower control arm. A 12mm Nylok nut and flat washer will secure the PosiLink to the lower arm.

Check clearance though full suspension travel and turn the wheel lock to lock. Ensure that the PosiLinks to not bind. Check PosiLink clearance with tie rods.



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Part # 11054699 58-64 Impala Rear CoolRide Kit

For Use w/ Lower StrongArms

Components:

- 2 90006873 Rear air spring
- 1 90000463 Driver side upper air spring bracket
- 1 90000464 Passenger side upper air spring bracket
- 2 90000472 1.5" O.D x 1.5" long aluminum bump stop spacer
- 2 90001082 Short bump stop

Hardware:

2	99435001	7/16" x 6" stud	Upper air spring bracket to frame
2	99433002	7/16" SAE flat washer	Upper air spring bracket to frame
2	99432001	7/16" USS Nylok nut	Upper air spring bracket to frame
4	99372002	3/8" USS Nylok nut	Upper air spring bracket
8	99373003	3/8" flat washer	Air spring mounting / Bump stop
2	99371003	3/8" x 1" USS bolt	Bump stop
2	99371001	3/8" x 3/4" USS bolt	Air spring to lower arm
4	99373005	3/8" lock washer	Air spring to lower arm / Bump stop



Installation Instructions

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

2. Support axle then remove coil spring, shock, and bump stop. Refer to service manual for proper disassembly procedure.







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

4. Place the upper cup bracket on top of the air spring and secure with two 3/8" Nylok nuts and flat washers.

5. Thread the 6" stud into the nut in the bottom of the cup.

6. Place the air spring assembly into the coil spring pocket with the tab on the side of the cup aligning with the factory bump stop mount.

7. The stud should poke through the hole in the upper coil spring pocket. Some cars may not have this hole and it must be drilled. Fasten with a 7/16" Nylok nut and flat washer.

8. Fasten the aluminum bump stop spacer to the frame using a 3/8" x 1" bolt, flat washer and lock washer.

9. Screw the bump stop into the spacer.

10. Fasten the air spring to the lower StrongArm using a 3/8" x 3/4" bolt, lock washer and flat washer.

11. Make sure that the air spring

cannot rub on anything at anytime.

This will result in air spring failure and

is a not a warrantable situation.

12. Ride height on this air spring is approximately 5" tall, but may vary to driver preference.



This is the driver bracket looking down at the top of it.

The tab goes to the rear of the car.

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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
- 4 99312003 5/16" USS Nylok nut
- 8 99313002 5/16" SAE flat washer
- 2 99502002 ¹/₂" SAE Nylok Nut
- 2 99503001 ¹/₂" SAE flat washer

Shock to frame Shock to frame Shocks to frame Shock to lower stud Shock to lower stud





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



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



Part # 11054499 58-64 Impala Rear Lower StrongArms For Use with CoolRide

Components:

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

Hardware:

4	99621005	5/8" x 3 1⁄2" SAE Gr.8 bolt	Lower arm
4	99632002	5/8" SAE Nylok jam nut	Lower arm

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Installation Instruction

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



2. Fasten the lower StrongArms to the frame and axle using the $5/8^{\circ} \times 3 \frac{1}{2}^{\circ}$ 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.



Part # 11046699 1958 Impala Rear Upper StrongArm

Components:

- 1 90000505 Rear Upper StrongArm
- 4 90001086 Poly bushing half 1.5" O.D. x 1" long
- 2 90000549 Inner bushing sleeve

Hardware:

- 3 99501006 ½" x 3" SAE Gr.8 bolt Upper arm
- 3 99502002 ¹/₂" SAE Nylok Jam nut Upper arm





Part # 11059102 - 58-64 Chevy Fullsize Rear MuscleBar



Recommended Tools





58-64 Chevy Fullsize MuscleBar Installation Instructions

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- Page 6..... Final Tightening and Adjusting









Major ComponentsIn the box

ltem #	Part #	Descritpion	
1	90002444	58-64 Rear MuscleBar Assembly	1
2	90002445	Driver Frame Bracket	1
2	90002446	Passenger Frame Bracket	
3	90000740	Axle Saddle Bracket	2
4	90000088	7/16" U bolt	2
5	99800004	Poly Bushing and Bracket	2
6	90000926	10mm 90 degree PosiLink end	4
	90001092	Tube of Lithium Grease (Not Shown)	







ltem #	QTY	Part Number	Descritpion	Location	
7	4	99432001	7/16"-14 Nylok Nut	Axle Mount U-bolt	
8	4	99433002	7/16" SAE Flatwasher	Axle Mount U-bolt	
9	10	99373007	3/8"-16 x 1 Thread Forming Bolt	Frame Bracket to Frame	
10	4	99112002	10mm-1.5 Nylok Nut	PosiLink to Bracket and MuscleBar	
11	8	99373003	3/8" SAE FlatWasher	PosiLink to Bracket and MuscleBar	
12	2	99115001	10mm-1.5 x 40mm Stud	Preassembled in Posilink Assembly	
13	4	90002275	Aluminum Crush Washer	Preassembled in Posilink Assembly	

Hardware ListIn the box

Getting Started.....

Congratulations on your purchase of the Ridetech Rear Muscle Bar. These system has been designed to give your car excellent handling along with a lifetime of enjoyment. One of the key features of this Muscle-Bar: Posilinks - The Posilink makes the reaction of the swaybar instantaneous, tuneability - this Musclebar has 3 postions to aid in the tuning of the handling of your car.

The MuscleBar has 3 postions to aid in the tuning of your cars handling. We start in the center position and tune from there. The Postion to to the front of the car will make the Musclebar softer. The position to the rear of the car will make the MuscleBar stiffer.



1. Apply Lithium grease to the inside of the sway bar bushings using the tube of grease supplied in the kit.





MuscleBar Installation







2. Install the swaybar bushings and straps onto the MuscleBar. The bushings and straps get installed on the outer ends of the MuscleBar against the stop rings.

3. Install the U-bolts over the axle, slide the saddles onto the ubolts along with the MuscleBar. The MuscleBar should be centered on the rearend. Install the 7/16" washer and Nylok nut loosely for now. **DO NOT TIGHTEN NUTS YET.**

Note: It may be necessary to trim the panhard mount to get the saddle to sit in place properly on the axle tube. The saddle should be level with the ground.

Note: With the arms parallel with the ground the rear of the Muscle bar should be angle down towards the ground.

4a . There is a Driver and Passenger frame bracket. In illustrations 4a & 4b, the drivers side is shown. The bracket gets located by measuring from the lower control arm frame bracket. The frame bracket is located 5 5/16" (measuring towards the rear of the car) from the factory control arm bracket. This measurment is taken right where the factory bracket attaches to the frame.

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MuscleBar Installation



PASSENGER

FRONT

5.

6.

4b. This illustration shows the frame bracket as looking from the side. With the frame bracket held in place mark the (5) mounting holes. Drill these holes with a 5/16" drill bit. Attach each bracket with (5) 3/8-16" thread forming bolts.

5. Install the PosiLinks in the frame brackets and in the CENTER hole in the MuscleBar using a 3/8" SAE Flatwasher on each side of the bracket and on each side of the mount on the MuscleBar. The Posilinks are installed with the stud on the upper Posilink pointing forward and the stud on the lower Posilink pointing to the inside of the car. Install the 10mm Nylok on Posilink and tighten nut.

6. Tighen the 7/16" Nylok nuts on the U-bolts making sure the Musclebar is centered on the rearend.

DRIVER





Final Tightening and Adjusting

5. The MuscleBar has (3) holes in the arms for adjustment. The center hole is the standard hole. You can stiffen the bar by moving the Posilnk in to the hole closest to the differential, or soften it by moving it to the hole at the end of the bar.

Note: If any grease is needed after installation use a lithium based grease. DO NOT USE A PETROLEUM BASED GREASE

STILL HAVE QUESTIONS?

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