

Part # 11060298 59-64 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

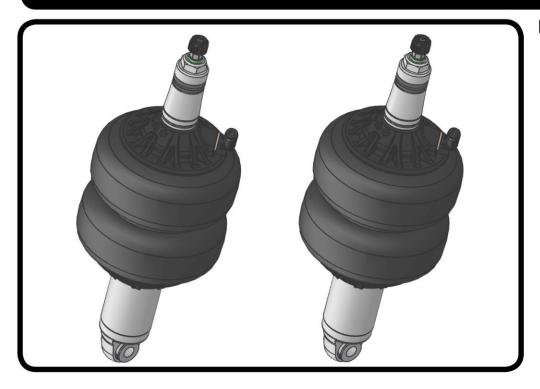
Rear Components:

1	11054699	Rear CoolRide Kit for StrongArms
1	11050701	HQ Series Rear Shocks
1	11054499	Rear Lower StrongArms
1	11066699	Rear Upper StrongArm & Panhard Bar Kit
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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Page 3...... Notes and Care of Your Shockwave

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ShockWave Dimensions:

Center of bearing to Center of bearing:

Compressed: 10.35" Ride Height: 11.75" Extended: 12.65"

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

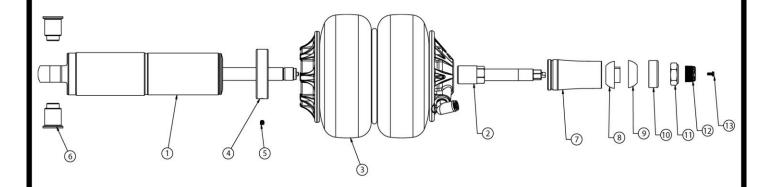






Major ComponentsIn the box

Item #	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)	4
	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.





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.



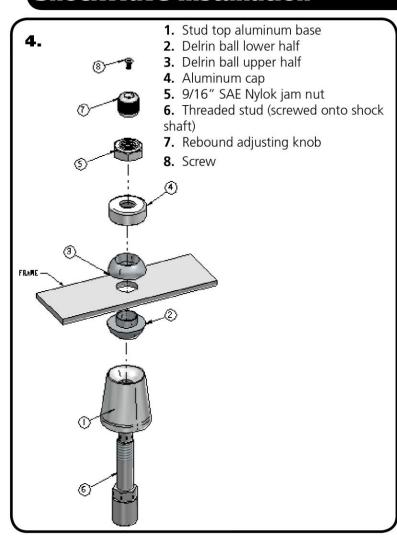
3. Image 3 shows the spring retainer trimmed out.

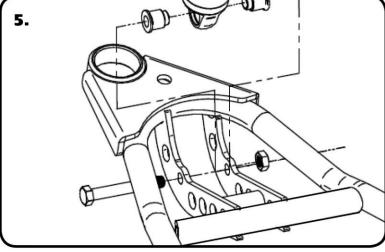
Note: It may be helpful to go ahead and install the lower StrongArms and Shockwaves to check if any more trimming is necessary.





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 34"
- 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 1/4" 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 warrantable situation.
- **7.** The best ride quality will occur around 50-60% suspension travel; depending on vehicle weight this typically occurs around 105-110 psi.



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 Fittin	ngs

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	½" Fender washer	Lower arm cross shaft
8	99433003	7/16" lock washer	Lower arm cross shaft & clamp
2	99501024	½"-13 x 3 ¼" Gr. 8 bolt	Shockwave to lower arm
2	99502001	½"-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.

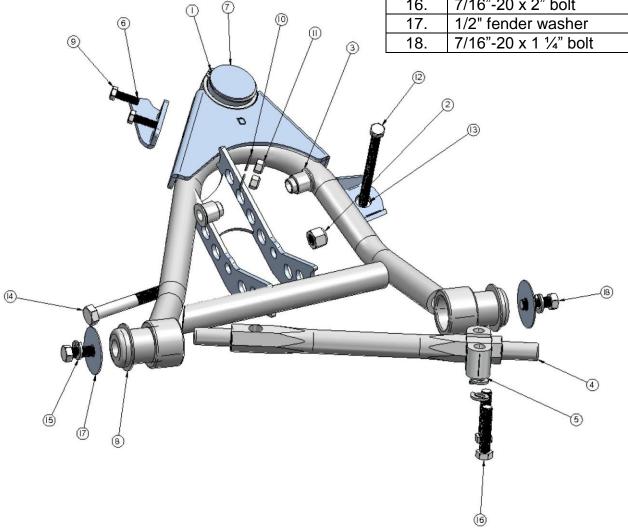


- 6. Attach the ShockWave to the lower StrongArm using the ½" x 3 ¼" bolts and aluminum spacers provided.
- 7. The sway bar end link must be shortened to 2" tall optimize clearance and alignment. Use the shorter 3/8" x 6 ½" bolt supplied. (Discard if using RideTech MuscleBar)
- 8. Check all clearance with brake lines, airlines, tie rod, sway bar, and tire through full suspension travel and turn wheel lock to lock.



58-64 Chevy <u>Drivers Side</u> 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 ½ 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





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:

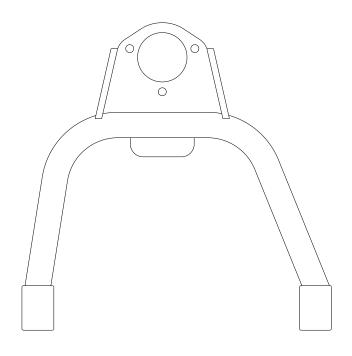
4	993/1014	3/8" x 1 1/4" SAE Gr. 8 bolt	Upper cross shaft
4	99373001	3/8" Fender washer	Upper cross shaft





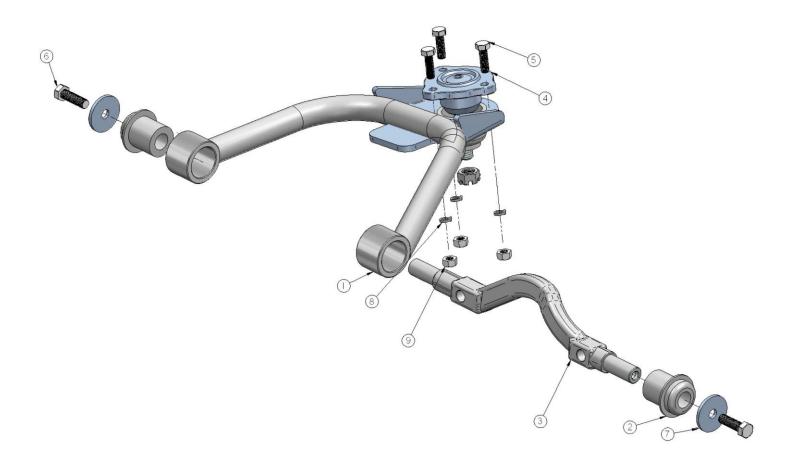
- 1. Drop the ball joint down through the ball joint plate, secure w/ the hardware supplied.
- 2. Fasten the upper arm to the frame using the factory hardware. Reinstall the current alignment shims, but **vehicle must be realigned.** This arm was designed with an extra 2 degrees of positive caster allowing 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 <u>Driver</u> Side Upper StrongArm





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





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

Components:

1	90000127	1 ¼" Diameter sway bar
2	90000124	Sway bar arm
1	90000736	Driver side frame bracket
1	90000737	Passenger side frame bracket
2	90001098	1 ¼" 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)

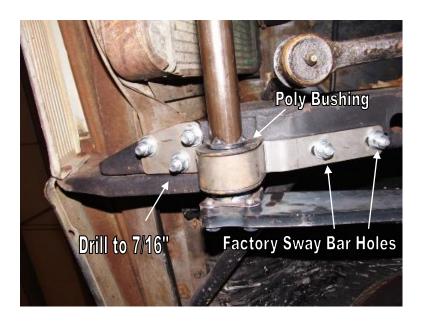
Hardware Kit: 99010039

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*****



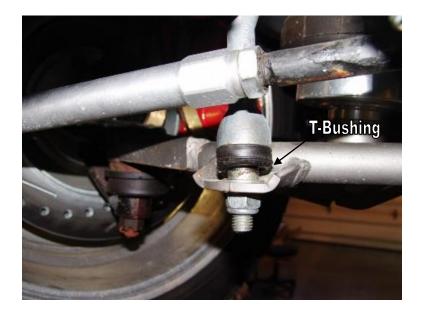
1. Apply lithium grease to the polyurethane bushing and slide it over the sway bar.

Note: Do not use petroleum based lubricants on polyurethane.

2. 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.





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.

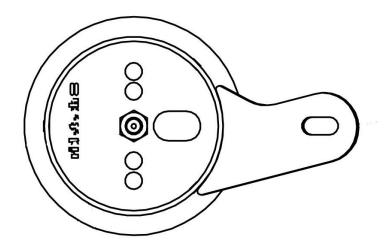






- 3. Apply thread sealant to the air fitting and screw it into the top of the air spring.
- 4. Place the upper cup bracket on top of the air spring and secure with two 3/8" Nylok nuts and flat washers.
- 5. Thread the 6" stud into the nut in the bottom of the cup.
- 6. Place the air spring assembly into 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	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	½" SAE Nylok Nut	Shock to lower stud
2	99503001	½" 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 ½" 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	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 ½" 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 ½" bolt and Nylok nuts supplied on the front. The OEM rear bolt will be reused.
- 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 # 11066699 59-64 Chevy Impala Rear Upper Strong Arm & Panhard Bar Kit

Components:

1	90001119	Upper control arm – (set at 13.75")
1	90001589	Kevlar lined Heim end – 5/8" I.D.
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
2	90002066	Aluminum bearing spacer
1	90000993	Panhard bar - (Set at 31.500")
1	90001942	Rubber bushing – pressed into panhard bar
1	90001946	Panhard Kevlar lined Heim end – 3/4" I.D.
2	90000460	Aluminum T bushing – for heim end
1	90000461	Panhard bar stud

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 ends
2	99621005	5/8" x 3 1/2" SAE Gr.8 bolt	Upper arm
3	99622006	5/8" SAE Nylok jam nut	Upper arm / Pan hard bar stud









- 1. Bolt the upper StrongArm to the frame using the 5/8" x 3 ½" bolts and Nylok nuts supplied. An aluminum washer must installed on each side of the spherical bearing.
- 2. Using a 5/8" x 3 ½" bolt fasten the poly bushing end of the upper bar to the axle bracket.

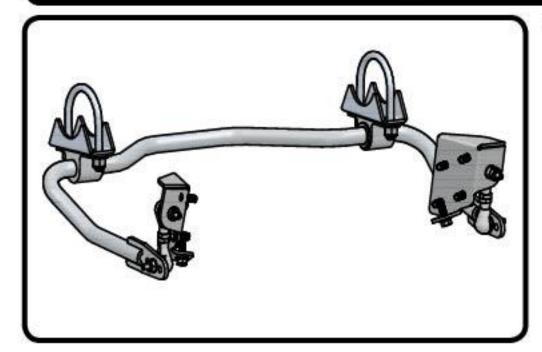
Note: Some vehicles have two factory upper arms and need a second tubular arm.

- 3. Install the ¾" 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 ½" 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. Slide the rubber end of the panhard bar onto the stud and secure with 5/8" thin Nylok nut and flat washer.





Part # 11059102 - 58-64 Chevy Fullsize Rear MuscleBar



Recommended Tools









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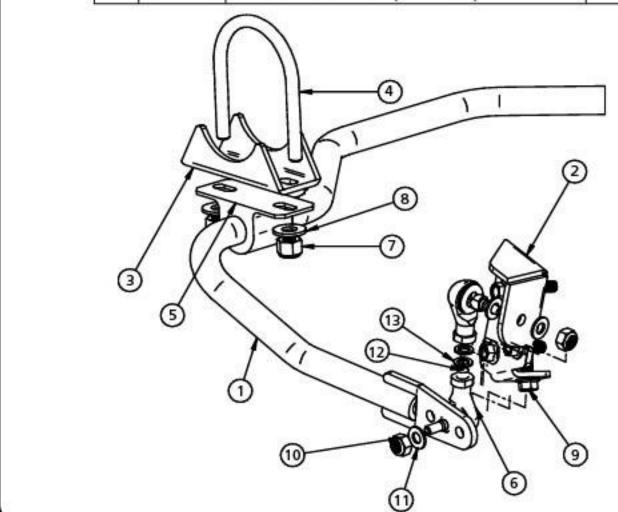






Major Components In the box

Item #	Part #	Descritpion	QTY
1	90002444	58-64 Rear MuscleBar Assembly	1
2	90002445	Driver Frame Bracket	1
2	90002446	Passenger Frame Bracket	1
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)	







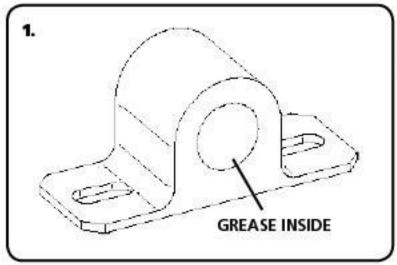
Hardware ListIn the box

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

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 the front of the car will make the Musclebar softer. The position to the rear of the car will make the MuscleBar stiffer.

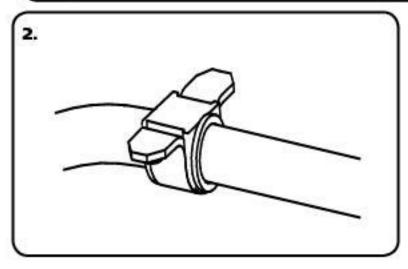


 Apply Lithium grease to the inside of the sway bar bushings using the tube of grease supplied in the kit.

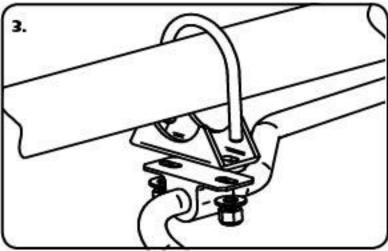




MuscleBar Installation



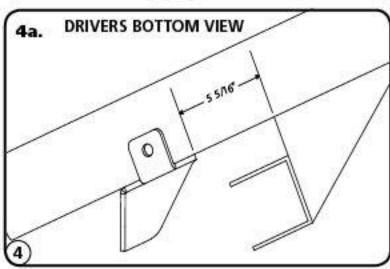
Install the swaybar bushings and straps onto the MuscleBar. The bushings and straps get installed on the outer ends of the Muscle-Bar against the stop rings.



3. Install the U-bolts over the axle, slide the saddles onto the ubolts along with the MusdeBar. 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.



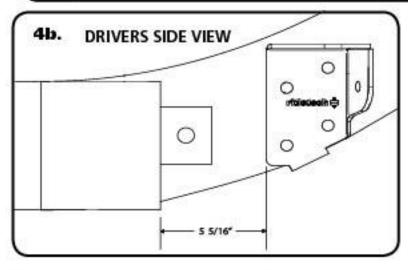
4a . There is a Driver and Passenger frame bracket. In illustrations 4a & 4b, the drivers side is shown. The bracket gets located by measuring from the lower control arm frame bracket. The frame bracket is located 5 5/16" (measuring towards the rear of the car) from the factory control arm bracket. This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

> www.rldetech.com 812-482-2932

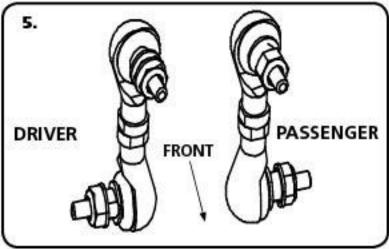




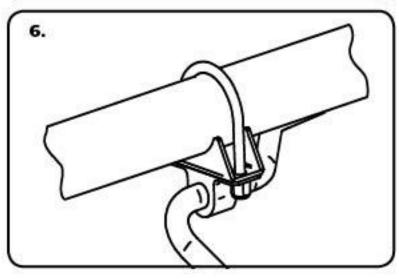
MuscleBar Installation



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.



Tighen the 7/16" Nylok nuts on the Ubolts making sure the Musclebar is centered on the rearend.





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?

Tech line hours

Monday - Friday 8AM - 6PM (EST) 812-482-2932