



Part # 11230202 - 1964-1967 GM "A" Body HQ CoilOver System

11227299 11226110 11239122

Miscellaneous Components: 85000000

Front CoilOvers Front Lower StrongArms Front Upper StrongArms Ridetech Hub Bearing Spindle C5,C6 Caliper Bracket Front SwayBar

Rear Upper StrongArms Rear Lower StrongArms Axle R-Joint & Installation Tool Rear CoilOvers Rear SwayBar



Recommended Tools



1964-1967 GM "A" Body CoilOver Installation Instructions

Spanner Wrench

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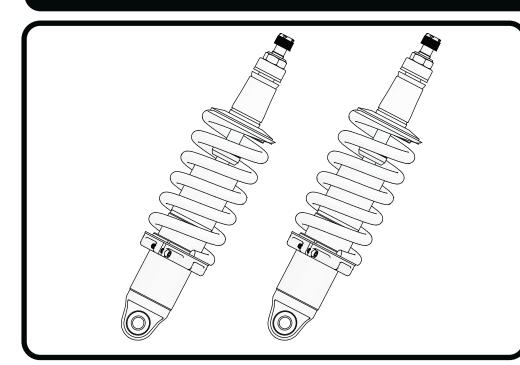








Part # 11233510 - 1964-1967 GM "A" Body HQ Front CoilOvers



Recommended Tools





1964-1967 GM "A"Body HQ Series Front CoilOvers

Installation Instructions

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ShockWave Dimensions:

Center of bearing	to Stud	Mounting Surface:
Compressed:	12.18″	
Ride Height:	14.55″	
Extended:	16.28″	

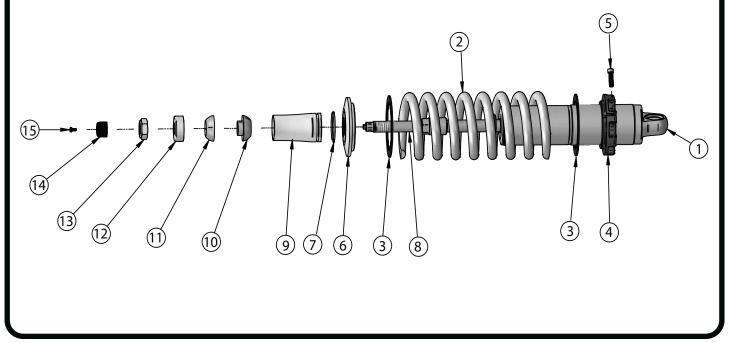






Major ComponentsIn the box

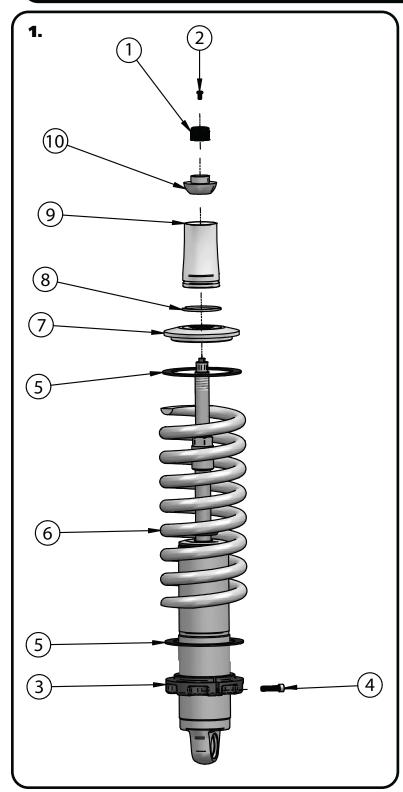
ltem #	Part #	Description	QTY
1	982-10-804	4.1" Stroke HQ Series Shock	2
2	59100850	Coilspring 10" 850lb	2
3	70010828	Delrin Spring Washer	4
4	803-00-199(kit)	Lower Spring Adjuster Nut (803-00-199 kit)	2
5	803-00-199(kit)	Adjuster Nut Locking Screw (803-00-199 kit)	2
6	803-00-199(kit)	Upper CoilSpring Retaining Plate (803-00-199 kit)	2
7	803-00-199(kit)	CoilSpring Plate Retaining Ring (803-00-199 kit)	2
8	90009993(kit)	3.75" Stud Adjuster Assembly	2
9	90002314	3.75" Stud Top Base	2
10	90001904	Delrin Ball Lower Half	2
11	90001903	Delrin Ball Top Half	2
12	90001902	Delrin Ball Upper Cap	2
13	99562003	9/16-18" Nylok Nut	2
14	210-35-120-0	Shock Adjuster Knob	2
15	90009969	Adjuster Knob Retaining Screw	2
	90001994	5/8" ID Bearing (installed in shock body)	2
	90001995	Bearing Snap Ring (installed in shock body)	4







CoilOver Assembly



 To Assemble the CoilOver you need to:
a. Remove Screw (2) from center of Adjustment Knob (1) and remove Adjustment Knob.

b. Remove Nylok Nut, Delrin Ball Upper Cap, Delrin Upper and Lower Balls, along with the base from the Coliover stud.

c. Thread Adjuster Nut (3) onto the CoilOver body. Once it is threaded on the shock body, lightly thread in the locking screw (4) into the Adjuster Nut.

d. Install a Delrin Spring Washer (5) onto the Adjuster Nut.

e. Slide the CoilSpring (6) onto the CoilOver.

f. Install another Delrin Spring Washer (5) on top of the CoilSpring.

g. Install the Upper CoilSpring Plate (7) onto the CoilSpring.

h. Install the CoilSpring Retaining Ring (8) onto the Stud Top Base (9). It fits into the groove in the base.

i. Slide the Stud Top Base onto the shock until it bottoms out on the stud. It may be necessary to thread the Adjuster Nut down the shock body (to lower the spring) if the base will not slide all the way down onto the stud.

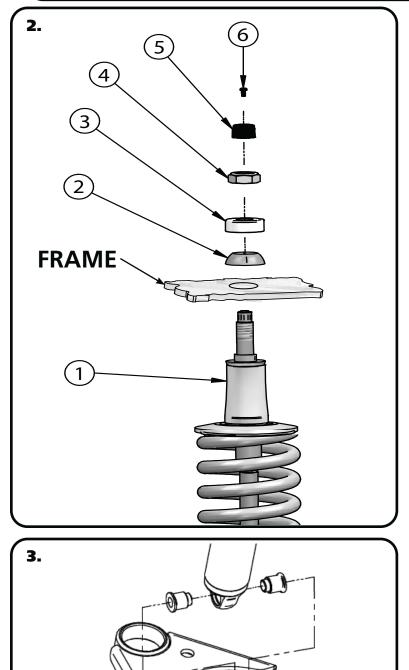
k. Slide the Lower Delrin Ball (10) (it has the collar sticking up around the center hole) on to the Stud Top.

Repeat on second CoilOver.





CoilOver Installation



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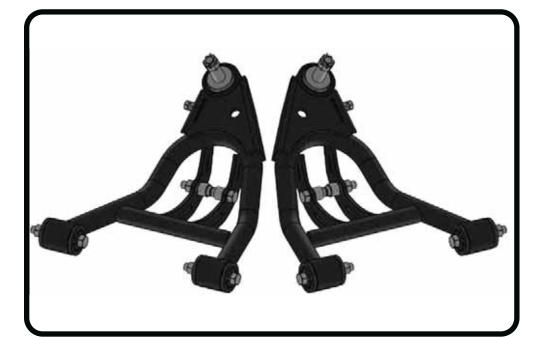
2. With the CoilOver(1) assembled, it is time to bolt them into the car. The factory shock hole will need to be drilled out to 3/4", this can best be done using a Unibit. Insert to CoilOver Stud Top through the factory hole in the frame. Install the Upper Delrin Ball(2) onto the shock stud with the flat side facing the frame. Next, Install the Delrin Ball Cap (3) onto the shock stud with the Concave side facing the Upper Delrin ball. Install the Nylok Nut(3) onto the shock stud and lightly tighten. The needs to be some resistance on the ball but not tight enough that it will not rotate freely. Reinstall the adjuster knob(5) using the screw (6) that was removed during step 1.

3. Install a spacer on each side of the lower Coilover. Slide the shock with the spacers installed into the lower control arm. Raise the arm up to line up the holes in the bushing with the 1/2" hole in the control arm straps and hold it in place while you install the 1/2" x 3 1/2" bolt, 1/2" flat washer, and 1/2" Nylok nut. Tighten the upper and lower shock bolts.





Part # 11222899 - 1964-1972 GM A-Body Front Lower StrongArms



Recommended Tools

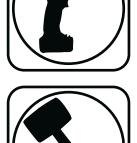




1964-1972 GM A-Body Lower StrongArms Installation Instructions

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- Page 7..... Lower Control Arm Components
- Page 8...... Getting Started & Installation
- Page 9..... Installing Spindles and Steering Stop



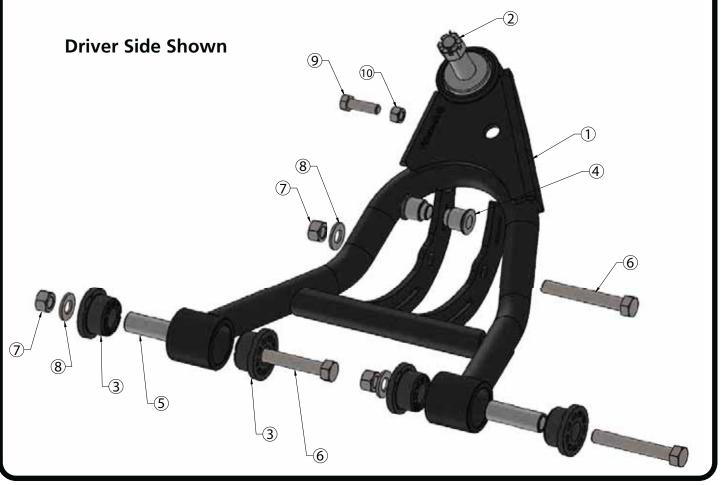






Lower Control Arm ComponentsIn the box

ltem #	Part Number	Description	QTY
1	90001224	Driver Lower Control Arm (Shown)	1
1	90001225	Passenger Lower Control Arm	1
2	90000898	Lower Ball Joint Assembly - Proforged # 101-10013	2
3	70010759	Delrin Bushing - with 2" Diameter Ledge	8
4	90002062	CoilOver Bearing Spacers	4
5	90000516	1/2" ID Inner Sleeve	4
6	99501005	1/2"-13 x 3 1/2" Hex Bolt	6
7	99502009	1/2"-13 Nylok Nut	6
8	99503014	1/2" SAE Flat Washer	6
9	99371005	3/8"-16 x 1 1/4" Hex Bolt	2
10	99372012	3/8"-16 Hex Nut	2







Getting Started.....

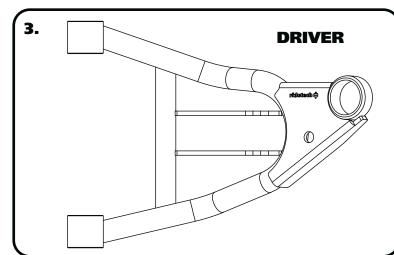
Congratulations on your purchase of the Ridetech A-Body StrongArms. These StrongArms have been designed to give your A-Body excellent handling along with a lifetime of enjoyment. Some of the key features of the TruTurn System: Balljoint angles have been optimized for the lowered ride height, Delrin bushings are used to eliminate bushing deflection along with providing free suspension movement through the entire travel. The Geometry has been optimized for excellent handling, driveabilty and minimal bumpsteer. The Delrin bushings are made from a material that is self lubricating so no grease zerks are needed.

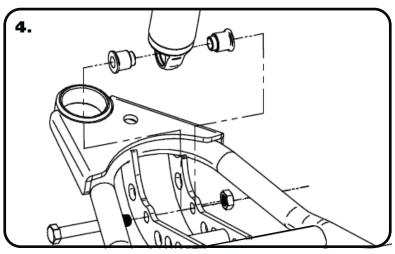
Note: These control arms are designed for use with the Ridetech CoilOvers and the MuscleBar swaybar. **The factory shocks and springs or the factory sway bar will not fit these arms.**

Installation

1. Remove the entire lower control arms from the car. If you are replacing the upper control arms and spindle, remove them too. Refer to a Factory Service Manual for the proper method.

2. Drill the factory upper shock mounting hole to 3/4". This can be done easily with a Unibit.





3. After removing the factory lower control arm, clean the bushing mounting surfaces on the frame. The Control Arms are marked "D" for Driver and "P" for Passenger. The Ballpoint Pin points up and the Sway bar mount is on the front side of the arm. Install a 1/2" flat washer on each of (2) 1/2"-13 x 3 1/2" bolts. Insert the bolt/ washers through the mounting holes. Install a 1/2" flat washer and 1/2" flat washer and 1/2" flat washer on the front side of the arm. The mounting holes. Install a 1/2" flat washer and 1/2" flat wash

Note: On some cars the frame brackets may be pinched and will need to be spread back apart to allow the bushing to slide in.

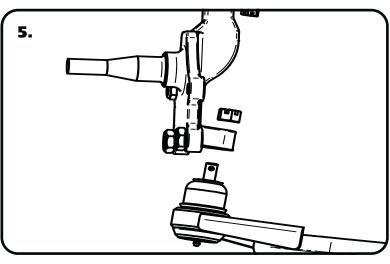
Install the CoilOvers at this time. Refer to the CoilOver instructions for Assembly.

4. Insert the Bearing Spacers into the lower shock bearing. The SMALL end goes into the bearing. Swing the Control Arm up, line up the 1/2" holes with the bearing spacers, insert 1/2"-13 x 3 1/2" bolt. Install a 1/2" flat washer and nylok nut. Torque to 75 ft-lbs. **Note: The shock bolt will need to be installed from the rear with the threads pointing to the front of the car.**





Installing Spindle & Setting Steering Stop



5. Attach the Spindle to the control arms.

Torque Specs:

Lower Balljoint - 65 ftlbs and tighten to line up cotter pin.

Install the Cotter Pin after tightening the ball joint nut.



6. Thread the 3/8"-16 nut onto the 3/8"-16 x 1 ¼" bolt. Thread it into the front hole of the ball joint plate. You will need to adjust the steering stop to suite your needs. This setting will vary depending on wheel and tire size and other suspension components. Torque to 12 ft-lbs.

7. Tighten all fasteners. If you are going to install the Ridetech MuscleBar, now is a good time to do it.

Suggested Alignment Specs:

J	
Street:	5 degrees
Street:	+3.0 to + 5.0 degrees
Street:	1/16" to 1/8" toe in
	Street:





Part # 11223699 - 1964-1972 GM A-Body Front Upper StrongArms



Recommended Tools





1964-1972 GM A-Body Upper StrongArms Installation Instructions

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- Page 13..... Caster Explained
- Page 14..... Offset Upper Control Arm Crossshaft
- Page 15..... Installing Spindle and Alignment





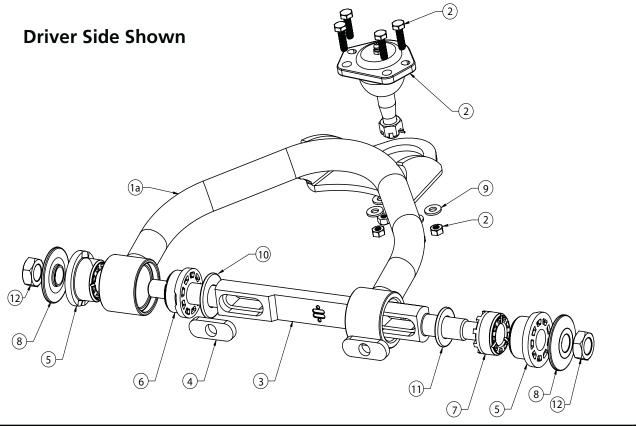






Upper Control Arm ComponentsIn the box

ltem #	Part Number	Description	QTY
1a	90001222	Driver Upper Control Arm (Shown)	1
1b	90001223	Passenger Upper Control Arm	1
2	90000908 kit	Upper Ball Joint Kit - Proforged # 101-10015	2
3	90003375	Caster Slug Crossshaft	2
4	70010883	Caster Slug	4
5	70010759	Outer Delrin Bushing with 2" Lip	4
6	70010827	Inner Delrin Bushing with 1.75" Lip	2
7	70010826	Inner Delrin Bushing with No Lip	2
8	90002737	Aluminum T-Washer	4
9	99253012	1/4" SAE Flat Washer	8
10	99753007	3/4" x 1 3/4" Flat Washer	2
11	99183002	M18 Flat Washer	2
12	99622005	5/8"-18 Lock Nut	4
	99433004	7/16" USS Flat Washer - NOT SHOWN	4







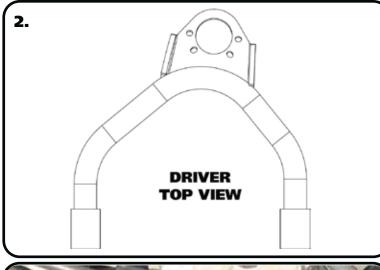
Getting Started.....

Congratulations on your purchase of the Ridetech A-Body StrongArms. These StrongArms have been designed to give your A-Body excellent handling along with a lifetime of enjoyment. Some of the key features of the TruTurn System: Balljoint angles have been optimized for the lowered ride height, Delrin bushings are used to eliminate bushing deflection along with providing free suspension movement through the entire travel. The Geometry has been optimized for excellent handling, driveabilty and minimal bumpsteer. The Delrin bushings are made from a material that is self lubricating so no grease zerks are needed.

When assembling the Control Arms tighten the cross shaft nuts enough to create drag on the delrin bushings, the arm should still move through its travel by hand.

Installation

1. Remove the entire upper control arms from the car. If you are replacing the lower control arms and spindle, remove them too. Refer to a Factory Service Manual for the proper method.



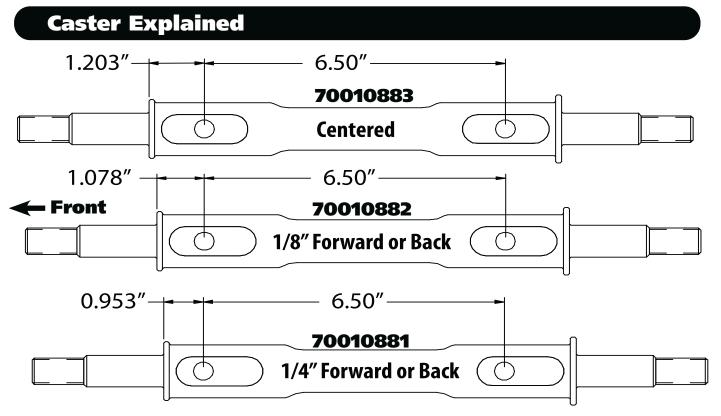


2. The Upper Control Arm is attaching the factory mount using factory hardware. The driver side arm is shown in **Figure "2"**. The Balljoint located on the arm to the front of the car. Install the Ball Joints in the control arms using the illustration on the previous page as a reference. Torque the hardware to 15 ftlbs.

3. The Upper Control Arm is attaching the factory mount using factory hardware with the supplied 7/16" Flat Washer under the OEM Nut. Torque the nuts to 50 ft-lbs. The driver side arm is shown in **Figure "2"**. The Arrow on the Cross shaft points to the front of the car. Page 4 & 5 has information about Caster and the Caster Slugs.







These StrongArms 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 supplied in the kit are setup to be centered. 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 slugs can be purchased from Ridetech or your Ridetech dealer.

1/8" = 70010882 1/4" = 70010881

Caster Explained:

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

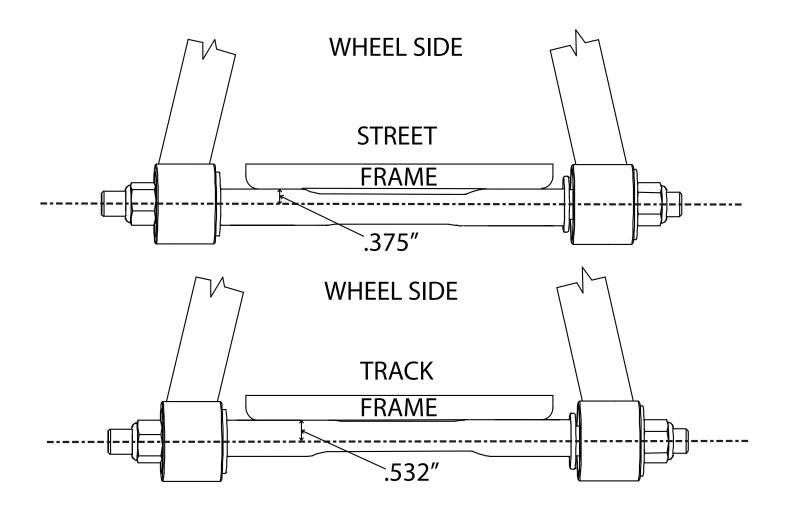
Caster is measured in degrees by using a caster gauge. If the imaginary line described above tilts towards the back of the vehicle at the top, then you have positive caster. If the imaginary line tilts forward then you have negative caster.

Positive caster provides the directional stability in your vehicle. 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 will cause the vehicle to wander down the highway.





Offset Upper Control Arm Shaft



The cross shaft that is used in the upper control arms 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 the lcon faces simply spin the cross shaft in the control arm.

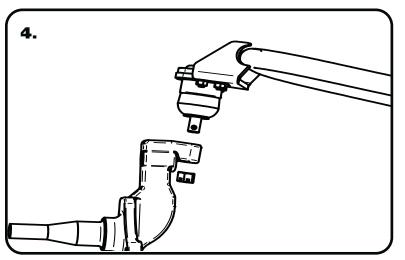
If you are after a **Street Alignment** bolt the upper control arm to the frame mount with the arm offset to the outside of the car. The Ridetech Icon and Caster Slugs will be facing the wheel.

If a more aggressive **Track or Autocross** alignment is desired, bolt the control arm to the frame bracket with the arm offset to the inside of the car. The Ridetech Icon and Caster Slugs will be facing the engine.





Installing Spindle and Alignment



4. Attach the Spindle to the control arms.

Torque Specs:

Upper Balljoint - 50 ftlbs and tighten to line up cotter pin.

Install the Cotter Pin after tightening the ball joint nut.

5. Tighten all fasteners.

When assembling the Control Arms tighten the cross shaft nuts enough to create drag on the delrin bushings, the arm should still move through its travel by hand.

Suggested Alignment Specs:

Camber:	Street:	5 degrees
Caster:	Street:	+3.0 to + 5.0 degrees
Toe:	Street:	1/16" to 1/8" toe in





Part # 11009312 & 11009546 - GM Hub Bearing Spindle



Recommended Tools





GM Hub Spindle Kit with C5,C6 Caliper Brackets Installation Instructions

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- Page 17..... Included Components and Hardware
- Page 18..... Getting Started and Disassembly
- Page 19..... Hub Bearing & Spindle Installation
- Page 19-21..... Caliper Bracket Installation
- Page 22-23..... Steering Arm Installation
- Page 23..... Caliper Installation
- Page 23..... The Finish

THIS SPINDLE IS DESIGNED TO FIT 64-72 GM A-BODY, 67-69 GM F-BODY, AND 68-74 GM X-BODY. THIS KNUCKLE IS ALSO DESIGNED TO BE USED ON SOME RIDETECH SUSPENSION KITS.

THESE SPINDLES ARE SYMMETRICAL, THEY AREN'T SIDE SPECIFIC UNTIL THE STEERING ARM AND CALIPER BRACKET ARE BOLTED ON.

THESE SPINDLES ARE DESIGNED TO USE C5, C6 CORVETTE BRAKES. THE OEM BRAKES FROM YOUR CAR WILL NOT FIT THEM.







Major ComponentsIn the box

]	ltem #	Part #	Description	QTY
-	1	70015750	Spindle	2
	2	90003535	Steering Arm Threaded Insert	4
Ì	3	90003548	Caliper Bracket - Driver	1
	4	90003547	Caliper Bracket - Passenger (Not Shown)	1
[5	90003549	Caliper Bracket Spacer	4
2 Eigure	1			7
Figure	I		$(O) \qquad (12)$	

Hardware ListIn the box (Kit # 99010230)

Item #	Part Number	Description	QTY	Item #	Part Number	Description	QTY
SPINDLE TO HUB			BRACK	BRACKET TO SPINDLE			
6	99121020	M12-1.75 X 40mm SHCS	6	11	99501062	1/2"-13 x 1 1/4" Hex Bolt	2
	90002263	Red Loctite	1	12	99501075	1/2"-13 x 1 1/4" FHSCS	4
BRACKE	BRACKET TO CALIPER13995030141/2" SAE Flat Washer		1/2" SAE Flat Washer	2			
7	99141007	M14-2.0 X 45mm Hex Bolt	4	14	99503017	Shim .063" thick, 1/2" ID	12
8	99143001	M14 Flat Washer	4	STEERII	NG ARMS		
SHIM P	ACK			not shown	99501043	1/2"-13 x 2" Hex Bolt	2
9	99623005	Shim .016" thick, 5/8" ID	8	not shown	99501026	1/2"-13 x 2 1/4" Hex Bolt	2
10	99623006	Shim .032" thick, 5/8" ID	8	not shown	99503014	1/2" SAE Flat Washer	4





Getting Started.....

These spindles will fit '67-69 Camaro, '64-'72 Chevelle, and '68-'74 Nova. They are also designed to fit some Ridetech suspensions. They will provide a 2" drop, and are taller than stock to improve the car's cornering ability. The raised upper ball joint induces negative camber gain and positive caster gain. This helps keep the tires flat on the pavement when cornering. This camber action change also raises the roll center for less body roll, and transfer the car's center of gravity inboard in the turn as well. You will see an appreciable improvement in handling.

These spindles are designed around OEM C5, & C6 Corvette brakes. Aftermarket brakes that are designed for these cars will also fit this spindle.

These spindles have are setup with multiple positions for the steering arm to help with bumpsteer. The instructions will give you a recommendation of what position to install the steering arms based off the vehicle you are installing them on.

Disassembly

1. Set the parking brake and chock the rear wheels.

2. Raise the front of the vehicle and place floor stands under the lift points. Do not place the floor stands under the lower control arms because spring tension is needed to assist in breaking loose the ball joint studs. If you are just replacing the spindle, leave the shock in place to help prevent the coil spring from coming out.

3. Remove wheel and tire assembly.

4. Remove brake caliper. If it's a drum brake car, the drum will need to be removed to access the steering arm hardware.

! CAUTION: When the brake caliper is removed, do not allow it to hang unsupported from the brake hose. Use a piece of wire or zip tie to support the caliper to prevent damage to the brake line.

- **5.** Remove tie rod end from knuckle.
- 6. Remove hub-disc assembly.
- 7. Remove ball joint studs from knuckle using the following procedure.

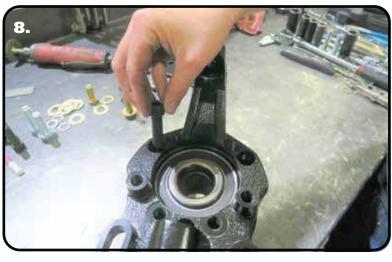
a. Place floor jack under the control arm spring seat and raise it until it supports the control arm. ! CAUTION: Floor jack must remain under the control arm spring seat during removal and installation of the spindle to retain the spring and control arm in position.

- **b.** Remove cotter pins from upper and lower ball joint studs.
- c. Loosen ball joint nuts two turns
- **d.** Gently tap knuckle with mallet to free ball joints or use ball joint separator.
- e. Remove ball joint nuts on upper and lower ball joints.
- **f.** Raise the upper control arm by hand and disengage the ball joint stud from the spindle.
- g. Remove the knuckle from the lower ball joint stud.
- h. Inspect ball joint and tie rod ends for wear or damage. Replace if necessary.





Hub Bearing & Spindle Installation



8. The Hub is attached to the spindle using (3) M12-1.75 x 40 SHCS. Apply RED Loctite to each of the mounting bolts. Insert them into the correct holes and Torque to 99 ftlbs.

9. Attach the spindles to the control arms. Torque the ball joints using the torque specs below.

Torque Specs:

Lower Ball Joint - 65 ftlbs and tighten to line up cotter pin.

Upper Ball Joint -50 ftlbs and tighten to line up cotter pin.

Note: The steering arms will **NOT** get attached to the knuckle until the brakes are attached.

Caliper Bracket Installation

Caliper bracket and brake mounting will differ depending on the brake kit being used.

We recommend mocking up the brakes with clean dry threads before applying any loctite to the hardware.

The brake bracket kits include shims for mounting the caliper brackets and calipers. The caliper brackets will use 1/2" ID shims. The caliper spacers will use 5/8" ID shims.

The next steps will cover the installation of C5 OEM brakes on the Ridetech spindle. *Again, mock up the brake kits with clean dry threads before using any loctite on the hardware.* We are showing the installation of the caliper bracket with the spindle off the car so it can be shown clearly.



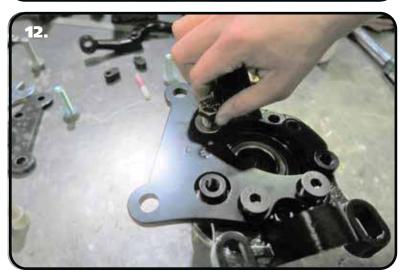


Caliper Bracket Installation



10. Lay a .062" thick, 1/2" ID shim on each of the caliper brackets (3) mounting holes.

11. The caliper brackets are side specific. They have a D & P stamped in them. Lay the correct side caliper bracket on top of the shims, aligning the mounting holes with the mounting holes of the bracket. The counter sunk holes should facing up.



12. Insert a $1/2"-13 \ge 1/4"$ flat head socket cap screw in each of the lower mounting holes. Install a 1/2" flat washer on a $1/2"-13 \ge 1/4"$ hex bolt and insert it in the upper mounting hole. Tighten the hardware to 75 ft-lbs.





Caliper Bracket Installation





13. Install the rotor on the hub. Thread some lug nuts on the threads of the hub to hold the rotor tight on the hub.

14. The kit includes spacers that will be installed between the caliper bracket and caliper mount. Install a M14 flat washer on each of (2) M14-2.0 x 45mm hex bolts. Insert the bolts through the caliper bracket, installing a spacer on each bolt. Line the caliper mount up with the hardware and thread in the bolts.

15. You can use feeler gauges to measure the distance between the caliper bracket and rotor to make sure the bracket is centered as much as possible. If the caliper mount is tighter on the back side, put shims on the caliper bracket/ spindle. If the caliper bracket is tighter on the front side, put shims between the caliper bracket/caliper mount. After you are happy with the fitment, the hardware will need to red loctite and torqued. Torque the 1/2" bracket to spindle hardware to 95 ft-lbs. Torque the M14 hardware to 125 ft-lbs.

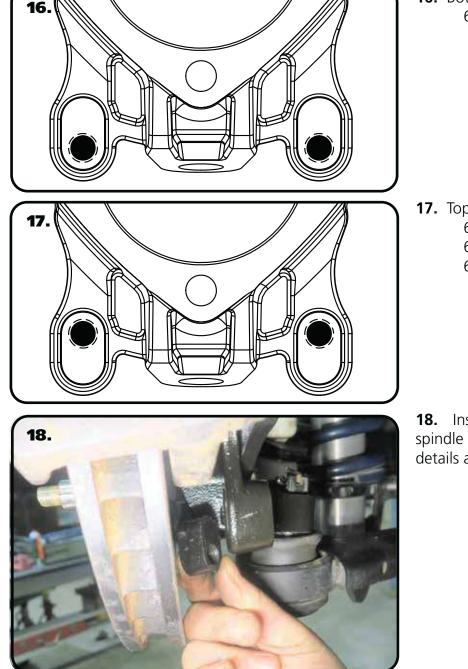
Note: If you are installing aftermarket brakes, refer to the brake kit instructions for measuring the caliper placement.





Steering Arm Installation

The threaded steering arm inserts can be mounted in 2 different positions. **Images 16 & 17** will help you determine the correct position for the installation on your vehicle. These positions are what we determined to be the best with Ridetech suspension. If you have another brand of suspension, we recommend measuring the bumpsteer on you car to help determine the best position.



16. Bottom Position:63-81 Corvette Ridetech Kit

17. Top Position: 67-69 GM F-Body 68-74 GM X-Body 64-72 GM A-body

18. Insert the steering arm inserts into the spindle using the correct orientation from the details above.





Steering Arm & Caliper Installation





The Finish

Suggested Alignment Specs:

Camber:	Street:	5 degrees
Caster:	Street:	+3.0 to + 5.0 degrees
Toe:	Street:	1/16" to 1/8" toe in

23. Recheck all hardware before driving.

19. The steering arm will bolt to the Ridetech spindle using the supplied 1/2" hardware. The mounting bosses of the steering arm are 2 different thicknesses. The thicker boss uses a $1/2"-13 \times 2 1/4"$ hex bolt. The thin boss will use a $1/2"-13 \times 2"$ bolt. Install a 1/2" SAE flat washer on each bolt. Apply red loctite on the threads of the bolt and install them in the correct location. Torque the hardware to 80 ft-lbs. Verify that the bolts are sticking through the slugs.

NOTE: Some steering arms have 7/16" mounting holes, they will need to be drilled out using a 1/2" drill bit.

20. Install the brake pads and caliper.

21. Install the outer tie rod end in the steering arm.

Torque Specs:

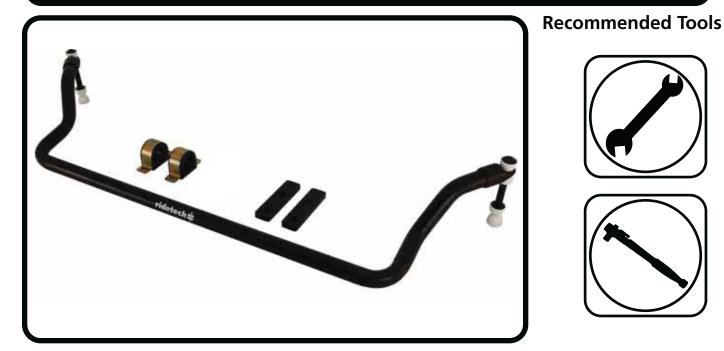
Tie Rod End - 35 ftlbs and tighten to line up cotter pin.

22. FINISH PLUMBING THE BRAKE SYSTEM AND BLEED THE SYSTEM.





Part # 11239120 - 1964-1967 GM A-Body Front SwayBar



1966-1967 GM A-Body Front SwayBar Installation Instructions

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Hardware Torque Specifications

5/16"-16..... 17 ftlbs 3/8"-16..... 30 ftlbs

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REV3 12/6/22

Major ComponentsIn the box

	Part #	Description				QTY
	90001230	Front SwayBar				1
	90002932	End Link Kit				1
	90001346	Bushing Strap				2
	70015015	Lined Sway Bar Bushing				2
	90001254	Bushing Mount Adapter				2
HAF	RDWARE KI	T 99010083				
QTY	Part Number	Description	QTY	Part Number	Description	
ADA	PTER PLATE	·	BUSH	ING STRAP	·	
2	99371032	3/8"-16 x 1 1/4" Flat Head	4	99371065	3/8"-16 x 3/4" Hex	Bolt
2	99311025	5/16"-18 x 1 1/4" Flat Head	4	99373002	3/8" Flat Washer	
2	99371005	3/8"-16 x 1 1/4" Hex Bolt	4	99373006	3/8" Split Lock Was	sher
2	99311011	5/16"-18 x 1 1/4" Hex Bolt				
2	99373002	3/8" Flat Washer				
2	99313001	5/16" SAE Flat Washer				
2	99373006	3/8" Split Lock Washer				
2	99313003	5/16" Split Lock Washer				
1	90002263	Red Loctite	7			

Getting Started.....

Note: This sway bar kit utilizes a anti-friction lining in the sway bar bushing. The lining allows the sway bar to move freely and quietly in the bushing. No lubrication is required.

Note: The threaded holes in the frame can be either 5/16"-18 or 3/8"-16. Hardware is supplied for both.

1. Jack the vehicle up to a safe working height and support with jack stands. Make sure the jack stands are stable before working under the car.

- 2. Remove the stock sway bar.
- 3. After removing the stock sway bar, determine what size hardware the frame will require.



4. Open the sway bar bushing at the split and slip it **OVER** the sway bar. Do this for both bushings.



6. Slip the Bushing Straps over the Sway Bar Bushings.



6. This kit contains an adpater plate to attach the sway bar to the frame. Depending on the year of the car, the hardware size can vary. Before continuing to the next step, you will need to determine the bolt size required for your installation. The threaded holes in the frame can be either 5/16"-18 or 3/8"-16. Hardware is supplied for both.

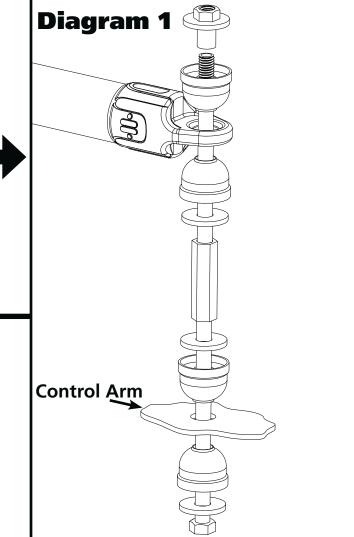


8. Slide the SwayBar into position on the car with the SwayBar arms above the tie rods. Install a 3/8" Lock Washer & 3/8" Flat Washer on the 3/8" x 3/4" Hex Bolts. Do **NOT** Complete tighten the Hardware, it will be left partially loose until the End Links are installed.





7. Hold the Frame Plate up to the OEM holes, the Counter Sunk hole will he positioned over the front hole with the slot to the rear. Apply Red Loctite to the Flat Head Bolt. The rear 1 1/4" long bolt uses a Split Washer and Flat Washer. Torque Hardware.



9. Install the End Links using **Diagram 1** as a reference. Install both end links before tightening the end link hardware. Tighten the end link barrel nut until it is flush with the end of the bolt, and then tighten it 2 more complete rounds.

10. Torque the SwayBar mounting hardware to 30 ftlbs.





Part # 11236699 - 1964-1967 GM "A"-Body Rear Upper StrongArm Kit



1964-1967 GM "A"-Body Rear Upper StrongArms Installation Instructions

Table of contents

- Page 28..... Included Components
- Page 29..... StrongArm Installation









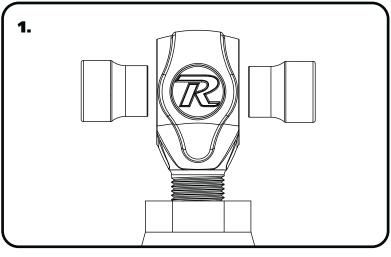
Included ComponentsIn the box

Part Number	Description			QTY	
90001116	Upper Control Arms (Set to 12.	750″)		2	
90001318	RH R-Joint Threaded Housing A		stalled in bars)	2	
99752004	3/4"-16 Jam Nut (Installed on R	-		2	
70013784	R-Joint Spacers			4	
	s - (Installed in R-Joint ends)			4	
70013275	R-Joint Center Ball			2	
70013275	R-Joint Composite Center Ball C	200		2	
70013278		Laye		2	
70013279	Retaining Ring			2	
Hardware Kit# - 9	Wavo Wave Spring			Z	
		<u> </u>		· . 1	
99501005	1/2"-13 x 3 1/2" Hex Bolt		rongArm	4	
99502009	1/2"-13 Nylok Nut		rongArm	4	
99503014	1/2" SAE Flat Washer	Upper St	rongArm	4	
INSTALLATION Install the Spacers by inserting the SMALL side of the SPACER into the Center Pivot Ball. Push them in until they bottom out and stop.					
STRONGARM O					





StrongArm Installation







1. Remove the OEM upper control arm. Inspect the condition of the bushings in the axle housing. If you are also installing the Axle Housing R-Joints, install them before installing the new upper StrongArms. Check the length of the upper StrongArm, it should be set at 12.750". Ensure that the jam nut is tight. Insert the R-Joint Spacers into the R-Joint by installing the small end of the spacers into the R-Joint. Push them in until they bottom out and stop.

2. Insert the R-Joint end of the upper StrongArm into the OEM location, making sure the StrongArm is positioned correctly. Use the illustration on **Page 24** to help determine the correct orientation. Line up the through hole of the R-joint with the upper control arm mounting holes. Insert a 1/2"-13 x 3 1/2" hex bolt through the holes. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt sticking through the frame. Torque to 75 ftlbs.

3. Slip the end of the upper Strongarm over the axle housing bushing. Line up the holes of the StrongArm with the through hole of the bushing. Insert a $1/2"-13 \times 3 1/2"$ hex bolt through the holes. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt sticking through the frame. Torque the hardware to 75 ftlbs.





Part # 11224499 - 1964-1972 GM "A"-Body Rear Lower StrongArm Kit







1964-1972 GM "A"-Body Rear Lower StrongArms **Installation Instructions**

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Page 31..... Included Components & Hardware Page 32..... Installation



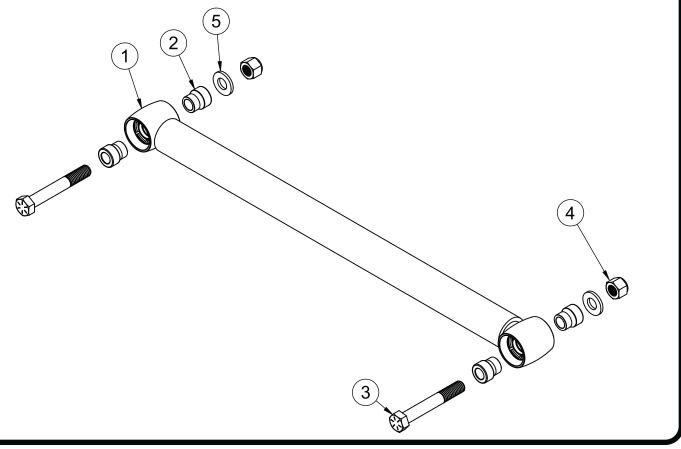






Included ComponentsIn the box

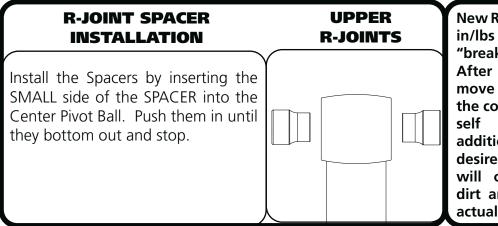
Item #	Part Number	Description	QTY
1	90002826	Lower Control Arms	2
2	70013784	1/2" ID R-Joint Spacer	8
	R-Joint Compo	onents - (Installed in bar ends)	
	70013275	R-Joint Center Ball	4
	70013276	R-Joint Composite Center Ball Cage	4
	70013279	Retaining Ring	4
	70013280	Wavo Wave Spring	4
	Hardware Kit	#99010096	
3	99501005	1/2"-13 x 3 1/2" Hex Bolt	4
4	99502009	1/2"-13 Nylok Nut	4
5	99503014	1/2" SAE flat Washer	4





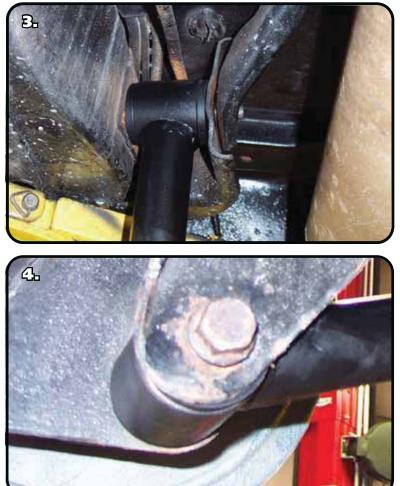


StrongArm Installation



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. Remove the 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 the above diagram.

3. Attach to front on the lower StrongArm to the frame using the $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " bolts and Nylok nuts supplied.

4. Attach to rear of the lower StrongArm to the frame using the $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " bolts and Nylok nuts supplied.

Note: Tighten the hardware to 75 ft-lbs.





Part # 11227299 - GM A-Body & G-Body Differential R-Joint Bushing Removal/Installation



GM A-Body & G-Body Differential R-Joint Bushing Removal/Installation

Installation Instructions

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Page 34..... Included Components and Getting Started Page 35-37..... Bushing Housing Installation

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.







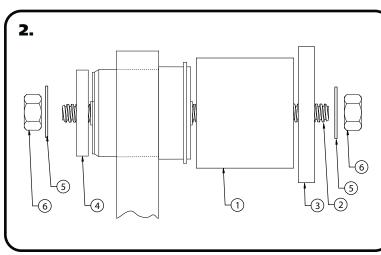


Major ComponentsIn the box

Part #	Description	QTY
R-Joint Hous	ing Components	
90002122	R-Joint Bushing Housing with R-Joint Components installed	2
70013784	R-Joint Spacers	4
R-Joint Com	ponents Installed In Housing	
70013275	R-Joint Center Ball	
70013276	R-Joint Composite Center Ball Cage	
70013279	Retaining Ring	
70013280	Wavo Wave Spring	
Bushing Ren	noval & Installation Tool Components	
90002912	1.875" ID x 1.00" Long Notched Sleeve	1
90002880	1.825" OD Washer	1
90002913	2.625" OD Washer with Flat	1
90002559	2.375" ID x 2.375" Long Sleeve	1
99505003	1/2"-10 x 8" ACME Threaded Rod	1
99502013	1/2"-10 ACME Hex Nut	2
99503003	1/2" Flat Washer	2

Getting Started.....

This kit is designed to aid in the removal of the OEM bushings and installation of the Delrin R-Joint Axle Housing Bushing. This guide will show you how the kit is to be used. It is important to not get the bushings crooked on installation.

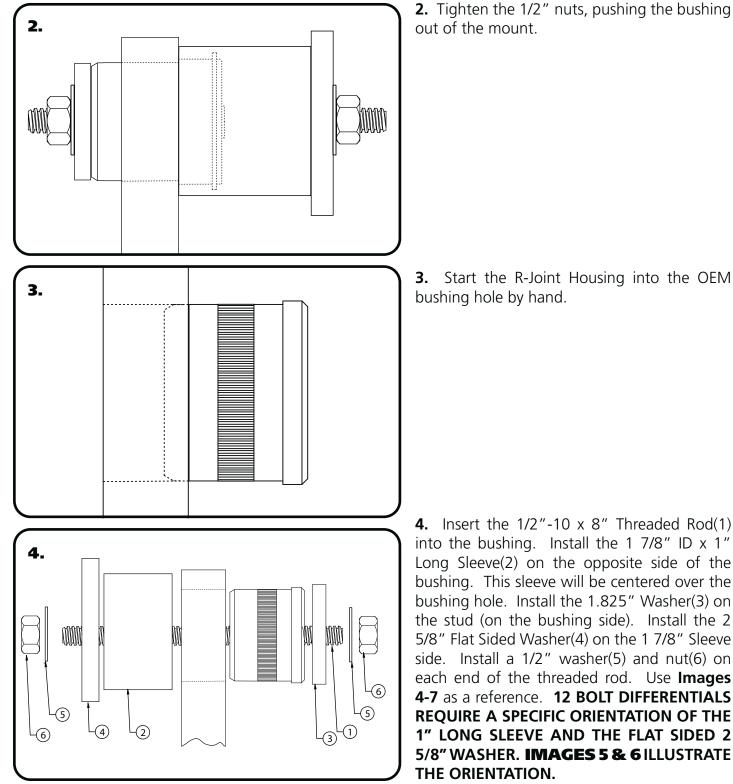


1. Start by sticking the 2 3/8" Sleeve(1) over the OEM bushing. Insert the 1/2"-10 x 8" Threaded Rod(2) into the OEM bushing. Install the Large 2 5/8" Diameter Flat Sided Washer(3) onto the threaded rod on the Sleeve side. Install the Small 1.825" Washer(4) on the threaded rod (on the side with the bushing sticking through the housing). Install a 1/2" washer(5) and nut(6) on each end of the threaded rod. Use **Images 1 & 2** as a reference.





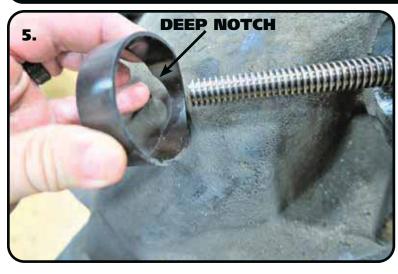
Bushing Housing Installation







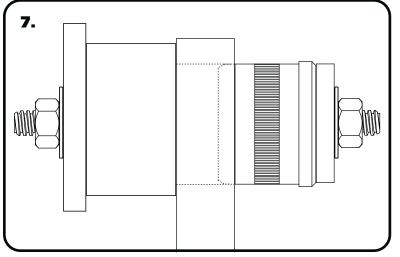
Bushing Housing Installation





5. 12 BOLT ONLY When installing the R-joint in a 12 bolt, the orientation of some components of the installation tool is important. **Image 5** is of the 1 7/8" ID x 1" Long Sleeve. The sleeve has a notch cut in each side of it. One side has a wide, shallow notch. The other side has a narrow, deep notch. A 12 bolt requires the wide, shallow notch to be up against the bushing ear of the axle. The narrow, deep notch is for clearance of the axle housing. The deep notch will need to be positioned so that the housing isn't pushing against the sleeve, causing it to not sit flat against the ear of the axle.

6. 12 BOLT ONLY The 2 5/8" Flat Sided Washer is made with a FLAT in it to clear the axle housing while installing the r-joint housing. You will need to position the Flat Sided Washer so it isn't hitting against the axle housing.

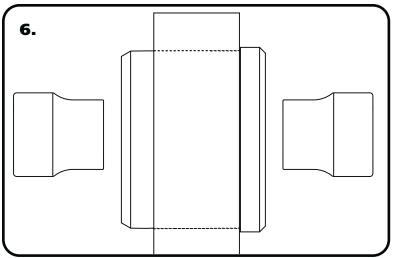


7. Snug down the nuts enough to hold the sleeve and washers in place. Check to make sure the sleeve is centered over the hole and the 1.825" washer is center on the bushing housing. If installing in a 12 Bolt Housing, refer to **Steps 5 & 6** for proper orientation of the installation tool. Tighten the nuts to press the bushing housing into the axle housing. Tighten the nuts until the housing bottoms in the axle mount.





Bushing Housing Installation



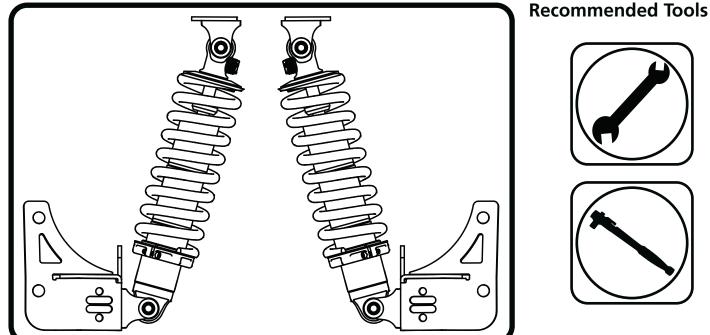
8. Install the Spacers by inserting the SMALL side of the SPACER into the Center Pivot Ball. Push them in until they bottom out and stop.

9. Install your Ridetech StrongArms. Refer to the instructions supplied with the StrongArms.





Part # 11226110 - 1964-1972 GM A-Body Rear CoilOver





64-72 A-Body HQ Series Rear CoilOver Installation Instructions

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Page 39..... Included Components

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Page 41...... CoilOver Assembly & installation

Page 42..... CoilOver Installation

Page 43...... CoilOver Installation & Setting Spring Height

Page 44...... Shock Adjustment

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Major ComponentsIn the box

Item			6	
#	Part #	Description	QTY	
1	982-10-805	5.2" Stroke HQ Series Shock	2	
2	59120225	12" 225lb CoilSpring	2	
3	70010828	Delrin CoilSpring Washer	4	
4	803-00-199	CoilSpring Retainer Kit	2	
5	815-05-022-KIT	1.7" Shock Eyelet	2	
6	90001994	5/8" ID Bearing (installed in shock and eyelet)	4	
7	90001995	Bearing Snap Ring (installed in shock and eyelet)	8	
8	90002043	1/2" ID Upper Bearing Spacers	8	
9	90002327	Upper Mount		
10	90002224	Driver Lower Mount	1	
10	90002223	Passenger Lower Mount (not shown)	1	





Hardware ListIn the box

QTY	Part Number	Description	Location
4	99501050	1/2"-13 x 2 1/2" Hex Bolt	ShockWave to Mounts
10	99502009	1/2"-13 Nylok Nut	ShockWave to Mounts, Lower Bar Bolt
14	99503014	1/2" SAE Flat Washer	ShockWave to Mounts, Lower Bar Bolt
2	99501065	1/2"-13 x 3 3/4" Hex Bolt	Lower Bar Bolt
4	99311011	5/16"-18 x 1 1/4" Hex Bolt	Upper Mounts to Frame
4	99312002	5/16"-18 Nylok Nut	Upper Mounts to Frame
8	99313001	5/16" SAE Flat Washer	Upper Mounts to Frame
4	99501053	1/2"-13 x 1 1/2" Hex Bolt	Lower Mounts to Differential
	4 10 14 2 4 4 8	4 99501050 10 99502009 14 99503014 2 99501065 4 99311011 4 99312002 8 99313001	10995020091/2"-13 Nylok Nut14995030141/2" SAE Flat Washer2995010651/2"-13 x 3 3/4" Hex Bolt4993110115/16"-18 x 1 1/4" Hex Bolt4993120025/16"-18 Nylok Nut8993130015/16" SAE Flat Washer

Getting Started.....

Congratulations on your purchase of the Ridetech Rear CoilOver System. These system has been designed to give your car excellent handling along with a lifetime of enjoyment. One of the key features of this system is the adjustablilty. With the CoilOver system you have an adjustable shock along with the height adjustment of the CoilOver.

Disassembly

- **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.

NOTE: Keep in mind the spring has pressure on it until you let the rear differential down to remove the springs.





Coilover Assembly

CoilOver Assembly...



First, using the supplied lower adjuster nut (803-00-199) thread the nut onto the shock from the bottom side as seen in figure 1. Remove the plastic pellet that is in the split of the adjuster nut.

Next, install a delrin washer 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. Then remove the Knob by holding it while removing the center screw.



Once the knob is removed slide a Delrin washer over the eyelet. Next, slide the upper spring mount (803-00-199) over eyelet as seen in figure 4.



Install upper spring mount retainer clip (803-00-199) into the groove on the upper eyelet as seen in figure 5. Then, reinstall adjuster to complete assembly.

Install the locking screw in the adjuster nut before setting spring preload, but DO NOT tighten until the spring preload has been set.

NOTE: Remember to adjust the shock valving before driving, the shock is currently set to full stiff.

CoilOver Installation

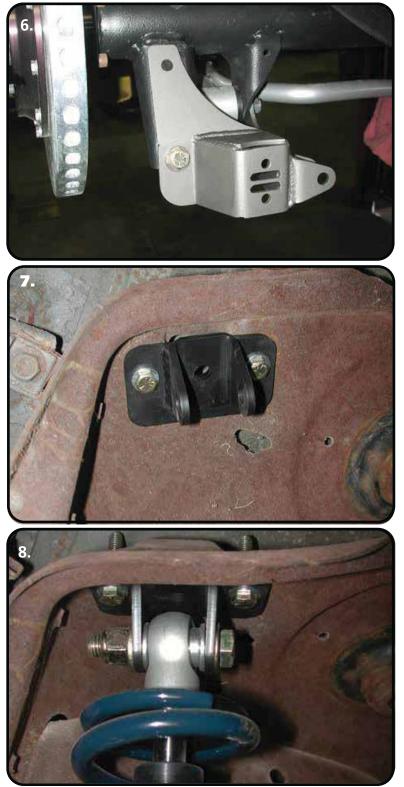


5. Remove the lower trailing arm mounting bolt. (Do one side at a time to keep the axle from rotating). Install the longer $\frac{1}{2}$ " x 3 $\frac{3}{4}$ " bolt through the lower trailing arm from the outside in. Install the lower bracket over the bolt and secure with a $\frac{1}{2}$ " Nylok nut and flat washer. Snug the Hardware, but do NOT fully tighten at this time.





CoilOver Installation



6. The lower bolt hole in the back of the bracket will align with the factory shock stud hole. Use a $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " bolt, Nylok nut and flat washers. The upper hole must be drilled with a $\frac{1}{2}$ " bit. The edge of the bracket should be parallel to the axle bracket. Use an centering punch and 1/8" bit to drill a pilot hole. A $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " bolt, Nylok nut and flat washers will be used here as well. Torque all hardware to 75 ftlbs.

7. Fasten the new upper shock bracket into the factory shock location using the 5/16" x 1 1/4" bolts, flat washers and Nylok nuts supplied. Torque to 17 ftlbs.

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

8. Fasten the CoilOver to the upper bracket using a $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " bolt, 1/2" flat washer, and Nylok nut. $\frac{1}{2}$ " I.D. aluminum spacers must be installed on each side of the bearing. Torque to 75 ftlbs.

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CoilOver Installation



9. Fasten the CoilOver to the lower bracket using a $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " bolt, 1/2" flat washer, and Nylok nut. $\frac{1}{2}$ " I.D. aluminum spacers must be installed on each side of the bearing. Torque to 75 ftlbs.

11. Ride height on this CoilOver is 14.5" from center eye to center eye.

Setting Spring Height

Ride Height

We have designed most cars to have a ride height of about 1 1/2"" 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

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 medium setting of 12.





-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 12 clicks. This sets the shock at 12. (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.

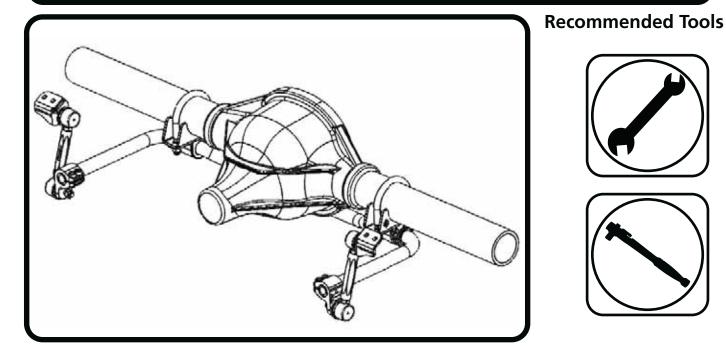
Note:

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





Part # 11239122 - 1964-1967 GM A-Body Rear SwayBar



1964-1967 GM A-Body Rear SwayBar Installation Instructions

Table of contents

Page 46..... Included Components and Hardware List Page 47-48.... SwayBar Installation

Hardware Torque Specifications

3/8"-16	30	ftlbs
7/16″-20	55	ftlbs
M10-1.5	37	ftlbs



Major ComponentsIn the box

Part #	Description	QTY
90001229	Rear Sway Bar	
90001249	Axle Bracket, 3" Axle Tube	
90001250	Bushing Strap	2
70015012	Lined Sway Bar Bushing	2
90001269	Frame Tab, Driver	1
90001270	Frame Tab, Passenger	1
70014301	Clamp Ring	2
70014207	Clamp On Sway Bar End	2
90002571	10mm 90 Degree End Links	4
90001253	Sway Bar End Link Spacer, 4"	2
9000088	7/16" U-bolt	2

HARDWARE	KIT.	99010084

QTY	Part Number	Description		
TAB TO FRAME				
4	99371005	3/8"-16 x 1 1/4" Hex Bolt		
4	99373002	3/8" Flat Washer		
4	99372001	3/8"-16 Nylok Nut		

QTY	Part Number	Description	
SWAYBAR TO AXLE			
4	99433002	7/16" SAE Flat Washer	
4	99432002	7/16"-20 Nylok Nut	
SWAYBAR END CLAMP			
4	99371054	3/8"-16 x 7/8" Socket Head Bolt	
1	90002276	Antisieze	

Getting Started.....

This sway bar kit utilizes a anti-friction lining in the sway bar bushing. The lining allows the sway bar to move freely and quietly in the bushing. No lubrication is required.

THIS SWAYBAR ATTACHES TO THE AXLE AND FRAME.

1. Jack the vehicle up to a safe working height and support with jack stands. Make sure the jack stands are stable before working under the car.

2. Remove the stock sway bar if the car is equipped with one.



3. Open the sway bar bushing at the split and slip it **OVER** the sway bar. Do this for both bushings.

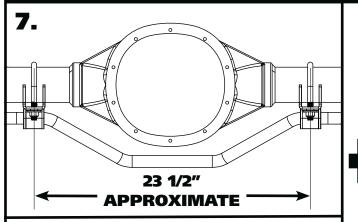


4. Install the bushing straps over the sway bar bushings.

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5. Install the u-bolts onto the axle tube with the threads pointing down. You may need to raise the brake lines in the area of the u-bolts. The u-bolts will be approximately 23 1/2" apart and equal distance on each side from the brake backing plates.

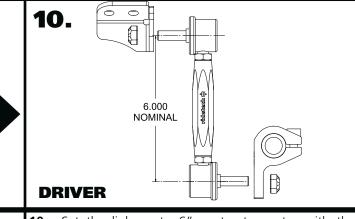




6. Install an axle bracket onto each u-bolt with the flat side to toward the ground. The "teeth" of the mount should touch the axle tube.



8. Hold the sway bar in position on the car with the center bend toward the ground. Install a 7/16" flat washer & 7/16"-20 nylok nut on the threads of the u-bolts. Snug the hardware down and verify that it is centered and the axle mounts are level. Torque the u-bolt hardware.



10. Set the linkage to 6" center to center with the threaded studs pointed opposite directions. Snug the jam nuts against the center adapter. Attach the sway bar linkage to the clamp-on mount using the hardware on the linkage. Attach the correct tab to the top of the linkage with the gusset to the front. Use **Diagram 10** as a reference. Attach the linkages and tab to both sides.

7. Diagram 7 illustrates the correct installation of the sway bar. Again, the axle brackets will be approximately 23 1/2" from center to center. The mounts should be spaced equal amounts from the brake backing plates, centering the sway bar on the axle.

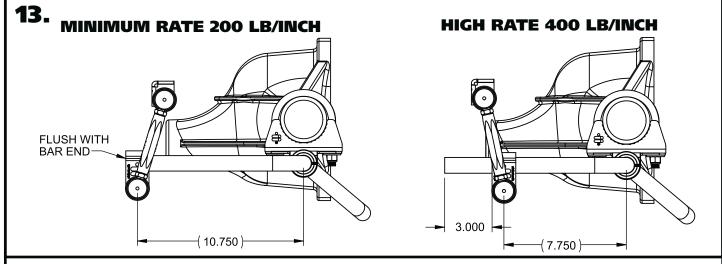


9. Apply Antisieze to (4) 3/8"-16 x 7/8" socket head cap screws and thread them into the clamp-on ends. Install a clamp-on end on each end of the bar. The end link mounting hole should be mounted to the outside of the bar and pointing down. Start with the mount flush with the end of the bar.

11. Swing the tab up to the frame, keeping the linkage straight from side to side. Use the tab to mark the location of the holes that will need to be drilled. Drill the holes with a 3/8" drill bit. Install a 3/8" flat washer on each of (2) $3/8"-16 \times 1 1/4"$ hex bolts and install them through the bracket and drilled holes. Install a 3/8" flat washer & 3/8"-16 nylok nut on each bolts sticking through the frame. Torque the hardware and repeat on the other side.



12. Install the locking rings on the outside of each bushing assembly. Use a hex key to take the locking ring apart. Reassemble it on the bar positioned next to the outside of the bushing assembly. Push the locking ring up against the bushing assembly and tighten.



DRIVER

13. We recommend getting the swaybar as level as possible at ride height and with no preload. Both of these steps are done by adjusting the end links. These end links can be adjusted from 6" to 6 3/4". Disconnect the end links from the swaybar and adjust one side to get the swaybar level. Reattach the end link to the swaybar and adjust the 2nd end link so that it goes in and out of the clamp-on mount with ease. This will be zero preload.

The rate of this sway bar is also adjustable. This is possible by changing the position of the clamp-on ends on the bar. The standard setting is with the clamp-on mounts even with the end of the bar, stiffest is with the clamp-on end positioned 3" from the end of the swaybar. The Diagram above shows the clamp-on mount in the softest and stiffest settings. The position of the mounts will be determined by several factors; spring rate, front bar size, and even tire size. We recommend running this rear sway bar with Ridetech's front sway bar (11239120) for the best performance.