ridetech

Installation Instructions

Part # 11250297 - 1962-1967 Chevy II HQ Series ShockWave System

Front Components:

11259598	Front TruTurn Kit
11253001	Front ShockWaves
11259100	Front SwayBar

Rear Components:

11257199	Rear 4Link System
21150701	Rear ShockWaves

Recommended Tools

1962-1967 Chevy II ShockWave Installation Instructions

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THE DRAGLINK ADAPTER IN THIS KIT IS DESIGNED FOR FACTORY STYLE FRONT SUMP OIL PANS. IF YOU HAVE A REAR SUMP OIL PAN, YOU WILL NEED DRAGLINK ADAPTER #90003358.

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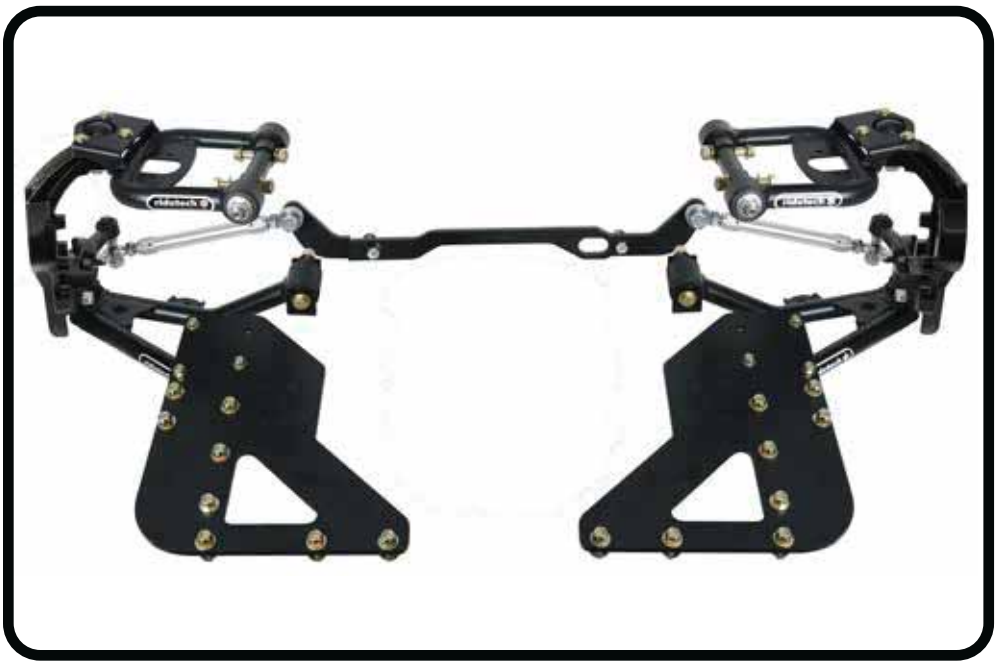
Installation Instructions

Part # 11259598 - 1962-1967 Chevy II Front TruTurn System



Recommended Tools

1962-1967 Chevy II TruTurn System

Installation Instructions

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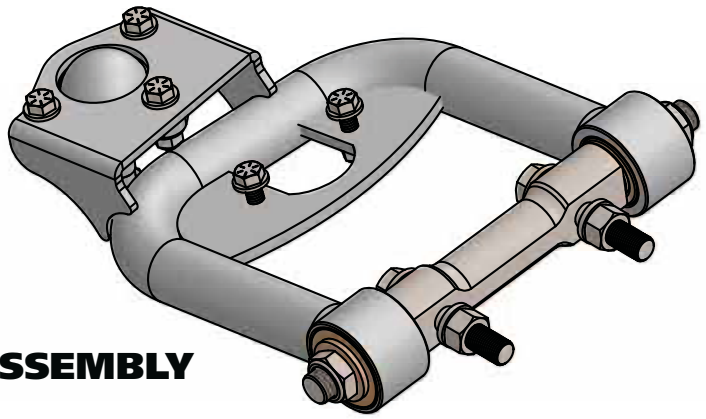
Major Components Assembled .....In the box

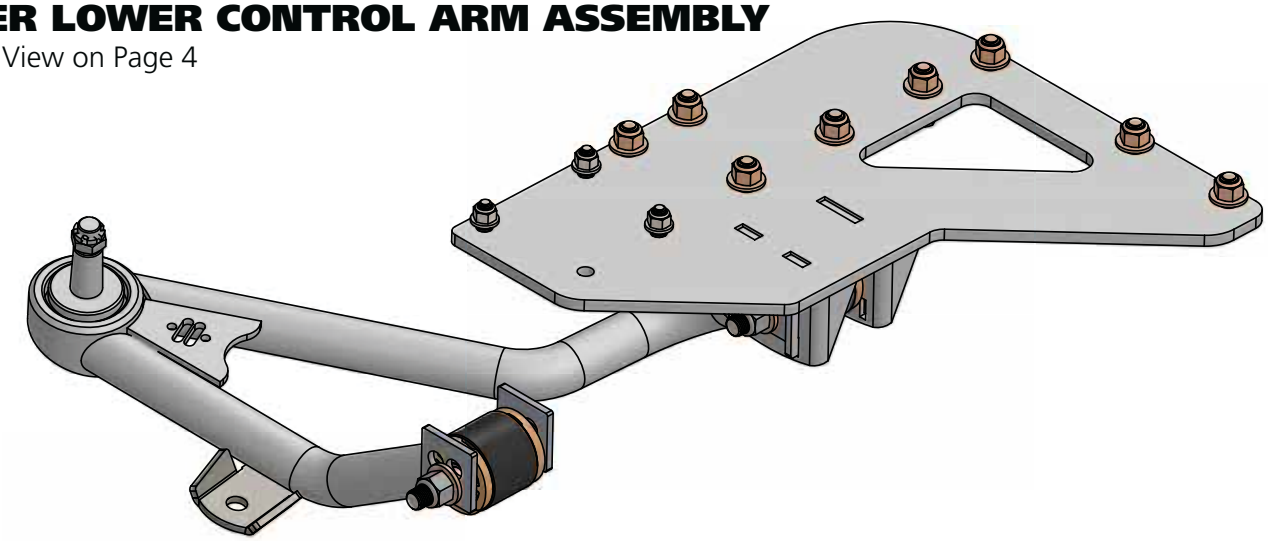


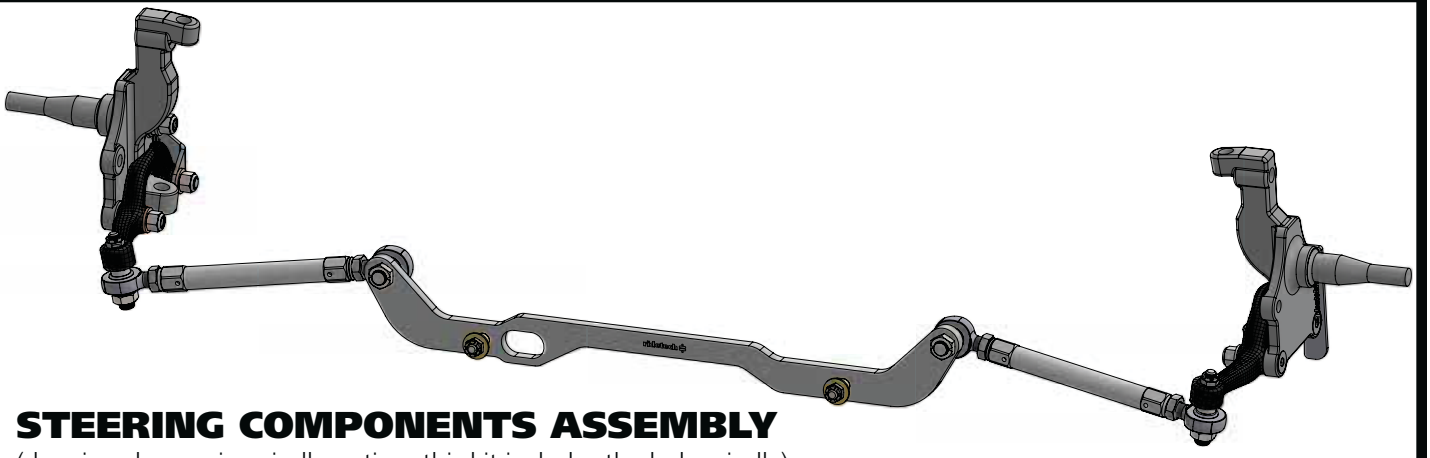
DRIVER UPPER CONTROL ARM ASSEMBLY

Exploded View on Page 3

DRIVER LOWER CONTROL ARM ASSEMBLY

Exploded View on Page 4





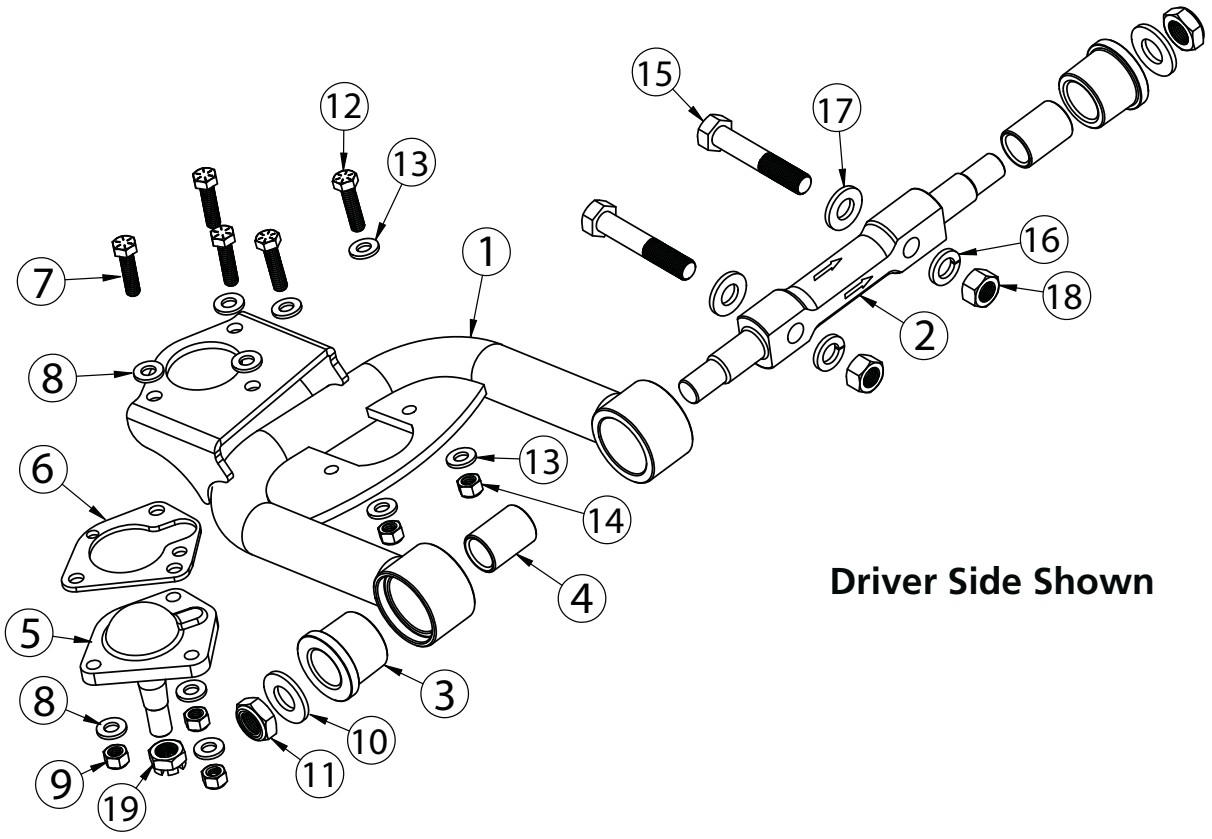
STEERING COMPONENTS ASSEMBLY

(drawing shows pin spindle option, this kit includes the hub spindle)

Exploded View on Page 5

Upper Control Arm Components .....In the box

Item #	Part Number	Description	QTY
1	90003261	Driver Upper Control Arm **(Shown)**	1
1	90003262	Passenger Upper Control Arm	1
2	90003263	Upper Cross Shaft	2
3	70015252	Delrin Upper Control Arm Bushing	4
4	90003340	Inner Bushing Sleeve	4
5	70010866	Ball joint Assembly - Proforged # 101-10083	2
6	90002633	Ball joint Spacer	2
7	99311011	5/16"-18 x 1 1/4" Hex Bolt	6
8	99313001	5/16" SAE Flat Washer	12
9	99312002	5/16"-18 Nylok Nut	6
10	99623010	5/8" SAE Flat Washer	4
11	99622006	5/8"-18 Nylok Nut	4



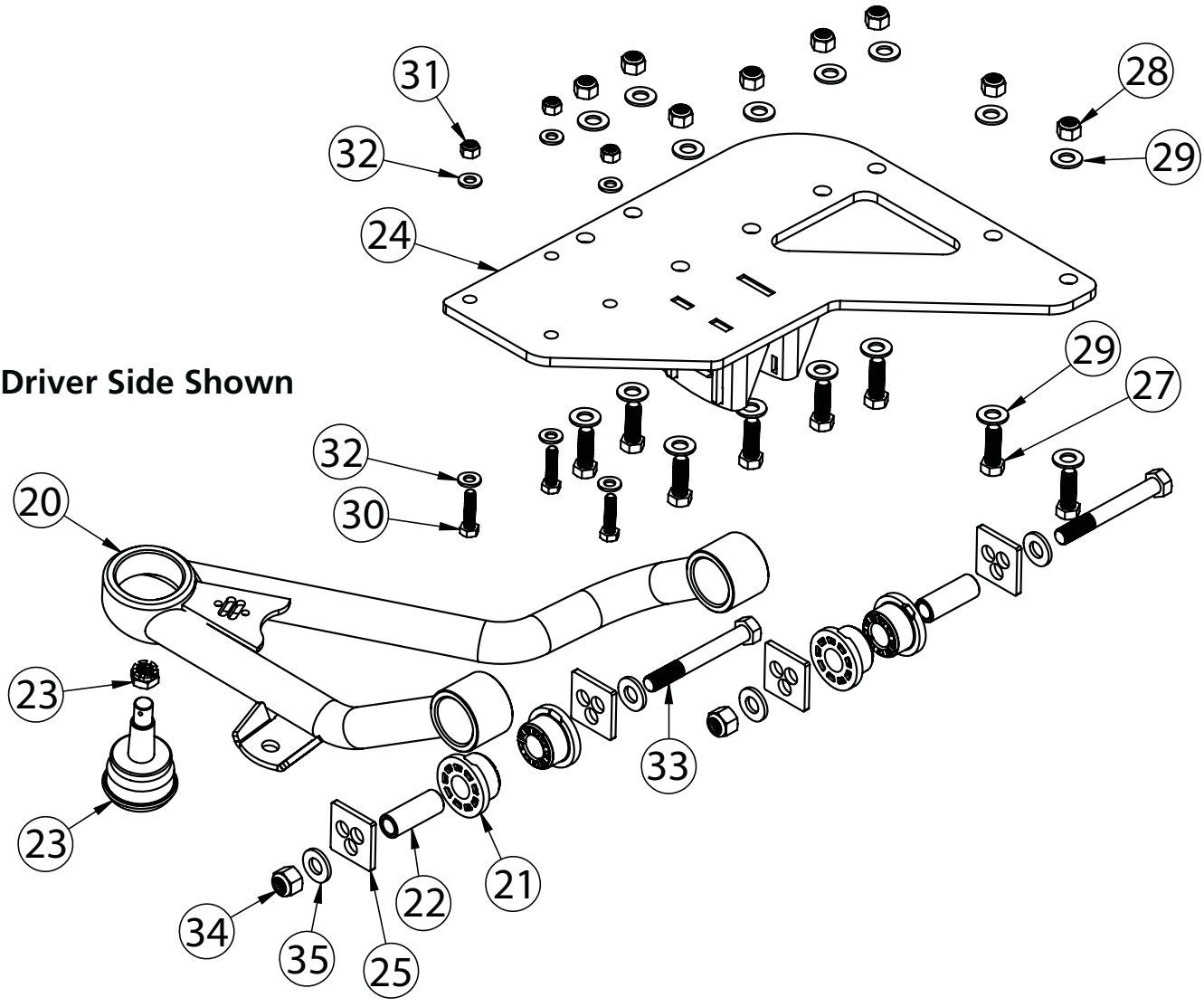
Driver Side Shown

NOTE: ***DISCARD THE BALL JOINT NUT INCLUDED WITH THE BALL JOINT KIT. A NEW BALL JOINT NUT IS SUPPLIED IN THE HARDWARE KIT.***

Lower Control Arm Components .....In the box

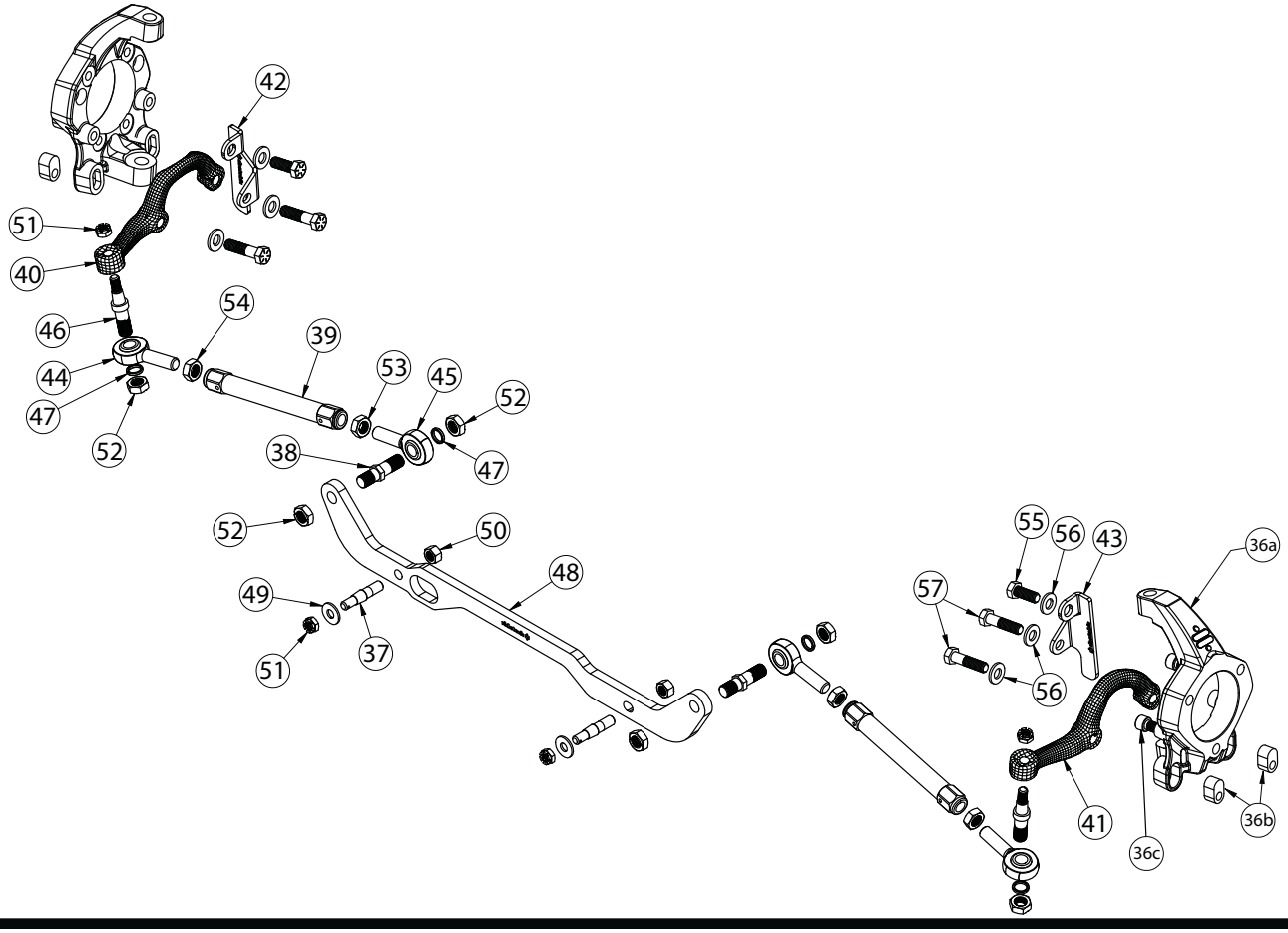
Item #	Part Number	Description	QTY
20	90003264	Driver Lower Control Arm **(Shown)**	1
20	90003265	Passenger Lower Control Arm	1
21	70010759	Delrin Bushing	8
22	90000549	Delrin Bushing Inner Sleeve	4
23	90000898	Lower Ball joint - Proforged # 101-10013	2
24	90003338	Lower Chassis Plate - Diver	1
24	90003339	Lower Chassis Plate - Passenger	1
25	90000112	Eccentric Plate	8

Driver Side Shown



TruTurn Steering Components .....In the box

Item #	Part Number	Description	QTY
36	11009312	Ridetech Hub Spindle Kit	1 pr
36a	70015750	Hub Spindle	2
36b	90003535	Steering Arm Threaded Insert	4
36c	99121020	M12-1.75 x 40mm SHCS	6
37	90009933	Drag Link Stud	2
38	90002351	Inner Tie Rod Stud	2
39	90003337	Tie-Rod Adjuster	2
40	90002347	Driver Steering Arm	1
41	90002348	Passenger Steering Arm	1
42	90002349	Bolt On Steering Stop - Driver	1
43	90002350	Bolt On Steering Stop - Passenger	1
44	90001582	Heim End - 5/8"-18 x 5/8" Bolt - LH Thread	2
45	90001590	Heim End - 5/8"-18 x 5/8" Bolt - RH Thread	2
46	90009931	Outer Tie Rod Stud	2
47	90002676	Outer Tie Rod Spacer - 5/8" ID x .125"	4
48	90003329	Drag Link Adapter	1



Caliper Brackets Components .....In the box

Item #	Part #	Description	QTY
58	90003548	Caliper Bracket - Driver	1
58	90003547	Caliper Bracket - Passenger (Not Shown)	1
59	90003549	Caliper Bracket Spacer	4

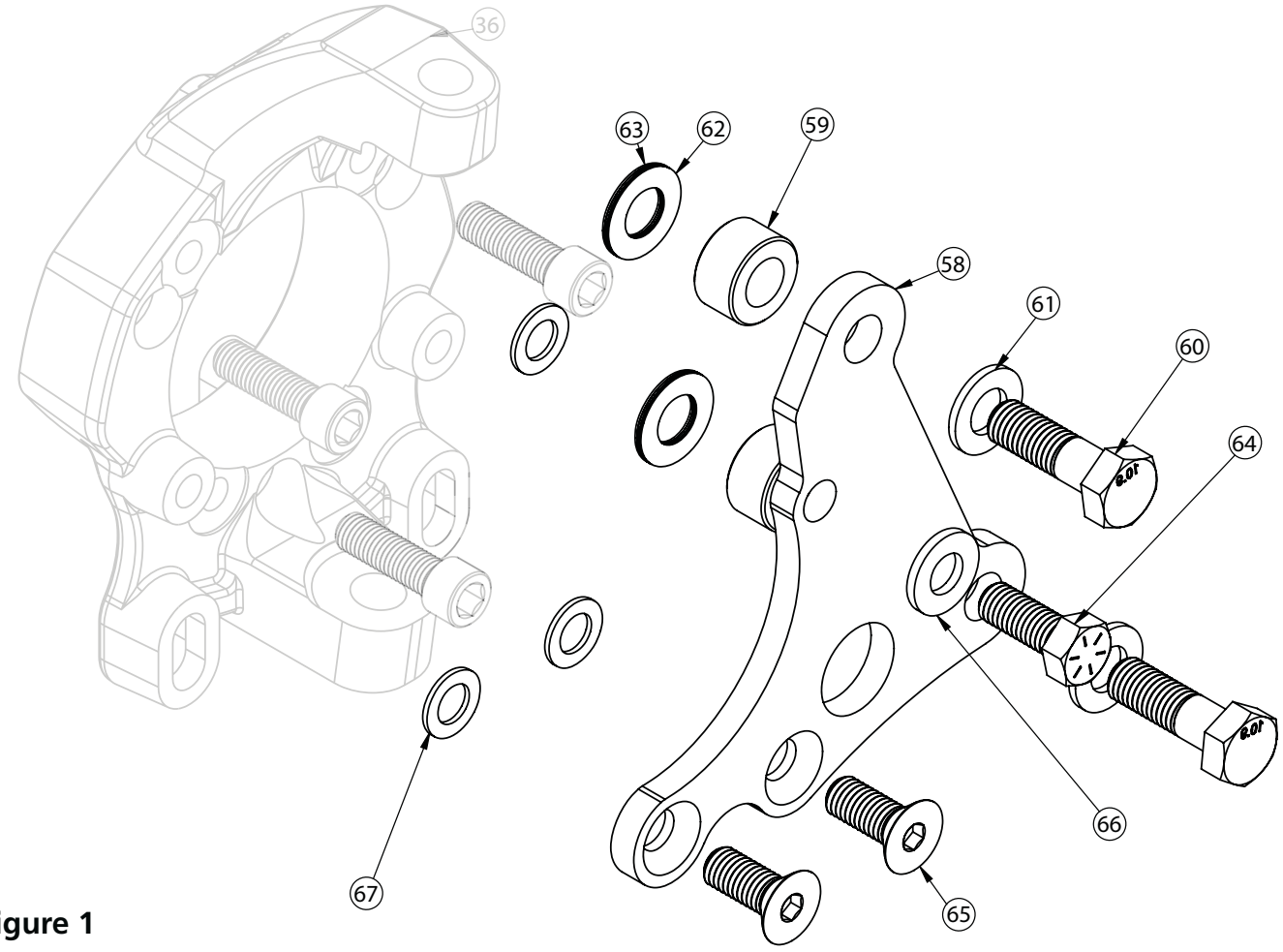


Figure 1

Hardware List .....In the box (Kit # 99010230)

Item #	Part Number	Description	QTY
BRACKET TO CALIPER			
60	99141007	M14-2.0 X 45mm Hex Bolt	4
61	99143001	M14 Flat Washer	4
SHIM PACK			
62	99623005	Shim .016" thick, 5/8" ID	8
63	99623006	Shim .032" thick, 5/8" ID	8

Item #	Part Number	Description	QTY
BRACKET TO SPINDLE			
64	99501062	1/2"-13 x 1 1/4" Hex Bolt	2
65	99501075	1/2"-13 x 1 1/4" FHSCS	4
66	99503014	1/2" SAE Flat Washer	2
67	99503017	Shim .063" thick, 1/2" ID	12

Hardware Shown in Diagrams .....Kit# 99010151

Kit# 99010188

Item #			QTY
		Shock Mount	
12	99311011	5/16-18 X 1 1/4" HEX CAP SCREW GR8	4
13	99313001	5/16" FLAT WASHER GR8	8
14	99312002	5/16-18 NYLON LOCKNUT GR8	4
		Cross Shaft to Car	
15	99501021	1/2-20 X 2.75 HEX BOLT GR8	4
16	99503015	1/2" SPLIT LOCK WASHER GR8	4
17	99503014	1/2" SAE FLAT WASHER GR8	4
18	99502004	1/2-20 HEX NUT GR8	4
		Upper Ball Joint To Spindle	
19	99502017	1/2-20 Castle Nut	2

Kit# 99010187

Item #			QTY
		Chassis Plate	
27	99431021	7/16-14 X 1.25" HEX BOLT GR8	16
28	99432010	7/16-14 NYLON LOCK NUT GR8	16
29	99433005	7/16" SAE FLAT WASHER GR8	32
30	99311011	5/16-18 X 1.25" HEX BOLT GR8	6
31	99312002	5/16-18 NYLON LOCK NUT GR8	6
32	99313001	5/16" SAE FLAT WASHER GR8	12
		Lower Control Arms Mounting	
33	99501016	1/2-20 X 4.00" HEX BOLT GR8	4
34	99502002	1/2-20 NYLON LOCK NUT GR8	4
35	99503014	1/2"SAE FLAT WASHER GR8	8

Kit# 99010186

Item #			QTY
		Drag Link Stud	
49	99433002	7/16" SAE FLAT WASHER	2
50	99502010	1/2-20 MECHANICAL LOCK NUT	2
51	99432005	7/16-20 CASTLE NUT	2
	99952002	3/32" COTTER PIN	2
		Outer Tie Rod Stud	
51	99432005	7/16-20 CASTLE NUT	2
52	99622005	5/8-18 THIN MECHANICAL LOCK NUT	2
	99952002	3/32" COTTER PIN	2
		Inner Tie Rod Stud	
52	99622005	5/8-18 THIN MECHANICAL LOCK NUT	4
		Tie Rod	
53	99800002	5/8-18 LH JAM NUT	2
54	99800003	5/8-18 RH JAM NUT	2
		Steering Stop	
55	99501052	1/2-13 X 1" HEX BOLT GR 8	2
56	99503014	1/2" SAE FLAT WASHER GR8	2
		Steering Arm	
56	99503014	1/2" SAE FLAT WASHER GR8	4
57	99501026	1/2-13 X 2 1/4" HEX BOLT GR 8	4

Getting Started.....

Congratulations on your purchase of the Ridetech TruTurn System. This System has been designed to give your Chevy II excellent handling along with a lifetime of enjoyment. Some of the key features of the Tru-Turn System: Ball joint angles have been optimized for the lowered ride height, eliminated rubber bushings to get rid of bushing deflection and provide free suspension movement through the entire range of travel. The geometry has been optimized for excellent handling, driveabilty and minimal bump steer.

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.**

THE DRAGLINK ADAPTER IN THIS KIT IS DESIGNED FOR FACTORY STYLE FRONT SUMP OIL PANS. IF YOU HAVE A REAR SUMP OIL PAN, YOU WILL NEED DRAGLINK ADAPTER #90003358.

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.

These spindles are designed around 1997-2013 Corvette (C5/C6) or 2014-2019 Corvette (C7) hub beaerings. C5 & C6 will have wheel speed sensors built into the bearing. C7 hubs are preferred, they are stronger and more cost effective as they don't have a wheel speed sensor (Moog 513378).

Disassembly

2. The OEM strut rod mounts will need to be removed form the car. The strut rod mount is attached to the car with 4 rivets. There is a 5th rivet that attaches the radiator support to the frame rail that will also need removed. We have seen some cars that have a bolt/nut here instead of a rivet.

3. We cut a "+" in the head of the rivets.

4. With the "+" cut in the head of the rivet, chisel the head of the rivet off. The head of the rivet should come off in 4 pieces.

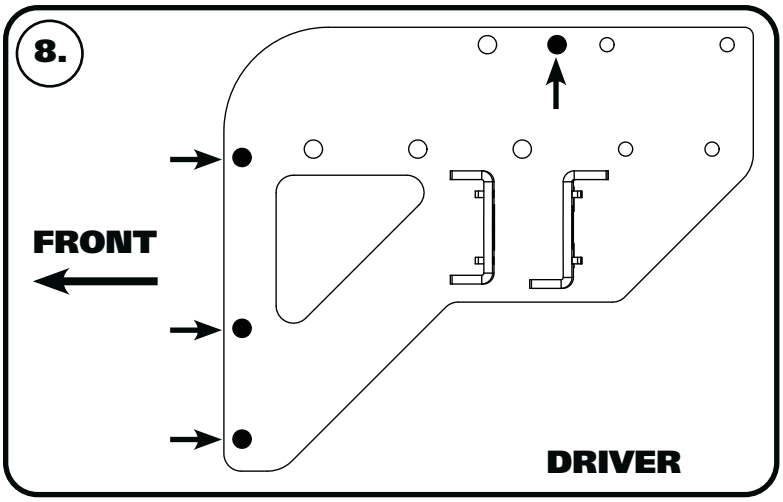
Disassembly

5. With the rivet heads removed, the strut rod mount can be removed from the car.

6. The remainder of the rivets will need to be removed from the frame of the car.

7. The crossmember will need to be removed from the car. **The crossmember will be reinstalled later.**

Installing Lower Control Arm Mount



Use **Images 8 - 12** as a guide to install the lower control arm mounts.

8. **Image 8** shows the DRIVER lower control arm mount. The lower control arm mounting plate will attach to some of the OEM rivet holes. The mounting holes that will use the OEM rivet holes are pointed out with arrows in **Image 8**. You may need to use a 7/16" drill bit to clean up the rivet holes that will be used to attached the lower control arm mounting plate. The (4) crossmember mounting bolts will also line up with the crossmember holes in the frame.

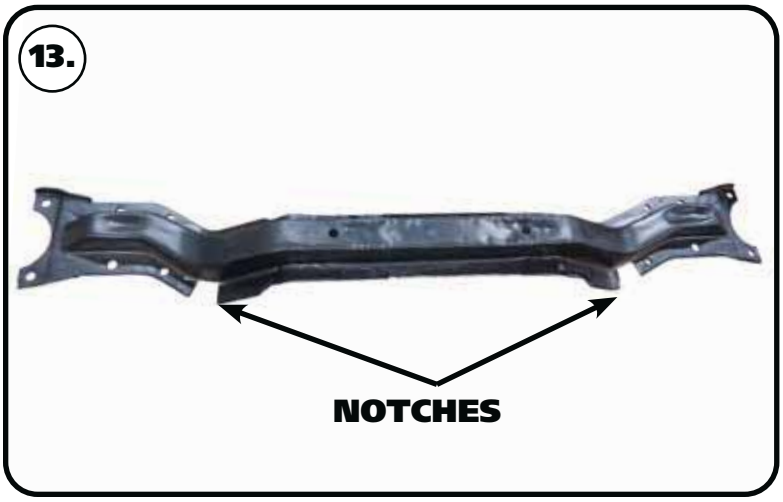
9. Align the lower control arm mount with the OEM rivet holes. Install a 7/16" flat washer on each of (4) 7/16"-14 x 1 1/4" bolts. Insert the bolts/washers in the holes that align with the OEM rivet holes. The threads of the bolts need to be pointing up before final tightening. We installed a few of the bolts with the threads pointing down for alignment purposes. We removed them and installed them with the threads pointing up after we got some of the other bolts installed correctly. Install a 7/16" flat washer and 7/16"-14 nylok nut on each of the bolts.

10. Use a 7/16" drill bit to drill the (4) holes in the frame rail that don't exist.

Installing Lower Control Arm Mount

11. Install a 7/16" flat washer on each of (4) 7/16"-14 x 1 1/4" bolts. Insert the bolts/washers in the holes that align with the holes that were just drilled. The threads of the bolts need to be pointing up. Install a 7/16" flat washer and 7/16"-14 nylok nut on each of the bolts. Torque the bolts to 80 ft-lbs. Repeat Step 8-12 on the other side.

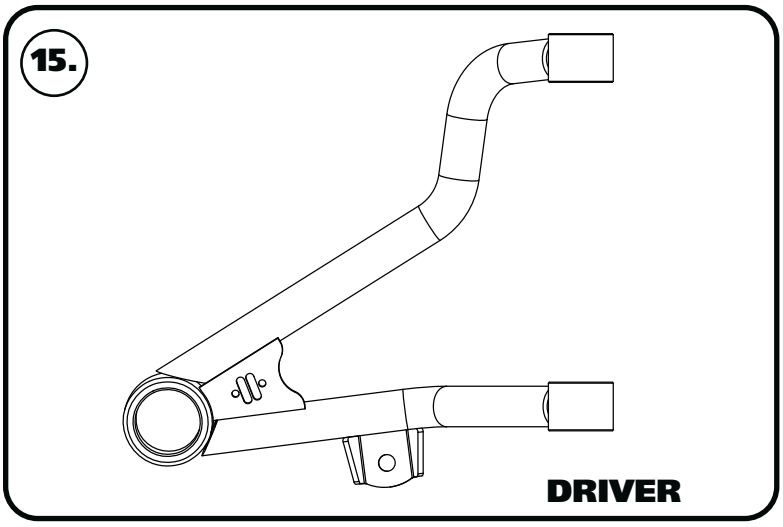
13. The crossmember will need to be notched to clear the lower control arm mount. Hold the crossmember up in position to see where you will need to notch it.



13. Image 13 shows the crossmember after it as been notched.

Installing Crossmember & Lower Control Arm

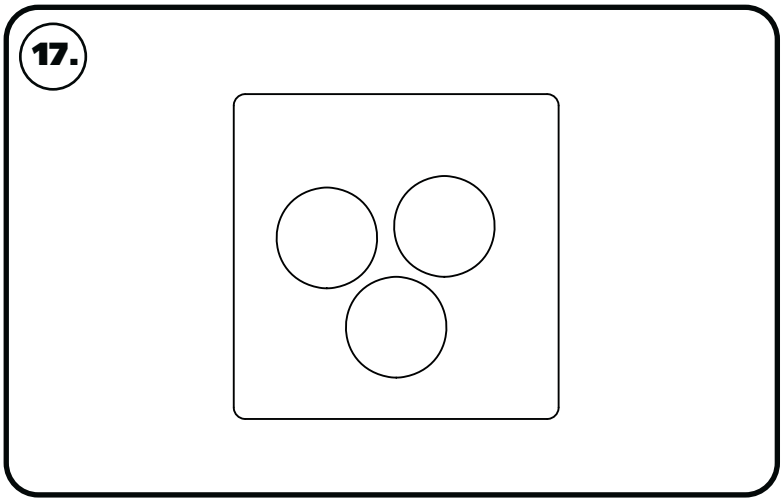
14. Hold the crossmember in position, aligning it with the mounting holes of the control arm plate and frame. The kits includes new 5/16" hardware to reattach the crossmember. Install a 5/16" flat washer on each of (6) 5/16"-18 x 1 1/4" bolts. THE REAR INNER CROSSMEMBER BOLT WILL NOT BE INSTALLED AT THIS TIME, IT WILL BE INSTALLED WITH THE INSTALLATION OF THE SWAY BAR. Insert the bolts/washers in the (2) front holes and the rear outer holes. With a bolt installed in each hole, install a 5/16" flat washer and 5/16"-18 nylok nut on each of the bolts. Torque the hardware to 25 ft-lbs.



15. Image 15 is of the DRIVER lower arm as viewed from the top.

16. Insert the lower control arm into the mounts. The rear bushing goes into the OEM mount. The front busing gets installed into the mount on the new lower control arm plate. Align the through hole of the bushing with the slots in the mounts.

Installing Lower Control Arm



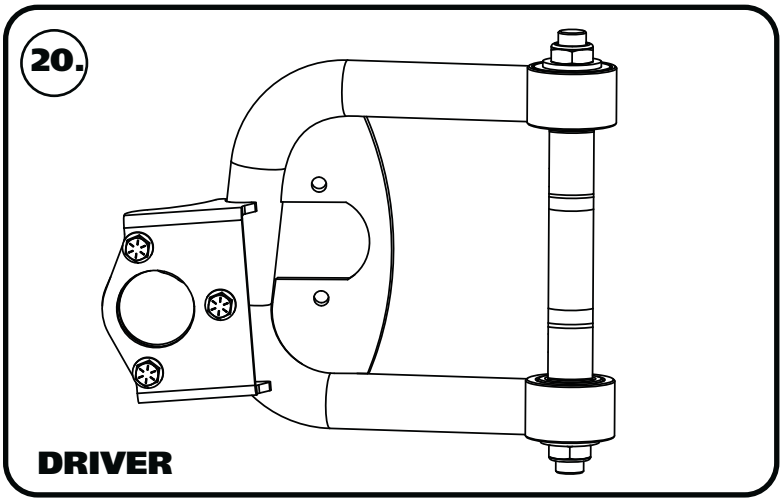
17. Eccentric eliminator plates are included, one must be installed on each side of the frame. Start out with it in the center, make sure both plates are in the same position. The CENTERED position is shown in **Image 17**.

18. Install a 1/2" flat washer on each of (4) 1/2"-20 x 4" hex bolt. Insert the bolt in the eccentric eliminator plate. Install the assembly in the lower control arm mount. Repeat for the 2nd bushing.

19. Install another eccentric eliminator on the threads of the bolt. Make sure the plate is orientated the same as the other plate. Install a 1/2" flat washer and 1/2"-20 nylok nut on the bolt. Repeat for the 2nd bushing. Torque the hardware to 120 ft-lbs.

Repeat **Steps 16-19** on the 2nd control arm.

Installing Upper Control Arm



20. Image 20 is of the DRIVER upper arm as viewed from the top.

21. The OEM upper control arm holes need to be drilled out using a 1/2" drill bit.

22a. Steps 22a & 22b illustrate mounting the upper control arm. The upper StrongArm gets bolted to the body using ½"-20 x 2 ½" bolts & flat washers. **The ARROW points to the front of the vehicle.**

Installing Upper Control Arm & Spindle

22b. Hold the arm in place and install the bolt/washers. Install a 1/2" split lock washer and 1/2"-20 nut on the threads of the bolts that are sticking through the shock tower. Torque the hardware to 110 ft-lbs.

23. ***DISCARD THE BALL JOINT NUT THAT IS SUPPLIED IN THE BALL JOINT KIT. A NEW 1/2"-20 CASTLE NUT IS SUPPLIED IN THE HARDWARE KIT.*** Install the spindle on the upper ball joint pin. THREAD THE 1/2"-20 CASTLE NUT SUPPLIED IN THE HARDWARE KIT ON THE THREADS OF THE BALL JOINT PIN. Torque the ball joint castle nut to 50 ftlbs and tighten to align the cotter pin holes. Install the cotter pin in the ball joint pin hole and bend the ends of the cotter pin to hold it in place. Install the grease zerk supplied with the ball joint.

24. The spindles included in this kit are identical for each side. They are not side specific until the steering arm is attached. Install the spindle on the lower ball joint pin. Torque the ball joint castle nut to 65 ft-lbs and tighten to align the cotter pin holes. Install the cotter pin in the ball joint pin hole and bend the ends of the cotter pin to hold it in place. Install the grease zerk supplied with the ball joint.

Hub Bearing Installation

25. 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.

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.

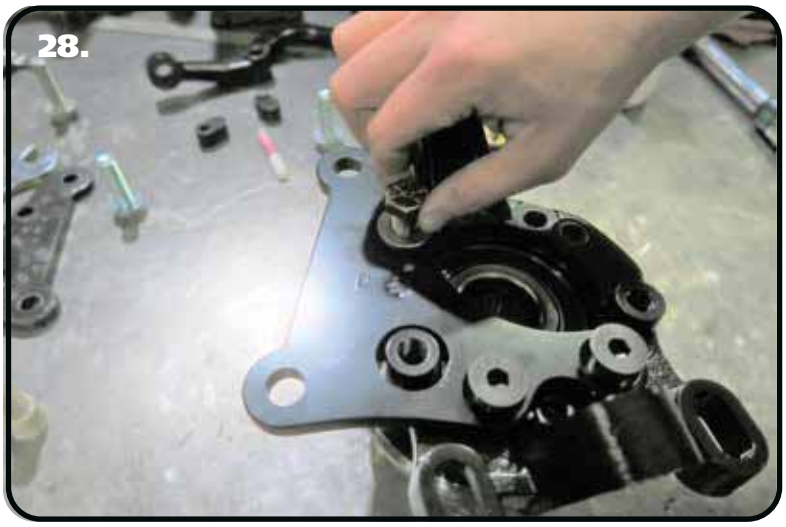
The brake bracket kits include shims for mounting the caliper brackets and calipers. The caliper brackets will use 1/2" ID shims. The caliper spacers will use 5/8" ID shims.

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.

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

Caliper Bracket Installation

27. 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.



28. Insert a 1/2"-13 x 1 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 x 1 1/4" hex bolt and insert it in the upper mounting hole. Tighten the hardware to 75 ft-lbs.

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

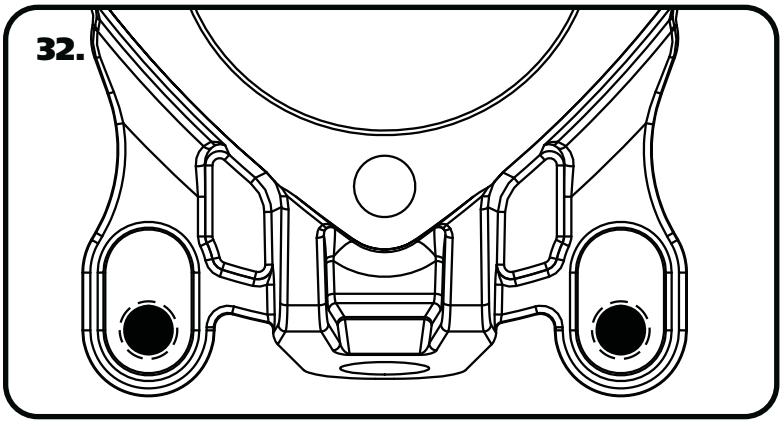
Caliper Bracket Installation

30. 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.

31. 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.

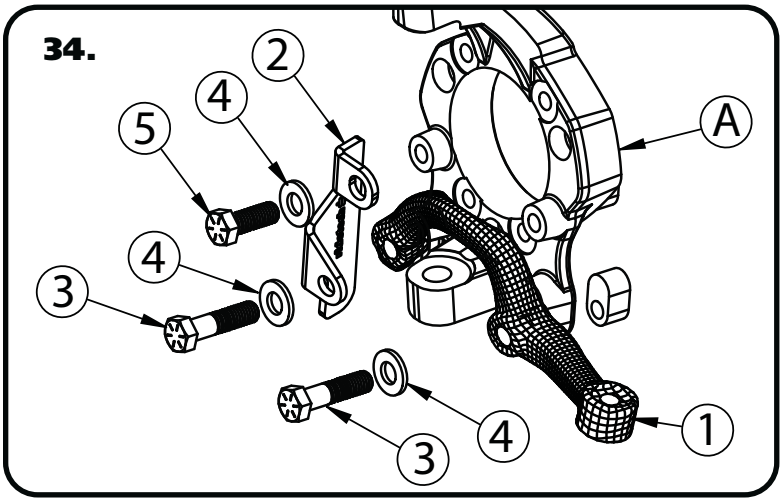
Steering Arm Installation



32. The threaded steering arm inserts can be mounted in 2 different positions. **Image 32** illustrates the correct position for the installation on your vehicle. This position is what we determined to be the best with Ridetech suspension.

Steering Arm Installation

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



34. Attach Steering Arm(1) and Steering Stop(2) to Spindle(A). The Steering Arm and Stop are attached to the spindle using [2]1/2"-13 x 2 1/4"(3) & [1] 1/2"-13 x 1"(5) hex bolts and [3] 1/2" SAE Flat Washers(4). The Steering Arm is positioned with the Tie Rod End pointing to the rear of the car and toward the engine. The Steering Stop is attached to the front mounting bolt of the steering arm and also attaches to the inner surface of the spindle in the top hole. Use the 1/2"-13 x 2 1/4" bolts with a flat washer in the steering arm. The 1/2"-13 x 1" bolt with a washer, attaches the top of the steering stop to the inner surface of the spindle. Use Red Loctite (Supplied in the Kit) on the bolts and torque to 80 ftlbs. Verify that the bolts are sticking through the slugs.

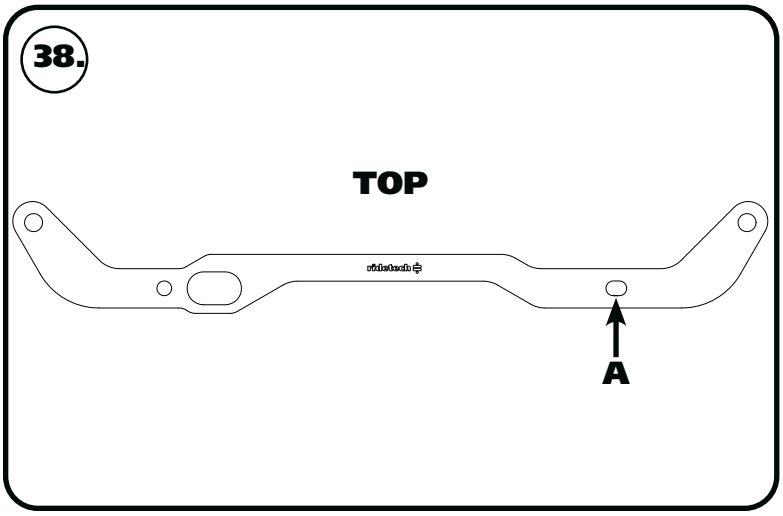
35. Install the brake pads and caliper.

Centerlink Adapter Installation

36. The SMALL tapered studs will get installed into the factory centerlink with the taper going into the centerlink, a 7/16" castle nut is used to attach it to the centerlink. The straight shank will point to the front of the car.

Note: It may be necessary to install 7/16" washers under the castle nut to get the cotter pin engaged properly.

37. Torque the nuts to 35 ft-lbs and tighten as needed to align cotter pin. Install cotter pin and bend the ends.



38. The centerlink bracket has one attachment hole [A] that is slotted. This is to accommodate the variations in manufacturing and machining processes, as well as any wear that may have occurred to the original centerlink over time. The slot goes on the passenger side centerlink adapter stud.

Centerlink Adapter Installation

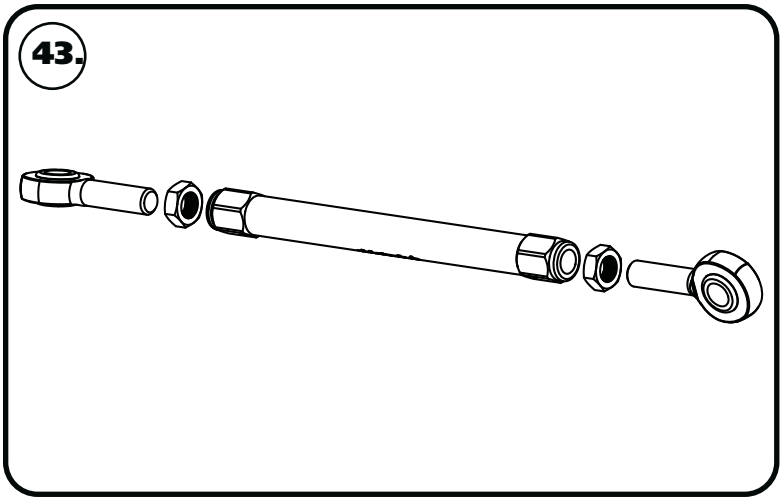
39. Install the draglink adapter on the studs sticking out of the OEM draglink. Install a 1/2"-20 mechanical locking nut on the threads of each stud sticking through the draglink adapter. Torque the nuts to 50 ft-lbs.

40. The studs with the short hex get installed into the centerlink adapter. The short side goes into the adapter attached with the 5/8"-18 thin top lock nut, with the long side of the stud pointing forward.

41. Install the 5/8"-18 **THIN** mechanical locking nut on the threads of the stud sticking through the centerlink adapter and torque to 45 ft-lbs.

Tie Rod Installation

42. Install the stud with the round flange into the steering arm with the taper going into the steering arm. Torque the nuts to 35 ft-lbs and tighten as needed to align cotter pin hole and install cotter pin.



43. The tie rod adjuster has 2 threads in it; 5/8"-18 RH & 5/8"-18 LH. The 5/8"-18 LH thread is marked with a groove on the outside of the adjuster. The tie rod can now be assembled to a center to center length of 11 3/8" to start with, having equal amount of threads on both ends. These aluminum adjusters have a left hand thread on one end and a right hand thread on the other. You should use anti seize when threading the heim ends into the adjuster. **FOR YOUR SAFETY, THE TIE ROD & HEIM NEED A MINIMUM OF 15/16" OF THREAD ENGAGEMENT INTO THE TIE ROD ADJUSTER.**

44. Install one end of the tie rod onto the stud of the centerlink adapter.

Tie Rod Installation

45. Install the 5/8" ID x .125" spacer on the stud followed by a 5/8"-18 mechanical locking nut. Torque to 45 ft-lbs.

46. Install a 5/8" ID x 3/8" spacer on the steering arm stud, followed by the outer end of the tie rod.

47. Install the 5/8" ID x .125" spacer on the stud followed by a 5/8"-18 mechanical locking nut. Torque to 45 ft-lbs.

Final Tightening & Alignment Specifications

48. Double check that you have tightened all hardware to the proper torque. If you are going to install the Ridetech MuscleBar, now is a good time to do it.

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

Suggested Alignment Specs:

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

Torque Specifications

COMPONENTS	TORQUE
LOWER CONTROL ARM MOUNT - 7/16"-14	80 FT-LBS
CROSSMEMBER MOUNTING	25 FT-LBS
FRONT UPPER SHOCK MOUNT TO FRAME	50 FT-LBS
LOWER CONTROL ARM MOUNTING	120 FT-LBS
UPPER BALL JOINT (tighten to align cotter pin hole after torquing)	50 FT-LBS
LOWER BALL JOINT (tighten to align cotter pin hole after torquing)	65 FT-LBS
CENTERLINK STUD NUT - 7/16"-20	35 FT-LBS
CENTERLINK ADAPTER TO STUD - 1/2"-20	50 FT-LBS
INNER TIE ROD STUD - 5/8"-18	45 FT-LBS
STEERING ARM TO SPINDLE	100 FT-LBS
STEERING STOP TO SPINDLE	75 IN-LBS
OUTER TIE ROD STUD - 7/16"-20	35 FT-LBS
INNER & OUTER TIE ROD MOUNTING - 5/8"-18	45 FT-LBS

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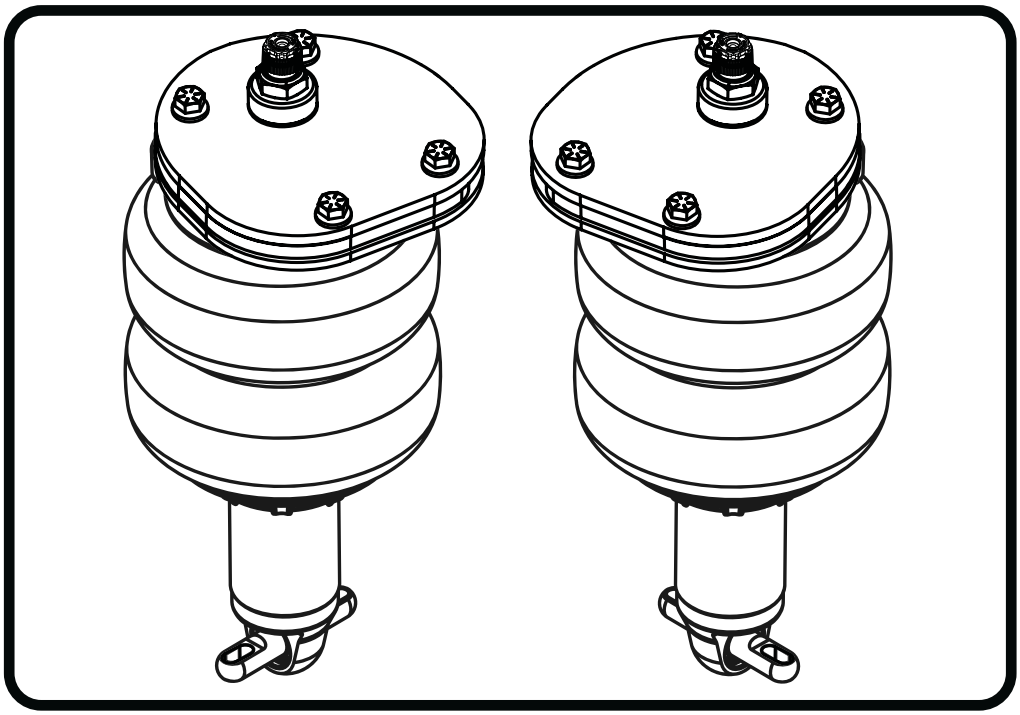
Installation Instructions

Part # 11253001 - 1962-1967 Chevy II Front HQ ShockWaves for StrongArms



Recommended Tools

1962-1967 Chevy II HQ Series Front ShockWaves

Installation Instructions

THESE SHOCKWAVES ARE DESIGNED TO BE USED WITH RIDETECH STRONGARMS

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ShockWave Dimensions:

Center of bearing to Center of bearing:

Compressed:	**11.00”**
Ride Height:	**13.10”**
Extended:	**14.50”**

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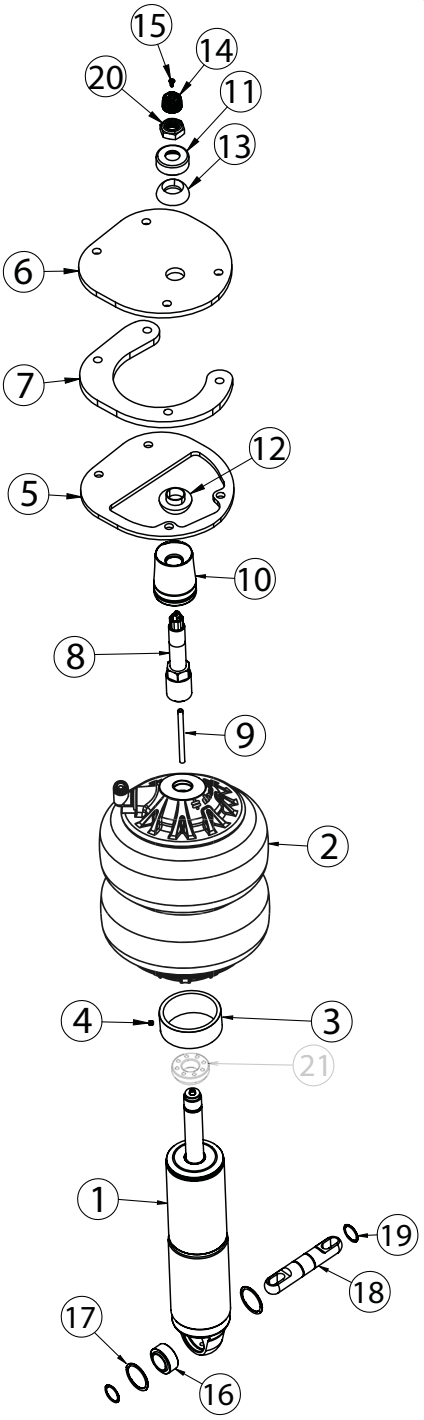
Major Components .....In the box

Item #	Part #	Description	QTY
1	982-10-804	4.1" Stroke HQ Series Shock	2
2	24090199	1000 Series ShockWave Bellow	2
3	234-00-153	Bellow Locking Ring (Installed on shock)	2
4	99055000	Locking Ring Set Screw (Installed on shock)	2
5	90001637	Lower Shock Tower Mounting Plate	2
6	90001638	Upper Shock Tower Mounting Plate	2
7	90003320	Shock Tower Spacer	2
8	90009988(kit)	2.00" Stud Adjuster Assembly	2
9	70012160	2.00" Metering Rod	2
10	90002312	2.00" Stud Top Base	2
11	90001902	Delrin Ball Upper Cap	2
12	90001903	Delrin Ball Lower Half	2
13	90001904	Delrin Ball Top Half	2
14	90009969	Adjuster Knob Retaining Screw	2
15	210-35-120-0	Shock Adjuster Knob	2
16	90001994	5/8" ID Bearing	2
17	90001995	Bearing Snap Ring	4
18	90002060	Universal Trunnion	2
19	90001980	Trunnion Snap Ring	4
20	99562003	9/16"-18 Nylok Jam Nut	2



Hardware Kit# 99010189

Part #	Description	QTY
99311022	5/16"-18 x 1 3/4" Hex Bolt	8
99312002	5/16"-18 Nylok Nut	8
99313001	5/16" SAE Flat Washer	16

Getting Started.....

THESE SHOCKWAVES ARE DESIGNED TO BE USED WITH RIDETECH STRONGARMS!

The front OEM Shock and Spring assemblies will need to be removed from the front of the car.

1. Raise the vehicle and support it by the frame, allowing the suspension to hang freely. Remove the wheels.

2. If you haven't installed the front StrongArms, do so before installing the CoilOvers. Refer to the StrongArms instructions.

Disassembly

3. The OEM upper shock mount will need to be removed from the car. Remove the upper shock nut and unbolt the mount.

4. If you haven't done so already, remove the shock spring assembly out of the car.

ShockWave Installation

5. The lower plate will fit the contours of the OEM shock tower opening.

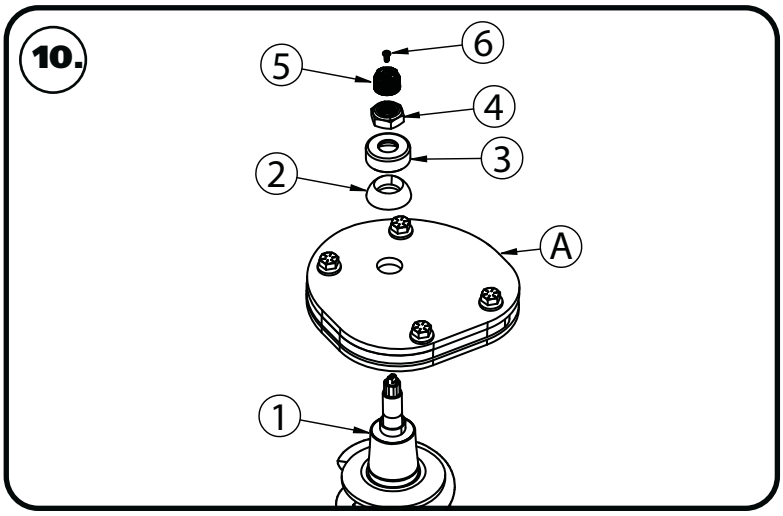
6. The kit includes an upper spacer due to different metal thicknesses at the upper shock mounting area. Place the upper spacer on top of the shock tower with the opening to the FRONT of the car and the curves side toward the engine. The mounting holes will align with the outer slots of the upper shock mount.

7. The upper mounting plate sits on top of the spacer. The mounting holes will align with the holes in the spacer plate.

ShockWave Installation

8. The outer (2) holes of the upper mount will align with the OEM slots. The inner (2) holes will need to be drilled. The easiest way to do this is to bolt the upper mounting plates together in the car. Install a 5/16" SAE flat washer on each of (2) 5/16"-18 x 1 3/4" hex bolt. Insert the bolt/washers through the (2) outer mounting holes. Install the lower plate from the bottom side, making sure the contour fits the shock tower. Install a 5/16" flat washer and 5/16"-18 nylok nut on each of the bolts. Snug the hardware down.

9. Drill the inner (2) holes using a 5/16" drill bit. Install a 5/16" on each of (2) 5/16"-18 x 1 3/4" hex bolts. Insert the bolts/ washer through the inner 2 holes. Install a 5/16" flat washer & 5/16"-18 nylok nut on each bolt. Torque the hardware to 25 ft-lbs.



10. Place the ShockWave into the coil spring pocket with the stud sticking through the upper mount (A). See assembly **Diagram 10**.

1. ShockWave Assembly
A. Upper Shock Mount
2. Delrin ball upper half
3. Aluminum cap
4. 9/16" SAE Nylok jam nut
5. Rebound adjusting knob
6. Screw

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. WE TORQUE THE NUT TO 80 IN-LBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.

CoilOver Installation

11. Raise the upper arm up to the ShockWave. Line up the shock mounting holes with the through hole of trunnion Install a 5/16" flat washer on each of (2) 5/16"-18 x 1 1/4" hex bolts. Insert the bolt/washers in the aligned holes. Install a 5/16" flat washer and 5/16"-18 nylok nut on the threads of each bolt. Torque to 25 ft-lbs.

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. WE TORQUE THE NUT TO 80 INLBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.

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.

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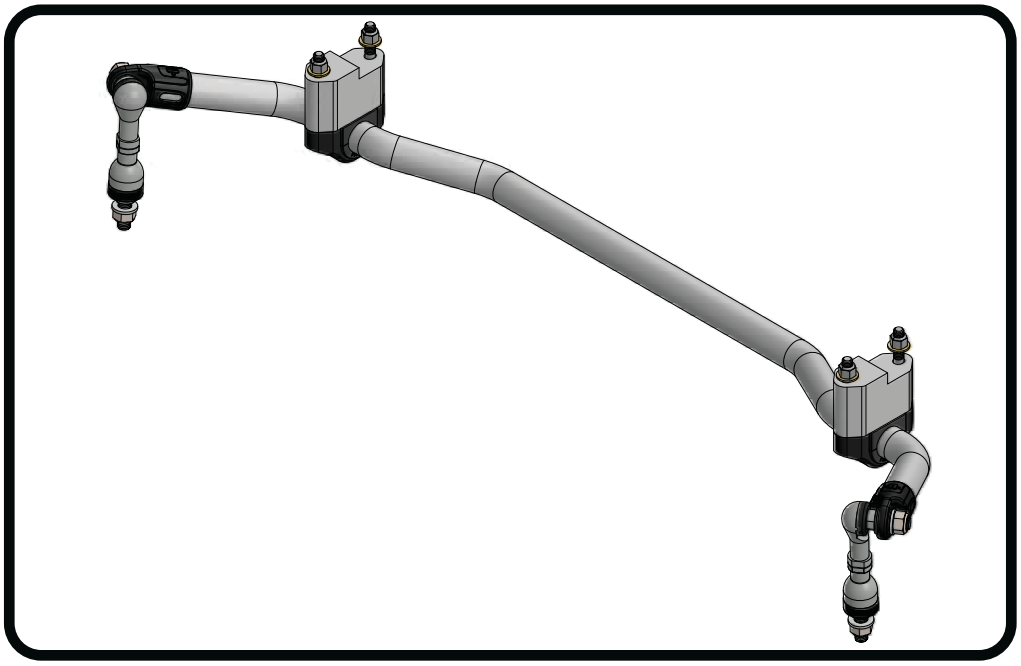
Installation Instructions

Part # 11259100 - 1962-1967 Chevy II Front MuscleBar



Recommended Tools

1962-1967 Chevy II Front MuscleBar
Installation Instructions

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THIS SWAYBAR KIT IS DESIGNED TO BE USED WITH RIDETECH STRONGARMS ONLY. IT WILL NOT FIT THE OEM CONTROL ARMS.

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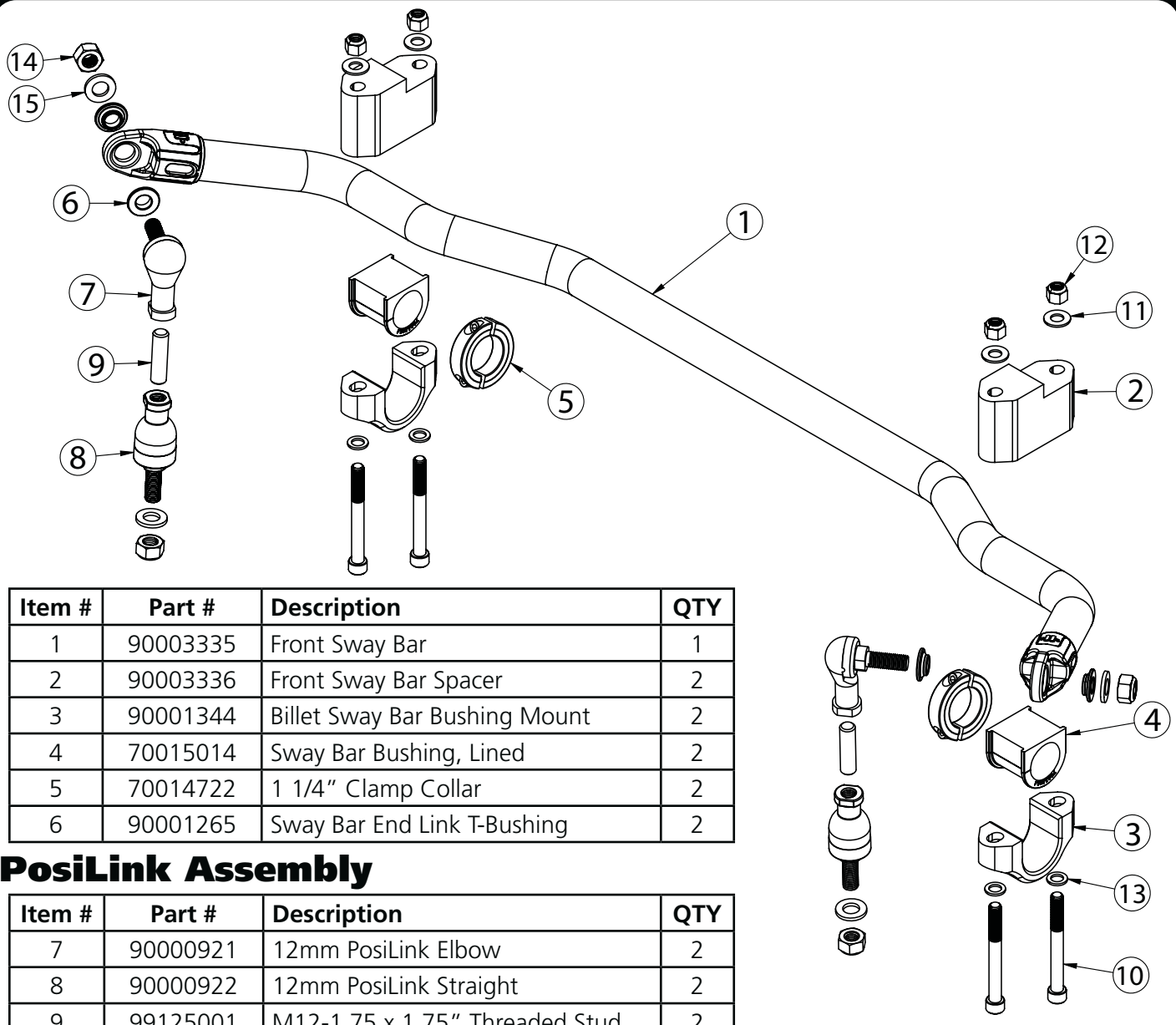
Major Components .....In the box



Item #	Part #	Description	QTY
1	90003335	Front Sway Bar	1
2	90003336	Front Sway Bar Spacer	2
3	90001344	Billet Sway Bar Bushing Mount	2
4	70015014	Sway Bar Bushing, Lined	2
5	70014722	1 1/4" Clamp Collar	2
6	90001265	Sway Bar End Link T-Bushing	2

PosiLink Assembly

Item #	Part #	Description	QTY
7	90000921	12mm PosiLink Elbow	2
8	90000922	12mm PosiLink Straight	2
9	99125001	M12-1.75 x 1.75" Threaded Stud	2

Hardware List .....In the box (Kit# 99010185)

Item #	Part #	Description	Usage	QTY
10	99371073	3/8"-16 x 3 1/2" Socket Head	Bushing Strap to Frame Mount	4
11	99373002	3/8" Flat Washer	Bushing Strap to Frame Mount	4
12	99372001	3/8"-16 Nylok Nut	Bushing Strap to Frame Mount	4
13	99373020	3/8" x 5/8" OD Flat Washer	Bushing Strap to Frame Mount	4
14	99122001	M12-1.75 Nylok Nut	PosiLink Attaching	4
15	99123001	M12 Flat Washer	PosiLink Attaching	4

Getting Started.....

THIS SWAYBAR KIT IS DESIGNED TO BE USED WITH RIDETECH STRONGARMS ONLY. IT WILL NOT FIT THE OEM CONTROL ARMS.

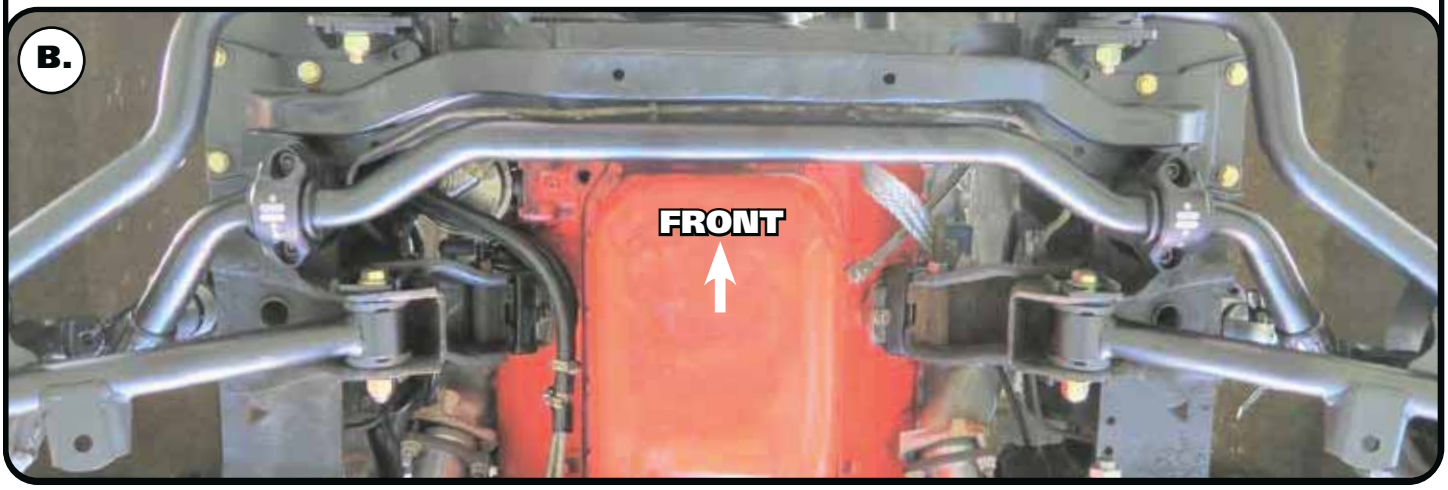
Install all Front suspension components before installing the MuscleBar.

If you haven't done so already, remove the OEM sway bar to prepare for the MuscleBar installation.

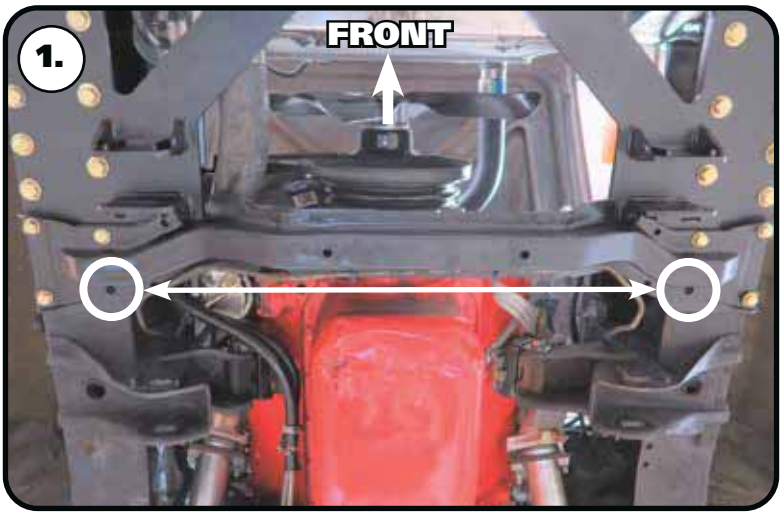
A.

IMAGE A SHOWS THE SWAY BAR AS VIEW FROM THE FRONT. **IMAGE B** SHOWS THE SWAY BAR INSTALLED IN THE CAR.

B.



1.



1. Remove the rear inner crossmember bolts if they are installed.

Sway Bar Installation

3. Open up the poly sway bar bushings and install them on the sway bar.

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

5. Insert the sway bar into position. The front bolt of the sway bar bushing/spacer will align with the rear inner bolt of the crossmember.

Sway Bar Installation

6. The supplied spacer needs to be installed between the bushing/strap and frame. The spacer is stepped on the frame side. The notch will be to the front of the car.

7. Line up the bushing mount a spacer with the rear inner hole of the crossmember.

8. With the sway bar lined up with the front mounting hole. Install a 3/8" x 5/8" OD flat washer on (2) 3/8"-16 x 3 1/2" socket head cap screw. Insert the bolt/washer in the front hole of the bushing strap and spacer. .

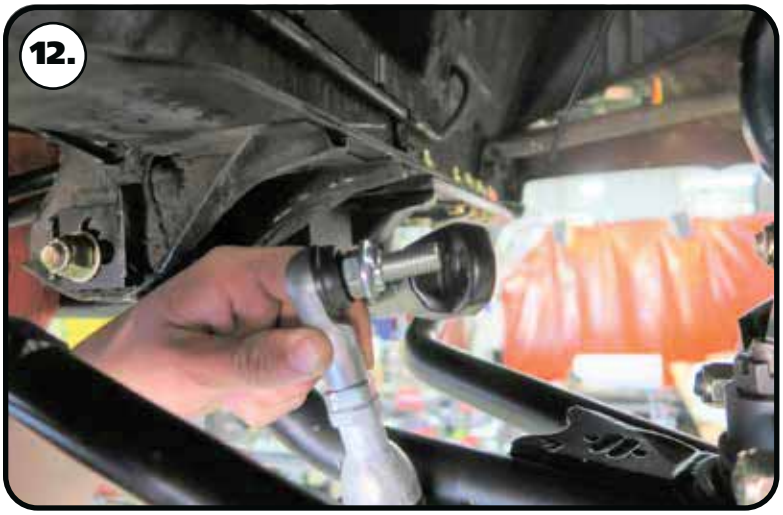
Sway Bar Installation

9. Install a 3/8" SAE flat washer & 3/8"-16 nylok nut on the threads of the bolt. Snug the hardware down to hold the sway bar in place.

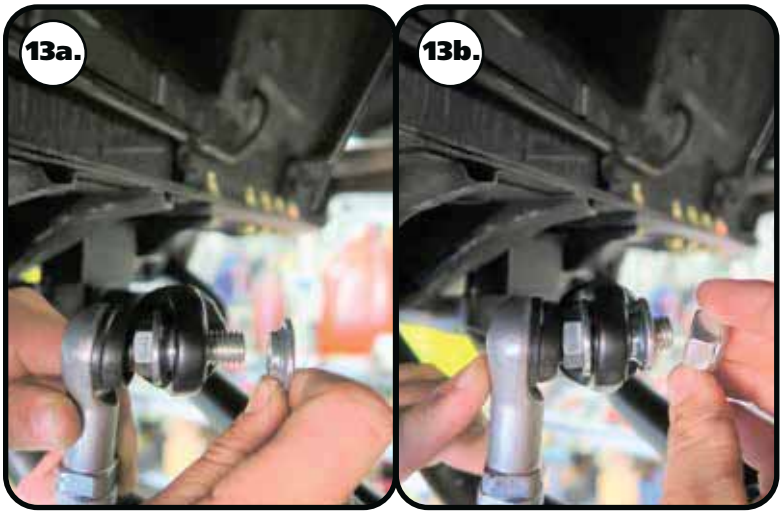
10. Use the bushing mount as a guide to drill a 3/8" hole in the frame for the rear hole.

11. Insert the straight end of the PosiLink into the sway bar tab of the lower control arm. Install a 12mm flat washer and M12-1.75 nylok nut on the threads of the PosiLink.

Sway Bar Installation



12. Install a t-bushing on the lower 90 degree end link. The t-bushings are installed with the large diameter against the shoulder of the end link. Insert the 90 degree end link/t-bushing into the swaybar end with the threads pointing toward the spindle.



13a & 13b. Install a 2nd t-bushing with the small diameter into the swaybar. Install a M12 flat washer & M12-1.75 nylok nut. Torque the top and bottom nuts to 50 ftlbs. Do this for both sides.

14. The bushing strap hardware can now be tightened. Torque to 30 ftlbs.

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

16. Check sway bar and end link clearance through full suspension travel.

17. Ensure that the end links do not bind through full suspension travel.

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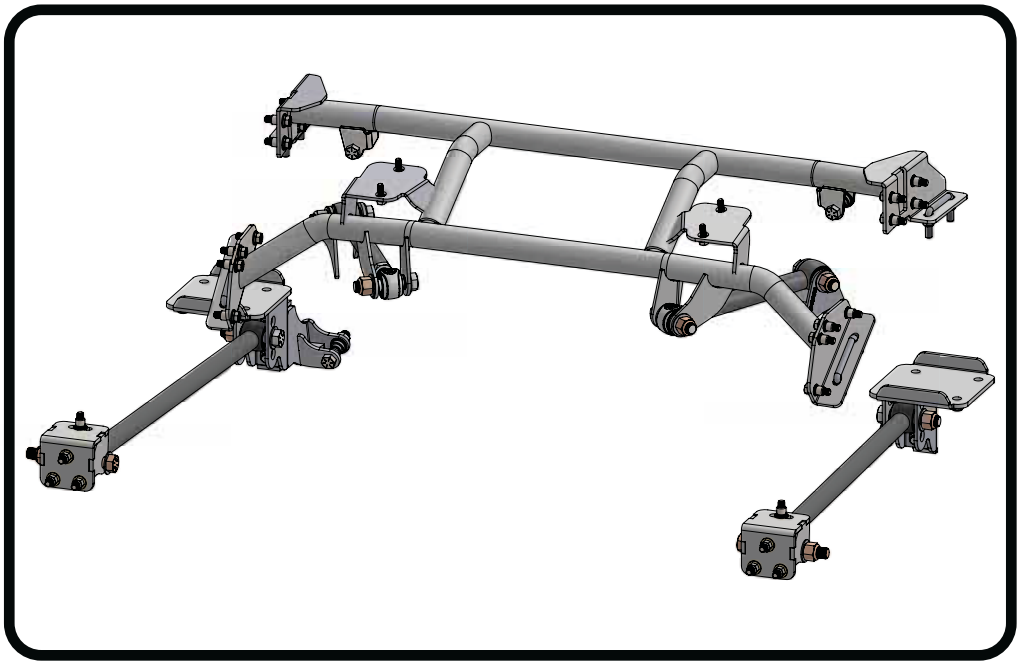
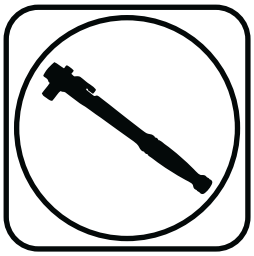
Installation Instructions

Part # 11257199 -1962-1967 Chevy II Rear Bolt-in 4 Link



Recommended Tools



1962-1967 Chevy II Rear Bolt-in 4 Link

Installation Instructions

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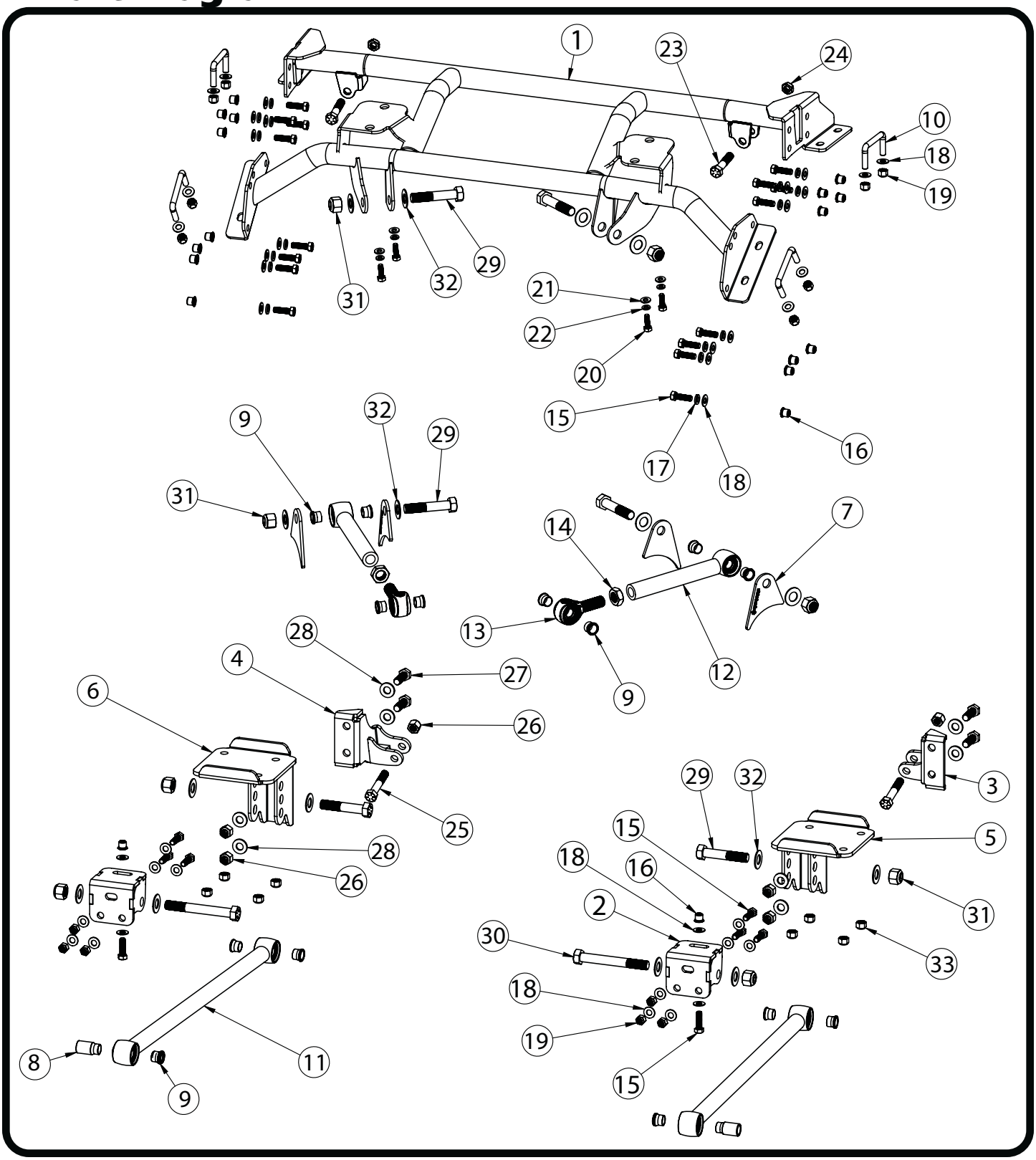
R-JOINT

Major Components .....In the box

Item #	Part #	Description	QTY
1	90003319	4-Link Rear Cradle	1
2	90003332	Lower Frame Bracket	2
3	90003333	Rear Lower Shock Mount-Driver	1
4	90003334	Rear Lower Shock Mount-Passenger	1
5	90003337	Rear Lower Bar Axle-Driver	1
6	90003338	Rear Lower Bar Axle-Passenger	1
7	90000144	Upper Bar Axle Tabs	4
8	70015642	R-Joint Spacers - 5/8" ID x 1.620" W	2
9	70013334	R-Joint Spacers - 5/8" ID x .620" W	14
10	90002285	Square U-Bolts	8
11	90002819	4 Link Lower Bar - 25.0625" center to center	2
12	90002855	4 Link Upper Bar - 10.00" center to center set length	2
13	90001318	RH R-Joint Threaded Housing End (installed in upper bars)	2
14	99752004	3/4"-16 Jam Nut (installed on upper bar R-Joint)	2
	70010694	Bar Tab Setting Jig	2
R-Joint Components - (Installed in bar ends)			
	70013279	Retaining Ring	6
	70013280	Wavo Wave Spring	6
	70013275	R-Joint Center Ball	6
	70013276	R-Joint Composite Center Ball Cage	6

Part Diagram

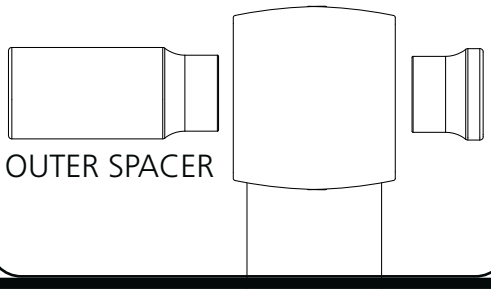
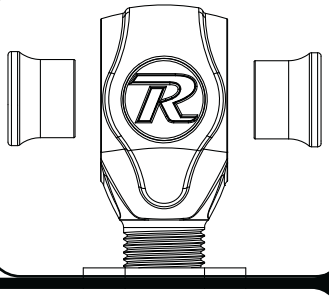


Hardware List .....In the box (Kit# 99010183)

The 4-Link Kit is supplied with a hardware kit. This hardware kit contains individual bags for the different parts of the installation. The bags are labeled to help determine the correct hardware for the installation of the specific parts of the kit. The instructions will aid you in selecting the correct hardware during the installation. The kit includes Rivnuts and installation tool for installation of the rear cradle. Refer to Page 9 for the correct installation procedure of the Rivnuts.

Item #	Cradle To Frame		QTY
not shown	85000007	17/32" DRILL BIT FOR RIV-NUTS	1
15	99371005	3/8-16 X 1.25" HEX BOLT GR8	16
16	99372007	3/8-16 RIV-NUT	16
17	99373006	3/8" SPLIT LOCK WASHER GR8	16
18	99373002	3/8" SAE FLAT WASHER GR8	16
	Lower Frame Mount		
15	99371005	3/8-16 X 1.25" HEX BOLT GR8	8
16	99372007	3/8-16 RIV-NUT	2
17	99373006	3/8" SPLIT LOCK WASHER GR8	2
18	99373002	3/8" SAE FLAT WASHER GR8	16
19	99372001	3/8-16 NYLON LOCKNUT GR8	6
	Cradle U-Bolts		
18	99373002	3/8" SAE FLAT WASHER GR8	16
19	99372001	3/8-16 NYLON LOCKNUT GR8	16
	Cradle To Shock Mounts		
20	99311030	5/16-18 x 1" HEX BOLT GR8	4
21	99313006	5/16" USS FLAT WASHER GR8	4
22	99313005	5/16" SPLIT LOCKWASHER GR8	4
	Shock To Cradle		
23	99501010	1/2-20 X 2.25" HEX BOLT GR8	2
24	99502003	1/2-20 THIN NYLOK JAM NUT	2
	Shock To Lower Mount		
25	99501021	1/2-20 X 2.75" HEX BOLT GR8	2
26	99502002	1/2-20 NYLON LOCKNUT GR8	2
	Shock Mount To Lower Axle Mount		
26	99502002	1/2-20 NYLON LOCKNUT GR8	4
27	99501008	1/2-20 X 1.50" HEX BOLT GR8	4
28	99503014	1/2" SAE FLAT WASHER GR8	8
	Upper & Lower Control Arms		
29	99621018	5/8-18 X 3.25" HEX BOLT GR8	6
30	99621007	5/8-18 X 5" HEX BOLT GR8	2
31	99622001`	5/8-18 NYLON LOCKNUT GR8	8
32	99623001	5/8" SAE FLAT WASHER GR8	16
	Lower Axle Mount		
33	99432007	7/16-20 NYLON LOCK NUT GR8	8

R-Joint Information

R-JOINT SPACER INSTALLATION	LOWER FRONT R-JOINT	ALL OTHER R-JOINTS
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.		

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.

Getting Started.....

Congratulations on your purchase of the Ridetech Rear 4-link System. This system has been designed to give your Chevy II excellent handling along with a lifetime of enjoyment. This system provides tunability, replaces the leaf springs, and allows the 4-Link to locate the rearend and the CoilOvers/ShockWaves to support the car.

Note: This system is designed for use with the Ridetech Shockwaves or CoilOvers. **The factory shocks and springs will not fit this setup.**

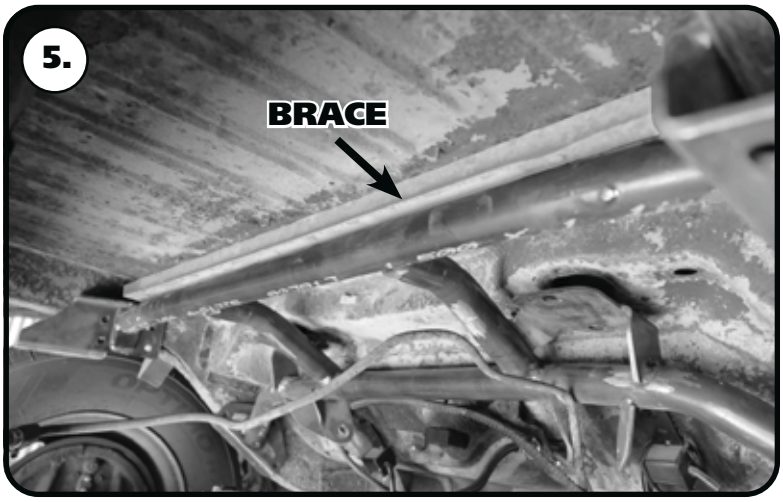
1. Raise the vehicle to a safe and comfortable working height. Use jack stands to support the vehicle with the suspension hanging freely.

2. Support the axle and remove the leaf springs, shocks and tail pipes. Refer to the factory service manual for proper disassembly procedures. The rear seat will also need to be removed.

3. Remove the emergency brake cable hold down from the pinion stop.

Cradle Installation

4. Remove the fuel line from the hold down that is beside the passenger upper shock mount.



5. WAGON ONLY! The wagons have a brace on the rear floor pan that will need to be removed. This brace is right above the rear cradle tube. The tube will support the floor pan.

6. Use a jack under the rear crossmember of the cradle to help hold it up in place.

Cradle Installation

7. Use a pry tool to help align the cradle with the OEM shock mounting holes..

8. Install a 5/16" SAE flat washer and 5/16" split lock washer on each of (4) 5/16"-18 x 1" bolts. Thread each bolt into the OEM shock mounting holes. Tighten the (4) bolts that attach the cradle to the OEM shock mounting holes.

9. Use the frame plates as a template to drill the holes in the bottom of the frame rails. Use a 7/16" drill bit to drill the holes. Drill the slotted hole to the outside of the slot.

Cradle Installation

10. Feed one end of the u-bolt through the round hole of the pair of holes, using the other end of the u-bolt as a handle. You need to get the end of the u-bolt that you are using as a handle fed in until it is past the 90 degree bend to be able to drop the other end through the drilled hole. If the u-bolt will not line up with the drilled holes, it may be necessary to slot the frame hole in the slotted hole of the frame mount.

11. Install (1) 3/8" Flat washer and (1) 3/8"-16 nylok nut onto each stud sticking through the cradle. Do not tighten them until all washers and nuts are installed. Tighten each leg of the u-bolt evenly. Torque to 30 ftlbs. Do this for all (4) u-bolts..

12. Mark or center punch the holes of the vertical surfaces of the frame mounts. These holes use Riv-nuts to bolt the cradle to the frame. The holes need to be centered as much as possible. Mark or center punch the holes for the driver and passenger frame rails.

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Installation Instructions

Riv-nut® Installation & Specs

1. Drill Hole in Frame using the SUPPLIED DRILL BIT keeping the Drill square with the metal.

2. We recommend installing (2) 3/8" Flat Washers between the bolt head and the lower anvil of the installation tool. Thread a Riv-nut® onto the supplied Tool. Thread the Riv-nut all the way onto the Tool until it stops.

3. Insert the Tool and Riv-nut® into the drilled hole 90° to the Frame Rail.

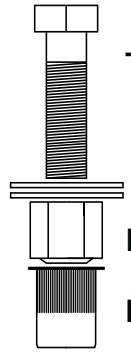
4. The Tool requires (2) 9/16" Wrenches to use. A Ratchet can be used on the top of the Tool.

KEEP THE TOOL AND RIV-NUT 90° TO THE SURFACE WHILE TIGHTENING

5. Put a 9/16" Wrench on the Lower Hex of the tool. Use a Wrench or Ratchet on the Top hex to Tighten.

6. Hold the Wrench in one position and turn the TOP HEX CLOCKWISE to engage the Riv-nut®. Keep Turning the TOP WRENCH until you feel a positive stop and you can't turn the TOP WRENCH anymore.

7. Break the Tool loose by turning the TOP HEX counterclockwise and thread the Tool out of the Riv-nut®

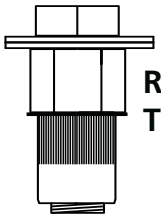


TOP BOLT

3/8" WASHERS

LOWER ANVIL

RIV-NUT®



RIV-NUT® ON TOOL

Figure 2

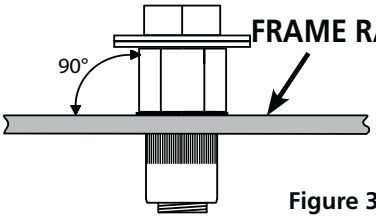


Figure 3

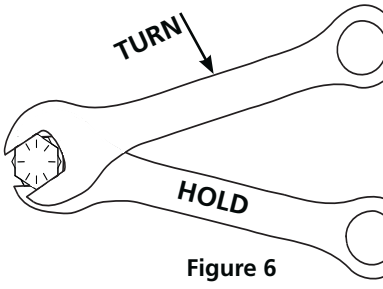


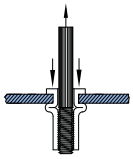
Figure 6

THE DATA BELOW ILLUSTRATES THE STRENGTH OF THE RIV-NUT®

RIVNUT® Fastener Engineering Data

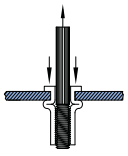
Upset Load (lbs.)		
RIVNUT ® Size	Steel	
	Min. Grip	Max. Grip
3/8-16	4965	5325

Fig. 1



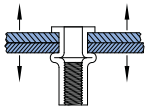
Ultimate thread strength (lbs.)		
RIVNUT ® Size	Steel	
	Min. Grip	Max. Grip
3/8-16	11500	10450

Fig.2



Ultimate tensile strength (lbs.)	
RIVNUT ® Size	Steel
3/8-16	3900

Fig. 3



Single Shear Strength 3/8" Grade 5 Bolt 3,975.8 lbs

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812-482-2932

Cradle Installation

13. The cradle will need to be removed to allow for driiling of the holes and installing the riv-nuts

.

14. The holes for the Riv-nuts NEED to be drilled with the supplied 17/32" drill bit. We suggest drilling the holes with a smaller drill bit first to make it easier to drill with the 17/32" drill bit. Drill all (16) holes in the sides of the frame rails.

15. Install the Riv-nuts in the sides of the frame rails. **Refer to the Riv-nut installation instructions on PAGE 9 for proper Riv-nut installation. Image 15** illustrates a Riv-nut being installed. Install all (16) Riv-nuts in the frame rails.

Cradle Installation

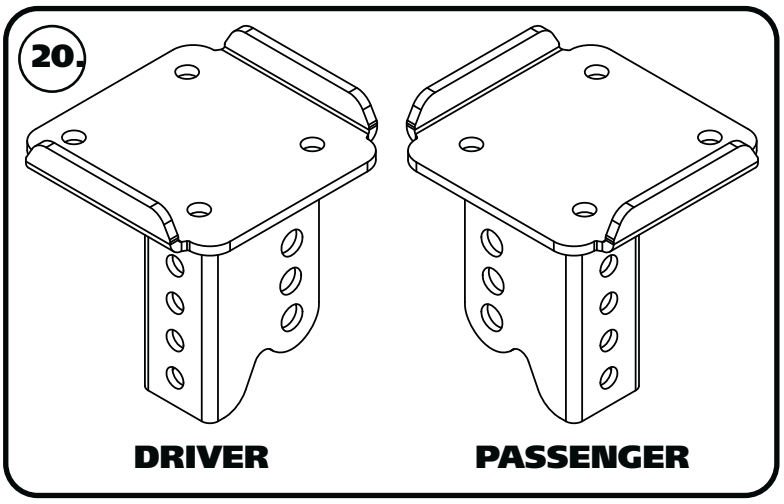
16. Image 16 shows the Riv-nuts installed in the passenger side frame rail.

17. Reinstall the cradle in the car. Reinstall the 5/16" hardware that attaches the cradle to the OEM shock mounting holes. Torque to 9 ft-lbs.

18. Reinstall the 3/8" hardware on the u-bolts. Do not tighten them until all washers and nuts are installed. Tighten each leg of the u-bolt evenly. Torque to 30 ftlbs. Do this for all (4) u-bolts.

Cradle & Axle Mount Installation

19. Install a 3/8" split lock washer, and a 3/8" flat washer on each of (16) 3/8"-16 x 1 1/4" hex bolts. Thread a bolt/washer in to each of the Riv-nuts installed in the frame rails. Make sure the bottom tabs are against the frame rails before tightening the bolts. Torque the bolts to 23 ftlbs.



20. The lower axle mounts are side specific. The bar/shock mount is offset to the inside to help get more wheel and tire clearance.

21. The lower axle bracket will be fastened to the leaf spring pad using the factory T-bolts/U-bolts. The bar mount is offset to the inside of the car to provide more wheel and tire clearance.

Image 21 shows the Driver side.

Axle & Shock Mount Installation

22. New 7/16" nyloks are supplied in the hardware kit. Torque the nuts to 55 ftlbs.

23. The lower shock mount attaches to the lower axle mount. The shock mounting ears will be to the center of the car. The shock mount has (2) mounting holes with the axle mount having (4) holes. The lower mounting hole of each will need to be lined up. Install a 1/2" flat washer on each of (2) 1/2"-20 x 1 1/2" bolts. With the lower mounting holes aligned, insert a bolt/washer in each mounting hole.

24. Install a 1/2" flat washer and 1/2"-20 nylok nut on the threads of each bolt. Torque to 90 ft-lbs.

Front Lower Bar Mount Installation

25. Steps 25 - 29 cover the installation of the front lower bar mount. We recommend reading through the steps before trying to do the installation. The front of the mount has (2)mounting holes and a slot. This surface will get bolted to the front of the OEM leaf spring mount. Using the supplied 17/32" drill bit, drill out the INNER hole that will be above the bar mount.

26. Install a Riv-nut in the inner hole that was drilled out in the previous step. **Refer to the Riv-nut installation instructions on PAGE 9 for proper Riv-nut installation.**

27. The OEM inner leaf spring mounting hole will need to be drilled out to at least 5/8". **After drilling the hole out, hold the new mount in position to check alignment. It may be necessary to drill the inner OEM leaf spring bolt hole out if it doesn't line up with the new mount.** We used a unibit to drill the OEM hole out.

Front Lower Bar Mount Installation

28. The mount will be bolted to the Riv-nut using a 3/8" split lock washer, 3/8" flat washer, & 3/8"-16 x 1 1/4" bolt. A 3/8" flat washer will need to installed on the top side of the mount in between the mount and the sheet metal of the car. Make sure the mount is sitting against the front of the OEM leaf spring mount and lightly tighten the bolt.

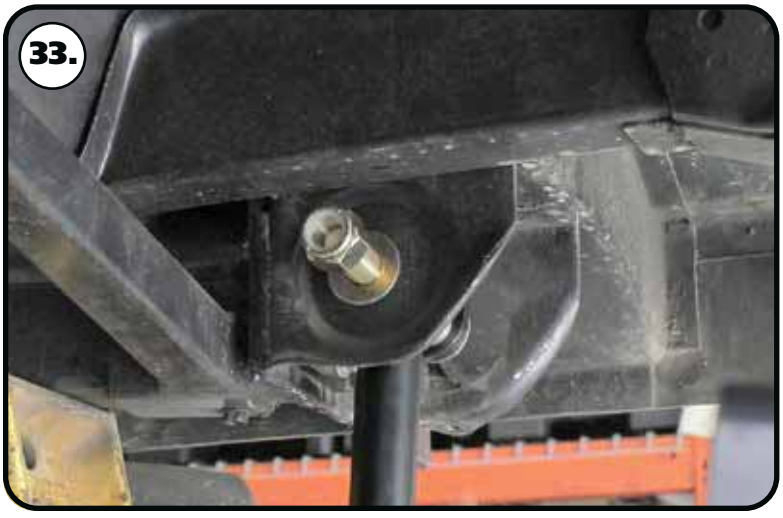
29. Drill the (3) holes in the front of the OEM leaf spring mount using the mount as a drill guide. Use a 3/8" drill bit to drill the holes. The upper slotted hole needs to be drilled in the center of the slot.

30. Install a 3/8" flat washer on each of (3) 3/8"-16 x 1 1/4" bolts. Insert the bolts through the mount and drilled holes. Install a 3/8" flat washer and 3/8"-16 nylok nut on the threads of each bolt. Torque the bolts to 45 ft-lbs. Torque the top bolt to 23 ft-lbs.

Lower Bar Installation

31. The R-joint setup is designed to be offset to the inside of the car. The wider spacer is used on the outside with a narrow spacer on the inside. This will offset the bar to the inside of the car for better wheel and tire clearance. Insert the R-joint and spacers into the front lower bar mount. Align the through hole of the r-joint/spacers with the mounting holes of the lower mount.

32. The front of the Lower Bar is attached with 5/8"-18 x 5" Hex Bolt. Install a 5/8" flat washer on the 5/8"-18 x 5" bolts supplied in the hardware kit. With the R-joint through holes aligned with the OEM leaf spring hole, insert the 5/8" bolt/washer through the aligned mounting holes. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt. Tighten enough to eliminate any gaps in the front mount.



33. Install a 5/8" flat washer and 5/8"-18 nylok nut on the threads of the bolt. Tighten enough to eliminate any gaps in the front mount.

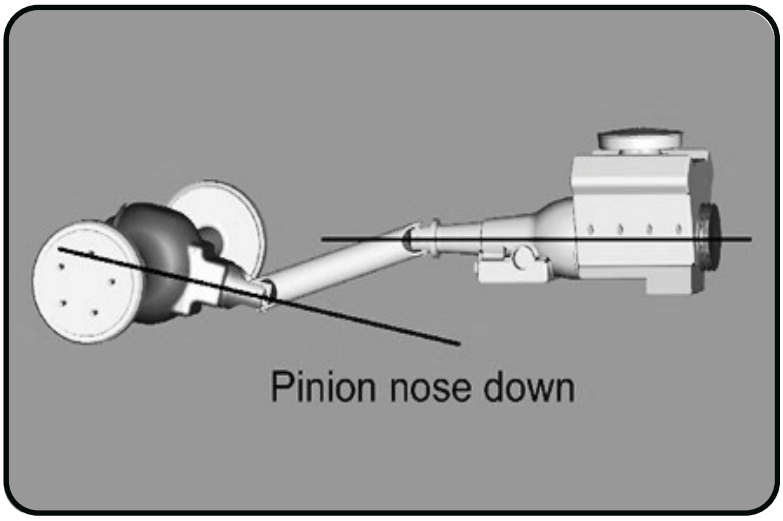
Lower Bar Installation

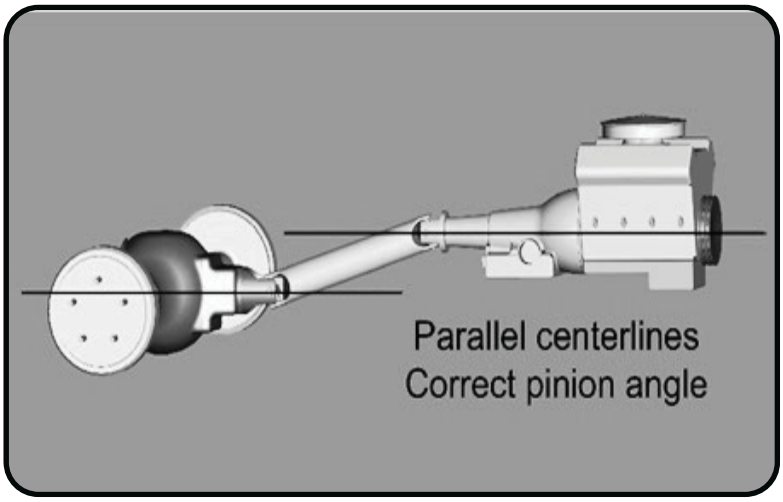
34. The Axle end of the bar gets a NAR-ROW(70013334) R-Joint spacer inserted into each side of the R-Joint. Align the R-joint with the **CENTER** hole of the axle mount.

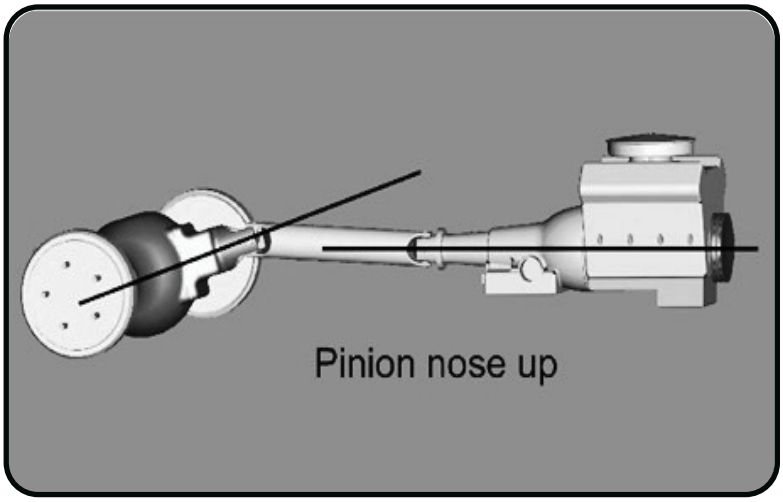
35. Install a 5/8" flat washer on a 5/8"-16 x 3" hex bolt. Insert the bolt/washer through the axle mount/bar. Install a 5/8" flat washer and 5/8"-16 thin nylok nut on the threads of the bolt. Do this for both sides. Tighten the bolt/nut enough to eliminate any gaps.

36. Install a 5/8" flat washer and 5/8"-16 nylok nut on the threads of the bolt. Do this for both sides. Tighten the bolt/nut enough to eliminate any gaps.

Setting Pinion Angle







READ PAGES 54 & 55 ON SETTING PINION ANGLES, UPPER BAR TAB JIG INSTALLATION, & SETTING RIDE HEIGHT.

How do you set the pinion angle? On a single-piece shaft you want to set it up where a line drawn through the center of the engine crank-shaft or output shaft of the transmission and a line drawn through the center of the pinion are parallel to each other but not the same line.

Your transmission angle should be around 3 degrees down in the rear. If it is more or less than 3 degrees, you might want to consider changing it. Too little angle on the transmission reduces the amount of oil getting to the rear bushing. Too much transmission angle will increase the working angles of the u-joints which will increase the wear. With the transmission at 3 degrees down in the rear, you will want to set the pinion 3 degrees up in the front.

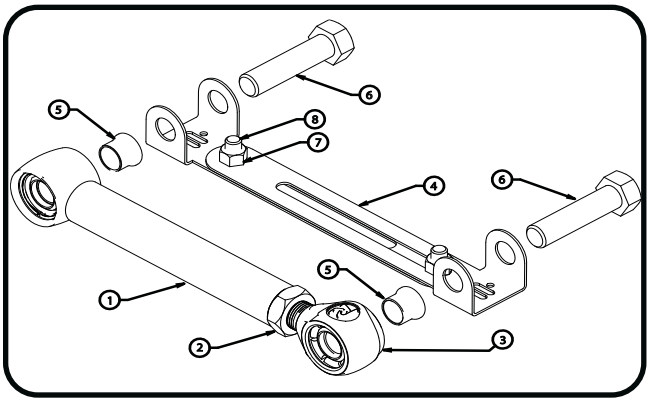
A simple way to do this is to place a digital angle finder or dial level on the front face of the lower engine pulley or harmonic balancer. This will give you a reading that is 90 degrees to the crank or output shaft unless you have real problems with your balancer. At the other end, you can place the same level or angle finder against the front face of the pinion yoke that is also at 90 degrees to the centerline. If you rotate the yoke up or down so both angles match, you have perfect alignment.

Road testing will tell you if you have it right. If you accelerate and you get or increase a vibration, then the pinion yoke is too HIGH. Rotate it downward in small increments of a degree or two until the problem goes away. If you get or increase a vibration when decelerating, then the pinion yoke is too LOW. Rotate it upward to correct it.

Upper Bar Tab Installation Jig

Upper Bar Installation Jig

- This jig has been supplied to aid in the installation of the upper 4 link bar. It can be temporarily used to properly align, locate and weld the tabs onto the axle. It will also ensure that the mounting bolts are parallel to each other.
- Follow the diagram below to set the jig to the same length as the upper bar, use the 3/8" x 3/4" bolt and nuts to set the length.
- Position the axle at ride height. Center the axle left to right between the quarter panels. Set pinion angle.
- Bolt one end of the jig to the cradle using a 5/8" x 3" bolt.
- Using another 5/8" x 3" bolt, fasten the axle tabs to the other end. The tabs will get bolted to the jig inner tab having the long side forward. The outer tab will have the long side rearward. The tabs must be bolted to the outside of the jig.
- Swing the bar down letting the tabs rest onto the axle.
- Check pinion angle, ride height and axle center. Tack-weld the tabs in place.
- Remove jig and install upper bar.
- Repeat this process for the other side.
- Recheck pinion angle, ride height and axle center. (Sound familiar?)
- After the tabs have been tack welded on both sides, remove the setting jig. Let the axle drop down for better access to the tabs. Lay 1" welds on the inside and outside of the tabs. Skip around from one side to the other to avoid overheating the tube.



Item#	Description
1	Upper Bar
2	3/4"-16 Jam Nut
3	R-Joint End
4	Alignment Jig
5	Aluminum Spacer
6	5/8" x 3" Bolt
7	3/8"-16 Nut
8	3/8"-16 x 3/4" Bolt

Installing Axle Tabs & Upper Bars

37. Before welding the tabs you must center the axle and set the pinion angle. This must be done at ride height. Raise the axle until the is 14 1/2" from center eye to center eye on the Shockwave mounts, this is ride height. One trick that we use to maintain the settings are to tack weld a 4" spacer between the axle and the frame.

38. Insert NARROW(70013334) spacers into each side of the R-Joints of the Upper Bar.

39. Align the R-joint with the upper bar mounts in the cradle.

Installing Axle Tabs & Upper Bars

40. Install a 5/8" flat washer on a 5/8"-16 x 3 1/4" hex bolt. Insert the bolt/washer through the upper bar mount/bar. Install a 5/8" flat washer and 5/8"-16 nylok nut on the threads of the bolt. Do this for both sides. Tighten the bolt/nut enough to eliminate any gaps. Do this for both upper bars.

41. When the tabs cool down, insert NAR-ROW(70013334) spacers into each side of the R-Joints of the Upper Bar. Align the R-joint with the upper bar mounts on the axle.

42. Install a 5/8" flat washer on a 5/8"-16 x 3 1/4" hex bolt. Insert the bolt/washer through the upper bar mount/bar. Install a 5/8" flat washer and 5/8"-16 nylok nut on the threads of the bolt. Do this for both sides. Tighten the bolt/nut enough to eliminate any gaps. Do this for both upper bars.

Note: Steps 36 & 37 cover the CoilOver/ ShockWave installation. CoilOvers can be installed with the shock body up or down. ShockWaves must be installed with the shock body down.

Installing Shockwaves/Coilovers

43. Ridetech CoilOvers or ShockWaves require a spacer on each side of the bearing. The upper shock uses a 1/2" ID spacer that is 3/8" long (90002043). The overall width with a spacer on each side will be 1 1/4". **The small side of the spacer goes into the shock bearing.** Insert the Shock with the 1/2" ID Spacers into the shock mount.

44. Line up the holes in the mount with the spacers and shock bearing. Insert a 1/2-20 x 2 1/4" hex bolt into the lined up holes. Install a 1/2"-20 Thin Jam Nylok Nut. Torque to 22 ftlbs

45. Ridetech CoilOvers or ShockWaves require a spacer on each side of the bearing. The lower shock uses a 1/2" ID spacer that is 3/8" long (90002043). The overall width with a spacer on each side will be 1 1/4". **The small side of the spacer goes into the shock bearing.** Insert the shock with the 1/2" ID spacers into the shock mount.

Installing Shockwaves/Coilovers

46. Line up the holes in the mount with the spacers and shock bearing. Insert a 1/2-20 x 2 3/4" hex bolt into the lined up holes. Install a 1/2"-20 Nylok Nut. Torque to 22 ftlbs.

NOTE: BEFORE INSTALLING SHOCKWAVES The correct pinion angle must be set first. Failure to do so could result in damage to the ShockWave by the bag rubbing the Lower Axle Mount.

Note: If installing Shockwaves and you want to locate the air fitting in a different location, the air spring assembly can be rotated on the shock by grabbing the shock and air spring assembly by hand and spinning the shock in the air spring assembly.

The designed ride height of the CoilOver/Shockwave is 14 1/2" center to center.

Double check all the hardware to ensure it is tight.

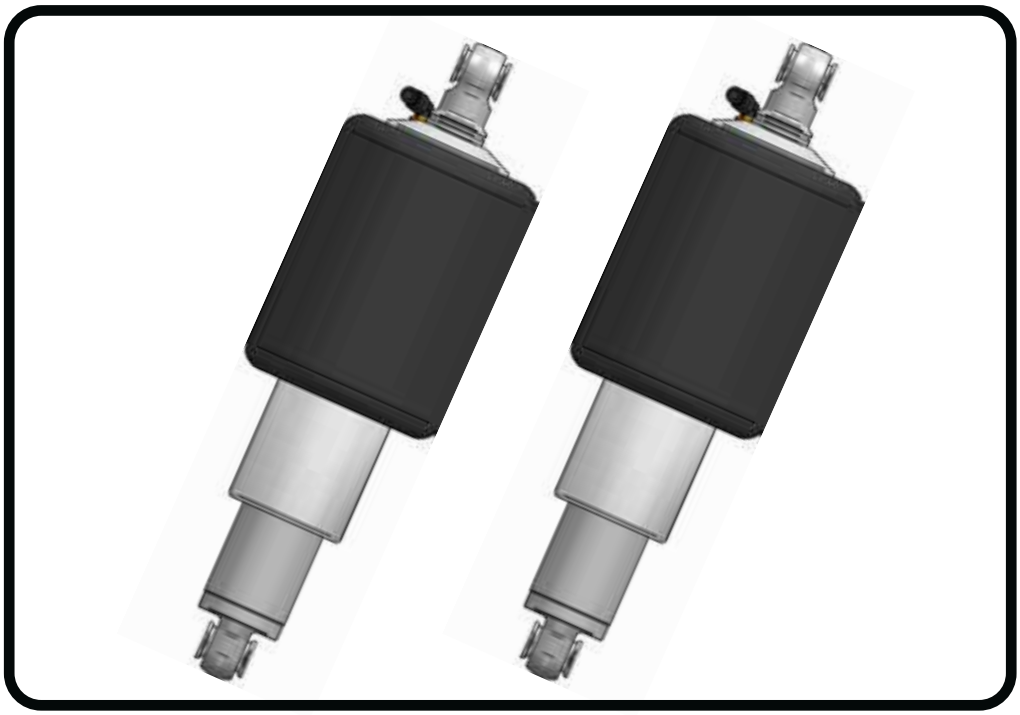
Torque Specifications

COMPONENTS	TORQUE
CRADLE U-BOLTS	30 FT-LBS
CRADLE TO OEM SHOCK MOUNTS	9 FT-LBS
CRADLE RIV-NUT HARDWARE	23 FT-LBS
LOWER AXLE MOUNT TO AXLE	55 FT-LBS
FRONT LOWER BAR MOUNT RIV-NUT HARDWARE	23 FT-LBS
FRONT LOWER BAR MOUNT 3/8" NYLOK NUT	45 FT-LBS
4-LINK BAR HARDWARE	TIGHTEN TO ELIMINATE GAPS
SHOCK MOUNTING HARDWARE	22 FT-LBS

ridetech

Installation Instructions

Part # 21150701 - 5.2" Stroke HQ Series Shockwave



Recommended Tools

7000 Series Bellow, Eye/Eye 5.2" Shock

Installation Instructions

Table of contents

ShockWave Dimensions:

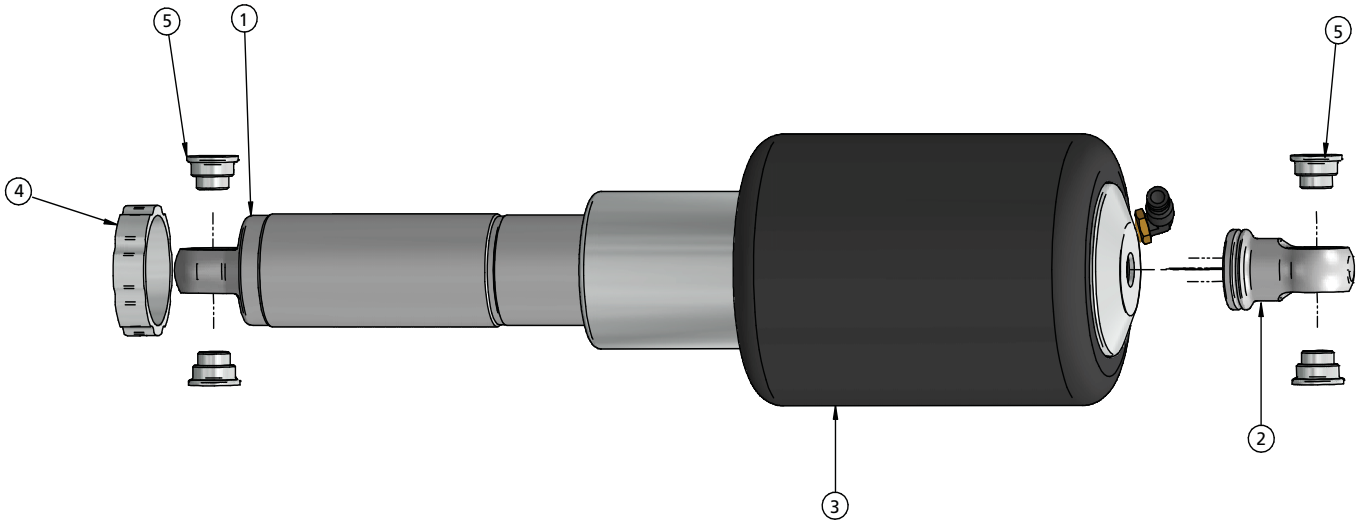
Center of bearing to Center of bearing:

Compressed:	11.85"
Ride Height:	14.60"
Extended:	16.42"

www.ridetech.com

Major Components .....In the box

Item #	Part #	Description	QTY
1	982-10-805	5.2" Stroke HQ Series Shock	2
2	815-05-022	Shock Eyelet	2
3	24090799	7000 Series, 4" Diameter AirSpring	2
4	234-00-153	AirSpring Locking Ring (Installed on Shock)	2
5	90002044	Spacer kit - 1/2" ID and 5/8" ID	4
	90001994	5/8" ID Bearing (installed in shock and eyelet)	4
	90001995	Bearing Snap Ring (installed in shock and eyelet)	8



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

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. WE TORQUE THE NUT TO 80 INLBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH..

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 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 and keep adjusting the unsatisfied end until the overall ride quality is satisfactory.