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Installation Instructions

Part # 12090301 - 1964-1966 Ford Mustang TQ Series CoilOver System

Front Components:

12099599	Front TruTurn Kit
12093511	Front CoilOvers
12099100	Front SwayBar

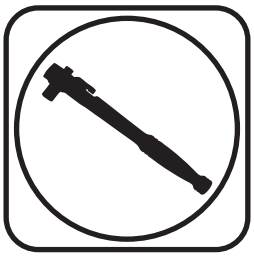
Rear Components:

12087199	Rear 4Link System
12096511	Rear Coilover Instructions

Miscellaneous Components:

85000000	Spanner Wrench

Recommended Tools



1964-1966 Ford Mustang Coilover Installation Instructions

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Pages 17-20..... Front CoilOvers
Pages 21-25..... Front SwayBar
Pages 26-34..... Rear 4-Link
Pages 35-37..... Rear CoilOvers
Pages 38-39..... Shock Adjustment

Mini-Starter required to clear TruTurn Centerlink Adapter (not Included).

The OEM Front Brakes will not work with this kit. (See Page 7 for details)

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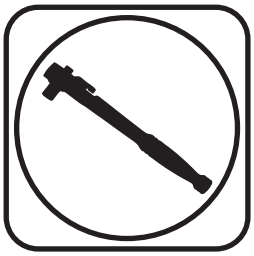
Installation Instructions

Part # 12099599 - 1964-1966 Ford Mustang Front TruTurn System

Recommended Tools



1966-1966 Ford Mustang TruTurn System

Installation Instructions

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Page 8-10..... Installing Control Arms
Page 10..... Spindle Installation
Page 11-12..... Centerlink Adapter Installation
Page 13..... Steering Arm & Stop Installation
Page 14-15.....Tie-Rod Assembly and Installation

Mini-Starter required to clear TruTurn Centerlink Adapter (not Included).

The OEM Front Brakes will not work with this kit. (See Page 7 for details)

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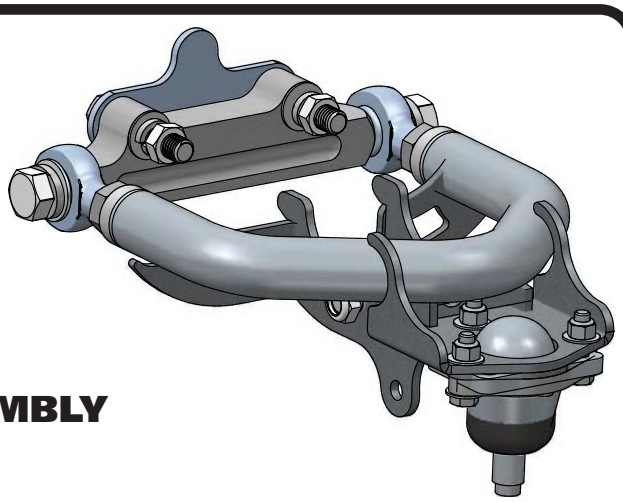
REV1 10/8-/20

Major Components Assembled .....In the box

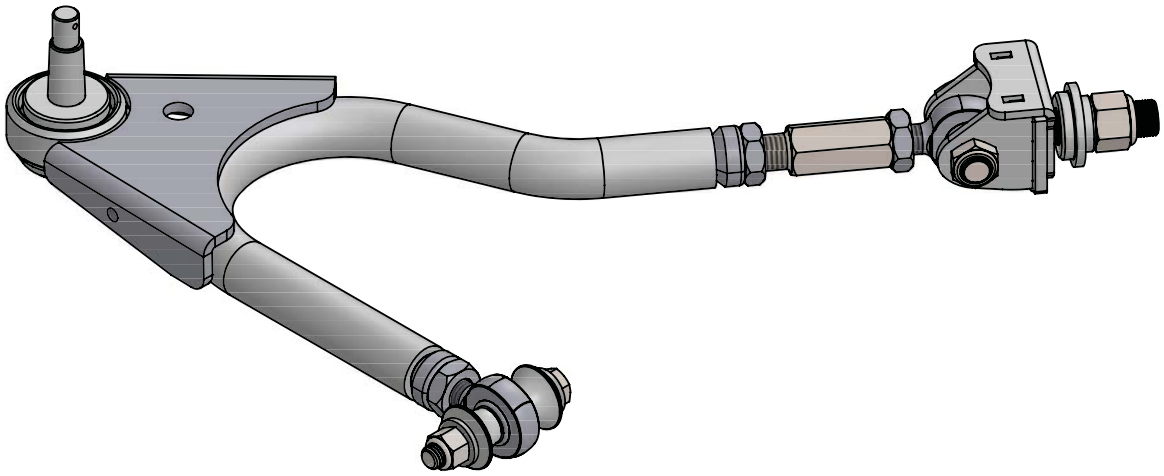


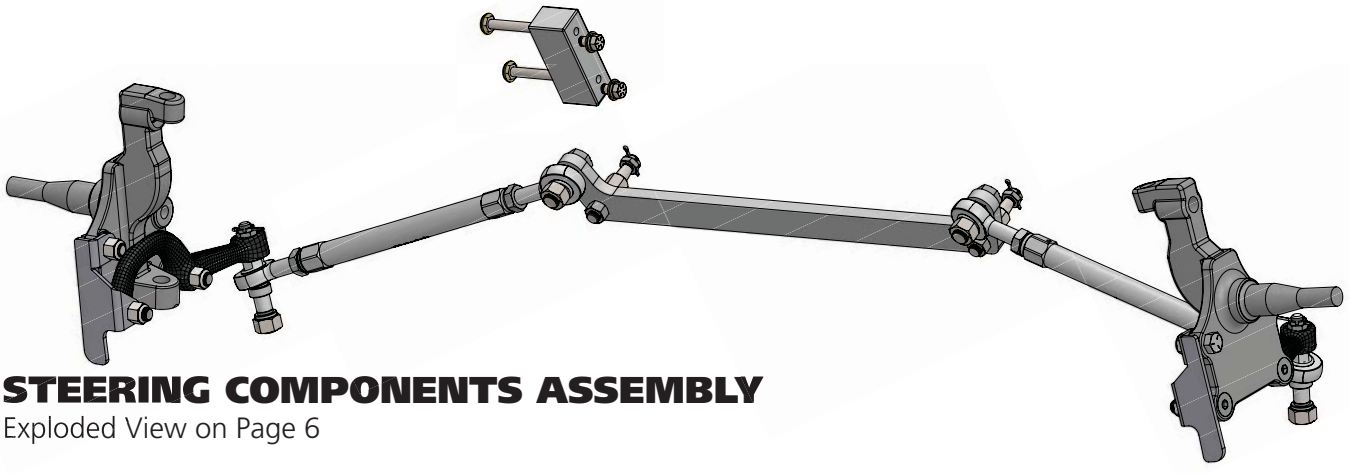
DRIVER UPPER CONTROL ARM ASSEMBLY

Exploded View on Page 4

DRIVER LOWER CONTROL ARM ASSEMBLY

Exploded View on Page 5





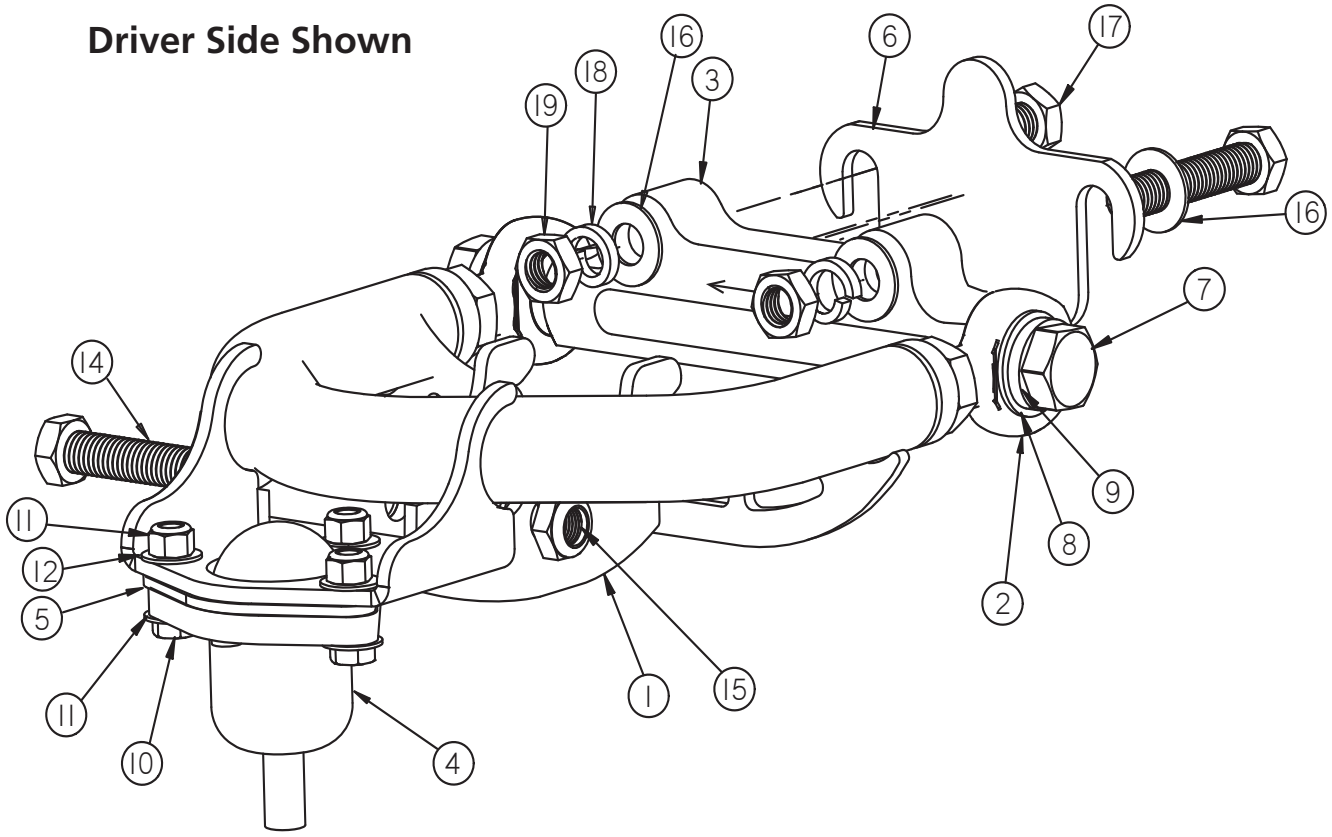
STEERING COMPONENTS ASSEMBLY

Exploded View on Page 6

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

Item #	Part Number	Description	QTY
1	90002339	Driver Upper Control Arm **(Shown)**	1
1	90002340	Passenger Upper Control Arm	1
2	90001589	Heim End	4
3	90009967	Upper Cross Shaft	2
4	70010866	Ball joint Assembly	2
5	90002633	Ball joint Spacer	2
6	90002341	3/16" Alignment Shim	2
7	99621002	5/18"-18 x 1 3/4" Hex Bolt	4
8	99623001	5/8" SAE Flat Washer	4
9	99623002	5/8" Split Lock Washer	4
10	99311002	5/16"-18 x 1 1/4" Hex Bolt	6
11	99312003	5/16"-18 Nylok Nut	6
12	99313002	5/16" SAE Flat Washer	12
13	90002067	Shock Bearing Spacers	4

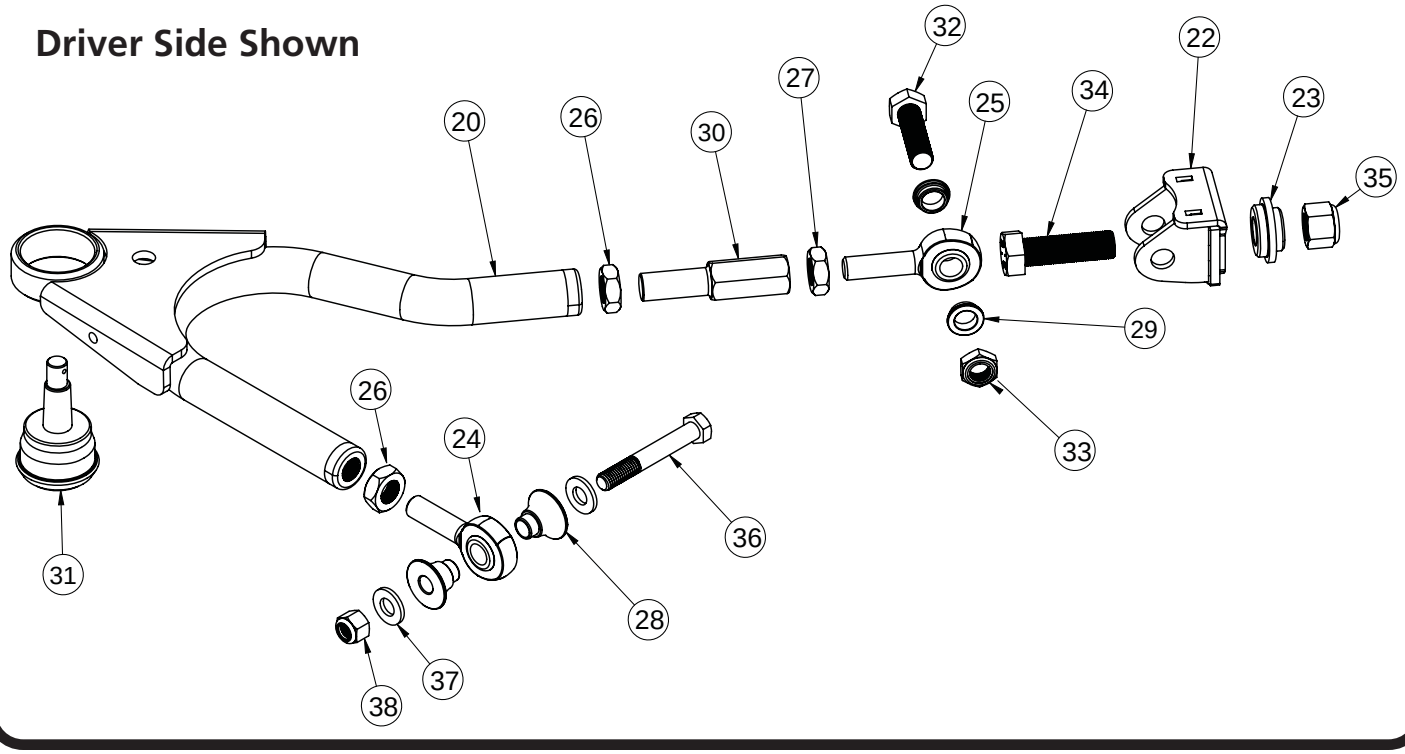
Driver Side Shown



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

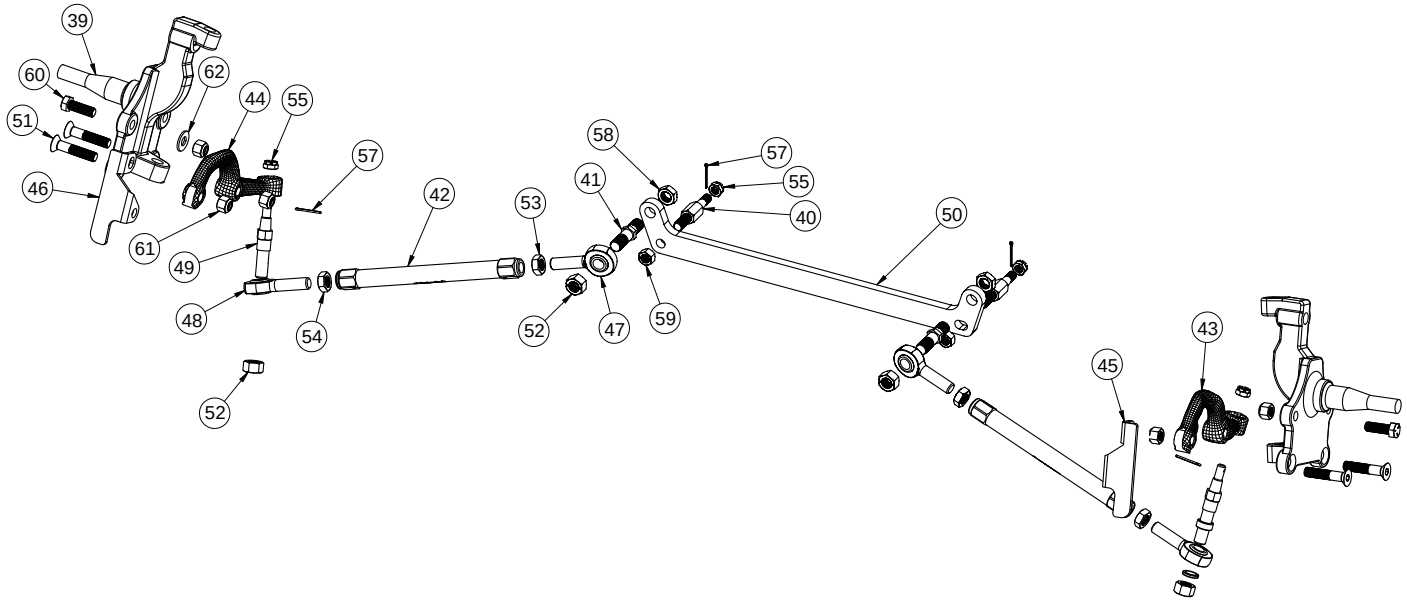
Item #	Part Number	Description	QTY
20	90003221	Driver Lower Control Arm **(Shown)**	1
21	90003222	Passenger Lower Control Arm	1
22	90003223	Strut Rod Frame Bracket Assembly	2
23	90003224	Frame T-Bushing	2
24	90001589	3/4"-16 x 5/8" Bolt Heim End - RH	2
25	90001591	3/4"-16 x 5/8" Bolt Heim End - LH	2
26	99752004	3/4"-16 Jam Nut - RH	4
27	99752006	3/4"-16 Jam Nut - LH	2
28	90002338	Frame Heim Spacer - 1/2" ID x 1.00" Long	4
29	90003225	Strut Rod Bracket Heim Spacer - 5/8" ID x .320" Long	4
30	90002582	Heim End Double Adjuster	2
31	90000898	Lower Ball joint	2

Driver Side Shown



TruTurn Steering Components .....In the box

Item #	Part Number	Description	QTY
39	11009303	Ridetech Tall Spindle	1 pr
40	90002345	Drag Link Stud	2
41	90002351	Inner Tie Rod Stud	2
42	90002346	Tie-Rod Adjuster	2
43	90002347	Driver Steering Arm	1
44	90002348	Passenger Steering Arm	1
45	90002349	Bolt On Steering Stop - Driver	1
46	90002350	Bolt On Steering Stop - Passenger	1
47	90001582	Heim End - 5/8"-18 x 5/8" Bolt - LH Thread	2
48	90001590	Heim End - 5/8"-18 x 5/8" Bolt - RH Thread	2
49	90009931	Outer Tie Rod Stud	2
50	90002344	Centerlink Adapter	1



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Installation Instructions

Hardware Shown in Diagrams .....Kit# 99010164

ITEM #	Shock To Upper Control Arm		QTY
14	99501005	1/2"-13 x 3 1/2" bolt GR8	2
15	99502009	1/2"-13 Nylok Nut GR8	2
16	99503014	1/2" SAE Flat Washer GR8	4
	Upper Control Arm To Car		
16	99503014	1/2" SAE Flat Washer GR8	8
17	99501050	1/2"-13 x 2 1/2" bolt GR8	4
18	99503015	1/2" SPLIT LOCK WASHER, GR8	4
19	99502021	1/2"-13 HEX Nut GR8	4
	Upper Ball Joint To Spindle		
	99502017	1/2"-20 Castle Nut	2
	Heim End Coupler		
26	99752004	3/4-16 Jam Nut	2
27	99752006	3/4-16 LH Jam Nut	2
	Heim End To Strut Rod Frame Bracket		
32	99621031	5/8-18 X 2 1/4" Hex Bolt Gr8	2
33	99622006	5/8-18 Thin Nylok Nut	2
	Strut Rod Frame Bracket To Car		
34	99751005	3/4-16 X 2" Hex Bolt Gr8	2
35	99752001	3/4-16 Nylok Nut Gr8	2
	Lower Control Arm To Car		
36	99501005	1/2-13 X 3 1/2" Bolt GR8	2
37	99503001	1/2" SAE Flat Washer	4
38	99502001	1/2-13 Nylok Nut	2

ITEM #	Spindle To Steering Arm		QTY
51	99501054	1/2-20 X 2 1/2" Flat Head Socket Cap Screw	2
	Steering Linkage		
52	99622003	5/8"-18 TOP LOCK NUT	4
53	99800003	5/8"-18 RH Jam Nut	2
54	99800002	5/8"-18 LH Jam Nut	2
55	99432005	7/16"-20 Castle Nut	2
56	99433002	7/16" SAE Flat Washer	2
57	99952002	3/32" Cotter Pin	2
	Draglink Adapter		
55	99432005	7/16"-20 Castle Nut	2
56	99433002	7/16" SAE Flat Washer	4
57	99952002	3/32" Cotter Pin	2
58	99622005	5/8"-18 THIN mechnical locking nut	2
59	99502010	1/2"-20 Mechanical Locking Nut	2
	Steering Stop		
60	99501053	1/2"-13 x 1 1/2" Hex Bolt GR8	2
61	99502009	1/2"-13 Nylok Nut GR8	2
62	99503014	1/2" SAE Flat Washer GR8	2

Getting Started.....

Congratulations on your purchase of the Ridetech TruTurn System. This System has been designed to give your Falcon excellent handling along with a lifetime of enjoyment. Some of the key features of the TruTurn 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.**

Mini-Starter required to clear TruTurn Centerlink Adapter (not Included).

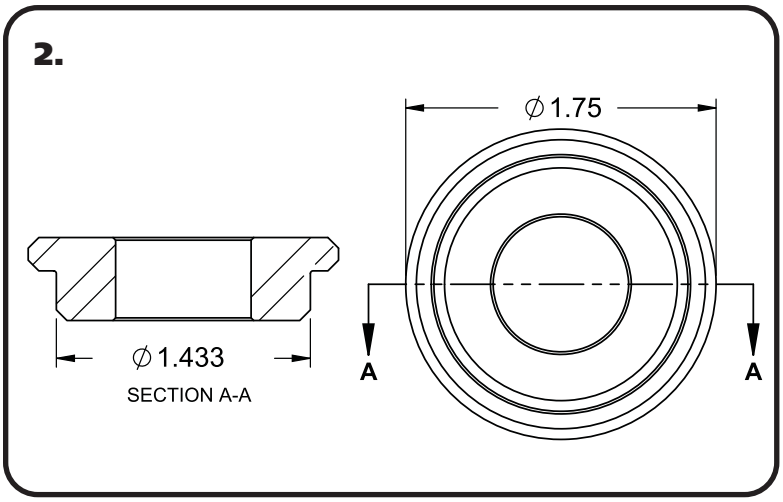
Brake Kits

The Falcon TruTurn Suspension package uses a GM Spindle used on 67-69 F body, 64-72 A body, and 68-74 X body. Any brake kit designed for this spindle will work. It just **needs a 4 ½" on 5 bolt pattern** to keep the same bolt pattern as the rear of the Falcon.

We collaborated with Baer and Wilwood to develop brake kits that work in harmony with our suspension. Depending on wheel size and your braking needs, both Wilwood and Baer have brake kits that will work with your car. Please visit our website to review options for your application.

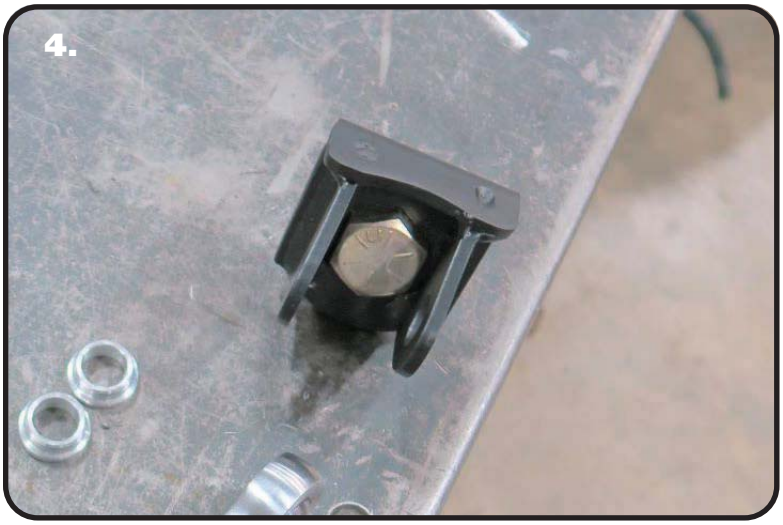
1. Remove the entire front suspension from the car including the centerlink, idler arm, and pitman arm. Refer to a Factory Service Manual for the proper method. The control arms, spindles, and steering linkage will all be replaced with the TruTurn package.

Installing Strut Rod T-Bushing



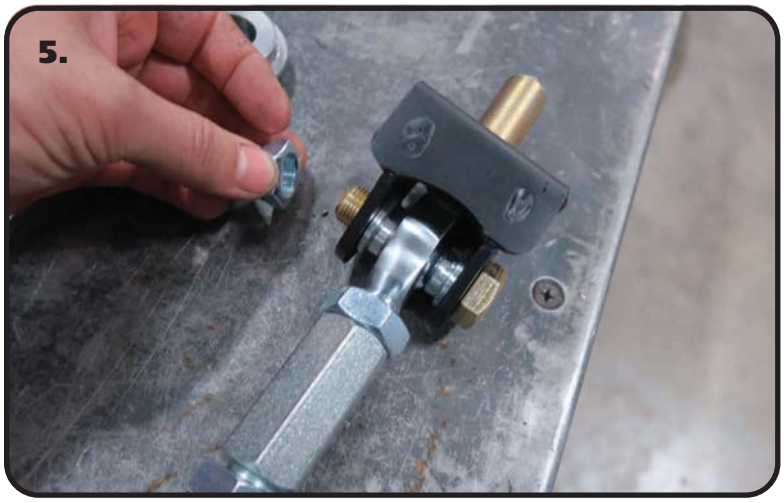
2. This kit includes a t-bushing for the strut rod bushing factory hole.

3. Test fit the t-bushing in your car's strut rod mount to help determine if the strut rod hole needs buffed out. The t-bushing is installed from the front side of the car.



4. Insert 3/4"-16 x 2" bolt in the strut rod frame bracket. The head of the bolt needs to be on the side of the bracket with the 2 mounting ears.

Installing Lower Control Arm



5. With the 3/4"-16 x 2" bolt installed in the bracket, attach the bracket to the front heim of the control arm with the flat side of the bracket on the same side as the ball joint pin. The bracket is installed with a 5/8" ID x .320" spacer on each side of the heim. The spacers need to be installed with the small outside diameter against the heim end. Align the holes of the bracket with the through holes of the spacers and heim. Install a 5/8"-18 x 2 1/4" bolt through the aligned holes. Install a 5/18"-18 thin nylok nut on the threads of the bolt and torque to 45 ftlbs.

6. Insert the 3/4" bolt of the strut rod adapter bracket through the center hole of the t-bushing. The t-bushing and threads of the bolt should be to the front of the car.

7. Install a 3/4"-16 nylok nut on the threads of the bolt sticking through the t-bushing. Torque to 120 ftlbs.

Installing Lower & Upper Control Arm

8. Install the 2 aluminum spacers into the rod end that goes into the factory control arm pivot. Slip the control arm into the factory frame mount.

9. Align the factory holes with the control arm through hole. Install a 1/2" flat washer on a 1/2"-13 x 3 1/2" hex bolt. Insert the bolt/ washer through the aligned holes. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt. Torque to 75 ftlbs.

10. Bolt the upper StrongArm to the body using ½"-13 x 2 ½" bolts, flat washers and lock washers. The ARROW points to the front of the vehicle. A shim is supplied and may need to be installed between the body and the arms to achieve proper alignment. The arms are preset at the factory so the alignment should be close, but the vehicle must be aligned before driving.

Note: The upper arm mounting holes on many cars have been redrilled 1" lower. This is done to improve the handling. Our cross shaft has the drop built into it; **make sure to use the factory mounting holes.**

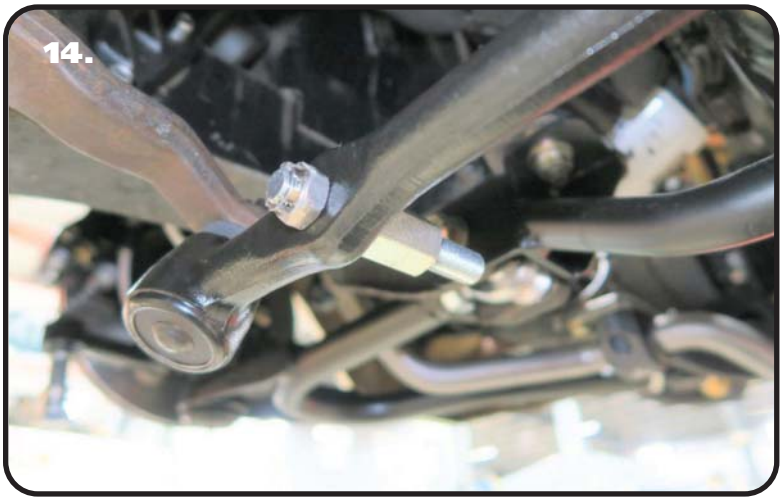
Upper Control Arm & Spindle Installation

11. Install a 1/2" flat washer, 1/2" split lock washer, and 1/2"-13 nut on the threads of the 2 bolts sticking through into the engine compartment. Torque to 75 ftlbs.

12. Install the spindle on the lower ball joint pin. Torque the ball joint castle nut to 65 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.

13. Install the spindle on the upper 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.

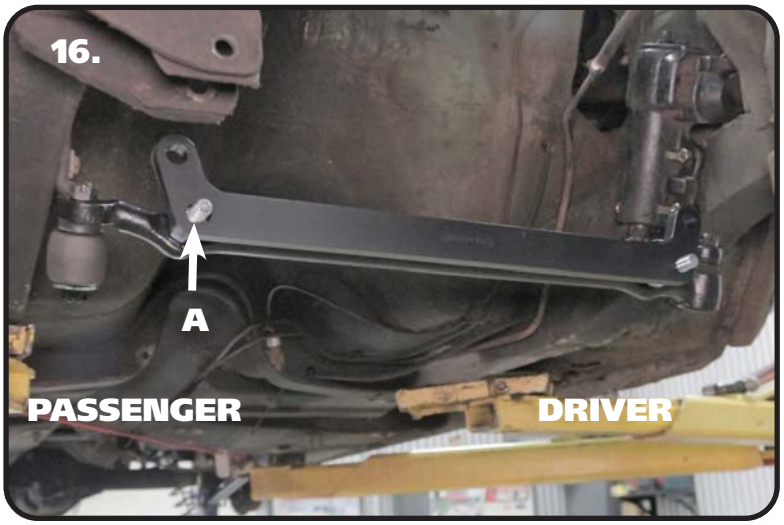
Centerlink Adapter Installation



14. The studs with the long hex on them 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.

15. Torque the nuts to 35 ftlbs and tighten as needed to align cotter pin. Install cotter pin and bend the ends.



16. 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

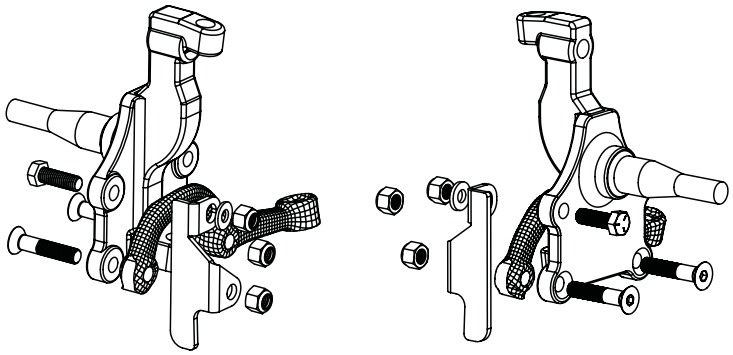
17. Install the 1/2"-20 mechanical locking nuts and torque to 50 ftlbs.

18. 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.

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

Steering Arm & Stop Installation

20a.



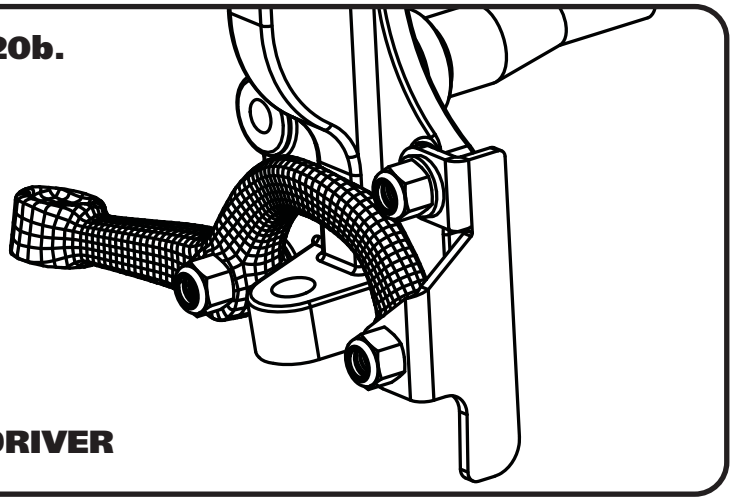
PASSENGER DRIVER

20a. Install the steering arms and steering stops onto the spindle using **Images 20a & 20b** as a reference. The steering arms angle toward the centerlink, and the tie rod mounting holes are to the rear of the car. The steering stops are marked D and P.

The steering arm is attached to the spindle using ½"-20 x 2 ½" flat socket cap bolts and nylok nuts. Torque to 100 ftlbs.

The upper tab of the steering stop is attached to the spindle using ½"-13 x 1 ½" hex head bolt, 1/2" SAE flat washer, and Nylok. Torque to 75 ftlbs.

20b.



DRIVER

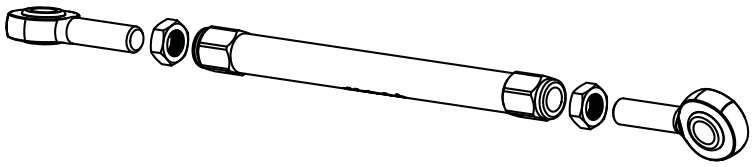
29b. You will notice in **Image 29b**, the bottom hole of the steering stop is mounted on top of the front steering arm mounting hole. The top mounting tab of the steering stop is on the engine side of the spindle.

21.

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

Tie Rod Assembly & Installation

22.



22. 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 14 1/4" 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.**

23. Install one end of the tie rod onto the stud of the centerlink adapter. Install a 5/8"-18 mechanical locking nut on the threads of the stud and torque to 45 ftlbs.

24. Install the outer end of the tie rod on the steering arm stud.

Tie Rod Installation

25. Install a 5/8"-18 mechanical locking nut. Torque to 45 ftlbs.

26. 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.

Suggested Alignment Specs:

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

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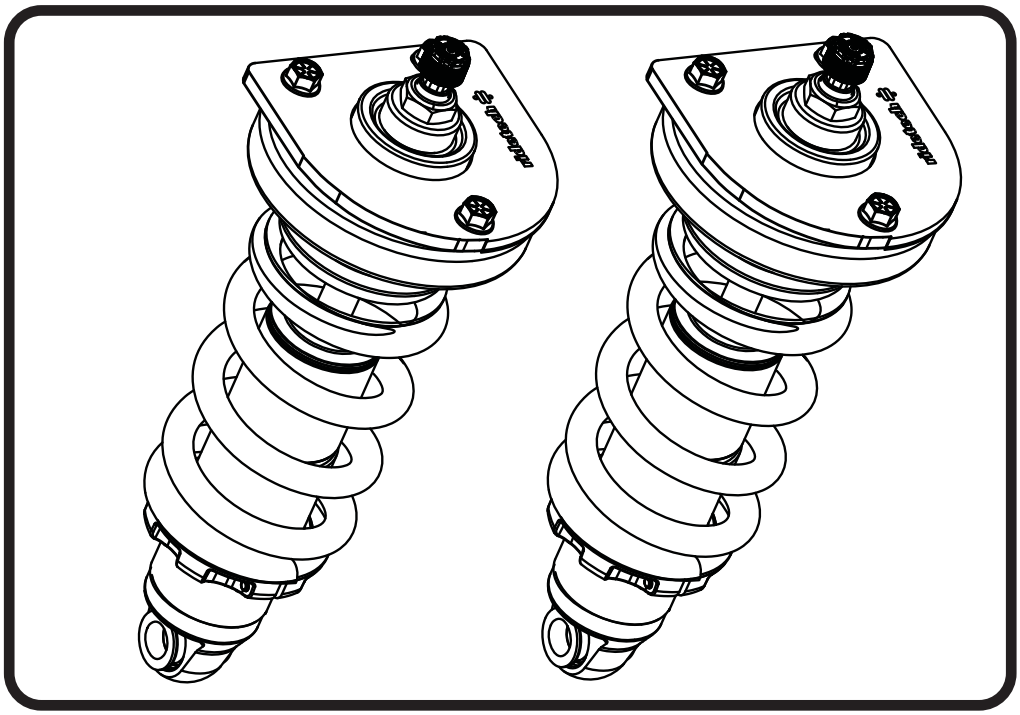
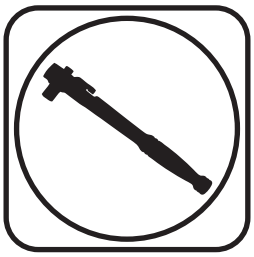
Installation Instructions

Part # 12093511 - 64-66 Ford Mustang Front TQ CoilOver, for StrongArms



Recommended Tools



1964-1966 Mustang TQ Series Front CoilOvers

Installation Instructions

THESE COILOVERS ARE DESIGNED TO BE USED WITH RIDETECH STRONGARMS

Table of contents

Page 18..... Included Components
Page 19-20..... CoilOver Installation

CoilOver Dimensions:

Mount to Mount:	
Compressed:	10.30”
Ride Height:	12.13”
Extended:	13.32”

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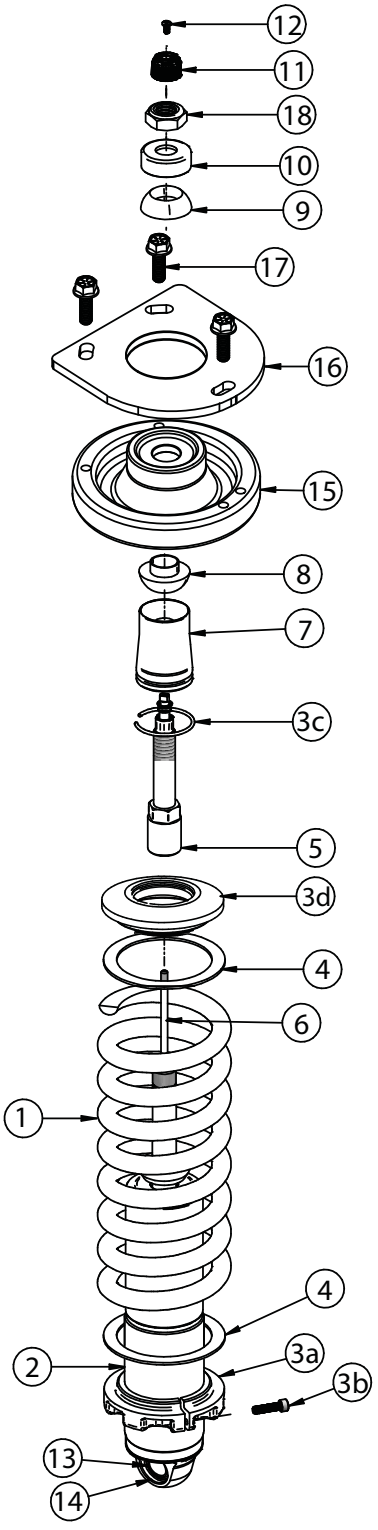
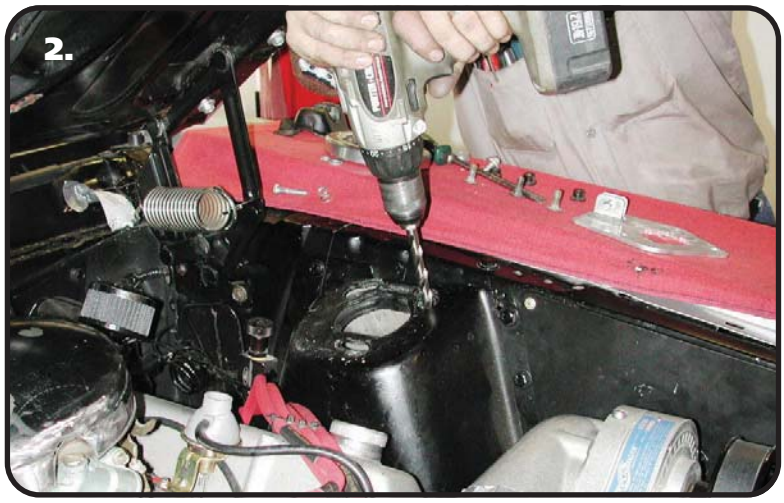
812-482-2932

Major Components .....In the box

Item #	Part Number	QTY	Description
1	59080650	2	Coil Spring, 8" free length, 650lb
2	986-10-070	2	3.6" Travel TQ Threaded Shock,
3a	803-00-199	2	Locking Ring
3b	803-00-199	2	Locking Ring Locking Screw
3c	803-00-199	2	Upper Drop Cap Retaining Ring
3d	803-00-199	2	Coilover spring Cap
4	70010828	4	Delrin Spring Washer (NO LOGO)
5	90009988	2	Fox stud adjuster assembly, 2.00"
6	70012160	2	2.00" Stud Top Metering Rod; T
7	90002312	2	2.00" Stud Top BASE for FOX
8	90001903	2	Lower Delrin Ball Half
9	90001904	2	Upper Delrin Ball Half
10	90001902	2	A3026 Master Series Aluminum Cap
11	210-35-120-0	2	Damping Adjust Part: Rebound Knob
12	90009969	2	Fastener, Standard: Screw [#4-40]
13	90001994	2	Shock Bearing .625" ID x 1.0"
14	90001995	4	Internal Snap Ring for 1" O.D.
15	90002356	2	64-70 Mustang frt upper billet
16	90000563	2	A699 64-66 Mustang upper plate
17	99311012	6	5/16"-18 X 1" Flange Bolt
18	99562003	2	9/16-18 NYLOK JAM NUT ZINC
	026-05-000	4	Reservoir Mount
	99050000	12	M5 Reservoir Mounting Screws
	85000003	1	Allen Wrench for Reservoir Screws



ShockWave Installation



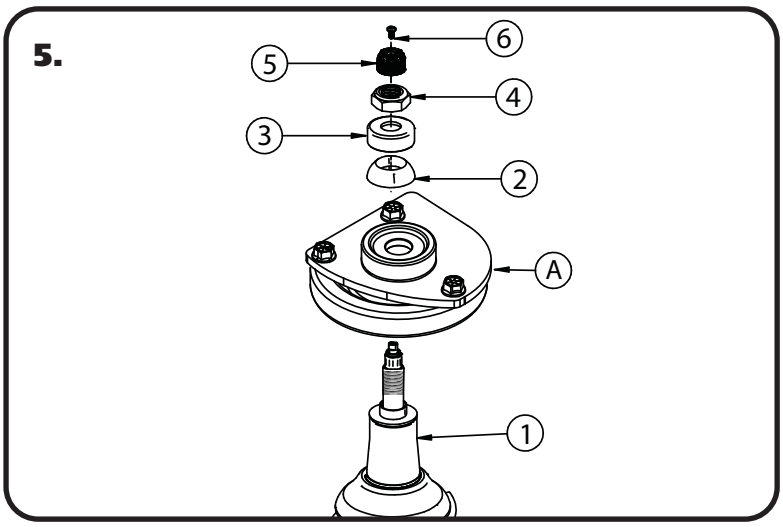
1. Install the Ridetech StrongArms. Also, it is easier to install the ShockWave with the CoilSpring Shield removed.

2. Drill a 3/8" Hole in the CENTER of the large part of the Key Hole Slots. Do this for each Key Hole in the driver and passenger shock towers.

3. Hold the Aluminum Upper Mount agianst the bottom of the shock tower lining up the threaded holes with the holes drilled in the shock tower.

4. Lay the Upper Plate on Top of the shock tower with the ShockWave Mount protruding through the large center hole. Line up the the holes in the Upper Plate with the holes drilled in the shock tower and the holes in the ShockWave mount. If the INNER Hole doe not line up, flip the plate over. Install a 5/16" x 1" Flange Bolt in each hole and tighten.

CoilOver Installation



5. Place the CoilOver into the coil spring pocket with the stud sticking through the Aluminum upper mount (A). See assembly **Diagram 5**.

1. CoilOver 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 INLBS USING A 7/8" CROWS FOOT WRENCH ON A TORQUE WRENCH.

6. Install a bearing spacer in each side of the Bearing. The SMALL part of the spacer inserts into the Inside diameter of the shock bearing.

7. Raise the lower arm up to the CoilOver. The coilover/spacers will slip between the 2 shock mounting straps of the control arm. Line up the shock mounting holes with the through holes of shock Install a 1/2" flat washer on a 1/2" x 3 1/2" hex bolt. Insert the bolt/washer in the aligned holes. Install a 1/2" flat washer and 1/2"-13 nylok nut on the threads of the bolt. Torque to 50 ftlbs.

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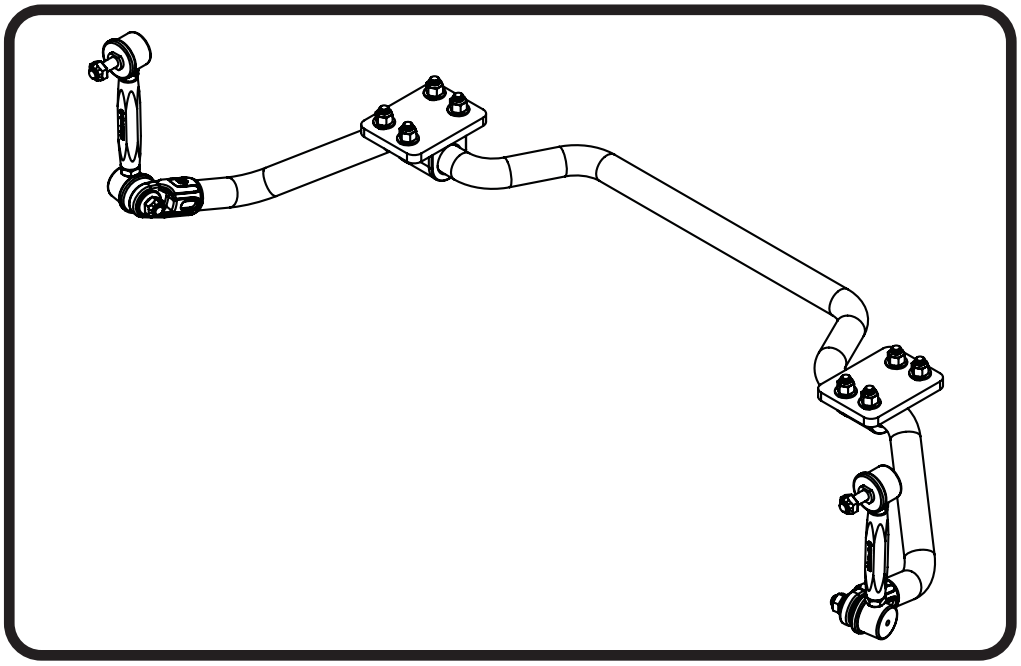
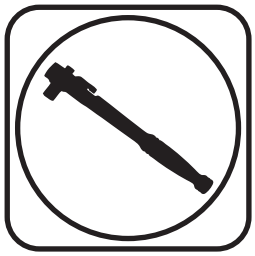
Installation Instructions

Part # 12099100 - 1964-1966 Mustang Front MuscleBar



Recommended Tools



1964-1966 Mustang Front MuscleBar
Installation Instructions

Table of contents

Page 22..... Included Components and Hardware List
Page 23-25..... Sway Bar Installation

Major Components .....In the box

Part #	Description	QTY
90003248	Front Sway Bar	1
70012402	Delrin Sway Bar Bushing Liner	2
90002572	Bushing Strap	2
90002539	Sway Bar Bushing	2
90003213	Offset Mounting Plate	2
90002571	90 Degree End Link	4
90001253	Sway Bar End Link T-Bushing	2
90001258	End Link to Sway Bar Adapter Bushing	4

Hardware List .....In the box (Kit# 99010162)

Part #	Description	Usage	QTY
99371005	3/8"-16 x 1 1/4" Hex Bolt	Bushing Strap to Frame Mount	8
99373002	3/8" Flat Washer	Bushing Strap to Frame Mount	16
99372001	3/8"-16 Nylok Nut	Bushing Strap to Frame Mount	8
99623001	5/8" SAE Flat Washer	NOT USED FOR THIS INSTALL	2

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.

Remove the OEM sway bar to prepare for the MuscleBar installation.

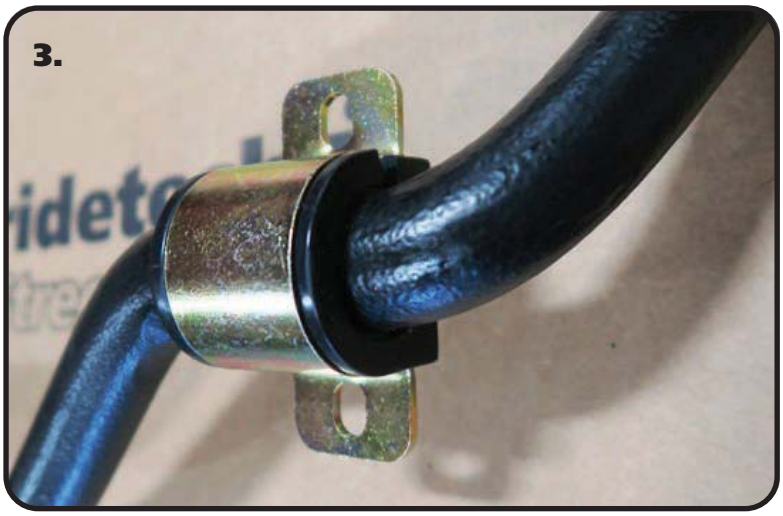
This sway bar kit utilizes a delrin liner in the sway bar Bushing. The delrin liner allows the sway bar to move freely and quietly in the bushing. The delrin is self-lubricating, no lubrication is required.

1. The delrin liner is split on one side to ease installation. Install a liner on each side of the swaybar in the approximate location they will need to be when installing the sway bar on the car.

Note: The delrin is self-lubricating, no lubricant is needed.

Sway Bar Installation

2. Open up the poly sway bar bushings and install them over the delrin sleeves.

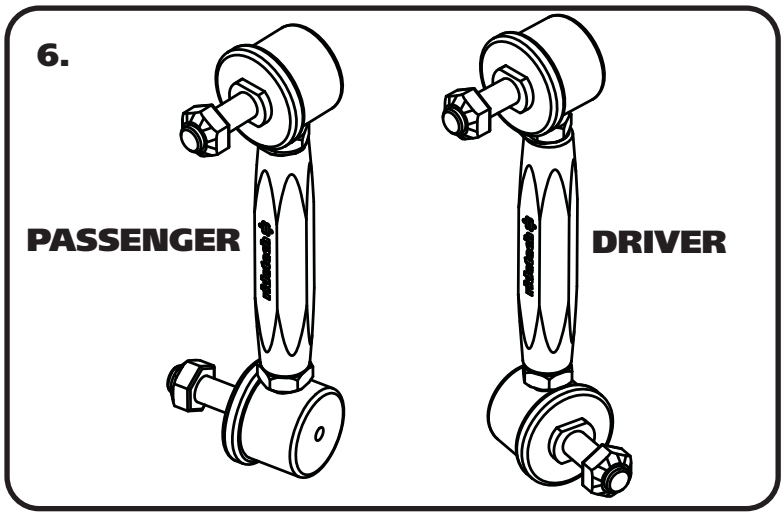


3. Install bushing straps over the poly sway bar bushings.

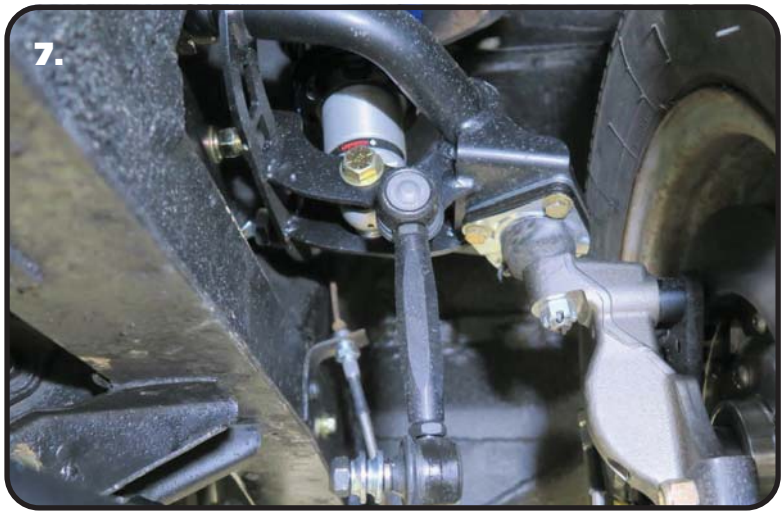
4. The offset mounting plate will get bolted to the OEM sway bar mount. It is bolted to the OEM holes using the SLOTTED holes in the offset plate with the (2) round holes offset toward the engine. Install a 3/8" flat washer on (2) 3/8"-16 x 1 1/4" hex bolts. A bolt/washer will go in each of the (2) mounting holes. Insert a bolt/washer through each slotted hole and OEM mounting hole. With the bolt/washers installed, install a 3/8" flat washer on the threads followed by a 3/8"-16 nylok nut. Torque the hardware to 30 ftlbs.

Sway Bar Installation

5. Slide the sway bar into position on the car. The sway bar arms will be bending upward with the center dropping toward the ground. Install a 3/8" flat washer on (4) 3/8"-16 x 1 1/4" hex bolts. A bolt/washer will go in each of the 4 mounting holes. With the bolt/washers installed, install a 3/8" flat washer on the threads followed by a 3/8"-16 nylok nut. Do **NOT** completely tighten the hardware. It will be left partially loose until the end links are installed.



6. The driver and passenger sway bar linkages are clocked opposite of each other. With the top stud pointing toward you, the stud on the lower should be pointing to the right for the driver side, to the left for the passenger side. Using **Diagram 6** as a reference, set the linkage to 6" center to center. Snug the jam nuts against the center adapter.



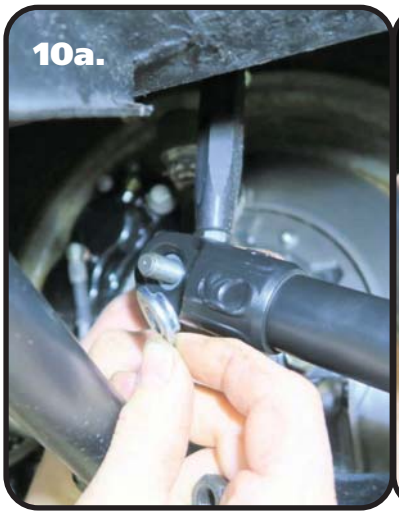
7. Remove the nut from the top end link. Insert the stud of the end link in the tab of the upper control arm with the stud pointing to the rear of the car. The lower stud should be pointing toward the engine. Install the nut on the stud of the end link and torque to 37 ftlbs. Repeat on the second side.

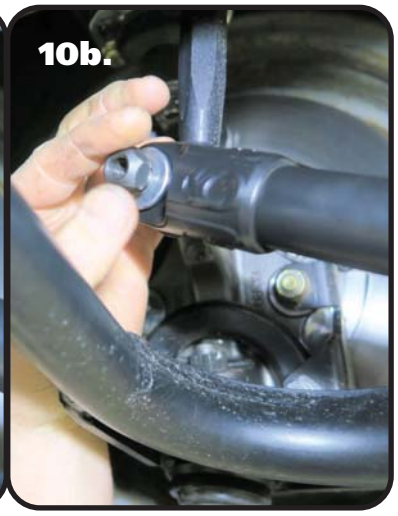
Sway Bar Installation

8. Remove the nut from the bottom end link. 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.

Drivers side shown in picture.

9. Insert the 90 degree end link/t-bushing into the swaybar end with the threads pointing toward the engine.





10a & 10b. Install a 2nd t-bushing with the small diameter into the swaybar. Install the nut and torque to 37 ftlbs. Do this for both sides.

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

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

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

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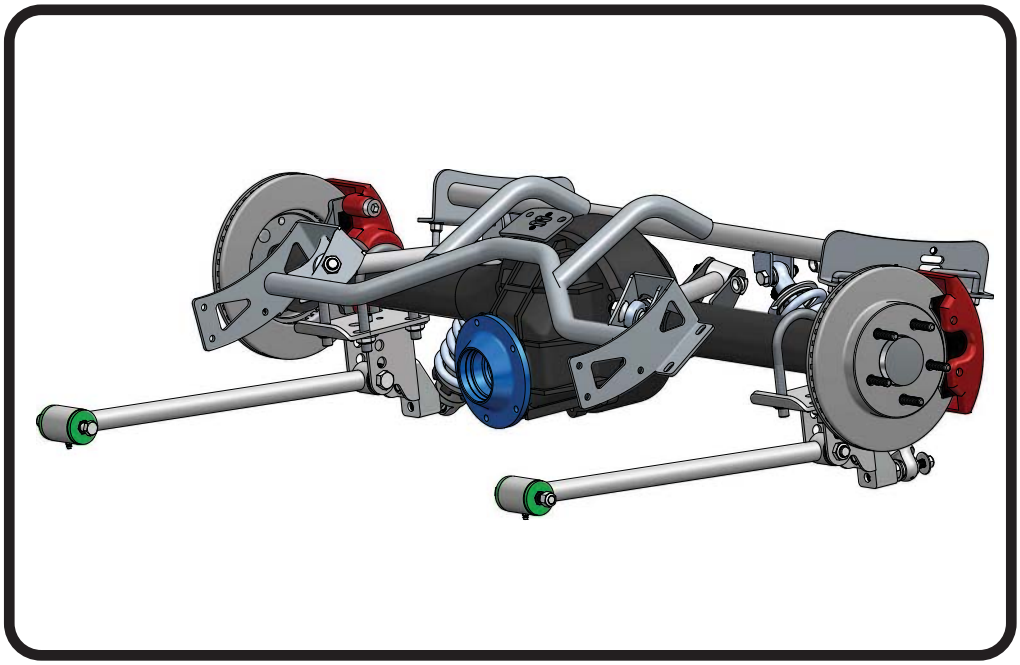
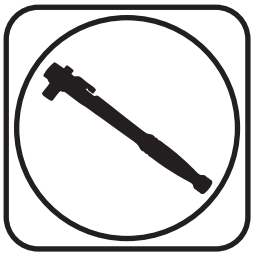
Installation Instructions

Part # 12087199 -1965-1970 Mustang Rear Bolt-in 4 Link



Recommended Tools



1965-1970 Mustang Rear Bolt-in 4 Link

Installation Instructions

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Page 27..... Included Components
Page 28..... Hardware List and Getting Started
Page 29..... Cradle Installation
Page 30..... Lower Axle Mount & Lower Bar Installation
Page 31..... Setting Pinion Angle
Page 32..... Upper Bar Axle Tab Installation
Page 33..... Installing Axle Tabs
Page 34..... Installing ShockWaves/CoilOvers

NOTE: If your car is equipped with a differential that has the axle tubes swedged to 2 1/4", you will need (4) 99566009 u-bolts. See page 28.

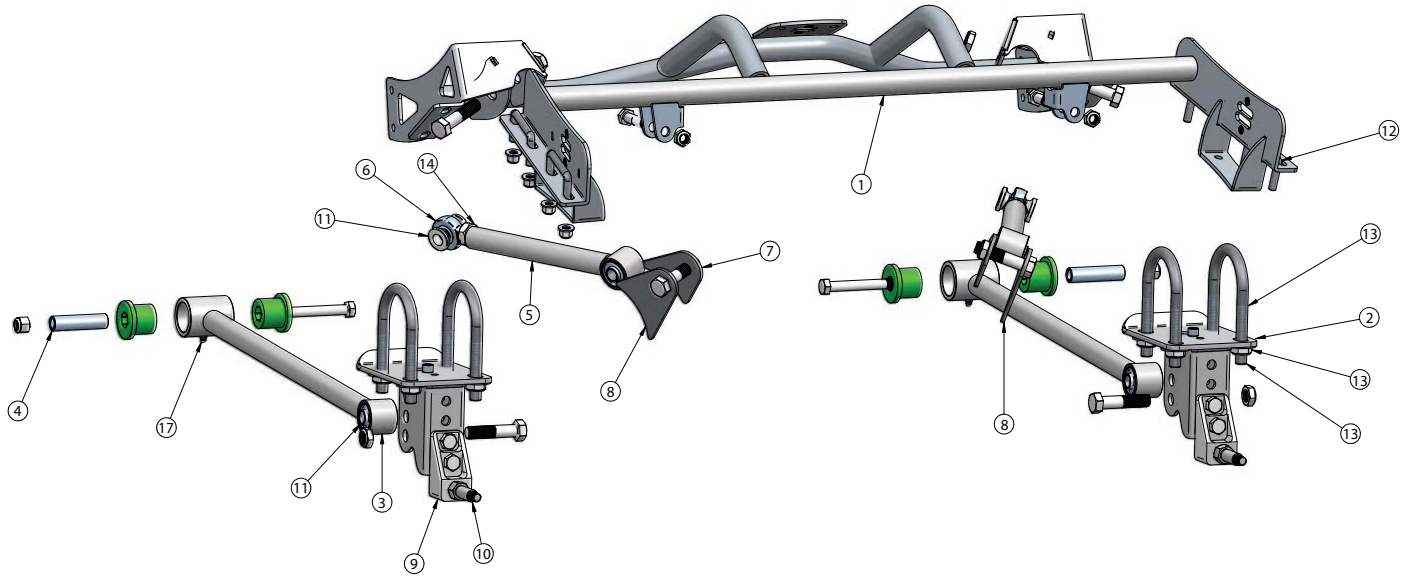
R-JOINT ADVANCED ROD END TECHNOLOGY

www.ridetech.com

REV4 12/14/20

Major Components .....In the box

Item #	Part #	Description	QTY
1	90002198	Upper Cradle	1
2	90001444	Lower Axle Mount	2
3	90002843	Lower Bar Assembly - 21 3/4" center to center	2
4	70013767	Front Lower R-Joint Spacer	4
5	90002844	Upper Bar - 11 3/4" center to center	2
6	70013364	RH R-Joint Threaded Housing End (installed in upper bars)	2
7	70011897	Upper Bar Tab - Tall	4
8	70012018	Upper Bar Tab - Short	2
9	90001624	Aluminum Lower Shock Mount	2
10	70002825	Lower Shock Stud	2
11	70013334	R-Joint Spacers	12
12	90002285	Square U-Bolts	7
13	99566001	Axle U-Bolts (+99566002 & 99566003)	4
14	99752004	3/4"-16 Jam Nut (installed on upper bar Heim)	2
	90002067	Lower Shock Spacers	4
	70010694	Bar Tab Setting Jig	2
R-Joint Components - (Installed in bar ends)			
	70013279	Retaining Ring	8
	70013280	Wavo Wave Spring	8
	70013275	R-Joint Center Ball	8
	70013276	R-Joint Composite Center Ball Cage	8



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Installation Instructions

Hardware List .....In the box (Kit# 99010054)

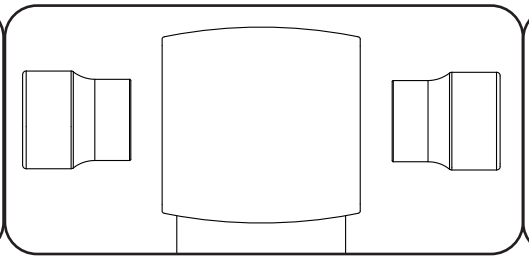
QTY	Part Number	Description
4-Link Bars to Mounts		
6	99621003	5/8"x 2 3/4" Gr. 8 Bolt
6	99622006	5/8" SAE Nylok Jam Nut
Cradle to Car		
14	99372002	3/8-16" Nylok Nut
14	99373003	3/8" SAE Flat washer
6	99373007	3/8"-16 Thread Forming Bolts
Shock Mount to Axle Mount		
2	99501007	1/2"-20 x 1 1/4" Hex Bolt
2	99501009	1/2"-20 x 1 3/4" Hex Bolt
4	99502002	1/2"-20 Nylok Nut
Shock to Cradle		
2	99501010	1/2"-20 x 2 1/4" Hex Bolt

QTY	Part Number	Description
Shock to Cradle		
2	99502003	1/2"-20 Thin Nylok Jam Nut
Front Lower bar to Chassis		
2	99501029	1/2"-20 x 6 1/2" Hex Bolt
2	99501017	1/2"-20 x 4 1/2" Hex Bolt
2	99502002	1/2"-20 Nylok Nut
Bar Setting Jig		
2	99371001	3/8"-16 x 3/4" Hex Bolt
2	99372004	3/8"-16 Hex Nut
Shock Stud		
2	99432002	7/16"-20 Nylok Nut
2	99433002	7/16" SAE flat Washer
2	99623004	5/8" SAE Flat Washer

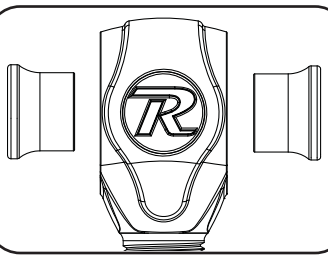
R-JOINT SPACER INSTALLATION

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.

LOWER FRONT R-JOINT



ALL OTHER R-JOINTS



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.

SWEDGED AXLE TUBES! - IF YOUR CAR EQUIPPED WITH A DIFFERENTIAL THAT HAS THE ENDS OF THE AXLE TUBES SWEDGED TO 2 1/4", YOU WILL NEED DIFFERENT U-BOLTS. YOU WILL NEED (4) OF RIDETECH PART # 99566009.

Getting Started.....

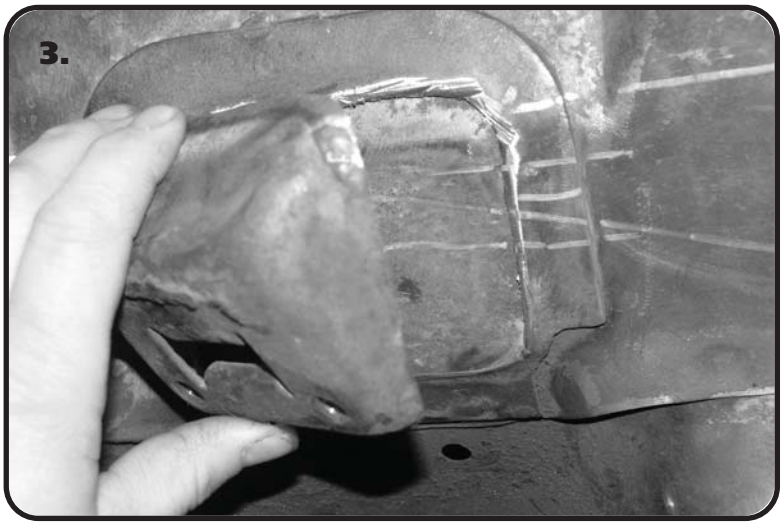
Congratulations on your purchase of the Ridetech Rear 4-link System. This system has been designed to give your Mustang excellent handling along with a lifetime of enjoyment. Some of the key features of this system: Tune ability, Replaces the Leaf Springs, this allows the 4-Link to locate the rearend and the CoilOvers/ShockWaves to support the car.

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

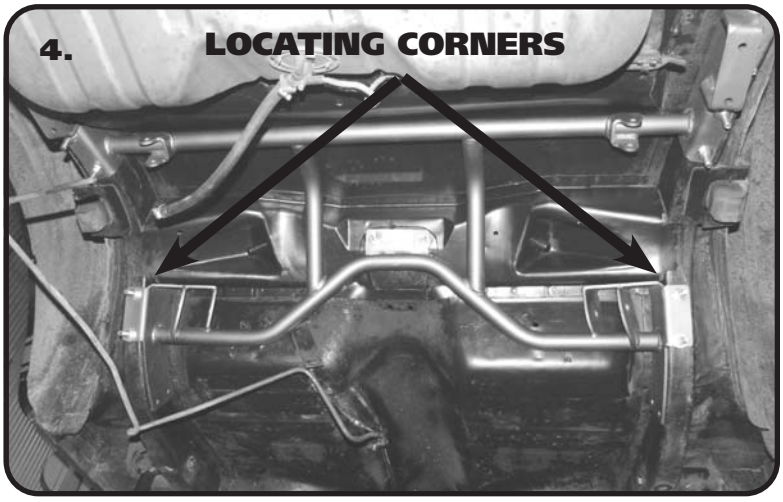
1. Raise the vehicle to a safe and comfortable working height. Use jack stands to support the vehicle with the suspension hanging freely.

2. Support the axle and remove the leaf springs, shocks and tail pipes. Refer to the factory service manual for proper disassemble procedures. You might have to detach the fuel line from the frame rails.

Cradle Installation



3. Remove the Factory Pinion Snubber and Mount from the car. We use a cut off wheel to remove the mount. Notice that we left the mounting lip of the mount attached to the car. This provides another layer of metal for the Front Tab of the Upper Cradle to attach too.

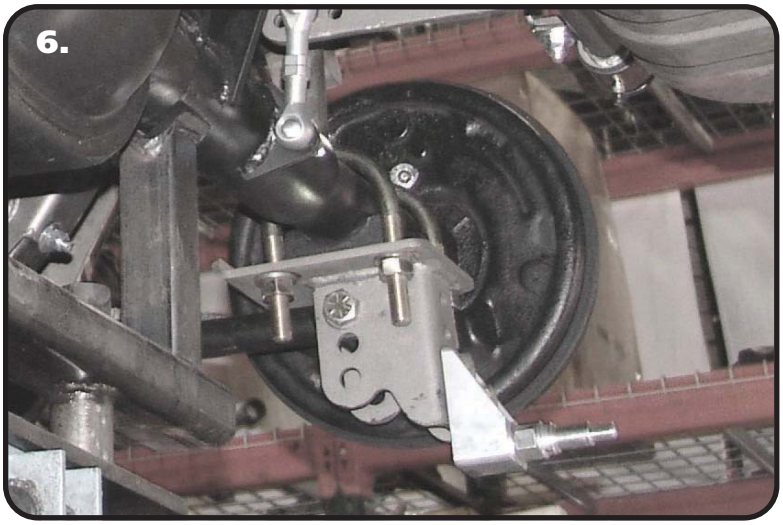


4. Install the cradle into the car. The rear corners of the Upper Bar Mounts locate into the front corner of the factory shock sheet metal mount. The Cradle is held in by (7) 3/8" Square U-bolts. Use the Cradle as a locator for drilling the holes. Drill the holes using a 7/16" drill bit. Drill The front 3 holes on each side with a 5/16" drill bit.

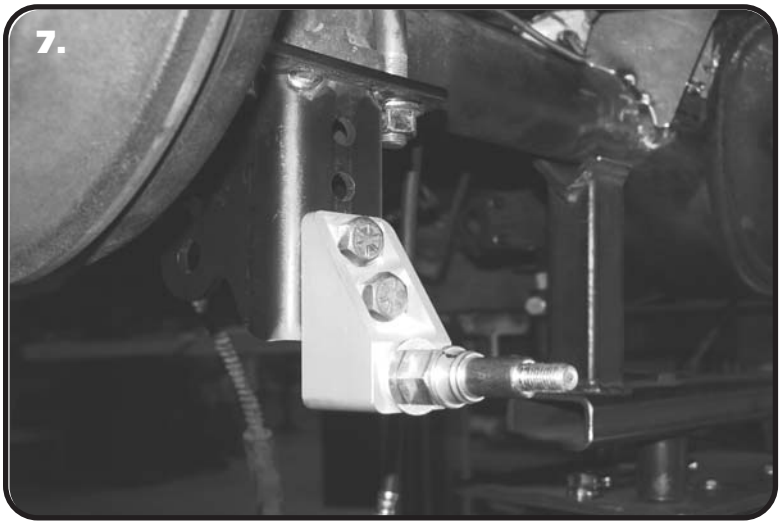
Note: The OEM fuel line will need to be detached from the frame rails until the Cradle is installed.

5. You will notice that the holes are drilled in pairs. Each pair will receive a Square U-bolt. To insert the Square U-bolts into the holes it may be necessary to lower the Cradle to install them. The U-bolts are installed by inserting one end into one of the drilled holes, using the other end as a handle, feed it through the frame until the inserted end will drop down through the remaining hole. Do this for all (7) U-bolts. Install the Cradle into position. Install (1) 3/8" Flat washer and (1) 3/8" Nylok nut onto each stud sticking through the cradle. Do not tighten them until all Washers and Nuts are installed. Install the 3/8" Thread Forming bolts into the 5/16" holes.

Lower Axle Mount & Lower Bar Installation



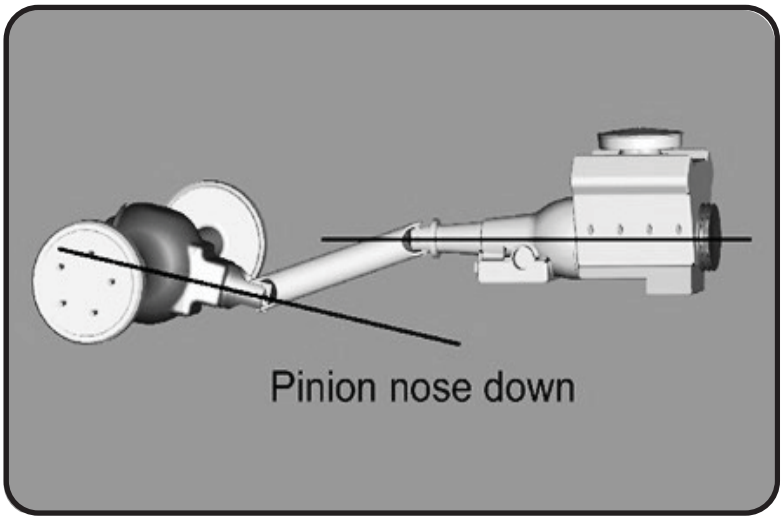
6. Install the Lower Axle Mount onto the Axle using the supplied U-Bolts. Run the nuts down to hold the mount in place, but DO NOT tighten yet.

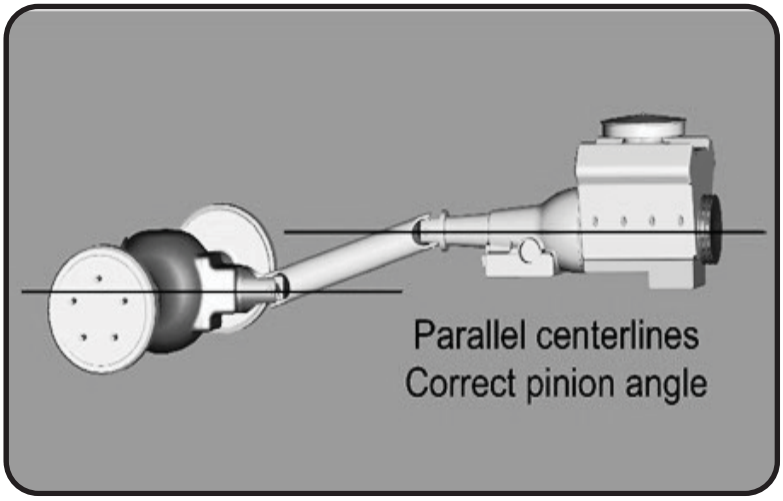


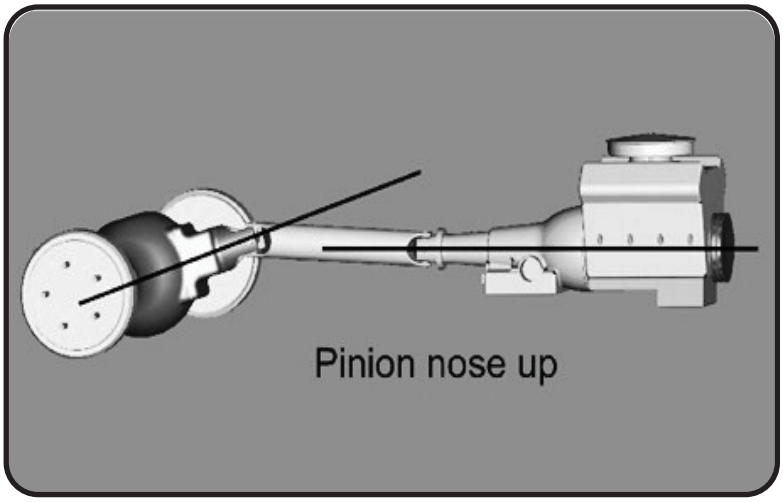
7. Attach the Lower Shock Mount to the Axle Mount using (1) 1/2"-20 x 1 1/4", (1) 1/2"-20 x 1 3/4" Hex Bolts, and (2) 1/2"-20 Nylok Nuts on each mount. The Shock Mount is installed in the BOTTOM 2 holes of the Axle Mount. Install a Shock Stud and 5/8" washer in each Shock Mount. Tighten the mounting hardware and the Shock Stud.

8. Install the Lower Bars. The Front Lower uses the WIDE(70013767) R-Joint Spacers inserted into each side of the R-Joint. The Axle end of the bar gets a NARROW(70013334) R-Joint Spacer inserted into each side of the R-Joint. The bar is attached to the Axle Mount in the **TOP HOLE** using (1) 5/8" x 2 3/4" Hex Bolt, and (1) 5/8" Thin Nylok Jam Nut. The front of the Lower Bar is attached with 1/2"x 6" Hex Bolt(64-67) or 1/2"x 4 1/2"Hex Bolt(68-70), and (1) 1/2" Nylok Nut.

Setting Pinion Angle







READ PAGES 6-8 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 crankshaft 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.

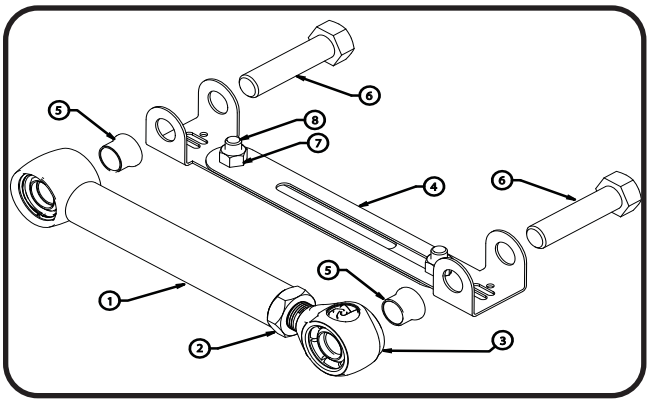
A simple way to do this is to place a digital angle finder or dial level on the front face of the lower engine pulley or harmonic balancer. This will give you a reading that is 90 degrees to the crank or output shaft unless you have real problems with your balancer. At the other end, you can place the 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

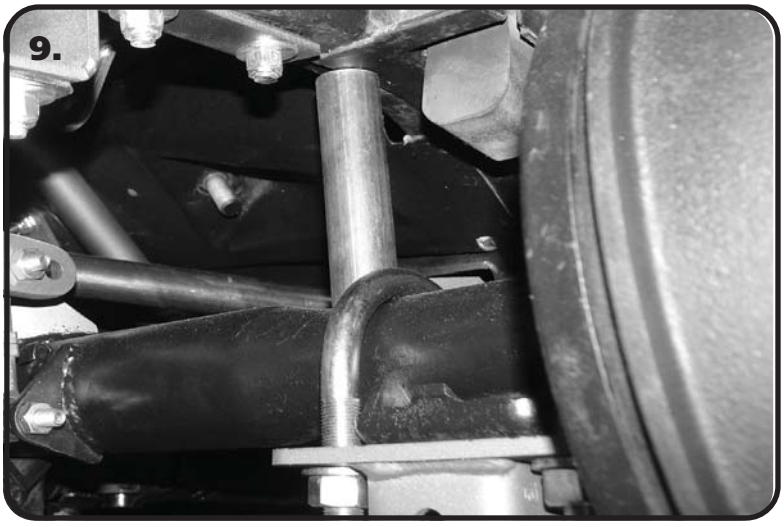
Upper Bar Installation Jig

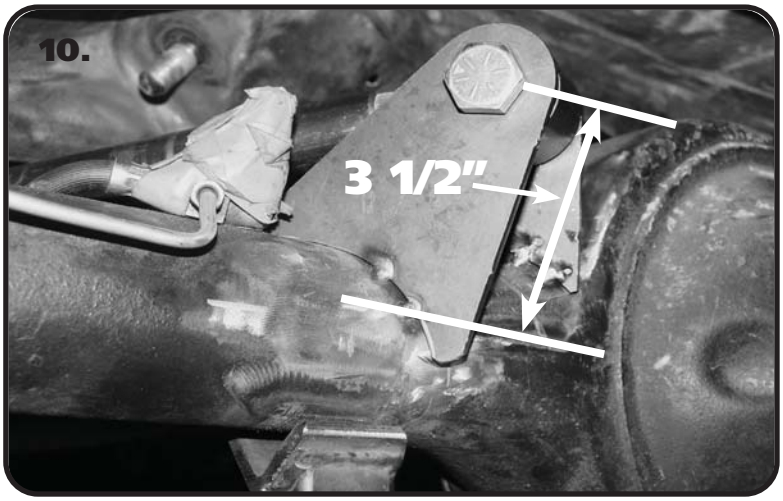
- This jig has been supplied to aid in the installation of the upper 4 link bar. It can be temporarily used to properly align, locate and weld the tabs onto the axle. It will also ensure that the mounting bolts are parallel to the ground.
- Follow the diagram below to set the jig to the same length as 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 2 ¾" bolt.
- Using another 5/8" x 2 ¾" bolt, fasten the axle tabs to the other end. The tall tab goes to the outside of the car. The short tab goes to the inside of the car (some cars may need a tall tab on the inside). The tabs must be bolted to the outside of the jig.
- Swing the bar down letting the tabs rest onto the axle. Trim the brackets as necessary to minimize the gap to be welded.
- 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 upper bars to avoid melting the rubber bushings. 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.

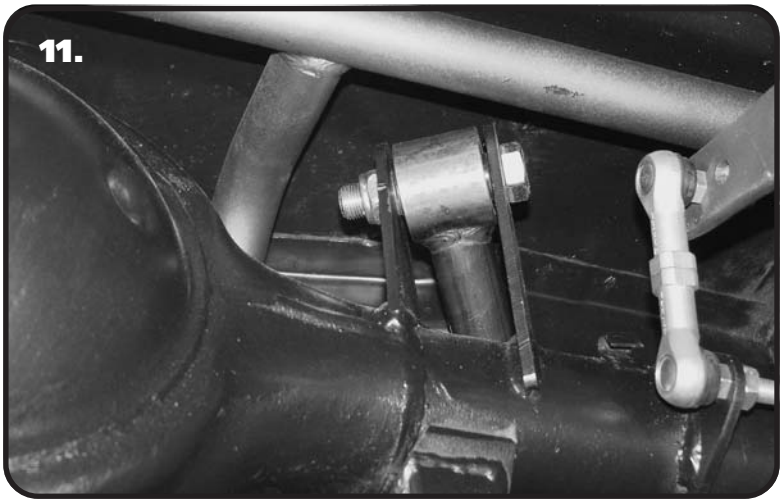


Item#	Description
1	Upper Bar
2	3/4"-16 Jam Nut
3	Heim End
4	Alignment Jig
5	Aluminum Spacer
6	5/8" x 2 3/4" Bolt
7	3/8"-16 Nut
8	3/8"-16 x 3/4" Bolt

Installing Axle Tabs







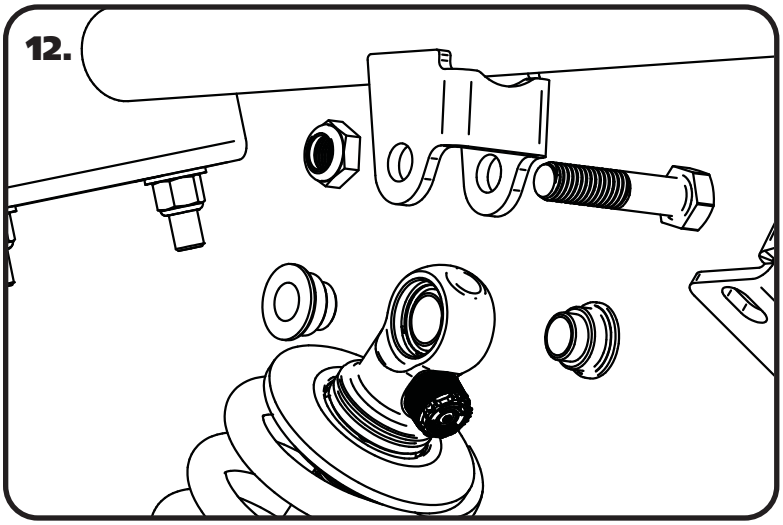
9. One helpful trick to maintain ride height when setting the pinion angle is to put a spacer between the axle and the frame. The spacer should be 4 1/2" tall. Set the pinion Angle and axle center. When measuring the axle center you can measure off of the frame rails. We also use a plum bob off the quarter panels to double check the axle center. Refer to Page 6 on Setting the Pinion Angle.

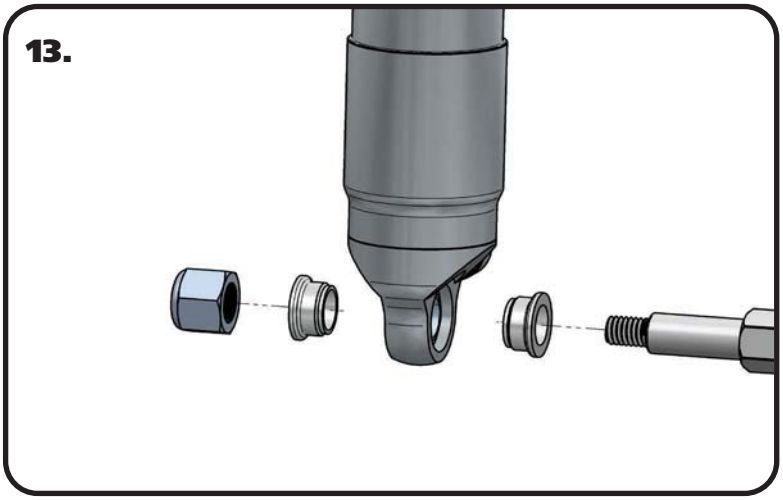
Note: You can tack weld the spacer in place after you get the Pinion Angle, and Axle Center set. This will ensure that nothing moves through the Upper Tab Installation.

10. Refer to Page 7 and set the length of the Upper Bar Jig and install the Tabs on the Jig. Insert the Jig into the Cradle. Set the Upper Tabs on the Rearend. Due to different variations of the Rearend Housings, it may be necessary to modify the tabs for the best fit. The height you are wanting to achieve with the upper bar end is 3 1/2" from the axle center line. Modify the tabs so that the center of the bar bushing will be 3 1/2" from the center of the axle.

11. Once the bar end height is set, tack weld the tabs to the axle. Do this for the Driver and Passenger side bars. Insert the bars into the Cradle and Tabs to double check fitment. Recheck Axle Center and Pinion Angle. Once satisfied with fitment weld the Upper bar Tabs onto the Axle. Weld 1" at a time, skip around from one side to the other, and one tab to the other to avoid overheating the Axle Tube. When the tabs cool down, insert NARROW(70013334) spacers into each side of the R-Joints of the Upper Bar. Attach the upper bars using (1)5/8" x 2 3/4" Bolt, and (1) 5/8" Thin Nylok Nut.

Installing Shockwaves/Coilovers





Remove the Spacer from between the Axle and Frame.

12. Install a 1/2" ID Spacer on each side of the upper Coilover/ShockWave. Slide the assembly into the upper crossmember from the bottom side. If your shock has an adjuster knob position it so that the knob points toward the center of the car. Line up the hole in the spacers with the hole in the upper shock bridge and insert 1/2" x 2 1/2" bolt and install 1/2" Nylok nut.

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.

13. Install a 5/8" ID spacer(Small side towards shock body) onto the lower Shock Stud. Slide the bottom of the Shock onto the Stud. Install a second 5/8" ID Spacer onto the Stud(small side towards shock). You may need to jack the rearend up to Slide the Shock onto the Stud. Install the 7/16" Flatwasher and 7/16" Nylok nut. Tighten the upper and lower shock bolts.

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.

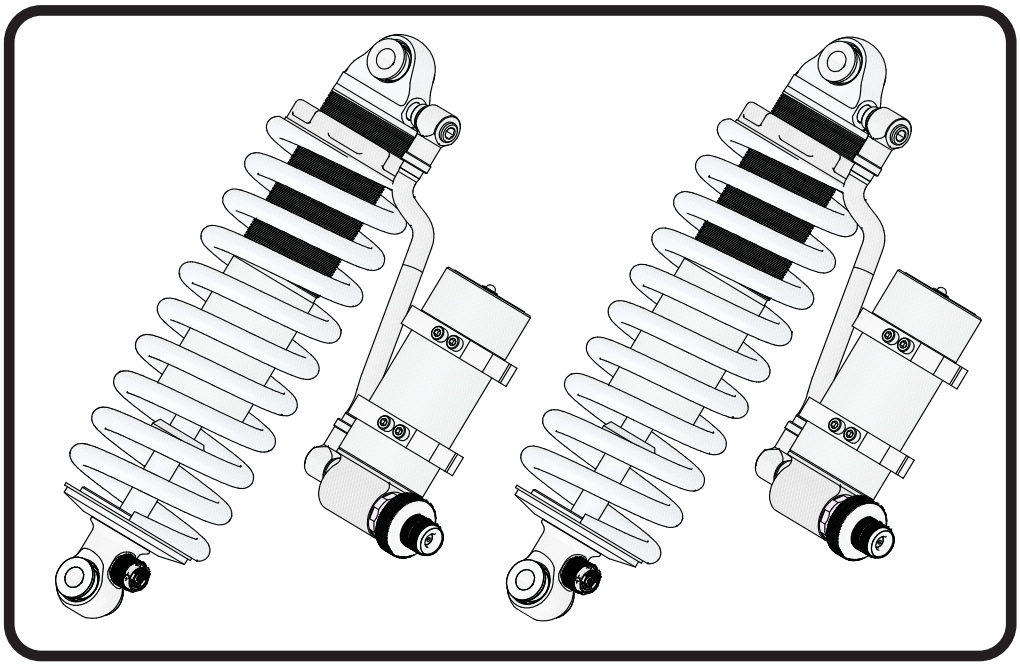
The designed ride height of the CoilOver/Shockwave is 14 1/2" center to center.

ridetech

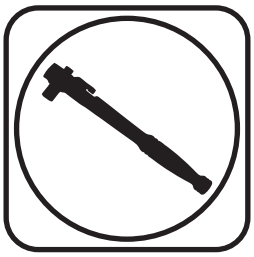
Installation Instructions

Part # 12096511

1964-1966 Ford Mustang TQ Rear CoilOvers



Recommended Tools



1964-1966 Ford Mustang TQ Series Rear CoilOvers

Installation Instructions

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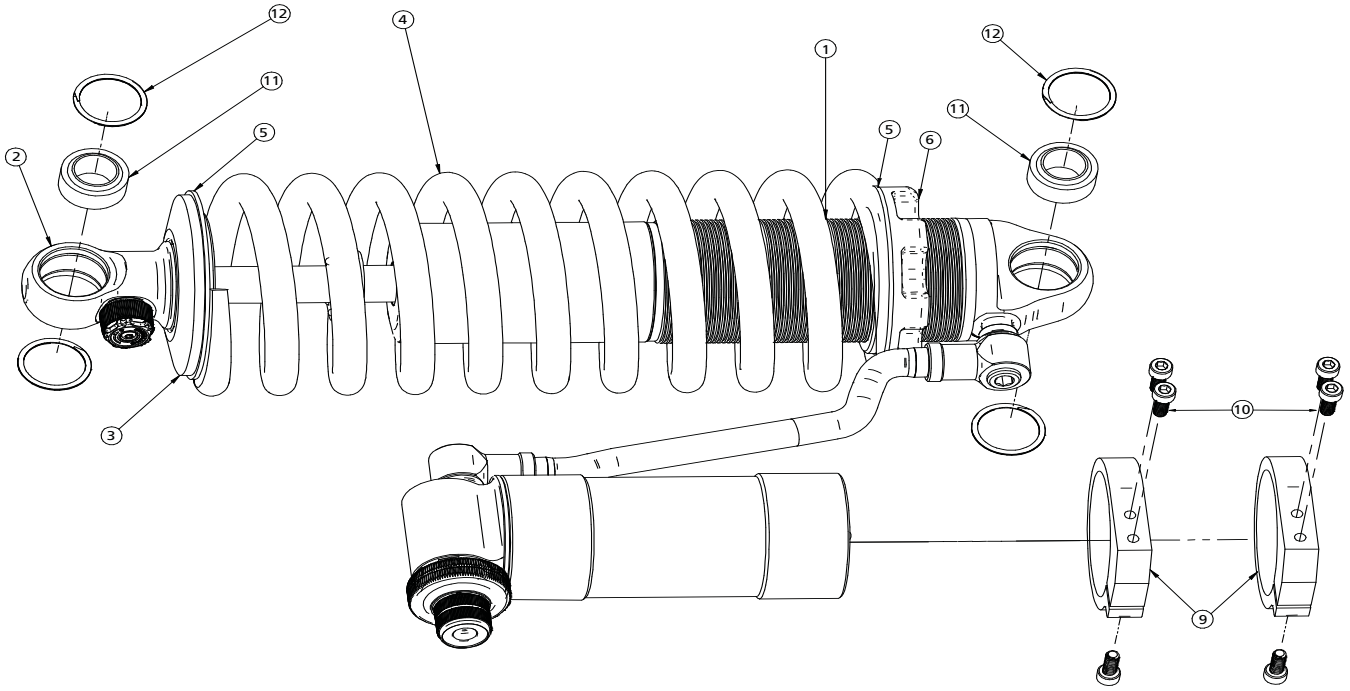
ShockWave Dimensions:

Center of bearing to Center of bearing:

Compressed:	11.23”
Ride Height:	14.50”
Extended:	16.43”

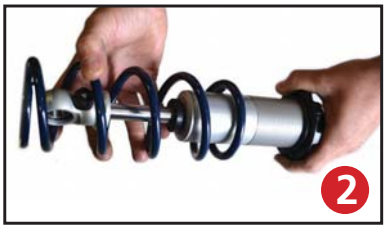
Major Components .....In the box

Item #	Part #	Description	QTY
1	986-10-072	5.2" Stroke TQ Series Shock	2
2	815-05-022	Shock Eyelet	2
3	803-00-199(kit)	Upper Coilspring Mount (803-00-199 kit)	2
4	59100150	Coilspring 10" 150lb	2
5	70010828	Delrin Spring Washer	4
6	803-00-199(kit)	Lower Spring Adjuster Nut (803-00-199 kit)	2
	803-00-199(kit)	Adjuster Nut Locking Screw (803-00-199 kit)	2
	803-00-199(kit)	Retaining Ring (803-00-199 kit)	2
9	026-05-000	Reservoir Clamps	4
10	99050000	Reservoir Socket Head Cap Screws	12
11	90001994	5/8" ID Bearing (installed in shock and eyelet)	4
12	90001995	Bearing Snap Ring (installed in shock and eyelet)	8
	90002043	1/2" ID Upper Shock Bearing Spacer	4



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.

CoilSpring Adjustment

6. Preload the springs of the CoilOver 1" to start. **Steps 6a - 6e** will assist you with preloading the coilspring. You may need to adjust the amount of preload in the spring, but this will be determined after the vehicle has been sat on the ground.

6a. Verify the adjuster nut locking screw is installed in the adjuster nut, but not tight.

6b. Thread the spring adjuster nut up the shock body until it is snug against the spring. You should NOT be able to move the spring up and down on the shock (0 preload). Verify the upper coilspring cap is seated correctly on the upper shock stud.

6c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

6d. Using a spanner wrench, thread the adjuster up the shock an additional 1" (from the measurement you took in step 2) to preload the spring.

6e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

7. Reinstall the rear wheels and tires and set the rear of the vehicle back on the ground.

8. After entire weight of vehicle is on the wheels, jounce the suspension and roll the car forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

CoilSpring Adjustment

9. If you determine you need to adjust the ride height of the rear suspension after getting the vehicle on the ground, **Steps 9a - 9e** will assist you in adjusting the ride height.

9a. Raise the vehicle and support it by the frame, allowing the suspension to hang freely. You do NOT need to remove the rear wheels.

9b. Loosen the locking screw in the adjuster nut, but do not remove the locking screw.

9c. Measure from the bottom of the adjuster nut to the flat of the shock. You may want to write the measurement down.

9d. Using a spanner wrench, thread the adjuster up or down the shock to obtain the correct ride height. One complete revolution of the adjuster nut is approximately 1/16" at the wheel. Threading the adjuster nut up the shock will raise the ride height, threading it down will lower the ride height.

9e. Lock the adjusting nut in place by tightening the adjuster nut locking screw.

10. After entire weight of vehicle is on the wheels, jounce the suspension and roll the vehicle forward and backward to alleviate suspension bind. **THIS IS NECESSARY BEFORE MEASURING RIDE HEIGHT.**

11. Recheck your ride height. If you need to readjust, repeat **Steps 9-10**.

Shock Adjustment 101- Single Adjustable

Rebound Adjustment:
How to adjust your new shocks.
The rebound adjustment knob is located on the top of the shock absorber protruding from the eyelet.
You must first begin at the ZERO setting, then set the shock to a soft setting of 20.

-Begin with the shocks adjusted to the ZERO rebound position (full stiff). Do this by rotating the rebound adjuster knob clockwise until it stops.

-Now turn the rebound adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).

Take the vehicle for a test drive.

-if you are satisfied with the ride quality, do not do anything, you are set!

-if the ride quality is too soft increase the damping effect by rotating the rebound knob clock wise 3 clicks.

Take the vehicle for another test drive.

-if the vehicle is too soft increase the damping effect by rotating the rebound knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the rebound adjustment knob counter clock wise 2 clicks and you are set!

Take the vehicle for another test drive and repeat the above steps until the ride quality is satisfactory.

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

Shock Adjustment

Shock Adjustment 101-**Triple Adjustable**

Triple Adjustable:
Step One: High Speed Compression

-High speed compression adjustments are used in both street driving and track tuning.

-Begin with the shocks adjusted to the ZERO high speed compression position (full stiff). Do this by rotating the high speed compression adjuster (large knob) clockwise until it stops.

-Now turn the high speed compression adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use. For typical street driving the high speed compression adjuster will remain at setting 20.

Step Two: Low Speed Compression
Low speed compression adjustment is what is typically felt during street driving.

-Begin with the shocks adjusted to the ZERO low speed compression position (full stiff). Do this by rotating the low speed compression adjuster (small knob) clockwise until it stops.

-Now turn the low speed compression adjuster knob counter clock wise 20 clicks. This sets the shock at 20. (settings 21-24 are typically too soft for street use).
Take the vehicle for a test drive.

-if you are satisfied with the ride quality, do not do anything, you are set!

-if the ride quality is too soft increase the damping effect by rotating the low speed compression 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 low speed compression knob clock wise 3 additional clicks.

-If the vehicle is too stiff rotate the low speed compression 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.

Step 3:
Adjust rebound according to Single Adjustable instructions.

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.