



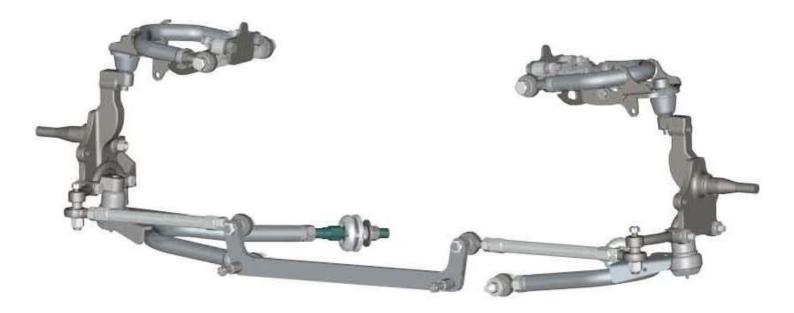
350 S. St. Charles St. Jasper, In. 47546 Ph. 812.482.2932 Fax 812.634.6632 <u>www.ridetech.com</u>



## Part # 12099599 64-66 Mustang Tru-Turn Suspension Package

## **Front Components:**

- 1 12093699 Upper Strong Arms
- 1 12092899 Lower Strong Arms
- 1 12099500 Tru Turn System



The OEM Brakes will not work with the Ridetech Spindle. (See page 14 for details)

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## Part # 12093699 64-66 Mustang Upper StrongArms For Use w/ Shockwaves or CoilOvers Must be Used with Ridetech Tru-Turn Setup

## **Components:**

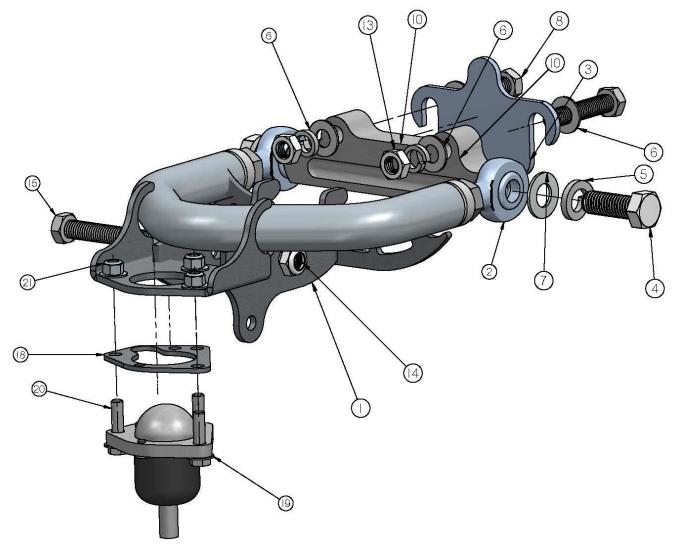
- 1 90002340 Driver Upper StrongArm
- 1 90002339 Pass Upper StrongArm
- 2 70010866 Upper ball joint
- 2 90002633 Ball joint spacer
- 2 90009967 Billet Aluminum drop cross shaft
- 4 90001589 Heim ends  $-\frac{3}{4}$ "-16 thread x 5/8" I.D.
- 2 90002341 Alignment shim
- 4 90002043 .500" I.D. Bearing spacer

## Hardware:

6	99311002	5/16"-18 x 1 ¼" Hex Bolt	Upper Ball joint
6	99312003	5/16"-18 Nylok Nut	Upper Ball joint
12	99313002	5/16" SAE Flat washer	Upper Ball joint
4	99621002	5/8"-18 x 1 ¾" Gr.8 bolt	Rod end to cross shaft
6	99501003	1/2"-13 x 2 1/2" Gr.5 bolt	Cross shaft to body/Shock to upper arm
4	99502006	1⁄2"-13 nut	Cross shaft to body
8	99503001	1/2" SAE flat washer	Cross shaft to body
4	99503002	1/2" lock washer	Cross shaft to body
2	99502001	1/2"-13 Nylok nut	Shockwave/CoilOver to upper arm
4	99752004	¾"-16 jam nut	Heim ends



Item #	Description		
1.	Control arm		
2.	Heim ends $-\frac{3}{4}$ "-16 thread x 5/8" I.D.		
3.	Alignment shim	1	
4.	5/8"-18 x 1 ¾" Gr.8 bolt	2	
5.	5/8" lock washer	2	
6.	1/2" SAE flat washer	4	
7.	5/8" SAE flat washer	2	
8.	<sup>1</sup> / <sub>2</sub> "-13 x 2 <sup>1</sup> / <sub>2</sub> " Gr.5 bolt	2	
10.	Cross shaft	1	
13.	1⁄2"-13 Nut		
14.	<sup>1</sup> / <sub>2</sub> "-13 Nylok Nut	2	
15.	<sup>1</sup> / <sub>2</sub> "-13 x 2 <sup>1</sup> / <sub>2</sub> " Gr.5 bolt	1	
18.	Ball Joint Spacer	2	
19.	5/16" flat washer	6	
20.	5/16"-18 x 1 ¼" bolt	3	
21.	5/16"-18 Nylok Nut	3	





 Bolt the Ball Joint to the Control Arm with the BALL JOINT SPACER between the Ball Joint and Control Arm. The Ball Joints/Spacers are attached using (3) 5/16"-18 x 1 ¼" Bolts, (3) 5/16"-18 Nylok Nuts and (6) 5/16" SAE Flat Washers. Do this for both Control Arms. Refer to the Diagram on Page 3.



**2.** Bolt the upper StrongArm to the body using  $\frac{1}{2}$ " x 2  $\frac{1}{2}$ " 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.

**3.** 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.** 



**4.** Bolt the upper arm to the spindle using the hardware and cotter pin supplied.

**5.** Attach the Shockwave to the upper StrongArm using a  $\frac{1}{2}$ " x 2  $\frac{1}{2}$ " bolt and Nylok nut.

**6.** This control arm is designed to work with our MuscleBar sway bar. The end link will attach to the **front** mounting tab on the upper arm.

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## Part # 12092899 64-66 Mustang Lower StrongArms

To Be Used With Ridetech TRU-TURN

## **Components:**

1 90002334 Driver side lower arm 1 90002335 Passengers side lower arm 90000898 2 Lower ball joint 2 90001589 Kevlar lined heim end 4 90002338 Rod End Spacers 2 90001045 Control arm pivot bearing 2 90002336 Bearing housing 2 90002337 Bearing retaining plate 2 90000733 Aluminum bearing spacer 2 90000732 Bearing stud (Set to 2-7/8")

## Hardware:

99501024	1⁄2"-13 x 3 1⁄4" Gr.5 bolt	Lower arm to frame
99502001	1/2"-13 Nylok nut	Lower arm to frame
99311003	5/16"-18 x 1 ½ Hex	Bearing housing
99313003	5/16" lock washer	Bearing housing
99752004	3⁄4"-16 Jam nut	Stud to arm
99752001	¾"-16 Lock nut	Stud to bearing
99753002	<sup>3</sup> ⁄ <sub>4</sub> " x 2" flat washer	Stud to bearing
	99502001 99311003 99313003 99752004 99752001	995020011/2"-13 Nylok nut993110035/16"-18 x 1 1/2 Hex993130035/16" lock washer997520043/4"-16 Jam nut997520013/4"-16 Lock nut



## **Installation Instructions**

- 1. Raise and support vehicle at a safe, comfortable working height. Let the front suspension hang freely.
- 2. Remove the coil spring, shock absorber, upper shock bracket, strut rod, sway bar, upper and lower control arms. Refer to factory service manual for proper disassembly procedure.



3. Be sure to remove the outer bushing sleeve from the strut rod frame mount.

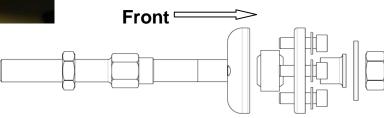
4. Remove any excess undercoating or rust.



5. Using the bushing retainer as a template, mark the holes to drill with a center punch.

6. Remove the retainer and drill the holes with a 3/8" bit.

7. Place the bearing inside the bearing housing, and then clamp it to the frame with the bearing retainer and the 5/16" x 1  $\frac{1}{2}$ " SHCS and lock washers.







8. The bearing stud should already be threaded into the lower arm, factory set at 2-7/8" (measuring from the end of the arm to the bearing).

9. Slide the stud through the bearing, and then slide the aluminum spacer over the stud with the larger end toward the front of the car. Secure the assembly with a <sup>3</sup>/<sub>4</sub>" Nylok Nut and flat washer.

**Note:** The caster setting should set at around 4.0 degrees positive. Vehicle must be aligned before driving.

10. Install the 2 aluminum spacers into the rod end that goes into the factory control arm pivot.

11. Attach the other end of the lower control arm to the factory frame mount using a  $\frac{1}{2}$ " x 3  $\frac{1}{4}$ " bolt and Hex nut.

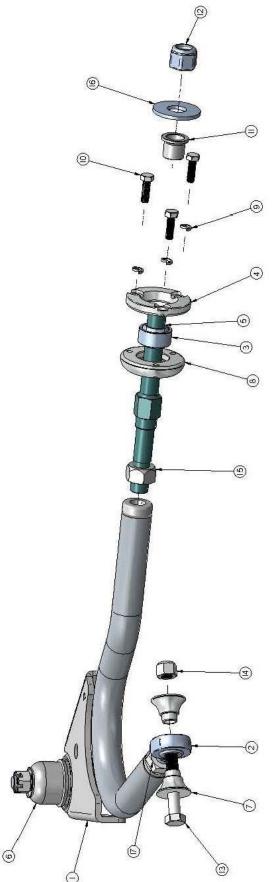


12. Slide the ball joint boot over the ball joint, then place the spindle over the ball joint stud. A ball joint spacer will be necessary to align the castle nut with the cotter pin hole. Grease ball joint

**Note:** Before installing the spindle, turn the ball joint stud so that the cotter pin hole faces front to back. This will make it easier to install/remove the cotter pin.



Item #	Description		
1.	Driver side arm	1	
2.	2. Kevlar lined Heim End		
3.	Control Arm pivot bearing	1	
4.	Bearing retaining plate	1	
5.	Bearing stud (Set to 2- 7/8")	1	
6.	6. Ball Joint		
7.	Heim end spacer	2	
8.	Bearing Housing	1	
9.	5/16" Lock washer	3	
10.	5/16"-1 1⁄2" Gr5 bolt	3	
11.	Aluminum bearing spacer	1	
12.	<sup>3</sup> ⁄ <sub>4</sub> "-16 Lock nut	1	
13.	1⁄2"-13 x 3 1⁄4' Gr.5 bolt	1	
14.	1/2"-13 Nylok nut	1	
15.	15. 3⁄4" -16 Jam Nut		
16. <sup>3</sup> ⁄ <sub>4</sub> " X 2" Flat washer		1	

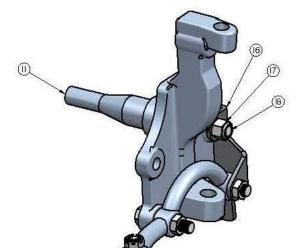




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## Part # 12099500 64 – 66 Mustang TruTurn System





4

(9

3

(15)

(1)

(5)

(19)

			1
Item #	Part #	Description-Torque Specification	Qty.
1.	90002344	Drag link bracket	1
2.	90001582	LH Thread Heim End	2
3.	99800003	5/8"-18 LH jam nut	2
4.	99800002	5/8"-18 RH jam nut	2
5.	90001590	Heim end	2
6.	90009931	Large stud – tie rod	2
7.	90002351	Inner tie rod stud	2
8.	90002345	Drag link stud	2
9.	90002346	Tie rod adjuster	2
10.	90002347	Driver steering arm	1
10.	90002348	Pass steering arm	1
11.	11009300	RideTech spindle	1 pr.
12.	99502010	1/2"-20 Lock nut-50 ft lbs	2
13.	99432005	7/16"-20 castle nut-35 ft lbs	4
14.	99952002	3/32" Cotter pin	4
15.	99622005	5/8"-18 Thin top lock nut	2
16.	90002349	Driver steering stop	1
16.	90002350	Pass steering stop	1
17.	99502001	1/2"-13 Nylok Nut	2
18.	99501002	<sup>1</sup> / <sub>2</sub> "-13 x 1 <sup>1</sup> / <sub>2</sub> " Hex Head Bolt	2
19.	99622007	5/8"-18 Mechanical lock nut	4
	99433002	7/16" Flatwasher	6

(2)

(12)

(14)

(17)



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## THIS SYSTEM WILL ONLY WORK WITH RIDETECH STRONG ARMS

Installation instructions

## This kit can be used with the OEM draglink or Borgeson Power Steering Conversion Kit

- 1. You should be using Ridetech Strong Arms and already have installed them.
- 2. Assemble the new RideTech draglink adapter bracket onto the OEM draglink with the supplied tapered studs and washers per the enclosed drawings.
- Install the new RideTech spindles onto the control arms per the enclosed drawings. Ball joint nut torque = 83 ft lbs
- 4. Install the Steering arm and Steering Stop at the same time. The nuts should be on the frame side of the spindle.
- 5. Install the remainder of the Tru Turn steering linkage as shown in the attached drawings. MAKE SURE that ALL cotter pins are used in the appropriate places and that there is no binding or interference throughout the entire suspension travel.
- 6. Adjust the camber and toe roughly until you can get the vehicle to a proper alignment shop. The recommended alignment settings are:

Camber - -.5 to -1.5 [within .3 from side to side]

Caster – 4 to 7 degrees positive [run .5 degrees more on pass side to allow for road crown]

Toe - 1/8 to 1/4 toe in

Feel free to experiment with alternative alignment settings that may be more appropriate for your particular driving style.

#### Installation notes:

- A. The draglink 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 draglink since that time.
- B. RideTech has successfully fitted a Baer disc brake system to this spindle. Other brands of disc brake brackets MAY need clearance or adjustment for proper installation. The RideTech spindle duplicates the GM A body and F body bolt pattern for brake bracket installation. You will need 5 on 4.5" bolt pattern to keep it the same as the factory rear.
- C. MAKE SURE that the cotter pins are properly installed in all appropriate places [C] to ensure that the castle nuts do not become loose and fail. These are VERY important connections!
- D. IF your OEM drag link is severely worn at the inner tie rod attachment holes [D] you may need to replace that unit with a new OEM style draglink to ensure that the [RideTech supplied] tapered pin adapters DO NOT pull through that hole.



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C

**Note:** Due to variances in the thickness of the factory drag link, 7/16" flat washers are provided and may be needed to align the castle nut with the cotter pin hole.



2. The studs with the long hex on them will get installed into the factory draglink with the taper going into the draglink, a 7/16" castle nut is used to attach it to the draglink. Torque the nuts to 35 ft lbs and tighten as needed to align cotter pin hole and install cotter pin. The straight shank will point to the front of the car.

A

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



3. Install the Ridetech spindle on the control arms.

4. Install the steering arms and steering stops onto the spindle. The steering arms angles toward the draglink. The steering stops are marked D and P.

The steering arm is attached to the spindle using  $\frac{1}{2}$ "-20 x 2  $\frac{1}{2}$ " Flat Socket Cap Bolts and Nylok nuts.

The upper tab of the steering stop is attached to the spindle using  $\frac{1}{2}$ -13 x 1  $\frac{1}{2}$ " Hex head bolt and Nylok.



5. 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.

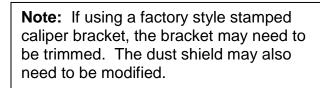
6. The studs with the short hex get installed into the draglink adapter. The short side goes into the adapter attached with the 5/8"-18 thin top lock nut, with the long side of the stud pointing forward.





7. The tie rod can now be assembled to a center to center length of 14 ¼" 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.

8. Install the tie rod assembly onto the studs using the 5/8"-18 lock nuts.







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## **Brake Kits**

The Mustang 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 Mustang.

We had worked with Baer and Wilwood to put together brake kits for our suspension. Both companies have brake kits that will work with your car, depending on wheel size and your braking needs. We have listed the basic brake kit and each company offers options for their brake kits.

#### Contact info:

Baer- Phone: 602-233-1411, Web- <u>www.baer.com</u> Wilwood- Phone: 805-388-1188, Web- <u>www.wilwood.com</u>

#### **Baer Brake Kits:**

Minimum	Baer Part	Brake Kit Name	Description
Wheel Size	#		
15" and bigger (some 14")	4301503	SS4+	4 piston caliper / 11" 2 piece rotor
16" and bigger	4301504	T4	4 piston caliper / 13" 1 piece rotor
	4301505	Pro 13	6 piston caliper / 13" 1 piece rotor
	4301506	Pro+13	6 piston caliper / 13" 2 piece rotor
17" and bigger	4301507	Pro+14	6 piston caliper / 14" 2 piece rotor
	4301508	Ext+14	6 piston caliper / 14" 2 piece rotor
18" and bigger	4301509	Ext+15	6 piston caliper / 15" 2 piece rotor

#### Wilwood Brake Kits:

Minimum Wheel Size	Wilwood Part #	Brake Kit Name	Description
14" and bigger	140-1016	Dyna Pro Single	2 piston caliper / 10" 2 piece rotor
15" and bigger	140-10996	Forged Dynalite Pro	4 piston caliper / 11" 2 piece rotor
	140-7675	Forged Dynalite	4 piston caliper / 12.19" 2 piece rotor
	140-10510	Dyna Pro 6	6 piston caliper / 12/19" 2 piece rotor
17" and bigger	140-12271	Forged Narrow Superlite 6R	6 piston caliper / 12.88" 1 piece rotor
	140-9803	Forged Narrow Superlite 6R	6 piston caliper / 12.88" 2 piece rotor
18" and bigger	140-10920	W6A Big Brake	6 piston caliper / 14" 2 piece rotor
	140-9804	Forged Narrow Superlite 6R	6 piston caliper / 14" 2 piece rotor

As with any brake kit you need to check the template to see if it will clear your wheels. These templates can be obtained by going to the brake manufactures web sites listed above.