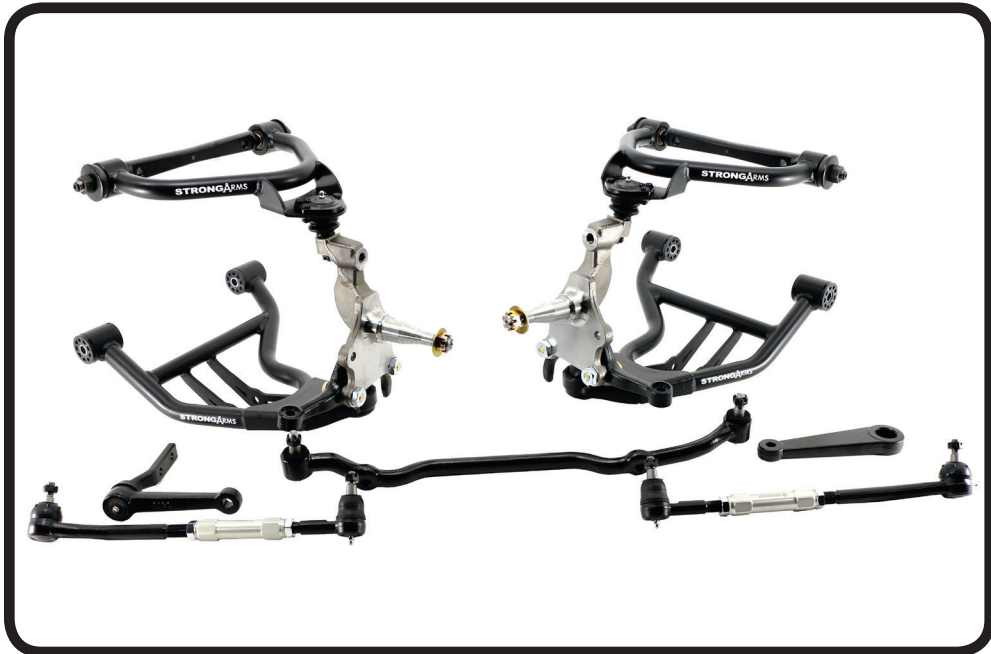
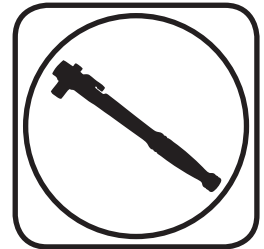




Part # 11179599 - 1970-1981 GM F-Body Front TruTurn System



Recommended Tools



1970-1981 GM F-Body TruTurn System Installation Instructions

Table of contents

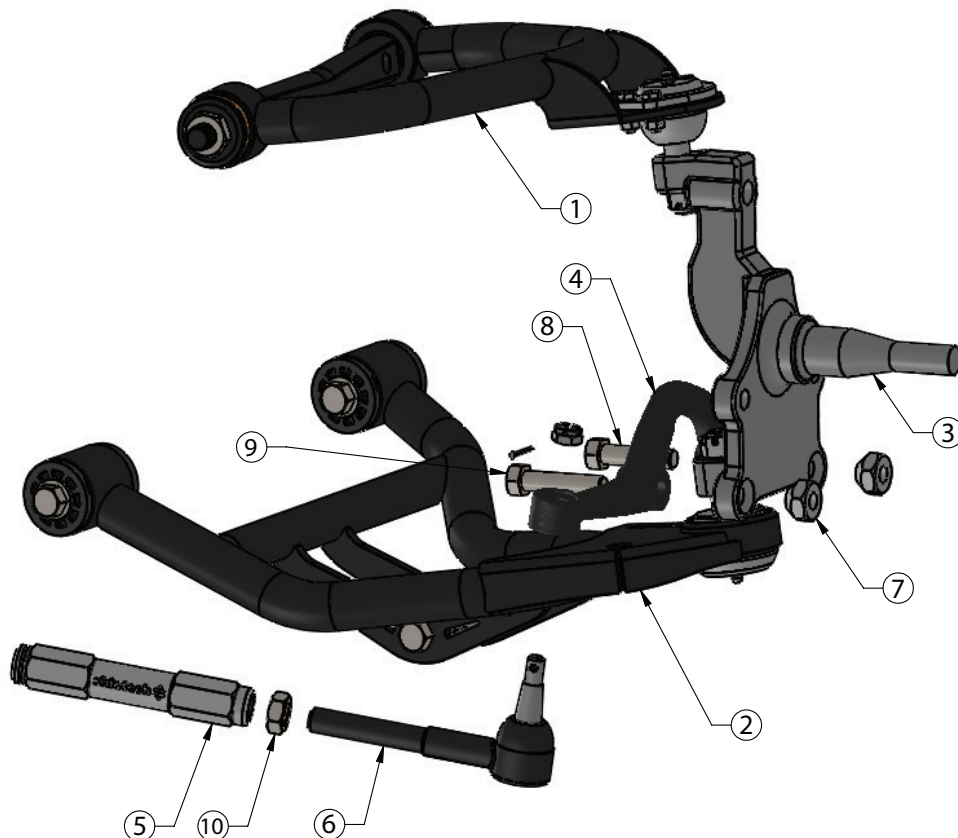
| | |
|--------------|--|
| Page 2..... | Included components |
| Page 3..... | Upper Control Arm Components |
| Page 4..... | Lower Control Arm Components |
| Page 5..... | TruTurn Steering Components |
| Page 6..... | Getting Started |
| Page 7..... | Installing Lower and Upper Control Arm |
| Page 8..... | Installing Spindles and Steering Arms |
| Page 9..... | Tie-Rod Assembly and Installation |
| Page 10..... | The Finish |

The OEM Front Brakes will not work with this kit.
(See Page 6 for details)



Major ComponentsIn the box

| Item # | Part # | Description | QTY |
|--------|----------|--|-----|
| 1 | 90002832 | Driver Upper Control Arm | 1 |
| 1 | 90002833 | Passenger Upper Control Arm (Not Shown) | 1 |
| 2 | 90002830 | Driver Lower Control Arm | 1 |
| 2 | 90002831 | Passenger Lower Control Arm (Not Shown) | 1 |
| 3 | 11009300 | Tall Spindle (Driver and Passenger) | 1pr |
| 4 | 90003000 | Steering Arm - 1 Set - includes driver and passenger | Set |
| 5 | 90002836 | Tie-Rod Adjuster | 2 |
| 6 | 90002834 | Tall Outer Tie Rod End | 2 |
| 7 | 90009932 | Steering Arm Tapered Nut | 2 |
| 8 | 99501010 | 1/2"-20 x 2 1/4" Hex Bolt | 2 |
| 9 | 99502005 | 1/2"-20 x 2" Hex Bolt | 2 |
| 10 | 99800002 | 5/8" SAE RH Jam Nut | 2 |
| | 99800001 | 11/16" SAE LH Jam Nut | 2 |
| | 90003036 | Center Link - (Not Shown) | 1 |
| | 90003025 | Left Inner Tie Rod - (Not Shown) | 1 |
| | 90003026 | Right Inner Tie Rod - (Not Shown) | 1 |

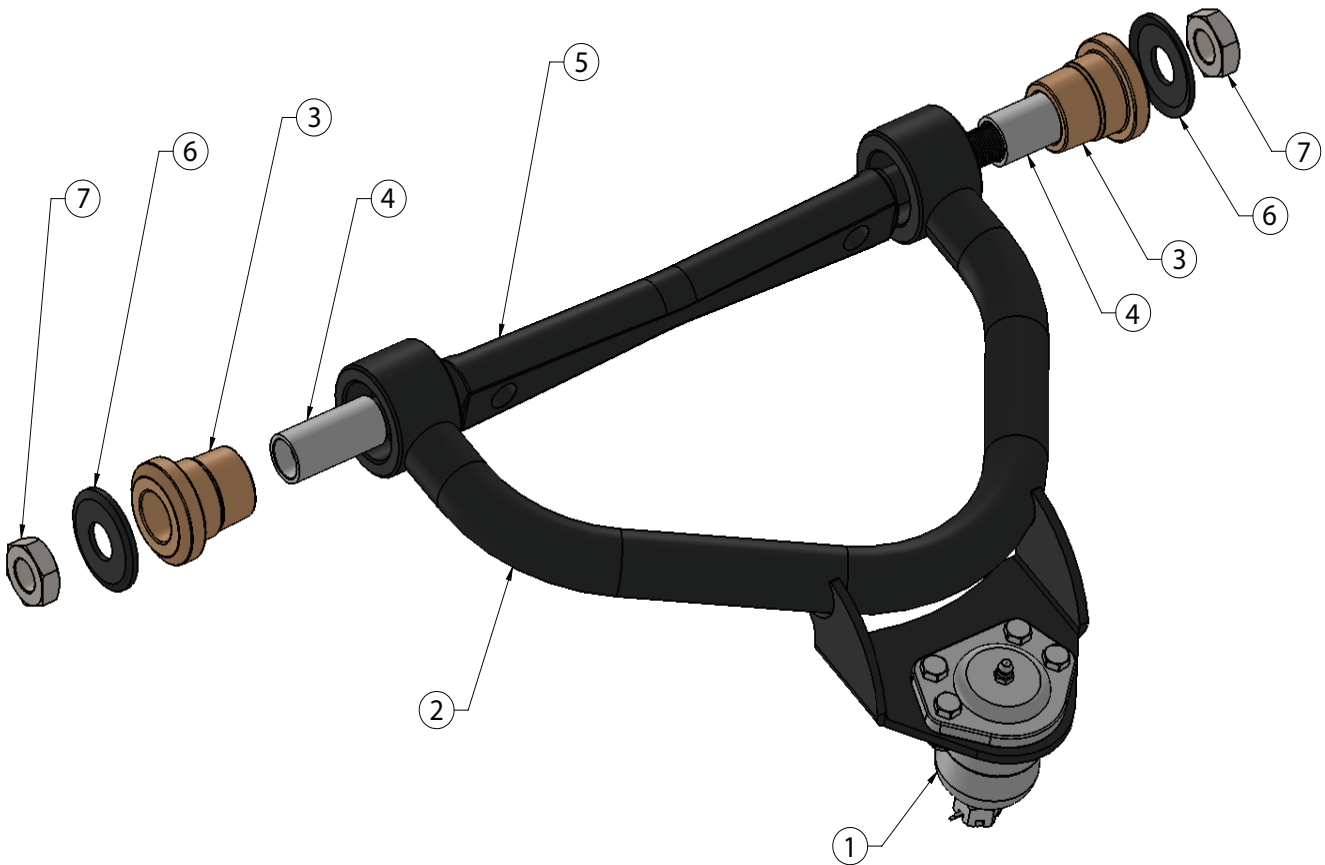




Upper Control Arm ComponentsIn the box

| Item # | Part Number | Description | QTY |
|--------|--------------|--|-----|
| 1 | 90000894 Kit | Upper Balljoint Assembly | 2 |
| 2 | 90002832 | Driver Upper Control Arm (Shown) | 1 |
| 2 | 90002833 | Passenger Upper Control Arm | 1 |
| 3 | 70012819 | Delrin Control Arm Bushing | 4 |
| 4 | 90002661 | Delrin Bushing Inner Sleeve | 4 |
| 5 | 90000917 kit | Upper Cross Shaft Kit | 2 |
| 6 | 90000917 kit | 5/8" Bushing Washer - included with 90000917 | 4 |
| 7 | 90000917 kit | 5/8"-18 Locking Nut - included with 90000917 | 4 |

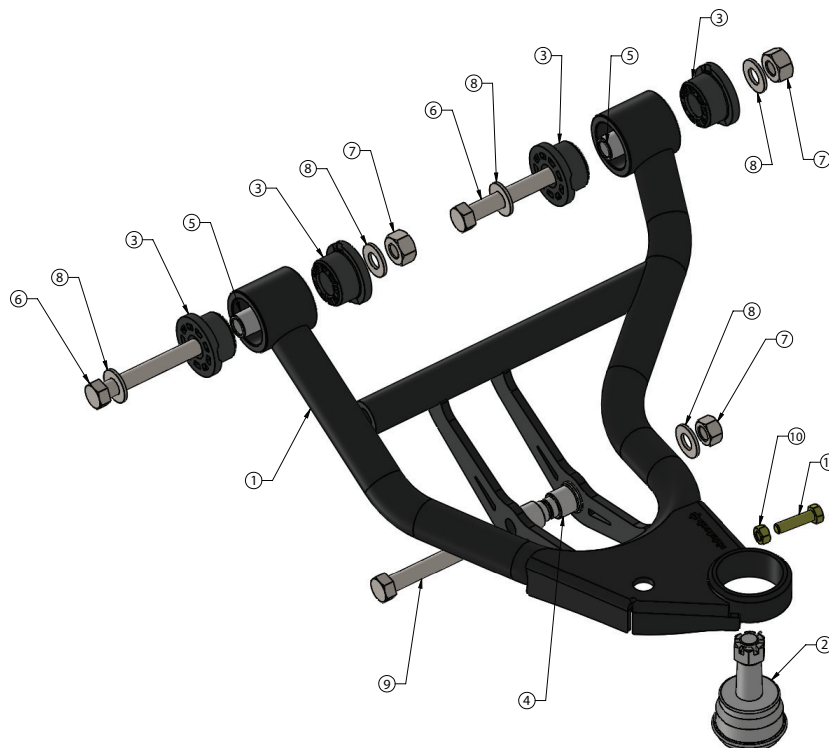
Driver Side Shown





Lower Control Arm ComponentsIn the box

| Item # | Part Number | Description | QTY |
|--------|-------------|---|-----|
| 1 | 90002830 | Driver Lower Control Arm (Shown) | 1 |
| 1 | 90002831 | Passenger Lower Control Arm | 1 |
| 2 | 90000898 | Lower Balljoint Assembly | 2 |
| 3 | 70010759 | Delrin Bushing - with 2" Diameter Ledge | 8 |
| 4 | 90002062 | CoilOver Bearing Spacers | 4 |
| 5 | 90000516 | 1/2" ID Inner Sleeve | 4 |
| 5 | 90000517 | 9/16" ID Inner Sleeve | 4 |
| 6 | 99501006 | 1/2"-13 x 3 1/2" Hex Bolt | 4 |
| 7 | 99502001 | 1/2"-13 Nylok Nut | 6 |
| 8 | 99503001 | 1/2" SAE Flat Washer | 10 |
| 6 | 99561006 | 9/16"-12 x 3 1/2" Hex Bolt | 4 |
| 7 | 99562005 | 9/16"-12 Nylok Nut | 4 |
| 8 | 99563002 | 9/16" SAE Flat Washer | 8 |
| 9 | 99501006 | 1/2"-13 x 3 1/2" Hex Bolt | 2 |
| 10 | 99311011 | 5/16"-18 x 1 1/4" Hex Bolt | 2 |
| 11 | 99312007 | 5/16"-18 Hex Nut | 2 |



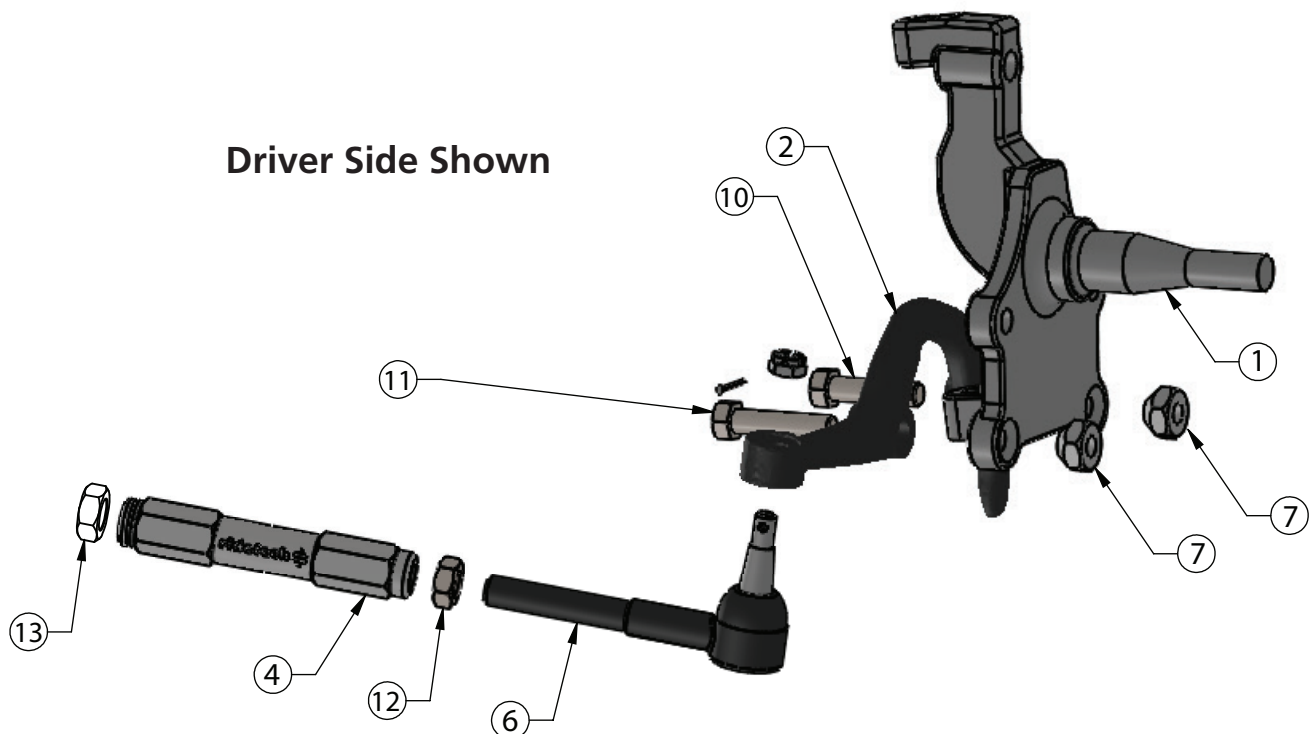
Driver Side Shown



TruTurn Steering ComponentsIn the box

| Item # | Part Number | Description | QTY |
|--------|-------------|---|------|
| 1 | 11009300 | Ridetech Tall Spindle | 1pr. |
| 2 | 90003000 | Driver Steering Arm | set |
| 2 | 90003000 | Passenger Steering Arm (not shown) | set |
| 3 | 90003036 | Center Link (not shown) | 1 |
| 4 | 90002836 | Tie-Rod Adjuster | 2 |
| 5 | 90003025 | Left Inner Tie Rod End (not shown) | 1 |
| 5 | 90003026 | Right Inner Tie Rod End (not shown) | 1 |
| 6 | 90002834 | Tall Outer Tie Rod End | 2 |
| 7 | 90009932 | Tapered Steering Arm Attaching Nut | 4 |
| 8 | 90002835 | Pitman Arm | 1 |
| 9 | 90003007 | Idler Arm | 1 |
| 10 | 99502005 | 1/2"-20 x 2" Hex Bolt | 2 |
| 11 | 99501010 | 1/2"-20 x 2 1/4" Hex Bolt | 2 |
| 12 | 99800002 | 5/8"-18 RH Jam Nut | 2 |
| 13 | 99800001 | 1 1/16"-16 LH Jam Nut | 2 |
| | 99431023 | 7/16"-14 x 1 3/4" Hex Bolt GR 8 - Idler Arm | 2 |
| | 99433005 | 7/16" SAE Flat Washer GR8 - Idler Arm | 4 |
| | 99432010 | 7/16"-14 Nylok Nut GR8 - Idler Arm | 2 |

Driver Side Shown





Getting Started.....

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

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

Note: The Camaro 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 to fit the OEM Disc Brake Spindle of the listed cars will fit the Spindle in your TruTurn System

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

Installation

1. Remove the entire 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 all the Steering Linkage will all be replaced with the TruTurn package.
2. Drill the factory upper shock mounting hole to 3/4". This can be done easily with a Unibit.

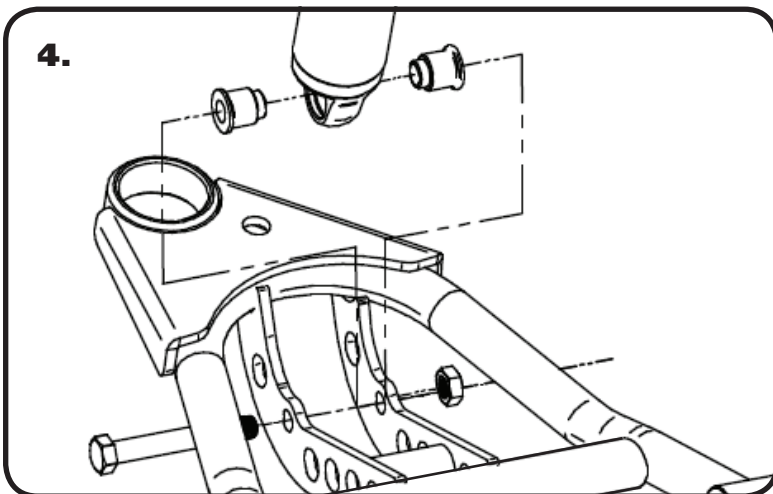


3. After removing the factory lower control arm, clean the bushing mounting surfaces on the frame. The Control Arms are marked "D" for Driver and "P" for Passenger. The Balljoint Pin points up and the Sway bar mount is on the front side of the arm. Fasten the lower arm to the frame with the hardware supplied. There are two different size bushing sleeves supplied 1/2" and 9/16". '71-'74 model years will use 1/2". '75-'81 will use 9/16".

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



Installing Lower & Upper Control Arm

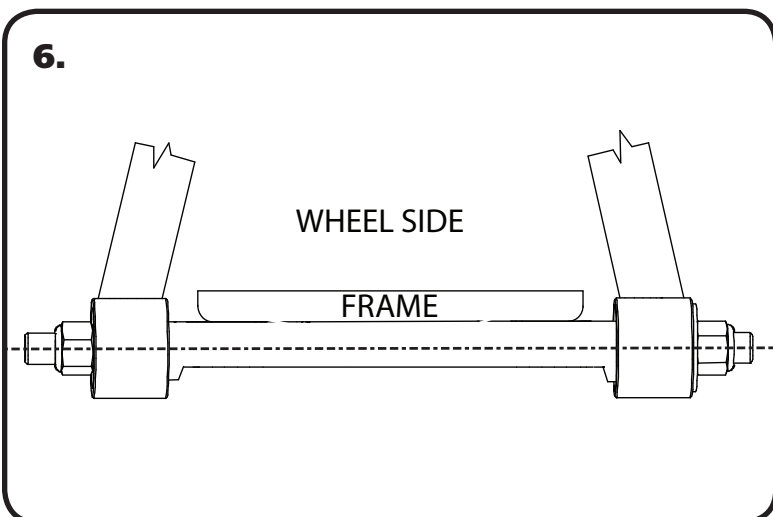


Install the CoilOvers at this time. Refer to the CoilOver instructions for Assembly.

4. Insert the Bearing Spacers into the lower shock bearing. Swing the Control Arm up, line up the 1/2" holes with the bearing spacers, insert 1/2"-13 x 3 1/2" bolt. Install a 1/2" flat washer and nylok nut.



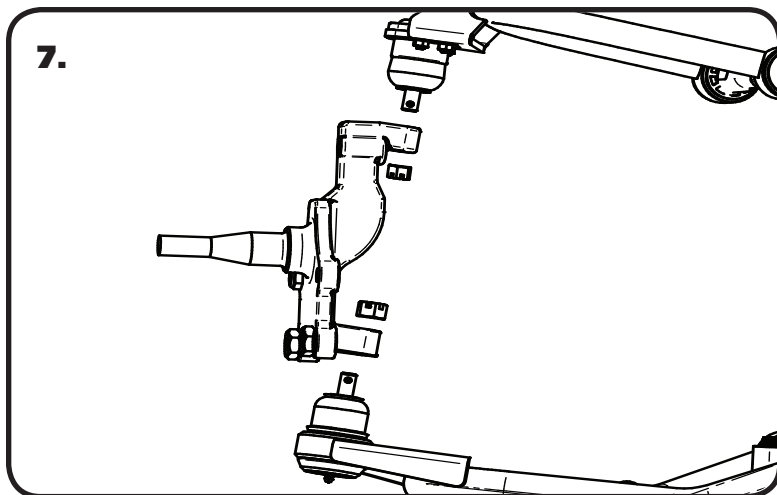
5. The Upper Control Arm is attaching the factory mount using factory hardware. The driver side arm is shown in Figure "5". The Balljoint located on the arm to the rear of the car.



6. Attach the Upper Control Arm with the FLAT Side of the cross shaft against the frame. Attach the upper control arms using the OEM hardware.



Installing Spindle and Steering Arm

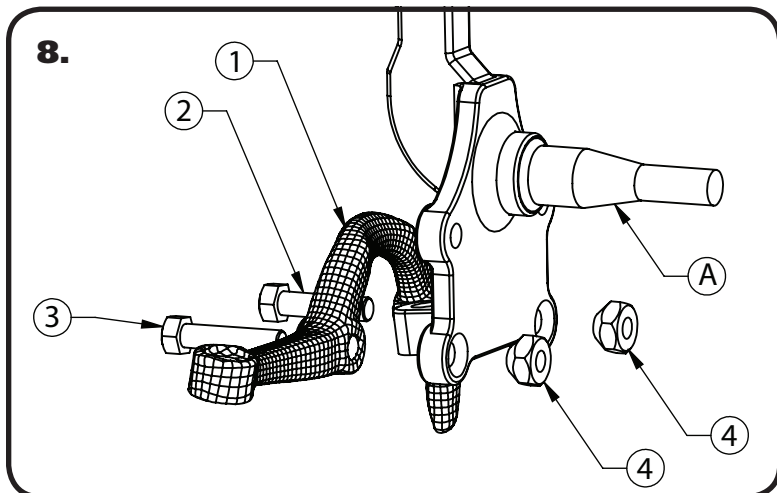


7. Attach the Spindle to the control arms. The Spindle is the same for Driver and Passenger.

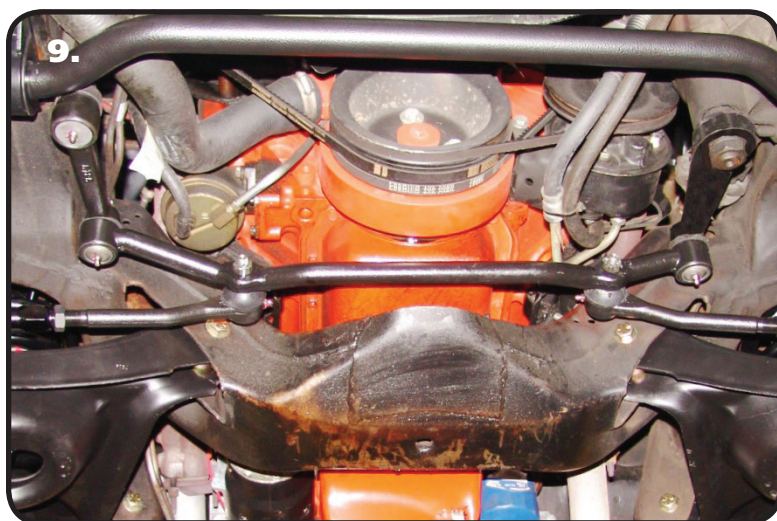
Torque Specs:

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

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



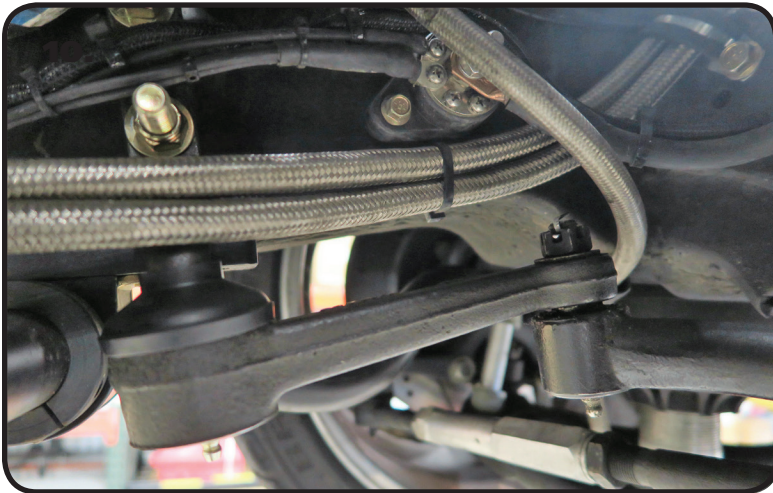
8. Attach Steering Arm(1) to Spindle(A). 1/2" x 2"(2), 1/2" x 2 1/4"(3) Hex Bolts, & Tapered Nuts(4) are used to attach them. The Steering Arm is positioned with the Tie Rod End pointing to the front of the car and toward the engine. Use Red Loctite (Supplied in the Kit) on the Bolts for the Tapered Nuts and Torque to 75 ftlbs.



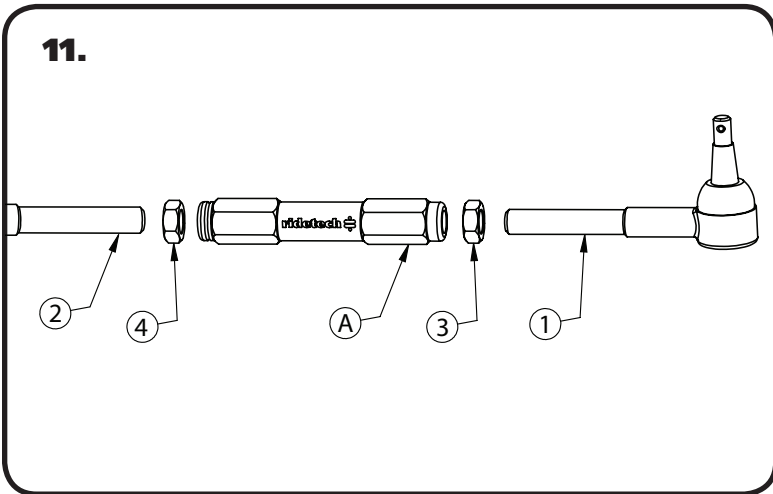
9. The TruTurn kit includes a new centerlink, pitman arm, idler arm. All of these components must be replaced to optimize the suspension. A pitman arm puller is necessary to replace the pitman arm.



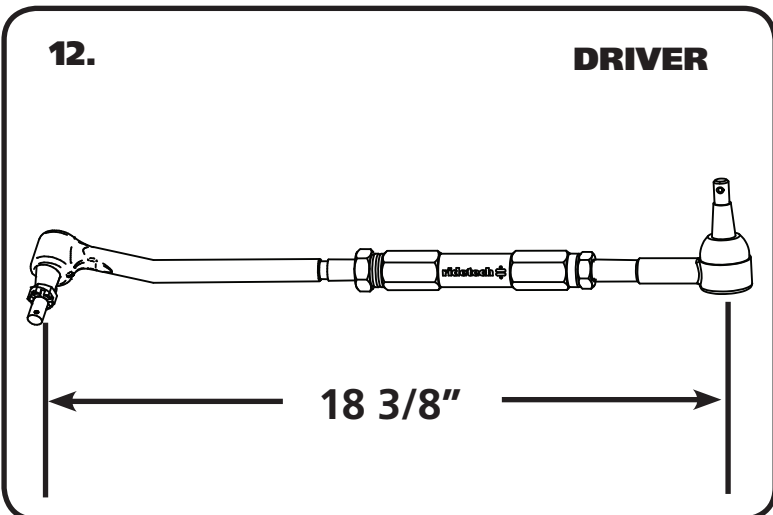
Tie Rod Assembly and Installation



10. Early Cars(70-72) used 3/8" bolts to attach the Idler Arm, these will need the holes drilled to 7/16". New 7/16"-14 x 1 3/4" Bolts, 7/16" Flat Washers, & 7/16"-14 Nylok Nuts are supplied to attach the new Idler Arm.



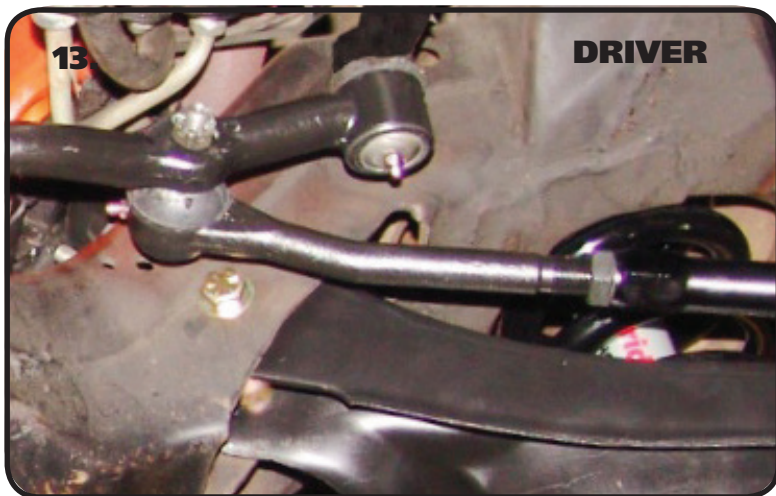
11. The Tie Rod Adjuster has 2 threads in it; 5/8-18 RH & 11/16-16 LH. The 11/16-16 LH thread is for the inner tie rod and is marked with a groove on the outside of the adjuster. Thread a 11/16"-16 LH Jam Nut on each of the inner Tie Rods. Thread a 5/8-18 RH Jam nut on each of the outer Tie Rods. Apply Antiseize to the threads of the adjuster. Thread the adjuster onto the inner tie rod, then thread the outer tie rod into the adjuster. You can keep the thread engagement by starting the inner and outer tie rods the same number of revolutions, then hold the outer tie rod from turning while turning the adjuster to thread it on the tie rods. This will thread them in evenly.



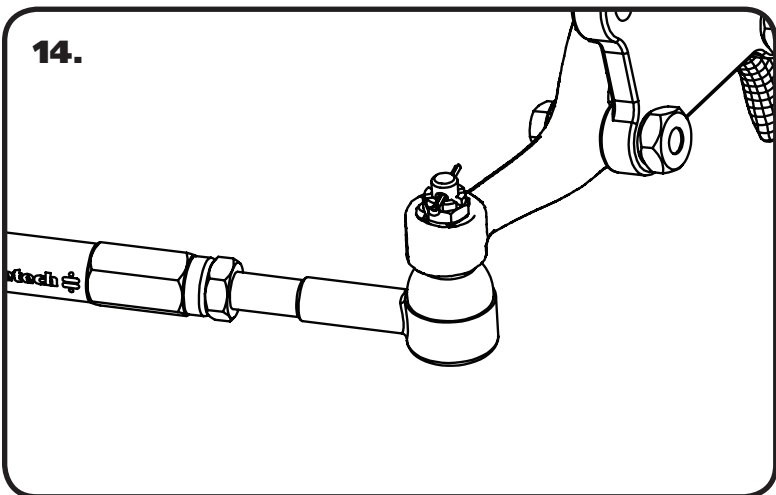
12. Assemble the Tie-Rod to a center to center length of 18 3/8" to start with, having equal amount of thread engagement on both ends. Use anti-seize on the threads of the Tie Rod and Heim end before threading them into the adjuster. The kit includes a Driver and Passenger Inner Tie Rod. The Tie Rods are installed with the BEND to the BOTTOM for better frame clearance. The Driver side is shown in **Image 11**.



Finishing



13. Install Inner Tie Rod into Centerlink using a 7/16" Castle Nut and 3/32" Cotter Pin. Insert the tapered end of the tie rod into the taper of the centerlink. Thread the 7/16" Castle nut on the stud. Torque to 35 ftlbs and then tighten to align Cotter Pin hole with slot on Castle Nut. Install Cotter Pin. Make sure the correct inner tie rods are on the correct sides. The driver is shown in **Image 12**.



14. Install Outer Tie Rod into Steering Arm using a 7/16" Castle Nut and 3/32" Cotter Pin. Insert the tapered end of the tie rod into the taper of the steering arm. Thread the 7/16" Castle nut on the stud. Torque to 35 ftlbs and then tighten to align Cotter Pin hole with slot on Castle Nut. Install Cotter Pin.

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

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

Suggested Alignment Specs:

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