**READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.**
**CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.**

# INSTALLATION GUIDE

CHRIS ALSTON'S Chassisworks
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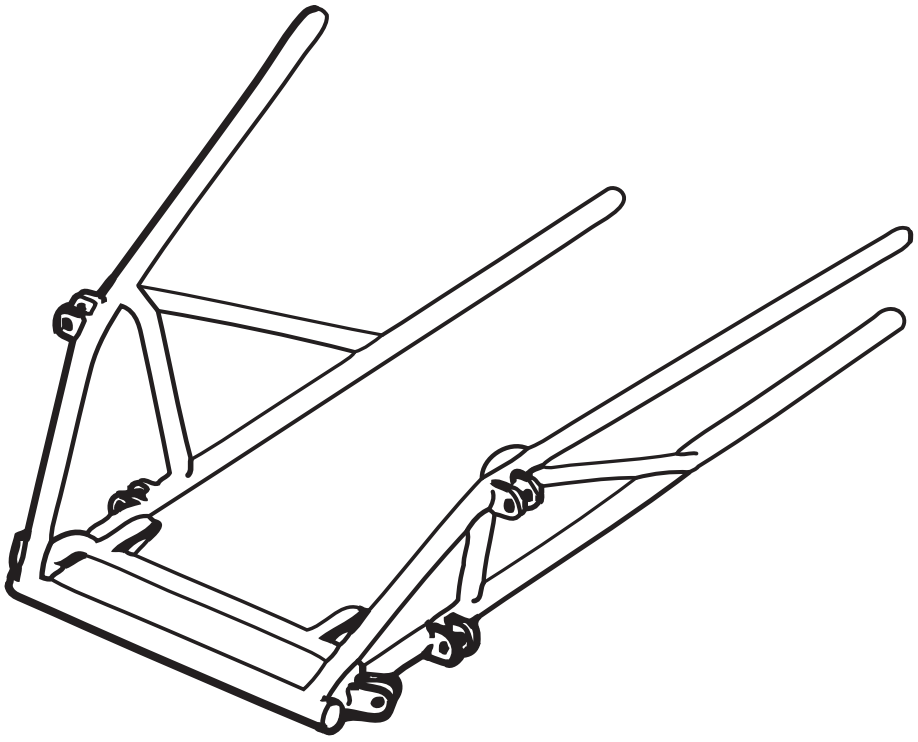
## 7103
## Strut Snout - 1-5/8” Frame



**Description:** Drag-race strut snount front frame in 1-5/8” round mild steel or 4130. Includes frame rails, forward support struts, front crossmember, rack and pinion crossmember, and mounting brackets.

# PARTS LIST (MILD STEEL)

### 7103 - Strut Front Frame, 1-5/8” Mild Steel

| Qty | Part Number | Description |
|---|---|---|
| 1 | 3004 | Front Brackets, Strut 1-5/8” Frame |
| 1 pair | 4215 | Front Frame - 1-5/8” Strut |
| 1 | 4611 | Strut Snout Bent Tubes |
| 1 | 4708 | Rack Crossmember 1-1/4” Mild Steel |
| 1 | E26.134-024.000 | Steel Tube, 1-5/8” x .134” x 24” Long |

### 3004 - Front Brackets, Strut 1-5/8” Frame

| | | |
|---|---|---|
| 4 | 1000 | Misalignment Bushing - 1/2” Bore |
| 4 | 2015 | Frame End Cap, 1-5/8” Round |
| 12 | 2101 | Suspension Tab, 1/2” Hole |
| 2 | 2300 | Pinto Rack and Pinion Chassis Mount |
| 2 | 3100-050F2.25Y | Bolt, 1/2-20 x 2-1/4”, Hex Head, Grade 8 |
| 2 | 3101-050-20C | Locknut, 1/2-20 Nylon Insert, Plated |

### 4611 - Strut Snount Bent Tubes

| | | |
|---|---|---|
| 1 | 4211 | Rack and PInion Crossmember, 27-1/2” Wide (unused) |
| 2 | 4219 | Forward Strut - Strut Chassis |
| 2 | E20.120-036.000 | Tube, 1-1/4” x .120” x 36” |

# PARTS LIST (4130)

### 7103 - Strut Front Frame, 1-5/8” 4130

| Qty | Part Number | Description |
|---|---|---|
| 1 | 3004 | Front Brackets, Strut 1-5/8” Frame |
| 1 pair | 4341 | 4130 Strut 1-5/8” Frame Rails |
| 2 | 4351 | 4130 Forward Strut Eliminator |
| 1 | 4723 | Rack and Pinion Crossmember 1-1/4”, 4130 |
| 1 | A20.058-072.000 | 4130 Tube, 1-1/4” x .058” x 72” Long |
| 1 | A26.065-028.000 | 4130 Tube, 1-5/8” x .065” x 28” Long |

### 3004 - Front Brackets, Strut 1-5/8” Frame

| | | |
|---|---|---|
| 4 | 1000 | Misalignment Bushing - 1/2” Bore |
| 4 | 2015 | Frame End Cap, 1-5/8” Round |
| 12 | 2101 | Suspension Tab, 1/2” Hole |
| 2 | 2300 | Pinto Rack and Pinion Chassis Mount |
| 2 | 3100-050F2.25Y | Bolt, 1/2-20 x 2-1/4”, Hex Head, Grade 8 |
| 2 | 3101-050-20C | Locknut, 1/2-20 Nylon Insert, Plated |

### 4341 - 4130 Strut 1-5/8” Frame Rails

| | | |
|---|---|---|
| 2 | A26.065-108.000 | Tube 1-5/8” x 065” 4130 x 108” Long |

# INSTRUCTIONS

- Read all instructions and make sure you understand them before starting.
- YOU NEED A FAIRLY LEVEL GARAGE FLOOR TO OBTAIN GOOD RESULTS!
- Your car must have an existing rear frame and a roll cage in order to use this kit.

1. First you must determine exactly where the stock front spindle centerline is located on your car. Measure from this point back to the rocker panel and make a reference mark. This will give you the front spindle centerline after the frame has been removed. Remove the stock frame and suspension but not the front fenders.
2. Determine where you are going to attach the rearward end of the new front frame. The best method is to install a dropped crossmember between the rocker panels. Position the crossmember 2 to 3 feet forward of the rear end. The rear frame will weld to the backside of the dropped crossmember. The new front frame will attach to the front side of the crossmember.
3. Locate the body off of the floor so it is positioned at the new ride height. Block the rocker panels and rear of the frame so the car will be held steady. You need at least 3 inches of ground clearance from the front bumper to the tire and 12 inches behind the tire. Do not let your car sit too low.
4. Before you can install the frame and upper strut mounts, you must determine what strut mount width you need for your tires to clear your fenders.
    - **Step 1:** Determine the outside front tire width that you need. Measure the width between the front fenders. You will need 4 to 5 inches of clearance from the side of the tire to the inner front fender lip. Subtract 8 to 10 inches from the inner fender width. This will equal the outside tire width.
    - **Step 2:** To determine the hub width, you need to know how much wider the outside of the tire is than the front hub. Put a yardstick across the outside of the tire and measure through the center to the side of the wheel that bolts to the hub. When the wheel is bolted on, it is this much wider than the hub. Multiply this by 2 and subtract this amount from the outside tire width you calculated in step one. This will be the required hub width.
    - **Step 3:** Subtract 11 1/2 inches from the hub width to find the top strut mount width. Write your mount width on the Assembly Drawing.
5. Install the front crossmember. It is 26 inches long with a 10-degree angle on each end and 16 inches forward of the front spindle centerline. Make some supports that hold the crossmember off the floor so it is centered on the body 3 1/2 inches above the ground and the front side is 16 inches forward of the front spindle line. This will be the crossmembers location at ride height. Cut the legs off of the steering box tube so they are only 1 5/8 inches tall. Locate the steering box tube per the assembly drawing. If you are using the pro box rack and pinion, part #6109, the rack and pinion mounts should only be 1 1/2 inches above the frame. Upon completion, the bottom of the front crossmember will be approxi¬mately 3 1/2 inches off of the ground when using a 25” diameter tire.
6. Position the new frame rails in the chassis. They will most likely be too long. If the front of the frame does not clear the grillwork, shorten it. Be careful not to cut too much. The rails should be parallel at the correct width and centered in the frame. Measure diagonally to make sure the frame is square. Measure from the side of the frame to the body in several places to make sure the frame is centered in the body.
    - Use #4203 cage mount loops (purchase separately) to attach your existing cage side to the new frame without creating header clearance problems. Use whatever frame rake is necessary to attach the rear of the frame correctly, making sure you have enough ground clearance. The frame in the engine compartment should run up hill to the rear.

7. Measure forward from the marks on the rocker panels that locate the front spindle line and draw a line across the floor (90 degrees to the car centerline) to represent the front spindle centerline. Use a large square or plumb bob to put a line on both sides of the new front frame rails, which will represent the front spindle centerline. All of your brackets will locate off of this line.

8. Install the forward and rear control arm mounts. Check the assembly drawing for their locations and angles. The angle of the brackets is determined by the angle of the control arm leading into them. For best results, position the brackets with the strut and control arms hanging in place. Also, install the rack and pinion mounts per the assembly drawing.

9. Make a stand that will simulate the top strut mount and bolt two 1/2-hole suspension tabs to it. It should be the correct width that you determined from step 4; 22 1/2 inches above the ground; and 1-3/4 inches behind the front spindle line. Also, the top strut mount brackets are tilted 10 degrees. Install the forward struts to the cage sides and front of the frame so they also attach to the top strut mount bracket. Install the 1 1/4 inch tubes to support the top strut mount per the Assembly Drawing.

10. Install the complete front suspension and steering, less the springs. Align the front end to 1/32 to 1/8 inch toe in, zero degrees camber, and 8 to 10 degrees of caster. The front end can be aligned by using a machinist level on the strut flats and steering arm.

11. Move the strut spindle through its full travel to make sure nothing binds up. Also, check for bump steer. If assembled correctly, all unnecessary bump steer can be removed by shimming the tie rods up and down at the spindle or by raising or lowering the rack and pinion slightly (1/16 of an inch at a time).

12. After everything checks out okay, final weld it all. Use the frame end caps to cap the front open end of the frame.



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