INSTALLATION INSTRUCTIONS: PART# 5351
Stage 3 Radius Arms, 1978-79 Bronco
Solid Axle Swap 1980-96 Bronco
Solid Axle Swap 1983-97 Ranger

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NOTES: This kit will not work on vehicles with less than 3 1/2” of suspension lift. These are intended to be used with a suspension lift as stock shocks will no longer work with these.

Before starting disassembly, take measurements while sitting on a flat, level surface, including ride height, wheelbase, clearance and any travel indicators. Drop plumb bobs and note wheelbase on fender with masking tape for reference. Check all clearances before installing.

These instructions are based on installation on a 78-79 Bronco, for a Solid Axle Swap instructions, refer to page 3 for general setup guides. We highly recommend using thread-locking compound on all fasteners. Please read all instructions before beginning.

1. Block the rear tires. Raise the front of the vehicle and place jack stands under the frame so the front axle will hang by the coil springs. Support the axle with a floor jack so you can manipulate its height during installation. CAUTION: Make sure your frame to axle brake line has sufficient length to accommodate the increased distance.

2. Remove the tires and wheels.

3. Remove the front coil spring and its lower retaining cup. As well as the front shocks.

4. Remove the bolts holding the stock radius arms to the “C” cap on the front of the radius arm.

5. Remove the cotter pin and castle nut from the rear of the stock arm. Slide it forward and out of the frame-mounting bracket.
6. Remove the stock frame bracket. Retain this bracket in case you would like to return to stock at a later date. With brackets removed, drill existing holes out to 7/16”. CAUTION: Check the backside of the frame for fuel or brake lines before drilling. Slide support bracket into place (short side to frame, long side to crossmember). Slide a 7/16” flat washer over each 7/16” x 1 1/4” Bolt, insert through bracket and crossmember. Secure with 7/16” flat washers, lock washers and nuts.

7. With the stock bracket removed, measure back 19” from the rear flange of the body mount bracket located towards the rear of the coil spring tower. This is the front edge of the new mount. The 1” hole in the frame brackets must be facing toward the front of the vehicle.

8. Based off of the measurement in step 7, slide the frame bracket into place. Mark the three mounting holes for drilling or use any existing holes that may line up. Remove the bracket and drill the three mounting holes in the frame. It is best to start with a 1/4” pilot drill and then progress up to the 1/2” size. CAUTION: Watch for brake lines, fuel lines and other possible items that may be on the other side of the frame.

9. Position frame bracket over the holes. Place a 1/2” flat washer over each 1/2 x 2” NC GR 5 bolt and insert through bracket and frame. Place Inner Frame Brackets over 1/2” bolts. Drill out the holes that you will be using. Secure with 1/2” flat washers and Nyloc Nuts.

10. With bracket secured, drill through center of Oblonged hole in the bottom of the bracket, through frame. (Note: check again for anything on the inside of the frame.) Secure with 1/2” washers, 1/2” x 2” NC Bolt and Nyloc Nut. Tighten the four bolts securely. Approximately 75 ft-lbs.

11. Using the brake line extension plates, the 5/16” x 3/4” bolts and Nyloc nuts provided, raise the brake line brackets up to clear the radius arm head units. Use the original bolts in the original position. CAUTION: Be careful not to kink or crack brake lines. Repeat steps 3 through 11 on the other side.

12. Insert the bushings provided into the large hole locations on the new head units. We highly recommend using a Lithium based grease on the bushings to prevent squeaking and to improve articulation through lessening of friction. Lubricate and insert the 5/8” I.D. sleeves provided into the bushings.

13. Position the radius arm around the head unit so that the bent portion is to the inboard side of the Bronco and so that the shock mounts are at the top outside of the arm. Align the upper and lower holes in the head unit with the upper and lower bushings in the radius arms. Secure these positions with the 5/8” NC GR 8 bolts, flat washers and Nyloc nuts provided. Torque to approximately 150 ft-lbs. Do not overtighten as this will lessen the effectiveness of the bushings as well as shorten their life-span.

14. Position the “C” bushings into the new head unit and the stock “C” cap. Note the proper orientation printed on each bushing. Make sure to lubricate these bushings with Lithium based grease. Note: Because these radius arms have 4.25° of caster built into them, you will be able to run a lesser degreed bushing and achieve the same caster rating. Normally, a 4° bushing can be used with a 4.5” lift and these arms.

15. Lubricate the 9/16” x 3” NC GR 5 bolts, use as starter bolts to pull the head unit and original “C” cap together Lubricate the 9/16” x 2 1/4” NC GR 8 bolts and use with the 9/16” lock washers to secure the original “C” cap to the new head unit. Start by hand and tighten in a X-pattern. Torque these bolts to the stock specifications (90-110 ft-lbs). Note: Due to inconsistent Ford “C” cap drill patterns it may be necessary to slightly enlarge or elongate one or more of the holes to fit the cast head unit. Torque evenly, failure to do so may cause the vehicle to have a slight lean to one side.
16. Repeat steps 12 through 15 on the other side.

17. Thread one jam nut fully onto each of the rod ends.

18. Thread the rod ends into the rearward end of the radius arms. Thread them in until they bottom out in the threads then back off slightly until the rod end is vertical (through hole is side ways). Note: It is very important that the distance from the center of the rod end to the upper forward, mounting-hole, from the arm to the “C” cap, be the same for each side. Securely tighten the jam nuts against the radius arms.

19. Slide the radius arms up into the frame brackets installed in steps 3-10. In this order slide the 1” bolt provided through a flat washer, the bracket, a 1” I.D. spacer, the rod end, a 1” I.D. spacer, and then through the bracket. Secure this with a flat washer and Nyloc nut provided. Note: the bolt head should be to the outside of the vehicle and the nut on the inside.

24. Reinstall the front tires and wheels.

25. Due to variations in tire size and wheel offset, check clearances around shocks, shock mounts and radius arms. Also check that the front axle u-joint is not binding at full steering lock. We highly recommend that an alignment be performed on the vehicle as soon as possible. After the alignment has been performed turn the steering wheel lock to lock to verify the steering is properly adjusted. Failure to do so could result in damage to tires, wheels or shocks.

26. Check all fasteners after 50 miles and every off road excursion.

Solid Axle Swap setup guides:

Before starting disassembly, take measurements while sitting on a flat, level surface, including ride height, wheelbase, clearance and any travel indicators. Drop plumb bobs and note wheelbase on fender with masking tape for reference. Check all clearances before installing.

Roll axle under the front of the vehicle, assemble Radius Arms as per instructions starting in step 12. Take measurement from end of assembled head unit to center of 1” hole in rod end (should be 45”).

Set the ride height of the vehicle. Center up the axle under the vehicle using the wheelbase measurements you took before disassembly by measuring back 45” front the center of the axle tube, drop the plumb bob. This is the center of the 1” hole for your frame bracket. Place the frame bracket and line up the 1” hole with the plumb bob. Mark the holes that you choose to use in the bracket. Check for items on the backside of the frame. Drill and bolt as described in the rest of the instructions above.

LIMITED WARRANTY

James Duff Inc. warrants our products to the original purchaser to be free from defects in materials and workmanship. Warranty periods begin at the date of purchase and varies by product. Shocks have a limited lifetime warranty. Headers, Radiators, Suspension Products, Power Brake Boosters and Master Cylinders have a one year warranty. Adapters and soft goods such as upholstery, vinyl and rubber products have a 90 day warranty. All warranties are to the original purchaser with proof of purchase only. Such obligations under this warranty shall be limited to the repair or replacement, at JDI's discretion, of any assembly or part which upon examination by JDI proves to be defective. Any costs of removal, installation, reinstallation or freight charges are expressly excluded from this warranty. This warranty covers only manufacturers defects, and does not cover product finish damage resulting from abuse, misuse, negligence, racing, alteration, accident or damage in transit. All returns must be pre-authorized by JDEI and accompanied with a Return Goods Authorization Number (RGA) and a dated proof of purchase. Returns must be made within 90 days of purchase, packaged sufficiently to prevent damage in shipment and sent prepaid to JDI, 6609 Bronco Ln., Knoxville, TN 37921. Returns without an RGA# or sent COD will be refused.
To maximize the performance of your new radius arms we suggest combining them with our other components designed specifically for high articulation.

Early Bronco Progressive Rate Coil Springs
In our continuous drive to offer the best in Bronco suspension items we have redesigned our coils to offer more travel and an even better quality ride. The initial and mid range spring rate is soft, which allows them to offer good ride characteristics and suspension travel, without being so soft or firm that predictable handling and ride quality is affected. Some springs are so soft that at maximum extension they don’t offer enough pressure down on the axle (and thereby to the tire) to provide traction. This is why some vehicles will do great on a RTI ramp but on an actual extreme trail their suspension will have a tendency to hop rather than provide enough down force to the tire for traction. The spring rate increases dramatically the last few inches before full compression, providing bottoming out prevention.

#5106 2 1/2” Lift Set
#5107 3 1/2” Lift Set
#5109 5 1/2” Lift Set

Lower Coil Retainers
We designed our HD replacements to securely hold your coils in place, allowing full flex (of even the last wrap) without fear of your coil popping out! Our simple but effective one piece design replaces both OE pieces. Zinc plated for rust resistance. Fits EB & 78-79 (5 1/2” diameter) Coils. #5120

Adjustable Track Bar
With up to 3” of adjustability our high quality tig welded track bar will get the front end centered under your rig and help correct steering woes. Heavy duty 1.5” 3/16” wall DOM tube with machined ends (not crushed tube) holds up to serious abuse. Work with up to 9” of lift. 9. wall Black powdercoated, includes poly bushings. Front crossmember will need to be trimmed for maximum clearance on up travel.

#5408 Adj. Track Bar, 78-79 Bronco

Full Width Shock Mounts
Designed with the proper offset for doing a Full width SAS on a 80-96 Bronco. Laser cut 3/8” and 1/4” installs on spring steel frames by bolting on with 1/2” bolts included. 15” overall height. #5225

SAS Track Bar Bracket 83-97 B2/R/X
This bracket is for doing a Solid Axle Swap under the front end of your Bronco II, 83-97 Ranger or 91-94 Explorer. All bolt on mounts using stock motor mount holes, our 5261B Coil Tower bolts and two others drilled in engine cross member. Track Bar Mounting hole is 3/4”, for use with heims & spacers or large bushings. 2.9/4.0 tested. Comes black painted with hardware. #5410

SAS Track Bar Bracket 80-96 FSB
All bolt on installation uses original holes in frame and by drilling two additional holes in engine cross member. Track Bar Mounting hole is 3/4”, for use with heims & spacers or large bushings. Black powdercoated with hardware. #5415

E-Brake Cables
This high quality, easy to install universal replacement cable can replace any of the 3 pieces necessary to run the length of your rig.

#3756 Universal Cable (1)

Heavy Duty Heim Joint Steering Systems
Our steering systems use 1.25” DOM with a .2815” wall thickness threaded (not a welded insert) for maximum strength and clearance. We attach the drag link to the tie rod via a saddle to maintain factory geometry and to eliminate the use of long spacers and additional torque on the passenger side knuckle. We use misalignment spacers around the high quality Teflon lined 3/4” rod ends and GR8 bolts to prevent binding and allow full articulation of the joint. Requires drilling out your knuckles and pitman arm to 3/4”. We include all metal lock nuts and cotter pins to drill and secure everything in place. Comes black powder coated with detailed instructions.

To ensure proper fit, we need two measurements on your vehicle; from center to center of your knuckles where the tie rod goes through and from the center of the pitman arm to the center of the PASSENGER side knuckle. These kits are based on a stock location steering box. We want both of these measurements because they will vary depending on lift height, steering box and the front end/knuckle setup you have. Also note that there is a significant amount of adjustment with 2 joints on each linkage. Remember, when measuring for steering the most accurate you can be the better. Make sure the project is nearly complete with all of the weight applied to the suspension. A missing body, engine, transmission, etc. can make a huge difference in your measurements.

Check state regulations before ordering as some states will not pass inspection with heim joints in the steering. Please note that these systems are not compatible with a shock mounted to the front of the C-Cap. Shocks must be behind the coil. #5645