

INSTALLATION INSTRUCTIONS: PART# 6101

OEM Style Radius Arm Hardware Kit,

1966-79 Bronco 1966-79 F150 4x4

CONTENTS:

2	3/4"x10 NC GR8 Flanged Nut	2	9/16" SAE GR8 Flat Washer				
2	Zinc Plated Cotter Pin	4	7/16"-14 x 1.25" GR5 Bolt	4	3/8" Lock Washer		
2	7/8" USS Washer	4	7/16" Lock Washer	4	1/2"-13 x 3" GR5 Bolt		
8	9/16"-12 x 2.25" GR8 Bolt	4	7/16" SAE Flat Washer	4	1/2"-13 Nyloc Nut		
2	9/16"-12 x 3.5" GR5 Bolt	4	3/8"-16 x 1.5" GR5 Bolt	8	1/2" USS Flat Washer	1/2	9/24
8	9/16" Lock Washer	4	3/8" SAE Washer				

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We are excited you chose the James Duff Radius Arm Hardware kit! In this kit we provide everything you need to replace and re-fresh all the hardware that attaches your radius arms to the frame and axle of your vehicle. Please check out the back of this page for other related offerings to help make your ride exactly the way you want it.

Note: This is not an exact copy of Ford OEM hardware. This hardware can be used on any vehicle that came with the factory Ford radius arms that mounted to a Dana 30 or 44 solid front axle. Typically that would be 66-79 Bronco and 66-79 F-150 4X4.

Safety Info: Please inspect your stock radius arms before reusing them. The ends that bolt to the frame get rusty and weak over 40-55 years and can become a serious safety concern to you and others around you while driving. Also please verify the radius arm is not bent and that the threads that hold the c cap and coil cups on are not damaged. Please inspect the radius arm mounts as well and if they are rusty and cracked you may want to consider replacing them with our adjustable radius arm mounts part#5430

Installing this hardware will require the use of PPE, floor jacks, jack stands, floor stands and several different sizes of wrenches, ratchets and sockets. If this is your first time replacing these parts on your vehicle we highly suggest you watch the T-rex arm install video on Bronco Garage's YouTube Channel

TEAR DOWN Please read all instructions before beginning. We recommend using penetrating oil on all hardware hours to days before the tear down.

1. Disconnect the breather hose from the front axle. With a 9/16" wrench, loosen and remove the breather extension. It secures the brake junction block to the center section, letting it dangle freely. Disconnect the front drive line at the front axle yoke, let it dangle as well. Break free the lug nuts on the front wheels, but don't loosen them. 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. (You may have to remove the front bumper if you don't have room behind it for the frame stands.) Support the axle with two 3-6 ton jack stands and a floor jack under the center section so that you can manipulate its height during installation. Remove the wheels.

CAUTION: Make sure your frame to axle brake line has sufficient length. Even with it disconnected you should keep an eye on it.

Remove the upper coil spring retainer, then loosen the 2 bolts that hold the lower coil spring retainer to the coil spring. Twist and slide the coil spring out by letting the axle hang freely.

NOTE: You may need to loosen the big nut holding the radius arm to the frame but do not remove the nut completely!

Now remove the track bar at the frame and secure it to the axle. Remove the drag link at the pitman arm and secure it to the tie rod. Use a small jack stand or a 4x4 wood block and wedge it under the pinion snout. This will be very helpful before removing the radius arms so the axle does not twist down on you unexpectedly during any process. Go to the radius arm frame mount and locate the large nut holding the arm into the mount. Use a pair of needle nose pliers and remove the cotter pin in the arm behind the nut. Use a 1 1/8" socket with an impact gun and remove the nut, the washer and the large rubber bushing. Repeat this step for the other side. Remove the 4 bolts holding the stock arm to the C-Cap using a 13/16" socket. Wiggle the arm and axle until the arm is free of the frame mount. This is a good time to clean and repaint the axle and C-Caps. You may find scale rust has built up under the c-bushings on the C-Caps and axle. Scrape or chisel that away, prep for paint then use gloss black chassis paint to prevent future rust.

C-CAP HARDWARE

Before you can attach your c cap hardware you first must install your C-Bushings. Using generous amounts of lube, coat the inside and outside of the bushings. Be sure to orientate them correctly by reading the inside edge of it. If you mount them upside down, your caster will be drastically off. Slide the C-Bushing into the stock radius arm.

NOTE: Make sure the 7/16 or 3/8" threaded hole on the stock radius arm is facing up. This hole has to face up because that is where your coil spring retainer attaches.

Position the other C-Bushing into the C cap, again make sure it also is facing the correct way, so there is a threaded hole at the top. We have supplied you with 2 9/16" x 3.5" Grade 5 bolts and SAE 9/16" washers. These are starter bolts that will pull the head unit and c cap together close enough so that you can use the 9/16" x 2.25" Grade 8 bolts. **BE SURE TO USE ANTI SEIZE ON ALL OF THESE BOLTS AND DO NOT USE AN IMPACT GUN!** Make sure you use the supplied SAE 9/16" washers to protect your paint and your socket!

Start the longer bolts first diagonal from each other. Using a ratchet, thread them in a little at a time. If they don't thread in easily, back them back out and back in until the hole becomes easier to thread. Do not bottom out the long starter bolt, this will cause the bolt to seize when trying to remove it. Now install the shorter 9/16" bolts and 9/16" lock washers. Once the first two are in place and have relieved the tension off the starter bolts, remove them and install the last two short bolts with lock washers. Once you have the shorter bolts threaded in 3 or 4 turns, move on to the other side and repeat step. Now that the arms are installed, it's time to finish tightening the C cap bolts. Grab the driver side arm and prevent it from rotating down. While doing this, remove the small jack stand or wood block under the pinion snout and slowly let the arms rotate down to the ground. Be mindful of the jack stands holding the axle up so the axle doesn't slip off of them. Also keep an eye on your axle to frame brake lines so they don't kink or over extend. Once the ends of the arms are resting on the ground, it is time to tighten the C-cap bolts the rest of the way. Grab your 13/16" socket, 6" extension and 1/2" ratchet driver and get comfortable underneath the front end. The goal here is to manually tighten down your C-caps while keeping both arms frame ends touching the ground. Make sure to go in a criss cross pattern and jump from the driver side to passenger side frequently. The arms will lift and drop a little as you tighten the bolts but once you are done tightening all 8 bolts, the arms should be flat on the ground. This is how you prevent the dreaded Bronco Lean. Once you have all 8 bolts tightened down by hand, torque them to 90-110 foot pounds.

FRAME END HARDWARE

Before you replace this hardware be sure the strut bushings are reusable. If they are distorted and/or cracked now is a good time to replace them. We suggest a new set of Polyurethane bushings part#6100. Using Fig. 2 below, reassemble the 7/8" washers, strut arm bushings, 3/4" flanged nut and 1/8" safety cotter pin on the arm and through the factory or James Duff frame bracket. **TIP** - You may not be able to start the nut on the threads with the second washer installed. Remove the washer and thread the nut on until it pulls the arm tighter to the frame bracket. Then remove the nut, install the washer and reinstall the nut. After all other components and hardware are installed, go back using an impact, tighten the 3/4" flanged nut until you see the bushings start to compress. Use your torque wrench to tighten it the rest of the way. Start at 80 ft. lbs. and up to a max of 120 ft. lbs. This extra torque may be required in order to install the supplied cotter pin. Once the hole is exposed, slip the cotter pin into the hole that is cross drilled through the end of the arm then bend the end of the cotter pin that slips through to 90°. Repeat this same process for the other side.

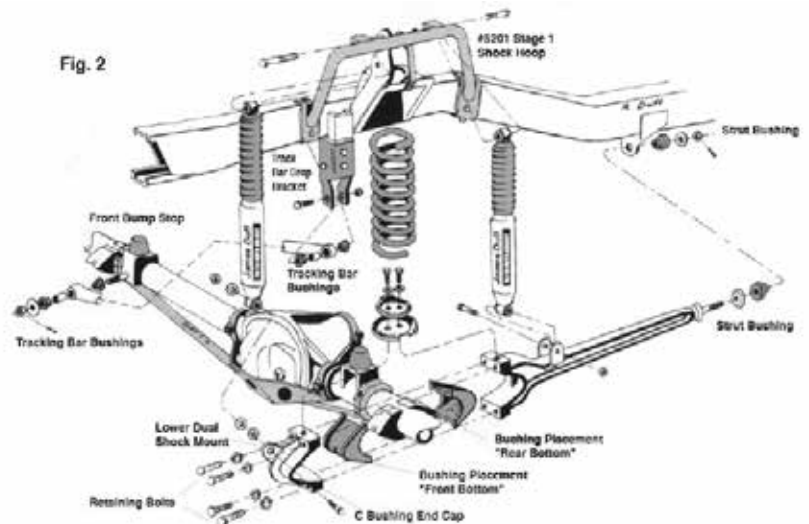
COIL CUP HARDWARE

We supply 7/16" and 3/8" hardware to reinstall your stock lower coil spring retainers. Please be sure which size you need before getting started. Some vehicles will use a combination of both. You can purchase new OEM style replacement lower coil spring retainers as well as the HD version we designed and sell. Please visit duffuff.com and search part# 5120 or spring retainers. You will notice we supply new lock washers as well as standard flat washers to protect your fresh paint, powdercoat or zinc finish. If you are using an OEM style coil cup, use Fig. 2 below for proper install orientation and be sure to not tighten the lower coil spring hardware down until the coil spring has been installed.

SHOCK HARDWARE

We supply new shock mounting hardware at the radius arm in this kit. If you need new hardware for the upper mount it will typically come with the shock if it's a stud style mount or with the hoop or tower. We also supply 1/2" big washers to use with the 1/2" bolts and nuts to protect the finish on your shock tabs. Do not over tighten the shock mounting hardware. Stop when you see the nut and bolt starting to compress the shock tabs. Allowing the shock ends to flex and move when the suspension cycles will allow them to do their job more effectively.

Be sure to go back and double check all new hardware is tight and no steps were missed. When you test drive the vehicle, keep it close to home at first. Listen for new noises and feel in the steering wheel and your seat for handling issues. If you properly lubricated and tightened all hardware and new bushings there should not be any noise or driving oddities.



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 and 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, re-installation or freight charges are expressly excluded from this warranty. This warranty covers only manufacturers defects, and does not cover product finish or 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 Lane, Knoxville, TN 37921. Returns without an RGA# will be refused. This warranty is expressly in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for use. This warranty gives you specific legal rights including other rights that vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion of limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you.