

INSTALLATION INSTRUCTIONS: #5370
1966-77 Bronco 4 Link Suspension for One-ton Axles



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6609 Bronco Ln.
Knoxville, TN 37921

CONTENTS:

- 1 HD Coil Retainers, pair #5120
- 1 Rear Axle Housing Truss
- 2 Frame Mounts
- 2 Lower Links
- 2 Upper Links
- 1 Coil Towers, pair #5111
- 1 Stage 4 Shock Mount #5220
- 1 Coil Springs, pair #5103
- 4 Shocks #8114
- 2 Lower Axle Shock Mts (weld on) #5505

TOOL LIST:

- Welder ***
- Cherry Picker (Hoist)
- Floor Jacks
- Frame/Jack Stands
- Grinder
- Cut Off Wheels
- Hammer
- Wrenches and Sockets
(1/2", 9/16", 5/8", 3/4", 15/16", 1-1/16", 1-1/8", 1-7/16", 1-1/2", 1-7/8")

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Please read all instructions before beginning. A 2" Body lift is required for installation of this kit. WARNING: Installation of a rear end 4-link coil set up will change the vehicles center of gravity and handling characteristics both on and off-road. You must operate the vehicle safely! Extreme care must be taken to prevent vehicle rollover or loss of control, which could result in serious injury or death. Avoid sudden sharp turns or abrupt maneuvers and always make sure all vehicle occupants have their seat belts fastened. Many states and municipalities have laws restricting vehicle lifts. Consult state and local laws to determine if the changes you intend to make to the vehicle comply with your states road vehicle laws. We highly recommend that an anti-sway bar be used with this kit for any vehicle to be intended to be driven on the road occasionally.

*****Experienced welder recommended for this installation. Type of welder recommended is a wire welder that is 220V or 240V single phase or larger. A 110V or 120V wire welder is not recommended for this installation. If you have any question regarding your welder size please contact us for more information. Welding on an axle housing and the heat generated by an untrained professional could cause damage to the truss, center section and bearings. CAUTION: Watch for brake lines, fuel lines and other possible items that may be on the other side of the frame.**

(Note: Installation may require you to remove and/or modify your exhaust system. If you have not removed it yet his may be a good time to take off the muffler and exhaust at the collector to gain work space for the frame brackets. You may want also want to disconnect your e-Brake cables at this time. Emergency brakes are an important safety feature of your vehicle. If you need a longer replacement, use our #3756.

The order in which we recommend installing these components will be: Diff Cover, Rear Axle Housing Truss, Upper and Lower Links, Frame Mounts, Coil Towers, Shock Mount, Lower Shock Mounts. However, you may want to change this order based on your rear housing set up or variations on what you're trying to accomplish in your rear 4 link system.

HARDWARE KIT

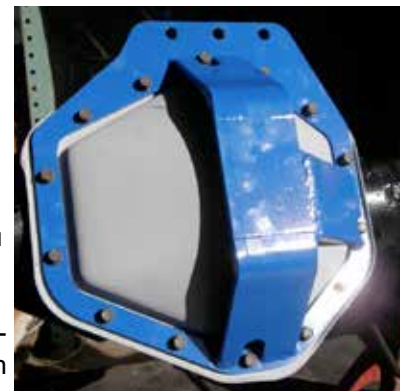
- | | | | |
|----|----------------------------------|---|--|
| 3 | 7/16" -14 x 2" GR 5 Hex bolt | 2 | 3/4" x 3-1/2" Grade 8 Bolts |
| 6 | 7/16" Flat Washers | 8 | 3/4" SAE Washers |
| 3 | 7/16" NC Nyloc Nut | 8 | 3/4" Rod End spacers .75 I.D |
| 14 | 1/2" Flat Washers | 4 | 3/4" Thin Nyloc Nuts Grade 8 |
| 4 | 1/2"-13 x 3" NC Grade 5 Hex Bolt | 4 | 1" X 5 1/2" Grade 5 Bolts |
| 4 | 1/2"-13 x 2" NC Grade 5 Hex Bolt | 8 | 1" Flat Washers |
| 8 | 1/2" NC Nyloc Nuts | 2 | 1" Rod Ends LH Thread |
| 2 | 1/2" x4" Grade 5 Hex Bolt | 2 | 1.25-12 Jam Nuts LH Thread |
| 2 | 3/4" Rod Ends RH Thread | 4 | 1" Nyloc Nuts |
| 2 | 3/4"-16 Jam Nuts RH Thread | 4 | 1" Rod End spacers (Short) .1" ID (For use at the frame mount) |
| 2 | 3/4" Rod Ends LH Thread | 4 | 1" Rod End Spacers (Long) .1" ID (For use at the truss) |
| 2 | 3/4"-16 Jam Nuts LH Thread | 2 | 1" Rod Ends RH Thread |
| 2 | 3/4" X 3" Grade 8 Bolts | 2 | 1.25"-12 Jam Nuts RH Thread |
| | | 1 | Diff to Truss Spacer |

STEP 1: INSTALL DIFF COVER ONTO HOUSING

Using hardware included in its individual hardware kit. Some applications have an additional instruction sheet included with the hardware.

STEP 2: TEST FITTING TRUSS TO AXLE HOUSING

Remove spring perches from axle housing, then proceed to fitting the truss to the housing. You may select to use c-clamps or other fastening methods to secure the outer part of the truss to the housing. Some grinding may be necessary to fit your individual housing. We recommend you remove the brake lines for safety from grinding and welding as they may have to be rerouted on the housing after the truss installation. Align axle truss so that the three bolt holes match



up with the bolt holes in the diff cover. Attach using the 3 – 7/16” -14x2” Grade 5 Hex Bolt, 6 - 7/16” Flat Washers and 3 – 7/16” Nyloc Nuts.

Once securely in place outline the areas to be welded on the axle housing. Using a marker, trace the exact location of the truss as it is attached to the axle housing. Once outlined, remove truss from axle housing. Clean axle housing with grinder or wire-wheel to remove any paint or debris to ensure a good clean surface to weld to. Prep the truss for welding by grinding a bit of the powder coating so that the welds will adhere. Reattach truss to axle housing with the 7/16” Bolts to begin welding. You may use C-Clamps or other methods of clamping (in our case we used a small ratchet strap).

Tack weld truss in place on the axle housing rear end. We say “Tack weld” so the bracket is secure but not over welded in the event of misalignment and need to reposition this bracket.



STEP 3: ASSEMBLE LINKS & ROD ENDS

Thread the 1.25”-12 Jam Nuts and 1” Rod Ends into the proper Left Hand or Right Hand adapter in the lower link bars. Do not tighten all the way. Be sure to leave space so the Rod End can be adjusted both ways. So when measuring placement of the frame bracket the Rod end will have adjustability both directions. We recommend a 1/4” of threads showing on each.

STEP 4: INSTALL LINKS INTO TRUSS

Install the upper and lower links to the truss. Note: Although it makes no difference which style of threads mount to the frame or axle (LH or RH), we recommend making sure that both links face the same direction as it makes it easier when tightening later.

Lower Link Hardware to Truss

2 – 1” x 5-1/2” Grade 5 Bolts

2 – 1” Nyloc Nuts

4 – 1” flat Washers

4 – 1” Rod End Spacers (Long) .1” ID

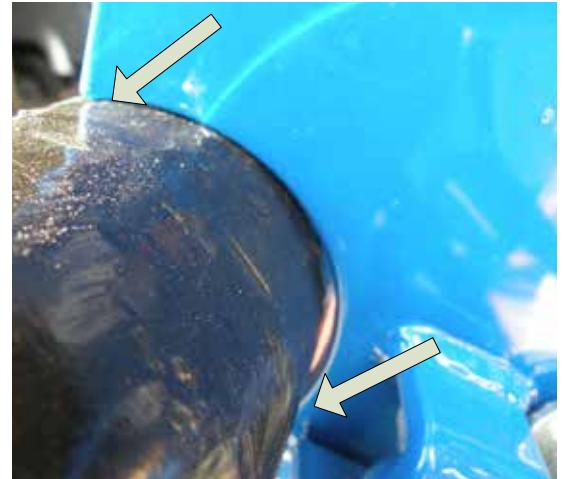
Upper Link Hardware to Truss

2 – 3/4” x 3-1/2” Grade 8 Bolts

2 – 3/4” Grade 8 Nyloc Nuts “Thin”

4 – 3/4” SAE Washers

4 – 3/4” Rod End Spacers



STEP 5: INSTALL UPPER AND LOWER LINKS TO FRAME MOUNTS

Install the upper and lower links to the frame mounts. Be sure to put all of the right hand rod ends onto the frame mounts. Note: Frame mounts can only mount correct one way. Be sure you can connect the upper links to the frame mounts, they are on backwards.

Lower Link Hardware to Frame Mount

2 – 1” x 5-1/2” Grade 5 Bolts

2 – 1” Nyloc Nuts

4 – 1” flat Washers

4 – 1” Rod End spacers (Short) .1” ID

Upper Link Hardware to Frame Mount

2 – 3/4” x 3” Grade 8 Bolts

2 – 3/4” Grade 8 Nyloc Nuts “Thin”

4 – 3/4” SAE Washers

4 – 3/4” Rod End Spacers



(Note: Installation may require you to remove and/or modify your exhaust system.)

If you have not removed it yet this may be a good time to take off the muffler and exhaust at the collector to gain work space for the frame brackets. You may want also want to disconnect your e-Brake cables from the frame at this time, along with fuel lines or anything else that may be on the back side of the frame. Note that emergency brakes are an important safety feature of your vehicle. If you need a longer replacement, use our #3756.

STEP 6: INSTALLING AXLE AND 4 LINK ASSEMBLIES

Remove the rear leaf springs. It is recommended to remove the old spring hangers and shock mounts, this will give the installation a good clean look, but isn't necessary. Note: All measurements are based on a 5-1/2" Duff Lift with a stock wheel base of 92" Have your Bronco sitting at ride height in the front, so the rear ride height can be achieved properly. Place the axle housing with the fully assembled truss and frame mounts with link attached under the vehicle. At this point it is very important that the rear axle tube is the same height as the front. (The measurement can be achieved by measuring from the grounded to the center of the axle, on the front and rear axle tubes). If you are installing this kit in gravel driveway or other conditions than a level concrete floor, the best way to achieve a ground to center measurement is to install the same tires on the rear axle as the front. Make sure that all the air pressure is the same. Doing this will make it a little harder to move the rear axle around, but will give you a very close center to center measurement. Next is to measure from the center of the front axle tube to the rear axle tube, left and right side to get the wheel base you want. Note: You may want to check the front axle to be square with the frame before taking the rear measurement. Once you have verified all measurements. The frame will be raised or lowered to meet this next measurement. Note: Again all measurements are based on a 92" stock wheelbase for a Bronco. The rear wheelbase can be stretched up to 2" without modifying the rear cross-member in front of the stock gas tank. Raise or lower the frame to 11-1/2" from the top of the axle to the bottom of the frame. Again this measurement is only a guide, it maybe more or less depending on your Bronco's weight and how much you stretch the wheelbase. When ride height is achieved check wheel base measurement again. Then place frame mount on to the frame with all the links attached. You may use C-clamps or other methods of clamping frame mounts. Outline the frame mounts on the frame and repeat Step 2 referencing to the prepping methods. Reattach the frame mounts. Check wheelbase measurement again and "tack" in to place. We say "tack weld" so the bracket is secure but not over welded in the event of misalignment and need to reposition this bracket.

STEP 7: INSTALLING COIL TOWERS

Mount the HD lower coil retainers. Reference instruction sheet #5120 with included hardware.

Note: Have you factored how much extra weight you will be carrying on the trail? We recommend setting the ride height with setting TRAIL PREPPED weight! We recommend that you load the vehicle with extra weight during prep if you are going to be carrying passengers in the rear of the vehicle. Every 200-250 lbs on the rear or the front of the vehicle will drop (or boost your front) your ride height approximately an additional 1/2". This is very important as coil springs are not as forgiving as leaf springs for load carrying capacities. Note that the springs will also take a short period of time to settle in once in use.



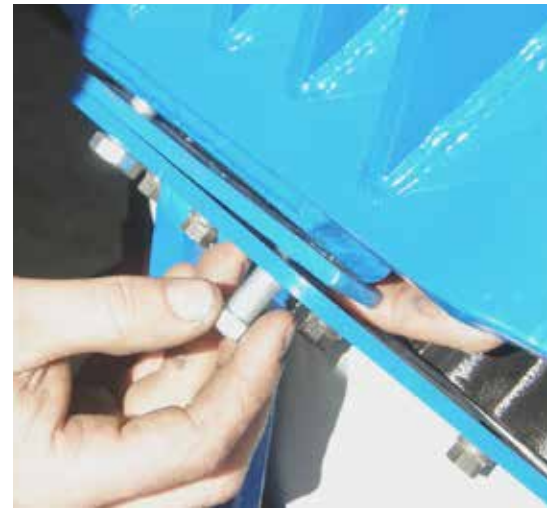
Once the HD lower coil retainers are in place, turn the coil spring in the seat base. Level the coil spring and mark the outside of the coil spring on the frame. This will give you the side to side location of the coil tower placement on the frame. Note: Be sure to write down your top of axle to bottom of frame measurement _____ inches. Now remove the coil springs and prep the frame for welding. Place the coil towers (#5111) on the frame and center the coil tower to your previous side to side marks. Tack weld the coil towers to the frame. Make sure the towers are at the same height on the frame. Note: You will have to reposition the coil towers one more time before final welding. Install the coil springs onto the truss. Then lower the frame down and seat the coil springs into the coil towers. Now with the vehicle sitting on the coil springs. **Note: Now is the time to think about plate bumper, tire carrier, roll cages, tool boxes, etc. If these items are not on the vehicle your ride height will not be correct, due to the added weight. These items must be added at this time to ensure the proper ride height.** Once you're happy with the added weight, measure from the top of the axle to the bottom of the frame. Take that measurement, and compare to your original ride height measurement.



Example: Original measurement 11-3/4" New measurement 10"
That is a difference of 1-3/4", so you would have to move the coil tower down 1-3/4" to get the original ride height. Note: Springs can settle approximately 1/4" to 1/2" over time. Move the coil towers according to your measurement up or down to achieve your desired ride height. Repeat process until your ride height is correct for your vehicle...

STEP 8: INSTALLING THE DRIVE SHAFT

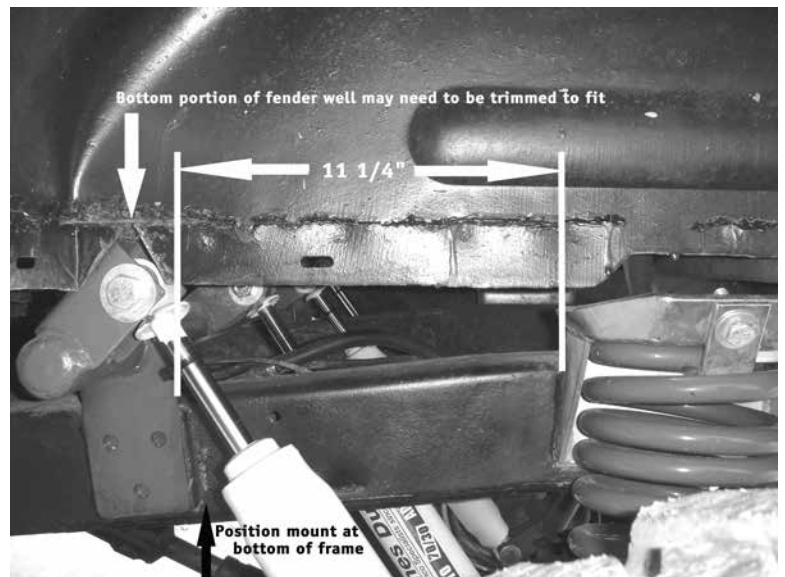
In this step you will need to install the drive shaft. The pinion needs to be pointing at the transfer case out-put yoke but slightly down. Adjust the upper links to the desired pinion angle. If you can't get enough pinion angle you need to use the Diff to Truss spacer provided in the hardware kit. This requires grinding the truss tacks loose and installing the diff to truss spacer in between the diff cover and truss.



This will cause the pinion angle to go up. After the spacer is added re-tack the truss to the axle housing and check pinion angle again. Once the pinion angle is achieved, check to see if the body is centered to the axle. You can do this by dropping a plumb-bob off the outside of the frame down to the axle. Then measure from that mark on the axle to the outside flange on the axle tube. Compare both sides (driver and passenger). Adjust the upper link to make the measurement the same. Note: The reason the body is out of center to the axle, is caused by one of the upper links is short or longer than the other one. It only takes small adjustments to the upper links to correct the alignment of the body to the axle.

STEP 9: INSTALLING STAGE 4 REAR SHOCK MOUNT

Measuring forward from the front edge of the HD Coil Tower, make a mark 11.25" from the top part of the frame as shown in the photo. Repeat for other side. Place shock mount on frame. Note: the lower wheel tub lip may need trimmed to clear the mount. Center mark the three mounting holes for drilling (or weld on) check the frame for fuel lines and electrical, move as necessary. Repeat for other side. Remove shock mount. Using a 1/2" drill bit, drill through both sides of frame. Repeat for other side. Place shock mount in place, attach with:



- 6 1/2" x 5" Grade 8 Hex Bolts
- 12 1/2" Flat Washers
- 6 1/2" NC Nyloc Nuts

Mount the shocks with:

- 8 1/2" x 3" NC Grade 5 Hex Bolts
- 16 1/2" Flat Washers
- 8 1/2" NC Nyloc Nuts

Mount the upper mount of the shock. Extend the shock to determine where to mount the lower mounts on the axle. We recommend they be oriented so they don't bind at full extension or compression. We recommend mounting the inside lower mounts at the center line of the axle so they won't get hung up on rocks. The outer mounts can hang lower and should be mounted after the suspension is cycled to allow maximum articulation.

Note: the cap in the end of the mount is removable for possible future optional swaybar installation.

Note: Shocks must be test fitted first. Once checked, removed to proceed to STEP 10.

STEP 10: DOUBLE CHECK ALL MEASUREMENTS AND ANGLES

Double check all measurements and angles before fully welding axle truss, frame mounts, and coil towers. Note: Its best to remove upper and lower links before welding. By removing the upper and lower links you will have more room to weld the truss and frame mounts properly. This will also eliminate the risk of the welding current running through the upper or lower links. Causes the rod ends to arc to the threads on the links. Resulting in galling the thread and not being able to adjust the links.

STEP 11: FULLY WELD THE 4-LINK ASSEMBLY

Fully weld the 4-link assembly. Allow the truss, frame mounts and coil towers to cool down before assembling the 4-link and shocks. Install all components and torque all bolts.

Fastening both side coil springs in their Spring towers with the:

- 2 #5100 Upper Coil Retainer tabs
- 4 3/8"-16 x 1 GR 5 Hex Bolts
- 2 3/8" plated Lock washers
- 2 3/8" NC Nyloc nuts
- 6 3/8" Flat Washers

Check emergency brake cables. Install extended e-brake cables if needed. Run brake lines back to the rear. Bleed Brakes. Replace or reinstall the exhaust and mufflers. Note the emissions laws in your state.

Check all your work. Test your new suspension. Reminder to check bolts and nuts periodically after use for loosening. Remember that the springs will settle in after a few trips out on the trail. Do not panic if it is sitting high in the rear, give it time to settle before making changes.

FOOTNOTES:

Brake lines might have to be relocated.

Rear springs may have a slight bow in them upon proper completion. This is not abnormal. Springs are designed to bow out some so they do not hit frame while flexing.

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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 or damage resulting from abuse, misuse, negligence, racing, alteration, accident or damage in transit.

All returns must be pre-authorized by JDI and accompanied with a Return Goods Authorization Number (RGA) and a dated proof of purchase. Returns must be made within 90 days of purchase, shipped prepaid, packed sufficiently to prevent damage in shipment to JDI, 6609 Bronco Ln., 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.

SUSPENSION PRODUCT INFORMATION

Modifying your vehicle with JDI products to improve off road performance may result in the vehicle handling differently than a factory equipped vehicle. Taller tires will cause the vehicle's speedometer to read slow, so recalibration is required. Use of oversize tires, suspension lifts, body lifts, and other modifications may raise your vehicle's center of gravity, resulting in an increased tendency for the vehicle to pitch and roll during sudden turns or abrupt maneuvering. Failure to drive with extreme care to prevent loss of control or vehicle roll over may result in injury or death. Drive at a reduced speed to ensure your ability to maintain control of the vehicle under all driving conditions. We recommend installing functional roll bars and cages as well as double shocking all vehicles for more safety and stability on or off road. Always wear seat belts when in a vehicle. Consult your owners manual for recommended tire sizes, safety instruction and warnings unique to your vehicle. It is your responsibility to check state and local laws restricting vehicle height to ensure that modifications to your vehicle are legal.