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PART #	DESCRIPTION
44100	21-UP BRONCO BILLET REAR UPPER LINK KIT

COMPONENTS INCLUDED	
(1) 144202 21-UP BRONCO BILLET REAR UPPER LINK DRVR	(1) 144203 21-UP BRONCO BILLET REAR UPPER LINK PASS
HARDWARE INCLUDED	
(1) 605969 RED THREAD LOCKER 2ML BULLET	
TOOLS REQUIRED	
FLOOR JACK JACK STANDS (4) CUT-OFF WHEEL TORQUE WRENCH FLAT SCREWDRIVER SOFT DEAD BLOW HAMMER	PRY BAR AND SPUD BAR FUEL LINE DISCONNECT TOOL. 18MM SOCKET / WRENCH 24MM SOCKET / WRENCH 3/8" 12-PT T25 TORX
TECH NOTES	
<ol style="list-style-type: none"> <li>INSTALLATION WILL REQUIRE LOWERING OF THE VEHICLE'S FUEL TANK, THEREFORE IT IS RECOMMENDED TO HAVE LESS THAN A 1/4 TANK OF FUEL WHEN PERFORMING THE INSTALLATION, TO LIGHTEN THE TANK AND MAKE HANDLING IT EASIER.</li> <li>DO NOT EXCEED 3.375" ADJUSTMENT FROM THE CENTER OF THE ROD END TO THE EDGE OF THE BILLET LINK. FAILURE CAUSED BY EXCESSIVE ADJUSTMENT WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.</li> <li>IF FUEL RETURN LINE RETAINING CLIP IS BROKEN USE DORMAN 800-041.</li> </ol>	



**WARNING!**

**\*\* READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED SEVERE FRAME, SUSPENSION AND TIRE DAMAGE MAY RESULT TO THE VEHICLE!**

**\*\* ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.**

**\*\* ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLATION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.**

## INSTALLATION

- Ensure the vehicle is parked on a flat, level surface with the transmission in PARK (or in first gear if the vehicle is equipped with a manual transmission) the parking brake set and the engine turned off. Securely chock the front tires to prevent the vehicle from rolling forward or backward when the rear tires are lifted. Wear safety glasses from this point forward.
- Use a floor jack under the rear differential to lift the rear of the vehicle and remove the rear tires.
- Place two heavy duty jack stands under the manufacturer's recommended lift points at the rear of the vehicle's frame (not under the axle or suspension components). Ensure that the vehicle is at a sufficient height to allow 3-4" of clearance between the floor and the wheel hubs/rotors with the suspension extended. Make sure that the vehicle's weight is securely supported on the jack stands with no wobbling or movement before proceeding. NEVER WORK UNDER AN UN-SUPPORTED VEHICLE.
- Use a 24mm socket and ratchet or driver to remove the lower track bar pivot bolt from the rear-passenger side of the rear axle [FIGURE 1]. It may be necessary to attach a ratchet strap between the upper and lower track bar mounts to draw them together and relieve pressure, to remove the bolt [FIGURE 2].

FIG.1



FIG.2



- Install the passenger side lower link first, which will require lowering the fuel tank to access the frame-side pivot bolts. Begin by disconnecting the wiring harness from the rear of the fuel tank. The connector is located above the fuel filler hose.

**6.** Use a flat screwdriver to loosen the hose clamp from the fuel filler hose where it attaches to the top-rear of the fuel tank. [FIGURE 3]

**7.** Use a fuel line spring-lock tool to disconnect the fuel vent line. [FIGURE 4]

FIG.3



FIG.4



**8.** Position two jack stands underneath the vehicle's fuel tank, one at each end of the tank. The following procedure will be easier using screw-jacks rather than notch-bar jack stands, to facilitate controlled lowering of the tank.

**9.** Use an 18mm socket and ratchet or driver to loosen the eight (8) bolts that secure the vehicle's fuel tank skid plate to the frame. Take care to ensure that the fuel tank's weight sits securely on to the jack stands before completely removing these bolts.

FIG.5



FIG.6



**10.** Slowly lower the fuel tank down a few inches, taking care to keep the tank as level as possible, until you can see and reach the fuel return line on the top of the tank. The line will be located along the side of the frame rail above the tank. The connector will have a white retaining clip on it. [FIGURE 7]

**NOTE:** If retaining clip is broken please see tech note.

**11.** Remove the retaining clip and disconnect the fuel line [FIGURE 8]. A small pick may be used to carefully pull the retaining clip. A replacement retaining clip is provided in the hardware kit, in case the factory clip is damaged during removal.

FIG.7

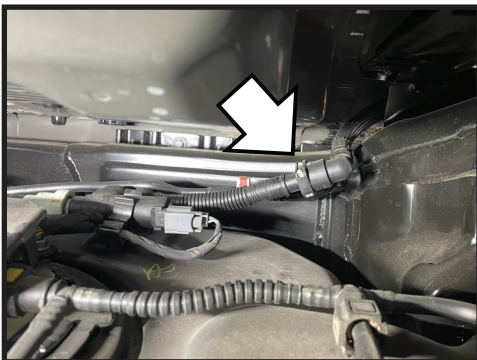


FIG.8



**12.** Disconnect the wiring harness from the top of the fuel tank



FIG.9



**13.** Near the top-front of the tank, use a body clip removal tool to pull the wiring harness retainer from the retaining hole in the tank (4-Door Bronco only) [FIGURE 10]. Dislodge the fuel line from the groove in the top of the tank. [FIGURE 11]

FIG.10



FIG.11



**14.** Carefully lower the fuel tank, taking care to keep it steady and secure on the jack stands as it is lowered. Lower the tank enough to allow access to the lower link bracket on the inboard side of the passenger side frame rail.

**15.** Use a 24mm deep socket and ratchet or driver to remove the nut from the upper link pivot bolt, frame end [FIGURE 12]. Remove the bolt while taking care to secure the link with a bungee cord, ratchet strap or the hand of a friend, as it may fall out of the link pocket once the bolt is moved.

FIG.12



**16.** Note the sheet metal cover that covers the head of the upper link pivot bolt at the axle housing end of the arm [FIGURE 13]. Use a T25 Torx bit and ratchet to remove the two screws and the bolt cover [FIGURE 14]. The cover will not be re-used.

FIG.13



FIG.14



**17.** Use the 24mm socket and ratchet to remove the nut pivot bolt and nut from the axle housing end of the upper link [FIGURE 15]. Remove the OE upper link and set it aside as it will not be re-used.

FIG.15



FIG.16



**18.** Install the HEIM SPACER- 1.000 X 630 X 2.949 into heim joint at the frame end of the passenger side 21-UP BRONCO BILLET UPPER REAR LINK. Insert the heim/spacer into the lower link mount on the vehicle's frame, with the longer side of the heim spacer oriented toward the inboard side of the frame rail. [FIGURE 17]

FIG.17



**19.** Observe the upper link mount bracket on the axle housing, and locate the hole on the inboard side of the bracket where the bolt cover had been attached (which was removed in a previous step). Use a step-bit or 1/2" drill bit to drill this hole out to 1/2" diameter. De-burr the edges of the hole and use touch-up paint or a paint pen to coat the bare metal around the inside of the widened hole.

FIG.18



**20.** Insert the bushing end of the ICON upper link into the upper link mounting bracket on the axle housing. The passenger link will be offset in the axle housing, the wide spacer towards the center of the vehicle. It may be necessary to carefully tap the link into place using a soft dead-blow mallet to avoid marring the anodized finish of the arm. It may be necessary to have a friend apply some torque to the axle housing with a long pry bar, to align the bolt holes [FIGURE 19]. Insert the OE bolt from the INBOARD side of the bracket (opposite of the stock configuration), and tap into place while making sure that the keeper tab on the bolt slips into the hole in the bracket that had been enlarged in the previous step. [FIGURE 20]

FIG.19



FIG.20



**21.** Re-install the OE lock nuts onto both upper link pivot bolts (frame end & axle end). Use a 24mm socket and torque wrench to torque them to factory-recommended specifications.



**22.** In order to access the driver side upper link pivot bolt it is necessary to disconnect the exhaust pipe from the hanger at the rear crossmember. Begin by applying WD-40 or other spray lubricant to the rubber isolator. Then firmly grasp the isolator and push it off of the mount. It may require some perseverance to get the rubber isolator past the nub on the metal hanger rod.

FIG.21



FIG.22



**23.** Continue with installation of the driver side upper link by repeating the previous instructions for the passenger side. When finished, reconnect the exhaust pipe by pushing the rubber isolator back onto the metal hanger rod.

**NOTE:** If installing 21-UP FORD BRONCO REAR LOWER BILLET LINK KIT (Part #41000) at the same time as this kit, switch to those instructions at this time to complete the lower arm installation before lifting the fuel tank back into place.

**24.** Re-connect all fuel tank lines and wires then lift the fuel tank back into place. Work backwards through the previous steps for disconnecting and lowering the fuel tank, to make sure all necessary connections are made. Be careful when lifting the tank back into place, taking care not to drop the tank off of it's jack stands or pinch any lines or wires while lifting it back.

**25.** Apply red thread locker compound (supplied in the hardware kit) to the threads of the OE fuel tank/skid plate mounting bolts and reinstall them. Use an 18mm socket and torque wrench to torque these fasteners to factory specifications.

FIG.23

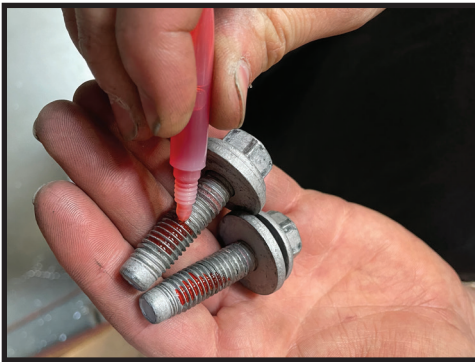


FIG.24



**26.** Reinstall fuel fill hose and reconnect the fuel vent line and electrical connection at the rear of the fuel tank.

**27.** Move to the driver side and repeat the previous steps (minus lowering the fuel tank) to install the driver side lower link. At the frame end, remember to orient the long side of the heim spacer toward the outboard side of the vehicle. At the axle housing end, remember to trim 1-1/4" from the keeper tab on the pivot bolt for the axle housing end of the link. Torque both pivot bolts to factory specifications.

**28.** Reinstall the lower track bar pivot bolt into the track bar and bracket at the rear-passenger side of the rear axle housing. It may be necessary, again, to attach a ratchet strap between the upper and lower track bar mounts to draw them together and relieve pressure while re-installing the bolt [FIGURE 1]. Torque the lower track bar pivot bolt to factory specifications.

**29.** Reinstall the vehicle's wheels and tires. Tighten the wheel lug nuts to factory specifications.

**30.** If custom pinion angle is desired you can adjust this with the vehicle on the ground. Do not adjust further than 3.375" from the center of the rod end to the edge of the billet link.

**VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.**

**RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.**

## ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

ICON Vehicle Dynamics warrants to the original retail purchaser who owns the vehicle on which the product was originally installed. ICON Vehicle Dynamics does not warrant the product for finish, alterations, modifications and/or installation contrary to ICON Vehicle Dynamics instructions. ICON Vehicle Dynamics products are not designed, nor are they intended to be installed on vehicles used in race applications, for racing purposes or for similar activities. (A "race" is defined as any contest between two or more vehicles, or a contest of one or more vehicles against the clock, whether or not such contest is for a prize). This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warranty are sales outside of the United States of America and Canada.

ICON Vehicle Dynamics' obligation under this warranty is limited to the repair or replacement, at ICON Vehicle Dynamics' discretion, of the defective product. Any and all costs of removal, installation or re-installation, freight charges and incidental or consequential damages are expressly excluded from this warranty. Items that are subject to wear are not considered defective when worn and are not covered.

ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.



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