TRAIL FORTRESS

BUILT FOR THE TRAIL. CHECKED FOR YOUR TRUCK.

# ICON Vehicle Dynamics K93143T Installation Instructions

Stage 3 Tubular UCA Suspension System for Ford F-150 (2021-2024)

Part number: K93143T

trailfortress.com/stage-3-tubular-uca-suspension-system-ford-f150-icon-vehicle-dynamics-k93143t

Scan for fitment, price and install help

ICON VEHICLE DYNAMICS®
7929 Lincoln Ave. Riverside, CA 92504
Phone: 951.689.ICON | Fax: 951.689.1016

# 98522DJ INSTALLATION INSTRUCTIONS

*5-17-2023 REV.A*

| PART # | DESCRIPTION |
|---|---|
| 98522DJ | 21-UP F150 TUBULAR UCA DJ PRO KIT |

## COMPONENTS INCLUDED

| | |
|---|---|
| (1) 194610 21-UP F150 TUBULAR UCA DRVR | (1) 194611 21-UP F150 TUBULAR UCA PASS |

## HARDWARE INCLUDED

| | |
|---|---|
| (2) 177158 DELTA JOINT PRO<br>(2) 12MM FLANGED NYLOCK NUT<br>(4) 199206 SLEEVE 1.000 X .563 X 2.440<br>(2) 290023 UCA CAP 3M DBL STICK 2.6 X 2.2 X 5MIL<br>(2) 295570 SPIRAL RETAINING RING 302SS<br>(8) 297034 HAT BUSHING | (4) 297043 POLY RING<br>(2) 297166 DELTA PRO TUBULAR UCA DUST COVER<br>(4) 605903 1/4-28 X 90 DEG STEEL ZERK FITTING<br>(1) DJ-REG DELTA JOINT REGISTRATION CARD |

## TOOLS REQUIRED

| | |
|---|---|
| JACK<br>JACK STANDS<br>TORQUE WRENCH<br>10MM SOCKET / WRENCH<br>18MM SOCKET / WRENCH | 21MM SOCKET / WRENCH<br>27MM SOCKET / WRENCH<br>9/16" SOCKET / WRENCH<br>5/8" SOCKET / WRENCH<br>T45 TORX |

## TECH NOTES

*1. ALL ICON UPPER CONTROL ARMS HAVE BEEN ENGINEERED TO ALLOW FOR THE MOST POSSIBLE CASTER, WHILE STILL ALLOWING THE VEHICLE TO BE PROPERLY ALIGNED. NOTIFY YOUR PROFESSIONAL ALIGNMENT SHOP OF THIS INFORMATION SO THAT MAXIMUM RIDE QUALITY CAN BE ACHIEVED.*

*2. ICON DELTA JOINTS ARE PRE-GREASED FROM THE FACTORY. ICON RECOMMENDS GREASING THE DELTA JOINT EVERY 3,000 MILES (OR EVERY OIL CHANGE). ADD NEW GREASE UNTIL ALL OF THE OLD GREASE IS EXPELLED FROM THE BOTTOM OF THE DELTA JOINT ASSEMBLY, WIPE AWAY EXCESS WITH A RAG OR SHOP TOWEL.*



**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

***1.*** Using a properly rated jack, raise the front of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the front wheels.

***2.*** Remove the coilover/strut assembly to gain access to the upper control arm bolts.

***3.*** Remove the 2 nuts from the lower shock mount using an 18mm socket/wrench (5/8" on ICON coilover).

***4.*** Support the spindle with a jack or strap and remove the lower control arm bolts from the frame using a 27 and 21mm socket/wrench. This will allow you to separate the lower arm and lower shock studs. **[FIGURE 1]**

**FIG.1**



*4b.* If you prefer to leave the lower arm in place, use a hammer to press the studs out of the lower bar pin assembly.

*4c.* If ICON coilover is already installed, you do not need to remove the lower control arm from the frame.

***5.*** Disconnect the tie rod from the knuckle using a 21mm and 10mm wrench.



trailfortress.com/stage-3-tubular-uca-suspension-system-ford-f150-icon-vehicle-dynamics-k93143t

***6.*** Remove the 3 nuts from the top of the factory shock assembly with an 18mm socket/wrench (9/16" for ICON coilover). The coilover can then be removed completely. **[FIGURE 2]**

**FIG.2**



***7.*** If the lower arm was removed, Reinstall it now, only snugging the bolts in place. [They will be torqued at the end]

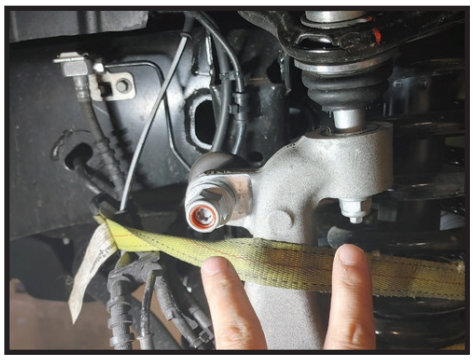
***8.*** If truck is equipped with Dynamic Bending Headlamps (Automatic ride height adjusting headlights) you will need to remove the bracket. Use a flat blade screwdriver or prybar to carefully pop the socket off the ball. **[FIGURE 3]**

**FIG.3**



***9.*** Remove the sway-bar link and upper control arm from the spindle. Support spindle with a jack or strap to prevent the CV (4x4) or brake lines from over extending. (18mm, 21mm, T45 Torx) **[FIGURE 4]**

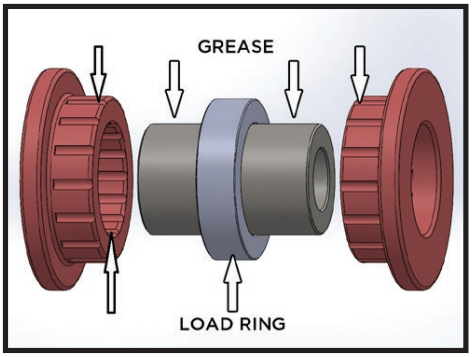
**FIG.4**



***10.*** Remove the UCA from the frame using a 21mm and 18mm socket/wrench.

***11.*** Before installing the new ICON upper control arms, care must be taken to grease the bushings prior to install assembly. Failure to grease properly will cause premature bushing wear and increased noise. A high quality moly-fortified grease is suggested. **[FIGURE 5]**

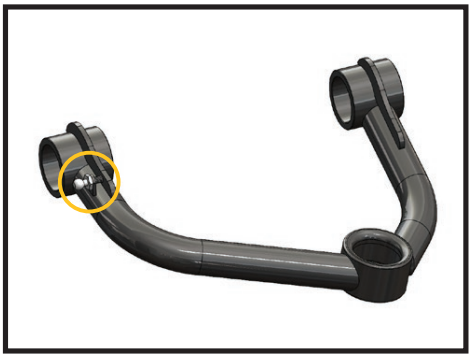
**FIG.5**




***12.*** Install 90° grease zerks (605903) into the bushing housings, making sure the zerks point out, towards the balljoint. Do not overtighten.

***13.*** If truck is equipped with Dynamic Bending Headlamps (automatic height adjusting headlights) you will need to install the bracket (sold separately) on the driver side billet UCA or the factory ball stud on the tube UCA. The factory ball stud takes a 8mm and 11mm wrench. **[FIGURE 6]**

**FIG.6**



***14.*** Place the ICON upper control arm into the mounts on the chassis and hand tighten using OEM hardware.

***15.*** Reinstall OEM shock or refer to ICON coil over assembly instructions now.

***16.*** Install tapered pin of UCA into the spindle and tighten using the supplied nut and 18mm socket/wrench. [Torque to 75 ft-lbs] **[FIGURE 7]**

**FIG.7**



***17.*** Tighten the UCA bolts at the chassis using a 21mm and 18mm socket/wrench. [Torque to factory spec]

***18.*** Repeat steps on opposite side.

***19.*** Reinstall wheels and carefully lower vehicle to the ground. [Torque lug nuts to factory spec]

***20.*** If the lower control arm was removed, now is the time to tighten the frame bolts. [Torque to factory spec]

***21.*** Have the vehicle professionally aligned.

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

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



trailfortress.com/stage-3-tubular-uca-suspension-system-ford-f150-icon-vehicle-dynamics-k93143t

## *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.

ICON VEHICLE DYNAMICS®
PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

7929 Lincoln Ave. Riverside, CA 92504 Phone: 951.689.ICON Fax: 951.689.1016
www.iconvehicledynamics.com

FOLLOW US ON FACEBOOK!



trailfortress.com/stage-3-tubular-uca-suspension-system-ford-f150-icon-vehicle-dynamics-k93143t