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# ICON Vehicle Dynamics K93143T Installation Instructions

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

Part number: K93143T

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# *94000 INSTALLATION INSTRUCTIONS*

*8-17-2023 REV.A*

| PART # | DESCRIPTION |
|---|---|
| 94000 | 21-23 F150 4WD FRONT KNUCKLE KIT |

## COMPONENTS INCLUDED

| | |
|---|---|
| (1) 197060D 21 F150 4WD LIFTED STEERING KNUCKLE DRVR | (1) 197060P 21 F150 4WD LIFTED STEERING KNUCKLE PASS |

## HARDWARE INCLUDED

| | |
|---|---|
| (1) 605969 VIBRATITE RED 2ML BULLET | |

## TOOLS REQUIRED

| | |
|---|---|
| JACK<br>JACK STAND<br>RATCHET<br>EXTENSIONS<br>TORQUE WRENCH<br>HAMMER / DEADBLOW HAMMER<br>BALL JOINT SEPERATOR | T45 TORX<br>5MM HEX KEY<br>8MM SOCKET / WRENCH<br>10MM SOCKET / WRENCH<br>13MM SOCKET / WRENCH<br>18MM SOCKET / WRENCH<br>21MM SOCKET / WRENCH<br>36MM SOCKET / WRENCH |

## TECH NOTES

*1. ESTIMATED INSTALL TIME: 3-4 HOURS*

*2. 4WD EQUIPPED VEHICLES ONLY*

*3. WILL NOT WORK ON CCD EQUIPPED TRUCKS*

*4. MUST USE ICON UPPER CONTROL ARM: #98522DJ*

*5. ALL OEM HARDWARE FROM THE KNUCKLE REMOVAL WILL BE REUSED ON THE ICON KNUCKLE.*



**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.*** Lift vehicle and securely place heavy duty jack stands under the manufacturer recommended lifting locations for the front of the vehicle. Take care when lifting the vehicle, and allow 3-4" of ground clearance from the tire. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the wheels/tires.

***2.*** Begin by removing the sway bar link from the upper part of the knuckle using a T45 torx and 21mm wrench. **[FIGURE 1]**

**FIG.1**





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***3.*** Next, remove the ABS and brake line bracket from the knuckle using a 10mm. **[FIGURE 2]**

**FIG.2**



***4.*** Remove the brake caliper from the knuckle using a 21mm. Once removed, use a wire hanger or string to support the caliper so it does not hang by the brake line. Remove the rotor and set it aside. **[FIGURE 3 & 4]**

**FIG.3**



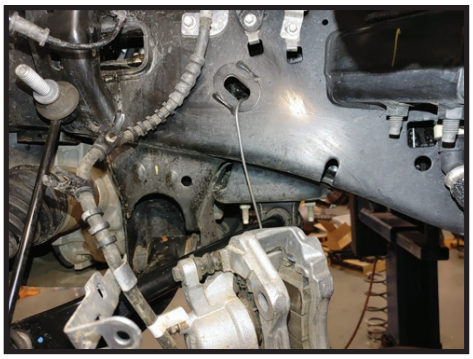



**FIG.4**

***5.*** Remove the 3 bolts holding the rotor rock shield from the knuckle using an 8mm. **[FIGURE 5 & 6]**

**FIG.5**

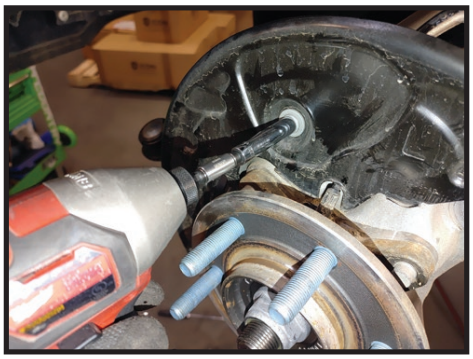




**FIG.6**

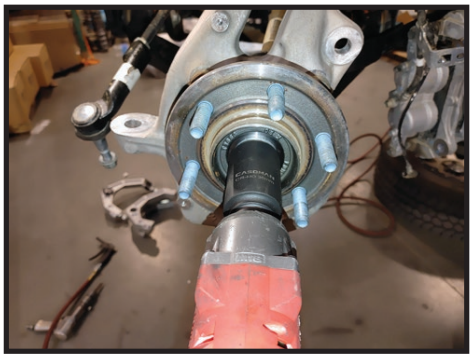
***6.*** Remove the speed sensor from the top side of the knuckle, behind the rock shield using a 5mm hex key. **[FIGURE 7]**

**FIG.7**



***7.*** Remove the CV axle nut from the hub. Depending on the hub style of your truck, it will be a 13mm or a 36mm socket. If the truck is equipped with electric hubs, also, remove the 4x 8mm bolts from the backside of the knuckle. This will allow the locking portion to be removed with the CV axle shaft. **[FIGURE 8, 9 & 10]**

FIG.8



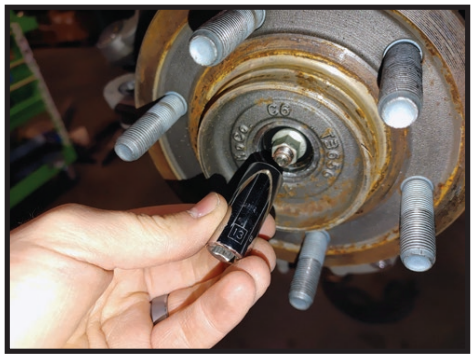
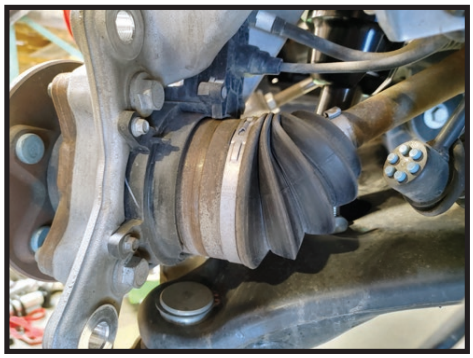


FIG.9

FIG.10



***8.*** Next, loosen the upper balljoint nut using a 18mm. Leave the nut loosely installed. Use a ball joint separator to dislodge the ball joint stud from the knuckle. A hammer can also be used by striking the side of the knuckle. **[FIGURE 11 & 12]**

FIG.11

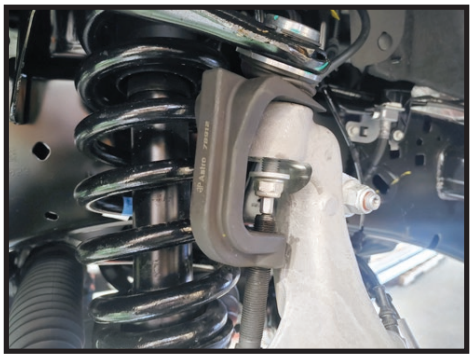




FIG.12

***9.*** Repeat this process on the lower ball joint. Use a 24mm to loosen the nut. **[FIGURE 13]**

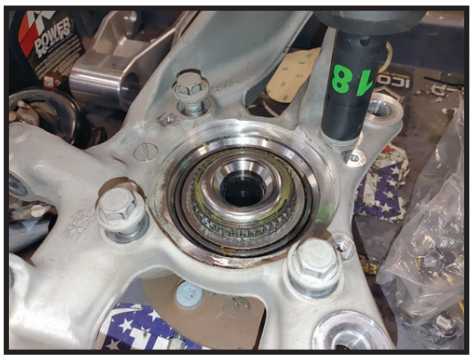
FIG.13



***10.*** The knuckle can now be removed. The upper control arm might be under pressure, take caution when removing the nut. Tilt the arm out and remove the CV axle from the hub, a dead blow hammer can be used to persuade it. Now remove the lower ball joint nut and set the knuckle down.

***11.*** With the knuckle out of the vehicle, the hub can be removed and transfer to the new ICON knuckle, using an 18mm. **[FIGURE 14 & 15]**

FIG.14



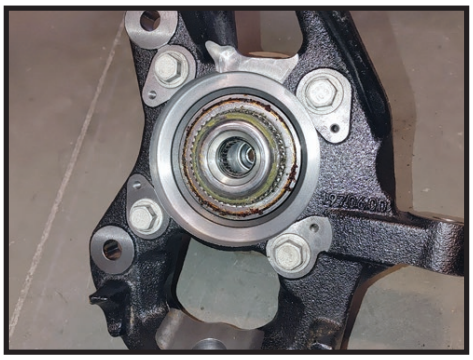


FIG.15

***12.*** Move on to the coilover and upper control arm instructions now. Some steps might be redundant.

***13.*** With the ICON coilover and upper control arm installed, the ICON knuckle can be reinstalled in the reverse order of removal of the OEM knuckle. Be sure to torque all bolts to OEM spec. Red thread locker should be used on the hub and brake caliper bolts and CV axle nut.

***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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