ICON Vehicle Dynamics K93093 Installation Instructions

Stage 3 Billet UCA Suspension System for Ford F-150 2WD (2015-2020)

Part number: K93093

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98505DJ INSTALLATION INSTRUCTIONS

8-5-2019 REV.B

PART #	DESCRIPTION
98505DJ	04-UP F150/14-UP EXPEDITION BILLET UCA DJ KIT

COMPONENTS INCLUDED

(1) 197517 04-UP F150 BILLET UCA (DRVR)	(1) 197518 04-UP F150 BILLET UCA (PASS)

HARDWARE INCLUDED

(2) 197200BJ 04-UP F150 DELTA JOINT	(1) 605968 VIBRATITE BLUE THREAD LOCK
HEIM SPACER KIT	
(4) 197502 HEIM SPACER RSMX12 X 14MM X 2.125	(4) 197503 HEIM SPACER RSMX12 X 14MM X 2.775
DUST COVER COMPONENTS KIT	
(2) 155110 -032 O-RING, NITRILE 70A (2) 157507 BILLET UCA DUST COVER	(8) 605002 6-32 X 0.500 SOCKET SCREW

TOOLS REQUIRED

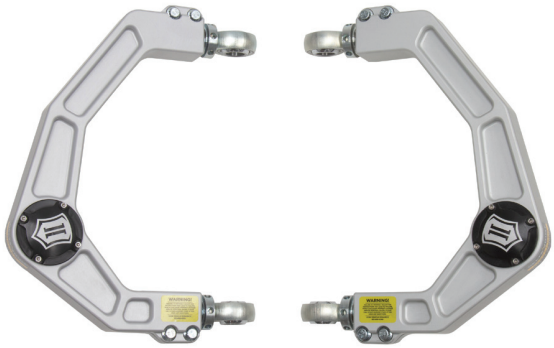
JACK JACK STANDS 3MM ALLEN WRENCH TORQUE WRENCH	15MM SOCKET / WRENCH 21MM SOCKET / WRENCH 24MM SOCKET / WRENCH 3/8" 12PT SOCKET / WRENCH

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.

3. DO NOT EXCEED 1.875" ADJUSTMENT FROM THE CENTER OF THE ROD END TO THE EDGE OF THE BILLET UPPER CONTROL ARM. FAILURE CAUSED BY EXCESSIVE ADJUSTMENT WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY. REFER TO TECH NOTE PHOTO.



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. Remove the lower shock bolt and then remove the (3) nuts on top of the coilover (use a 15mm, 27mm & 30mm socket/wrench for stock assembly, 9/16" & 15/16" socket/wrench for ICON assembly). Removing the lower shock end out of the pocket in the arm can be difficult because you are fighting the bushing stiffness from the lower control arm and sway bar tension. Disconnect the sway bar links and/or the top of the other shock to relieve some of this tension. **[FIGURE 1 & 2]**

FIG.1

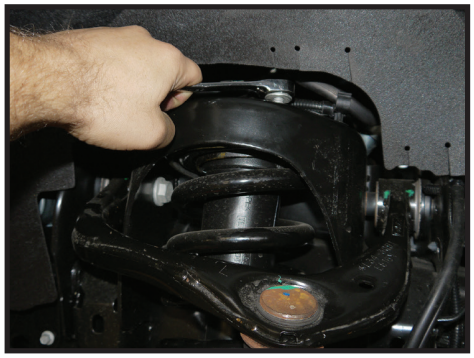




FIG.2

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3. Loosen the taper on the upper ball joint and the tie rod end using a 21mm socket/wrench. Using a hammer, strike the steering knuckle to separate the upper ball joint taper and tie rod end. Take care not to damage the threads. Support the steering knuckle so that it does not overextend the CV joints when detached. **[FIGURE 3 & 4]**

FIG.3



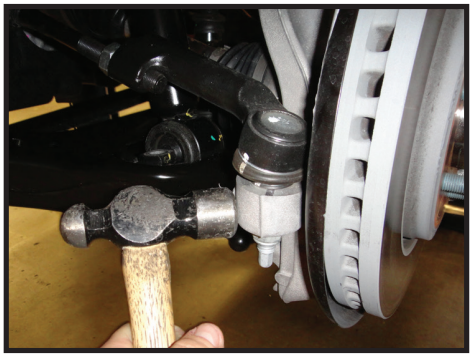
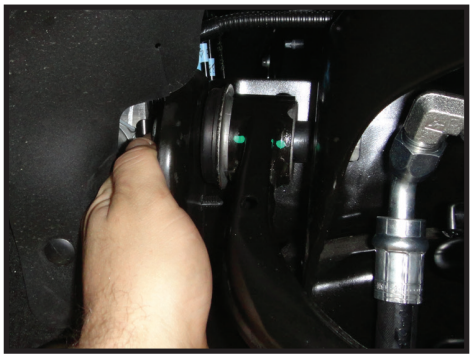


FIG.4

4. Using a jack, slightly lift the lower control arm to prevent the suspension from being at full extension.

5. With the upper control arm detached from the spindle, begin to loosen the upper control arm from its mounts in the frame using a 21mm socket/wrench and remove the OEM assembly. **[FIGURE 5]**

FIG.5



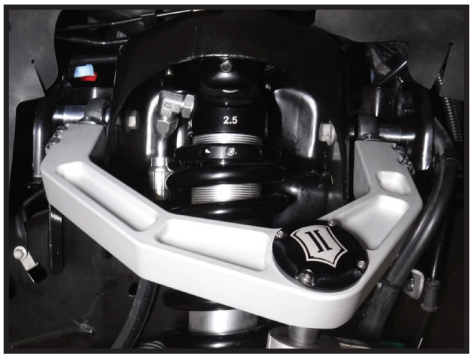


FIG.6

6. Place the ICON upper control arm into the mounts on the chassis and hand tighten using OEM hardware. **[FIGURE 6]**

7. Reinstall the factory shock assembly or refer to the appropriate ICON coilover installation instructions now.

8. Take care when inserting tapered pin into the spindle to not damage the threads. Use a 21mm socket/wrench to fasten the supplied nut onto the tapered pin to get it to seat properly. [Torque to 75 ft-lbs]

9. If the brake line bracket behind the arm is making contact at the full droop position, bend the bracket outward slightly to allow clearance. Be careful not to damage the ABS wires or brake line. **[FIGURE 7 & 8]**

FIG.7



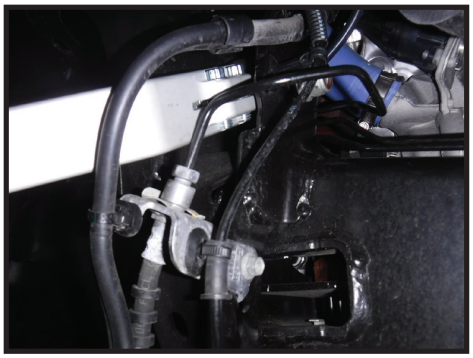


FIG.8

10. Tighten the upper control arm bolts on the chassis using a 21mm socket/wrench. [Torque to factory spec]

11. Repeat steps on the opposite side.

12. Reinstall wheels and carefully lower the vehicle to the ground. [Torque lugs to factory spec]

13. 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.

[TECH NOTE #3]



ALIGNMENT NOTE

ICON SHIPS THE BILLET UPPER CONTROL ARM AT THE MOST COMMON ALIGNMENT SETTING. ONE OF THE MAJOR PERFORMANCE ADVANTAGES OF AN ICON BILLET ADJUSTABLE UPPER CONTROL ARM IS THE ABILITY TO IMPROVE WHEEL POSITION. IMPROVING WHEEL POSITION IMPROVES FIREWALL CLEARANCE ALLOWING FOR LARGER TIRES AS THE SUSPENSION CYCLES. IN ORDER TO TAKE ADVANTAGE OF THIS FEATURE, DISCUSS WITH YOUR PROFESSIONAL ALIGNMENT SHOP THAT YOU WOULD LIKE TO CAM THE LOWER CONTROL ARM TO MAXIMIZE WHEEL POSITION FORWARD AND THEN ADJUST CAMBER AND CASTER WITH THE UPPER THREADED ADJUSTERS.

A MAJOR PERFORMANCE ADVANTAGE OF ALL ICON UPPER CONTROL ARMS IS INCREASED CASTER OVER STOCK. DISCUSS WITH A PROFESSIONAL ALIGNMENT SHOP THAT YOU WANT THE VEHICLE ALIGNED WITH THE CASTER AT THE MAX OF THE FACTORY RECOMMENDED SETTINGS IF YOU WANT TO TAKE ADVANTAGE OF THE DYNAMIC EFFECTS OF INCREASED CASTER.

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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