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PART #	DESCRIPTION
98511DJ	2019-UP FORD RANGER TUBULAR UCA DJ KIT (STEEL KNUCKLE)

COMPONENTS INCLUDED	
(1) 194604 19-UP RANGER TUBULAR UCA (DRVR) (1) 194605 19-UP RANGER TUBULAR UCA (PASS)	(2) 194606 19-UP RANGER TUBULAR UCA BUCKET BRACKET
HARDWARE INCLUDED	
(2) 197100BJ RANGER STEEL KNUCKLE DJ (4) 179106 SLEEVE 1.000 X .563 X 2.440	(8) 297034 HAT BUSHING 1.625 X 1.000 X .850 (4) 297042 POLY RING 1.590 X 1.005 X .450
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH FLATHEAD SCREWDRIVER	18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 5/16" SOCKET / WRENCH
TECH NOTES	
<p>1. ICON RECOMMENDS OPTIONAL BILLET DUST COVER SET (191011) TO PREVENT DEBRIS FROM PACKING UP AROUND THE ZERK FITTING.</p> <p>2. 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.</p> <p>3. 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.</p>	



WARNING!
<p>** 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!</p> <p>** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.</p> <p>** 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.</p>

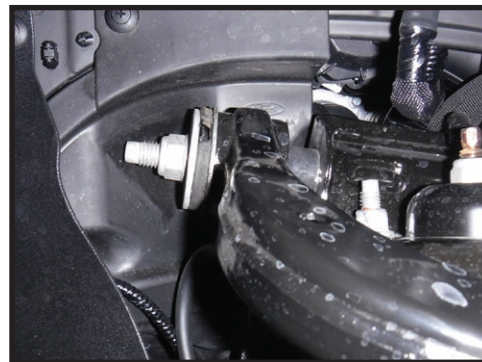
## INSTALLATION

- 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.
- Carefully pull the ABS wire retainers from the UCA. [FIGURE 1]

FIG.1



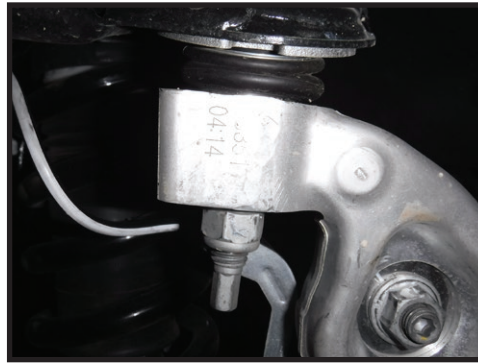
FIG.2



- Remove the nut from the pivot bolt using an 18mm on the bolt head and 21mm on the nut. [FIGURE 2]

**4.** Disconnect the UCA from the spindle using an 18mm. Loosen the nut to the end of the shank but do not remove entirely so that the nut protects the threads. Dislodge the taper by either using a ball joint separator or by striking the spindle on the outside of the taper with a large hammer or hand sledge. [FIGURE 3]

FIG.3



**5.** Separate the UCA from the spindle and support the spindle so that it does not overextend the CV joints when detached.

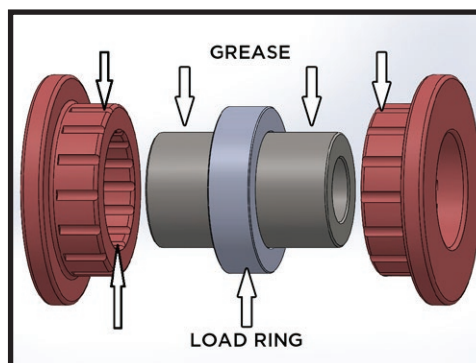
**6.** Slide the pivot bolt out from the back of the UCA and remove the assembly from the vehicle.

**7.** Slide the UCA bucket bracket over the UCA frame mount. The cutout should be toward the motor. On the driver side, there are ground wires that will contact the UCA bucket bracket. To protect the wires, use the supplied hose protectors (PN: 258202) and zip-ties on the wires.

**8.** Before installing the new ICON upper control arms, care must be taken to grease the bushings prior to installing the assembly. Failure to grease properly will cause premature bushing wear and increased noise. [FIGURE 4]

**9.** Install the supplied zerk fittings using a 5/16". Do not overtighten.

FIG.4



**10.** Install the ICON UCA. Hold the UCA in position and slide the frame bolt in from the back of the UCA. Make sure that the supplied washers are placed on the outside face (outer front and outer rear) of the hat bushings. Install the nut and tighten using an 18mm and 21mm. [Torque to factory spec]

**11.** Pivot the Delta Joint stem so that it is inline with the taper bore in the spindle. The new Delta Joint will be very stiff the first time you move it. Rotate the upper control arm downward and install the stem through the spindle taper. Install TWO washers per side with the supplied flanged nut on the taper pin. Connect the UCA to the spindle using an 18mm. [Torque to 60 ft-lbs]

**12.** Connect the ABS lines to the UCA.

**13.** Repeat steps on opposite side.

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

**15.** Have the vehicle professionally aligned.

#### ALIGNMENT NOTE

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.

**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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