ICON VEHICLE DYNAMICS ™

91600 INSTALLATION INSTRUCTIONS

7-7-2015 REV.A

PART #	DESCRIPTION
91600	09-13 F150 2WD 2.5 VS IR COILOVER KIT

COMPONENTS INCLUDED

(2) 194943 09-13 F150 2WD 2.5 CO IR	(1) 611019 COILOVER HARDWARE KIT (PAIR) (1) 611046 09-13 F150 LCA CO MOUNT HARDWARE (PAIR)

HARDWARE INCLUDED

611019 HARDWARE KIT	
(6) 605101 3/8-16 X 1.000 HHCS GR8	(6) 605131 3/8 SPLIT LOCK WASHER GR8
611046 HARDWARE KIT	
(2) 605502 5/8-11 X 4.500 HHCS GR8 (2) 605520 5/8-11 NYLOCK NUT GR5	(4) 605530 5/8 SAE FLAT WASHER GR8 (4) 197012 09-13 F150 & RAPTOR ADAPTER LCA

TOOLS REQUIRED

JACK JACK STANDS TORQUE WRENCH 15MM SOCKET / WRENCH	21MM SOCKET / WRENCH 27MM SOCKET / WRENCH 29MM SOCKET / WRENCH 9/16" SOCKET / WRENCH 15/16" SOCKET / WRENCH

TECH NOTES

1. YOUR ICON COILOVER ASSEMBLIES COME FACTORY CHARGED TO 250 PSI. RELEASING NITROGEN PRESSURE MAY LEAD TO SHOCK MALFUNCTION AND REDUCED RIDE QUALITY. FAILURE CAUSED BY LOW NITROGEN PRESSURE IS NOT COVERED UNDER ICON'S WARRANTY POLICY.

2. YOUR ICON COILOVER ASSEMBLIES COME SHIPPED AT ICON'S RECOMMENDED RIDE HEIGHT. REDUCING DROOP TRAVEL WILL REDUCE RIDE QUALITY. DO NOT PRELOAD THE COIL BEYOND 2.625" OF EXPOSED THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE COIL ADJUSTER NUT. ADJUSTING PRELOAD BEYOND THIS SETTING WILL CAUSE THE COIL TO BIND AND DAMAGE WILL OCCUR TO COILOVER AND/OR VEHICLE.

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 INSTALLTION 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. Disconnect the outer tie rod end using a 21mm socket/wrench. Loosen the nut a few turns. Strike the end of the steering arm with a large hammer to dislodge the taper. Remove the nut and swing the tie rod out of the way. **[FIGURE 1 & 2]**

FIG.1

FIG.2

3. Support the lower control arm with a jack and remove the (3) nuts securing the upper shock mount to the coil bucket using a 15mm socket/wrench. Do not loosen or remove the larger center nut securing the spring seat to the shock shaft. This will result in the stock coil assembly to come apart violently, causing possible damage to components and injury. **[FIGURE 3]**

FIG.3

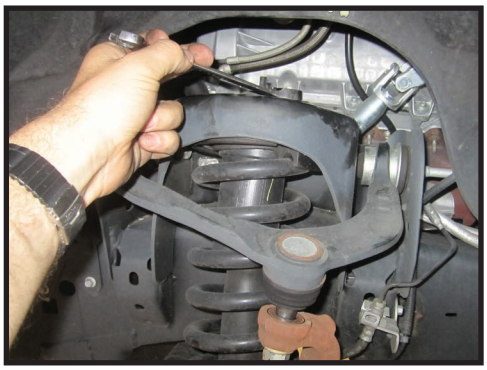

FIG.4

4. Use a 29mm socket, and a 27mm socket/wrench to remove the bolt holding the lower shock eye to the lower control arm. **[FIGURE 4]**

5. Lower the jack and remove the stock coilover assembly. Due to rubber bushing stiffness you may need to pull down on the suspension to make room for removal. To make this easier you can use a pry bar over the top of the upper control arm and under the pivot bolt for additional leverage. Be careful not to damage any brake lines or wires that may be routed down the arm.

6. Install new ICON coilover assembly. Install upper mount with the charge port facing outward using three (605101) bolts and three (605131) lock washers. Tighten using a 9/16" socket/wrench. [Torque to 35 ft-lbs] **[FIGURE 5]**

FIG.5

7. Install lower shock mount to lower control arm: First install the adapter (197011) into the lower mount as shown. Cut the zip tie off the lower shock eye and make sure that the spacers don't fall out. Slide the lower end of the shock between the adapters (197011) and install the supplied lower (605500) bolt with (605530) washers. Tighten using a 15/16" socket/wrench. [Torque to 150 ft-lb] **[FIGURE 6 & 7]**

FIG.6

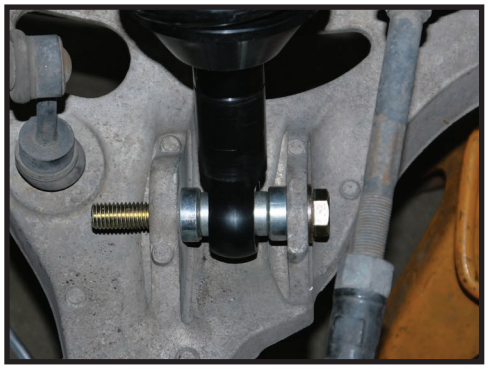

FIG.7

8. Reinstall the outer tie rod end using a 21mm socket/wrench [Torque to factory spec] and install cotter pin.

9. Install front wheels and lower vehicle back to the ground. [Torque to factory spec]

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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