ICON Vehicle Dynamics K93081 Installation Instructions

Stage 1 Suspension System for Ford F-150 (2015-2020)

Part number: K93081

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ICON VEHICLE DYNAMICS ™
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91711 INSTALLATION INSTRUCTIONS

2-10-2015 REV.A

PART #	DESCRIPTION
91711	15-UP F-150 4WD 2.5 VS IR COILOVER KIT

COMPONENTS INCLUDED

(1) 194953 15+ F-150 IR VS COILOVER (DRVR) (1) 194953 15+ F-150 IR VS COILOVER (PASS)	(1) 611019 COILOVER HARDWARE KIT (1) 611052 14-UP F150 CO LOWER HARDWARE KIT

HARDWARE INCLUDED

611019 HARDWARE KIT	
(6) 605101 3/8-16 X 1.000 BOLT	(6) 605131 3/8 SPLIT LOCK WASHER
611052 HARDWARE KIT	
(4) 605201 7/16-14 X 3.000 BOLT (4) 605230 7/16 FLAT WASHER	(4) 605231 WASHER 1.00 X .469 X .125

TOOLS REQUIRED

JACK JACK STANDS HAMMER TORQUE WRENCH 8MM SOCKET / WRENCH	10MM SOCKET / WRENCH 15MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 9/16" SOCKET / WRENCH 5/8" SOCKET / WRENCH

TECH NOTES

1. THE SHOCKS SHIP AT ICON'S RECOMMENDED RIDE HEIGHT. ICON DOES NOT RECOMMEND PRE-LOADING THE COIL BEYOND 1.75" OF THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE TOP OF THE COIL NUT. INCREASING PRELOAD BEYOND THE FACTORY SETTING WILL REDUCE RIDE QUALITY.

2. YOUR NEW COILOVER ASSEMBLIES COME CHARGED WITH THE CORRECT AMOUNT OF NITROGEN. DO NOT RELEASE PRESSURE FROM THE CHARGE PORT, AS THIS CAN CAUSE THE SHOCK TO MALFUNCTION.



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.*

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 sway bar from the links using an 18mm and an 8mm socket/wrench. **(FIGURE 1)**

FIG.1



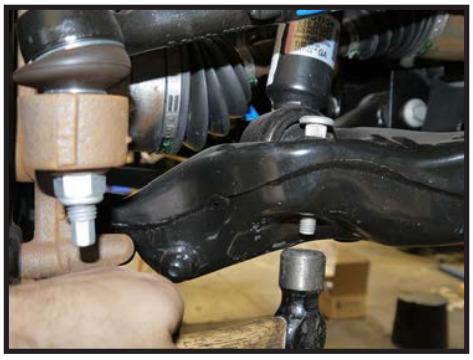


FIG.2

3. Remove the nuts from the lower bar pin studs on the factory coilover using an 18mm socket/wrench. **(FIGURE 2)**

4. Use a hammer to push the studs out of the bar pin. **(FIGURE 3)**

FIG.3



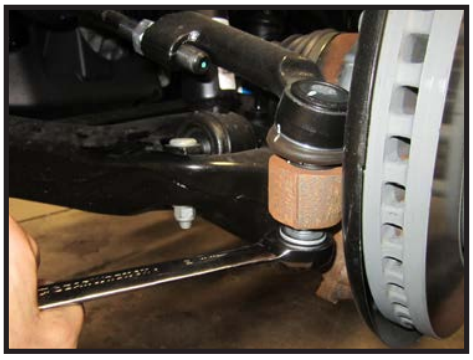


FIG.4

5. Loosen the nut connecting the steering knuckle to the tie rod using a 21mm and a 10mm socket/wrench. **(FIGURE 4)**

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6. Using a hammer or a ball joint separator, separate the taper from the knuckle, remove the nut and disconnect the tie rod.

7. Loosen the nut connecting the steering knuckle to the UCA using a 21mm socket/wrench. **(FIGURE 5)**

FIG.5



8. Using a hammer or a ball joint separator, separate the taper from the knuckle. Remove the nut and disconnect the UCA from the knuckle.

9. Tie the steering knuckle close to the frame to prevent over extending the CV joints on the axles. **(FIGURE 6)**

FIG.6





FIG.7

10. Using an 18mm socket/wrench, remove the 3 nuts from the upper shock mount and remove the factory coilover. **(FIGURE 7)**

11. Install the coilover using the supplied 3/8" hardware. Bolt the upper mount to the coil bucket and tighten with a 9/16" socket/wrench [Torque to 30 ft-lbs]. The driver side has two upper holes rearward and 1 forward. The passenger side is the opposite. The bolts go through the holes on the upper mount without the dimples next to them. **(FIGURE 8)**

FIG.8



12. Install the 7/16" hardware from the bottom of the lower A-arm and connect to the bar pin using a 5/8" socket/wrench [Torque to 50 ft-lbs]. The bar pin is installed offsetting the shock forward to increase axle clearance. The supplied thick washer goes on the bottom side of the arm with the standard washer between the bolt head and the thick washer.

13. Connect the UCA to the knuckle using a 18mm socket/wrench. [Torque to factory spec] **(FIGURE 9)**

FIG.9





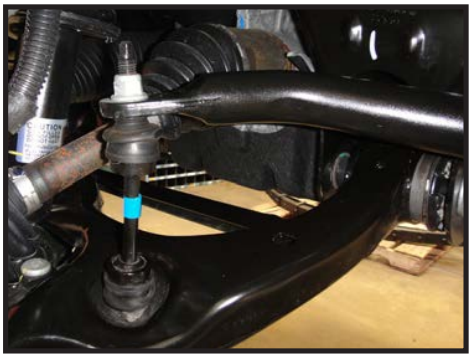
FIG.10

14. Connect the tie rod to the knuckle using a 21mm and a 10mm socket/wrench. [Torque to factory spec] **(FIGURE 10)**

15. Repeat steps 3 - 14 on passenger side.

16. Connect the sway bar to the sway bar links. [Torque to factory spec] **(FIGURE 11)**

FIG.11

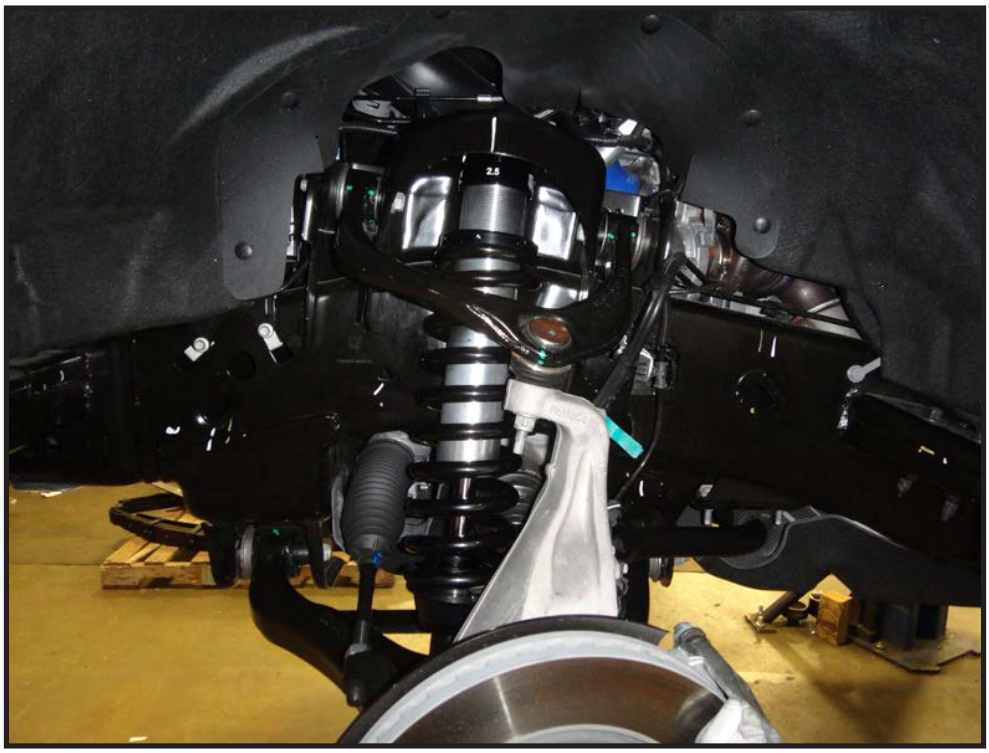


17. Install the front wheels and lower the vehicle to the ground. [Torque to factory spec]

18. Have the truck professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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



2.5 VS SERIES SHOCK & COILOVER TECHNICAL INFORMATION

MAINTENANCE

ICON shock absorbers are a high quality rebuildable race style shock absorber designed for optimal performance. With a unit of this caliber on your vehicle, routine maintenance is required to keep them looking and operating in like new condition. Residual oil and assembly lube may be present at all seal paths from the factory out of the box and is considered normal. Pooling of oil however is not acceptable at any time and one should contact the iCON dealer where purchased.

BELOW ARE GUIDELINES BASED ON HOW YOU USE YOUR VEHICLE BUT YOUR MILEAGE MAY VARY:

STREET USE:

- Send in for factory servicing every 40,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Remove any buildup of road salt, mud, or debris from shocks and coil springs anytime accrued
- Clean with mild soap and water with each oil change or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure yearly. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- **DO NOT** apply any type of lube to the upper and lower bearings.

STREET/DIRT:

- Send in for factory servicing every 15,000 miles or if a leak develops, ride quality decreases, or they begin to make excessive noise.
- Clean with mild soap and water with each oil change, offroad trip, or anytime you notice build up.
- Wax the cylinders yearly with automotive wax to prevent corrosion.
- Check nitrogen pressure each dirt outing. (252004 charge needle assembly available at any ICON distributor)
- Check bearings for excessive wear yearly.
- **DO NOT** apply any type of lube to the upper and lower bearings.

DIRT USE:

- Send in for factory servicing every 1,000 miles.
- Check nitrogen pressure each outing. (252004 charge needle assembly available at any ICON distributor)
- Remove any buildup of mud or debris from shocks and coil springs after every outing.

SELF-SERVICE:

- Contact ICON for service kits & tools at (951) 689-4266.

PRODUCT REGISTRATION

Please visit: http://www.iconvehicledynamics.com/tech-support/registration/ to register your product.

ICON VEHICLE DYNAMICS SHOCK ABSORBER WARRANTY

This shock absorber has a 1 year warranty against any manufacturer's defects. If a shock fails within the initial year of ownership, the shock must be shipped to ICON Vehicle Dynamics for inspection and service. If a shock is inspected and it has been determined the shock failed due to neglect, damage caused by improper installation or any other reason besides "normal wear and tear", the owner of said shock is responsible for all service costs. This includes labor, parts, and shipping.

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.

To send a shock in for warranty please visit our website http://www.iconvehicledynamics.com/tech-support/shock-service/

ICON VEHICLE DYNAMICS

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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