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PART #	DESCRIPTION
95002	2017-UP FORD RAPTOR 3.0 VS RR CDCV COILOVER KIT

COMPONENTS INCLUDED

(1) 194964RCD 17+ RAPTOR COILOVER (DRVR)	(1) 194507 10+ RAPTOR RESI MOUNT (DRVR)
(1) 194964RCP 17+ RAPTOR COILOVER (PASS)	(1) 194508 10+ RAPTOR RESI MOUNT (PASS)
	(1) 95002H 17+ RAPT COILOVER HARDWARE KIT

HARDWARE INCLUDED

95002H HARDWARE KIT

(2) 197011 04-08 F-150 & RAPTOR ADAPTOR LCA	(4) 605053 1/4 FLAT WASHER
(2) 197013 10+ RAPTOR ADAPTOR LCA NARROW	(4) 605055 1/4-20 X .750 BUTTONHEAD BOLT
(4) 257260 EXTRUDED RESI MOUNT CLAMP	(2) 605500 5/8-11 X 5.000 BOLT
(2) 257262M EXTRUDED RESERVOIR MOUNT	(2) 605520 5/8-11 NYLOCK NUT
(4) 605040 10-32 X 1.125 SOCKET HEAD BOLT	(4) 605530 5/8 FLAT WASHER
(4) 605052 1/4-20 NYLOCK NUT	(1) 611019 COILOVER PAIR HARDWARE KIT

611019 HARDWARE KIT

(6) 605101 3/8-16 X 1.00 BOLT	(6) 605131 3/8 SPLIT LOCK WASHER
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TOOLS REQUIRED

JACK	15/16" SOCKET / WRENCH
JACK STANDS	15MM SOCKET / WRENCH
5/32" ALLEN WRENCH	18MM SOCKET / WRENCH
TORQUE WRENCH	21MM SOCKET / WRENCH
7/16" SOCKET / WRENCH	27MM SOCKET / WRENCH
9/16" SOCKET / WRENCH	30MM SOCKET / WRENCH

TECH NOTES

1. 2019-UP VEHICLES WITH FACTORY LIVE VALVE SHOCKS WILL NEED AN ICON DAMPER INTERFACE DEVICE (PN: 95199) TO ALLOW THE VEHICLE DRIVE MODES TO OPERATE CORRECTLY WITH THE OE SHOCKS REMOVED.

2. YOUR ICON COILOVER ASSEMBLIES ARE PRESET TO ICON'S RECOMMENDED RIDE HEIGHT. REDUCING DROOP TRAVEL WILL REDUCE RIDE QUALITY. DO NOT PRELOAD THE COIL BEYOND 1.65" OF EXPOSED THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE TOP OF THE COIL ADJUSTER NUT. ADJUSTING PRELOAD BEYOND THIS SETTING WILL CAUSE THE COIL TO BIND AND DAMAGE WILL OCCUR TO COILOVER AND/OR VEHICLE.

3. YOUR ICON COILOVER ASSEMBLIES COME FACTORY CHARGED TO 150 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.



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.

NOTE: If installing on 2019-UP vehicles with factory Live Valve shocks, the Live Valve wire harness will need to be removed. Trace the wire from the shocks all the way to the plug while removing any retaining clips that secure the wire to the frame. Depress the locking tab on the plug to disconnect it and then remove it from the vehicle.

2. Remove the front OEM shock assemblies from the vehicle. To gain access to the (3) nuts on the upper mount unclip the wiring harness on the side of the battery as shown. [FIGURE 1 & 2]

FIG.1



FIG.2



3. Disconnect the tie rod and upper control arm from the knuckle. Loosen the nuts (18mm and 21mm) and strike the side of the knuckle at the taper to dislodge. Tie or bungee cord the top of the knuckle to prevent it from flopping outward and overextending the CV joints. Disconnect the sway bar link at the sway bar using an 18mm. [FIGURE 3 & 4]

FIG.3



FIG.4



4. Remove the lower shock bolt (30mm nut, 27mm head). Remove the (3) upper shock mount bolts. NOTE: Do not loosen the center nut on the top of the shock or the assembly can come apart violently, resulting in damage and serious injury. Remove the shock assembly from the vehicle. You will have to push down on the lower control arm to get the bottom of the shock to come out of its pocket in the arm. If the knuckle is held slightly outward from vertical then the arm will extend downward easier.

NOTE: If you are installing ICON upper control arms, do so now. Refer to upper control arm instructions.

5. Assemble and install the reservoir mounts. Loosely install the clamp blocks onto the dovetail clamp base with the supplied #10 x 1-1/8" socket head screws (5/32" allen). Secure the clamp base to the reservoir bracket with the supplied 1/4" button head bolts and nylock nuts (5/32" allen, 7/16" wrench). [FIGURE 5]

FIG.5



6. Install the reservoir assembly to the vehicle on the forward upper control arm bolt. Remove the nut (21mm) on the front upper control arm pivot bolt, on the passenger side you must also remove the ground wire located just below the nut, slide the reservoir bracket assembly over the bolt and reinstall the nut. If using ICON upper control arms, torque bolt to factory spec. If using OEM upper control arms, DO NOT TIGHTEN at this time. This must be tightened on the ground to avoid damaging the OEM upper control arm bushings. Reinstall the ground wire through the bracket. [FIGURE 6 & 7]

FIG.6



FIG.7



7. Install the ICON coilover assembly. Install the heim spacers in the lower control arm with the shorter one towards the front of the truck. Make sure the spacers in the lower eyelet of the shock are oriented correctly. It helps to get the 3/8" x 1" upper bolts ready with the lock washers on them and placed in a easy to reach spot once you get the coilover up in position, as the coilover assembly is very heavy, an extra set of hands is recommended for this step.

8. Lift the coilover assembly up into position and start the (3) upper mount bolts. Push down on the lower control arm and to get the lower eyelet into position in the lower control arm pocket. [FIGURE 8 & 9]

FIG.8

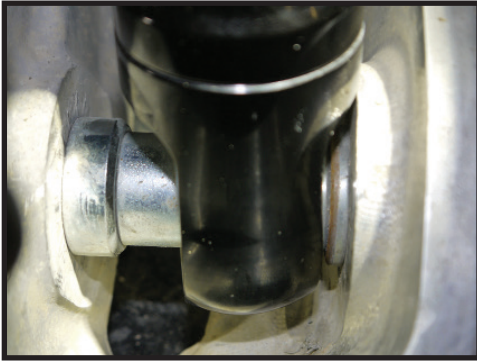


FIG.9



9. Install the lower 5/8" x 5" bolt and washer through the lower pivot then install the second washer and nut. [Torque to 120 ft-lbs]

10. Reattach the upper ball joint, tie rod, and sway bar link [Torque to factory spec]. Tighten the (3) upper mount bolts. [Torque to 35 ft-lbs]

11. Mount the shock reservoir: Insert the back of the reservoir dovetail into the back of the mount and rotate it into the mount. Position the clamp blocks over the front part of the dove tail and secure by tightening the #10 allen head bolts. Do not overtighten. [Torque to 24 in-lbs] [FIGURE 10]

FIG.10



12. Reinstall wheels and secure the wire harness clip on the side of the battery. Slowly lower the vehicle to the ground. Scrub out the suspension by rolling forward and backward a couple of feet 2-3 times. [Torque lugs to factory spec]

13. With the vehicle sitting on the ground you can now torque the front upper control arm pivot bolts to factory spec.

14. 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.

3.0 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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