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PART #	DESCRIPTION
IVD6135B	21-UP FORD RAPTOR .5-2.50" AAC FRONT LEVELING KIT

COMPONENTS INCLUDED	
(2) 197032 21-UP RAPTOR PERCH THREAD SIDE (2) 197033 21-UP RAPTOR PERCH C-BORE SIDE	(2) 190010 RAPTOR SHOCK TOWER SHIM (1) 605968 VIBRATITE BLUE 2ML BULLET
HARDWARE INCLUDED	
(8) 605086 5/16-18 X 1.50 ALLEN BOLT	(6) 605846 M10-1.50 SERRATED FLANGE NUT
TOOLS REQUIRED	
JACK JACK STANDS HD SPRING COMPRESSOR TORQUE WRENCH 1/4" ALLEN SOCKET	15MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH 27MM SOCKET / WRENCH 30MM SOCKET / WRENCH
TECH NOTES	
<p>1. THIS KIT IS CONFIGURABLE TO 5 DIFFERENT RIDE HEIGHTS AS DESIRED. REFER TO CHART ON LAST PAGE TO SEE WHICH CONFIGURATION PROVIDES YOUR DESIRED LIFT HEIGHT. ICON HIGHLY RECOMMENDS THE 1.75" LIFT SETTING WHICH CONSISTS OF THE 3/8" TOP SHIM AND THE COLLAR ON THE LOWER SETTING. THIS WILL YIELD THE BEST OVERALL RIDE QUALITY AND PERFORMANCE.</p> <p>2. SEE PAGE 5 FOR COLLAR ADJUSTMENTS.</p>	



**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**

- 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.
- Remove the shock assemblies from the vehicle: Three nuts on top of the shock mount, not the center nut, if this nut is removed, damage and/or physical injury can occur.
- Disconnect the tie rod and upper arm from the knuckle: Loosen the nuts using an 18mm and 21mm. Use a ball joint separator or strike the side of the knuckle at the taper to dislodge. Support the top of the knuckle to prevent it from flopping outward and over extending the CV joints. Disconnect the sway bar link at the sway bar using an 18mm. [FIGURE 1]

FIG.3



4. Follow the Live Valve back to the connector then disconnect the Live Valve and wire retainers. [FIGURE 2 & 3]

FIG.2



FIG.3



5. Remove the lower shock bolt using a 27mm and 30mm. Remove the three upper shock mount nuts. Push down on the lower control arm to get the bottom of the shock to come out of its mounting pocket in the arm. If the knuckle is held slightly outward from vertical the arm will flex downward easier.

6. With the shock out of the vehicle, mark the alignment of the top and bottom of the coil to the seats and to the shock body. Note that the three studs on the top of the shock are not symmetrical, two are close together, the third is in line with the bolt axes on the bottom. [FIGURE 4]

FIG.4



7. It is not necessary to disassemble the shock or coil, however the spring will need to be compressed a couple of inches. A quality spring compressor is necessary; we recommend a three arm style as shown in the photos. [FIGURE 5 & 6]

FIG.5



FIG.6



**8.** Position the compressor to grab as high and low on the coil as possible. Compress the coil until the spring comes out of contact with the lower seat. Remove the clips holding the Live Valve wire to the coil seat. Cut and remove the lower half inch of the sticker from the shock body above the coil seat. It is difficult to work around the coil, but removing the sticker is necessary for the coil seat to slide up far enough. Using a rubber mallet, tap the lower seat up the shock body. It will have to go over the sticker and will be tight at this point. This will expose 2 half ring locking collars, remove the collars. [FIGURE 7, 8, 9]

FIG.7



FIG.8



FIG.9



**9.** Position the split preload collar on the shock with the text of the desired lift height right side up (note the lift height indicated assumes the upper shim ring is also used). The bolt heads of the collar should be towards the live valve actuator [Tighten bolts to 12 ft-lbs]. Make sure that the inner locking portion of the collar is securely seated inside the groove on the shock body. [FIGURE 14]

FIG.14



FIG.15



**10.** As you release tension make sure you have maintained alignment with your marks. By putting a rod or extension in the lower eyelet you can visually check that it is in line with the 3rd mount bolt. [FIGURE 15]

FIG.16



FIG.17



**11.** Reinstall in vehicle: slide the upper 3/8\"/>

**12.** Connect the wire retainers to the collar as shown. Ensure that the wire is snug against the collar avoid making contact with the CV axle. Reconnect the Live Valve connector and wire retainers that were previously removed.

**13.** Reinstall wheels and secure the wire harness clip on the side of the battery. Lower vehicle back to the ground. [Torque lugs 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.**

## **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.

# **ICON VEHICLE DYNAMICS**

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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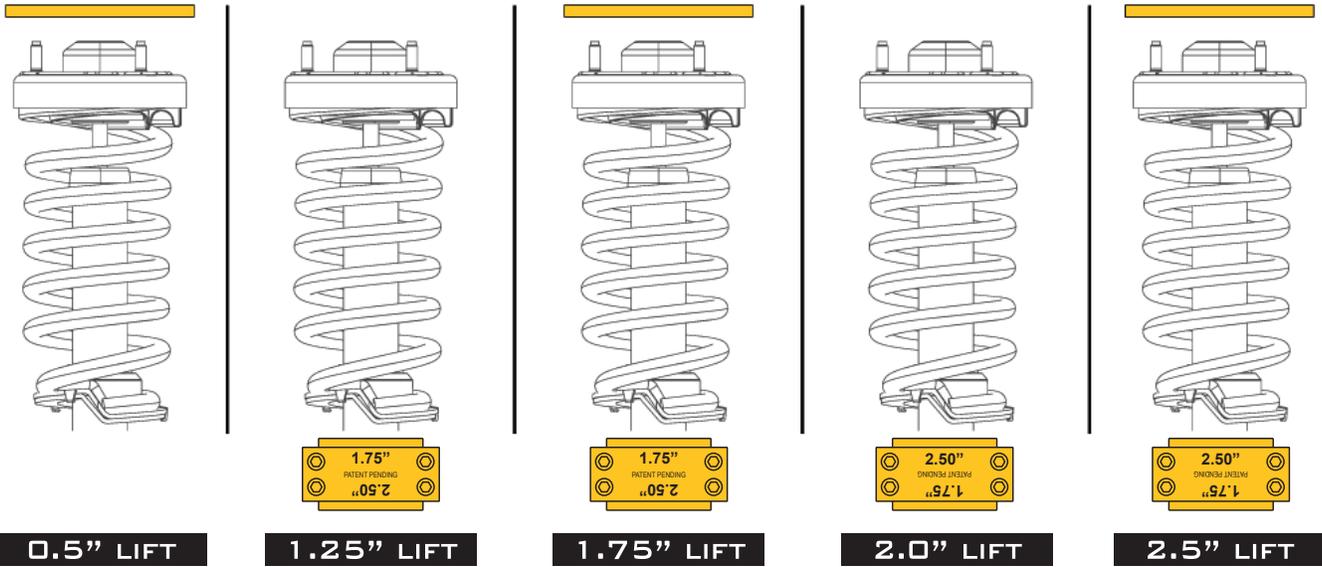


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# ICON VEHICLE DYNAMICS

## 2021-UP RAPTOR ATTITUDE ADJUSTMENT COLLAR



\*COILOVER ASSEMBLY PICTURED DOES NOT REPRESENT 2021-UP RAPTOR, FOR ILLUSTRATION PURPOSES ONLY!

