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PART #	DESCRIPTION
95205	17-UP FORD RAPTOR REAR 3.0 BYPASS SHOCK KIT

COMPONENTS INCLUDED	
(2) 194965 17+ RAPTOR REAR ZETA 3.0 SHOCK	(2) 95205H 17+ RAPTOR REAR HARDWARE KIT
HARDWARE INCLUDED	
95205H HARDWARE KIT	
(1) 295527 NJF4 ROD END FEMALE (1) 295528 NJM4 ROD END MALE (1) 605052 1/4-20 NYLOCK NUT (3) 605053 1/4 FLAT WASHER	(1) 605854M M12-1.75 X 70MM FLANGE BOLT (1) 605063 1/4-20 X 1.25 SET SCREW (1) 605064 1/4-28 JAM NUT
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH 5/32" ALLEN WRENCH	7/16" SOCKET / WRENCH 15MM SOCKET / WRENCH 16MM SOCKET / WRENCH 18MM SOCKET / WRENCH
TECH NOTES	
<p>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.</p> <p>2. YOUR ICON SHOCK 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.</p> <p>3. ICON RECOMMENDS FIRST INSTALLING OUR MULTI-RATE REAR LEAF SPRING KIT. THE LEAF SPRINGS WILL ALLOW THE REAR SUSPENSION TO EXTEND FURTHER, MAKING INSTALLATION MUCH EASIER.</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

1. Using a properly rated jack, raise the rear 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 rear 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. Support the axle assembly with a floor jack and extend the rear suspension. Remove the factory rear shocks using a 15mm and 18mm. Save the factory hardware as it will be reused.

3. Both left and right shocks are identical and can be installed on either side. Install shocks with the bypass tubes facing outward and the reservoir toward the axle. Position the axle with the jack to match the extended length of the shock. It may be necessary to push down on the axle to get it to extend enough to install the new shocks. [FIGURE 1]

FIG.1



4. Remove the nut and (3) washers from the supplied 12mm bolt and set aside. Secure the lower end of the shock with the factory hardware. Fasten the upper mount with the supplied bolt and factory nut using a 16mm deep socket. [Torque to 78 ft-lbs]

5. Install the anti-wobble link. The purpose of the anti-wobble link is to keep the shock from flopping side to side and to keep the body of the shock from contacting the leaf spring or inner fender well. Subsequently, you can rock the shock back and forth to line up the wobble link. Place the (3) washers previously removed over the stud on the upper mount bolt. Slide the anti-wobble link over both of the studs on the bolt and top of the shock. Secure with the supplied 1/4" nylock nuts and a 7/16" wrench. [Torque to 10 ft-lbs] [FIGURE 2 & 3]

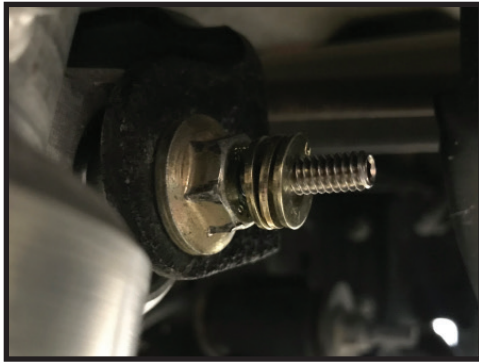


FIG.2



FIG.3

6. Reinstall rear wheels and slowly lower the vehicle back to the ground. [Torque lugs to factory spec]

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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

COMPRESSION TUBE 1 (SHORT)

ICON SETTINGS: ALL OUT

The short compression tube is designed to tune the "ride zone" specifically. The shocks piston is in this zone while at ride height, so any adjustments on this tube will be felt when street driving. This tube overlaps the long compression tube, therefore the long tube is used to add compression and it will affect the ride zone. The short tube can be used to counter any adjustments made to the long tube.

COMPRESSION TUBE 2 (LONG)

ICON SETTINGS: (4) REVOLUTIONS OUT FROM CLOSED

The long compression tube affects the ride zone and the zone leading into the "bump zone". This tube starts wide open; closing this tube off will start to affect the ride zone slightly and will start to stiffen the ride quality in the zone right after ride. If the vehicle is bottoming out easily, this tube will help increase the compression sooner and allow the shock to be slowing down more before it reaches the "bump zone".

REBOUND TUBE

ICON SETTINGS: (4) REVOLUTIONS OUT FROM CLOSED

Rebound control will greatly impair handling. Opening the rebound adjustment will cause the vehicle's rear end to feel loose and can cause the vehicle's rear end to "kick" or "buck". Closing off the rebound adjustment can cause the vehicle to feel like the rear wheels are frozen and the vehicle will become harsh and choppy. The rear end will begin to "pack up" when off-roading and may kick/buck due to the shock bottoming out and not being able to return fast enough to catch the next bump.

FIELD TUNING GUIDE

COMPRESSION TUBE 1	VALVE ON BOTTOM, THE SHORTER OF THE 2 TUBES. THIS VALVE HAS THE MOST FLOW AND WHEN OPEN ATTRIBUTES TO A SOFT RIDE. CAN BE LEFT MOSTLY OPEN UNLESS CARRYING A HEAVY LOAD. THE MORE ITS OPEN THE FASTER THE WHEEL CAN GO OVER AN OBSTACLE WITHOUT UPSETTING THE VEHICLE WHEN HIT AT SPEED. EFFECTIVE TO 65% OF TRAVEL
COMPRESSION TUBE 2	VALVE ON BOTTOM, THE LONGER OF THE 2 TUBES. THIS VALVE SLOWS DOWN THE WHEEL AS IT GETS CLOSER TO THE BUMP ZONE. WHEN DRIVING AGGRESSIVELY THIS VALVE KEEPS THE WHEEL FROM BLOWING THROUGH THE TRAVEL THE MORE IT IS CLOSED. EFFECTIVE TO 85% OF TRAVEL
REBOUND 2	VALVE ON TOP, INDEPENDENT TUBE. THIS VALVE CONTRIBUTES MOST TO THE OVERALL FEELING OF STABILITY. THE MORE ITS OPEN THE FASTER THE WHEEL CAN FOLLOW THE GROUND WHEN CYCLING QUICKLY. THE MORE ITS CLOSED THE MORE IT HOLDS THE CHASSIS DOWN. GENERALLY HAVING IT OPEN AS MUCH AS POSSIBLE WITHOUT MAKING IT TOO "FLOATY" IS BEST FOR OFF ROAD.

RECOMMENDED SETTINGS

	GENERAL OFFROAD	HIGH SPEED WHOOPS	UNLOADED STREET	LOADED	TOWING
COMP 1	7 (OPEN)*	7 (OPEN)*	7 (OPEN)*	5	4
COMP 2	4	2 - 3	4	3	2
REBOUND	5	5.5 - 7.5	4	3	1.5 - 2

SETTINGS REFERENCE FULL TURNS OUT (COUNTERCLOCKWISE) FROM FULLY CLOSED (CLOCKWISE). (4 CLICKS PER TURN)

*BYPASS VALVE WILL STOP CLICKING AT 6 FULL TURNS OUT, BUT WILL CONTINUE TO TURN ONE MORE REVOLUTION TO FULLY OPEN POSITION.

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/>



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PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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