

PART #	DESCRIPTION
95200	FORD F150 SVT RAPTOR REAR 3.0" BYPASS SHOCKS

**\*\* 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! \*\***

**\*\* WARNING! ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS. \*\***

**\*\* WARNING! YOUR NEW BYPASS ASSEMBLIES COME CHARGED WITH THE CORRECT AMOUNT OF NITROGEN! DO NOT RELEASE PRESSURE FROM THE CHARGE PORT, FOR THAT WILL CAUSE THE SHOCK TO MALFUNCTION! \*\***



SYSTEM COMPONENTS
(2) 3.0 3-Tube Raptor Rear Bypass Shocks (2) Shaft Shin Guards

**Tools Required:**

15mm wrench	18mm wrench
Jack	Barrel Sander (Optional)

## INSTALLATION

1. ENSURE TRUCK IS IN GEAR OR IN PARK, SET PARKING BRAKE, TURN OFF ENGINE AND CHOCK TIRES!
2. Jack up the rear of the truck and support with jack stands under the frame rail. Remove the rear wheels.
3. Loosen OEM shock hardware top and bottom and remove original shocks.
4. Minor sanding may be necessary to allow clearance for the top cap of the shock if using aftermarket leaf springs. If this is necessary, please refer to Page 2 of these instructions.
5. Using factory hardware install new ICON Vehicle Dynamics 3.0" 3 Tube piggyback bypass shocks. Reservoirs should face the rear of the truck, and the tubes should face the tire.
6. Tighten hardware to OE specified ft-lbs.
7. Install rear wheels. Check Lug nuts after 50 miles.

**PLEASE SEE ATTACHED GUIDE FOR SUSPENSION TUNING INFORMATION & RECOMMENDED SETTINGS**

**\*\* THE ADDITIONAL PERFORMANCE OF THE ICON BYPASS SHOCKS COMBINED WITH THE ABILITY TO NOW DRIVE YOUR VEHICLE MORE AGGRESSIVELY RESULTS IN HIGHER FORCES BEING PUT INTO THE CHASSIS. IF YOU FEEL YOU ARE GOING TO BE PUSHING THE NEW FOUND LIMITS OF YOUR VEHICLE YOU SHOULD CONSIDER REINFORCING YOUR UPPER AND LOWER REAR SHOCK MOUNTS TO HANDLE THE ADDITIONAL LOAD. \*\***

### ICON Vehicle Dynamics LIMITED LIFETIME WARRANTY

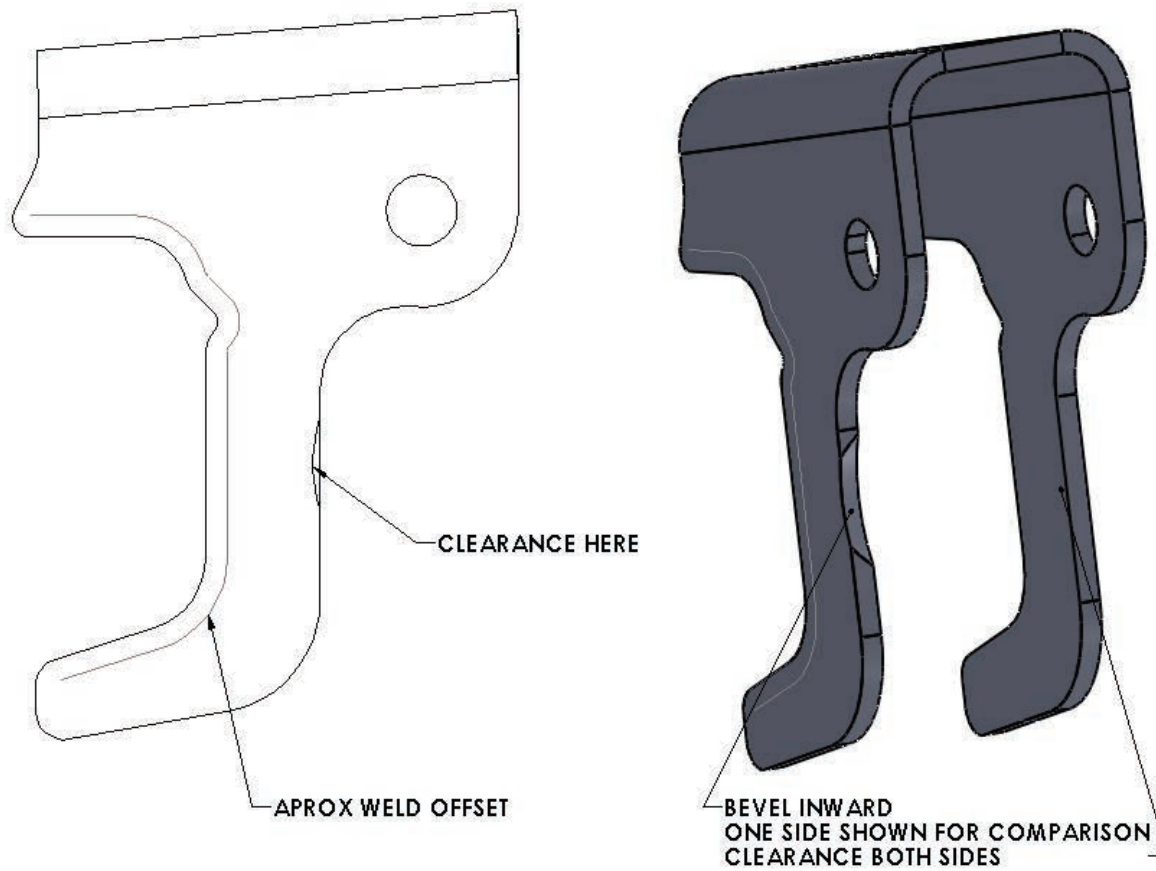
Icon Vehicle Dynamics warrants to the original retail purchaser who owns the vehicle on which the product was originally installed. Icon Vehicle Dynamics does not warrant the product for finish, alterations, modifications and/or installation contrary to Icon Vehicle Dynamics instructions. Icon Vehicle 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.

## REAR SHOCK MOUNT CLEARANCING



CLEARANCING SHOCK MOUNT DOES NOT REQUIRE A SUBSTANTIAL AMOUNT OF MATERIAL TO BE REMOVED! IF YOU HAVE QUESTIONS AS TO HOW TO PROPERLY COMPLETE THIS PROCESS, CALL ICON CUSTOMER SERVICE AT (951) 689-4266 MONDAY-FRIDAY, 8AM - 5PM.



# ICON VEHICLE DYNAMICS

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

## RAPTOR REAR BYPASS FIELD TUNING GUIDE

### NITROGEN SETTING

ICON SETTINGS: 220 PSI

### 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.

### SHAFT

Keep an eye to make sure the shaft is clear from knicks/scratches. Small abrasions allow rust to form and eat away the shaft. Keep shafts smooth or damage to the seals can occur.

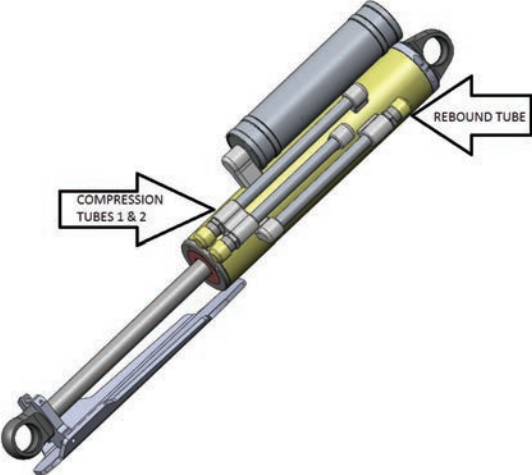
### MOLDED SHIN GUARD

Thick molded shin guard was designed specifically to protect the shaft, rod end, and bearing from pitting, scratches, and road debris. This is a wearable item and should be inspected after each offroad trip.

ICON RAPTOR SHIN GUARD REPLACEMENT, PART #191006

### HIGH QUALITY 3/4” BEARINGS (TOP/BOTTOM)

Commercial grade spherical bearings feature woven PTFE liners for smooth operation, but they are susceptible to dirt getting in and damaging the liner. Cleaning these bearings and preventing debris build up will prolong the life of these components.



### 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.