

# FORD

## INSTRUCTIONS

RANGER ADJUSTABLE FRONT COIL  
OVER CONVERSION SYSTEM

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## 2019 FORD RANGER 2WD







## **Installation Instructions**

Front Coil Over Conversion Kit

2019 Ford Ranger 2WD

**CO-2500**

### **Conversion System Contents**

- Unassembled Control Arms
- Adjustable Upper Control Arm
- Grade 8 hardware
- Instruction sheet

### **Coil Over Kit**

- Two (2) Viking Double Adjustable Coil Over Shocks
- Two (2) High Tensile Springs
- Two Upper Coil Over Brackets
- Upper Control Arm Adjustment Assemblies
- Two (2) Lower Coil Over Brackets
- All Grade 8 Hardware

Thank you for purchasing this Ford Ranger performance coil-over system from Control Freak Suspensions®, manufactured in DeBary, Florida. We believe this adjustable conversion system is the best available at any price. Please note that while installation is relatively easy for those with mechanical skills and modest experience, novices should employ a professional for installation. Also, fit is guaranteed on vehicles that are unmolested...that is vehicles that have not suffered any front-end damage. Such damage can bend or alter the chassis, making installation and alignment more difficult.

### **Torque Specifications**

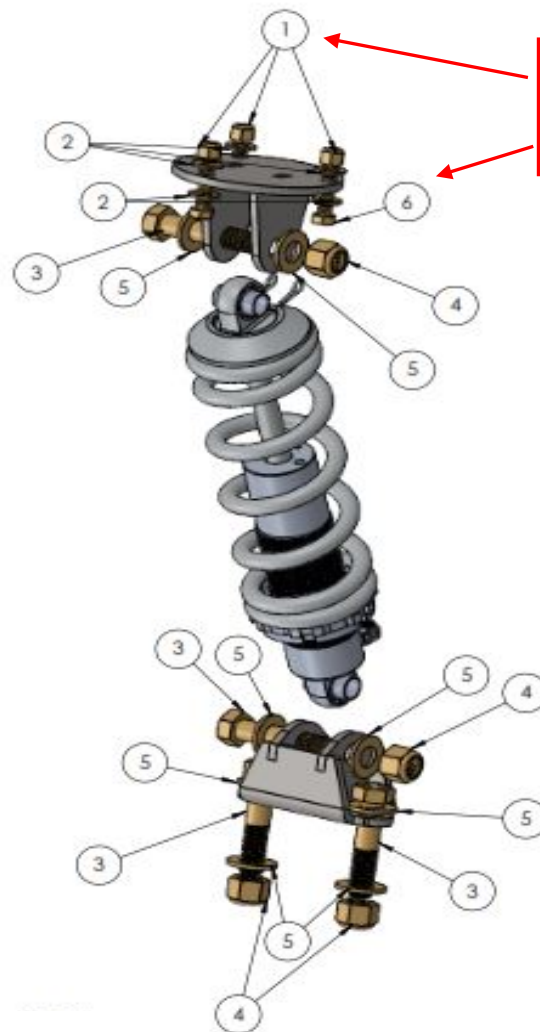
- Upper Ball Joint Bolts: .....35 ft-lbs
- Upper Shock Bracket: .....35 ft-lbs
- Lower Shock Bracket: .....45 ft-lbs
- Upper Control Arm to Bracket: .....60-65 ft-lbs

### **Installation Of Tubular Upper Control Arms**

1. Place a jack under the lower control arm to support it. Remove the stock spring assembly by releasing the pressure on the lower control arm. The spring assembly can then be easily removed by unbolting the upper brackets from the frame and lower brackets from the lower control arm. The coil over conversion parts include a pair each of new upper and lower coil over brackets to replace the stock spring/shock setup.

2. Remove the stock upper control arm by releasing the ball joint from the spindle and removing the long stock bolt holding the arm to the chassis. These bolts will be reused to install the new upper control arm.
3. Install the new lower coil over brackets using the supplied 5/8-inch bolts, Nylock nuts and washers.

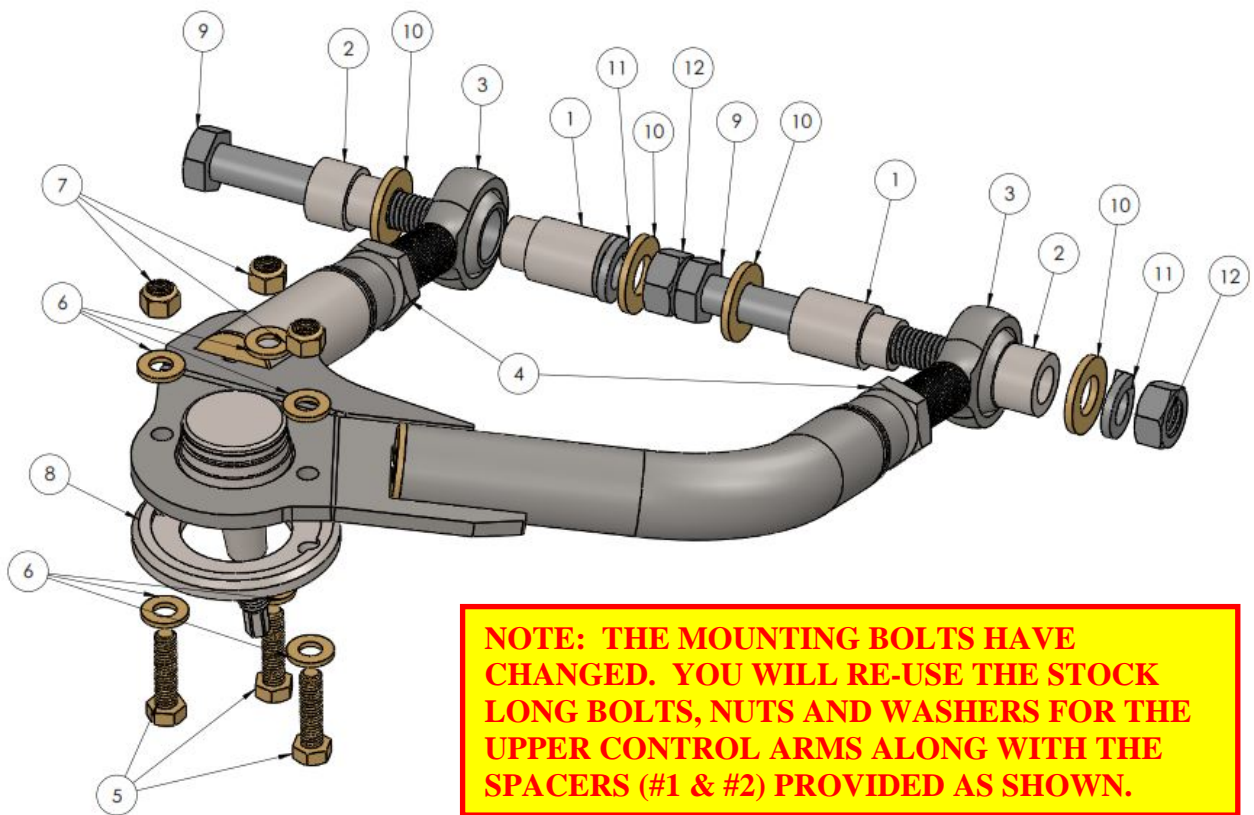
COILOVER MOUNTING HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	-	M10 x 1.5 GRADE 10.9 NUT	6
2	37NWSHZ	3/8" SAE FLAT WASHER	12
3	62C300HCS8Z	5/8"-11 x 3.00" HEX HEAD BOLT GRADE 8 YZ	8
4	62CNN8Z	5/8"-11 NYLOCK NUT GRADE 8 YZ	8
5	62NWSHZ	5/8" SAE FLAT WASHER	16
6	-	M10 x 1.5 x 30mm HEX HEAD BOLT GRADE 10.9	6



**NOTE: Bolts (#6) and Nuts (#1) are the stock bolts which are re-used.**

4. Assemble the coil over shock, but do not tighten the spring yet. The coil over shocks need to be prepared. Remove each shock body from its package. Install the bearings with the supplied c-clips in top and bottom eyes of the coil over shock. Install the jam nut and body screw nut onto the coil over body. When the nut is all the way down on the body of the coil-over, paint about two inches of silver anti-seize lubricant on the threads above the nut.
5. Attach the lower coil over mount to the lower coil over bracket that was just installed. Use the supplied hardware to mount it.
6. Attach the upper coil over bracket to the upper coil over mount. You do not need to torque these bolts yet. Be certain to correctly index the bracket with the single mounting hole facing front. There is a left and right bracket.
7. Once the coil-over is attached, move the upper coil over bracket into position and bolt it to the chassis using the same three stock bolts and holes that held the original upper spring mount. Once all three bolts are installed, they can be torqued to the specifications on Page 3.
8. Hand screw the coil-over body nut until you feel tension from the spring. Don't make any additional adjustments at this time. By making it hand tight you have achieved neutral preload on the spring.
9. You can now torque all the coil over bolts and coil over brackets per the specifications on Page 3.
10. Assemble the upper control arms as shown on the next page. You will have to install the ball joints and the machined ball joint retainer rings. Use the supplied bolts, three for each retainer ring. Do not use the front hole for the ball joint retainer bolt.

UPPER CONTROL ARM HARDWARE			
ITEM	PART NUMBER	DESCRIPTION	QUANTITY (PER SYSTEM)
1	CA-2205	LARGE ROD END SPACER	4
2	CA-2206	SMALL ROD END SPACER	4
3	XML-12	3/4" ROD END LEFT HAND	4
4	75FNFJ8Z	3/4" RH JAM NUT GRADE 5	4
5	31C125HCS8Z	5/16"-18 x 1.25" HEX HEAD GRADE 8 YZ	6
6	31NWSHZ	5/16" SAE FLAT WASHER	12
7	31CNN8Z	5/16" -18 NYLOCK NUT GRADE 8 YZ	6
8	CA-2207	BALL JOINT RETAINER	2
<del>9</del>	<del>.14 C100HCS/10.9</del>	<del>M14 x 2.0 x 100 BOLT</del>	<del>4</del>
<del>10</del>	<del>56NWSHZ</del>	<del>9/16 SAE WASHER</del>	<del>8</del>
<del>11</del>	<del>56NWSHZ</del>	<del>9/16 LOCK WASHER</del>	<del>4</del>
<del>12</del>	<del>.14 CNFH/10</del>	<del>M14 Xx 2.0 NUT</del>	<del>4</del>



11. Using anti-seize on the threads, install the rod ends and jam nuts into the machined ends of the upper control arms, being careful not to cross-thread. You

- should leave about four threads showing beyond the jam nut as a starting point. This will be adjusted when the vehicle is aligned.
12. Install the upper control arms to the frame, just as the original arms. You will use the long stock metric bolts. Just tighten until it is snug, but do not torque to specifications. Your alignment technician will do that.
  13. Mount the upper control arm ball joint to the spindle, tighten the castle nut on the ball joint.
  14. Using the spanner wrench turn the coil over body nut about 1-1/2 turns to apply a preload on the springs. This is a good starting point for setting ride height.  
NOTE: COIL-OVER SHOCKS WILL SETTLE ABOUT 5/8-INCH AFTER DRIVING ABOUT TEN OR FIFTEEN MILES. SET YOUR STARTING RIDE HEIGHT ACCORDINGLY.
  15. Go back to the ball joint nuts and tighten everything down to the specifications on Page 3.
  16. When the vehicle is back on the ground the ride height needs to be measured to ensure the coil overs are correctly set and locked into place. Roll the vehicle a full car length back and forth two times to allow the suspension to settle correctly to the ground. You should leave a minimum 3-inch gap between the tires and the fender. Remember, the coil overs will settle about 5/8-inch after a few miles of driving, so set the ride height accordingly. Make adjustments to the coil overs to ensure the vehicle sits correctly on both sides.
  17. When the correct ride height is reached, have the vehicle professionally aligned.

**For technical support, please call 888-325-6462 or 407-696-2772,  
or via e-mail at [tech@FreakRide.com](mailto:tech@FreakRide.com)**



**Recommended Alignment Specifications**

For street vehicles, adjust to the following recommended alignment settings:

Caster Left: +2.5 Degrees                      Caster Right: +2.9 Degrees

Camber Left & Right: 0 to 1/4 Degrees Negative

Toe In Left & Right: 0 to 1/16"

For racing, adjust to the following recommended alignment settings:

Caster Left: +3 Degrees                      Caster Right: +3.5 Degrees

Camber Left & Right: 1 to 2 Degrees Negative

Toe In Left & Right: 1/32" to 1/8"

Note: Race settings vary upon the type of racing done

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**WARRANTY DISCLAIMER** The purchaser understands and recognizes that racing parts, specialized high performance equipment, and all parts and services sold by Control Freak, are exposed to many and varied conditions due to the manner in which they are installed and used. Control Freak makes no warranties, either expressed or implied, including any warranty of merchantability or fitness for a particular purpose other than those contained in its current catalog with respect to the goods identified on the face of the invoice. There is no warranty expressed or implied as to whether the goods sold hereby will protect purchaser or ultimate user of such goods from injury or death. Control Freak assumes no liability for these suspension products.

**DAMAGE CLAIMS** Always inspect your package upon delivery. Inspect all packages in the presence of the delivery driver. The driver must note any damage. Ask the driver the Carrier's procedures for handling damage claims. You must hold the original box, packing material and damaged merchandise for inspection or the carrier will not honor the claim. Notify Control Freak for instructions on returning damaged goods. Control Freak is not responsible if no notification is given within two (2) days of receipt.

**SHORTAGES** Always check the contents of your delivery to insure all the parts that you ordered were received. Please read the invoice and Pack Lists. Double check all packing materials, small items may be wrapped inside with these products. Shortages may occur from damage to the box, so save all packing materials. Inspect the box for holes that would allow parts to fall out. If you are missing any item(s) be sure to check your invoice and/or Pack List for back orders or canceled items before calling the customer service department. If Control Freak has to split a shipment into multiple boxes, packages may be delivered on different days. You need to contact the customer service department within 5 days of delivery to assure the prompt replacement. Control Freak assumes no liability after this period.

**WARRANTY CLAIMS** If an item has a manufacturer's warranty as being free from defects we will exchange that item. If the item has been used and you are requesting warranty work, Control Freak will determine the validity of the claim. If you have any questions, please contact customer service.

**RETURNS** Our return policy applies to all suspension systems *except* Independent Front Suspension (IFS) systems. Control Freak wants you to be satisfied with your purchase. If within five (5) days after you receive your shipment you are not satisfied, you may return the item for refund, exchange or credit. **This does not apply to any IFS systems.** All exchanged or returned merchandise must be in original factory condition with no modifications or alterations. Returned merchandise must include all original packaging materials, warranty cards, manuals, and accessories. If the items being returned need to be repackaged there will be a re-packing charge of 15%. Pack the item in a sturdy box and include a copy of your invoice and notify us of the return. You must ship orders back **PRE-PAID. WE DO NOT ACCEPT COD SHIPMENTS.** All exchanges need to have reshipping charges included. Items that are returned after 5 days are subject to 15% restocking charges. **Absolutely no returns on custom built suspension systems or other special-order merchandise. All IFS systems are considered custom builds. All exchange and/or repair is at the discretion of Control Freak Suspensions.**

Some items may not be street legal in some countries. Such items may be legal for racing vehicles only which may not be used upon a highway

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### CONTROL FREAK SUSPENSIONS

485 South Shell Rd., Suite 5B

DeBary, Florida 32713

(407) 696-2772 (888) 325-6462 Toll Free (407) 696-6216 Fax

[Sales@FreakRide.com](mailto:Sales@FreakRide.com)

[www.FreakRide.com](http://www.FreakRide.com)