

PART #	DESCRIPTION
58645	07-09 FJ/03-09 4RNR/03-UP GX EXT TRAVEL 2.5 VS IR COILOVER KIT

COMPONENTS INCLUDED	
(2) 154953 07+ FJ/03+ 4RUNNER EXT TRAVEL IR (1) 611019 COILOVER HARDWARE KIT	(1) 611030 05+ TACO / 07-09 FJ SWAYBAR RELOCATION KIT
HARDWARE INCLUDED	
611019 HARDWARE KIT	
(6) 605101 3/8-16 X 1.000 BOLT	(6) 605131 3/8 SPLIT LOCK WASHER
611030 HARDWARE KIT	
(2) 157100 05+ TACO SWAYBAR RELOCATION BRACKET	(4) 605100 3/8-16 X .750 BOLT (4) 605133 3/8 SAE FLAT WASHER
TOOLS REQUIRED	
JACK JACK STANDS PLIERS TORQUE WRENCH HAMMER 8MM ALLEN WRENCH 9/16" SOCKET / WRENCH	8MM SOCKET / WRENCH 10MM SOCKET / WRENCH 13MM SOCKET / WRENCH 14MM SOCKET / WRENCH 15MM SOCKET / WRENCH 18MM SOCKET / WRENCH 21MM SOCKET / WRENCH
TECH NOTES	
<p>1. YOUR ICON COILOVER 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>2. YOUR ICON COILOVER ASSEMBLIES COME SHIPPED AT ICON'S RECOMMENDED RIDE HEIGHT. DO NOT PRELOAD THE COIL BEYOND 2.13" (1.13" FOR 700LB COIL #158508) OF EXPOSED THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE TOP OF THE COIL ADJUSTER NUT. A REDUCTION IN RIDE QUALITY WILL BE EXPERIENCED IF COILOVERS ARE ADJUSTED TO ALLOW FOR LESS THAN 2" OF DROOP TRAVEL FROM STATIC RIDE HEIGHT.</p> <p>3. REQUIRES USE OF ICON TUBULAR UPPER CONTROL ARM (58451) OR ICON BILLET UPPER CONTROL ARM (58515).</p> <p>4. KDSS EQUIPPED VEHICLES WILL REQUIRE THE SYSTEM TO BE DEACTIVATED BEFORE INSTALLATION, AND REACTIVATED AFTER INSTALLATION IS COMPLETE. REFER TO FACTORY SERVICE MANUAL FOR MORE INFORMATION.</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. If your vehicle is equipped with Kinetik Dynamic Suspension System (KDSS), deactivate the system before performing ANY work to the vehicle. Refer to the factory service manual for information on how to deactivate this system. KDSS will need to be reactivated once the installation is complete.
2. 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.
3. Disconnect the outer tie rod end on both sides. Remove the cotter pin and loosen the nut a few turns. Strike the end of the steering knuckle arm with a large hammer to dislodge the taper. Remove the nut and swing the tie rod out of the way.
4. Disconnect the sway bar from the frame on both sides. Remove the (2) bolts per side using a 14mm socket/wrench and remove the bracket from the sway bar. Move the sway bar forward to make room for removal and installation of the shock.
5. Remove the (3) nuts securing the upper coil seat to the coil bucket. Do not loosen or remove the large center nut securing the spring seat to the shock shaft. Failure to comply will result in the stock coil assembly to come apart violently, causing damage to components and possible injury!
6. Remove the bolt connecting the shock to the lower control arm. Note orientation: as this bolt will be reused. The head of the bolt should be facing forward.
7. Remove the stock coil assembly. Due to rubber bushing stiffness you may need to pull down on the suspension. To make this easier you can use a pry bar over the top of the upper control arm and under the pivot bolt for additional leverage. Be careful not to damage any brake lines or wires that may be routed down the control arm.

8. Install new coil assembly. Install upper mount with the hose pointing outward using (3) 3/8-16 X 1.000 bolts and (3) 3/8 lock washers. [Torque to 35 ft-lbs] [FIGURE 1]

FIG.1



9. Connect the shock to the lower control arm: The lower shock mount has (1) long and (1) short spacer [Torque to factory spec]. Make sure the long spacer is toward the front of the vehicle as this will position the shock further toward the rear of the control arm to ensure adequate sway bar clearance. Install the factory lower shock bolt.

10. Install the outer tie rod end using a 21mm socket/wrench [Torque to factory spec]. Install cotter pin.

11. Remove the skid plate using a 15mm socket/wrench and set aside.

12. Install the sway bar relocation block. Using the supplied 10mm hardware, bolt the block to the frame. The allen heads will be recessed in the block. [Torque to factory spec] using an 8mm allen wrench. Make sure the block is positioned so that the new threaded holes are forward of the countersunk holes. Using the supplied 3/8" bolts, washers and factory bracket, reinstall the sway bar in its new position and [Torque to 35 ft-lbs]. [FIGURE 2]

FIG.2



13. Install the skid plate using factory hardware and tighten with a 15mm socket/wrench. [Torque to factory spec]

14. Install the wheels [Torque to factory spec] and lower the vehicle back to the ground.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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

2.5 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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