

7929 Lincoln Ave. Riverside, CA 92504  
 Phone: 951.689.ICON | Fax: 951.689.1016

PART #	DESCRIPTION
71670C	23 CANYON/COLORADO 2.5 VS RR CDCV COILOVER KIT

COMPONENTS INCLUDED	
(1) 174961RCD 23 CANYON COLORADO 2" CO 2.5 VS RR CDCV DRVR (1) 174961RCP 23 CANYON COLORADO 2" CO 2.5 VS RR CDCV PASS	(2) 170158 23 CANYON COLORADO FRNT RESI MOUNT (1) 71670H 23 CANYON COLORADO COILOVER HARDWARE KIT
HARDWARE INCLUDED	
(6) 605133 3/8 SAE FLAT WASHER GR8 YZINC	
71670H HARDWARE KIT	
(2) 207452 DIFF SPACER 1.375 X .625 X .500 RAW (2) 605016 5/16 SAE FLAT WASHER GR8 YZINC (2) 605080 5/16-18 X 1.000 HHCS GR8 YZINC (2) 605093 5/16-18 GR5 U NUT BLK PHOS (1) 605969 VIBRATITE RED 2ML BULLET	(1) 611019 COILOVER HARDWARE KIT PAIR (1) 611051 #36 1.188-2.750 STAINLESS HOSE CLAMP KIT (4)
611019 HARDWARE KIT	
(6) 605101 3/8-16 X 1.000 HHCS GR8 YZINC	(6) 605131 3/8 SPLIT LOCK WASHER GR8 YZINC
TOOLS REQUIRED	
FLOOR JACK JACK STANDS BALL JOINT SEPARATOR PLASTIC PUSH PIN PRY TOOL TORQUE WRENCH RATCHET 5/16 NUT DRIVER	T15 & T30 TORX 10MM SOCKET / WRENCH 13MM 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. REDUCING DROOP TRAVEL WILL REDUCE RIDE QUALITY. DO NOT PRELOAD THE COIL BEYOND 1" OF EXPOSED THREADS BETWEEN THE BOTTOM OF THE TOP CAP AND THE TOP OF THE COIL ADJUSTER NUT. ADJUSTING PRELOAD BEYOND THIS SETTING WILL CAUSE THE COIL TO BIND AND DAMAGE WILL OCCUR TO COILOVER AND/OR VEHICLE.</p> <p>3. ONLY COMPATIBLE WITH ULTRA WIDE STANCE TRUCKS.</p> <p>4. WILL NOT WORK ON CHEVROLET COLORADO WT, LT OR Z71</p> <p>5. ESTIMATED INSTALL TIME: 3-4 HOURS</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

**1.** Place the truck on a flat surface with the parking brake engaged, chock the rear tires.



FIG.1

**2.** Use a suitable floor jack in the manufacturer designated spot on the frame to lift the front of the truck, then place a suitable jack stand under the frame and set the truck down securely on the jack stand. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the front wheels and tires.

**3.** Loosen and remove the speed sensor lines from the upper control arm (Driver side pictured, Passenger side is similar). 10mm can be used to remove the 2 screws that secure the harness. A plastic clip pry tool can be used to remove the clips. [FIGURE 1 & 2]

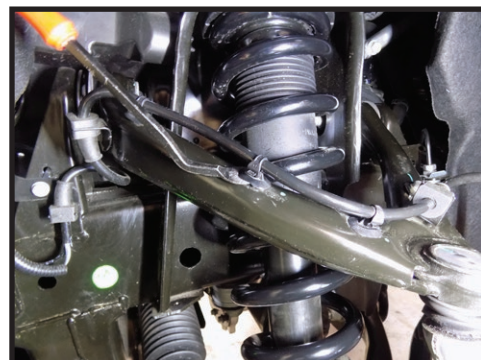
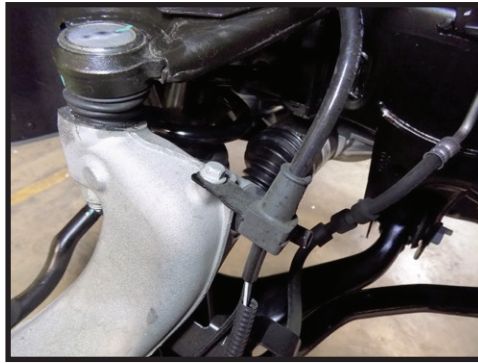


FIG.2

**4.** Remove the 10mm bolts holding the brake lines and sensor wire onto the knuckle. Also remove the speed sensor itself from the front side of the knuckle, using a T30. [FIGURE 3]

FIG.3



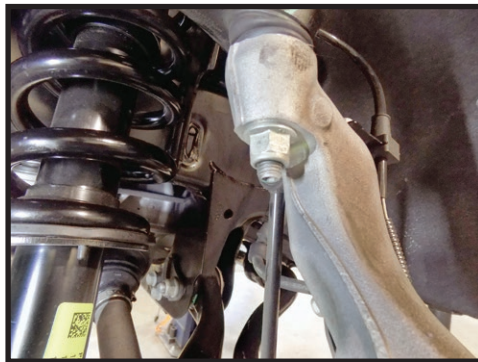
**5.** Remove the tie rod nut using a 21mm and remove the tie rod of the knuckle using a ball joint separator. [FIGURE 4]

FIG.4



**6.** Next you will need to loosen and remove the upper joint nut using an 18mm. Then use the ball joint separator to break the ball joint taper free from the knuckle. A well-placed hit with a hammer onto the knuckle can also free the taper. Leave the nut attached so the knuckle does not fall away and pull apart the CV joints. [FIGURE 5]

FIG.5



**7.** Now support the knuckle with a strap to the frame to keep it from falling away and pulling apart the CV axle. Then remove the nut from the upper ball joint. The knuckle should rotate out of the way to easier access the coilover.

**8.** Use a floor jack to support the lower control arm and remove the lower 15mm bolts that hold the coilover to the control arm. [FIGURE 6]

FIG.6



**9.** Remove the 3 18mm nuts from the top of the coilover. There is a wire loom clip on one of the factory studs, use a screw driver or small pry bar to remove it (For easier access, half of the fender liner can be removed and folded out of the way using a T15 torx and plastic clip removal tool). [FIGURE 7-10]

**FIG.7**



**FIG.8**



**FIG.9**



**FIG.10**



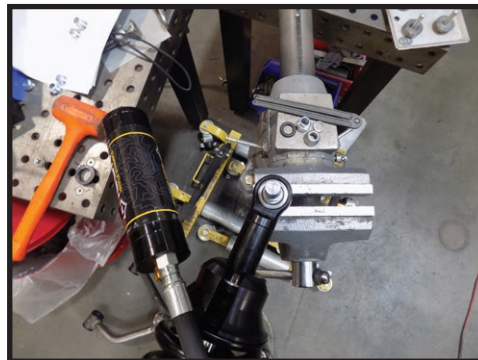
**10.** The coilover can now be removed. [FIGURE 11]

**FIG.11**



**11.** Grab the new ICON coilover and make sure the lower bar pin is oriented correctly for ease of bolt installation. This may require using an adjustable wrench or vise to rotate the barpin/bearing as shown. [FIGURE 12]

**FIG.12**



**12.** With the new ICON UCA installed into the frame mounts, place the ICON coilover into the coil bucket and lower arm. Apply thread locker to the OEM barpin hardware and insert it through the arm and into the barpin, do this by hand so as to not cross thread the bolts. Torque to 45 ft-lbs.

**13.** Use the supplied 3/8 bolts, washers and split washers to secure the upper mount to the coil bucket. Torque to 35 ft-lbs. [FIGURE 13 & 14]



FIG.13



FIG.14

**NOTE:** The coilovers are labeled Driver/Passenger with a sticker on the upper mounting plate.

**14.** The reservoir mount will need to attach to the lower radiator support. The skid plate or splash guard hardware will need to be removed. Depending on the model of truck, the hardware may be different. The bracket is the same for both sides. The offset side will go towards the center of the truck. [FIGURE 15]



FIG.15

**15.** Install the hose clamps and reservoir onto the reservoir mount and tighten (CDEV pictured, CDCV will have the hose oriented the same way). [FIGURE 16 & 17]



FIG.16



FIG.17

**16.** Next, you will need to install the differential drop spacers.

**17.** Support the differential with a floor jack, use a 21mm to remove the driver side bolt and insert the supplied spacer between the frame and diff mount. Apply thread locker to the bolt and torque the bolt to 90 ft-lbs. [FIGURE 18-21]

FIG.18



FIG.19



FIG.20

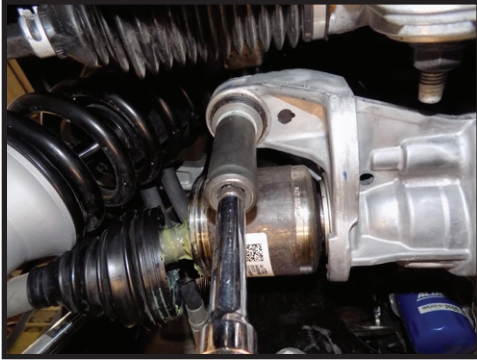


FIG.21



***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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PART #	DESCRIPTION
77751CP	GM 31XX-2 CANYON COLORADO 0-1" REAR 2.5 VS PB CDCV

COMPONENTS INCLUDED	
(2) 174962CP-AL GM 31XX-2 CANYON COLORADO 0-1" REAR 2.5 AL PB CDCV UPKG	
HARDWARE INCLUDED	
(4) 257161 HEIM SPACER COM10 X 14MM X 1.925 CZINC	(4) 257168 HEIM SPACER COM10 X 14MM X 1.375 CZINC
TOOLS REQUIRED	
FLOOR JACK JACK STANDS	TORQUE WRENCH 21MM SOCKET / WRENCH
TECH NOTES	
<p>1. 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>2. ESTIMATED INSTALL TIME: 1-2 HOURS</p>	



### WARNING!

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## INSTALLATION

- Place the truck on a flat surface with the parking brake engaged, chock the front tires.
- Use a suitable floor jack in the manufacturer designated spot on the frame to lift the rear of the truck, then place a suitable jack stand under the frame and set the truck down securely on the jack stand. NEVER WORK UNDER AN UNSUPPORTED VEHICLE.
- Begin by supporting the rear axle with a floor jack, as you may need to lift or lower it to assist in the shock removal and installation.

- Use a 21mm to remove the upper and lower bolts securing the shock in place. [FIGURE 1 & 2]

FIG.1



FIG.2



**5.** With both rear shocks removed, you can install the driver side ICON shock now. The supplied heim spacers should offset the shock inward, away from the frame. Torque the bolts to 110 ft-lbs. [FIGURE 3 & 4]

FIG.3



FIG.4



**6.** The passenger upper mount will need to be sanded to fit. A barrel sander is the best option but a 90° sander can be used also. Mark out the mount as pictured and begin sanding away. ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT. [FIGURE 5 & 6]

FIG.5



FIG.6



**7.** Apply a layer of spray paint to the sanded area to prevent rust and corrosion.

**8.** Install the new ICON shock with the spacers offset to push the shock away from the frame. Torque the bolts to 110 ft-lbs. [FIGURE 7 & 8]

FIG.7

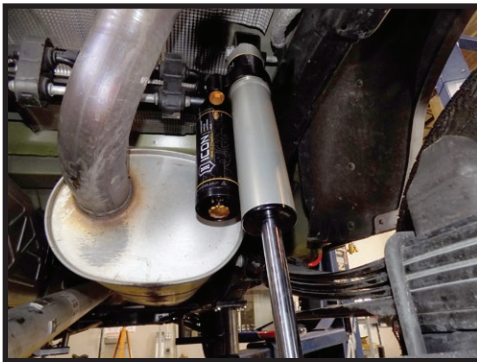


FIG.8



***VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.  
RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.***

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**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:**

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