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PART #	DESCRIPTION
22042	20-UP JT / 18-UP JL / 07-18 JK FRONT HYD BUMP STOP KIT

COMPONENTS INCLUDED	
(2) 124067 FRONT BUMP STOP MOUNT (2) 204902 2.0 AIR BUMP, 2.5 TRAVEL, 1:1 RATIO	(1) 22019H FRONT BUMPSTOP HARDWARE KIT
HARDWARE INCLUDED	
22019H HARDWARE KIT	
(2) 150109 WASHER 1.25 X .395 X .125 (2) 605052 1/4-20 NYLOCK NUT (2) 605057 1/4-20 X 2.000 HHCS	(2) 605115 3/8-16 X 1.500 FHCS SS 18-8 (2) 605121 3/8-16 NYLOCK NUT (2) 605970 VIBRATITE ANTI SEIZE TUBE
TOOLS REQUIRED	
JACK JACK STANDS GRINDER / SANDER SAWZALL W/ METAL BLADE ALLEN WRENCH SET TORQUE WRENCH	7/16" SOCKET / WRENCH 9/16" SOCKET / WRENCH 10MM SOCKET / WRENCH 15MM SOCKET / WRENCH 18MM SOCKET / WRENCH
TECH NOTES	
1. YOUR ICON BUMP STOP ASSEMBLIES COME FACTORY CHARGED TO 150 PSI. PLEASE CONSULT ICON PRIOR TO MAKING ANY NITROGEN PRESSURE CHANGES.	



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 INSTALLTION 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

- 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.
- Disconnect the brake line from the lower control arm (15mm), and the lower brake line bracket at the axle (10mm). Disconnect the front shock at the lower mount (18mm) and the sway bar link at the axle (18mm).
- Slowly lower the front axle to unload the coil springs. Be careful to not overextend any brake lines or wires as you lower the differential. Remove the front coil springs from the vehicle. Remove the rubber coil isolator from the coil bucket and set aside.
- The tube in the middle of the coil bucket must be removed by cutting the weld where it goes through the bucket. This can be done with a sawzall or an abrasive cut off wheel. If using a sawzall, place masking tape over the front of the coil bucket to prevent the foot of the sawzall from scratching the bucket. Be very careful not to damage or cut anything in the engine compartment as you make this cut.
- There is a brake line on the driver side and a wiring harness on the passenger side that are close to where you will be cutting. Take all necessary precautions to make sure these are well protected. [FIGURE 1 & 2]

FIG.1



FIG.2



6. Carefully cut just under the weld. [FIGURE 3]

FIG.3

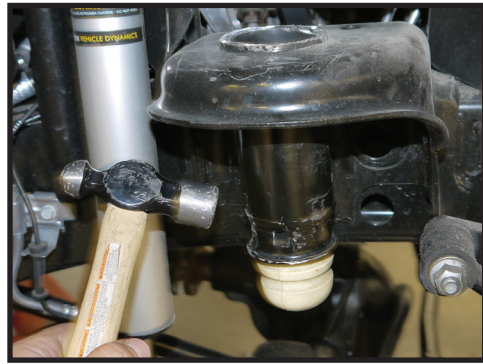
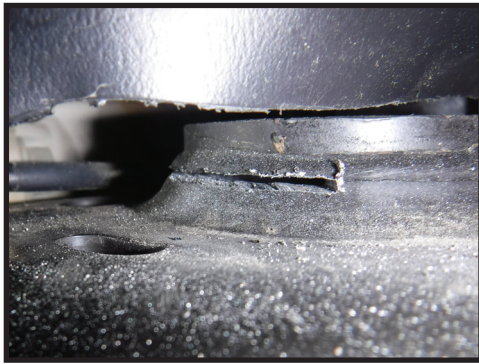


FIG.4

7. Once the weld has been removed, break the bump stop tube loose then remove it. [FIGURE 4]

8. Sand the cut surface until smooth then cover any bare metal with spray paint to prevent corrosion. [FIGURE 5 & 6]

FIG.5



FIG.6

9. The bump stop mount is retained primarily by the coil, but there is an additional retaining bolt to keep it from rotating and to hold it in place for assembly. [FIGURE 7]

FIG.7

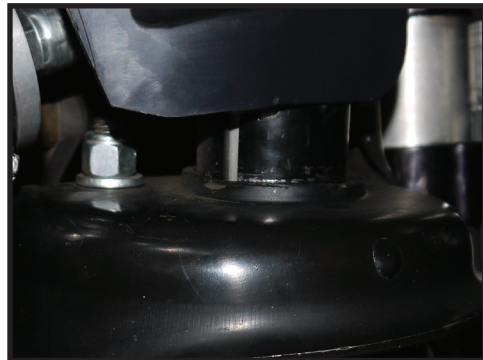
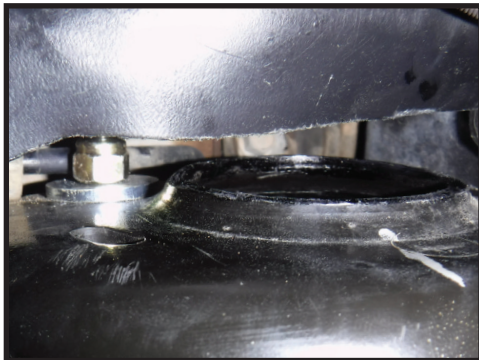


FIG.8

10. Position the mount as shown and fasten it using the supplied 3/8" flat head bolt going up through the mount and bucket. Place the large OD washer on the top side of the bucket and secure with the supplied nylock nut. Center the mount tube in the middle of the bucket as you tighten the retaining bolt using a 7/32" allen & 9/16". Repeat steps on opposite side. [FIGURE 8]

11. Slide the factory rubber coil isolator over the bump stop mount. The rubber isolator is tapered and must be installed in the proper orientation. Make sure that the locating pins are oriented facing inside towards the frame. [FIGURE 9 & 10]

FIG.9



FIG.10

12. Preassemble the 1/4" bolt and nut through the pinch tubes. Apply one tube of anti seize to the bump stop cylinder, then slide the hydraulic bump stop up into the mount and tighten the pinch bolt (7/16"). Do not over tighten. [FIGURE 11 & 12]

FIG.11



FIG.12



13. Reinstall the spring and slowly raise the axle until you can reconnect the shock (18mm), sway bar links (10mm), brake line brackets (10mm & 15mm), and wiring. [Torque to factory spec] [FIGURE 13]

FIG.13



14. Reinstall wheels and lower the vehicle 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.

2.0 BUMP STOP 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 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)

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)

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 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/>

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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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.