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ICON Vehicle Dynamics 217803EP Installation Instructions

Front 2.5 VS RR CDEV Shock Pair for Ram 2500, 4.5 in.

Part number: 217803EP

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217803EP INSTALLATION INSTRUCTIONS

5-27-2022 REV.A

PART #	DESCRIPTION
217803EP	14-UP RAM 2500 4.5" FRONT 2.5 VS RR CDEV SHOCKS

COMPONENTS INCLUDED

(1) 214948E 14-UP RAM 2500 2.5" FRONT 2.5 RR CDEV (DRVR) (1) 214948E 14-UP RAM 2500 2.5" FRONT 2.5 RR CDEV (PASS) (2) 250006 7.5 UNIVERSAL 90 DEGREE RESI MT	(4) 605136 3/8-16 X 1.000 BUTTON HEAD (2) 611006 9/16 HD STEM BUSHING KIT (1) 611051 HOSE CLAMP KIT (4) 605133 3/8 WASHER (4) 605124 3/8-16 LOCKNUT THIN

HARDWARE INCLUDED

611006 HARDWARE KIT	
(2) 255200 STEM BUSHING 9/16 ID (2) 254200 9/16 STEM WASHER	(1) 605809 M12-1.25 JAM NUT (1) 605810 M12-1.25 NUT
611051 HARDWARE KIT	
(4) 605931 1/2 X 2 1/16 - 3 ID #40 SS HOSE CLAMP	

TOOLS REQUIRED

JACK JACK STANDS TORQUE WRENCH DRILL 7/16" DRILL BIT	7/32" ALLEN 5/16" NUT DRIVER 9/16" WRENCH 19MM WRENCH (X2) 21MM SOCKET / WRENCH

TECH NOTES

1. FAILURE TO INSTALL THE BRAKE LINE RELOCATION BRACKETS (PART #214108/214109) SUPPLIED WITH THE ICON 2.5" SPRING KIT (PART #214200) WILL LEAD TO BRAKE LINE FAILURE FROM THE SHOCK CRASHING INTO THE BRAKE LINES.

2. THE DRIVER SIDE SHOCK IS SHOWN ON THE RIGHT SIDE IN THE PHOTO.

3. YOUR ICON SHOCK ASSEMBLIES COME FACTORY CHARGED TO 150 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.



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

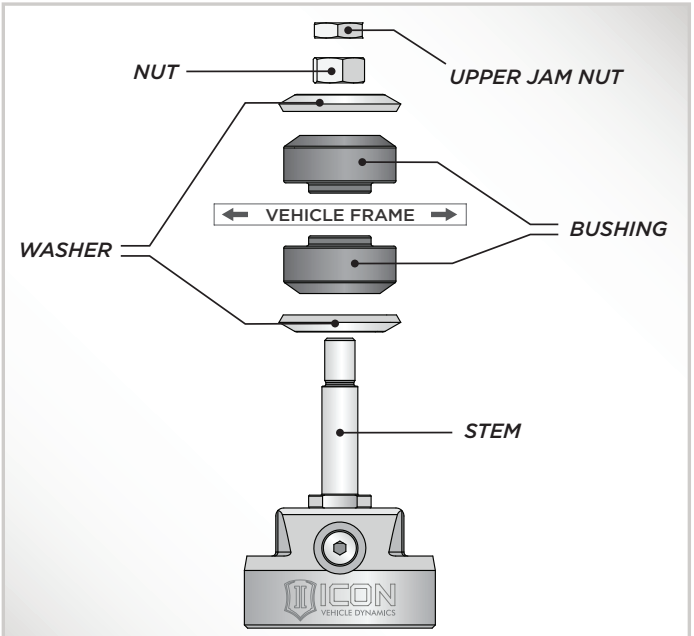
1. Using a properly rated jack, raise the front of the vehicle and support the frame rails with jack stands. Ensure the jack stands are secure and set properly before lowering the jack. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove front wheels.

2. Support the front axle with a jack. Loosen the driver side lower shock mount using a 21mm socket/wrench. Loosen the upper shock mount using a 19mm socket/wrench. Slowly lower jack until the stem is free from the upper shock mount and remove shock.

3. Install stem hardware as seen in diagram. Install (605810) tall nut and fasten bushing assembly until 3-4 threads are exposed for the (605809) jam nut. Install (605809) nut and torque to 50 ft-lbs while holding (605810) with a 19mm wrench. Do not overtighten bushing assembly as this can lead to premature bushing wear. Failure caused by incorrect installation of bushings is not covered under ICON's warranty policy.

NOTE: Tightening the upper shock stem nut before installing the lower bolt will increase the difficulty of lower bolt installation due to the way the radius arm swings as the suspension cycles down. Wait to tighten the upper shock stem nut until the lower mount has been installed.

NOTE: Take care not to wedge the reservoir hose against the clip behind the shock as it will cut the hose casing.



HD STEM BUSHING DIAGRAM (FRONT VIEW)

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4. Install (2) heim spacers into the lower shock eyelet, make sure to install the larger spacer towards the rear of the truck. Line up the shock in the lower mount using a jack to position the axle at the right height for installation of the factory lower shock bolt using a 21mm socket/wrench. [Torque to factory spec] **[FIGURE 1]**

FIG.1

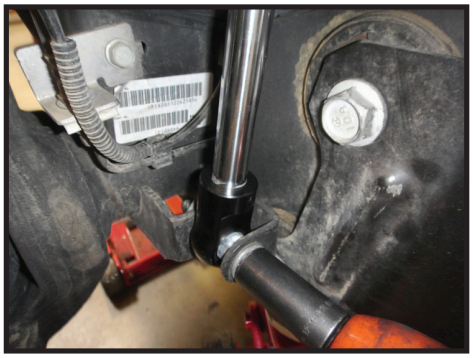



FIG.2

5. Fasten the supplied (605810) large nut until 2-3 threads are showing and then install the supplied (605809) thin jam nut to lock it against the tall nut. [Torque the jam nut to 50ft-lbs] **[FIGURE 2]**

NOTE: Over tightening the large stem nut will cause too much bushing preload which will cause premature wear on internal shock components and also effect vehicle ride characteristics.

6. Locate the (250006) reservoir bracket. Clamp it to the coil bucket and mark the two holes that need to be drilled. **[FIGURE 3]**

FIG.3





FIG.4

7. Remove the bracket and protect the backside of where you will be drilling through. Drill two holes with a 7/16" drill bit. **[FIGURE 4]**

8. Spray paint the exposed metal to prevent corrosion.

9. Install the bracket with supplied 3/8" button head screws, washers and lock nuts (washers and nuts go on backside of coil bucket). Use a 7/32" allen wrench and 9/16" socket/wrench to tighten. [Torque to 30 ft-lbs] **[FIGURE 5]**

FIG.5





FIG.6

10. Attach the reservoir to the bracket using the supplied hose clamps and a 5/16" nut driver. Roll the reservoir in the clamps to roll the hose inward, this will make the compression adjuster knob more accessible. **[FIGURE 6]**

11. Repeat steps 2-10 on the passenger side.

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

13. Refer to IIC install instructions for wire installation

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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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/

ICON VEHICLE DYNAMICS

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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