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PART #	DESCRIPTION
59925P	08-UP LAND CRUISER 200 0-2" REAR 2.5 VS RR OMEGA BYPASS

COMPONENTS INCLUDED	
(1) 1548530 08+ LAND CRUISER 200 0-2" REAR 2.5 VS RR BP (DRIVER) (1) 1548530 08+ LAND CRUISER 200 0-2" REAR 2.5 VS RR BP (PASSENGER)	(2) 611007 9/16" MEDIUM DUTY STEM BUSHING (1) 611051 2 1/16-3" HOSE CLAMP KIT (2) 250002 7.5" UNIVERSAL RESI MT PLATE (2) 605936 3/4" ADEL CLAMP, .400 HOLE
HARDWARE INCLUDED	
611007 STEM BUSHING HARDWARE KIT	
(2) MED DUTY 9/16" ID STEM BUSHING (1) MED DUTY 9/16" ID STEM WASHER	(1) MED DUTY 12MM ID STEM WASHER (1) M12-1.25 NYLOCK NUT
611051 HOSE CLAMP HARDWARE KIT	
(4) 605931 2 1/16-3" HOSE CLAMP	
TOOLS REQUIRED	
JACK JACK STANDS TORQUE WRENCH 5/16" NUT DRIVER 9/16" SOCKET / WRENCH	12MM SOCKET / WRENCH 14MM SOCKET / WRENCH 17MM SOCKET / WRENCH 19MM SOCKET / WRENCH 4.5MM ALLEN WRENCH
TECH NOTES	
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.	



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 rear 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 rear wheels.
- Deactivate the KDSS: on the inside of the left frame rail you will find a hydraulic valve block that the KDSS lines go to. On the bottom there are 2 set screws that are normally in the closed position. Using a 4.5mm allen wrench loosen both set screws 2 turns each. This will allow the suspension to droop equally without the sway bars fighting its movement while work is performed. [FIGURE 1]

FIG.1



- With a floor jack under the rear end, slightly raise the rear axle housing, loosen and remove the lower shock bolts. Make sure the axle is well supported. Keep all of the hardware, it will be reused.
- Using a 19mm socket/wrench disconnect top of the shock: Reach up over the top mount near the coil bucket to access the upper stem nut. This can be a little hard to reach, when loose you may be able to spin the shock to aid in removal.

5. The shocks are side specific. Note the orientation of the bypass tubes and the reservoir hose. The tubes go towards the inside of the vehicle and the reservoir line goes towards the front of the vehicle. [FIGURE 2 & 3]



FIG.2



FIG.3

6. Install the shock stem washer and bushing onto the top of the shock assemblies as follows: washer, bushing, OEM shock mount, bushing, washer, lock nut. Put the lower washer and bushing on the shock stem, raise the shock up into position and install the remaining bushing, washer and lock nut. [FIGURE 4]

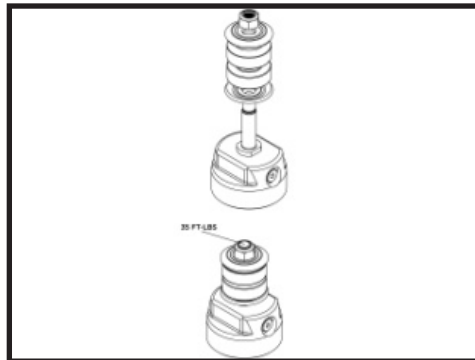


FIG.4

7. Tighten the nylock nut so 2-3 threads are showing through the nut. (Reservoir manifold/hose fitting should be oriented to the Front of the vehicle)

8. There are 2 spacers that go on either side of the bearing on the lower shock mount stud on the axle. The fit of the spacers and the lower shock bearing is a very tight tolerance. It is common for the stud on the axle to get corroded over time. You may need to clean the stud of buildup prior to installation of the spacers and bearing. Emery cloth or sand paper works best.

9. Slide 1 spacer over the stud then the lower shock bearing followed by the other spacer. To assist in lining up the bearing with the stud you will have to jack up the axle very slowly so the parts align. You will also need to rotate the inner part of the bearing to be parallel with the stud, this can be easily done using the female head of a 3/8" extension in the bearing for leverage. Use the OE bolt and captive washer to clamp the lower bearing and spacers [Torque to factory spec].

10. Route the reservoir above and along the E-brake cable to the outside of the frame.

11. Mount the reservoir to the outside of the frame: mount the reservoir bracket to the frame using the existing bolt for the E-brake cable bracket forward of the lower link pivot. Slip the hose clamps under the bracket in the notches before fully tightening the bracket. Position the reservoir on the bracket and secure with the hose clamps. [FIGURE 5 & 6]



FIG.5



FIG.6

12. Using the supplied adel clamps secure the hose above the E-brake cable using the existing E-brake bracket bolts. **[FIGURE 7]**

FIG.7



13. Install wheels and slowly lower vehicle back to the ground.

14. Close the KDSS bypass valve: with the vehicle sitting on the ground and level screw both set screws in until they bottom. **[FIGURE 8]**

FIG.8



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/>

ICON VEHICLE DYNAMICS

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

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