

PART #	DESCRIPTION
56109	07-UP TUNDRA S2 SECONDARY SHOCK HOOP KIT

COMPONENTS INCLUDED	
(1) 154150 07-UP TUNDRA S2 HOOP (DRVR) (1) 154151 07-UP TUNDRA S2 HOOP (PASS)	(2) 157015 07-UP TUNDRA S2 PUCK (1) 56109H 07-UP TUNDRA S2 HARDWARE KIT
HARDWARE INCLUDED	
56109H HARDWARE KIT	
(1) 150110 TUNDRA LOWER ARM TAB (DRVR) (1) 150111 TUNDRA LOWER ARM TAB (PASS) (1) 219007 SLEEVE 1.00 X .688 X 1.625 (2) 294007 NUT TAB 1/2-13 4.0" BENT (8) 605131 3/8" SPLIT LOCK WASHER (8) 605155 3/8-16 X 2.5" BOLT	(2) 605300 1/2-13 X 1.00 BOLT (2) 605330 1/2" FLAT WASHER (2) 605517 5/8-18 X 9.00 BOLT (2) 605525 5/8-18 LOCK NUT (4) 605530 5/8" FLAT WASHER
TOOLS REQUIRED	
JACK JACK STANDS GRINDER W/ CUT-OFF WHEEL SMALL SANDING DISC DRILL 17/32" DRILL BIT WELDER	MARKER DIAGONAL CUTTERS TORQUE WRENCH 9/16" SOCKET / WRENCH 3/4" SOCKET / WRENCH 15/16" SOCKET / WRENCH 22MM SOCKET / WRENCH
TECH NOTES	
1. IF NOT USING AN ICON UCA, YOU MUST CHECK CLEARANCE FROM UCA TO SECONDARY SHOCK AS THE SUSPENSION CYCLES. CHECK THE ABS LINE TABS AND THE SECONDARY SHOCK TO VERIFY THAT THERE IS ADEQUATE CLEARANCE.	
2. THE UCA ABS LINE BRACKET MUST BE REMOVED FROM ABS LINE (AND UCA) AND ABS LINE ZIP TIED TO BRAKE LINE AS SHOWN.	
3. REMOTE RESERVOIR SECONDARY SHOCK (59922P) IS NOT RECOMMENDED WITH REMOTE RESERVOIR COILOVER. IF USING REMOTE RESERVOIR SECONDARY SHOCK USE WITH IR COILOVER KIT.	
4. S2 SECONDARY SHOCK IS NOT COMPATIBLE WITH OEM COILOVER.	



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 the front wheels.
2. Mark and trim the fender as shown on both driver and passenger side. Be careful not to cut anything but the fender as there are brake lines, wires, and hoses close by. Use the minimal amount of trimming necessary to ensure proper fitment of components, excessive trimming leads to increased dirt/mud accumulation in the engine compartment. [FIGURE 1 - 6]

FIG.1



FIG.2



FIG.3



FIG.4



FIG.5



FIG.6



3. Remove the (4) upper mounting bolts securing the upper shock mount to the coil bucket. Do not loosen or remove the larger center nut securing the spring seat to the shock shaft. [FIGURE 7]

FIG.7



FIG.8



4. Support the lower control arm with a jack and use a 22mm to remove the bolt holding the shock rod end to the lower control arm. Slide the supplied 5/8" bolt in. [FIGURE 8]

5. Drill out the existing hole on the frame (above the plastic cap) to 17/32 (.531") as shown. [FIGURE 9]

FIG.9



6. Remove the plastic cover in the side of the frame below the hole you just drilled.

7. Set the S2 puck on top of the bucket on the frame. Set the S2 hoop on top of the puck and start the (4) bolts connecting the S2 hoop, S2 puck, frame bucket, and coilover. Do not tighten yet. [FIGURE 10]

FIG.10



8. Slide the nut tab through the window in the side of the frame and hold the nut behind the drilled hole.

9. Thread the 1/2" bolt into the nut tab using a 3/4" socket/wrench. [Torque to 75 ft-lbs] [FIGURE 11]

FIG.11



10. Tighten the (4) upper bolts using a 9/16" socket/wrench. The inner bolts are easier to get to from under the hood of the truck using some long extensions. [Torque to 35 ft-lbs]

11. Remove the ABS line bracket from the ABS line before mounting the secondary shock. Using the supplied zip ties, attach the ABS line to the brake line leaving enough slack to allow the suspension and steering to cycle fully without damaging the line. [FIGURE 12]

FIG.12



FIG.13



12. Slide the supplied weld sleeve onto the bolt on the back of the LCA and the weld on bracket. Mark the area to be welded and remove the bracket. Sand the paint from the areas to weld. Slide the bracket back on with the weld sleeve in place and install the washer and nut. Tighten the nut using a 15/16" until the bracket is snug against the LCA. The sleeve is slightly wider than the shock to allow for easy installation of shock in pocket. [FIGURE 13]

13. Check positioning and weld path. Weld the bracket to the LCA, then remove the weld sleeve and paint the shock mount to prevent rust. [FIGURE 14 & 15]

FIG.14



FIG.15



14. Once the paint dries, mount the shock in place and tighten the 5/8" bolt using a 15/16". [Torque to 240 ft-lbs] The S2 shock has a short and a long bearing spacer. The short spacer goes toward the front for the truck.

15. Mount the secondary shock on the S2 hoop using the supplied 1/2" X 2.75" bolt and 3/4" socket/wrench. [Torque to 75 ft-lbs] Make sure the reservoir is clocked toward the frame for tire clearance, but also make sure it will not hit anything as the suspension cycles. Adjust the reservoir (if needed) for optimal clearance. [FIGURE 16]

FIG.16



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

17. Have the vehicle professionally aligned.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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.

ICON VEHICLE DYNAMICS

PERFORMANCE SUSPENSION SYSTEMS AND SHOCK ABSORBERS

7929 Lincoln Ave. Riverside, CA 92504 Phone: 951.689.ICON Fax: 951.689.1016
www.iconvehicledynamics.com



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PART #	DESCRIPTION
59922P	07-UP TUNDRA S2 2.5 VS OMEGA BYPASS SHOCKS

COMPONENTS INCLUDED	
(1) 154883ROD 07-UP TUNDRA S2 RR OMEGA (DRVR) (1) 154883ROP 07-UP TUNDRA S2 RR OMEGA (PASS)	(2) 154006 07-UP TUNDRA RESERVOIR MOUNT
HARDWARE INCLUDED	
(4) 605131 3/8" SPLIT LOCK WASHER (4) 605144 3/8-12 X .750 SELF TAP BOLT	(8) 605926 ZIP TIES (1) 611051 STAINLESS STEEL HOSE CLAMP KIT
TOOLS REQUIRED	
JACK JACK STANDS DRILL 11/32" DRILL BIT TORQUE WRENCH	9/16" SOCKET / WRENCH 3/4" SOCKET / WRENCH 15/16" SOCKET / WRENCH
TECH NOTES	
<p>1. MUST BE USED WITH IR COILOVER (#58650). THIS KIT (59922P) IS NOT COMPATIBLE WITH REMOTE RESERVOIR COILOVERS.</p> <p>2. MUST BE USED WITH ICON S2 HOOP KIT (56109).</p> <p>3. 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>	



WARNING!
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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.
- Mount the shock to the S2 hoop using a 3/4" socket and the 1/2" x 2.75" bolt supplied in the S2 hoop kit. Make sure the bypass tubes are clocked toward the frame for tire clearance. [Torque to 75 ft-lbs] [FIGURE 1 & 2] (PASSENGER SIDE SHOWN)

FIG.1



FIG.2



- Mount the shock in the pocket of the welded lower shock mount (included in S2 hoop kit) using a 15/16" socket. The S2 shock has a long and a short rod end spacer, make sure the short spacer goes towards the front of the truck. [Torque to 170 ft-lbs]
- Remove the skirt covering the space between the body and frame in the front of the wheel well.

5. Locate the 2 existing holes in the frame that the reservoir will mount to. Drill the holes to 11/32" and then mount the reservoir bracket using the supplied 3/8" self-tapping screws. [FIGURE 3]

FIG.3



6. Fasten the reservoir hose to the S2 secondary shock hoop using the supplied zip ties.

7. Reinstall wheels and lower vehicle back to the ground. [Torque to factory spec]

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

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



2.5 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

7929 Lincoln Ave. Riverside, CA 92504 Phone: 951.689.ICON Fax: 951.689.1016
www.iconvehicledynamics.com



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