ICON Vehicle Dynamics 56102 Installation Instructions

S2 Shock Hoop Kit for 4Runner, FJ Cruiser & Tacoma

Part number: 56102

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Scan for fitment, price and install help

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56102 INSTALLATION INSTRUCTIONS

2-07-2017 REV.C

PART #	DESCRIPTION
56102	07-UP FJ/03-UP 4RUNNER/05-UP TACOMA S2 SHOCK HOOP KIT

COMPONENTS INCLUDED

(1) 150106 S2 TACO/FJ/4RUN DRIVER HOOP (2) 150107 S2 TACO/FJ/4RUN PASS HOOP	(1) 56102H SECONDARY SHOCK HARDWARE KIT FJ/4RUN/TACO

HARDWARE INCLUDED

56102H SECONDARY SHOCK HARDWARE KIT

(2) 157014 TACO/FJ/4RUN BILLET PUCK (2) 159008 S2 STEERING STOP (2) 154012 1/2-13 NUT TAB (2) 155517 BRAKE LINE, 4RUN/FJ/TACOMA (1) 159007 SLEEVE .750 X .510 X 1.530 (2) 290010 3/16 TAB 1.250 TALL x .531 HOLE (2) 605012 5/16 SPLIT LOCK WASHER (2) 605077 5/16-18 x .75 SELF TAPPING SCREW	(6) 605131 3/8 SPLIT LOCK WASHER (6) 605133 3/8 FLAT WASHER (6) 605155 3/8-16 X 2.5 HHCS (2) 605300 1/2-13 X 1.000 HHCS (2) 605306 1/2-13 X 2.500 HHCS (2) 605307 1/2-13 X 2.750 HHCS (4) 605322 1/2-13 C-LOCK NUT (10) 605330 1/2 FLAT WASHER

TOOLS REQUIRED

JACK JACK STANDS TORQUE WRENCH 3/4" WRENCH 3/4" SOCKET 9/16" WRENCH	10MM WRENCH CENTER PUNCH DRILL 1/2" DRILL BIT 1.25" HOLE SAW SANDER WELDER

TECH NOTES

1. ICON COILOVER AND S2 SKID PLATE (PART #56101 OR PART #56106) REQUIRED FOR INSTALLATION.

2. STEERING STOP REQUIRED (SUPPLIED).

3. SKILLED WELDER REQUIRED TO WELD ON LOWER CONTROL ARM SHOCK TAB.

4. SKILLED WELDER REQUIRED TO WELD ON STEERING STOP.

5. FAILURE TO FLIP LOWER COILOVER BOLT DIRECTION BEFORE WELDING WILL REQUIRE CUTTING OFF TO REMOVE COILOVER.

6. RECOMMENDED TIRE SIZE 285/70R17.



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. Disconnect the negative battery terminal.

2. 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.

3. Remove the (3) upper coilover bolts from driver side coilover using a 9/16" wrench (these will not be used with S2 hoop kit). ICON coilover and S2 LCA skid plate (#56101, #56106, or #56107) required for installation.

4. Locate driver side hoop, spacer, and 3/8" X 2.50" bolts, washers, and lock washers. **(FIGURE 1)**

FIG.1





FIG.2

5. Some fender liners have a sheet metal tab that has to be removed and two screws protruding that need to be sanded flat to get the hoop to locate properly on the frame. **(FIGURE 2)**

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6. Loosely assemble hoop on top of bucket with supplied spacer and 3/8" hardware. Use of anti-seize is recommended. **(FIGURE 3)**

FIG.3



7. Hold hoop firmly against raised portion of frame at top, snug the 3, 3/8" mounting bolts on top of coilover and mark center hole on frame. Drill frame at mark with 1/2" drill bit. **(FIGURE 4 - FIGURE 6)**

FIG.4

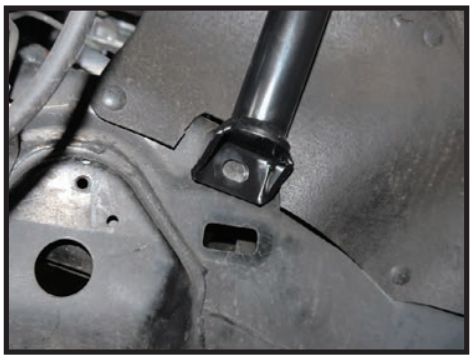
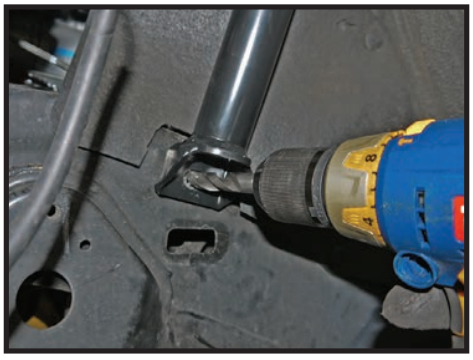




FIG.5

8. Using supplied nut tab, assemble hoop to frame with 1/2" hardware. [Torque to 120 ft-lbs] **(FIGURE 7)**

FIG.6



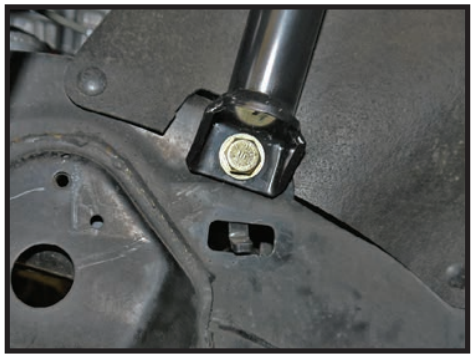


FIG.7

9. Tighten the (3) coilover bolts [Torque to 40 ft-lbs]. At this time, flip the factory bolt in the lower coilover mount so that the head of the bolt is facing the front of the vehicle and the nut is facing the rear. If this is skipped, you will be required to cut the bolt to remove it after the tab is welded in Step 15.

10. On 2016-UP models the factory bump stop must be clearanced with a 1.25" holesaw (as shown) so that it will not make contact with the shock. **(FIGURE 8 & 9)**

FIG.8

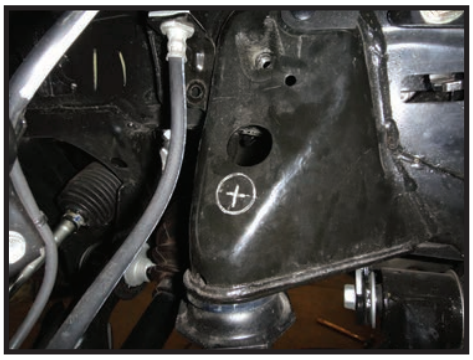




FIG.9

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11. Notch the bump stop as shown. **(FIGURE 10)**

FIG.10



12. The S2 LCA skid plate should be loosened so ideal weld on tab location is used. Using the supplied raw sleeve (#159007) in the hardware kit, assemble the raw tab (#290010) to the S2 LCA skid plate locating tab and fasten together with the supplied 1/2" hardware. Outline the weld on tab with a marker or scribe on the lower control arm.

NOTE: The tab has a notch to fit multiple lower control arm contours. Late model SUV arms will locate the notch on the welded bump stop pad, while every other model will locate the notch to account for the bend in the arm where the tab locates.

13. Be sure that the S2 LCA skid plate is positioned so that the weld on tab and rod end will clear the CV boot at full steering lock **(FIGURE 11 & 12)**. There are multiple CV boot revisions used by Toyota and the larger CV boot will come very close at full droop to the rod end with the extended travel shock (picture is with largest CV boot). Failure to locate the tab properly will result in CV boot damage. The S2 skid mounting holes in the LCA can be drilled larger to allow for adequate orientation to clear the CV boot if needed.

NOTE: If unsure of tab locating procedure, contact ICON Vehicle Dynamics tech support immediately at (951) 689-4266. Normal business hours are Mon - Fri, 8AM - 5PM (PST). This step is extremely critical, do not hesitate to call if you have any questions.

FIG.11





FIG.12

14. Remove sleeve, tab, and hardware.

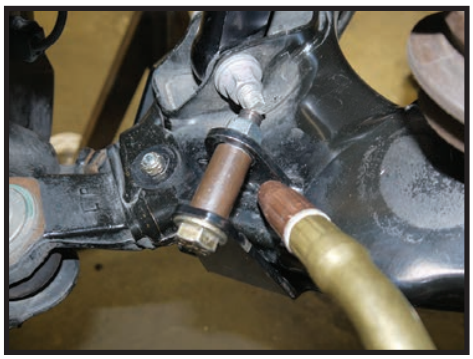
15. Sand outlined area.

16. Reassemble the sleeve and tab to the S2 LCA skid plate tab locator.

17. Weld the lower supplied tab to the factory control arm. This step is to be performed by a professional welder. Proper penetration is critical to avoid failure. **(FIGURE 13)**

NOTE: If this tab is not welded on properly the system will fail.

FIG.13



18. Remove hardware and sleeve and weld inside of tab then spray paint to avoid corrosion.

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19. Remove the factory steel brake line at the caliper and replace with the supplied brake line and route as pictured **(FIGURE 14 & 15)**. Late model FJ / 4Runners with the taller LCA do not require the brake line.

NOTE: Failure to install the supplied brake line properly will lead to catastrophic failure of brake system.

FIG.14

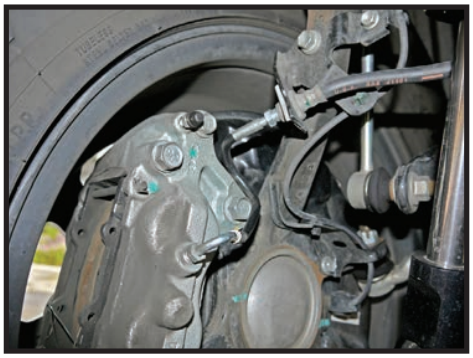




FIG.15

20. Remove the factory brake line routing bracket from frame and relocate it as pictured using a 1/4" drill bit and supplied 5/16" self-tapping screw. [Torque to 25 ft-lbs] **(FIGURE 16)**

FIG.16





FIG.17

21. Install the ICON S2 specific shock with the wider high misalign hardware at the bottom, and the narrow non high misalign at the top with the supplied 1/2" hardware [Torque to 120 ft-lbs]. Use of anti-seize is recommended on these bolts.

22. Route the reservoir hose up and along the hoop to the front of the fender well. Use the supplied zip ties (supplied with S2 shock) to secure it to the hoop.

23. Use ICON reservoir mount and mount as pictured (mount and hardware supplied with S2 specific shock). **(FIGURE 17)**

24. If using a reservoir coilover with the S2 secondary shock, make sure the reservoirs do not touch as the frame-mounted reservoir will damage the body-mounted reservoir from rubbing during heavy off-road use.

25. Secure reservoir to supplied mounting bracket using the supplied hose clamps.

26. Weld on the supplied steering stop as pictured and paint to prevent corrosion. **(FIGURE 18, FIGURE 19)**

FIG.18



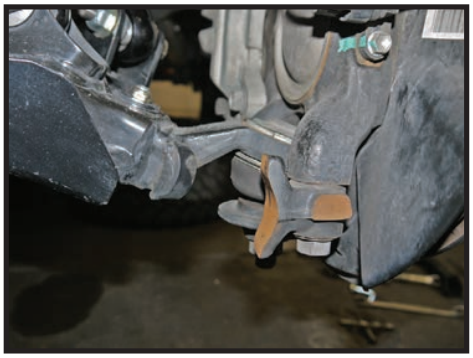


FIG.19

27. Steer vehicle from left to right to make sure nothing binds up and brake line is routed correctly.

28. Repeat steps 3-27 on passenger side.

29. Bleed the brakes.

30. Install wheels, torque lug nuts to factory specifications.

31. Reconnect negative terminal on battery.

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32. If using a coilover other than ICON or modified A-arm bump stops any implied warranty is void.

33. Install wheels and lower 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.



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.

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