



SDHQ Motorsports
190 S McQueen Rd
Ste 109 Gilbert, AZ 85233
www.sdhqoffroad.com

Product Packing List

Product: SDHQ-52-3001-200

Description: 2008-2021 Toyota Land Cruiser and Lexus LX 570 Dual Battery Tray Kit

Batteries NOT included

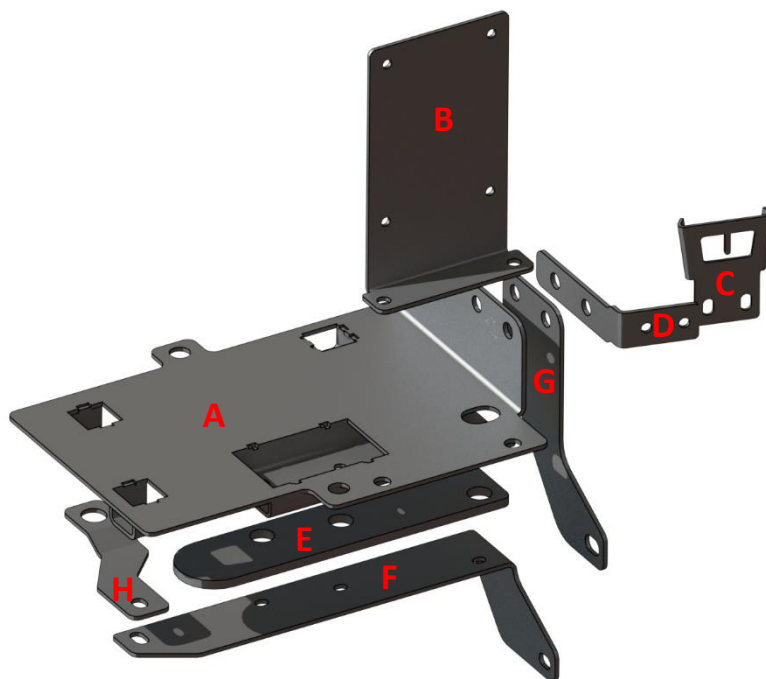
_____ (1) Main Battery Mount	SDHQ-52-3001-200-A
_____ (1) Blue Sea ML-ACR Mount	SDHQ-52-3001-200-B
_____ (1) SDHQ PS Reservoir Mount	SDHQ-52-3001-200-C
_____ (1) Land Cruiser PS Reservoir to Tray Mount	SDHQ-52-3001-200-D
_____ (1) Bottom Support Doubler Bracket	SDHQ-52-3001-200-E
_____ (1) Bottom Support Bracket	SDHQ-52-3001-200-F
_____ (1) Upright Support Bracket	SDHQ-52-3001-200-G
_____ (1) Bottom Rear Support Bracket	SDHQ-52-3001-200-H
_____ (1) SDHQ Auxiliary Billet Battery Hold Down	SDHQ-50-3005-U1-A
_____ (1) Hardware Package	SDHQ-52-3001-200-HP

Inspected and Packaged By: _____ Date: _____

For questions or help with the installation, please email help@sdhqoffroad.com
Store front hours: Mon. – Fri. 8:00am – 5:30pm and Sat. 9:00am – 2:00pm Arizona Time.

Included in Hardware Package SDHQ-52-3001-200-HP:

- (2) ¼" - 20 x ¼" S.S. Button Head Bolts
- (2) ¼" - 20 S.S. Nylock Nuts
- (10) ¼" S.S. SAE Washers
- (2) ¼" ID x 1 ¼" OD S.S. Fender Washers
- (6) M6 - 1.0 x 25mm S.S. Hex Head Bolts
- (5) M6 - 1.0 S.S. Serrated Flange Nuts
- (2) 5/8" Grade 8 Washers
- (5) 5/16" - 18 x 1" S.S. Button Head Bolts
- (5) 5/16" S.S. SAE Washers
- (5) 5/16" - 18 Nut Clips
- (2) 3/8" - 16 x 9" Threaded Rods
- (2) 3/8" - 16 x 10" Threaded Rods
- (2) 3/8" - 16 S.S. Serrated Flange Nuts
- (2) 3/8" S.S. with Rubber Washers
- (1) Quart of Power Steering Fluid
- (1) Formed SDHQ 5/8" Power Steering Hose
- (1) 17" - 3/8" Power Steering Hose
- (5) Edge Zip Ties
- (1) Tube of Anti-Seize



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INSTALLATION INSTRUCTIONS

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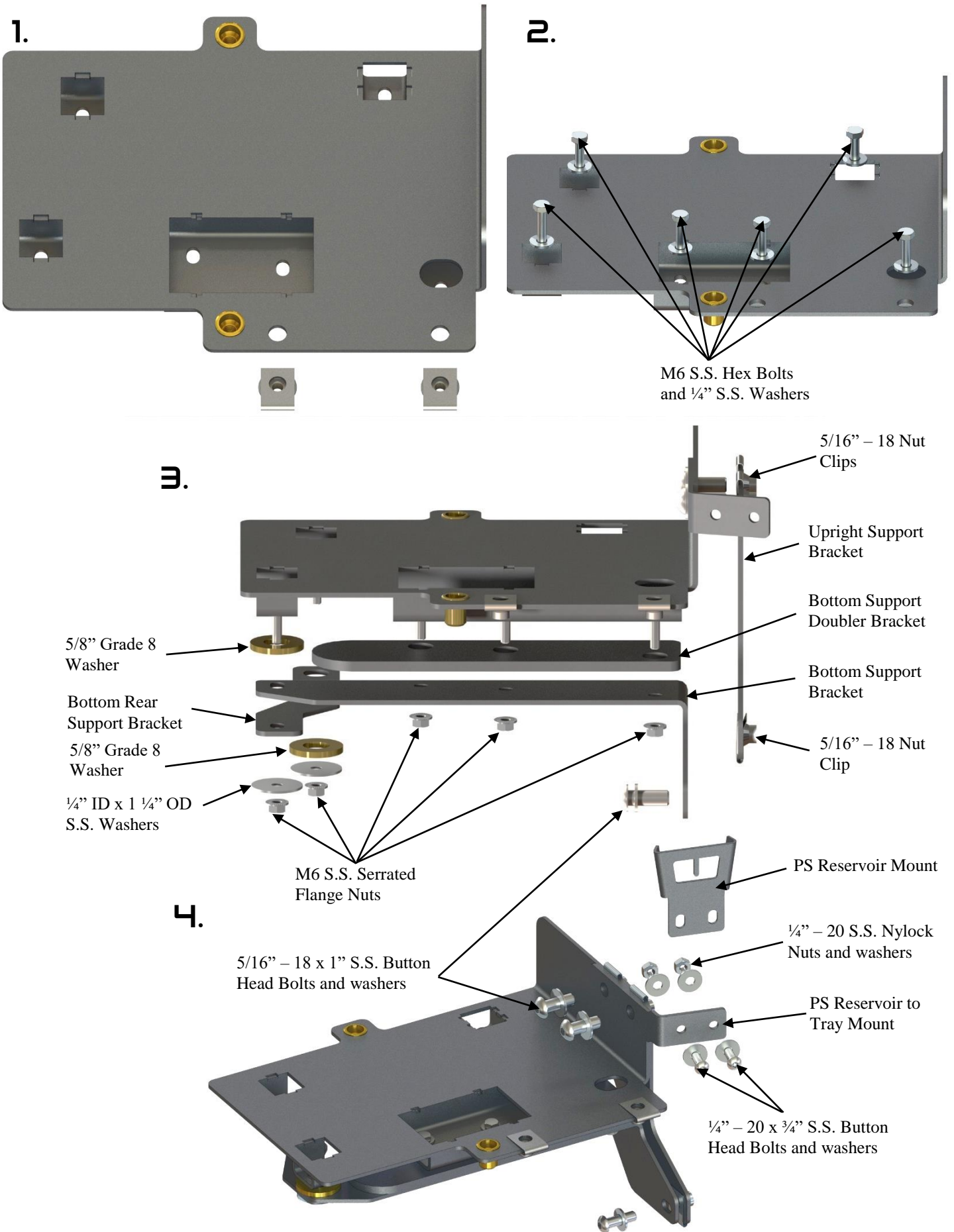
<u>Parts List</u>	<u>Hardware List</u>	<u>Required Tools</u>
(1) Main Battery Mount SDHQ-52-3001-200-A (1) Blue Sea ML-ACR Mount SDHQ-52-3001-200-B (1) SDHQ PS Reservoir Mount SDHQ-52-3001-200-C (1) LC PS Reservoir to Tray Mount SDHQ-52-3001-200-D (1) Bottom Support Doubler Bracket SDHQ-52-3001-200-E (1) Bottom Support Bracket SDHQ-52-3001-200-F (1) Upright Support Bracket SDHQ-52-3001-200-G (1) Bottom Rear Support Bracket SDHQ-52-3001-200-H (1) SDHQ Auxiliary Battery Hold Down SDHQ-50-3005-U1-A (1) Hardware Package SDHQ-52-3001-200-HP	(2) 1/4" – 20 x 3/4" S.S. Button Head Bolts (2) 1/4" – 20 S.S. Nylock Nuts (10) 1/4" S.S. SAE Washers (2) 1/4" ID x 1 1/4" OD S.S. Fender Washers (6) M6 – 1.0 x 25mm S.S. Hex Head Bolts (5) M6 – 1.0 S.S. Serrated Flange Nuts (2) 5/8" Grade 8 Washers (5) 5/16" – 18 x 1" S.S. Button Head Bolts (5) 5/16" S.S. SAE Washers (5) 5/16" – 18 Nut Clips (2) 3/8" – 16 x 9" Threaded Rods (2) 3/8" – 16 x 10" Threaded Rods (2) 3/8" – 16 S.S. Serrated Flange Nuts (2) 3/8" S.S. with Rubber Washers (1) Quart of Power Steering Fluid (1) Formed SDHQ Power Steering Hose (1) 17" Power Steering Hose (5) Edge Zip Ties (1) Tube of Anti-Seize	Standard and Metric Sockets 3" and 6" Extensions Wobbly Adapter Ratchet 5/32", 3/16" Allen Bit T30 Torx Bit Flat/Philips Head Screw Driver 10mm, 12mm, 14mm Wrench 7/16", 1/2", 9/16" Wrench Siphon Oil Catch Can Shop Rags Wire Strippers/Cutters Red Loctite

Tech Notes

Direct bolt in for 2008-2021 Toyota Land Cruiser.
 Use Anti-Seize on all Stainless Steel (S.S.) hardware.
 For ease of wiring, SDHQ-50-3002-U1-CK is our optional wiring kit. Must be purchased separately or in the Land Cruiser Complete Dual Battery Kit (SDHQ-52-3000-200)
**** Connect all accessories to the main battery ****
 Approx. Install Time: 4+ Hours

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION!

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1.

2.

3.

4.

M6 S.S. Hex Bolts
and 1/4" S.S. Washers

5/8" Grade 8
Washer

Bottom Rear
Support Bracket

5/8" Grade 8
Washer

1/4" ID x 1 1/4" OD
S.S. Washers

M6 S.S. Serrated
Flange Nuts

5/16" - 18 x 1" S.S. Button
Head Bolts and washers

5/16" - 18 Nut
Clips

Upright Support
Bracket

Bottom Support
Doubler Bracket

Bottom Support
Bracket

5/16" - 18 Nut
Clip

PS Reservoir Mount

1/4" - 20 S.S. Nylock
Nuts and washers

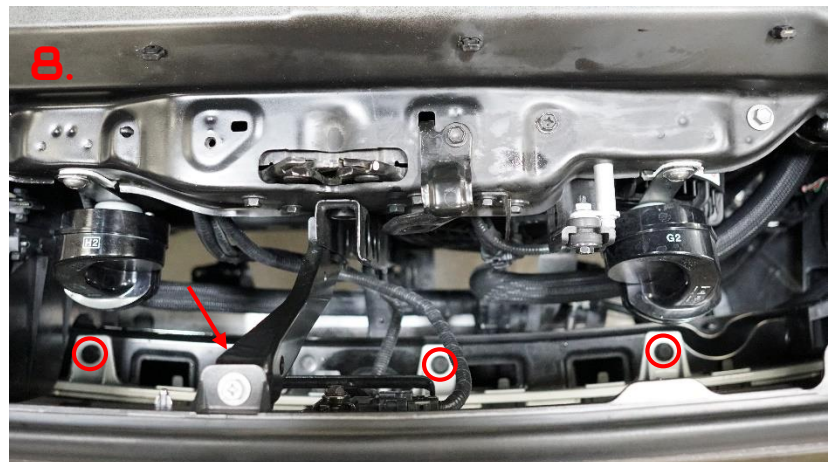
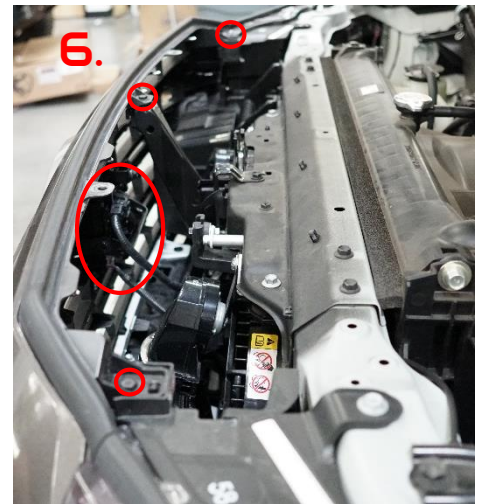
PS Reservoir to
Tray Mount

1/4" - 20 x 3/4" S.S. Button
Head Bolts and washers

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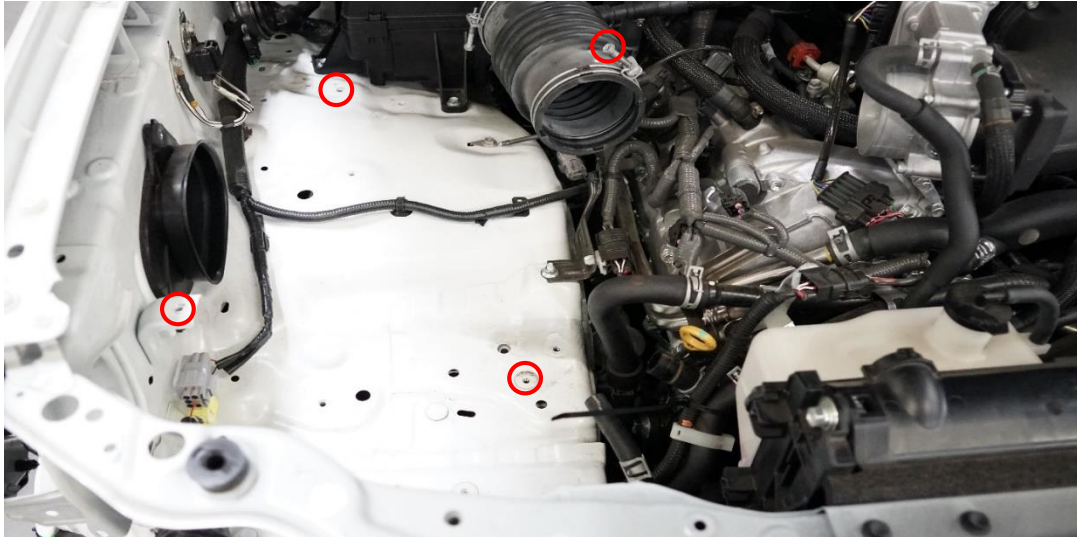
Installation Instructions:

1. Unbox your SDHQ Dual Battery Kit, check over all the parts. Familiarize yourself with the parts and the diagrams. Disconnect the vehicle's battery before starting.
2. **Preparing your Land Cruiser.** In order to install your dual battery kit in the engine bay, it is highly recommended that you remove both headlights for ease of installation. Start by, removing (7) push-in clips from the radiator cowl and remove (Fig. 5). Using a panel removal tool to gently pry, remove both headlight trim pieces by starting at the grille and working your way out towards the headlights. Remove (3) 10mm bolts on top of the grille, then disconnect the TSS plug and the front facing camera from the inside of the grille (Fig. 6). The grille can now be removed by gently pulling towards you, the bottom of the grille pushes into the top of the bumper.
3. Remove the 2 grey plastic plates that butt up to the headlight using a Philips head screwdriver. The large connector on the driver side of the grill opening needs to have the white portion flipped up before the connector can be removed (Fig. 7). Crimp and disconnect the headlight washer fluid line. With a Torx T30 bit, remove (3) bolts on each side connecting the bumper to the inner fender liner. Remove (9) 10mm bolts securing the bottom of the bumper cover and the (4) push in clips securing the top of the bumper cover (Fig. 8). The bumper cover assembly can now be removed from the vehicle by gently pulling the sides of the bumper to unclip from the fender. Next, lift the bumper carefully away from the vehicle and double check for anything that is still connected.

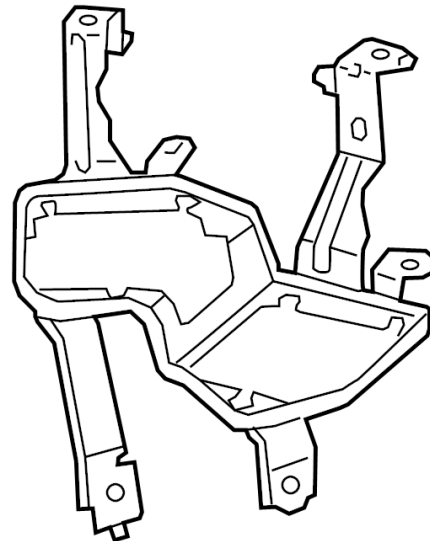


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4. **Removing the intake.** Use an 8mm socket to remove the hose clamp by the throttle body. Remove (3) 10mm bolts connecting the intake to the top of the fender. Disconnect the MAF sensor and vacuum lines. Remove the intake and set aside.



5. **Removing the Secondary Air Pump.** In order to get complete access to the area you will be working, it is necessary to drop the secondary air pump assembly located on the underside of the passenger side fender. Remove the (2) 12mm bolts and (2) 12mm nuts attaching the whole assembly and allow it to dangle.



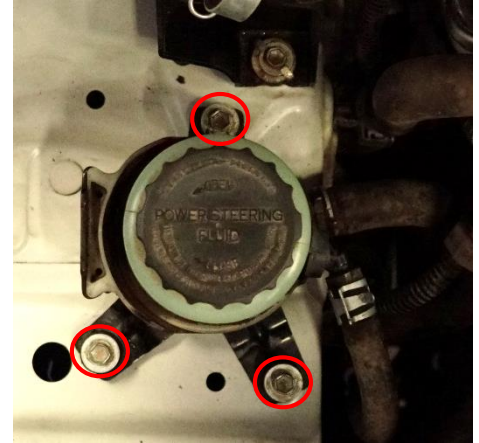
6. **Removing the Headlights.** The headlight is held in by (2) 10mm bolts, unclip both wire harness connectors and unbolt headlight from vehicle. Repeat for Driver side and set both headlights aside.



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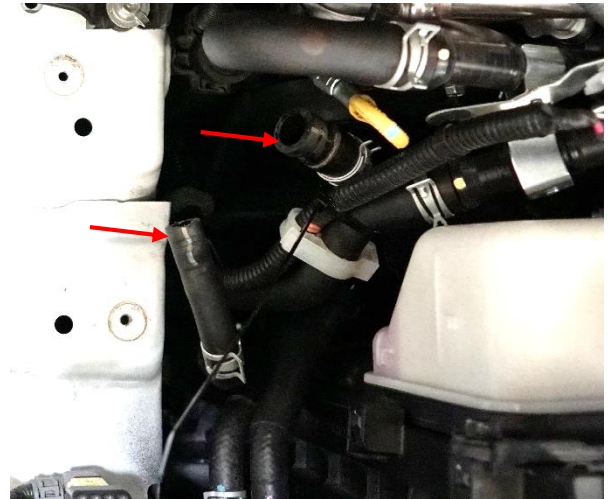
If the SDHQ Power Steering Reservoir Kit (**SDHQ-53-9201-G3**) was previously purchased and installed, proceed to Step 1 in the SDHQ Dual Battery Power Steering Reservoir Mount (**SDHQ-53-9212-G3**) Install Instructions.

7. **Removing the factory power steering reservoir.** Use a siphon to remove as much power steering fluid as possible. Position your shop rags and oil catch container as necessary. Move the hose clamps down the power steering hoses. Remove the hoses from the reservoir. Remove the (3) 10mm bolts securing the power steering reservoir. Remove the power steering reservoir from the truck.
8. The power steering reservoir and mount need to be separated. Bend the tab on the mount away from the reservoir and remove the reservoir from the mount.



If the SDHQ Dual Battery Power Steering Reservoir Kit (**SDHQ-53-9211-G3**) was purchased, proceed to Step 1 in those Install Instructions.

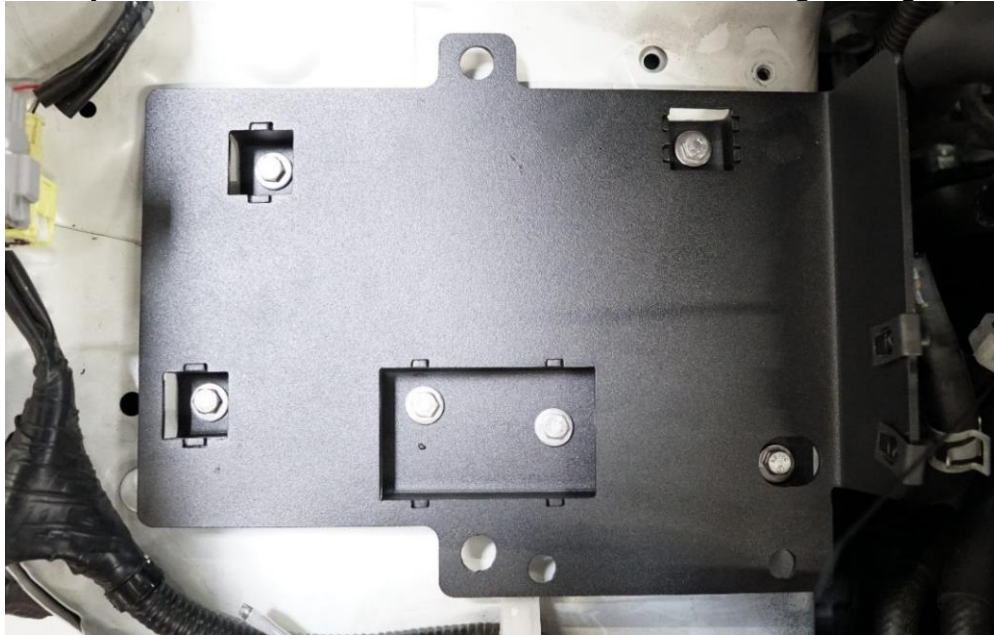
9. Both of the power steering lines that go to the reservoir need to be replaced with longer lines. Follow the smaller diameter power steering line (steering rack return to reservoir) down towards the frame. Remove the hose clamps from the hard line and remove the power steering line. Repeat this for the larger diameter power steering line (reservoir to power steering pump). Follow this line down towards the passenger side of the engine. It may be easier to access this line from underneath the truck. LX 570 Power Steering Pump is located on the top passenger side of the engine.
10. Install the longer power steering lines supplied in this kit. Remove the hose clamps from the factory lines and install them on the supplied lines. Use power steering fluid to help lube the hardline and power steering lines. Once the power steering lines are installed over the hardline, secure the lines with the hose clamps. Install the power steering lines onto the factory power steering reservoir and secure the lines with the hose clamps. LX 570 will need to cut and route larger diameter hose.



Before installing the dual battery tray, some wiring needs to be ran first. Proceed to Step 20 through 25 in the Toyota Dual Battery **Wiring Kit** Installation Instructions (**SDHQ-50-3002-U1**).

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11. Installing the Dual Battery Tray. Begin by installing (2) 5/16" – 18 Nutclips as shown in Figure 1 on Page 4. Align the dual battery tray and thread (6) M6 x 25mm bolts and (6) 1/4" washers into the top holes, and adjust the dual battery tray as far forward and to the passenger fender as possible. Tighten the (6) M6 bolts and test fit your intake. Adjust the battery tray if needed. Once your intake fits, it can be removed and set aside again. Tighten down M6 bolts.

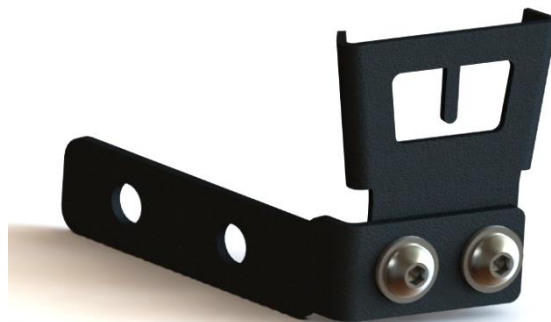


Before installing the Blue Sea ML-ACR and mount, it needs to be wired. Proceed to Step 26 in the Toyota **Wiring Kit** Installation Instructions (SDHQ-50-3002-U1).

Billet Power Steering Reservoir. Proceed to Step 9 in the Toyota **Billet Power Steering Reservoir** Installation Instructions (SDHQ-53-9211-G3).

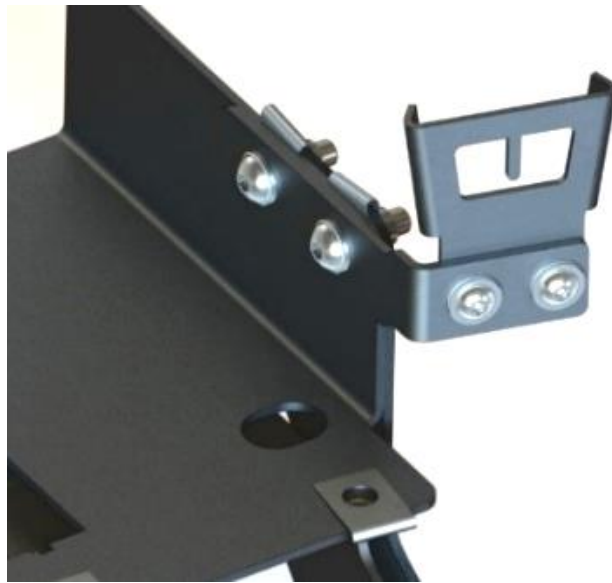
Billet Power Steering Reservoir Dual Battery Kit Mount. Proceed to Step 3 in the Toyota **Billet Power Steering Reservoir Mount** Installation Instructions (SDHQ-53-9212-G3).

12. Installing the Power Steering Reservoir. Bolt the PS Reservoir to Tray Mount to the PS Reservoir Mount using (2) 1/4" – 20 x 3/4" S.S. button head bolts, (4) 1/4" S.S. washers and (2) 1/4" - 20 S.S. nylock nuts. Finish by sliding the reservoir into the SDHQ PS Reservoir Mount and bending the tab on the SDHQ PS Reservoir Mount to secure the reservoir.

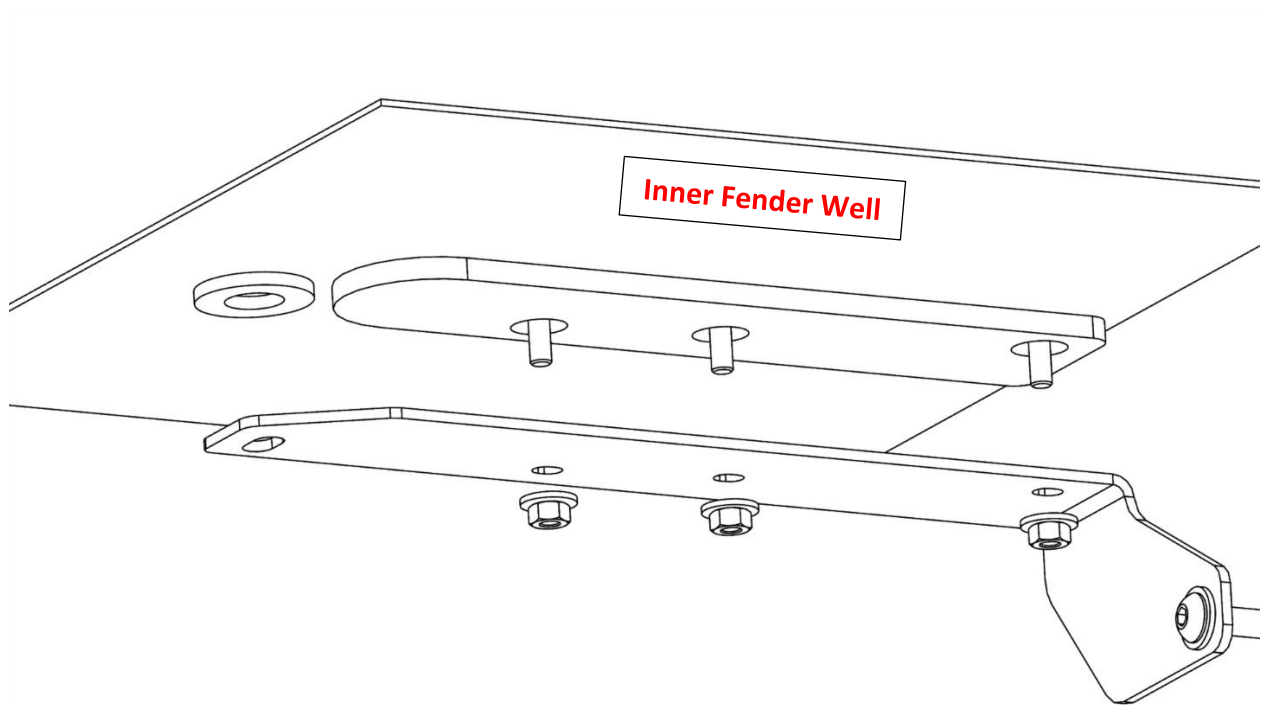


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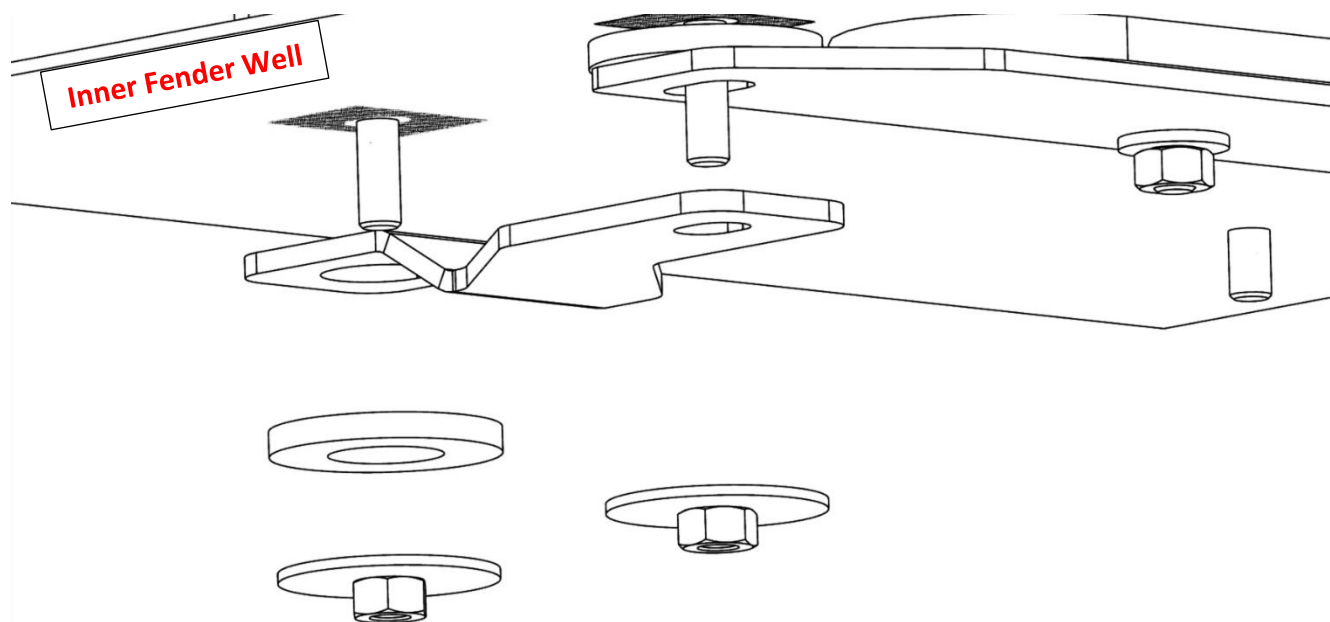
13. Install (3) 5/16"-18 nut clips to the Upright Support Bracket. Align the Upright Support Bracket and PS Reservoir Mount to the Tray. Bolt the bracket and mounts with (2) 5/16" Button Head Bolts and 5/16" Washers to the Tray. Leave loose for now. See Figure 4 on Page 4. Check the transmission cooler lines and adjust them lower if they are rubbing the PS brackets.



14. One 5/8" washer needs to be positioned over the outer weld nut under the fender, above the brackets. Align the Bottom Support Doubler Bracket and Bottom Support Bracket underneath the Main Battery Mount and secure the Brackets with (3) M6 S.S. Serrated Flange Nuts, as shown below. Thread (1) 5/16" Button Head Bolt and 5/16" Washer through the Bottom Support Bracket into the Upright Support Bracket. See Figure 3 on Page 4 and the picture below showing under fender placement. Leave hardware loose for now.

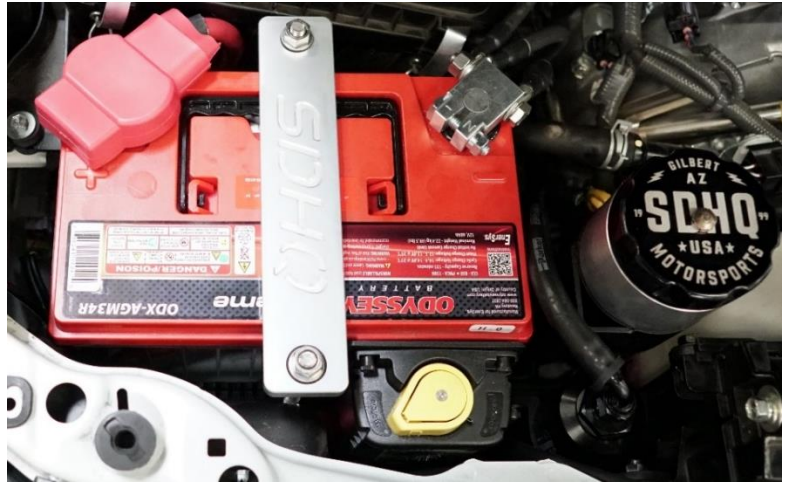


15. Align the Bottom Rear Support Bracket underneath the fender, through both M6 Bolts. Secure the bracket with (2) 1/4" Fender Washer, (1) 5/8" Washer and (2) M6 Serrated Flange Nuts. See Figure 3 on Page 4 and pictures below for under fender placement.



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16. Installing the Battery. Group 34 batteries will use the 9" threaded rods, all other batteries will use the 10" threaded rods. Using red Loctite, thread (1) threaded rod into each rivet nut. Install your battery into the Main Battery Mount. Place the SDHQ Auxiliary Battery Hold Down on top of the battery. Place (2) 3/8" Washers and thread (2) 3/8" Flange Nuts.



Finish Wiring. Proceed to Step 28 in the Toyota Wiring Kit Installation Instructions (SDHQ-50-3002-U1)

- 17.** Using the supplied power steering fluid, fill up the power steering reservoir to the internal fill line. With the power steering cap off, lift the vehicle so the front wheels are in the air and cycle the steering rack to either side until there is no longer air bubbling into the reservoir. Refill the reservoir as needed. Start the vehicle and check for any leaks. Clean up any spilt fluid.
- 18.** With all the wiring complete, you can start assembling your vehicle. Connect all of the electrical connections to the headlight and install the headlight. Align and secure the Air Pumper with the factory hardware. Install your fender liner with the (15) 10mm bolts and panel clips. Install your air intake and secure it with the (3) 10mm bolts. Install the intake hose to the throttle body with the 8mm hose clamp. Check all electrical connections and vacuum hoses. Next, install your bumper with (9) 10mm bolts, (4) push in clips and (3) Torx T30 screws. Install the headlight washer fluid line and any electrical connections. Install the grey plastic headlight plates. Finally, reinstall the grille and secure it with the 10mm bolts and panel clips. Install the TSS plug and front facing camera. Install the radiator cowl and panel clips.
- 19.** Take your truck out for a drive to get it up to operating temperatures and finish removing the air out of the power steering lines. The Reservoir Body and Cap will be **EXTREMELY** hot at operating temperatures. Refill the reservoir if needed to the hot max line. Check the reservoir fluid after 50 miles. Installation is COMPLETE! Enjoy your new SDHQ Dual Battery Kit!



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Double check all hardware is installed correctly and tight

Re-torque ALL bolts after 100 miles



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