



Auto Step

PART# BD-AS-100-JK4



CONGRATULATIONS ON YOUR PURCHASE OF THE AUTO STEP!

DESIGNED TO BE FUNCTIONAL, TOUGH, AND DURABLE

WHILE PERMITTING YOU TO GET IN AND OUT OF YOUR VEHICLE WITH EASE.

IMPORTANT NOTES -

- NO MAINTENCE REQUIRED. IF THE STEPS BECOME JAMMED WITH MUD/DIRT, SIMPLY SPRAY THEM OFF AND LET THEM DRY. HARNESS IS WATERPROOF AND THE MOTORS ARE WATER RESISTANT
- FACTORY MOUNT INSTALL

TOOLS REQUIRED FOR INSTALL

- Zip Ties
- 11mm or 7/16" socket and wrench
- 1/2" Socket and wrench
- 3/4" Step Drill or 3/4" Bit with Drill

ROCK-SLIDE ENGINEERING PARTS LIST

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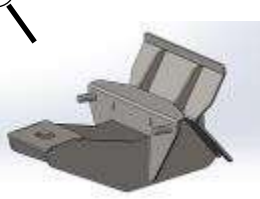
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Item	Manufacture Part	DESCRIPTION	QUANTITY
1		ELECTRIC ALUMINUM AUTO STEP	2
2		WIRING HARNESS (TWO PIECE)	1
3		FRONT BRACKETS (SHORT LENGTH)	2
4		CENTER BRACKET (LONG LENGTH)	2
5		REAR BRACKET (CIRCULAR END)	2
6		T-RAILS	6
7		1/4" - 20 STAINLESS STEEL WASHER	12
8		5/16" STAINLESS STEEL WASHER	12
9		1/4" - 20 NYLOCK NUTS	12
10		5/16" NYLOCK NUTS	12
11		M8 HEX HEAD X 1"	6
12		DOOR SENSORS & MAGNETS	4
13		ALCOHOL WIPES	2
14		CUTOFF ROCKER SWITCH	1
15		TORX SCREW PACKET	1
16		MAGNETS	4
17		CIRCUIT BOARD	1
18		ANTI-SIEZE	1
19		WIRE LOOM	1

WIRING HARNESS

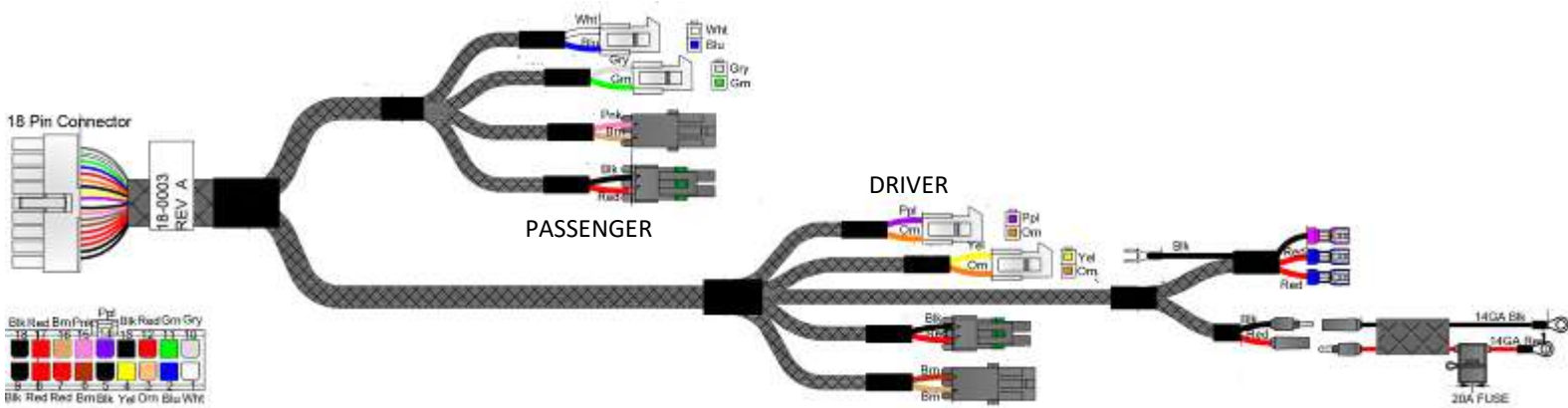


Figure 3.1

<i>DRIVER SIDE</i>	<i>WIRE COLOR</i>	<i>PASSENGER SIDE</i>	<i>WIRE COLOR</i>
FRONT DOOR SENSOR	ORANGE/YELLOW	FRONT DOOR SENSOR	GREEN/GRAY
REAR DOOR SENSOR	ORANGE/PURPLE	REAR DOOR SENSOR	BLUE/WHITE
DRIVER LED LIGHT	BROWN/TAN	PASSENGER LED LIGHT	PINK/TAN
DRIVER ACTUATOR	RED/BLACK	PASSENGER ACTUATOR	RED/BLACK

Table 3.2

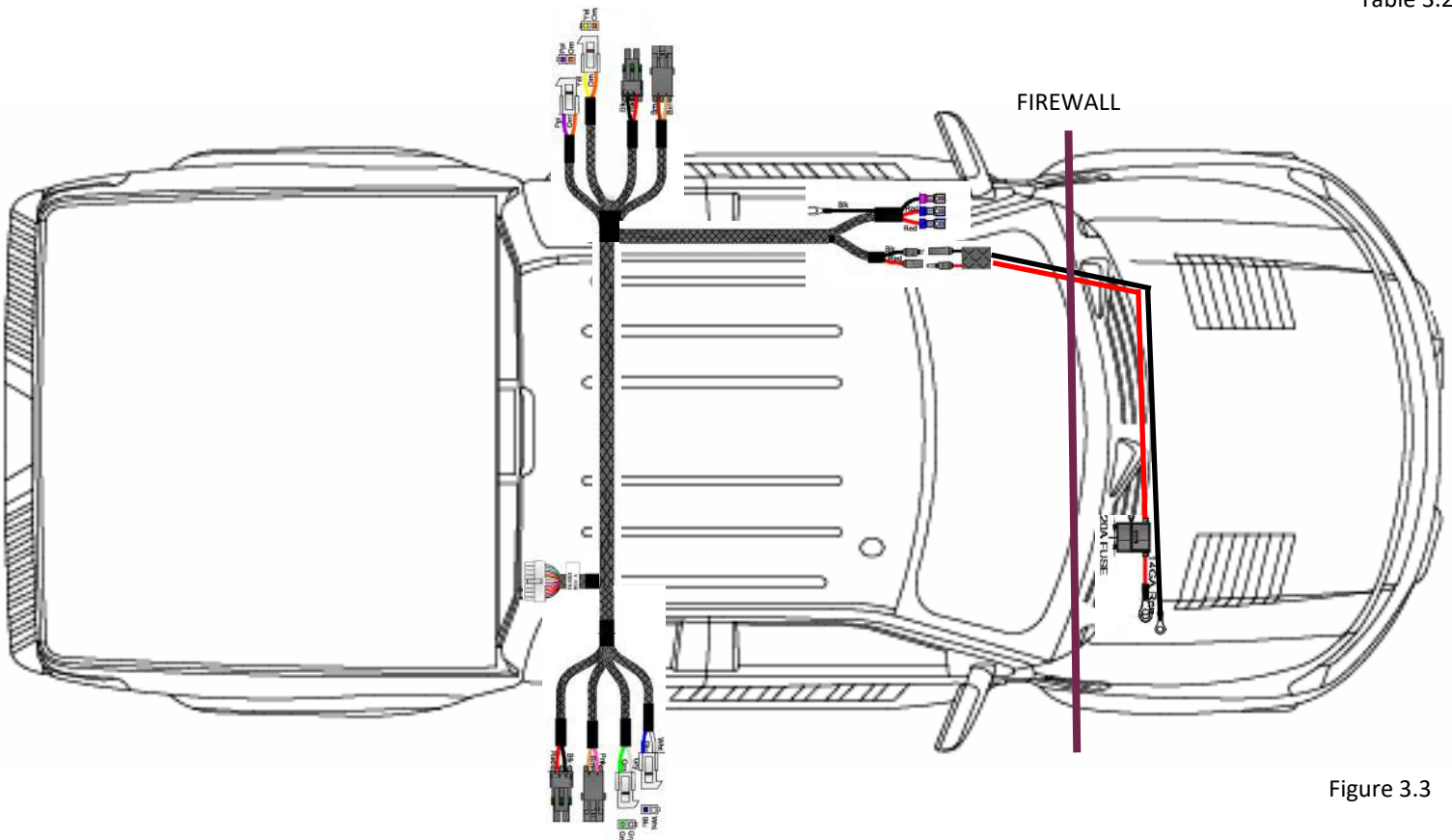


Figure 3.3

Step and Bracket install

Remove any existing hardware or steps off the side of the Jeep.



Remove step from box along with hardware. Ensure all components have arrived per the install hardware list.

Important

Motor wire ends will be towards the rear of the Jeep. sticker / tag will be towards the front of the vehicle while mounting hardware.

Do NOT tighten nuts until the end of the install.

Install t-rails (item 6) into the back of the auto step in the lower mounting slot, three per side. slide the t-rails so that one is towards the front, middle, and rear. do this for both steps.



Locate the front bracket (item 3). Install this bracket on to the Auto Step next to the sticker by mounting the top of the bracket into the slot.



Figure 4.3.1



Figure 4.3.2

With the lip of the bracket inserted into the top slot, rotate the bracket down and mount slots onto the t-rail. Add a 5/16" washer/nylock nut (item 8 & 10). Screw the nut down 3/4 of the way but allow bracket to slide in mounting position left and right for adjustment.



Figure 4.4.1

Do NOT tighten nuts yet. This will be done in a later step.

Locate middle bracket (item 4). Mount bracket into the center of the step using the same technique as in steps 4

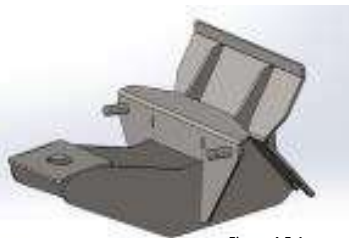


Figure 4.5.1



Figure 4.5.2

Locate rear bracket (item 5). ****Mount with light tab facing other brackets.**** Install bracket as stated in steps 4. When installing, motor wire should be at the rear of the Jeep.



Figure 4.6.1



Figure 4.6.2

With brackets mounted onto the Auto Step, mount either side onto the Jeeps using the following steps.

Locate mounting points on the underside of the vehicle. There are three locations with two holes the brackets will mount to on the pinch seam. (see below)



Figure 4.7.1

On the back of the brackets there are two 1/4"—20 studs. Mount the studs through the pinch seam. May require a second person to line up the brackets. Shift the brackets left or right to line them up with the pinch seam holes. Attach 1/4"—20 washer/nut (item 7 & 9) to the back of each stud once inserted.



Figure 4.8.1



Figure 4.8.2

Apply anti seize (item 16) to M8 hex head (item 11)

Insert with washer (item 7) through the bracket and into the body. Screw in half way.



Figure 4.9.1



Figure 4.9.2

In this order, hand tighten with wrench until snug:

Tighten pinch seam 1/4"-20 nuts **first** using a 11mm or 7/16" socket. Tighten 5/16" nuts to bracket using 1/2" socket. Tighten M8 body bolt **last** using 1/2" socket.

Wiring Harness Install

Notes: the harness comes in two pieces. A smaller section that you can run from the battery through the firewall that connects into the full harness.

****Remove fuse from smaller harness prior to install**



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Working on the driver front, remove push in clips using a flat head screwdriver or wire clippers. Keep or replace the push in retainers.



11

Move your driver seat all the way forward and tilt forward. Remove retaining plastic push in heads. Carefully pry the upper b-panel board and lower b-panel to allow access under them. Pull the front driver protector panel towards rear of Jeep to remove off of retainer clips.



12



Figure 5.12.2

Unravel the small harness. Open the hood on the engine. Route wire behind / against rear firewall from the battery on the left side to the access point on the right.



Figure 5.13.1

Pull the fuse from the small harness, connect the smaller harness to the battery, red to positive / black to negative. Locate rubber boot on the right side about halfway down in the engine compartment. Slit the rubber slightly. Insert ends through hole and into cab of the Jeep. Pull slightly taut and ensure wires are not interfering with others in then engine bay or under the steering column.

****If you are having trouble pushing the harness through, use a hard metal wire and poke it through the hole as a guide**



Figure 5.14.1

14

Unravel the large harness. Lay the harness out on the back seat with the power leads on the driver side, the main 18 pin plug near the passenger rear, and the end of the harness on the passenger side. This will give you a rough idea of where your harness will be and how you can make a clean install. Refer to figure 3.1 / 3.3 for layout.

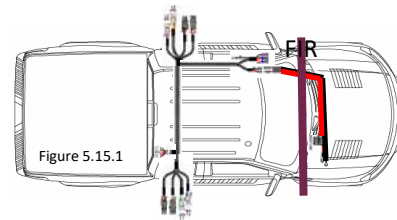


Figure 5.15.1

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Run the power and ground leads and the three insulated connectors next to the current electrical under the panels you removed in the prior steps. Keep the wires tucked away and behind the seatbelt mechanism. Run the power and ground wire up behind the metal guard and connect.



Figure 5.16.1

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Install the cutoff switch. Drill a 3/4" using the step up drill or 3/4" drill bit hole into a desired position on the dash or kick panel. Final install will be similar to the picture shown. We recommend mounting to this location for ease of access.



Figure 5.17.1

Leave the hole open until end of install.

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With the hole drilled on the dash, run the insulated wires up behind your panel and through the hole. Locate a bolt to install the ground wire behind the steering column against the tub of the jeep. Remove nut off the bolt. Put the hole of the ground over the bolt and re-install the nut.



Figure 5.18.1

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Plug the insulated wires into the back of the cutoff switch. Black wire to the bronze, and red wire the other two points. **Do not** push into hole in the dash yet.



Figure 5.19.1

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****Refer to wiring diagram for color code per door****

Run the passenger portion of the harness along the rear driver side panel, behind the rear seat, to the passenger side. Leave the 18 pin connector under the rear passenger seat. Run the **green/grey** wire toward the b-pillar on the passenger front. Leave **blue/white** wire near the rear passenger door jam.

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Pull back the carpet behind the driver side. Locate hole to run the motor wires. Remove plug from hole. Drop the motor wire and light wires through the hole. Slit the plug so the plug sits around the wire. Repeat on the driver side of the vehicle. route remaining harness under rear seat towards the driver side



Figure 6.21.1

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Install door sensors (# 12) . Clean under the door latch hook with an alcohol swab and put double sided tape on, then attach sensor. Do this to all 4 doors. Ensure wire faces inside the jeep.

Figure 6.22.1



Figure 6.22.2



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Working on front passenger side, tuck the **Green/gray** wire under panels and secure. Connect **Green/gray** wire to front door sensor. Secure wires.

Figure 6.23.1



Working on the rear passenger, pull back the carpet and run **blue/white** connector towards latch. Connect door sensor to **blue/white**.

23

Repeat the previous step on the driver side front door using the **orange/yellow** wire. Ensure wires are tucked away and do not interfere with seatbelt mechanisms. Connect sensor to the harness.

Install sensors into harness rear doors using **orange/purple** on the driver side.

24

With the door sensors all connected and installed, install the motor section of the harness. Ensure the motor wires have been run through the plug hole and are hanging loosely below the jeep. Run motor wires and light wires toward the rear of the jeep. Cover wires with wire loom. Run the motor wire through the hole on the bracket and towards the top of the bracket. Secure wires to bracket with a zip tie by running zip tie through slots at the top of the bracket. (see below left and below right.)

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Figure 6.26.1

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Figure 6.27.1

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Install light kit onto the bracket. Remove jam nut off of the light, slide wire and light into hole, tighten jam nut using crescent wrench. Secure wire as above

Figure 6.28.1

Figure 6.28.2



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Put magnets onto the door in location shown on all four of the doors. Door location may vary slightly against sensor location.



Figure 6.29.1

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Plug circuit board into the harness.

Figure 7.31.1



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Re-install fuse into the harness. Turn on the switch.

Steps should deploy at this time. If they do not deploy see troubleshooting guide at the end of the instructions

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Shut the doors on the vehicle. Steps should retract. If they do not retract, magnets are mis-aligned just barely.

Troubleshooting: Working on one side of the jeep, unplug the rear sensor but leave the front door shut. If step retracts after two seconds, front door is aligned. If the step stays down open the door, shift magnet slightly then shut the door. Wait two seconds to see if it retracts. Repeat until step shuts while door is shut. Mark the location with a sharpie so if the magnet shifts you can put it back. Leave the front door closed. Re-connect the rear sensor. Repeat the same method for testing magnet placement. Mark with a sharpie, or apply a dab of superglue or silicon.

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Figure 7.34.1



Figure 7.34.2

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Recheck all wires to make sure they are completely secure and free from coming into contact with any moving parts to prevent system damage. Tuck all wires back out of heavy traffic on the floor. Secure loose wires with zip ties. Route the wires underneath the rear seat towards the back for protection.

35

Reinstall internal plastic and carpet pieces

Secure wiring harness in the engine bay using zip ties.

Double check bolts are tightened.

36

Install Torx screws into the end caps to hold them in place. ONE per endcap.

37

Want to run without doors?

Install optional door delete kit. SL-DD-100



You're done!

On the next page there is troubleshooting to help diagnose your steps if they are not functioning properly.

Tech support / General assistance

435-752-4580

8 A.M.—5 P.M. MST

TROUBLESHOOTING YOUR STEP SLIDERS:

I just installed my steps and they aren't coming down when I open the door.

Alright! First thing: Double check connections. Check the fuse to make sure it is plugged in. Is the little on/off switch getting power? Is the little circuit board plugged in? Are the door sensors plugged in?

My switch is getting power but the light stays on in both positions.

The light is only supposed to be on when the system is turned on. If it is lit in both positions simply switch the red wires on the back. *Will this kill my battery with the light constantly lit?* This will not kill your battery unless you leave it lit for a month with no use.

Everything is plugged in and the switch is turning on and off, but still the steps won't deploy.

Two things may be causing this issue.

- Check the motor first. Simply unplug it from the wiring harness and apply external 12V power to the leads. One position will make them deploy. Switch the leads again to make them retract. If this works, plug the motor back into the harness. We test each and every motor that leaves our factory by hand along with assembling your step slider by hand. These may fail, but it is extremely rare after we send them after having tested them. If you test the motor and all you hear is a clicking sound but nothing happens, something internally broke. If they are brand new and you can provide a proof of sale or sales receipt we cover this under warranty. We do not cover labor cost.

- Check the sensors. Unplug both of them from the wiring harness, and plug one back in. Manually test your sensors by putting a magnet really close (but not touching) to the sensor. Does it make the step retract? When the magnet is away, the step should deploy. If the steps deployed right after installation more than likely your magnets just need to be aligned. Do this one by one with each sensor by the method above. Install one sensor, test, align the magnet on the door, test, and then mark the position of the magnet so if for some reason they do move out of place you can easily realign them. The sensors should have a label with MP###802 or MP###902.

I tested the motor, its good. I checked the sensors individually, and the system still won't work. The steps don't even deploy unless I do it manually with 12V power.

In even rarer circumstances, the circuit board that runs the system came faulty from our manufacture. We have you covered though. Our internals are covered for 3 years against manufacture defects. Call us and we will replace that circuit board at no cost to you. This includes ground shipping. We do not cover three day air, 2nd day air or overnight shipping on replacement parts.

I opened my door a bunch of times and the system just shut off. What happened?

Our systems have built in protection against quick cycling like this to prevent damage. Simply turn your on/off switch to off, wait 5 seconds, and then to on again. This will reset the system and allow it to work normally again.

Everything is working now! But I want to take my doors off and have the steps still work.

We sell a door delete button you can replace those sensors with! SL-DD-100 kit comes with everything you need for two doors. If you want to install a delete kit on the rear doors also you will need to purchase two kits.

I was off-roading, forget to turn my system off, someone left the door ajar and I ripped my step off on a rock. What now?

No worries! We can replace these parts for you at cost. You will have to remove the step off your vehicle to replace the innards. Call us and we'll figure out what you need exactly!

Tech Support / General Questions

435-752-4580

8 A.M.—5 P.M. MST

PRODUCT INFORMATION:

WARNING: Neither the seller nor the manufacturer will be liable for any loss, damage, or injury directly or indirectly arising from the use of or inability to determine the use of these products. Before using, the user shall determine the suitability of the products for its intended use, and the user shall assume all responsibility and risk in connection therewith.

REFUNDS / RETURNS: Products returns are possible if: A) the product is returned in it's original packaging, in perfect condition and the return shipping is pre-paid. B) the product is incorrect due to a shipping error on behalf of Rock Slide Engineering. The original purchaser may, within 30 days of the date of purchase, exchange an item if it is returned in its original unaltered condition. Returns must be accompanied by a sales receipt to verify proof of purchase.

PRIVACY POLICY: We believe in 100% privacy. Your information is shared with NO other companies or individuals. For more info click on the Customer Service button in footer menu.

SHIPPING DAMAGE: If the product was damaged during shipping, you must report such damage to Rock Slide Engineering with 24 hours. In such case all the packaging materials must be retained so Rock Slide Engineering can process a damage claim with the carrier.

WARRANTY POLICY: Rock-Slide Engineering warrants Rock-Slide Engineering products to the original retail purchaser on the vehicle originally installed to be free of defects in material and workmanship for 36 months on electrical / mechanical and 12 months on powder coating.

This warranty does not cover improperly installed or applied products, improperly maintained products, products used for racing or competition or damage due to abuse, neglect, or damage caused while off-roading.

Warranty does **not** cover labor costs.

We strongly recommend consumers to purchase from an authorized Rock-Slide Engineering reseller. Please note, if Rock-Slide Engineering product(s) are purchased from an unauthorized reseller, the unauthorized reseller may or may not honor our warranty and the consumer runs the risk of receiving a counterfeit product.

RETURNS: All returns must be accompanied by an original invoice. It is the customer's responsibility to remove the product from the vehicle. Inbound shipping charges (from you to us) are the responsibility of the customer. Rock-Slide Engineering Inc. will pay the out-bound (to you from us) freight.

PATENT INFORMATION:

This product is covered by multiple US issued patents.

PAT US 9,771,024 B2

PAT US 8,833,781B2

PAT US D718,1955

