

**SHOP BY VEHICLE**

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# INSTALL INSTRUCTIONS FOR 76-7007

**PRINT**

## BEFORE YOU START

- Please read the entire installation manual before proceeding.
- Ensure all components listed on the following section are present.
- If you are missing any of the components, call our customer support at (909) 947-0015.
- Do not work on the vehicle while the engine is hot.
- Make sure the engine is turned off, the vehicle is in Park and the Parking Brake is set.

## REQUIRED TOOLS

- 4mm Hex Key
- 5mm Hex Key
- 3/8" Deep Socket
- 5/16" Nut Driver/Socket
- T40 Torx Screwdriver
- Panel Popper / Flat Blade Screwdriver
- Razor Blade
- Wire Cutters

**If your fans are not working as described in the instructions, please watch our fan troubleshooting video below.**

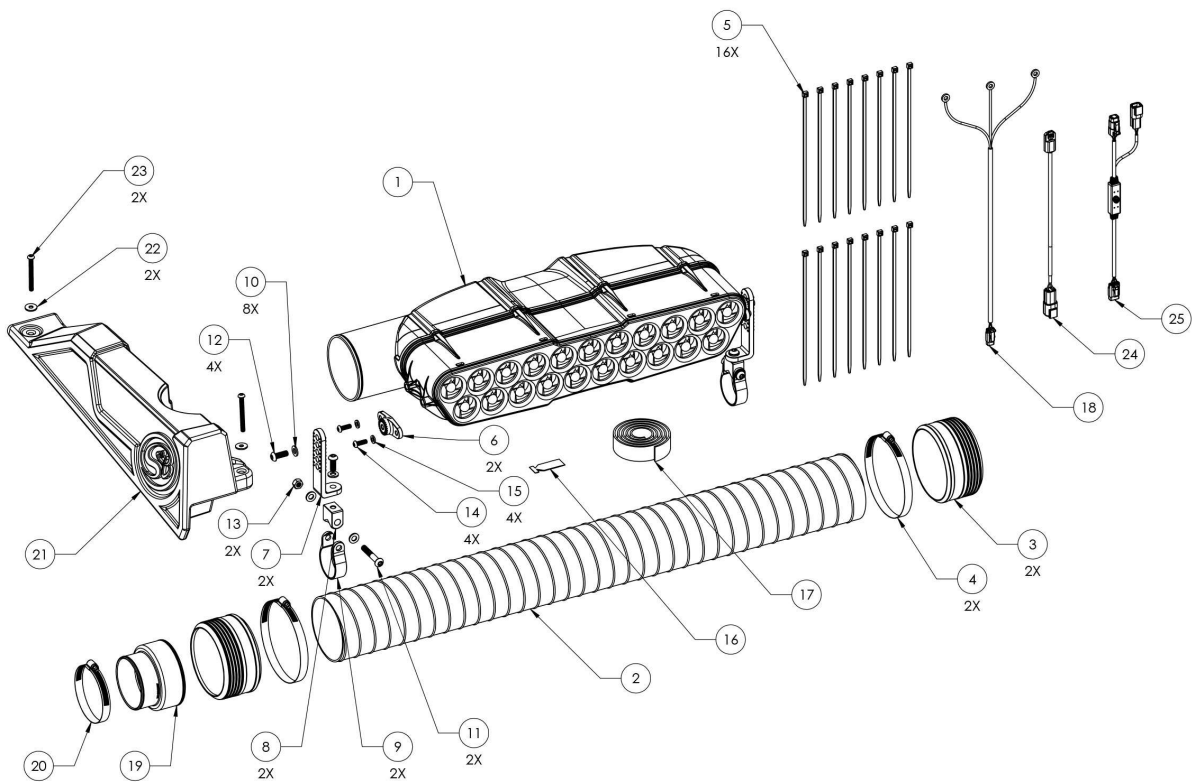
If you determine that part of your electrical system is malfunctioning, please contact S&B customer support for assistance.

### Trouble Shooting the Scavenge Fans on a S&B Particle Sep...



Hi. Need any help?





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AI2011-00	PARTICLE SEPARATOR UNIT	1	14	AI1802-00	M6 X 1.0 X 18 SS BHCS	4
2	AI2022-01	4IN ID FLEX DUCT	1	15	AI1416-00	M6 SS FLAT WASHER	4
3	AI2372C-00	4in FLEX DUCT END CUFF	2	16	AI1595-00	THREADLOCKER	1
4	AG1009-00	HOSE CLAMP, #72	2	17	AI1779-01	VELCRO 1IN X 36IN, CUT	1
5	AI1750-00	CABLE TIE, 9in LONG	16	18	AI2082-02	MAIN WIRE HARNESS	1
6	AI1800-01	CLAMP ADAPTER	2	19	AI1731-01	ADAPTER, 4in ID DUCT TO 3.25in ID STOCK INLET	1
7	AI1781-01	CLAMP L-BRACKET	2	20	AG1019-00	HOSE CLAMP, #56	1
8	AI1782-02	CLAMP PIVOT	2	21	AI1293-01	SIDE COVER	1
9	AI1783-02	1.75 in STRAP	2	22	AI1755-00	M6 FENDER WASHER	2
10	AI1740-00	M8 SS FLAT WASHER	8	23	AI1789-00	M6 X 1.0 X 60 SS BHCS	2
11	AI2038-00	M8 X 1.25 X 50 SS BHCS	2	24	AI2497-00	IGNITION SENSOR ASSEMBLY	1
12	AI2111-00	M8 X 1.25 X 22 SS BHCS	4	25	AI2451-00	CONTROL BOARD HARNESS	1
13	AI2244-00	M8 X 1.25 LOCKNUT, NYLON INSERT	2				

BEFORE YOU BEGIN

This installation requires the use of a powered electrical busbar found underneath the hood of the vehicle. The

provided Wire Harness (J) is designed to work with these factory-installed electrical posts on the busbar and has the length of wire necessary to power the Particle Separator's scavenge fan anywhere on the vehicle. If the busbar in your vehicle is not connected to the vehicle's battery do not begin the installation of the Particle Separator. You will need to install both a power and a ground cable from the vehicle's battery to the busbar. Although not required, Polaris offers a busbar harness kit with complete instructions about how to do this.

## STEP 1

Based on the room you have available, and accommodating for other accessories, determine where you want to mount the Particle Separator unit (1) to your roll cage. Make sure you have enough room to fit the clamps and Particle Separator on the roll cage without any interference. Planning ahead

will save you time and frustration during the installation. In these instructions, the Particle Separator unit will be installed on the lower horizontal bar (highlighted red).



## STEP 2

Install the Clamp Adapters (6) on the mounting bosses of the Particle Separator with the supplied M6-1.0 x 18 screws (14) and M6 washers (15). Apply threadlocker (16) to the screw before tightening. You will do this on both sides of the Particle Separator unit.



## STEP 3

Install the two Clamp Straps (1.75") (9) onto the lower bar of the roll cage. Do not pull the ends of the straps open. Loosely wrap some plastic around the roll cage to prevent scratching, and push the straps onto the roll cage until they snap into place.



## STEP 4

Install the clamp pivot bodies (8) onto the clamp straps with the supplied M8-1.25 x 50 screws (11), M8 washers (10), and M8 locknuts (13). Do not fully tighten the screws and locknuts. Leave the straps loose for final adjustments later in the install.



## STEP 5



Install the L brackets (7) onto the clamp pivot bodies using the M8-1.25 X 22 screws (12) and M8 washers. Apply threadlocker to the screws before tightening.



## STEP 6

Install the particle separator unit onto the vehicle by fastening the L brackets to the adapters previously installed onto the unit. Determine the proper angle to mount the clamp L-brackets to the clamp adapters based on the desired location for the Particle Separator. Make sure the ribs in the clamp L-brackets are properly seated inside the grooves of the clamp adapters. Do not attempt to rotate these parts once assembled. They are designed to lock into place once seated. Once you're satisfied with the position of the clamp L-brackets, apply threadlocker to the M8-1.25 x 25 screws, install the M8 washers, and tighten. Ensure that the L-brackets on both



sides are pointed in the same direction and are aligned with each other.

## STEP 7A

Adjust the position of the particle separator unit so that everything sits as desired. Then tighten all of the screws and nuts associated with the roll cage clamps assembly so that the particle separator is completely fixed and does not move or rotate around the roll cage when shaken.



## STEP 7B



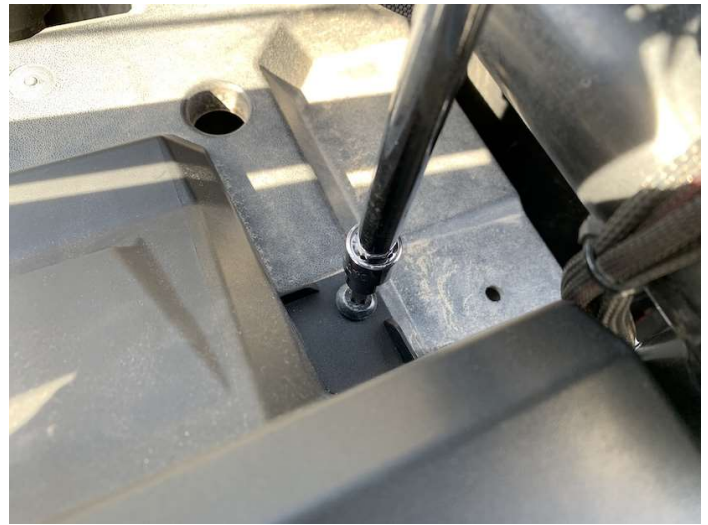
## STEP 8A

Remove the passenger side Frogzskin cover by removing the two screws securing the cover to the vehicle. Once the two screws are removed the cover can be taken off by pulling up and forward.





## STEP 8B



## STEP 8C



## STEP 9

Place a #56 Hose Clamp (20) over the stock airbox inlet, insert the smaller end of the duct adapter (19) into the stock airbox inlet, then tighten the hose clamp to secure the duct adapter to the stock airbox inlet.



## STEP 10

Install the S&B side cover (21) onto the vehicle by placing it where the old frogzskin side cover was taken off. Line up the holes on the S&B side cover with the threaded holes on the frame, and secure the side cover using the M6-1.0 x 60 screws (23) and M6 fender washers (22) included in the kit.



## STEP 11

Insert one end of the flexible duct (2) onto the plastic duct adapter. Do not install the hose clamp #72 (4) or flex duct end cuff yet (3). Bring the other end towards the round clean air outlet of the Particle Separator to simulate the desired length of ducting. Note the amount of duct that

needs to be cut. We recommend adding at least an extra inch to the length of the duct needed. The duct can always be cut shorter if desired. Remove the duct from the adapter and Particle Separator.



## STEP 12A

Pierce the flexible duct using a razor blade, centered between the two-wire reinforcements. Cut all the way around, keeping the blade centered between the wire reinforcements the entire length of the cut. Use a mini-bolt or a heavy duty wire cutter to cut through the wire and duct. Use a pair of scissors to finish the cut and to even out any jagged edges.





## STEP 12B



## STEP 13

Insert each end of the flexible duct fully into each of the flex duct end cuffs provided. Place the #72 hose clamps around each flex duct end cuffs, making sure that they are seated in the grooves. Leave the hose clamps loose.



## STEP 14

Install one end of the flexible duct onto the plastic duct adapter and the other end of the flexible duct onto the



plenum outlet on the particle separator unit. Tighten each Hose Clamp #72. Make sure the hose clamp is seated in the groove of the Flex Duct End Cuff and check to make sure the duct will not pull off either of the openings.



## STEP 15

Remove the rear driver's side seat from the vehicle and disconnect the negative terminal on the battery.

NOTE: Always disconnect the battery before doing any electrical modifications.



## STEP 16A

Remove the vehicle's hood by rotating the locking tabs and then pulling the hood towards the front of the vehicle.

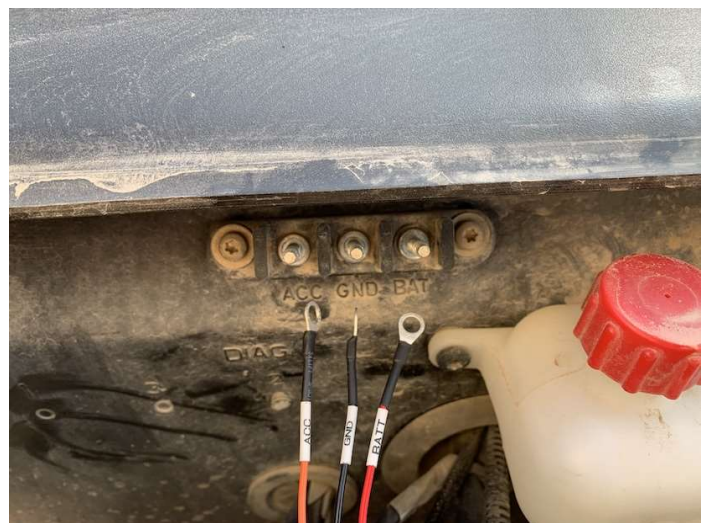


## STEP 16B



## STEP 17

Locate the battery busbar under the panel on the front of the vehicle. Familiarize yourself with the 3 post locations, the left being accessory (ACC), middle ground (GND), and right positive (BAT). Remove the 3 nuts found on these posts.



## STEP 18

Install the main wiring harness (18) with the key-on (ACC) wire in the left position, the ground (GND) wire in the middle position, and the 12v (BATT) wire in the right position. Reinstall the nuts that were previously found on the posts.



## STEP 19

Run the fan connector through the rubber grommet to the inside of the vehicle. This wire will be coming through the wall behind the dash. Pull the entire length of the fan connector wiring through the grommet, this length of wire will be needed to reach the scavenge fan in the Particle Separator unit.





## STEP 20A

You are free to route the fan connector to the Particle Separator however it is most convenient for you, however, we prefer to first run the wiring down the driver side wall, then to the back of the vehicle inside the driver side body panels (path shown in the image). This keeps the wiring out of sight and prevents it from becoming tangled with anything. By removing a few screws and/or plastic rivets around the door frame (shown in Image 2 and Image 3), the body panels can be opened up enough to run your wiring inside them. Zip tie the harness to the roll cage periodically while routing it so that it does not come out of place in the future.





## STEP 20B



## STEP 20C



## STEP 20D



## STEP 21

Remove the airbox cover in the bed of the vehicle by lifting up on the handle and pulling up.



## STEP 22A

Install the ignition sensor (22) by connecting it to the black box found to the left of the red rubber caps protecting the end of the spark plug wires. Place the flat side of the ignition sensor against the front of the black box, pointing the clip of the sensor toward the engine. Using three zip ties you will secure the sensor to this surface. Feed one of the zip ties down through the small gap shown and around the sensor. If you wiggle the zip tie around, you will notice that there is a support that can't be seen, separating this gap into a left (driver) and right (passenger) side. Be sure that the zip tie is on the left side of that

support and tighten it so that the zip tie clamps the sensor between the screw and plastic lip. Feed the second zip tie through the right side of the gap and tighten it around the sensor so that it lies to the right of the screw found on the face of the sensor. Feed the last zip tie through the two zip ties that you just tightened, fastening them together around the support found in the gap.



## STEP 22B



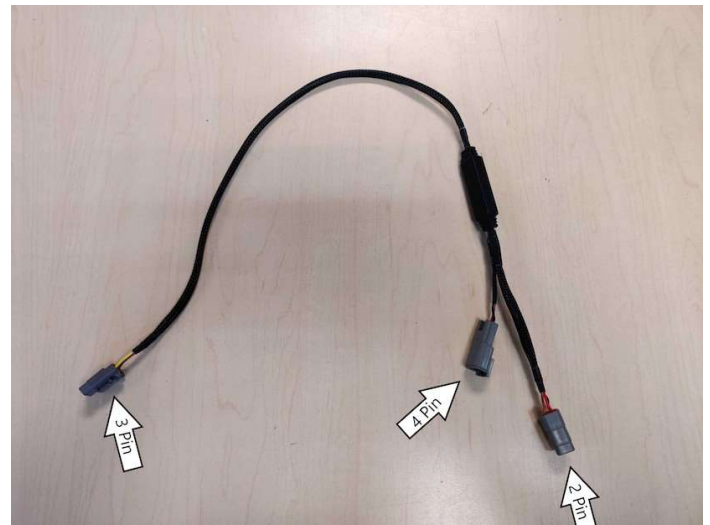
## STEP 23

Verify that the ignition sensor is secured correctly by tugging on it to see if it will wiggle around. If it is installed

correctly, It should not move from its position by more than a couple of millimeters.

## STEP 24

Locate the control board harness (25) and familiarize yourself with it using the picture for this step. One side will have a single 3 pin connector that connects to the Particle Separator fans. The other end has two connectors: one square 4 pin connector that connects to the ignition sensor, and one flat 2 pin connector that connects to the main power harness.

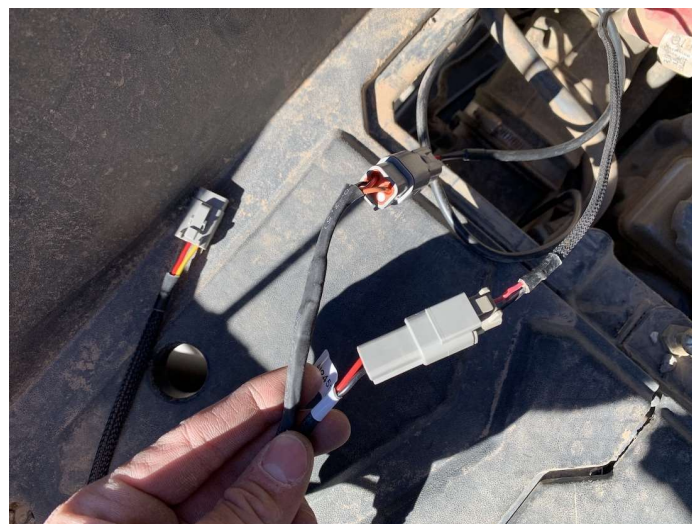


## STEP 25

Plug the square 4 pin connector on the control



board harness into the connector on the ignition sensor and the 2 pin connector on the control board harness into the connector on the main wiring harness.



## STEP 26A

Pull the end of the control board harness under the bodywork and above the shock to the passenger side wheel well. Feed the 3 pin connector through the hole that is found there in the body work and plug it into the connector found on the bottom of the particle separator.



## STEP 26B

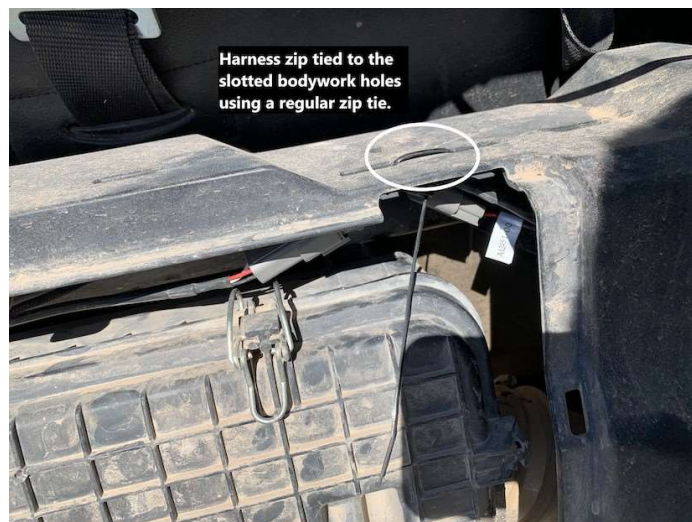


## STEP 27A

Once the harness has been plugged into the particle separator, collect the slack from the harnesses above the airbox. Using the push-in zip ties and regular zip ties, secure the slack from the harnesses to the roll cage bar above the airbox by attaching it to any of the 1/4" holes found on the roll cage bar, or the slotted holes in the bodywork above the airbox. Be sure that all parts of the harness are out of the way from any hot or moving components.



## STEP 27B



## STEP 28

Reconnect the negative terminal on the battery and replace all panels that were removed in the installation process. Reinstall the driver's side seat to complete installation.



## STEP 29

You have now completed the installation for your new Particle Separator. To ensure that everything is installed correctly and there are no



problems with any part of the electrical system, we need to run a test to verify the function of the whisper quiet fan technology system.

Test the particle separator with these steps:

1. Turn the ignition to the key on position. The fans on the particle separator should be at 20% speed and should barely be audible.
2. Turn the ignition on. The fans should be at 50% speed and barely be audible over the engine idle noise.
3. Rev the engine to a constant 4000 rpm for 5 seconds and then take your foot off of the gas. The fans should build to and stay at max speed during the 5 seconds, and decelerate back to 50% speed 2 seconds after you let your foot off of the gas.

If your particle behaves as these tests describe, the installation is complete. If the separator does not act as described, please watch our electrical system troubleshooting video to determine the cause of the misbehavior.





## **SIDE NOTE**

S&B recommends that you apply a layer of waterproof grease, such as made by Bel-Ray or Super Lube, on the inside flange of the stock air filter to keep dust from bypassing the seal.

## **ONGOING MAINTENANCE**

Your Particle Separator requires very little if any maintenance depending on where you drive; however, you should check to make sure that none of the openings in front of the Particle Separators are blocked by mud or other debris each time you exit the UTV. You should also make sure the scavenge fan is operating properly. To do so, simply check to make sure the fan is still blowing out air (for about 15-20 seconds)

when you turn off your UTV as this is a normal condition. If the fan is not blowing out air or the airflow seems lower than when you initially installed your system, please contact S&B tech support. To clean your Particle Separator, review the cleaning instructions below.



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