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# INSTALL INSTRUCTIONS FOR 76-7021

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## 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.

**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.

## 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

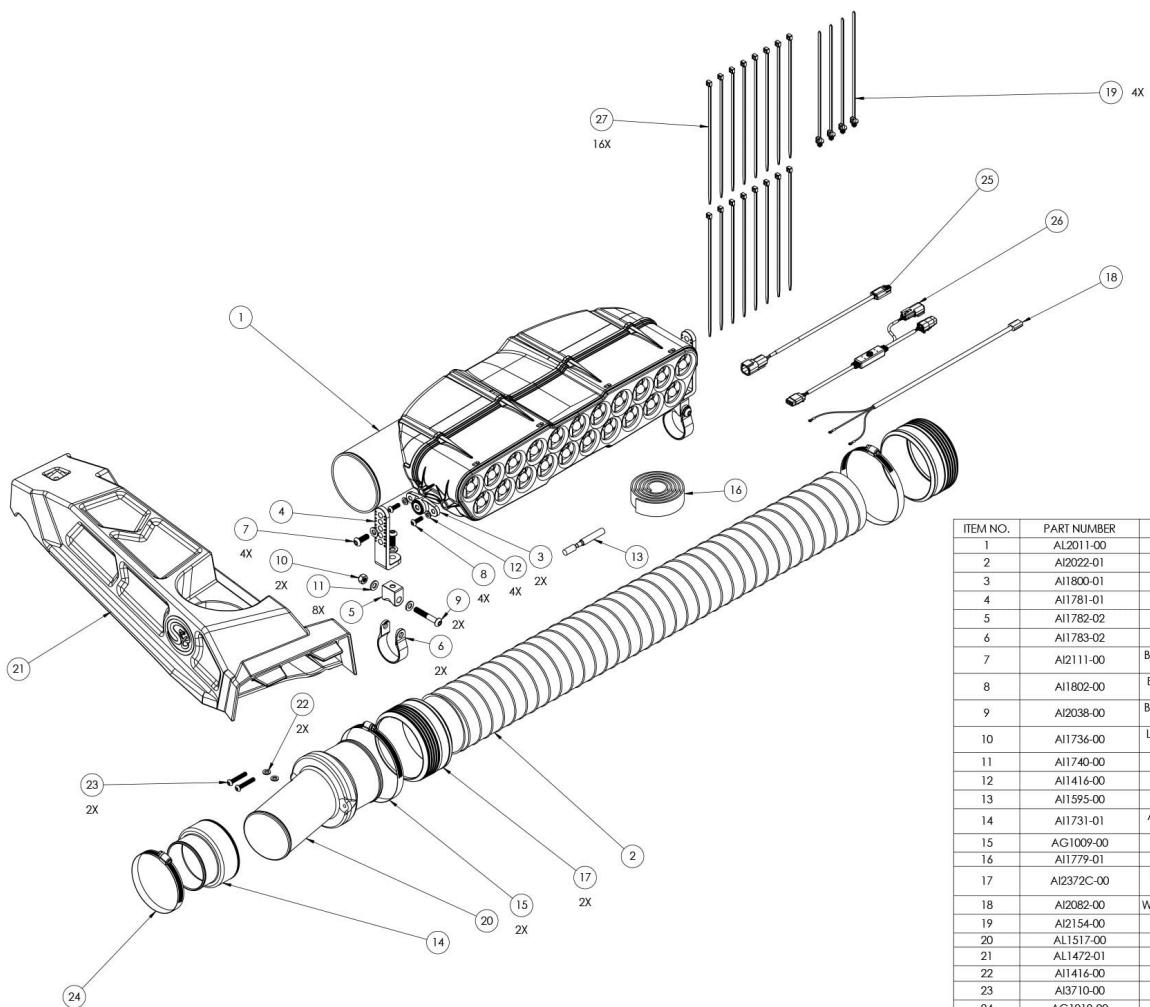


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## Trouble Shooting the Scavenge Fans on a S&amp;B Particle Sep...



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	AI2011-00	PARTICLE SEPARATOR UNIT	1
2	AI2022-01	4IN ID FLEXIBLE DUCT	1
3	AI1800-01	CLAMP ADAPTER	2
4	AI1781-01	CLAMP L-BRACKET	2
5	AI1782-02	ULTIMATE CLAMP, PIVOT BODY	2
6	AI1783-02	ULTIMATE CLAMP, 1.75" STRAP	2
7	AI2111-00	BHCS, M8-1.25 X 22mm LONG, 18-8 SS	4
8	AI1802-00	BHSC, M6 X 1 X 18mm LONG, 18-8 SS	4
9	AI2038-00	BHCS, M8-1.25 X 50mm LONG, 18-8 SS	2
10	AI1736-00	LOCKNUT, NYLON INSERT, M8-1.25, DIN 985, CLASS 10, ZN PLD	2
11	AI1740-00	Washer, M8, 16mm OD, 18-8 SS	8
12	AI1416-00	M6 WASHER, 12mm OD, 18-8 SS	4
13	AI1595-00	THREADLOCKER	1
14	AI1731-01	ADAPTER, 3.5" ID DUCT TO 3.25" ID STOCK INLET	1
15	AG1009-00	HOSE CLAMP, #72	2
16	AI1779-01	VELCRO 1IN X 36IN	1
17	AI2372C-00	FLEX DUCT END CUFF - FITS 4.0" ID SILICONE	2
18	AI2082-00	WIRING HARNESS, POLARIS VERSION	1
19	AI2154-00	PUSH IN MOUNT CABLE TIE	4
20	AI1517-00	ADAP TUBE FOR 76-7021	1
21	AI1472-01	SIDE COVER	1
22	AI1416-00	M6 Washer, 12mm OD, 18-8 SS	2
23	AI3710-00	Button Head Hex Drive Screw	2
24	AG1019-00	Hose Clamp, #56	1
25	AI2497-00	Ignition Sensor Assembly	1
26	AI2451-00	CONTROL BOARD HARNESS	1
27	AI1750-00	Cable Tie, 9" Long	16

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## 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.

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## 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.

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## 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.

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## 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.

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## 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

Cookie Preferences securing the cover to the vehicle and the hose clamp securing the intake pipe to side piece underside. Once the screw and clamp are removed the cover can be taken off by pulling up and forward.

## **STEP 8B**

## **STEP 8C**

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## STEP 9

Install the S&B side cover and reinstall with the same bolt.

## STEP 10

Install the S&B duct adaptor into the intake tube and tighten down with the OEM clamp.

## STEP 11

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

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## 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

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## 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.

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## 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 14A

Place the included velcro through the zip tie and around the ducting to secure the ducting to the side piece.

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## STEP 15

Remove the seats from the vehicle.

## STEP 16

Use a flat head screwdriver and torx to remove the pins and bolts holding down the panels that run along the center of the vehicle.

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## STEP 16A

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## STEP 17

Remove the vehicle's hood by removing the 2 bolts to access the Pulse Bar

## STEP 18

Locate an unused Pulse Bar connector, remove the plug and install the S&B Pulse connector. Make sure you hear a click when installing the connector. The relay and fuse will stay under the hood and get zip tied.

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## STEP 19

Fish the connector into the cab of the vehicle and run the harness through the center of the vehicle.

## STEP 20

Run the harness up the passenger side rollbar and connect to the separator.

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## STEP 21

Locate the ignition coil box on the drivers side and zip tie the ignition sensor to the side of the box.

## STEP 22

Ensure the wire harness is free from hot or moving components. Reinstall the bed, center console and seats.

## STEP 23

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

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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.

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## 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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