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743 E. Iona Rd. Idaho Falls, ID 83401, (208)529-0244 Fax (208)529-9000

SLP High Flow™ Intake Kit for 2012-16 Arctic Cat 800 Twin Part # 14-323

Thank you for purchasing the SLP High Flow™ Intake Kit. This kit utilizes Powder Valves™ that are installed in the air box to provide additional air flow to the engine. They are activated by air box vacuum. When the stock intake begins to plug in deep powder snow conditions, these valves open to deliver necessary air flow that the engine demands. This substantially improves throttle response and consistency when running in deep powder snow conditions.

Kit Contents:

- | | |
|------------------------------------|--|
| 2 - Powder Valves™ (#14-142) | 2 - Rivet Washers (#999-0041) |
| 16 - Plastic Rivets (#14-223) | 2 - Powder Valve™ Covers (#14-141) |
| 3 - Templates | 1 - Intake Air Temp. Sensor Relocation Pigtail (#14-199) |
| 3 - Plastic Cable Ties (#999-5431) | 1 - 1" x 1 1/2" Foil Tape |

Installation Instructions

1. Remove side panels from sled.
2. Remove hood from the sled as follows:
 - 2a. Remove the rear most screw from each side of the hood where it attaches to the fuel tank shroud (2 screws total, 1 on each side).
 - 2b. Remove screws (1 on each side) that attach the hood to the upper shock tower cover.
 - 2c. Remove 2 screws that attach the front lower portion of the hood to the plastic a-arm cover.
Note: It is easiest to do this by rolling the sled on its side to access these two screws.
 - 2d. Unplug wiring harness located below gauge.
 - 2e. Remove hood by gently pulling hood forward and lifting it straight up once the rear cowling tabs and front air box tabs have disengaged.
3. Remove both hood sides from hood assembly by removing the six torx screws holding the hood sides in place (three on each side). Then rotate the hood sides outward (towards the front) and gently pull front tabs of hood sides out of air box to remove.
4. Remove windshield.

5. Remove gauge assembly from hood by removing the 4 screws that attach the bracket to the hood.

6. Remove upper intake cowl/headlight cover by disengaging the plastic tabs from both sides of the headlight (these plastic tabs are located on the lower rear corner of each side of the headlight). Then unplug the 12 volt auxiliary wiring and key switch. Gently lift the front section of the upper intake cowl/headlight cover to release it from the headlight and slide to the rear and remove.

7. Remove stock air temp sensor by gently prying up on the outside corners with a small flat blade screwdriver.

Warning: do not pry on the center of the sensor housing as sensor damage can occur.

8. Cut plastic tie holding sensor wiring to wire loom and remove stock intake air temp sensor.

9. Using 1" x 1 1/2" foil tape, cover stock sensor location (see illustration #1).

10. Look into stock intake holes and make sure foam on the upper half of the airbox has not come loose. If stock foam comes loose it can partially block the intake opening creating a restriction. Remove if necessary (see illustration #2).

Powder Valve™ Installation:

11. Cut out the 2 templates provided and tape them to the front side flat area of the airbox (see illustration #3 for template placement). Then mark around the inside of templates. **NOTE:** Center templates on the flat area within 1/8" of the recess (see illustration #3).

12. **Carefully** cut out the **inside** of the marked area using a Dremel tool with a drywall bit and finish with a drum sander or file (a multi-tool with a narrow blade also works well to make the initial cut).

Note: Make sure the Powder Valve™ sits flush on the box with the spring towards the inside.

13. Using Powder Valve™ as a guide, drill out the 4 holes using a 3/16" drill bit. On one of the rivets furthest away from the hinge, place a rivet washer on the outside of Powder Valve™ (see illustration #4) and rivet into place using plastic rivets provided. This rivet washer acts as a stop.

Note: Check each Powder Valve's range of motion, if any of the rivets interfere with valve they will need to be trimmed.

Illustration #1



Illustration #2

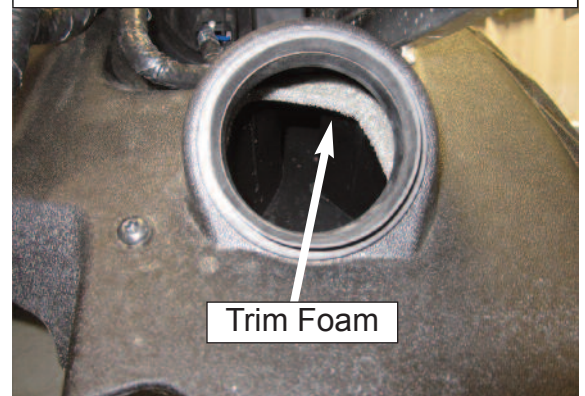
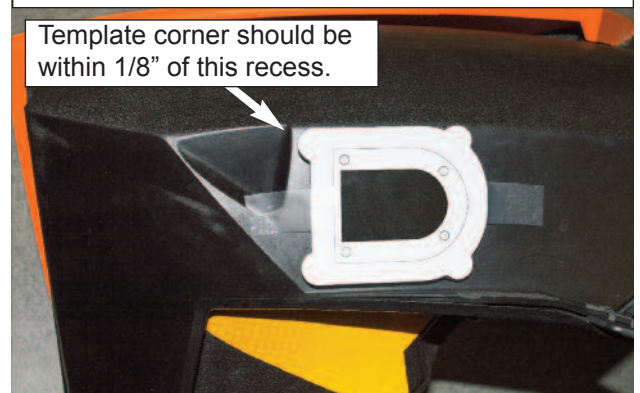


Illustration #3



14. Install Powder Valve™ Covers (with the material to the outside) over the valves and use as a guide. Drill four holes using a 3/16" drill bit and rivet covers into place using plastic rivets provided (see illustration #5).

15. Repeat on the other side.

Caution: Remove all plastic shavings from the air box or severe engine damage may occur. We recommend disassembling the air box and using compressed air to blow out all plastic shavings.

Intake Air Temperature Sensor Installation:

16. Remove pipe from sled.

17. Remove aluminum heat shield from nose of sled that protects ECU.

18. Remove ECU from sled.

19. Cut supplied template along dotted line.

20. Set template on top of lower airbox and align the four lines with the centers of the four Phillips screws that hold the fuel rail to the throttle bodies. Make sure to push paper template back so that it rests against the throttle bodies (see illustration #6).

21. Center punch the sensor holes in the air box through the paper template.

22. Using a 1/2" bit, drill the center hole.

23. Using a 3/16" bit, drill the two outer holes.

Caution: Remove all plastic shavings from the air box or severe engine damage may occur.

24. Insert the stock intake air temp sensor (previously removed from the hood) into the lower airbox using the stock darts that held it into the hood (see illustration #7)

25. Connect the SLP supplied pigtail to the intake air temp sensor and route the

Illustration #4

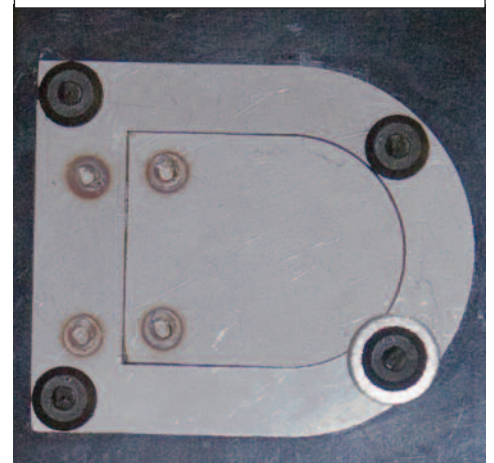
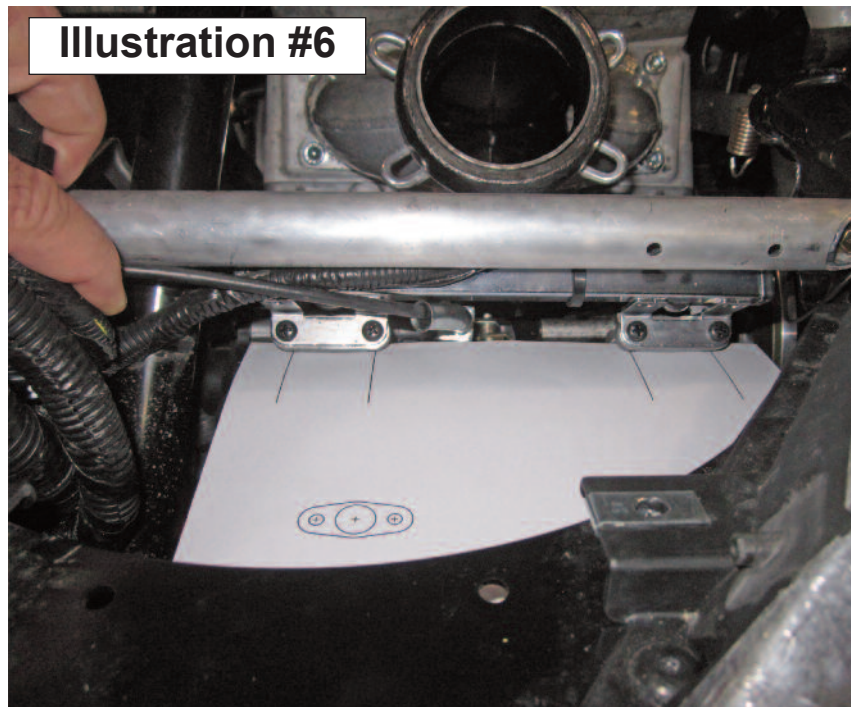


Illustration #5



Illustration #6



pigtail up the outside of the right hand frame member as shown in illustration #8. Fasten the pigtail to the frame member using three plastic ties provided.

Caution: Do not fasten the throttle cable as throttle cable must float up and down as steering is adjusted on models with vertical steering.

26. Reinstall ECU in sled.

27. Reinstall aluminum heat shield that protects the ECU back in the stock location. Make sure the wires are not rubbing on the heat shield side.

28. Reinstall pipe in sled. Use anti seize on threads of the exhaust temperature sensor making sure not to over-torque it (exhaust temperature sensor recommended torque is 12-15 ft/lbs.)

29. Reinstall the upper intake cowl/headlight cover by sliding the upper intake cowl/headlight cover to the front of the hood and engaging the intake tubes into the rubber grommets. Then gently engage the plastic tabs on both sides of the headlight. Plug the 12 volt auxiliary wiring and key switch back in.

30. Reinstall the gauge and plug wiring harness into the gauge.

31. Reinstall the windshield.

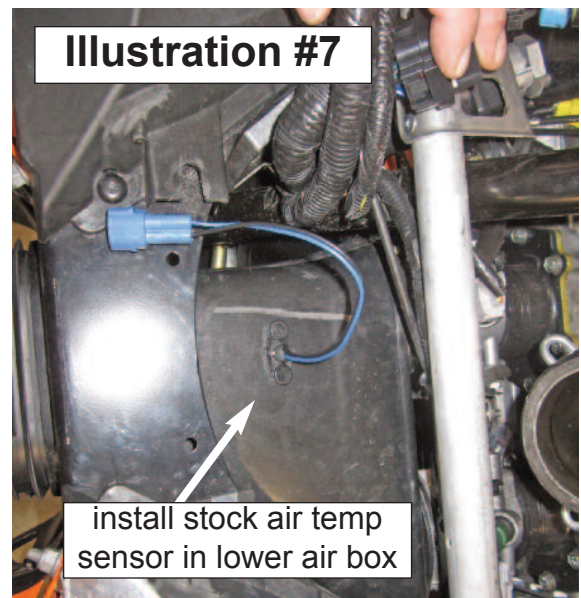
32. Reinstall both hood sides to the hood assembly by gently inserting the front tabs of hood side into the airbox and then once fully engaged, rotate hood sides rearward. Reinstall the six torx screws that hold the hood sides in place (three per side).

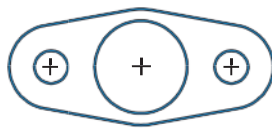
33. Reinstall the hood on the sled (in the reverse order of steps 2a through 2e). Make sure the rear cowl tabs and front air box tabs are engaged properly.

34. Reinstall side panels.

35. Plug the SLP pigtail into the stock intake air temp sensor wiring plug located below the gauge (it is a blue 2 prong plug).

NOTE: Loop pigtail around outside of right hand air box horn, then plug it in. This will keep pigtail from getting snagged on the steering column.





Cut along dotted line.

Powder Valve Templates

