



# Valkyrie Carbs and Custom Fuel Solenoid Installation Instructions

See picture below for mounting configuration.



**NOTE: fuel lines are not yet connected to fuel rail nipples in this picture. Leave them disconnected at this time. They will be installed in step 32.**

7. If desired, use Ty Wraps to secure fuel hose to carb brace where red circle is in above picture.



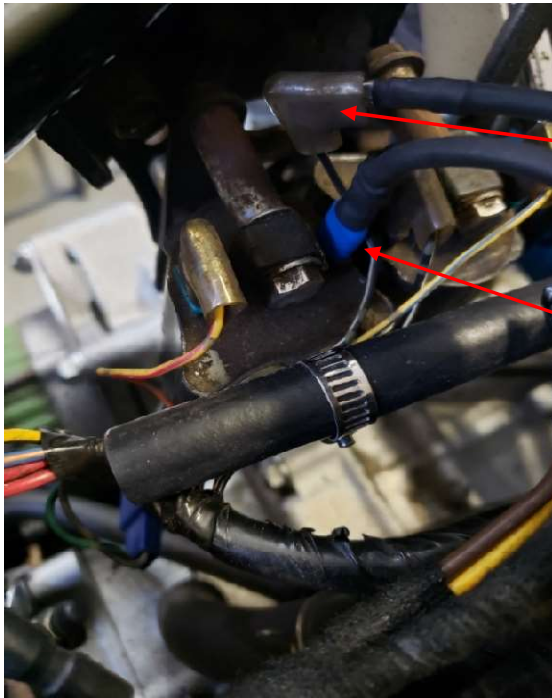
8. Refer to above picture for relay installation.

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9. Remove the battery box cover.
10. Connect the RED wire marked BATT (+) to the positive battery terminal.
11. Connect the WHITE wire marked BATT (-) to the negative battery terminal.
12. Route the harness along the frame to the solenoid area.
13. Connect the 2 pin Molex connectors marked FUEL SOLENOID. (Yellow circle below)



14. Refer to the picture below for coil connection in steps 15-17 below.



Black/White wire connector disconnected from #5 coil and connected to Black wire from relay harness marked "To B/W wire from #5 coil."

Red wire from relay harness marked "#5 coil" connected to where the B/W wire was removed.

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15. Remove the **Black/White** wire spade connector from the #5 coil.
16. Connect the red wire connector marked “#5 coil” to the coil where you just removed the connector.
17. Connect the removed spade connector to the male spade connector marked “To B/W wire from #5 coil.” on the harness.
18. Install the Battery Cover.



19. Place the relay and route the wire harness as shown in the picture below. (Battery connections were made in steps 10, & 11.)
20. Use the alcohol swab to clean the mounting location.  
**NOTE: You will get only one shot at sticking the 3M tape. It is extremely sticky.**
21. Remove the film from the 3M dual lock connection tape.
22. Place relay down where you want it mounted.
23. To remove battery cover, remove the relay by separating the Dual Lock mount like Velcro. Swing the relay to the right side and remove the battery cover.
24. Use the remaining Ty Wraps to secure the wiring harness as desired.

**NOTE: The safety circuit must be satisfied. Any of the conditions that would keep you from starting the bike will keep the solenoid from operating. The safety circuit signals such as the ignition key, kill switch, and bank angle sensor, deenergize the fuel solenoid and stop fuel flow. If you can bump the starter, the safety circuit is satisfied.**

25. Turn on the ignition key.
26. Verify you can blow through the fuel line.
27. Select the kill switch to the OFF position.
28. Verify that you cannot blow through the fuel line.
29. Select the kill switch to RUN.
30. Turn off the ignition key.

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31. Loosen the hose clamps on the fuel lines, slide them down, and retighten them on the fuel rail nipples.
32. Install the Air Box.
33. Set the fuel tank on the bike.
34. Install the fuel tank vent line.

**NOTE: The fuel line from the fuel tank to the carbs on a Valkyrie must be straight. Thus, it is sized to be as short as possible. If it is longer, it will heat up and sag, causing a loop seal and starve the engine of fuel. The fuel line has been properly sized.**

35. Place a small piece of 2X4 under the tail of the tank to raise it enough to work under the tank.
36. Feed the fuel line onto the petcock nipple.
37. Remove the 2x4.
38. Move the hose clamp over the petcock nipple and retighten.
39. Connect the fuel selector knob.
40. Move the petcock selector to ON.
41. Turn the key on and verify no fuel leaks at carb connections.
42. Install the fuel tank bolts.
43. Install the seat.
44. Start bike and verify proper operation.