

Prep , Tips and Lessons Learned for Carb Cleaning

Before you start, run the tank's fuel down to low.

Have a couple ~ 5/16" bolts handy to plug coolant lines.

Get 16) 4mm Dia x 8mm long Allen Head bolts to replace the Carbs' Bowl bolts.

Set up a clean spot on the bench to work.

Set up good lighting, if not already in place.

Have that can of Carb cleaner and it's "Red Tube" handy.

If this is the first time to for you to clean the Carbs, remove the entire Carb rack and perform the work on the bench. There are several reasons for this (e.g. the OEM bowls screws are a pistol to get out, you need to take your time, the parts are small and if you drop one into the belly pan, you are hosed, etc. etc.)

Have a one quart container handy to catch fuel, which will run out the Carb vents when the Carbs are tipped up-side-down. When you take off the rack, be ready for ~ one pint of fuel to come out the Carb vents. So once you are ready to catch this fuel, tip the Carbs upside down and the fuel in the bowls will come out the two vent lines. This is usually the easiest and quickest way to catch this fuel. Of course this assumes that you keep the Carbs upright during removal. If you don't, you won't have to worry about catching the fuel. ☺

If a Bowl screw strips, grind the bolt's head off. The remaining piece of bolt can be easily removed by hand or with vise grips after the bowl is off. I used an impact driver (without even tapping it) to get the OEM bolts out. The large Phillips bit fits perfect and the handle provides a good grip. No need for a hammer. But, for one bolt in each Carb, you will need an extended bit. The driver needs to be away from the screw by about two - three inches. I welded an old broken bit to the right Phillips bit and have an extended bit for this screw. Again, there is no need to hammer on this tool to get the bolts out. You do not want to crack the flange.

The bowls are fitted to an O-Ring that is placed around the Main Jet's housing. This causes you to have to pull a bit to get the bowl off, once the screws are out. Also, this causes the bowl to come off at a slight angle. So if you notice the angle, you are not bending something as the bowl moves off center.

Take care to not damage the Bowl gaskets. I also tend to keep them from sitting in Carb Cleaner. But I do not remove them from the bowl. Make sure you clean out the bowl with Carb Cleaner. Sometimes you cannot see the flakes of sediment in the bowl. Open the bowl drain and flush it with Carb Cleaner too. Then close it.

After soaking the Pilot Jets for a few minutes in Carb Cleaner, I use a bristle from a wire brush to "rod out" the jet. After "rodding," a spray through the jet from the slotted end, with your fingers

over the slots, should yield a 10' even stream of Carb Cleaner shooting out of the jet. If not, the jet is not yet clean. If you are tree-hugger I just made you shutter and you should probably catch the steam of Carb Cleaner. If you are a perfectionist, it is time for target practice. ☺

If you do choose to "rod" the jets, be careful to not damage the jet by trying to push through a bent rod or rough surfaced "rod." Excessive "rodding" could also damage the jet. So let the jets soak for a while first and keep the "rodding" down to the minimum necessary to get the jet clean.

I do not mess with taking the tops off the Carbs. But if you do, be sure to catch the little O-Ring. Be sure that the little O-ring goes back into place when you put the cap back on. The sled will run like crap w/o all 4 O-rings in place.

When you reinstall the Carb bowls, put a little motor oil on the O-Ring around the Main Jet Housing. This will help you get the bowl on the O-Ring and allow the bowl to more evenly be placed on the Carb body. These O-Rings do not have to be in perfect condition. They were placed on '04 and later Carbbed sleds to preclude fuel starvation when climbing steep grades. However, they should be capable of staying in place or taken completely out or replaced.

If the Carbs were flooding the sled off, take out spark plugs and roll over the engine to blow the excessive fuel out of the cylinder(s). This is to preclude damage from Hydrolock caused by excessive fuel in cylinder(s).

If you have trouble getting the idle to remain consistent after a blip of the throttle, or if the idle stays high after a blip of the throttle, you did not get the pilot jets clean or they just got dirty again.

When you are all done reinstalling the Carbs and have it idling properly, you may want to sync the Carbs. This may be the first time all the fuel screws were set even. Also, the Carbs may have been previously synced when the Carbs were not clean. Syncing the Carbs will greatly reduce the potential for clutch and reduction gear rattle. If the coils are good, and the Carbs are Clean, and the kitten is not purrin', The Carbs need syncing.

Cleaning procedure

1. Remove Airbox.
2. Disconnect Choke cable from Carb rack.
3. Disconnect Throttle cable from Carb rack.
4. Remove the two gas lines from Carb rack and plug, if necessary.
5. Remove the two coolant lines from Carb rack and plug, if necessary.
6. Disconnect Carb Heater harness. The Carb heater harness can be disconnected near the delta frame and the whole harness then comes off with the Carb rack. The Carb heaters are easy to break. So, do not mess with the connections to the individual Carb heaters.
7. Loosen Carb to engine boot clamps.
8. Tilt Carb rack up slightly and gently pull Carbs out of boots.
9. Inspect Boots and cylinder for excessive fuel.

10. If the Carbs were flooding the sled off, take out spark plugs and roll over the engine to blow the excessive fuel out of the cylinder(s). This is to preclude damage from Hydrolock caused by excessive fuel in cylinder(s).
11. Cover boots with clean rag(s).
12. Take Carbs to one quart container and tip Carbs upside down to drain out fuel via the vent lines.
13. Take fuel container to fuel lines on sled and blow some air through the Tank vent line to build enough pressure to drain some fuel from the lines. You should not have to use compressed air to do this. Actually, do not use compressed air.
14. Remove and clean the Pilot Screws, which are not inside the Bowl. They are in the bottom of the output side of the Carb.
15. Remove Carb Bowls using a large Phillips Screw Driver or bit from Nut Driver. Be careful to avoid damage to Carb Bowl seals. Also avoid getting Carb cleaner on these gaskets, as best as possible.
16. Clean the three jets in the Carb bowls. Soak in cleaner and Rod out the Pilot Jet. Blow Jets out with Carb cleaner and air. Inspect jet. Look for light through jet.
17. Remove the float and clean the needle valve. You do not need to remove the needle valve's seat to do this. Use caution to not damage the float, valve or seat.
18. Clean passageway that Pilot Screws control by spraying Carb cleaner through it.
19. Clean the bowls and drain passages in the bowl.
20. Given the condition of the jets, if your fuel is suspect. Drain and clean the fuel tank. After cleaning the tank, you may want to add some fresh fuel and blow this through the fuel lines to ensure they are clean. Inspect your fuel filter, which is in the tank.
21. Inspect Floats to ensure they are all hanging about the same.
22. Reassemble the Carbs. Replace Carb Bowl Bolts with Allen Head bolts.
23. Install Pilot screws to 2 turns out from the bottom.
24. Reinstall the Carb rack. (i.e. 2 fuel lines, 2 coolant lines, Carb heater harness, throttle and choke cables)
25. Install the Airbox. Make sure the Airbox is seated correctly on the Carbs when you are done.
26. Clean any fuel or coolant you spilled on the engine and into the belly pan as best as possible. Refill the coolant overflow bottle to the cold line. Double check it's level later if you spilled a lot of coolant.
27. Set Idle to slightly above 1500 RPM to avoid clutch and Reduction Gear Rattle.
28. Blip the throttle. If the idle does not immediately recover, then repeat the cleaning with particular attention to the Pilot Jets.
29. If the Idle recovers but is still a little rough, resync the Carbs.

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