



Poulan P3314 Primer Bulb, Fuel Line, and Filters Replacement

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INTRODUCTION

Almost all gas now contains up to 10% ethanol. Ethanol is one of the leading causes of damage to small gas engines. The alcohol can cause corrosion on rubber and plastic parts and can make gas powered yard tools almost impossible to start. I will illustrate how to replace the parts that are most common to fail, the primer bulb and fuel lines. While disassembled I will also illustrate how to replace the fuel filter and air filter of the Poulan P3314 2-Cycle Chainsaw.



TOOLS:

- [5/16" Socket](#) (1)
- [iFixit 1/4" Screwdriver Bits](#) (1)
- [6-in-1 Screwdriver](#) (1)
- [Utility Scissors](#) (1)
- [Marker](#) (1)
- [Large Needle Nose Pliers](#) (1)
- [Hemostat](#) (1)
- [Wire](#) (1)



PARTS:

- [Poulan P3314 Primer Bulb](#) (1)
- [Poulan P3314 Fuel Filter](#) (1)
- [Poulan P3314 Spark Plug](#) (1)

Step 1 — Primer Bulb, Fuel Lines, Filters



- Unscrew the three T25 screws on the top cover.
- Remove the top cover and set aside.

Step 2



- With the top cover off, disconnect the spark plug.

Step 3



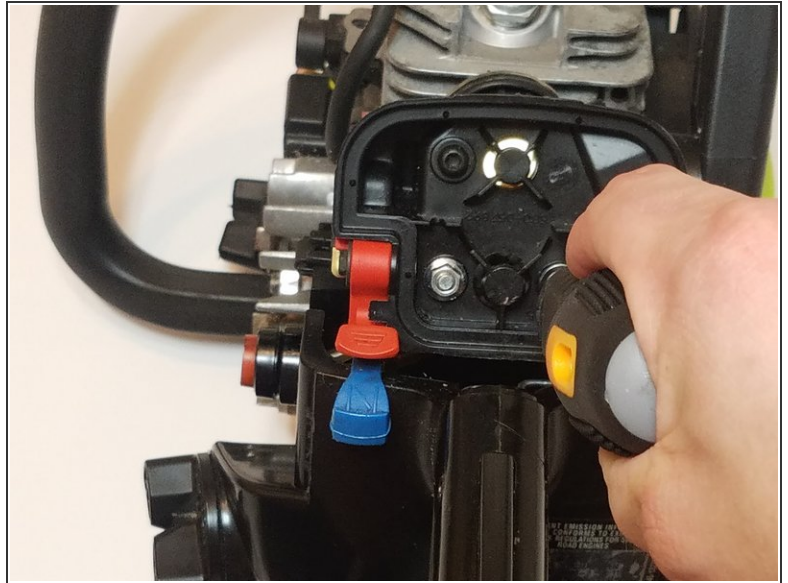
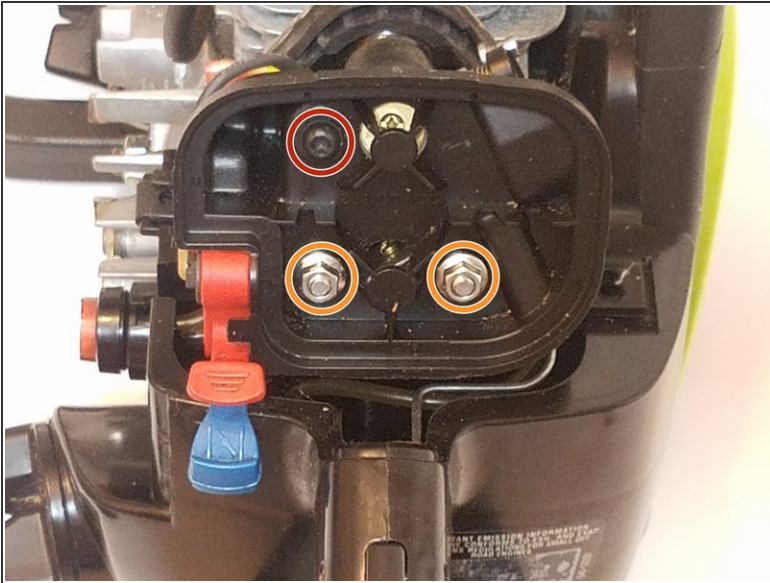
- Remove the four T25 screws securing the starter assembly to the (side) of the chainsaw.
- Remove the starter assembly and set aside.

Step 4



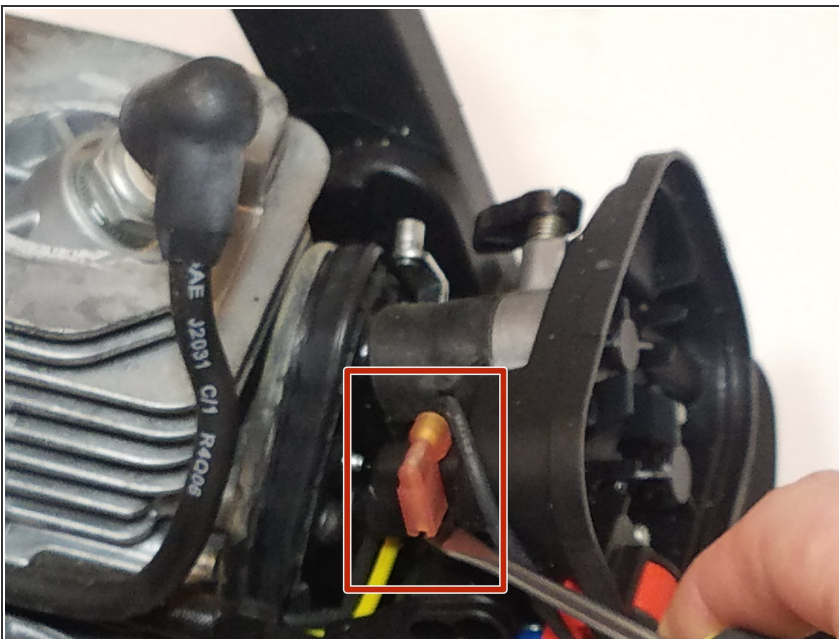
- Remove the air filter cover and set aside.
- Remove the air filter from the housing and set aside.

Step 5



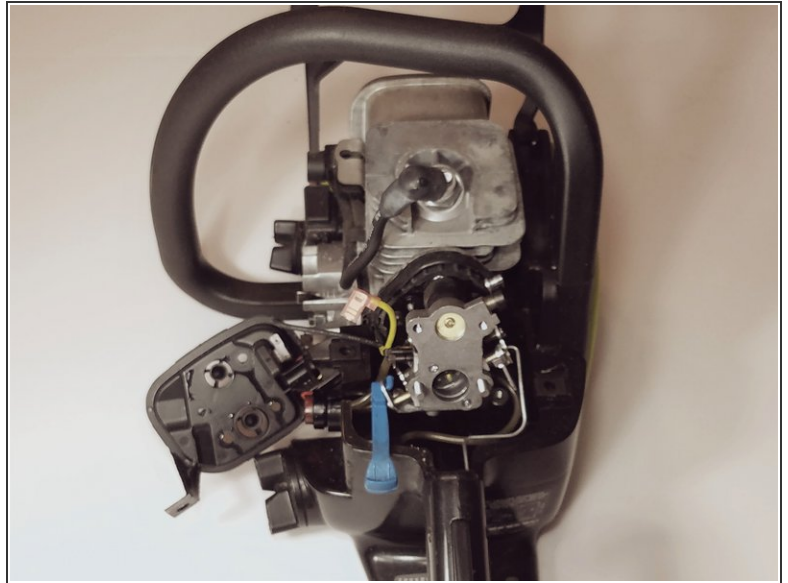
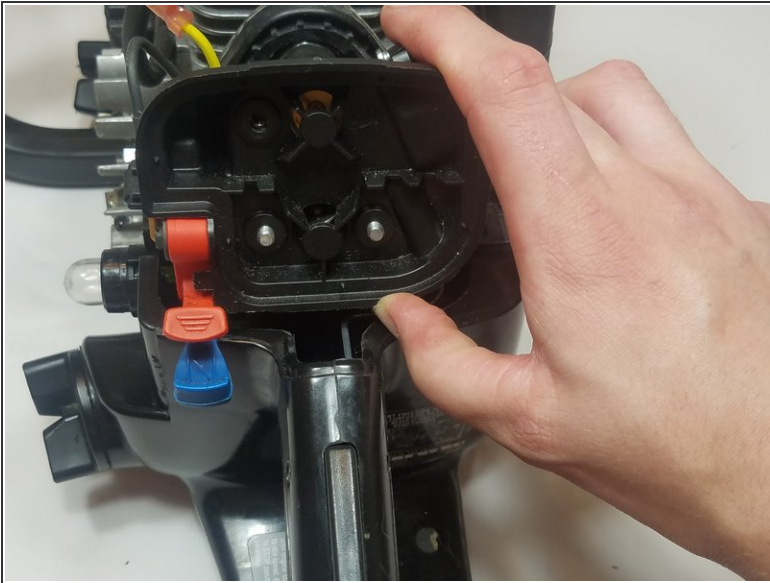
- Unscrew the single T25 screw securing the air filter housing to the carburetor.
- Remove the two 5/16"nuts securing the air filter housing to the carburetor.

Step 6



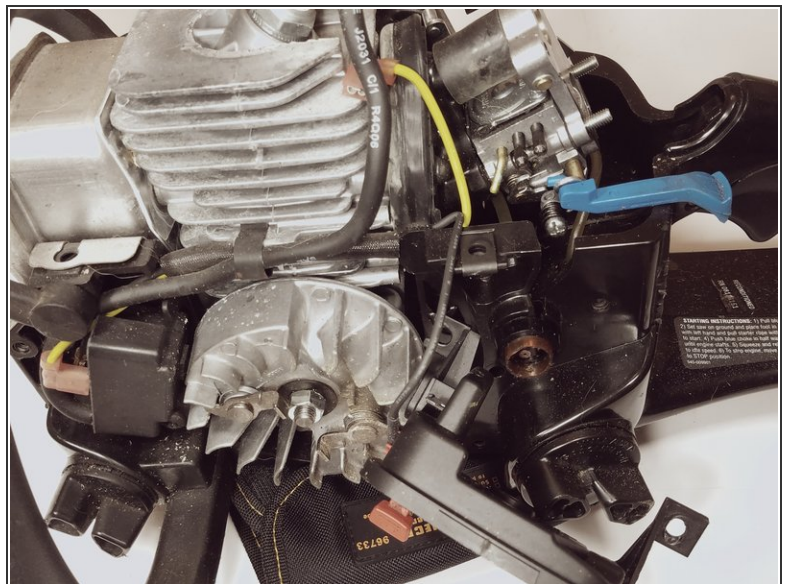
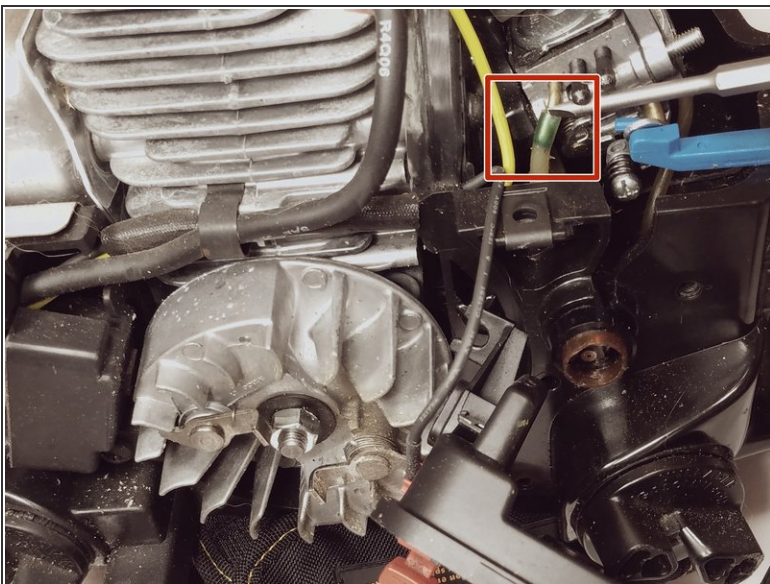
- Use a spudger or flat head screwdriver to disconnect the kill switch wire.

Step 7



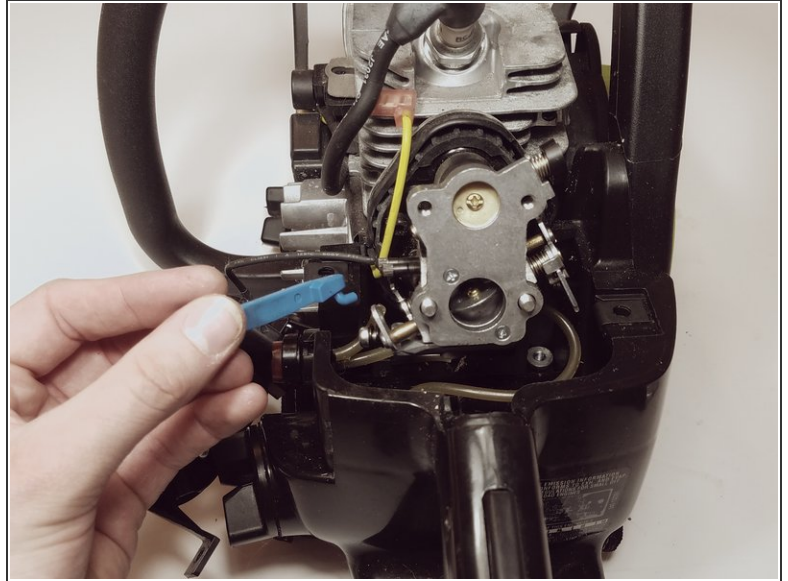
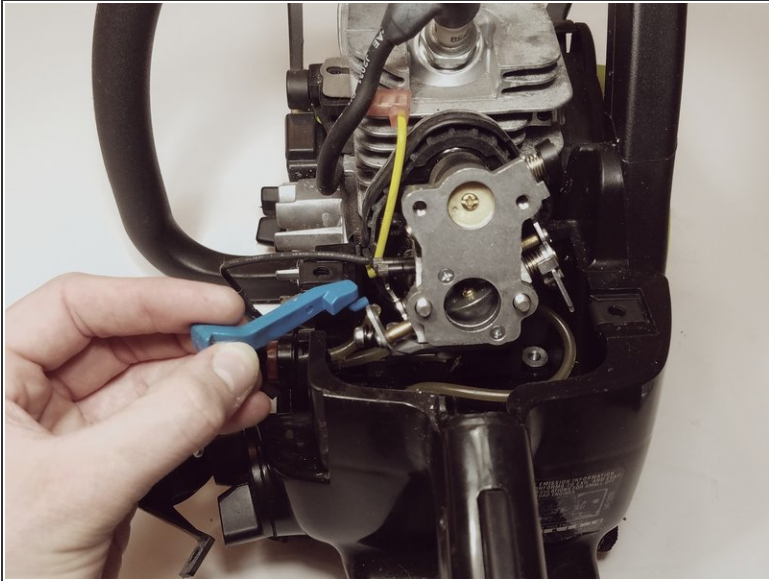
- Remove the air filter housing from the carburetor.
- Let the air filter housing rest on the side of the chainsaw.

Step 8



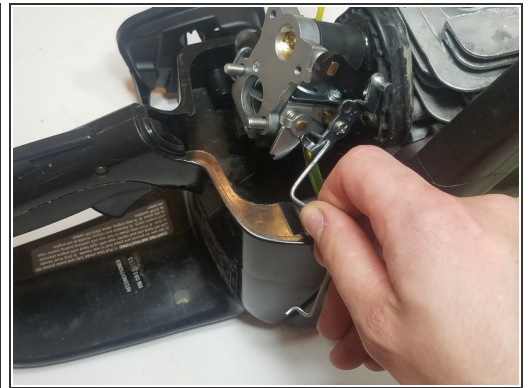
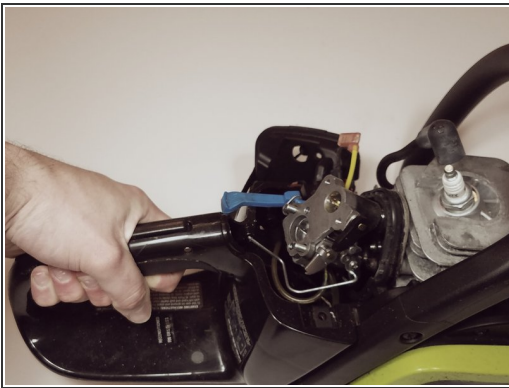
- Using a flat head screw driver or opening tool to disconnect the (primer-side) fuel line from the carburetor.

Step 9



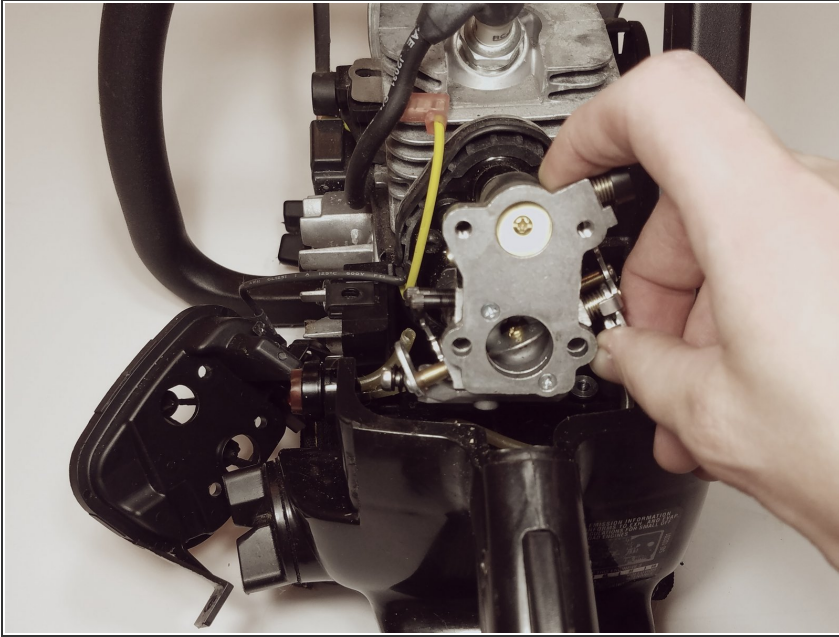
- Remove the choke lever from the carburetor and set aside.

Step 10



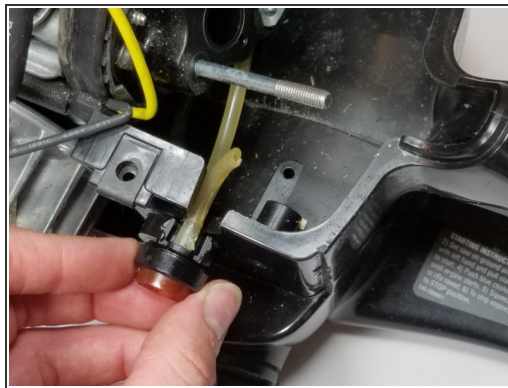
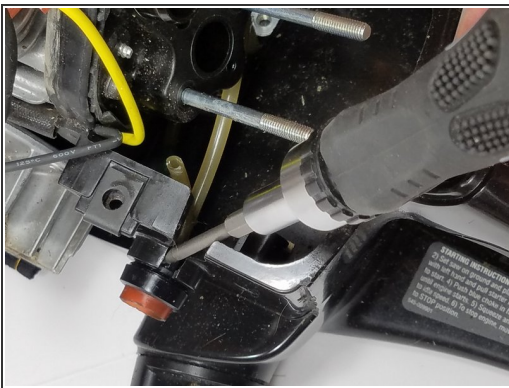
- Pull and hold the throttle trigger to expose the throttle linkage attachment point (on the trigger).
- Disconnect the linkage from the throttle trigger.
- Disconnect and remove the throttle linkage from the carburetor.
- Set the throttle linkage aside.

Step 11



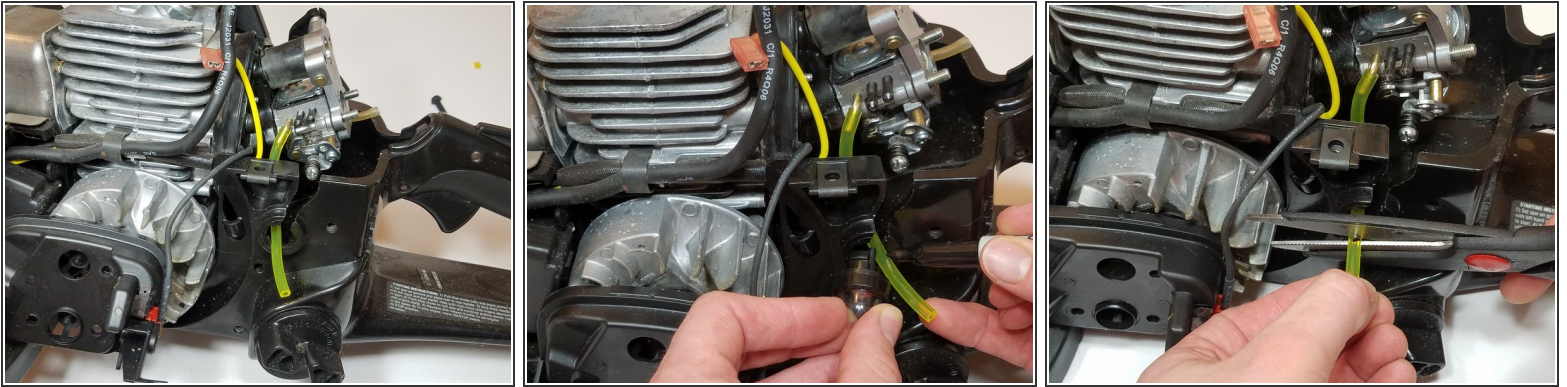
- Slide the carburetor assembly off the mounting bolts and away from the engine.
- ❗ The fuel return line may still be attached to the carburetor. In my case the fuel line was disintegrated. If it is still attached remove with a flat head screw driver or spudger.

Step 12



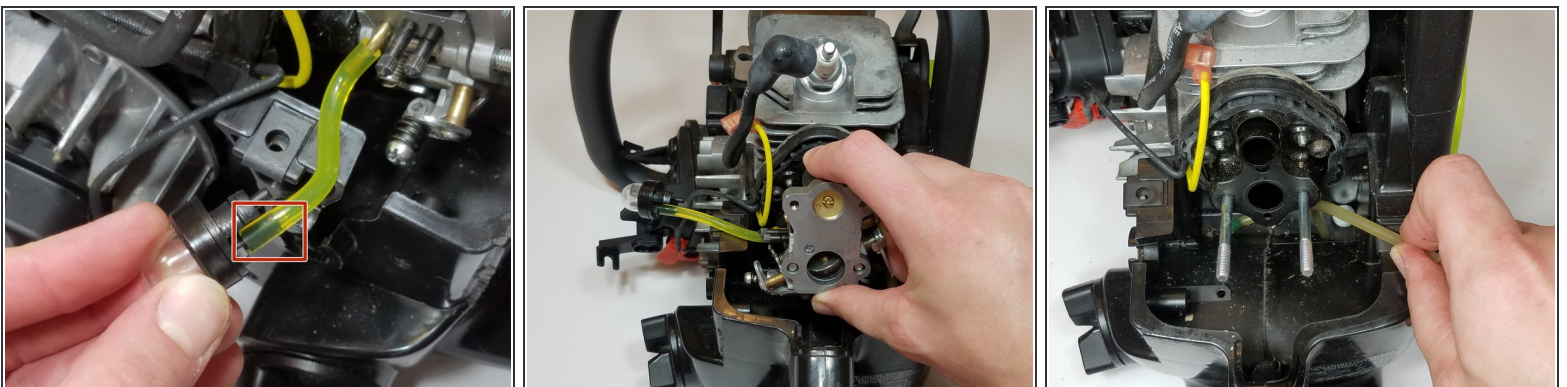
- Using a flat head screwdriver or spudger to press the tabs on the inside of the primer bulb assembly. (This will release the primer bulb from the housing).
- Pull the damaged primer bulb out of the engine housing.
- Use long needle nosed pliers to disconnect the two fuel lines from the primer bulb.

Step 13



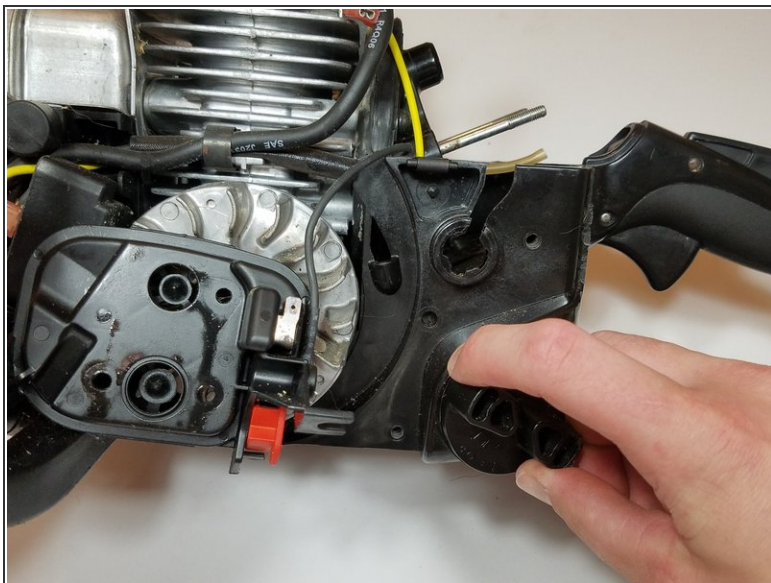
- If the primer suction line was damaged, slide the carburetor back onto the mounting bolts.
 - Attach one end of the new fuel line to the incoming fuel port on the carburetor.
 - Move the fuel line through the primer bulb housing and hold the primer bulb up to the fuel line.
 - Mark desired length and cut to size.
- i** If the old primer suction line was intact, you can measure and cut a new piece of fuel line to the same length and attach it to the intake port on the primer bulb and intake port on the carburetor.

Step 14



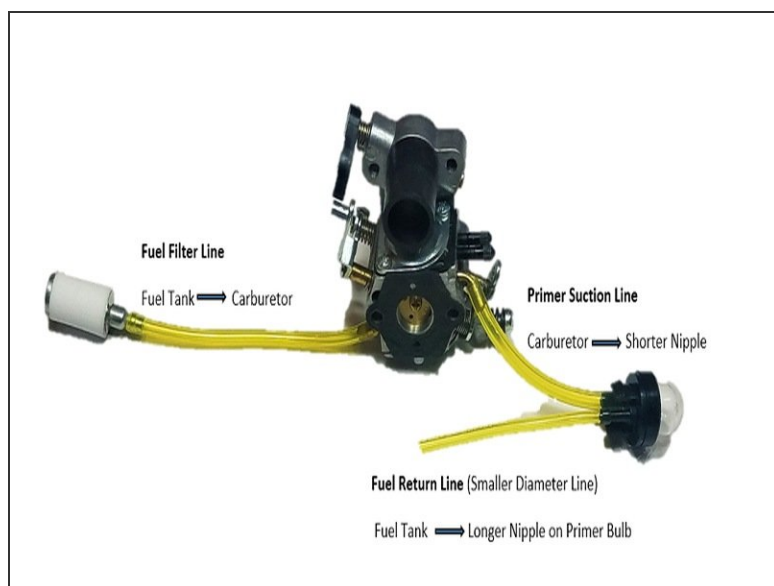
- Attach the cut end of the primer fuel line to the intake port of the primer bulb (shorter nipple).
- Slide the carburetor back off of the mounting bolts.
- Cut and remove the remaining old fuel lines by pulling them through the housing.

Step 15



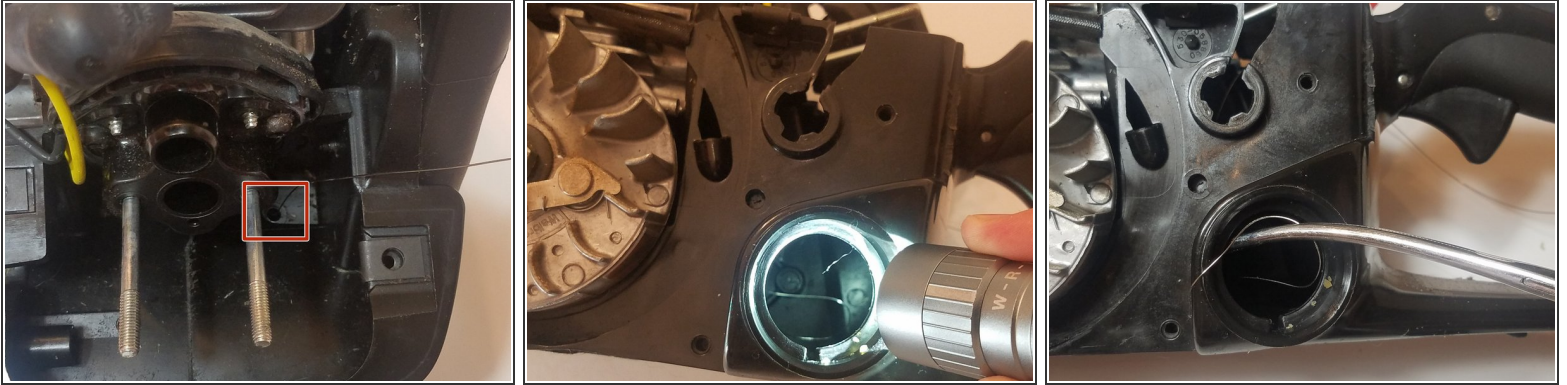
- Unscrew and remove the gas cap.
- Pull out and remove old fuel lines and fuel filter.

Step 16



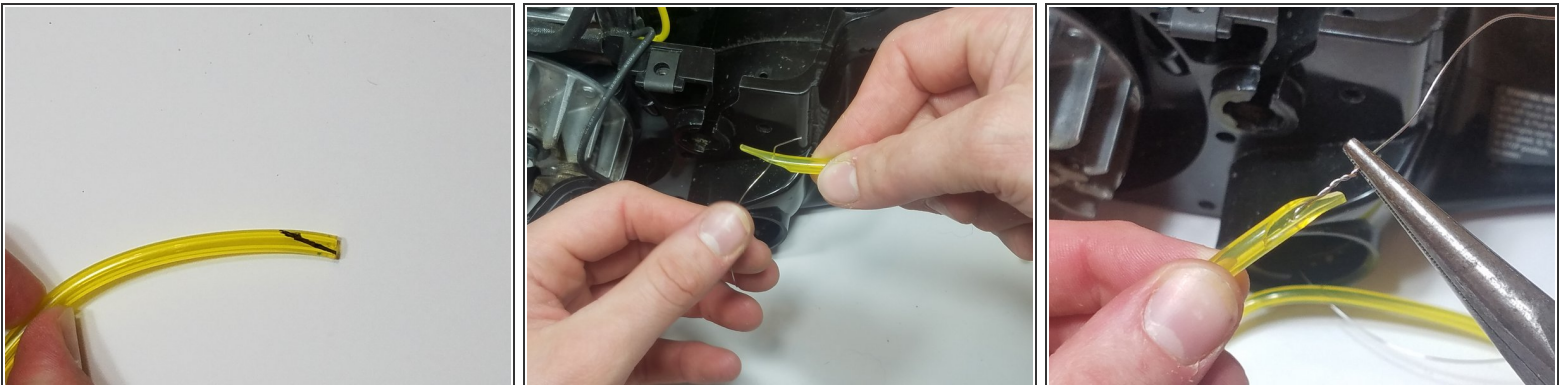
i This is an example of how the fuel lines will attach to the carburetor and primer bulb.

Step 17



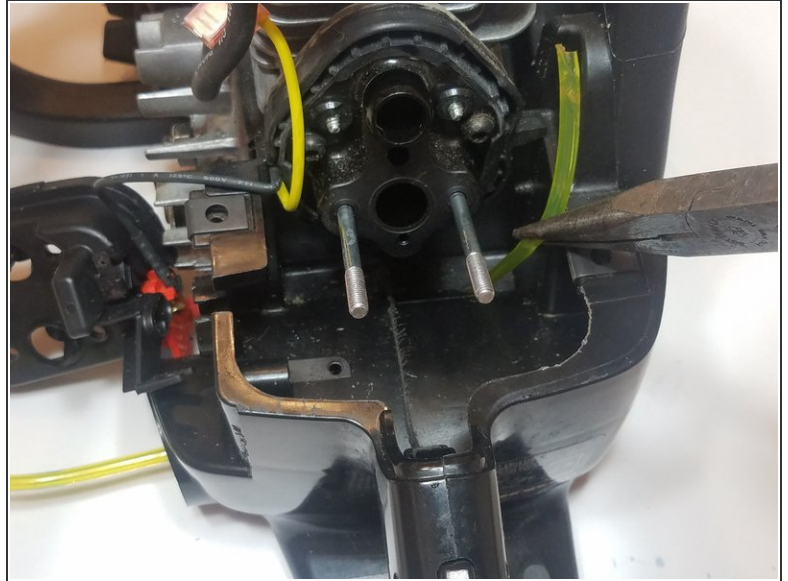
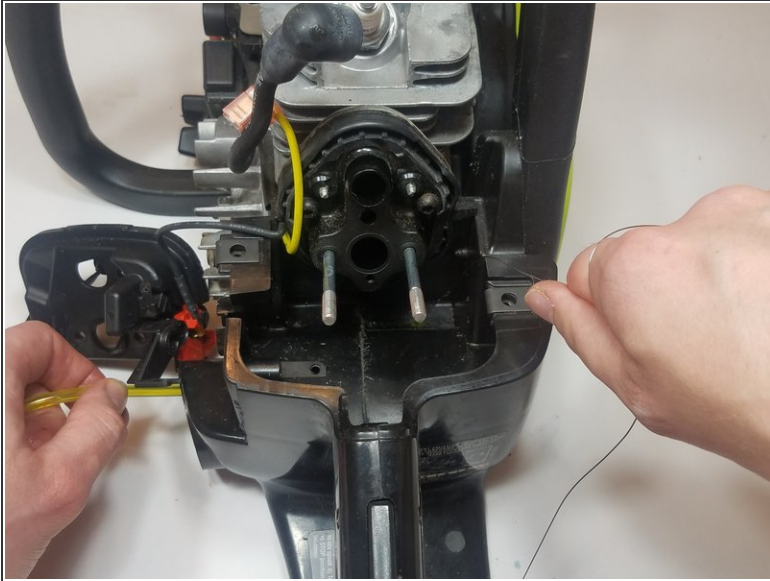
- Push a piece of scrap wire through the larger hole (fuel filter line).
- Use a pair of long needle nose pliers or hemostats to grab the other end through the gas tank.

Step 18



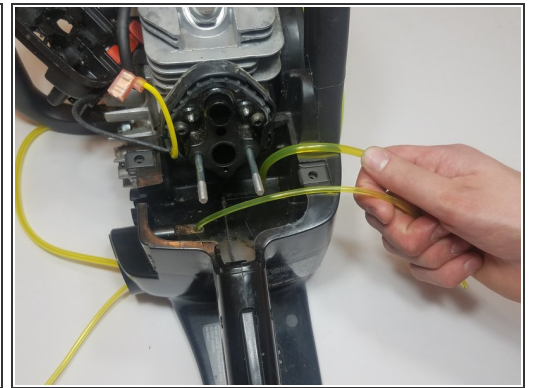
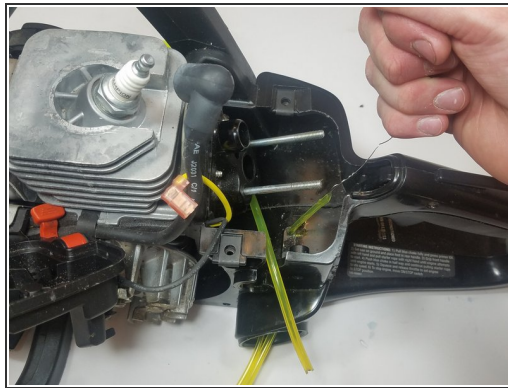
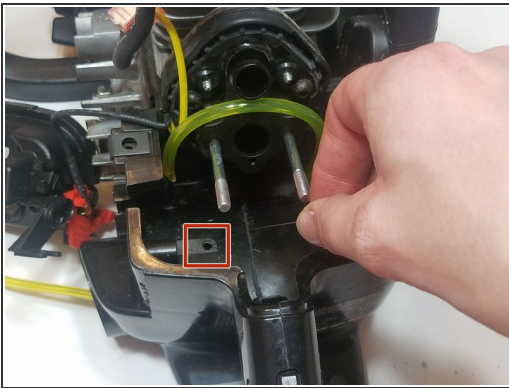
- Cut a piece of the thicker diameter fuel line at a sharp angle.
- Pierce the wire through the fuel line and twist the wire with pliers.

Step 19



- Feed the fuel line through the gas tank while pulling the wire.
- Use pliers to continue to pull the fuel line through the housing.

Step 20



- Feed the wire through the small hole (fuel return).
- ☑ Attach the wire to the cut end of the thinner diameter fuel line as in the previous step.
- Feed the fuel line through the gas tank while pulling the wire as in the previous step.
- Pull both fuel lines up through the housing.

Step 21



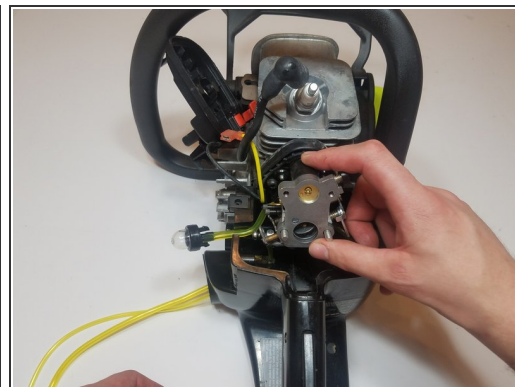
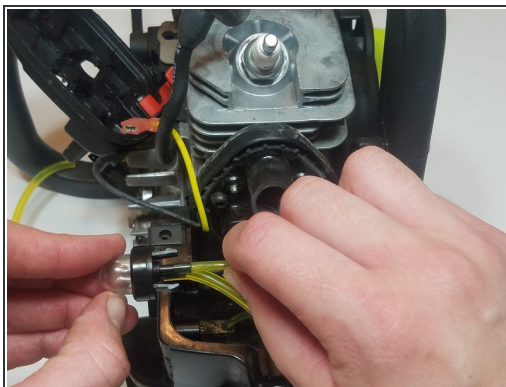
- i** Using 2-cycle oil as lubricant on the fuel lines will make it easier to pull them through the housing.

Step 22



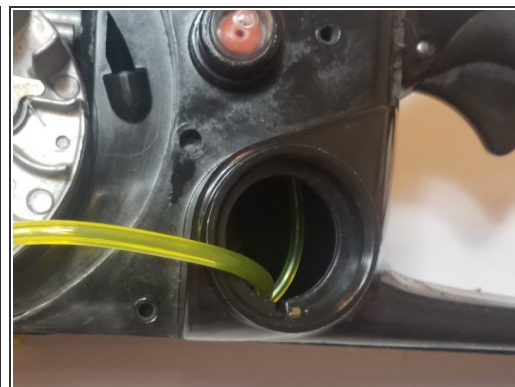
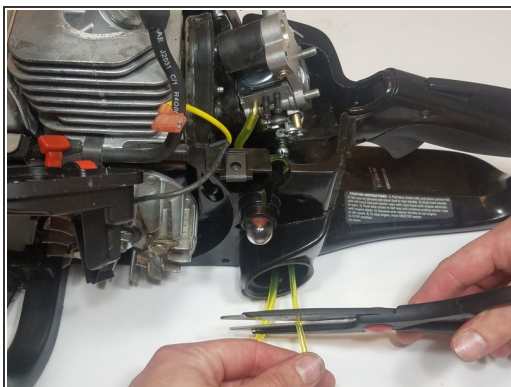
- Cut both of the fuel lines flush (removing the angle that was previously cut).

Step 23



- Attach the larger diameter fuel line (fuel filter line) to the intake inlet on the carburetor.
- Attach the smaller diameter fuel line (fuel return line) to the return port on the primer bulb (longer nipple).
- Slide the carburetor back onto the mounting bolts while pulling out the slack out of the fuel lines from the gas tank.

Step 24



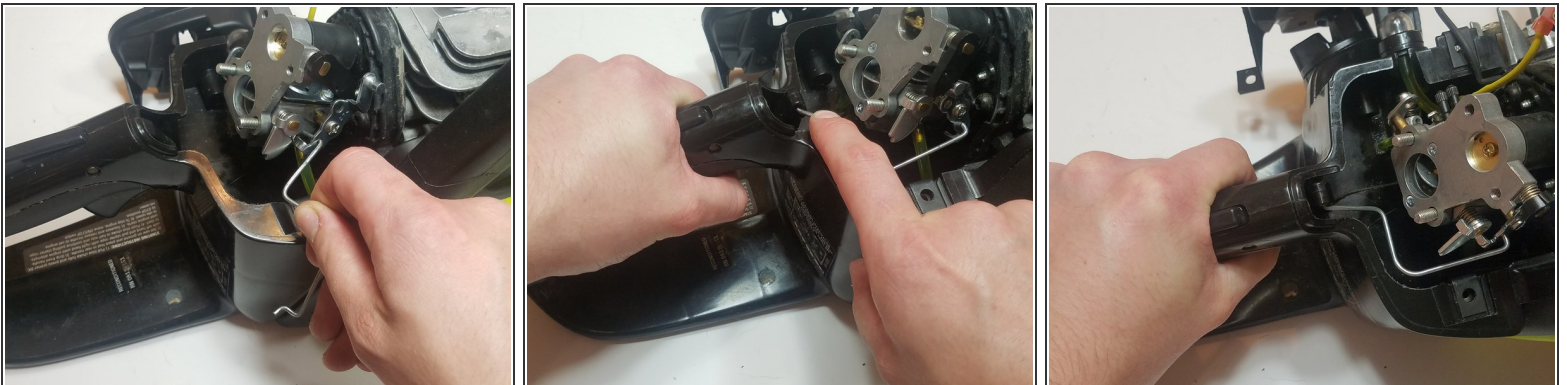
- Push the primer bulb back into the housing.
 - Cut the smaller diameter fuel line (fuel return line) and push it into the gas tank.
- i** The fuel return line should be at the bottom of the tank.

Step 25



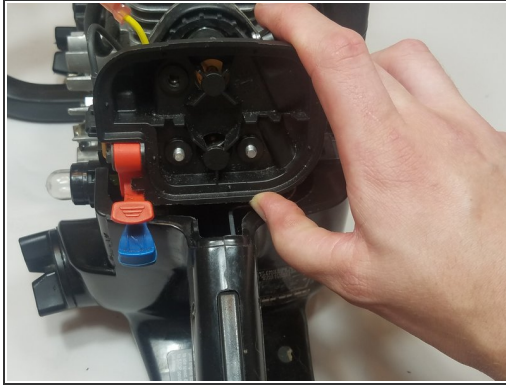
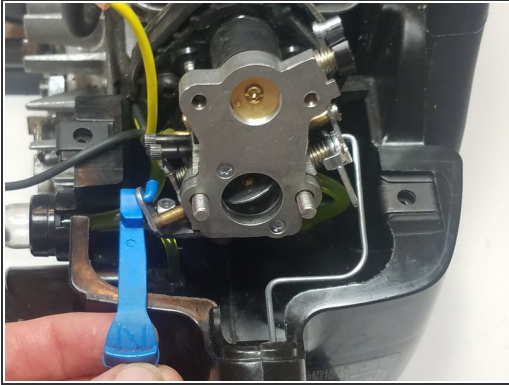
- Cut the fuel filter line and attach the new fuel filter.
- Push the fuel filter line into the gas tank.
- ⓘ The fuel filter should rest at the bottom of the gas tank.

Step 26



- Reconnect the throttle linkage to the carburetor linkage.
- Pull and hold the throttle trigger to expose the attachment point for the trigger-portion of the throttle linkage.
- Connect the throttle linkage to the throttle trigger.

Step 27



- Reconnect the choke lever.
- Slide the air filter housing back onto the carburetor mounting bolts.
- Secure the air filter housing with the two 5/16" nuts.
- Secure air filter housing with one T25 screw.

Step 28



- Install the new air filter onto the air filter housing.
- Install the air filter cover.
- Connect the kills switch wire.

Step 29



- Install the starter assembly onto the engine.
- Secure the starter assembly with four T25 screws.
- Pull the starter rope slowly until the flywheel engages the starter assembly.

Step 30



- Reconnect the spark plug.
- Install the top cover and secure with three T25 screws.

To reassemble your device, follow these instructions in reverse order.