

Rebuild Kit Instructions

36, 38, 40mm SC2 Model SmartCarbs

Thank you for being a SmartCarb® owner and for purchasing this Rebuild Kit. Proper cleaning and maintenance, including the replacement of the service parts included in this kit, will keep your SC2 performing excellently for years to come!

Refer to this guide and page 55 of your SmartCarb® User Manual for cleaning instructions (go to smartcarb.com/support or scan the QR code on the back page of this guide to view the online version of the User Manual).

Required/Recommended Tools & Items

Required Tools:

- Any tool necessary to uninstall your SC2
- Allen Wrenches (2.5mm, 3mm, 4mm)
- Circlip/Snap Ring Pliers (internal)
- 1/4" Flat Screwdriver
- Small Flat Screwdriver
- 14mm Wrench
- Pliers
- Razor Blades
- Picks

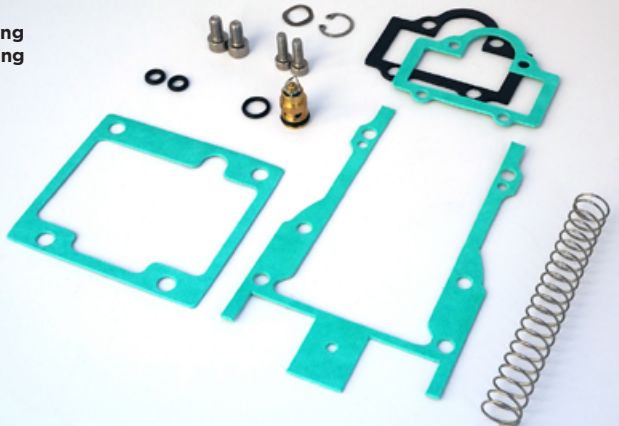
Recommended Items:

- Permatex® MotoSeal® gasket maker
- Paper Towels
- Q-Tips
- Toothbrush
- Latex Gloves
- Carb Cleaner
- Compressed Air
- Vaseline or other wipe-on lubricant
- WD-40 or other aerosolized or sprayable lubricant

Kit Components

Rebuild Kit includes:

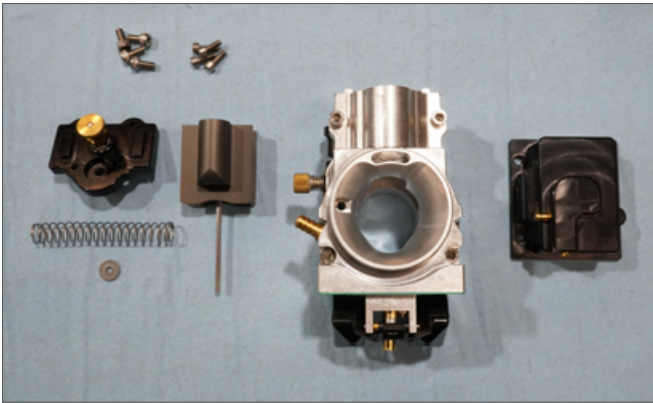
- These Instructions
- 2 Fuel Nozzle O-Rings
- Softer Throttle Slide Return Spring
- Stiffer Throttle Slide Return Spring
- Cap Gasket
- Float Bowl Gasket
- Body Gasket
- 3.8mm Needle & Seat Assembly
- 2 Cap Screws
- 2 Bowl/Body Screws
- Throttle Slide Circlip
- Throttle Slide Wave Washer



Preparation

NOTE: Rebuilding the SmartCarb® requires uninstallation and disassembly. SmartCarb Fuel Systems recommends performing a rebuild after giving it a thorough cleaning as explained on page 55 of the User Manual. Rebuild your SC2 to completion all at once to avoid forgetting where and how parts go back together and spot clean as you go with carb cleaner and Q-tips. Latex gloves are recommended to keep fuel, oil, and other grime off of your hands.

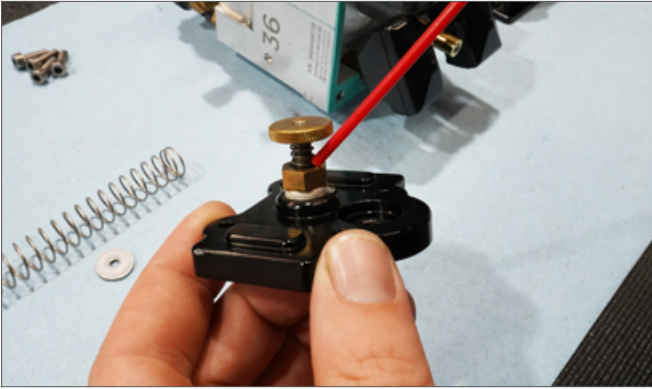
1. Uninstall your SC2 SmartCarb® making sure that **the fuel valve or petcock is turned OFF at the tank**. Lifting the rear subframe may make this process easier.
2. Remove the cap and throttle slide from the body assembly using a 3mm allen wrench and set them, the throttle return spring, and the throttle cable retainer disk aside. The throttle cable retainer disk may be stuck down in the spring pocket of the slide. If so you can poke it free from the underside using a pick.
3. Drain the fuel out of the carburetor by using a 1/4" flat screwdriver to open the drain screw on the bottom of the float bowl 1-2 turns counterclockwise. Fuel will pour out of the blue drain hose. Then fully remove the float bowl from the body assembly using a 4mm allen wrench and set them both aside.



Sonic Cleaning: A sonic cleaner may be used to clean metal SmartCarb® components and assemblies. Do not sonic clean gaskets, o-rings, the floats, or the float needle seat as doing so may damage them.

Cap Rebuild

1. Clean the cap assembly with hot, soapy water, carb cleaner, and compressed air. Use Q-tips or a toothbrush if necessary to reach into the corners.
2. Lightly apply WD-40 or other aerosolized or sprayable lubricant down along the stainless steel clicker shaft and clicker spring. Let it soak down through the cap while cycling the clicker plunger up and down. This will free the action up and de-grease the internals. Wipe off any excess dirt/grime from the clicker shaft protruding from the underside of the cap while holding the clicker thumbwheel down. Repeat as necessary until the clicker springs all the way up easily.



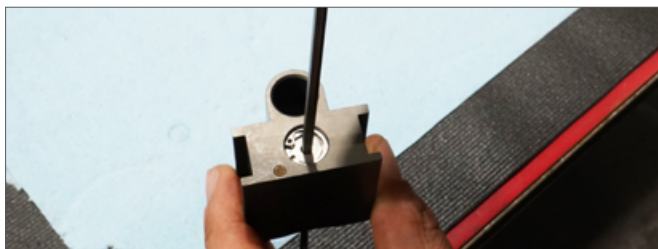
3. Inspect the cap gasket for wear. If there are frays or pieces missing it will need replaced. The Rebuild Kit includes two gaskets: one that is a green plasticized material (for aluminum caps) and one that is a black rubberized material (for nylon plastic caps). Replace the old gasket with a new one of the same color. Gasket removal may require the use of a razor blade or other flat scraper. Leave no material or debris.

Float Bowl Rebuild

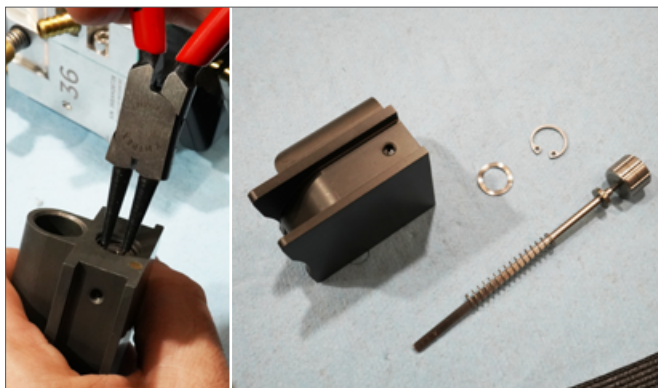
1. Remove the drain screw from the float bowl and wipe away any grime or dirt build-up off of the o-ring.
2. Clean the float bowl with hot, soapy water, carb cleaner, and compressed air or use a sonic cleaner. Use Q-tips or a toothbrush if necessary to reach into the corners.
3. Apply a thin film of Vaseline or other wipe-on lubricant to the drain screw o-ring and reinstall it using a 1/4" flat screwdriver.

Throttle Slide Rebuild

1. Insert the 3mm allen wrench into the clicker barrel on top of the throttle slide and click to the right or clockwise, counting the number of clicks until it stops. Don't force it beyond the stopping point, otherwise you risk damaging the clicker barrel and/or metering rod. Write the number of clicks down for future reference.



2. Use circlip or snap ring pliers to remove the circlip and wave washer underneath it. Then remove the metering rod assembly by pushing the metering rod upward.



3. Clean the throttle slide with hot, soapy water, carb cleaner, and compressed air or use a sonic cleaner. Use Q-tips or a toothbrush if necessary to reach into the corners.
4. Clean the metering rod to remove fuel/oil gelling or build-up. Be careful not to scratch the flat grind surface or otherwise damage or bend it.
5. Reassemble the throttle slide in reverse order using the new circlip and wave washer from the Rebuild Kit.
6. Using the 3mm allen wrench, click the metering rod assembly clockwise until it stops. That is clicker count 0. From there click the mechanism left or counterclockwise, counting the number of clicks that you wrote down in step 1 to reset the metering rod position to its former setting. Otherwise you can revert back to the factory baseline clicker count given on the back page of your Quick Start Guide (included with your original purchase).

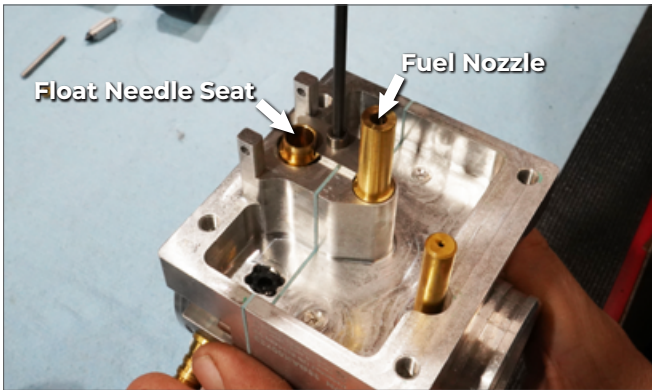
For the latest official SmartCarb® tuning baselines by application, go to smartcarb.com/support or scan the QR code on the back page of this guide.

Body Rebuild

1. Remove the floats and float needle by pulling out the float axle pin. Discard the float needle. Some earlier SC2 SmartCarbs may have a brass or nylon bushing installed on the float axle pin. Do not lose it.



2. Use the 2.5mm allen wrench to remove the stainless steel keeper holding the float needle seat and fuel nozzle in place.



3. Carefully remove the float needle seat and fuel nozzle using pliers or a smooth jaw vice if necessary. Twist while pulling. If these parts are seized in place, apply some WD-40 or other aerosolized or sprayable lubricant down around the outside of them before twisting to remove. Discard the float needle seat.
4. Use a pick or small flat screwdriver to remove the two o-rings on the fuel nozzle. Then install the two replacement o-rings included in the Rebuild Kit.
5. Use the 4mm allen wrench to remove the four body bolts. Then pull apart the two body halves and remove the body gasket.
6. Clean the two body halves with hot, soapy water, carb cleaner, and compressed air or use a sonic cleaner. Use Q-tips or a toothbrush if necessary to reach into the corners.

Body Rebuild (continued)

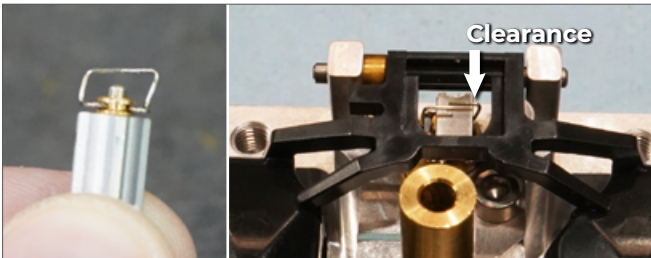
7. Install the new body gasket between the two body halves and reinstall the body screws finger tight. DO NOT tighten the screws yet.
8. Apply a thin film of Vaseline or other wipe-on lubricant to the replacement needle seat's o-ring, fuel nozzle o-rings, and in the holes that they go into.
9. Reinsert the float needle seat and fuel nozzle with a twisting motion. DO NOT push them straight in, otherwise damage to the o-rings may occur.



10. Reinstall the stainless steel keeper. Leave a small gap between the side of the keeper and the side of the float needle seat and fuel nozzle.

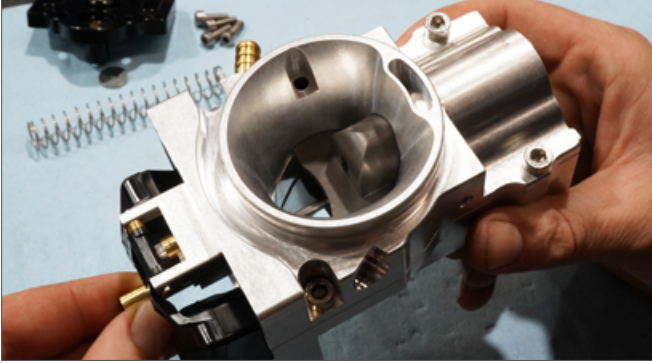


11. Install the new float needle, float, and bushing (if applicable) using the float axle pin. Some earlier SC2 SmartCarbs may have an offset float position relative to the float needle seat. If necessary, use a pair of needle nose pliers to bend the float needle bail outward to prevent side-loading against the float tab.



Body Rebuild (continued)

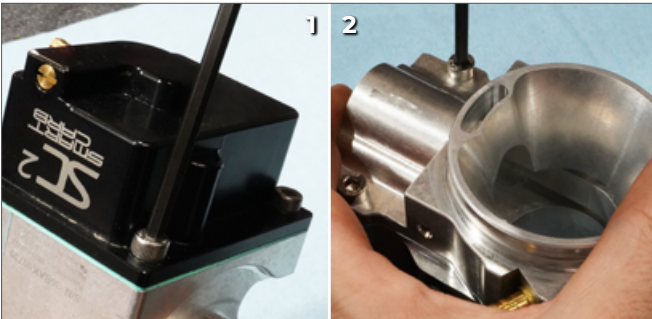
12. Reference the Float Level Adjustments document included with this Kit to confirm or set the float level.
13. Install the throttle slide assembly and, while holding the SmartCarb® at a shallow angle, cycle the throttle slide up and down by hand. It should return to closed smoothly and easily. Make any tweaks or adjustments to the fuel nozzle to free up the throttle slide return.



14. Place a small dab of Permatex® MotoSeal® or other fuel-safe gasket maker on the bottom of the body gasket, both sides.



15. Install the new float bowl gasket, float bowl, and float bowl screws. Tighten the float bowl screws first and then tighten the body screws.



Body Rebuild (continued)

16. Reference page 16 of your SmartCarb® User Manual for instructions on reinstalling your SC2 (go to smartcarb.com/support or scan the QR code below to view the online version of the User Manual).

Open the choke prior to re-filling the float bowl from empty.



Contact

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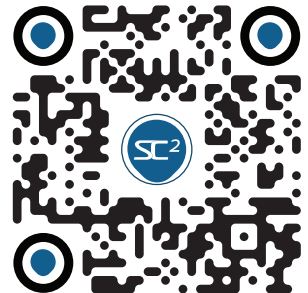
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Online Resources

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