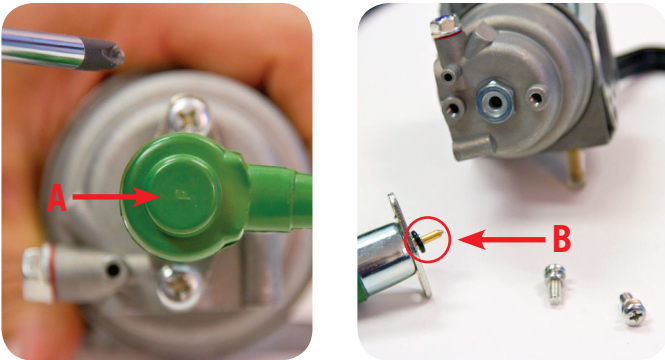


## Replacing the Standard Main Jet for High Altitude Operation

This bulletin covers the following Champion Power Equipment models (*Note: Read instructions completely before performing service*):

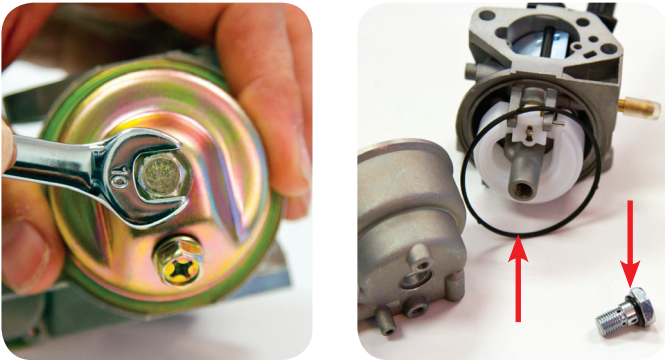
- All Champion Power Equipment products equipped with a: 439cc, 389cc, 338cc, 196cc, and 163cc engine.

- 1) Using a standard Phillips Head screwdriver, unscrew and disconnect the fuel cut-off solenoid (A) from the bottom of the carburetor float chamber. Do not lose or misplace the fuel cut-off solenoid O-ring or damage the needle. (B)



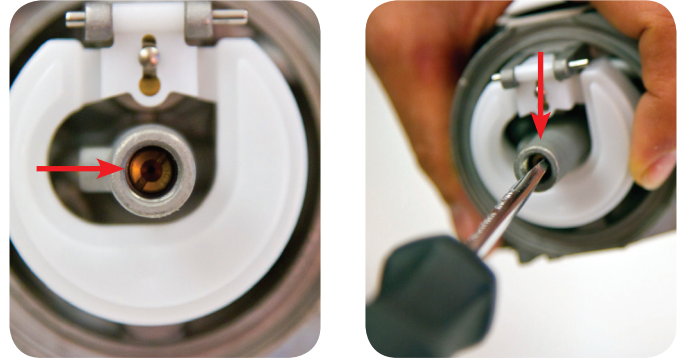
**Note: Only 439cc, 389cc, and 338cc model engines have the fuel cut-off solenoid.**

- 2) Using a wrench or socket (10mm for 196cc, 163cc) (14mm for 439cc, 389cc, 338cc), unscrew the float chamber bolt from the bottom of the bowl.



**Note: Do not lose or misplace the float chamber O-rings for the chamber or bolt.**

- 3) Using a standard Flat Head screwdriver, unscrew the Standard Main Jet from inside the carburetor body stem.



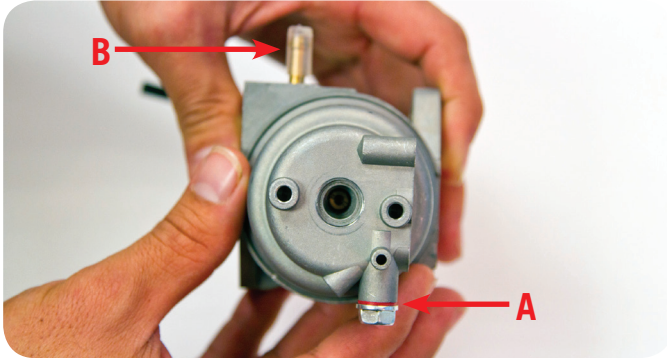
- 4) Gently shake or tap out the loosened Standard Main Jet from the carburetor body stem and replace with the correct Altitude Main Jet.



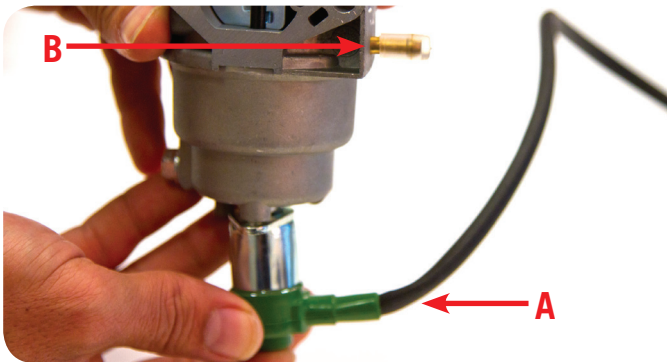
**Note: Do not remove or replace main nozzle (A) from carburetor body stem. If removed re-insert nozzle back into stem before the main jet (B), in the correct facing position pictured above.**

## Replacing the Standard Main Jet for High Altitude Operation

- 5) When re-assembling the carburetor float chamber, make sure that the float chamber drain bolt/plug/screw (A) is facing in the opposite direction of the brass fuel male nipple. (B)



- 6) Make sure the fuel cut-off solenoid (A) is facing in the same direction as the brass fuel male nipple. (B)



**Note: Fuel cut-off solenoid only on carburetors for engine sizes 439cc, 389cc and 338cc.**

**Note: When re-assembling and tightening all nuts, bolts, and screws, DO NOT overtighten, as this may cause damage to parts and threads.**

If you have any questions, please contact us at:

**Champion Power Equipment, Inc.**

*Customer Service*

12039 Smith Ave.

Santa Fe Springs, CA 90670

www.championpowerequipment.com

*Technical Service*

Mon – Fri 8:30 AM – 5:00 PM (PST/PDT)

Toll Free: 1-877-338-0999

tech@championpowerequipment.com

### Part Numbers and Altitude

439cc	Part Number	Altitude
Standard main jet	ST190FD-2-1131000-17	6000 feet (1800 meters)
Altitude main jet	490.131017.01	

389cc	Part Number	Altitude
Standard main jet	ST188FD-1131000-17	4000 feet (1200 meters)
Altitude main jet	188.131017.01	

338cc	Part Number	Altitude
Standard main jet	ST182FD-1131000-17	5000 feet (1500 meters)
Altitude main jet	182.131017.01	

163cc	Part Number	Altitude
Standard main jet	ST168FD-2-1131000-17Z	4500 feet (1400 meters)
Altitude main jet	ST168F-2-1131000-17Z	

### Part Numbers and Altitude for 196cc Engines Only

Carburetor Code	Main Jet	Part Number	Altitude
P19-1-Z	Standard	ST168F-2-1131000-17Z	6000 feet (1800 meters)
	Altitude	468.131017.01	
P19-2-Z	Standard	ST168FD-2-1131000-17Z	
	Altitude	ST168F-2-1131000-17Z	
P19-3-Z	Standard	ST168FD-2-1131000-17Z	
	Altitude	ST168F-2-1131000-17Z	
P19-2-H	Standard	ST168FD-2-1131000-17H	
	Altitude	ST168F-2-1131000-17H	
P19-3-H	Standard	ST168FD-2-1131000-17H	
	Altitude	ST168F-2-1131000-17H	

### ⚠ WARNING

Operation using the alternative main jet at elevations lower than the recommended minimum altitude can damage the engine. For operation at lower elevations, the standard main jet must be used. Operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance.