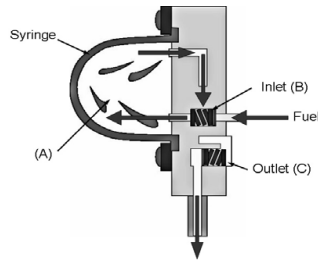


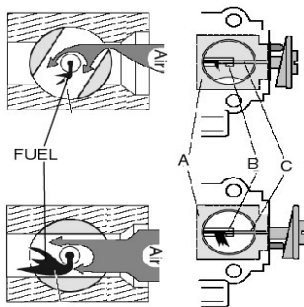
# PRINCIPLES OF OPERATION

## PRIMER PURGE PUMP



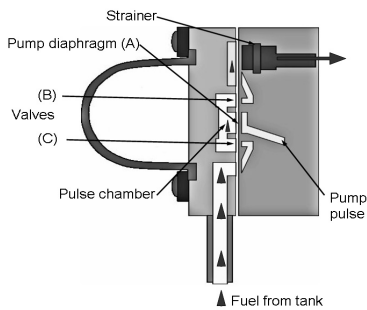
- The purge pump is comprised of purge bulb (A), inlet check valve (B) and outlet check valve (C).
- When the purge bulb (A) is depressed, the outlet check valve (C) opens and air or fuel is forced through the outlet check valve (C) to the fuel return hose fitting.
- When the purge bulb (A) is released, the outlet check valve (C) closes and the inlet check valve (B) opens to draw fuel from the metering chamber.
- Vacuum created by the expanding bulb draws fuel from the fuel tank through the fuel passages of the carburetor into the purge bulb (A).

## THROTTLE BODY



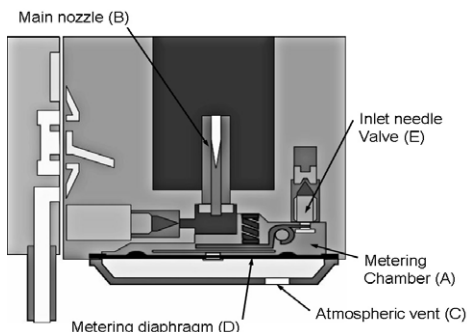
- The throttle valve (A) is a hollow barrel. Rotation of the throttle valve controls the opening of the throttle and also controls the air volume.
- The main nozzle (B) has a slot port to discharge and is located in the center of the throttle valve for maximum air velocity. The throttle valve needle (C) is installed into the main nozzle to control fuel volume. The throttle valve needle moves upward by cam action of the throttle valve, proportionate to the opening the throttle valve.
- At idle the throttle valve is slightly open. The valve needle is at its lowest position, the main nozzle only slightly open.
- As the throttle is opened, the opening of the valve enlarges to allow more airflow into the valve and simultaneously raises the throttle valve to increase fuel flow from the main nozzle.

## FUEL PUMP



- The diaphragm (A) is operated by alternating positive pressure and negative pressure pulses generated in the crankcase.
- The valve (B) and (C) open and close alternately to direct the fuel flow from the fuel tank to the inlet needle valve. Fuel is filtered by the strainer prior to entering the metering chamber.

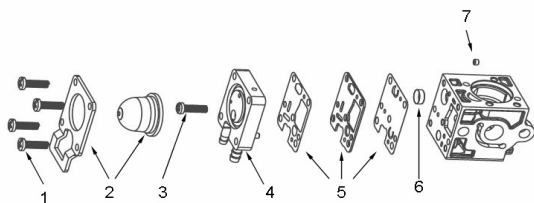
## METERING CHAMBER AND INLET NEEDLE



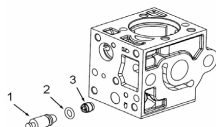
- The metering chamber (A) functions as a reservoir for fuel.
- As the engine rotates, air is drawn into the throttle valve by crankcase vacuum. This creates depression in the area of the main nozzle (B).
- Atmospheric pressure acting through the atmospheric vent (C) depresses the metering diaphragm (D) forcing fuel from the main nozzle (B) and simultaneously opening the inlet needle valve (E) to allow fuel into the metering chamber (A).
- The metering diaphragm controls the amount of fuel in the metering chamber.

# RB ROTARY DISASSEMBLY AND SERVICE

## FUEL PUMP

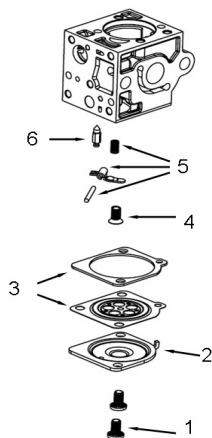


1. Remove four syringe retainer screws.
2. Remove syringe retainer and syringe.
3. Remove base primer screw. Remove base primer. Replace if primer does not function.
4. Remove surge diaphragm, pump gasket, and pump diaphragm.
5. Inspect pump diaphragms and gasket, replace if they show any signs of wear, wrinkles, curling or tears.
6. Remove fuel strainer installed in the carburetor body. Inspect for dirt and foreign matter. Replace if necessary.



## FIXED JET MODELS

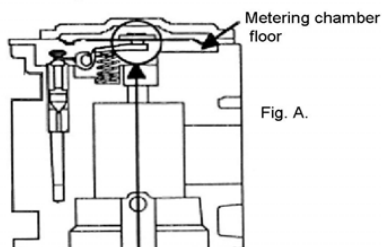
1. Remove plastic nozzle plug.
2. Inspect nozzle plug and o-ring. Replace if they show any signs of wear.
3. Remove jet. Inspect for damage. Do not run drill or wire through jet for cleaning.



## METERING DIAPHRAGM AND INLET NEEDLE VALVE

1. Remove two metering cover screws.
2. Remove metering chamber cover.
3. Remove metering diaphragm assembly and metering cover gasket. Inspect metering diaphragm for dirt and foreign matter, replace if they show any signs of wear, wrinkles, curling or tears.
4. Remove metering lever screw.
5. Remove the metering lever, pin and spring. Inspect the metering lever; it should not be worn where it contacts the inlet needle valve or pin. Replace if necessary.
6. Remove and inspect the inlet needle valve. The tip should not be deformed where it contacts the seat. A ring on the needle tip is normal. When you run your thumbnail across the surface of the tip you should not feel groove. Replace if necessary.

Adjustment of metering lever for RB models



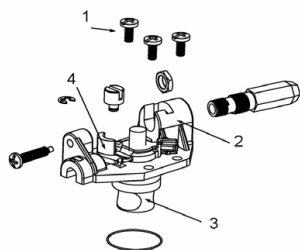
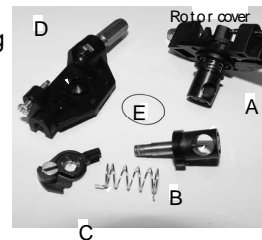
Free end of metering lever is about flush with the gasket flange of the carburetor body.

## NOZZLE

- Nozzle Assembly cannot be removed.
- Clean with aerosol cleaner and compressed air.

## ROTOR

1. Remove two rotor cover screws.
2. Remove rotor cover carefully.
3. Inspect rotor for damage. Rotor assembly should not be broken or worn. Areas to look for wear are A) rotor B) jet needle C) return spring D) boot E) O-ring
4. Remove Rotor guide carefully. The plastic guide must be smooth and free from cracks or chipped edges.
5. Inspect and clean Roller guide. Pay attention when disassembling carb to remove the roller guide and set aside so that it is not misplaced when cleaning the body.



## CARBURETOR BODY

- Clean the carburetor body. Channels can be cleaned with aerosol cleaner. Do not use wires or drills to clean the orifices. Inspect the operation of the throttle valve and lever.