

## OPERATING INSTRUCTIONS

### FUEL MIXTURE

Normal operation mixture for Power Bee 2-cycle engines is 1/3 pint (BIA-TCW) two cycle oil with each gallon of gasoline thoroughly mixed in a separate container.

Regarding gasoline, any brand with an octane rating of 87 is recommended. The use of any brand with any alcohol content should be avoided.

Strain the fuel mixture through a fine meshed screen when filling gasoline tank to remove any dirt and water if present.

### PREPARATION FOR STARTING

1. Fill gasoline tank with fuel mixture prepared per above instruction. Wipe up all spilled gasoline.
2. Open gasoline shut-off valve.
3. Move choke lever to closed position.

**NOTE:** If engine is warm, it may not require choking.

4. Open the throttle and crank engine.
5. When engine starts, move choke lever to open position.

**NOTE:** A starting point of 1 turn out from closed should be used for both the low and high speed mixture needles. Occasional readjustment may be required but it is not necessary to readjust for starting except for cold weather starting when it may be necessary to open the high speed adjusting needle an additional 1/8 turn.

### TO STOP ENGINE

Switch will stop engine by shorting magneto to ground.

### CARBURETOR ADJUSTMENT

1. Turn both adjustment needles clockwise until completely closed.

**CAUTION:** Do not force needle tightly closed as the seat may be damaged.

2. Turn both needles counter-clockwise one turn.

3. Start engine and allow it to warm up, then, if carburetor setting is too "lean", engine will not run at full speed and will "pop" and may stop. Turn main adjustment needle counter-clockwise an eighth of a turn at a time until the engine runs smoothly.

If the engine runs at full speed without load, but will not maintain full speed under load, turn the main adjustment needle counter-clockwise 1/8 turn.

If carburetor setting is too "rich", engine will not develop full power but will roll and run unevenly under load. Turn main adjustment needle clockwise 1/8 turn at a time until the engine runs smoothly.

4. To verify proper idle needle setting, start engine and allow to warm up. If motor surges, and runs at uneven speed, turn the idle adjustment needle slowly clockwise up to 1/4 turn. If this aggravates rather than corrects the situation, return to the original setting, then turn the idle adjustment needle slowly counter-clockwise up to 1/4 turn. This should cause the engine to "settle down" and run at a constant speed. If engine fails to accelerate, open idle screw 1/8 turn.

5. If engine runs too fast at idle speed, back out the idle stop screw a little at a time until desired speed is obtained. To increase idling speed, turn in the idle stop screw.

## MAGNETO IGNITION

1. Breaker point gap should be set at .020". Set points with cam follower at highest point of breaker.
2. Directional arrow on cam must be up.
3. For magneto inspection or service, contact your nearest authorized dealer.
4. If magneto stator plate is loosened or removed from the engine for any reason, be sure it is reinstalled as follows:
  - A. Place stator plate in position.
  - B. Install hold down screws, but do not tighten.
  - C. Turn stator plate to the mid-range position.
  - D. Tighten screws.
  - E. Reset breaker points to .020" gap.

This places the stator plate in the position for correct ignition timing.

## AIR CLEANER

Under ordinary operating conditions, the air cleaner should be cleaned daily. However, under extremely dirty conditions, more frequent cleaning is recommended. To clean the air cleaner, follow equipment manufacturer's recommendations.

**IMPORTANT:** Dirt that enters the engine through the carburetor is one of the greatest causes of engine wear. Therefore, it is very important that the air cleaner be serviced regularly.

## STARTER SCREEN

The screen keeps dirt, etc., from entering the fan housing and clogging the air cooling passages.

Because this engine is air-cooled, it is necessary to keep this screen clean at all times to permit the unrestricted passage of air into the fan housing.

## SPARK PLUG

Check and clean spark plugs regularly. A fouled, dirty, or carboned plug causes hard starting and poor engine performance.

Set spark plug gap at .030".

## STORING MOTOR

1. The following steps should be taken to prepare your engine for storage.
2. Close gasoline shut-off valve.
3. Start engine and allow to run until it stops from lack of fuel. This will use up all the fuel in the carburetor and prevent the formation of deposits due to evaporation of fuel.
4. Disconnect fuel line and permit all fuel to drain from the gasoline tank. Replace fuel line.
5. Remove spark plug and pour 1/4 cup of motor oil into cylinder. Replace spark plug.
6. Crank engine two or three times to distribute oil throughout the cylinder. This will coat the cylinder walls with oil and prevent rust from forming during the storage period.

## TORQUE CHART

**FLYWHEEL 420 In. Lbs.**  
**CONNECTING ROD 80-90 In. Lbs.**  
**SPARK PLUG 120-180 In. Lbs.**

## GENERAL SCREWS

<b>10-24</b>	<b>30 In. Lbs.</b>	<b>1/4-20</b>	<b>70 In. Lbs.</b>
<b>10-32</b>	<b>35 In. Lbs.</b>	<b>5/16-18</b>	<b>160 In. Lbs.</b>
		<b>1/4-28</b>	<b>75 In. Lbs.</b>