

# Operating Instructions

## **FUEL MIXTURE**

In a separate, clean container thoroughly mix 6 oz. of a high quality (BIA-TCWIII) or SAE approved two cycle oil with each gallon of gasoline.

Use a regular unleaded grade of gasoline. High test, high octane gasoline is not recommended.

Strain the fuel mixture through a fine meshed screen when filling the gasoline tank on the engine. This will help to remove dirt and water if present.

## **PREPARATION FOR STARTING**

1. Fill gasoline tank with fuel mixture prepared per above instructions. 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. When the engine starts, move choke lever to open position.

**NOTE:** The normal main adjustment needle settings are approximately one turn open. 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**

ON/OFF switch will stop engine by shorting ignition.

## **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 counterclockwise 1 turn. This is the average setting for proper engine operation.
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 counterclockwise 1/8th of a 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 counterclockwise 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 idling speed, loosen the idle stop screw a little at a time until desired speed is obtained. To increase idling speed tighten the idle stop screw.

## **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 manufacturers 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 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 passage of air into the fan housing.

## **SPARK PLUG**

Check and clean the spark plugs regularly. A fouled dirty, or carboned spark plug causes hard starting and poor engine performance. Set the spark plug gap at .030.

## **STORING ENGINE**

The following steps should be taken to prepare your engine for storage:

1. Close gasoline shut-off valve.
2. 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.
3. Disconnect fuel line and permit all fuel to drain from the gasoline tank. Replace the fuel line.
4. Remove spark plug and pour 1/4 cup of motor oil into cylinder. Replace spark plug.
5. Crank engine two or three times to distribute oil throughout 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**

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