

## USER MANUAL AGM GAS ENGINE

### AGM-30



*AGM series gasoline-engines is design for model airplanes only, with high power output and light weight, it's ideal engine for any kinds of model planes that need power around 30CC.*

### 1. Safety Instructions

- 1) Gasoline engine is not a toy. Serious injury may result from improper use. We are not responsible for any injury, damage or other loss resulting from its use.
- 2) Before every use, check the engine assembly, propeller and airframe carefully for loose screws and nuts. Loctite is strongly recommended on all the screws.
- 3) During the break-in process, engine must running with shock absorber installed. Or the engine will be seriously damaged by vibration.
- 4) Always stand clear of and behind the propeller; never allow anyone including yourself, to be in front of or to the sides of the propeller when starting or running the engine. Anyone near the engine should wear protective eyewear. Do not wear loose clothing near the engine or propeller.

### 2. Specifications

#### 1) Performance

3.7HP/8500rpm
Idle Speed: 1600rpm/min.
8.5Kg Static Thrust/100 meters Altitude
7.5Kg Static Thrust/1800 meters Altitude
The specification of the aircraft propeller: 18x8; 18x10; 19x8; 20x8
The type of the sparking plug: NGK CM6

#### 2) Parameter

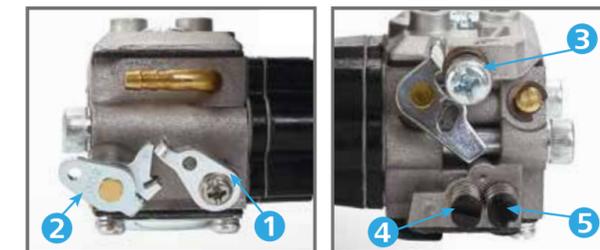
Exhaust Amount: 30.5cm <sup>3</sup>
Diameter × stroke: 36mm×30mm
Ratio of compression: 7.6:1
Ratio of lubricating capacity: 30:1
Weight: Main engine - 920g      Exhaust pipe - 60g Ignition equipment - 120g

### 3. Engine Adjustment

- 1) Every engine has been adjusted to average mixture settings which will most likely allow the engine to start and run in most locations. However, as altitudes and barometric pressures vary by location, it is very likely that the carburetor mixture settings will need to be adjusted to obtain optimum performance.

### 2) Functions and Adjustments

- (1) Throttle Lever
- (2) Choke Lever
- (3) Idle Speed Adjustment Screw
- (4) Low Speed Mixture Adjustment Screw
- (5) High Speed Mixture Adjustment Screw



**Adjustment:** A general starting point is 1.1 turns out for the low speed needle (See No.4), and 1.5 turns out for the high speed needle (See No.5).

Adjust the High needle to peak rpm. If ever the engine slows or dies while at full throttle, the high speed mixture is likely too lean.

Adjust the Low needle until you achieve a smooth idle and a reliable transition to high throttle. If the engine dies when the throttle is advanced, the mixture is likely too lean. If the engine stumbles when the throttle is advanced, the mixture is likely too rich.

**Caution:** Don't be tempted to run an overly rich mixture. A too rich mixture will only result in poor engine performance (engine easily off in a quick accelerating and decelerating process), pre-mature carbon buildup, a fouled plug and excessive exhaust residue. However, a lean mixture will also damage the cylinder and piston badly. After few times full throttle test and check the spark plug, it appears to be yellow if mixture had been set properly.

### 3) Start-up the engine

**Step 1:** Close the choke and turn on the ignition, advance throttle to full position.

**Step 2:** Briskly flip the prop through compression until the engine fires and then dies. It may take a few more flips if this is first time to start the engine after being stored for a long period.

**Step 3:** Open the choke and briskly flip the prop through compression, advance the throttle to very slightly above the idle position, the engine should start in just a few flips.

**Step 4:** Open the choke, advance the throttle to very slightly above the idle position, turn on the ignition and briskly flip the prop through compression.

### 4. Maintenance of the engine

1) Please use the petrol 93#. The ratio of petrol and engine oil is 30:1. **Do not mixed up different brand of engine oil, carburetor could be seriously blocked.**

2) Breaking-in at 4000RPM/min for 2 hours. Running at low speed for too long might carbonize the spark plug.

3) Always check the tube at fuel system, make sure there is no air leaking.

4) The exterior of the engine should be kept clean and inspected regularly. Please use AGM#2 spark plug, or engine could seriously damaged because of carbon buildup and overheat.

5) Notice: The carburetor fuel screen should be cleaned periodically also. Carefully remove the pump cover (inlet side of the carburetor), gasket and pump membrane. The screen will be visible and can be cleaned after careful removal.



**Caution**

Read the manual carefully before operation. Serious injury may result from improper use.