

***CRRCpro GP50R* Gasoline Engine**



Thank you very much for choosing this engine. Hope it will bring you a good happy time. In order to get a good operation, please read the instruction in detail as below.

I、Parameter

Type:	Two-stroke piston valve petrol aircraft engine
Displacement(cc):	50.8cc
Bore x Stroke:	43mmx35mm
Carburettor:	Walbro(Diaphragm & Butterfly Valve)
Max. Output:	5.4PSps/7800rpm
RPM Range:	1300-7600rpm
Weight:	About 1740g (Without ignition battery)
Ignition power:	DC 4.8 Volts (4 cell NiCad or NiMh battery, ensure battery have max. electric currency of 0.5A or use 5V stable power supply)

Fuel mixture
(Ratio of gasoline and oil): 25-35 : 1
Propeller: 22X8, 22X10, 23X8
24X6(2-blade prop.)

WARNING:

- 1、 This engine is specially designed for the airplane model. Please don't use for any other purpose.
- 2、 We're responsible for the replacement due to our manufacturing defect. However, we don't take charge of improper operation, unfamiliar repair work, re-build without permission or using non-original parts.
- 3、 Attention! This engine is not a toy. Any misuse may cause serious injury or even death. Please read it carefully to know how to use & operate.

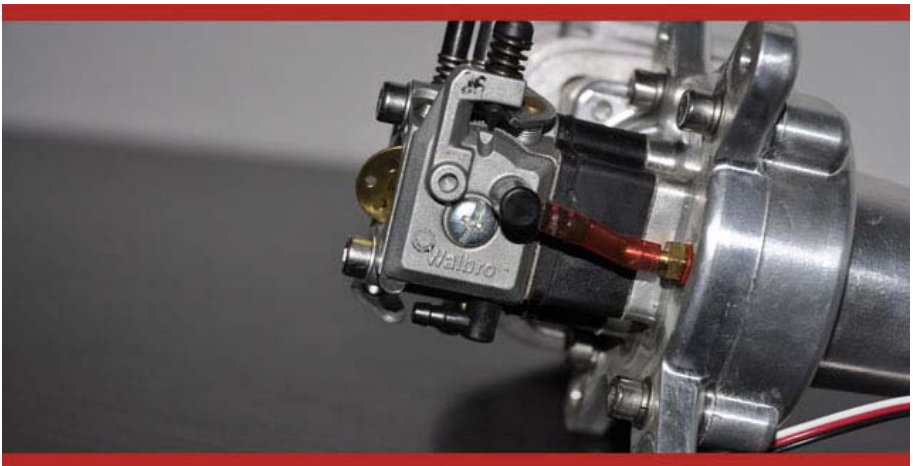
II、 Notice before assembling & starting engine

- 1、 Make sure there is a specially designed and firmed engine assembling position on your model. If not, it can assemble onto the airplane to break-in.
- 2、 Fix the engine properly.
- 3、 Have adequate airflow & cooling for the engine. Supply big enough exhaust hole as to cool the engine.
- 4、 Use an approved propeller and spinner. Tighten and balance the propeller correctly, and check it from time to time.
- 5、 Mount the ignition properly and avoid overheating.
- 6、 Use suitable battery and switch which should match with your ignition.
- 7、 Use suitable fuel tank and fuel line(Tygon) for the engine.
- 8、 Use suitable fuel mixture(gas & oil) to ensure good break-in & flying.
- 9、 Ensure fuel is clean.
- 10、 Keep engine clean enough that it will not affect the heat elimination.
- 11、 Ensure the airplne model is fixed firmly, then start the engine.
- 12、 Start your engine in a perfect way.
- 13、 Adjust the carburettor correctly(Don't adjust the high/low speed needles in random if you're not 100% certain).

- 14、 Ensure that your spark plug is in good condition and is tightened correctly.
- 15、 Make sure all the spectators are behind the propeller to avoid the accidents which caused by the propeller.
- 16、 Wear suitable clothes. Don't wear necktie, jewellery etc. in order to avoid the wrapping by running propeller.
- 17、 After engine started, please stay behind the running propeller. Don't stand in front of it or beside it.
- 18、 Don't test & start engine on a soft sand or stone place. It will damage the engine easily.
- 19、 Please operate the engine in a well-ventilated place. Otherwise, the exhaust gas will affect your health.
- 20、 Be careful to the operated engine as it is hot.

DECLARATION: We cannot control the safe operation of our products. So we're not responsible for the injuries or loss due to in-proper operation.

III、 Carburettor settings



Every engine is inspected & operated strictly before packing. The basic

settings for the high and low speed needles are as follows:

High speed needle: 1 +1/2

Low speed needle: 1 +1/2

Please adjust the needles after sufficient break-in. Use fuel filter to avoid something into the carburettor. Wash it completely before using new fuel tank.

Carburettor settings will affect the engine's performance directly. Please set it according to its throttle response, high RPM & burning of spark plug.

IV、 Engine Start

If this is the first time of you to start the engine, please fill a little lubrication to the spark plug hole and turn the propeller assembly lightly to make the piston lubricated enough.

- 1、 Remove the spark plug and fill some lubrication to the cylinder.
- 2、 Turn the output shaft to make the cylinder & piston lubricated sufficiently.
- 3、 Put the engine to a right place, connect the fuel pipe & mount the propeller.
- 4、 Use your left hand to choke the air intake and turn the propeller till you feel left hand have oil.
- 5、 Connect the CDI. Make sure CDI & spark plug are good.
- 6、 Tighten the idle screw with two circle(make the starting RPM a little higher and add some throttle when starting, such as the glow engine).
- 7、 Close the choking and assemble the spark plug to the cylinder, then start it with rocking propeller.
- 8、 Open the choking when heard the combustion noise. To rock the propeller till engine starts.
- 9、 Every engine is tested by the manufacturer before sending. If it is dismantled by oneself, please check if the re-assembling is right.
- 10、 Don't change the position of the sensor as it is very precise.
- 11、 Don't use other ignition to this type of engine.
- 12、 Generally, you can start the engine successfully by step of "7" & "8" after break-in.

V、 Engine Break-In

- 1、 Recommended gasoline is 93# and lubrication ratio is 25:1. After break-in, the lubrication ratio can be 30:1 or even 35:1. Don't change the lubrication's brand or level frequently. Please use oil for 2-stroke engine only. Use FB level mineral oil when break-in, but not high level's synthetic oil.
- 2、 After starting, let the engine run stably with middle & low RPM(about 3000-4000RPM). After 30 minutes, turn off the engine to check it and let it cool naturally. Repeat the above process till the break-in period is about 2 hours. Don't let the engine run in a low RPM for a long time as it will damage it.
- 3、 Don't adjust the needles in random when break-in(except idle screw).
- 4、 Please use the lubrication ratio of 30:1 if it is 3D flying.
- 5、 Now you can fly it, but please pay attention:
 Don't let the engine run with high RPM for a long time!
 Make the engine in a good cooling environment!
 Don't decrease the content of the lubrication so much!
 Finally the break-in process is finished after the engine running for more than 20 hours.

VI、 Pilots check list

- 1、 Checking before flying:
 Keep the distance between engine & CDI and receiver more than 20cm.
 If use wood propeller, please check if it is perfect.
 Check the gasoline and see if the lubrication ratio is right.
 Check the spark plug if it is good.
 Check the ignition & canister system if are mounted firmly.
 Check the engine & propeller screw if are mounted firmly.
 Check all the pipe or lines are connected correctly.
- 2、 Checking after flying:
 If engine is overheating?
 If spark plug burning is normal?
 All bolts and nuts have looseness?
 All the pipes or lines are good?

VII、 Maintenance

- 1、 Please clean it and put it in a dry environment if you're not going to use for a long period.
- 2、 Please remove the spark plug if put the engine with inverse.
- 3、 Please avoid insect, dust & water into the engine.

VIII、 Problem analysis

1、 If engine cannot start, please check:

Oil is fed?

Fuel is too much?

Oil in the cylinder is too much?

Ignition is fired?

Sensor position is right?

If you've dis-assembled engine, check if the re-assembling is right.

2、 If acceleration weak or high speed cough, please check:

Battery voltage is low?

Ignition system has leakage?

The connection between carburettor & cylinder has leakage?

The carburetor adjustment is right(Low speed needle is too tight or high speed needle is too loose)?

Engine has leakage?

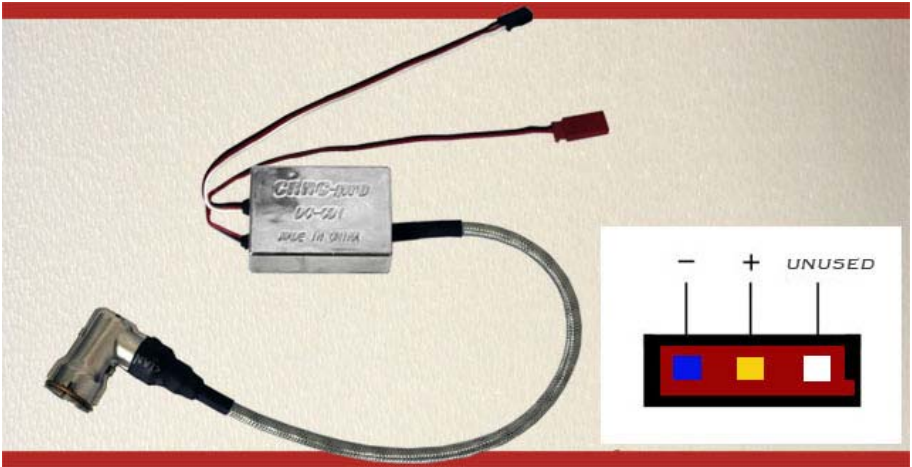
NOTE: Any problems when you're operating, please contact to us or our distributor. We'll serve you with our best.

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Ignition Instruction



NOTICE:

- 1、 High voltage inside! Please don't dismantle by yourself!
- 2、 Don't power-on the power supply before the ignition shield connected to the spark plug, as to avoid the damage of ignition.
- 3、 Don't let the water or oil into the ignition. Don't use it in a wet environment.
- 4、 Repair the independent power supply for the ignition. Don't share the power supply with remote facilities as to avoid affect of the receiver.
- 5、 Don't let the throttle rod touch the high voltage line.
- 6、 Mount the ignition on a right place to avoid the overheating.
- 7、 Fix the high voltage line, power supply line & sensor line separately.
- 8、 Use manufacturer's original spark plug.
- 9、 If there are choked vibrating and high speed go-up difficulty, please check if the ignition battery's capacity or voltage is sufficient. When engine is running with high speed, it needs electric currency output of 600MA.