

CRRCpro GF50I MANUAL

Thank you for using our engine! We hope that you will enjoy it and have many fun and safe flying experiences with its use. In order to maintain its performance and safety when you are using it, please read the detailed instructions fully before operating this engine.



Specifications:

Type	2 Cycle Air Cooled Gasoline Engine for airplane use only
Displacement (cc)	50cc
Bore x Stroke (mm)	43mm*34mm
Dry Weight (kg)	1660g (not including the ignition battery)
Carburetor	Walbro (Diaphragm & Butterfly Valve)
Maximum Output	4.9ps @ 7500 RPM
RPM Range	1600RPM Idle / 7800RPM Full throttle
Ignition	Auto advaced DC-CDI (EMI Certified)
Ignition Power	DC 4.8 Volts (4 cell NiCad or NiMh battery)
Lubrication Oil	2 cycle Engine Oil
Fuel Mix – Break In Approx: 15 Hours Ratio – Gasoline : Oil	25:1
Fuel Mix – General Ratio – Gasoline : Oil	40:1
Recommended Propellers	20 x 10; 22 x 8; 22 x 10 (two leafs)

Warning!

Warning! This engine is not a toy! Serious injury and/or death can occur from its misuse! READ and become familiar with this entire instruction manual. Learn the engine's

applications, limitations, and possible hazards.

This gasoline engine is strictly intended for model aircraft usage only, please do not use in the other untested applications.

For safe operation and to maintain your warranty you must:

1. Have a properly designed engine box on your model
2. Mount the engine correctly
3. Provide adequate air flow and cooling for the engine
4. Provide adequate air flow and cooling for the exhaust
5. Use an approved propeller and spinner
6. Please ensure that the propeller is balanced, as an imbalanced prop robs power.
7. Tighten the propeller nut and engine mounting bolts correctly and check them often
8. The ignition module can get hot during operation, ensure appropriate cooling.
9. Use the correct battery and regulator (if applicable) for your ignition
10. Use the correct switch for your ignition
11. Use a fuel tank and fuel line (Tygon) suitable for gasoline operation.
12. Use the correct fuel mix for break in (25:1) (gas and oil)
13. After engine break, the recommended mix is (40:1) (gas and oil)
14. Adequate filtering of your fuel ensures reliable operation
15. Maintain your engine by keeping it clean
16. Use a pre-flight check list before flying your model. See section on recommended pilot's check list
17. Secure your model properly when starting
18. Do not use your fingers or hand to start your engine, use a starter
19. Adjust your carburetor correctly
20. Ensure that your spark plug is in good condition and is correctly tightened
21. Make sure that your ignition wires are not frayed and appropriately secured
22. Ensure that your ignition cap is securely mounted
23. Keep all spectators away and behind the line of the spinning prop
24. Do not allow any part of your body to come in contact with rotating propeller. Exercise common sense
25. Do not wear loose clothing and watch your radio neck straps. These can get caught in the moving propeller
26. Always wear eye protection when starting the engine.
27. Do not operate this engine if you are under the influence of any drugs, alcohol or medication that could affect your ability to use the engine properly.

Disclaimer:

We cannot control the safe operation of our products. We do not accept responsibility from injuries or damage to property resulting from the misuse and abuse of our products.

Carburetor settings:

Every engine is bench run at the factory prior to shipment and packing. During this Quality assurance process, the carburetor is adjusted for optimum settings. The High and Low needle settings are adjusted. The basic settings for the high and low needles are as follows:

High-speed needle H: 1 1/2 Turns from close

Low-speed needle L: 1 3/4 Turns from close

Note: Do not remove the carburetor spring as the spring helps keep the carburetor butterfly valve correctly aligned. Spring tension may be relieved by unhooking the spring. Do not remove the spring or inconsistent operation will result.

Engine Break In

Use a good quality 2 cycle engine oil

Use a fuel mixture of 20-1 or 25-1 (Bench running)

Use this fuel mixture for approximately 2-3 hours of run time, we suggest that you bench run the engine to become familiar with its operation. A high Octane unleaded fuel (98 Octane is ideal) is recommended. Do not run the engine at full throttle for more than ten seconds during this test stand break in as the engine will not be getting the normal cooling effect that you would get if the engine was in a model that was flying. The GF50i engine requires approximately 12-20 hours running time to complete the break in process. We recommend using a smaller propeller during the engine break in period.

Safety Note:

Remember that when the engine is running every one must stay behind the line of the rotating propeller; never to the side or the front! The GF50i produces a lot of power, a defective propeller will disintegrate to the side and forward. Stay behind the turning propeller at all times!

Engine Cooling

A proper cooling system is vital for any engine. An air cooled engine requires an appropriately sized air intake. Also to keep this air cooling process working the incoming air must be exhausted. Further, the exhaust air outlet should be four times (4X) the size of the cool air intake.

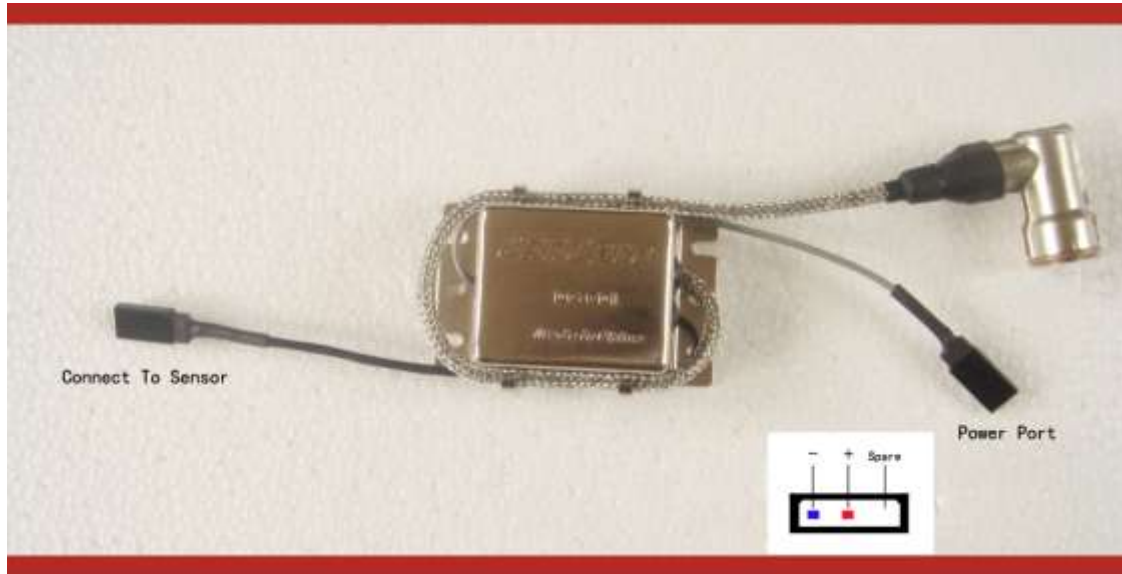
Example:

- . 10 square inches of air intake area would require
- . 40 square inches of exhaust air outlet area

It is up to you to insure that the air flows freely to, over, and away from, the hot cylinder(s) and muffler(s).

DC-CDI details:

The DC-CDI module is a Micro Controller Type Electronic Ignition Module with Auto Advanced Timing. Please observe the following operational requirements:



1. The power connector to the DC-CDI module is polarized. It is the Grey cable. Check the illustration above. The connector is a standard RX battery connector with the middle positive pin (+ve). Reverse polarity can result in damage to the module and invalidates warranty.
2. The position of the ignition sensor for the DC-CDI module has been set at our factory for optimum performance of the CRRC50i. Do not change it.
3. The sensor cable is BLACK; it is next to the shielded Ignition lead. This sensor connection uses a Futaba J connector and mates perfectly with the sensor installed on the CRRC GF50i engine.
4. Isolate the DC-CDI module from vibration, we recommend that you locate the DC-CDI module behind the firewall. Do not let the module get wet or allow it to be flooded with fuel.
5. Please locate the DC-CDI module away from the receiver and servos to minimize RF interference potential.
6. The DC-CDI uses a secondary 4.8Volt battery for operation. (We recommend a 4 cell NiCad or NiMh battery pack with at least 1000 MAh capacity) Please do not use the receiver battery for your DC-CDI module. You must use a separate power source for the DC-CDI module.
7. Low pack voltage can cause the DC-CDI module to misfire, resulting in erratic engine performance. If you observe this in flight please land quickly and recharge you power pack.
8. Check the DC-CDI module power pack voltage before flying .

DC-CDI Note:

The DC-CDI is a very robustly designed electronic device. During operation **VERY HIGH VOLTAGE** is generated to ensure a strong spark and smooth operation of your GF50i engine. High voltage from the module can be potentially lethal. Do not attempt to open or service the unit. The electronics in the module has been factory sealed and is not field serviceable.

We warranty the DC-CDI module for one year under normal operating conditions. Opening or tampering with the unit automatically invalidates warranty. Use or abuse of the unit will also invalidate warranty.

Pilots check list

We strongly recommend checking the following items regularly for your own safety before starting!

1. Check the propeller bolts for tightness
2. Check that the spinner is firmly attached
3. Check the propeller for possible damage
4. Check to be sure you have the throttle position at idle
5. Check all batteries
6. Check servo functions
7. Check to see that the ignition switch is OFF
8. Check pressure (6-8 bar) system of retract (if applicable)
9. Check all linkages for play
10. Check your wheels for possible damage and easy running
11. Check the wing mounting for tight fit and proper attachment
12. Check the canopy for tight fit and proper attachment
13. When starting the engine one person (minimum) has to hold the model

Trouble Shooting

Problem	Solution
The engine is flooded (the crankshaft housing is filled with fuel).	Remove the spark plug; turn the engine to a position where the fuel runs out.
The engine starts after being choked but then stops soon after.	The low needle on the carburetor is probably too lean. Go back to the recommended settings and adjust your carburetor from there. This problem may also indicate a dirty carburetor or faulty ignition.
The engine runs rough and is vibrating strongly.	Balance the propeller. Check the ignition timing. Check your plumbing for air/fuel leaks. Check your spark plug for carbon and check the spark plug gap. Check the motor mount to be sure it is rigid. Check to make sure the engine is mounted on a level surface so that the crankcase is free of tension. Check the engine and propeller bolts.
The engine doesn't reach a normal RPM at full	Check the carburetor settings. Check to see if

throttle.	the propeller is too large. Verify that you have the correct muffler system. Check to see if the engine is overheating. Check the ignition timing. Check the spark plug for defect. Verify you have the correct gasoline, oil, and have mixed them with the correct ratio.
-----------	--

You can order any spare parts under the direction of this form easily from our distributor or local hobby shop.

Pack No.	Item No.
50A	50010 x 1
50B	50020 x 1 + M5150 x 4 + Flat Washers x 4
50C	50030 x2
50D	50050 x 1 + 50060 x 2 + 50080 x 2
50E	50040
50F	50070
50G	50090
50H	50110 x 2 + 50111
50I	50120 + 50112
50J	50130 x 1 + 50140 x 1 + M5250 x 4 + Split Washers x 4
50K	50150 + 50160 + 50170 + 50180
50L	50280
50M	50200 x 1
50N	Ignition For GF50I
50O	50221 x 1 + 50222 x 1 + 50223 x 1
50P	50270 x 2
50Q	50220 x 1
50R	50230 x 1 + M5100 x 2
50S	50240 x 1 + M5400 x 2 + Flat Washers x 2
50T	50250 x 1 + M5200 x 2 + Split Washers x 2 + 50260 x 2
50U	26280 x 4 + M5500 x 4 + 26290 x 4
50V	50100

We hope that you enjoy using your GF50i engine. Please check the website for updates to this instruction manual. Thank you for purchasing CRRCP Engine