



BILAND

START-UP AND RUNNING

INSTRUCTIONS



1. Before starting the motor from cold check the oil and water level. Rock the kart from side to side on its stand until you can see the oil level move in the sight glass (a small amount of oil gathers in the bottom of the sight glass which has misled people to think it is the oil level when in fact the tank was empty. Very expensive!).
2. Blow fuel through to the carbs by blowing into the fuel tank through the breather pipe (take care not to inhale fumes!).
3. Turn on the ignition (red button), the oil pressure light should come on immediately. (If not, see note 'A').
4. Put both chokes on (levers up)
5. DO NOT pump the accelerator pedal. Leave the accelerator closed and turn the motor over. If it doesn't fire open up the throttle slowly BUT only to about 1/8 open. Opening the throttle more than this will make it difficult to start.
6. When the motor starts the oil pressure light should go out almost immediately. If it isn't out after 4 – 5 seconds stop the motor and see note 'B'. If the motor won't start see note 'C'.
7. Depending on temperature the motor will usually run between 1000 and 2000 rpm on both chokes (the rear wheels must be off the floor at this time or clutch damage will occur).
8. As the motor warms up feel the bottom and top of the radiator to ensure that BOTH are getting warm at the same time. If not, see note 'D'.
9. Put one choke off and see if the motor still runs happily. If not put the choke back on. Don't be afraid to leave the motor running on one choke as it warms up. Repeat the procedure with the second choke until the motor ticks over happily with both chokes off.
10. Try, whenever possible, to warm the motor to a minimum of 60°C before taking it onto the track.
11. Whilst the kart is warming up have a good look around for any oil or water leaks and check the oil level in the sight gauge.
12. The actual level of the oil varies from kart to kart but as long as the level is visible in the gauge when the kart is running that is OK. If you keep filling the oil level to the top of the sight glass and the kart keeps pushing oil into the breather bottle it wants a slightly lower level.



NOTES

- A. DO NOT start the motor until the light is working. Remove the brown wire from the oil pressure switch on the front of the motor and earth it to the motor block (with the ignition switched on). If the light comes on the switch is faulty and should be replaced. If the light doesn't come on check the bulb in the light and check the loom for any loose or broken wires.
- B. If the oil pressure light doesn't go out within a few seconds of starting the motor switch it off immediately. Check that you have enough oil in the tank. If so remove the spark plugs and put them in the HT caps and lay them on the cylinder head so that they can spark as you turn the motor over. Turn the motor over until the oil pressure light goes out. When the light goes out stop turning the motor over and within a couple of seconds the light should come on again. Turn the motor over again and this time the light should go off again in a couple of seconds. If after turning the motor over for 30 to 40 seconds the light doesn't go off it may be necessary to prime the high pressure oil pump (this would be extremely unusual unless the motor had been stood idle for many months). To do this remove the 6 mm Allen bolt from the top of the rocker cover nearest the cambelt, pour a drop of oil into the hole on top of the relief spring and refit the bolt. Turn the motor over again and the light should go out.
- C. If the motor won't start there are a few things to check.
- i. Is the battery connected the correct way round?
 - ii. Is the battery fully charged (minimum 12.8 v., anything less is considered flat)
 - iii. Are you getting fuel through to the carbs? To check this remove the air filter backplate and sponge filter, put the palm of your hand fully over one carb inlet and turn the motor over a few times. There should be lots of fuel on the palm of your hand. If not check that the needle valve in the float chamber is not sticking (can be a common problem if the kart has stood for a long time). Repeat this test for the other carb.
 - iv. Is there a spark? Remove the plugs, if they are wet change for another set. Put the plugs in the HT leads and rest them on the engine and turn the motor over and look for a spark. The spark is quite small and in daylight is very difficult to see. If possible carry out the test in a darkened room or hold a coat over the engine. CAUTION – HIGH VOLTAGE.
 - v. Is the cam timing out? Check the timing marks on the crank and camshaft pulleys. Details on 'Cambelt Replacement' handout.

If all these tests are OK and you don't open the throttle too much the motor should run.



- D. If the bottom and top of the radiator are not warming up together or not warming up at all switch the motor off and check the water level.

CAUTION – DO NOT REMOVE THE RADIATOR CAP ON A HOT ENGINE. If the water level is OK remove the air bleed pipe off the top of the water pump and allow it to release any air until water is running freely. Refit the pipe, top up the radiator and try again.