



### **Black Star 31cc 4 Stroke Over Head Valve Motor**

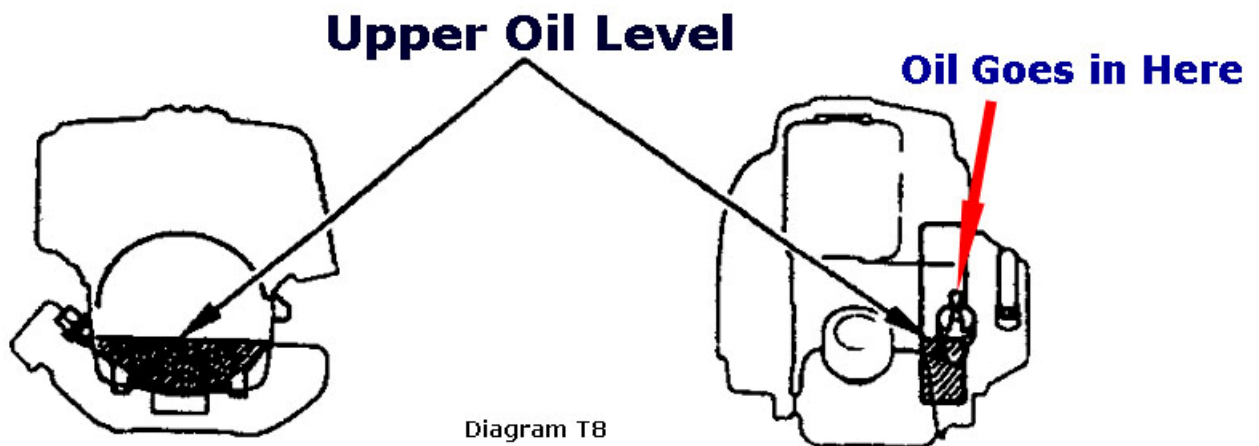
**Motor runs on either unleaded or premium unleaded fuels.**

#### **Engine Oil:**

**As soon as you get your Black Star 4 Stroke Motor Kit you will need to fill the transmission with oil**

Only use a high quality four stroke oil (recommended oil type is 10W-30) Some people use a thinner oil for higher performance

1. Place the engine sitting on its bracket on a flat surface
2. Remove the oil filler cap and fill with four stroke oil up to the upper oil level shown in Diagram T8 below
3. Check the oil level after every 10 hours of use or more frequently if you are more particular and top up with oil
4. Please use a premium quality four stroke oil (10W-30 is the standard recommended oil type)

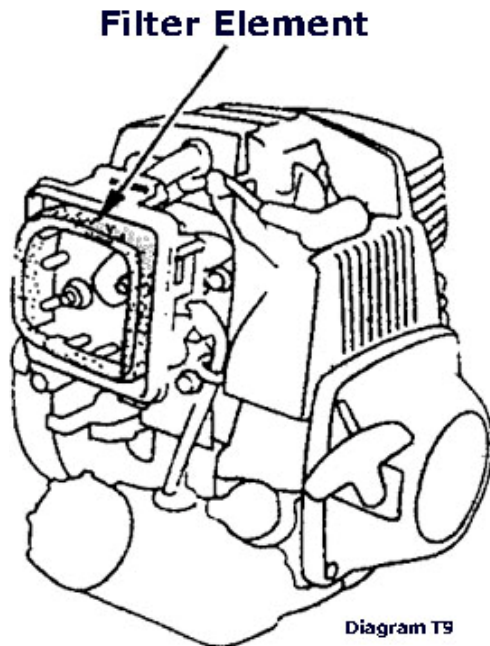


## Air Filter

Never run your motor without an air filter in place as this could significantly shorten engine life

Checking the air filter is recommended fortnightly or every time you ride through a dusty or sandy environment

The air filter is located above the carburetor as shown in Diagram T9 below



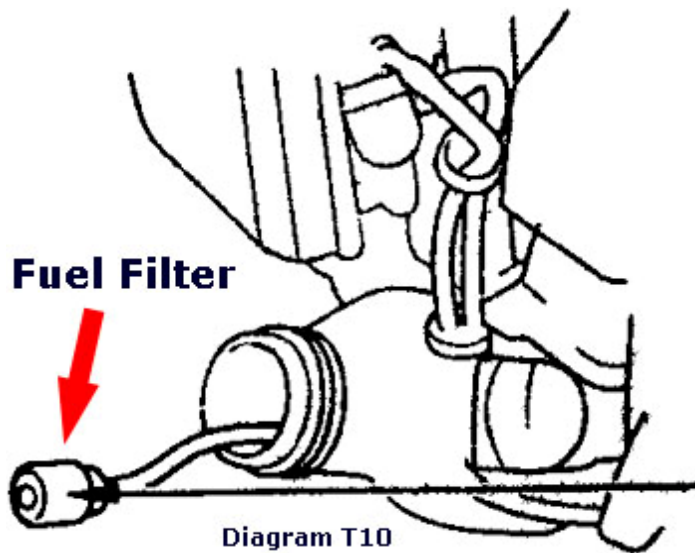
## Cleaning Air filter

1. To clean air filter undo the retaining top cover and carefully remove the air filter
2. Wash filter in a bucket with some dirt bike filter cleaner or alternatively give it a spray with a citrus based (like orange based) degreaser (not a normal degreaser as this will damage filter) and squeeze
3. Now wash the filter with some soapy water (maybe in an ice cream bucket) and then rinse with fresh water, do not ring (as in do not twist) filter at any time
4. Sit filter to dry in the shade, not in direct sunlight as this can damage the filter
5. Now lightly apply filter oil (available at all motorcycle stores) all over the filter, now squeeze out any excess so the filter is not saturated and can breathe air and so it is not clogged with oil
6. Reinsert the filter into its original position and screw the cap back over the top
7. Now the filter is done and ready for action. If your filter gets torn or gets splits appearing then please replace

## Fuel Filter

### Checking the fuel filter

1. Remove the fuel cap from the fuel tank and drain the excess fuel into a separate container so your fuel tank is empty
2. The fuel filter is connected to the end of a hose inside the fuel tank
3. Bend a coat hanger or something similar and make a thin hook on the end
4. Reach the coat hanger or other implement into the fuel tank and hook it around near the end of the hose (like a lasso) so you can pull the filter from outside of the fuel tank so that you can examine it, as shown in Diagram T10 below, don't yank the fuel filter hose to far out
5. Check to see if the filter looks dirty, if it does you can wash it with a non-flammable solvent (a solvent is a cleaning agent)
6. If the filter is filthy you can replace it (widely available at all small engine retailers, just bring the old filter with you if unsure)
7. Now put the filter and hose back into the tank



## **Spark Plug**

Recommended spark plug is the NGK C5HSB or CR5HSB

## **Checking and Changing Spark Plug**

Never use a spark plug of incorrect heat range

1. Make sure engine is not hot when removing spark plug
2. Remove the spark plug cap of the top of the spark plug
3. Use an appropriate sized spark plug removing wrench
4. Inspect the original spark plug. If the spark plug shows apparent wear, the white enamel is chipped or if it is really black, please replace
5. If you are going to reuse the spark plug clean with a wire brush and then wipe with a clean dry rag before reinserting

## **Motor Cooling Fins**

If you use your bike in dusty or dirty environments regularly, then please inspect the cooling fins of the motor for build up of muck and clean the fins by sliding a slightly dampened rag through them or by brushing with a Non steel brush, like a normal plastic dust pan brush is good. For this the covers would need to be removed while cleaning

This motor kit can be ridden in dirt but please take care to clean regularly the air filter, motor and pulley system