BLUE BIRD FOGGER

RED BIRD FOGGER

INSTRUCTION MANUAL

SPECIFICATIONS	BLUE BIRD FOGGER
Formulation Output	0 - 5.3 gallon / hr., 0 - 20 liters / hr.
Droplet Size (VMD)	10 - 50 microns
Engine	25.9 HP, 18.9 KW, 16,250 Kcal / hr.
Fuel Tank / Consumption	0.4 gallons, 1.5 liters / 0.4 gph, 1.5 L / hr
Formulation Tank	1.7 gallons, 6.5 liters
Power Supply	6 V DC Rechargeable battery
Weight (empty)	19.6 lbs., 8.9 kg
Dimensions (L x W x H)	47 x 8.6 x 13 in., 120 cm x 22 x 33 cm

SPECIFICATIONS	RED BIRD FOGGER
Formulation Output	0 - 5.3 gallon / hr., 0 - 20 liters / hr.
Droplet Size (VMD)	10 - 50 microns
Engine	24.5 HP, 18 KW, 16,250 Kcal / hr.
Fuel Tank / Consumption	0.2 gallons, 0.7 liters / 0.4 gph, 1.4 L / hr
Formulation Tank	0.8 gallons, 3 liters
Power Supply	6 V DC Rechargeable battery
Weight (empty)	14 lbs., 6.5 kg
Dimensions (L x W x H)	35 x 8.6 x 11 in., 90 cm x 22 x 27 cm

WARNING: READ AND UNDERSTAND THESE INSTRUCTIONS AND SAFETY PRECAUTIONS BEFORE OPERATING THE FOGGER

BLUE BIRD / RED BIRD FOGGER

This thermal fogger operates on the principle of injecting liquid insecticide into the hot gasses created in a combustion chamber. The high velocity hot gasses vaporize the insecticide formulation, which condenses into a dense, white fog when it leaves the end of the engine tube. The size of the fog droplets can be adjusted from approximately 0.5 to 50 microns, based on the flow rate of the insecticide as it is injected into the hot gas stream. This fogger is intended for outdoor use and for treating enclosed spaces with volumes that are more than 500 cubic feet (14 cubic meters).

HOW IT WORKS

Engine is a tube with a combustion chamber and a carburetor provided with a supply of fuel and air. Depressing the started button activates the air pump that pressurizes the fuel tank and formulation tank and sends power to the spark plug. The air and fuel mix in the carburetor and is ignited by the spark plug. The ignition explosion is forced out the exhaust tube but blocked from the carburetor by the petal valve. The fuel burns rapidly in the combustion chamber and the hot gasses are driven out of the long engine tube.

Spark plug is powered by 6V rechargeable battery. After the initial ignition of the fuel, the repeated cycle of gas ignition is provided by the high temperature maintained at the back of the engine. Once the engine begins the fuel is forced to the carburetor by pressure in the fuel tank.

Liquid insecticide in the formulation tank is forced under pressure to a nozzle along the length of the engine tube. It is injected into the stream of high gasses. The liquid insecticide is broken into small droplets by the hot and pulsating air stream.

Battery is rechargeable, and the first charge will require 8-10 hours. Charge the battery before attempting to start the fogger.

Caution: Be certain that the correct power supply (110 V or 220 V) is used to recharge the battery. Check the outlet before connecting the recharger unit.

SAFETY PRECAUTIONS

Gasoline. The only fuel is unleaded gasoline with an 87octane rating. Add gasoline to fill ¾ of the fuel tank. The remaining space is need for the air pressure during operation. Do not add fuel when the engine is running. Gasoline spilled on the machine or spilled in the immediate area creates a hazardous condition.

Insecticide formulation. All insecticide formulations for use in thermal foggers are combustible, including high or 'no' flashpoint formulations. A combustible liquid vapor can be ignited because it forms a uniform mixture with the air.

Improper use. Do not place the end of the exhaust pipe close to a wall or other obstruction. This will reduce the cooling of the engine and result in overheating and explosion, and fire. Maintain at least 24 inches (60 cm) clearance between the end of the exhaust tube and external objects.

Safety equipment. Proper ear protection should be used when operating the Superhawk fogger. Insecticide formulations often require the operator to use personal safety equipment. Follow all label directions, Cautions, and Warnings.

BEFORE STARTING THE ENGINE

- **Battery is completely charged.**
  A weak battery will prevent starting.

- **Fuel and Formulation Tanks only ¾ full.**
  Caps on both tanks are tightly closed.

- **Close the Formulation valve.**

STARTING THE ENGINE

1. **Depress start button and keep it pressed until engine starts.**

   If carburetor floods and engine doesn't start: press start button and press and hold the stop button on top of the fuel tank. This will remove the excess fuel in carburetor.

2. **Begin fogging by opening the Formulation Control Valve.**

STOPPING THE ENGINE

1. **Close formulation valve, depress button on Formulation Tank cap to release pressure and stop flow.**
   Allow engine to operate for 15 seconds.

2. **Depress the 'stop' button on top of fuel tank to release pressure and stop fuel supply to engine.**

FOGGING START / STOP

Start fogging by opening the Formulation Control Valve after the engine has been operating for about 15 seconds. The cap on the formulation tank must be tightly closed.

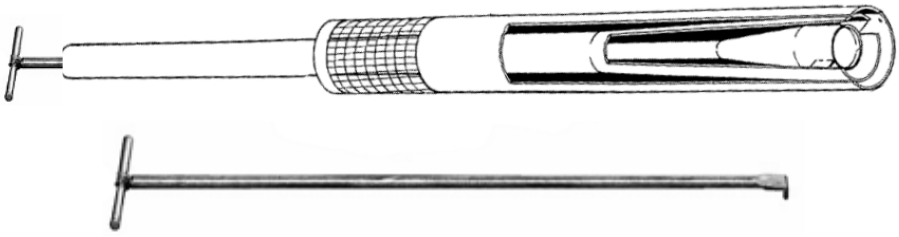
Stop fogging by closing the Formulation Control Valve or depressing the pressure release button on the cap of the formulation tank.

Note*: If the engine stops during fogging, immediately depress the pressure release button on the formulation tank to stop the flow of formulation. Close the Formulation Control Valve before restarting the engine.*

SCHEDULED CLEANING / MAINTENANCE

Every 8 hours operation the fogger requires cleaning and flushing. The normal build-up of carbon deposits in the engine, and residue in the formulation tank and nozzles must be removed with a flushing solution.

Engine tube. Clean the engine tube with the long-handled tool provided with the fogger. Insert the tool into the end of the engine tube and scrape carbon deposits from the inside of the engine tube. Thee deposits will be blown out the end of the tube when the engine is started.



Formulation tank flush. The formulation tank and supply line require cleaning. A professional flushing solution must be used to get complete cleaning.

Empty the formulation tank and add about 16 ounces (400-500 ml) of flushing solution and secure the tank cap. Start the engine and fog until the formulation tank is empty / fogging stops.

TROUBLE SHOOT: ENGINE STARTING AND FOGGING

Problems starting the engine and creating fog are often based on preparation of the fogger during regular use, or when the fogger has been unused for a long time.

Consider these first:

- **Batteries are old** or the connections are not secured and there is not enough power to the spark plug. The spark plug may be effective with low power (about 9 volts DC), but the starting will be difficult and fail after a few attempts.

  Remedy: *Change out all 8 batteries.*

- **Gasoline is old** or contaminated with water. Air from the pump has to volatize some of the gasoline for the spark plug to ignite. If there is not enough of the gas / air mixture, there will not be the ignition necessary to burn the other gas in the antechamber.

  Remedy: *Empty and add fresh gasoline to the tank.*

Engine Will Not Start – Check These

[ ] **Spark plug**. The tip of the spark plug must be clean and with the correct gap (0.060 / 1.5 mm). The spark plug is only hand tightened in position.

Engine Will Not Fog – Check These

[ ] **Formulation level in tank**. Check to be certain that the formulation tank is at least 2/3 full of liquid insecticide. Add formulation to tank.

[ ] **Formulation tank cap**. It must be tightly closed. This tank is slightly pressurized to move the formulation liquid to the injection point. The cap must be in place to maintain pressure in the tank.

[ ] **Injection point**. The point of injection of liquid formulation to the engine tube can become clogged, especially if flushing solution has not be used in the fogger.

- Remove and clean the injection point and / or run 16 ounces (400-500 ml) of flushing solution through the fogger.

LONG-TERM STORAGE

[ ] **Drain the formulation tank**. Pour the liquid back into the original container with the proper insecticide label and cap. Rinse the formulation tank with a small amount of flushing solution.

- Place about 16 ounces (400-500 ml) of flushing in the formulation tank and run the engine and fog until the formulation tank is empty.

[ ] **Drain the gas tank**. Pour the gasoline into a proper fuel container. Replace the filter and the cap to the tank.