

**IF YOU HAVE ANY QUESTIONS OR CONCERNS, OR ARE MISSING PARTS  
DO NOT RETURN SPRAYER TO THE STORE!**

**PLEASE CALL OUR CONSUMER HOTLINE AT 1-800-9-SPRAYER**

**(1-800-977-7293)**

Visit us on the Internet: [www.hdhudson.com](http://www.hdhudson.com)

## **Instruction 738-556      Model 18537**

### **LIMITED WARRANTY**

H. D. Hudson Manufacturing Company warrants to the original purchaser only that this product will continue to function as intended if used in accordance with operating instructions (under **NORMAL CONSUMER USE**) for one year . If the product fails to function as intended—**DO NOT RETURN IT TO THE STORE**—call our **CONSUMER SERVICE HOTLINE AT 1-800-9-SPRAYER** (toll free) for fast service. We will, at our option, repair or replace any non-functioning parts without charge (shipping and handling charges will apply) H. D. Hudson Manufacturing Company shall have the option of requiring the return of the non-functioning product to the address listed below together with the proof of purchase to establish a claim under this warranty. This warranty does not apply to damage resulting from accident, misuse, neglect, alterations, operation not in accordance with instructions, commercial use, or normal wear.

**ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR CONSUMER USE, ARE LIMITED TO THE DURATION SPECIFIED ABOVE. H. D. HUDSON MANUFACTURING COMPANY'S LIABILITY IS LIMITED SOLELY TO THE REPAIR OR REPLACEMENT OF THE NON-FUNCTIONING PRODUCT OR PART. H. D. HUDSON MANUFACTURING COMPANY EXCLUDES LIABILITY UNDER THIS WARRANTY FOR ANY AND ALL INCIDENTAL AND CONSEQUENTIAL LOSS OR DAMAGE.**

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

**IF YOU HAVE QUESTIONS OR CONCERNS: PLEASE CALL OUR CONSUMER HOTLINE AT 1-800-9-SPRAYER.  
(1-800-977-7293)**

## **WARNING!**

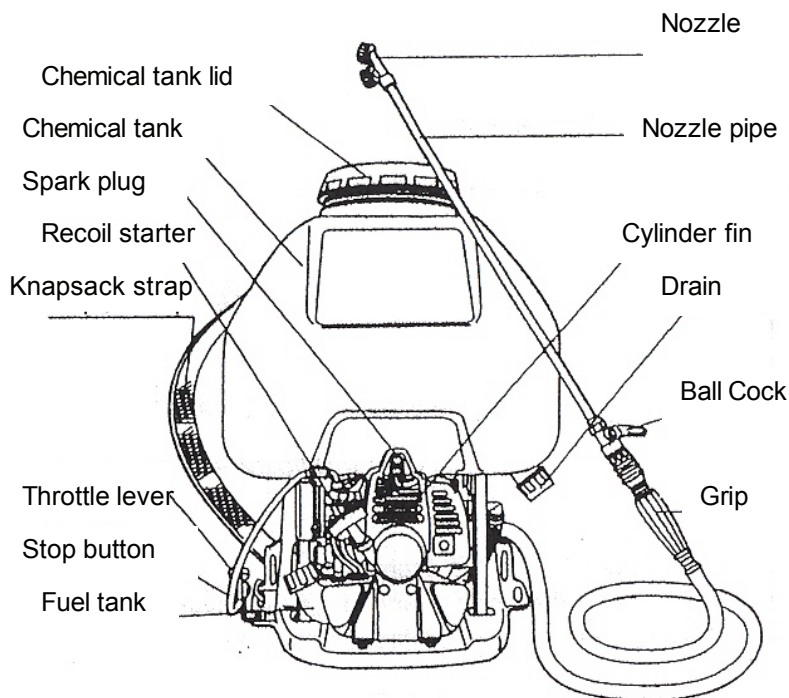
The engine must use mixed fuel. The ratio between gasoline and oil is 25:1. You can use either leaded or unleaded gasoline. The oil should be for two stroke engines. The engine should run without load for 3-5 minutes after starting and before stopping. Do not run engine without load at high speed, it can damage the engine. You may also damage the engine by stopping the engine at high speeds. Always reduce the engine speed before shutting off the unit. To prevent fire, keep hot engine away from flammable materials when adding fuel. Smoking is strictly prohibited!

## **CAUTION!**

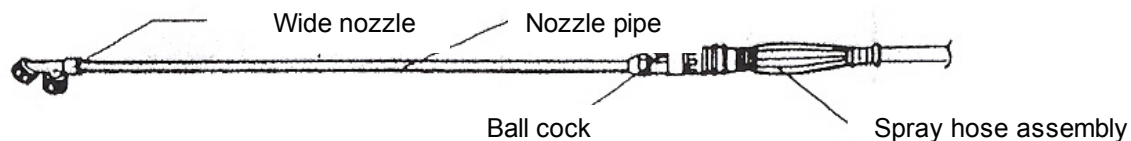
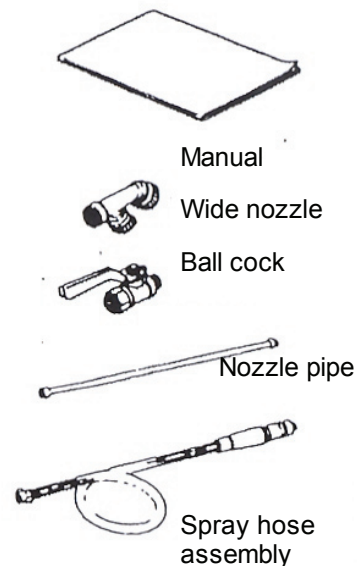
Wear approved, protective clothing, respirator mask and oil-proof gloves to protect operator from contamination from pesticide. Follow pesticide label directions. In all cases, consider direction of wind to avoid spray being blown back on operator. Always flush pesticide tank and supply lines at the end of each period of use. This will help prevent corrosion and damage to the sprayer and its components. Dispose of pesticide formulations remaining in the tank and flush the residues in accordance with label directions. Before opening container of pesticide for use in this sprayer, always read and thoroughly understand directions on its label. Follow exactly the instructions for mixing, application, disposal and safety. Be sure the pesticide is appropriate for usage with this sprayer. Keep sprayer and spray material out of reach of children

# FEATURES

## Names of components



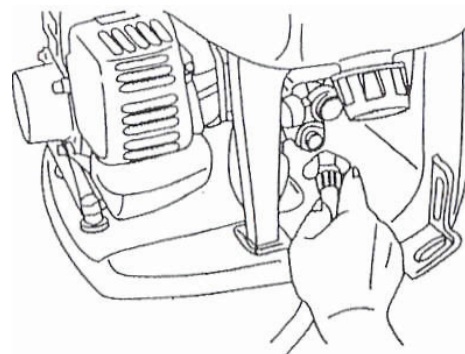
## Accessories



## Assembling

Attach the wide nozzle, the nozzle pipe, and the ball to the spray hose. Connect the other end of the hose to the spray outlet.

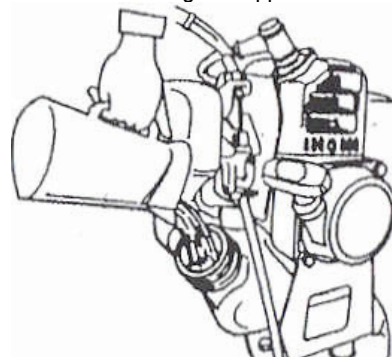
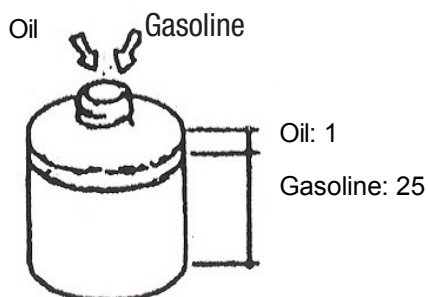
The clip ends of the straps should be connected to the strap hangers on the base of the unit. The strap slides can be adjusted to make the unit more comfortable. The padding on the straps should rest on your shoulders.



Be sure of the engine stopped and cool.

## Pre-operation preparation

### Oiling



Be sure to use 2 cycle exclusive oil.

**2**

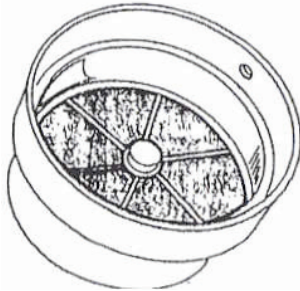
Do NOT overfill or spill the fuel on the engine.

# POINTS FOR ATTENTION

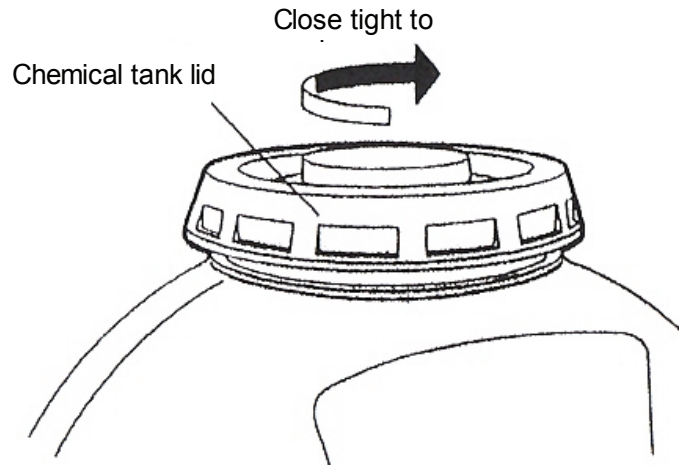
## Dilution of chemicals /Charging to the chemical tank

**Caution:** Agricultural chemicals are extremely dangerous, and must be handled with care. Read the chemical instruction carefully before use.

Dissolve water dispersible power in a separate container before filling. Be sure not to get foreign material into the chemicals.



Always fill the chemical tank through the strainer so that contaminants are not mixed into the chemicals.



Open the ball cock and purge air until the chemical is draining out. Close the ball cock securely. Before spraying the agrochemical, be sure to put on suitable protective clothing to protect yourself against contact with and breathing it. Observe the following cautions for safe operation:

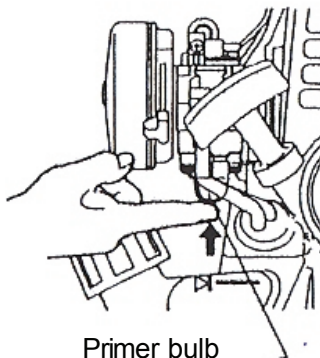
- a) Be sure to close the chemical tank cover securely.
- b) Check the spray hose and nozzle connections to make sure there are no leaks.
- c) Always stop the engine before refilling the fuel tank or changing the nozzle.
- d) When carrying a full chemical tank, be careful not to lose your balance.

## Starting the engine

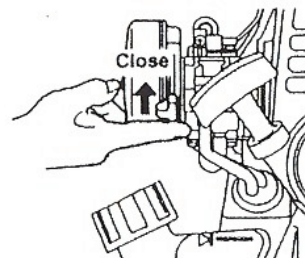
**Important:** When starting the engine, be sure to fill the chemical tank with pure water or chemical liquid. Never run the engine when the chemical tank is empty.

Pump the primer bulb until fuel can be seen flowing through the fuel return line, and pull the choke lever to full close. (During hot weather and when the engine is already warmed up, the choke lever may be set to either half open or full open).

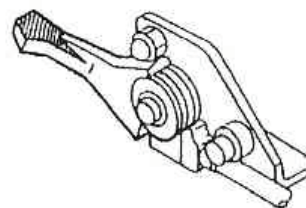
Set the throttle lever to the middle speed position (not necessarily to maximum).



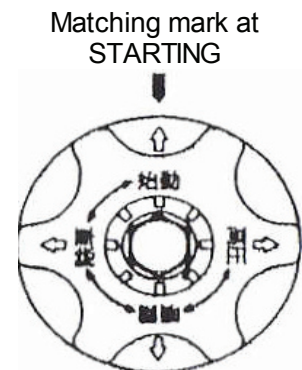
The first starting attempt  
Choke lever: Fully closed



When the engine is warm  
Choke lever : Fully open



Throttle lever  
Middle speed position



Control valve handle  
setting will always be  
at 12 o'clock

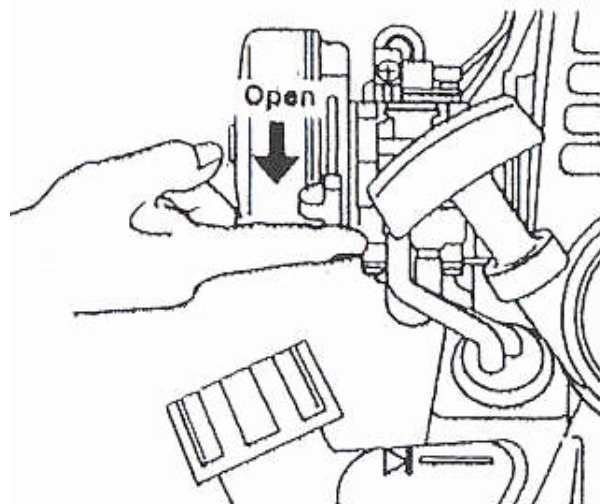
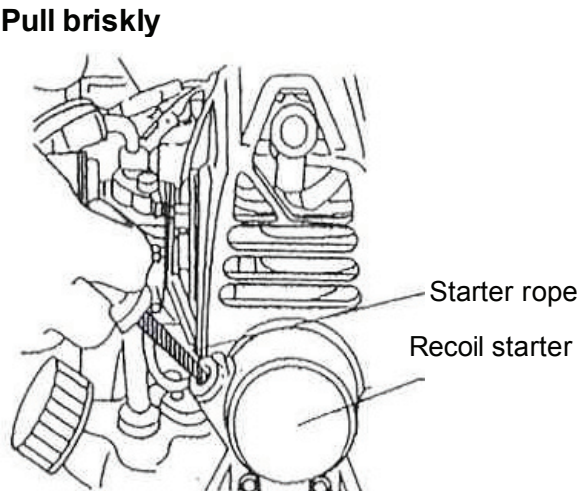
# OPERATION

Pull the recoil starter lightly 2-3 times.

Pull the recoil starter strongly to start the engine.

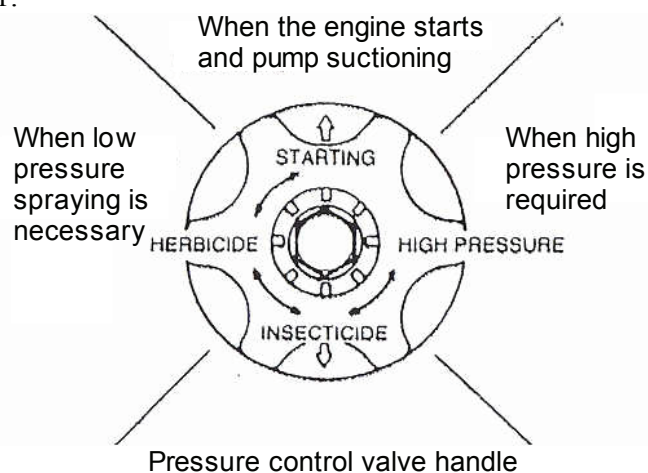
If the engine stops after a few revolutions, set the choke to half open, and pull the recoil starter rope strongly again to restart it. Note: If the engine does not catch even after the starter is pulled several times, set the choke lever to full open and pull the starter rope. Be sure not to pull the starter lever completely out. After the engine starts, open the choke lever slowly, move the throttle lever to the low-speed side, and let the sprayer warm up for 2-3 minutes.

## Pull briskly



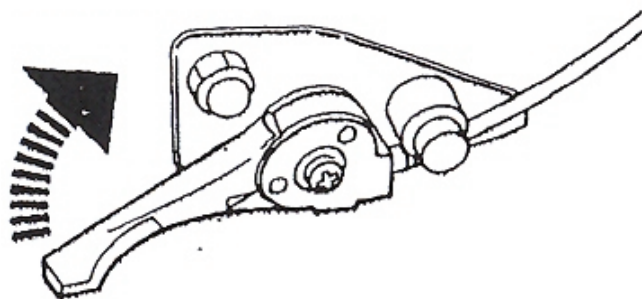
## Operation

1.



2.

## High speed running



1. Turn the handle of the control valve, and set it to the position for HERBICIDE, INSECTICIDE or HIGH PRESSURE to match the pressure to operating conditions.
2. Once the sprayer is properly set, slide your arms through the straps and lift the unit onto your back. The strap pads should rest on your shoulders.
3. When the ball cock is opened, chemicals will be atomized as they come out of the nozzle.

## IMPORTANT!

When the pressure control valve handle is set to INSECTICIDE or HERBICIDE, do not use the throttle at the fully opened position. These chemicals are more effective at low pressure. The full open throttle position should only be used with the HIGH PRESSURE setting on the pressure control valve handle.

**\*Be careful of the amount of fuel in the fuel tank, and refill it when it becomes low.**

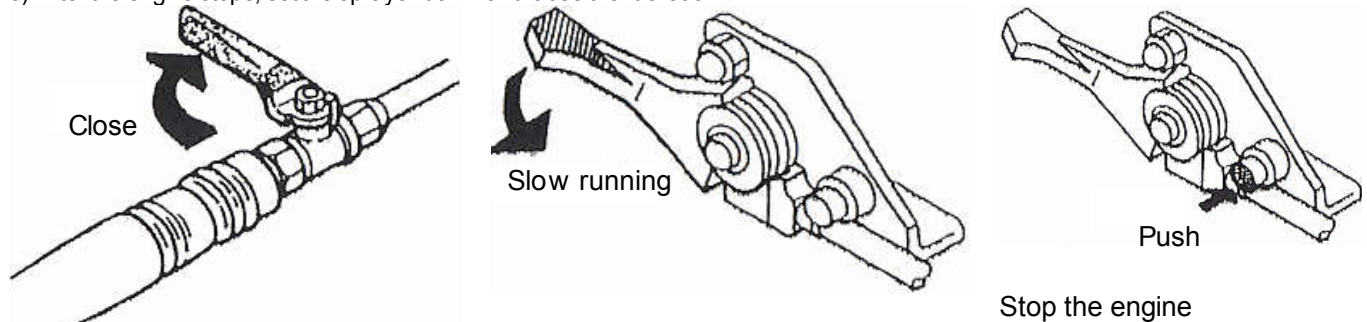


# OPERATION AND MAINTENANCE

## Stop

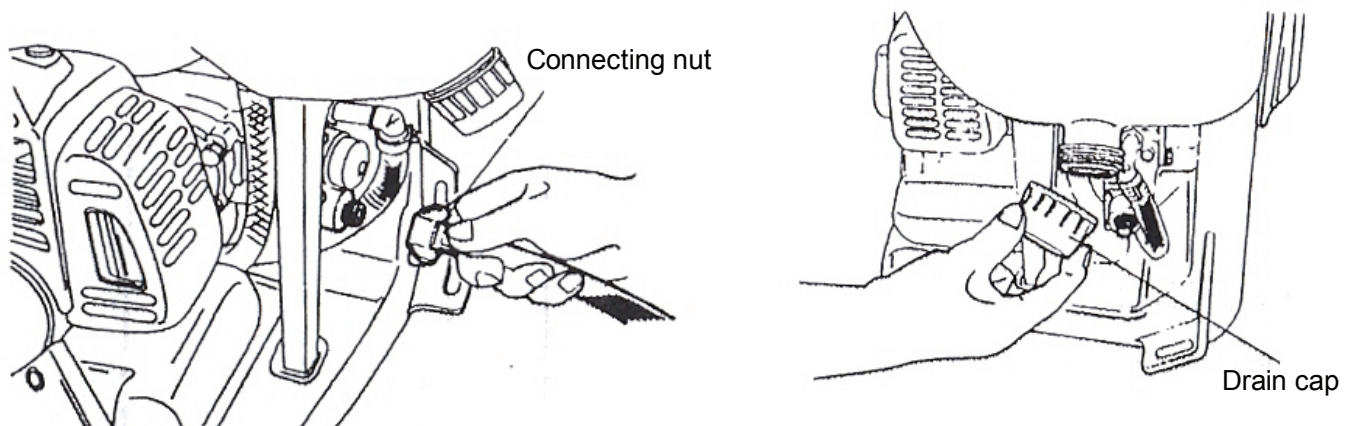
Temporary halt during operation

- Close the nozzle, and return the throttle lever to low speed.
- Press the engine stop button.
- After the engine stops, set the sprayer down and close the fuel cock.



Stopping the sprayer after completing spraying

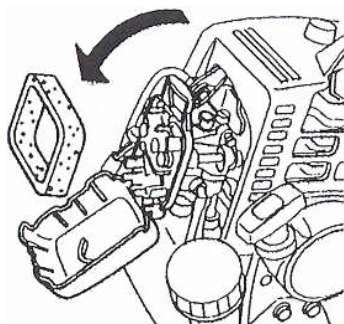
- Remove the chemical tank drain cap, and drain off all of the chemical.
- Fill the chemical tank with clean water. Start the engine, and clean the pump and hose interior by spraying the clean water. Drain off remaining water through the drain.



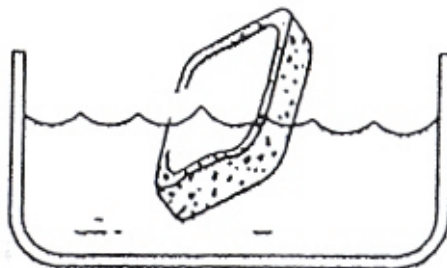
Start the engine at just less than high speed for 15-20 seconds to spray out the water in the spray hose and nozzle. When water stops coming from the nozzle, turn off the engine at once.

## Maintenance

### Cleaning the air cleaner

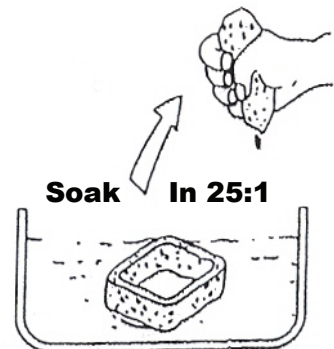


Remove the air filter cap to  
clean the element



Gasoline

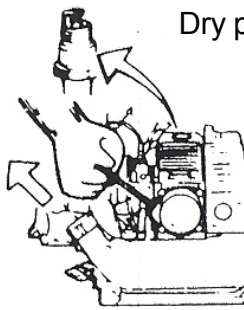
Squeeze firmly



Oil Mixed fuel

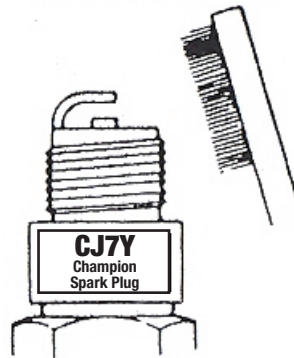
# STORAGE AND TROUBLE-SHOOTING

## Plug

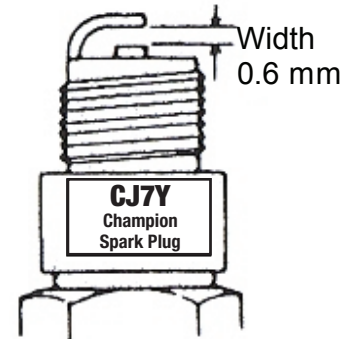


Pull  
2-3 times

## Remove carbon



## Proper state



## Storage

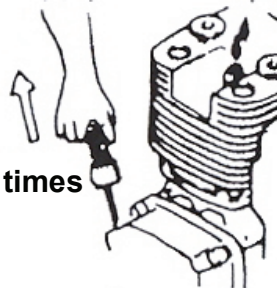
After using the sprayer for the season, store it until the next season of use as follows:

- Drain fuel from the fuel tank and the carburettor.
- Remove the spark plug and coat the interior of the cylinder with a small amount of oil. Pull the recoil starter lightly 2-3 times to spread the oil over the cylinder completely.

### 1. Remove the plug



### 2. Apply a few drops of oil.



### 3. Pull 2 or 3 times

c) Pull the recoil starter out slightly and stop it in place where you fuel the pull start (compression starts).

d) Clean the entire sprayer completely, cover it so it does not accumulate dirt and dust, and store it in a dry, cool location.

### 4. Connect the plug

## Trouble-shooting

### PUMP

| Trouble                   | Cause                                   | Countermeasure  |
|---------------------------|---|---|
| <b>No suction</b>         | Looseness in the hose.                  | Tight securely.   |
|                           | Suction hose is clogged with chemicals. | Disassemble and clean.  |
|                           | Worn piston packing.                    | Replace with new one.   |
|                           | Foreign object in valve parts.          | Disassemble and clean.  |
| <b>Poor spray quality</b> | Worn piston packing.                    | Replace with new one.   |
|                           | Flaw on cylinder inside surface.        | Replace with new one.   |
|                           | Flaw on exhaust valve.                  | Replace with new one.   |
|                           | Worn pressure control valve seat.       | Replace with new one.   |
|                           | Worn pressure control valve handle.     | Replace with new one.   |
|                           | Foreign object in valve parts.          | Disassemble and clean.  |
|                           | Worn nozzle hole.                       | Replace with new one.   |
|                           | Too many nozzles attached.              | Reduce number of nozzles or replace with nozzle of smaller holes. |

# TROUBLE-SHOOTING (Con't)

## When engine fails to start:

|   | Diagnoses                       | Causes   |
|---|---------------------------------|--|
| <b>There is fuel, but spark plugs fail to ignite.</b> | There is power at the terminal. | Drawing too much fuel.<br>Faulty spark plug gap.<br>Faulty spark plug insulation.                  |
|   | No power at the terminal.       | Faulty TCI unit or broken wire.<br>A break or short in the ignition coil.                          |
| <b>There is fuel and spark plugs ignite.</b>          | Compression is good.            | Bad fuel mixture.  |
|   | Compression is bad.             | Faulty packing or tightening.<br>Spark plugs not tightened properly.<br>Piston rings are sticking. |
| <b>No fuel in the carburetor</b>                      |                                 | No fuel in the tank.<br>Fuel valve is faulty or fuel tank air vent is plugged.<br>Lines are bent.  |

## When engine runs poorly:

|   | Diagnoses                       | Causes   |
|---|---------------------------------|--|
| <b>No power</b>   | Compression and spark are good. | Air cleaner element is plugged up.<br>Air has entered fuel line joints.<br>Faulty choke lever<br>Carbon build-up on cylinder muffler   |
|   | Compression and spark are bad.  | Burnt spark plugs<br>Short in cable<br>Bad fuel mix or piston ring wear.<br>Marks on cylinder, cracks in the piston head   |
| <b>Engine overheated</b>                                      |                                 | Carburetor set too lean<br>Improper fuel/oil mixture.<br>Carbon build-up, overloaded operation.<br>Faulty spark plugs<br>Plugged cylinder or coolant lines<br>Carburetor not adjusted properly |
| <b>Engine operates erratically, surges, and runs unevenly</b> |                                 | Faulty spark plugs<br>Faulty magneto or internal short<br>Overheated cylinders<br>Overload operation<br>Improper fuel/oil mixture<br>Internal engine damage                                    |
| <b>Slow acceleration</b>                                      |                                 | Carburettor not adjusted properly or faulty compression.<br>Poor gasoline oil quality<br>Carbon build-up   |

# SPECIFICATION

## SPECIFICATION

| <b>DIMENSION</b>                           |                           |
|--|---------------------------|
| HEIGHT x WIDTH x LENGTH ( MM )             | 640 X 350 480             |
| DRY WEIGHT ( LBS/KG )                      | 20/9                      |
| CHEMICAL TANK CAPACITY (GAL/L )            | 6.5/25                    |
| FUEL TANK CAPACITY (GAL/L)                 | .12/0.6                   |
| <b>PUMP</b>                                |                           |
| NORMAL OPERATION PRESSURE ( PSI/MPa )      | 145-580/1 ~ 4             |
| SUCTION ( GAL/L PER MIN )                  | 1.88/7.1                  |
| ROTATIONAL FREQUENCY ( MIN <sup>-1</sup> ) | 1800                      |
| <b>ENGINE</b>                              |                           |
| MODEL                                      | 725006                    |
| TYPE                                       | FORCED AIR COOL, 2-CYCLE  |
| DISPLACEMENT ( CI/ML )                     | 1.56/25.6                 |
| FUEL                                       | MIXED GASOLINE ( 25 : 1 ) |
| IGNITION SYSTEM                            | ELECTRONIC IGNITION       |
| CARBURETOR                                 | DIAPHRAGM TYPE            |
| STARTING SYSTEM                            | RECOIL STARTER            |

**The specification may be change for product improvement, without prior notice.**

