INSTRUCTIONS FOR OPERATING CLASS 125 CRASH FIRE TRUCK

DESCRIPTION OF OUTFIT—The machine consists of a high pressure BEAN Royal-55 pump unit mounted on a four wheel motor truck. The pump operates at 600 to 650 pounds pressure, with 60 gallons per minute capacity. Pump is equipped with a relief valve for pressure control. Pump is driven by truck engine through a split shaft type of power take-off, which means that the engine power can be used either to move the truck or drive the pump, but it is impossible to run the pump and move the truck at the same time. The power take-off control lever is located in the truck cab immediately to the right of the regular truck control levers (see E, page 6). This lever is in the back or rear position as shown at "E," page 6, when the pump is in gear, and forward as shown in dotted lines on page 6 when set to move the truck.

The outfit is provided with a 300 gallon tank for water supply. There is also a 20 gallon tank for carrying foam concentrate. This smaller tank is mounted on top of the main water tank and it has a control valve through which the foam concentrate can be quickly transferred into the water tank. Three lines of high pressure hose are provided and these hose lines are carried coiled in three compartments provided above the pump unit. By using the "over and under" method of coiling, the hose can be pulled away from the carrying compartments without undue kinking. The two forward lines of hose are equipped with BEAN Fire Master water guns which will produce any type of discharge from a solid stream to a fine fog, depending upon the adjustment of the gun. The third or rear hose line is connected to a special type of gun for producing foam. There is also an auxiliary foam gun which may be connected to one of the two forward lines of hose in the event that it is desirable to use two foam guns at one time.

STARTING—To properly start the unit, proceed in accordance with the steps as outlined below:

(1) See that the water tank is full or at least partly full of water and open valve A, page 6, to permit water to flow to pump. Water is needed to lubricate the rubber composition plungers, so do not run the pump without water passing through it. Filling of the tank is described on next page.

(2) Open the jet agitator control valve (see B, page 6) which serves as a pressure release. This eliminates starting of the pump against full pressure, which sometimes kills the motor.

(3) In the event that the truck motor is not running, the next thing to do is put the transmission in neutral and start the truck motor in the usual manner. Depress clutch pedal.

(4) Put the gear shift lever on the truck transmission in third gear. The drive from the power take-off to the pump is arranged so that proper engine speed in relation to the pump speed is obtained with the truck gear shift lever in third (next to high).

(5) After the truck motor has been allowed to warm up, engage the power take-off by moving gear shift lever (E, page 6) to the rear position. Use extreme care not to burr the gear teeth. Engaging the power take-off while the motor is running is accomplished by lightly releasing the clutch for short intervals, thus tending to move the gears just a little in order to obtain proper gear alignment. When proper gear alignment is obtained the gear shift lever may easily be pulled into the rear position. CAUTION: Be especially careful not to burr and damage the power take-off gears, which might make it impossible to engage the power take-off. Gears may be shifted with truck motor stopped using starter if necessary to mesh gears. To mesh gears with starter, have ignition turned off and step on starter for an instant.

(6) Release clutch pedal and the pump will immediately start to run.

(7) After the pump is in operation, slowly close the jet agitator control valve (B, page 6), and at the same time gradually adjust the speed of the truck motor by means of the Vernier throttle control (F, page 6) mounted on the right side of the machine, so that the speedometer on the truck indicates 15 to 18 miles per hour. This is with truck transmission in third gear as explained in paragraph 4 above.

(8) CAUTION: Do not operate pump with speedometer indicating more than 18 miles per hour. Overspeeding pump may cause excessive wear.

(9) While closing the jet agitator control valve (B, page 6) as mentioned in paragraph 7 above, observe the pressure reading on the pressure gauge. It should not be allowed to go over 600 to 650 pounds when the jet control valve is completely closed. In the event that this pressure is not 600 to 650, it will be necessary to adjust the relief valve. Screwing the nut on top of relief valve to the right will increase the pressure and screwing to the left will lower pressure. (See page 8.)

FILLING TANK—In most cases, the Bean unit will use plain water at high pressure for the purpose of extinguishing or controlling gasoline or oil fires, as well as fires in buildings. The large tank is therefore filled with plain water. The tank may be filled with water by several different methods as follows:

(1) The easiest method to fill the tank is to simply allow a hose from the hydrant to discharge into the screened and covered opening provided in the top of the tank. *Note:* A hydrant hose is not a part of the factory equipment.

(2) Another method to fill the tank from a hydrant is by hooking a hose to hydrant connection (C, page 6) provided on the right hand side of the machine. Both of the 2″ gate valves (A and C, page 6) in the suction line should be opened and the water allowed to flow through the suction line into the tank until it is full. Have pump stopped when filling this way.

(3) In the event that a hydrant is not available, the tank may be filled by a bucket brigade dumping water into the compartment at the top of the tank and allowing it to flow through the screen and into the tank. The cover, of course, should be removed.

(4) Pump may be used to fill tank from stream or pond if it is possible to drive machine fairly close to the water and not have a total lift of more than about 10 or 12 ft. The greater the lift the slower the tank will fill. To do this, connect a hydrant or suction hose at "C," page 6, open valves "B" and "C" and close valve "A" while pump is running. Be sure the water is clean and free from grit and sand.

FIRE MASTER GUNS—The truck is provided with Bean Fire Master Guns as illustrated on page 15. Two of these guns are attached to two of the hose lines on top of the machine at all times. For operation of these guns, proceed as follows:

(1) Open the hose control valves (D, page 6) on the side of the machine which will allow the water under high pressure to flow through the hose and to the spray guns.

(2) The spray guns themselves have a control valve located in the handle and this must be opened before the water will discharge out the end of the gun.

(3) Sometimes oil and gasoline or even building fires are so hot that it is very difficult to approach them to a distance where control may be attempted. On the top of the gun, there is a small nozzle. Open the petcock to this nozzle and as soon as the gun is turned on, a fine spray will shoot up vertically and this fine spray protects the fireman's face from excessive heat. The fine particles of moisture absorb heat very rapidly, before it reaches the operator.

(4) When operating at pressures of 600 pounds the Bean Fire Master gun will throw a high pressure solid stream of water for a distance of 75 to 100 feet. Therefore, the gun may be turned on when the operator is quite a distance away from the fire. As soon as the operator is within effective distance from the fire, he should open the main gun valve being careful to brace himself for the recoil from this high pressure stream. The gun valve is opened by squeezing the handle and automatically latches in open position where it will remain until the operator desires to close it by means of the release button at the rear of the gun handle.

(5) A solid stream of water for long distance is obtained when the stream control device on the gun barrel is screwed clear back. At times, it will be desirable to use a fog or some adjustment in between a solid stream and a fog, which is easily obtained by screwing the stream control device in or out. It is well for an operator to try the gun in various adjustments so he can acquaint himself with the types of streams that are available out of this gun. Any adjustment, ranging from a fine fog to a solid stream is instantly available. Take advantage of the easy control feature for there are many conditions under which the fog and semi-fog positions do a far better job at a great saving in water.

(6) The two Fire Master guns provided with this machine have a capacity of 30 gallons each at pressures of 600 pounds. Therefore, this unit will operate the two Fire Master guns at one time.

(7) Since the machine is provided with a relief valve to take care of excessive pump capacity and still keep the pressure at 600 pounds, one gun may be used. The remainder of the pump capacity simply flows through the relief valve and back into the tank with no wastage of water. However, it is best to reduce the engine speed if only one gun is being used.

MIXING FOAM—The machine is provided with an auxiliary foam tank located on top of the 300 gallon water tank as shown on page 13. When mixing foam and water, it is necessary to fill the 300 gallon water tank to approximately 280 gallons (about 2″ from top). Fill the auxiliary foam tank with foam concentrate and then raise the quick acting valve on top of the foam tank and allow the foam concentrate to flow into the water contained in the main tank. To mix this foam making solution with the water without the introduction of excessive air, jet type agitators have been provided. After the foam tank has completely emptied into the lower tank, open wide valves "A" and "B," page 6, and run the pump at normal speed (speedometer at 15 to 18 M.P.H.). The jet agitators mix the foam and water and the mixture is ready for immediate use.

FOAM GUNS—These machines are provided with two foam guns and one of these is connected to one hose line at all times. However, this foam gun is not to be used with plain water for its use is limited entirely to the laying down of a blanket of foam. In the event that it is desired to use two foam guns, it will be necessary to disconnect one of the Fire Master high pressure water guns and connect the second foam gun to a second hose line.

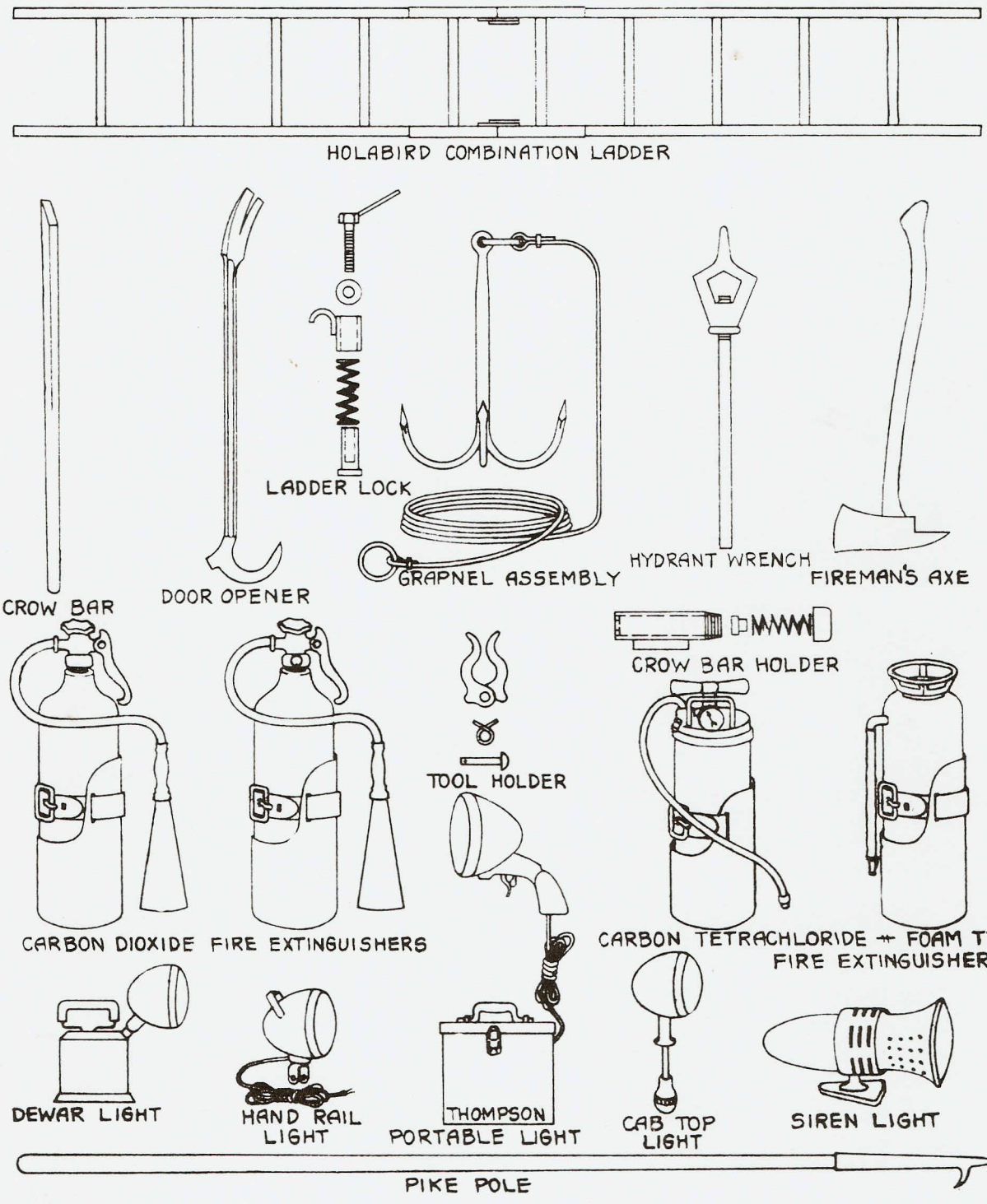
The foam guns are designed for operation at comparatively low pressure—much less pressure than is used when fighting fires with the Fire Master Gun. This lower pressure is obtained by merely changing the speed of the engine by means of the Vernier throttle control (F, page 6). It is not necessary and it is not desirable to change the setting of the pressure relief valve when handling foam. Set the engine speed to where the pressure indicated on instrument panel pressure gauge is approximately 280 pounds. CAUTION: Too high an operating pressure will cause the blanket of foam to be worthless in its protection against fire. Be sure to adjust the engine speed so as to obtain approximately 280 pounds of pressure.

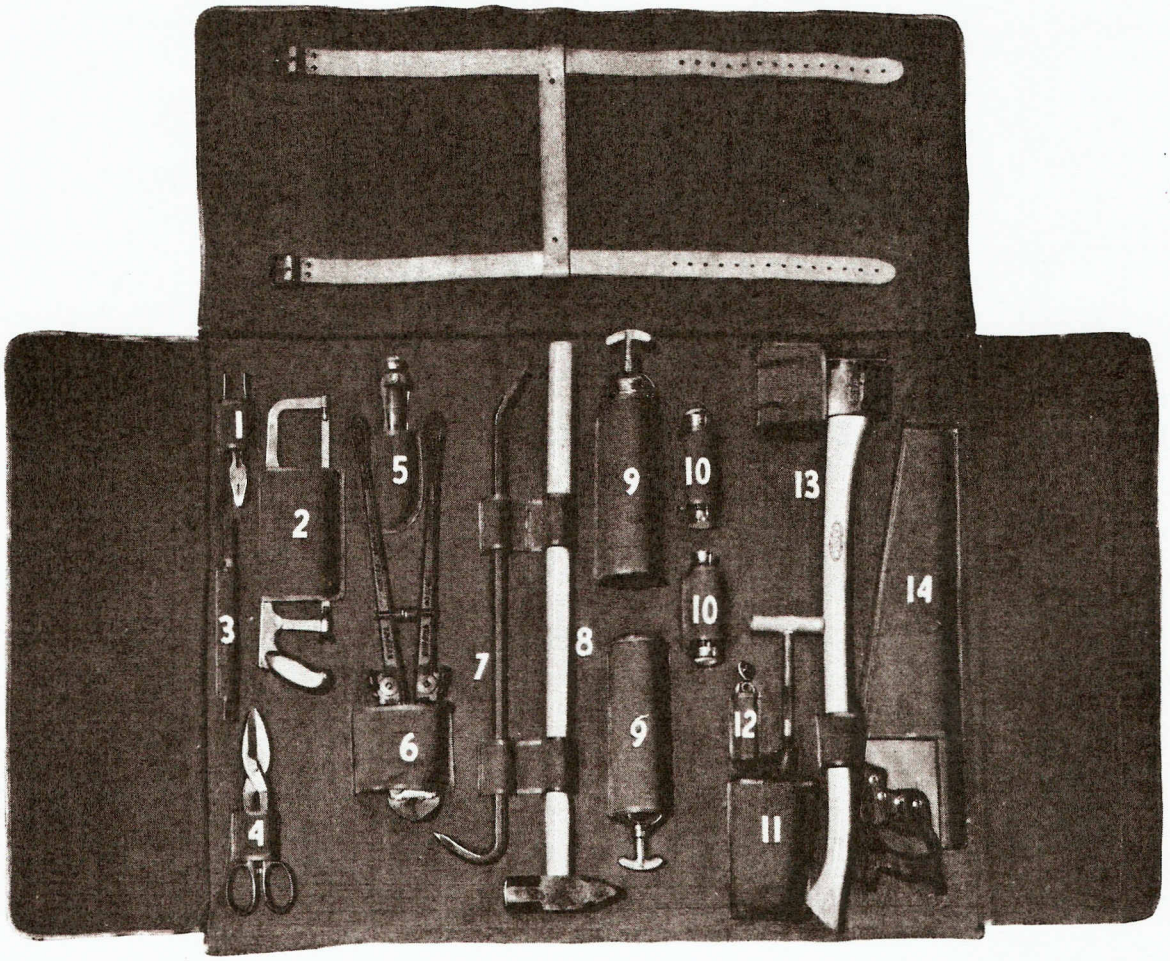
The capacity of each foam gun is approximately 30 gallons per minute when operated at 280 pounds pressure, which means 60 gallons per minute for two guns. Therefore, the engine will be operating at about normal speed (15 to 18 M.P.H. on the speedometer) when using two foam guns. In the event that only one foam gun is being used, it will be necessary to throttle the engine down to about half of its normal speed. Just be sure to set the engine speed to where the pressure will be 280 pounds, regardless of whether one or two foam guns are being used.

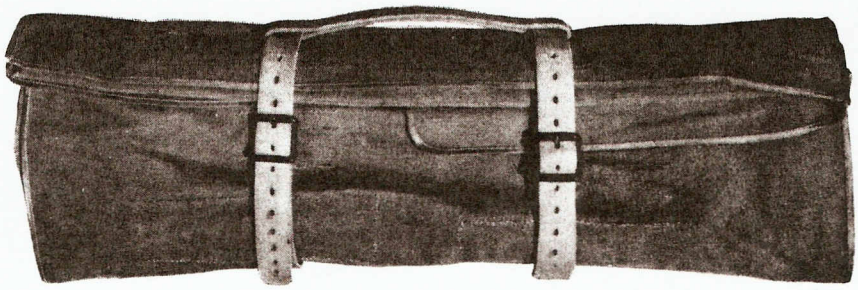
STRAINER—In addition to the coarse screen strainer provided in the large tank opening, there is a fine mesh strainer in the suction line to the pump, which will catch small particles of dirt, chips, etc., and keep them from getting into the pump and causing difficulty with the valves. The position of this strainer—Fig. 3-F—is clearly indicated on page 13. The strainer may be cleaned by removing the clamp type of cover which will allow the screen unit to drop out of the strainer pot. To put the screen back in place, simply put it on top of the cover and install cover and clamp back on the filter pot. Be careful that the cover has good contact and the gasket is tight so as to eliminate the possibility of an air leak in the suction line. When it is desired to clean the strainer while the tank is full of water the 2″ gate valve (A, page 6), between the strainer and the tank must be closed.

TOOLS AND ACCESSORIES—The truck is provided with various tools which will come in handy in the fighting of fires. Common fire truck accessories such as spot lights and a fire alarm siren are also provided. It is unnecessary to go into the use of these various accessories, other than to mention that the fire alarm siren is provided with two control switches so that either the driver of the truck or his companion in the cab may keep the siren running when desired.

ACCESSORIES FOR CRASH FIRE TRUCK







TOOL ROLL

1. Pliers
2. Hack Saw
3. Extra Blades
4. Tin Snips
5. Knife
6. Bolt Cutter
7. Wrecking Bar
8. Hammer
9. Fire Extinguishers
10. Flash Lights
11. Pipe Cutter
12. Extra Cutters
13. Axe
14. Hand Saw