



PROJECTILE 419 LUBRICATOR

**INSTALLATION AND
OPERATING INSTRUCTIONS**

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I. INSTALLATION INSTRUCTIONS

A. Central Lubricator Unit

1. Mounting:

Use two 6 mm screws to mount the lubricator central unit to a secure support on the machine.

2. Power:

The input voltage required for the lubricator is shown on the solenoid valve label. Check the label on the coil to confirm this voltage. This voltage should be present when the machine is knitting and off when it is not.

B. Installing the Projectile 419 nozzles (pat. pend.) (see figure 1)

1. Installing the nozzles:

The nozzles are made with 5mm, 6mm, and 10-32 threads. They also come in various lengths to match the depth of the cylinder and dial sections (cam boxes). See figure 1.

NOTE: THE TIP OF THE NOZZLE SHOULD BE FLUSH WITH THE INSIDE SURFACE OF THE CAM BOX! THIS IS VERY IMPORTANT FOR PROPER NOZZLE OPERATION...(FIGURE 1a)

2. Quick Connect Operation:

The Projectile Nozzles are equipped with "Quick Connect" tubing connectors. (See figure 2) This permits simple tube installation and simple tube removal for machine maintenance.

3. Flusher Attachment (Optional):

This attachment is used to deliver a solid stream of oil under

pressure to the cam tracks and needles in order to clean lint, dirt and carbonized yarn lubricants. The oil output for each nozzle is approximately 1/10 of a fluid ounce per second.

Install up to four flusher nozzles in the cylinder, dial or sinker cam tracks. One of the flusher nozzles can also be directed at the needle hooks by using the mounting bracket provided.

II- OPERATING INSTRUCTIONS

A. Lubricant Specification:

Mineral base or synthetic lubricants may be used in the UNIWAVE system. The lubricant should be a light weight oil (approximately a 10 weight lubricant) with a low to medium surface tension.

Viscosity Range : 70 - 500 SUS @ 100 degrees F

Viscosity Index : Greater than 90

Surface Tension : 20 to 40 dynes per centimeter

Temperature Range : 50 degrees F and above

*Acceptable Additives : Oxidation, corrosion and rust inhibitors, emulsifiers, foam suppressants and certain anti-wear and anti-weld additives

*Additives must be compatible with the base stock and must be properly blended. No solids in suspension or additives such as pro-oxidants or soap fillers should be used.

B. Setting the air pressure:

1. Adjusting the air regulator

The air regulator for the control of the lubricator is located immediately to the left of the oil reservoir. To adjust the air pressure, loosen the **lock ring** and turn clockwise to increase pressure and counterclockwise to reduce the pressure. The adjustment is done with the machine operating. Adjust the pressure regulator until the color coded gauge is set properly.

2. Using the color coded air gauge

- a. Setting in the Red Zone - The color coded gauge should never be set in the red zone!
- b. Setting in the Green Zone - This zone is used for light lubricating oils (viscosity between 70 and 150 SUS @ 100 degrees F= 9 to 20 CST @ 50 degrees C). When using this type of oil, set at the location in the green zone corresponding to the number of Projectile Nozzles installed.
- c. Setting in the Blue Zone - This zone is used for heavier lubricating oils (viscosity of more than 150 SUS @ 100 degrees F= 20 CST @ 50 degrees C). When using this type of oil, set at the location in the blue zone corresponding to the number of Projectile Nozzles installed.

3. Setting the oil drip rate

With the machine knitting, insert the screw driver in the oil adjustment screw slot and turn clockwise to increase the amount of oil and counterclockwise to decrease the amount of oil.

4. Check Points to Insure Proper Operation

To insure proper operation of the lubricator, several conditions must be met.

- a. The available air pressure at the input side of the filter must be at least 60 PSIG with the lubricator operation.
- b. The lubricator must not be over-filled. Oil must be visible in the sight gauge at all times. This level should be checked frequently.
- c. The pressure gauge should indicate some reading.
- d. An oil drip rate should be visible in the oil sight dome.
- e. After one minute of operation, oil should be visible moving up the clear plastic tubing. A non-glossy, white piece of paper held about 1/2 inch from a nozzle should show a small oil mark after being exposed for one minute. This mark will get bigger at time increases.

5. As a final check, inspect all settings after 1 hour of operation.

OK

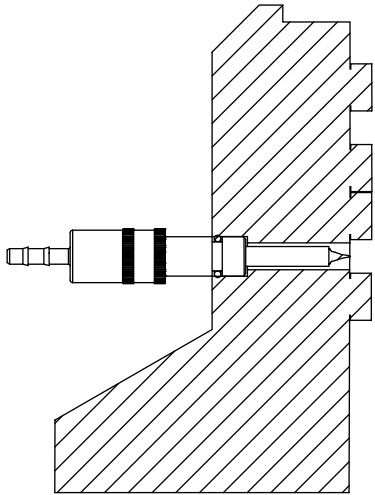


FIGURE 1A

PROPER NOZZLE POSITION
WHEN THE CAMS ARE
ATTACHED DIRECTLY TO
THE CYLINDER CAM BOX

OK

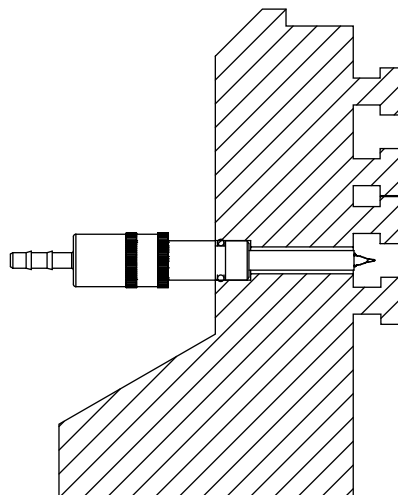


FIGURE 1 B

PROPER NOZZLE POSITION
WHEN THE CAMS ARE
ATTACHED TO THE CAM BOX
USING STANDOFFS OR SLIDES

FIGURE 1 PROJECTILE NOZZLE INSTALLATION

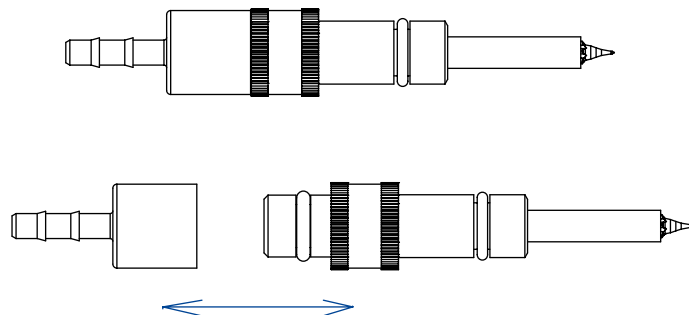


FIGURE 2 QUICK CONNECT OPERATION



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