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**Instructions for Care and Operation of Garver Babcock Milk & Cream Tester**

Before starting tester for the first time, place five to seven drops of Garver Centrifuge oil (30W motor oil) into the top of motor shaft, this hole oils both top and bottom motor bearings. Put one drop in motor shaft daily. If centrifuge is operated 3 shifts a day, it should be oiled twice a day.

**NOTICE:** If tester is equipped with GARVER VISISCOPE SPEED INDICATOR, the indicator shaft acts as a seal on the motor shaft. To oil, push shaft up and squirt a few drops of oil in the top of the motor shaft nut. This oils both the bottom and the top bearings of the motor. All other models squirt oil into top of rotor head nut on motor shaft.

If your tester is a double cup 24 or 36 capacities, always use the outside row of cups when centrifuging single samples or low numbers of samples, or arrange bottles so that any double cup used will have both cups loaded. If any inside cup is loaded with a bottle and the outside cup on the same hanger is empty, the neck of the test bottle may be broken when motor attains running speed.

**HEAT:** If tester is equipped with a heating unit, temperature inside centrifuge should be maintained, at 125 F (unless state law requires higher). The temperature is preset from the factory at 125F but thermostat may need fine tuned. Clockwise will increase temperature counterclockwise will decrease temperature. The following method for thermostat adjustment should be used:

Preheat centrifuge for 20 minutes, by turning on heater switch and closing front lid. After preheating leave heater on and run centrifuge for 5 minutes, after the 5 minute run, check temperature. Thermometer should read approximately 120 degrees at the end of the 5 minute period. For a final thermostat setting, run centrifuge another 5 minutes, check temperature, thermometer should read 120F. Gerber centrifuge thermostats are factory set at 140 F.

**SPEED:** ALL GARVER testers are designed to run at the accepted regulation speed. The correct speeds for carrier used are:

836 RPM (plus or minus 25)	on 8 to 24-bottle 6" types (16 ½ inch diameter)
740	(plus or minus 25) on 12, 24 and 36-bottle 9" types (21 inch diameter)
740	(plus or minus 25) on 36-bottle 6" types (21 inch diameter)
1084	(plus or minus 60) on 24, and 36 Gerber (21 inch diameter)
1232	(plus or minus 60) on 8, and 12 Gerber (16 ½ inch diameter)

**NOTE:** The motor bearings in this centrifuge have been fitted to close limits. If tester does not readily start when new, spin carrier with hand until motor picks up speed. When checking speeds, be sure tester is warmed up and oiled. If tester has been standing over night or longer in a cold room, speed will be reduced temporarily. Speed will be greatly reduced when tester lid is open. Test speed only when lid is closed, using the center hole in the lid.

**TO OPERATE THE GARVER DELUXE VS TESTERS**

To operate the GARVER DELUXE VS SERIES centrifuge equipped with seven position switch and GARVER VISISCOPE, operate motor on the start position until inside dots stop rotating, then rotate switch clockwise to run positions, while keeping the visiscope inner dots rotating to the right, outer dots rotating slowly to the left(see instructions for installation and operation of GARVER VISISCOPE).

**CAUTION:** Do not operate tester on start position over 35 seconds at any time. Operate centrifuge on sturdy table/counter to avoid excess vibration.

**IMPORTANT:** Keep inside of centrifuge bowls free of broken glass & sludge. Debris inside bowl slows speed down.

**OPERATING CENTRIFUGE**

1. Preheat centrifuge for 20 minutes before tests are run. (applicable to Babcock/Gerber test)
2. Load test bottles. Remember to close lid and leave heat on during centrifugation of Babcock & Gerber bottles.

Turn motor switch on then time out test. Turn motor switch off, and apply brake by lightly pushing down on

3. red brake handle located at the lower right front of the centrifuge.
4. Remove test bottles and close lid