

STRAIGHT HANDPIECE MAINTENANCE:

LUBRICATION:

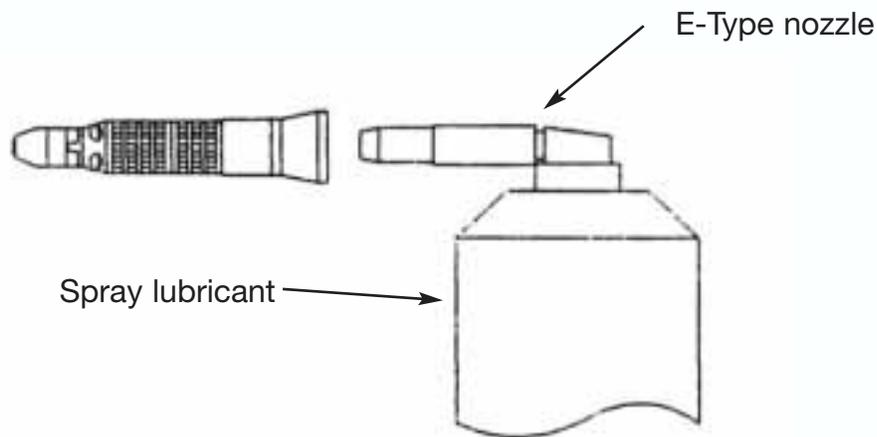
The spray nozzle oiling method is optional but highly recommended because it cleans as well as lubricates. The alternate method is to place 1 drop of approved oil in the chuck hole. Do not lubricate the handpiece while it is on the Micromotor.

Lubrication of the straight handpiece is required at least once a week.

Lubrication by spray lubricant:

1. Make sure that the straight handpiece is in the unlocked position prior to lubricating.
2. Install the E-Type nozzle by pushing it onto the top of the spray can. To lubricate, insert the E-Type nozzle into the bottom of the handpiece. Holding the two together tightly, with can in the upright position, push spray button for 2 to 3 seconds.

NOTE: If spray time is too short oil may not be propelled into all areas of the handpiece.



CLEANING and STERILIZATION OF HANDPIECE.

Cleaning:

1. Wipe the handpiece clean with an alcohol-soaked soft tissue.
2. Never clean the handpiece with boiling water, chemical solutions, ultrasonic cleaner, or with wire brushes.

Sterilization:

1. Autoclaving is recommended for the Engler Straight Handpiece.
2. Clean the Handpiece as described above.
3. Lubricate the Handpiece as described in the lubrication section of this manual.
4. Place the Handpiece in an autoclaving pouch and seal it in accordance with the instructions on the pouch.

5. Autoclave the Handpiece for no longer than 20 minutes at 121 C (250 F), or 15 min. at 132 C (270 F).

Keep the straight Handpiece away from water vapor or mist that may settle and cause premature damage to the bearings.

IMPORTANT: If you experience problems during operation, call our repair department. **DO NOT** attempt to repair the straight Handpiece. Doing so may shift the internal springs and may cause permanent damage to the unit and will void your warranty.

MICROMOTOR MAINTENANCE:

The Micromotor is capable of rotational speeds up to 35,000 RPM for use in cutting, sectioning and drilling. It contains sealed bearings and does not require any lubrication. The Micromotor has cooling vents located at the back of its body, **DO NOT** allow water, oil, or any other substance to enter these vents. Failure to keep debris out of the Micromotor will shorten the lifespan of the unit and may cause permanent damage.

IMPORTANT:

1. **NEVER** change the direction of the Micromotor while it is in operation. **ALWAYS** wait until it has come to a full stop.

IMPORTANT:

2. **NEVER** oil, or allow oil to get into the micromotor.



SCALER TROUBLESHOOTING:

- I “ON” LED INDICATOR DOES NOT LIGHT UP:
 - A. The unit is not plugged in to a power outlet: verify that the unit is plugged in.
 - B. Power Outlet not active: try another outlet.
 - C. Contact Engler Engineering Corporation.

- II “ON” LED INDICATOR LIGHTS UP, NO WATER FLOW:
 - A. Verify that the selector switch is in scaling mode.
 - B. Verify water line is connected and water is flowing to unit.
 - C. Check if water line is kinked or twisted.
 - D. Check Water Filter and disk: clean disk with plain water and a toothbrush. If clogged, replace “O” ring and disc
 - E. If using Portable Water Tank: verify you have sufficient pressure in the tank.
 - F. Water blockage in tip: replace the tip. (Clean with # 5 piano wire)
 - G. Contact Engler Engineering Corporation.

- III “ON” LED INDICATOR LIGHTS UP, LITTLE OR NO VIBRATION / CAVITATION ON TIP:
 - A. Tip loose: tighten the tip.
 - B. Tip damaged: replace the tip.
 - C. Old or damaged stack: replace the stack.
 - D. Contact Engler Engineering Corporation.

HOT WATER AND / OR SCALING HANDPIECE:

The Stack requires a constant cool water flow in order to maintain tip water temperature below 100 degrees F. You may correct the problem by:

- A. Adjusting water flow knob higher (counter clockwise).
- B. Tip clogged. Replace tip.
- C. Check and / or replace “O” ring and disc.
- D. Water restriction in unit: contact Engler Engineering Corporation repair department.
- E. If using Portable Water Bottle, pump up to pressurize the bottle.

INTERMITTENT OPERATION:

- I. Tip vibrates/cavitates and then stops:
 - A. Tip loose: tighten tip.
 - B. Footswitch damaged: Contact Engler Engineering Corporation.
 - C. Handpiece / cable damaged: Contact Engler Engineering Corporation.

- II Tip action ceases abruptly during operating procedure.
 - A. Tip not tightened: tighten tip.
 - B. Transducer broken: replace.
 - C. Handpiece / cable damaged: Contact Engler Engineering Corporation.