

## DISASSEMBLY

## ASSEMBLY

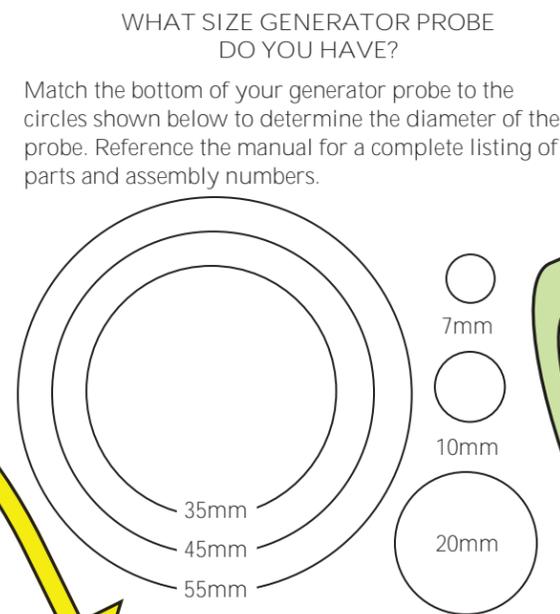
<p>7mm 10mm</p> <p>1 Insert and hold probe tool.</p>	<p>20mm</p> <p>1 Insert and hold probe tool.</p>	<p>32mm-55mm</p> <p>1 Insert and hold knife tool.</p>
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OR

**CAUTION**  
DO NOT use any tools other than those illustrated. Use of any other tool will void your warranty. Contact the service department if a tool kit is required.

**WARNING**  
Generator probe and knife may be sharp. Always use caution when working with any sharp objects.

**CAUTION**  
DO NOT tighten generator probe parts. Use of any torque may damage the generator probe or complicate assembly and disassembly.



**NOTE** Inspect bearing for wear or black particles. Clean any dirt from bearing before reassembly. Replace bearing if worn or damaged.

**NOTE** If bearings are replaced, they must be run-in before initial use.

**NOTE** 195mm length generator probes may have a mid-bearing pressed into the tube. The tube can be autoclaved with the mid-bearing installed. If you must remove the mid-bearing, contact the service department.

<p>7mm 10mm</p> <p>4 Insert knife.</p>	<p>20mm-55mm</p> <p>4 Insert knife.</p>
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OR

<p>7mm 10mm</p> <p>5 Insert probe tool.</p>	<p>20mm</p> <p>5 Insert probe tool.</p>	<p>32mm-55mm</p> <p>5 Insert knife tool.</p>
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OR

6 Turn rotor shaft clockwise with shaft tool.

7 Run generator in water. Knife will self tighten.

**CAUTION:** Turn shaft until assembly stops. DO NOT TIGHTEN.

## RUN-IN PROCEDURE

New bearings must be run-in before initial use.

Procedure:

1. Run 4 minutes on lowest motor setting.
2. Run 5 minutes on medium motor setting.
3. Run 1 minute on highest motor setting.
4. Disassemble generator probe.
5. Clean bearings of run-in dust.
6. Reassemble generator probe.

Generator probe is ready for use.

10mm 20mm 32mm 35mm 45mm 55mm

The lower bearing will come out with little effort. Remove the lower bearing and the parts are ready for cleaning.

OR

A press is required to remove the lower bearing from 7mm generator probes. The process is illustrated below.

6 Thread appropriate bearing press onto shaft.

7 Insert shaft with bearing press into generator tube.

8 Press bearing out of generator tube.

9 Remove bearing press before cleaning.



## GENERATOR PROBES FOR OMNI MIXER, MACRO, & MACRO-ES

### CLEANING GENERATOR PROBES

Generator probes are configured with a PTFE upper and lower bearing (400-series stainless steel bearings may be ordered). Please note that 400-series stainless steel bearings are subject to corrosion if not properly maintained. After cleaning, stainless steel bearings should be removed from the generator probe and wiped clean of all debris and moisture. Stainless steel bearings should not be used when working with organic solvents or in an environment that does not allow for proper maintenance. If the generator probe is to be used with organic solvents, then it is recommended that the stainless steel bearing be replaced with a glass filled PTFE bearing (PN 10503). PTFE bearings are generally corrosion resistant, and are self-lubricating.

**CAUTION:** DO NOT autoclave or lubricate stainless steel bearings.

Generator probes can be autoclaved as a complete assembly, if PTFE bearings are used. However, if it is necessary to disassemble the generator probe for special cleaning, or replacement of the rotor knife, rotor shaft, or the bearings, then follow the disassembly introductions.

**NOTE:** If you experience excessive vibration, heat, or bearing wear, please contact technical support at 1-800-776-4431

### REPLACEMENT AND RUN-IN OF PTFE BEARINGS

Over time, and with repeated use, PTFE bearings will wear out and must be replaced. Failure to replace worn PTFE bearings will result in damage to the generator probe. PTFE bearings should be replaced when they no longer fit snugly against the rotor shaft, or when visible wear is apparent, or if black particles become visible in the sample.

**Run-in:** The new bearing must be run-in in order to assure proper seating and to operate properly. Immerse one-third of the generator probe in water and operate the motor drive at low speed for 5 minutes, then run at full speed for 1 minute to complete the run-in procedure. If excessive or unusual noise is experienced during the run-in, immediately turn off the motor drive, and restart the break-in procedure at low speed. After completion of the run-in procedure, disassemble the generator probe and clean the bearing. Reassemble the generator probe and operate as needed.

**WARNING:** The tip of the generator probe, especially on the saw tooth generator probes, is sharp. For safety purposes it is advisable that the protective cap be replaced on the generator probe when not in use.

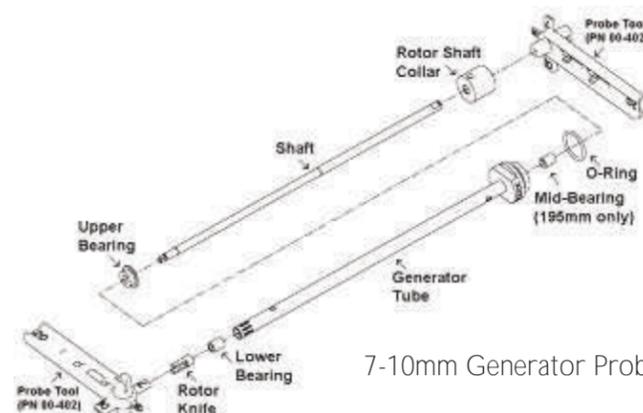
**CAUTION:** The bottom of the generator probe is extremely fragile and care should be taken to protect it. Replace the blue protective cap on the end of the generator probe when the generator probe is not being used.

**CAUTION:** When using PTFE lower bearings, immerse the bottom of the generator probe in liquid or in the sample to avoid premature failure of the lower bearing.

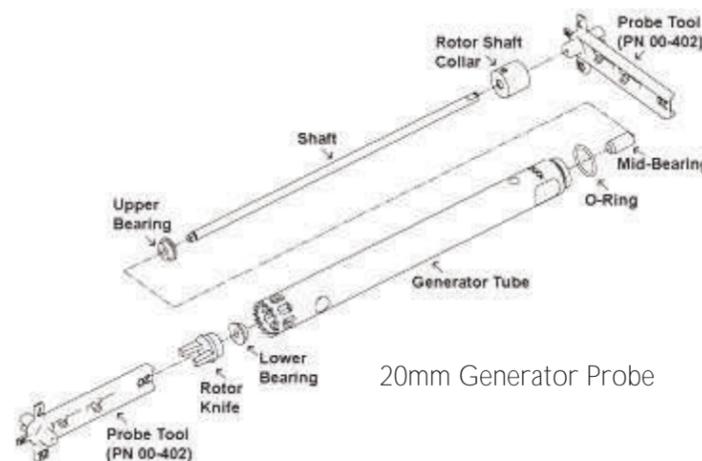
**NOTE:** For optimal sample recovery during processing, completely remove the generator probe from the sample prior to turning off the motor drive unit.

**NOTE:** Liquid circulates through the two holes in the generator probe. DO NOT block the upper hole, although the lower hole may be completely submerged during processing.

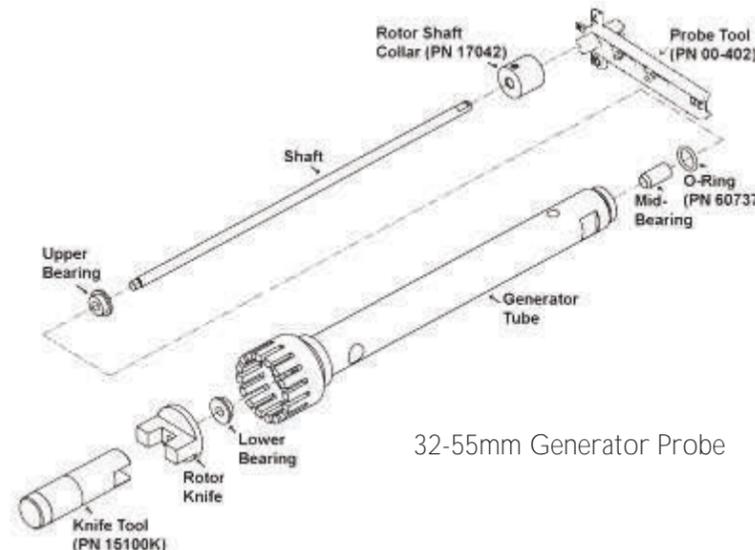
**CAUTION:** To protect the motor and the generator probe never operate the motor with the generator probe partially threaded onto the motor.



7-10mm Generator Probe

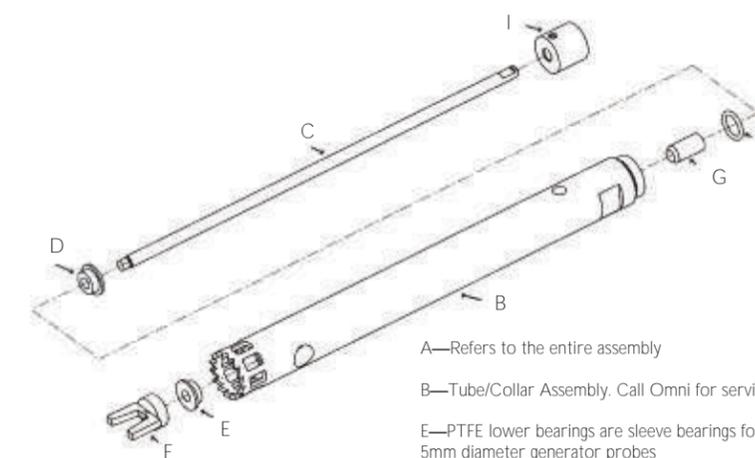


20mm Generator Probe



32-55mm Generator Probe

### GENERATOR PROBE REPLACEMENT PARTS



Generator	Diameter	Length	Shaft	Upper Brg	SS Brg.	PTFE Low Brg.	Knife	Mid Brg.	O-Ring	Rotor Shaft Collar
A			C	D (4/pkg)	D (2/pkg)	E (4/pkg)	F	G	H	I
15007	7mm	95mm	10017	10503	10651	10507	10047	N/A	60737	17042
15007W	7mm	95mm	10017	10503	10651	10507	10047	N/A	60737	17042
15007ST	7mm	95mm	10017	10503	10651	10507	10047	N/A	60737	17042
15007STW	7mm	95mm	10017	10503	10651	10507	10047	N/A	60737	17042
15007L	7mm	195mm	10017L	10503	10651	10507	10047	10071_R	60737	17042
15007LW	7mm	195mm	10017L	10503	10651	10507	10047	10071_R	60737	17042
15007LST	7mm	195mm	10017L	10503	10651	10507	10047	10071_R	60737	17042
15007LSTW	7mm	195mm	10017L	10503	10651	10507	10047	10071_R	60737	17042
15051	10mm	95mm	15512	10503	10651	10504	15013	N/A	60737	17042
15051W	10mm	95mm	15512	10503	10651	10504	15013	N/A	60737	17042
15010	10mm	195mm	15012	10503	10651	10504	15013	10069	60737	17042
15010W	10mm	195mm	15012	10503	10651	10504	15013	10069	60737	17042
15201	20mm	100mm	15222	10503	10651	10503	15023	N/A	60737	17042
15201W	20mm	100mm	15222	10503	10651	10503	15023	N/A	60737	17042
15401	20mm	145mm	15422	10503	10651	10503	15023	N/A	60737	17042
15401W	20mm	145mm	15422	10503	10651	10503	15023	N/A	60737	17042
15020	20mm	195mm	15022	10503	10651	10503	15023	10069	60737	17042
15020W	20mm	195mm	15022	10503	10651	10503	15023	10069	60737	17042
150-32TT-195	32mm	195mm	15-04-195	10653	10653	10506	15-03-32T	15-11-250	60737	18063
150-35NA-195	35mm	195mm	15-04-195	10653	10653	10506	15-03-35A	15-11-250	60737	18063
150-35WA-195	35mm	195mm	15-04-195	10653	10653	10506	15-03-35A	15-11-250	60737	18063
150-45NA-195	45mm	195mm	15-04-195	10653	10653	10506	15-03-45A	15-11-250	60737	18063
150-45WA-195	45mm	195mm	15-04-195	10653	10653	10506	15-03-45A	15-11-250	60737	18063
150-55NA-195	55mm	195mm	15-04-195	10653	10653	10506	15-03-55A	15-11-250	60737	18063
150-55WA-195	55mm	195mm	15-04-195	10653	10653	10506	15-03-55A	15-11-250	60737	18063