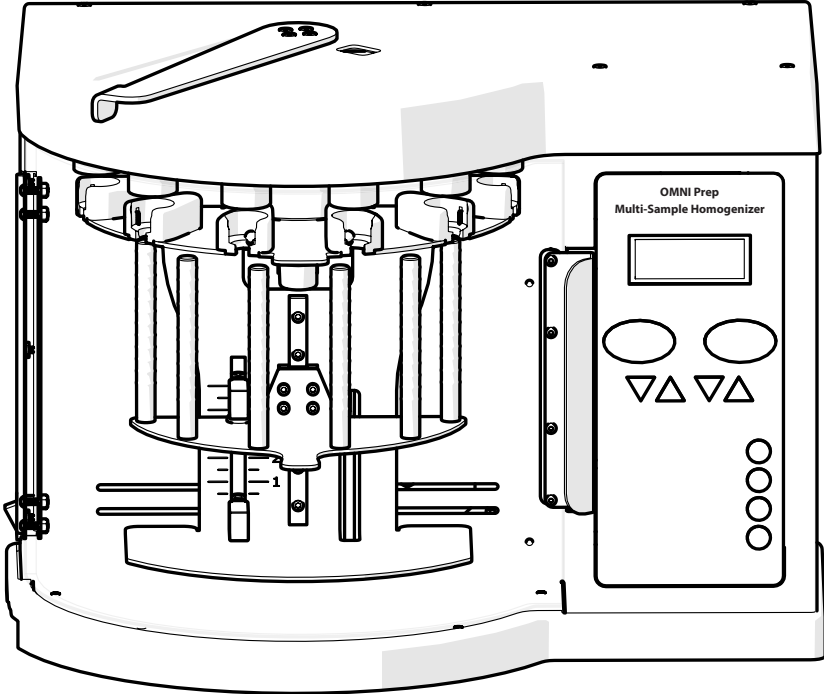


OMNI Prep

Multi-Sample Homogenizer

User Manual



WARRANTY INFORMATION

This manual is a guide for the use of the OMNI Prep Automated Homogenizer and accessories. Data herein has been verified and validated. It is believed adequate for the intended use of the instrument. If the instrument or procedures are used for purposes over and above the capabilities specified herein, confirmation of the validity and suitability should be obtained, otherwise OMNI International does not guarantee results and assumes no obligation or liability. This publication is not a license to operate under, or a recommendation to infringe upon, any process patents.

Notes, cautions, and warnings within the text of this manual are used to emphasize important and critical instructions.

This OMNI International product is warranted to be free from defects in material and workmanship for a period of ONE YEAR from the date of delivery. OMNI International will repair or replace and return free of charge any part which is returned to its factory within said period, transportation prepaid by user, and which is found upon inspection to have been defective in materials or workmanship. For the first 90 days, both parts and service are without charge. For the balance of the period, parts will be provided but service will be charged at established labor rates. This warranty does not include normal wear from use; it does not apply to any instrument or parts which have been altered by anyone other than an employee OMNI International nor to any instrument which has been damaged through accident, negligence, failure to follow operating instructions, the use of electric currents or circuits other than those specified on the plate affixed to the instrument, misuse, or abuse. OMNI International reserves the right to change, alter, modify, or improve any of its instruments without any obligation whatever to make corresponding changes to any instrument previously sold or shipped.

THE FORGOING OBLIGATION IS IN LIEU OF ALL OBLIGATIONS AND LIABILITIES INCLUDING NEGLIGENCE AND ALL WARRANTIES OF MERCHANTABILITY OR OTHERWISE, EXPRESSED OR IMPLIED IN FACT OR BY LAW, AND STATE OUR ENTIRE AND EXCLUSIVE LIABILITY AND BUYERS EXCLUSIVE REMEDY FOR ANY CLAIM OF DAMAGES IN CONNECTION WITH THE SALE OR FURNISHING OF GOODS OR PARTS, THEIR DESIGN, SUITABILITY FOR USE, INSTALLATION, OR OPERATION. OMNI INTERNATIONAL WILL IN NO EVENT BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, AND THEIR LIABILITY UNDER NO CIRCUMSTANCES WILL EXCEED THE CONTRACT PRICE FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.

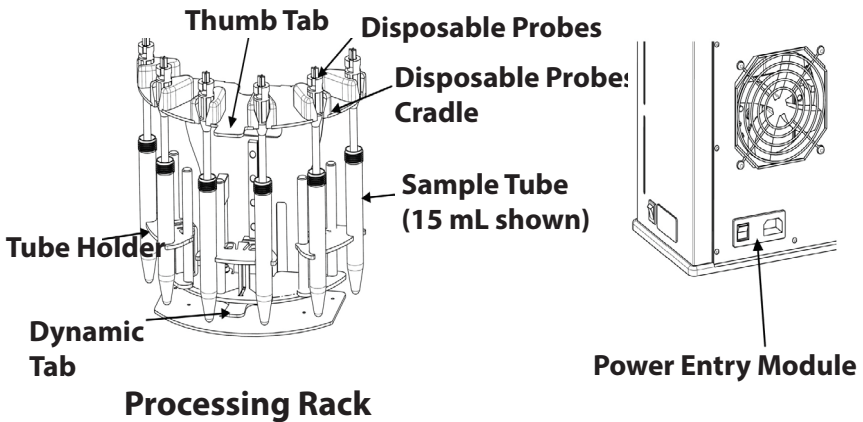
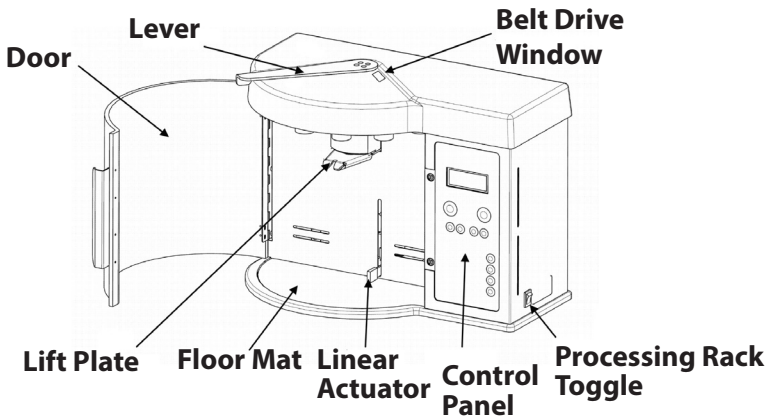
- **READ ALL INSTRUCTIONS BEFORE USING.**
- **SAVE THIS OWNER'S MANUAL.**

The OMNI Prep has been engineered for maximum functionality as well as safety; however, basic safety precautions and common sense must always be demonstrated when using any electrical product. **DO NOT** attempt to modify any part of the OMNI Prep. If you experience problems with or have questions about your OMNI Prep, contact your authorized dealer.

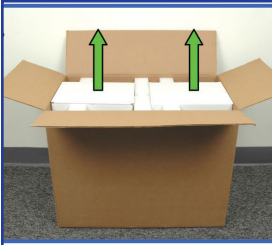
- **DO NOT** allow the machine to be submerged in any liquid.
- **DO NOT** use in any setting other than an indoor laboratory.
- **DO NOT** plug power cord into an incorrect outlet.
- **DO NOT** operate the product if it is damaged in any way.
- **DO NOT** use attachments not recommended by the manufacturer.
- Use this product only for its intended purpose as described in this booklet.

OVERVIEW

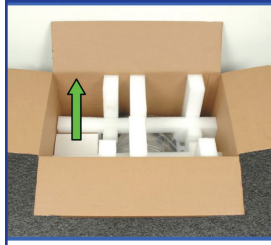
The OMNI Prep Homogenizer is a variable speed, multi-sample homogenizer. The OMNI Prep is powered by a 150 watt, 30,000 rpm belt-driven motor. It includes a built-in high efficiency speed control, a digital speed display, and a built-in timer. The OMNI Prep operates exclusively with Disposable Probes™ plastic generator probes or specially designed Stainless Steel Probes. The motor drive unit housing has been specifically designed to reduce motor noise to less than 75db at top speed. The OMNI Prep allows you to process up to 6 samples at a time in 1.5 - 50 mL sample tubes.



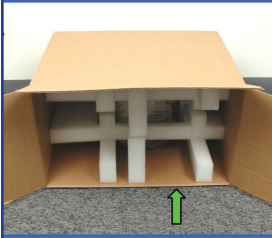
UNPACKING THE OMNI PREP



1. Open the box on the floor. Remove the two rack boxes. (Package may contain one rack box depending on your order).



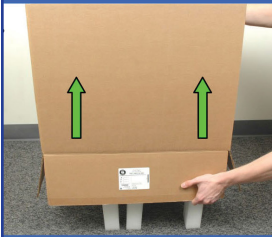
2. Remove the accessory box.



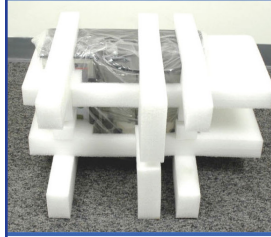
3. Lay the box down on one side. Make sure that the box flap is folded under (arrow).



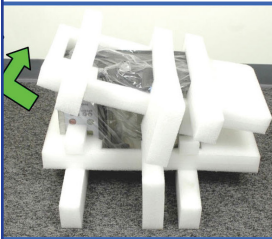
4. Turn the box upside down making sure that all of the flaps are folded out as shown.



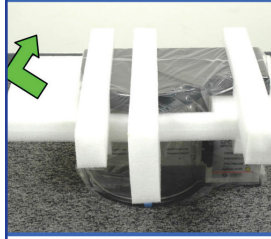
5. Lift the box off of the foam as shown.



6. Lay the OMNI Prep upside-down on the floor.



7. Work the foam off of the unit by lifting from one side to the other as shown. The unit is held very tightly in the foam.



8. Turn the unit over and remove the rest of the foam.

PLEASE NOTE: SAVE ALL INCLUDED PACKAGING!

SPECIFICATIONS

Variable Motor Speed: 500 - 30,000 rpm

Speed Control Accuracy: +/- 1%

Dimensions: W: 15.7" (40 cm), D: 7.8" (20 cm), H: 11.8" (33 cm)

Weight: 21 lbs. (9.53 kg)

Electrical Requirements: 110-230 VAC 50/60 Hz

Standards Approval/Compliance: CE and UKCA certified



ACCESSORIES

The OMNI Prep is sold as a customizable homogenizing system. Listed below are all available accessories for the OMNI Prep. At least 1 processing rack, 3 tube holders, and Disposable Probes are required to operate the OMNI Prep.



OMNI Prep Processing Rack

Movable for highly efficient process. Required for operating the OMNI Prep.

OMNI Prep Rack Tube Holders



Tube holders are available for 1.5 - 2 mL, 15 mL and 30 or 50 mL sample tubes. Custom tube holder sizes are also available. Each holder holds 2 sample tubes. Tube holders are required to operate the OMNI Prep.

OMNI Tips™ Disposable Probes



25 OMNI Tips™ Soft Tissue - Order # 30750

50 OMNI Tips™ Soft Tissue - Order # 32750

100 OMNI Tips™ Soft Tissue - Order # 34750

500 OMNI Tips™ Soft Tissue - Order # 35750



25 OMNI Tips™ Hard Tissue - Order # 30750H

50 OMNI Tips™ Hard Tissue - Order # 32750H

100 OMNI Tips™ Hard Tissue - Order # 34750H

500 OMNI Tips™ Hard Tissue - Order # 35750H

ACCESSORIES



Stainless Steel Homogenizer Probes

These Stainless Steel Probes were designed specifically for the OMNI Prep. These probes are ideal for larger sample volumes, larger initial sample tissue sizes, and tougher tissue types. Stainless Steel Probes are also resistant to most organic solvents commonly used during homogenization.

5 x 75 mm Stainless Steel Probe

Order # B5-075

(6 Pack) - Order # B5-075-6

7 x 110 mm Stainless Steel Probe

Order # B7-110ST

(6 Pack) - Order # B7-110ST-6

10 x 110 mm Stainless Steel Probe

Order # B10-110ST

(6 Pack) - Order # B10-110ST-6



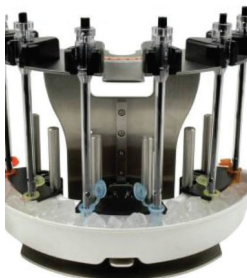
7 mm Hybrid Probes

The Hybrid Probes combine the convenience of disposable plastic probes with the durability of traditional stainless steel probes. Hybrid probes are made up of an outer stainless steel tube with an inner Ultem plastic shaft. The plastic shafts can either be disposed of after use or cleaned and reused multiple times. The simple two-piece design makes these probes much easier to clean and disassemble than traditional stainless steel probes.

7 x 110 mm Hybrid Probe

Order # 22-007

(6 Pack) - Order # 22-007-6



OMNI Prep Ice Tray

Keeps frozen and sensitive samples cold during processing.

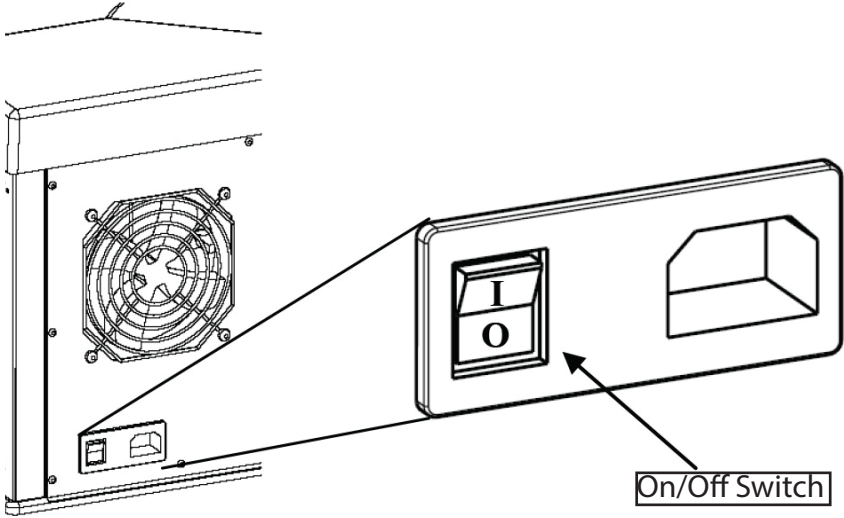
Ice Tray for 1.5mL—2mL Tubes - Order # 06-207

Ice Tray for 15mL—50mL Tubes - Order # 06-210

PREPARATION FOR USE

Connect the power cord to the power entry module on the rear panel, and plug it into an appropriate outlet.

Note: The OMNI Prep is equipped with a universal power supply which works with an input voltage of 110 - 230 VAC at 50/60 Hz.



WARNING: DO NOT attempt to plug a cord into an incompatible outlet.

WARNING: DO NOT attempt to remove the ground post on 115v cords. Service power must be earth grounded.

CAUTION: It is strongly recommended that a surge protector be used to help protect the OMNI Prep.

LOADING SAMPLES

The processing rack has been engineered to hold up to six open or sealed tubes of various sizes.



1. Determine the number of samples to be processed. Only an even numbers of samples may be processed at a time.

- If processing only two samples, place the tube holder between the two middle bars as shown. (50 mL tube holder shown)



- If processing only four samples, mount the tube holders on the rack leaving the rods on the far ends empty. (50 mL holders shown)

- If six samples are desired, mount all three tube holders in the rack as shown. (50 mL tube holders shown)



2. Load empty sample tubes into tube holders. Do not add sample or fluid to tubes until after a complete "dry" setup has been made. (50 mL tube holders shown)



3. Install Disposable or Stainless Steel Probes by first inserting the lower end into the sample tube, then lower the Tip/Probe until it rests securely in the probe cradle.



CAUTION: DO NOT allow probes to touch the bottoms of the tubes.

CAUTION: Only probes made by OMNI International are compatible with the OMNI Prep. Attempting to use other style processors will damage the OMNI Prep and void all warranties.

LOADING SAMPLES

PROCESSING RACK

The processing rack has been engineered to allow the samples to be vertically oscillated relative to the probes during processing.



1. Load the tube holders, sample tubes, and Disposable/Stainless Steel Probes by following the steps. (50 mL tubes shown).

2. Loosen top adjustment knob on rear of rack.



3. Raise platform up to desired Tip/Probe depth in the sample tubes. Lower top adjustment knob to platform and tighten.

4. Loosen lower adjustment knob on rear of rack.



5. Move platform down to desired Tip/Probe maximum height in sample tubes. Raise lower adjustment knob to meet platform and tighten.

CAUTION: DO NOT allow Disposable/Stainless Steel Probes to touch the bottoms of the tubes.

CAUTION: DO NOT allow the Disposable/Stainless Steel Probes to ever be completely extracted from the sample tubes during processing.



6. Remove the Disposable/Stainless Steel Probes and the sample tubes.

7. Load tubes containing sample and fluid and replace the Disposable/Stainless Steel Probes. The rack is now ready to be loaded into the OMNI Prep.

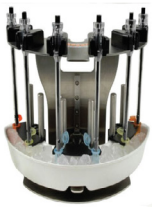


NOTE: If stationary operation is desired, load the tube holders as described and leave the processing rack toggle switch in the Off position during processing.

CAUTION: DO NOT use sealed tube caps when move-able rack processing is desired. Rack will no move with tube caps in place.

PLEASE NOTE: Portion of Disposable/Stainless Steel Probe shown below the red line must be submerged in liquid during processing.

LOADING THE ICE BATH (OPTIONAL)



1. Install the empty ice bath to the rack underneath the tube holders.
2. Lower the tube holders so that the tubes are at the desired depth relative to the ice bath.
3. Place the cooling agent (chilled water, ice, dry ice, etc.) into the bath.



INSTALLING THE PROCESSING RACK

1. Ensure the lever is positioned all the way to the left; hold the rack in your right hand using the thumb-tab located on the center of the top plate.
2. Slide the rack onto the lift plate, and push completely back until it stops.
3. Close the door and sweep the lever to the right until the processing rack locks in its raised position.



CAUTION: The lever should move with smooth and constant motion. If the lever does not slide smoothly as it is moved to the right:

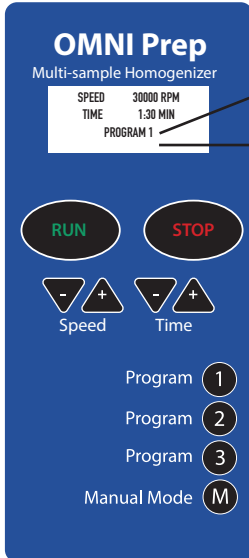
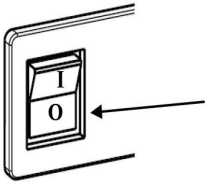
1. Slide the lever back to the left.
2. Remove the rack.
3. Rotate the tops of the probe shafts.
4. Replace the rack in the OMNI Prep.

Repeat this procedure until the locking lever can be moved smoothly all the way to the right (fully locked position).

MODES OF OPERATION

The OMNI Prep is now ready for use.

Turn ON the power switch located on the rear of the unit.



Mode Line

Message Line

The OMNI Prep has two modes of operation.

In **Program mode**, the active program defines the process time and speed. Processing time counts down and processing stops when time reaches zero.

In **Manual Mode**, the timer counts UP from zero, and the OMNI Prep continues to process until the "Stop" button is pressed (10 minute maximum).

PROGRAM MODE

The OMNI Prep can store up to three separate programs. The active program number is displayed on the mode line of the LCD screen (example: PROGRAM 1). A program is modifiable when it is active and the OMNI Prep is not running. Modified time and speed values are automatically stored in the active program. Press START to begin processing; the speed may be adjusted during a run, but the time may not. The time will count down from the stored value. Processing may be paused at any time by pressing the STOP button once or by lowering the rack; the message line will read "RUN PAUSED". Pressing START will resume the run; the message line will read "RUN RESUMED" (rack must be locked). Pressing the STOP button twice will cancel the run and reset the time to the starting value.

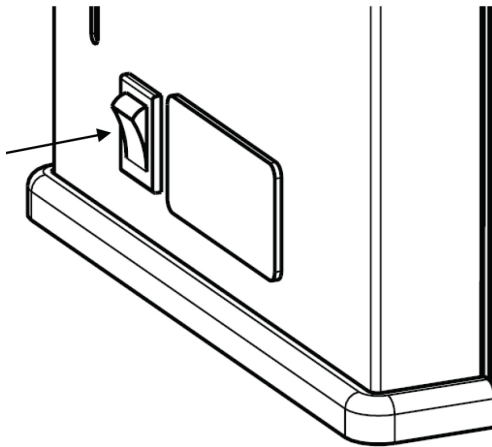
MODES OF OPERATION

MANUAL MODE

The speed value is actively stored and may be changed at any time. Press START to begin processing. Processing may be paused at any time by pressing the STOP button once or by lowering the rack; the LCD display will read "RUN PAUSED". Pressing START will resume the run; the display will read "RUN RESUMED" (rack must be locked). Pressing the STOP button twice will cancel the run and reset the time to zero.

PROCESSING RACK OPERATION

The processing rack is controlled by the toggle switch on the side of the OMNI Prep. The mechanism raises and lowers the rack as the samples are processed allowing more even/efficient processing. When in use, the rack oscillates through the user specified range of motion, see section 3.2. The maximum range of motion is about 2 inches. The rack oscillates at an approximate rate of 0.8 Hz. The system is disengaged until the rack is raised into the running position by sweeping and locking the lever to the right. Once the rack has been installed, see section 3, and the Program to be run has been specified, see sections 4.1 and 4.2, press the START button and turn on the movable rack toggle switch.



CLEANING THE OMNI Prep

Remove power. Remove the rack and the floor mat and wipe with a mild detergent and water solution. The OMNI Prep motor unit and tube holders may be wiped down with a damp cloth of the same mild detergent. Do not use an excess amount of cleaning solution. Dry thoroughly.

CAUTION: DO NOT attempt to submerge any part of the OMNI Prep in any solution.

CAUTION: DO NOT spray cleaning solution on to the OMNI Prep. Wipe the surfaces with a damp cloth.

CAUTION: DO NOT sterilize plastic tube holders in an autoclave. They may be damaged if autoclaved.

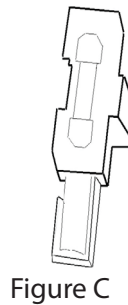
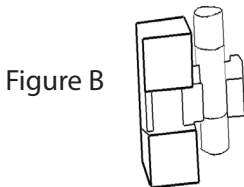
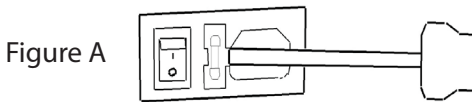
CLEANING DISPOSABLE PROBES/TIPS

While Disposable Probes can be autoclaved up to seven times for repeated use, they are not recommended for extended use with phenol or guanidine-based reagents. Disposal may be required when used in conjunction with these reagents. However, for many applications the probe can be cleaned and/or sterilized for reuse by the procedures described below:

	Recommended	Not Recommended
Sterilization Techniques	<ul style="list-style-type: none">• Autoclave up to 250°F• Ethylene Oxide• Formaldehyde• Gluteralhyde (2%)• Gamma irradiation up to 5MRAD	<ul style="list-style-type: none">• UV Irradiation
Biological Disinfection:	<ul style="list-style-type: none">• Alcohol (70%)• Hypochlorite (5%) [chlorine bleach]• Formaldehyde (40%)	<ul style="list-style-type: none">• Phenolic Derivatives• Extended exposure to Guanidine• Dichloromethane
Radioactive Decontamination:	<ul style="list-style-type: none">• Radiacwash• Count-Off• Water/Ethanol/SDS	

FUSE CHECK AND REPLACEMENT

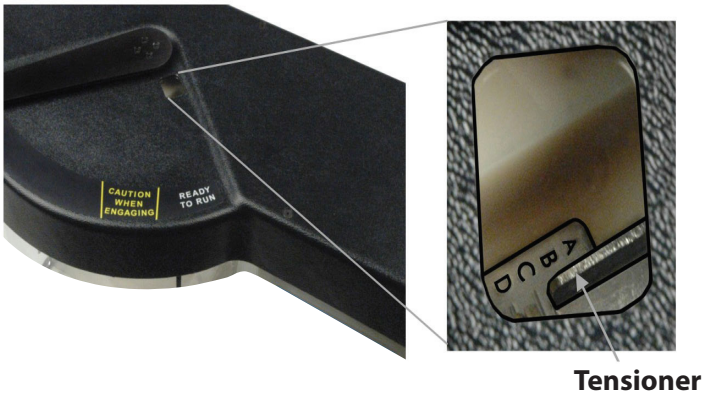
1. Remove power. Unplug the cord from the power entry module.
The fuse holder is located in the center of the power entry module.
2. Use the tab on the right-hand side of the fuse holder and a screwdriver (figure A) to slide the holder straight back until it is completely removed.
3. Check the fuse by examining the filament in the center of the tube as shown (figure B). If the filament is broken, continue to step four. If the filament is in tact, return the assembly into the power entry module and contact OMNI International.
4. Un-clip the expired fuse and discard. Press on one end of the enclosed portion of the fuse holder to remove the spare fuse from the casing as shown (figure C). Replace the empty casing into the fuse holder.
5. Clip the new fuse into the exposed side of the holder and reinstall into the power entry module.
6. Contact OMNI International to obtain a new replacement fuse.
Store the fuse in the casing on the enclosed side of the fuse holder.



CHECKING DRIVE BELT TENSION

The OMNI Prep operates by means of a belt driven motor system. Over time the tension of the belt may need to be adjusted or the belt itself may need to be replaced.

The OMNI Prep is equipped with a Belt Drive Window located on top of the unit. This window allows for easy viewing of the Belt Drive Tensioner. The belt tension is correct when the tensioner is located between the letters "B" and "C" on the tension scale (See figure below).



If the belt tension is incorrect contact OMNI International.

CAUTION: ANY ATTEMPT TO REMOVE ANY SURFACE OR MODIFY THE OMNI Prep IN ANY WAY WILL VOID ANY WARRANTY.

WARNING: To reduce the risk of electric shock, personal injury, or death, DO NOT ATTEMPT TO REMOVE THE REAR PANEL OF THE OMNI Prep.

TROUBLESHOOTING

Do not attempt to service the OMNI Prep in a manner other than those discussed in this manual. For any issue that is unsuccessfully corrected using this guide, please contact OMNI International.

PROBLEM	CORRECTIVE ACTION
The OMNI Prep is plugged in and turned on but is not functioning.	-Check power cord connectors -Check wall socket for power to the outlet -Check Fuse
LCD screen is lit but motor will not run	-Verify that the LCD displays "READY" -Make sure the rack is locked
LCD lit but not functioning properly	-Turn power off and back on to reset Call if problem persists.
OMNI Prep begins a run but probes/tips are not rotating	-Drive Belt may need servicing -Turn the OMNI Prep OFF and call OMNI International
Rack raises but will not lock	-Do Not Force Lever. -Verify that the rack is pushed completely onto lift plate. - Damaged drive connects on Disposable Probes Tip shafts; replace the Disposable Probes
Rack binds in transition to locked position	-Do Not Force Lever -Disposable Probe drive connects may be damaged. Inspect and replace if necessary. -Verify that rack is securely pushed into place.
Disposable Probes/tips stick in OMNI Prep drives when unlocking the rack	-Disposable Probe drive connect worn, replace Disposable Probe.
Excessive noise/vibration from Disposable Probes	-Fluid level may be too low in tube. -Drive Belt may need servicing
Excessive splashing in sample tube	-Fluid level too low for tube size -Contact OMNI International about sealed tube operation



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PN:03-201 Rev. E