



# THE ALTERNATE Source<sup>®</sup>

SUMMER 1994

VOLUME 4

SERVING THE NEEDS OF THE HEALTHCARE INDUSTRY SINCE 1972

NUMBER 2

## JUNE IS



### For Healthcare Equipment

*"The term preventive maintenance (PM) became widely known in the early 1960s. The concept behind it was, and still is, that scheduled inspections and minor repairs of equipment greatly increase the time between overhauls and significantly reduce the probability of costly, unscheduled shut-downs. Today we know that PM is a sound concept and, when used with discipline and good judgment, saves industry millions of dollars each year."*

*Roger LeBlanc  
Maintenance Calibration Consultant*

**W**e know it. Our customers know it. The industry knows it. But when it comes time for budget cuts, it's the first to go. What is it? It's PM - Preventive Maintenance - and it does not get the attention it deserves.

So, RPI created National Preventive Maintenance Month. The idea is to create a greater awareness throughout the industry of the importance of PM to healthcare equipment as well as to a budget's bottom line. When you think about it, the cost of PM is quite reasonable when compared to equipment down-time, not to mention the risk of major equipment failure.

Throughout the years, you, our customers, have asked us to provide more parts and kits directly associated with PMing equipment. You also wanted more hands-on information about PM efficiencies. So, in response to your requests and in support of National Preventive Maintenance Month, we have a FREE gift for you.

It's the limited edition RPI PM wall poster. This colorful poster is full of helpful hints and practical advice to save money on repair costs and step-by-step suggestions on creating an effective PM program for all kinds of equipment. There's also an easy to use chart that lists the RPI PM parts and kits that are most in demand. In addition, it includes articles on fine-tuning PM cycles, the new direction of PM and much more.

You'll find your poster inside this newsletter. If you would like additional copies of the poster at no charge, please contact our Customer Service Department at (800) 221-9723 or use our 24-hour faxline, (818) 882-7028.

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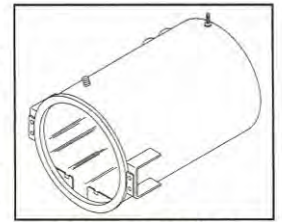
And, if you would like to contribute to next year's National Preventive Maintenance Month, please let us know. If you have an idea, please contact Joan Woodlock. Whether it's a helpful hint, suggestion, cartoon, anything that will help to get the word to the industry that PM is the future. Let's work together to help each other.

## THEY'RE HERE THEY'RE HERE

**A**bout two years ago we told you that we were starting development work on the chamber to fit the Pelton & Crane OCR and OCM table top sterilizers. We told you to expect them soon. Well, this is as soon as it gets. The chamber to fit the OCR is now being introduced. Within the next twelve months, we'll have the chamber to fit the OCM, too. What took us so long? Careful, deliberate design aimed at quality with a high degree of built in safety.

An autoclave chamber is actually a small pressure vessel carrying with it all of the inherent risks. We designed away those risks. As proof, we ran a burst test on our first chamber.

Only two pin holes (no burst or rupture) occurred at about 900 psig. This is only slightly (HA HA) in excess of autoclaving pressure of about 30 psig.



RPI Part # PCC116

This test was done with a special steel plate covering the opening of the chamber rather than the standard OCR door. The reason: when run with its own door, the maximum pressure we could achieve was about 100 psig. At that pressure the door deformed slightly relieving the seal, and steam began escaping. It acted much like a second higher pressure relief valve.

We were able to achieve these wonderful results because we designed to ASME standards. This means that we have done such things as using heavier gauge metal on the hemispherical end and using special high pressure seam welds. But our care continues beyond development. Each chamber you buy will be serialized so that you can maintain traceability. It will have been individually tested at 300 psig with certification to that effect included with your chamber. It will have had all seam welds tightly inspected. Bottom line, you will be getting one of the best products we've ever made. Please see the enclosed new flyer update for more information.

## IMPLEMENTING A CLINICAL LABORATORY EQUIPMENT SUPPORT PROGRAM IN YOUR HOSPITAL, PART III

By Myron D. Hartman, CCE, CBET, Director of Clinical Engineering  
South Hills Health System, Jefferson Hospital, Pittsburgh, PA

*This is the final installment of a three part series. As you may recall in Part I and II of the series which appeared in "The Alternate Source"® Summer, 1993 and Winter, 1994 issues respectively, the author focused on gathering information and laying the ground work to develop an effective support program. In Part III, he concludes the series with a discussion about the resources needed to implement a successful program and other services you may be able to offer.*

One important step in your plan that should not be overlooked is what resources are needed to complete the task of implementing the program. Resources such as staffing, capital equipment and operating supplies should be addressed. And, consider offering other kinds of services to the Clinical Laboratory.

**Staffing.** Here are some suggestions. Calculations for the labor should be straightforward for preventive maintenance testing and repairs. Time estimates for the preventive maintenance should include safety checks, cleaning or preventive maintenance actions and performance evaluations.

**Tools and Equipment.** As for the tools and equipment needed for servicing the clinical laboratory equipment, most of the items will already be in the Clinical Engineering Department. Following is a listing of the basic equipment needed to inspect and service the clinical laboratory support equipment: electrical safety analyzer, digital multi-meter, digital thermometer, digital phototach, digital pressure/vacuum meter, reed tachometer, oscilloscope, stop watch or digital timer, tool box with basic hand tools.

And, for servicing more sophisticated automated analyzers, training from the manufacturer will help to identify what additional tools, equipment and supplies are needed.

**Additional Services.** Besides service and inspections on clinical laboratory equipment, your department may offer the clinical laboratory other important support services including: xylene gas monitoring, formaldehyde gas monitoring, alcohol gas monitoring, electrical power quality surveys, electrical power problem corrections, radiation dosimetry badge management, electrical receptacle testing, air quality measurements, contract record-keeping and evaluations, vendor service report documentation, vendor preventive maintenance report documentation, manufacturer and FDA hazard recalls, manufacturer modification documentation, vendor equipment hardware/software upgrade documentation, measurement and documentation for equipment up-time, S.M.D.A. (Safety Medical Devices Act) reporting, U.P.S. (Uninterrupted Power Supply) testing coordination, emergency generator testing coordination, utility utilization and conservation, O.S.H.A. safety training - lockout/tagout, safety audits, and cabling and interface to computers.

In conclusion, you now have the basic information needed to put together a comprehensive strategic operating plan for implementing a clinical laboratory equipment support program in your hospital. You have an idea of how to determine where you are today, where you want to go, and a plan on how to get there.

Remember that each one of us begins at a different starting point and this project may not happen over night. It takes a special, self-motivated, patient individual to take on a task as challenging as this. But the rewards can be enormous. By taking on additional roles in the laboratory, you will be doing more than the average clinical engineering department — you can become a valuable resource to your system.

### PHR004 & PHR005

#### They Finally Meet Our Standards

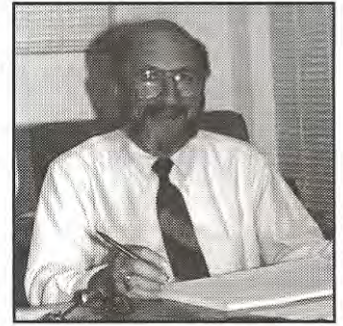
##### Here's the long and short of it...

About two years ago, RPI was not satisfied with the quality of our Long and Short Pin Plastic Rollers that fit the Philips (Dent-X) X-ray Film Processor 810, 810 Basic and 810 XL, so we decided to take them off the shelf until we could offer you a roller that met our high standards. They do now and they're in stock, ready for immediate delivery. Thank you for being so patient.

### CUSTOMER COMMENTS

"...Appreciated the Earthquake Update — Glad to hear you're OK. We at National hope your future rock & rolling is limited to music. We wish you continued success..."

Tom Leeds  
National Medical Specialty, Inc.  
Plymouth, MI



Al Lapides, President

From  
the  
desk  
of  
the

## PRESIDENT

### NEVER SAY NEVER

Those who have been with us for a long time know that we have never deleted a single part from our inventory. We have even beaten our own drum and assured customers that this was fact. However, we were prudent to not promise that we would NEVER drop a part. Never say never (should be the title for a James Bond 007 movie) because you don't know what the future may bring. Here's what's happening and this is a first for RPI.

We can no longer supply the switches (RPI Part #GOS008 and GOS009) to fit the Gomco board. Gomco can't either. Quite simply, the switches are no longer manufactured by anyone. And we came to find that there is NO replacement that will fit those older boards.

However, RPI came up with a solution for you. We developed a new board (RPI Part #GOB016) that comes with switches. So you can replace the old board with our new board and if there ever comes a time when you need to replace these switches, you can. We carry the switches for our new board separately (RPI Part #GOS030 and GOS031). (See page 45C in our current April 1993 catalog.)

What's more, almost a dozen years ago, one of our customers strongly suggested we make parts for wheelchairs. We were still small enough (there were only three of us) and naive enough to take a single customer's input and run with it. We have, of course, discovered the hard way that our broad base of customers doesn't include very many of those who work on wheelchairs. So it's time to bite the bullet and pull them from the catalog. Present inventories will be used up and not replaced. That means they may not be available even before the new catalog is distributed.

Thanks for understanding. This is not the beginning of a trend. It is being practical in our efforts to serve you better.



Sherry Lapides, General Manager

## from the PRESIDENT'S BOSS

"It was the best of times, it was the worst of times." These opening lines of Charles Dickens' *A Tale of Two Cities* just about sums up our feelings regarding the first quarter of 1994.

The best of times was that, thanks to all of you, March was our best sales month ever, and sales for the first quarter of 1994 set another record. March also set a new record for the number of orders processed. Our Customer Service and Shipping Departments really had things moving. Way to go, everyone!

The worst of times was another story. Mother Nature dealt some cruel blows all across the country, with earthquakes, ice storms, floods and tornadoes leading the way and affecting not only RPI, but also many of our customers, and wreaking havoc with shipping schedules.

But that wasn't the worst of it. As many of you discovered, for the first time in our twenty-two years in business, RPI ran into some major back-order problems. I could go on and give you reasons and excuses for what happened, but that's not the point. The point is that we let you down, and broke our promise to ship the same day your order is received. In too many cases we could not do that in the last couple of months. For that I truly apologize to all of you who were inconvenienced by this situation. We're trying our hardest to get things squared away.

RPI was founded on the idea of service to our customers. We try our best to keep that idea in front of us and I sincerely hope a situation like this does not occur again.

Since this article is being written several weeks before you read it, with luck the back-order problem will have been resolved and we will be back on our normal track again.

In the meantime, have a wonderful summer and some great vacations.

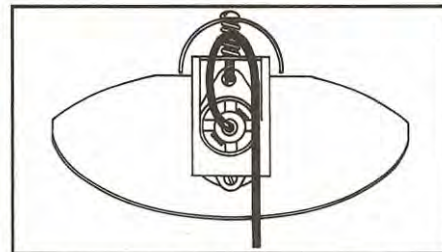


# TECH TALK

By John Downs  
RPI Product Development  
Department

## Light Fantastic LFI Socket Replacement

Perhaps the most important thing to remember when replacing the slotted, ceramic socket (RPI Part #PCS605) is to make sure that the socket wires are not crimped. To do this, work with one side at a time. Bend the wire close to the socket about 90 degrees up until it touches the underside of the lamp cover and forms a 180 degree loop. Then push the loop slightly over the socket as shown in the diagram above. The loop is essential for proper operation and if done correctly it can avoid premature wire failure.



When replacing the socket (RPI Part #PCS605) in the Light Fantastic LFI, make sure that the socket wires are not crimped.

## "REVISIONS GONE MAD" THE CAM050 IS BACK AND BETTER THAN EVER

**fed up adj : disgusted beyond endurance.** As a faithful consumer of RPI centrifuge parts, more than likely you, too, are fed up with our microhematocrit motor (RPI Part #CAM050). But we have good news for all.

Just to update you on the situation. Originally the motor was slightly larger in diameter. An easy solution was to remove the mounting ribs which are not used in this application. No sooner was this accomplished, when we discovered an arcing problem between the carbon graphite brush and the armature. The solution was to change brush material to an electro graphitic type. Ahh, less arcing and a cooler running motor. But — not cool enough. The motor still ran hot. So, back to the drawing board with the help of Ivan Frank of SIENCO. We commissioned Mr. Frank to do a study of the motor and its problems. This is what we discovered.

Problem	Solution
Saturation in Field	Reduce lead wire in armature
Ran Hot	Field lead wires dressed for minimum obstruction in pole gap area
	Added vent holes in upper and lower peripherals as well as in mounting bracket
	Added impeller type fan
	Improved wiring to centrifuge
	Added thermal protection

The good news is that the prototypes built to our new specifications are far superior to our original motor. No arcing problem. No hot motor. In fact, our motor is so well designed that several companies in the European community asked us if they could use the design in other applications. Now here's a motor of which we can all be proud. The new and improved motors should be here by mid-June, but please call us for availability.

A special thanks to Mr. Frank for his engineering expertise. And another thank you to one of our customers, Ed Corr of Doctor's Equipment Service, for staying with us every step of the way. And thank you, all of our customers, for your time and patience. This is what working together is all about.

## What's New

You Asked For Them  
You Got Them

### YOUR OPINION COUNTS

In response to your requests, the following new parts are in inventory, ready to be shipped the day your order is received. Please see the enclosed RPI new product flyers and add them to your RPI April, 1993 catalog notebook.

- **Air Shields** – Motor, retainer knobs, and heat shield to fit the C100QT and C200QT as well as a motor to fit the C86, C100 and C200. See page 14A.
- **American Sterilizer** – Ten new parts to fit the Eagle and Medallion series including pressure gauges, fuses, door switch, sight glass and safety valve. Also now available is the trim gasket to fit the 20" x 20" Amscomatic. See page 18D.
- **Clay Adams** – It's covered — lid cover assembly, catch block and latch assembly to fit the Readacrit and MP Readacrit. See page 38A.
- **Pelton & Crane** – Oh yes...and presenting the long-awaited chamber assembly to fit the OCR. See page 70A.



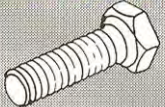
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**NEW PARTS  
 PAGES INSIDE**

# SERVICE TIPS



By Dennis H. Augur  
 A SERVICE A PLUS, For Your Coulter Counter®, Fulton, MO

## Coulter T Series

The Coulter T Series units are very reliable for the most part, but like all equipment they have a few idiosyncrasies.

### TIP # 1

Erratic RBC and/or WBC counts with abnormal vote outs or rejects is usually caused by insufficient mixing bubbles in the baths. Drain the baths and replace the malfunctioning Mixing Bubble Check Valve (RPI Part #COV009).

### TIP # 2

The I Beam Pinch Valves used on all Coulters have three ports which will accept tubing. The center port is never used. When changing pinch valve tubing, always hold the pinch valve open with a red clip. This keeps the center port closed so it can't be used.

*Editor's note: Dennis Augur has been servicing Coulter equipment for more than 19 years. He was a Senior Field Service Engineer for Coulter in the Midwest for 14 years and five years ago he founded his own company, A SERVICE A PLUS, which services Coulter equipment worldwide.*

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Inquiries should be addressed to: RPI, Marketing Department, P.O. Box 5019, Chatsworth, California 91313-5019.

Additional copies of *The Alternate Source*® may be obtained by calling RPI, (800) 221-9723 or (818) 882-8611.

## ISNI '94 MEETING UPDATE

**T**hey keep on getting better. The third annual meeting of ISNI (Independent Service Network International) was another step forward in education, training, organizing, and networking (having it in Freeport, Bahama wasn't too shabby, either). There were sessions on legal happenings directly affecting ISOs; special insurance programs; tactics to increase sales; considerations on profit potentials; how to sell your service business; and new trends as we head into the next century. There were special sessions just for the medical ISOs covering strategies being developed by OEMs to block the ISOs and reverse strategies to beat them. And an hours-long open forum round table covering primary issues facing medical ISOs.

I must repeat again, the importance of this association to all of us. Most of us belong to professional associations and I agree that that is primary. Associations such as AAMI, ASHE and the College of Clinical Engineering are just that: professional societies. They are not business associations aimed at helping an independent business, an ISO, to move forward in a changing marketplace. That's the role that ISNI performs, and I recommend all of you independents to consider it seriously. I am pleased to say that two of you did last year: Lewtek in Reno, and Privimed in Quebec. I hope more of you do. If you have any interest, please call Claudia Betzner at (404) 885-9908. And tell her RPI sent you.

Next year promises to be even better. The bench marking standards committee is continuing its efforts, and the medical group has alot more programming coming. The legal work in keeping a level playing field for all of the OEMs continues all year long. The site for next February's meeting has not yet been set, but it will be in a warm climate. Hope to see some of you there.

### What's Coming Up? Coming this fall!

- **Air Shields** - More parts such as knobs, switches and gaskets for incubators and radiant warmers.
- **American Sterilizer** - Just can't get enough parts for the bulk sterilizers? How about more switches, gaskets, valve seats, or the transducer assembly? We'll have them.
- **Pelton & Crane** - Lots and lots of parts to fit the OCM and the OCR — from the controller and conversion kits to the reservoir cover assembly and arm locator...plus many more.



**H**ello RPI customers. My name is Dora Aguirre and I'm from a tiny country in Central America, El Salvador. I have lived in California for twenty years. I have

been part of the RPI family for six months. Many of you may already be familiar with my name and voice because as part of the Accounts Receivable and Customer Service Departments, I answer your questions and take your orders over the phone. I enjoy every minute of my job and hope to continue helping you, the customer, in the best way I know how.



**Call us Toll-Free Monday-Friday, 8:00 AM-4:30 PM (Pacific Time), (800) 221-9723**