



Sterilizer Maintenance

by Myron Hartman, CCE, CBET
Director, Clinical Engineering

South Hills Health System, Jefferson Hospital, Pittsburgh, PA

This is the first article in a two part series. In this first article, the author focuses on the initial steps that should be taken prior to developing and writing a sterilizer maintenance plan. In the final article, Mr. Hartman will offer a detailed outline of what should be included in the plan as well as a point-by-point discussion regarding the importance of feedback to customers.

Looking for some more work? Well, how about helping to kill a few bugs, save some money, and increasing quality. Servicing sterilizers can be that new frontier you have been looking for. Steam sterilizers have been in hospitals since the beginning of time, and some Central Services (CS) staff may even say that the hospitals were built around them.

Technology in this area has not really changed too much, other than becoming better controlled, monitored, and documented. The basic principles of steam sterilization, time and temperature, are still there, but are now controlled with microprocessors and digital circuits. Servicing this newer generation of sterilizers takes a technician with many different skills: electrical, electronics, microprocessors, mechanical, pneumatic, and thermodynamics. So if this sounds like something you want to investigate, you can start by following the outline that I have below:

The first step in any new process is to take a picture as it is now, the present conditions. You must get a good understanding as to the process, relationships,

and conditions as they exist now. Here are a few steps that I recommend you follow:

a) Inventory All Units – Central Supply, Operating Room, Laboratory, Surgery Centers. Talk to your CS staff and they should know where they are all located. This is a good practice anyway, as they should be included with your master equipment inventory, regardless of service method.

b) Review Current Service Methods – OEM, ISO, Facilities/Maintenance. Get copies of the service methods from CS or Facilities and review the scope of services. Do they include or exclude items like: parts, evening or weekend labor,

“Sterilization is more than just a sterilizer. It is a process that involves people, procedures, supplies, equipment, skills, and quality controls.”

overtime charges, travel charges, PM kits and upgrades? Make up a matrix with equipment on one axis, and contract terms and conditions on the other, and place an “X” where that item is included.

c) Review Service Histories – PMs, repairs, upgrades, recalls. If the documentation is not organized well, help the departments with binders or a filing system. Analyze the data for service calls, parts, labor charges, and other related services. Use your equipment management software, or simply create a spreadsheet that summarizes the service activities for the last several years.

d) Locate Technical Documentation – Service manuals, installation drawings, utility supplies. These should be located with the equipment or somewhere within the department. Check them for being complete and sufficient to service the equipment.

RPI Adds New Lines of Parts

Introducing Parts to Fit Tuttnauer™ Autoclaves, Pelton & Crane Delta AE & AF Sterilizers and A-dec® Model 6300 Dental Lights

If you haven't heard the news already, RPI now carries parts to fit Tuttnauer autoclaves Models 1730, 2340 and 2540. It's a brand new line of parts for us, but you've been asking for them for quite some time, so here are the first parts with many more to come:

- Signal Lights (Red, Orange and Green)
- Gaskets
- Heaters
- Pressure Gauge
- Safety Release Valve
- Switches (Power Switch, Microswitch and Door Switch)
- Timer

We've carried replacement parts to fit the A-dec line of delivery systems for many years, and now you can get RPI replacement parts to fit the A-dec Model 6300 dental light. Listed below are the parts we have in stock now, ready to be shipped.

- Lamp Socket Assembly
- Power Switch
- Intensity Switch
- Transformers
- Circuit Breaker

For details about the parts mentioned above to fit Tuttnauer and A-dec, please see pages 4-5.

What's more, parts to fit the Pelton & Crane Delta AE (8") and AF (10") sterilizers are also available from RPI. For a complete listing of all RPI parts that fit the Delta units, please see the yellow flyer in this newsletter or contact RPI (800) 221-9723.

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FROM . . . THE DESK OF THE PRESIDENT



*Al Lapides, President
Replacement Parts Industries, Inc.*

Should You Be Regulated?

On December 23rd, the FDA released an ANPR (Advanced Notice of Proposed Rulemaking) concerning regulation of servicing, refurbishing, or reconditioning medical (read also dental) equipment. Comments are to be submitted within 90 days. You can find the document on the internet: www.fda.gov/cdrh/fr/fr1223af.html. This ANPR is a follow on to the CGMPs that were issued in 1996. That document covered remanufactured devices only. However, it promised future proposed regulations for the other areas.

At least three organizations will be responding. They are IAMER (International Association of Medical Equipment Remarketers), ISNI (Independent Service Network International) and ACCE (American College of Clinical Engineering). They are convinced that GMP type regulation is not needed. They are convinced that service done by an OEM after a warranty period should not be regulated any more than any other post warranty service work. What their final responses will be, I don't know at this time. I do know that their arguments will be based on the fact that a problem does not exist and therefore, does not need fixing.

I think they're right. Three years ago at the request of the FDA, ECRI studied available failure data of serviced and reconditioned equipment given to them by the FDA. They could find no problem. The FDA acknowledges this but believes they may have insufficient data. They asked for input from users to help confirm or deny this conclusion.

The FDA has stated that they would prefer not to regulate this area, but believe there must be some controls. It appears that the associations may propose some form of self-regulation or independent party oversight such as ECRI. In any case, regulation directly affects all of you. You need to be involved. Letters to the FDA are very much in order, particularly if they can attest to the lack of problems with equipment. While Congress is not directly involved, it never hurts to let your Congressman know what's going on.

Here's another case where the few are doing for the rest of us. The combined membership of IAMER, ISNI and ACCE constitutes only around 5% of all service and refurbishing organizations. The FDA is hearing from them regularly. They're not hearing from the rest of you. Please participate. It's your future too!



*Sherry Lapides, General Manager
Replacement Parts Industries, Inc.*

Prepare for Change

1997 was certainly a busy year for us. On a personal note, we greeted two new grandchildren (a second boy for our daughter, Robbie, and her husband, and a girl for Ira and his wife, Melissa). We had a wonderful trip to Africa, where we saw more animals than I could count, were awestruck at the wonder of Victoria Falls, and fell in love with the area around Capetown.

We attended several meetings last year, including the California Dental Association in Anaheim, Healthtech in San Diego, ISNI and IAMER in Las Vegas. Al wrote about these in the previous newsletters. At each meeting we had an opportunity to speak to or listen to some of the leaders of the medical/dental equipment repair industry. There are so many changes, taking place so fast, that it's hard to keep up with them.

I hope you all are aware of these trends. With the increasing growth of the asset management firms, and with hospitals buying up physician group practices, the face of our industry keeps changing. The dental service companies are seeing their share of changes, too, with many consolidations taking place. We're also seeing cases of dealerships and distributorships and parts availability being taken from some of the independents who cannot reach the sales goals the OEMs want.

In talking with customers over the past year we have been able to discern a wide difference in the amount of awareness and preparation for change. Some of the small ISOs most likely will not be around in another few years. Their owners seem to feel that things will stay as they are...they are not preparing for change. Others are looking to broaden their range of services. Some are forging strategic alliances with other ISOs or with asset management firms. Some are carving a niche for themselves in other, affiliated areas and working with their present customers to increase that feeling of loyalty.

Please don't be complacent. We don't know all the changes that will be happening in the near future, but we do know that changes will occur. Prepare now so you won't be left out in the cold.

On a different note – as I write this, the sky outside is blue and the not-too-distant hills have changed from their usual shade of

(Continued on page 3)

Why Stainless Steel Is Better

For Replacement Heating Elements To Fit Tuttnauer™ Autoclaves, Stainless Steel Was The Material of Choice

by Phil Goldstein
Product Development Manager

Experience. It's worth its weight in gold.

When the time came to develop the band heaters to fit Tuttnauer autoclaves, we knew from past experience that aluminum would not be our choice of material. Been there, done that. Yes, there was a time when RPI experimented with aluminum clad heating elements. What we found out was that the coefficient of heat expansion between the stainless steel chamber and the aluminum heaters were so different, sometimes the heating element rippled, thus preventing the heating element to remain flush with the chamber. At best, when the heating elements did not ripple and burn out, the tie down bands constantly required tightening. So when it came time to manufacture the replacement heaters to fit the Tuttnauer autoclaves, we realized three things:

1. Stainless steel heating elements last longer because they transfer heat more evenly.
2. The final adjustment to tighten the heaters will be the last adjustment you have to make.
3. The fewer adjustments you make to the heater bands, the less chances there are for problems with the capillary tubes running through them.

From...the President's Boss

(Continued from page 2)

brown to a beautiful shade of green. My rose bushes are showing signs of new growth, and El Nino will bring us another storm in a day or two. Only six more weeks of winter, according to the groundhog, so we know Spring is on its way. Hope you stay warm and dry until then.



by Al Goldstein

Medical and dental equipment that utilizes power supplied by plugging them into a wall outlet must be properly grounded. This grounding is accomplished via a green wire in the power cable. This wire connects between the metal frame of the machine and the round pin on the power plug.

Occasionally during a repair we unknowingly create a hazardous situation. Examples would be installing a part too close to a screw that is projecting through the metal cabinet or crushing a wire between two metal parts you're screwing together, or changing the wiring and a wire is misplaced, etc. These errors probably would not show up until the machine is plugged in and turned ON. Then the results can be disastrous. Expensive circuit boards or other parts will be destroyed in a flash.

A good habit to get into is to perform a few simple tests using a multi-tester. **CAUTION: The machine must NOT be plugged into the power receptacle.** Set the multi-tester to the ohm or resistance function on the lowest range. The first test is to measure the resistance between the ground pin of the power connector and a point on the metal frame of the machine. The spot on the metal should be unpainted and clean. Scratch the spot with the multi-tester probe. The resistance should read 1.0 ohm. If the resistance is higher, the ground circuit should be checked. The next test is to measure the resistance between the ground pin and each of the two other pins on the power plug (one at a time). This test should be done with the power switch of the machine in the ON position. The multi-tester should be set to the highest resistance range. Both readings should be over 1 megohm. Failure of this test will require an analysis of the circuits to locate where the low (less than 1 megohm) resistance path is.

These tests take a small amount of time and if only one problem is uncovered it makes it all worthwhile.

Note: Try using these tests prior to opening a machine on the bench.

A Big RPI Welcome To...

Denise Brown, Tina Wilson and Tracey Blazer. Denise and Tina are the two newest members of the Customer Service department and Tracey is the new Accounts Receivable Supervisor. It's great to have them aboard and a part of the RPI family.

It's Nice To Hear From You...

"Season's Greetings and Best Wishes for the New Year. You are super prompt, thorough, & efficient."

Dan Underwood
Dan Underwood & Co.

Thank you Dan.

WHAT'S NEW

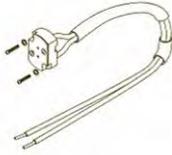
YOU ASKED FOR THEM, YOU GOT THEM!

DENTAL LIGHTS A-dec® Model 6300

RPI Part #ADS125
OEM Part #28-0633-00

LAMP SOCKET ASSEMBLY

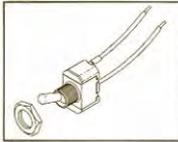
- Includes (2) M2x10 Stainless Steel Phillips Pan Head Screw, (2) M2 Split Lock Washer and (3) Pig Tail (RPI Part #RPT014)
 - Uses replacement Lamp (RPI Part #LMP600)
- Fits:** Inside of Focus Tube
Models: All 6300 Models



RPI Part #ADS129
OEM Part #041-336-00

POWER SWITCH

- SPST
 - 20A, 125VAC; 10A, 250VAC
 - Includes (2) Pig Tail (RPI Part #RPT014)
- Fits:** Head Assembly and Swivel Block
Models: All 6300 Models



RPI Part #ADS130
OEM Part #041-177-00

INTENSITY SWITCH

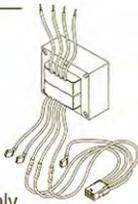
- 6A, 125VAC; 3A, 250VAC
 - On-On-On; DPDT; .093 Tabs
- Fits:** Transformer Housing, Box Assembly and Pivot Arm Assembly
Models: All 6300 Models



RPI Part #ADT132
OEM Part #28-0724-00

TRANSFORMER

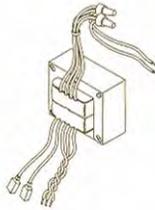
- 120/240 Volt; 50/60Hz
 - Includes (3) Pig Tail (RPI Part #RPT014)
- Fits:** Prefocus II and Box Assembly
Models: 6300



RPI Part #ADT133
OEM Part #28-0822-00

TRANSFORMER

- 120/240 Volt; 50/60Hz
 - Includes (2) 4" Cable Tie (RPI Part #RPT083) and (3) Pig Tail (RPI Part #RPT013)
- Fits:** Track Light
Models: 6300



RPI Part #ADT127
OEM Part #28-0566-00

LOCKING TAB

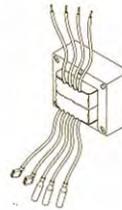
- Oilite Bronze
- Fits:** Pivot Arm to Mounting Hub
Models: All 6300 Models

Illustration
to come

RPI Part #ADT134
OEM Part #28-0720-00

TRANSFORMER

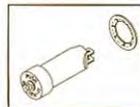
- 120/240 Volt; 50/60Hz
 - Includes (2) 4" Cable Tie (RPI Part #RPT083) and (3) Pig Tail (RPI Part #RPT013)
- Fits:** Rigid Arm Assembly on Ceiling, Wall and Unit Mounted Lights
Models: 6300 - Excellence and Preference I



RPI Part #RPH243
OEM Part #046-123-00

CIRCUIT BREAKER

- 10 Amps; 250VAC; 50VDC
 - Includes clip retainer
 - Fits a standard 5/8" round or "D" panel cutout
- Fits:** Transformer Housing of Ceiling, Wall, Unit and Track Assembly
Models: All 6300 Models



DENTAL LIGHTS Pelton & Crane LF Series

RPI Part #PCK693
Wave Washer OEM Part #015502
Flat Washer OEM Part #3323016

WAVE WASHER KIT

- Includes Wave Washer (RPI Part #RPH241) and (2) Flat Washer (RPI Part #RPH242)
 - Flat Washer - .875 O.D. x .640 I.D.; THK. .035
 - Wave Washer - .875 O.D. x .640 I.D.; THK. .008
- Fits:** Pivot Rod to Yoke Assembly
Models: LFC II, LFC II-D, LFT II, LFT II-D & LFW II(2)



RPI Part #PCR694
OEM Part #015186

PIVOT ROD

- Fits:** Down/Drop Arm and Yoke Assembly
Models: LFC II, LFC II-D, LFT II, LFT II-D & LFW II(2)



RPI Part #RPH241
OEM Part #015502

WAVE WASHER

- 5 per package
 - .875 O.D. x .640 I.D., .008 THK
 - Also in Wave Washer Kit (RPI Part #PCK693)
- Models:** LFC II, LFC II-D, LFT II, LFT II-D & LFW II(2)



RPI Part #RPH242
OEM Part #3323016

FLAT WASHER

- 5 per package
 - .875 O.D. x .640 I.D., .035 THK
 - Also in Wave Washer Kit (RPI Part #PCK693)
- Models:** LFC II, LFC II-D, LFT II, LFT II-D & LFW II(2)



WHAT'S COMING UP?

More new parts to fit the Pelton & Crane Validator® 8 Plus and 10 Plus including:
Overheat Thermostat • Heater & Plug Assembly

WHAT'S ON THE DRAWING BOARD

Developing New Parts to Fit A-dec® Delivery Units • Adding More New Parts to Fit Barnstead, Midmark, Pelton & Crane and Tuttnauer™ Sterilizers and Autoclaves • Expanding Our Product Lines for Beckman, Clay-Adams® and IEC • Targeting Newer Lines Such as the Air-Shields Models 450 and 550

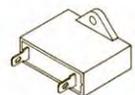
We would appreciate your feed-back with respect to what we have on the drawing board. Please contact Phil Goldstein, Product Develop Manager at: (800) 221-9723 or (818) 882-8611, extension 128, or via his e-mail address: phil@rpiiparts.com.

INFANT INCUBATORS Air Shields C86, C100/200 & QT

RPI Part #AIC058
OEM Part #N/A

MOTOR CAPACITOR

- 6mfd; 250VAC; 50/60Hz
- Fits:** Motor (RPI Part #AIK005, AIK007, AIK009 & AIK010)
Model: C86, C100/200 & QT



FROM RPI!

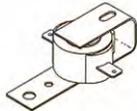
ORDER YOUR PARTS TODAY, HAVE THEM TOMORROW!

STERILIZERS Pelton & Crane Magna-Clave®

RPI Part #PCB088
OEM Part #A62-004491

BUZZER

- 220Volt, 60Hz, .05 Amp.
- Fits: Mounts on Machine Base
- Model: Magna-Clave



STERILIZERS Pelton & Crane OCM, OCR & OCR+

RPI Part #PCH186
OEM Part #019155

WIRING HARNESS

- Includes 20K Ω potentiometer
- All terminals crimped and soldered
- Models: OCM (S/N #69564 and above)



RPI Part #PCH187
OEM Part #019156

WIRING HARNESS

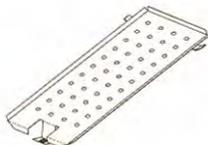
- Includes 20K Ω potentiometer
- All terminals crimped and soldered
- Models: OCR (S/N #15050 and above) and All OCR+ Units



RPI Part #PCR188
OEM Part #004286

TRAY REST & SUPPORT ASSEMBLY

- Stainless Steel
- 13" x 4.5"
- Fits: Chamber
- Models: OCM

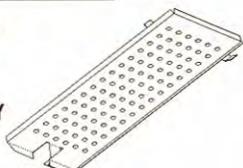


RPI also carries the Tray (RPI Part #PCT140) for the Tray Rest & Support Assembly shown above. See the RPI catalog, Sterilizers Section-Pelton & Crane, page PC-7 10/96.

RPI Part #PCR189
OEM Part #004426

TRAY REST & SUPPORT ASSEMBLY

- Stainless Steel
- 17.5" x 6"
- Fits: Chamber
- Models: OCR & OCR+



RPI also carries the Tray (RPI Part #PCT141) for the Tray Rest & Support Assembly shown above. See the RPI catalog, Sterilizers Section-Pelton & Crane, page PC-7 10/96.

STERILIZERS Tuttnauer™ 1730, 2340 & 2540

RPI Part #MDL019
OEM Part #01960007

SIGNAL LIGHT - RED

- 125VAC; 1/3W
- Fits: Control Panel
- Models: 1730M, 2340M & 2540M



RPI Part #MDL021
OEM Part #01910257

SIGNAL LIGHT - ORANGE

- 125VAC; 1/3W
- Fits: Control Panel
- Models: 1730M, 2340M & 2540M



RPI Part #MDL022
OEM Part #01910258

SIGNAL LIGHT - GREEN

- 125VAC; 1/3W
- Fits: Control Panel
- Models: 1730M, 2340M & 2540M



RPI Part #TUG001
OEM Part #02610020

DOOR GASKET

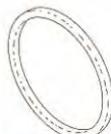
- OD: 7.370; Green silicone
- Fits: Door
- Models: 1730E/1730EK & 1730M/1730MK



RPI Part #TUG002
OEM Part #02610005

DOOR GASKET

- OD: 9.468; Maroon silicone
- Fits: Door
- Models: 2340M (S/N Below 8806)



RPI Part #TUG003
OEM Part #02610023

DOOR GASKET

- OD: 10.590; Green silicone
- Fits: Door
- Models: 2540E/2540EK & 2540M/2540MK



RPI Part #TUV011
OEM Part #03110002

SAFETY RELEASE VALVE

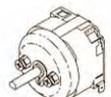
- Brass; 1/4" NPT
- Cracking Pressure: 37 PSI
- Fits: Air Trap Jet
- Models: 1730M/1730MK, 1730E/1730EK, 2340E/2340EK, 2340M/2340MK, 2540E/2540EK & 2540M/2540MK



RPI Part #TUT008
New OEM Part #01910011
Old OEM Part #01910005

TIMER

- 60 Minute; SPST N.O. switch
- Includes timer and mounting screws
- Fits: Front Panel
- Models: 1730M/1730MK, 2340M/2340MK & 2540M/2540MK



RPI Part #TUH004
OEM Part #01720011

HEATER ELEMENT

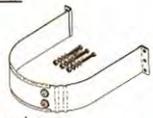
- 120VAC, 450W (~32 Ω)
- Includes heater and attaching hardware
- Hardware and heater mounting strap are stainless steel
- Fits: Chamber
- Models: 1730EK & 1730MK



RPI Part #TUH005
OEM Part #01720002

HEATER ELEMENT

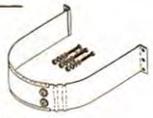
- 120VAC, 350W (~41 Ω)
- Includes heater and attaching hardware
- Hardware and heater mounting strap are stainless steel
- Fits: Chamber
- Models: 2340E & 2340M



RPI Part #TUH006
OEM Part #01720003

HEATER ELEMENT

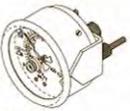
- 120VAC, 350W (~41 Ω)
- Includes heater and attaching hardware
- Hardware and heater mounting strap are stainless steel
- Fits: Chamber
- Models: 2540E & 2540M



RPI Part #TUG012
OEM Part #02300011

PRESSURE GAUGE WITH MAXIMUM INDICATING POINTER

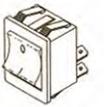
- 2.5" (63.5 MM); 0 to 60 PSI range
- Pressure connection threads: G1/4A, 14 MM Flats
- Fits: Front Panel
- Models: 2340M/2340MK & 2540M/2540MK



RPI Part #TUS009
OEM Part #01910172

POWER SWITCH

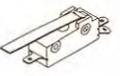
- SPST; 16A, 125-250 VAC
- Lighted rocker; Green lens
- Fits: Front Panel Cut-Out
- Models: 1730M/1730MK, 2340M/2340MK & 2540M/2540MK



RPI Part #TUS013
OEM Part #01910191

MICROSWITCH

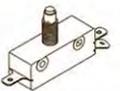
- Black; SPST; 15A, 125V-250V
- 2.5" Lever Arm (Black)
- Mounts to bracket in main valve assembly
- Fits: Main Valve
- Models: 1730M/1730MK, 2340M/2340MK & 2540M/2540MK



RPI Part #TUS014
OEM Part #01910190

DOOR SWITCH

- SPST/15A, 125V-250V
- Fits: Front Panel
- Models: All 1730, 2340 & 2540 Models



THE rpi FAMILY

Hi! My name is Ira Lapides. My official title at RPI is Vice President, which basically means that I do a lot of different things. My primary responsibilities are overseeing our Purchasing and Warehouse departments, doing financial analysis and planning, and interacting with customers and promoting RPI.

I first started with RPI when I was about 10 years old, licking stamps and stuffing envelopes for my parents, Al and Sherry, for the first few mailings that RPI sent in 1972 and 1973. I think I was paid one penny per envelope, which seemed like a fortune to me back then. I also worked at RPI after school and during my summer breaks in junior high and high school doing shipping, packaging and assembly.

Fast forward a few years, when I received my bachelors degree from U.C. Berkeley, and my M.B.A. from U.C.L.A. It's too long a story, but my experience at RPI pro-



Ira Lapides, Vice President

vided me with an interest in the healthcare industry, so after business school, I took a job with FHP Healthcare, a large local HMO. After nearly nine years of climbing the corporate ladder, I'd had enough and was presented with an excellent opportunity to join RPI in the Spring of 1995. So here I am, and it has been great! I have really enjoyed my transition to a smaller, customer-focused company, and have learned a lot (with much left to learn!) about this sector of the healthcare industry.

When I am not at the office, I am with my wife and 8 month-old daughter, both of whom are the greatest! I also enjoy golf, mountain biking, softball, cooking and fine wines.



CONGRATULATIONS ANDY & TONY

It seems like yesterday when Andy Sandelski and Tony Aguilar walked through our doors to begin their first day at RPI. But it wasn't. It was ten years ago this month. And ever since then Andy has been developing new parts in addition to assisting customers with technical questions and Tony has been supervising the Shipping and Warehouse department. They were quite surprised when Ira Lapides presented them with 10 year anniversary gifts and a large "Congratulations" cake that everyone enjoyed. (Left to Right Andy Sandelski, Ira Lapides and Tony Aguilar).

Sterilizer Maintenance

(Continued from front page)

e) Determine Any problems or Concerns – Downtime, staining, work load, service issues, equipment replacement schedules. Ask the CS staff about any problems they have with the equipment or service. This may uncover problems that have existed for years.

f) Work Profiles – Steam and ethylene oxide - products sterilized, biological indicators, incubators, chemical indicators, packaging, sterilization trays, work flow, transportation systems, product storage and inventory, decontamination, flash sterilization. Sterilization is more than just a sterilizer. It is a process that involves people, procedures, supplies, equipment, skills, and quality controls. The sterilizer is only one piece of the process; you must learn and understand the entire process to be successful. How do products come to CS, what is decontamination, what type of trays or packaging is being used, why do we use BI and chemical indicators, how long can items be stored, and what happens if the process does not work.

g) Employee Training – Safety (ETO), personnel protective equipment, equipment operation, processing of products. Workers' safety has to be the number one concern in working with this type of equipment. Ethylene oxide is a known carcinogen and OSHA has limits established on employee exposure. Products, carts, trays and other items can severely burn and injure employees if not handled properly. Service and CS personnel must know what and how personal protective equipment (PPE) is used, procedures for processing, and proper operation of equipment.

h) Utility Supplies – Steam quality and pressure, steam filtration, electrical power, drains. Output of the sterilization process can be directly affected by the steam quality. Filtration systems are usually required to remove chemical treatments to steam and prevent staining of instruments and sterilizers. A good working relationship is needed with individuals in charge of running the boilers. If there are changes to be made to chemical treatments, pressure changes, and cycling of boilers, it may be seen on the finished product from the sterilizer. Good steam inlet filters that are routinely replaced can be the a key element in maintaining quality sterilized products.

Now that you have a good understanding of what is going on, you can plan your course as to where you want to go. There are many different service opportunities that you may choose, and in most cases, a mix or partnership with the in-house and OEM/ISO works well. Input from the users should also be included when developing and writing the plan. In *Part II* of this series, I will focus on the steps that should be included in the implementation plan for service as well as the importance of feedback to customers.

Your Feed-Back!

Your feed-back regarding the performance of our parts is important and we appreciate hearing from you. In fact, listed below are several parts we have improved due to customer feed-back. If you have suggestions or recommendations, please contact our Product Development Department and speak with one of our engineers, (800) 221-9723, ext 6.

Motors (CAM049 & CAM050)

Your Feed-Back

- Poor braking response
- Excessive current draw
- Improper wire colors

The RPI Solution

- Rewired the field from series opposed to series aiding
- Changed color codes to match OEM's

Valve Stems (AMA041 & AMA055)

Your Feed-Back

- Difficult to press stem into bonnet

The RPI Solution

- Reduced the diameter of the knurl

Fill/Vent Valve (RCV052)*

Your Feed-Back

- Leaks
- Extension breaks away

The RPI Solution

- Extended the length of stem and did away with extension

Dental Barbs (ADB011 & ADB012)

Your Feed-Back

- Washer floats on shoulder of barb, causing it to leak

The RPI Solution

- Increased diameter of the shoulder area

*New design due mid-April, 1998.

Returning A Part?

If there ever comes a time when you are not 100% satisfied with any RPI part and would like to return it, please:

- 1) Call RPI before you return the item in order to obtain an RGA Number (Returned Goods Authorization Number).
- 2) Tell us "why" you are returning the part especially if it does not perform properly. Your feed-back helps us improve the quality of our parts.
- 3) If possible, return the part in its original condition. (For example, if you return a motor, please do not cut the wires when removing it from the machine.)

The parts mentioned in this newsletter are manufactured by Replacement Parts Industries, Inc. to fit the OEM equipment. All product names used in this document are trademarks or registered trademarks of their respective holders including: A-dec, Cascade and Preference III, A-dec, Inc.; Clay Adams, Becton Dickinson and Co Primary Care Diagnostics Div; Light Fantastic, Magna-Clave, Omni Clave, OCM, OCR, OCR+ and Validator, Siemens/Pelton & Crane Co Sub Siemens Medical Systems Inc; Tuttnauer, Brinkmann Instruments Inc and Kwiklave, Tuttnauer USA Co Ltd.

TECH TALK

by Jim Wisniewski (a.k.a. "The Dental Guy"), RPI Product Development

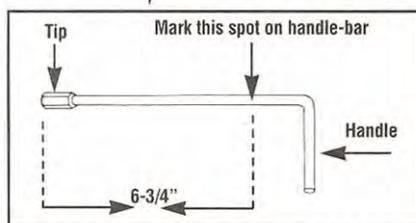
Pelton & Crane Light Fantastic II® Lights: Your Spring Tool Can Be Your Best Friend

Has this ever happened to you? You just installed a new mechanical (or gas) spring in a Pelton & Crane LFII light. You are now adjusting the main spring. You hear a loud "BANG". You remove the spring tool only to find that the front arm is jammed. It won't move up or down because you turned the spring tool too much, which caused the set screw located in the rear support knuckle to pass through the knuckle and out to the other side, thus compressing the spring to the maximum pressure. You now have to disassemble the arm and start all over again ... from the beginning. "What a hassle!", you say to yourself.

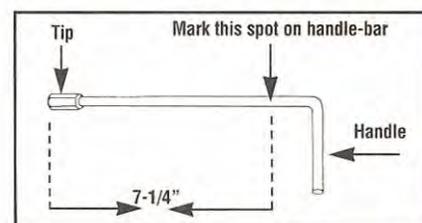
Here's a hint to help prevent this from happening in the future: Mark your spring tool to indicate the **maximum length that it should be turned** before you encounter a jam. Keep in mind that each light is different and when adjusting a light there is no set number of times the tool should be turned. The markings are there simply to remind you that when you reach the marking while you are turning the tool you should stop turning or a jam will occur.

For example, mark your tool about 6-3/4" from the tip of the tool to the handle-bar for the LFII, LFC II and LFC II-D. For all other lights including the LFT II, LFT II-D, LFW II(2), LFW II(3) and LFL II mark the tool about 7-1/4" from the tip to the handle-bar. See the illustrations below. Now you're ready.

There's more good news! For your convenience, RPI will begin marking the spring tool for you. Please be patient! We will let you know as soon as they become available.



For work on the LFII, LFC II and LFC II-D, mark your spring tool 6-3/4" from the tip to the handle-bar as illustrated above to indicate the maximum length that it should be turned before you encounter a jam.



For work on the LFT II, LFT II-D, LFW II(2), LFW II(3) and LFL II, mark your spring tool 7-1/4" from the tip to the handle-bar as illustrated above to indicate the maximum length that it should be turned before you encounter a jam.

RPI RETIRES SOME PARTS

We don't like it any more than you do, but it happens. The end has come for some RPI parts. You won't see them around anymore, we're sorry to say. When RPI can no longer deliver parts that meet our high quality of excellence for one reason or another (or if we simply can't find the part or company to manufacture the part) we must bid the parts a fond farewell. The parts listed below have now been retired. They have been "set out to pasture" (or in their case, out to the big tool box in the sky).

- O-rings (RPI Part #BIO001 - BIO013) that fit Bird Models Mark 7, Mark 8, Mark 10 & Mark 14
- Recording Stylus (RPI Part #HPS001) that fits Hewlett Packard Models 1500A/B & 1511A/B
- Foot Control Switch (RPI Part #MIS010) that fits Midmark Models 105 Tables (Prior to Serial #H1020 and G1325), 110, 111, 112, 113, 116, 117 (3-Station Foot Switch), 119 and Model 8500

Although these few parts have gone, we make room for more new parts. More new parts that you ask for ... that you need. Watch for our bright yellow flyers in the mail announcing new parts throughout the year.

SEND E-MAIL

To Place an Order
order@rpiparts.com

For Technical Assistance
techsupport@rpiparts.com

For More Information
moreinfo@rpiparts.com

WHAT'S YOUR FAX?

If you have a fax number, please let us know immediately. During the year we introduce new parts and keep you up-to-date on important industry happenings via fax broadcasts. You won't want to miss out! **Fax your fax number to us: (818) 882-7028; e-mail your fax number to: moreinfo@rpiparts.com.; or, call our customer service department: (800) 221-9723 or (818) 882-8611.**

FAX YOUR ORDERS

To place an order via the fax, don't forget to include your RPI Customer Account #, your PO# and the way you would like us to ship the order. **Fax (818) 882-7028.**

OUR WEBSITE

Searching for a replacement part has never been easier than on RPI's website. From our home page simply click the box indicating the type of equipment you need the part for, then click the name of the OEM, then the model and voila! A complete listing of all parts RPI carries to fit that particular machine will appear. And coming soon – all RPI parts illustrations will be available for your website viewing. Check it out today!

www.rpiparts.com

USE THE PHONE

You can dial direct to the department or person you want to speak with at RPI. When you hear the RPI operator announce that you have reached RPI, simply enter the extension of the person or department. Here's a listing of the most frequently called departments:

Technical Assistance

Extension 6

To Place an Order

Extension 5

Accounting Department

Extension 7

If you do not know the extension of the person you would like to speak with, simply "Enter 3" for the company directory and when you first hear the operator's announcement, dial the first three letters of the name of person you would like to contact.



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