OCTOBER 2019 VOLUME 12 NO 1

Annual PM Kit RPI Part #CMK274

CME281

RXT002

RXG070

Tip Seal Kit RPI Part #CMK287 The Leader in Replacement Parts for Healthcare Equipment Since 1972

RPI's Ever Expanding Line of Dental Air Compressor PM Kits and More

By Mark Micucci, RPI Product Development

This new 5,000 Hour

compressors that have been converted

PM Kit is for the scroll

to the newer "round"

style air intake filter

assembly.

Ever since RPI released its first PM Kits to fit the DentalEZ 1000 series compressor, customers have been contacting us looking for other PM

This New Kit (RPI Part #CMK286) includes both the

Annual Compressor PM Kit and the Tip Seal Kit!

CMK025

Part #CME281) as well as the **Coalescing Filter Element RPI Part**

> #CMK025). Then comes the 5,000 Hour PM Kit (RPI Part #CMK286) that includes the parts from the Annual PM **Kit** mentioned above, and the Compressor Tip Seal Kit (RPI Part #CMK287). Keep in mind that these Kits are only for the scroll compressors that have been converted to the newer "round" style Air Intake Filter Assembly.

But not to worry if you still sors installed with the "rectangular" style air intake filter assemblies. You can easily upgrade the older scroll com-

pressors by installing RPI's Air Intake Upgrade Kit (RPI Part #CMK280) that includes the Air Filter Assembly (RPI Part #CMA289), Air Intake Filter Element (RPI Part #CME281), the

upgraded with RPI's Air Intake Upgrade Kit, you can start using the RPI line of Compressor PM Kits for this unit. Just ask for RPI Part

RPI also offers the **Drive Belt** (RPI Part #CMB279), a Grease Gun Kit (RPI Part #RXK069) that includes

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the Air Intake Filter Element (RPI

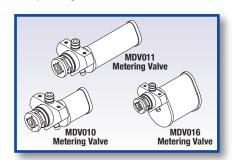
have the older scroll compres-

mounting plate, and hardware.

Once the scroll compressor has been #CMK274, CMK286 and CMK287.

The End of An Era -Say Goodbye to the **RPI Metering Valves**

By Ira Lapides, RPI President & CEO



In 1997, RPI introduced our version of the metering valve to fit the MDT ChemiClave® sterilizers. MDT's original design, using Teflon® coating on the shaft, had an inherent flaw in that any minor imperfection in the Teflon perhaps caused by some grit getting into the valve would not allow the valve to seal and therefore it would need to be replaced. Those valves were so finicky that MDT had only one person in their facility who could assemble the shafts properly in production.

We spent years working on our design, and even had some discussions with MDT about the design. In 1997, we produced three different sizes (RPI Part #'s MDV010, MDV011, and MDV016), one for each of the models of the Chemiclave, and, to put it mildly, it was a rocky start. We thought we had a good working design of the valve, but after a period of time, many valves stopped functioning properly, primarily due to the o-rings on the shaft tearing. Over time, we came out with a few modifications to our original design and the one that

Continued on the back page

Kit for an older model and models from manufacturers which have been swallowed up by larger manufacturers, as well as calls for models which just finished production. So, fulfilling our customer needs once again, RPI is proud to announce 16 new and updated dental air compressor PM Kits and associated parts, along with new upgrade kits and tools needed for these compressors.

Kits. Even after releasing 61 differ-

ent compressor PM Kits, RPI still

gets phone calls looking for a PM

First up to fit the Apollo, Apollo by Midmark and Midmark scroll compressors is the Annual PM Kit (RPI Part #CMK274) that contains both



FROM THE DESK OF THE PRESIDENT

Ira Lapides CEO & President Replacement Parts Industries, Inc.

Generations of Family at RPI

Back in 1972, RPI was founded as a family business, with my father and uncle being two of the three founders, and my mother and father running the business for the first 27 years.

At the beginning, my brother, 11 years old at the time, helped my mother put together our first mailing list. Then he and I, with help from our sister, would stuff envelopes and lick stamps for RPI's first mailings to potential customers.

Later when I was in high school, I would ride my bike to RPI after school to package parts; and for a few years, one of my older cousins worked full time at RPI packaging and shipping and doing other support jobs. RPI truly was a family business.

The family business dynamics changed a bit over the years, with me joining full time in 1995, and my parents retiring in 1999. We also bought out my aunt's shares of the company and also those of our other partner back in the early 2000's so that RPI is now owned just by our family.

A few years ago, my wife Melissa started working part time at RPI, supporting both our Accounting and Purchasing departments, and her role has continued to expand into other areas. Our children have also put in some time over the years, working with our Marketing department or in the Warehouse, and even helping out at a few trade shows.

Now, RPI has become an even different type of family business, as it is not just our family that is involved.

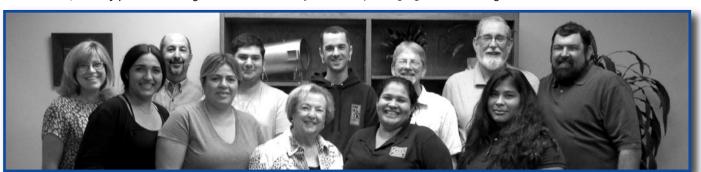
We now have two sisters working in the Warehouse, Marciela and Jocelyn Villeda. Marciela is one of our shippers, and Jocelyn does packaging and assembly. David Wisniewski, the son of Jim Wisniewski, our Manager of Product Development and Tech Support, joined RPI last year and is doing a great job in our Warehouse, and his role has expanded to include special projects there as well.

We had another opening in the Warehouse last year, so Amy Cordoba, one of our Customer Service Representatives, referred her niece, Alondra Lugo, for the job. Alondra has done great with packaging and assembly and is now pulling parts for orders.

We recently added Sean Micucci, Product Engineer Mark Micucci's son, to our Warehouse staff. Sean came to us with several years of prior warehouse experience and has been a very good addition to our team.

Over the years, we have also been fortunate to be able to have various other sons and daughters of RPI employees experience their very first jobs at RPI – learning what it is like to work a full day, contribute to the company, and earn a paycheck.

It is wonderful to see all of these family members working here together, and even more so, it's really been a great thing to be able to do this for our families. I feel very fortunate to be in a position where we have a business that provides good jobs in an interesting industry and help, if only a little bit, bring some families a little closer together.



Front, I to r: Alondra Lugo, Amy Cordoba, Sherry Lapides, Marciela Villeda, Jocelyn Villeda Back I to r: Melissa Lapides, Ira Lapides, Ryan Lapides, David Wisniewski, Jim Wisniewski, Mark Micucci, Sean Micucci

RPI is offering \$50.00 for your used, non-operational Control PC Boards that fit the older style M11 D and M11 220V Midmark UltraClaves® with the "Red" LED display, Models M11 001-019

Here's our plan. Call RPI before you send in an M11 D or M11 220V, and we will send you a free shipping box with a pre-paid return-shipping label. (There's no need to send us the bracket.) Then upon receipt of the board, we will inspect it to determine if it is eligible for the program. If it is, you will receive \$50.00. Then, the boards that are designated with a "D" will be converted so that they will fit the non "D" M11 units; and, the 220V boards will be

RPI Core Program Now Seeking Midmark M11/D & M11/220V Control PC Boards

converted so that they will fit the M11 120V boards. We are doing this to keep the M11's in the field up and running. By the way, we will not be offer-

ing any D or 220 Volt Control PC Boards for sale; again, at this time, we will be using these older style Control PC Boards to convert them into our RPI Part #MIB131 to fit the M11's.



When Midmark M9/M11 Overheats During the Dry Part of the Sterilization Cycle - Here's What to Do!

By Neil Blagman, RPI Product Development

Why did my Midmark M9 / M11 overheat during the dry part of the sterilization cycle and what can I do about it? Complicated question, complicated answer.

1) Break down the problem:

- a) What kind of Midmark (M9 or M11), "old style" (red LED display) or "new style" green liquid crystal display and most important, is it the "D" style sterilizer that does not have a pulse solenoid or an automatic door motor?
- b) If this sterilizer does have the automatic door opener did it open at the end of the cycle? And if it didn't open the door at the end of the cycle then why not? Is there a bad pulse solenoid, door motor or is the door jammed or hard to open by hand?

2) If this is the "old style" red display version:

- a) Check your overheat thermostat and wiring. Remember that
 the "old style" M9/11 turns completely off when it overheats
 it is possible that the thermostat may be damaged and
 opening at the incorrect temperature.
- b) Check your door springs and door hinge. Remember that the door must be open (about 1") during the dry cycle to allow any remaining steam and heat to escape the chamber. And remember that when checking the door and dam gaskets, RPI Door Gaskets do not use a wire ring like the Midmark gasket does using the ring in an RPI gasket can make it harder to close the door and may cause the door to stick when opening. Also remember to check that the Dam Gasket is properly installed within the V groove of the Door Gasket.
- c) Check the DIP switches on the main PC Board. If the sterilizer shuts off during the dry cycle and the door is opened you may need to turn down the duty cycle for the heating element during the dry cycle. To do this, refer to the "M9/M11 Dry Cycle Dip Switch Configurations" chart and use one of the 5 settings from hottest (5) to coldest (1). If packs are wet, you've turned the duty cycle down too much so bring it back up one step.
- d) If you still cannot stop the overheating during the dry cycle or if your Main PC Board does not have any DIP switches use

M9/M11 DRY CYCLE DIP SWITCH CONFIGURATIONS	# 3 to left (OFF) # 4 to right (ON)
# 2 to right (ON) # 3 to right (ON) # 4 to right (ON)	# 3 to left (OFF) # 4 to left (OFF)
# 3 to right (ON) # 4 to right (ON)	# 3 to right (ON) # 4 to left (OFF)

your Max Register Thermometer (RPI Part #RPT113) to check if the maximum temperature during the dry cycle is over 240°F – you may be looking at the beginnings of a circuit board failure such as a stuck or sticking power relay for the heating element.

3) If this is the "new style" green liquid crystal version:

- a) Check your overheat thermostat and wiring. Remember that the "new style" M9/11 has two over temperature switches with a jumper between them that is subject to oxidation and potential failure it is possible that the thermostat may be damaged and opening at the incorrect temperature.
- b) Check the vent valve, air valve and condensing coil. Obstructions within the venting system can lead to hot air, steam and water remaining behind in the chamber. This material can interfere with the entry of cold air into the rear of the chamber and can prevent the free flow of heat from the walls of the chamber out into the room.
- c) Check the door springs, door hinge and door motor. Remember that the door must open (about 1") to allow any remaining steam and heat to escape the chamber.
- d) If you still cannot stop the overheating during the dry cycle use a Max Register Thermometer (RPI Part #RPT113) to check if the maximum temperature during the dry cycle is over 240°F – if so, you may be looking at the beginnings of a circuit board failure such as a stuck or sticking power relay for the heating element.

WHAT'S NEW FROM RPI

DENTAL EQUIPMENT New Parts to fit Air Techniques, Apollo/Midmark®, Midmark®, Matrx/Midmark & Tech West Dental Compressors! DESCRIPTION OEM PART # **FITS** CMK278 87356 Compressor PM Kit Air Techniques AirStar 100M CMK270 (No OEM Part # Available) Compressor PM Kit Apollo/Midmark AOCRS11 & ARCRS12 This PM Kit only fits the older style AOCRS11 and AOCRS12 models with an air filter housing that has a single threaded port. For the PM Kit that fits the newer style AOCRS11 and AOCRS12 models with an air filter housing that has two ports, one at each end of the housing, see RPI Part #CMK271. | E288 | (No OEM Part # Available) | Air Filter Element | Apollo/Midmark AOCRS11 & ARCRS12 | This Air Filter Element only fits the air filter housing with a single threaded port on the older style AOCRS11 and AOCRS12 models. This Air Filter Element is not to be used on the newer style AOCRS11 and AOCRS12 models where the housing has two ports, one at each end of the housing. (No OEM Part # Available) Compressor PM Kit Apollo/Midmark AOCRS11 & ARCRS12 This PM Kit only fits the newer style AOCRS11 and AOCRS12 models where the air filter housing has two ports, one at each end of the housing. For the PM Kit that fits the older style AOCRS11 and AOCRS12 models with an air filter housing that has a single threaded port, see RPI Part #CMK270. (No OEM Part # Available) Air Intake Filter Apollo/Midmark AOCRS11 & ARCRS12 This Air Intake Filter is not to be used on the newer style AOCRS11 and AOCRS12 models where the housing has two ports, one at each end of the housing Apollo/Midmark A0C0S52 & A0C0S52D; Midmark S52 PFM50950 (rectangular style) Air Intake Upgrade Kit This Kit allows for the older, discontinued OEM rectangular-style Air Intake Filter Assembly to be converted to the newer round-shaped style assembly. Apollo/Midmark A0C0S52 & A0C0S52D; Midmark S52 (No OEM Part # Available) Air Filter Assembly This Air Filter Assembly is only a replacement for the newer round-shaped style Air Intake Filter Assembly. This Assembly is not to be used with the older discontinued rectangular-style Air Intake Filter Assembly. To convert from the older style assembly to the newer round-shaped style assembly, see RPI's Air Intake Upgrade Kit (RPI Part #CMK280). PFM50950 (rectangular style) Air Intake Filter Element Apollo/Midmark A0C0S52, A0C0S52D; Midmark S52 This element fits only the newer round-shaped style Air Intake Filter Assembly. This element is not to be used with the older discontinued rectangular-style Air Intake Filter Assembly. To convert from the older style assembly to the newer round-shaped style assembly, see RPI's Air Intake Upgrade Kit (RPI Part #CMK280). ACA85416 Compressor PM & Tip Seal Kit Apollo/Midmark AOCOS52, AOCOS52D; Midmark S52 This Kit only fits compressors that have been converted to the newer round-shaped style Air Intake Filter Assembly. This Kit is not to be used on compressors with the older disc Assembly. To convert from the older style assembly to the newer round-shaped style assembly, use RPI's Air Intake Upgrade Kit (RPI Part #CMK280). Apollo/Midmark AOCOS52 & AOCOS52D; Midmark S52 Compressor PM Kit This Kit only fits compressors that have been converted to the newer round-shaped style Air Intake Filter Assembly. This Kit is not to be used on compressors with the older discontinued rectangular-style Air Intake Filter Assembly. To convert from the older style assembly to the newer round-shaped style assembly, use RPI's Air Intake Upgrade Kit (RPI Part #CMK280). CMK287 HPA30505 Compressor Tip Seal Kit Apollo/Midmark AOCOS52 & AOCOS52D: Midmark S52 CMB279 MMS73500 Apollo/Midmark AOCOS52 & AOCOS52D; Midmark S52 Drive Belt RXK069 HPA30530 Grease Gun Kit Apollo/Midmark AOCOS52 & AOCOS52D; Midmark S52 CMV283 PVV50515 Apollo/Midmark AOCOS52, AOCOS52D, ALCQL82, ALCQL82D, ALCRL62, Check Valve ALCRL62D, ALCSL11, ALCSL11D, ALCSL12, ALCSL12D, ALCSL21, ALCSL21D, ALCSL22, ALCSL22D, ALCTL31, ALCTL31D, ALCTL32, ALCTL32D, ALCTL42, ALCTL42D, AOCOS11, AOCOS11D, AOCOS12, AOCOS12D, AOCOS21, AOCOS21D, AOCOS22, AOCOS22D, AOCOS21, AOCOS31D, AOCOS32, AOCOS32D, AOCOS42, AOCOS42D, AOCOT32, AOCOT32T, AOCOT42, AOCOT42D, AOCOT62, AOCOT62D AOCOT82, AOCOT82D, AOCRS11, AOCRS12, AOCRT21Q, AOCRT21DQ & AOCRT22Q, ACORT22DQ; Midmark R22 & R42 Apollo/Midmark AOCOS11, AOCOS11D, AOCOS11DQ, AOCOS11Q, CMK170 ACA85403 & ACA85417 Compressor PM Kit AOCOS12, AOCOS12D, AOCOS12DQ, AOCOS12Q, AOCOS21, AOCOS21D, AOCOS21DQ, AOCOS21Q, AOCOS22, AOCOS22D, AOCOS22DQ, AOCOS22Q, AOCTR21Q, AOCTR21DQ, AOCTR22Q, AOCTR22DQ & R22 (Fits R22 with 10 gallon tank only) Apollo/Midmark R42 & R22 (Fits R22 with 20, 30, or 40 gallon tank only) CMK273 ACA85418 Compressor PM Kit CMK266 Compressor PM Kit Matrx/Midmark AC-075, AC-100 & AC-101 (No OEM Part # Available) CMK268 Compressor PM Kit Matrx/Midmark ACD-075, ACD-100 & ACD-101 (No OEM Part # Available) Compressor PM Kit Matrx/Midmark AC-100-2 CMK267 (No OEM Part # Available) CMK269 Compressor PM Kit Matrx/Midmark ACD-100-2 (No OEM Part # Available) CMK263 (No OEM Part # Available) Compressor PM Kit Matrx/Midmark AMD-100 & AMD-102 CMK264 (No OEM Part # Available) Compressor PM Kit Matrx/Midmark AMD-100-2 CMK265 (No OEM Part # Available) Compressor PM Kit Matrx/Midmark AMD-100-3 CMK275 Compressor PM Kit Tech West ACOR2D1, ACOR2D1Q, ACOR2D2, ACOR2D2Q, ACOR3T2 & (No OEM Part # Available) ACOR3T2Q

4 Essential Tools for an Easier Oil Change!

Tech West ACOR4Q2

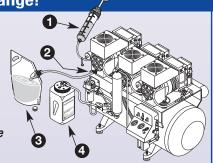
- 1. SYRINGE PUMP/EXTRACTOR (RPI Part #RPT842) One-of-a-Kind Tool!
 - Allows complete removal of oil from a compressor without needing to tilt or disassemble the unit!

Compressor PM Kit

- 2. DRAIN VALVE (RPI Part # RPV841) One-of-a-Kind Drain Valve!
 - Upgrade to RPI's Drain Valve with a special Tee-handle that allows you to easily open and close the valve to control the flow of oil as it is draining into the Disposal Bag!
- 3. DISPOSAL BAG (RPI Part #RPB838) Perfect Solution!

(No OEM Part # Available)

- For carrying, storing and disposing of used oil. This one gallon bag is constructed of durable clear plastic with an expandable base, a built in handle, and tight sealing cap.
- 4. COLLECTION CONTAINER KIT (RPI Part #'s CMK180 & CMK181) One-of-a-Kind Collection Bottle
 This bottle can replace the purge drain lines and directly connect with tubing to the compressor so that the
 purge waste water and oil can be collected and disposed of properly.



CMK277



Every once in a while we are forced to classify a part as "No Longer Available". The reason for this varies, from a manufacturer becomes no longer able to make the part, or the part has become too expensive to make due to low sales, etc. In other words, these parts will no longer be offered.

And that's exactly what will happen to the following parts, **once we deplete our current inventory.**

So, if you need any of the parts listed below, then please order them now, and stock up – because once they're gone, they're gone!

RPI Part #PCC138 - Outer Casing Fits: Pelton & Crane OCM (A3)

RPI Part #PCC139 - Outer Casing Fits: Pelton & Crane OCR (A4)

RPI Part #PCS184 - Valve Fill Stem

Fits: Pelton & Crane Validator 10 (AA) and Validator 8 (AB)

RPI Part #BDA015 - Head Cover Assy

Fits: 630 Select-A-Fuge

RPI Part #GXM002 - Drive Motor
RPI Part #GXK038 - Mounting Hardware Kit
Fits: Gendex GXPTM Film & X-ray Processor

RPI Still Supports Drager 2000e Isolette Infant Incubators After OEM Announces End of Life and End of Service

Just a reminder! Even though the OEM announced their EOS and EOL for parts that fit the Drager 2000e Isolette Infant Incubators, RPI still supports this model with free technical assistance and the parts you need most. For a listing of the parts RPI offers to fit the 2000e, please visit: www.rpiparts.com.



PM Kits To Fit The Medivator Are

Back & Better Than Ever!

Sometimes we have no other choice than to put a part "on hold" to ensure the best possible product we can offer our customers.





MTK014

This was the case for our PM Kits that fit the Medivator where there was an issue with a rolling diaphragm used in the Valve Kits (RPI Part #MTK013 and MTK014).

This diaphragm was rolling on itself until it would bind, which caused leaking due to the valves remaining partially unsealed from the orifice of the ³/₄" drain valve manifold.

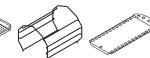
The good news is that some changes were made to the diaphragm that now allow the diaphragm to roll freely through the whole stroke of the valve resulting in no more leaking at the drain valve manifold.

With that, we are pleased to announce that our PM kits are back! The Annual PM Kit to fit the DSD201 (RPI Part #MTK009) and the Annual PM Kit to fit the DSD Edge (RPI Part #MTK033) are now both back in stock and ready for your annual PM needs. Also, don't forget that all parts included in the PM Kits are also sold separately.

Whether you need a disinfectant pump, check valves, drain valves, sample port seals or some air valve diaphragms (which by the way, now come with their own Loctite® tube and uncoated screws), RPI has you covered.

So stop by the website or give us call and get the parts you need to fit the Medivator.

RPI Offers Trays, Racks & Bottom Plates For Table Top Sterilizers!



Midmark M9 Large Tray (RPI Part #MIT207), Small Tray (RPI Part #MIT206), Rack (RPI Part #MIR208) and Bottom Plate (RPI Part #MIP205). Rack & Tray Kit (RPI Part #MIK204).

Midmark M11 Large Tray (RPI Part #MIT212), Small Tray (RPI Part #MIT211), Rack (RPI Part #MIR213) and Bottom Plate (RPI Part #MIP210). Rack & Tray Kit (RPI Part #MIK209).

Midmark M7 Small Tray (RPI Part #MIT206).

Pelton-Crane Delta 10 all models Large Tray (RPI Part #PCT143) and Small Tray (RPI Part #PCT142).

Pelton-Crane OCM, OCR & OCR+ Large Tray (RPI Part #PCT143), Small Tray (RPI Part #PCT142), OCM Tray Rest and Support (RPI Part #PCR188) and OCR & OCR+ Tray Rest and Support (RPI Part #PCR189).

Tuttnauer model 1730 all models Wire Tray (RPI Part #TUT165) and Tray Holder (RPI Part #TUH164). Holder & Tray Kit (RPI Part #TUK163).

Tuttnauer models EZ9, EZ9k & 2340 all models Wire Tray (RPI Part #TUT168) and Tray Holder (RPI Part #TUH167). Holder & Tray Kit (RPI Part #TUK166).

Tuttnauer models EZ10, EZ10k & 2540 all models Wire Tray (RPI Part #TUT168) and Tray Holder (RPI Part #TUH170). Holder & Tray Kit (RPI Part #TUK169).

Tuttnauer model 3870 all modelsLarge Tray (RPI Part #TUT174), Small
Tray (RPI Part #TUT173), Tray Holder
(RPI Part #TUH172) and Holder & Tray
Kit (RPI Part #TUK171).



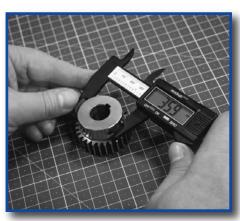


Sherry Lapides
Vice President, Customer Relations
Replacement Parts Industries, Inc.

The Quality of RPI Parts Begins with The Quality Control Process

Having written in my last column about how important the quality of our parts is to RPI, I would now like to explain a little about our quality control process.

Ray Martinez, our Manager of Quality Control, has been with RPI for about 15 years. With more than 40 years in the aerospace industry, machine shop and electronic assembly inspection, Ray has an extensive



background in shop practice, various types of machining, precision toolmaking and electronic assembly and testing. He once told me that two of the things he likes most about his job at RPI are the challenging variety of the work, and the freedom he is allowed to do his job.

Thinking about what quality control really is and relating it to what Ray does for RPI, it comes down to the fact that Ray is responsible for the process intended to make sure that our parts adhere to a defined set of manufacturing and testing criteria where defects are identified, examined and refined whereby our parts ultimately meet the customer's requirements and their 100% satisfaction.

Our Product Engineers begin the "engineering" of a part by first conducting research about the part including everything from the material from which it is made to how (and if) it can be made even better. Of course this gathering of information includes a thorough risk analysis. During this time, Ray is often consulted regarding the part's drawing specifications, product measurements and material, as well as testing requirements among other things – so right from the start he is an integral participant of engineering a part. Soon after, Ray attends several meetings at which his expertise on the manufacturing process, material and/or process certification requirements, whether there is a need for first article approval and in-house testing availability, etc. is quite valuable.

After RPI receives in the parts, he again springs into action as he reviews the type of inspection necessary, which may include checking that screw threads are

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THE RPI FAMILY

Hello! My name is Amy Cordoba. I am very happy to say that I am a Customer Service Representative with RPI. I love my job, especially talking with the customers, and helping with their orders and anything else that can make their job easier.

I have been with RPI for more than five years, and have really enjoyed being here. It's like one big family. In fact, my niece, Alondra, also works here in the Shipping and Warehouse Department. We carpool together every day, and it's fun to have her in the car with me through the tough Los Angeles traffic.

I have three great kids, all boys so it's really active around my house all the time. They love to play all kinds of sports including basketball, that's their favorite! We do all kinds of fun things together like going to the park, and theme parks, but most of all they like to go anywhere that they can run jump, and play. When I have some free time to. I most enjoy going to the movies,

and catching a quick nap, even if it's in the car for 5 minutes or during my lunch time.



I have lived in the Los Angeles

Amy Cordoba Customer Service Representative

area all my life. Living here is perfect for our entire family because we are so close to many of the wonderful places like the beach, mountains, desert, lakes, and national parks. Perhaps my favorite place to visit is Disneyland because it has been so magical ever since I was little and my mom, dad and our whole family would go there for the entire day, riding all of the rides.



The Stainless In the Steel:

Is it possible for stainless steel to corrode or rust?

By Phil Goldstein, RPI Product Development

RPI has been manufacturing and supplying stainless steel instrument trays for steam sterilizers since 1995.

Instrument trays are an excellent product for us to offer because all steam sterilizers require trays to place instruments on, somehow they mysteriously disappear and they do not malfunction or require warranty replacement. That doesn't mean that stainless steel instrument trays don't have their own perplexities that cause heads to spin and stir conversation.

I recently spoke with a customer who purchased our instrument trays to fit one of the Midmark sterilizers. His concern was that in a short time the trays showed evidence of rust or corrosion.

Is it possible for stainless steel (316L) to corrode or rust? The simple answer is no. Three basic ingredients comprise stainless steel; iron, carbon and chromium. Molybdenum and trace elements like manganese and nickel may also be present.

It is the chromium that is responsible for the properties of stainless steel on which we have come to depend. When chromium is exposed to oxygen it forms chromium oxide. It is that layer of chromium oxide that protects the steel from corroding or rusting. If the layer of chromium oxide is disrupted then the void area is subject to rust or corrosion. This in itself isn't so bad because you can clean the rust/corrosion off the surface and the chromium will oxidize again and create a new layer of protection.

Physical damage to an instrument tray, such as using a steel wire brush or steel wool to clean it will damage the layer of chromium oxide. Water/moisture and oxygen will find their way into the tiny grooves and gouges created by the wire brush or steel wool pad.

Common chemicals used in doctor and dentist offices and medical labs are probably the most common culprits causing the stainless steel chambers and instrument trays to corrode or have the appearance of rusting and corrosion.

Cleaners that contain chlorides (bromine, chlorine, fluorine etc.) will damage the chromium oxide surface layer. Do not use them on stainless steel products and that includes the pressure chamber. Cleaners containing alcohols or ammonia will also create havoc and should be avoided.

Tap water should never be used in a steam sterilizer unless it is filtered to remove minerals and trace metals. Contaminants that are not removed from the surface and left to dry have the ability to oxidize and stain. Many public water systems add chlorine to the water as a disinfectant. Unfortunately chlorine can breakdown the chromium oxide layer protecting the stainless steel surface.

If oxidation has built up on the surface of your instrument trays, there are over the counter cleaners such as Barkeeper's Friend Soft CleanerTM or baking soda and clean water that can be applied with a little elbow grease to



To help maintain your stainless steel instrument trays use a surfactant spray such as RPI's Sci-Dry™ (RPI Part #SCA054) on a weekly basis to help keep moisture off of them.

RPI's Sci-Dry TM is also available by the

case of 12 (2 oz.) spray bottles (RPI Part #SCA055) or 16 oz. Refill Bottle (RPI Part #SCA046).

restore their finish. Always use a clean soft cloth and wipe with the grain not against it. Make sure to dry the trays when finished cleaning them. For best results and prolonged use try using a surfactant spray such as RPI's Sci-Dry™ (RPI Part #SCA054). It keeps moisture from settling on the surface of the trays which helps eliminate debris build up.

Quick Recap 1) To maintain your stainless steel instrument travs do wash them with a mild detergent on a weekly basis. Dry them well. 2) Use a surfactant spray such as RPI's Sci-Dry™ (RPI Part #SCA054) on a weekly basis to help keep moisture off of them. 3) If discoloration or any appearance of corrosion occurs inquire as to what chemicals might be on the instruments that could migrate into the steam atmosphere and cause the chromium oxide to break down. 4) Be sure to review the cleaning agents the office staff is using to clean the sterilizer. 5) Always check the water that is being used in the sterilizer.

Just a reminder, RPI offers trays, racks and bottom plates to fit Midmark, Pelton-Crane and Tuttnauer table top sterilizers ... please, take a moment to review the entire listing that's located on page 5 of this newsletter.

The Quality of RPI Parts Begins with The Quality Control Process

(Continued from page 6)

correct, verifying the durometer hardness of a gasket, using the Optical Comparator to check critical dimensions, or verifying the mechanical or electrical operation of a part. He also determines the appropriate sample size to test based on many different factors to ensure the best possible outcome for our customers. Parts that pass Ray's inspection are tagged as accepted and routed to the Warehouse to be processed into inventory. Parts not approved are rejected and returned to their source for corrective action. Then the cycle repeats.

I hope my article gives you a better understanding of how the quality process works here at RPI, and how Ray is a valuable part of the team in working together with our Product Engineers, Purchasing, and Warehouse personnel.

We appreciate the suggestions from our customers as to what parts you need and do our very best to inventory those parts as soon as we can, always keeping in mind our high standards for product quality and our outstanding warranty policy of only shipping to you parts that will meet your complete 100% satisfaction.

RPI's Ever Expanding Line Of Dental Air Compressor PM Kits and More

(Continued from front page)

the **Grease Gun** (RPI Part #RXG071), **Grease Gun Nozzle** (RPI Part #RXN072) and the **Grease Cartridge** (RPI Part #RXG070). The parts in the Grease Gun Kit are also sold separately.

The End of an Era – Say Goodbye to the RPI Metering Valves

(Continued from front page)

we are currently selling has performed fairly well.

Several years ago, Barnstead Thermolyne, which bought the MDT/Harvey line, discontinued the manufacture of these machines and discontinued parts support, and the Chemiclaves have been slowly dying off since then. We are now at the point where sales of parts to support these machines, with a few exceptions, is just not economically feasible. So when our current inventory of the metering valves is depleted, we will discontinue selling those valves as well as several other parts that fit the Chemiclaves and other MDT/Harvey models. We will still carry the door gaskets and a few parts that cross over to other brands, such as the indicator lights that are also used on some Tuttnauer sterilizers. We will also continue to carry the PM Kit for our metering valves (RPI Part #MDK057) so that the valves currently in use can continue to be serviced.

It truly is the end of an era, as we had a good long run with these valves, but with so many Chemiclaves retired and more taken out of service every day, it is time to move on.

RPI has also released a variety of new parts and kits to fit compressors made by Apollo, Midmark, Apollo by Midmark, older Matrx compressors, Matrx units before they were acquired by Midmark, Air Techniques, and Tech West. For a listing of these new parts and the models each fit, see page 4. Please visit our website **www.rpiparts.com** to see the complete line of compressor parts.

New S.S. Swivel Elbow to fit Tuttnauer Water Pump

RPI will now be using a new Stainless Steel

swivel elbow to replace our old aluminum body swivel elbow used on the Tuttnauer water pumps. We heard from you that when the cleaning solution was not properly flushed through the system that it would stick to the fitting and eat away at the edge of the aluminum part of the fitting, causing leaking. Our new fitting is now made entirely of Stainless Steel and will not interact with the cleaning solution. This new fitting is sold separately under RPI Part #RPF811. It will also now be the new standard fitting installed on the Water Pump (120VAC) (RPI Part #TUP089) and the Water Pump (220VAC) (RPI Part #TUP090).

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