




replacement parts industries, inc.

Best Practices to Repair and Service SciCan STAT/M® Cassette Autoclave

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Replacement Parts Industries, Inc.
April, 2014

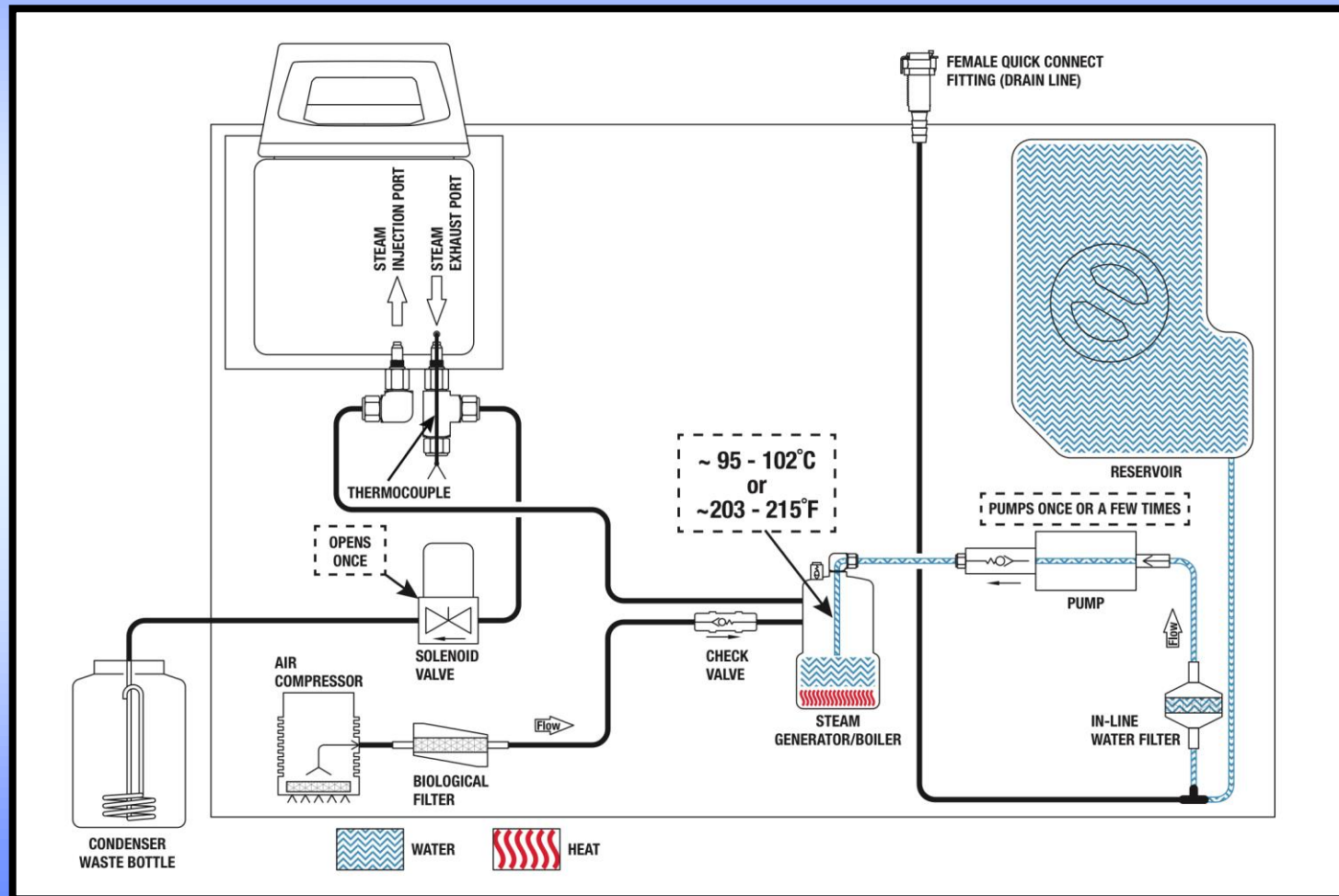


- The Six Phases of Sterilization used by the SciCan autoclave
- Best Ways to Begin Service or Repair
- Preventive Maintenance
- Review of the Most Common Error Codes
- “Tricks of the Trade”
- RPI Field Service Smart Kit®
- RPI Technical Assistance Center

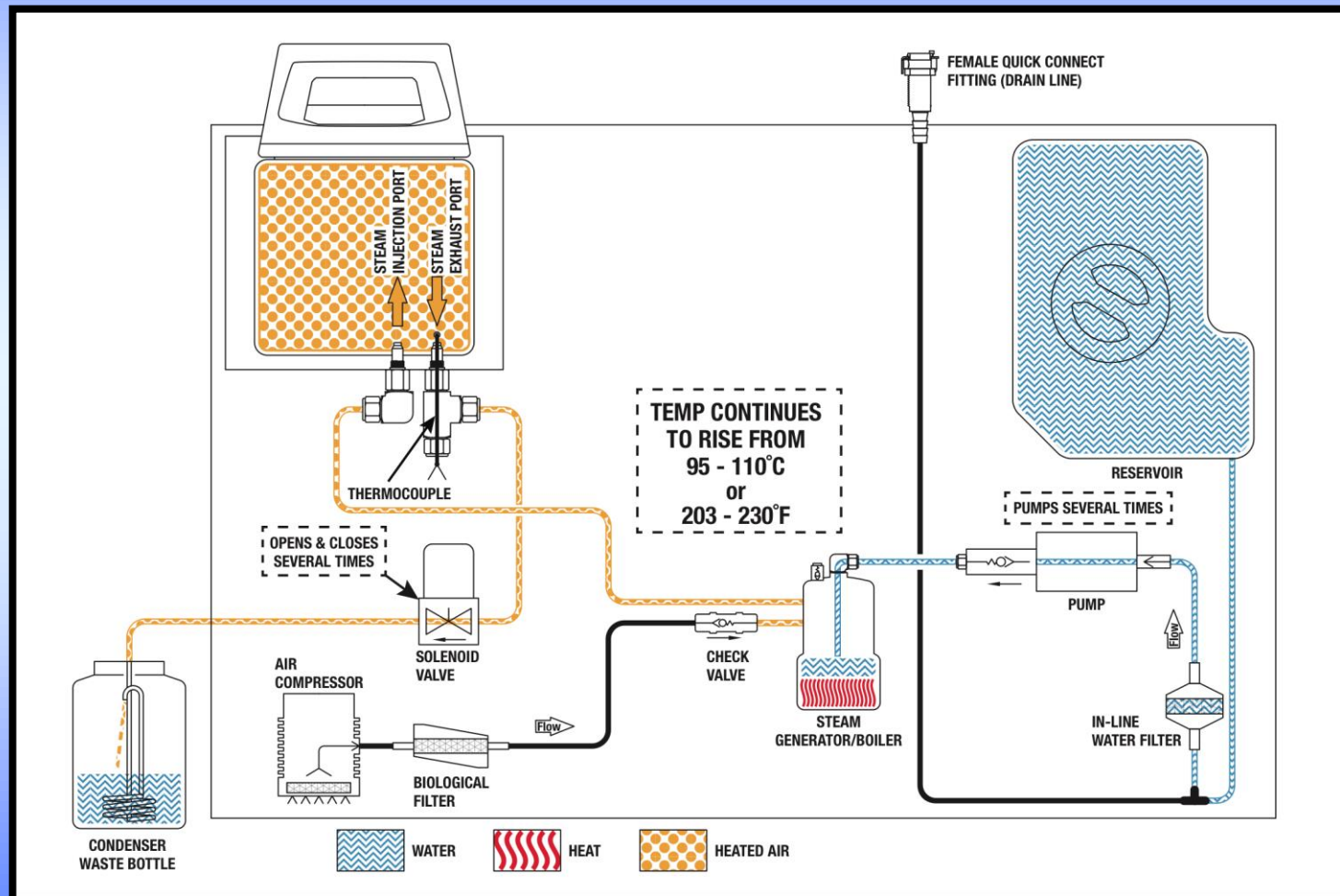
A white, rectangular SciCan autoclave is shown from a three-quarter perspective. It has a control panel on the front right side with a small digital display and several buttons. A circular access door is visible on the top surface.



5 Stages of Sterilization – Stage 1: Warming Up

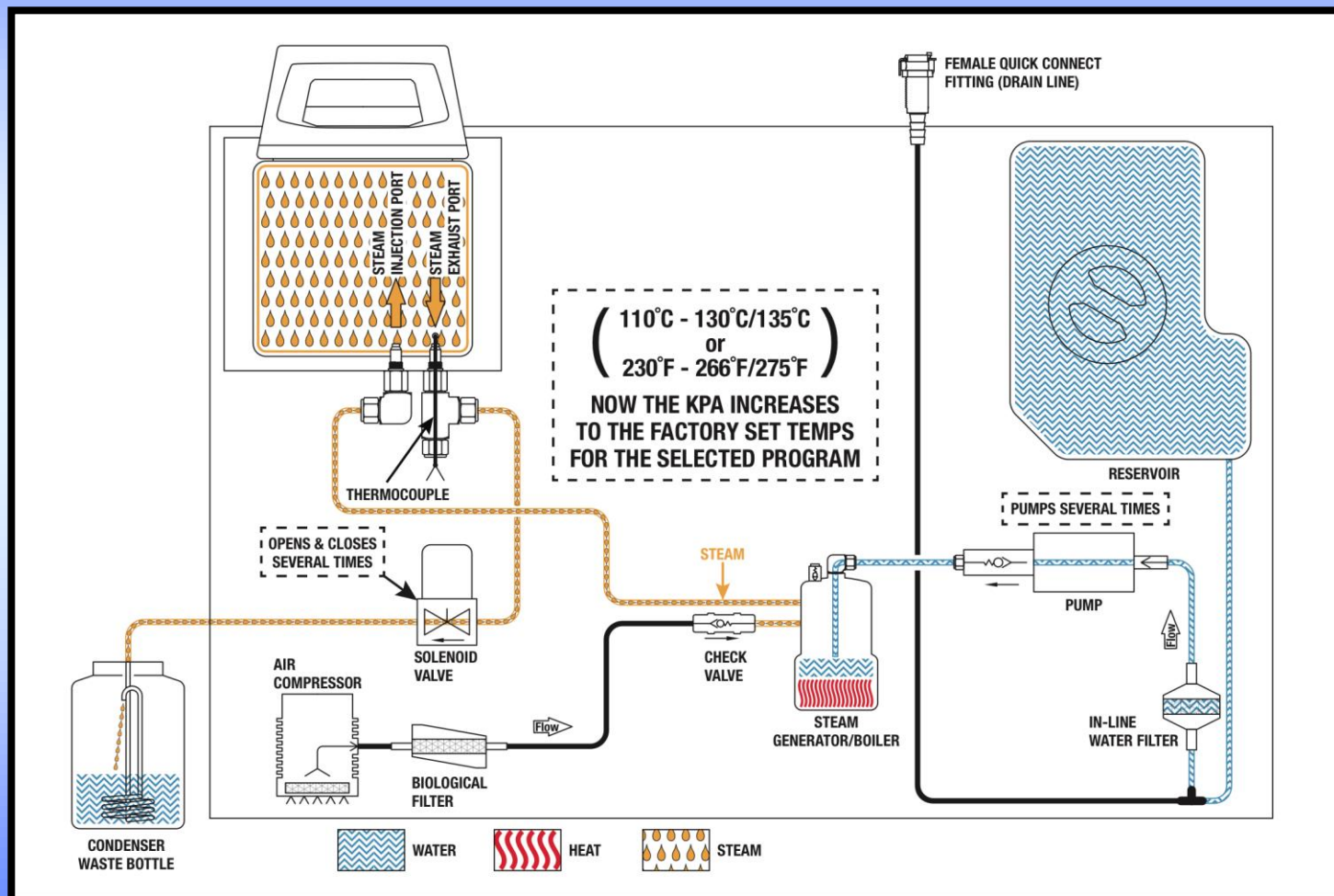


5 Stages of Sterilization – Stage 2: Conditioning



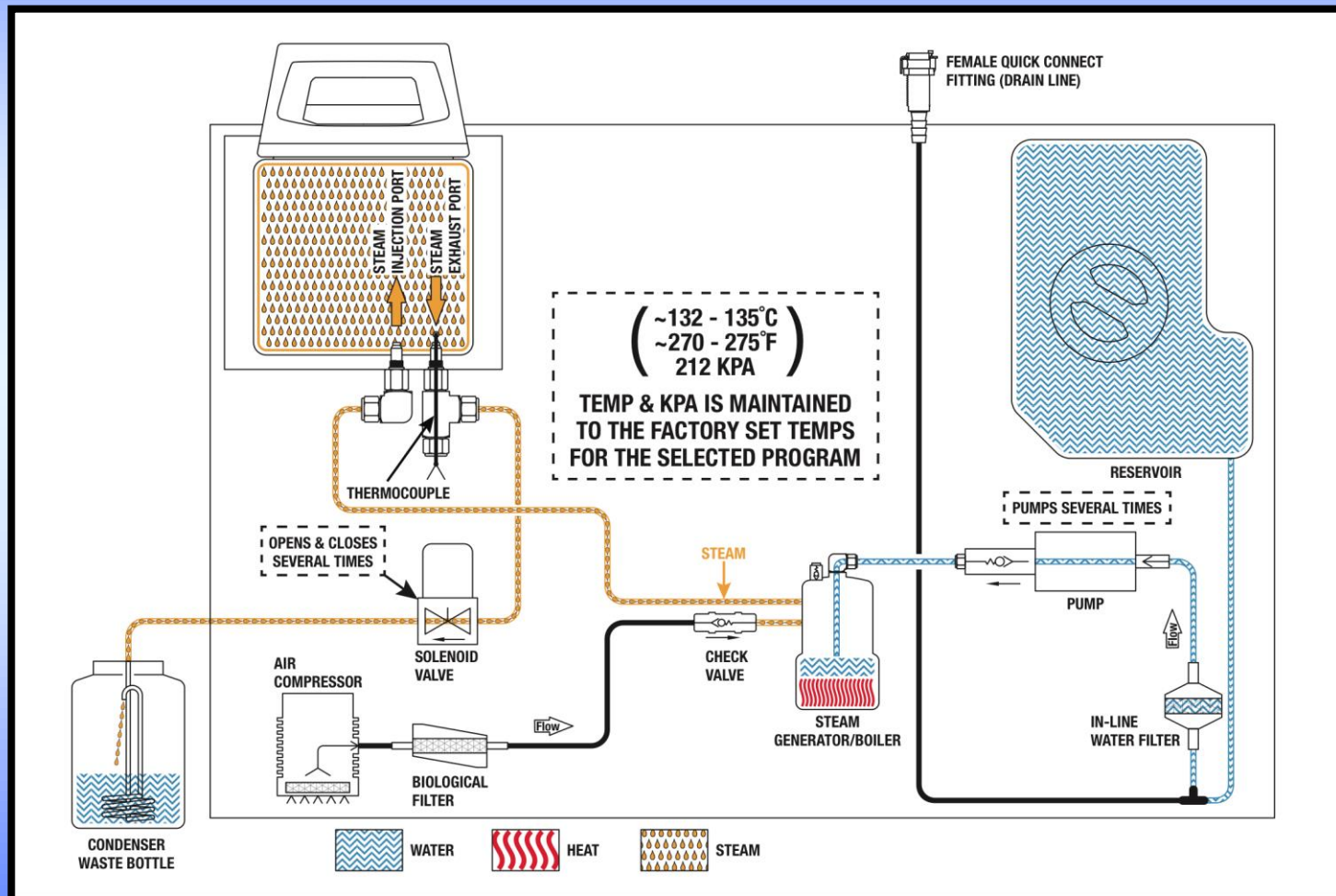


5 Stages of Sterilization – Stage 3: Pressurizing



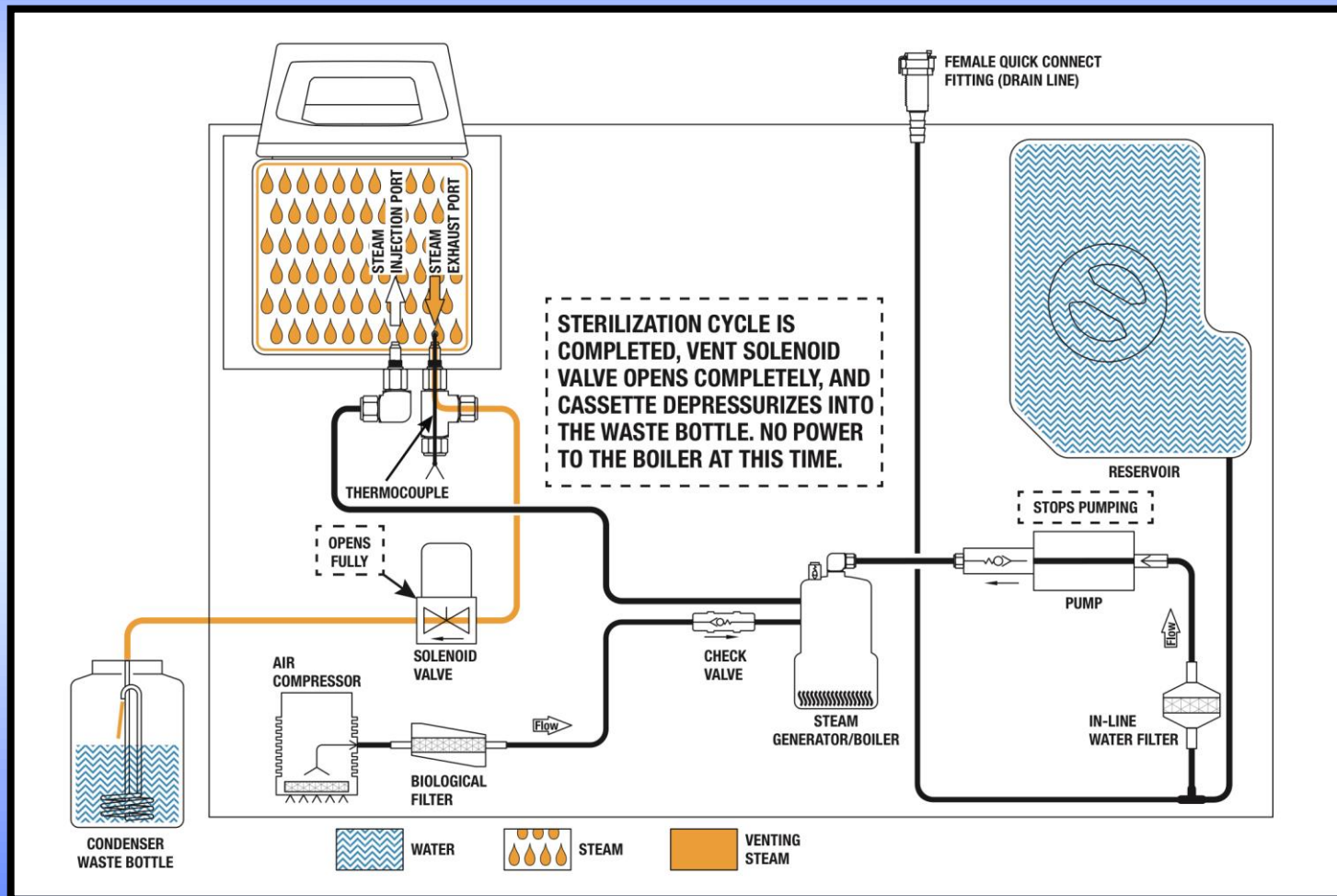


5 Stages of Sterilization – Stage 4: Sterilization

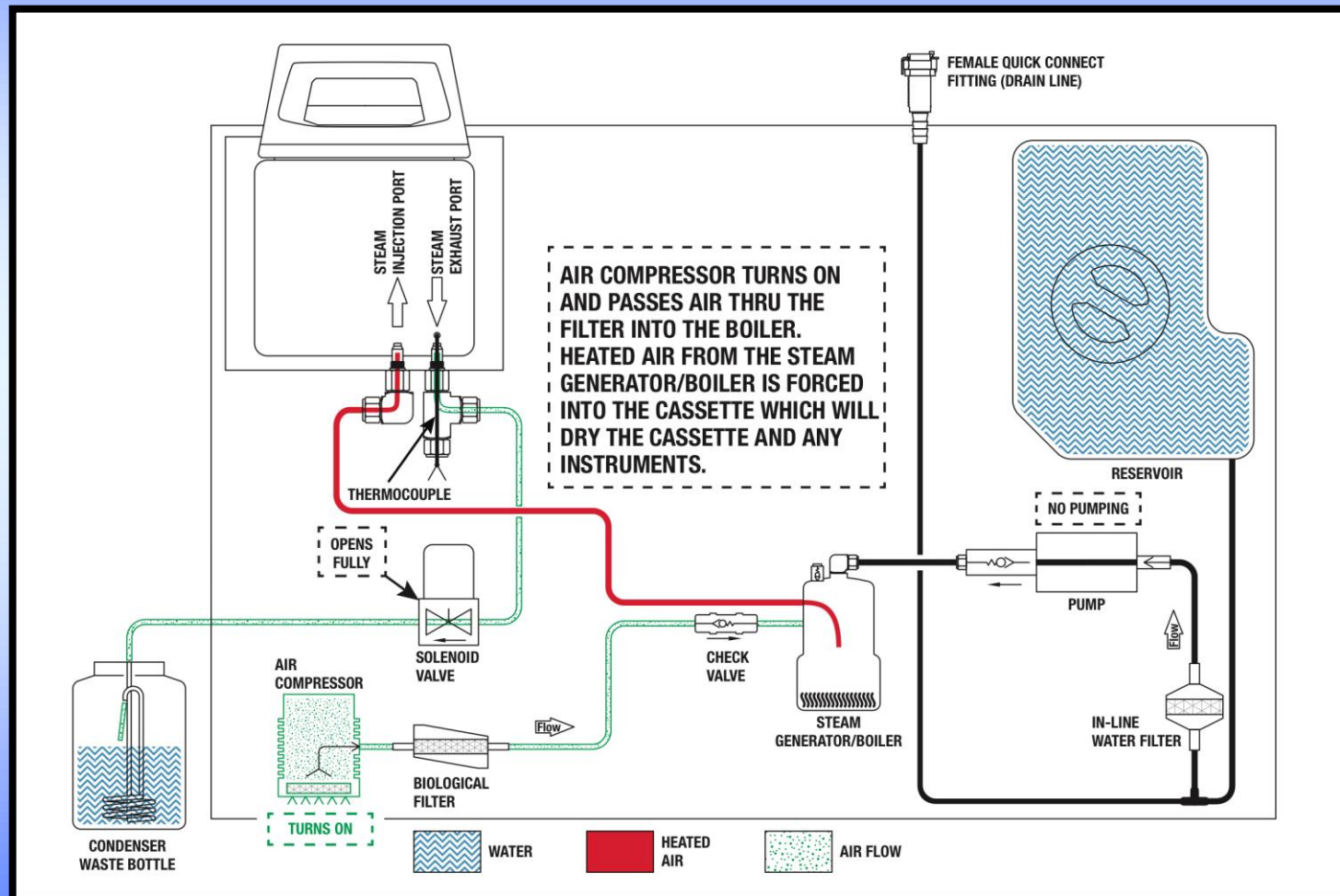




5 Stages of Sterilization – Stage 5: Venting



5 Stages of Sterilization – Stage 6: Drying





If leveling is improper, adjust the feet until proper level is achieved.



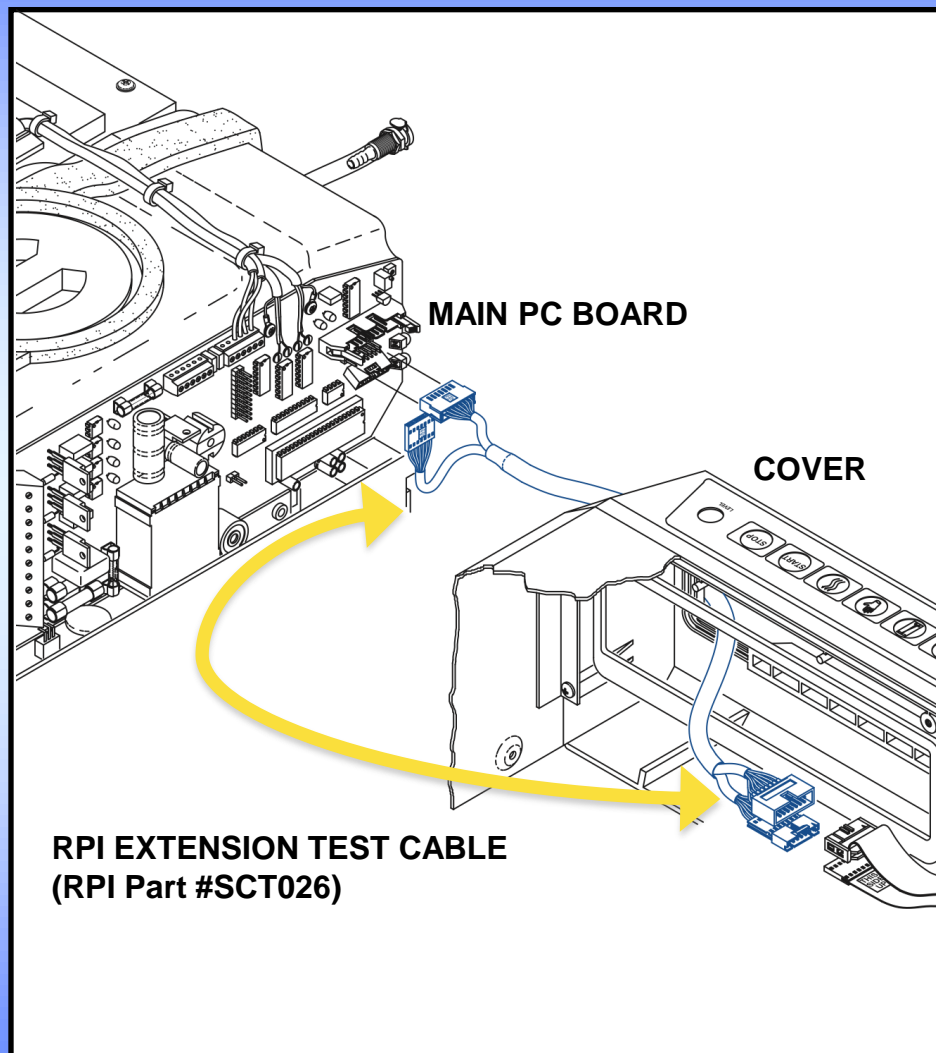


Use the RPI Extension Test Cable (RPI Part #SCT026)



When testing, troubleshooting or repairing the STATIM autoclave, install the RPI Extension Test Cable.

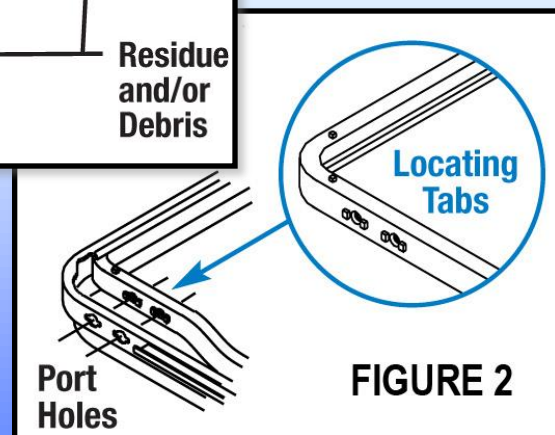
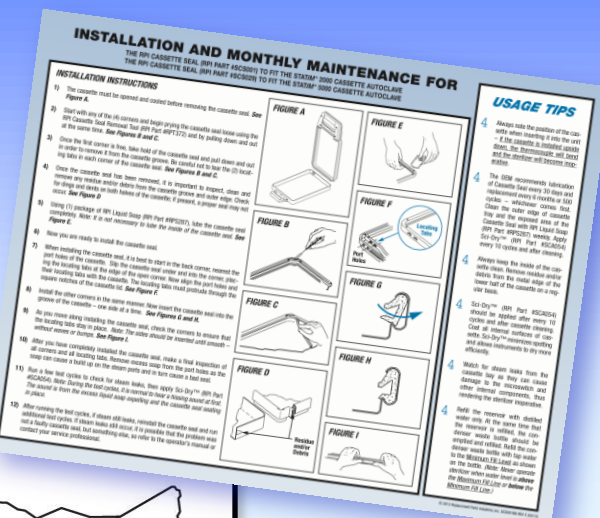
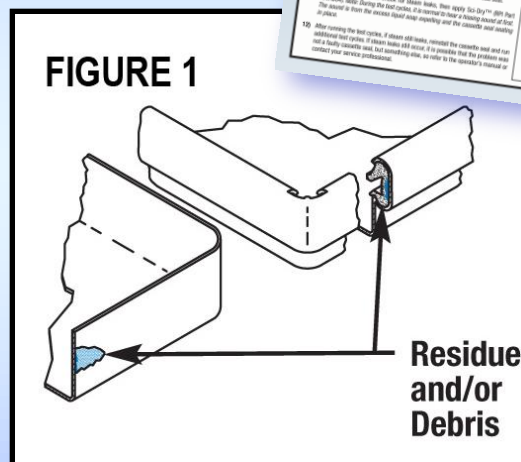
By attaching the Extension Test Cable to the cover and main PC board as shown in this illustration, you will be able to extend the distance between the autoclave and the cover thus allowing you to place the cover in a horizontal (not vertical) position for easier viewing of the LCD display and easier access to the keypad.





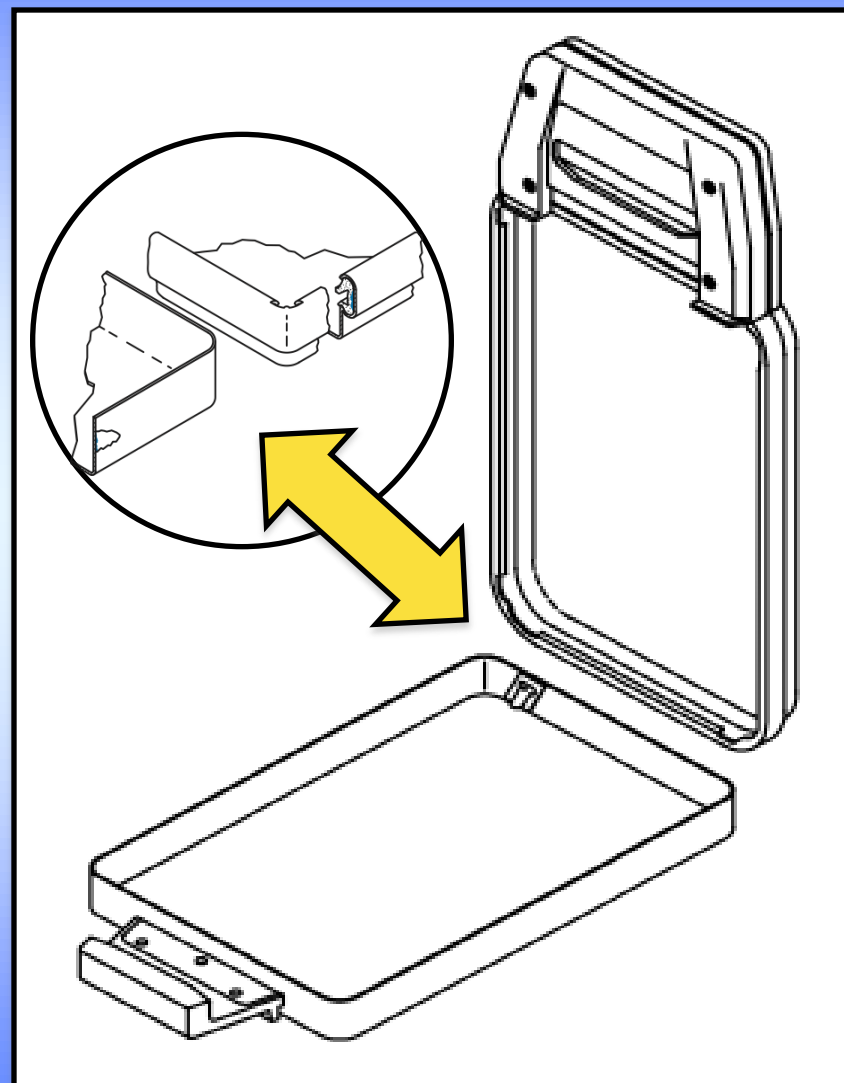
Highlights of Replacing the Cassette Seal (RPI Part #SCS001 & SCS029)

-
- Once the cassette seal has been removed, it is important to inspect, clean and remove any residue and/or debris from the cassette groove and outer edge. Check for dings and dents on both halves of the cassette; if present, a proper seal may not occur. See Figure 1.
- When installing the cassette seal, it is best to start in the back corner, nearest the port holes of the cassette. Slip the cassette seal under and into the corner, placing the locating tabs at the edge of the open corner. Now align the port holes and their locating tabs with the cassette. The locating tabs must protrude through the square notches of the cassette lid. See Figure 2.



**There's More to It Than
Just Replacing the Cassette Seal ...
*You must also clean, verify and inspect!***

- ☐ Ensure that there is no debris or residue on outer edges of cassette tray.
- ☐ Verify that outer edges of cassette tray are straight (not nicked, dented, or damaged).
- Confirm that the cassette seal ports are not damaged due to the steam ports
- ☐ Inspect and clean steam ports on probe bracket. If you observe excess debris that is not easily removed, or if the steam ports appear to be worn or damaged, remove probe bracket for proper evaluation. Replace probe bracket if necessary.

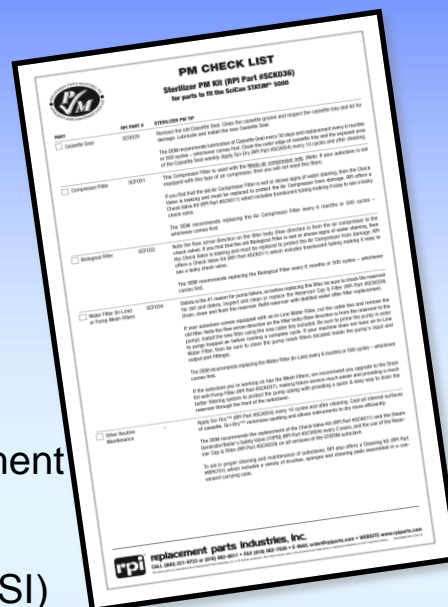




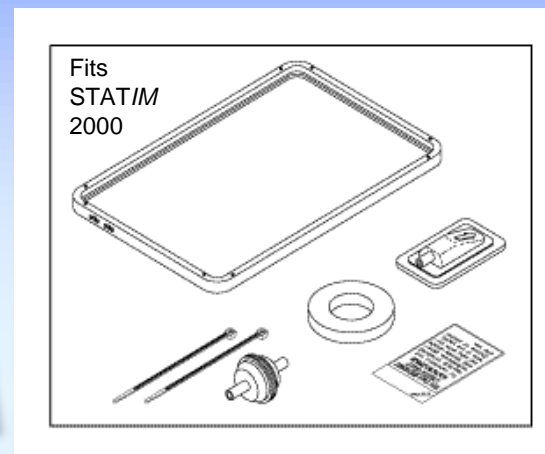
RPI PM Kits and Checklist



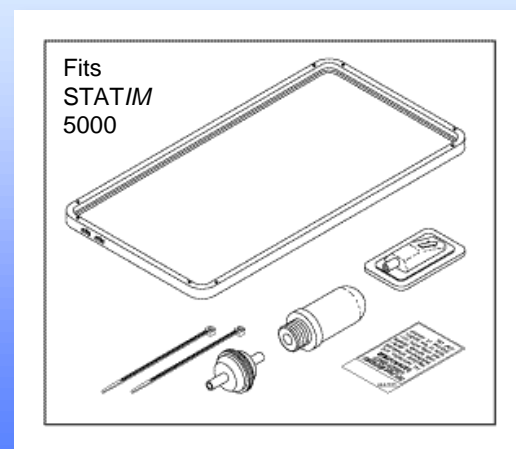
- Once a year or 6 months (approximately 500 cycles). Customer's usage will dictate timing of PM.
- The OEM recommends the replacement of the Check Valve Kit (RPI Part #SCK011) and the steam generator/boiler's Safety Valve (70PSI) (RPI Part #SCV004) every 2 years, and the use of the Reservoir Cap & Filter (RPI Part #SCK059) on all versions of the STATIM autoclave.
- To aid in proper cleaning and maintenance of autoclaves, RPI also offers a Cleaning Kit (RPI Part #RPK791) which includes a variety of brushes, sponges and cleaning pads assembled in a convenient carrying case.



Sterilizer PM Kit (RPI Part #SCK035)



Sterilizer PM Kit (RPI Part #SCK036)





There's More to It Than Just Replacing the Cassette Seal ... *You must also properly align it!*

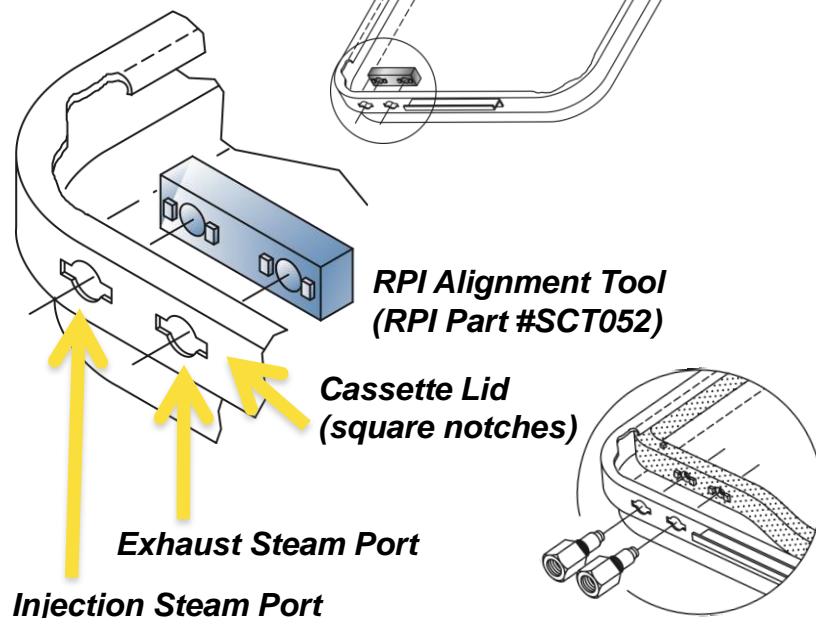


Separate cassette tray from cassette lid. Place lid on counter top and remove cassette seal. The cassette seal must be removed before continuing with Alignment Tool installation.

Alignment Tool Installation Instructions

- 1) Tilt the cassette lid and install Alignment Tool into steam ports from the inside of the cassette lid as shown. The square tabs on the tool must engage the square notches in the cassette lid, and the tool must lay flat within the cassette seal groove. The Alignment Tool must be seated correctly to avoid damaging the tray when latched and closed. See Figure to left.
- 2) Carefully attach the bottom tray to cassette lid and close to properly retain the Alignment Tool. Cassette lid should close normally and retain the Alignment Tool. **DO NOT FORCE IT CLOSED!**
- 3) Cassette is now ready to be used to align probe bracket steam ports.

Service Tip! Angle cassette lid as shown, using gravity to aid in tool positioning while assembling and closing the cassette.





Replacing the Water Pump Filter



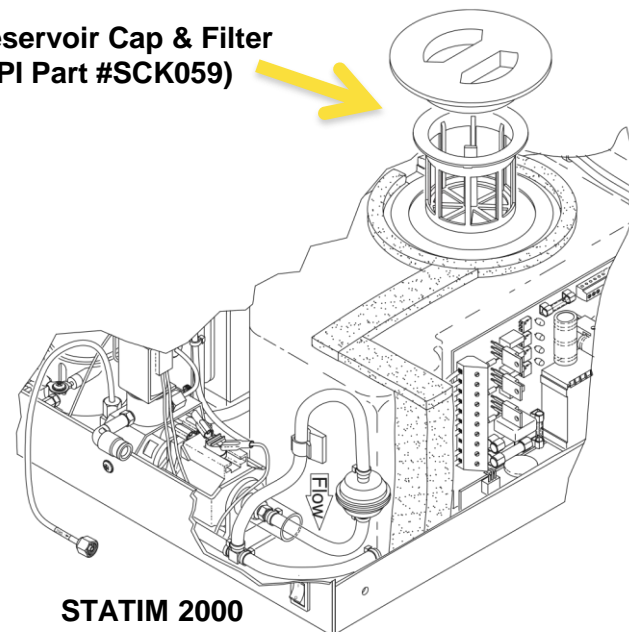
Effective June 2007, the OEM stopped using the mesh filter (installed in the inlet and outlet fittings) and offered the In-Line Water Filter to be installed between the reservoir and pump.

The OEM now recommends the use of the Reservoir Cap and Filter along with the In-Line Water Filter on all units. The mesh filters should be removed and the autoclave should be upgraded to the In-Line Water Filter.

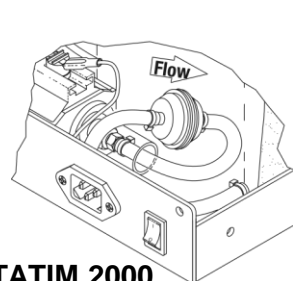
RPI offers the parts you need:

- In-Line Water Filter* (RPI Part #SCF034)
- Reservoir Cap & Filter (RPI Part #SCK059)
- Drain Kit with Pump Filter (RPI Part #SCK037)

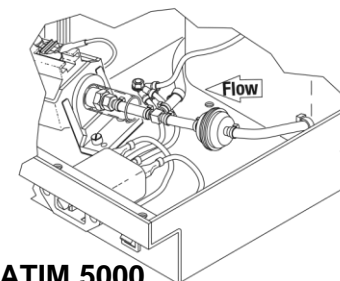
Reservoir Cap & Filter
(RPI Part #SCK059)



STATIM 2000
With Drain Kit



STATIM 2000
Without Drain Kit

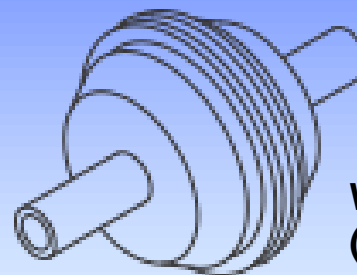


STATIM 5000

* The In-Line Water Filter is also included in the PM Kit!

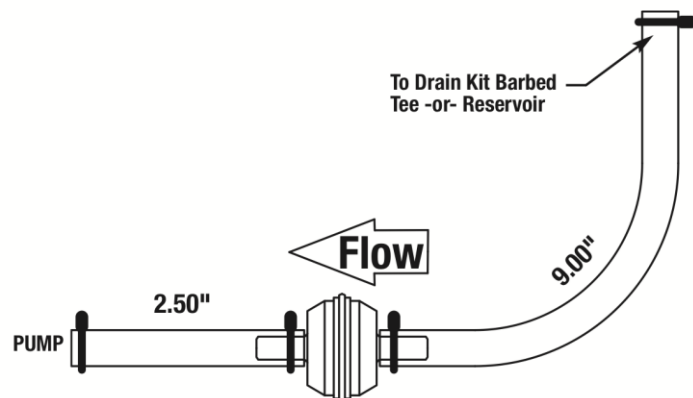


Proper Placement of the Water Pump Filter

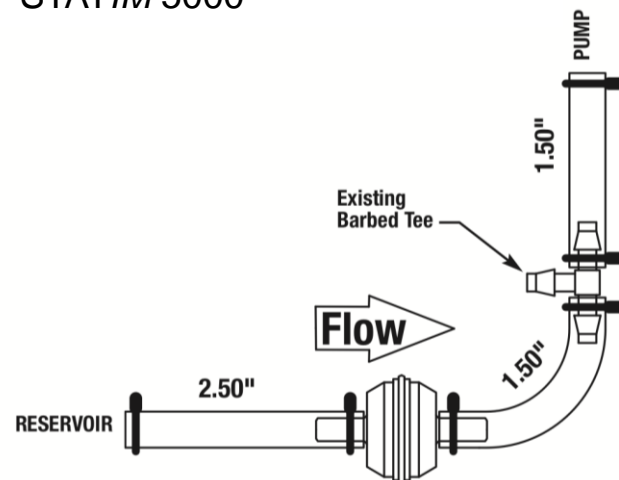


Water Filter (In-line)
(RPI Part #SCF034)

STAT/M 2000



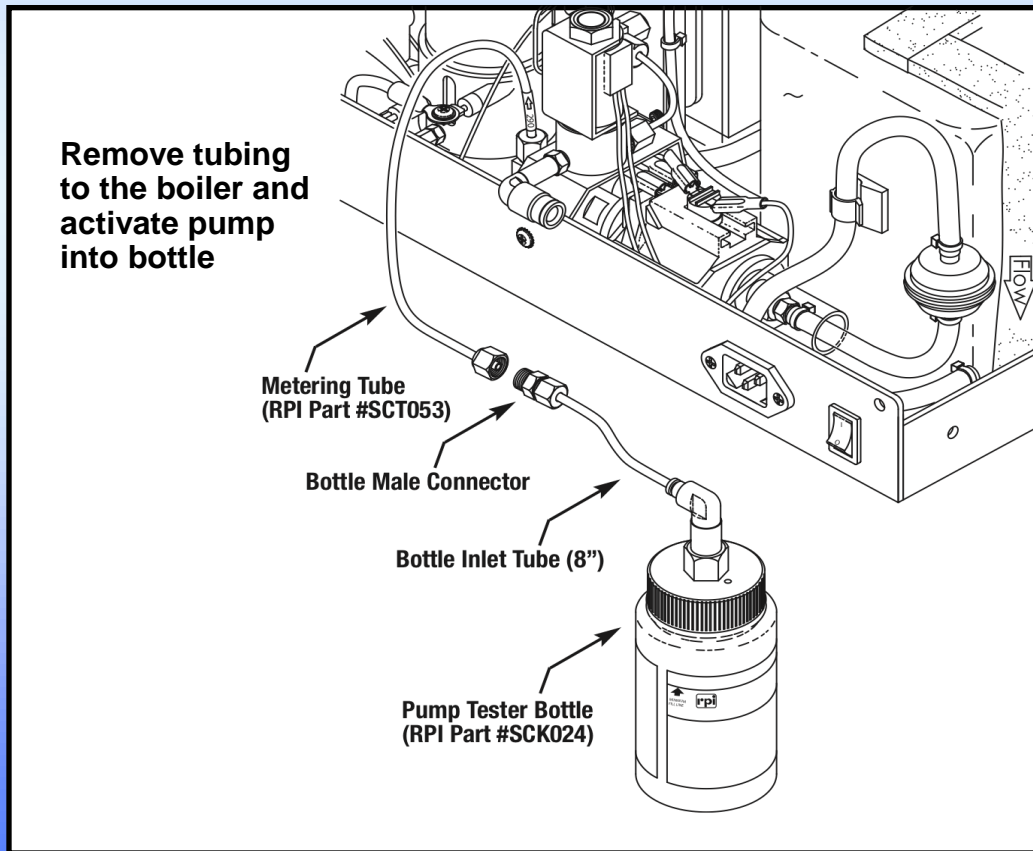
STAT/M 5000



RESIZE TUBING AS SHOWN



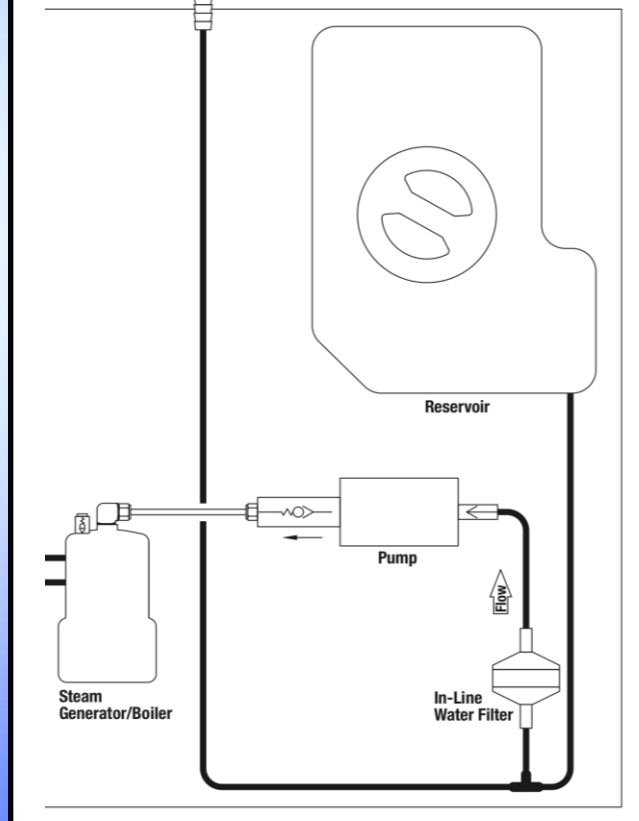
Priming the Water Pump Filter



Connect Drain Kit and drain here to aid in priming the Pump Filter.



DRAIN TUBE ASSEMBLY KIT (RPI Part #RPK432)





Preventive Maintenance

Importance of Using Sci-Dry™



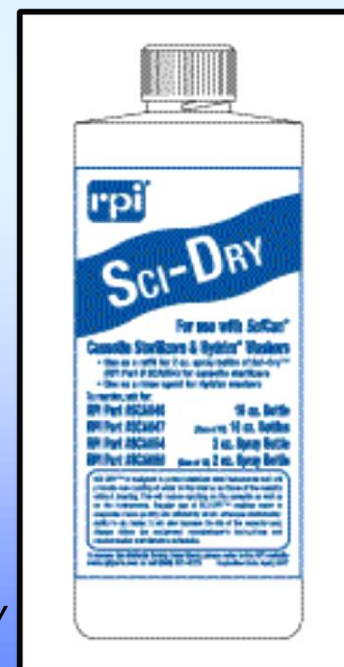
- SCI-DRY™ is designed to protect stainless steel instruments and will promote even coating of water on the internal surfaces of the cassette without beading. This will reduce spotting on the cassette as well as on the instruments.
- Regular use (every 10 cycles) of SCI-DRY™ enables water to evaporate more quickly and efficiently which enhances instruments' ability to dry faster.
- It will also increase the life of the cassette seal. Always follow the equipment manufacturer's instructions and recommended maintenance schedules.

RPI Sci-Dry:

- (1) 2 oz. Spray Bottle (RPI Part #SCA054)
- Case of 12 (2 oz.) Spray Bottles (RPI Part #SCA055)
- (1) 16 oz. Bottle (RPI Part #SCA046)
- Case of 12 (16 oz.) Bottles (RPI Part #SCA047)



**Use Sci-Dry
spray every
10 cycles!**



*Refill for the
convenient spray
bottle.*



Be Successful! Use the RPI Field Service Smart Kit® (RPI Part #SCK028)



The RPI Field Service Smart Kit is a valuable work tool that can help save you and your customers time and money.

The Kit includes a booklet where you will find instructions on how to use each of the tools in this Kit, plus:

- Diagrams
- Exploded Views
- PM Check Lists
- Error Code Listings with Trouble-Shooting Service Tips
- List of RPI parts to fit the SciCan STATIM Cassette Autoclaves.





The RPI Field Service Smart Kit® (RPI Part #SCK028)



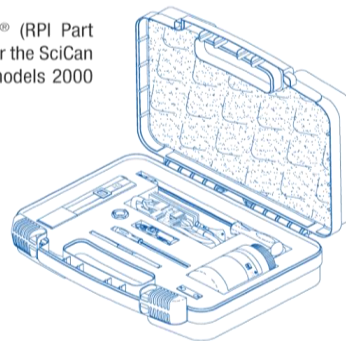
Everything needed to properly service the Stat/M 2000 and 5000 units, plus more!

RPI offers one-of-a-kind, specialized tools that are not offered by the OEM ... only available from RPI.

Tools that make
your job easier, and
your customers
satisfied.

RPI FIELD SERVICE SMART KIT® (RPI PART #SCK028)

RPI Field Service Smart Kit® (RPI Part #SCK028) to service and repair the SciCan STATIM Cassette Autoclave models 2000 and 5000.



All Parts Shown Are Included In The Kit!



SCT026



SCS021



RPA369



SCT052



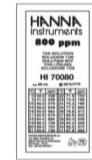
RPT297



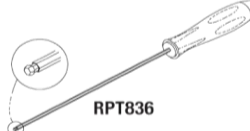
SCK024



RPT820



RPS821



RPT836



RPS287



RPT372

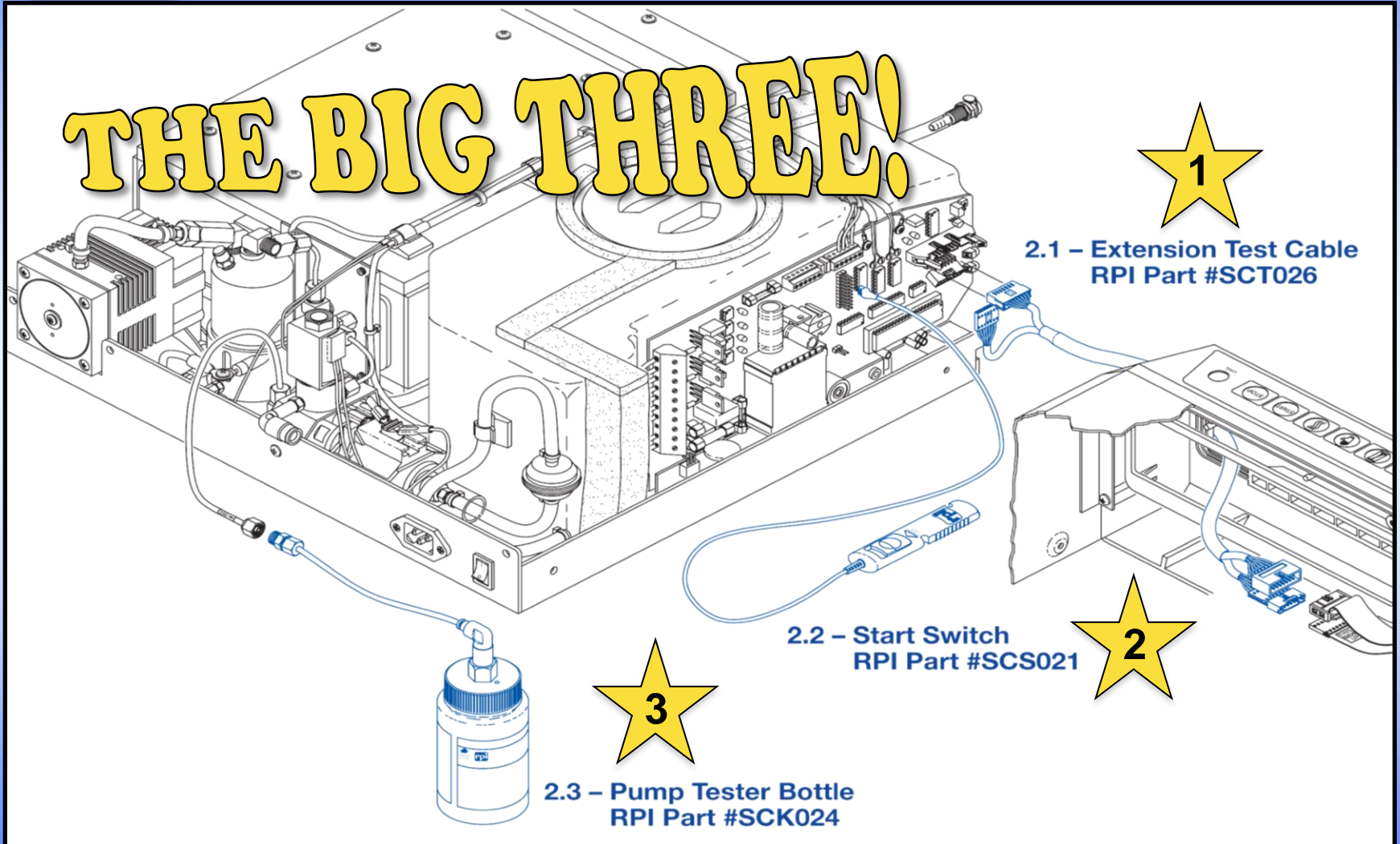


RPT364



RPC476

THE BIG THREE!





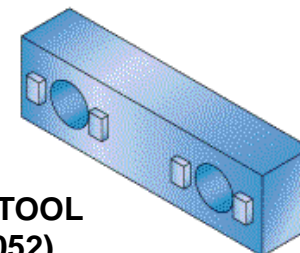
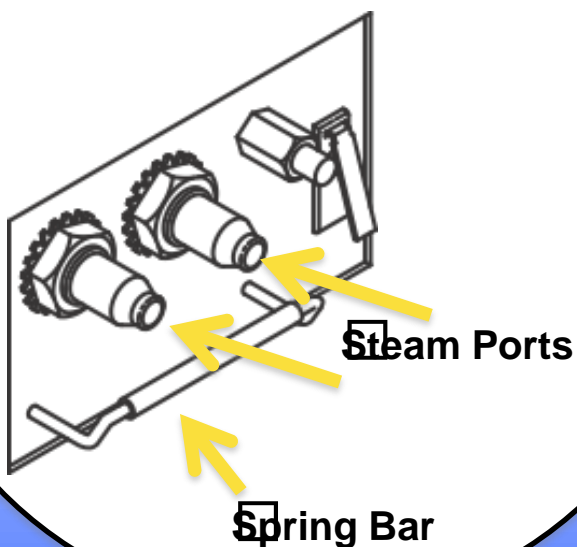
"Tricks of the Trade" – The Probe Bracket

Probe Bracket & Probe Bracket Kits

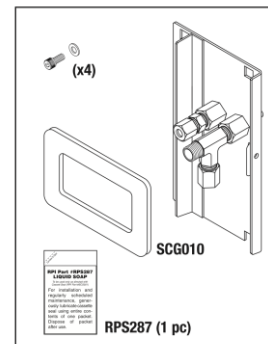
The Cassette Seal will fail if the:

- Cassette Seal Port Holes are worn
- Steam Ports have mineral build up or are worn
- Probe Bracket is out of alignment

Internal View of Cassette Bay (Armature)

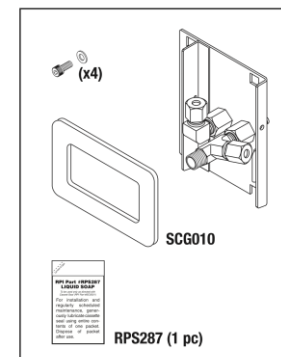


RPI ALIGNMENT TOOL
(RPI Part #SCT052)



PROBE BRACKET
(RPI Part #SCB043)
Fits 5000 Series

PROBE BRACKET
(RPI Part #SCB039)
Fits 2000 Series





"Tricks of the Trade" – Micro Switch

Micro Switch

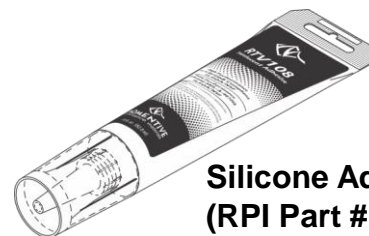
Apply Silicone Adhesive* (RPI Part #RPA874) to side of switch and mount to probe bracket angle.

Apply a sealing bead of Silicone Adhesive around switch housing to close off any leak paths between the switch and bracket.

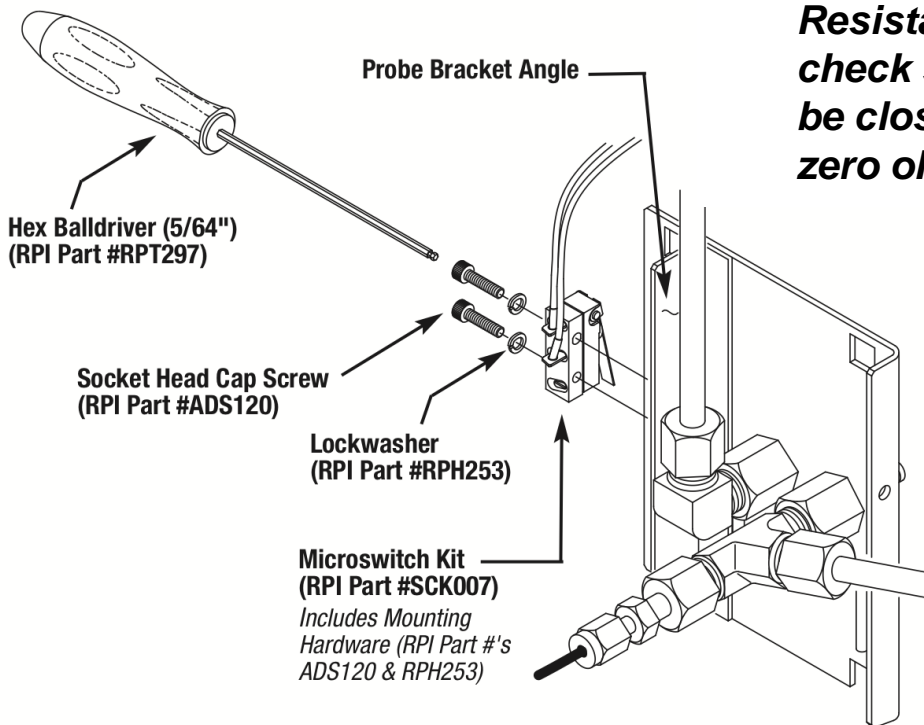
Watch for steam leaks from the cassette bay as they can cause damage to the micro switch and other internal components. Verify integrity of cassette seal steam ports and probe bracket alignment.

NOTE: Silicone Adhesive (RPI Part #RPA874) replaces Gasket Maker (RPI Part #RPS639).

TIP - Apply Adhesive RTV108 (RPI Part #RPA874) to side of switch and mount to probe bracket angle. Apply a sealing bead of Adhesive RTV108 around switch housing to close off any leak paths between switch and bracket.



**Silicone Adhesive RTV108
(RPI Part #RPA874)**





“Tricks of the Trade” – Solenoid Valve

Solenoid Valve

- Avoid crushing the flute/bonnet (which would prevent the plunger from moving up and down freely) by using a Spanner Nut (RPI Part #RPT364) or Spanner Wrench (RPI Part #RPT501).
- Inspect and clean plunger rubber seat, replace if necessary. Uneven wear could indicate a problem to the valve body orifice.
- Lubricate the plunger (metal body only) with a drop of 3-IN-ONE® oil. This can also help reduce valve noise.
- Inspect and clean valve body orifice and ports, looking for damage and debris.
- Check that the coil and bracket have been reinstalled in the proper orientation.

SMART KIT BOOKLET FIGURE 9.4

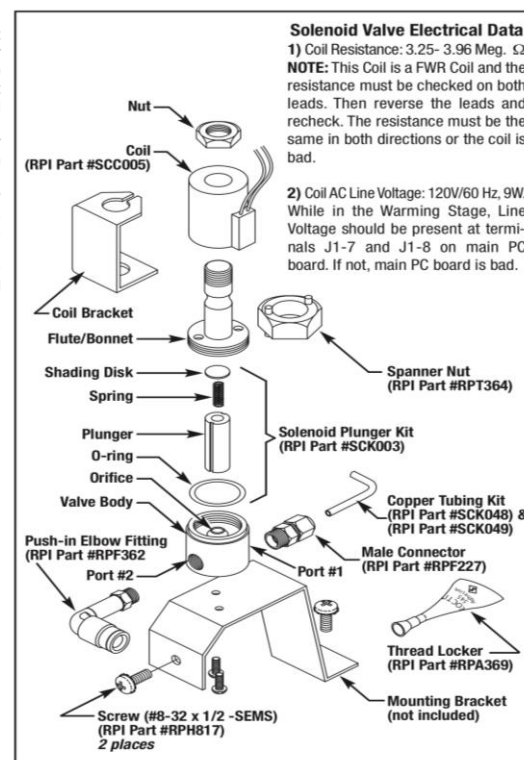
SERVICE TIP

- Avoid crushing the flute/bonnet (which would prevent the plunger from moving up and down freely) by using a Spanner Nut (RPI Part #RPT364) or Spanner Wrench (RPI Part #RPT501).
- Inspect and clean plunger rubber seat, replace if necessary. Uneven wear could indicate a problem.
- Lubricate the plunger (metal body only) with a drop of 3-IN-ONE® oil. This can also help reduce valve noise.
- Inspect and clean valve body orifice and ports, looking for damage and debris.
- Check that the coil has been reinstalled in the proper orientation.

Solenoid Valve Electrical Data

1) Coil Resistance: 3.25- 3.96 Meg. Ω
NOTE: This Coil is a FWR Coil and the resistance must be checked on both leads. Then reverse the leads and recheck. The resistance must be the same in both directions or the coil is bad.

2) Coil AC Line Voltage: 120V/60 Hz, 9W.
While in the Warming Stage, Line Voltage should be present at terminals J1-7 and J1-8 on main PC board. If not, main PC board is bad.





“Tricks of the Trade” – Check Valve Kit

Check Valve Kit

A failed Check Valve can lead to:

- Compressor failure
- PSI leaks and Error codes

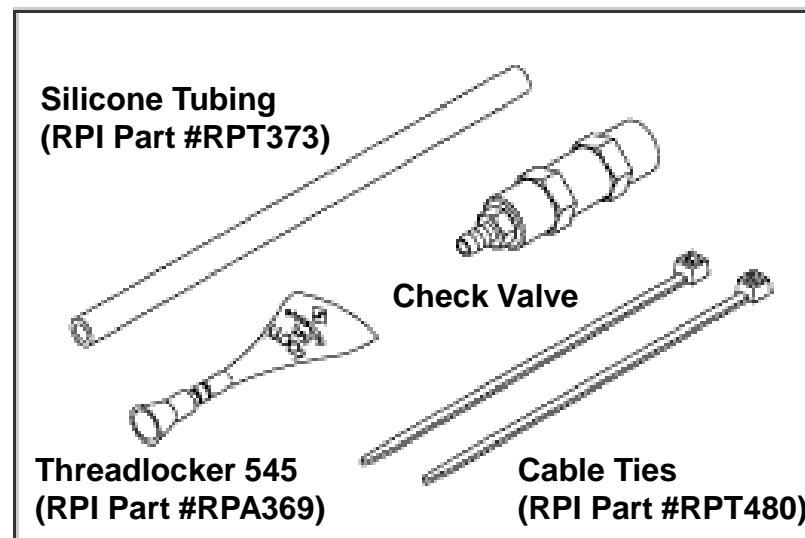
Visual inspection will help to identify if there is a Check Valve failure.

Visually inspect:

- a) Clear tubing
- b) Compressor Filter(s)

Service Tip: To avoid possible valve failure, debris must be completely removed from the fitting before installing new Check Valve (RPI part #SCK011) using supplied threadlocker on fitting threads.

Check Valve Kit (RPI Part #SCK011)





“Tricks of the Trade” – Drain Tube Kit

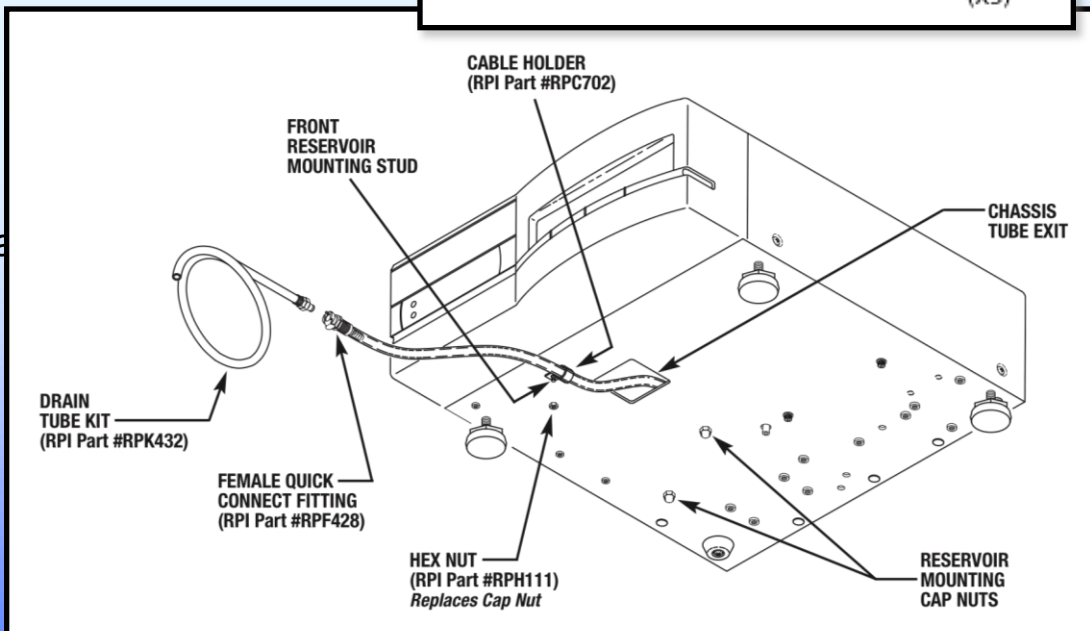
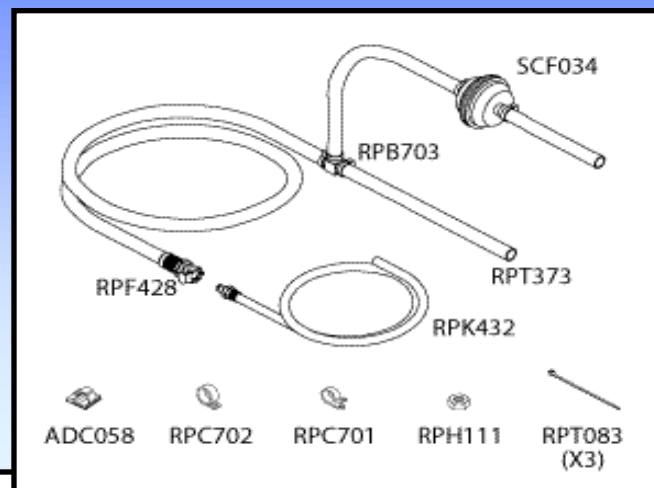
Drain Tube Kit
(Drain Kit with Pump Filter (RPI Part #SCK037 fits 2000. For kit to fit 5000, see Note below.)

RPI Advantage!

The Quick Disconnect included in the RPI Drain Tube Kit (RPI Part #SCK037) allows you to drain the machine before taking it to your van or shop to repair.

NOTE: To upgrade the Scican StatIM® 5000, order the Drain Tubing Kit (RPI and the Female Quick Disconnect Fitting (RPI Part #RPF428). The StatIM 5000 comes equipped with the drain Line and Plug.

Drain Kit with Pump Filter
(RPI Part #SCK037)





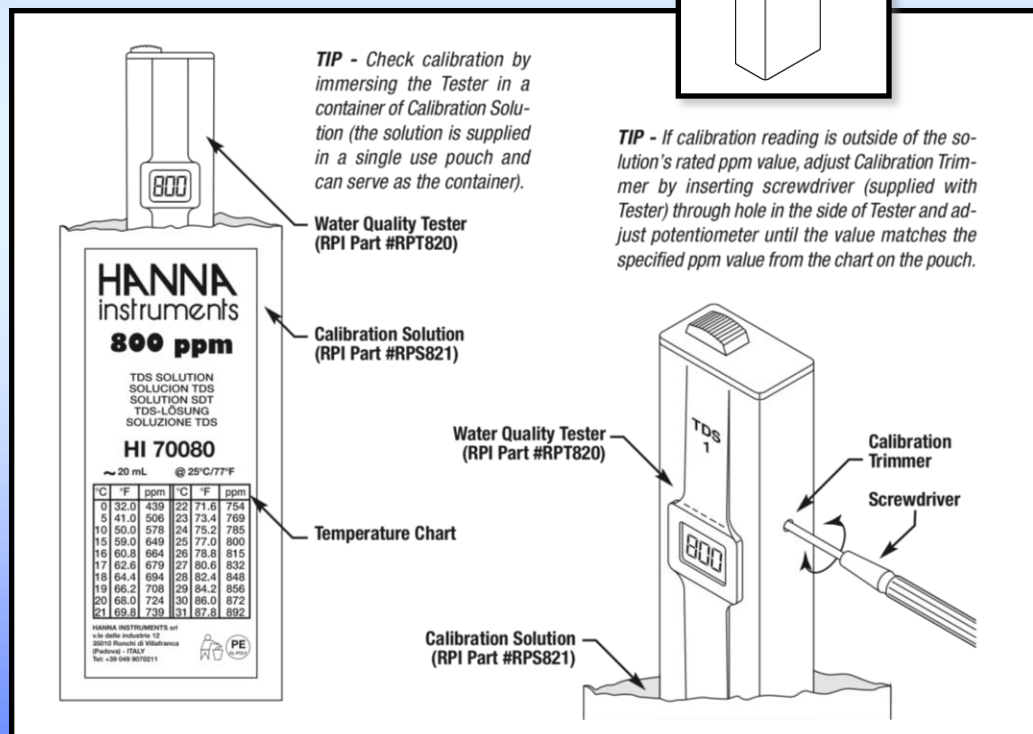
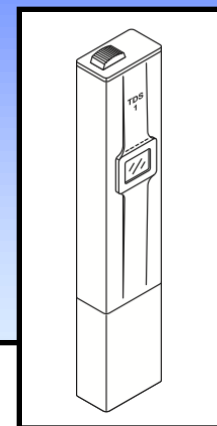
“Tricks of the Trade” – Water Testing

Water Testing

Water quality is critical! Use only high quality distilled water.

The Water Quality Tester (RPI Part #RPT820) is a meter designed to measure water quality. This meter determines the total amount of dissolved solids (TDS) present in the water being used for sterilization. SciCan states the total dissolved solids (TDS) allowable in the water reservoir to be a maximum of 5 Parts Per Million (ppm) or a conductivity of less than 10 Micro Siemens ($\mu\text{S}/\text{cm}$). RPI's Water Quality Tester displays its readings in “Parts Per Million” (ppm) and will automatically compensate for temperature variations.

Water Quality Tester (RPI Part #RPT820)





“Tricks of the Trade” – Condenser Waste Bottle Kit

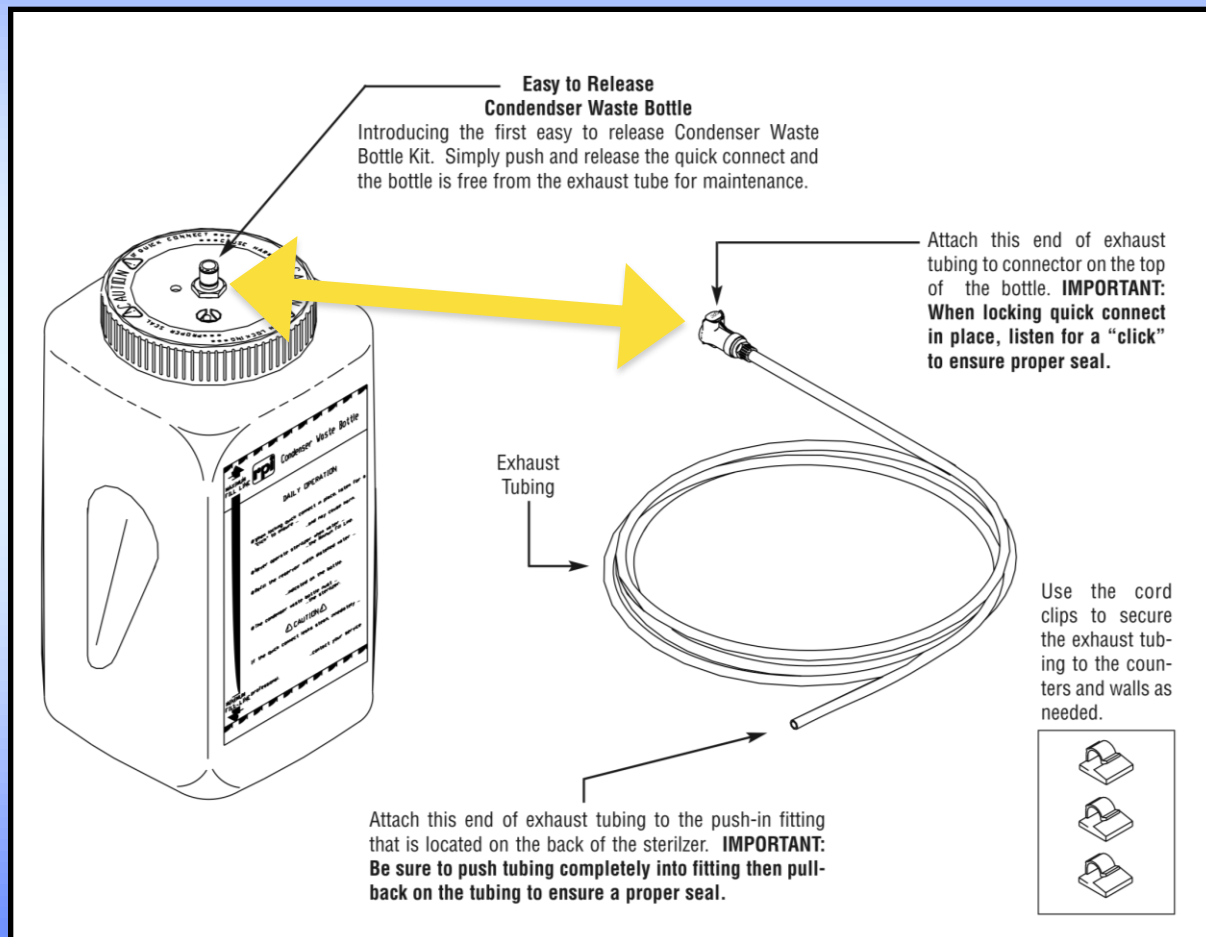
Condenser Waste Bottle Kit (RPI Part #SCK016)

The RPI Advantage!

This one-of-a-kind design allows removal of the Condenser Waste Bottle from the exhaust tubing in one easy step.

Simply push and release the quick connect on the lid and the bottle is free from the exhaust tube for easy maintenance.

Condenser Waste Bottle Kit (RPI Part #SCK016)





Replacement Parts Industries, Inc. (RPI) has been the leader in replacement parts since 1972.

Service Technicians have come to rely on RPI for its valuable technical assistance, including:



- Tech help available via phone, fax, email and website.
- RPI Planned Maintenance Kits to fit a Variety of Tabletop and Bulk Sterilizers.
- Free Troubleshooting Guides.
- Free Exploded Views.
- Web Access to all Installation Instructions.
- Tech Talk and Service Tip Articles.
- At-a-glance Cross References and Quick Reference Guides.
- Annual Planned Maintenance Posters.
- More service tips can be found in the Tech Help section of the RPI website – www.rpiparts.com.

Phone (800) 221-9723 or (818) 882-8611 • Fax (818) 882-7028

Email techsupport@rpiparts.com • Website www.rpiparts.com



Thank you for joining us for our presentation on

**Best Practices to Repair and Service
SciCan STAT/M® Cassette Autoclave**

**And many thanks for giving
RPI the opportunity to share this valuable
information with you.**