

Official Guide:

MAINTAINING & CLEANING SURGICAL INSTRUMENTS



813-889-9614

www.sharn.com

Table of Contents

18	Bone Cutter Inspection
3	Causes of Corrosion, Staining, Pitting and Marking
4	Cleaning and Sterilization
24	Customer Service
2	Enemies of Surgical Instruments
15	Hemostat Inspection
6	Instrument Lubrication
7	Instrument Staining
8	Instrument Stringers, Repair Tags, Tip Protectors
9	Instrument Marking/ Identification Tape
1	Introduction, Proper Care of Instruments
17	Laminectomy and Cervical Rongeur Inspection
19 – 23	Lap Instrument Inspection, Testing, and Cleaning
12	Needleholder Inspection
14	Retractor Inspection
10	Stainless Steel Instrument Brush Study
11	Scissor Testing and Inspection
13	Suction Device Inspection
16	Tissue and Dressing Forcep Inspection
5 – 6	Ultrasonic Cleaning

Contact Sharn

813-889-9614

Email: mailbox@sharn.com

www.sharn.com

4517 George Road Suite 200
Tampa, FL 33634

About This Guide

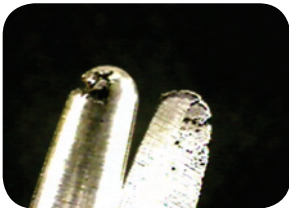
As a medical professional, you want to ensure the utmost quality and integrity of your surgical instruments at all times. You also want to protect your considerable investment in these high-grade medical devices.

The cost of replacing surgical instruments is far greater than the cost of maintaining them. For this reason, a comprehensive maintenance program is extremely important. This guide provided by Sharn will help.

Proper Care and Scheduled Preventative Maintenance

Proper care of surgical instruments begins with proper cleaning. This guide discusses proper washing, cleaning and sterilization of many types of surgical instruments. Proper care also means maintenance of German-made instruments on a regular basis, consisting of sharpening and restoration. A general rule of thumb for busy O.R.'s is to schedule maintenance quarterly. Instruments that may require this maintenance include: scissors, needleholders, bone cutters, hemostats, osteotomes, rongeurs, chisels, bone curettes, knives and punches. German-made surgical instruments are designed to be re-sharpened and restored. Performing this maintenance will allow the instruments to last for many years and perform flawlessly.

Stained and pitted instruments



The Look and Feel of New Instruments

Most professionals will recognize that new instruments feel different. New instruments tend to be harder and have a stiffer feel to them. As instruments age, they soften with use and sterilization. With proper care, these instruments can last a lifetime. It is important to realize that all surgical instruments will experience softening over time. Remember, new instruments are designed to be stiff at the onset of use. The idea is to use them for their designed purpose and always properly clean, lubricate, and perform preventative maintenance.

Enemies of Surgical Instruments

In addition to giving tips on the care and cleaning of instruments, this guide will discuss several enemies of surgical instruments. Water and moisture of any kind (especially blood, pus, surgical debris and chlorhexidine solutions) are the primary causes of staining and pitting of surgical instruments. Allowing any type of moisture to air-dry on your instruments will cause severe damage. Other enemies include cold soaking or washing instruments with inappropriate solutions. Examples of these solutions are dish or laundry soap, bleach, iodine-type solutions, general disinfectants, surgeon's hand scrub and most importantly, any solution that contains chlorhexidine or is a chloride-based solution. Surgical instruments are made from 300 and 400 series stainless steel. Despite its name, stainless steel definitely stains and it can also rust and become pitted.

TIP: Extend the drying cycle of your autoclave, especially when a sterilizing tray is fully loaded. This will help to reduce condensation on the instruments.



Spectra-Soap®
Order # SS2



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



Box-lock instrument brush
Order # 45-7000



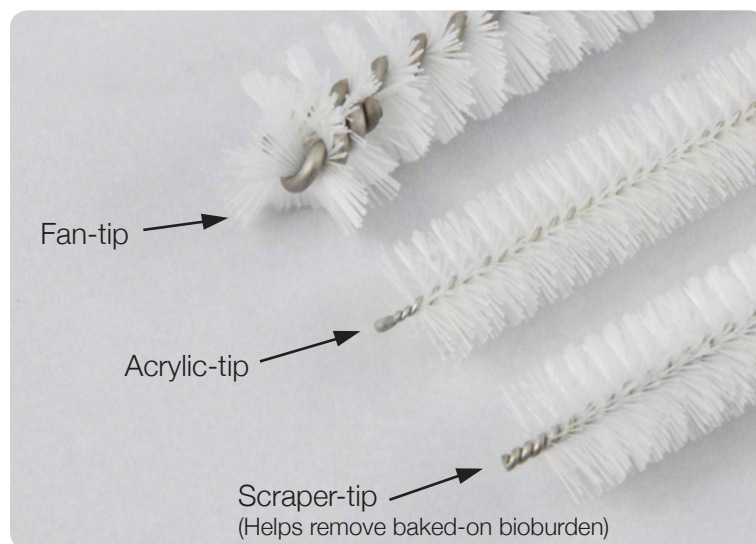
Instrument brush
Order # 45-8000

Causes of Corrosion— Staining, Pitting and Marking

Surgical residues such as blood, pus and other secretions contain chloride ions which lead to corrosion most often appearing as dark spots. If blood is left on the instruments for any period of time (20 minutes or longer), the instrument will mark and stain, especially if these residues are allowed to dry. Therefore, always clean and dry every instrument thoroughly after use. Only sterilize a clean instrument. The most damaging procedure is to allow dried-on blood to become baked-on stains in the autoclave. The temperature of the autoclave (250°–270°F or 121°–132°C) will cause chemical reactions that can make the stain permanent. Remember, an autoclave does not clean; it will only sterilize.

The cleansers and cleaning agents you use could also be a source of corrosion. Strong substances, as well as those containing a chemical make-up of acid or alkaline-based solutions, can lead to pitting and staining. Wash instruments with a neutral pH soap (between 7pH - 8pH) that is designed for surgical instruments for optimal results. Anything with a higher pH may damage the instrument. Do not use dish soap, Iodine, bleach, cold-soak solution, chlorhexidine-based solutions, laundry soap or surgeons hand scrub. These products will cause spotting and corrosion. Using an instrument cleaning brush is recommended, especially for jaw serrations, teeth and hinged areas.

A Word on Cannula Cleaning Brush Tips...



TIP: If more time is needed, keep post-op instruments moist so that blood, tissue and other debris does not dry on the instruments. The best way to keep your instruments moist is to place a wet towel over the instruments, or use Spectra-Moist® available from Sharn. This wetting-agent keeps blood from drying for hours.



Spectra-Moist®
Order # SS6



Sterilize with the ratchets open

Cleaning After Surgery

The washing process should begin within 20 minutes after surgery, even if sterilization will take place much later. Washing instruments within a few minutes of surgery prevents blood from drying and is your best defense against corrosion, pitting and staining.

Only use approved solutions for washing, disinfecting, and lubricating. Non-approved solutions are any that do not specifically state, “for surgical instruments” on the label.

Approved solutions are specifically designed for surgical instruments and the sterilization cycle. Their product labels will state this use.

Sterilization

All surgical instruments must be sterilized prior to surgery to prevent infection. But even sterilization can leave contaminants behind if not properly cleaned. Sterilize instruments with the ratchets open. This allows for better steam penetration. Plus, it prevents the box locks (hinge area) from cracking. If using a pan or tray, we recommend one with perforations. This will also enable better steam penetration and aids in more effective drying as well. For efficiency, place heavy instruments at the bottom and lighter, more delicate instruments on top. If sterilizing in paper or plastic pouches, do not stack pouches on top of one another during sterilization. When possible, pouches should be sterilized on their side, leaning against a pack or sterilizer chamber wall.

TIP: A heated tank does not significantly improve cleaning. Generally speaking, there is no measurable improvement in cleaning when heat is applied to the solution.



Spectra-Sonic®
Order # SS1



Ultrasonic
Cleaning Kit
Order # 1235KIT

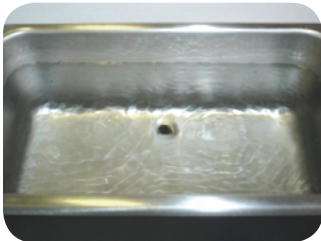
Ultrasonic Cleaning

A method of cleaning that is a necessity is ultrasonic cleaning. This method is the most efficient and effective available today. In fact, ultrasonic cleaning is 16 times more efficient than manual cleaning alone. Place instruments in the ultrasonic unit for 10-15 minutes and use a neutral pH ultrasonic solution. Here are a few tips for ultrasonic cleaning:

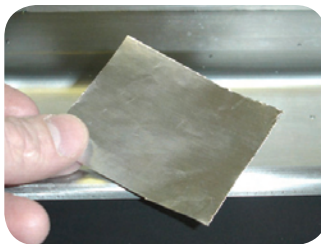
- 1) Before placing into the ultrasonic unit, clean instruments of all visible debris by hand-washing them in a neutral pH soap.
- 2) Before placing instruments into the ultrasonic unit, turn on the ultrasonic machine and let it run for 10 minutes to de-gas the solution. This process removes any gas or air bubbles in the solution.
- 3) The cleaner the instruments go into the ultrasonic cleaner, the cleaner they will come out.
- 4) As with all types of cleaning, open all instruments so ratchets and box locks are fully exposed to the cleaning process.
- 5) Make sure instruments have plenty of room. Don't overload your ultrasonic cleaner.
- 6) Do not mix dissimilar metals (such as aluminum and stainless) in the same cycle to prevent cross-plating.
- 7) Upon completion of the cycle, remove instruments immediately and rinse them.
- 8) Dry instruments thoroughly with a towel, ensuring that no moisture is left on the instruments.

Use distilled water or tap water with a neutral pH ultrasonic solution to properly fill the tank of your ultrasonic cleaner. Never use a manual soap in the ultrasonic cleaner and always follow proper dilution. A neutral pH ultrasonic cleaning solution, when properly mixed, effectively reduces the surface tension of the solution and increases the ultrasonic cavitation process. The solution should be changed at least daily or sooner if the solution appears dirty or murky. Only plug an ultrasonic machine into a GFI outlet.

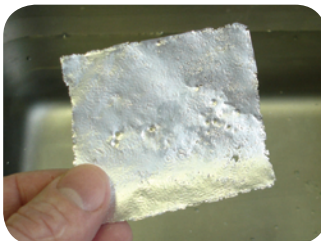
Testing Your Ultrasonic Cleaning Machine



(Photo A)



(Photo B)



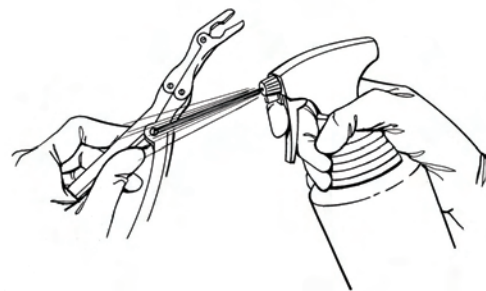
(Photo C)

To determine if your machine is working properly, simply put water and properly mixed ultrasonic solution in the tank. Turn on machine and view the surface of the water. If you see “sonic” waves (photo A) your machine is working. If the surface of the water is totally flat, your machine may have a problem with the transducer(s).

The second test is called the foil test. Simply place a small piece of aluminum foil (photo B) in the bottom of a filled tank and run for 5-8 minutes. Remove foil and it should be pelted with small holes and dents (photo C). This verifies that the ultrasonic machine is working properly.

Lubrication

One of the easiest, yet most effective ways to keep instruments in excellent condition is to lubricate them after every cleaning. Proper lubrication keeps the moving parts of instruments from rubbing and scraping, thus preventing dulling and strain to joints and hinges. Moving parts on instruments, such as joints, box locks, ratchets, and screw joints, should be lubricated regularly. Before autoclaving, lubricate all instruments that have moving parts. Only use water-based surgical lubricants because they are steam penetrable.



Spectra-Lube®
Order # T2Q



Stained instrument



Eraser test



Spectra-Scrub™ Stain Remover
Order # SS7



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Rust vs. Stains

Stains can be removed, whereas rust will leave permanent damage. To determine if a brown/orange discoloration is a stain or rust, use the eraser test. Rub a pencil eraser aggressively over the discoloration. If the discoloration is removed with the eraser and the metal underneath is smooth and clean, this is a stain. If a pit mark appears under the discoloration, this corrosion is rust.

Trouble Shooting Stain Guide

Brown/Orange Stains - Most brown/orange stains are not rust. This stain color is the result of high pH surface deposits caused by any of the following: chlorhexidine usage, improper soaps and detergents, cold-sterilization solution, baked-on blood, soaking in saline or using laundry soap.

Dark Brown/Black Stains - Low pH (less than 6) acid stain. May be caused by improper detergents and soaps and/or dried blood.

Bluish-Black Stains - Reverse plating may occur when two different types of metals are ultrasonically processed together. For example, stainless steel instruments processed with chrome instruments may cause a stain color reaction. Exposure to saline, blood or potassium chloride will cause this bluish-black stain to occur.

Multi-Color Stains - Excessive heat caused by a localized "hot spot" in the autoclave.

Light and Dark Spots - Water spots from allowing instruments to air-dry. With slow evaporation, minerals from water are left on the instrument's surface.

Bluish-Gray Stains - Cold sterilization solution being used outside manufacturer guidelines.

Black Stains - Possible exposure to ammonia.

Stain Removal

To remove localized staining, dip a moistened cleaning brush in Spectra-Scrub® and brush the stain away. Use tap water or distilled water to rinse, then dry with a towel.



10" Quick Rack Stringer
Order # 10QR



Sharpen / Repair Tags
Order # HL-4 (Blue)
Order # HL-4R (Red)



Assortment of vented tip protectors

Instrument Stringers

Instrument stringers allow for safer handling of instruments, faster set-up of sterile field, and more efficient organization of the tray assembly process. Instrument stringers are produced in various widths and lengths. The most common width is 2.5 inches and the most common length being 10 inches. After selecting size, there are several stringer closure styles to choose from.

Repair Tags

The use of repair tags facilitates precise communication between the operating room and the sterile processing department. Placing 3 – 5 new repair tags in each set prior to sterilization allows the tags to be available on the sterile field. Once a dull or damaged instrument is discovered during a procedure, a sterile repair tag can then be placed on the instrument. This system clearly identifies the defective instrument and prevents unnecessary repairs.

Tip Protectors

The use of tip protectors is a good practice that protects valuable instruments and scopes from damage. Many times the damage to an instrument from not using tip protectors is not repairable, making it necessary to replace the instrument. Tip protectors are available in vented (with holes) or non-vented (without holes) styles. Vented tip protectors are safer to use due to the fact that they are easier to remove from the instrument, which reduces possible finger injuries. The other advantage of the vented tip protector is the improved exposure of the device surface to the sterilant. Tip protectors can be used on the tips of pointed scissors and sharp instruments, skin hooks, distal tips of rigid scopes and to guard the cutting edges of osteotomes.



Complete etching kit
Order # 256ASC



Marking tape on instrument shanks

Instrument Etching / Marking

Vibrating engraving devices are **not recommended** because:

- 1) They scratch off the protective surface of the instrument.
- 2) The box lock area is weakened.
- 3) Engraving creates a “bed” for bacteria.
- 4) Interferes with restoration / refinishing.

Acid-base etching is recommended. You may purchase an etching machine kit from Sharn to perform your own instrument marking (Order # 256ASC).

Instrument Marking Tape Application

How to properly apply:

- 1) Clean fingers with alcohol to remove oils, grease and dirt.
- 2) Wipe tape site with alcohol to remove any lubricant.
- 3) Tape length should be only enough to wrap 1 to 1½ times around instrument.
- 4) After tape is applied, autoclave instruments. The heat will assist with the bonding of the tape.
- 5) Tape the shanks of all instruments. Avoid instrument rings. Wrapping tape 1 to 1½ times around will not interfere with the closing of most scissor tips.

The Facts about Sharn's Stainless Steel Instrument Cleaning Brushes

Laboratory Test Results
BEFORE brushing



Hemostat Close-Up



Scissors Close-Up

Laboratory Test Results
AFTER brushing



Hemostat Close-Up



Scissors Close-Up

It has been reported for years that the use of stainless steel cleaning brushes will damage an instrument's surface or passivation layer. To dispel this myth, we hired an independent testing lab to test instruments before and after brushing with a Sharn stainless steel, bristled instrument cleaning brush (order # 45-303SS). The test employed before and after photos, taken with an electron microscope at 200X magnification. In addition, we examined the metallurgical properties of the stainless steel before and after brushing. During the test, the instrument's surface was brushed 60 times. As you can see from the photos below, the stainless steel bristles did not harm the instrument's surface, proving that using Sharn's stainless steel-bristled cleaning brushes WILL NOT HARM your stainless surgical instruments.

Test:	Metallurgical Laboratory Study
Laboratory:	Analytical Services, Inc.
Date conducted:	2003
Method:	Scanning Electron Microscope Energy Dispersive Spectroscopy

A few words on wire brushes...

The stainless steel brush is designed to remove baked-on debris and stains that the nylon brush cannot remove. The design of the soft stainless steel bristles allows the bristles to bend and remove debris atraumatically. Previously, wire brushes that damaged surgical instruments were bone cement brushes. These very stiff bristles occasionally caused damage, which led to the negative opinion of wire brushes. The recommendation is to use a nylon bristle brush first. If the debris is not removed, then use a stainless steel bristled brush. This brush is intended for use on bone files, needleholder jaws, burs, reamers, vascular instrument serrations and stubborn stains.

Notice: Insulated, coated, plated, or chrome instruments will be damaged by using a stainless steel-bristled brush.

Demonstrates softness of wire bristles



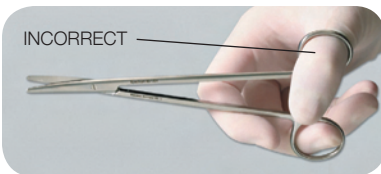
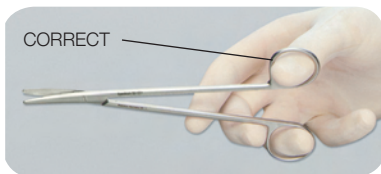
New

After several uses

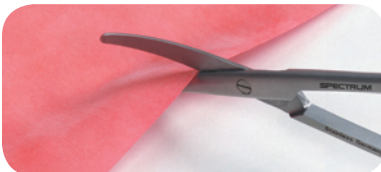
Scissor Testing, Inspection, and Quality Assurance

Test Your Scissors:

- 1 Using right hand thumb and middle (or ring) finger, make sure that scissors are held like a surgeon.



- 2 Cut through material using 1/2 of blade to cut all the way through to the distal tip.



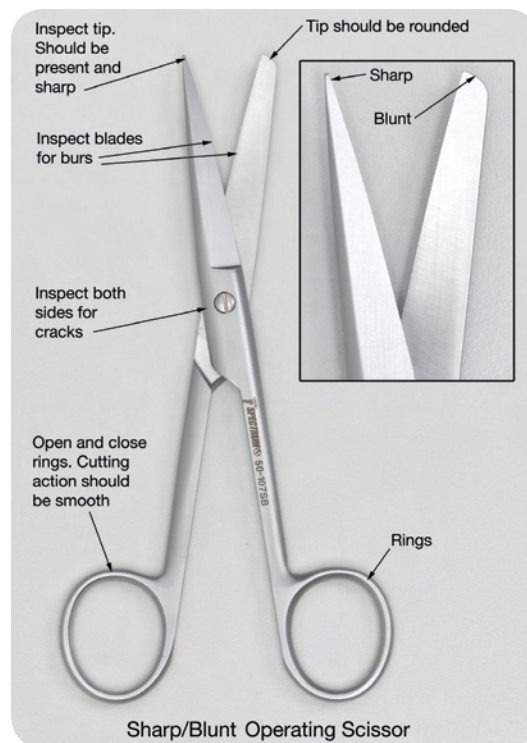
- 3 After several cuts, extract scissors. If scissors do not pinch or grab material, scissors are sharp.



- 4 The final test is how the scissors feel. Scissors should open and close smoothly and should not "jump", grind, or feel loose.

Visually inspect cutting blades for burrs, chips or corrosion. The distal tips should meet evenly. Inspect sharp tips for bending or damage. The cutting action of a scissor should be smooth as the scissor closes and the scissor should not grind, "jump, feel loose or too tight. Use the guide at left to test scissor sharpness.

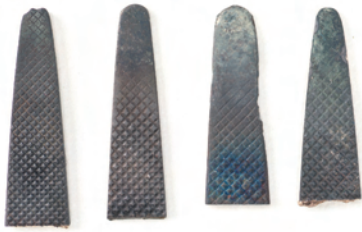
- For scissors longer than 4 1/2" use Sharn's Standard Scissor Test Material (Order # 621431 or non-latex, order # 621531).
- For scissors shorter than 4 1/2" length, use Sharn's Thin Scissor Test Material (Order # 621430 or non-latex, order # 621530).



Recommended Brushes: 45-202NS, M-16, 45-7000

Post-Operative Care

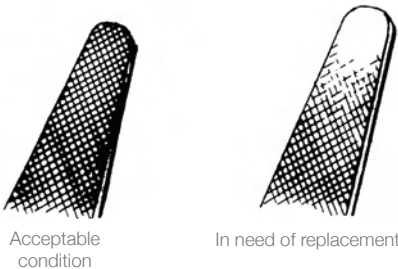
Separate the rings and begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments.



Worn needleholder jaw inserts



Replacement needleholder jaw inserts



Acceptable condition

In need of replacement



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



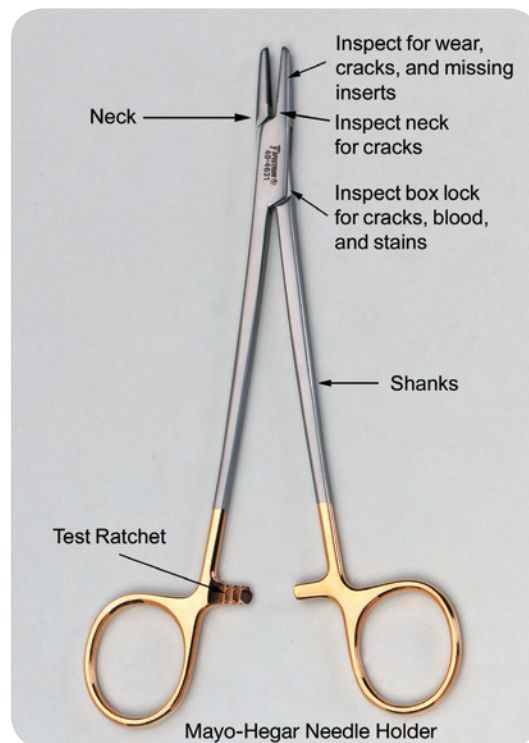
Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Needleholder Inspection and Quality Assurance

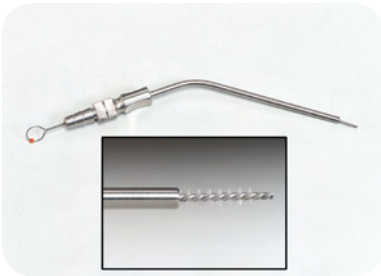
1. Visually inspect jaws for signs such as partial smoothness or inconsistent wear. If worn schedule for repair.
2. Hold needleholder to a light source and close jaws all the way. If you can see light between the jaws, this needleholder is in need of repair.
3. Inspect jaws and box locks for cracks.
4. Check jaws for burrs.
5. The shanks of the instrument should be straight.
6. Check ratchet to see if jaws stay closed on last ratchet. Test ratchet by opening and closing. With needleholder ratchets closed completely all edges should meet evenly.



Recommended Brushes: 45-202NS, 45-303SS, 45-303N, M-16, 45-7000

Post-Operative Care

Separate the rings and begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments.



TIP: Brush of proper size should completely exit suction tube when cleaning.

Recommended cleaning brushes:

Baron Suction Tube Brushes

Order #	Diameter	Length
45-904	3 french (1.0 mm)	9.75"
45-905	5 french (1.6 mm)	9.75"

Frazier Suction Tube Brushes

Order #	Diameter	Length
45-906	6 french (2.0 mm)	9.75"
45-907	7 french (2.3 mm)	9.75"
45-908	8 french (2.6 mm)	9.75"
45-909	9 french (3.0 mm)	9.75"
45-910	10 french (3.3 mm)	9.75"
45-911	11 french (3.6 mm)	9.75"
45-912	12 french (4.0 mm)	9.75"

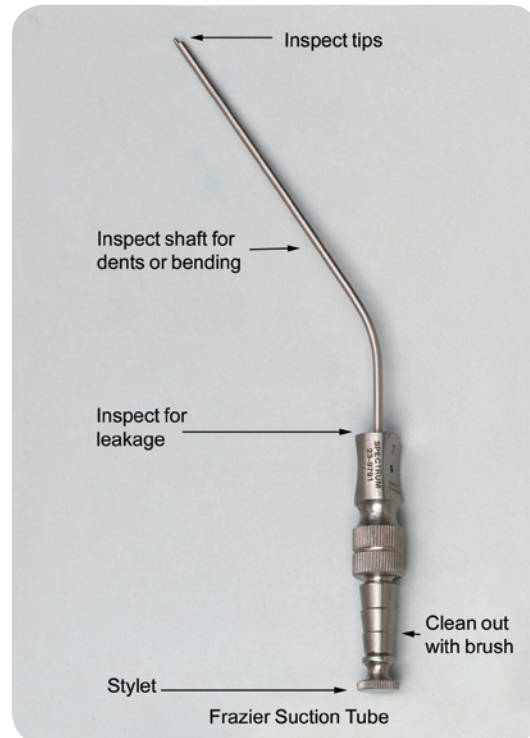


Cleaning Brush Scale

Available from Sharn
Order # 45-0001

Suction Device Inspection and Quality Assurance

1. Visually inspect all areas of suction tubes for sharp edges, dents and trapped surgical debris.
2. Inspect shaft for dents as a result of bending.
3. Inspect the tubing union of the suction control area for cracks and proper soldering. Verify there is no breakdown of the union.
4. Inspect stylette and see that stylette can be inserted smoothly into proximal end. Note: Stylette should not be inserted during sterilization.



Cleaning Instructions

Use a cleaning brush that is the proper size for each suction tube. Always allow brush to enter and completely exit suction channel, and then draw brush back through device.

Retractor Inspection and Quality Assurance

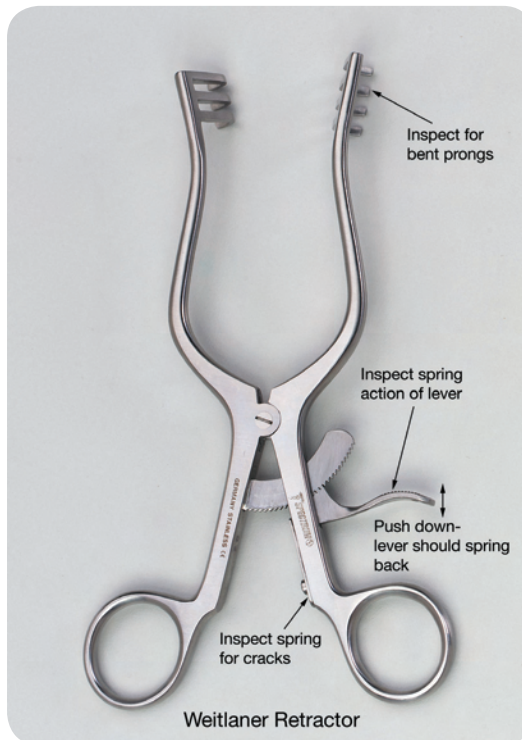
1. Visually inspect retractor for chipping or flaking of surface.
2. Inspect visually and by feel for dents, burrs, bent blades or prongs.
3. If retractor has release lever, flick the lever and see that it springs back into place. Lever should open and close smoothly.
4. If retractor has a spring and screw area, inspect closely for cracks.
5. If retractor is chrome-plated and finish is flaking, remove instrument from service and replace.



Inspect chrome-plated instruments for flaking



Instrument brush
Order # 45-8000



Recommended Brushes: 45-303N, 45-303SS, M-16, 45-7000, 45-8000

Post-Operative Care

Separate the rings and begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments.

TIP: Ratchets should always be open when cleaning and sterilizing for the following reasons:

1. Allows for adequate steam/sterilant penetration into box lock area.
2. Prevents cracks by reducing stress on box lock area due to rapid expansion of the steel during the sterilization process.



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



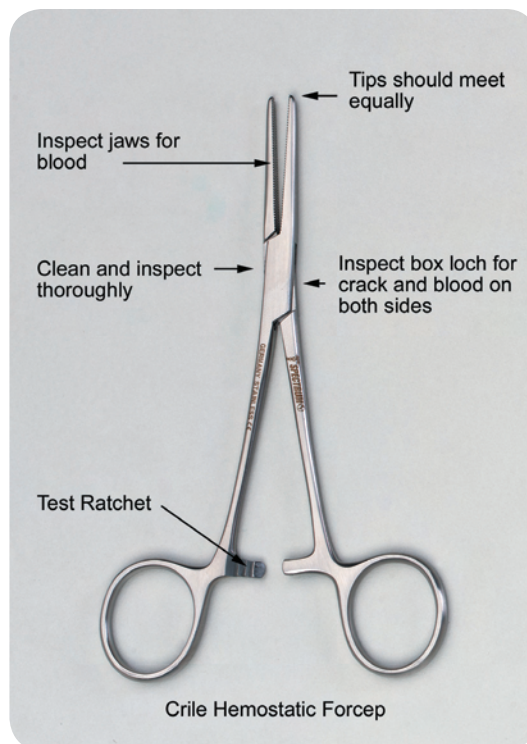
Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Hemostat Inspection and Quality Assurance

1. Visually inspect serrations of jaws and all surfaces.
2. Tips of serrated jaws should meet flush, with no overlay.
3. Teeth of hemostatic tissue forceps should be present, aligned and fit together perfectly.
4. Open and close hemostat, checking for stiffness.
5. Carefully inspect box lock area for cracks and debris.
6. Test ratchet prior to each assembly of tray. To test if ratchet is sprung/ in need of adjustment, close ratchet and gently tap rings evenly on a hard surface.



Recommended Brushes: 45-303N, 45-303SS, 45-202NS, M-16, 45-7000

Post-Operative Care

Separate the rings and begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments. Be sure to thoroughly rinse and clean the box lock area and serrations of the jaws. These are the most difficult areas to clean.



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



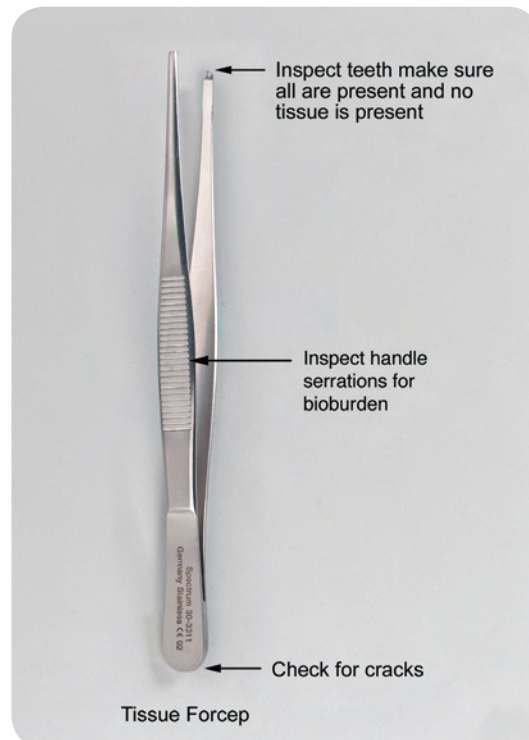
Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Tissue and Dressing Forcep Inspection and Quality Assurance

1. Visually inspect forceps from tip to tip.
2. Make sure all teeth are present.
3. Tips should meet evenly, with no overlay.
4. Teeth of forceps should be aligned and fit together perfectly with out sticking when testing.
5. Carefully inspect for cracks and debris.
6. Tissue and Dressing Forceps should not “click” and should not “stick” when testing.



Recommended Brushes: 45-303N, 45-303SS, 45-202NS, M-16, 45-7000, 45-8000

Post-Operative Care

Separate the rings and begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments.

TIP: Sharpness of a rongeur can be tested by using a standard 3" x 5" index card. The rongeur should take a clean bite out of the card.



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



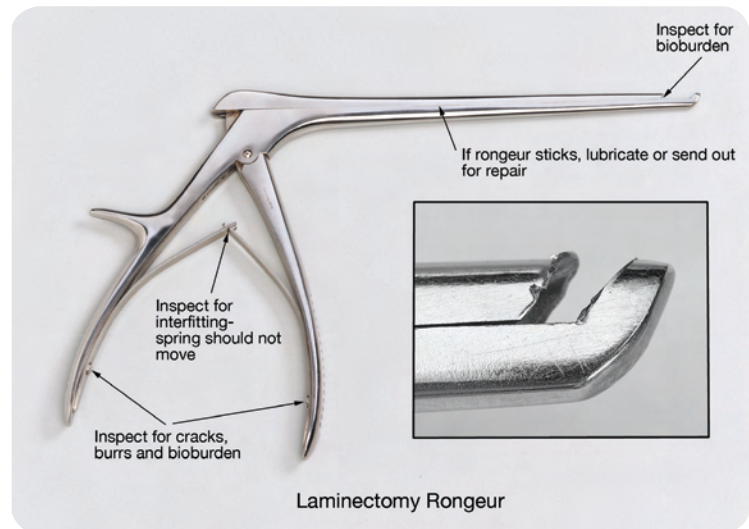
Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Laminectomy and Cervical Rongeurs

1. Closely inspect rongeur at distal tip, where damage most often occurs, significantly reducing the instrument's ability to cut.
2. Inspect channel and interlocking parts for bioburden.
3. If rongeur sticks, lubricate or send out for repair evaluation.
4. Carefully inspect springs and screws for cracks and debris.



Recommended Brushes: M-16, 45-303N, 45-303SS, 45-7000

Post-Operative Care

Begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments. Be sure to thoroughly rinse, clean and inspect the channel/ interlocking areas and cutting portion. These are the most difficult areas to clean.

TIP: Sharpness of a bone cutter can be tested by using a standard 3" x 5" index card. The bone cutter should cut cleanly through a single thickness of the card.



TIP: Test Pin Cutters in the center portion of the jaw. This is the area of the jaw that is designed to cut.



Nylon bristle cleaning brush
Order # 45-303N

Stainless steel bristle brush
Order # 45-303SS

Double-ended nylon bristle brush
Order # M-16

Double-Headed brush
Order # 45-202NS



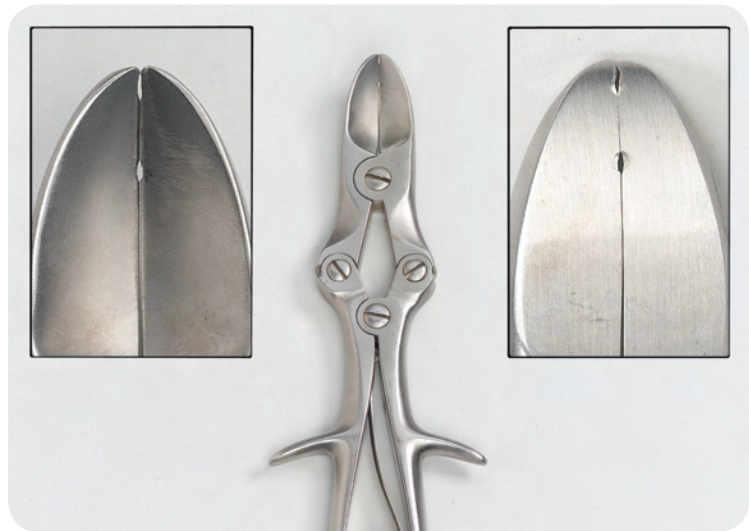
Box-lock instrument brush
Order # 45-7000



Instrument brush
Order # 45-8000

Bone Cutters

1. Closely inspect bone cutter's jaws at distal tip, where damage most often occurs, significantly reducing the instrument's ability to cut.
2. If damage to cutting surface is discovered, schedule the instrument to be repaired immediately and discontinue use.
2. If bone cutter sticks, lubricate or send out for repair.
4. Carefully inspect all springs and screws for cracks and debris.



Recommended Brushes: 45-303N, 45-303SS, 45-202NS, M-16, 45-8000

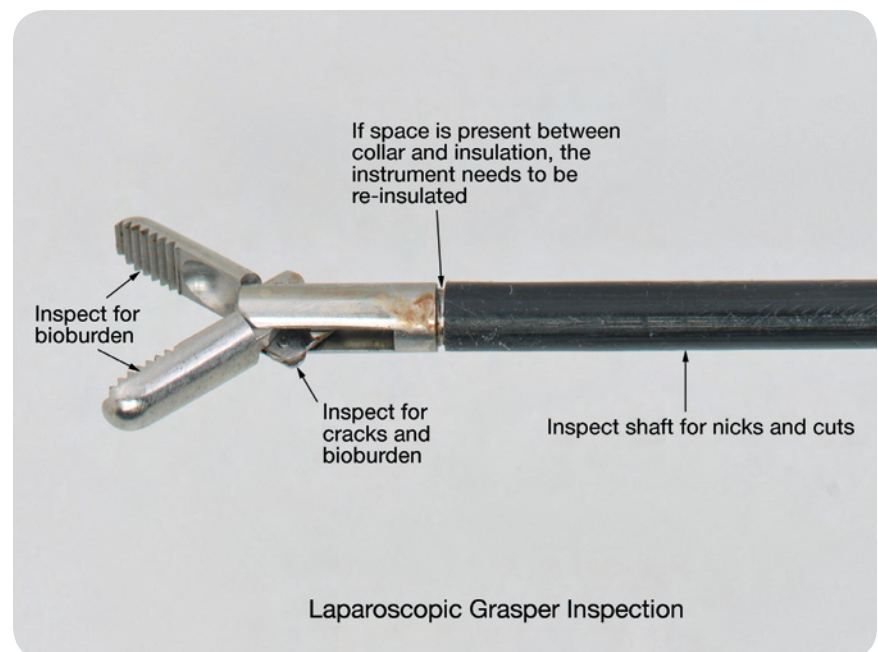
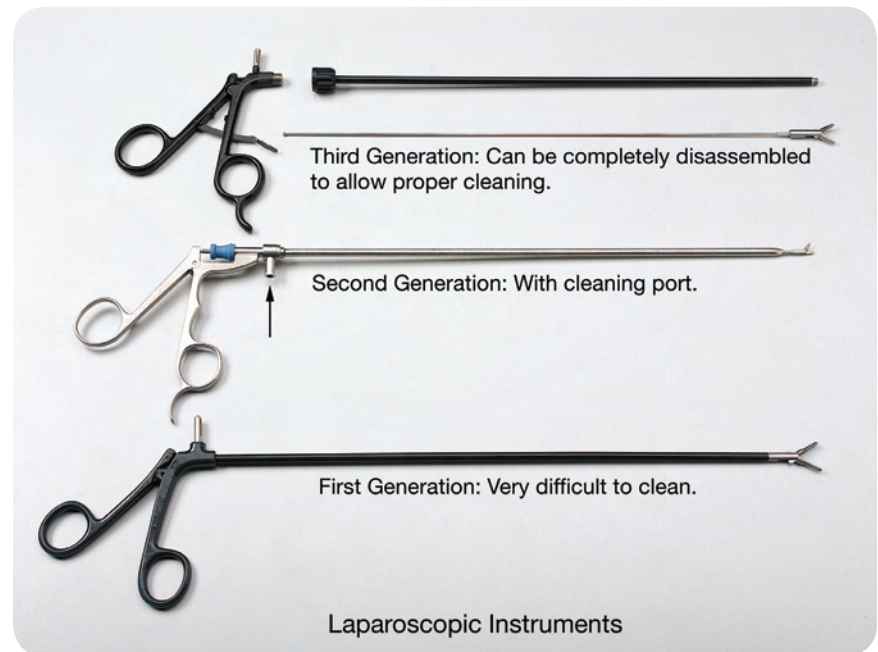
Post-Operative Care

Begin the decontamination process within 20 minutes after surgery. The use of spray-on moisturizers such as Spectra-Moist® (Order # SS6) is also a very effective way to prevent the blood from drying. Soak the instruments in an enzymatic solution (Spectra-Matic™ Order # SS9) or place a moist towel saturated with water over the instruments.

TIP: To test laparoscopic insulation, visually inspect the entire shaft for any nicks or cuts. Next, pull back on the insulation. If the insulation slides back, the instrument is in need of re-insulation.



Laparoscopic Instrument Inspection, Testing, and Cleaning



TIP: Laparoscopic tip protectors help protect valuable laparoscopic instruments.

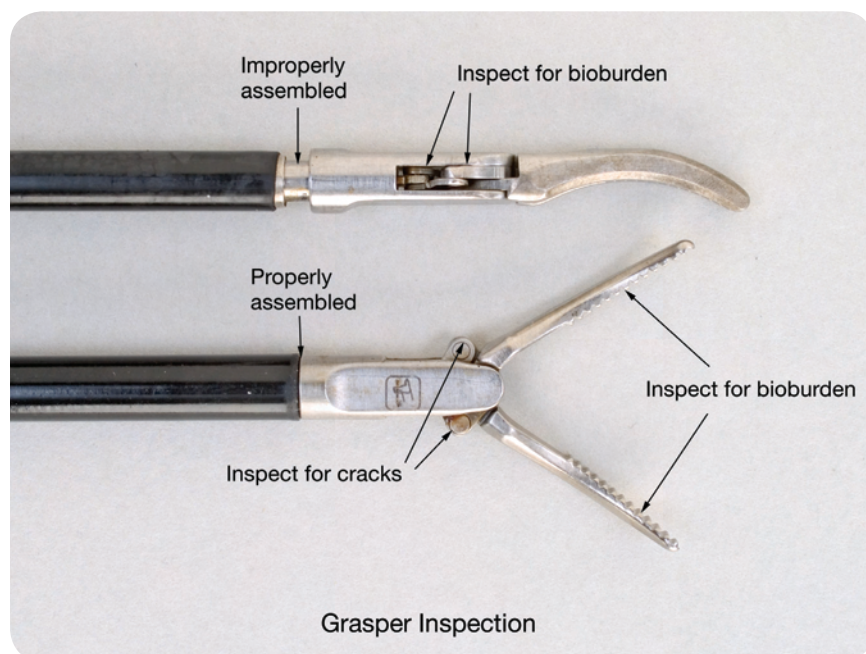
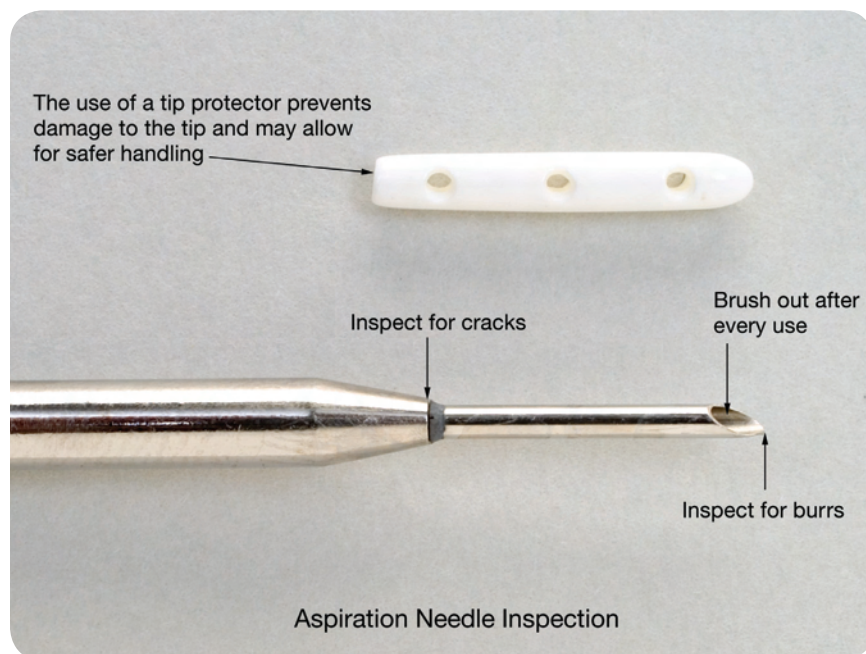


Tip protectors are available in several sizes from Sharn.



Order # LTP-5-800	5mm diameter .75" length (20/pkg)
Order # LTP-5-168	5mm diameter 1.68" length (20/pkg)
Order # LTP-10-800	10mm diameter .75" length (20/pkg)
Order # LTP-10-225	10mm diameter 2.25" length (20/pkg)
Order # LTP-VN-750	Verres Needle Protector .75" length (50/pkg)

Laparoscopic Instrument Inspection, Testing, and Cleaning



NEW BRUSH DESIGNS

Shallow Cannula Cleaning Brushes

Color-coded hook handles

Order #	Diameter	Handle	Length
45-0505	5 mm	Green	5"
45-0507	7 mm	Yellow	5"
45-0510	10 mm	Pink	5"

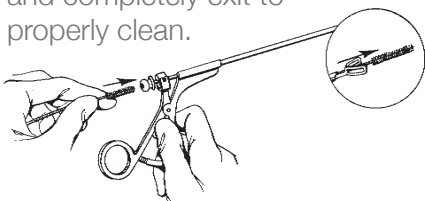


Laparoscopic Instrument Inspection, Testing, and Cleaning

To determine if the inner linkage is worn, stretched, or fatigued, wiggle the drive ring back and forth. If the jaw does not move, the linkage is damaged and is in need of repair. As the ring moves, the jaw should move as well.



TIP: When cleaning any laparoscopic instrument shaft, the cleaning brush must enter and completely exit to properly clean.

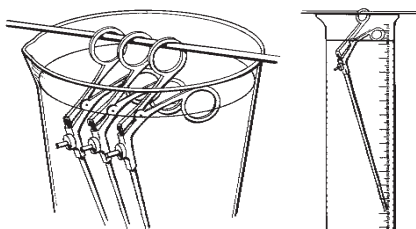


Recommended cleaning brushes:

Laparoscopic Instrument Brushes

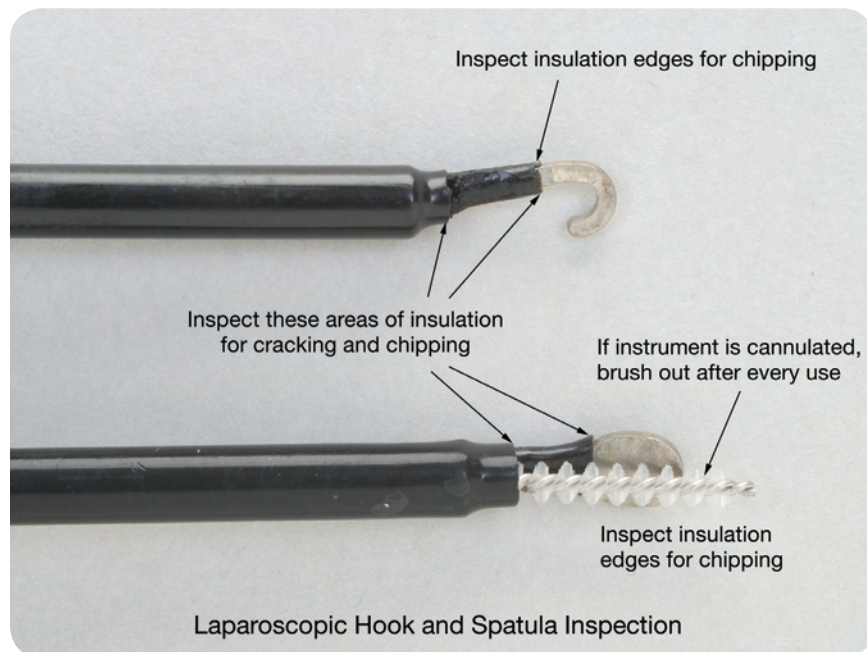
Order #	Diameter	Length
45-542	2 mm	12"
45-543	3 mm	12"
45-544	4 mm	12"
45-545	5 mm	12"
45-546	6 mm	12"
45-539	5 mm	16"
45-540	7 mm	16"
45-541	10 mm	16"
45-550	2.5 mm	24"
45-551	5 mm	24"
45-552	7 mm	24"
45-553	10 mm	24"

TIP: When soaking laparoscopic instruments, soaking the instruments vertically allows fluid to enter at the distal tip and rise up. Fluid will seek it's own level, and this, in conjunction with an enzymatic cleaner, will assist with the cleaning process.



Soaking Cylinder
Order # 3662-4000

Laparoscopic Instrument Inspection, Testing, and Cleaning



To properly flush and irrigate laparoscopic instruments, connect syringe to irrigation port and with distal tip underwater, draw up water from cleaning sink. Force cleaning fluids in and out of shaft.

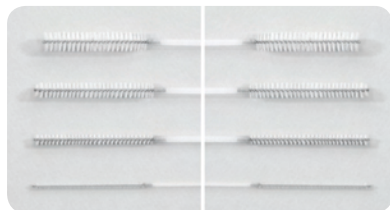
NEW BRUSH DESIGNS



Cleanables™ Instrument Brushes
Single-Ended

Order #	Diameter	Length
45-1503	3 mm	25"
45-1505	5 mm	25"
45-1508	8 mm	25"
45-1510	10 mm	25"

Double-Trouble Cleanables™ Instrument Brushes - Double-Ended



Order #	Diameter	Length
45-2503	3 mm	25"
45-2505	5 mm	25"
45-2508	8 mm	25"
45-2510	10 mm	25"

Reposables™ Instrument Brushes
Disposable brush tips with reusable 24" shaft



Order #	Diameter	Length
45-2505	5 mm Disposable Brush tip	
45-2508	8 mm Disposable Brush tip	
45-2510	10 mm Disposable Brush tip	
45-2400	24" Reusable Handle	

Reposables™ Instrument Brush Kit
Disposable brush tips with reusable shaft

45-2499 24" Reusable handle with disposable brush tips



Laparoscopic Instrument Inspection, Testing, and Cleaning

To test sharpness of a standard laparoscopic scissor, blades should cut cleanly through one thickness of facial tissue. Blades should open and close smoothly and be free of nicks and burrs.



To test sharpness of a laparoscopic hook scissor, blades should cut cleanly through a standard, 1/4" wide rubberband. Blades should open and close smoothly and be free of nicks and burrs.



Customer Service

Customer Service is our number one priority. SHARN Anesthesia, Inc. has a wide network of dealers across 36 countries. If you are an existing customer of one of our excellent dealers, we thank you for your business and hope to continue to serve you with top quality products at competitive prices.

If you are not yet a customer, we will be happy to put you in touch with the dealer closest to you. If you are a dealer and interested in surgical instrument care products, we are happy to hear from you. Either way you can contact us through calling 01-813-889-9614 or via email at mailbox@sharn.com. Please address your communications to the Director of International Sales.

Again, service is the watchword at SHARN Anesthesia Inc. Our whole staff and our network of dealers work hard to provide the best service for all our customers.

This guide is completely protected by copyright. No part, page, or image of this publication may be reproduced, scanned, stored, distributed, or transmitted in any form or by any means without prior written permission from the author. The author has done everything possible to ensure that the information contained within this book is accurate and up-to-date in accordance with accepted industry standards at the time of print. The author is not responsible for errors or omissions or for consequences from use of the guide, and makes no warranty expressed or implied regarding the content of this guide. Any practice or recommendation described in the book should be applied by the reader in accordance with their facility's professional standards and policies. Always consult your facility's policies and always refer to and follow the manufacturer's cleaning and sterilization guidelines.

© 2009 Spectrum Surgical Instruments Corp.