

INSPEKTOR[®]

NCI, Inc.

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Inspection and Foreign Debris Identification

Pre-inspection Steps for Successful Inspection

1. Check the borescope fiber for wear and damage.
2. Begin by cleaning the INSPEKTOR Borescope with a disinfectant wipe.
3. Rinse with water and wipe again with a water moistened fiber-free cloth (wipe).

Sterile Processing - Inspecting Surgical Instrument Lumens

Consider inspecting all cannulated instruments – anything with a lumen

Examples:

1. Arthroscopic Shavers
2. Suction Probes
3. Orthopedic Instruments e.g., Reamers, Drill Guides
4. Take-apart Laparoscopic Instruments
5. Endoscopes if cleaned in SPD

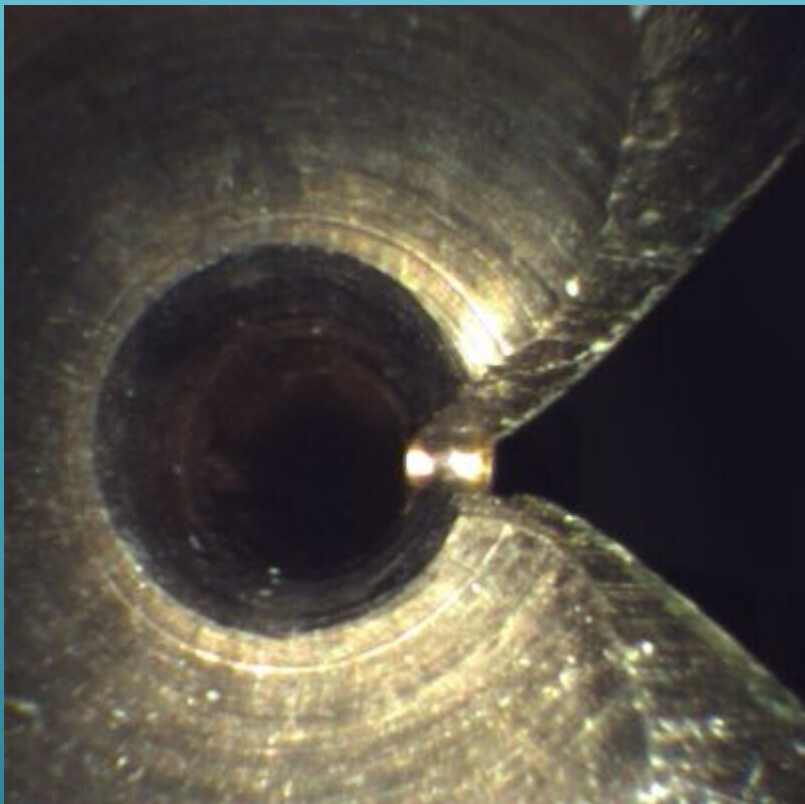
Sterile Processing: Inspecting Surgical Instrument Lumens

Remember: It is not about identifying what the foreign debris is or what type of bio-burden is present. It is about recognizing visible contaminants that do not belong there.

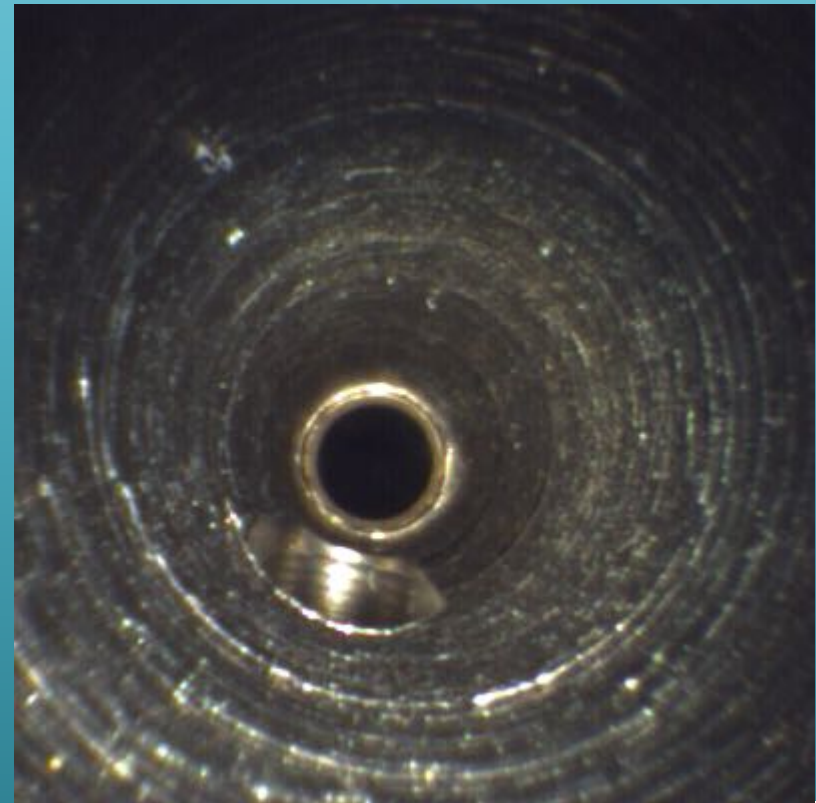
If you saw dirt on the outside of the instrument – you would clean it. A borescope helps you to see dirt on the inside so you can confirm if the instrument has been properly cleaned or not.

Understanding What You are Looking At

The inside of surgical instruments are not polished to be shiny and smooth like the outside. There are machine marks, swirls, scratches and rough edges at weld points.

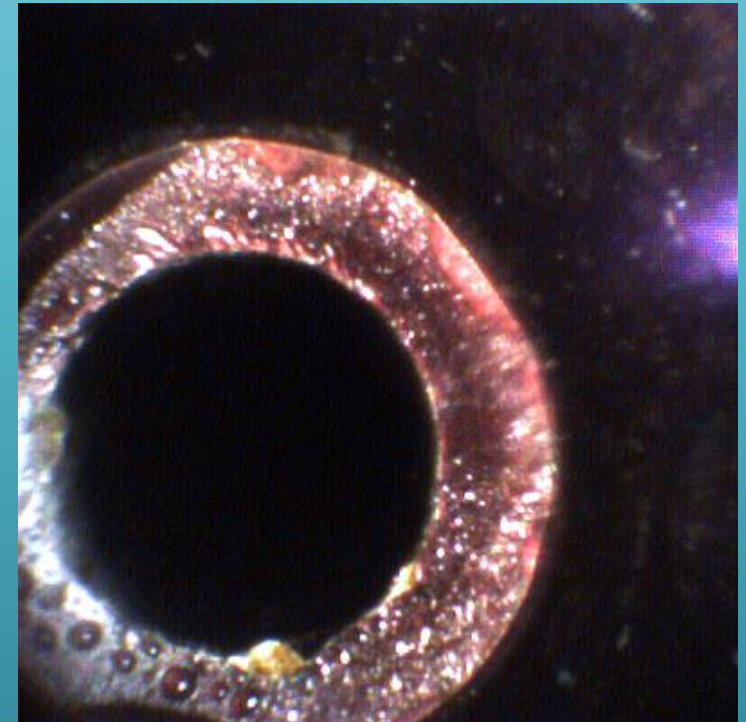
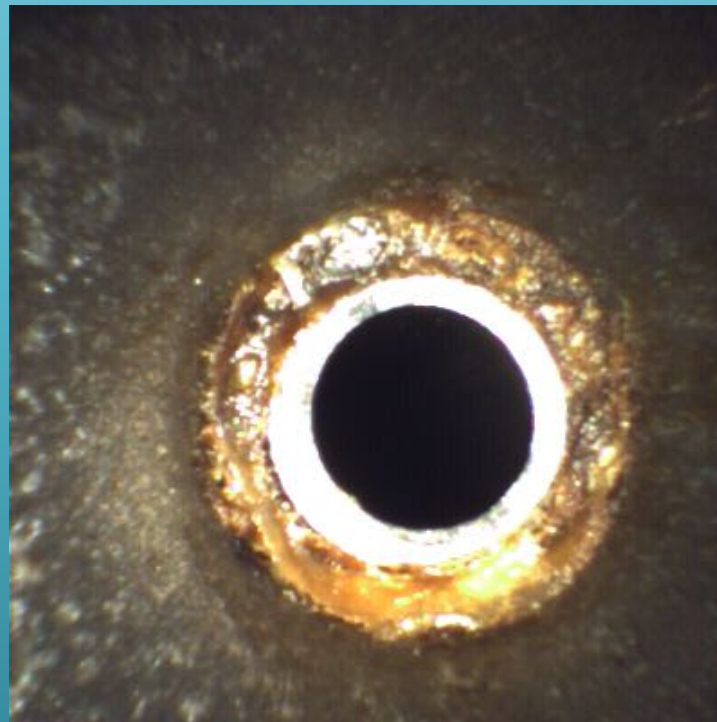
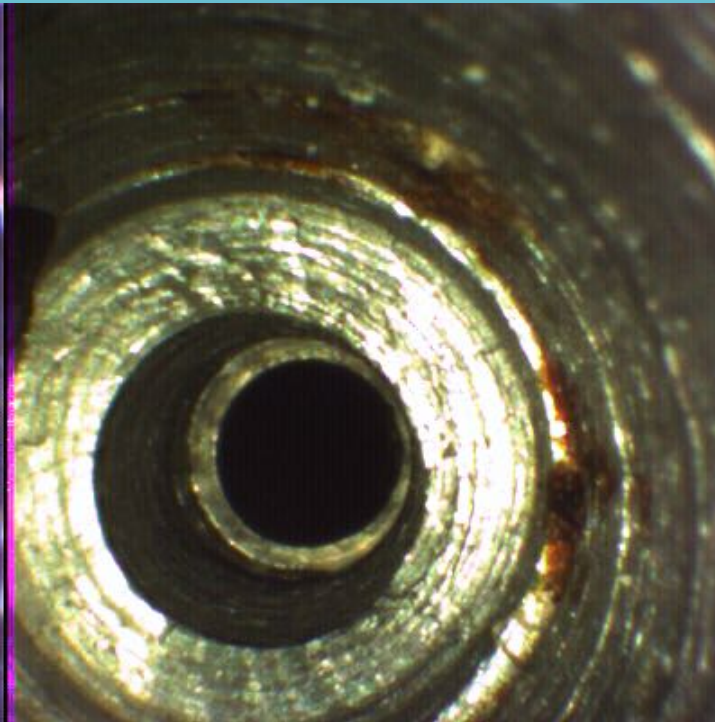


Machine marks
and uneven swirls.
Some foreign debris
present.



Common Areas of Concern

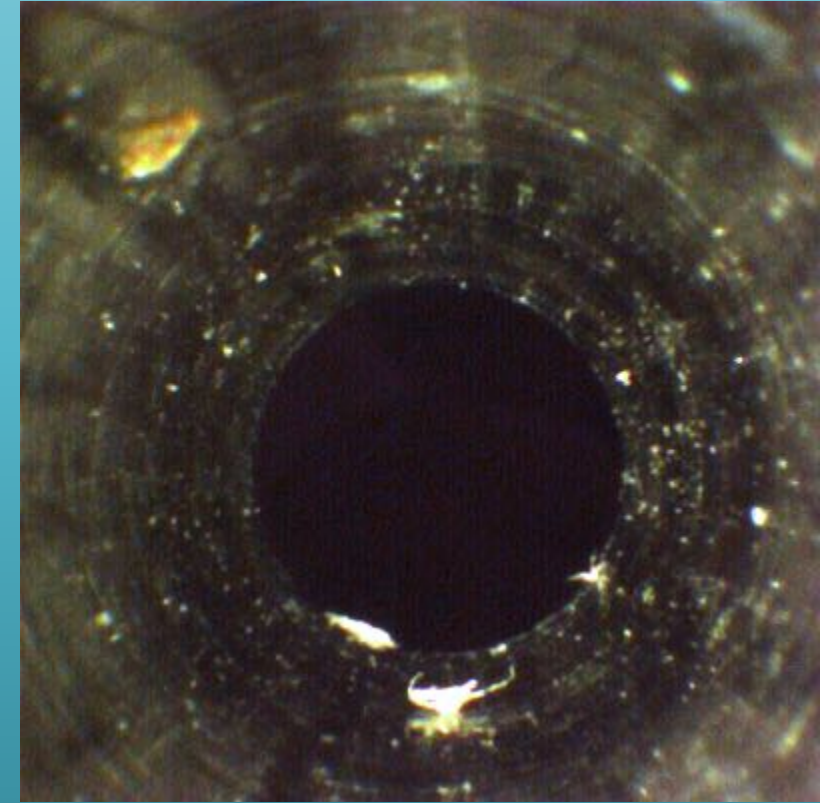
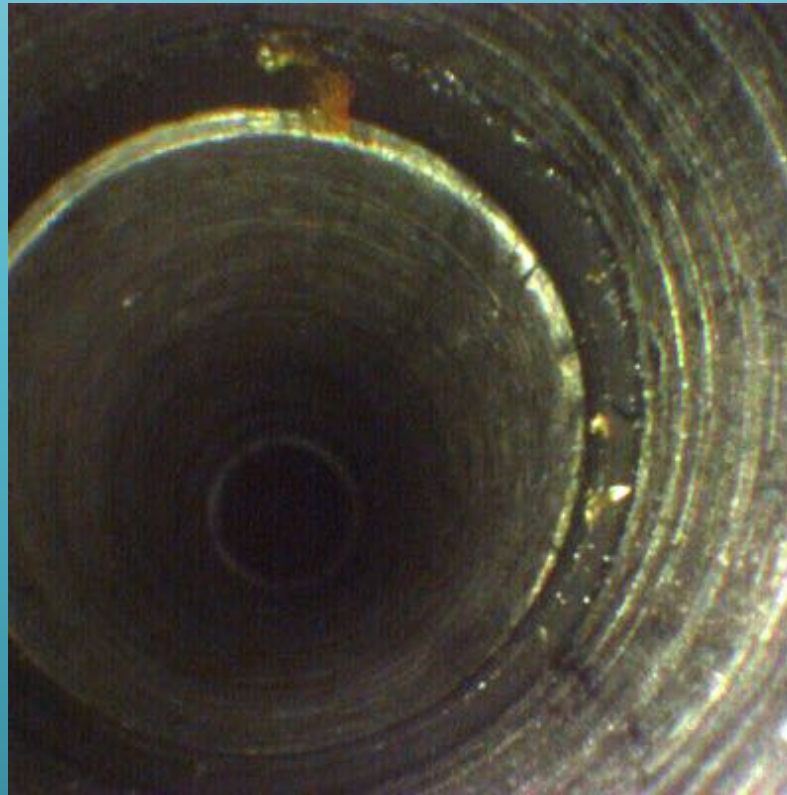
Debris is often difficult to clean where there are steps (narrowing) in a lumen.



Soaking and more careful brushing is required with a properly sized brush

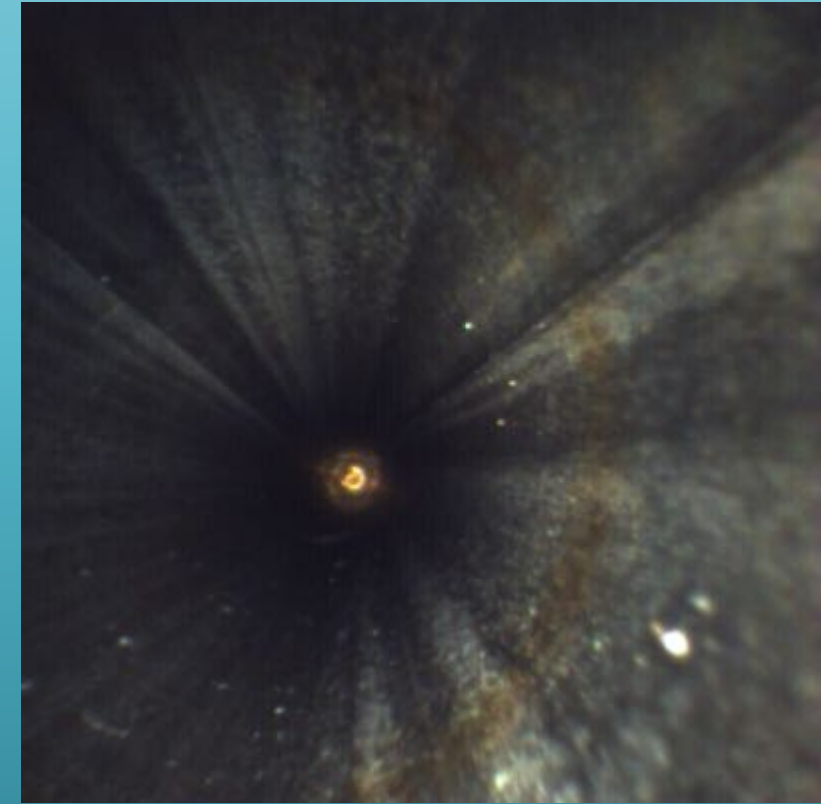
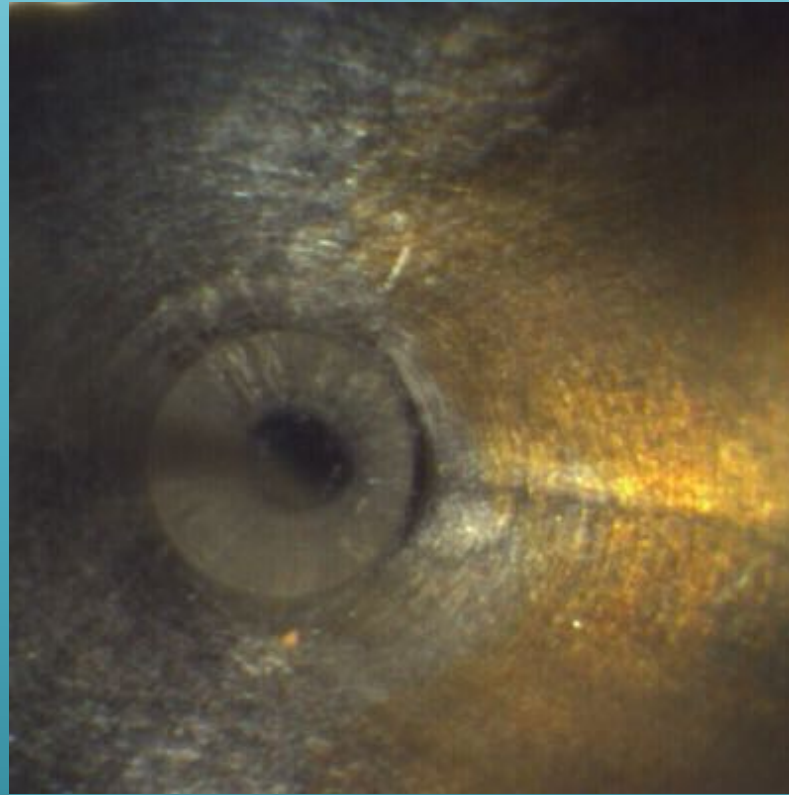
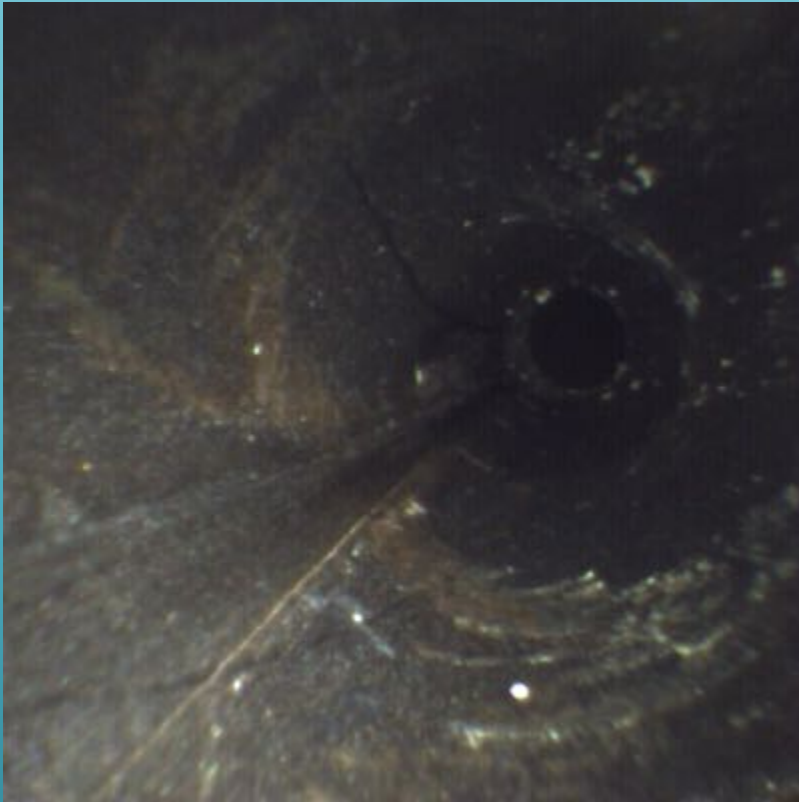
Dirty Surgical Instrument Examples

Small bits of bio-burden and other bits of unidentified debris.

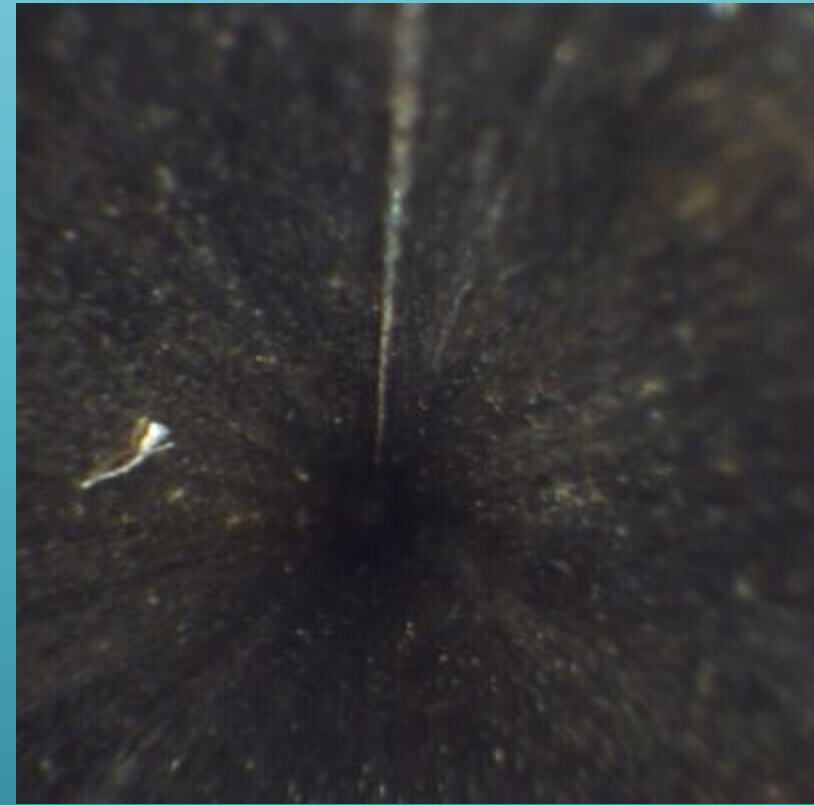
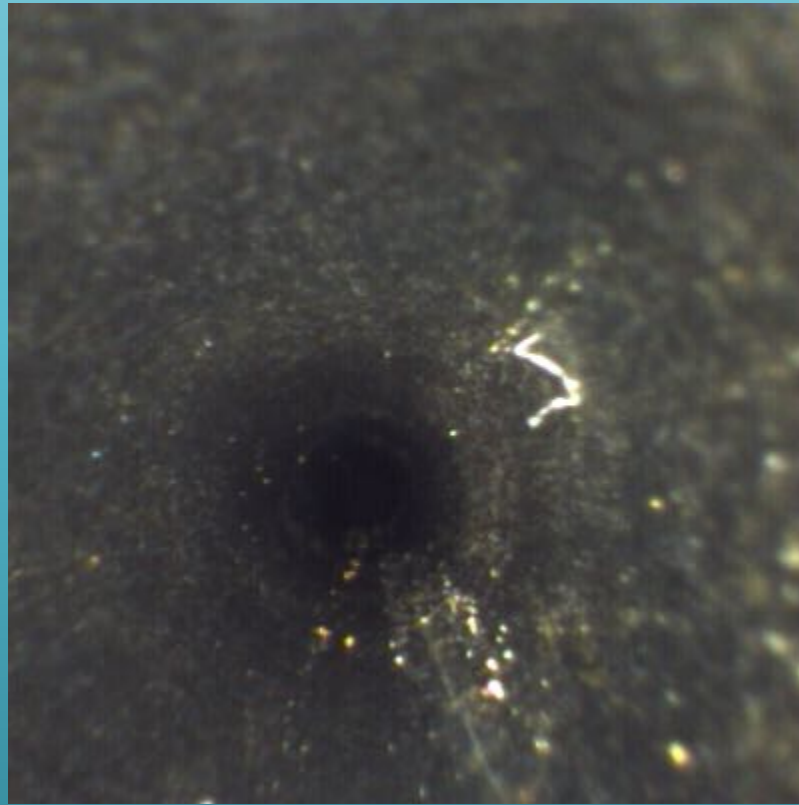
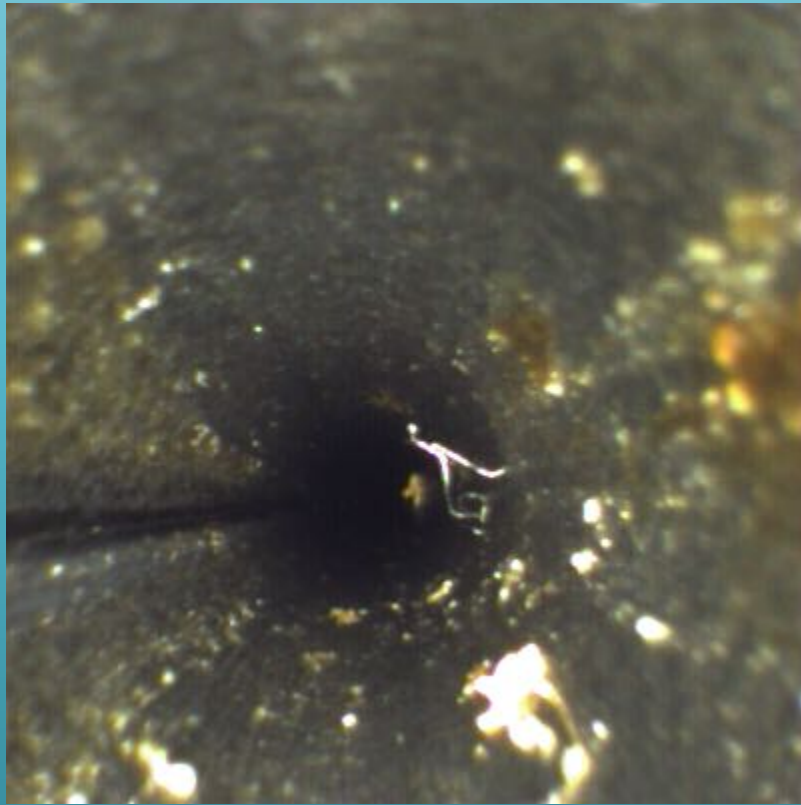


Stains and Dis-colorization

Consider that there may also be stains or dis-colorization in the metal. Most stains are flattened foreign debris and dried fluid that has been baked onto the surface from many cycles of steam sterilization. These will require longer soak time in an enzymatic and more brushing.

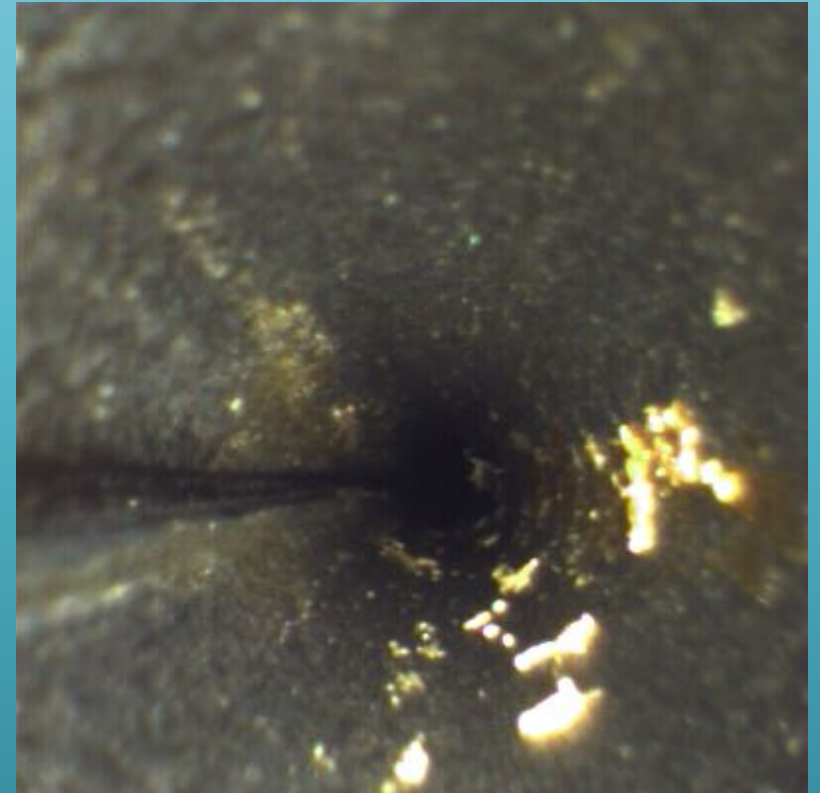
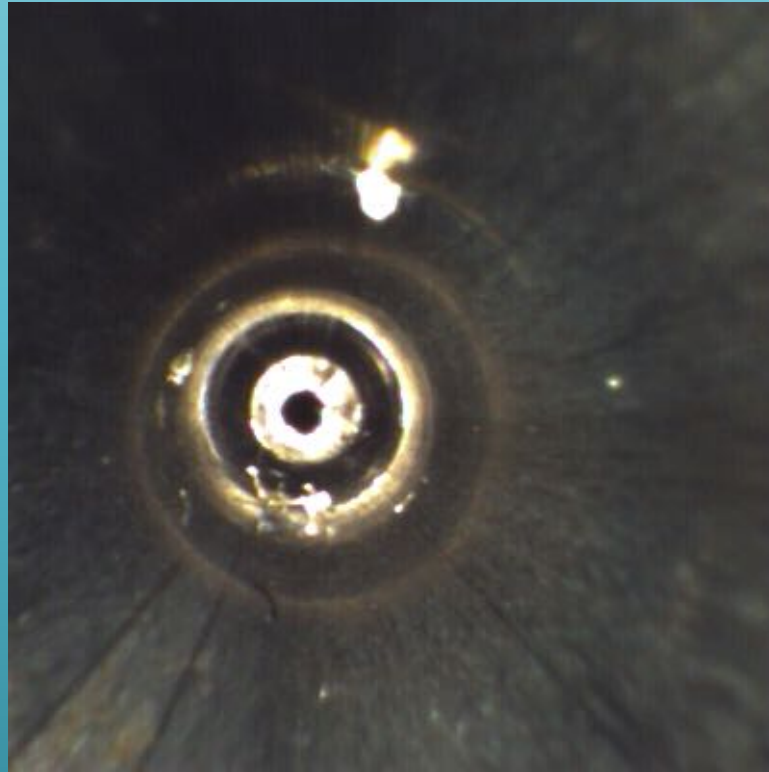
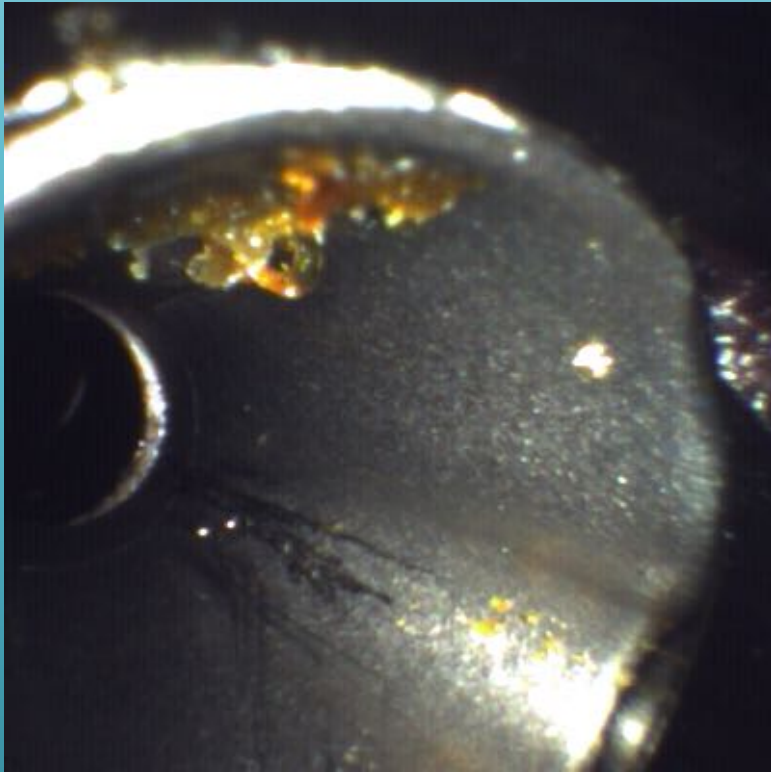


Examples of Foreign Debris: Fibers



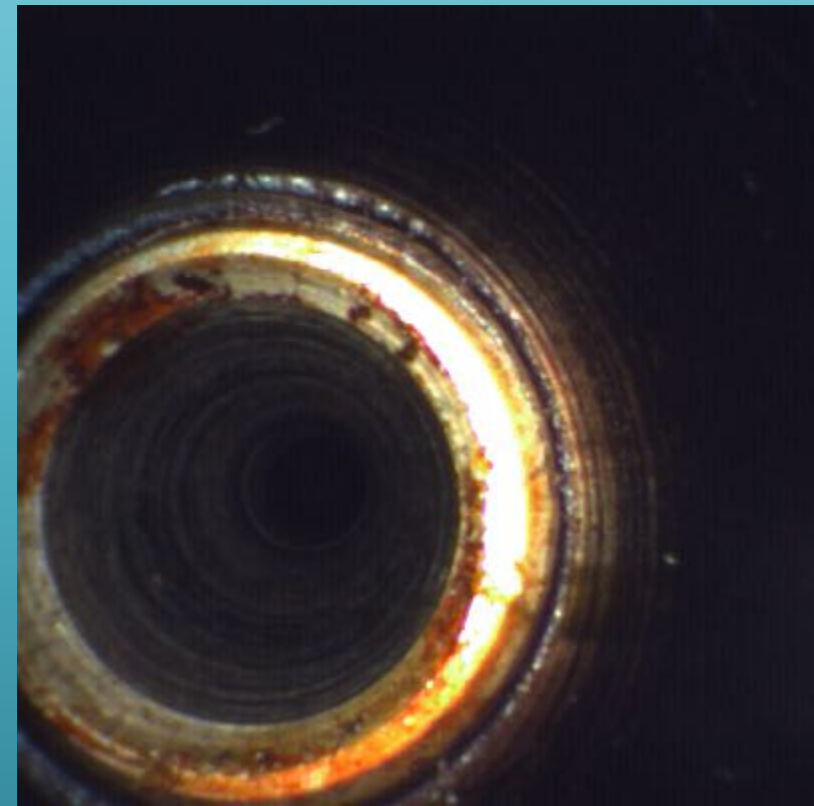
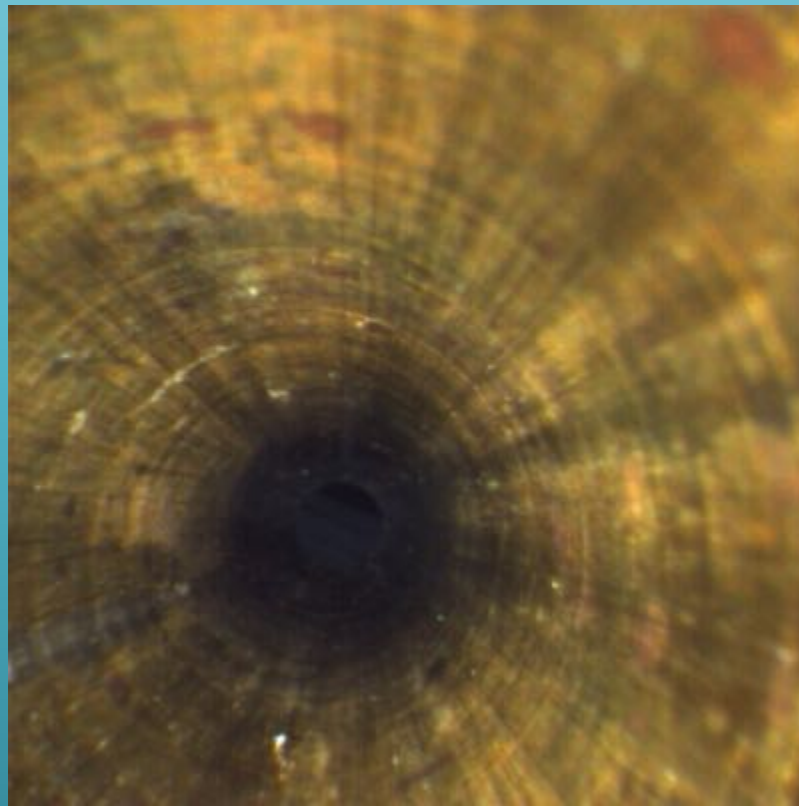
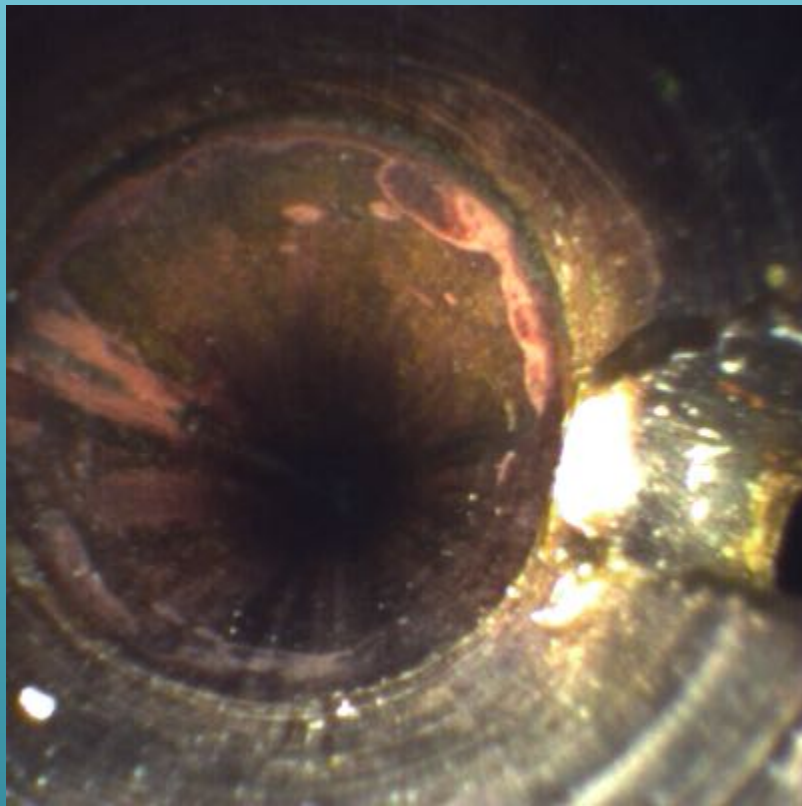
Recommendation: Use only Fiber-Free cloths in the sink.

Examples of Foreign Debris - Bio-burden



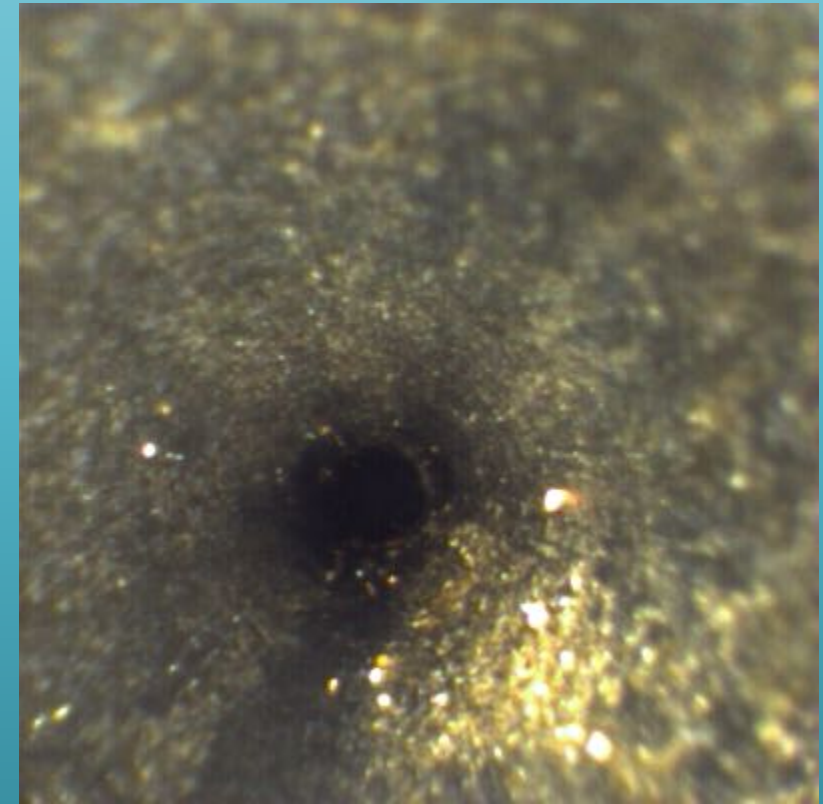
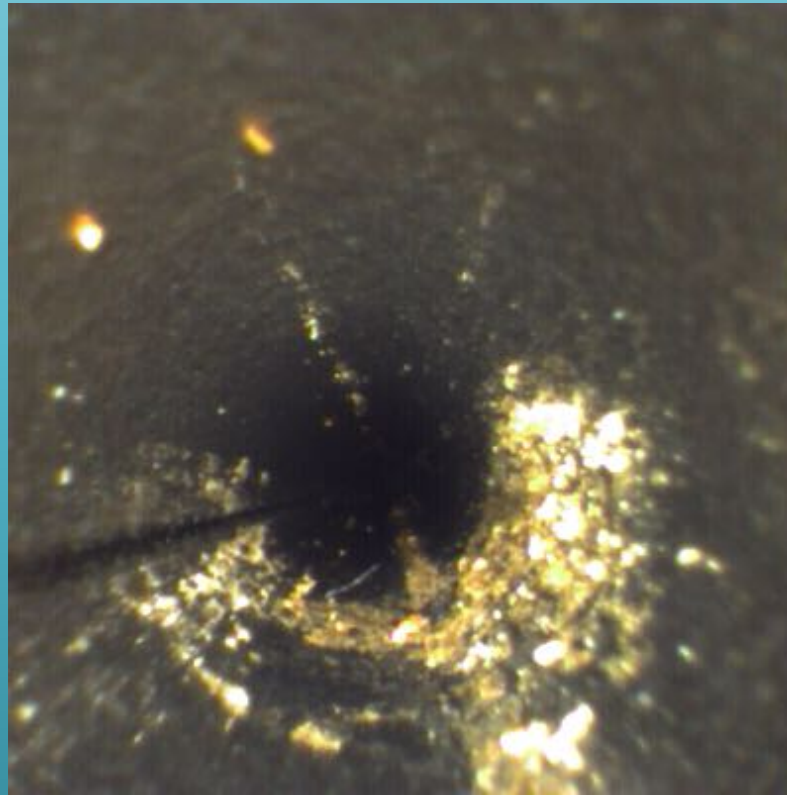
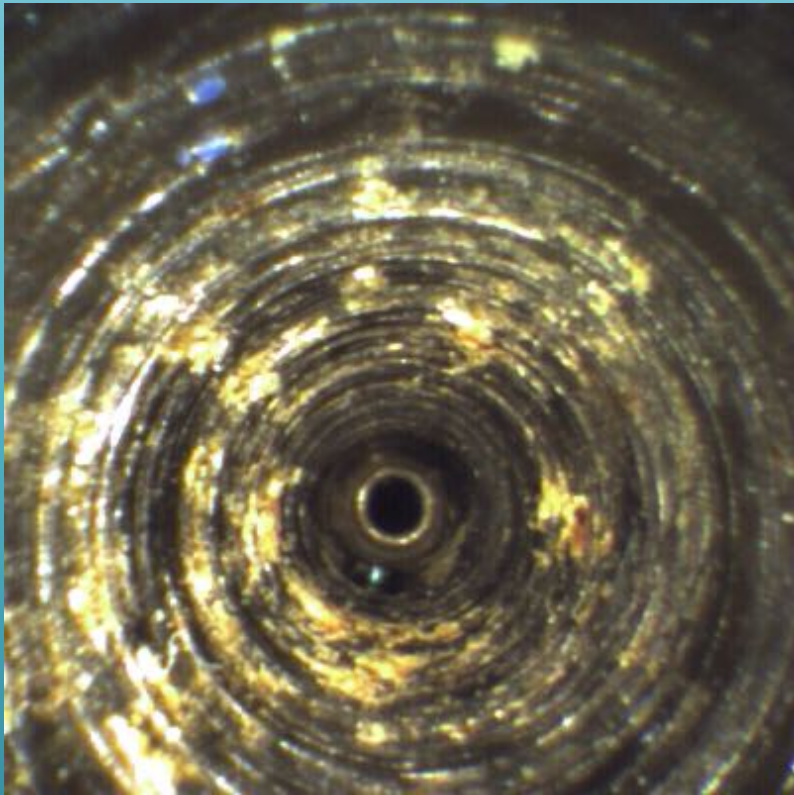
?? Tissue, bone, cartilage - all bio-burden.

Examples of Foreign Debris: Blood



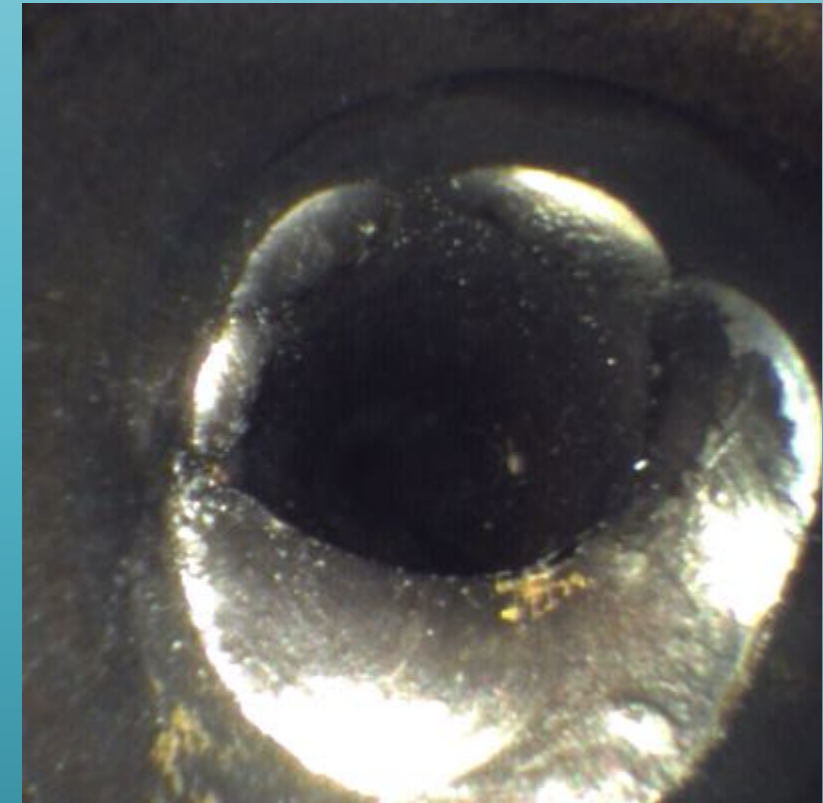
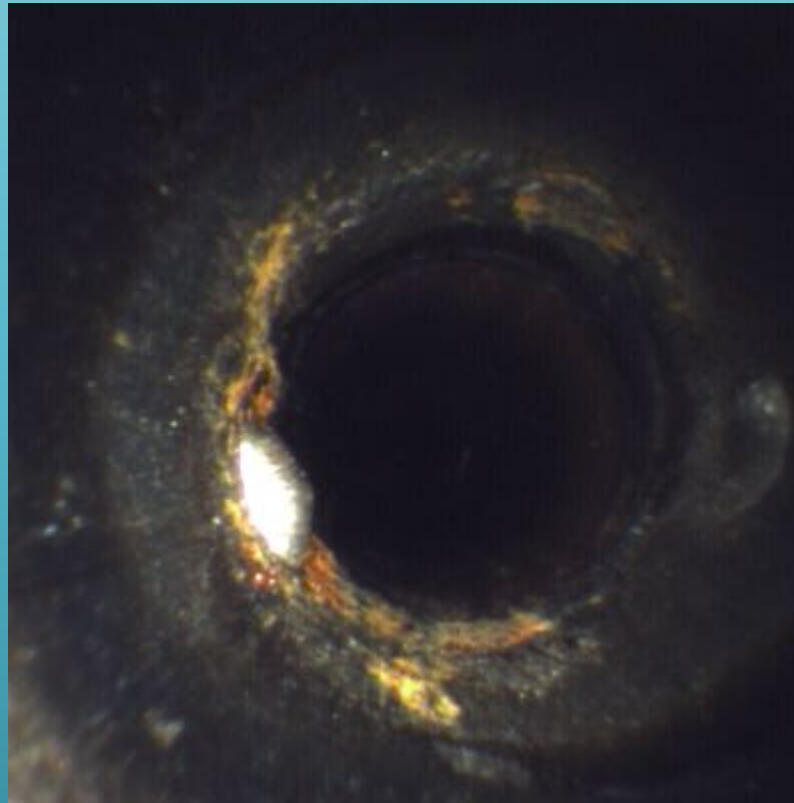
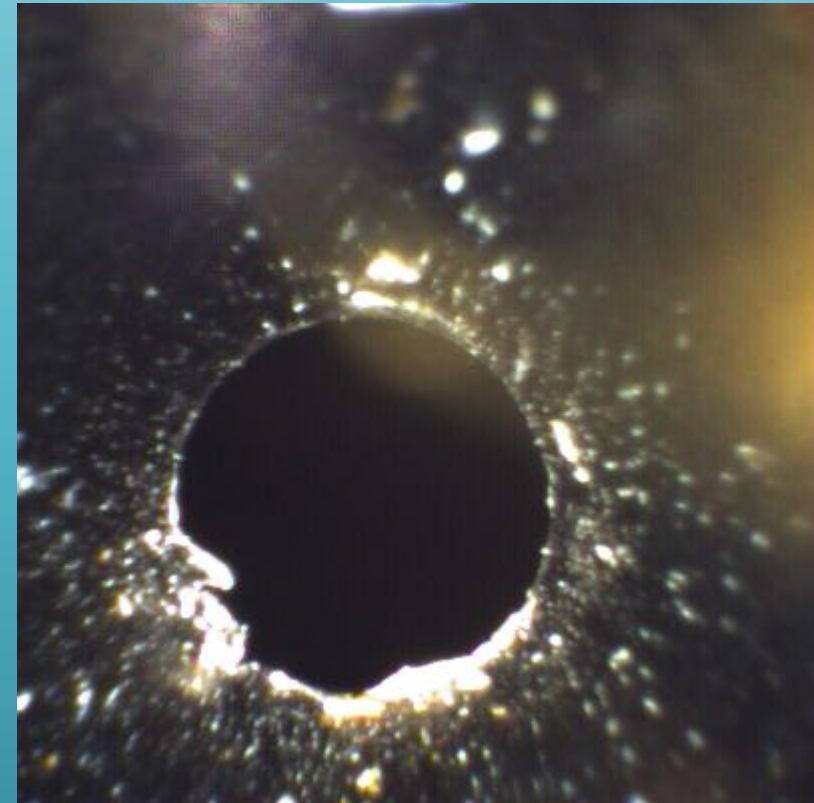
Probably blood. Rust... unlikely.

Examples of Foreign Debris: Various



Miscellaneous debris: un-identifiable but it clearly does not belong in here!

Examples of Foreign Debris: Various



Debris often collects at transition points and is often more difficult to clean there.

Endoscopy: Inspecting Endoscope Channels

Consider inspecting all endoscopes – anything with a channel.

Examples:

1. Upper GI Endoscopes... Gastrosopes, Duodenoscopes, Enteroscopes
2. Lower Gi Endoscope Channels... Colonoscopes
3. Bronchoscopes
4. Ureteroscopes
5. Cytoscopes
6. Hysteroscopes

Remember to inspect all of these after EVERY cleaning..

Endoscopy: Inspecting Endoscope Channels

Endoscope Channel Inspection:

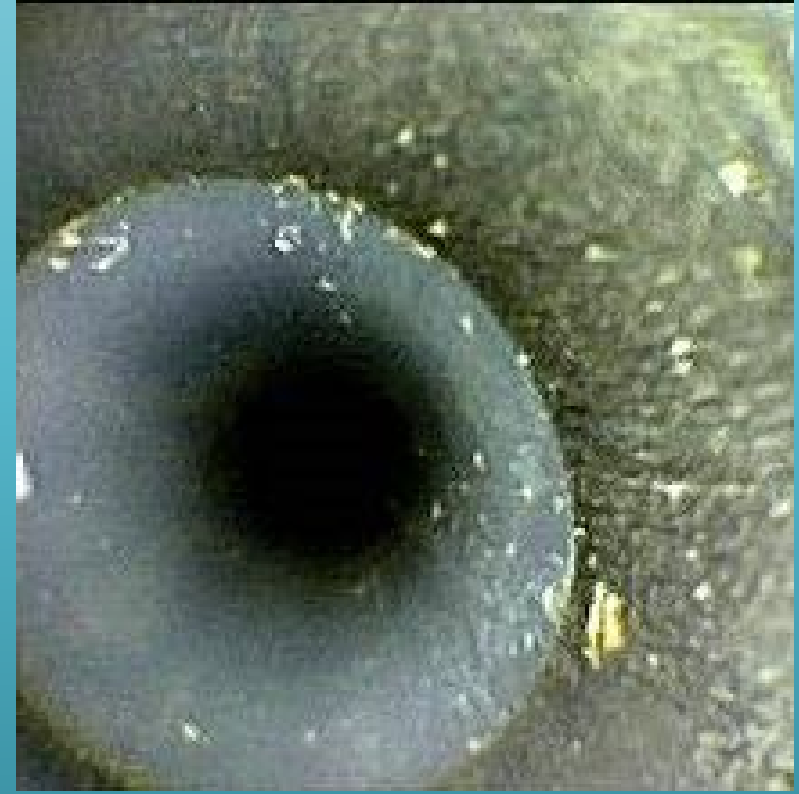
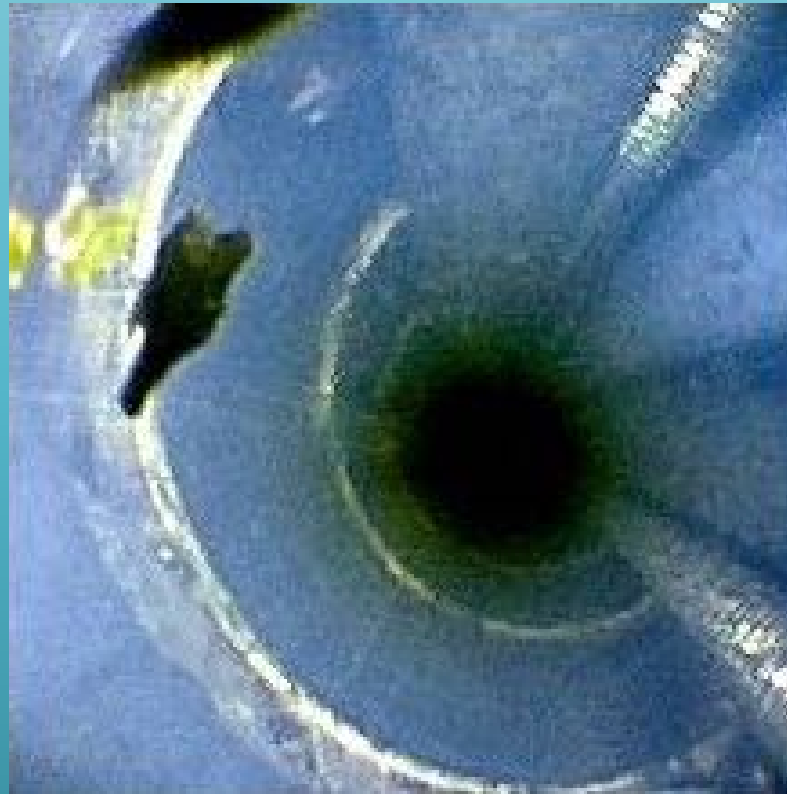
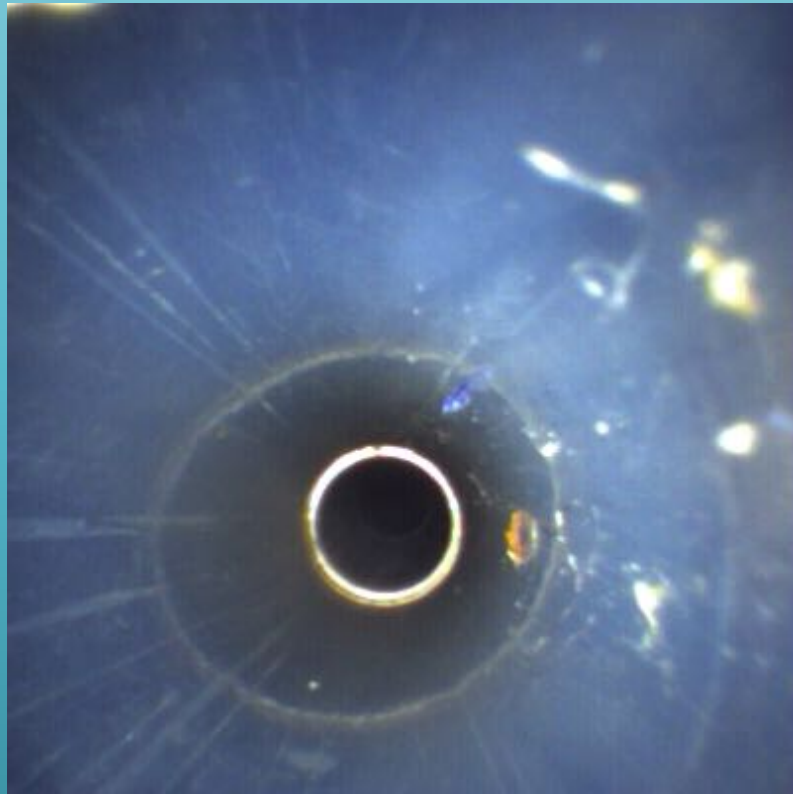
- Foreign Debris
- Damage to Channel Lining

Endoscopy: Inspecting Endoscopes

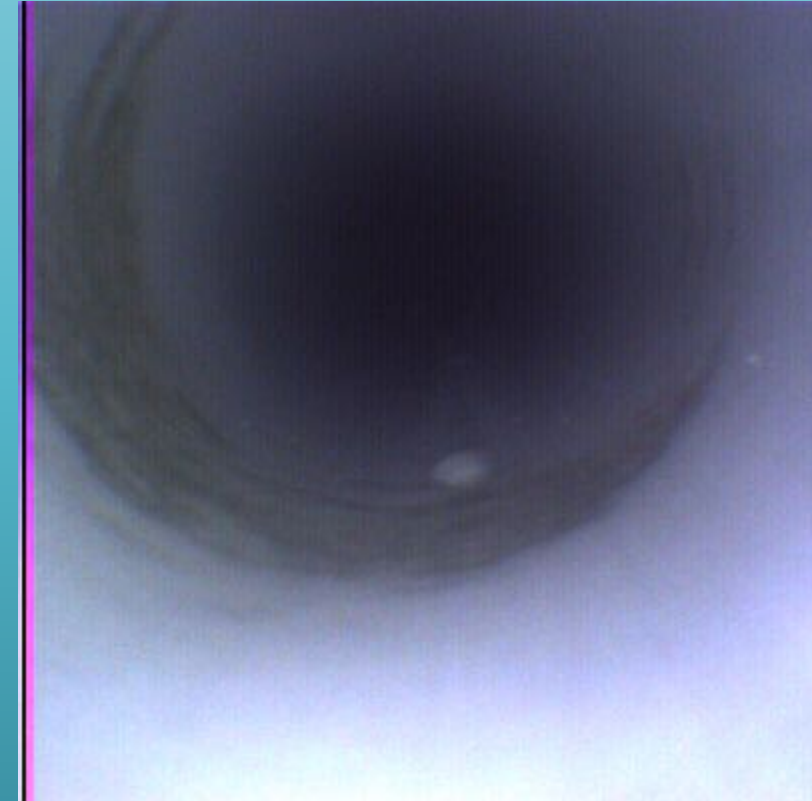
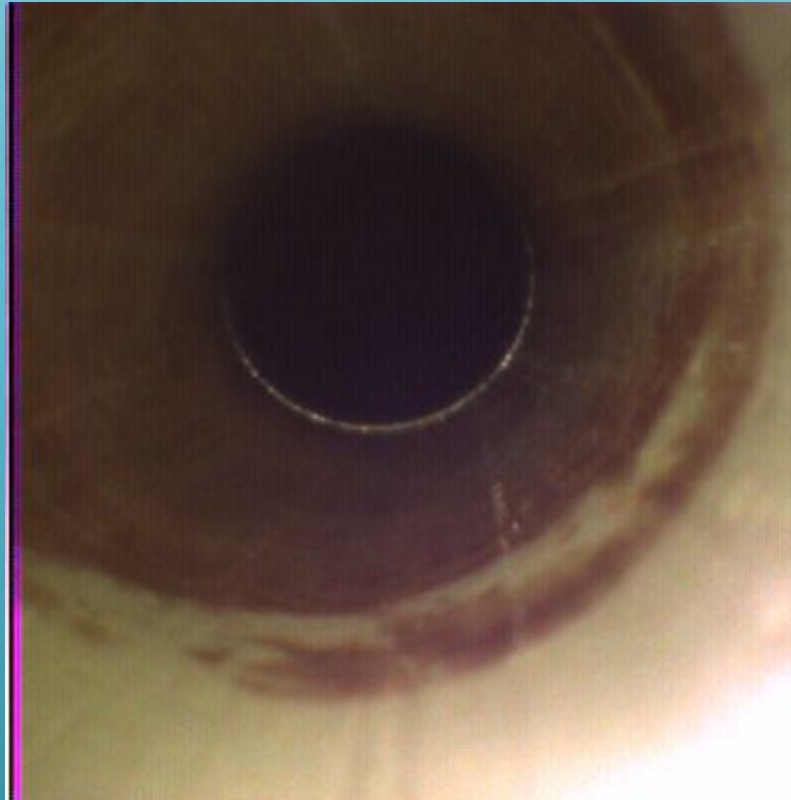
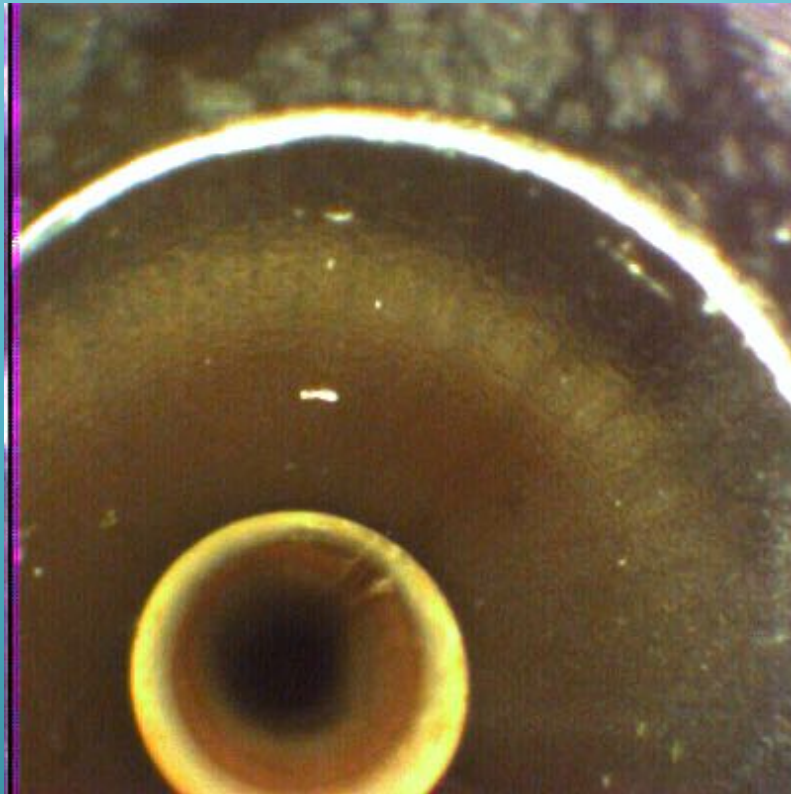
Inspection: Other Areas of Concern

- Duodenoscopes: Behind the Elevator at the Distal Tip and Around the Elevator Hinge
- Biopsy Channel Bifurcation
- Interface transitions: from metal to gasket to Teflon lining.

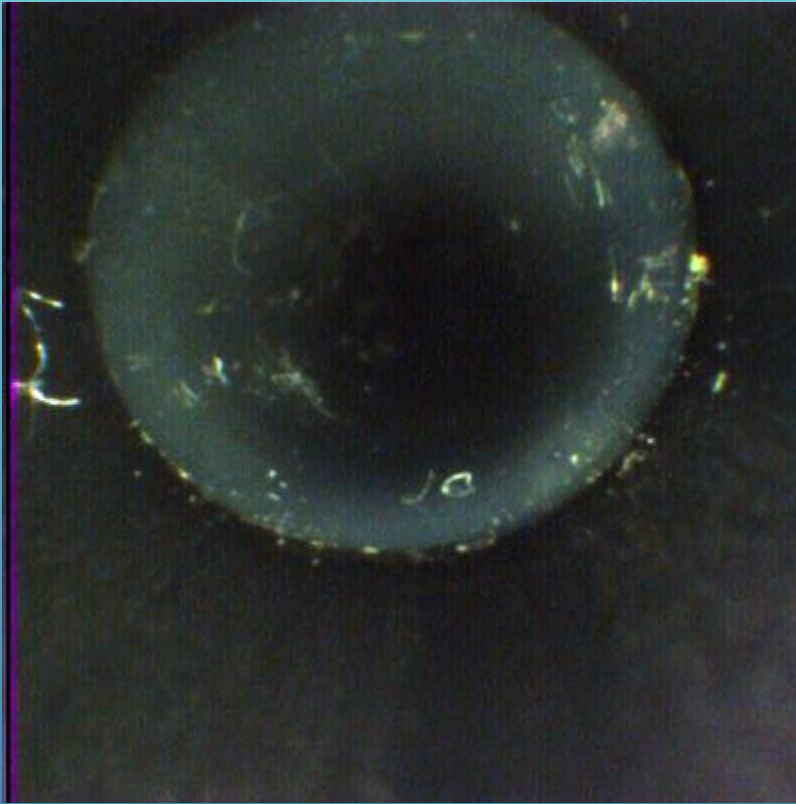
Dirty Endoscope Examples: Debris



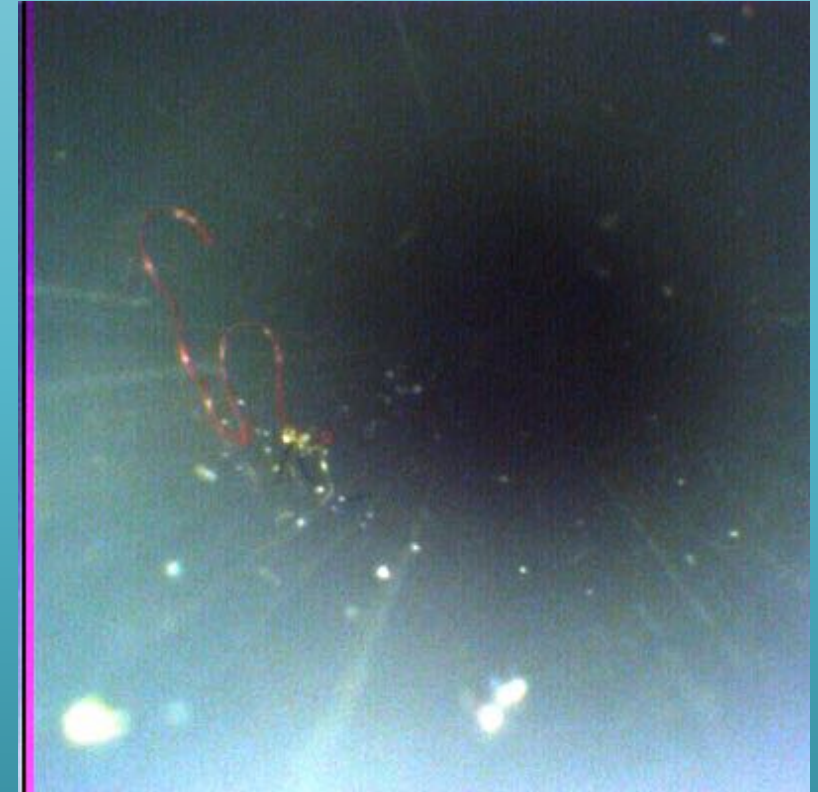
Dirty Endoscope Examples: Stains



Dirty Endoscope Examples: Fibers



Use only Fiber-free
Cloths
at or in the sink.



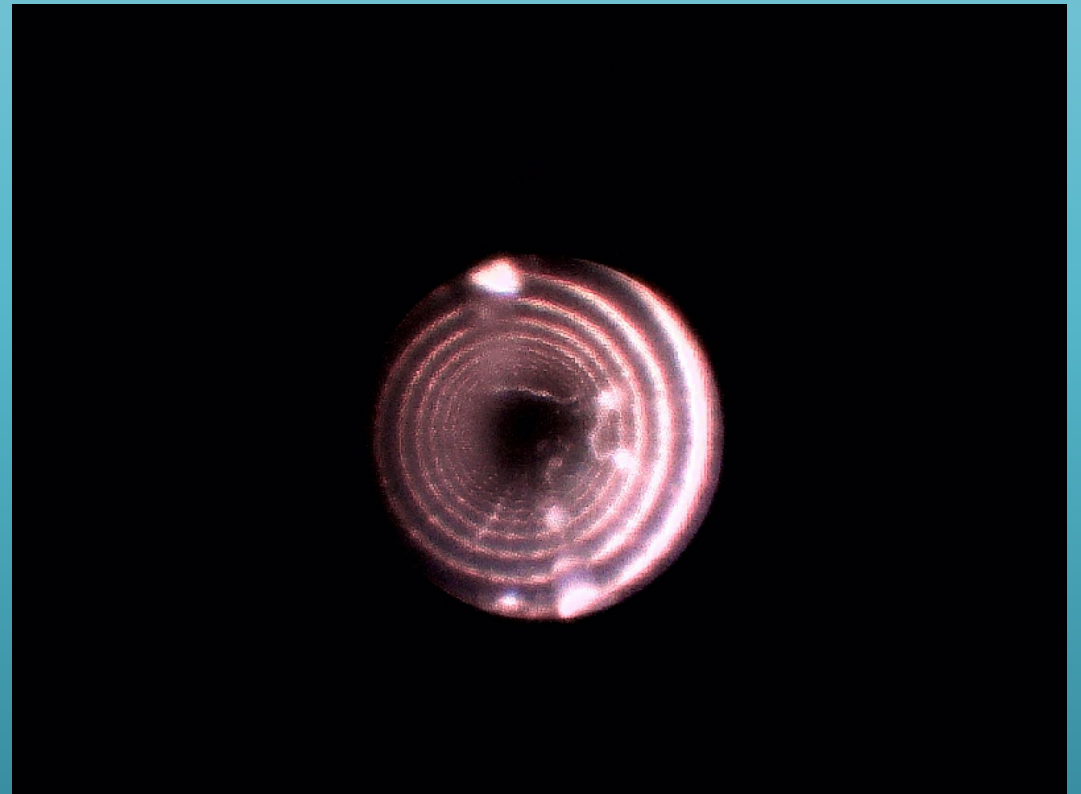
Damage to Endoscope Channels



Kinked lining of endoscope channel

Damage to Endoscope Channel

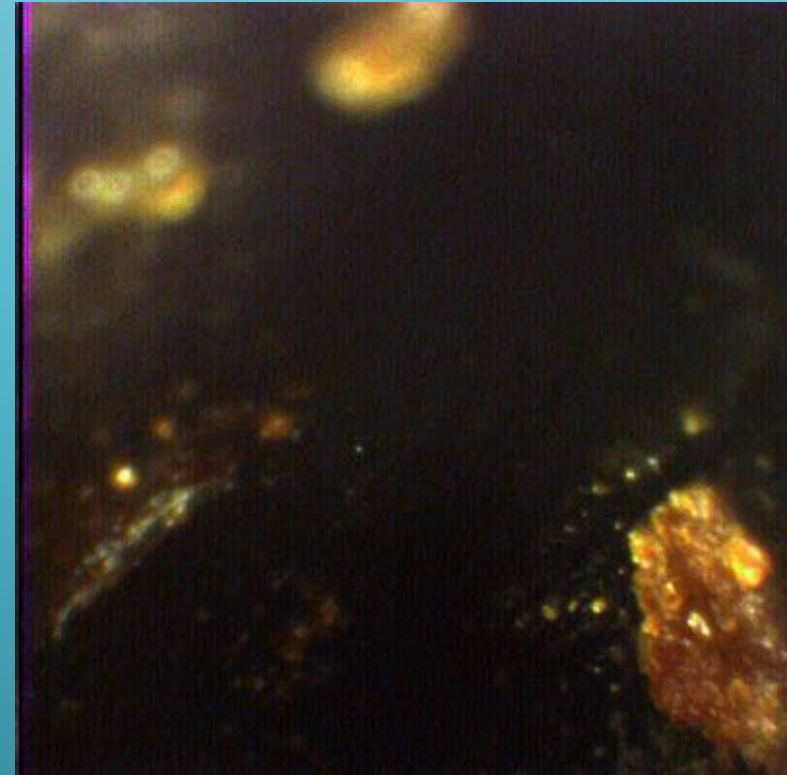
Scored Teflon strands –still attached



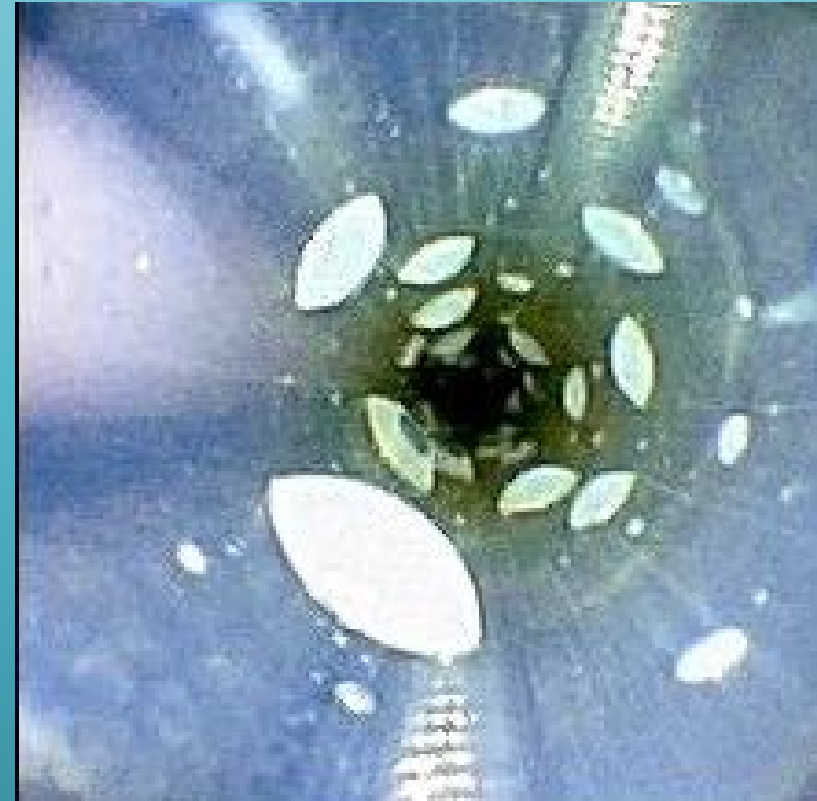
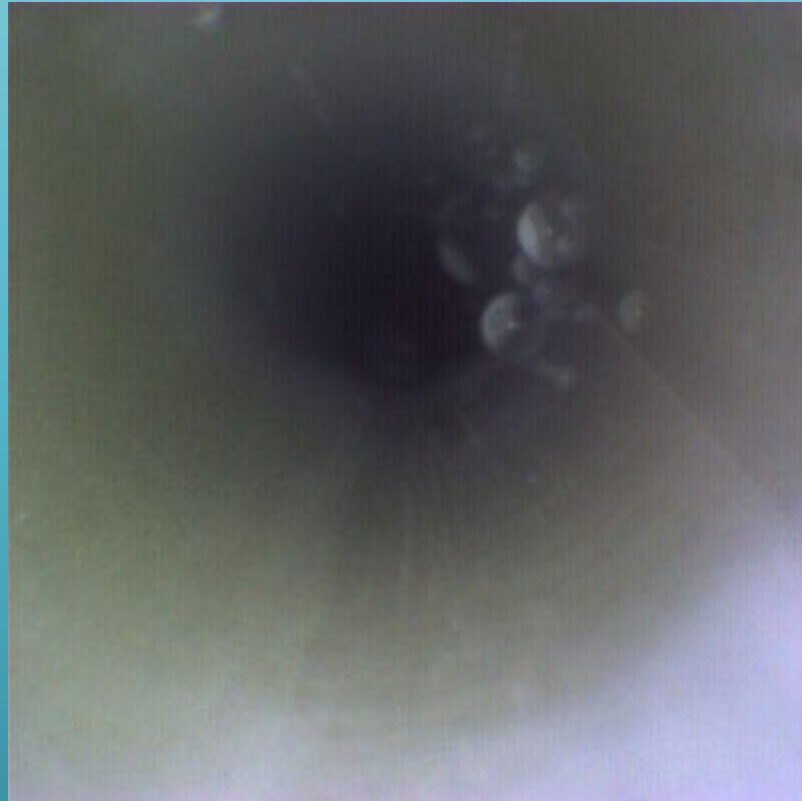
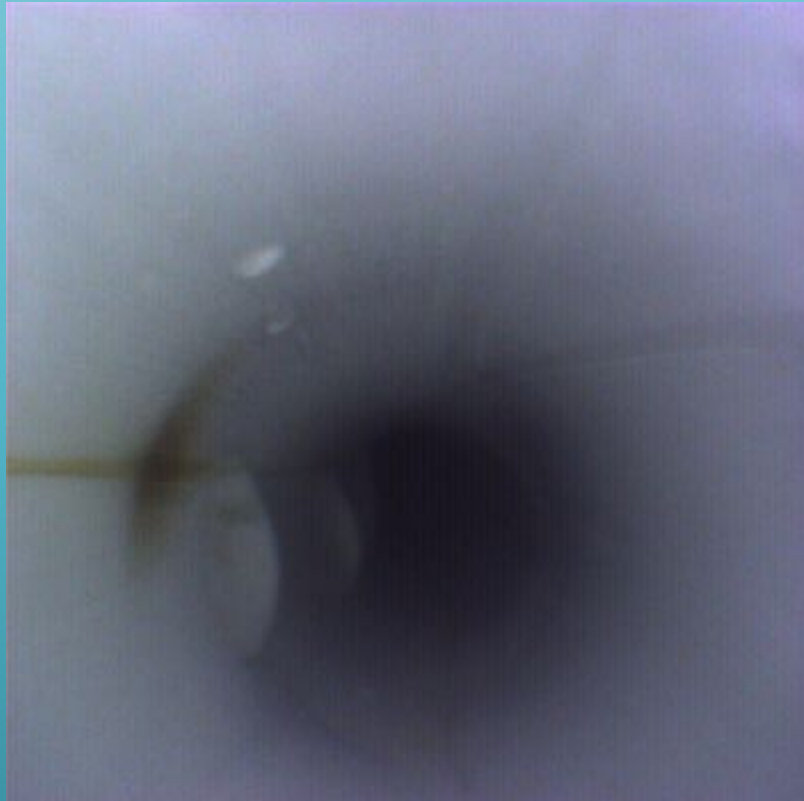
Behind the Elevator: Debris



Behind the elevator and hinge area is difficult to inspect. Takes more time but this area is critical and should be properly and carefully inspected with a borescope.



Fluid in Endoscope Channels



Endoscopes need to be free of fluid before hanging in a cabinet to avoid growing bacteria.

Borescope Inspection

It's about elevating the standard of care in the hospital by improving the ability to properly clean instruments and endoscopes through borescope inspection.

Disclaimer: Images presented are a small sample of types and sizes of foreign debris found in instruments and endoscopes. They are unique and do not represent all the different types of debris or bio-burden that may be present in devices. Individual instruments also vary greatly in surface condition, size and structure. Images shown are presented as a guide.

Thank you