Before operating an endoscope, it should be thoroughly inspected to avoid adverse effects caused by fluid invasion and corrosion damage. Do not use a damaged endoscope.

The intention of this document is to reduce the cost of repair however; it is not a perfect solution and cannot prevent all circumstances that may damage an endoscope.

**EL Connector Fluid Invasion and Scope Connector Corrosion**

1. **Possible problems**
   - Fluid invasion can be caused by not attaching the water resistant cap
   - Fluid invasion can be caused by a leaking water resistant cap
   - Fluid in the leak tester cap and the water resistant cap may flow into the leakage tester.
   - Fluid from the water resistant cap may drip or flow into the EL Connector, especially in the case of MD-252. Prior to removing the water resistant cap, face the scope connector with the water resistant cap down. This will prevent water from seeping into the EL Connector.

2. **Preventative Action**
   - Use the chain that was supplied with the water-resistant cap, MAJ-1119, MAJ-1193.
   - Perform a leak test before reprocessing the endoscope (cleaning and disinfection). The leak test will also determine if the water resistant cap is watertight.
   - Dry the scope connector prior to attaching the EL Connector to the video processor. This will prevent secondary damage to the endoscope.
   - Do not drop or strike the water resistant cap against a hard surface.

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1. Please read the instruction manual and the pamphlet that was enclosed with the endoscope.
2. The water resistant cap is a consumable item.
3. Damage MAJ-119 is used for Olympus videoscope, non-applicable to high frequency, cauterization, or laser with stainless steel distal end.
4. MAJ-1193 is used for Olympus broncho, cysto, and rhino-laryngo videoscopes.
**Potential Damage Areas**

Below are the primary inspection areas on the endoscope.

- **General**
  - EL Connector: Fluid invasion
  - Biopsy Channel: Pinhole (puncture, crack)
  - Insertion Tube: Crushed, buckled
  - Stopper End: (Insertion Tube) Wrinkle

- **Fiberscope**
  - Scope Connector: Fluid invasion

- **Control Section**
  - Switch Pinhole

- **Damage Analysis**
  - Investigated: Jun 2005 to Dec 2005
  - US Market
  - Damage indicated in blue lead to fluid invasion

- **Distal End**
  - Nozzle: Clogged
  - Lens: Crack, scratch, residue
  

**Inspection Prior to Use**

This section is an excerpt from the “Inspection of the endoscope” in the instruction manual. Before using an endoscope, inspection should not only include the endoscope but also the scope function, ancillary equipment, and the function as a system when the endoscope and the ancillary equipment are connected as instructed in the instruction manual.

Do not use the endoscope that is suspect. Any malfunction or abnormally may compromise patient or user safety, and may also result in more severe equipment damage. It is strongly recommended that each part of the endoscope be inspected and in good working order before using an endoscope in a procedure.

- **General**
  - Scope Connector: Large crack, deformation
  - Bond at bending cover and insertion tube
  - Protector end: Crack, kink, swelling
  - Distal End, Bending and Insertion Tube: Crack, dent, swelling, sharp, scratch, metallic projectile, protrusion, deterioration, deformation, buckle, detached part
  - Control unit: Large crack, deformation

- **Distal End**
  - Nozzle: Bent, dented, deformation
  - Lens: Scratch, chip, residue

* Distal end, straight view endoscope

- **Gently hold the insertion tube with one hand.**
- **Carefully run the fingertips over the entire length of the insertion tube.**
- **Verify that objects or metallic wires are not protruding and that the insertion tube is not abnormally stiff.**

- **With both hands, bend the insertion tube.**
- **Verify that the entire tube can be bent in a smooth arc and that the insertion tube is pliable.**
190-Series Leak Testing/Reprocessing Scope Considerations
(EVIS EXERA III Endoscopes)

CAUTION: This guide is only a summary of some key considerations to properly perform a leak test on your 190-series scope. Be sure to follow the detailed steps outlined in the ENDOSCOPE REPROCESSING MANUAL that was included with your endoscope when purchased.

### Remove ETO Cap

1. The **ETO cap must be removed** from the venting connector before:
   - Immersion for cleaning/disinfection
   - Conducting a leakage test

### Connector Cap & Venting Connector Must Be Dry

2. Check that the Connector Cap of the leakage tester is not wet inside.

   - Check that the Venting Connector of the endoscope is not wet.
   - It is important that no water remains inside the Connector Cap or Venting Connector because any subsequent pressurization of the scope with the leakage tester may force water inside the scope.

### Inspecting the Set Screw on the MB-155 Leakage Tester

3. The MB-155 set screw, seen just below the notch, should be in-tact with no degradation. A sheared or missing set screw will allow the venting valve to remain open, after leak testing, causing fluid invasion during reprocessing.

### Attaching/Detaching Leakage Tester

4. **DO NOT** attach/detach the leakage tester while the endoscope is fully or partially immersed.

   - Attaching/detaching under or near fluid may allow fluid to enter the endoscope, resulting in damage.

### During Leakage Test

5. If continuous bubbling at the connection of the leakage tester MB-155 to the endoscope is noted, this indicates a leak. Either the leakage tester or the endoscope could have damage.