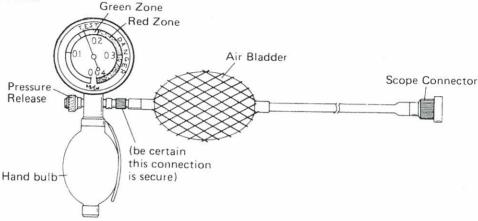
LEAKAGE TESTER INSTRUCTIONS

The PENTAX Leakage Tester allows for simple two (2) stage testing of the watertight integrity of the PENTAX PNE/PNE II/Video Endoscopes. Air pressure is delivered by means of a hand operated bulb, eliminating the need for any electro-mechanical devices.

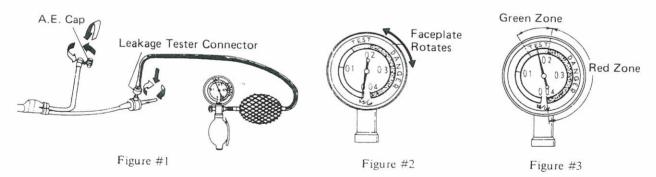


NOTE: When using the Leakage Tester with the PENTAX Video Endoscope, please refer to the operating manual provided with the scope.

STAGE I TEST

BEFORE IMMERSION, PENTAX Endoscopes should be tested for any major loss of integrity in their watertight construction (example: major tear in the working channel).

1) Secure the Leakage Tester connector to the air vent on the scope light guide. The "Silver" A.E. Cap should be securely on the A.E. plug, The Leakage Tester connector and the air vent on the scope light guide MUST be dry before connecting. Proper connection will require alignment of the air vent pin and clockwise rotation of the Leakage Tester connector. (Figure #1)



- 2) Turn the gauge faceplate to 'zero' the pressure indicator. (Figure # 2)
- 3) Pressurize the scope by pumping the hand bulb until the indicator on the gauge is in the GREEN zone (0.16-0.20 $\,\mathrm{kg/cm^2}$).
 - DO NOT pressurize into the RED zone, it may cause serious damage to the scope. (Figure #3)
- 4) Observe the gauge pressure to determine if the indicator remains in the GREEN zone. If the indicator drops from the GREEN zone rapidly, a major leak may be indicated.

NOTE: Be certain that the pressure release valve on the handle of the Leakage Tester has been tightened.

DO NOT IMMERSE Instead, contact you



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t remain in the GREEN zone.

STAGE II TEST

After determining the absence of any major leak in Stage I testing, PENTAX Endoscopes may be immersed to test for loss of integrity in their watertight construction.

1) With the Leakage Tester securely attached to the scope and the scope pressurized with the gauge indicator in the GREEN zone, and the "Silver" A.E. Cap securely attached over the A.E. plug on the umbilical cable of the scope, the entire scope may be immersed in clean water. (Figure #4)

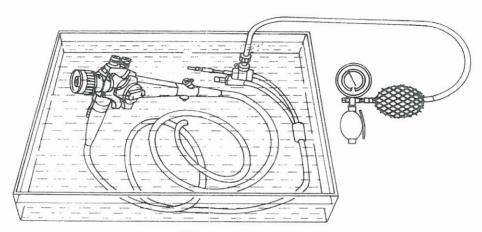


Figure #4

NOTE: Only the Leakage Tester connector and a small portion of its tubing should be immersed. NEVER immerse the entire Leakage Tester.

2) Observe the instrument carefully. A few bubbles may occur initially from recessed areas of the scope. This is normal. If a continuous stream of bubbles is observed from the same spot, a leak is indicated. Immediately remove the scope from the water. (Figure # 5)

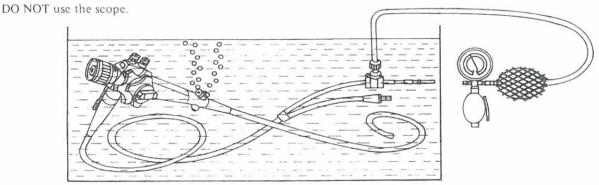


Figure #5

3) After removing the scope from water, release the air pressure within the scope by opening the pressure release valve on the handle of the Leakage Tester. After the gauge indicates 'zero', disconnect the Leakage Tester from the scope.

NOTE: NEVER connect or disconnect the Leakage Tester under water. This will cause leakage of water into the scope and Leakage Tester.

- 4) If leakage was discovered in step (2), thoroughly dry the instrument and contact your PENTAX Service Center.
- 5) If no leakage was discovered in step (2), you may proceed with cleaning and disinfection of the scope as described in the Operating Manual for the specific PENTAX scope involved.

