



Instructions for Use: Leak Tester Tester

<b>Brand Name of Product</b>	Leak Tester Tester
<b>Generic Name of Product</b>	Leak Tester Tester
<b>Product Code Number(s)</b>	LTT4000, LTT-1001, LTT-1002, LTT-1003, LTT-1004
<b>Intended Use</b>	To test the pressure of air (pounds per square inch PSI) of a leak tester.
<b>Range of Applications for Product</b>	To test the functionality of the pump and the connector of leak testers.
<b>Key Specifications of Product</b>	Four Test Kits Included: <ol style="list-style-type: none"> <li>1. Olympus MU-1 leak tester- LTT-1001</li> <li>2. Olympus handheld leak testers- LTT-1002</li> <li>3. Pentax handheld leak testers- LTT-1003</li> <li>4. Karl Storz handheld leak testers- LTT-1004</li> </ol>

<b>Shipping &amp; Storage</b>	
<b>Shipping Conditions &amp; Requirements</b>	
<b>Storage Conditions</b>	Store the LTT in a manner that will prevent damage to the LTT venting ports and the factory calibrated gauge.
<b>Packaging Conditions</b>	
<b>Shelf Life</b>	

<b>Instructions for Using Product</b>	
<b>Description of Use(s)</b>	To verify the accuracy of air pressure provided by automated and handheld endoscope leakage testers.
<b>Preparation for Use</b>	4 LTTs provided in test kit provide: <ol style="list-style-type: none"> <li>1. Calibration of the Olympus MU-1 leak tester. <b>Fig. 1</b></li> <li>2. Calibration of the Olympus handheld leak testers. <b>Fig. 2</b></li> <li>3. Calibration of the Pentax handheld leak testers. <b>Fig. 3</b></li> <li>4. Calibration of the Karl Storz handheld leak testers. <b>Fig. 4</b></li> </ol> <ul style="list-style-type: none"> <li>• The unit of measure (PSI) is identified on the gauge face of the handheld endoscope leak testers. <b>Fig. 5</b></li> </ul>
<b>Diagrams (drawings, pictures)</b>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>Fig. 1 Olympus MU-1 &amp; ALT Pro LTT-1001</b></p> </div> <div style="text-align: center;">  <p><b>Fig. 2 Olympus Handheld LTT-1002</b></p> </div> </div>



**Fig. 3 Pentax Handheld  
LTT-1003**



**Fig. 4 Karl Storz Handheld  
LTT-1004**



**Figure 5**



**Figure 6**



**Figure 7**



**Figure 8**



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13



Figure 14



Figure 15

Olympus MB-155 Leak Tester



**Figure 16**



**Figure 16A**



**Figure 17**

**Steps for Use of Product**

**Gauge Inspection Before Use**

**Step 1 is performed for all gauges before they are used (inspection of the gauge)**

1. Inspect LTT for damage to include verifying the pressure gauge is reading zero prior to use. **Fig. 6**
2. If gauge is showing that it has pressure (not a zero), pull up on the blue cap atop of the gauge. **Fig. 7** This process will open the vent plug and will relieve the internal pressure changes in the gauge case. If any of the gauges do not return to zero, the gauge is malfunctioning and should be returned for evaluation.

**Olympus MU-1**

3. Install the LTT into the socket of the MU-1 **Fig. 8**
4. Turn power switch to the on position; this will pressurize the LTT.
5. Note the pressure reading on the test figure gauge. The pressure should be a minimum of 4.1 psi. If the reading is below 4.1 psi, remove the LTT from service.
6. Turn power switch off and remove LTT from the automated leak testing device.

**Olympus Alt-Pro**

1. Install the MAJ-2009 leak test air tube into the tube connector of the Alt-Pro. **Fig. 9**
2. Connect the test fixture to MB-155 leak test air tube.
3. Set the Alt-Pro to MANUAL testing, then press START this will pressurize the LTT. **Fig. 10**
4. The pressure should be a minimum of 4.1 or greater (hold for at least 30 seconds). If it is lower, do not use the MB-155. **Fig. 11**

**Handheld Leak Tester: Pentax, Olympus, and Karl Storz**

1. Attach handheld leak tester to the appropriate LTT. **Fig. 12**
2. Place handheld leak tester in the pressurize position. **Fig. 13**
3. Identify the measurement of pressure on the gauge face of the LTT and handheld leak tester. **Fig. 14 and 15.**
4. Pump the inflation bulb of the gauge until the needle holds steady in the correct zone. This is the green zone on the handheld gauge. Once you reach the correct pressure (green zone), the LTT pressure gauge should match the unit of measurement on the handheld leak tester (See **Chart 1**) based on the unit of measurement (see **Figures 14 and 15**).

**Chart 1**

<b>Kpa pressurize to 25 units =</b>	<b>Mmhg pressurize to 160 units =</b>	<b>PSI pressurize to 5 psi =</b>
To 3.6 psi on test fixture	To 3.0 psi on test fixture	To 5.0 psi on test fixture

**Note:** Test fixture gauge has an allowable variance of 0.24 PSI

	<ol style="list-style-type: none"> <li>5. Note the pressure reading on your specific test fixture gauge. The pressure should equal the psi measurements in Chart 1 (they match green zone to pressure on the leak tester tester).</li> <li>6. Make sure the needle holds steady for 1 minute in the green zone.</li> <li>7. If the needle falls slowly outside of the green zone during the 1 minute timeframe, your handheld tester is faulty and does not hold a pressure. Do not use and replace.</li> <li>8. If the needle falls rapidly or pressure cannot be maintained during the 1 minute timeframe, the handheld tester should not be used and must be replaced.</li> <li>9. Once the 1 minute timeframe is reached and the pressure has stayed in the green zone, your handheld tester is acceptable to test an endoscope.</li> <li>10. Now release the pressure on the handheld leakage tester and allow 10 seconds to completely depressurize the leak tester tester (test fixture).</li> <li>11. Disconnect the leak tester from the LTT.</li> </ol> <p><b>Olympus MB-155 Leak Tester Cable (coiled)</b></p> <ol style="list-style-type: none"> <li>1. Install the MB-155 leak tester into the socket of the MU-1. <b>Fig. 16</b></li> <li>2. Connect the LTT to MB-155 leak tester. <b>Fig. 16A</b></li> <li>3. Turn the power switch to the on position; this will pressurize the testing device.</li> <li>4. The pressure should be a minimum of 4.1 psi or greater (hold for at least 30 seconds). If it is lower, do not use the MB-155; remove the MB-155 leak tester from service. <b>Fig.17</b></li> <li>5. Turn the power switch off and remove LTT from the MU-1 leak testing device.</li> <li>6. Then detach the MB-155 from the leak tester tester.</li> </ol>
<b>Interpretation of Test Results</b>	
<b>Contraindications of Test Results</b>	
<b>Documentation</b>	
<b>Special Warnings and Cautions</b>	<ul style="list-style-type: none"> <li>● If the gauge becomes inadvertently submerged in fluid or the LTT is dropped, the LTT should be returned to validate proper calibration.</li> <li>● Submerging, dropping or mishandling LTT may damage the accuracy of the gauge.</li> </ul>
<b>Disposal</b>	

<b>Reprocessing Instructions</b>	
<b>Point of Use</b>	
<b>Preparation for Decontamination</b>	
<b>Disassembly Instructions</b>	
<b>Cleaning – Manual</b>	
<b>Cleaning – Automated</b>	
<b>Disinfection</b>	
<b>Drying</b>	
<b>Maintenance, Inspection, and Testing</b>	Each unit should be returned back to Healthmark one year after the purchase for recalibration.
<b>Reassembly Instructions</b>	
<b>Packaging</b>	
<b>Sterilization</b>	
<b>Storage</b>	Store in a manner that prevents damage to the LTT venting ports and the factory calibrated gauge.
<b>Additional Information</b>	
<b>Related Healthmark Products</b>	
<b>Other Product Support Documents</b>	ProSys™ Brochure, ProSys™ Price List
<b>Reference Documents</b>	
<b>Customer Service Contact</b>	Healthmark Industries Company, Inc. 18600 Malyn Blvd. Fraser, MI 48026 1-586-774-7600 <a href="mailto:healthmark@hmark.com">healthmark@hmark.com</a> <a href="http://hmark.com">hmark.com</a>