



Cylinder Thread Viewer User Manual

Cylinder Thread Viewer Operations Manual / Users Guide

The Cylinder Thread Viewer is a one-piece internal battery-operated unit designed to enhance the viewing abilities when checking the threads of any cylinder. The user places an indexing plate on top of the threaded opening of the cylinder. The mirror tube is then rotated into the index plate allowing the inspector to remain stationary while the mirror tube rotates 360 degrees within the cylinder threads. The inspection can begin from the bottom up or the top down, Technician's choice.

Focusing Ring

The internal focal lenses are precision cut glass optics. The clarity of the glass lenses helps to avoid cuts and scratches on the surfaces of the lenses. Due to the design, and the placement within the focusing tube, the user is provided up to 2" of focal length. Since the mirror tube can fit well below the threads, it can view the crown region of most cylinders. When the mirror tube protrudes beyond the threads, use the focusing tube to adjust the clarity. Optimal distance is approximately 2" from the center of the threads. As the mirror tube is rotated back within the threads, the focusing tube is used to re-focus the inspectors view.

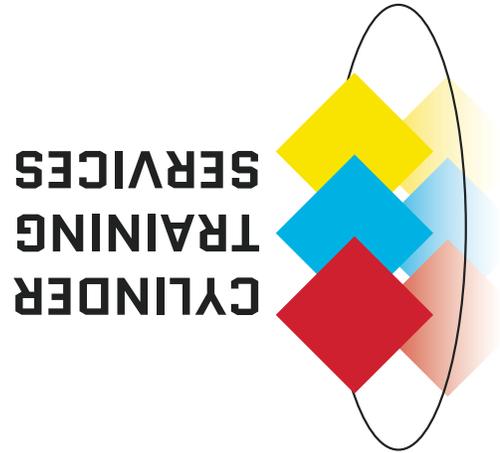
- If the technician wishes to lock the position of the focus tube, there is a nylon lock screw located next to the tube, which prevents it from moving.

Brightness Adjustment

An internal battery operates a bright white LED which is focused on the mirror. The reflecting light is then used to check the peaks and valleys of the threads. As the mirror tube rotates through the threads. The brightness of the LED is controlled with the rotation of the power on/off switch.

Marking Laser / Index plate

The battery also powers a low watt Laser (1mw). The laser is focused on the index plate which has 360-degree markings. The laser is positioned in line with the mirror tube. When something is located during the inspection, the operator will have an exact location of the issue they located. When a fellow inspector is asked to review the



findings, the first technician tells the second technician where the "O" degree was set on the cylinder (such as the initial hydro mark). The first technician then says what degrees they are concerned with. The second technician can find the exact location using the same markings on the index plate with the help of the guidance laser.

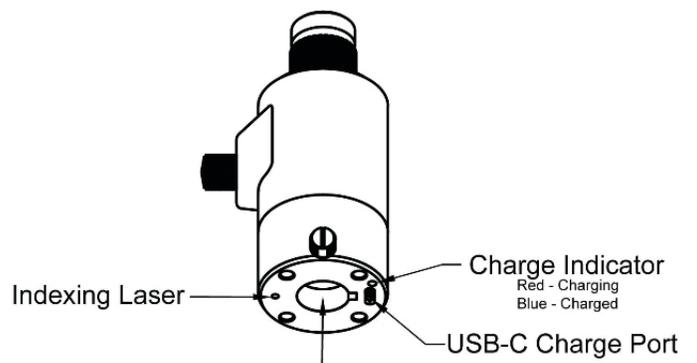
- The index plate also has a mirror tube rotation locking screw, to lock the position of the mirror tube. This allows the technician to walk away or hand the unit to another, so they see the exact location.

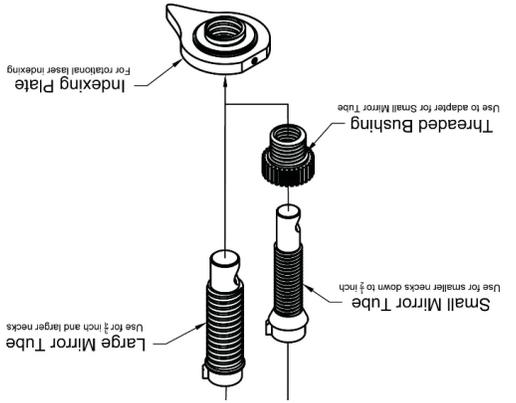
Charging

The unit has an internal lithium battery allowing up to 8 hours of operation on a full charge. The charging port is located on the bottom of the unit. Use the supplied USB-C charging cable to plug into any USB plug to re-charge the unit.

- Indicator Lights

RED = Charging
BLUE = Charged





Mirror Tubes (Small and Large)

To have the ability to view the threads of most cylinders, small and large, the thread viewer can change the diameter of the mirror tube. The smaller tube can fit cylinder threads as small as $\frac{1}{2}$ " (12mm). The larger tube handles most other cylinders starting at $\frac{3}{4}$ " (19mm)

To use the smaller mirror tube, a bushing is inserted into the index plate. The mirror tube is switched at the base of the unit. Unscrew the alignment screw and remove the existing mirror tube. Insert the new mirror tube into the unit. Once it is aligned (round viewing port) lock the tube in place with the alignment/locking screw. The small mirror tube can then be inserted into the bushing and used the same as the larger mirror tube.

Storage

The Cylinder Thread Viewer comes in a Carbon Fiber zippered case. The case is a great way to store the unit to prevent damage in case it falls from a great distance. The case will also protect the unit from extreme heat exposure. Do not leave the unit in direct sunlight or high temperatures (120F or 48 C)

WARRANTY

Each unit is serialized and tracked. We will guarantee workmanship for 90 days from date of purchase.

WARNINGS

DO NOT point the laser in your eye or the eye of another – severe injury may occur
 Keep out of direct sunlight or heat – extreme heat may damage the unit
 DO NOT drop – hard impacts may dislodge the internal optics
 DO NOT force the focus tube – it should glide smoothly from top to bottom – finger tight
 DO store the unit in its case when not in use

SPECIFICATIONS

- Lenses: Optics glass, 60/40 quality with a +/- 1% tolerance
- Lighting: white 6000-9000 K (adjustable)
- Battery: 3.7V / 250mAh / 500 cycle life / charging protection circuit / 1hr charge 8hr runtime
- Laser: 1mW / 650nm / brass housing
- USB-C charging cable: 5v 3amp
- Storage case: Carbon Fiber

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- Small Mirror Tube
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