



USER MANUAL

AUTOMATED TOOL TESTER
RTTE0001-25

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1. INTRODUCTION

Thank you for purchasing the Russtech Engineering Automated Tool Tester. This tester has been designed to consistently and accurately measure the force performance of the Russtech Engineering RTTL0002 series contact retention test tools.

The Automated Tool Tester is an integral part of a quality system ensuring tools are calibrated and performing with their intended force values.

2. TOOLS REQUIRED (NOT INCLUDED)

- 2mm Hex Key
- 3mm Hex Key
- #1 Phillips Head Screwdriver

3. WARNINGS AND NOTICES



WARNING – Keep hands clear during operation



Restrictions of Use of Hazardous Substances (RoHS) compliant

4. WHATS IN THE BOX?

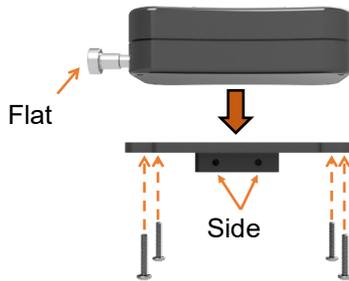
	<p>Automated Tool Tester</p>	<p>QTY 1</p>
	<p>RTTL0002 Tool Mount</p>	<p>QTY 1</p>
	<p>Wagner FDIX Mounting Plate</p>	<p>QTY 1</p>
	<p>M4 X 20mm Hex Socket Head Screw</p>	<p>QTY 2</p>
	<p>6-32 x 3/4in Phillips Pan Head Screw</p>	<p>QTY 4</p>
	<p>Test Probe</p>	<p>QTY 1</p>
	<p>AC Adapter Output: 24VDC 2.0A</p>	<p>QTY 1</p>
	<p>Wagner FDIX Force Gauge</p>	<p>QTY 1</p>
	<p>User Manual</p>	<p>QTY 1</p>

5. INITIAL SETUP

- 5.1 Remove all components from the box and ensure that all parts are present. Reference: Section 4 – What is in the box
- 5.2 Install Wagner FDIX Force Gauge onto Wagner FDIX Mounting Plate using four (4) 6-32 x 3/4in Phillips Pan Head Screws as shown:

NOTE: Observe the threaded load cell orientation in reference to the side holes. Ensure side holes on the mounting plate line up properly.

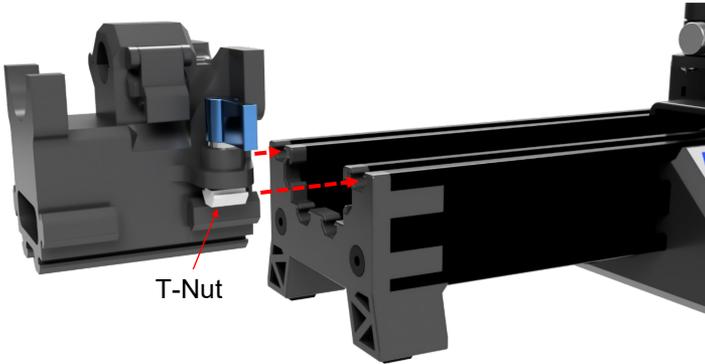
- 5.3 Ensure that Force Gauge has the flat steel tip installed on the threaded load cell.



- 5.4 Install force gauge assembly onto the automated tool tester carriage ensuring side holes are aligned. Use QTY 2 M4-20mm Hex Socket Head Screws to secure as shown:



- 5.5 Loosen T-Nuts on RTTL0002 Tool Mount and slide onto automated tool tester from the left side ensuring T-Nuts are aligned properly in channels. Position on the left side of the rail and tighten T-Nuts by lifting the blue spring-loaded thumb screws and using a 2mm hex key to tighten the screws.



- 5.6 Plug in AC adapter and ensure that RUN TEST button illuminates.

NOTE: The Automated Tool Tester Carriage Assembly may cycle when power is applied to locate it's home position.

6. HOW TO TEST A CONTACT RETENTION TOOL

- 6.1 Remove any existing contact test probes in the RTTL0002 Tool and set aside.
- 6.2 Install Test Probe included with the Automated Tool Tester Kit. O-Ring end must be inserted first and then pushed in until fully seated in the tool handle.



- 6.3 Open the tool cradle saddle latch on the tool mount. NOTE: Applying slight downward pressure on the saddle latch makes releasing the latch easier. (See photo from Section 6.2 for reference).
- 6.4 Install tool in the tool cradle. Tool wing stop must fit flush with the tool mount. (See photo from Section 6.2 for reference).
- 6.5 Close the saddle latch on the tool cradle securing the tool to be tested ensuring that alignment is maintained between the tool wing stop and the tool mount. Ensure that the latch is secure.
- 6.6 Set the distance between the tool test probe (installed in step 5.2) and the force gauge using the blue spring-loaded thumb screws on the tool mount. Loosen the tool mount by positioning the spring-loaded blue handles and turning the screws. Once loosened, the tool mount will be able to slide on the rail. Proper alignment is achieved when the end of the test probe is within 2mm-4mm of the force gauge. The tool should not be in direct contact with the force gauge prior to the test. (See photo from Section 6.2 for reference).
- 6.7 Once the correct alignment is achieved, tighten the blue spring-loaded screws on the tool mount.
- 6.8 Turn on the force gauge.
- 6.9 Set the force gauge to record peak force measurement. This is achieved on the Wagner FDIX by pressing the DISPLAY button until it displays C-Peak values.
- 6.10 Ensure that the automated tool tester switch is in the PUSH mode.
- 6.11 Run five (5) test cycles using the RUN TEST button on the automated tool tester. The RUN TEST button can be held down and released after five (5) cycles or you may choose to push the RUN TEST button five (5) times.
- 6.12 Reset the force gauge by pressing the ZERO button.
- 6.13 Perform three (3) consecutive tests recording the results of each test. Ensure that the force gauge is zeroed between each test. If all test results are within the documented tolerance of the tool under test, the tool has retained calibration.

7. CLEANING AND MAINTENANCE

The Automated Tool Tester requires no specific maintenance. Contaminants on the device surface can be cleaned using alcohol and a non-abrasive cloth. The screw drive mechanism requires no external lubrication, it is self-lubricating.

DISCLAIMER: It is the end-user's responsibility to maintain proper calibration of the Wagner FDIX force gauge.

8. TROUBLESHOOTING

8.1 **ISSUE: Motor does not run when pressing the RUN TEST button**

- 8.1.1 Ensure wire harness connector is securely plugged into the stepper motor.

8.2 **ISSUE: Tester jams during test**

- 8.2.1 Unplug power cord
- 8.2.2 Remove tool under test from tool mount
- 8.2.3 Plug in power AC adapter and allow tester to reset
- 8.2.4 Refer to section 6 to properly setup and run test ensuring proper tool mount alignment

9. ADDITIONAL RESOURCES

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