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June 13, 2012

**Subject:** RT-750 Force Test

**Purpose:** To collect baseline data on the closing force of the RT-750.

**UUT:** One (1) RT-750 with Viper jaws.

**UUT Specifications:**

The UUT is battery operated by 8 “AA” batteries. The UUT draws a maximum of 12.7 VDC at 615 mA from a fresh battery pack.

**Test Equipment:**

Scale:

TRAC Digital Scale, 0 – 50 Lbs.

Un-calibrated, verified to a certified scale to be +1 – 2 oz throughout the scale range.

Variable power supply with voltage and current limit:

Xantrex XHR33-33 DC power supply, Calibration 4/12/12

Calipers:

TTC 6” caliber, Calibration 1/25/12

**Test Setup:** *Reference Fig 13.* Digital scale is secured to the top of the test fixture. The top of the test fixture is adjustable in height to allow for testing the UUT’s full range of motion. The top jaw of the UUT is secured to the digital scale. The bottom jaw of the UUT is secured to the base of the test fixture. The power source for the UUT is a variable power supply to eliminate decreasing source power through out the test that would be caused by diminishing battery power.

**Test Plan:**

1. Set power supply to 12v current limit to .65A. Disconnect battery pack from UUT control box and connect control box to power supply.
2. Adjust test fixture height so that when power is applied to the UUT, the jaws stop at the desired screw travel. *Reference fig. 13 and 14.*



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3. Release tension from jaws. Zero out scale. Close jaws until they stop and record scale reading. Repeat a total of four times and record scale reading.
4. Repeat steps 3 and 4 for each of the six positions.

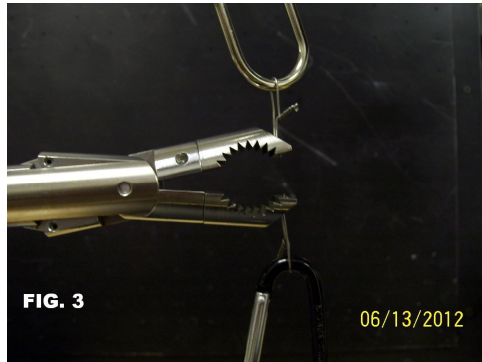
**Test Results:**

Reference: Position	Screw Travel From Closed	Force	
		LBS	Oz
P-1 FIG. 1	.080" FIG. 2	1	10
		1	8
		1	6
		1	8
P-2 FIG. 3	.140" FIG. 4	8	9
		9	1
		9	1
		9	5
P-3 FIG. 5	.320" FIG. 6	17	10
		17	9
		17	3
		16	11
P-4 FIG. 7	.510" FIG. 8	20	11
		24	3
		24	3
		24	0
P-5 FIG. 9	.660" FIG. 10	26	6
		27	5
		27	4
		27	12
P-6 FIG. 11	.860" FIG. 12	28	2
		28	4
		26	11
		28	2



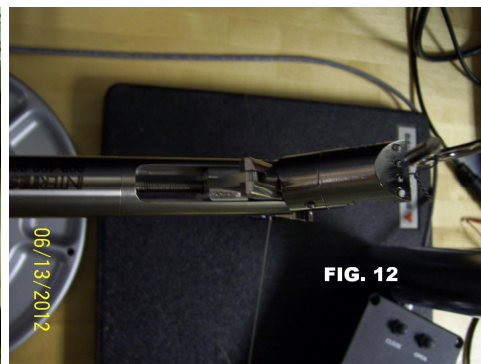
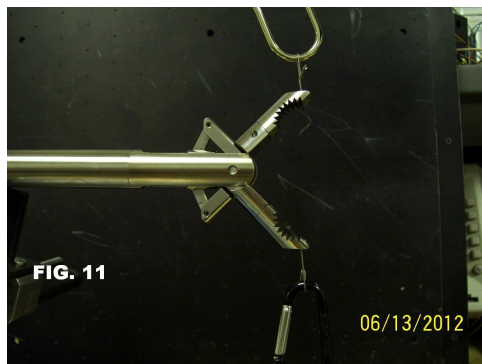
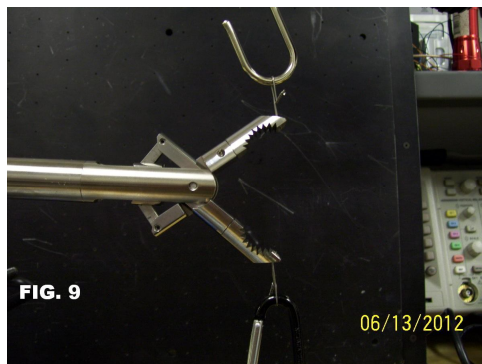
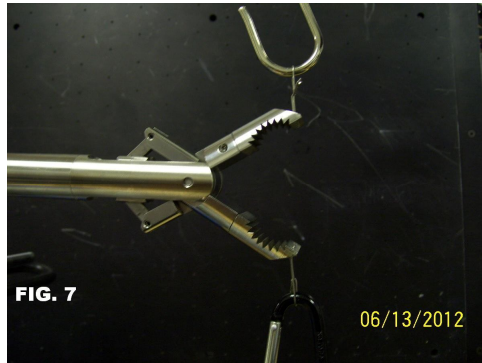
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**Reference Photos:**



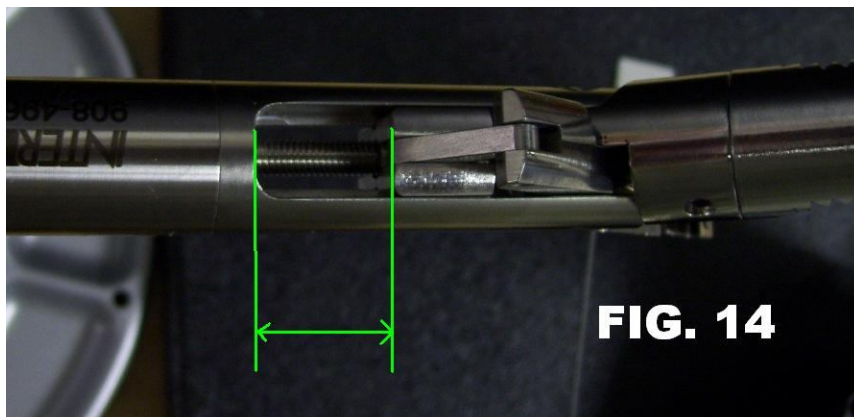
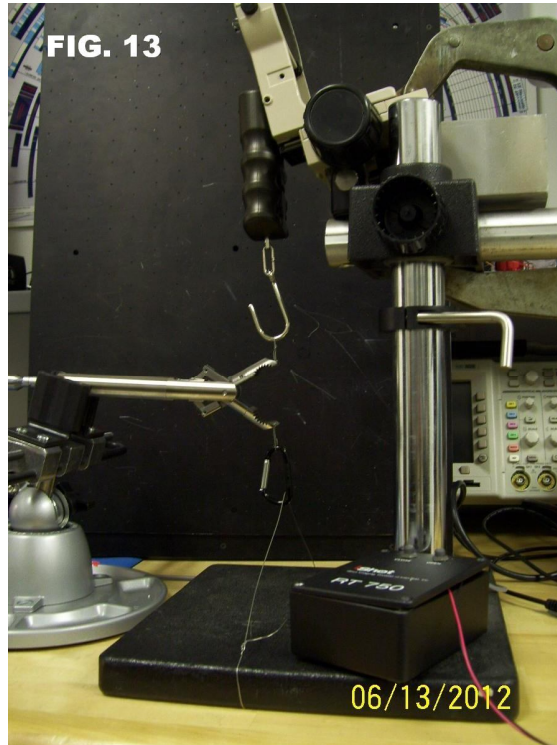


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