

**Typical application showing tool testing pin contacts.**

The quality assurance test most often overlooked is contact retention (proper seating of power contacts). This important test can now be performed simply and in a matter of seconds with the DMC retention testing tools for power contacts.

These tools check the retention of pins and sockets in electrical connectors by indicating when proper pressure has been applied. Each tool body is set for a different poundage range (see chart A on back of this page). The tester tips are color coded for specific sizes (AWG 4, 6, 8, 10, 12, 16, 20, 22, & 23, 24 and 26) and designated for pins or sockets. Use pin end tips to test sockets and socket end tips to test pins. All tips are made of aluminum and are replaceable.

A nylon hand protector is provided with each tool. The tools can be preset at the factory to your request.

Insert tester into a contact so that the tester and contact are in a straight line. Hold in this position throughout the testing procedure. Apply pressure to tester until the indicator band is in-line with the body.

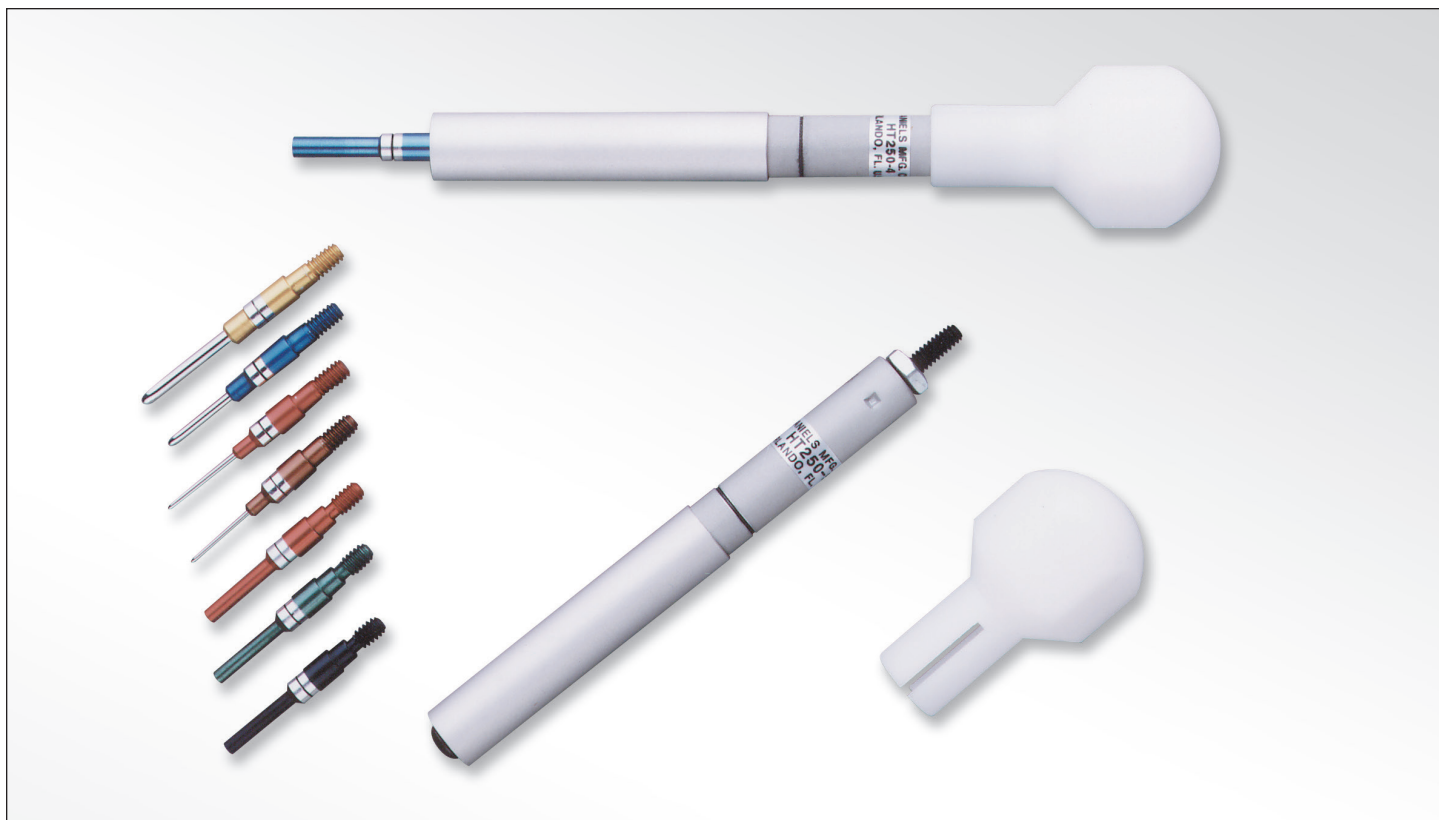
If contact is still firmly retained, the retention is satisfactory.

## CONNECTOR SERIES SERVICED

AS50151	MIL-DTL-38999
MIL-DTL-24308	MIL-C-81511
MIL-DTL-26482	MIL-C-81659
MIL-DTL-26500	AS81703
MIL-DTL-28748	MIL-DTL-83723

Proprietary and other military connector series may be serviced by DMC retention testers. Please consult DMC for verification

**NOTE:** Retention test tools are to be used as a simple indicator to verify contact locking. Retention testing to MIL-STD-1344 (method 2007.1) will require different test equipment. For additional information, please consult DMC.



**NOTE:** Retention test tools are to be used for POWER CONTACTS ONLY.  
Not for use with COAX or TRIAX contacts.

## HT250 ADJUSTABLE RETENTION TEST TOOL

### TOOL SET UP

1. Tool part number designates tool body only, without tip. Refer to Chart A for preset range of tool.
2. Remove button head (shipping) screw. Select appropriate tip and screw into tool body through slide. Refer to Chart B for tip part numbers.

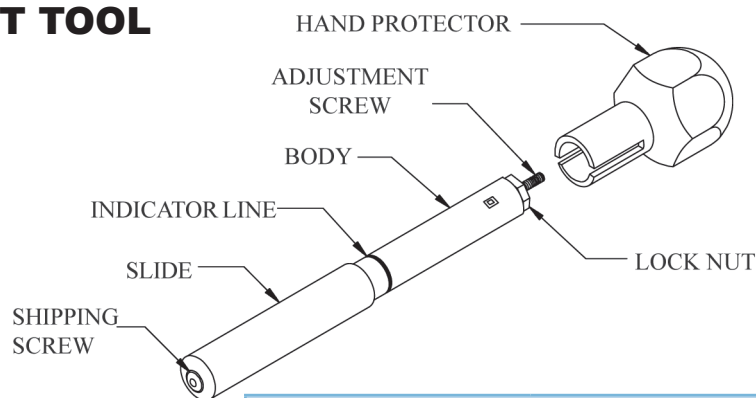
### USE OF TOOL

1. To test retention of socket contacts, use socket tester tip with preset tool. Insert tester (pin) into mating end of contact. Tool must be in a straight line with contact. For pin contacts, fit pin tester to tool body and place over contact at the mating end.
2. Apply pressure toward contact until slide aligns with indicator mark, contact should remain firmly in place.

### TOOL ADJUSTMENT

1. Remove hand protector, back off lock nut away from body of tool to allow free movement of adjustment screw
2. Secure tool in **RTCG-75A** or equivalent setting gage for precise calibration. If precise calibration isn't required, you can set the tool by holding the tool firmly by hand on a scale or other weight indicating device, and apply axial force until the end of the slide is aligned with the indicator mark. Note reading of force on gage (or accurate weight-scale).
3. Adjust tool to required force by turning adjustment screw with a screwdriver, clockwise to increase force and counterclockwise to decrease force. When required value is achieved, tighten lock nut firmly while maintaining alignment of slide and indicator line. Tool is now set.
4. Note: Inspection stickers may be used to seal hand protector onto tool body, in order to signal any tampering with the adjustment screw.

**\*NOTE:** TIPS ARE ORDERED SEPARATELY FROM TOOL HANDLE. ADDITIONAL TIPS ARE AVAILABLE. PLEASE CONSULT DMC CUSTOMER SERVICE.



**CHART A**

TOOL PART NUMBER	RANGE POUNDS
HT250-1	1.5 THRU 3.0
HT250-2	3.0 THRU 5.5
HT250-3	4.0 THRU 8.0
HT250-4	7.0 THRU 18.0
HT250-5	17.0 THRU 25.0
HT250-6	24.0 THRU 40.0

**CHART B**

CONTACT SIZE	COLOR CODE	SOCKET TESTER	PIN TESTER
4	Yellow	67-004-01	68-004-01
6	Blue	67-006-01	68-006-01
8	Red	67-008-01	68-008-01
10	Gray	67-010-01	68-010-01
12	Yellow	67-012-01	68-012-01
16	Blue	67-016-01	68-016-01
20	Red	67-020-01	68-020-01
22, 22M, 22D	Copper	67-022-01	68-022-01
23	Black	67-023-01	68-023-01
24	Gold	67-024-01	68-024-01
26	Green	67-026-01	68-026-01

### RTCG-75A

Retention Tester Calibration Gage



### Optional Calibration Equipment

The DMC RTCG-75A calibration fixture is supplied to support in-house calibration of DMC **HT250** Series Retention Testers. It incorporates the latest Alphatron® digital test technology, and is self-contained and portable.

The tester is supplied in a protective case with calibration certificate to NIST (accuracy 0.5% full scale to 75 pounds force).

# Mouser Electronics

Authorized Distributor

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[HT250-3-16](#) [HT250-3-20](#)