



# DOCUMENT CHANGE REQUEST

DCR number	361	Changes required for:	N/A	Originator:	Jean-Laurent BOUTEAUX
Date:	2007/06/19	Date sent:	2007/06/19	Organisation:	CNES
Status:	IMPLEMENTED				

Title: Contacts Electrical Crimp for 3401/052 and /056 Connectors

Number:	3401/058	Issue:	1
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Other documents affected:

Page:

Page:7 ; Table (1a) "contact retention force max"

Paragraph:

Page:7 ; Table (1a) "contact retention force max"

Original wording:

Proposed wording:

For male and female contact size 8, variant 09 and 10 replace "150" by "111" (see sheet attached)

Justification:

To be in accordance with MIL DTL 38999 K requirements , table XVII, contact retention ( see sheet attached)

Attachments:

DCR\_3401\_058.PDF, null

Modifications:

N/A

Approval signature:

Date signed:

2007-06-19



ESA/SCC Detail Specification  
No. 3401/058

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ISSUE 1

Rev. 'A'

**TABLE 1(a) - TYPE VARIANTS (CONTINUED)**

VAR- IANT	TYPE	MATING END SIZE	CRIMP BARREL SIZE	RATED CUR- RENT	ACCEPT WIRE	MAX WEIGHT	ENGAGEMENT & SEPARATION		CONTACT CAPABILITY			CON- TACT RETENT. FORCE MAX N	CON- TACT INSERT WITHDR. FORCES MAX N	PROBE DAMAGE		OVERSIZE PIN EXCL.		
							ENGAG. max N (1)	SEPAR. min N (1)	TEST PIN DIA mm	Pick-up g (2)	Drop g (3)			MO- MENT N.cm	PROBE DIA mm	FORCE MAX N	TEST PIN DIA mm	min
09	Male	8	8	A	AWG	9	-	-	-	-	150	150	-	-	-	-	-	
10	Female	8	8	46	10	5.0	9.9	1.1	800	800	150	150	50	3.594	3.619	10	4.00	4.01
							8.0	1.1	110	-	-	180	180	-	-	-	-	-
11	Male	4	4	80	6	6.0	-	-	-	-	180	180	-	-	-	-	-	-
							7.5	2.2	1600	1600	180	180	50	5.702	5.727	15	6.10	6.11
12	Female	4	4	46	4	7.5	20.4	2.2	220	220	180	180	50	5.702	5.727	15	6.10	6.11
							16.0	2.2	-	-	180	180	-	-	-	-	-	-
13	Male	4	8	46	8	6.5	-	-	-	-	180	180	-	-	-	-	-	-
							8.0	2.2	220	220	180	180	50	5.702	5.727	15	6.10	6.11
14	Female	4	8	46	10	8.0	20.4	2.2	220	220	180	180	50	5.702	5.727	15	6.10	6.11
							16.0	2.2	-	-	180	180	-	-	-	-	-	-

**NOTES**

- 1st line with maximum diameter test pin; 2nd line with minimum diameter test pin.
- With minimum diameter test pin and minimum insertion depth of 4mm.
- With maximum diameter test pin and minimum insertion depth of 4mm.

- a. Number of samples - The test shall be performed on 20 percent of the contact complement; but not less than three contacts in each connector half.
- b. Applied axial load - Preload to 3 pounds maximum, (13.6 newtons). Apply load as specified in table XVII.
- c. Special requirements - Where the test sequence required maintenance aging prior to contact retention, the contacts which were subjected to maintenance aging shall also be selected for contact retention.
- d. Axial direction - The applicable forces shall be applied along the longitudinal axis of individual contacts in the direction tending to displace the contacts to the rear.
- e. Only the contacts to be tested need be installed in the connector.

4.5.19.2 Procedure II. The contact retention shall be tested as specified in method 2007 of MIL-STD-1344. The following details and exceptions shall apply:

- a. 4.5.19.1a through 4.5.19.1c apply.
- b. Axial direction - Same as 4.5.19.1d, except the direction shall tend to displace the contacts to the front.
- c. Only the contacts to be tested need be installed in the connector.

TABLE XVII. Contact retention.

Contact	Load $\pm 10$ percent	
	Pounds	Newtons
22 1/, 22D, 22M 1/	10	44
20	15	67
16	25	111
12	25	111
8	25	111
10	25	111
8 Triax	25	111

1/ Inactive for new design.

4.5.20 Altitude-low temperature (see 3.24). Wired, mated, assembled connectors shall be subjected to the test specified in method 1011 of MIL-STD-1344. The following details apply:

- a. No wire ends or splices inside the chamber.
- b. Dielectric withstanding voltage test to be performed after return to ambient conditions shall be in accordance with 4.5.10.1.
- c. Insulation resistance test to be performed at 100,000 feet at  $-65^{\circ}\text{C}$  and shall be in accordance with 4.5.9.1.

4.5.21 Accessory thread strength (see 3.25). The mated connector shall be mounted as in normal service to a rigid panel. The torque wrench shall be attached as shown on figure 23. After mating the plug and receptacle connectors, a torque shall be applied to the accessory end of the plug at a rate of approximately 10 pounds-inches per second until the required torque is achieved. The applied load shall be held for 1 minute, then the load shall be released. The test shall then be repeated on the accessory end of the receptacle.