

REV.
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RATIONALE

AS39029/74A HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

NOTICE

THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF SAE AS39029.

AS39029/74

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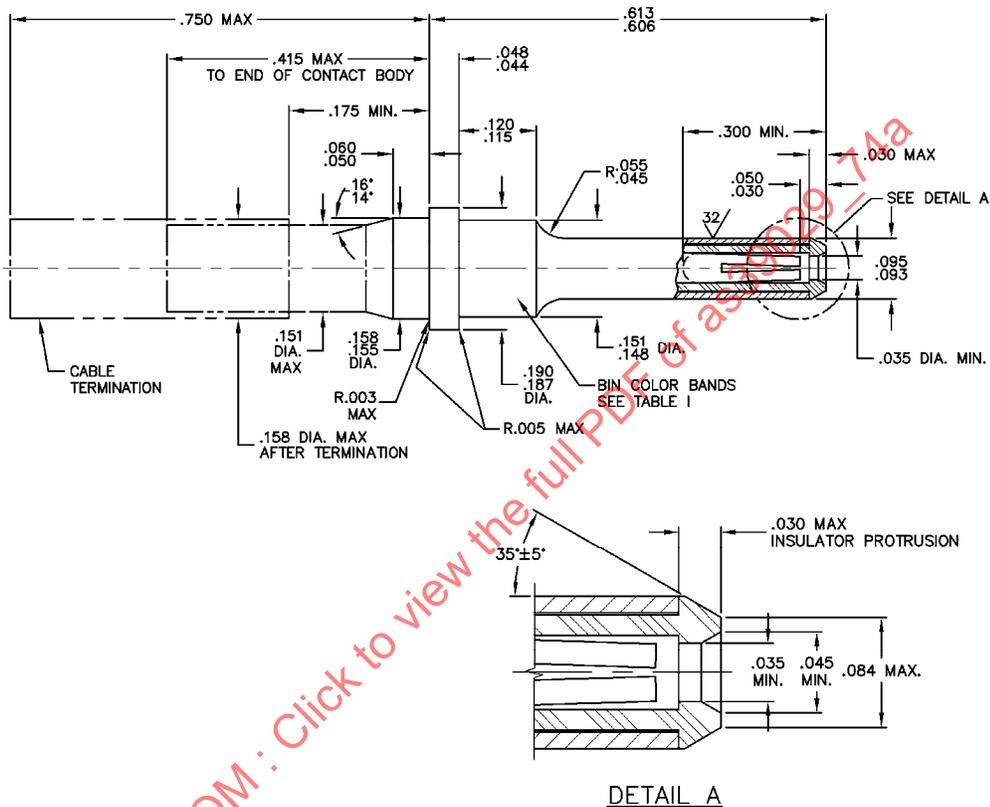
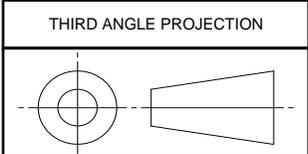


FIGURE 1 - CONNECTOR CONTACT

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CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

(R) CONTACTS, ELECTRICAL CONNECTORS, PIN, SOLDER, REMOVABLE, SHIELDED, SIZE 12 (FOR MIL-DTL-83723 SERIES III, MIL-DTL-26482 SERIES 2, MIL-DTL-83733 AND MIL-DTL-83527 CONNECTORS)

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TABLE I - DESIGN AND CHARACTERISTICS

BIN CODE	COLOR BAND			CABLE ACCOMMODATION (SEE FIGURE 2)				SHIELD PREPARATION TECHNIQUE	TEST CABLES	TYPE	CLASS
	1 ST	2 ND	3 RD	A 1/	B 2/	C 3/	D 4/				
399	ORANGE	WHITE	WHITE	.026 (.66) MAX .011 (.28) MIN	.105 (2.67) MAX .093 (2.36) MIN	.124 (3.15) MAX .112 (2.84) MIN	.145 (3.68) MAX .120 (3.05) MIN	STRAIGHT	M17/095- RG180	D	A
400	YELLOW	BLACK	BLACK	.026 (.66) MAX .011 (.28) MIN	.081 (2.06) MAX .055 (1.40) MIN	.099 (2.51) MAX .077 (1.96) MIN	.140 (3.56) MAX .094 (2.39) MIN	STRAIGHT	M17/094- RG179 RAYCHEM 9530H1024- 9 5/		
				.026 (.66) MAX .011 (.28) MIN	.045 (1.14) MAX .030 (.76) MIN	.099 (2.51) MAX .077 (1.96) MIN AFTER FOLDBACK	.145 (3.68) MAX .094 (2.39) MIN AFTER BUILD-UP	FOLDBACK	M17/093- RG178		
401	YELLOW	BLACK	BROWN	24 AND 26 AWG TWISTED PAIR				N/A	TWISTED PAIR 24 AND 26 AWG PER MIL-DTL- 55021		

- 1/ A. CONDUCTOR DIAMETER
- 2/ B. DIELECTRIC DIAMETER
- 3/ C. SHIELD DIAMETER
- 4/ D. JACKET DIAMETER
- 5/ OR EQUIVALENT

TABLE 2 - TOOLS

BIN CODE	STANDARD FIXTURE		REPAIR FIXTURE	HEATING TOOL	INSTALLING AND REMOVAL TOOL
	BASIC FIXTURE	ADAPTER			
399, 400, 401	AD-1319 RAYCHEM 1/	AT-1319-19 RAYCHEM 1/	AD-1494 RAYCHEM 1/	M83521/5-04 1/	M81969/14-04

1/ OR EQUIVALENT

TABLE 3 - CONTACT ENGAGEMENT AND SEPARATION FORCE

TEST PIN DIAMETER (INCH)	MINIMUM SEPARATION FORCE (OUNCES)		MAXIMUM ENGAGEMENT FORCE (OUNCES)		MAXIMUM AVERAGE ENGAGEMENT FORCE (OUNCES)	
	INITIAL	AFTER CONDITIONING	INITIAL	AFTER CONDITIONING	INITIAL	AFTER CONDITIONING
.0295 (0.75) +.0000 (0.00) -.0001 (0.00)	N/A	N/A	16	20	N/A	N/A
.0280 (0.71) +.0001 (0.00) -.0000 (0.00)	0.5	0.4	N/A	N/A	N/A	N/A

TABLE 4 - CONTACT RESISTANCE

BIN CODE	CABLE ACCOMMODATED	TEST CURRENT (AMPS) <u>1/</u>	MAXIMUM VOLTAGE DROP (MILLIVOLTS)					
			25° +3°, -0°C		25° +3°, -0°C <u>2/</u>		125° +3°, -0°C	
			INNER	OUTER	INNER	OUTER	INNER	OUTER
399	M17/095-RG180	1	120	13	144	16	204	22
400	M17/093-RG178 M17/094-RG179	1	120	13	144	16	204	22
	9530H1024-9 <u>3/</u> RAYCHEM	1	60	5	72	6	90	7.5
401	24 AWG TWISTED PAIR	3	57	49	68	59	97	83
	26 AWG TWISTED PAIR	2	63	51	76	61	107	87

- 1/ AMMETER ACCURACY OF 2%
2/ AFTER CONDITIONING
3/ OR EQUIVALENT

TABLE 5 - CONDUCTOR RETENTION

BIN CODE	CABLES ACCOMMODATED	MINIMUM TENSILE LOAD (POUNDS) <u>1/</u>	
		INNER CONTACT	OUTER CONTACT
399	M17/095-RG180	4.5	20.0
400	M17/093-RG178	5.2	6.5
	M17/094-RG179	5.2	16.0
	RAYCHEM 9530H1024-9 <u>2/</u>	5.5	19.5
401	24 AWG TWISTED PAIR	15.0	15.0
	26 AWG TWISTED PAIR	10.5	10.5

- 1/ BREAKAGE OF CABLE OUTSIDE OF SOLDER JOINT SHALL BE CONSIDERED PASSING.
2/ OR EQUIVALENT

TABLE 6 - PART NUMBER

PART NUMBER	BIN CODE	SUPERSEDES
M39029/74-399	399	M39029/74-12A
M39029/74-400	400	M39029/74-12C
M39029/74-401	401	M39029/74-12B

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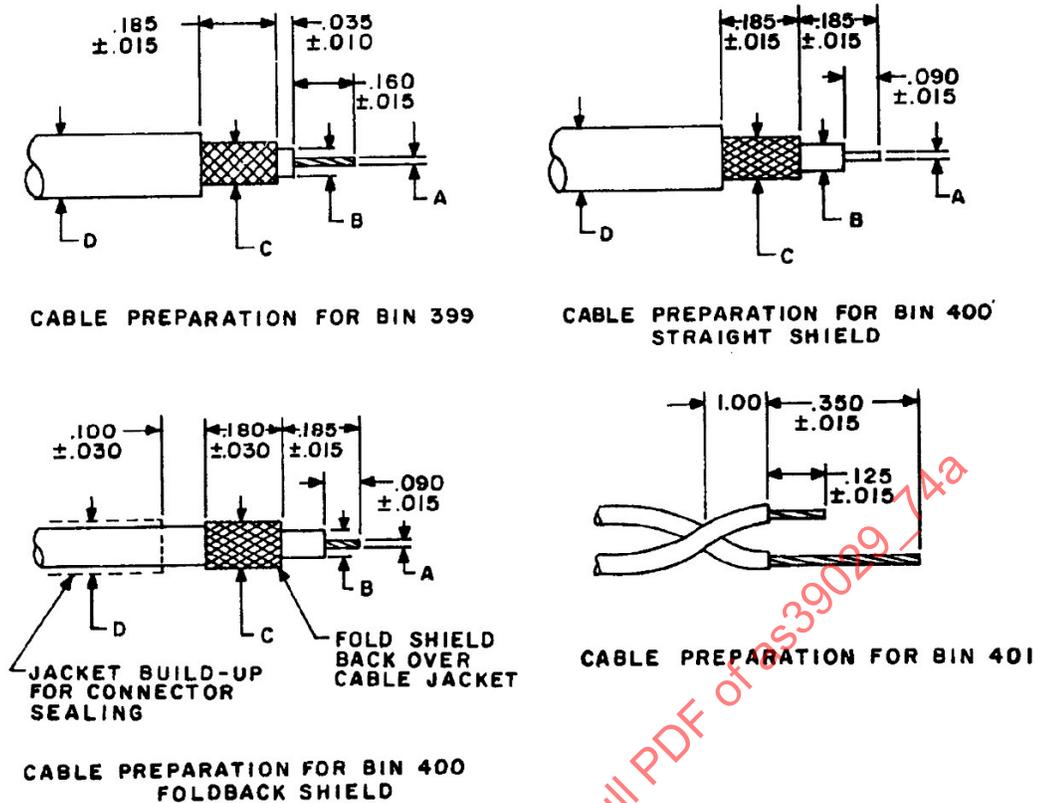


FIGURE 2 - CABLE PREPARATION

REQUIREMENTS:

- DESIGN AND CONSTRUCTION: CONTACTS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLE 1. DIMENSIONS ARE IN INCHES, METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY. DIMENSIONS SHOWN APPLY AFTER PLATING
- TOOLS: TOOLS REQUIRED FOR TERMINATING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 2.
- PART NUMBERS: CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 6. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.
- MATERIALS: MATERIALS SHALL BE IN ACCORDANCE WITH AS39029. SOLDER TYPE: J-STD-006, SN60 OR SN63.
- MECHANICAL: MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029. CONTACT ENGAGEMENT AND SEPARATION FORCES (SOCKET CONTACT ONLY): SEE TABLE 3. THE ENGAGEMENT DEPTH SHALL BE AS ENCOUNTERED IN NORMAL SERVICE. THE TEST PINS SHALL BE IN ACCORDANCE WITH SAE AS31971 EXCEPT THE DIAMETERS SHALL BE AS SPECIFIED IN TABLE 3. CONDUCTOR RETENTION (TENSILE STRENGTH TEST) IN ACCORDANCE WITH TABLE 5.
- ELECTRICAL: ELECTRICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029. LOW SIGNAL LEVEL CONTACT RESISTANCE: 20 MILLIOHMS, MAXIMUM. TESTED WITH 24 AWG TWISTED PAIR. CONTACT RESISTANCE: SEE TABLE 4. DIELECTRIC WITHSTANDING VOLTAGE: 900 V RMS, MINIMUM, AT SEA LEVEL.

	AEROSPACE STANDARD (R) CONTACTS, ELECTRICAL CONNECTORS, PIN, SOLDER, REMOVABLE, SHIELDED, SIZE 12 (FOR MIL-DTL-83723 SERIES III, MIL-DTL-26482 SERIES 2, MIL-DTL-83733 AND MIL-DTL-83527 CONNECTORS)	AS39029/74 SHEET 4 OF 5	REV. A