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AS39029™/117

FEDERAL SUPPLY CLASS
5999

RATIONALE

NEW CONTACTS REQUIRED FOR AIRCRAFT ENGINE APPLICATIONS.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

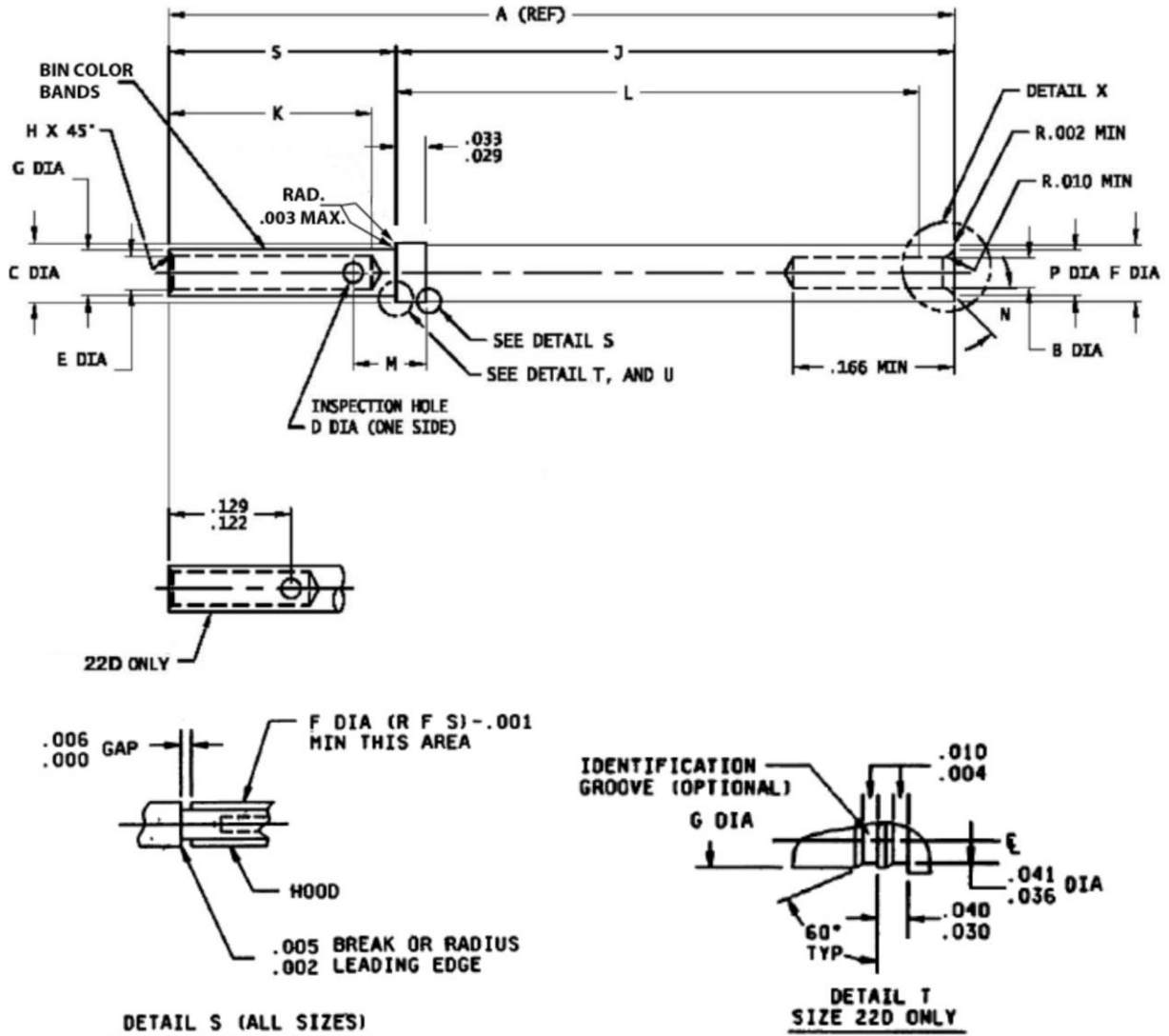
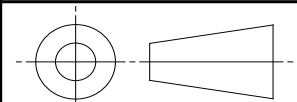


FIGURE 1 - SOCKET CONTACT

For more information on this standard, visit
<https://www.sae.org/standards/content/AS39029/117>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTOR, SOCKET,
CRIMP REMOVABLE, ENGINE APPLICATION, (FOR
MIL-DTL-38999 SERIES I, III, AND IV CONNECTORS)

AS39029™/117
SHEET 1 OF 8

Documents

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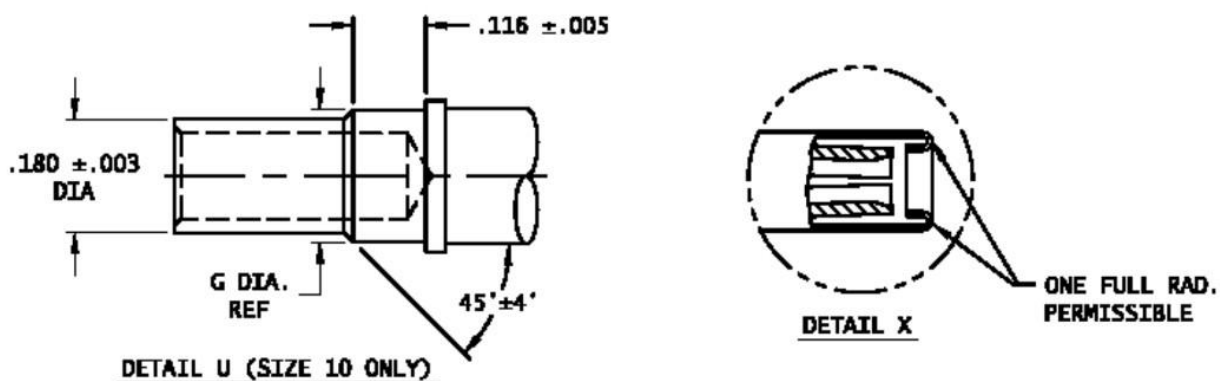


FIGURE 1 - SOCKET CONTACT (CONTINUED)

TABLE 1 - FIGURE 1 DIMENSIONS

BIN CODE	MATING END SIZE	WIRE BARREL SIZE	A REF	B DIA MIN	C DIA	D DIA	E DIA	F DIA MAX	G DIA	H 1/
632 638	22	22D	.855	.031	.062 .060	.022 .018	.0355 .0335	.062	.048 .046	.005 .003
634 640	20	20		.0415	.094 .091	.032 .026	.048 .046	.078	.070 .068	.010 .005
635 641	16	16		.064	.130 .127	.042	.068 .066	.113	.103 .101	.005
636 642	12	12		.0955	.182 .179	.036	.102 .098	.161	.151 .148	.016
637 643	10	10	1.021	.1265	.242 .238	.052 .046	.140 .134	.215	.213 .207	.005

1/ IF A BLEND RADIUS IS USED MATING END SIZE 22 SHALL BE .010 ± .005, SIZE 20 SHALL BE .015 ± .005, AND SIZE 16 SHALL BE .020 ± .005.

TABLE 1 - FIGURE 1 DIMENSIONS (CONTINUED)

BIN CODE	MATING END SIZE	WIRE BARREL SIZE	J	K	L MIN	M	N°	P DIA. MIN	S
632 638	22	22D	.626 .616	.141 MIN	.585	---	50 44	.047	.237 .231
634 640	20	20		.209 MIN		.078 .072	47 40	.053	
635 641	16	16				.088 .082		.084	
636 642	12	12							
637 643	10	10		.385 .355		.115 .108	NA	.146	.405 .395

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF AS39029.

1. CONTACT SHALL BE A CLASS B, TYPE A CONTACT IN ACCORDANCE WITH FIGURE 1 AND TABLE 1.
 - a. DIMENSIONS ARE IN INCHES AND SHOWN AFTER PLATING. METRIC UNITS ARE PROVIDED IN TABLE 7 FOR GENERAL INFORMATION ONLY (SEE SPECIFICATION NOTE).
 - b. IF A BLEND RADIUS IS USED, CRIMP BARREL END SIZE 20 SHALL BE $.015 \pm .005$, AND SIZE 16 SHALL BE $.020 \pm .005$.
 - c. SHOULDER DIMENSION $.029/.033$ DOES NOT APPLY TO BIN CODE 632 AND 638 (SEE FIGURE 1).
 - d. DIAMETERS E AND G SHALL BE CONCENTRIC WITHIN $.003$ (TIR) AT LEAST MATERIAL CONDITION (LMC) FOR BIN CODES 636 AND 642
 - e. DIAMETERS E AND G SHALL BE CONCENTRIC WITHIN $.001$ (TIR) AT THE LEAST MATERIAL CONDITION (LMC) FOR ALL BIN CODES EXCEPT CODES 636 AND 641
 - f. DIMENSION $.041/.036$ (SEE DETAIL T) SHALL BE CONCENTRIC TO DIAMETER G WITHIN $.003$ TIR (RFS).
 - g. DIMENSION K SHALL DEFINE THE LOCATION OF WIRE STOP ON A WIRE STRIPPER TOOL
 - h. DIMENSION L MINIMUM IS THE POINT AT WHICH A SQUARE ENDED PIN OF THE SAME BASIC DIAMETER AS THE MATING CONTACT FIRST ENGAGES THE SOCKET CONTACT SPRING.
 - i. A FULL RADIUS IS PERMISSIBLE FOR SIZE 10 (BIN CODES 636 AND 641), ANGLE (N°). SEE DETAIL X.
 - j. CONTACT SHALL BE A ONE PIECE CONSTRUCTION WITH NO MULTIPLE PART CONSTRUCTION EXCEPT FOR AN OPTIONAL HOOD PROVIDED THE HOOD DOES NOT ACT AS A POINT OF ENGAGEMENT WITH THE MATING PIN CONTACT.
 - k. MECHANICAL PRESSURE MEMBER SHALL BE SHROUDED. HOOD, IF USED, SHALL COMPLY WITH THE REQUIREMENTS HEREIN. HOOD SHALL NOT EXCEED CONTACT BODY DIAMETER. OPTIONAL DESIGN HOOD MAY BE CORROSION RESISTANT STEEL.
2. CONTACT MATERIAL SHALL BE IN ACCORDANCE WITH AS39029 EXCEPT AS FOLLOWS (SEE TABLE 2).
 - a. CONTACT PLATING FOR BIN CODES 632 AND 634 THROUGH 637 SHALL BE GOLD PLATED 100 MICROINCHES MINIMUM THICKNESS OVER 50 MICROINCHES MINIMUM THICKNESS NICKEL UNDERPLATE.
 - b. CONTACT PLATING FOR BIN CODES 638 AND 639 THROUGH 643 SHALL BE IN RHODIUM PLATED 50 MICROINCHES MINIMUM THICKNESS IN ACCORDANCE WITH ASTM B634 OVER 150 MICROINCHES MINIMUM THICK NICKEL UNDERPLATE.
 - c. THE INTERIOR OF THE CRIMP BARREL AT THE CRIMP LOCATION SHALL BE 3 MICROINCHES MINIMUM FOR LOCALIZED GOLD PLATING.
 - d. LOCALIZED RHODIUM PLATING IS NOT PERMITTED.
3. CONTACT MARKING AND RATINGS ARE IN ACCORDANCE WITH TABLE 2.

TABLE 2 - CONTACT MARKING AND RATINGS 1/

BIN CODE	COLOR BANDS			MATING END SIZE	WIRE BARREL SIZE	TYPE	CLASS	CONTACT PLATING
	1ST	2ND	3RD					
632	BLUE	ORANGE	RED	22	22D	A	B	GOLD OVER NICKEL
634	BLUE	ORANGE	YELLOW	20	20			
635	BLUE	ORANGE	GREEN	16	16			
636	BLUE	ORANGE	BLUE	12	12			
637	BLUE	ORANGE	VIOLET	10	10			
638	BLUE	ORANGE	GRAY	22	22D			
640	BLUE	YELLOW	BLACK	20	20			RHODIUM OVER NICKEL
641	BLUE	YELLOW	BROWN	16	16			
642	BLUE	YELLOW	RED	12	12			
643	BLUE	YELLOW	ORANGE	10	10			

1/ OPERATING TEMPERATURE RANGE: -65 °C (-85 °F) TO 200 °C (392 °F).