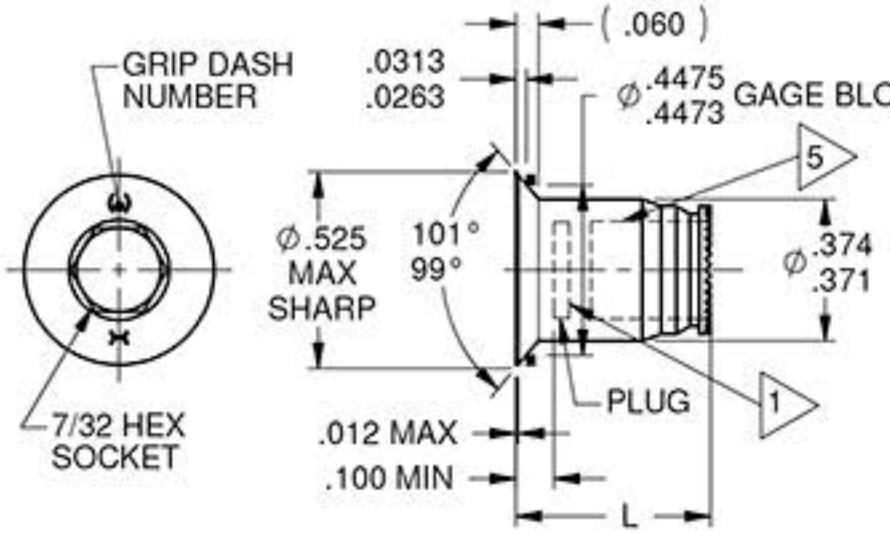
Alcoa Fastening Systems & Rings

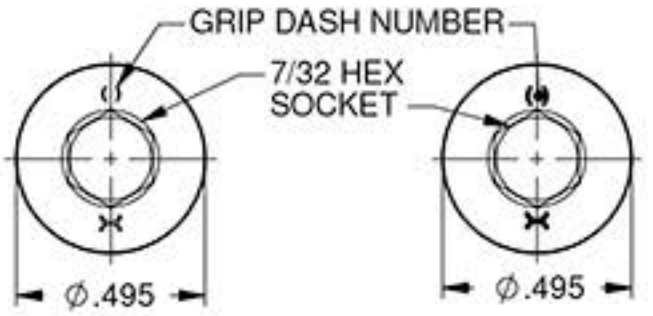
ALCOA

CURRENT DESIGN ACTIVITY
CAGE CODE 0HDW7
AFSR TUCSON OPERATIONS
3724 EAST COLUMBIA STREET
TUCSON, ARIZONA 85714
PHONE (520) 519-7400
FAX (520) 519-7454

HUCK ZL

ENGINEERING STANDARD





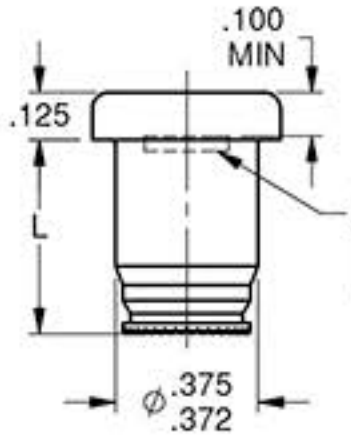
STUD NUT - FLUSH HEAD D1011( ) - 1- ( )

PART NUMBER CALLOUT

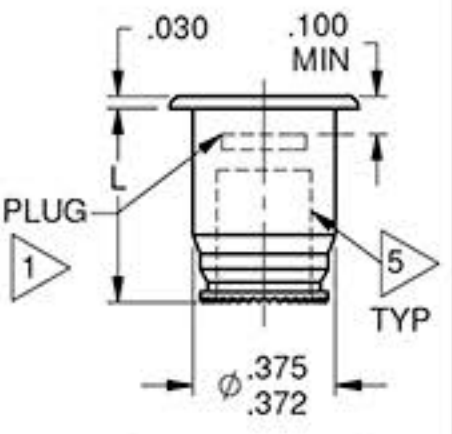
D	1100	( )	-1	-( )	(FLUSH HEAD)
D	1200	( )	-1	-( )	(PROT. HEAD)
DM	1200	( )	-1	-( )	(MOD. PROT. HEAD)

- MODEL
- SERIES
- FINISH CODE: NONE - PLATED, C - UNPLATED
- SIZE CODE PER NAS 547
- GRIP CODE (SEE TABLE 1)

4



STUD NUT - PROTRUDING HEAD D1012( )-1-( )



STUD NUT - MOD PROTRUDING HEAD DM1012( )-1-( )

KEY

TABLE I			
GRIP CODE	GRIP	L	
		FLUSH	PROT.
1	.062-.125	-	.325
2	.125-.188	.387	
3	.188-.250	.450	
4	.250-.312	.512	
5	.312-.375	.575	
6	.375-.438	.637	
7	.438-.500	.700	
8	.500-.562	.762	
9	.562-.625	.825	
10	.625-.688	.887	
11	.688-.750	.950	
12	.750-.812	1.012	
13	.812-.875	1.075	
14	.875-.938	1.137	
15	.938-1.000	1.200	
16	1.000-1.062	1.262	
17	1.062-1.125	1.325	
18	1.125-1.187	1.387	
19	1.187-1.250	1.450	
20	1.250-1.312	1.512	

PART NUMBER	COMPONENT DESCRIPTION	MATERIAL	FINISH
D1011-1-( )-SP	STUD NUT	8740 ALLOY STEEL PER AMS 6322	CAD PLATE PER AMS QQ-P-416, TYPE I, CLASS 3
D1011-1-( ) D1012-1-( )			CAD PLATE PER AMS QQ-P-416, TYPE II, CLASS 3
DM1012-1-( )			CAD PLATE PER AMS QQ-P-416, TYPE II, CLASS 2
D1011C-1-( ) D1012C-1-( )		431 CRES PER AMS 5628 OR EQUIVALENT	PASSIVATE PER AMS2700
DM1012C-1-( )			PASSIVATE PER AMS2700, DRILUBE PER AS5272 OR EQUIV
D1050-1 DB1050-1 DM1050-1	RECEPTACLE	8740 ALLOY STUD, 6061 ALUM SHELL, OTHER COMPONENTS CARBON STEEL	CAD PLATE PER AMS QQ-P-416, TYPE II, CLASS 3 STEEL PARTS, ANODIZE SHELL PER MIL-A-8625, TYPE II, CLASS 1
D1050C-1		431 CRES STUD, 6061 ALUM SHELL, OTHER COMPONENTS CRES	PASSIVATE CRES PARTS PER AMS2700, & DRILUBE STUD ONLY, ANODIZE SHELL PER MIL-A-8625, TYPE II, CLASS 1
D1050ST-1		8740 ALLOY STUD, OTHER COMPONENTS CARBON STEEL	CAD PLATE PER AMS QQ-P-416, TYPE II, CLASS 3
D1021A-1	RETAINING RING	ELGILOY PER AMS 5833, 5834 OR EQUIV.	PASSIVATE PER AMS2700
D1021C-1		302 CRES PER AMS 5636 OR EQUIV.	

AF	PER DCN 13120, CHANGED FORMAT	TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 .XX = ±.02 .XXX = ±.015 ANGLES ±0.5° DIMENSIONS IN INCHES	DRAWN BY: J. SCHLOBOHM
ISSUED	1/3/2005		CHECKED BY: SIGNATURE ON FILE
REVISED	6/19/2015	HUCK ZL, SIZE 1	D1000 SERIES
PAGE	1 OF 4		S-0042

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HUCK ZL

ENGINEERING STANDARD

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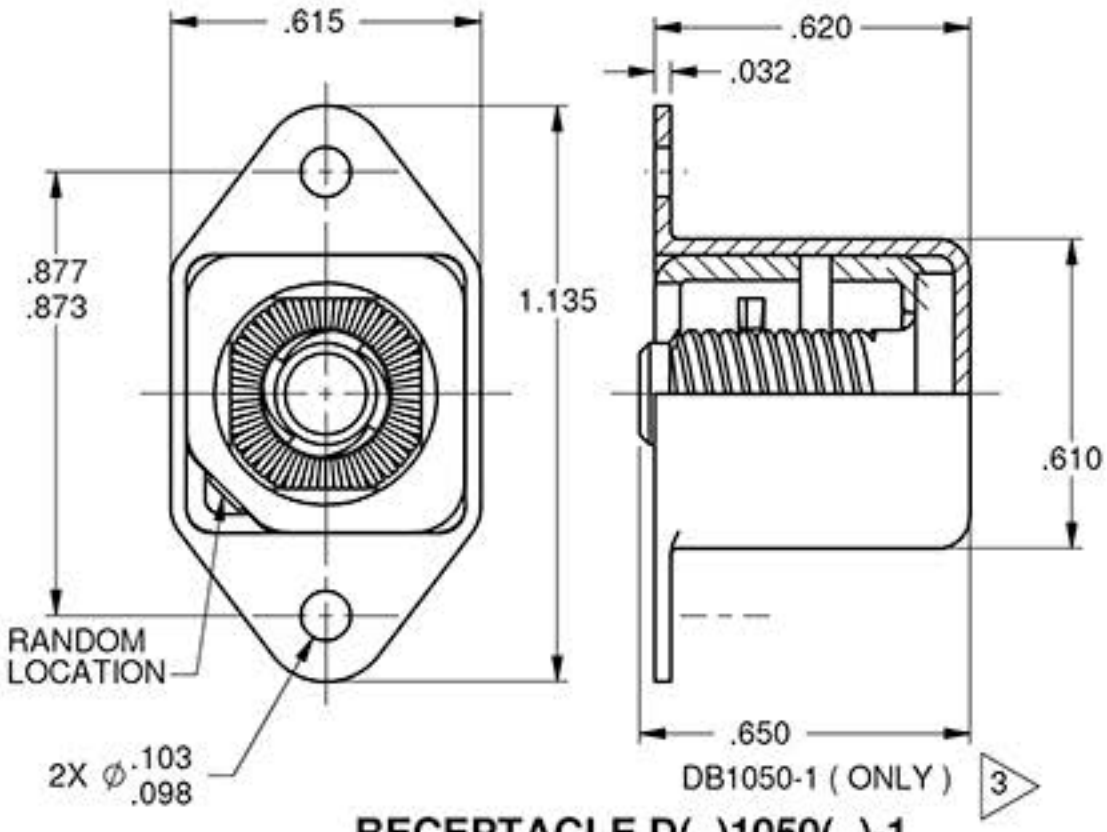
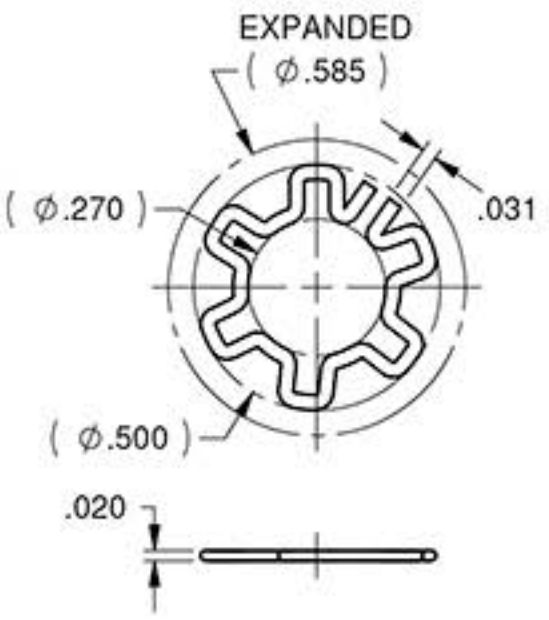
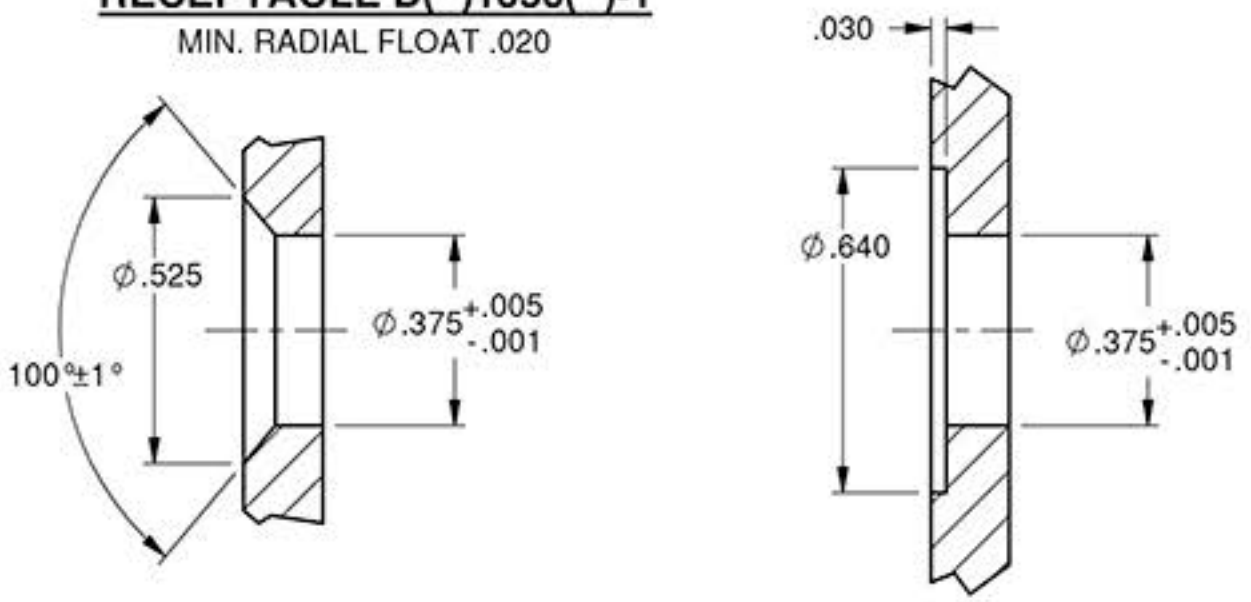


RECEPTACLE D( )1050( )-1

MIN. RADIAL FLOAT .020



RETAINING RING D1021( )-1



PANEL & SUBSTRUCTURE PREPARATION

NOTES:

1. FOR SHORT LENGTH PARTS (UP TO"-6") A PLUG CAPABLE OF WITHSTANDING AN AIR PRESSURE OF 80 PSI MIN. MAY BE USED.
2. THIS FASTENER MEETS THE ENVELOPE DIMENSIONS AND THE MECHANICAL PERFORMANCE OF NAS 547 SIZE # 1.
3. THE FOLLOWING RECEPTACLE PART NUMBERS ARE IDENTICAL EXCEPT AS GRAPHICALLY SHOWN ABOVE: D1050-1, DB1050-1, DM1050-1.
4. COMPLETE PART NUMBER INCLUDES STUD NUT, RECEPTACLE AND RETAINING RING.
5. .250-28 UNF-2B QUADRUPLE LEAD MODIFIED MINOR Ø.215/.227 PER ASME B1.1.

AF	PER DCN 13120, CHANGED FORMAT	TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 .XX = ±.02 .XXX = ±.015 ANGLES ±0.5°	DRAWN BY	J. SCHLOBOHM
			CHECKED BY	SIGNATURE ON FILE
ISSUED	1/3/2005			D1000 SERIES
REVISED	6/19/2015	HUCK ZL, SIZE 1		
PAGE	2 OF 4	DIMENSIONS IN INCHES		S-0042

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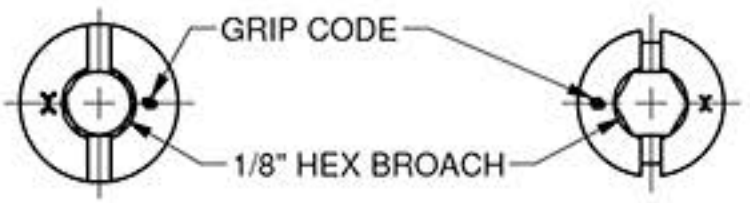
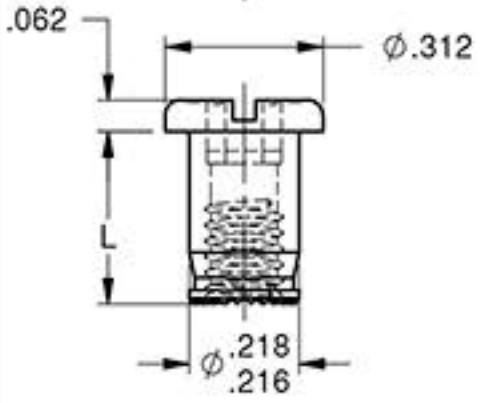
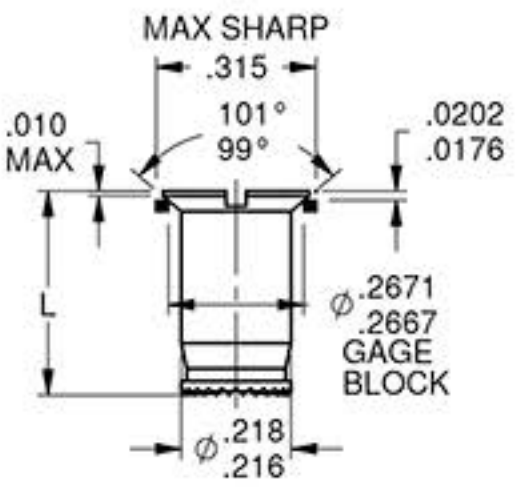
HUCK ZL

ENGINEERING STANDARD

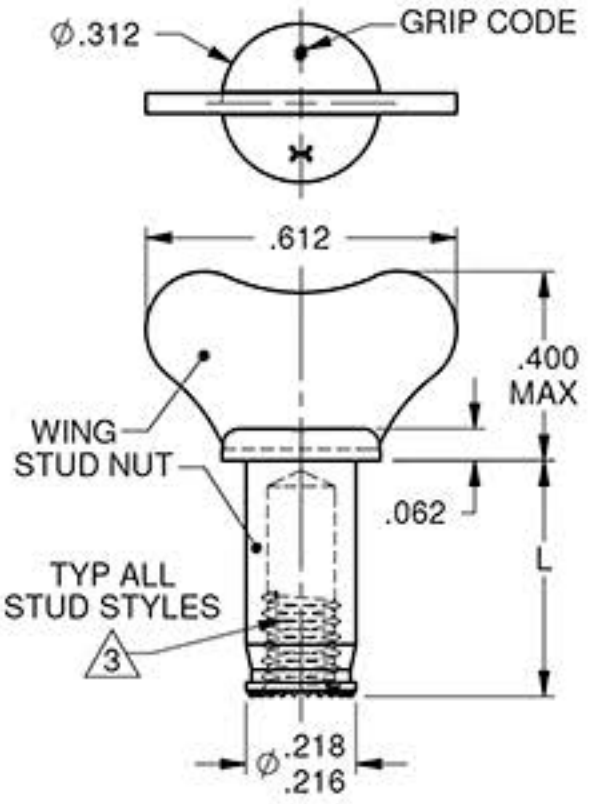




STUD NUT - PROTRUDING HEAD
D3012( )-0-( )



STUD NUT - FLUSH HEAD
D3011( ) - 0- ( )



STUD NUT - PROTRUDING WING HEAD
DW3012( )-0-( )

PART NUMBER CALLOUT

D	3100	( )	-0	-( )	(FLUSH HEAD)
D	3200	( )	-0	-( )	(PROT. HEAD)
DW	3200	( )	-0	-( )	(WINGED PROT. HEAD)

- MODEL
- SERIES
- FINISH CODE: NONE - PLATED, C - UNPLATED
- SIZE CODE PER NAS 547
- GRIP CODE (SEE TABLE 1)

TABLE I

GRIP CODE	GRIP	L ±.010	
		FLUSH	PROT.
1	.062-.125	-	.280
2	.125-.188	.343	
3	.188-.250	.405	
4	.250-.312	.468	
5	.312-.375	.530	
6	.375-.438	.593	
7	.438-.500	.655	
8	.500-.562	.718	
9	.562-.625	.780	
10	.625-.688	.843	
11	.688-.750	.905	
12	.750-.812	.968	
13	.812-.875	1.030	
14	.875-.938	1.093	
15	.938-1.000	1.155	
16	1.000-1.062	1.218	

PART NUMBER	COMPONENT DESCRIPTION	MATERIAL	FINISH
D3011-0-( ) D3012-0-( ) DW3012-0-( )	STUD NUT	8740 ALLOY STEEL PER AMS 6322 OR EQUIV.	CAD PLATE PER AMS QQ-P-416, TYPE I I, CLASS 3
D3011C-0-( ) D3012C-0-( ) DW3012C-0-( )		431 CRES STUD PER AMS 5628 OR EQUIV.	PASSIVATE PER AMS2700
D3050-0	RECEPTACLE	8740 ALLOY STEEL STUD; 6061 ALUMINUM SHELL & RETAINER; CARBON STEEL RATCHET; CRES SPRING & WASHER	CAD PLATE STUD & RATCHET PER AMS QQ-P-416, TYPE I I, CLASS 3, ANODIZE SHELL & RETAINER PER MIL-A-8625, TYPE I I, PASSIVATE SPRING & WASHER PER AMS2700
D3050C-0		431 CRES STUD; 6061 ALUMINUM SHELL & RETAINER; 17-7 PH CRES RATCHET, SPRING & WASHER	PASSIVATE CRES PARTS & DRILUBE STUD ONLY PER AS5272 OR EQUIV., ANODIZE SHELL & RETAINER PER MIL-A-8625, TYPE I I
D3021-0	SNAP RING	1095 CARBON STEEL PER AMS 5112 OR EQUIV.	CAD PLATE PER AMS QQ-P-416, TYPE I I, CLASS 3
D3021C-0		302 CRES PER AMS 5636 OR EQUIV.	PASSIVATE PER AMS2700

AF	PER DCN 13120, CHANGED FORMAT	TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05, .XX = ±.02, .XXX = ±.015, ANGLES ±0.5°	DRAWN BY: J. SCHLOBOHM
ISSUED	1/3/2005		CHECKED BY: SIGNATURE ON FILE
REVISED	6/19/2015	HUCK ZL, MINIATURE SIZE 0	D3000 SERIES
PAGE	3 OF 4	DIMENSIONS IN INCHES	S-0042

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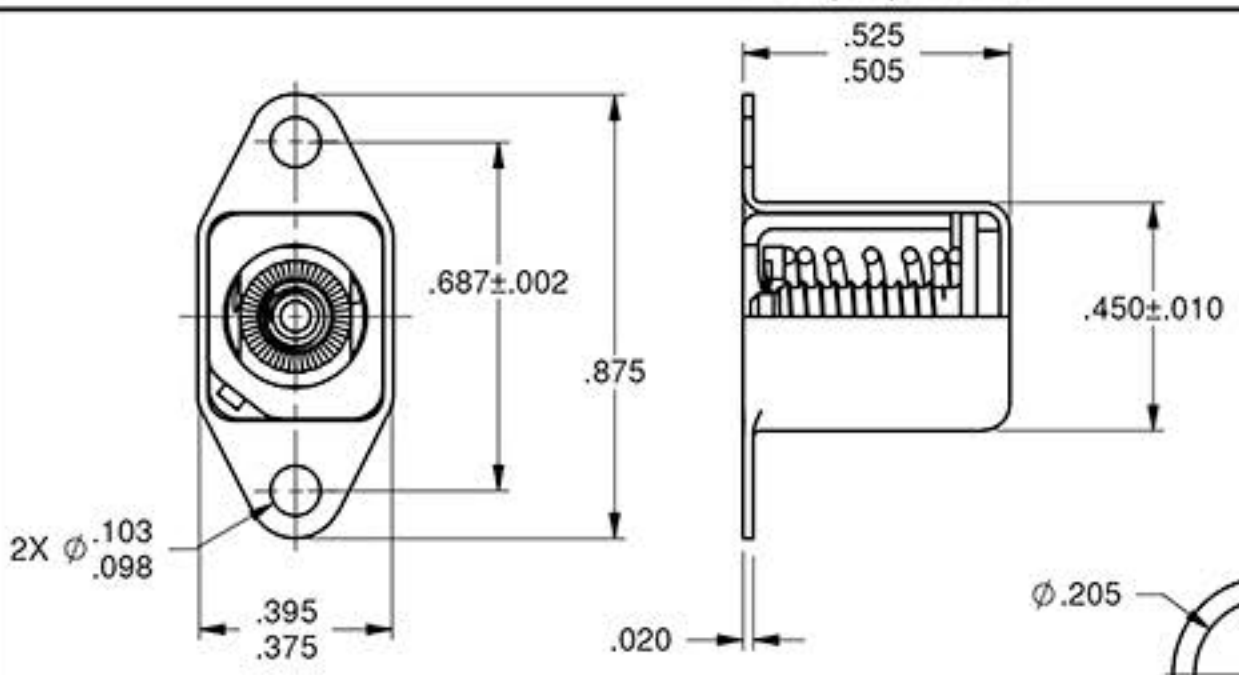
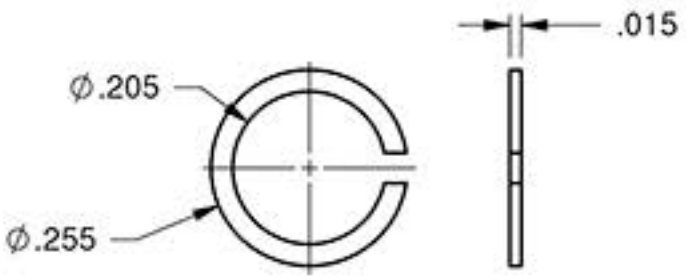
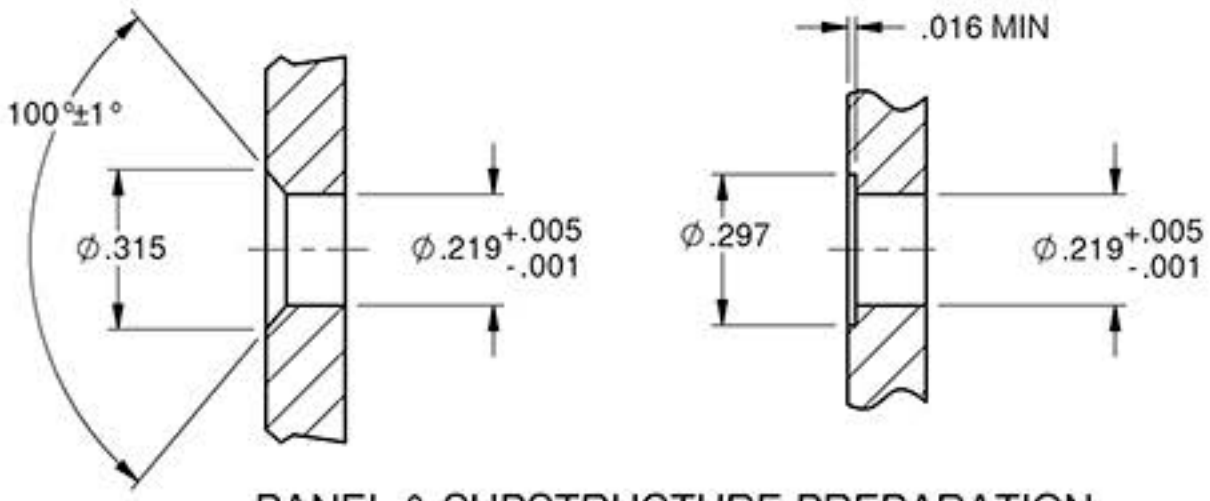


RECEPTACLE D3050( )-0



SNAP RING D3021( )-0



PANEL & SUBSTRUCTURE PREPARATION

NOTES:

1. DEEPDRAW RESULTS IN SOME THINNING OF OUTER RECEPTACLE TO .013 MIN.
2. COMPLETE PART NUMBER INCLUDES STUD NUT, RECEPTACLE & SNAP RING.
3. .138-62 UNC-2B DOUBLE LEAD MODIFIED MINOR Ø.104/.114 PER ASME B1.1.

AF	PER DCN 13120, CHANGED FORMAT		TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 .XX = ±.02 .XXX = ±.015 ANGLES ±0.5° DIMENSIONS IN INCHES	DRAWN BY	J. SCHLOBOHM
				CHECKED BY	SIGNATURE ON FILE
ISSUED	1/3/2005	HUCK ZL, MINIATURE SIZE 0		D3000 SERIES	
REVISED	6/19/2015			S-0042	
PAGE	4 OF 4				

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