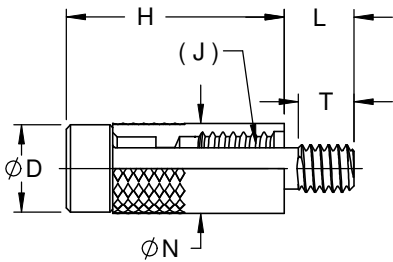


REV Y

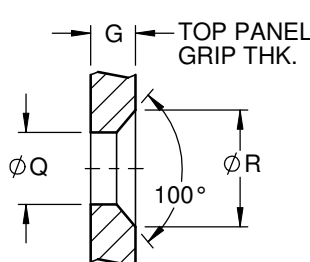
S-2293

DRAWING NO.

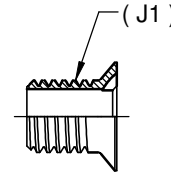
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ASSEMBLY BEFORE MOUNTING

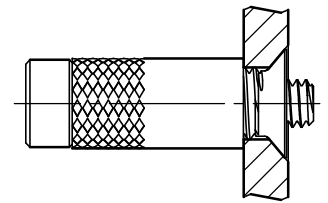


PANEL PREPARATION



SEE SHEET 2 FOR RETAINER NUT INFORMATION

RETAINER NUT



ASSEMBLY AFTER MOUNTING

THREAD SIZE CODE	Ø D			H ±.030	(J) THREAD	Ø Q	Ø N	Ø R	T
	HS, P, SL	SK	TS						
4, 4F, M3	.19	.23	.19	.56	.164-36 UNJF-3B	.164	.200	.228	.156
6, 6F, M3.5	.27	.31	.22	.65	.216-24 UNJC-3B	.218	.250	.352	
8, 8F, M4, 10, 10C, 10F M5	.30	.37	.30	.75	.250-28 UNJF-3B M7 x 1.0 6G	.250	.310	.406	.312
12, 12C, 12F, M6	.40	.50	.40	1.00	.375-24 UNJF-3B	.375	.440	.570	.375

PART NUMBER CALLOUT

D ( ) 7910 ( ) - ( ) - ( )

LENGTH CODE	L	LENGTH CODE	L	LENGTH CODE	L
NA	NA	9	.562	15	.938
4	.250	10	.625	16	1.000
5	.312	11	.688	17	1.062
6	.375	12	.750	18	1.125
7	.438	13	.812	19	1.187
8	.500	14	.875	20	1.250

THREAD SIZE CODE	THREAD SIZE	LEAD	THREAD SIZE CODE	THREAD SIZE	LEAD
4	.112-40 UNC-3A	SINGLE	8F	.164-32 UNC-3A	QUAD
6	.138-32 UNC-3A		10F	.190-32 UNF-3A	
8	.164-32 UNC-3A		12F	.250-28 UNF-3A	
10	.190-32 UNF-3A		M3	M3 x 0.5 6g	METRIC
12	.250-28 UNF-3A		M3.5	M3.5 x 0.6 6g	
10C	.190-24 UNC-3A	M4	M4 x 0.7 6g		
12C	.250-20 UNC-3A	M5	M5 x 0.8 6g		
4F	.112-40 UNC-3A	DOUBLE	M6	M6 x 1.0 6g	
6F	.138-32 UNC-3A				

RECESS CODE	DRIVING RECESS AND SPECIFICATION	RECESS CODE	DRIVING RECESS AND SPECIFICATION
S	SLOT RECESS PER ANSIB18.6.3	SK	SLOT FILLISTER HEAD PER ANSIB18.6.3 (KNURLED)
HH	HEX HEAD (PLAIN) PER ANSIB18.6.3	TS	RECESS PER NASM 33781
HS	HEX SOCKET RECESS PER ANSIB18.3	HP	HEX HEAD/CROSS RECESS
P	CROSS RECESS PER NASM 9006		

MATERIAL / FINISH CODE	SCREW MATERIAL / SCREW AND SLEEVE FINISH	MATERIAL / FINISH CODE	SCREW MATERIAL / SCREW AND SLEEVE FINISH
NONE	302 CRES / PASSIVATED ASSEMBLY	A	302 CRES / ALUMINUM COATED ASSEMBLY
P	A-286 CRES / PASSIVATED ASSEMBLY	B	A-286 CRES / ALUMINUM COATED ASSEMBLY
R	A-286 CRES / BLACK OXIDE SCREW W / PASSIVATED SLEEVE	C	302 CRES / CADMIUM PLATED ASSEMBLY
S	A-286 CRES / BLACK OXIDE SCREW AND SLEEVE	D	A-286 CRES / CADMIUM PLATED ASSEMBLY

Y	DCN 8694	03-29-10
REV	DESCRIPTION/EC NO.	DATE

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES  
TOLERANCE UNLESS OTHERWISE NOTED:  
.X = ±.05 ANGLES ±0.5°  
.XX = ±.02  
.XXX = ±.015

**Alcoa Fastening Systems**  
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AEROSPACE FASTENER DIVISION  
3724 EAST COLUMBIA STREET  
TUCSON, ARIZONA 85714  
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FAX 520 519-7427  
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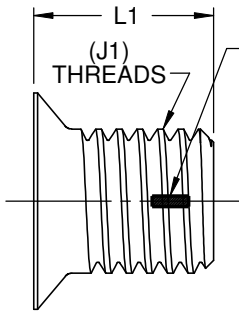
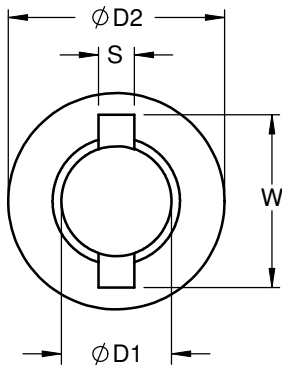
TITLE **CAPTIVE SCREW, RETAINER HELD, FILLISTER & HEX HEAD, ALL SIZES, OPTIONAL RECESS**

DATE	01-23-06	PART NUMBER	D( )7910
DRAWN	J. SCHLOBOHM	SIGNER INITIALS	
CHECK	J. CALLAWAY	DRAWING NO.	S-2293
APPROVE	J. HEIN	CAGE CODE	0HDW7
		SCALE: NONE	SHEET 1 OF 2

REV Y

S-2293

DRAWING NO.



NYLON PATCH PER MIL-DTL-18240 (CUSTOMER OPTION)

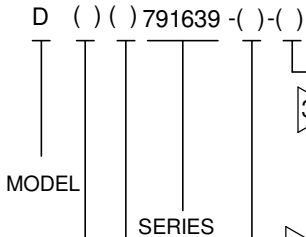
THREAD SIZE CODE	Ø D1	Ø D2 MIN	S	W
4	.112	.200	.031	.175
6	.138	.304	.060	.280
8/10	.190	.350		.300
12	.260	.512	.062	.437
M5	.195	.350		.300

MATERIAL: RETAINER NUT: D( )791639: 302 CRES PER AMS 5636 OR ASTM-A-493 OR 303Se CRES PER AMS 5641 OR ASTM-A-484

EXAMPLE PART NUMBER: DNB 791639-4-B: NYLON PATCH, BLACK, .164-36 UNJF-3A THREAD, .081-.130 PANEL THICKNESS RETAINER NUT

**RETAINER NUT BEFORE MOUNTING**

**PART NUMBER CALLOUT**



GRIP CODE	NOMINAL SIZE 4		NOMINAL SIZE 6		NOMINAL SIZE 8, 10, M5		NOMINAL SIZE 12	
	G	L1	G	L1	G	L1	G	L1
A	.062-.080	.225	.062-.162	.312	.062-.093	.250	.081-.218	.375
B	.081-.130	.275	.188-.312	.437	.094-.187	.312	.219-.343	.500
C	NA	NA	.313-.437	.562	.188-.312	.437	.344-.462	.625
D	NA	NA	NA	NA	.313-.437	.562	.469-.593	.750

THREAD SIZE CODE	(J1) THREAD
4	.164-36 UNJF-3A
6	.216-24 UNJC-3A
8/10	.250-28 UNJF-3A
M5	M7 x 1.0 6g
12	.375-24 UNJF-3A

FINISH CODE	FINISH
NONE	PASSIVATE PER AMS-QQ-P-35
A	ALUMINUM COAT PER NAS4006
B	BLACK OXIDE PER MIL-DTL-13924, CLASS 4
C	CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2

CODE	NYLON PATCH OPTION
NONE	NO NYLON PATCH
N	NYLON PATCH PER MIL-DTL-18240

**NOTES:**

- 1) THREAD LENGTH 'T' DIMENSION FOR CODE -3 IS .142 FOR ALL THREAD SIZE CODES
- CODE -4 IS .205 FOR ALL THREAD SIZE CODES EXCEPT 4, 4F, AND M3
- CODE -5 IS .265 FOR ALL THREAD SIZE CODES EXCEPT 4, 4F, AND M3
- 2) THREAD SIZE CODE INDICATES NOMINAL RETAINER NUT THREAD SIZE (J1).
- 3) GRIP CODE "G" INDICATES TOP PANEL THICKNESS RANGE DESIGNATED BY LETTERS "A" THRU "D".
- 4) -3A AND -3B THREADS PER MIL-S-7742. METRIC THREADS PER ASME B1.13M.
- 5) HP HEAD STYLE: CROSS RECESS PER NASM9006, RECESS SIZE IS ONE SIZE SMALLER THAN EQUIV. THREAD SIZE FOR FLUSH HEAD SCREW.
- 6) SCREW IS SEMI-CAPTIVE ON ALUMINUM-COATED AND CAD-PLATED VERSIONS, COMPONENTS ARE COATED PRIOR TO ASSEMBLY TO ENSURE COMPLETE COVERAGE. SLEEVE I.D. IS THREADED TO ALLOW FOR ASSEMBLY AFTER THREAD ROLL AND COAT OPERATION.

**MATERIAL AND FINISH FOR SHEET 1**

**MATERIAL**

SCREW:  
WHEN SPECIFIED BY MATERIAL/FINISH CODE:  
302 CRES PER AMS 5636 OR ASTM-A-493  
OR  
A-286 CRES PER AMS 5732, AMS 5737 OR EQUIV.,  
H.T TO 160 KSI MIN. ULTIMATE TENSILE STRENGTH

SLEEVE:  
303Se CRES PER AMS 5641 OR ASTM-A-484

SPRING:  
302 CRES PER AMS 5688 OR ASTM-A-313

**FINISH**

SCREW:  
WHEN SPECIFIED BY MATERIAL/FINISH CODE:  
PASSIVATE PER AMS QQ-P-35  
BLACK OXIDE PER MIL-DTL-13924, CLASS 3 (A-286)  
BLACK OXIDE PER MIL-DTL-13924, CLASS 4 (302)  
ALUMINUM COAT PER NAS4006  
CAD PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2

SLEEVE:  
WHEN SPECIFIED BY MATERIAL/FINISH CODE:  
PASSIVATE PER AMS QQ-P-35  
BLACK OXIDE PER MIL-DTL-13924, CLASS 4  
ALUMINUM COAT PER NAS4006  
CAD PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2

SPRING: ALL VERSIONS: PASSIVATE PER AMS QQ-P-35

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Y	DCN 8694	03-29-10
REV	DESCRIPTION/EC NO.	DATE

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.X = ±.05 ANGLES ±0.5°  
.XX = ±.02  
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FAX 520 519-7427  
www.alcoafasteners.com

TITLE <b>CAPTIVE SCREW, RETAINER HELD, FILLISTER &amp; HEX HEAD, ALL SIZES, OPTIONAL RECESS</b>			
DATE 01-23-06	PART NUMBER <b>D( ) 791639</b>		
DRAWN J. SCHLOBOHM	SIGNER INITIALS	DRAWING NO. <b>S-2293</b>	
CHECK J. CALLAWAY		CAGE CODE 0HDW7	REV <b>Y</b>
APPROVE J. HEIN		SCALE: NONE	SHEET 2 OF 2