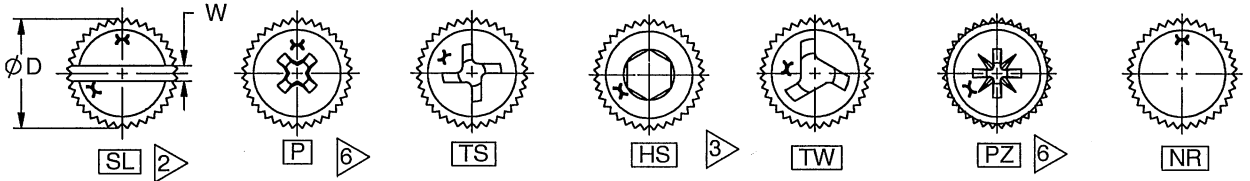
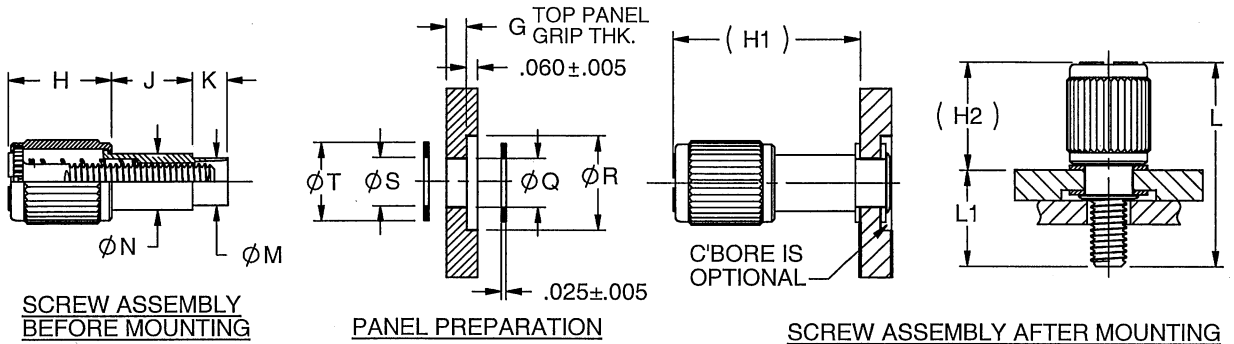


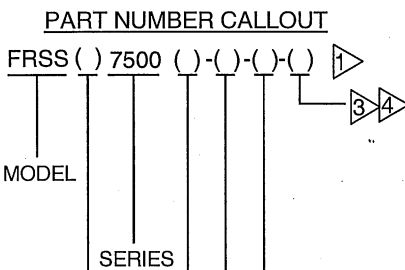
REV K

S-1051

DRAWING NO.



THREAD SIZE CODE	Ø D	H		(H1)		(H2)		J	Ø M ±.005	Ø N ±.005	Ø Q +.004 -0.001	Ø R	Ø S +.004 -0.001	Ø T ±.010	W	RECESS SIZE			
		HS	P, PZ, SL, TS, TW, NR	HS	P, PZ, SL, TS, TW, NR	HS	P, PZ, SL, TS, TW, NR									P, PZ	TW	TS	HS
4, 4F, M3	.325	.444	.374	.746	.676	.481	.411	.265	.177	.206	.250	.390	.185	.309	.040	4	2	2	3/32
6, 6F, M3.5	.356	.449	.379	.764	.694	.494	.424	.280	.202	.241	.272	.406	.209	.333	.044	4	3	4	7/64
8, 8F, M4	.420	.559	.489	.986	.916	.606	.536	.385	.215	.258	.281	.468	.223	.385	.049	6	4	6	9/64
10, 10C, 10F, M5	.451	.599	.529	1.061	.991	.641	.571	.427	.250	.297	.316	.500	.257	.415	.055	8	5	8	5/32
12, 12C, 12F, M6	.531	.604	.534	1.066	.996	.641	.571	.428	.313	.371	.386	.578	.323	.495	.062	10	6	10	3/16



LENGTH CODE	4, 4F, M3		6, 6F, M3.5		8, 8F, M4		10, 10C, 10F, M5		12, 12C, 12F, M6	
	L +.025 -0.015	L1	L +.025 -0.015	L1	L +.025 -0.015	L1	L +.025 -0.015	L1	L +.025 -0.015	L1
1	.639	.228	.650	.226	.685	.149	.832	.261	.745	.174
2	.764	.353	.775	.351	.810	.274	.957	.386	.870	.299
3	.889	.478	.900	.476	.935	.399	1.082	.511	.995	.424
4	1.014	.603	1.025	.601	1.060	.524	1.207	.636	1.120	.549
5	1.139	.728	1.150	.726	1.185	.649	1.332	.761	1.245	.674

THREAD SIZE CODE	THREAD SIZE	5	LEAD	THREAD SIZE CODE	THREAD SIZE	5	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 0.5-4h6h		
12	.250-28 UNF-3A	SINGLE (COARSE)		M3.5	M3.5 x 0.6-4h6h	METRIC	
10C	.190-24 UNC-3A			M4	M4 x 0.7-4h6h		
12C	.250-20 UNC-3A			M5	M5 x 0.8-4h6h		
4F	.112-40 UNC-3A	DOUBLE		M6	M6 x 1.0-4h6h		
6F	.138-32 UNC-3A						

GRIP CODE	G (TOP PANEL GRIP THICKNESS)	K ±.005
A	.020-.031	.125
B	.032-.093	.187
C	.094-.155	.250
D	.156-.217	.312
E	.218-.279	.375
F	.280-.341	.437

RECESS CODE	DRIVING RECESS AND SPECIFICATION	RECESS CODE	DRIVING RECESS AND SPECIFICATION
2	SLOT RECESS PER ANSI B18.6.3	PZ	RECESS PER TYPE 1A ANSI B18.6.3
6	HS HEX SOCKET RECESS PER ANSI B18.3	TS	RECESS PER NASM 33781
	NR NO RECESS	TW	RECESS PER NAS 4000
	P CROSS RECESS PER NASM 9006		

CODE	FINISH
NONE	CLEAR
B	BLACK

K	DCN 2538	07-08-04
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 Alcoa Fastening Systems

AEROSPACE FASTENER DIVISION
 3724 EAST COLUMBIA STREET
 TUCSON, ARIZONA 85714
 PHONE 520 519-7400
 FAX 520 519-7427
 www.alcoafasteners.com

TITLE
TURN-LOC, HIGH PROFILE, OPTIONAL RECESS, ALUM KNOB .031 RADIAL FLOAT

DATE 09/28/2004	PART NUMBER FRSS7500
DRAWN JLS	DRAWING NO. S-1051
CHECK [Signature]	CAGE CODE 0HDW7
APPROVE	REV K

SCALE: 1:1 SHEET 1 OF 2

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ORIGINAL
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REV
K

DRAWING NO.
S-1051

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AVAILABILITY TABLE																									
GRIP CODE	4, 4F, M3					6, 6F, M3.5					8, 8F, M4					10, 10C, 10F, M5					12, 12C, 12F, M6				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
A																									
B																									
C																									
D																									
E																									
F																									

- ASSEMBLIES NOT AVAILABLE
- FULLY RETRACTABLE ASSEMBLIES
- ASSEMBLIES NOT FULLY RETRACTABLE (STUD WILL PROTRUDE BELOW MINIMUM TOP PANEL THICKNESS)

MATERIAL

STUD: HS, NR, P, PZ, & SLOT RECESSES
 ALL SIZES - 302 CRES PER ASTM-A-493 OR AMS 5636

STUD: TS AND TW RECESSES
 ALL SIZES - A-286 CRES PER AMS 5737, HEAT TREAT TO 160 KSI MIN. ULTIMATE TENSILE STRENGTH

KNOB : 6061 ALUMINUM ALLOY PER AMS QQ-A-225/8, OR AMS 4117, OR EQUIVALENT

SLEEVE: 304 CRES PER AMS QQ-S-763 OR AMS 5639

SPRING: 302 CRES PER ASTM-A313 OR AMS 5688

WASHERS: 301 CRES PER ASTM A 666 OR AMS 5519 OR EQUIVALENT

FINISH

NONE: STUD, SPRING, SLEEVE & WASHERS: PASSIVATE PER AMS-QQ-P-35

KNOB: ANODIZE PER MIL-A-8625, TYPE II, CLASS I


B: STUD & WASHERS:
 BLACK OXIDE PER MIL-C-13924, CLASS 4 (300 SERIES)
 BLACK OXIDE PER MIL-C-13924, CLASS 3 (A-286)
 KNOB: BLACK ANODIZE PER MIL-A-8625, TYPE II, CLASS 2

NOTES:

- 1) LETTERS AT THE END OF PART NUMBER DESIGNATE SPECIAL ASSEMBLIES:
 DL - ASSEMBLIES WITH DRI LUBE THREADS PER MIL-PRF-46010
 PL - ASSEMBLIES WITH PATCH LOCK PER MIL-DTL-18240
- 2) NO CODE REQUIRED FOR SLOTTED HEADS
- 3) WHEN USING THE HEX SOCKET CONFIGURATION, ADD .070 TO "L" LENGTH.
- 4) FOR LONGER LENGTHS, ADD .125 INCREMENTS PER LENGTH CODE
- 5) -3A THREADS PER ASME B1.1. "M" THREADS PER ANSI/ASME B1.13M.
- 6) RECESS IS ONE SIZE SMALLER THAN NOMINAL SIZE REQUIRED FOR 100° FLAT HEAD.
- 7) COMPONENTS ARE FINISHED PRIOR TO THE ASSEMBLY PROCESS. DISCOLORATION OF THE BLACK ANODIZE MAY OCCUR ON THE CRIMPED PORTION OF THE KNOB DURING ASSEMBLY. A HIGH-ADHESION BLACK PAINT IS PERMITTED FOR TOUCH-UP AFTER ASSEMBLY.

INSTALLATION TOOLS: () INDICATES THREAD SIZE CODE

ARBOR PRESS TOOL HW7600-(), REMOVAL ADAPTER TOOL FNR7505-(), NOSE PIECE HN7513-(), PULLER HP7523-(), HANDLE ASSEMBLY TA7533;
 COMPLETE HAND TOOL ASS'Y: H8603-() (INCLUDES NOSE PIECE, PULLER & HANDLE)

K	DCN 2538	07-08-04	 Alcoa Fastening Systems	TITLE	
REV	DESCRIPTION/EC NO.	DATE		TURN-LOC, HIGH PROFILE, OPTIONAL RECESS, ALUM KNOB .031 RADIAL FLOAT	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN INCHES TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 ANGLES ±0.5° .XX = ±.02 .XXX = ±.015			AEROSPACE FASTENER DIVISION 3724 EAST COLUMBIA STREET TUCSON, ARIZONA 85714 PHONE 520 519-7400 FAX 520 519-7427 www.alcoafasteners.com	DATE	PART NUMBER
		09/28/2004		FRSS7500	
		DRAWN JLS		DRAWING NO. S-1051	
		CHECK <i>[Signature]</i>		CAGE CODE	REV K
		APPROVE <i>[Signature]</i>	SCALE: 1:1	SHEET 2 OF 2	