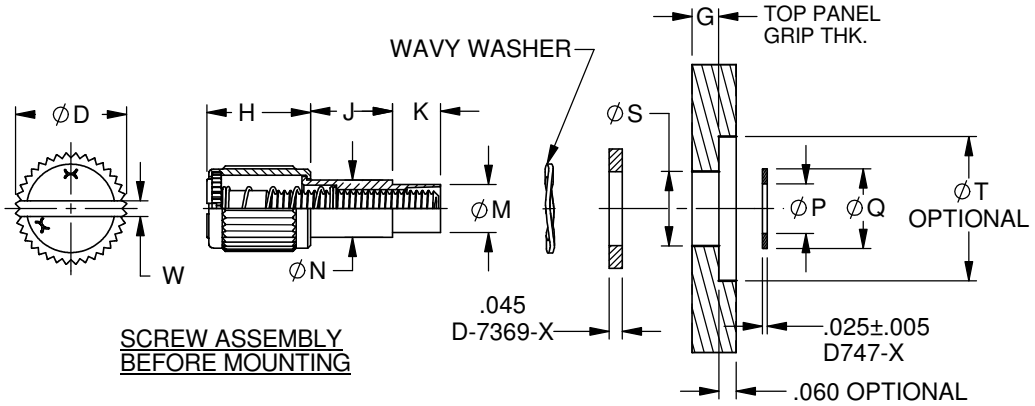
Alcoa Fastening Systems

CURRENT DESIGN ACTIVITY
CAGE CODE 0HDW7 (FORMER 08524)
AFS TUCSON OPERATIONS
3724 EAST COLUMBIA STREET
TUCSON, ARIZONA 85714
PHONE (520) 519-7400
FAX (520) 519-7454

TURN-LOC®

ENGINEERING STANDARD

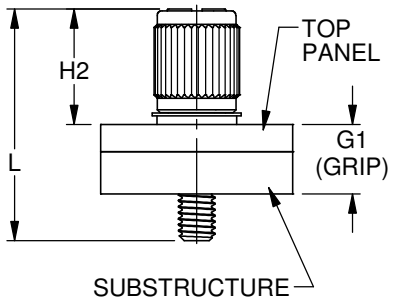


SCREW ASSEMBLY BEFORE MOUNTING

SCREW ASSEMBLY AFTER MOUNTING

PANEL PREPARATION

THREAD SIZE CODE	Ø D	H	(H1)	H2	J	Ø M ±.005	Ø N ±.005	Ø P +.004 -.001	Ø Q	Ø S	Ø T	W
4	.325	.373	.663	.438	.265	.177	.206	.185	.309	.250	.390	.040
6	.356	.385	.690	.440	.280	.202	.241	.209	.333	.272	.406	.044
8	.420	.495	.905	.565	.385	.215	.258	.223	.385	.281	.468	.049
10	.451	.520	.972	.590	.427	.250	.297	.257	.415	.316	.500	.055
12	.531	.530	.990	.615	.428	.313	.371	.323	.495	.386	.578	.062



INSTALLATION TOOLS:
( ) INDICATES THREAD SIZE CODE

ARBOR PRESS TOOL HW7600-( ),
REMOVAL NOSE ADAPTER WFRN7505-( ),
NOSE PIECE WFNR7505-( ),
HAND TOOL H7503-( )

PART NUMBER CALLOUT

FRBHCWW (3) 7500 -( )-( )-( ) 1

MODEL

SERIES

WAVY WASHER SEE S-2117

LENGTH CODE	4 L +.025 -.015	6 L +.025 -.015	8 L +.025 -.015	10 L +.025 -.015	12 L +.025 -.015
1	.639	.650	.685	.832	.745
2	.764	.775	.810	.957	.870
3	.889	.900	.935	1.082	.995
4	1.014	1.025	1.060	1.207	1.120
5	1.139	1.150	1.185	1.332	1.245

THREAD SIZE CODE	THREAD SIZE PER ASME B1.1	LEAD
4	.112-40 UNC-3A	SINGLE
6	.138-32 UNC-3A	
8	.164-32 UNC-3A	
10	.190-32 UNF-3A	
12	.250-28 UNF-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

GRIP CODE	G1 (GRIP)
1	.062 - .187
2	.188 - .312
3	.313 - .437
4	.438 - .562
5	.563 - .687

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. FOR INTERMEDIATE LENGTHS, ADD .062 TO PREVIOUS LENGTH CODE.

A	PER DCN 10196, REVISED MATERIAL SPECIFICATIONS AND FORMAT PER CURRENT STANDARDS FORMAT	DIMENSIONS IN INCHES TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 .XX = ±.02 .XXX = ±.015 ANGLES ±0.5°	DRAWN BY: J. SCHLOBOHM	SIGNER INITIALS
ISSUED: 4/21/1977	TURN-LOC®, ALL SIZES, LOCKING, FLOATING, .031 RADIAL FLOAT, ALL CRES		CHECKED BY: J. CALLAWAY	
REVISED: 10/27/2011			**FRBHCWW(3)7500**	
PAGE: 1 OF 2			**S-2642**	

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A

MATERIAL

STUD: A-286 CRES PER AMS 5737, HEAT TREAT
TO 160 KSI MIN. ULTIMATE TENSILE STRENGTH

KNOB: 303Se CRES PER AMS QQ-S-764, OR AMS 5641, OR EQUIVALENT

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

SPRING: 302 CRES PER ASTM-A313 OR AMS 5688

BEARING WASHER: A-286 CRES PER AMS 5737, AMS 5525, OR EQUIVALENT
HEAT TREAT TO 140 KSI MIN. ULTIMATE TENSILE STRENGTH

WASHER: 301 CRES PER ASTM A 666, OR AMS 5519, OR EQUIVALENT

WAVY WASHER: 17-7 PH STEEL PER AMS 5528 OR AMS 5529

FINISH

ALL COMPONENTS: PASSIVATE PER AMS2700 AND AMS-QQ-P-35

AVAILABILITY TABLE

GRIP CODE	4					6					8					10					12				
	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											O														
B	O					O					O										O				
C	O					O					O	O				O					O				
D	O					O					O	O				O					O	O			
E	O	O				O	O				O	O	O			O	O				O	O			
F	O	O	O			O	O				O	O	O			O	O				O	O	O		

O ASSEMBLIES NOT AVAILABLE

FULLY RETRACTABLE ASSEMBLIES

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

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