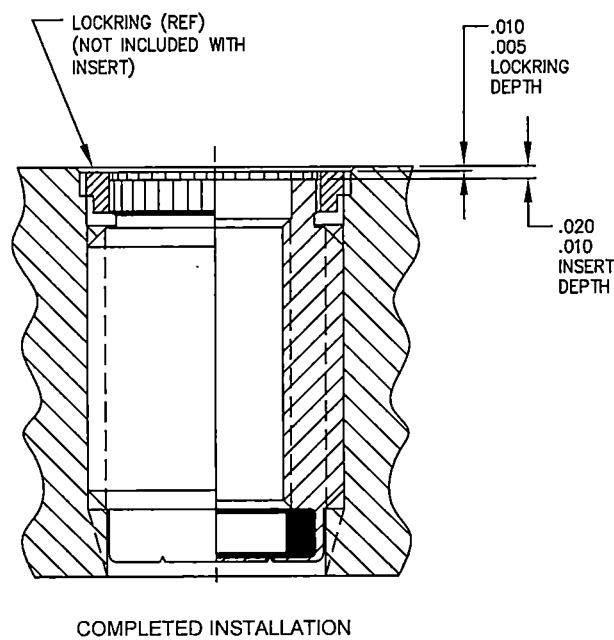
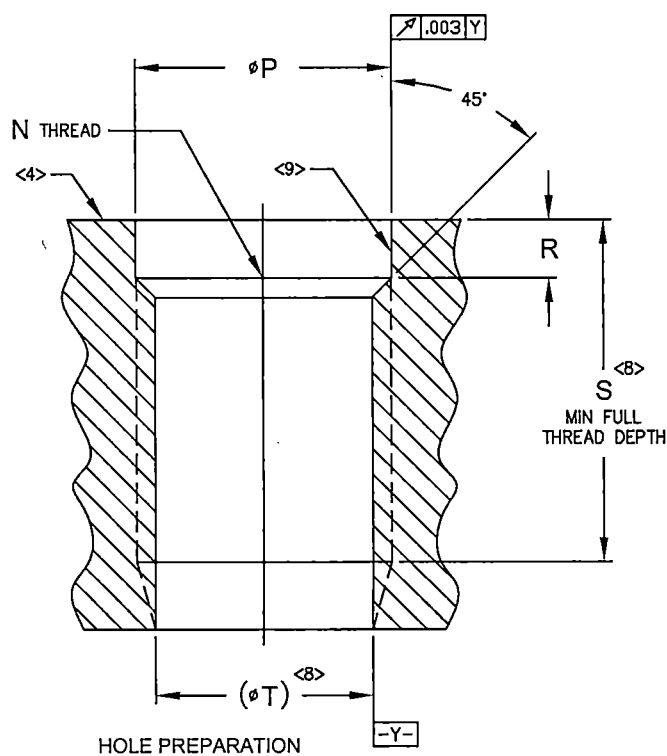
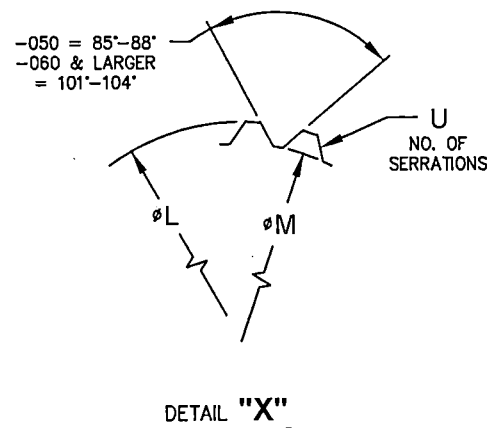
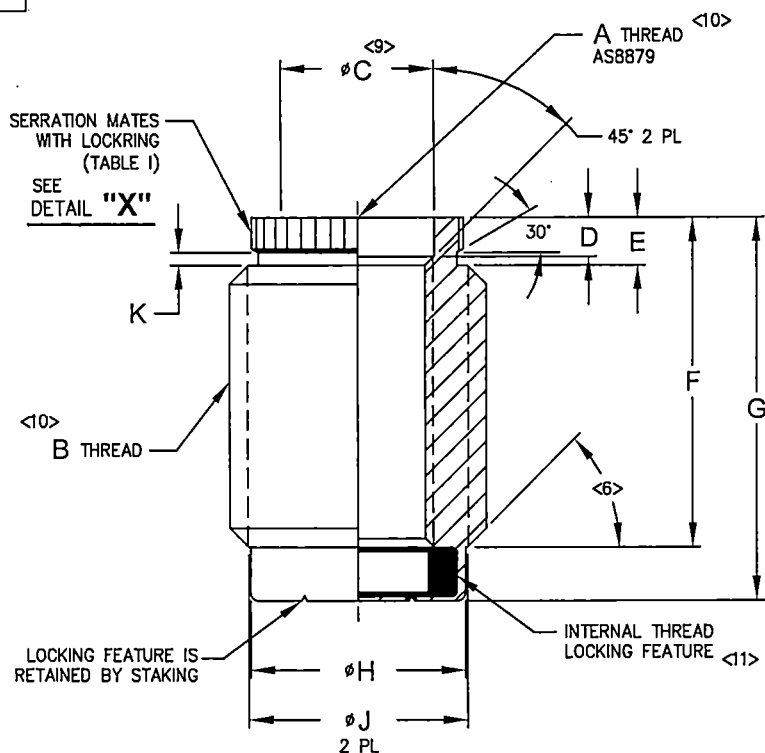




HOWMET
AEROSPACE

MANUFACTURE OF THE PROPRIETARY PARTS SHOWN HERE WITHOUT WRITTEN
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PURPOSES ONLY AND DO NOT INCLUDE DIMENSIONS NECESSARY FOR FABRICATION OF PRODUCT.

APPROVED DATE 75-09-18	CURRENT DESIGN ACTIVITY: Howmet Fastening Systems (HFS)	TITLE: INSERT - RING LOCKED, POLYIMIDE LOCK	CURRENT DESIGN ACTIVITY: CAGE CODE: 83324
REV. LETTER AND DATE L 05/17/21			SALES DRAWING NO.
DAF NUMBER 120536	Rosan Products 3018 W. Lomita Blvd. Torrance, California 90505-5103	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & ASME Y14.5M TOLERANCES:	05-13008-000 SERIES
		ANGLES DECIMALS XX = ±.02 XXX = ±.010	SHEET 1 OF 3



HOWMET
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TABLE I:

INSERT PART NUMBER	A THREAD AS8879 CLASS-3B	B THREAD				ϕ C +.007 -.002	D $\pm$.005	E $\pm$.010	F $\pm$.010	G $\pm$.015	ϕ H MAX	ϕ J $\pm$.007
		SIZE & PITCH	MAJOR DIA	ROSA PD	MINOR DIA							
05-13008-050	.1900-32UNJF	.3750-24NS	.3750 .3684	.3498 .3479	.3257 .3185	.196	.075	.105	.390	.456	.297	.308
05-13008-060	.2500-28UNJF	.4375-20NS	.4375 .4303	.4073 .4053	.3784 .3700	.257	.083	.105	.504	.602	.360	.360
05-13008-070	.3125-24UNJF	.5000-20NS	.5000 .4928	.4698 .4678	.4409 .4325	.320	.097	.120	.640	.775	.417	.423
05-13008-080	.3750-24UNJF	.5625-18NS	.5625 .5543	.5290 .5268	.4969 .4873	.382	.097	.140	.824	.999	.480	.478

TABLE I: (CONTINUED)

INSERT PART NUMBER	K +.010 -.005	ϕ L +.007 -.002	ϕ M +.005 -.004	N THREAD CLASS-3B	ϕ P +.005 -.000	R +.015 -.000	S MAX	U (NO. OF SERRATIONS)	ROTATIONAL RESISTANCE LB-IN MIN	<12> RESISTANCE TO PULLOUT LBF MIN
05-13008-050	.025	.284	.255	.3750-24NF	.375	.109	.410	17	125	4250
05-13008-060	.025	.345	.316	.4375-20NF	.437	.109	.524	20	300	7750
05-13008-070	.035	.407	.380	.5000-20NF	.515	.125	.660	24	600	12300
05-13008-080	.035	.487	.456	.5625-18NF	.593	.141	.844	26	1100	18600

TABLE I: (CONTINUED)

INSERT PART NUMBER	MAXIMUM LOCKING TORQUE (lbf.in) ROOM TEMP.	MINIMUM BREAKAWAY TORQUE	(ϕT) DRILL SIZE	<7> MIN SHEAR ENGAGEMENT AREA (IN ²)	TOOLING			LOCKRING
					STEP DRILL <5>	WRENCH	DRIVE TOOL	PART NO. REF
05-13008-050	18	32 ozf.in	Q (.332)	.1762	RCDC24-332	R1105W	R3605D	RL24SU5
05-13008-060	30	3.5 lbf.in	W (.386)	.3150	RCDC28-386	R1106W	R3606D	RL28SU5
05-13008-070	60	6.5 lbf.in	29/64 (.4531)	.4985	RCDC33-453	R1107X-W	R3607D	RL33SU6
05-13008-080	80	9.5 lbf.in	.506	.7714	RCDC38-506	R1108W	R3608D	RL38SU7

APPROVED DATE

75-09-18

REV. LETTER AND DATE

L 05/17/21

DAF NUMBER

120536

CURRENT DESIGN ACTIVITY:

Howmet
Fastening
Systems (HFS)

Rosan Products
3018 W. Lomita Blvd.
Torrance, California 90505-5103

TITLE:

INSERT - RING LOCKED,
POLYIMIDE LOCK

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES &
ASME Y14.5M TOLERANCES:

ANGLES
DECIMALS = $\pm$ 2°
.XX = $\pm$.02
.XXX = $\pm$.010

CURRENT DESIGN ACTIVITY:

CAGE CODE: 83324

SALES DRAWING NO.

05-13008-000
SERIES

SHEET 2 OF 3

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NOTES:

1. MATERIAL: INSERT: CRES, A286 PER AMS 5731 OR AMS 5734.
LOCKING ELEMENT: POLYIMIDE PER AMS 3644, CLASS I.
2. HEAT TREAT: BRINELL 269 MIN.
3. FINISH: SOLID FILM LUBE PER AS5272 TYPE I, TIOLUBE 460.
- <4> WHEN PARENT MATERIAL SURFACE IS NOT FLAT OR IS NOT NORMAL TO AXIS OF HOLE,
PROVIDE A SPOTFACE FOR PROPER LOCKRING ENTRY.
- <5> STEP DRILLS ARE DESIGNED FOR THRU HOLE DRILLING. WHEN USED TO DRILL A BLIND
HOLE, IT MAY BE NECESSARY TO GRIND THE DRILL TO SUIT THE DEPTH REQUIRED.
- <6> THREAD CHAMFER ANGLES, 2 PLACES: 45° APPROX.
- <7> SHEAR ENGAGEMENT AREA IS THE ASSEMBLED DIMENSIONAL VALUE FOR THE OVERALL
ENGAGED AREA OF MATING THREAD MEMBERS. IT DOES NOT REPRESENT A DIMENSION
OF EITHER OF THE MEMBERS IN AN UNASSEMBLED CONDITION.
- <8> TAP DRILL DEPTH FOR BLIND TAPPING TO BE AS REQUIRED TO PROVIDE BOLT CLEARANCE.
THE BOLT IS TO PASS THRU THE LOCKING FEATURE OF THE INSERT A MINIMUM OF TWO
PITCHES INCLUDING CHAMFER.
- <9> THREAD MARKS PERMISSIBLE INSIDE COUNTERBORE.
- <10> THREAD DIMENSIONS ARE PRIOR TO THE ADDITION OF SOLID FILM LUBE.
- <11> OVERSPRAY OF SOLID FILM LUBE PERMISSIBLE ON INTERNAL THREAD LOCKING FEATURE.
- <12> RESISTANCE TO PULLOUT SHALL BE TESTED PER MIL-I-45910
(RINGLOCKED SCREW THREAD INSERT) IN AN AMS 4284 (356-T6)
OR 6061-T6 (AMS 4150, AMS 4113 OR AMS 4027) TEST BLOCK.
13. 100% FLUORESCENT PENETRANT INSPECTION REQUIRED ON INSERT BODY
PRIOR TO ASSEMBLY.

QUALIFICATION TEST:

- a. TEST BOLT TO BE OF BARE 718 MATERIAL AND HAVE THREADS PER AS8879.
- b. REUSABILITY TEMPERATURE TO BE 375°F FOR 6 HOURS BETWEEN CYCLES.
- c. MAXIMUM LOCKING TORQUE AND MINIMUM BREAKAWAY TORQUE LIMITS TO BE PER TABLE I.
- d. TEMPERATURE REUSABILITY TEST SHALL BE REPEATED FOR A TOTAL OF 50 TIMES AND MINIMUM
PREVAILING TORQUE SHALL BE RECORDED EVERY FIVE CYCLES. TEST BOLTS MAY BE REPLACED
WHEN WORN PROVIDED A MINIMUM OF TEN TEST CYCLES HAVE BEEN PERFORMED ON THE BOLT
AND SHALL BE NOTED IN THE TEST REPORT. ELONGATION SHALL BE .0075 FOR 2.00 SPACERS,
.0057 FOR 1.50 SPACERS AND .0038 FOR 1.00 SPACERS. ALL PARTS TESTED SHALL MEET THE
REQUIREMENTS OF TABLE I AT THE COMPLETION OF THE TEST. ALL PARTS TESTED SHALL MEET
THE REQUIREMENTS OF TABLE I FOR AT LEAST 45 CYCLES AND 80% OF TESTED PARTS SHALL
MEET THE REQUIREMENTS AT THE COMPLETION OF THE TEST. USE OF MIL-PRF-7808L OIL AS
ASSEMBLY AID IS OPTIONAL.

APPROVED DATE 75-09-18	CURRENT DESIGN ACTIVITY: Howmet Fastening Systems (HFS)	TITLE: INSERT - RING LOCKED, POLYIMIDE LOCK	CURRENT DESIGN ACTIVITY: CAGE CODE: 83324
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		ANGLES DECIMALS .XX = ±.02 .XXX = ±.010	