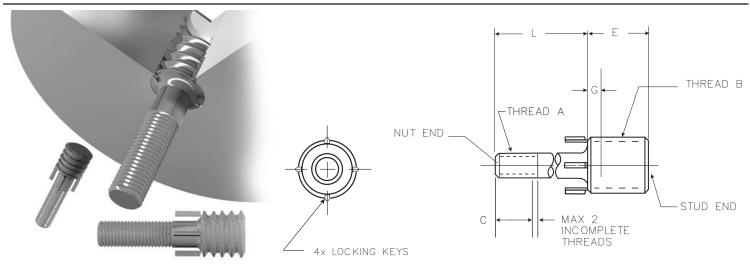


ROLAND AEROSPACE MANUFACTURER OF SPECIALIZED JET ENGINE COMPONENTS 13429 Western Ave. Gardena, California 90249



Part	A Nut End	End Stud End THD		C Min	E + .015	L <u>+</u> .020
Number	Thread UNF-3A	Thread	Mod MinorØ (REF)			
RA2005-1	.3125-24 UNF-3A	.5000-13 UNC-2A	.440 .432	.688	.430	.906
RA2005-2	.3750-24 UNF-3A	.5625-12 UNC-2A	.503 .495	.812	.500	1.020
RA2005-3	.2500-28 UNF-3A	.4375-14 UNC-2A	.383 .375	.656	.370	.750
RA2005-4	.3750-24 UNF-3A	.5625-12 UNC-2A	.503 .495	.812	.500	1.125
RA2005-5	.3125-24 UNF-3A	.5000-13 UNC-2A	.440 .432	.719	.430	1.000
RA2005-6	.3125-24 UNF-3A	.3750-24 UNJF-3A	N/A	.688	.688	.906
RA2005-7	.2500-28 UNF-3A	.3125-24 UNJF-3A	N/A	.656	.625	.750

1. Material: Stud: 303 Cres per AMS5640 or ASTM-A-582 Key: 302 Cres per ASTM-A-580. Chemistry Only

2. Finish: Stud: Passivated Key: Passivated

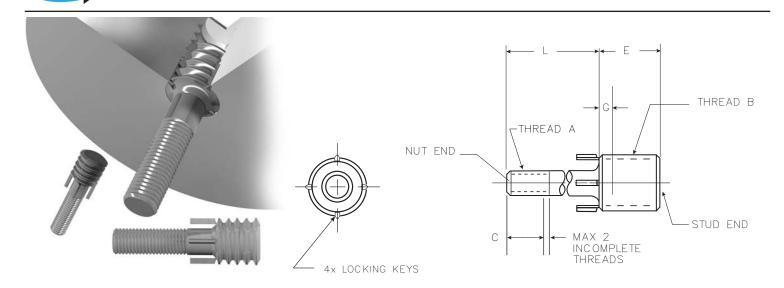
3/Studs with a nut end thread size (A) of .3125 and above shall be furnished with four keys: All others shall be furnished with two keys.

STUD HIGH TEMPERATURE KEY LOCKED

CAGE CODE	DWG NO. RA2005	Drawn by:	Date: 04/16/2012	
63FM5		Approved by:	Bu	Date:04/16/2012
OSLIVIS	REV: NC SHEET 1 of 3	Approved by:	/ -	Date. 17 107 2012



ROLAND AEROSPACE MANUFACTURER OF SPECIALIZED JET ENGINE COMPONENTS 13429 Western Ave. Gardena, California 90249



Part Number	A Nut End Thread UNF-3A	B Stud En Mod Mi Thread UNC-2A	d THD inor Ø Minor Ø (REF)	C Min	E ±.015	L ±.020
RA2005-8	.3125-24 UNF-3A	.5000-13	.440 .432	.719	.430	1.000
RA2005-9	.3125-24 UNF-3A	.5000-13	.440 .432	.688	.430	.906
RA2005-10	.3750-24 UNF-3A	.5625-12	.503 .495	.812	.500	1.020
RA2005-11	.3750-24 UNF-3A	.5625-12	.503 .495	.812	.500	2.350
RA2005-12	.3750-24 UNJF-3A	.5625-12	.503 .495	.640 ±.030	.500	.687

1. Material: Stud: A286 CRES per AMS5731, AMS5732, or AMS5737

Key: 302 CRES per ASTM-A-580 or QQ-W-423. Chemistry only.

2. Heat Treat to 140KSI for AMS 5371, AMS 5732, and AMS 5734 AMS 5737 - 140KSI Min.

3. Finish: Stud: Passivated

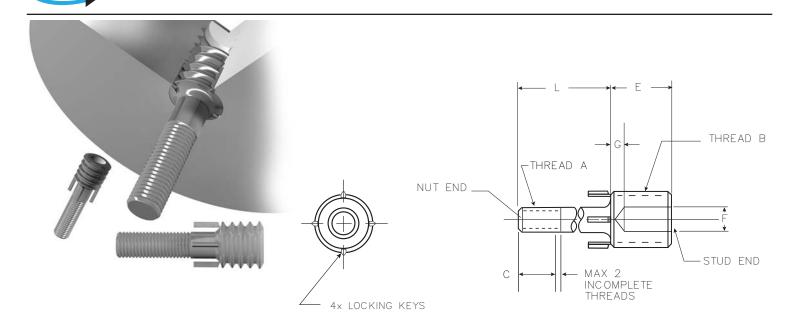
Key: Passivated

STUD HIGH TEMPERATURE KEY LOCKED

CAGE CODE	DWG NO. RA2005	Drawn by: Lines Haras	Date: 04/16/2012
63EM5	REV: NC SHEET 2 of 3	Approved by:	Date: 04/16/2012



ROLAND AEROSPACE MANUFACTURER OF SPECIALIZED JET ENGINE COMPONENTS 13429 Western Ave. Gardena, California 90249



Part Nut End		B Stud End THD Mod Minor Ø		C Min	E ±.010	L ±.020	ØF	G
Number	Thread UNJF-3A	Thread UNC-2A	MinorØ (REF)					
RA2005-13	.4375-20	.6250-11	.565 .551	.700	1.300	.900	None	None
RA2005-14	.3750-24	.5625-12	.503 .495	.700	1.015	.960	None	None
RA2005-15	.4375-20	.6250-11	.565 .551	.700	.800	.900	.385 .365	.170 .160

1. Material: Stud: A286 CRES per AMS5731, AMS5734, or AMS5737

Key: 302 CRES per ASTM-A-580 or ASTM-A-313. Chemistry only.

2. Heat Treat to 140KSI for AMS 5371, AMS 5732, and AMS 5734 AMS 5737 - 140KSI Min

3. Finish: Stud: Passivated

Key: Passivated

STUD HIGH TEMPERATURE KEY LOCKED

CAGE CODE	DWG NO. RA 2005	Drawn by: Lines Horas	Date: 04/16/2012	
63EM5	REV: NC SHEET 3 of 3	Approved by:	Date: 04/16/2012	