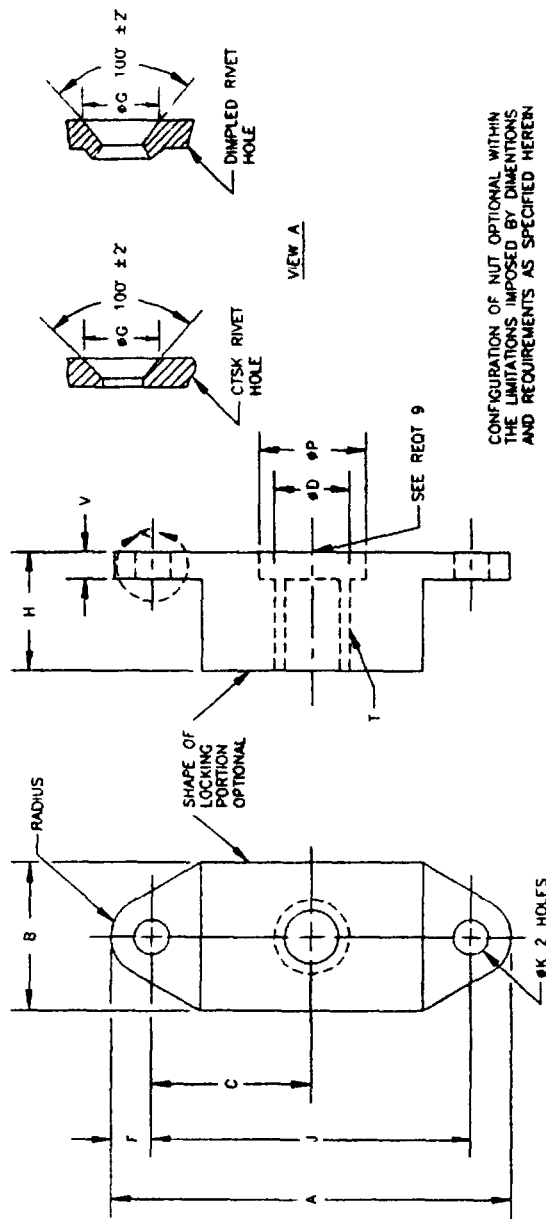




CONFIGURATION OF NUT OPTIONAL WITHIN
THE LIMITATIONS IMPOSED BY DIMENSIONS
AND REQUIREMENTS AS SPECIFIED HEREIN

TABLE 1 DASH NUMBERS AND DIMENSIONS

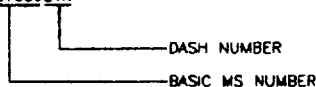
DASH NUMBERS		PLAIN RIVET HOLES		COUNTERSUNK OR DIMPLED RIVET HOLES		T THREAD SIZES	A		B		C		D		E		F		G		H		J		K		L		M		N		O		P		Q		R		S		T		U		V		W		X		Y		Z		AA		AB		AC		AD		AE		AF		AG		AH		AI		AJ		AK		AL		AM		AN		AO		AP		AQ		AR		AS		AT		AU		AV		AW		AX		AY		AZ		BA		BB		BC		BD		BE		BF		BG		BH		BI		BJ		BK		BL		BM		BN		BO		BP		BQ		BR		BS		BT		BU		BV		BW		BX		BY		BZ		CA		CB		CC		CD		CE		CF		CG		CH		CI		CJ		CK		CL		CM		CN		CO		CP		CQ		CR		CS		CT		CU		CV		CW		CX		CY		CZ		DA		DB		DC		DD		DE		DF		DG		DH		DI		DJ		DK		DL		DM		DN		DO		DP		DQ		DR		DS		DT		DU		DV		DW		DX		DY		DZ		EA		EB		EC		ED		EE		EF		EG		EH		EI		EJ		EK		EL		EM		EN		EO		EP		EQ		ER		ES		ET		EU		EV		EW		EX		EY		EZ		FA		FB		FC		FD		FE		FF		FG		FH		FI		FJ		FK		FL		FM		FN		FO		FP		FQ		FR		FS		FT		FU		FV		FW		FX		FY		FZ		GA		GB		GC		GD		GE		GF		GG		GH		GI		GJ		GK		GL		GM		GN		GO		GP		GQ		GR		GS		GT		GU		GV		GW		GX		GY		GZ		HA		HB		HC		HD		HE		HF		HG		HH		HI		HJ		HK		HL		HM		HN		HO		HP		HQ		HR		HS		HT		HU		HV		HW		HX		HY		HZ		IA		IB		IC		ID		IE		IF		IG		IH		IJ		IK		IL		IM		IN		IO		IP		IQ		IR		IS		IT		IU		IV		IW		IX		IY		IZ		JA		JB		JC		JD		JE		JF		JG		JH		JI		JJ		JK		JL		JM		JN		JO		JP		JQ		JR		JS		JT		JU		JV		JW		JX		JY		JZ		KA		KB		KC		KD		KE		KF		KG		KH		KI		KJ		KL		KM		KN		KO		KP		KQ		KR		KS		KT		KU		KV		KW		KX		KY		KZ		LA		LB		LC		LD		LE		LF		LG		LH		LI		LJ		LK		LM		LN		LO		LP		LQ		LR		LS		LT		LU		LV		LW		LX		LY		LZ		MA		MB		MC		MD		ME		MF		MG		MH		MI		MJ		MK		ML		MN		MO		MP		MQ		MR		MS		MT		MU		MV		MW		MX		MY		MZ		NA		NB		NC		ND		NE		NF		NG		NH		NI		NJ		NK		NL		NM		NO		NP		NQ		NR		NS		NT		NU		NV		NW		NX		NY		NZ		OA		OB		OC		OD		OE		OF		OG		OH		OI		OJ		OK		OL		OM		ON		OO		OP		OQ		OR		OS		OT		OU		OV		OW		OX		OY		OZ		PA		PB		PC		PD		PE		PF		PG		PH		PI		PJ		PK		PL		PM		PN		PO		PP		PQ		PR		PS		PT		PU		PV		PW		PX		PY		PZ		QA		QB		QC		QD		QE		QF		QG		QH		QI		QJ		QK		QL		QM		QN		QO		QP		QQ		QR		QS		QT		QU		QV		QW		QX		QY		QZ		RA		RB		RC		RD		RE		RF		RG		RH		RI		RJ		RK		RL		RM		RN		RO		RP		RQ		RR		RS		RT		RU		RV		RW		RX		RY		RZ		SA		SB		SC		SD		SE		SF		SG		SH		SI		SJ		SK		SL		SM		SN		SO		SP		SQ		SR		SS		ST		SU		SV		SW		SX		SY		SZ		TA		TB		TC		TD		TE		TF		TG		TH		TI		TJ		TK		TL		TM		TN		TO		TP		TQ		TR		TS		TT		TU		TV		TW		TX		TY		TZ		UA		UB		UC		UD		UE		UF		UG		UH		UI		UJ		UK		UL		UM		UN		UO		UP		UQ		UR		US		UT		UU		UV		UW		UX		UY		UZ		VA		VB		VC		VD		VE		VF		VG		VH		VI		VJ		VK		VL		VM		VN		VO		VP		VQ		VR		VS		VT		VU		VV		VW		VX		VY		VZ		WA		WB		WC		WD		WE		WF		WG		WH		WI		WJ		WK		WL		WM		WN		WO		WP		WQ		WR		WS		WT		WU		WV		WW		WX		WY		WZ		XA		XB		XC		XD		XE		XF		XG		XH		XI		XJ		XK		XL		XM		XN		XO		XP		XQ		XR		XS		XT		XU		XV		XW		XX		XY		XZ		YA		YB		YC		YD		YE		YF		YG		YH		YI		YJ		YK		YL		YM		YN		YO		YP		YQ		YR		YS		YT		YU		YV		YW		YX		YY		YZ		ZA		ZB		ZC		ZD		ZE		ZF		ZG		ZH		ZI		ZJ		ZK		ZL		ZM		ZN		ZO		ZP		ZQ		ZR		ZS		ZT		ZU		ZV		ZW		ZX		ZY		ZZ	
		NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT	NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT		NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT		MAX	MIN	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN	± .005	MIN	MAX	± .010	MAX	MIN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

REQUIREMENTS

1 MATERIAL

- (J) NUT - CARBON STEEL COMPOSITIONS 1035 (UNS G10350) 1040 (UNS G10400) AND 1050 (UNS G10500), IN ACCORDANCE WITH ASTM A827 OR QQ-S-700 1042 (UNS G10420) IN ACCORDANCE WITH ASTM A29 ALLOY STEEL GRADES 4130 (UNS G41300) 4340 (UNS G43400) AND 8740 (UNS G87400) IN ACCORDANCE WITH ASTM A29
- (J) RETAINER (IF APPLICABLE) - CARBON STEEL COMPOSITIONS 1035 (UNS G10350) AND 1050 (UNS G10500), IN ACCORDANCE WITH ASTM A827 OR QQ-S-700 1042 (UNS G10420) AND ALLOY STEEL GRADE 4130 (UNS G41300) IN ACCORDANCE WITH ASTM A29
- 2 FINISH CADIUM PLATE IN ACCORDANCE WITH QQ-P-416 TYPE II CLASS 2 FOR DRY FILM LUBRICATED NUTS THE TYPE AND CLASS ARE OPTIONAL IF THE NUTS MEET THE SALT SPRAY REQUIREMENTS OF QQ-P-416 TYPE II
- 3 DIMENSIONING AND TOLERANCING DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M
- 4 HARDNESS 49HRC MAX
- 5 THREADS THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879
- 6 SURFACE TEXTURE SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED SHALL NOT EXCEED 125 MICRONS IN ACCORDANCE WITH ANSI/ASME B46.1
- 7 LUBRICANT DRY FILM LUBRICANT APPROVED IN ACCORDANCE WITH MIL-N-25027 NON-DRY LUBRICANTS SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802
- 8 COUNTERBORE/COUNTERSINK ON SIZE 164 AND LARGER THREAD RELIEF SHALL BE .062 MINIMUM, ON SIZE 138 AND SMALLER, COUNTERSINK OR RADIUS WITHIN ".P" DIAMETER
- 9 FLOAT FLOAT OF NUT ELEMENT PORTION OF ASSEMBLY SHALL NOT BE LESS THAN .030 LATERALLY AND LONGITUDINALLY FROM CENTERED POSITION NUT BODY SHALL BE CAPABLE OF ENGAGEMENT WITH A BOLT IN THE MAXIMUM MISALIGNED POSITION MAXIMUM AXIAL FLOAT .020 INCHES FOR 190 AND SMALLER, .030 FOR 250 AND LARGER NUT MISALIGNMENT SHALL NOT EXCEED DIMENSION "B" THE NUT AND BASE PORTION OF THE ASSEMBLY SHALL FORM ONE INTEGRAL UNIT AND THE SURFACE ASSEMBLY SHALL PROVIDE A BEARING FOR THE NUT
- (J) 10 PART NUMBER THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I

EXAMPLE MS21059L4K



MS21059L4K INDICATES NUT SELF-LOCKING, PLATE, TWO LUG, FLOATING LOW HEIGHT STEEL 125 KSI Ftu, 450° F 250-28 UNJF-38 DRY FILM LUBRICANT COUNTERSUNK OR DIMPLED HOLES

NOTES

- 1 ALL DIMENSIONS ARE IN INCHES
- 2 IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE
- 3 REFERENCED GOVERNMENT (OR NON-GOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN
- 4 DESIGN AND USAGE LIMITATIONS THESE NUTS ARE DESIGNED TO DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE TENSILE STRENGTH OF 125 KSI BASED ON THE CROSS SECTION AREA AT THE BASIC ROOT DIAMETER OF THE THREADS THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS33588 ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED
- 5 MS21059 SUPERSEDES NAS686 NAS1031

PREPARING ACTIVITY DLA-IS CUSTODIANS ARMY- AV NAVY- AS AIR FORCE- 11 DLA- REVIEW USER CR, MI PROJECT NUMBER 5310-1949	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING PLATE TWO LUG, FLOATING, LOW HEIGHT STEEL 125 KSI Ftu, 450° F	SPECIFICATION SHEET NUMBER MS21059 1 FEB 94 REV J SUPERSEDING MS21059H 30 OCT 89 (SEE NOTE 5) AMSC- N/A FSC 5310
DISTRIBUTION STATEMENT A. Approved for public release, distribution is unlimited		Page 2 of 3

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODDS SPECIFIED IN THE SOLICITATION MIL-N-25027

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

Form Approved
OMB No 0704-0188

INTERCHANGEABILITY RELATIONSHIP

MS21059 NUTS CAN UNIVERSALLY REPLACE NAS686 AND NAS1031 NUTS OF LIKE MATERIAL, THREAD SIZE LUBRICANT (DRY FILM OR NON-DRY FILM) RIVET SPACING AND FASTENING METHOD (PLAIN RIVET HOLES DIMPLED OR COUNTERSUNK RIVET HOLES) BUT THESE NAS686 AND NAS1031 NUTS CANNOT UNIVERSALLY REPLACE MS21059 NUTS

INTERCHANGEABILITY TABLE

CANCELLED PART NUMBERS	SUBSTITUTIVE PART NUMBERS	CANCELLED PART NUMBERS	SUBSTITUTIVE PART NUMBERS	CANCELLED PART NUMBERS	SUBSTITUTIVE PART NUMBERS
NAS686X04	MS21059-04	NAS1031X04	MS21059-04	NAS1031A3	MS21059L3
NAS686X04K	MS21059-04K	NAS1031X04K	MS21059-04K	NAS1031A3K	MS21059L3K
NAS686A04	MS21059L04	NAS1031A04	MS21059L04	NAS1031X4	MS21059-4
NAS686A04K	MS21059L04K	NAS1031A04K	MS21059L04K	NAS1031X4K	MS21059-4K
NAS686X06	MS21059-06	NAS1031X06	MS21059-06	NAS1031A4	MS21059L4
NAS686X06K	MS21059-06K	NAS1031X06K	MS21059-06K	NAS1031A4K	MS21059L4K
NAS686A06	MS21059L06	NAS1031A06	MS21059L06	NAS1031X5	MS21059-5
NAS686A06K	MS21059L06K	NAS1031A06K	MS21059L06K	NAS1031X5K	MS21059-5K
NAS686X08	MS21059-08	NAS1031X08	MS21059-08	NAS1031A5	MS21059L5
NAS686X08K	MS21059-08K	NAS1031X08K	MS21059-08K	NAS1031A5K	MS21059L5K
NAS686A08	MS21059L08	NAS1031A08	MS21059L08	NAS1031X6	MS21059-6
NAS686A08K	MS21059L08K	NAS1031A08K	MS21059L08K	NAS1031A6	MS21059L6
NAS686X3	MS21059-3	NAS1031X3	MS21059-3	NAS1031X7	MS21059-7
NAS686X3K	MS21059-3K	NAS1031X3K	MS21059-3K	NAS1031A7	MS21059L7
NAS686A3	MS21059L3			NAS1031X8	MS21059-8
NAS686A3K	MS21059L3K			NAS1031A8	MS21059L8
NAS686X4	MS21059-4				
NAS686X4K	MS21059-4K				
NAS686A4	MS21059L4				
NAS686A4K	MS21059L4K				
NAS686X5	MS21059-5				
NAS686X5K	MS21059-5K				
NAS686A5	MS21059L5				
NAS686A5K	MS21059L5K				
NAS686X6	MS21059-6				
NAS686A6	MS21059L6				

PREPARING ACTIVITY DLA-15 CUSTODIANS ARMY- AV NAVY- AS AIR FORCE- 11 DLA-	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT STEEL 125 KSI Ftu, 450 F	SPECIFICATION SHEET NUMBER MS21059 1 FEB 84 REV J SUPERSEDING MS21059H 30 OCT 89 (SEE NOTE 5) AMSC- N/A FSC 5310
REVIEW USER CR, MI PROJECT NUMBER 5310-1949 DISTRIBUTION STATEMENT A Approved for public release distribution is unlimited		Page 3 of 3

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE