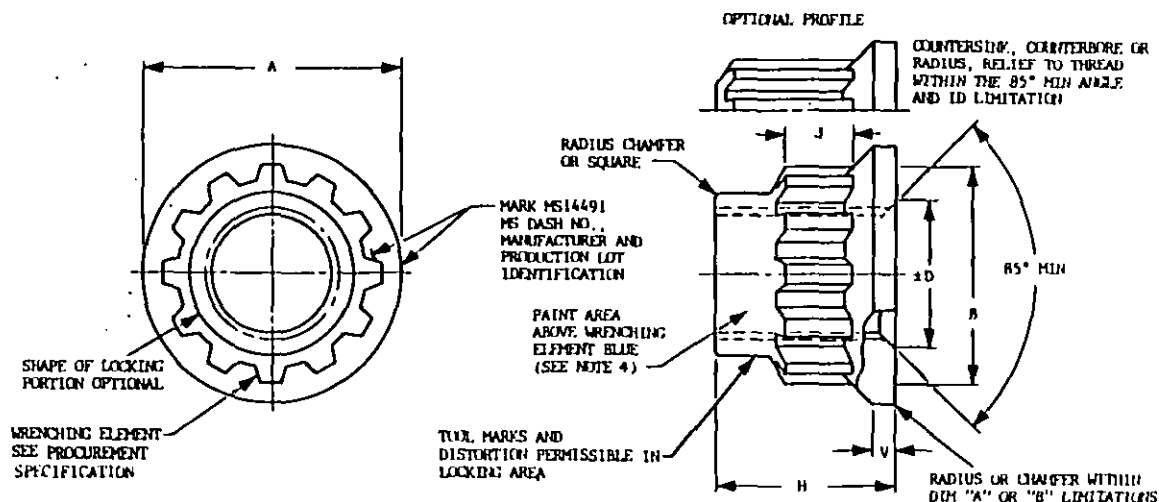


THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DOCS SPECIFIED IN THE SOLICITATION: MIL-N-85730

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



NOTES:

1. MATERIAL: NICKEL ALLOY 718 PER AMS 5662, AMS 5663, (UNS N07718); MUST BE CAPABLE OF MEETING MINIMUM ULTIMATE TENSILE STRENGTHS LISTED IN TABLE II.
2. PLATING: CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2.
3. PAINT: PAINT THE AREA ABOVE WRENCHING ELEMENT WITH NO. 15102 BLUE PER IT-C-489.
4. DRIVERS: IN ACCORDANCE WITH MIL-W-8982.
5. DIMENSIONS: IN INCHES, DIMENSIONS APPLY BEFORE LUBRICATION. TOLERANCES: DECIMALS ± 0.010 , ANGLES $\pm 5^\circ$ UNLESS OTHERWISE SPECIFIED.
6. DESIGN USAGE INFORMATION: THESE NUTS ARE DESIGNED TO BE USED WITH MS14490 BOLTS AND MS14177 WASHERS.
7. PERPENDICULARITY: BEARING SURFACE SHALL BE NORMAL WITH PITCH DIAMETER OF THREAD WITHIN "X" (SEE TABLE) WHEN CHECKED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
8. MECHANICAL PROPERTIES PER MIL-N-85730 EXCEPT FOR:
 - (a) THREADS AND BEARING SURFACES SHALL BE LUBRICATED WITH MIL-T-5544 COMPOUND FOR WRENCH TORQUE, TORQUE EFFECTIVITY, LOCKING TORQUE, PERMANENT SET, ACCELERATED FATIGATION.
 - (b) TABULATED SEATING TORQUE EFFECTIVITY TEST.
 - (c) MINIMUM BREAKAWAY FIRST CYCLE TORQUE VALUES ARE NOT APPLICABLE. USE MINIMUM BREAKAWAY TORQUE VALUES.
 - (d) ELEVATED TEMPERATURE TENSILE STRENGTH AND STRESS RUPTURE TESTS ARE NOT APPLICABLE.
 - (e) FATIGUE PER MIL-B-85604 EXCEPT THAT LOADING SHALL BE AS SHOWN IN MS14491 TABLE II AND MS14490 BOLTS, MS14177 WASHERS SHALL BE USED. NO NUT SHALL FAIL THE BOLT AT LESS THAN 1,000,000 CYCLES. THREADS AND BEARING SURFACES OF MS14490 BOLTS, MS14491 NUTS AND MS14177 WASHERS SHALL BE LUBRICATED WITH MIL-T-5544 COMPOUND FOR FATIGUE TEST. FATIGUE LOADING SPECIFIED IN TABLE II INTENDED TO APPROXIMATE WHEEL NUT APPLICATION.
 - (f) LOW TENSION FATIGUE LOAD IS BASED ON $0.65 \times F_{tu}$ OF TABLE II.
 - (g) HIGH TENSION FATIGUE LOAD FOR SIZES .250 THROUGH .500 INCH ARE BASED ON $0.77 \times F_{tu}$ AND SIZES .562 THROUGH .625 INCH ARE BASED ON $0.72 \times F_{tu}$ OF TABLE II.
9. EXAMPLE OF PART NUMBERS: MS14491-04 - 0.2500 -28 NUT, CADMIUM PLATED.
10. SIZES 0.75 (DASH NO. 12) AND 0.875 (DASH NO. 14) ARE CANCELLED WITH NO SUPERSEDEANCE BECAUSE OF DIFFICULTY IN MAINTAINING 132 KSI SHEAR STRENGTH.
11. SEE MS14182 FOR OTHER THAN WHEEL APPLICATIONS.
12. SURFACE TEXTURE: SURFACE TEXTURE IN ACCORDANCE WITH ANSI/ASME B.46.1. UNLESS OTHERWISE SPECIFIED, SURFACE TEXTURE SHALL NOT EXCEED 125 MICROINCHES.

DENOTES CHANGE

PREPARING ACTIVITY: NAVY - AS CUSTODIANS: ARMY - AV NAVY - AIR FORCE - 99 DLA - REVIEW: DLA - IS USER: PROJECT NUMBER: 5310 - 1693	MILITARY SPECIFICATION SHEET TITLE NUT, WHEEL, SELF-LOCKING, FLANGED, NICKEL ALLOY 718, 220 KSI F_{tu} , 450° F, SPLINE DRIVE	SPECIFICATION SHEET NUMBER MS14491 C 28 AUG 89 SUPERSEDING MS14491 B 13 JUL 87 AMSC - N/A FSC 5310
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.		Page 1 of 2

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 DDSSS SPECIFIED IN THE SOLICITATION: MIL-N-85730

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Form approved
OMB No. 0704-0188

TABLE I. DIMENSIONS

DASH NO.	NOMINAL SIZE	THREAD	MS33787 ELEMENT NUMBER	A		B		1b	
				MAX	MIN	MIN	MAX	MIN	MAX
04	.250	.2500-28UNJF-3B	10	.438	.428	.408	.280	.250	
05	.312	.3125-24UNJF-3B	12	.531	.521	.501	.342	.312	
06	.375	.3750-24UNJF-3B	14	.649	.639	.609	.405	.375	
07	.438	.4375-20UNJF-3B	18	.750	.740	.710	.473	.438	
08	.500	.5000-20UNJF-3B	20	.828	.818	.788	.535	.500	
09	.562	.5625-18UNJF-3B	22	.938	.928	.898	.597	.562	
10	.625	.6250-18UNJF-3B	24	1.050	1.040	1.010	.660	.625	

TABLE II. MECHANICAL PROPERTIES

DASH NO.	H MAX	V MIN	J MIN	X MIN	ULTIMATE AXIAL STRENGTH LB. MIN	SEATING TORQUE FOR TORQUE EFFECTIVITY TEST IN-LB	FATIGUE LOADING		APPROX WEIGHT LB/100
							LOW (?) TENSION LOAD LB +2%	HIGH TENSION LOAD LB +2%	
04	.300	.030	.110	.003	8,870	130	5,800	6,850	.41
05	.385	.045	.147	.003	14,100	260	9,200	10,900	.77
06	.455	.070	.176	.003	20,900	460	13,600	16,100	1.20
07	.520	.085	.206	.003	28,300	730	18,400	21,800	1.80
08	.600	.105	.235	.003	37,800	1100	24,600	29,100	3.50
09	.680	.105	.264	.004	47,900	1600	31,100	34,500	4.60
10	.740	.105	.294	.004	59,900	2200	38,900	43,100	6.10

PREPARING ACTIVITY: NAVY - AS

CUSTODIANS: ARMY - AY NAVY -

AIR FORCE - 99 DLA -

REVIEW: DLA - IS

USER:

PROJECT NUMBER: 5310 - 1691

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

NUT, WHEEL, SELF-LOCKING,
FLANGED, NICKEL ALLOY 718,
220 KSI F_{tu}, 450° F, SPLINE DRIVE

SPECIFICATION SHEET NUMBER

MS14491 C 28 AUG 89

SUPERSEDING
MS14491 B 13 JUL 87

AMSC - N/A FSC 5310

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