

FIRST DASH NO.	THREAD	A DIA MAX	B DIA MIN	D DIA	H REF	M GAGE PROT	N	P DIA	R RAD	T BASIC	U REF	V GAGE DIA	Z
-3	.1900-32 UNJF-3A	.381	.338	.1895 .1890	.082	.0222 .0196	.121 .111	.075 .070	.029 .019	.406	.039	.3272 .3270	.003
-4	.2500-28 UNJF-3A	.508	.456	.2495 .2490	.111	.0313 .0283	.121 .111	.081 .076	.035 .025	.469	.045	.4320 .4318	.003
-5	.3125-24 UNJF-3A	.635	.575	.3120 .3115	.138	.0371 .0337	.124 .114	.081 .076	.041 .031	.531	.052	.5451 .5449	.003
-6	.3750-24 UNJF-3A	.763	.692	.3745 .3740	.166	.0432 .0394	.125 .115	.111 .106	.047 .037	.641	.052	.6582 .6580	.003
-7	.4375-20 UNJF-3A	.889	.810	.4370 .4365	.193	.0456 .0414	.128 .118	.111 .106	.053 .043	.675	.062	.7784 .7782	.003
-8	.5000-20 UNJF-3A	1.016	.928	.4995 .4990	.221	.0519 .0473	.128 .118	.111 .106	.060 .050	.781	.062	.8902 .8900	.003
-10	.6250-18 UNJF-3A	1.276	1.169	.6240 .6235	.279	.0674 .0620	.129 .119	.146 .141	.072 .062	.953	.068	1.1124 1.1122	.003
-12	.7500-16 UNJF-3A	1.531	1.406	.7490 .7485	.334	.0771 .0709	.254 .244	.146 .141	.072 .062	.912	.078	1.3440 1.3438	.003

RELEASED
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U.S. PATENT NUMBERS: 2,745,120; 2,808,087; 2,864,418; 2,949,949; 2,954,719; 2,994,354; 3,060,565; 3,103,675; 3,388,411; OTHER U.S. AND FOREIGN PATENTS PENDING.

DRAWN
24 JANUARY 1973
REV. LETTER AND DATE
J 29 MAY 1990

HI-TORQUE
BOLT, 100° FLUSH TENSION HEAD
HI-TORQUE RECESS, PH13-8Mo
CLOSE TOLERANCE, LONG THREAD
125 KSI MIN SHEAR

DRAWING NUMBER
HT4025L
SHEET 1 OF 2

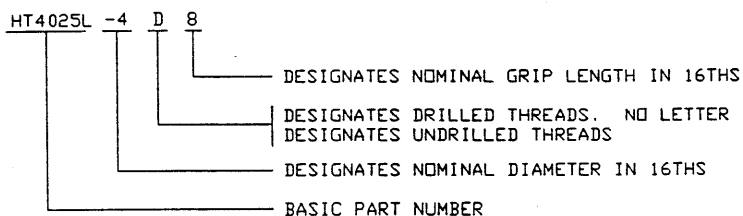
**ENGINEERING STANDARDS COMMITTEE
FOR HI-TORQUE PRODUCTS**
P.O. BOX 512, CULVER CITY, CA. 90230. PH. 213-838-2131

HI-SHEAR CORP. (73197)
VOI-SHAN (92215)
STANDARD PRESSED STEEL CO. (80539)
DEUTSCH FASTENER CORP. (08524)

FIRST DASH NO.	HI-TORQUE RECESS <7>				TENSILE STRENGTH LBS/MIN	DOUBLE SHEAR STRENGTH LBS/MIN	
	RECESS NO.	J	K REF	W REF			TORQUE IN/LB MIN
-3	3	.045 .042	.305	.110	76	4,090	7,090
-4	4	.054 .051	.422	.134	165	7,530	12,300
-5	5	.064 .061	.490	.160	260	12,080	19,200
-6	6	.088 .084	.639	.198	400	18,450	27,600
-7	7	.100 .096	.715	.224	730	24,910	37,600
-8	8	.105 .101	.766	.256	1220	33,790	49,100
-10	10	.141 .137	1.020	.344	2500	54,300	76,700
-12	12	.162 .158	1.200	.400	3200	79,400	110,500

PROCUREMENT SPECIFICATION: MCDONNELL DOUGLAS 23M112, TYPE (c).
MATERIAL: PH13-8Mo PER AMS 5629.
HEAT TREAT: 125,000 PSI MINIMUM SHEAR.
FINISH: PASSIVATE PER QQ-P-35.

PART CODE AND EXAMPLE:



- GENERAL NOTES:
- CONCENTRICITY: CONICAL SURFACE OF HEAD TO "D" DIA WITHIN .003 TIR.
"D" DIA TO THREAD PITCH DIAMETER WITHIN .005 TIR.
RECESS TO "D" DIA WITHIN .010 TIR FOR -08 AND -3,
WITHIN .012 TIR FOR -4 THRU -6, WITHIN .015 FOR -7 THRU -10.
 - <2> SHANK SHALL BE STRAIGHT WITHIN "Z" VALUES PER INCH OF BOLT LENGTH.
 - HEAD TO SHANK FILLET RADIUS TO BE ROLLED AFTER HEAT TREAT.
 - COTTER PIN HOLE CENTERLINE WITHIN .010 AND NORMAL WITHIN 2° OF BOLT CENTERLINE.
 - SURFACE ROUGHNESS PER ANSI B46.1. BEARING SURFACE OF HEAD, HEAD TO SHANK FILLET, SHANK AND ALL THREAD ELEMENTS 32 Ra MAX; ALL OTHER SURFACES 125 Ra MAX.
 - FLUORESCENT PENETRANT INSPECT PER MIL-STD-6866.
 - <7> RECESS SHALL WITHSTAND THE RECESS INSPECTION TORQUE VALUES TABULATED, WITH AN AXIAL END PRESSURE NOT EXCEEDING 15 POUNDS, WITHOUT FAILURE OF RECESS OR APPLICABLE HI-TORQUE DRIVER.
 - DIMENSIONS IN INCHES.
 - <9> APPLY WHITE PAINT (MINIMUM 40% OF AREA) TO TOP OF HEAD FOR MATERIAL IDENTIFICATION.

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