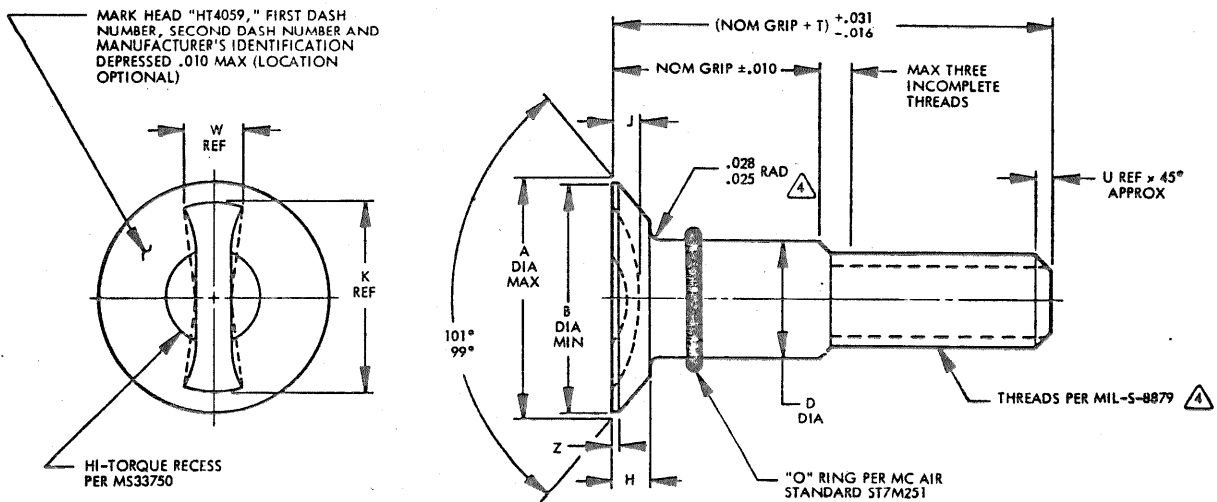


**ENGINEERING STANDARDS COMMITTEE
FOR HI-TORQUE PRODUCTS**
P.O. BOX 512, CULVER CITY, CA. 90230. PH. 213-838-2131

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



PART NUMBER	NOM DIA	THREAD SIZE	A DIA MAX	B DIA MIN	D DIA	H	T BASIC	U REF	X TIR Δ	Z	HI-TORQUE RECESS Δ				"O" RING PART NUMBER	TENSILE STRENGTH LBS. MIN.	DOUBLE SHEAR STRENGTH LBS. MIN.		
											RECESS NO.	J	K REF	W REF				TORQUE IN LBS. MIN.	
HT4059-3(-)	3/16	.1900-32 UNJF-3A	.381	.338	.2026 .2021		.0413 .0393	.406	.032	.0045	.013 .005	3	.045 .042	.305	.110	50	ST7M251-6	1,700	5,380
HT4059-4(-)	1/4	.2500-28 UNJF-3A	.508	.456	.2651 .2646		.0672 .0652	.469	.032	.0045	.015 .005	4	.054 .051	.422	.134	125	ST7M251-8	4,000	9,300
HT4059-5(-)	5/16	.3125-24 UNJF-3A	.633	.575	.3276 .3271		.0839 .0819	.531	.046	.0045	.015 .005	5	.064 .061	.490	.160	200	ST7M251-10	6,400	14,600
HT4059-6(-)	3/8	.3750-24 UNJF-3A	.763	.692	.3901 .3896		.1108 .1088	.641	.046	.0045	.015 .005	6	.088 .084	.639	.198	380	ST7M251-12	9,600	21,000
HT4059-7(-)	7/16	.4375-20 UNJF-3A	.889	.810	.4526 .4521		.1274 .1244	.656	.046	.0060	.022 .005	7	.100 .096	.715	.224	650	ST7M251-14	13,000	28,600
HT4059-8(-)	1/2	.5000-20 UNJF-3A	1.016	.928	.5151 .5146		.1538 .1508	.781	.046	.0060	.022 .005	8	.105 .101	.766	.256	1,000	ST7M251-16	17,500	37,300

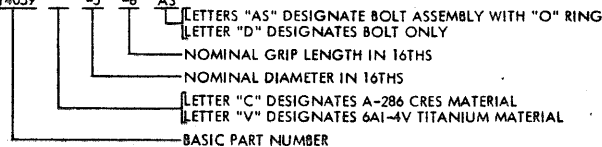
PROCUREMENT SPEC: "C" CODE: AMS7478, EXCEPT AS NOTED. PROCESSING DEVIATIONS NECESSARY TO MEET PROPERTIES SPECIFIED HEREIN ARE PERMITTED.
"V" CODE: NAS621, EXCEPT AS NOTED.

MATERIAL: "C" CODE: A-286 CRES PER AMS5731 OR AMS5734.
"V" CODE: 6Al-4V TITANIUM PER AMS4928 OR AMS4967.

FINISH & LUBRICANT: "C" CODE: PASSIVATE PER QQ-P-35 AND CETYL ALCOHOL LUBE.
"V" CODE: CETYL ALCOHOL LUBE.

HEAT TREAT: "C" CODE: 95,000 PSI MINIMUM SHEAR STRENGTH.
"V" CODE: 95,000 PSI MINIMUM SHEAR STRENGTH.

PART CODE & EXAMPLE: HT4059 -5 -8 AS



- GENERAL NOTES:
1. CONCENTRICITY: CONICAL SURFACE OF HEAD TO "D" DIA WITHIN .002 TIR.
"D" DIA TO THREAD PITCH DIAMETER WITHIN "X" TIR.
 2. GRIP LENGTH OF BOLT IS MEASURED FROM TOP OF HEAD TO END OF FULL CYLINDRICAL PORTION OF SHANK.
 3. BOLTS SHALL BE TESTED WITH APPLICABLE MS33750 DRIVER WITH AN AXIAL END LOAD NOT EXCEEDING 15 POUNDS. BOLTS ARE REJECTABLE IF MINIMUM TORQUE VALUES AS TABULATED CAUSE FRACTURE OR DISTORTION WHICH RESULT IN A RAISE OF METAL AT THE EDGE OF THE SLOT EXCEEDING .005 ABOVE THE SURROUNDING AREA.
 4. THREADS AND HEAD TO SHANK FILLET RADIUS TO BE ROLLED AFTER HEAT TREAT.
 5. SURFACE ROUGHNESS PER ANSI B46.1. CONICAL SURFACE OF HEAD, HEAD TO SHANK FILLET RADIUS, SHANK AND ALL THREAD ELEMENTS 32 RHR MAX. ALL OTHER SURFACES 125 RHR MAX.
 6. FLUORESCENT PENETRANT INSPECT PER MIL-I-6866.
 7. BREAK ALL SHARP EDGES AND REMOVE ALL BURRS.
 8. DIMENSIONS IN INCHES.

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
31 OCTOBER 1977

REV. LETTER AND DATE
A 10 NOVEMBER 1977

HI-TORQUE®
BOLT, 100° FLUSH SEALING HEAD
CLOSE TOLERANCE
A-286 CRES AND 6-4 TITANIUM
.0156 OVERSIZE

DRAWING NUMBER
HT 4059
SHEET 1 OF 1.