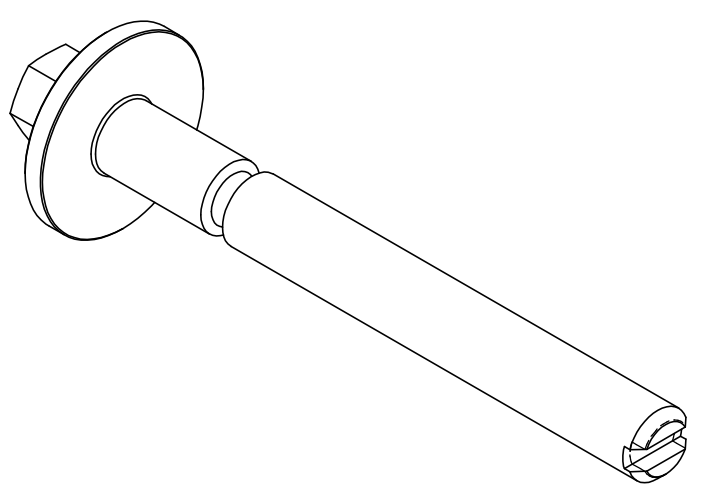


CLASSIFICATION OF CHARACTERISTICS (DOD-STD-2101)	
CRITICAL -	0
MAJOR -	0
MINOR -	ALL OTHER CHARACTERISTICS



REFERENCE VIEW

REVISION HISTORY					
ZONE	REV	DESCRIPTION	DATE	APPROVED	
	-	INC CR 28435	JR	12-10-2018	BMG
--	A	INC CR 28919	JR	02-28-2019	RA
	B	INC CR 30166	JRH	07-16-2019	JR
--	C	INC CR 30811	JR	09-18-2019	JAS
--	D	INC CR 31711	RAS	01-31-2020	JAS
--	E	INC CR 36863	RRP	03-09-2021	JR

- NOTES: UNLESS OTHERWISE SPECIFIED
- APPLICABLE STANDARDS/SPECIFICATIONS:
A. ASME Y14.100-2017
B. ASME Y14.5M-2009
 - MATERIAL: TI 6Al-4V IAW AMS-4965.
 - REMOVE ALL BURRS AND SHARP EDGES; BREAK EDGES .015 MAX. ALL FILLETS R.005 - .015.
 - SURFACE ROUGHNESS 63 MICROINCHES MAX.
 - MARK PART NO. AND REV LTR AT A MINIMUM ON PACKAGING, METHOD OPTIONAL. DO NOT MARK PHYSICAL PART. BAGGING / TAGGING OF INDIVIDUAL PARTS NOT REQUIRED.
 - WORKMANSHIP REQUIREMENTS:
A. FINISHED PART SHALL BE CLEAN AND FREE FROM RESIDUES, OILS, GREASE AND OTHER CONTAMINANTS / FOREIGN ELEMENTS.
 - 10% OF FASTENERS (MIN.) ARE SUBJECT TO TENSILE TESTING IAW GTP8000/1061. DATA PROVIDED AS PART OF EIDP (END ITEM DATA PACKAGE).
 - FINISH: TITANIUM ANODIZE OR TIODIZE IAW AMS-2488, TYPE II.
 - TABLE I DIMENSIONS TO BE USED FOR REFERENCE AND BY CUSTOMERS THAT DO NOT PROVIDE UNIQUE SPECIFICATIONS OR DRAWINGS. CUSTOM FASTENERS AVAILABLE UPON REQUEST.
 - MINIMUM LENGTH OF FULL SHANK DIAMETER REQUIRED BETWEEN THREADS AND CENTER OF NOTCH DEFINED IN TABLE I.
 - NOTCH GEOMETRY IAW EBAD SPECIFICATION F81088 TO YIELD TENSILE STRENGTH IAW GTP8000/1061.
 - ALL THREADS SHALL BE ROLLED IAW AS8879 WITH THE EXCEPTION OF 1/2" THREADS (FC8 FASTENERS) WHICH MAY BE CUT.
 - DIMENSIONS COINCIDES WITH MAXIMUM GRIP LENGTH. VALUE MUST BE LIMITED PER TABLE I FOR FASTENERS PAIRED WITH STANDARD ALLOY C FRANGIBOLTS (FCX). GRIP LENGTH MAY BE EXTENDED FOR FASTENERS USED WITH SUBSEA ALLOY B FRANGIBOLTS (FBUX) WITH EBAD ENGINEERING REVIEW AND APPROVAL.

14. ORDERING INFORMATION AS FOLLOWS:
F19155-XX-XXXX-XXXJ-XXXXT
- DO NOT INCLUDE DECIMALS IN FINAL PN. REFERENCES SHOWN BELOW ARE MEANT TO SHOW REQUIRED NUMBER OF SIGNIFICANT FIGURES FOR EACH DIMENSION.
 - INCLUDE IF TITANIUM ANODIZE FINISH IS REQUIRED. OTHERWISE OMIT.
 - N (NOTCH LOCATION) (REF X.XXX)
 - INCLUDE IF SCREW DRIVER SLOT IS REQUIRED. OTHERWISE OMIT.
 - M (SHAFT LENGTH) (REF X.XX)
 - L (THREADED LENGTH) (REF X.XXX)
 - SIZE CODE, SEE TABLE I.
 - BASIC PART NUMBER

15. FEATURE SHOWN IS SCREWDRIVER SLOT, AND IS ONLY REQUIRED AS DEFINED IN PART NUMBER (REF NOTE 14).

16. PART NAMING CONVENTION:
FRBLT FSTNR, .XXX-XX X X.XX
- M (SHAFT LENGTH; NOTE: THE DECIMAL IS INCLUDED IN THE PART NAMING BUT IT SHOULD NOT BE INCLUDED IN THE PART NUMBER AS INDICATED BY NOTE 14)
 - G (THREAD TYPE), FORMATTED AS SHOWN

EXAMPLE OF PART NUMBER AND NAMING CONVENTION:
F19155-04-0650-130J PART NAME: FRBLT FSTNR, .112-40 X 1.30
DESCRIPTION: FRBLT FSTNR, SIZE .112-40 X 1.30 LONG, WITH A SCREWDRIVER SLOT

F19155-04-0650-130J-XXXXT PART NAME: FRBLT FSTNR, .112-40 X 1.30
DESCRIPTION: FRBLT FSTNR, SIZE .112-40 X 1.30 LONG, WITH A SCREWDRIVER SLOT, NOTCHED, TITANIUM ANODIZED.

17. TABLE II TO BE COMPLETED BY CUSTOMER FOR MANUFACTURING PURPOSES ONLY. REQUIRED NUMBER OF SIGNIFICANT FIGURES SHOWN FOR EACH DIMENSION. DEVIATION FROM NUMBER OF SIGNIFICANT FIGURES WILL REQUIRE A CUSTOM DRAWING.

18. DIMENSIONAL LIMITS AND SURFACE ROUGHNESS APPLY AFTER PLATING/COATING.

19. FRANGIBOLT® IS A REGISTERED TRADEMARK OF EBAD. FRANGIBOLT® WILL BE REFERENCED AS "FRBLT" ON THIS DRAWING.

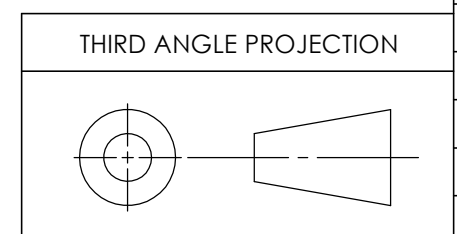
INFORMATION COPY
WILL NOT BE UPDATED

PART NO.	DESCRIPTION	NOTES
F19155-XX-XXXX-XXXJ-XXXXT	STD FRBLT FSTNR ICD, TI-ANOD	ALL NOTES APPLY
F19155-XX-XXXX-XXXJ-XXXX	STD FRBLT FSTNR, NOTCH & TST	ALL NOTES APPLY EXCEPT NOTE 8
F19155-XX-XXXX-XXXJ	STD FRBLT FSTNR, MACHINE	ALL NOTES APPLY EXCEPT 7, 8, 11

PART NO. SEE TABLE I

THIS DOCUMENT IS THE PROPERTY OF ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY AND SHALL NOT BE DISCLOSED, REPRODUCED IN WHOLE OR IN PART, OR USED FOR ANYONE OTHER THAN ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY, WITHOUT ITS PRIOR WRITTEN CONSENT. THIS RESTRICTION DOES NOT APPLY TO OR PURPORT TO LIMIT THE RIGHT TO USE INFORMATION OBTAINED LAWFULLY FROM SOURCES OTHER THAN ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY.

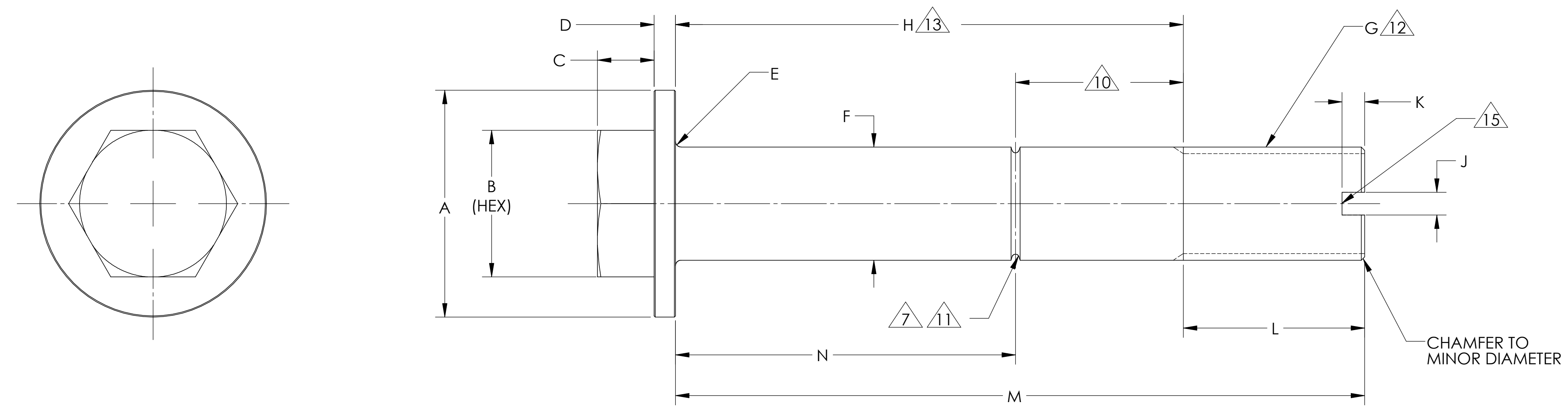
INFORMATION SUBJECT TO EXPORT CONTROL LAWS
THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT MAY BE RESTRICTED BY THE ARMS EXPORT REGULATIONS, AS MANDATED BY THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, 50 U.S.C. APP. 2401 et seq., EAR99 "NLR". GOVERNMENT AUTHORIZATION MAY BE REQUIRED PRIOR TO EXPORT, REEXPORT, DISCLOSE OR TRANSFER TO A FOREIGN PERSON(S) LOCATED IN PROHIBITED DESTINATIONS. DIVERSION CONTRARY TO THE U.S. LAWS IS PROHIBITED. VIOLATIONS OF THE EXPORT ADMINISTRATION REGULATIONS (EAR) ARE SUBJECT TO SEVERE CIVIL AND / OR CRIMINAL PENALTIES.



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: ANGLES ± 1° 1 PLACE DECIMAL ± .1 2 PLACE DECIMAL ± .01 3 PLACE DECIMAL ± .005		CONTRACT NO.	
DO NOT SCALE DRAWING		CONTRACTOR	
MATERIAL: 2		DRAWN BY JR DATE 11-27-2018	
FINISH: 8		CHECKER BMG DATE 12-10-2018	
NEXT ASSY		ENGINEER BPC APPROVED ATN	
USED ON		APPROVED BPC APPROVED KAK	
APPLICATION		DESIGN ACTIVITY APPROVAL	
SCALE 3:1		PART NO. SEE TABLE I	
SIZE D 96336		DWG NO. F19155	
CAGE CODE		REV E	
DWG NO. F19155		SHEET 1 OF 2	

DWG NO.	F19155	SH	2	REV	E
REVISION HISTORY					
ZONE	REV	DESCRIPTION	DATE	APPROVED	
-	-	INC CR 28435	JR	12-10-2018	BMG
--	A	INC CR 28919	JR	02-28-2019	RA
	B	INC CR 30166	JRH	07-16-2019	JR
--	C	INC CR 30811	JR	09-18-2019	JAS
--	D	INC CR 31711	RAS	01-31-2020	JAS
--	E	INC CR 36863	RRP	03-09-2021	JR

TABLE II - DIMENSIONS PER CUSTOMER SPECIFICATION			
SIZE CODE	L (THREADED LENGTH; X.XXX)	M (SHAFT LENGTH; X.XX)	N (NOTCH LOCATION; X.XXX)
CUSTOMER NAME:		PURCHASE ORDER #:	
AUTHORIZED SIGNATURE:			DATE:
PART NUMBER (SEE NOTES 14 & 16):			



INFORMATION COPY
WILL NOT BE UPDATED

TABLE I - DIMENSIONS FOR #4 THROUGH 1/2" SIZE BOLTS															
SIZE	SIZE CODE	A (WASHER Ø)	B (HEX HEAD)	C (HEX HT)	D (WASHER HT)	E (RADIUS)	F (SHANK Ø)	G (THREAD)	H (GRIP LENGTH)	INSTALLATION TORQUE	TARGET PRELOAD	TENSILE STRENGTH	J (SLOT WIDTH)	K (SLOT DEPTH)	NOTCH TO THREAD LENGTH
#4	04	.300 ±.002	.188 ±.002	.110 ±.002	.032 ±.002	.004 MAX	.109 ±.001	.112-40 UNJC-3A	1.00 IN MAX	50 IN-OZ	150 LBF	630 ±70 LBF	.035 ±.004	.025 ±.005	.073 MIN
#8	2	.450 ±.002	.250 ±.002	.125 ±.002	.032 ±.002	.005 MAX	.163 ±.001	.164-32 UNJC-3A	1.75 IN MAX	14 IN-LB	400 LBF	1,400 ±200 LBF	.050 ±.004	.040 ±.005	.078 MIN
#10	3	.500 ±.002	.372 ±.002	.140 ±.002	.050 ±.002	.010 MAX	.189 ±.001	.190-32 UNJF-3A	2.25 IN MAX	20 IN-LB	700 LBF	2,250 ±250 LBF	.055 ±.004	.050 ±.005	.079 MIN
1/4"	4	.650 ±.002	.434 ±.002	.150 ±.002	.063 ±.002	.015 MAX	.249 ±.001	.250-28 UNJF-3A	2.50 IN MAX	65 IN-LB	1,500 LBF	5,200 ±400 LBF	.070 ±.004	.060 ±.005	.081 MIN
3/8"	6	.950 ±.002	.559 ±.002	.210 ±.002	.080 ±.002	.020 MAX	.374 ±.001	.375-24 UNJF-3A	3.25 IN MAX	250 IN-LB	4,000 LBF	9,200 ±800 LBF	.085 ±.004	.080 ±.005	.094 MIN
1/2"	8	1.000 ±.002	.746 ±.002	.250 ±.002	.094 ±.002	.025 MAX	.499 ±.001	.500-20 UNJF-3A	3.45 IN MAX	50 FT-LB	7,000 LBF	15,000 ±1,500 LBF	.100 ±.004	.100 ±.005	.105 MIN

THIS DOCUMENT IS THE PROPERTY OF ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY AND SHALL NOT BE DISCLOSED, REPRODUCED IN WHOLE OR IN PART, OR USED FOR ANYONE OTHER THAN ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY, WITHOUT ITS PRIOR WRITTEN CONSENT. THIS RESTRICTION DOES NOT APPLY TO OR PURPORT TO LIMIT THE RIGHT TO USE INFORMATION OBTAINED LAWFULLY FROM SOURCES OTHER THAN ENSIGN-BICKFORD AEROSPACE & DEFENSE COMPANY.

INFORMATION SUBJECT TO EXPORT CONTROL LAWS
THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT MAY BE RESTRICTED BY THE ARMS EXPORT REGULATIONS, AS MANDATED BY THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, 150 U.S.C. APP. 2401 et seq., EAR99 "NLR". GOVERNMENT AUTHORIZATION MAY BE REQUIRED PRIOR TO EXPORT, REEXPORT, DISCLOSE OR TRANSFER TO A FOREIGN PERSON(S) LOCATED IN PROHIBITED DESTINATIONS. DIVERSION CONTRARY TO THE U.S. LAWS IS PROHIBITED. VIOLATIONS OF THE EXPORT ADMINISTRATION REGULATIONS (EAR) ARE SUBJECT TO SEVERE CIVIL AND / OR CRIMINAL PENALTIES.

EBAD Ensign-Bickford Aerospace & Defense	SIZE	CAGE CODE	DWG NO.	REV
	D	96336	F19155	E
DRAWN BY JR	CHECKER BMG	SCALE 3:1	SHEET 2 OF 2	