

NOTE FOR MATERIAL:

ASTM F436 TYPE 1 MODIFIED, THROUGH-QUENCHED
AND TEMPERED, 42-48 HRC

MATERIAL SHALL BE AN ALLOY STEEL, AS
DEFINED BY ASTM A941. NON-ALLOY STEELS
ARE NOT PERMITTED.

MAXIMUM ECCENTRICITY = .020 INCHES
MAXIMUM OUT OF FLATNESS = .010 INCHES
SURFACE FINISH ON INSIDE DIAMETER, OUTSIDE DIAMETER = AS PUNCHED
MAXIMUM PARALLELISM BETWEEN TOP AND BOTTOM SURFACES = .005 INCHES
HEAT TREAT TO ROCKWELL C42-48 HARDNESS

IF MFG BY GE COMPANY HEAT TREAT PER FOLLOWING:
B4E6A STEEL (AISI-1095) PER MFG PROCESS P10F-EP7
B4C1A STEEL (AISI-1045) PER MFG PROCESS P10C15

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THIRD PARTIES WITHOUT WRITTEN PERMISSION OF GENERAL ELECTRIC COMPANY.

NOTE FOR FINISH PLATING:

(FINISH F75B2B2)
ZINC .0002 MECHANICAL PLATING WITH
A YELLOW CHROMATE CONVERSION COATING.

(FINISH F70B4A2)
BRIGHT ZINC .0002 ELECTROPLATE WITH
SULFURIC ACID-SODIUM DICHROMATE TREATMENT.

DRAFTING NOTE: 3D UG MODEL EXISTS FOR P1,P2,
P6,P7,P9,P11,P12,P14,P18,P20,P21,P22,P31,P33,
P35,P36,P37,P39,P40,P42,P43,P45,46,P47,P48,P49
P50,P51,53,54,P55,P56,P57,P58,P59, P60,P61,P62
P63,P64,P65,P66,P67,P68 & P69.

REVISION HISTORY

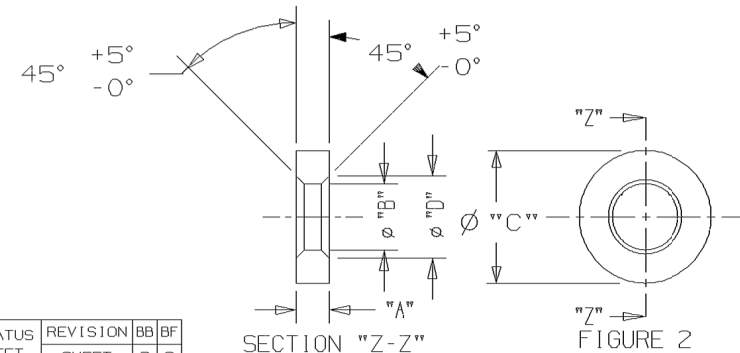
REV	DATE	DRAFTER ENGINEER	CO #, IN # DESCRIPTION
BE	08-NOV-2018	YASHASWINI BRITTANY FISHER	ECN-204699-01 MATERIAL NOTE UPDATED
BF	03-MAY-2019	ARUN V PATIL, LAVANGUDA	ECN-221654-01 PART 76 ADDED

ENGINEERING NOTE:
FOR TIGHTER FLATNESS REQUIREMENTS (TO DISTRIBUTE
LOADS UNDER THE BOLT HEAD), SUCH AS FOR ROTATING
PARTS AND/OR HIGH BOLTING FORCES, USE 84C633020,
GROUND HARDENED WASHERS.

BREAK SHARP
EDGES BOTH
SIDES.
.005 - .020

SECTION "Y-Y"

FIGURE 1



REV STATUS OF SHEET	REVISION SHEET	BB BF
		2 3

PART NO.	FIG. NO.	BOLT SIZE	"A" +.000 -.010	"B"	"C"	"D"	FINISH PLATING PER	CURRENT REVISION
1	1	.375	.090	.435 ±.005	.675 ±.008	-----	F75B2B2	BB
2	1	.375	.125	.435 ±.005	1.188 ±.008	-----	F75B2B2	BB
3	1	.4375	.125	.498 ±.005	.760 ±.008	-----	DO NOT USE P3, USE 41B537660P4	
4	1	.4375	.125	.498 ±.005	.760 ±.008	-----	F75B2B2	BB
5	1	.500	.090	.562 ±.005	.938 ±.008	-----	DO NOT USE P5, USE 41B537660P6	
6	1	.500	.090	.562 ±.005	.938 ±.008	-----	F75B2B2	BB
7	1	.500	.200	.562 ±.005	1.250 ±.020	-----	F75B2B2	BB
8	1	.625	.125	.725 ±.005	1.000 ±.008	-----	DO NOT USE P8, USE 41B537660P9	
9	1	.625	.125	.725 ±.005	1.000 ±.008	-----	F75B2B2	BB
10	1	.625	.187	.725 ±.005	1.250 ±.020	-----	DO NOT USE P10, USE 41B537660P11	
11	1	.625	.187	.725 ±.005	1.250 ±.020	-----	F75B2B2	BB
12	1	.625	.312	.725 ±.005	2.000 ±.020	-----	NONE	BB
13	1	.750	.125	.850 ±.005	1.188 ±.008	-----	DO NOT USE P13, USE 41B537660P14	
14	1	.750	.125	.850 ±.005	1.188 ±.008	-----	F75B2B2	BB
15	1	.750	.210	.850 ±.005	1.375 ±.020	-----	DO NOT USE P15, USE 41B537660P16	
16	1	.750	.210	.850 ±.005	1.375 ±.020	-----	F75B2B2	BB
17	2	.750	.500	.780 ±.005	4.000 ±.060	.870 ±.008	NONE	BB
18	1	.875	.210	.968 ±.005	1.375 ±.020	-----	NONE	BB
19	2	.875	.210	.968 ±.005	1.750 ±.020	1.015 ±.008	NONE	BB
20	2	1.000	.240	1.063 ±.008	2.000 ±.020	1.203 ±.008	NONE	BB
21	2	1.000	.240	1.063 ±.008	2.000 ±.020	1.203 ±.008	F75B2B2	BB
22	2	1.250	.220	1.313 ±.008	2.500 ±.020	1.453 ±.008	NONE	BB
23	2	1.500	.280	1.583 ±.008	2.625 ±.020	1.703 ±.008	NONE	BB
24	1	1.500	.375	1.583 ±.008	3.000 ±.020	-----	F75B2B2	BB
25	2	.875	.210	.968 ±.008	1.375 ±.020	1.015 ±.008	NONE	BB
26	1	.625	.125	.725 ±.005	1.000 ±.008	-----	NONE	BB

DRAFTING PRACTICES ON THIS DRAWING CONFORM TO THE 84A222563
SERIES OF DOCUMENTS BASED ON ASME Y14.5 1994 & Y14.100 2004

DIMENSIONS ARE IN INCHES (X.X) IN MILLIMETERS		CTQ SYMBOL:	CTQ'S PRESENT? NO
UNLESS OTHERWISE SPECIFIED, TOLERANCES PER 84A226035-C		CTQ LOCATIONS: X	
SIGNATURES		DATE	GE TRANSPORTATION ERIE, PA HARDENED WASHER FIRST MADE FOR PROPULSION EQUIPMENT X DWG NO 41B537660 CONT ON SHEET 2 SH NO 1
DRAWN R.L.KACPROWICZ		09-JAN-1985	
ISSUED K.MARSEN		08-AUG-1997	
ENGRG D.C.WALKER			

PART NO.	FIG. NO.	BOLT SIZE	"A" +.000 -.010	"B"	"C"	"D"	FINISH PLATING PER	CURRENT REVISION
27	1	.750	.125	.850 ±.005	1.188 ±.008	-----	NONE	BB
28	2	.875	.312	.968 ±.005	2.250 ±.020	1.015 ±.008	NONE	BB
29	2	.625	.210	.725 ±.005	1.375 ±.020	.787 ±.008	NONE	BB
30	2	1.125 HUCK	.250	1.188 ±.005	2.375 ±.020	1.312 ±.008	NONE	BB
31	2	.500	.187	.531 ±.005	1.000 ±.020	.856 ±.008	NONE	BB
32	2	.500	.187	.531 ±.005	1.000 ±.020	.856 ±.008	F75B2B2	BB
33	1	1.375	.220	1.450 ±.010	2.250	-----	NONE	BB
34	2	1.250	.220	1.313 ±.008	2.750 ±.020	1.453 ±.008	NONE	BB
35	2	1.250	.220	1.313 ±.008	2.000 ±.020	1.453 ±.008	NONE	BB
36	1	.750	.250	.850 ±.005	2.000 ±.020	-----	NONE	BB
37	1	.500	.090	.531 ±.005	.907 ±.008	-----	F75B2B2	BB
38	1	.500	.200	.531 ±.005	.875 ±.005	-----	F75B2B2	BB
39	2	1.250	.160	1.313 ±.008	2.250 ±.020	1.453 ±.008	NONE	BB
40	1	.500	.437	.531 ±.005	1.125 ±.020	-----	F75B2B2	BB
41	1	.750	.625	.812 ±.010	1.500 ±.020	-----	NONE	BB
42	1	.375	.125	.435 ±.005	1.000 ±.008	-----	F75B2B2	BB
43	1	.4375	.100	.469 ±.005	1.480 ±.008	-----	F75B2B2	BB
44	1	.3125	.078	.375 ±.005	.875 ±.005	-----	F75B2B2	BB
45	1	.375	.250	.435 ±.005	1.188 ±.008	-----	F75B2B2	BB
46	1	.750	.375	.850 ±.005	1.375 ±.020	-----	F75B2B2	BB
47	2	.750	.625	.875 ±.005	1.500 ±.020	.895 ±.008	NONE	BB
48	1	.750	1.250	.850 ±.005	1.375 ±.020	-----	F75B2B2	BB
49	1	.875	1.210	.968 ±.005	1.750 ±.020	-----	NONE	BB
50	1	.500	.140	.588 ±.005	.950 ±.020	-----	F75B2B2	BB
51	1	.500	.470	.562 ±.005	1.125 ±.020	-----	F75B2B2	BB
52	1	.500	.625	.562 ±.005	1.000 ±.020	-----	F75B2B2	BB
53	1	.625	.625	.687 ±.005	1.000 ±.020	-----	F75B2B2	BB
54	1	.750	.250	.850 ±.005	2.000 ±.020	-----	F75B2B2	BB
55	1	.500	.090	.562 ±.005	.938 ±.020	-----	F75B2B2	BB
56	1	.375	.375	.435 ±.005	.675 ±.008	-----	F75B2B2	BB
57	1	.500	.098	.551 ±.005	1.260 ±.008	-----	NONE	BB
58	1	.625	.236	.690 ±.005	1.775 ±.020	-----	NONE	BB
59	1	.625	.098	.690 ±.005	1.775 ±.020	-----	NONE	BB
60	1	.750	1.181	.879 ±.005	1.970 ±.020	-----	NONE	BB
61	2	.875	.312	.968 ±.005	3.500 ±.008	1.015 ±.008	NONE	BB

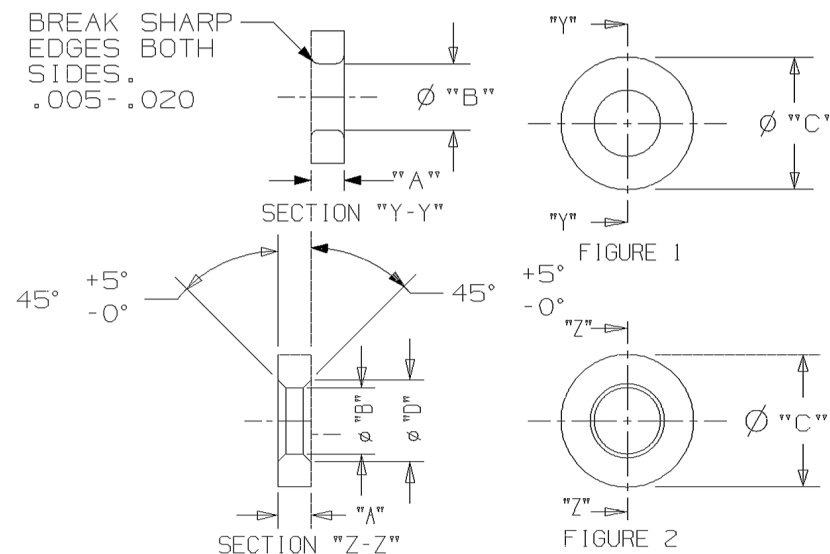
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SERIES OF DOCUMENTS BASED ON ASME Y14.5 1994 & Y14.100 2004

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DWG NO 41B537660 SH 2

REVISION HISTORY

REV	DATE	DRAFTER ENGINEER	CO #, IN # DESCRIPTION
AY	30-MAR-2016	J. BOHRER K. ANAND	CO-173640 P6B 3D MODEL CREATED
BB	26-APR-2017	RAGHUTEJ HR GOKUL S	CO-177586 IN-17



DIMENSIONS ARE IN INCHES (X.X) IN MILLIMETERS		CTQ SYMBOL: $\ominus$	CTQ'S PRESENT? NO
UNLESS OTHERWISE SPECIFIED, TOLERANCES PER 84A226035-C		CTQ LOCATIONS: X	
PLAN REF NONE FCF RY STANDARD			
SIGNATURES		DATE	
DRAWN R.L.KACPROWICZ		09-JAN-1985	
ISSUED K.MARSEN		08-AUG-1997	
ENGRG D.C.WALKER			
GE TRANSPORTATION ERIE, PA			
TITLE HARDENED WASHER			
FIRST MADE FOR PROPULSION EQUIPMENT X			
		DWG NO 41B537660	
		CONT ON SHEET 3	SH NO 2

UGPROP B

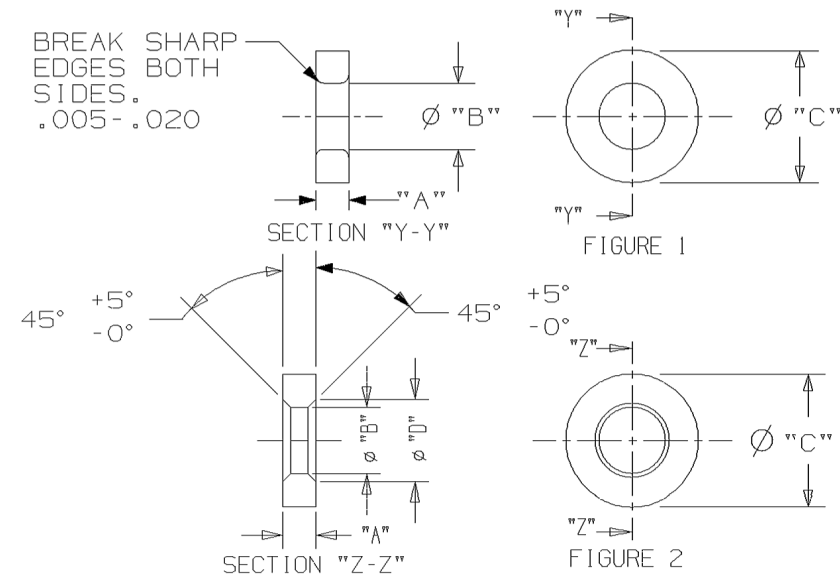
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PART NO.	FIG. NO.	BOLT SIZE	"A" +.000 -.010	"B"	"C"	"D"	FINISH PLATING PER	CURRENT REVISION
62	1	M16(.630)	.597	.688 ± .005	1.732 ± .020	-----	NONE	BB
63	1	M16(.630)	.236	.688 ± .005	1.732 ± .020	-----	NONE	BB
64	1	.500	.250	.562 ± .005	1.750 ± .020	-----	F75B2B2	BB
65	1	M16(.630)	.597	.688 ± .005	1.26 ± .020	-----	NONE	BB
66	1	.500	.450	.531 ± .005	.875 ± .005	-----	F75B2B2	BB
67	2	1.000	.500	1.063 ± .008	2.000 ± .020	1.203 ± .008	F75B2B2	BB
68	1	0.750	.375	.850 ± .005	1.600 ± .020	-----	F75B2B2	BB
69	1	1.000	.375	1.062 ± .02	3.000 ± .02		F75B2B2	BB
70	1	M10(.393)	1.181 ± .005	.433 ± .005	1.103 ± .005		NONE	BB
71	1	M6(.236)	.748 ± .005	.276 ± .005	.729 ± .005		NONE	BB
72	1	.375	.125	.435 ± .005	1.750 ± .008	-----	F75B2B2	BB
73	1	.375	.250	.435 ± .005	1.000 ± .008	-----	F75B2B2	BB
74	1	.625	1.000	.750 ± .005	1.750 ± .020	-----	NONE	BC
75	1	.500	.500	.562 ± .005	1.500 ± .020	.622 ± .008	F75B2B2	BD
76	2	M33(1.299)	.220	1.378 ± .008	2.598 ± .020	1.524 ± .008	F75B2B2	BF

REVISION HISTORY

REV	DATE	DRAFTER ENGINEER	CO #, IN # DESCRIPTION
BD	30-NOV-2017	RAJA REDDY VISHWA	CO-183792 ADDED P75
BF	03-MAY-2019	ARUN V PATIL, LAVANGUDA	ECN-221654-01 PART 76 ADDED

BREAK SHARP
EDGES BOTH
SIDES.
.005 - .020



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SIGNATURES		DATE	
DRAWN J. BOHRER		30-MAR-2016	
ISSUED J. BOHRER		30-MAR-2016	
ENGRG K. ANAND			
GE TRANSPORTATION ERIE, PA		TITLE HARDENED WASHER	
FIRST MADE FOR PROPULSION EQUIPMENT		X	
DWG NO 41B537660		CONT SHEET F SH NO 3	

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