Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AERONAUTICAL RECOMMENDED PRACTICE

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PROPELLER SHAFT ENDS, DUAL ROTATION (PROPELLER SUPPLIED BEARING)

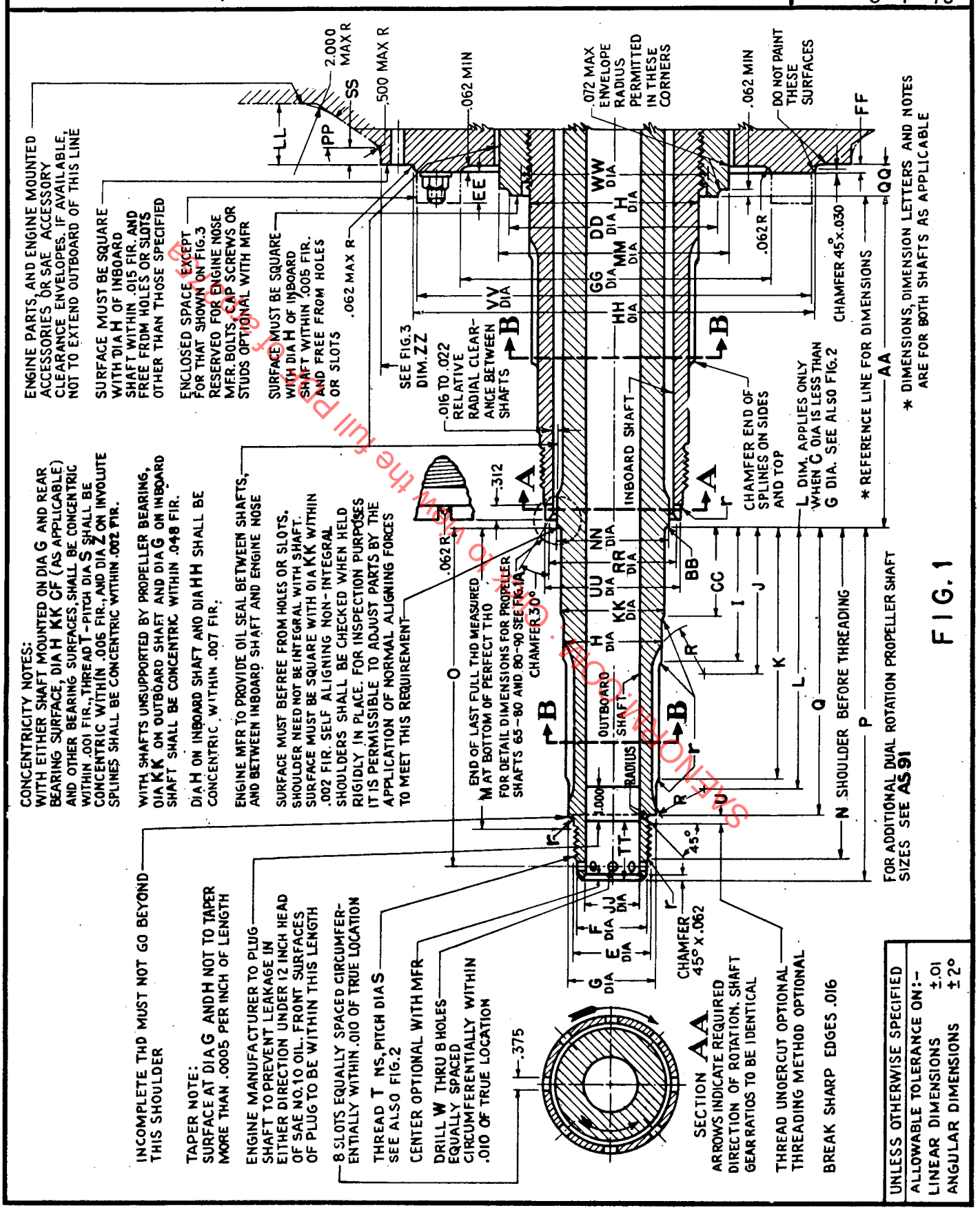


FIG. 1

PROPELLER SHAFT ENDS, DUAL ROTATION (PROPELLER SUPPLIED BEARING)

LET	TOLERANCE		41 — 60		51 — 70		65 — 80		80 — 90	
	OUT-BOARD SHAFT	IN-BOARD SHAFT	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES
A	+.000	−.005	3.083	4.680	3.750	5.539	5.250	6.411	6.411	7.554
			—	—	—	—	—	—	—	—
B	MAX.		2.917	4.436	3.583	5.294	5.000	6.151	6.151	7.294
C	+.000	−.020	2.850	—	3.517	—	4.900	—	—	—
	+.010	−.020	—	4.321	—	5.179	—	6.036	6.036	7.179
D	+.0000	−.0030	.1299	.2233	.1299	.2233	.1953	.2233	.2233	.2234
E	+.000	−.004	2.807	4.245	3.432	5.120	4.870	5.995	5.995	7.120
F	+.000	−.005	2.688	4.062	3.312	4.938	4.688	5.812	5.812	6.938
G	+.000	−.002	2.812	4.296	3.500	5.156	4.875	6.011	6.011	7.156
H	+.000	−.002	3.125	4.687	3.812	5.562	5.281	6.426	6.426	7.570
I	±.020	±.025	4.438	1.812	7.375	1.812	11.250	3.250	15.125	3.312
J	±.030	±.040	4.938	2.312	7.875	2.312	11.750	3.750	15.625	3.812
K	±.020		8.250	5.375	11.188	5.375	16.125	7.400	20.750	8.000
L	±.020	—	—	—	11.312	—	—	—	—	—
M	+.000−*	+.010−*	9.475	8.360	12.412	8.360	18.297	10.360	23.735	11.610
N	+.010	−.030	10.641	9.735	13.578	9.735	19.672	11.610	25.110	13.110
O	±.015	—	10.938	—	13.812	—	20.062	—	25.562	—
P	±.020		11.312	10.625	14.250	10.625	20.312	12.500	25.812	14.062
Q	±.010	±.020	9.375	8.250	12.312	8.250	18.188	10.250	23.625	11.500
R	MAX		1.530	2.030	1.530	2.030	2.030	2.030	2.030	3.030
	MIN		1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125
r	+.030	−.000	.062	.062	.062	.062	.062	.062	.062	.062
S	+.0000	−.0030	2.7560	—	3.3810	—	—	—	—	—
	+.0000	−.0050	—	4.1668	—	5.0418	4.7918	5.9168	5.9168	—
	+.0000	−.0080	—	—	—	—	—	—	—	7.0418
T	—		2.8125-12	4.250-8	3.4375-12	5.125-8	4.875-8	6.000-8	6.000-8	7.125-8
U	±.030		.170	.250	.170	.250	.250	.250	.250	.250
V	APPROX		.035	.068	.035	.068	.060	.068	.068	.068
W	±.0100	—	.2656	—	.2656	—	.2656	—	.2656	—
X	—		36	32	44	38	41	44	44	52
Y	—		12/24	7/16	12/24	7/16	8/16	7/16	7/16	7/16
Z	THEO		3.0000	4.5714	3.6667	5.4286	5.1250	6.2857	6.2857	7.4286
AA	±.040		10.688		10.688		16.062		17.625	
BB	MAX	—	.094	—	.094	—	.094	—	.094	—
CB	±.020	—	—	—	—	—	7.875	—	8.875	—
CC	±.020	—	2.375		2.375		3.875	—	4.875	—
CF	+.0000 −.0005	—	—	—	—	—	5.3149 135MM BRG	—	6.4567 164 MM BRG	—
DD	±.010		5.812		6.688		7.562		8.750	
EE	MAX		.750		.750		.750		1.000	
FF	±.010		.312		.312		.312		.312	
GG	MIN		7.750		8.750		9.625		11.375	
HH	±.001		10.123		11.123		12.625		14.373	
JJ	+.005 −.000	—	2.188	—	2.812	—	4.125	—	5.156	—
KK	+.0000 −.0005	—	3.1498 (80 MM BRG)		3.8191 (97MM BRG)		5.3543 136MM BRG	—	6.4960 165 MM BRG	—
LL	MIN		2.062 **		2.062 **		4.000		4.000	
MM	MAX		6.188		7.062		7.938		9.125	
NN	+.000 −.010	—	3.604	—	4.354	—	5.812	—	6.938	—
PP	MIN		35° **		35° **		45°		45°	
QQ	±.035		.938		.938		.938		.938	
RR	—	±.010	—	3.852	—	4.602	—	5.688	—	6.750
SS	MIN		.500		.500		.500		.500	
TT	±.030	—	3.000	—	3.000	—	2.000	—	2.000	—
UU	—	+.010	—	4.000	—	4.812	—	5.781	—	6.875
VV	MAX		10.102		11.072		12.574		14.250	
WW	MAX		—		—		6.792		7.938	

INBOARD AXIAL DIMENSIONS ARE FROM THRUST NUT

M DIM. MAX LIMIT GIVES MIN FULL THREAD

* MINUS VALUE DEPENDS ON METHOD OF THREADING AND THD RUNOUT RELATION TO SHOULDER **Q**

TO OBTAIN DIM. FOR FULL NUMBER OF PITCHES, WHEN DESIRED, DEDUCT BASIC **M** FROM BASIC **N**

M DIM. DOES NOT APPLY WHEN UNDERCUT IS USED

** **LL** TO BE 4.000 AND **PP** TO BE 45° WHEN PRACTICABLE

UNLESS OTHERWISE SPECIFIED
ALLOWABLE TOLERANCE ON:-
LINEAR DIMENSIONS ±.01
ANGULAR DIMENSIONS ± 2°

TABLE FOR FIG. 1, 1A AND 2

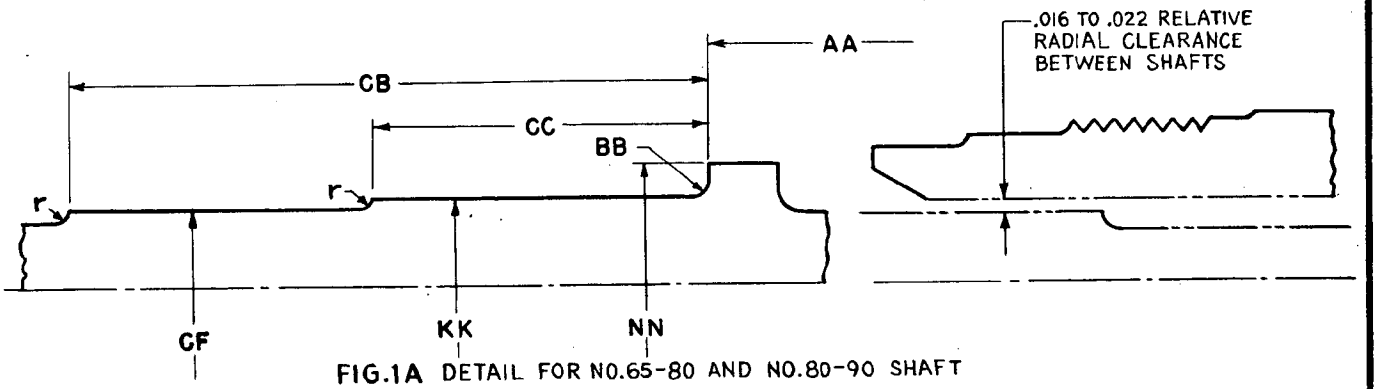
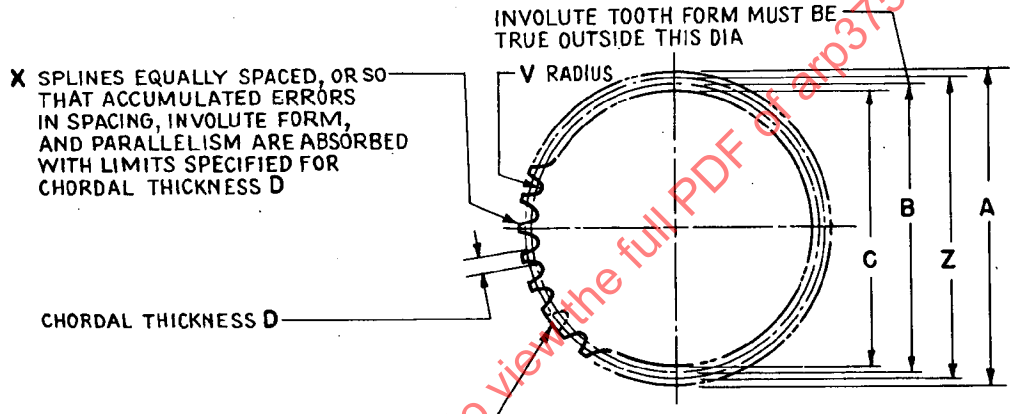
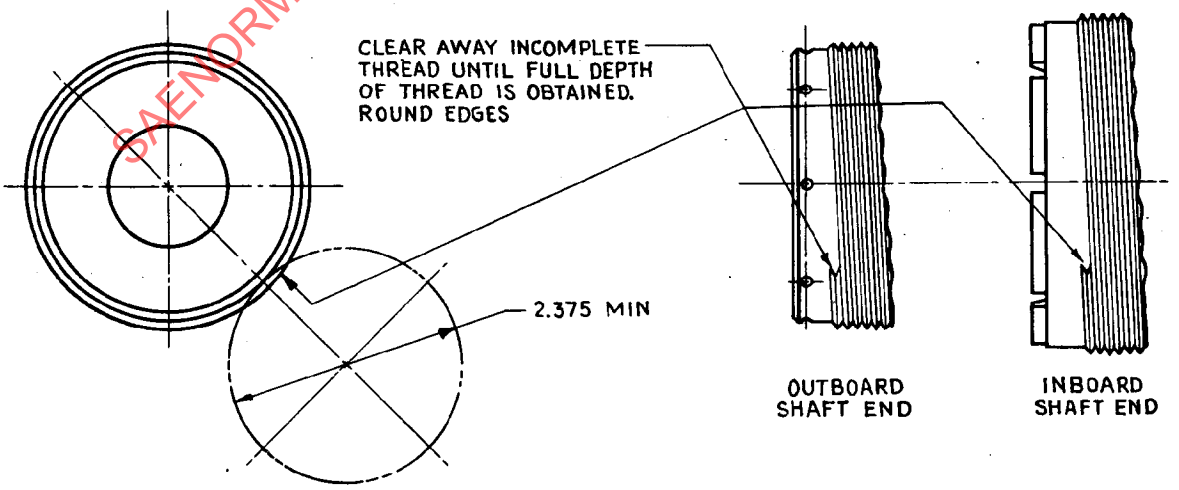


FIG.1A DETAIL FOR NO.65-80 AND NO.80-90 SHAFT



SECTION **BB**
INVOLUTE SPLINES
SHAFT SPLINE DATA

X TEETH INVOLUTE FORM
Y DIAMETRAL PITCH
Z PITCH DIA (THEO)
30° PRESSURE ANGLE



REMOVAL OF INCOMPLETE THREAD
METHOD OF REMOVAL OPTIONAL

FIG. 2

UNLESS OTHERWISE SPECIFIED	
ALLOWABLE TOLERANCE ON:-	
LINEAR DIMENSIONS	+.01
ANGULAR DIMENSIONS	±2°