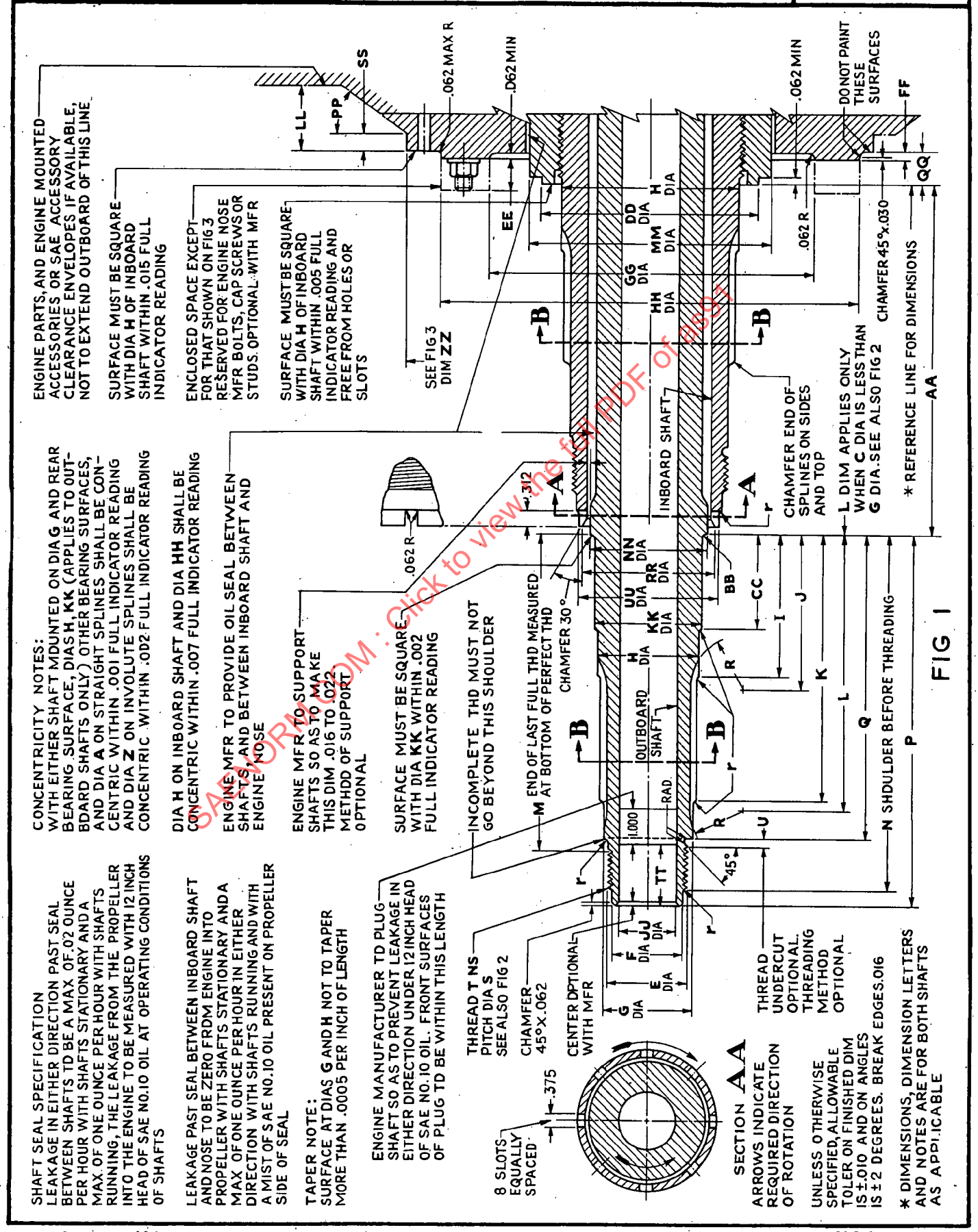
Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AERONAUTICAL STANDARD

AS 91

PROPELLER SHAFT ENDS, DUAL ROTATION
(Propeller Supplied Bearing)

Issued 7-1-43
Revised



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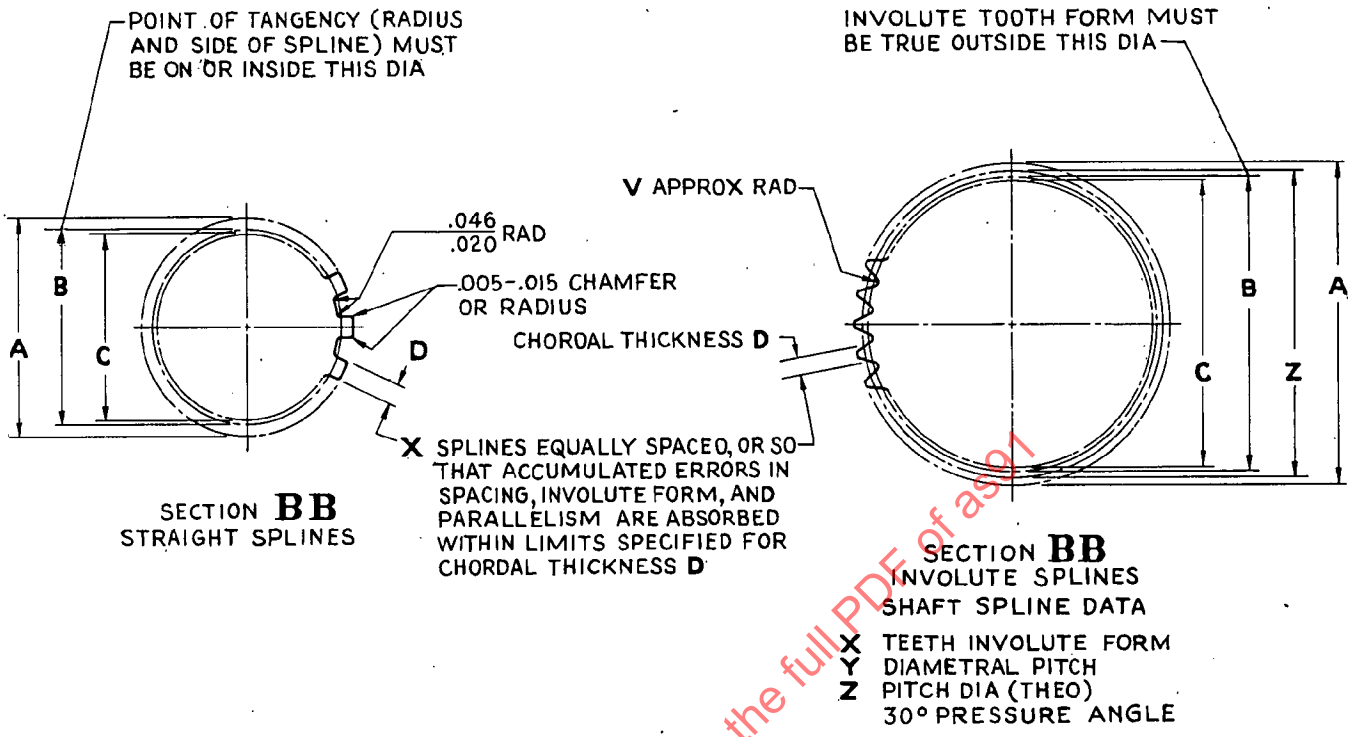
LET	TOLERANCE OUT-BOARD SHAFT	TOLERANCE IN-BOARD SHAFT	40 — 60 STRAIGHT SPLINES	40 — 60 INVOLUTE SPLINES	50 — 70 STRAIGHT SPLINES	50 — 70 INVOLUTE SPLINES	60 — 80 INVOLUTE SPLINES	60 — 80 INVOLUTE SPLINES	60L — 80 INVOLUTE SPLINES	60L — 80 INVOLUTE SPLINES
A	+.000	−.002	3.117	—	3.804	—	—	—	—	—
	+.000	−.005	—	4.680	—	5.539	4.680	6.411	4.680	6.411
B	MAX		2.875	4.436	3.554	5.294	4.436	6.151	4.436	6.151
C	MIN		2.783	—	3.462	—	—	—	—	—
	+.010	−.020	—	4.321	—	5.179	4.321	6.036	4.321	6.036
D	±.0008		.3040	—	.375	—	—	—	—	—
	+.0000	−.0030	—	.2233	—	.2233	.2233	.2233	.2233	.2233
E	+.000	−.004	2.807	4.245	3.432	5.120	4.245	5.995	4.245	5.995
F	+.000	−.005	2.688	4.062	3.312	4.938	4.062	5.812	4.062	5.812
G	+.000	−.002	2.812	4.296	3.500	5.156	4.296	6.011	4.296	6.011
H	+.000	−.002	3.125	4.687	3.812	5.562	4.687	6.426	4.687	6.426
I	±.020	±.025	4.438	1.812	7.375	1.812	8.250	3.250	13.250	3.250
J	±.030	±.040	4.938	2.312	7.875	2.312	8.750	3.750	13.750	3.750
K		±.020	8.250	5.375	11.188	5.375	12.297	7.400	17.297	7.400
L	±.020	—	8.375	—	11.312	—	—	—	—	—
M	+.000−*	+.010−*	9.475	8.360	12.412	8.360	13.808	10.360	18.808	10.360
N	+.000 −.020	+.010 −.030	10.641	9.735	13.578	9.735	15.183	11.610	20.183	11.610
P		±.020	11.312	10.625	14.250	10.625	15.688	12.500	20.688	12.500
Q		±.020	9.375	8.250	12.312	8.250	13.688	10.250	18.688	10.250
R	MAX		1.530	2.030	1.530	2.030	2.030	2.030	2.030	2.030
	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	4.1668	5.9168	4.1668	5.9168
T	—		2.8125-12	4.250-8	3.4375-12	5.125-8	4.250-8	6.000-8	4.250-8	6.000-8
U	±.030		.170	.250	.170	.250	.250	.250	.250	.250
V	—		—	.068	—	.068	.068	.068	.068	.068
X	—		16	32	16	38	32	44	32	44
Y	—		—	7/16	—	7/16	7/16	7/16	7/16	7/16
Z	THEO		—	4.5714	—	5.4286	4.5714	6.2857	4.5714	6.2857
AA	±.030		10.688		10.688		12.562		12.562	
BB	+.000 −.020	—	.094	—	.094	—	.094	—	.094	—
CC			2.375	—	2.375	—	4.938	—	4.938	—
DD			5.812		6.688		7.562		7.562	
EE	MAX		.750		.750		.750		.750	
FF			.312		.312		.312		.312	
GG	MIN		7.750		8.750		9.625		9.625	
HH	±.001		10.123		11.123		12.625		12.625	
JJ	+.005 −.000	—	2.188	—	2.812	—	3.562	—	3.562	—
KK	+.0000 −.0005	—	3.1498 (80 M/M BRG)		3.8191 (97 M/M BRG)		4.7246 (120 M/M BRG)		4.7246 (120 M/M BRG)	
LL	MIN **		2.062		2.062		2.062		2.062	
MM	MAX		6.188		7.062		7.938		7.938	
NN	MIN	—	3.594	—	4.344	—	5.375	—	5.375	—
PP	MIN **		35°		35°		35°		35°	
QQ	±.025		.938		.938		.938		.938	
RR			—	3.852	—	4.602	—	5.688	—	5.688
SS	MIN		.500		.500		.500		.500	
TT	±.030	—	3.000	—	3.000	—	3.000	—	3.000	—
UU			—	4.000	—	4.812	—	5.781	—	5.781

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** FRDM BASIC **N**
M DIM DOES NOT APPLY WHEN UNDERCUT IS USED
LL TO BE 4.000 AND **PP TO BE 45° WHEN PRACTICABLE

TABLE FOR FIG 1 AND 2

UNLESS OTHERWISE SPECIFIED ALLOWABLE TOLER ON FINISHED DIM IS ± .010 AND ON ANGLES ±2 DEGREES



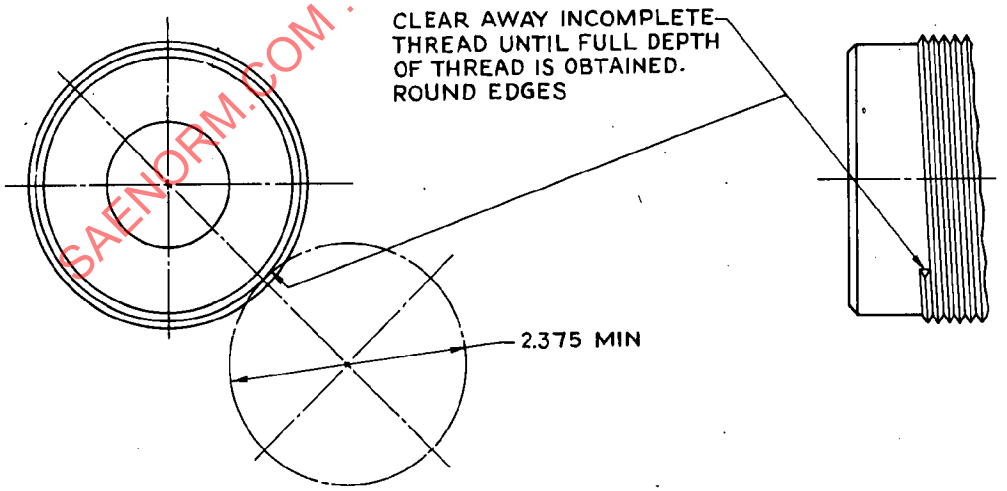


FIG 2