

PROPELLER SHAFT ENDS, DUAL ROTATION
(Propeller Supplied Bearing)

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Revised

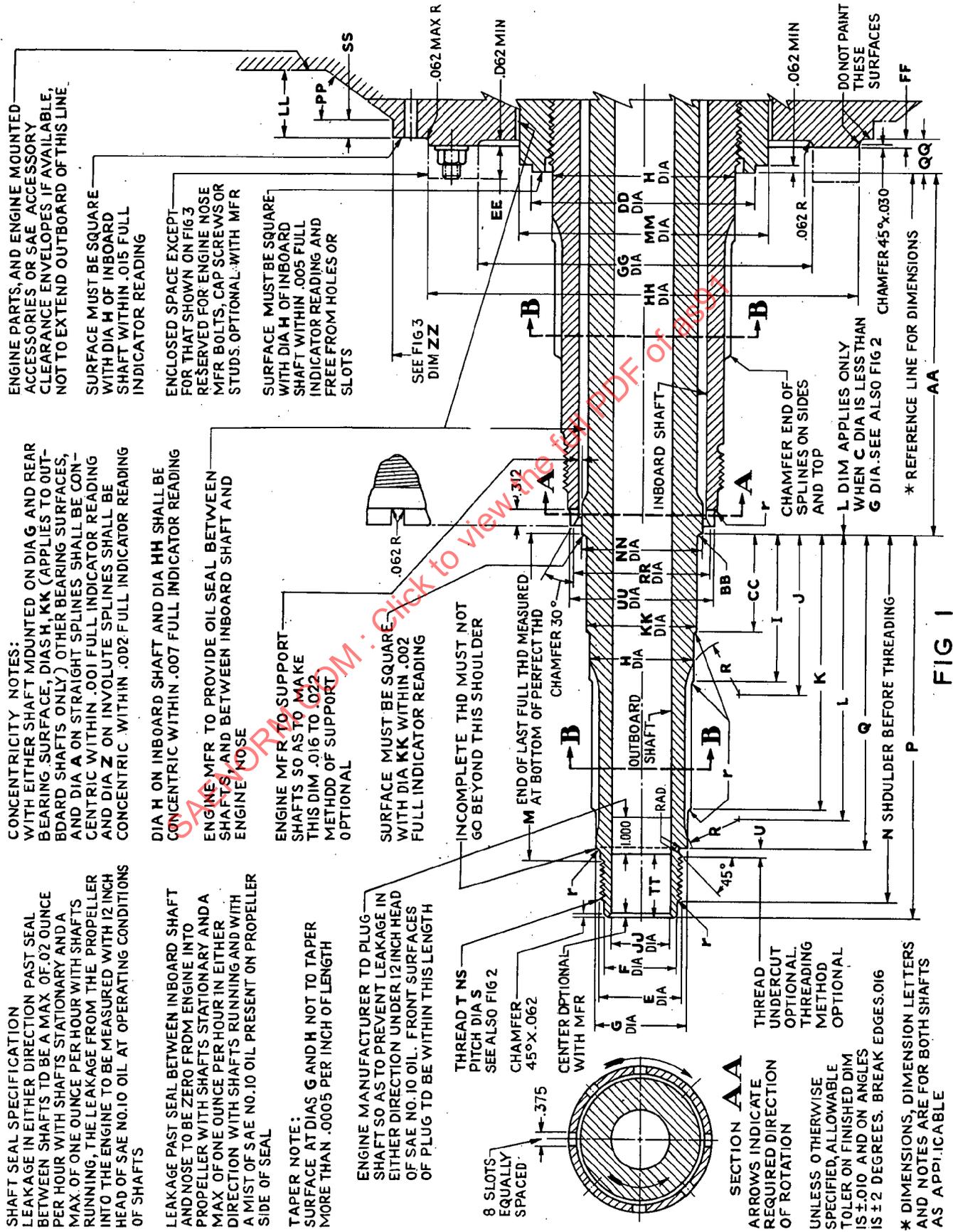


FIG 1

SHAFT SEAL SPECIFICATION
LEAKAGE IN EITHER DIRECTION PAST SEAL BETWEEN SHAFTS TO BE A MAX OF .02 OUNCE PER HOUR WITH SHAFTS STATIONARY AND A MAX OF ONE OUNCE PER HOUR WITH SHAFTS RUNNING. THE LEAKAGE FROM THE PROPELLER INTO THE ENGINE TO BE MEASURED WITH 12 INCH HEAD OF SAE NO.10 OIL AT OPERATING CONDITIONS OF SHAFTS

LEAKAGE PAST SEAL BETWEEN INBOARD SHAFT AND NOSE TO BE ZERO FROM ENGINE INTO PROPELLER WITH SHAFTS STATIONARY AND A MAX OF ONE OUNCE PER HOUR IN EITHER DIRECTION WITH SHAFTS RUNNING AND WITH A MIST OF SAE NO.10 OIL PRESENT ON PROPELLER SIDE OF SEAL

TAPER NOTE:
SURFACE AT DIAS G AND H NOT TO TAPER MORE THAN .0005 PER INCH OF LENGTH

ENGINE MANUFACTURER TO PLUG SHAFT SO AS TO PREVENT LEAKAGE IN EITHER DIRECTION UNDER 12 INCH HEAD OF SAE NO.10 OIL. FRONT SURFACES OF PLUG TO BE WITHIN THIS LENGTH

CONCENTRICITY NOTES:
WITH EITHER SHAFT MOUNTED ON DIA G AND REAR BEARING SURFACE, DIA H, KK (APPLIES TO OUTBOARD SHAFTS ONLY) OTHER BEARING SURFACES, AND DIA A ON STRAIGHT SPLINES SHALL BE CONCENTRIC WITHIN .001 FULL INDICATOR READING AND DIA Z ON INVOLUTE SPLINES SHALL BE CONCENTRIC WITHIN .002 FULL INDICATOR READING

DIA H ON INBOARD SHAFT AND DIA HH SHALL BE CONCENTRIC WITHIN .007 FULL INDICATOR READING

ENGINE MFR TO PROVIDE OIL SEAL BETWEEN SHAFTS, AND BETWEEN INBOARD SHAFT AND ENGINE NOSE

ENGINE MFR TO SUPPORT SHAFTS SO AS TO MAKE THIS DIM .016 TO .022
METHOD OF SUPPORT OPTIONAL

SURFACE MUST BE SQUARE WITH DIA KK WITHIN .002 FULL INDICATOR READING

INCOMPLETE THD MUST NOT GO BEYOND THIS SHOULDER

END OF LAST FULL THD MEASURED AT BOTTOM OF PERFECT THD

CHAMFER 30 degrees

M

1.000
RAD.
45 degrees
U
U
R
R
B
B
C
C
I
J
K
L
M
N
N
N
N
NN
NN
RR
RR
HH
HH
MM
MM
DD
DD
H
H
D/A
D/A
AA
BB
CC
DD
EE
FF
GG
HH
II
JJ
KK
LL
MM
NN
OO
PP
QQ
RR
SS
TT
UU
VV
WW
XX
YY
ZZ
CHAMFER 45 degrees x .030
CHAMFER END OF SPLINES ON SIDES AND TOP
L DIM APPLIES ONLY WHEN C DIA IS LESS THAN G DIA. SEE ALSO FIG 2
* REFERENCE LINE FOR DIMENSIONS

ENGINE PARTS, AND ENGINE MOUNTED ACCESSORIES OR SAE ACCESSORY CLEARANCE ENVELOPES IF AVAILABLE, NOT TO EXTEND OUTBOARD OF THIS LINE

SURFACE MUST BE SQUARE WITH DIA H OF INBOARD SHAFT WITHIN .015 FULL INDICATOR READING

ENCLOSED SPACE EXCEPT FOR THAT SHOWN ON FIG 3 RESERVED FOR ENGINE NOSE MFR BOLTS, CAP SCREWS OR STUDS, OPTIONAL, WITH MFR

SURFACE MUST BE SQUARE WITH DIA H OF INBOARD SHAFT WITHIN .005 FULL INDICATOR READING AND FREE FROM HOLES OR SLOTS

SEE FIG 3 DIM ZZ

B

B

CHAMFER END OF SPLINES ON SIDES AND TOP

L DIM APPLIES ONLY WHEN C DIA IS LESS THAN G DIA. SEE ALSO FIG 2

* REFERENCE LINE FOR DIMENSIONS

8 SLOTS EQUALLY SPACED

375

THREAD T NS PITCH DIA S SEE ALSO FIG 2

CHAMFER 45 degrees x .062

CENTER OPTIONAL WITH MFR

THREAD UNDERCUT OPTIONAL. THREADING METHOD OPTIONAL

UNLESS OTHERWISE SPECIFIED, ALLOWABLE TOLER ON FINISHED DIM IS +/- .010 AND ON ANGLES IS +/- 2 DEGREES. BREAK EDGES .016

* DIMENSIONS, DIMENSION LETTERS AND NOTES ARE FOR BOTH SHAFTS AS APPLICABLE

SECTION AA

ARROWS INDICATE REQUIRED DIRECTION OF ROTATION

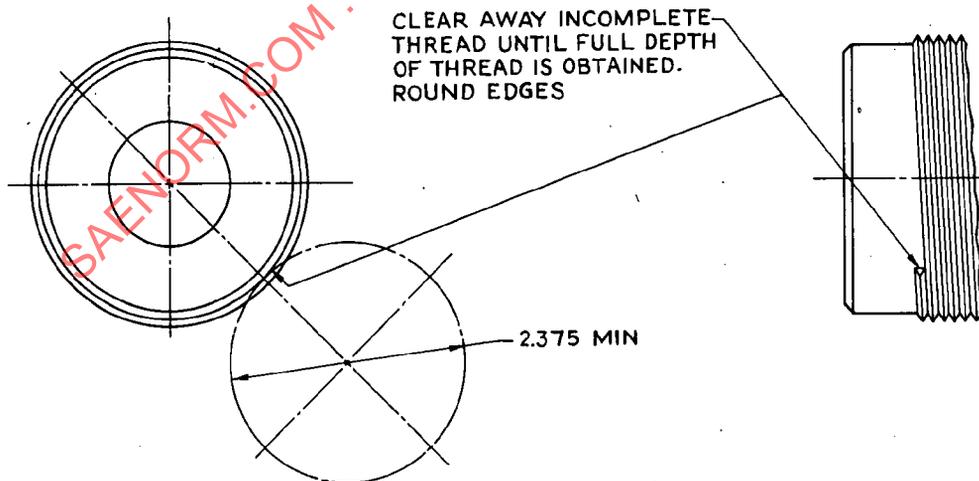
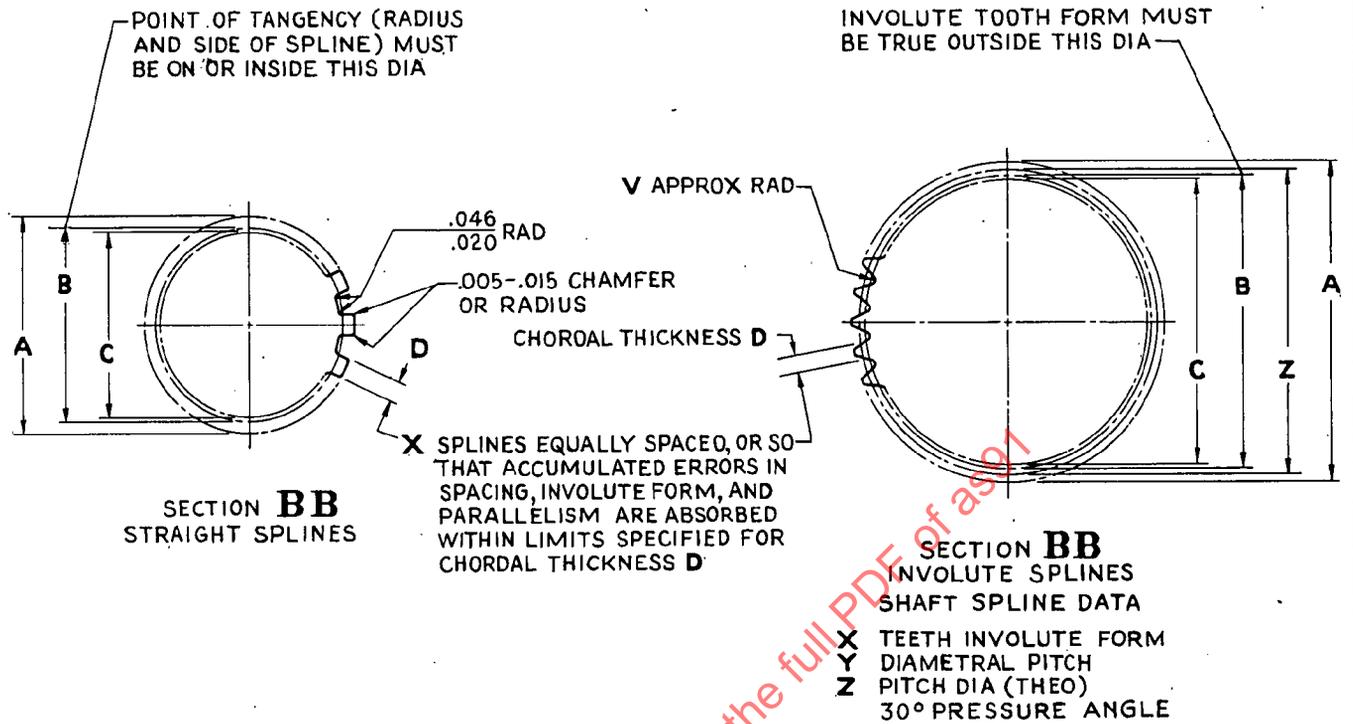
LET	TOLERANCE		40 — 60		50 — 70		60 — 80		60L — 80	
	OUT-BOARD SHAFT	IN-BOARD SHAFT	STRAIGHT SPLINES	INVOLUTE SPLINES	STRAIGHT SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES	INVOLUTE SPLINES
A	+0.000	-.002	3.117	—	3.804	—	—	—	—	—
	+0.000	-.005	—	4.680	—	5.539	4.680	6.411	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	—	—	—	—	—
	+0.010	-.020	—	4.321	—	5.179	4.321	6.036	4.321	6.036
D	±.0008		.3040	—	.375	—	—	—	—	—
	+0.0000	-.0030	—	.2233	—	.2233	.2233	.2233	.2233	.2233
E	+0.000	-.004	2.807	4.245	3.432	5.120	4.245	5.995	4.245	5.995
F	+0.000	-.005	2.688	4.062	3.312	4.938	4.062	5.812	4.062	5.812
G	+0.000	-.002	2.812	4.296	3.500	5.156	4.296	6.011	4.296	6.011
H	+0.000	-.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	+0.000*	+0.010*	9.475	8.360	12.412	8.360	13.808	10.360	18.808	10.360
N	+0.000 -.020	+0.010 -.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	+0.030	-.000	.062	.062	.062	.062	.062	.062	.062	.062
S	+0.0000	-.0030	2.7560	—	3.3810	—	—	—	—	—
	+0.0000	-.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	—	—	—	1/16	—	1/16	1/16	1/16	1/16	1/16
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	+0.000 -.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	+0.005 -.000	—	2.188	—	2.812	—	3.562	—	3.562	—
KK	+0.0000 -.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** FROM 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

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REMOVAL OF INCOMPLETE THREAD
METHOD OF REMOVAL OPTIONAL

FIG 2