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FEDERAL SUPPLY CLASS

RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

SHAFT ROTATION-EITHER DIRECTION
(SAME REQUIREMENTS APPLY)

APPLIES ONLY WHEN C DIA
IS LESS THAN G DIA

INCOMPLETE THREAD MUST NOT
GO BEYOND THIS SHOULDER

THREAD T NS
PITCH DIA S
SEE ALSO FIG. 2

DRILL W THRU 8 HOLES
EQUALLY SPACED AND
LOCATED WITHIN .010 OF
TRUE POSITION

CENTER AND AMOUNT
OF CHAMFER OPTIONAL
WITH MFR

CHAMFER 45° X .062

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

POINT OF TANGENCY (RADIUS AND SIDE OF
SPLINE) MUST BE ON OR INSIDE THIS DIA

CHAMFER OR RADIUS
.005-.015
.046R
.020R

WIDE SPLINE OR BLANKED
SLOT ON DIRECT DRIVE ENGINES
SLOT MUST COME ON C OF FIRST
THROW OF CRANKSHAFT
WITHIN 2 DEGREES
WIDE SPLINE OR BLANKED SLOT
OPTIONAL ON ALL OTHER ENGINES
BUT NOT RECOMMENDED UNLESS
REQUIRED FOR SOME PHASING PURPOSES

X SPLINES EQUALLY SPACED,
THAT ACCUMULATED ERRORS IN
SPACING, INVOLUTE FORM, AND
PARALLELISM ARE ABSORBED
WITHIN THE LIMITS SPECIFIED
FOR CHORDAL THICKNESS D

CONCENTRICITY:

WITH SHAFT MOUNTED ON DIA G AND REAR BEARING SURFACE,
DIA H, OTHER BEARING SURFACES AND DIA A ON STRAIGHT
SPLINES SHALL BE CONCENTRIC WITHIN .001 FIR., THREAD T -PITCH
DIA S SHALL BE CONCENTRIC WITHIN .005 FIR., AND DIA Z ON
INVOLUTE SPLINES SHALL BE CONCENTRIC WITHIN .002 FIR.
ANGULAR POSITION OF SPLINES MAY VARY FREELY WITH RESPECT
TO HOLES W
BREAK EDGES .016

INVOLUTE TOOTH FORM MUST BE
TRUE OUTSIDE THIS DIA

V APPROX
RADIUS

CHORDAL
THICKNESS D

SECTION A-A
INVOLUTE SPLINES

SHAFT SPLINE DATA:

X NUMBER OF TEETH
Y DIAMETRAL PITCH
Z PITCH DIA (THEO)
30° PRESSURE ANGLE

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$

PREPARED BY SAE COMMITTEE E-25, GENERAL STANDARDS FOR AEROSPACE PROPULSION SYSTEMS

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

PROPELLER SHAFT ENDS - SINGLE ROTATION

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SHEET 1 OF 13

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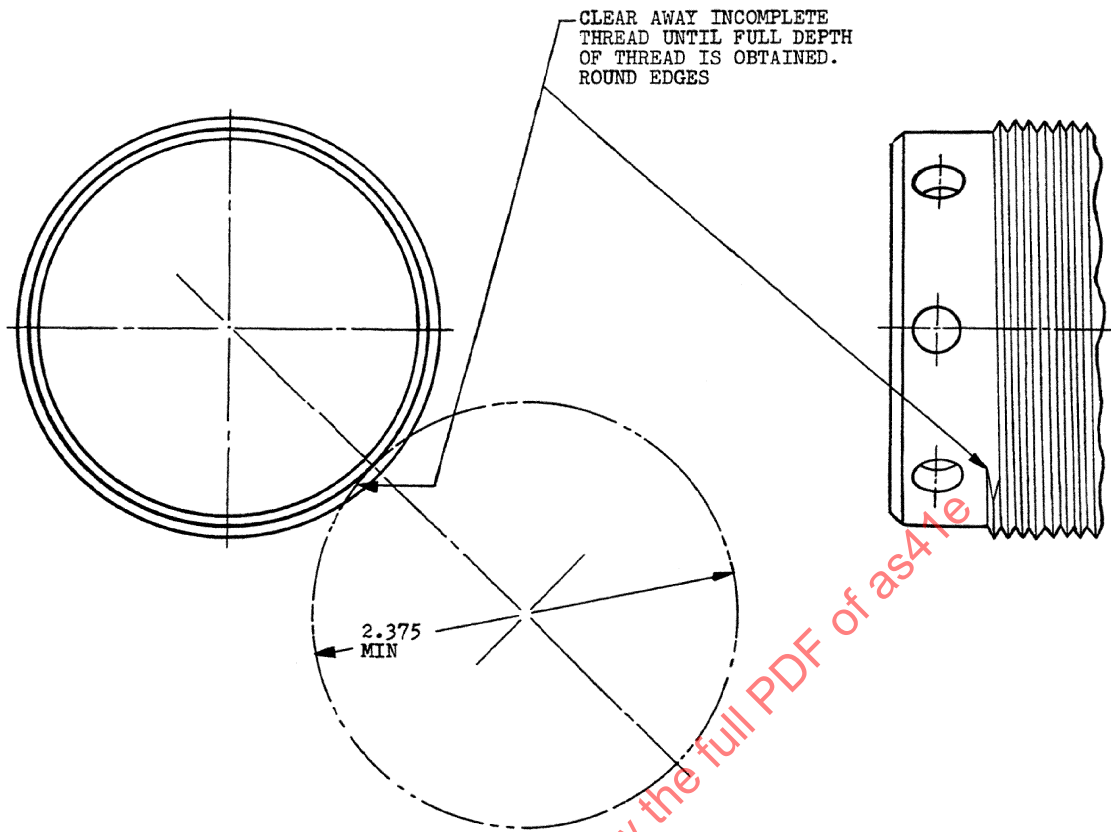
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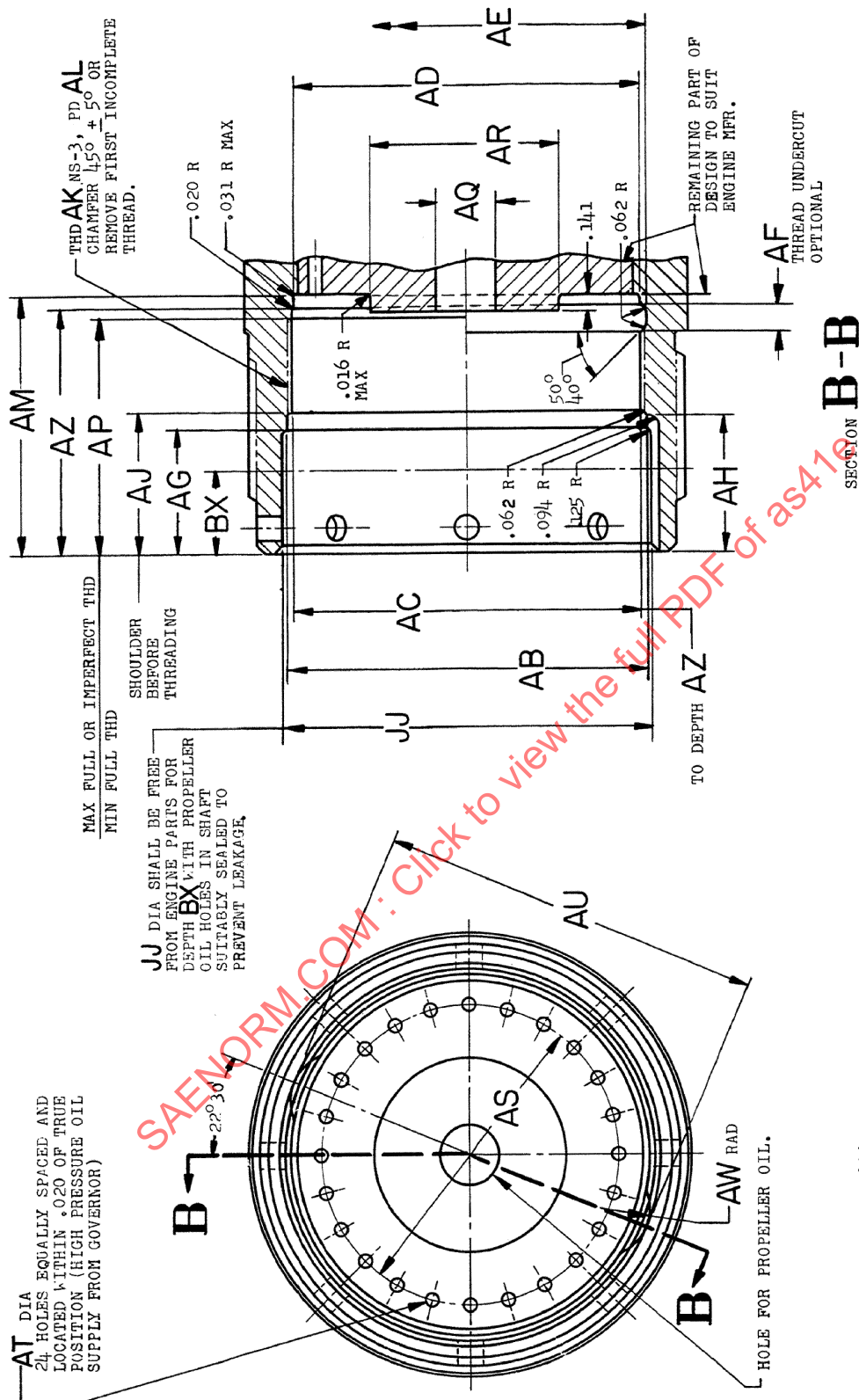


REMOVAL OF INCOMPLETE THREAD
METHOD OF REMOVAL OPTIONAL

BREAK EDGES .016

FIG. 2

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$



SLOTS SHOWN BY DIMENSION AU OPTIONAL.

CONCENTRICITY: DIA AD, AR, AND AL CONCENTRIC WITH DIA G (ON FIG. 1) WITHIN .005 FIR.

WHEN OIL TRANSFER PLUG IS NOT PROVIDED, ENGINE MFR. SHALL PROVIDE PLUG WITH FRONT FACE AT DIM. AM
OR BETWEEN BX AND AM TO PREVENT LEAKAGE IN EITHER DIRECTION. MAX EXTERNAL PRESSURE
1.2 INCH HEAD OF SAE No. 10 OIL; MAX INTERNAL PRESSURE ENGINE IMPOSED CONDITION.

FIGURE SHOWS INTERNAL FEATURES OF SHAFT PREFERRED FOR RECIPROCATING ENGINES (SEE ALSO FIG. 4).

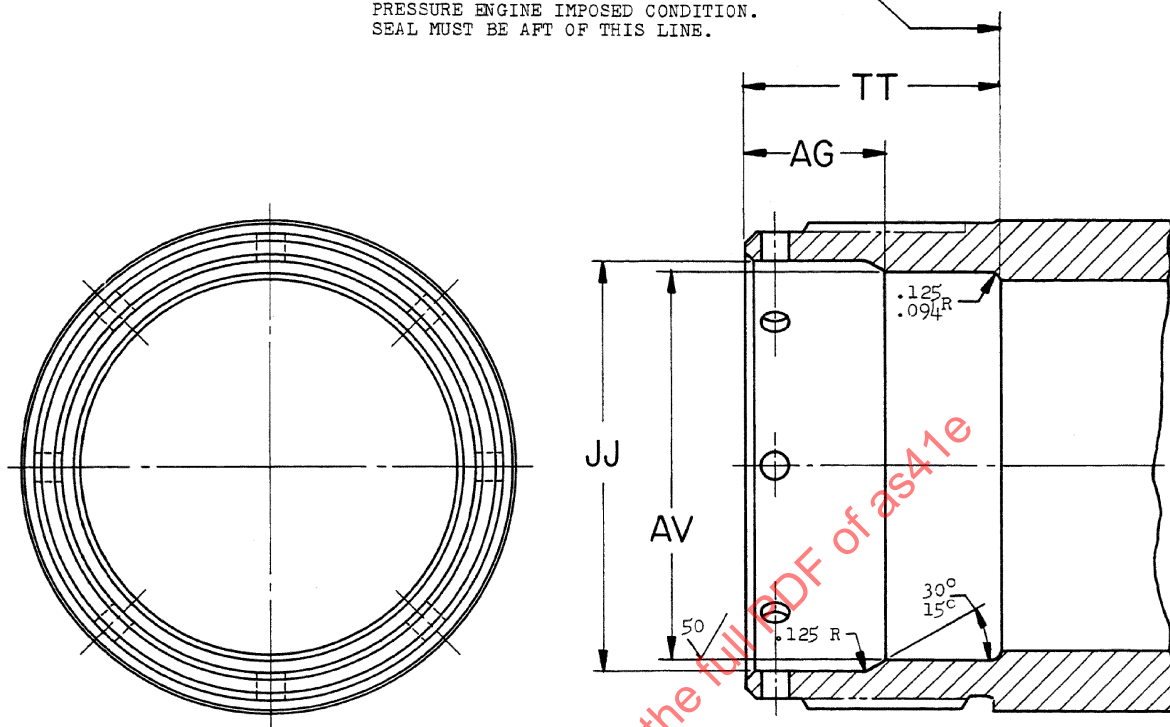
DIMENSIONS IN INCHES.
UNLESS OTHERWISE SPECIFIED:
BREAK SHARP EDGES .003 - .015
TOLERANCES;
THREE PLACE DECIMALS ± .010
ANGLES

FIG. 3

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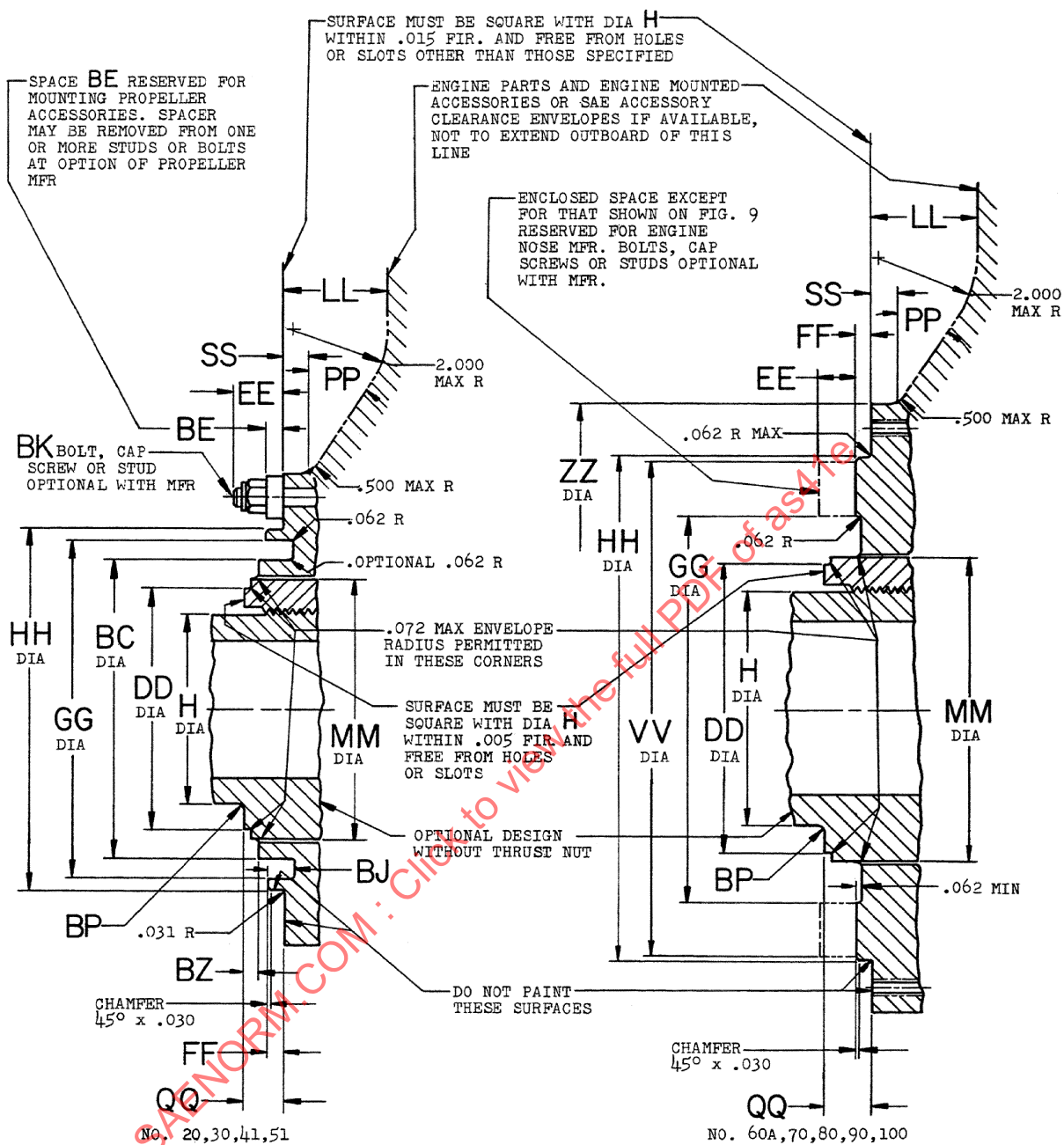
ENGINE MFR SHALL SEAL SHAFT TO
PREVENT LEAKAGE IN EITHER DIRECTION.
MAX EXTERNAL PRESSURE 12 INCH HEAD
OF SAE NO. 10 OIL. MAX INTERNAL
PRESSURE ENGINE IMPOSED CONDITION.
SEAL MUST BE AFT OF THIS LINE.



CONCENTRICITY: DIA **AV** CONCENTRIC WITH DIA **G** (ON FIG. 1) WITHIN .005 FIR.
FINISH: FOR INTERPRETATION OF SURFACE ROUGHNESS SYMBOL $\checkmark$. SEE AS 291.
INTERNAL DETAILS FOR CONFIGURATION WITHOUT OIL TRANSFER PROVISIONS (SEE ALSO FIG. 3).

FIG. 4

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED:
BREAK SHARP EDGES .003 - .015
TOLERANCES;
THREE PLACE DECIMALS $\pm .010$



CONCENTRICITY NOTE: DIA H AND HH TO BE CONCENTRIC WITHIN .007 FIR.

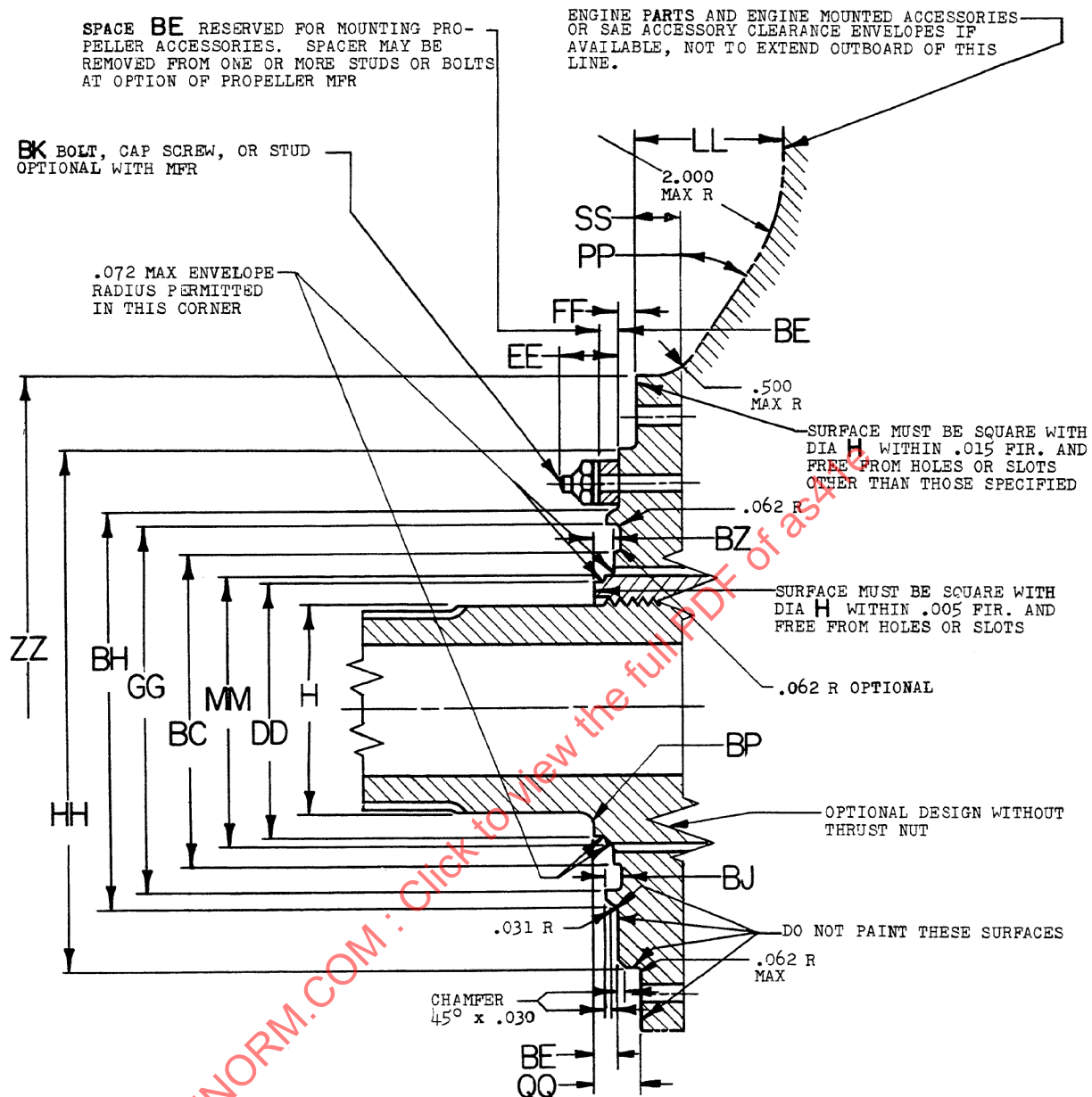
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NOSE END CROSS SECTION
FIG 5

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$

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CONCENTRICITY NOTE:

DIA H AND HH TO BE
CONCENTRIC WITHIN .007 FIR.

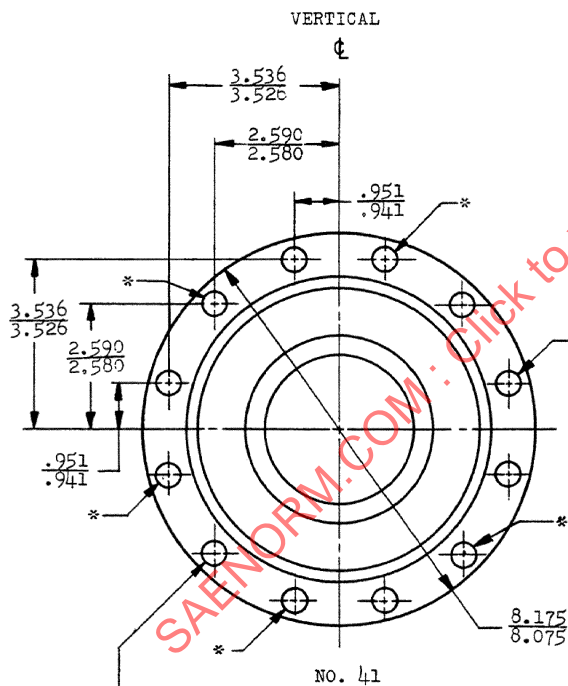
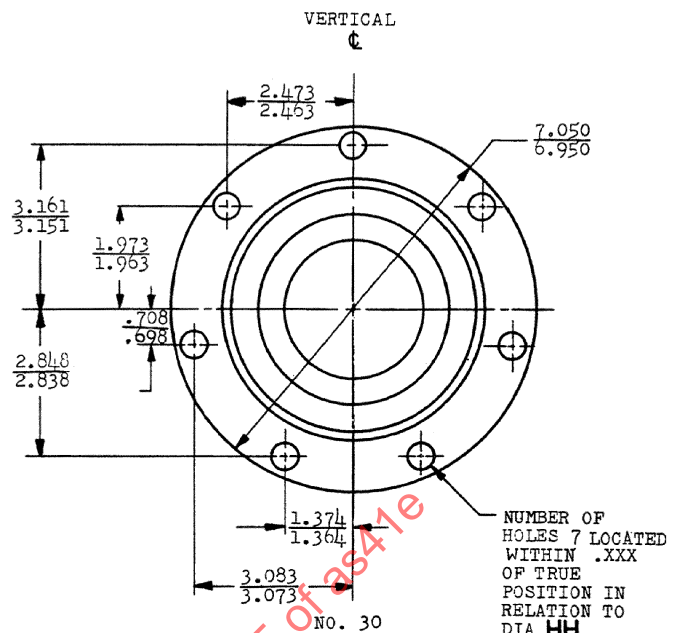
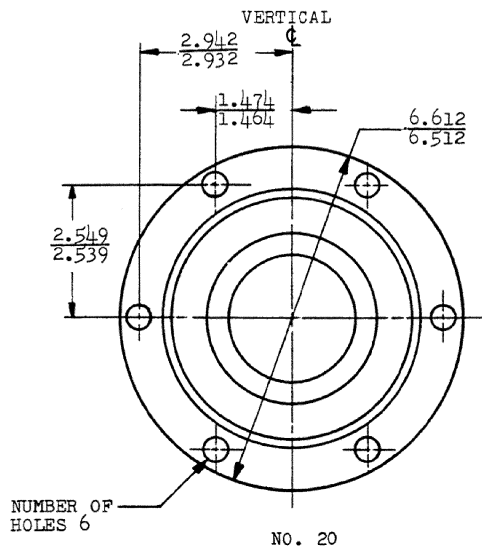
BREAK EDGES .016

FIG. 6

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$

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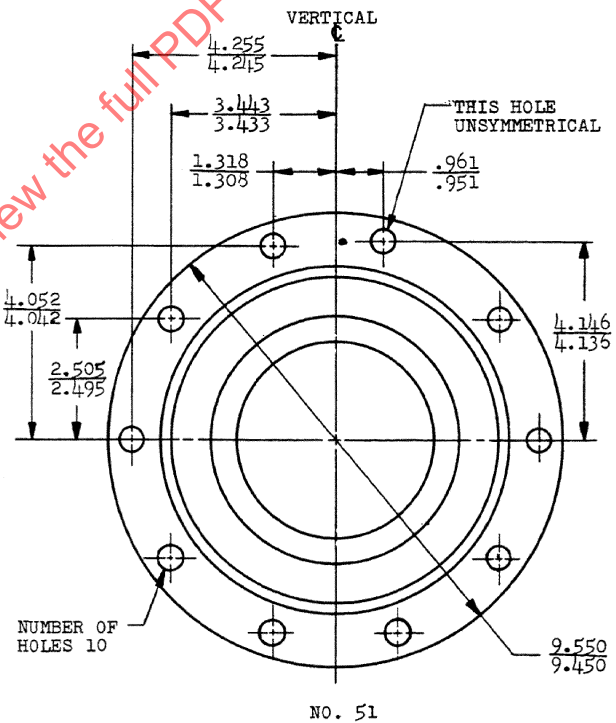
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NUMBER OF HOLES 6 OR 12
 WHEN 6 HOLES ARE USED,
 HOLES MARKED * ARE TO
 BE OMITTED

SEE FIGS 5 AND TABLES FOR OTHER APPLICABLE DIMENSIONS

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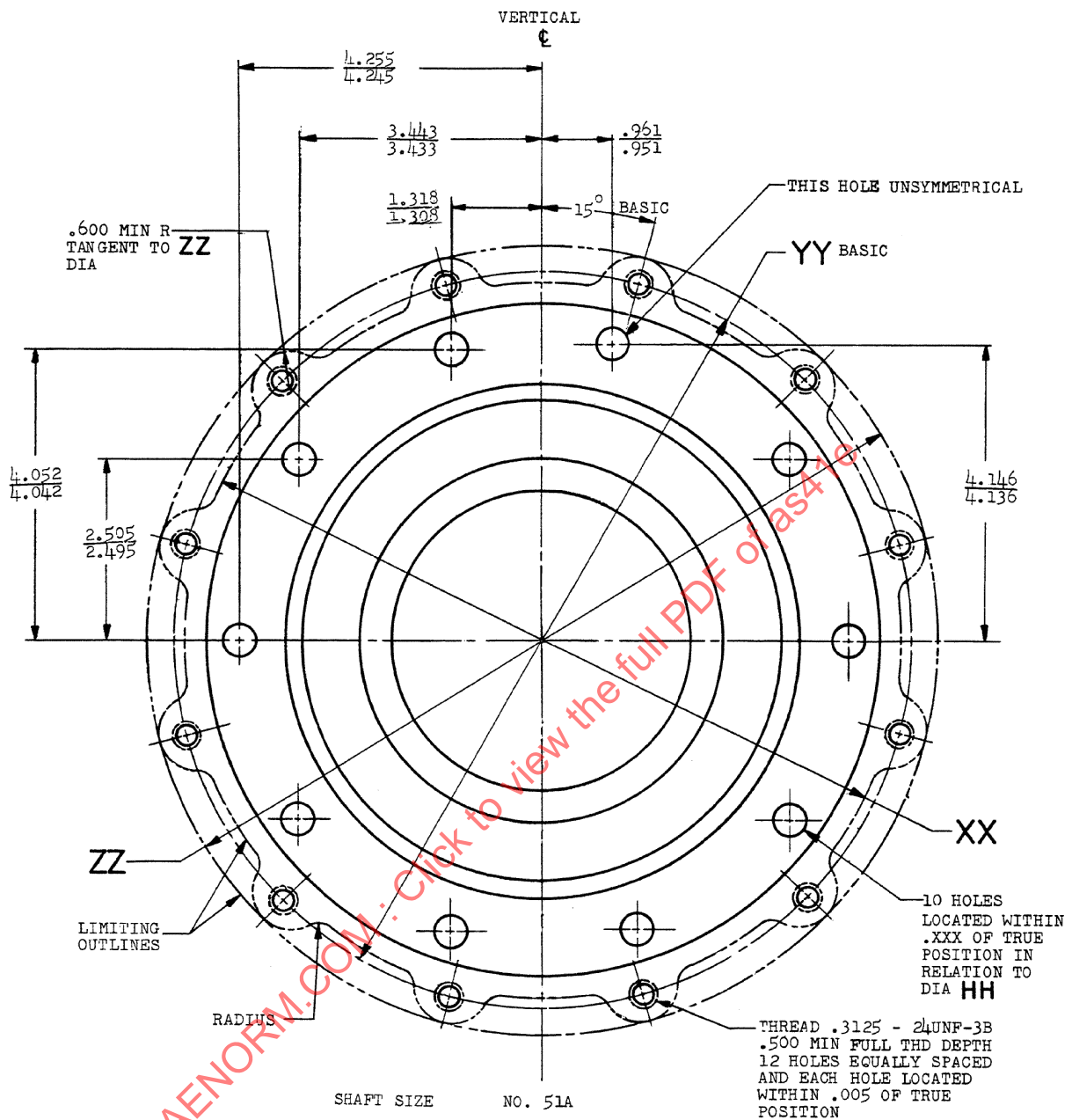
NOSE END PLAN VIEWS

FIG. 7

DIMENSIONS IN INCHES
 UNLESS OTHERWISE SPECIFIED
 TOLERANCES
 THREE PLACE DECIMALS $\pm .010$
 ANGLES $\pm 2^\circ$

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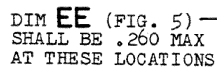
HOLES ARE DIMENSIONED IN RELATION TO CENTER OF DIA HH (FIG. 6)

BREAK EDGES .016

NOSE END PLAN VIEW

FIG. 8

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$



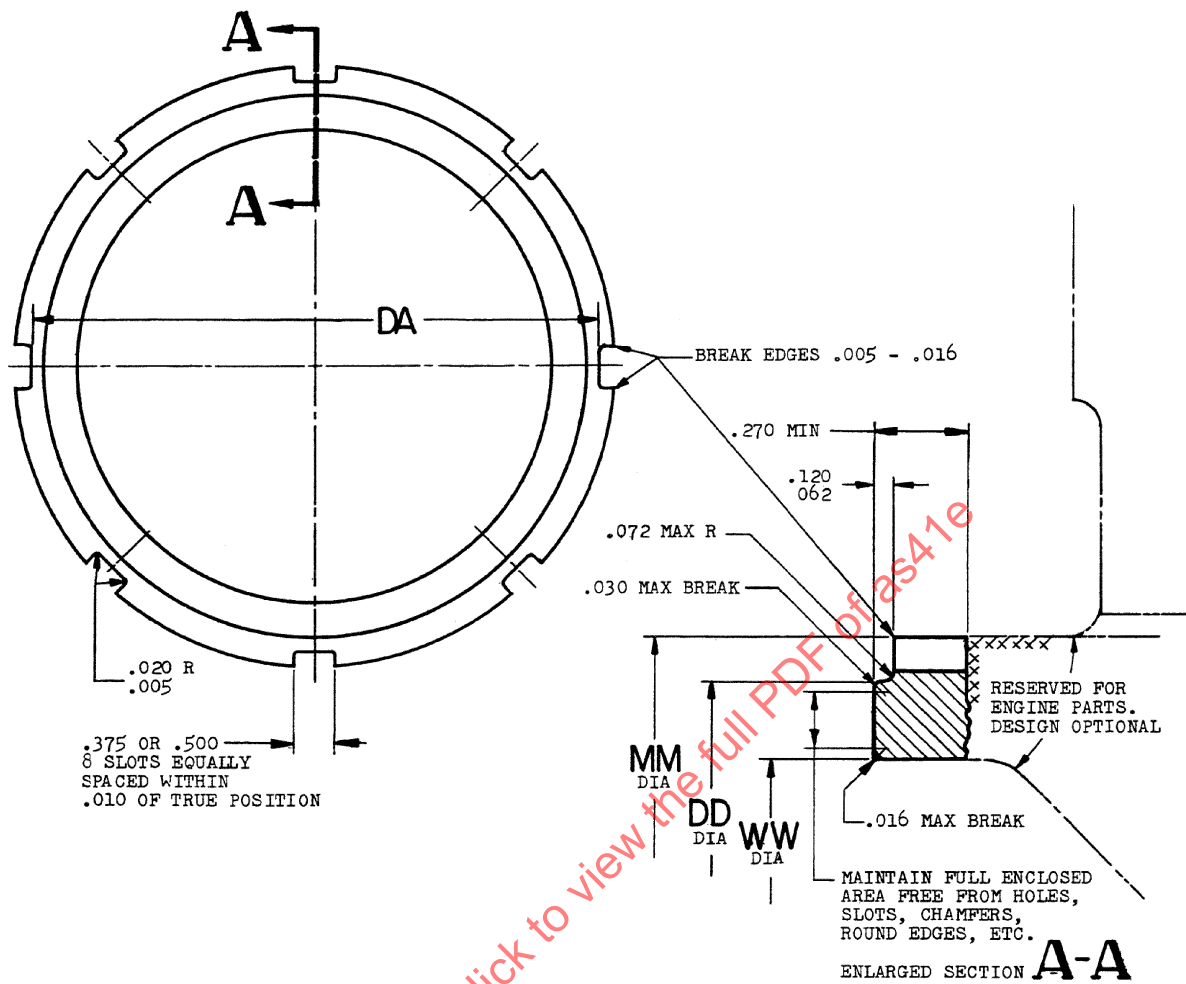
NOSE END PLAN VIEW

FIG. 9

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$

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MIN VALUE OF **MM** APPLIES ONLY TO .270 MIN LENGTH,
DETAILED ABOVE, BEYOND WHICH **MM** MAX ONLY APPLIES
AND **MM** MIN MAY SUIT DESIGN AS FAR AS ENGINE NOSE
OUTLINE.

PROPELLER SHAFT THRUST NUT
WHEN APPLICABLE

FIG. 10

DIMENSIONS IN INCHES
UNLESS OTHERWISE SPECIFIED
TOLERANCES
THREE PLACE DECIMALS $\pm .010$
ANGLES $\pm 2^\circ$