

REV. A

ARP277

FEDERAL SUPPLY CLASS

RATIONALE

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

MOUNTING DATA FOR APPLICABLE DIMENSIONS SEE TABLE 1

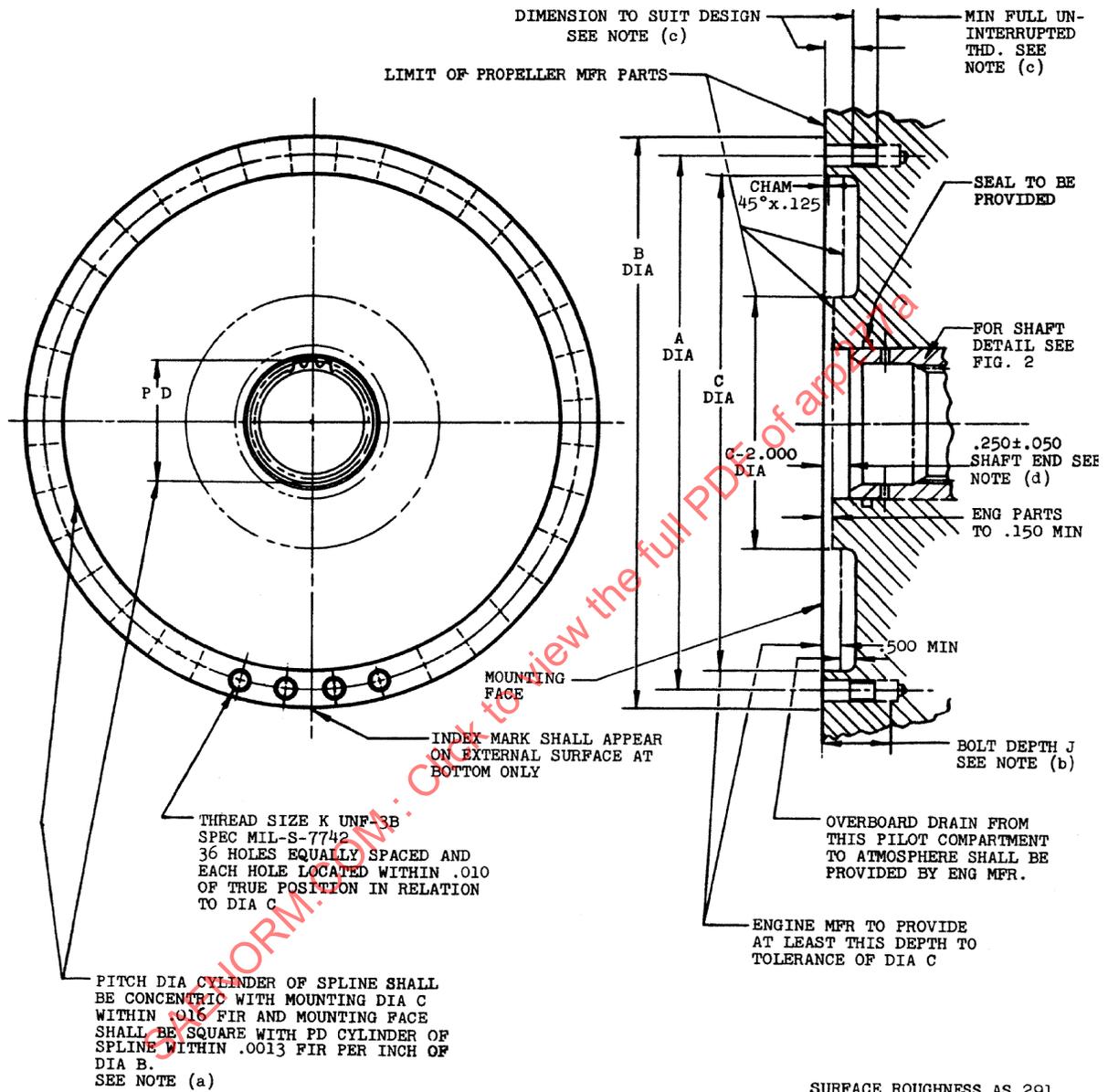


FIGURE I

SURFACE ROUGHNESS AS 291 ALL DIMENSIONS IN INCHES

UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .003-.015
TOLERANCES:
LINEAR DIMENSIONS ±.010
ANGULAR DIMENSIONS ± 2°

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

SAE Aerospace An SAE International Group

AEROSPACE RECOMMENDED PRACTICE

PROPELLER ATTACHMENT-NOSE MOUNTED

ARP277 SHEET 1 OF 4

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ISSUED 1953-04 REVISED 1960-04 NONCONCURRENT 1973-08 REAFFIRMED NONCONCURRENT 2006-07

ENGINE SHAFT DATA
FOR APPLICABLE DIMENSIONS SEE TABLE 1

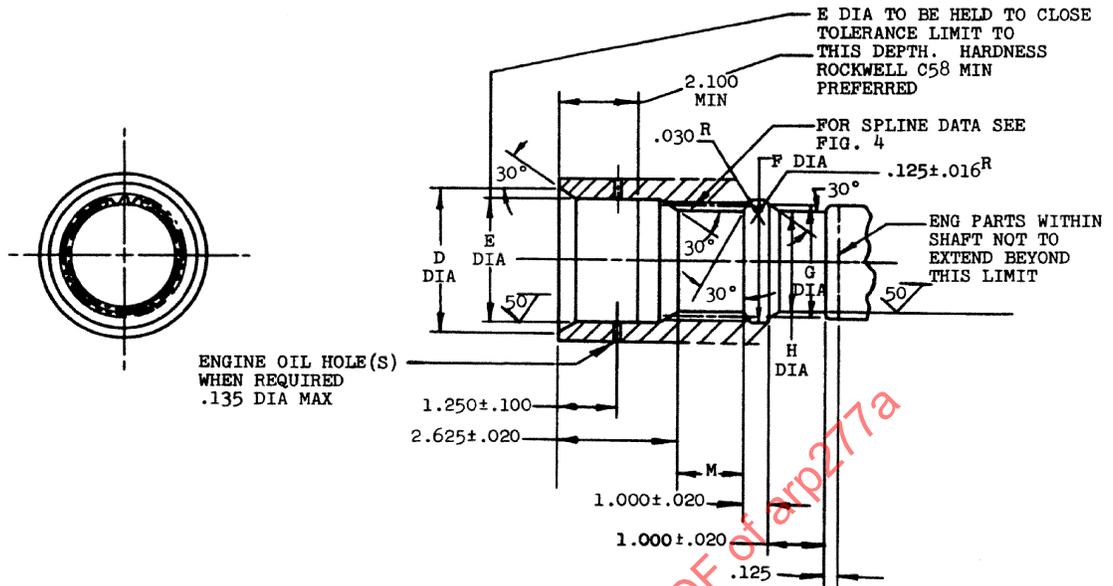


FIGURE 2

PROPELLER END DATA AND TYPICAL INSTALLATION

BETWEEN THESE LIMITS THE PROPELLER MFR SHALL SUPPLY A SEAL, MATING WITH DIAMETERS E AND H, COMPATIBLE WITH THE ENGINE SPLINE LUBRICANT. THIS SEAL SHALL BE CAPABLE OF WITHSTANDING 200 PSI PRESSURE DIFFERENTIAL.

BETWEEN THESE LIMITS THE PROPELLER MFR SHALL MAKE PROVISION FOR RETAINING LUBRICANT TO THE I.D. OF THE ENGINE SPLINE WHEN THE PROPELLER IS ROTATING, AND TO PERMIT A MIN OF 0.1 SQUARE INCH OF FLOW AREA WITHIN THE INNER DIA OF LUBRICANT RETAINING RING.

PROPELLER FURNISHED PARTS SHALL NOT OVERLAP LUBRICATING HOLE(S) UNDER ANY CONDITIONS.

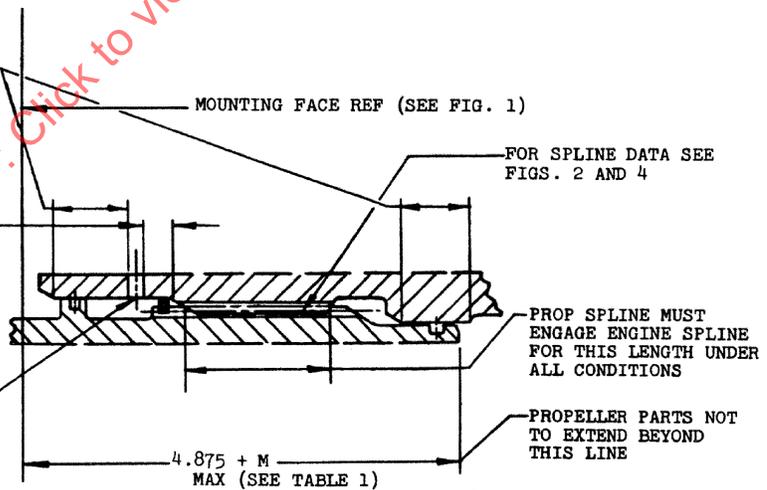


FIGURE 3

UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .003-.015
TOLERANCES:
LINEAR DIMENSIONS ±.010
ANGULAR DIMENSIONS ± 2°

SIZE	A BASIC	B ENG MIN	C +.004 -.000	D	E +.002 -.000	F MIN	G	H +.002 -.000	J MAX	K THD SIZE	L LB-IN	M LENGTH
20-20	20.000	21.250	18.750	4.850	4.502	4.550	4.100	3.875	1.500	.375-24	5,000	2.250
22-22	22.000	23.250	20.750	5.350	5.062	5.050	4.600	4.375	1.750	.4375-20	6,000	2.500
24-24	24.000	25.375	22.625	5.865	5.562	5.550	5.100	4.875	2.000	.500-20	7,000	2.750
26-26	26.000	27.375	24.625	6.615	6.312	6.300	5.850	5.625	2.000	.500-20	8,000	3.250
28-28	28.000	29.500	26.500	7.365	7.062	7.050	6.600	6.375	2.250	.5625-18	9,000	3.750
30-30	30.000	31.500	28.500	7.865	7.562	7.550	7.100	6.875	2.250	.5625-18	10,000	4.250
32-32	32.000	33.500	30.500	8.365	8.062	8.050	7.600	7.375	2.250	.5625-18	11,000	4.750

TABLE I FOR FIGURES 1, 2 & 3

NOTES:

- (a) INCLUDING THE MAX ENGINE SHAFT ECCENTRICITY AND MISALIGNMENT SPECIFIED HEREIN, AND UNDER THE CONDITIONS OF MAXIMUM PROPELLER DESIGN LOADING, THE FORCES EXERTED BY THE PROPELLER SPLINES ON THE ENGINE DRIVE SPLINES SHALL NOT EXCEED A SIDE LOAD OF 6000 POUNDS, A FORE AND AFT THRUST OF 1500 POUNDS, AND A MOMENT OF L. FOR NORMAL CONTINUOUS OPERATION THE FORCES SHALL NOT EXCEED 45% OF THESE SPECIFIED DESIGN VALUES.
- (b) MAX BOLT DEPTH J INDICATES AMOUNT OF MIN REMOVAL SPACE TO BE ALLOWED IN PROP MFR PARTS FOR THE ATTACHMENT BOLT. PROP MFR SHALL REFER TO ENG MFR INSTALLATION DWG WHICH SHALL SHOW MAX AND MIN REQUIRED DEPTH OF INSTALLED BOLT.
- (c) PROP MFR SHALL REFER TO ENG MFR ENGINE INSTALLATION DWG WHICH SHALL SHOW MAX DEPTH TO FIRST FULL UNINTERRUPTED THD AND MIN DEPTH TO LAST FULL UNINTERRUPTED THD AVAILABLE FOR BOLT ENGAGEMENT.
- (d) MAX END PLAY .050 (THIS LIMIT IS INCLUDED IN THE TOLERANCE)

SURFACE ROUGHNESS AS 291
ALL DIMENSIONS IN INCHES

UNLESS OTHERWISE SPECIFIED
BREAK SHARP EDGES .003-.015
TOLERANCES:
LINEAR DIMENSIONS $\pm .010$
ANGULAR DIMENSIONS $\pm 2^\circ$