

RATIONALE

THE REASON FOR CREATING THIS STANDARD IS TO QUALIFY BEARINGS WITH A LINER THICKNESS LESS THAN .015 INCHES FOR USE IN MAIN ROTOR BEARING APPLICATIONS. THE STANDARD ALSO INCORPORATES AN 'A' PART NUMBER DESIGNATION FOR A NEW LINER SYSTEM THAT HAS 2-1/2 TIMES THE LIFE OF THE STANDARD LINER SYSTEM.

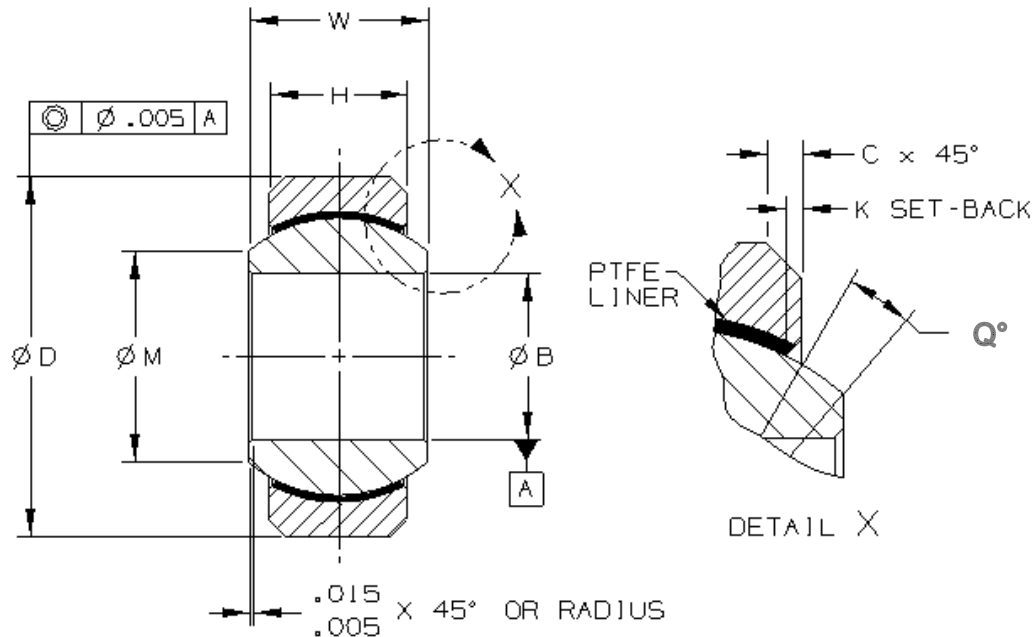
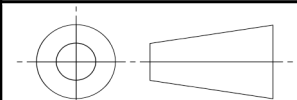


FIGURE 1

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/AS82819/1>

THIRD ANGLE PROJECTION



CUSTODIAN: ACBG

PROCUREMENT SPECIFICATION: AS82819



AEROSPACE STANDARD

BEARINGS, PLAIN, SELF-ALIGNING, SELF-LUBRICATING, 300 CPM (13 FPM) OSCILLATION, -65 TO +160 °F, LINERS LESS THAN .015 INCH THICK

AS82819™/1
SHEET 1 OF 3



TABLE 1 - DIMENSIONS & QUALIFICATION TEST CRITERIA

DASH NUMBER	K MAX.	C ±.005	Ø B +.0000 -.0005	Ø D +.0000 -.0005	H ±.005	Ø M MIN	Q° MIN	W +.000 -.002	NO-LOAD ROTATIONAL BREAKAWAY TORQUE (INCH-POUND)	WT POUND (APPROX REF)
-2	.045	.035	1.0000	1.7500	.797	1.118	9	1.000	1-24	.386

DASH NUMBER	QUALIFICATION TESTS <u>5/</u>										
	STATIC LIMIT LOAD		CONSTANT LOAD OSCILLATION WEAR TEST CONDITIONS				CYCLIC LOAD OSCILLATION WEAR TEST CONDITIONS <u>3/</u>				
	RADIAL (POUND)	AXIAL (POUND)	TEST LOAD (POUND) <u>1/</u>	TEST SPEED (CPM)	OSCILLATION ANGLE (°) <u>2/</u>	TEST TIME (HOURS)	TEST CONDITION	TEST LOAD (POUND) <u>4/</u>	TEST SPEED (CPM)	OSCILLATION ANGLE (°)	TEST TIME (HOURS)
-2	75 100	10 200	2300	300	±10	600*	I	0 ± 2300	300	±10	600**
							II	2300 ± 2300	300	±10	600**

* ALL CONSTANT LOAD TESTS ARE 600 HOURS FOR BOTH THE STANDARD AND THE TYPE A BEARINGS WITH THE EXCEPTION OF FLUID COMPATIBILITY TESTS, WHICH ARE 200 HOURS TEST TIME FOR STANDARD AND TYPE A, AND SOLID CONTAMINANT (DUST) TESTS WHICH ARE 600 HOURS FOR STANDARD AND 1500 HOURS FOR TYPE A.

** TYPE "A" IS TO BE TESTED TO 1500 HOURS.

1/ LOAD FOR CONSTANT OSCILLATION WEAR TEST SHALL BE APPLIED USING HOUSING DESIGN SPECIFIED IN AS82819.

2/ ONE CYCLE SHALL CONSIST OF ROTATION FROM ZERO TO (+) OSCILLATION ANGLE IN DEGREES, RETURN TO ZERO TO (-) OSCILLATION ANGLE IN DEGREES, AND RETURN TO ZERO (40 DEGREES PER CYCLE).

3/ TWO EACH OF CONDITION I AND CONDITION II CYCLIC LOAD TESTS ARE REQUIRED. A MINIMUM OF .002 INCHES OF LINER MUST REMAIN AT THE CONCLUSION OF THE TEST, PER ARP5448/7.

4/ CYCLIC LOAD TESTS SHALL BE CONDUCTED SO THAT THE MAX. LOAD AND MAX. BALL SURFACE SPEED OCCUR AT THE SAME TIME.

5/ ALL DYNAMIC TESTS ARE TO BE PRECEDED BY IMMERSION IN LIQUID NITROGEN (LN₂) FOR 5 MINUTES PRIOR TO INSTALLATION IN TEST HOUSING.

FOR ADDITIONAL PERFORMANCE REQUIREMENTS, REFER TO PROCUREMENT STANDARD AS82819.

	AEROSPACE STANDARD	AS82819™/1 SHEET 2 OF 3	
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