

SAE-AS14103

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Navy - AS
(Project 3120-0793)

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Land Sea Air and Space
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AEROSPACE STANDARD

BEARING, PLAIN, SELF-LUBRICATING, SELF-ALIGNING,
LOW SPEED, WIDE, GROOVED OUTER RING,
-65 °F TO 325 °F

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SHEET 1 OF 4

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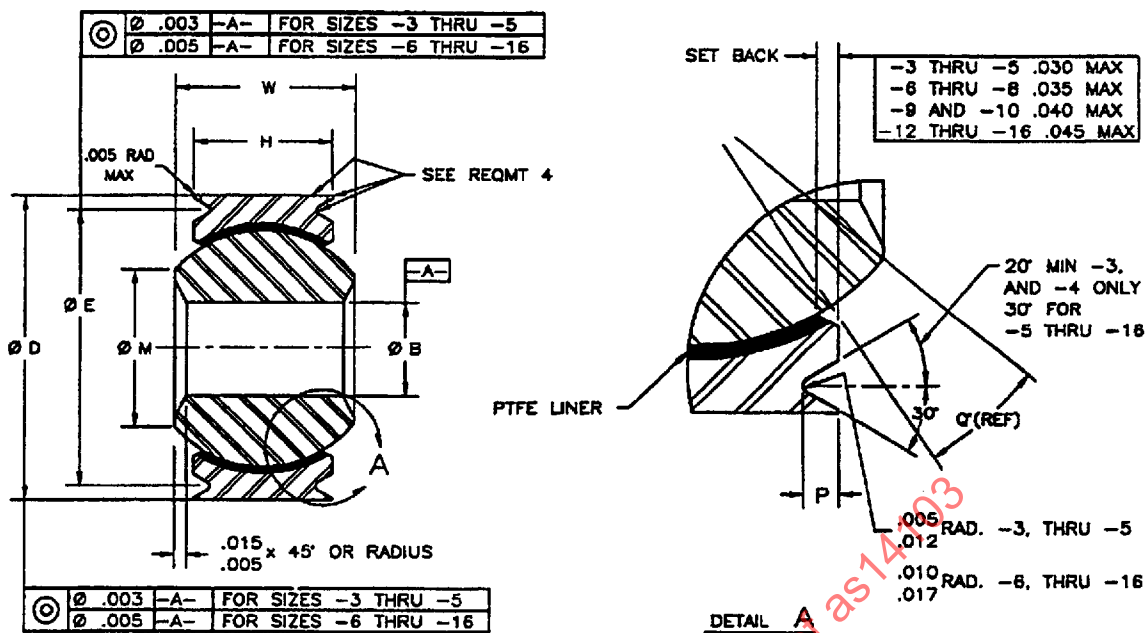


TABLE I. DIMENSIONS AND STRENGTHS

DASH NO.	ØB +.0000 -.0005	ØD** +.0000 -.0005	H** ±.005	ØM MIN	P +.000 -.010	Q (REF)	W +.000 -.002	ØE +.000 -.008	STATIC LIMIT LOAD		OSCIL- LATING LOAD LB	NO-LOAD ROTATIONAL BREAKAWAY TORQUE IN-LB		WT LB MAX (REF)				
									RADIAL LB	AXIAL LB		STANDARD	K" TYPE					
-3	.1900	.6250	.327	.300	.025	15	.437	.563	2500	1770	4900	0.25-5.0	0-0.5	.031				
-4	.2500								5500									
-5	.3125	.6875	.317	.360		14	.625	9400	1640	6050					0.25-8.0	0-1.0	.035	
-6	.3750	.8125	.406	.466		8	.500	.712	13700	2630								8310
-7	.4375	.9375	.442	.537	10	.562	.837	20700	3650	11750	.080							
-7A	.4375	.9062	.442	.537	10	.562	.806	19700	3650			.100						
-8	.5000	1.0000	.505	.607	9	.625	.900	21400	4970				14950	.135				
-9	.5625	1.1250	.536	.721	10	.687	1.025	26600	5370	18100			.160					
-10	.6250	1.1875	.567	.747	12	.750	1.087	29000	6130	20250								.240
-12	.7500	1.3750	.630	.845	13	.875	1.251	37000	7730	26200					.350			
-14	.8750	1.6250	.755	.995	6	.875	1.501	65200	10800	33600						0.25-12.0	0-2.0	
-16	1.0000	2.1250	1.005	1.269	12	1.375	2.001	104000	19300	56250								

* SEE REQUIREMENT 5 "NO-LOAD TORQUE" AND NOTE B.

** SEE NOTE 7.

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TABLE II. OVERSIZE BEARING DIMENSIONS 1/ 2/
RESTRICTED USAGE FOR REPAIR WORK ONLY
 .010 AND .020 OVERSIZE OUTSIDE DIAMETER FOR
 REPLACEMENT OF BEARINGS SHOWN ON SHEET 1

DASH NO.	NOMINAL SIZE	1st OVERSIZE (.010) #D
-3	.1875	.6350
-4	.2500	.6350
-5	.3125	.6975
-6	.3750	.8225
-7	.4375	.9475
-7A	.4375	.9162
-8	.5000	1.0100
-9	.5625	1.1350
-10	.6250	1.1975
-12	.7500	1.3850
-14	.8750	1.6350
-16	1.0000	2.1350

DASH NO.	NOMINAL SIZE	2nd OVERSIZE (.020) #D
-3	.1875	.6450
-4	.2500	.6450
-5	.3125	.7075
-6	.3750	.8325
-7	.4375	.9575
-7A	.4375	.9262
-8	.5000	1.0200
-9	.5625	1.1450
-10	.6250	1.2075
-12	.7500	1.3950
-14	.8750	1.6450
-16	1.0000	2.1450

1/ BEFORE INITIATING A REPAIR PROCEDURE TO USE AN OVERSIZE BEARING, APPROVAL FOR MODIFYING AND REIDENTIFYING THE BEARING HOUSING MUST BE OBTAINED FROM THE COGNIZANT ENGINEERING AUTHORITY.

2/ REFER TO NAS0331 FOR INSTALLATION PROCEDURE AND STAKING FORCES.

REQUIREMENTS:

1. MATERIAL: BALL, 440C AMS-5630 OR PH13-8Mo AMS-5629 H1000 (see NOTE 8a)
 OUTER RING, AMS-5643 (17-4PH)
 LINER, PTFE SHALL BE INCLUDED IN THE LINER

2. SURFACE TEXTURE: BALL DIA. Ra 8 MAX; BORE, BALL, FACE, AND OUTER RING DIA Ra 32 MAX; ALL OTHERS Ra 125 MAX.

3. HARDNESS: BALL, 440C 55-62 Rc OR PH13-8Mo Rc 43 MIN; OUTER RING Rc 28 MIN/Rc 37 MAX BEFORE SWAGING.

4. SURFACE FINISH:

OUTER RING: PLATING, WHEN SPECIFIED, SHALL BE ZINC-NICKEL PLATING PER AMS-2417, TYPE 2, OR CADMIUM PLATING PER QQ-P-416, TYPE II, CLASS 2, WITH A THICKNESS RANGE OF 0.0003 TO 0.0006 INCHES.
 PLATE ON THE OUTSIDE DIAMETER SURFACE AND ON THE FLAT BETWEEN THE OUTSIDE DIAMETER AND THE GROOVE. PLATING RUNOUT MAY OCCUR EITHER IN THE GROOVE OR IN THE AREA BETWEEN THE GROOVE AND THE BALL.

BALL: PH13-8Mo. PASSIVATE PER QQ-P-35; 440C, PASSIVATE PER QQ-P-35, OPTIONAL.

5. NO-LOAD TORQUE: WHEN THE LETTER "K" IS PRESENT IN THE PART NUMBER, LOWER VALUES OF NO-LOAD TORQUE ARE SPECIFIED PER TABLE 1. IF THE MEASURED TORQUE OF A "K" TYPE BEARING IS LESS THAN 0.1 INCH-POUND, THE INTERNAL RADIAL PLAY SHALL BE MEASURED AND SHALL NOT EXCEED THE FOLLOWING:

DASH NO.	MAXIMUM RADIAL PLAY	MAXIMUM AXIAL PLAY
-3K THRU -12K	0.0007 INCH	0.0021 INCH
-14K THRU -16K	0.0010 INCH	0.0030 INCH

THE INTERNAL AXIAL PLAY SHALL BE MEASURED FOR ALL "K" TYPE BEARINGS.