

REV. A

AS14101

FEDERAL SUPPLY CLASS  
3120

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS AEROSPACE STANDARD SHEET AND THE ISSUE OF THE FOLLOWING STANDARD LISTED IN THE DODISS SPECIFIED IN THE SOLICITATION: SAE AS81820.

NOTICE

THIS DOCUMENT INCLUDES CADMIUM AS A PLATING MATERIAL. THE USE OF CADMIUM HAS BEEN RESTRICTED AND/OR BANNED FOR USE IN MANY COUNTRIES DUE TO ENVIRONMENTAL AND HEALTH CONCERNS. THE USER SHOULD CONSULT WITH LOCAL OFFICIALS ON APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS REGARDING ITS USE.

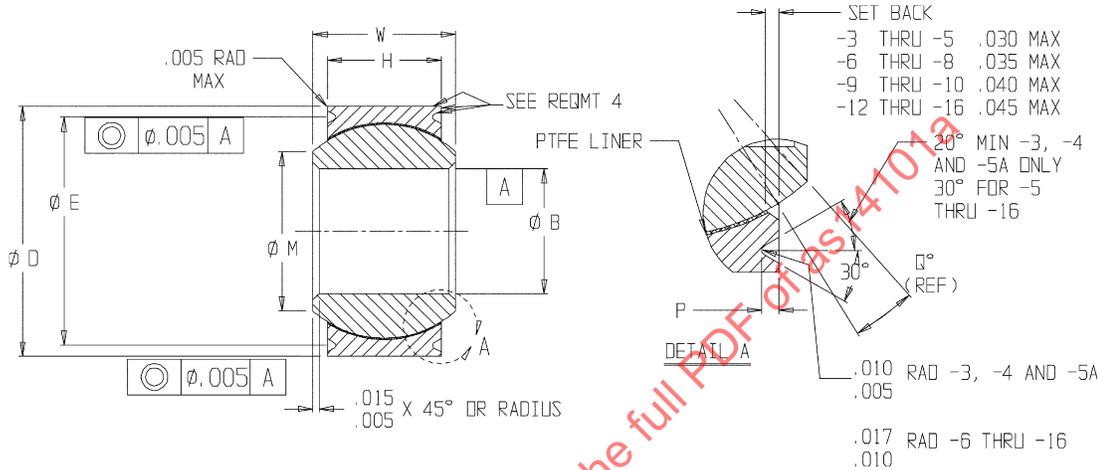


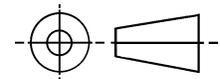
TABLE 1 - DIMENSIONS AND STRENGTHS

PART 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		OSCILLATING LOAD LB	NO-LOAD ROTATIONAL BREAKAWAY TORQUE IN-LB		WT LB MAX (REF)
									RADIAL LB	AXIAL LB		STANDARD	"K" TYPE	
MS14101 -3	.1900	.5625	.218	.293	.025	10	.281	.500	3975	150	1500	0.25-5.0	0-0.5	.020
MS14101 -4	.2500	.6562	.250	.364			.343	.594	6040	430	3320			
MS14101 -5	.3125	.7500	.281	.419	.035	9	.375	.650	8750	700	5460	0.25-8.0	0-1.0	.030
MS14101-5A	.3125	.7500	.281	.419			.375	.660	8750	700	5460			
MS14101 -6	.3750	.8125	.312	.475	.055	8	.406	.712	10540	1100	6600	0.25-12.0	0-2.0	.040
MS14101 -7	.4375	.9062	.343	.530			.437	.806	13200	1400	8050			
MS14101 -8	.5000	1.0000	.390	.600	.055	8	.500	.876	17900	2100	10400	0.25-12.0	0-2.0	.050
MS14101 -9	.5625	1.0937	.437	.670			.562	.970	23200	3680	13000			
MS14101-10	.6250	1.1875	.500	.739	.055	8	.625	1.063	30500	4720	16450	0.25-12.0	0-2.0	.070
MS14101-12	.7500	1.4375	.593	.920			.750	1.313	46400	6750	23600			
MS14101-14	.8750	1.5625	.703	.980	.055	9	.875	1.438	62200	9350	30250	0.25-12.0	0-2.0	.090
MS14101-16	1.0000	1.7500	.797	1.118			1.000	1.626	82200	12160	38000			

\* SEE REQUIREMENT 5 "NO-LOAD TORQUE" AND NOTE 8.  
\*\* SEE NOTE 7.

MS14101-5 INACTIVE FOR NEW DESIGN

THIRD ANGLE PROJECTION



PREPARED BY AIRFRAME CONTROL BEARINGS GROUP

**SAE Aerospace**  
An SAE International Group

(R) **AEROSPACE STANDARD**  
BEARING, PLAIN, SELF-LUBRICATING,  
SELF-ALIGNING, LOW SPEED, NARROW,  
GROOVED RACE, -65 TO 325 °F

**AS14101**  
SHEET 1 OF 3

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ISSUED 1998-07 REVISED 2003-10

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TABLE 2 - 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

PART NO.	NOMINAL SIZE	1st OVERSIZE (.010) ØD
MS14101-3 T	.1875	.5725
MS14101-4 T	.2500	.6662
MS14101-5(A) T	.3125	.7600
MS14101-6 T	.3750	.8225
MS14101-7 T	.4375	.9162
MS14101-8 T	.5000	1.0100
MS14101-9 T	.5625	1.1037
MS14101-10 T	.6250	1.1975
MS14101-12 T	.7500	1.4475
MS14101-14 T	.8750	1.5725
MS14101-16 T	1.0000	1.7600

PART NO.	NOMINAL SIZE	2nd OVERSIZE (.020) ØD
MS14101-3 U	.1875	.5825
MS14101-4 U	.2500	.6762
MS14101-5(A) U	.3125	.7700
MS14101-6 U	.3750	.8325
MS14101-7 U	.4375	.9262
MS14101-8 U	.5000	1.0200
MS14101-9 U	.5625	1.1137
MS14101-10 U	.6250	1.2075
MS14101-12 U	.7500	1.4575
MS14101-14 U	.8750	1.5825
MS14101-16 U	1.0000	1.7700

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:

- MATERIAL: BALL, 440C (AMS 5630, AMS 5880, OR AMS 5618) OR PH13-8Mo AMS 5629 H1000 (SEE NOTE 8a). RACE, AMS 5643 (17-4PH). LINER, PTFE SHALL BE INCLUDED IN THE LINER.
- SURFACE TEXTURE: BALL DIA Ra 8 MAX; BALL FACES Ra 16 MAX; BALL BORE AND RACE DIA Ra 32 MAX; ALL OTHER METALLIC SURFACES Ra 125 MAX. LINER SURFACES ARE EXEMPT FROM SURFACE TEXTURE MEASUREMENTS.
- HARDNESS: BALL, 440C 55-62 Rc OR PH13-8Mo Rc 43 MIN; RACE; Rc 28 MIN/Rc 37 MAX BEFORE SWAGING.
- SURFACE FINISH:  
RACE: PLATING, WHEN SPECIFIED, SHALL BE ZINC-NICKEL PLATING PER AMS 2417, TYPE 2, OR CADMIUM PLATING PER AMS-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 AMS-QQ-P-35 OR ASTM A 967; 440C, PASSIVATE PER AMS-QQ-P-35 OR ASTM A 967, OPTIONAL.
- 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	0.0028 INCH
-14K THRU -16K	0.0010 INCH	0.0040 INCH

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

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