

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

REV. A	Submitted for recognition as an American National Standard		Form Approved OMB No. 0704-0188
	NOTICE THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MS27646F AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MS27646F. ANY PART NUMBERS ESTABLISHED BY THE ORIGINAL SPECIFICATION REMAIN UNCHANGED. THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES PROVIDE FOR (A) THE PUBLICATION OF PORTIONS OF UNREVISED GOVERNMENT SPECIFICATIONS AND STANDARDS WITHOUT CONSENSUS VOTING AT THE SAE COMMITTEE LEVEL, AND (B) THE USE OF THE EXISTING GOVERNMENT SPECIFICATION OR STANDARD FORMAT. UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS TECHNICAL REPORT.		
AS27646	SAENORM.COM : Click to view the full PDF of as27646a		
ISSUED 1998-04 REVISED 1998-11			
PREPARED BY AIRFRAME CONTROL BEARINGS GROUP (ACBG)			
 SAE The Engineering Society For Advancing Mobility Land Sea Air and Space® 400 Commonwealth Drive, Warrendale, PA 15096-0001		AEROSPACE STANDARD BEARING, BALL, AIRFRAME, ANTI-FRICTION, EXTRA LIGHT DUTY	AS27646 SHEET 1 OF 3
		REV. A	

REV.
A

AS27646

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-B-7949.

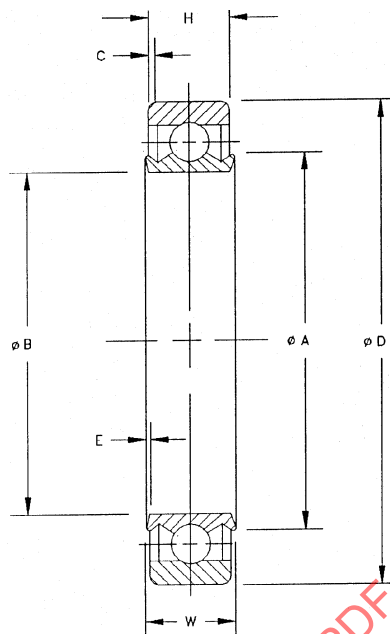


FIGURE 1 BEARING

TABLE I. DIMENSIONS AND LOADS

MS DASH NO.	øB	øD	W	H	øA	E & C	RADIAL LIMIT LOAD RATING LBS	THRUST LIMIT LOAD RATING LBS	4/ 5/ RADIAL LOAD RATING (LBS.) FOR AVERAGE LIFE OF 10,000 COMPLETE 90° CYCLES		WEIGHT POUNDS (APPROX)	MAXIMUM STARTING TORQUE (INCH-OZ)
	6/	1/ 6/	1/	1/	SHOULDER DIAMETER INNER RING APPROX.	CORNER CHAMFER X 45°						
	BORE	OUTSIDE DIAMETER	WIDTH INNER RING	WIDTH OUTER RING		2/ 3/						
	+ .0007 - .0007	+ .0000 - .0010	+ .000 - .005	+ .000 - .005		+ .020 - .000						
-38	.6250	1.0625	.281	.250	.777	.015	3280	1500	1990	1820	.03	2
-39	.7500	1.1875			.895		3750	1700	2050	1900	.04	2
-40	.8750	1.3125			1.016		4220	1900	2110	1970	.05	3
-41	1.0625	1.5000			1.216		5000	2200	2170	2020	.06	4
-42	1.3125	1.7500			1.451		5950	2700	2220	2130	.09	4
-43	1.5625	2.0000			1.702		6880	3200	2260	2180	.10	5
-44	1.8125 8/	2.2500 7/			1.970		7980	3600	2300	2220	.11	5
-45	2.0625 8/	2.6250 7/			2.286		9220	4000	2340	2260	.15	6
-46	2.3125 8/	2.8750 7/			2.527		10150	4400	2360	2280	.17	6

1/ DIMENSIONS TO BE MET AFTER PLATING.

2/ A RADIUS GIVING APPROXIMATELY THE SAME GRIP FOR STAKING THE BEARING IN THE HOUSING WILL BE ACCEPTABLE.

3/ A RADIUS GIVING APPROXIMATELY THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.

4/ CASE I = LOAD FIXED WITH RESPECT TO OUTER RING.

CASE II = LOAD FIXED WITH RESPECT TO THE INNER RING.

5/ THESE RATINGS ARE FOR OPERATION UP TO 250°F. WHEN SUBJECT TO OPERATION UP TO 350°F, THE RATINGS SHALL BE REDUCED BY 20 PERCENT.

6/ OUT-OF-ROUND TOLERANCES: BORE: -38 THRU -43 $\pm .0010$; -44 THRU -46: $\pm .0016$

OUTSIDE DIAMETER: -38 THRU -43 $+.0005, -.0015$; -44 THRU -46: $+.0008, -.0023$

7/ FOR DASH NUMBER SIZES -44, -45, AND -46, THE OUTSIDE DIAMETER TOLERANCE SHALL BE $+.0000$ TO $-.0015$ INCHES.

8/ FOR DASH NUMBER SIZES -44, -45, AND -46 THE BORE TOLERANCE SHALL BE $+.0010$ TO $-.0010$ INCHES.

(F) DENOTES CHANGES