

REV. D

SAE AS21153

FEDERAL SUPPLY CLASS
3110

RATIONALE

AS21153 REV D IS A FIVE YEAR REVIEW. CORRECTED "G" DIMENSION IN TABLE 1 DASH 5 SIZE, UPDATED SPECIFICATIONS TO CURRENT REQUIREMENTS, REFORMATTED GRAPHICS, TABLES AND NOTES, ADDED ZINC-NICKEL CODE, ADDED OPTIONAL MATERIAL FOR INNER RACE AND BALLS AND REMOVED "OR AN APPROVED EQUIVALENT" TO SEAL MATERIAL.

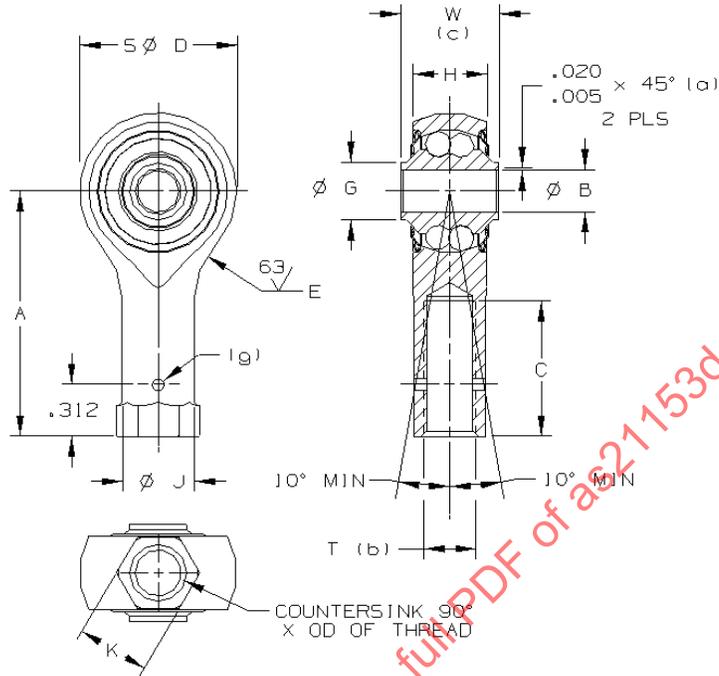
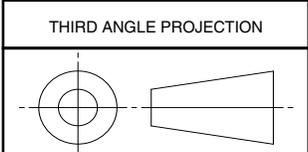


FIGURE 1

TABLE 1 - DIMENSIONS AND TOLERANCES

MS21153 DASH NUMBER (c)	BORE SIZE NOM.	A	ØB	C	ØD	E	H	ØJ	K BEAD OR HEX	N	ØG	T THREAD	W	WT LB APPROX.
		±.010	+0.000 -0.003	±.031	±.010	NOM	±.010	±.010	±.010	+0.015 -.000	MIN	UNFJ-3B	+0.000 -.005	
-1	3/16	1.375	.1900	.750	.781	.390	.328	.375	BEAD .438	.005	.276	.2500-28RH	.437	.05
-2								.438	HEX .438			.3125-24RH		
-3								.375	BEAD .438			.2500-28RH	.500	
-4								.375	BEAD .438			.2500-28LH		
-5								.375	BEAD .438			.2500-28LH	.437	
-6	1/4	1.469	.2500	1.125	.938	.468	.438	.438	HEX .438	.015	.340	.3125-24RH	.593	.07
-7								.438	HEX .438			.3125-24LH		
-8								.625	HEX OR STRAIGHT			.4375-20RH		
-9								.625	HEX OR STRAIGHT			.4375-20LH		
-10	5/16	1.875	.3125	1.000	1.250	.500	.656	.438	HEX OR STRAIGHT	.015	.501	.3125-24RH	.870	.10
-11												.3125-24LH		

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CUSTODIAN: SAE AIRFRAME CONTROL BEARINGS GROUP

PROCUREMENT SPECIFICATION: AS6039



AEROSPACE STANDARD
(R) BEARING, BALL, ROD END, DOUBLE ROW, PRECISION, INTERNAL THREAD, SELF-ALIGNING, AIRFRAME, TYPE IV, -65 TO 300 °F

SAE AS21153
SHEET 1 OF 3

REV. D

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ISSUED 1998-01 REVISED 2008-10

TABLE 2 - ENGINEERING DATA

MS21153 DASH NUMBER (c)	RADIAL STRENGTH		AXIAL STRENGTH		RADIAL LOAD RATING 10 000 COMPLETE 90° CYCLES (e) (f)		MAXIMUM STARTING TORQUE
	LIMIT LOAD LBF	FRACTURE LOAD LBF	LIMIT LOAD LBF	FRACTURE LOAD LBF	CASE I	CASE II	IN-OZ
-1	1000	1500	200	300	1000	1000	3.0
-2							
-3							
-4							
-5							
-6	1720	2580	345	520	1720	1720	4.0
-7							
-8							
-9							
-10	2920	4375	585	880	2920	2600	6.0
-11							

REQUIREMENTS:

- (a) A RADIUS GIVING THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- (b) THREADS SHALL CONFORM TO UNJF-3B IN ACCORDANCE WITH AS8879. INTERNAL THREADS MAY BE MACHINED. THREAD LENGTH SHALL BE TOTAL LENGTH "C" ALLOWING A MAXIMUM OF TWO IMPERFECT THREADS.
- (c) KEYWAY SLOT IF REQUIRED SHALL BE IN ACCORDANCE WITH NASM14198 AND SHALL BE DESIGNATED BY ADDING SUFFIX "C" TO THE DASH NUMBER.
- (d) 10° MIN. MISALIGNMENT IN EITHER DIRECTION SHALL OCCUR WITHOUT INTERFERENCE BETWEEN BALL HOUSING AND SURFACES INDICATED BY DIMENSION "W".
- (e) CASE I - LOAD FIXED WITH RESPECT TO OUTER RACE (AVERAGE LIFE RATING).
CASE II - LOAD FIXED WITH RESPECT TO INNER RACE (AVERAGE LIFE RATING).
- (f) THESE RATINGS ARE FOR OPERATIONS UP TO 250°F MAXIMUM WHEN SUBJECTED TO OPERATION ABOVE 250 °F THE RATINGS SHOULD BE REDUCED BY 20%.
- (g) DRILL .070 INCH DIA. THRU HOLE. INSPECTION HOLE FOR THREAD ENGAGEMENT.

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

1. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER ANY OTHER DOCUMENTS REFERENCED HEREIN.
2. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.
3. RADIAL CLEARANCE: .0000 TO .0004 INCHES UNDER 5.5 LB FULLY REVERSING GAGE LOAD.
4. AXIAL CLEARANCE: .000 TO .003 INCHES UNDER 5.5 LB FULLY REVERSING GAGE LOAD.

 An SAE International Group	AEROSPACE STANDARD (R) BEARING, BALL, ROD END, DOUBLE ROW, PRECISION, INTERNAL THREAD, SELF-ALIGNING, AIRFRAME, TYPE IV, -65 TO 300 °F	SAE AS21153 SHEET 2 OF 3	REV. D