

REV.
E

SAE AS21153

RATIONALE

FEDERAL SUPPLY CLASS
3110

CORRECTION. FIGURE 1 SPECIFIED A .020/.005 X 45 DEGREE BORE CHAMFER AS A CONSTANT BUT TABLE 1 INDICATES THAT CHAMFER AS "N" AND VARIES DEPENDING ON THE DASH NUMBER.

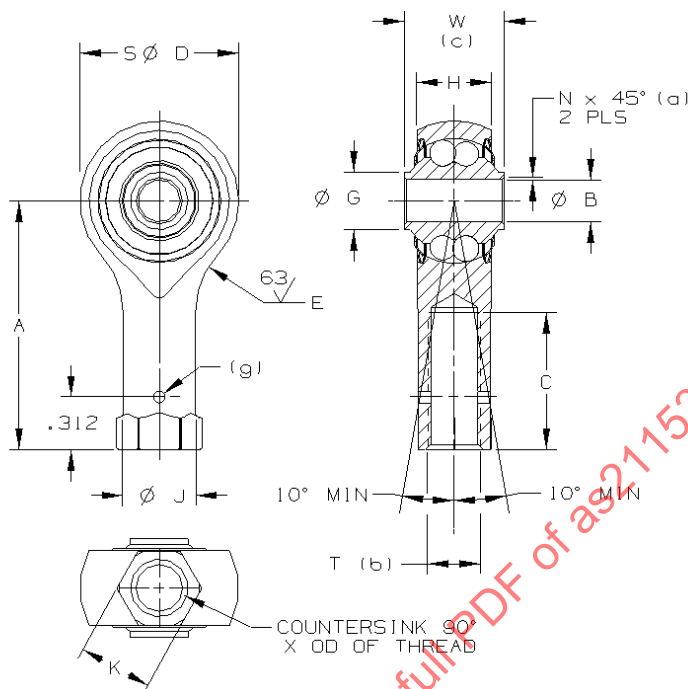


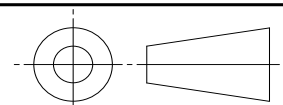
FIGURE 1

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	+ .0000 - .0003	±.031	±.010	NOM	±.010	±.010	±.010	+ .015 - .000	MIN	UNJF-3B	+ .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	.06		
-4												.2500-28LH				
-5												.2500-28LH	.437	.05		
-6	1/4	1.469	.2500	1.125	.938	.468	.438	.438	HEX .438	.005	.340	.3125-24RH	.593	.07		
-7								.625	HEX OR STRAIGHT			.3125-24LH				
-8												.4375-20RH				
-9												.4375-20LH		.18		
-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				

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS21153E>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AIRFRAME CONTROL BEARINGS GROUP

PROCUREMENT SPECIFICATION: AS6039

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

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

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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 DEGREES 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.

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

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