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REV.
E

AS21439™

FEDERAL SUPPLY CLASS
3110

RATIONALE

FIVE-YEAR REVIEW. CHANGES INCLUDE UPDATING FIGURE 1, FORMATTING OF TABLE UNITS IN TABLE 1, AND UPDATING THE WASHER MATERIAL.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39901.

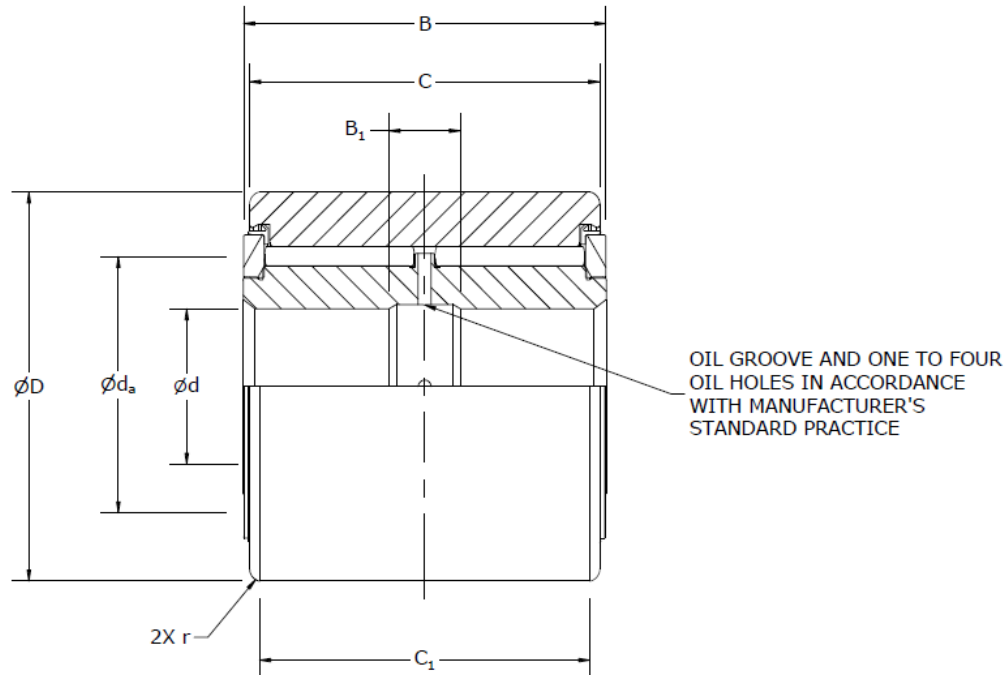
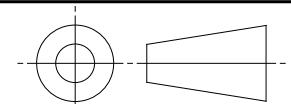


FIGURE 1

For more information on this standard, visit
<https://www.sae.org/standards/content/AS21439E/>

THIRD ANGLE PROJECTION



CUSTODIAN: ACBG

PROCUREMENT SPECIFICATION: AS39901



AEROSPACE STANDARD

BEARING, ROLLER, NEEDLE, DOUBLE ROW,
HEAVY DUTY, TRACK ROLLER, SEALED, TYPE VI,
INCH

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SHEET 1 OF 4

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TABLE 1 - DIMENSIONS IN INCHES

DASH NO.	Ød BORE	ØD OUTSIDE DIA	C OUTER RING WIDTH	B OVERALL WIDTH	Ød _a CLAMPING DIA MIN	r RAD MIN	B ₁ LUBRICATION GROOVE WIDTH	C ₁ MIN TRACK CONTACT WIDTH	CAPACITY AS A TRACK ROLLER lbf	TRACK CAPACITY 40 HRC lbf	LIMIT LOAD lbf	MASS (APPROX) POUNDS
-106	.3750	1.1250	.940	1.000	.672	.022	.188	.750	5370	2600	7130	0.24
-108	.5000	1.3750	1.190	1.250	.891	.032	.250	1.000	9370	9370	12500	0.44
-110	.6250	1.6250	1.440	1.500	1.109	.032	.375	1.125	15000	15000	19900	0.73
-112	.7500	1.8750	1.690	1.750	1.281	.032	.375	1.375	21400	21400	28500	1.13
-114	.8750	2.1250	1.940	2.000	1.469	.032	.375	1.625	28900	28900	38500	1.63
-116	1.0000	2.3750	2.190	2.250	1.578	.032	.375	1.797	33600	33600	44900	2.31
-120	1.2500	2.7500	2.440	2.500	1.844	.032	.375	2.047	44600	44600	59500	3.26
-124	1.5000	3.0000	2.690	2.750	1.984	.032	.375	2.297	53600	53600	71300	4.33
-128	1.7500	3.4375	2.940	3.000	2.281	.032	.375	2.547	69000	69000	92000	6.09
-132	2.0000	3.8750	2.940	3.000	2.562	.032	.375	2.547	76600	76600	102000	7.35

TABLE 2 - TOLERANCE VALUE

Ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIAMETER d _{mp}		ALLOWABLE DEVIATION FROM OVERALL WIDTH B		ALLOWABLE DEVIATION FROM LUBRICATION GROOVE WIDTH B ₁		ØD BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN DIAMETER D _{mp}		ALLOWABLE DEVIATION FROM OUTER RING WIDTH C	
		HIGH	LOW	HIGH	LOW	HIGH	LOW	OVER	INCL	HIGH	LOW	HIGH	LOW
OVER	INCL												
.2500	2.0000	.0	-.0007	.0	-.010	.0	-.062	1.0000	3.8750	+.001	-.001	.00	-.005

REQUIREMENTS:

1. MATERIAL:

- INNER RING, OUTER RING, AND NEEDLES: 52100 STEEL PER AMS6440, AMS6444, AMS6447, OR ASTM A295.
- ENDWASHERS: AISI 1070 – 1090 STEEL OR SAE 52100 STEEL PER AMS6440, AMS6444, AMS6447, OR ASTM A295.
- SEALS AND BACKING RINGS: ACETAL RESIN PER ASTM D6778 POM 111 OR NYLON PER L-P-410, TYPE 6/6, WEAR RESISTANT GRADE, OR POLYESTER ELASTOMER. CONSTRUCTION OPTIONAL.
- RETAINING RINGS: BRASS (OPTIONAL).

2. HEAT TREAT:

- OUTER RING: HARDEN AND TEMPER TO 58 TO 62 HRC.
- INNER RING: HARDEN AND TEMPER TO 60 TO 64 HRC OR INDUCTION HARDEN TO 60 TO 64 HRC FOR .015 INCH MINIMUM DEPTH AND 50 HRC AT .030 INCH MINIMUM DEPTH.
- NEEDLES: HARDEN AND TEMPER TO 60 TO 64 HRC.
- ENDWASHERS: HARDEN AND TEMPER TO 51 TO 56 HRC.



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