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REV. A	RATIONALE		FEDERAL SUPPLY CLASS 3110
	FIVE YEAR REVIEW. UPDATE PASSIVATION SPECIFICATIONS.		
AS5927™	NOTICE		
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SAE values your input. To provide feedback on this Technical Report, please visit http://www.sae.org/technical/standards/AS5927A		THIRD ANGLE PROJECTION	
CUSTODIAN: ACBG		PROCUREMENT SPECIFICATION: AS39901	
		AEROSPACE STANDARD (R) BEARING, ROLLER, NEEDLE, SINGLE ROW, HEAVY DUTY, TRACK ROLLER, SEALED, TYPE V, ANTI-FRICTION, CORROSION RESISTANT NITROGEN (CREN) STEEL, INCH	AS5927™ SHEET 1 OF 4
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ISSUED 2005-09 REVISED 2016-01

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

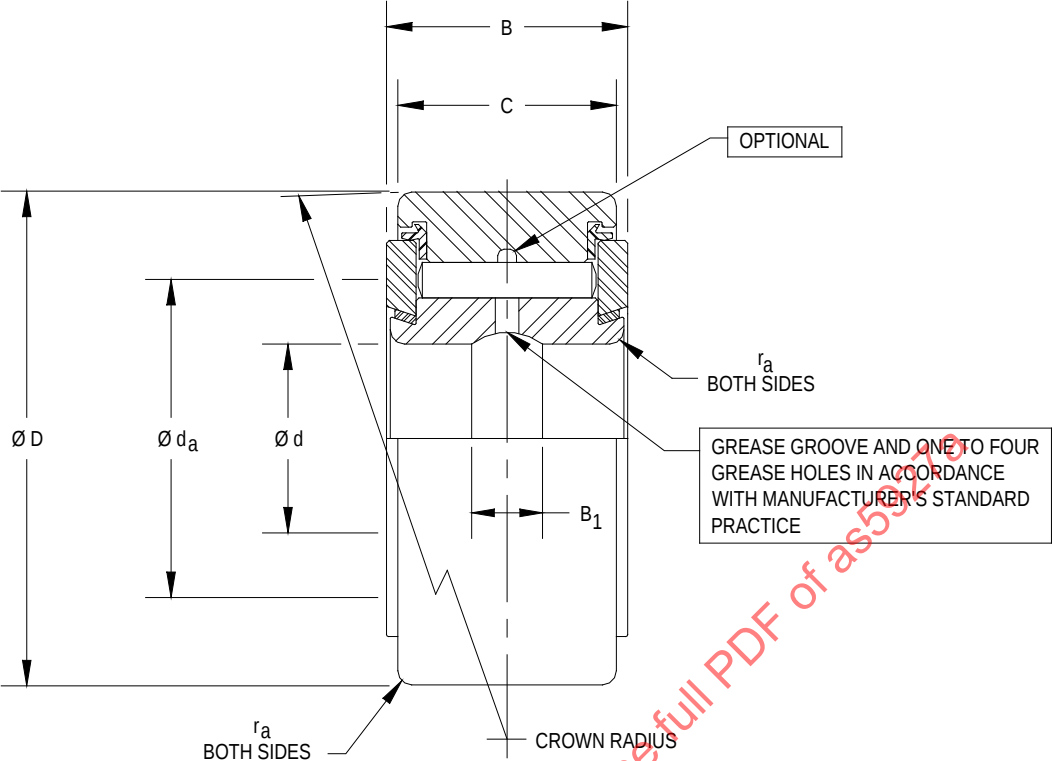


FIGURE 1

TABLE 1

DASH NO.	$\varnothing d$ BORE	$\varnothing D$ OUTER RING OD	C OUTER RING WIDTH	B OVERALL WIDTH	$\varnothing d_a$ CLAMPING DIAMETER MINIMUM	R_a RADIUS MINIMUM	B_1 LUBRICATION GROOVE WIDTH	CROWN RADIUS REF.	RADIAL INTERNAL CLEARANCE MAXIMUM	CAPACITY AS A TRACK ROLLER POUNDS	TRACK CAPACITY 40 HRC POUNDS	LIMIT LOAD RATING POUNDS	WEIGHT (APPROX) POUNDS
-103	.1900	.7500	.280	.312	.488	.022	.094	10.0	.0018	875	290	1,200	.03
-104	.2500	.8750	.345	.375	.516	.022	.125	10.0	.0018	1,420	575	2,000	.05
-106	.3750	1.0625	.455	.500	.672	.022	.188	10.0	.0018	2,800	1,000	3,800	.10
-108	.5000	1.3125	.580	.625	.844	.022	.188	12.5	.0018	4,550	1,785	6,200	.18
-110	.6250	1.5000	.705	.750	.953	.032	.250	17.5	.0018	6,700	2,600	9,000	.28
-112	.7500	1.7500	.950	1.000	1.109	.032	.250	25.0	.0018	11,000	4,050	15,500	.52
-114	.8750	2.0000	1.075	1.125	1.219	.032	.250	27.5	.0018	15,000	5,350	21,000	.75
-116	1.0000	2.2500	1.075	1.125	1.500	.032	.250	27.5	.0018	16,500	6,000	23,500	.90
-120	1.2500	2.5000	1.200	1.250	1.625	.032	.375	30.0	.0018	20,000	7,100	27,000	1.16
-124	1.5000	3.0000	1.440	1.500	2.000	.032	.375	60.0	.0018	30,000	10,800	41,000	2.36
-128	1.7500	3.4375	1.440	1.500	2.281	.032	.375	60.0	.0018	34,000	12,400	48,000	2.71
-132	2.0000	3.8750	1.440	1.500	2.562	.032	.375	60.0	.0018	36,700	14,000	48,900	3.42
-136	2.2500	4.3125	1.440	1.500	2.589	.032	.375	60.0	.0018	41,200	15,600	55,000	4.23
-140	2.5000	4.7500	1.440	1.500	3.109	.032	.375	60.0	.0020	44,900	17,200	59,900	5.14
-144	2.7500	5.0000	1.440	1.500	3.344	.032	.375	60.0	.0020	46,800	18,100	64,800	5.49



AEROSPACE STANDARD

(R) BEARING, ROLLER, NEEDLE, SINGLE ROW, HEAVY DUTY,
TRACK ROLLER, SEALED, TYPE V, ANTI-FRICTION,
CORROSION RESISTANT NITROGEN (CREN) STEEL, INCH

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TABLE 2

Ød BASIC BORE		ALLOWABLE DEVIATION FROM Ød OF SINGLE MEAN DIAMETER D _{MP}		ALLOWABLE DEVIATION FROM OVERALL WIDTH B		ALLOWABLE DEVIATION FROM LUBRICATION GROOVE WIDTH B ₁		ØD BASIC OUTSIDE DIAMETER		ALLOWABLE DEVIATION FROM ØD OF SINGLE MEAN DIAMETER D _{MP}		ALLOWABLE DEVIATION FROM OUTER RING WIDTH C	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW
.1900	2.750	0	-.0007	0	-.010	0	-.062	.7500	5.000	+.001	-.001	0	-.015

NOTES:

1. MATERIAL:

- INNER RING, OUTER RING AND NEEDLES: CORROSION RESISTANT NITROGEN (CREN) STEEL PER AMS5898, AMS5925 OR 422 STEEL PER AMS5655.
- ENDWASHERS: 420 STEEL PER AMS5506 OR AMS5621, 422 STEEL PER AMS5655 OR CORROSION RESISTANT NITROGEN (CREN) STEEL PER AMS5898 OR AMS5925.
- SEALS: POLYAMIDE (NYLON) PER L-P-410, TYPE 6/6 WEAR RESISTANT GRADE OR ACETAL COPOLYMER WITH LUBRICANT FILLERS PER ASTM D6778.
- RETAINING RINGS (OPTIONAL): BRASS.

2. HEAT TREATMENT:

- INNER AND OUTER RINGS: STEEL PER AMS5898 AND AMS5925 THROUGH HARDEN TO 58 HRC MINIMUM. STEEL PER AMS5655 CASE HARDEN TO 58 HRC MINIMUM AT A CASE DEPTH OF .030.
- NEEDLES: 58 HRC MINIMUM.
- ENDWASHERS: 50-56 HRC.

3. FINISH:

INNER AND OUTER RINGS, NEEDLES AND ENDWASHERS: PASSIVATE PER AMS2700, METHOD 1, TYPE 2 OR METHOD 2. TEST FOR PASSIVATION PER AMS2700 METHOD 101 OR 102.

4. SURFACE FINISH:

- NEEDLE OD – 8 µin Ra MAXIMUM
- INNER RING RACEWAY – 16 µin Ra MAXIMUM
- OUTER RING RACEWAY – 40 µin Ra MAXIMUM
- ENDWASHER INSIDE FACE – 63 µin Ra MAXIMUM

5. LUBRICANT:

ALL BEARINGS SHALL BE PREPACKED 80 TO 100% FULL WITH MAINTENANCE-FREE GREASE, CONSISTING OF A LITHIUM COMPLEX THICKENED SYNTHETIC BASE OIL GREASE (GREASE A) MIXED WITH A HIGH QUALITY PTFE THICKENED PERFLUORINATED OIL GREASE (GREASE B). IF RELUBRICATION IS DESIRED, RELUBRICATING WITH THE LITHIUM COMPLEX THICKENED SYNTHETIC BASE OIL GREASE COMPONENT (GREASE A) ONLY IS RECOMMENDED. GREASES USED FOR THE ORIGINAL FILL AND RELUBRICATION MUST BE APPROVED BY THE QUALIFYING ACTIVITY AND IDENTIFIED BY BRAND NAME ON QUALIFICATION DRAWINGS.

6. MARKING:

THE MARKING SHALL CONSIST OF THE AS PART NUMBER AND THE MANUFACTURER'S CAGE CODE IN ACCORDANCE WITH MIL-STD-130 AND A LOT CONTROL NUMBER.

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	(R) BEARING, ROLLER, NEEDLE, SINGLE ROW, HEAVY DUTY, TRACK ROLLER, SEALED, TYPE V, ANTI-FRICTION, CORROSION RESISTANT NITROGEN (CREN) STEEL, INCH		