

RATIONALE

DELETED THICKNESS AND BREAKING STRENGTH DESIGNATION FOR AMS3666 SEAL MATERIAL.

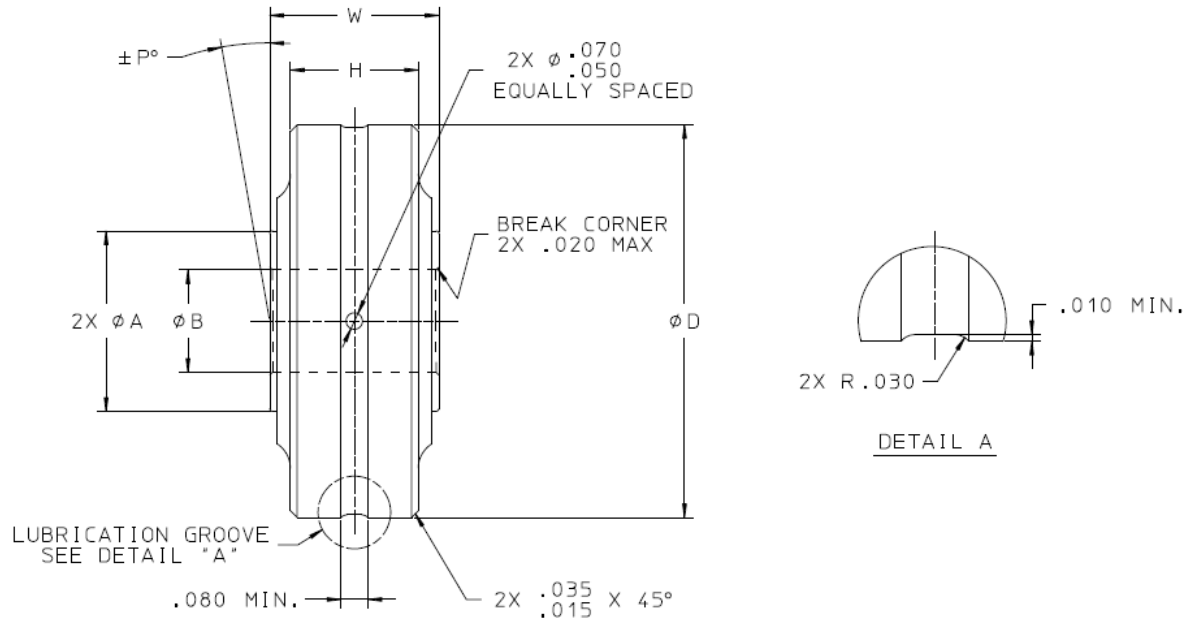


FIGURE 1

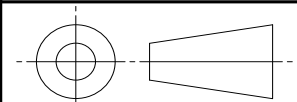
TABLE 1

DASH NO.	φB +.0000 -.0005	φD +.0000 -.0005	W +.000 -.005	H +.000 -.005	φ A +.005 -.005	P° MIN	WT (APPROX) LB	LIMIT LOAD - LB		RADIAL DYNAMIC LOAD LB
								RADIAL	THRUST	
-3	.1900	1.0000	.500	.344	.420	10°	.07	2720	270	2260
-4	.2500	1.0000	.500	.344	.420	10°	.06	2720	270	2260
-5	.3125	1.2500	.588	.375	.550	10°	.12	4210	420	3490
-6	.3750	1.4375	.620	.469	.660	10°	.17	6160	610	5120
-7	.4375	1.5000	.812	.625	.660	10°	.30	7900	790	6550
-8	.5000	1.6250	.750	.687	.810	2.5°	.37	11900	1190	9940

BEARING ROUNDNESS LIMITS									
BASIC (NOMINAL) DIAMETER		BORE ACCEPTANCE LIMITS				OD ACCEPTANCE LIMITS			
		d MIN	MEAN DIAMETER		d MAX	D MIN	MEAN DIAMETER		D MAX
OVER	INCL		LOW	HIGH			LOW	HIGH	
-	2.0000	-.0005	-.0005	+.0000	+.0001	-.0008	-.0005	+.0000	+.0003

For more information on this standard, visit
<https://www.sae.org/standards/content/AS21431D/>

THIRD ANGLE PROJECTION



CUSTODIAN: ACBG

PROCUREMENT SPECIFICATION: AS8914



AEROSPACE STANDARD

BEARING, ROLLER, SELF-ALIGNING.
SINGLE ROW, ANTI-FRICTION,
SEALED, -65 TO 350 °F, TYPE I

AS21431™
SHEET 1 OF 2

REV.
D

Documents

NOTES:

NOTICE

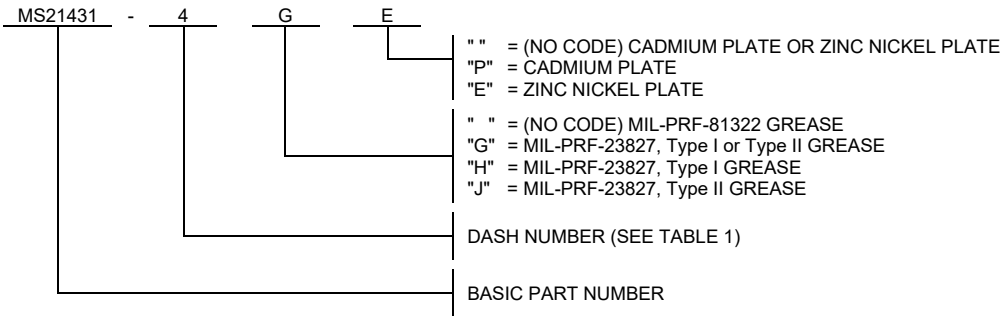
THIS DOCUMENT REFERENCES A PART WHICH MAY CONTAIN CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

REQUIREMENTS:

1. MATERIAL: RINGS AND ROLLERS: 52100 STEEL PER AMS6440.
SEALS: POLYTETRAFLUOROETHYLENE SHEET, GLASS FABRIC REINFORCED PER AMS3666 TYPE 1 OR TYPE 2, TESTING FOR VOLUME RESISTIVITY AND ELECTRICAL FLAWS IS NOT REQUIRED.
SHIELDS: CORROSION RESISTANT STEEL, AISI 300 OR AISI 400 SERIES STEEL.
2. LUBRICANT: MIL-PRF-81322 OR MIL-PRF-23827 (TYPE I OR TYPE II). ALL BEARINGS SHALL BE FILLED 80% MINIMUM WITH GREASE CONFORMING TO MIL-PRF-81322, UNLESS OTHERWISE SPECIFIED. MIL-PRF-23827 (TYPE I OR TYPE II) SHALL NOT BE USED WHERE TEMPERATURE EXCEEDS 250 °F MAX.
IF NO SPECIFIC TYPE IS REQUIRED FOR MIL-PRF-23827, ADD THE LETTER "G" AFTER THE MS21429 DASH NUMBER.
IF MIL-PRF-23827 TYPE I IS REQUIRED, ADD THE LETTER "H" AFTER THE MS21431 DASH NUMBER.
IF MIL-PRF-23827 TYPE II IS REQUIRED, ADD THE LETTER "J" AFTER THE MS21431 DASH NUMBER.
3. HARDNESS: HEAT TREAT RINGS AND ROLLERS TO 60 TO 65 HRC AND STABILIZE FOR OPERATION AT 250 °F.
4. SURFACE ROUGHNESS: RACEWAYS 8 MICROINCHES Ra AND ROLLERS 6 MICROINCHES Ra IN ACCORDANCE WITH ASME B46.1.
5. INTERNAL CLEARANCE: RADIAL .0006 TO .0014 INCHES.
6. FINISH: ZINC NICKEL PLATED IN ACCORDANCE WITH AMS2417, TYPE 2, GRADE B, OR CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE I, CLASS 2, TO A THICKNESS OF .0003 TO .0006 INCHES.

IF ZINC NICKEL PLATING IS REQUIRED, ADD THE LETTER "E" AND IF CADMIUM PLATING IS REQUIRED, ADD THE LETTER "P" AFTER THE MS21431 DASH NUMBER AS SHOWN IN NOTE 7.
7. EXAMPLE OF PART NUMBER:

THE PART NUMBER SHALL BE SEQUENCED LEFT TO RIGHT, WITHOUT SPACES, WITH DESIGNATIONS IN THE FOLLOWING SEQUENCE:



8. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE SPECIFIED.
9. THESE LOAD RATINGS ARE FOR OPERATIONS UP TO 250 °F. FOR OPERATIONS UP TO 350 °F THE RATINGS SHALL BE REDUCED BY 20%.
10. DIMENSIONS TO BE MET AFTER PLATING.
11. TOLERANCES: DECIMALS +.010 TO -.000 INCHES, UNLESS OTHERWISE SPECIFIED.
12. REMOVE BURRS AND SHARP EDGES.

SPECIFICATION NOTES:

1. REVISION INDICATOR: A CHANGE BAR (I) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

	AEROSPACE STANDARD	AS21431™ SHEET 2 OF 2	REV. D
	BEARING, ROLLER, SELF-ALIGNING. SINGLE ROW, ANTI-FRICTION, SEALED, -65 TO 350 °F, TYPE I		