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REV. C
AS21155™

FEDERAL SUPPLY CLASS
3120

RATIONALE

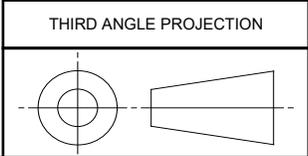
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CUSTODIAN: AIRFRAME CONTROL BEARINGS GROUP

	AEROSPACE STANDARD		AS21155™	REV. C
	BEARING, PLAIN, SELF-ALIGNING, CHAMFERED OUTER RING			

ISSUED 1999-08 REVISED 2011-12 STABILIZED 2023-06

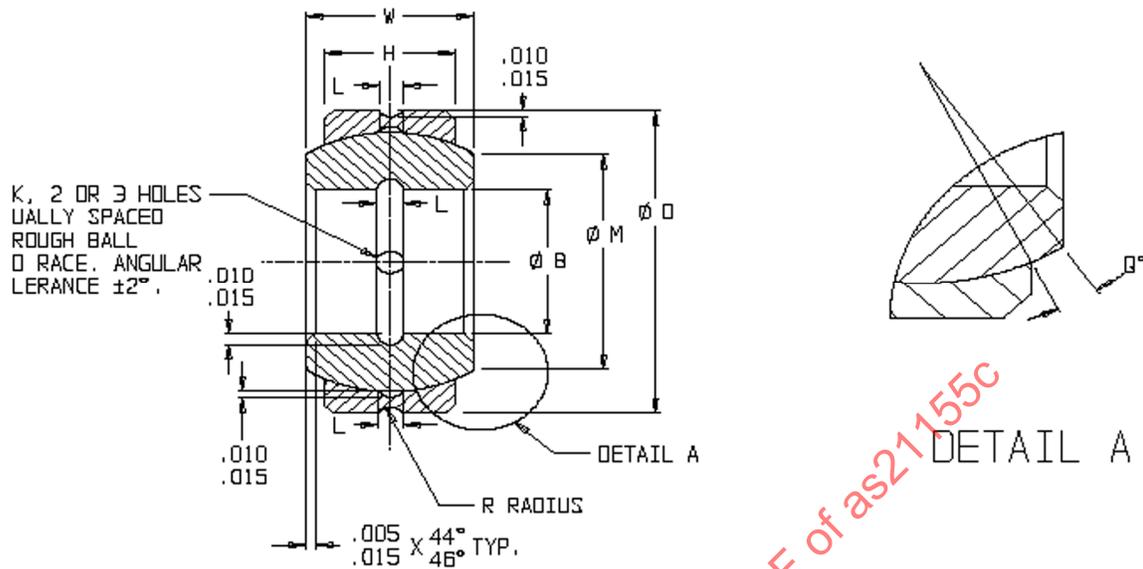


FIGURE 1 – PART CONFIGURATION

TABLE 1 - DIMENSIONS AND LOADS

DASH NO.	Ø B +.0000 -.0005	Ø D +.0000 -.0005	H ±.005	Ø K	L ±.005 (a)	Ø M MIN.	Q° MIN.	W +.000 -.002	ALLOY STEEL		ALUMINUM BRONZE	
									RADIAL STATIC LIMIT LOAD (b)	AXIAL STATIC LIMIT LOAD (c)	RADIAL STATIC LIMIT LOAD (b)	AXIAL STATIC LIMIT LOAD (c)
-03	.1900	.5625	.218	.047	.062	.293	10	.281	4600	2100	2800	850
-04	.2500	.6562	.250			.364		.343	7080	2800	4300	1100
-05	.3125	.7500	.281			.419		.375	8500	3550	5200	1400
-06	.3750	.8125	.312	.062	.078	.475	9	.406	11050	4400	6750	1760
-07	.4375	.9062	.343			.530		.437	13900	5400	8500	2150
-08	.5000	1.0000	.390			.600		.500	18850	7050	11500	2800
-09	.5625	1.0937	.437	.078	.093	.670	8	.562	25500	8900	15600	3550
-10	.6250	1.1875	.500			.739		.625	31950	11700	19500	4650
-12	.7500	1.4375	.593			.920		.750	46750	16500	28500	6575
-14	.8750	1.5625	.703	.078	.093	.980	9	.875	62750	23300	38300	9300
-16	1.0000	1.7500	.797			1.118		1.000	83350	30000	51000	12000

- (a) FACE ID GROOVE (L DIMENSION) AND HOLE DIAMETER TO BE MEASURED BEFORE BEARING ASSEMBLY BUT SWAGING SHALL NOT PREVENT GREASE FLOW.
- (b) THESE BEARINGS MAY EXPERIENCE SOME METAL YIELDING AT THE RADIAL STATIC LIMIT LOADS LISTED.
- (c) THE LIMIT AND ULTIMATE AXIAL LOAD CAPACITY OF THE BEARING CAN BE ACHIEVED ONLY WHEN THE SIDE FACE INSIDE THE GROOVE IS SUPPORTED AS DEFINED IN AS8976.

TABLE 1 – DIMENSIONS AND LOADS (CONTINUED)

DASH NO.	R RADIUS (REF)	BALL DIA. MAX.	
		ALLOY STEEL	ALUM BRONZE
-03	.045	.407	.438
-04		.501	.501
-05	.065	.563	.594
-06		.657	.657
-07		.719	.719
-08		.814	.814
-09		.907	.907
-10	.088	.970	1.001
-12		1.188	1.251
-14		1.313	1.376
-16		1.501	1.563

REQUIREMENTS:

1. MATERIAL:

BALL - 52100 AMS6440, AMS6444, AMS-S-7420 OR 440C AMS5630

RACE - CODES: "S" ALLOY STEEL, AMS-S-5000, AMS-S-6758 OR AMS-S-6050.
 "B" ALUMINUM BRONZE PER ASTM B 124/B 124M, ASTM B 150, ASTM B 169/B 169M AND B 283-EXCEPT THE CHEMICAL COMPOSITION SHALL BE:

ELEMENT PERCENT	CU	AL	FE	NI	SI	MN	SN	ZN	SUM OF NAMED ELEMENTS MIN
	80.0 TO 93.0	6.5 TO 11.0	4.0 MAX	1.0 MAX ^(d)	2.2 MAX ^(d)	1.5 MAX	.60 MAX	1.0 MAX	99.5

(d) WHEN BOTH SILICON AND NICKEL ARE PRESENT, ONLY ONE SHALL BE IN EXCESS OF 0.25 PERCENT.

- FINISH: BALL - CHROME PLATE AMS2460, CLASS 2D, 0.0002 INCH MINIMUM ON SPHERICAL SURFACES AND ON FACES, PLATING RUNOUT ON BALL ID CHAMFERS ALLOWED. DIMS APPLY AFTER PLATE. SHOT PEEN PRIOR TO PLATE NOT REQUIRED.
 FINISH: RACE - CAD PLATE PER AMS-QQ-P-416, TYPE 1, CLASS 2. DIMS APPLY AFTER PLATE.
- HARDNESS: BALL - HRC 56 MINIMUM.
 RACE - ALLOY STEEL, HRC 27-36, APPLIES PRIOR TO RACE ASSEMBLY (SWAGING).
- LUBRICATION: PREPACKED WITH MIL-G-21164 GREASE.
- SURFACE TEXTURE (μ INCHES): SPHERICAL SURFACE OF BALL 8 RA; BORE, BALL FACE AND OUTER RACE O.D. 32 RA. ALL OTHER SURFACES 125 RA, IN ACCORDANCE WITH ASME B 46.1.
- TEMPERATURE RANGE: -65 TO +250 °F.
- INTERNAL CLEARANCE MEASURED UNDER A ±5.5 LB. MINIMUM GAGE LOAD:
 RADIAL CLEARANCE 0.0005 TO 0.0020 INCH
 AXIAL CLEARANCE 0.010 INCH MAXIMUM
- BREAK SHARP EDGES AND CORNERS AND REMOVE ALL BURRS AND SLIVERS.
- DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.010, ANGLES ±1/2 DEGREE.
- OUTER RACE PLATING: BASE PART NUMBER, DEFAULT PLATING IS CADMIUM PLATE PER AMS-QQ-P-416, TYPE 1, CL. II ON ALL EXTERNAL SURFACES OF THE RACE; OPTIONAL, AT THE OPTION OF THE MANUFACTURER, ZINC NICKEL PLATE PER AMS2417, TYPE 2, ON ALL EXTERNAL SURFACES OF THE RACE. PLATING RUNOUT (WHICH MAY BE INCOMPLETE AND MISSING) MAY OCCUR IN THE RACE ID CHAMFER/SETBACK REGION ON THE RACE.

OUTER RACE: PLATING, WHEN SPECIFIED (AS DEFINED IN NOTE 4), SHALL BE ZINC-NICKEL PLATING PER AMS2417, TYPE 2, ON ALL EXTERNAL SURFACES OF THE RACE. PLATING RUNOUT (WHICH MAY BE INCOMPLETE AND MISSING) MAY OCCUR IN THE RACE ID CHAMFER/SETBACK REGION ON THE RACE.

	AEROSPACE STANDARD	AS21155™ SHEET 2 OF 3	REV. C
	BEARING, PLAIN, SELF-ALIGNING, CHAMFERED OUTER RING		