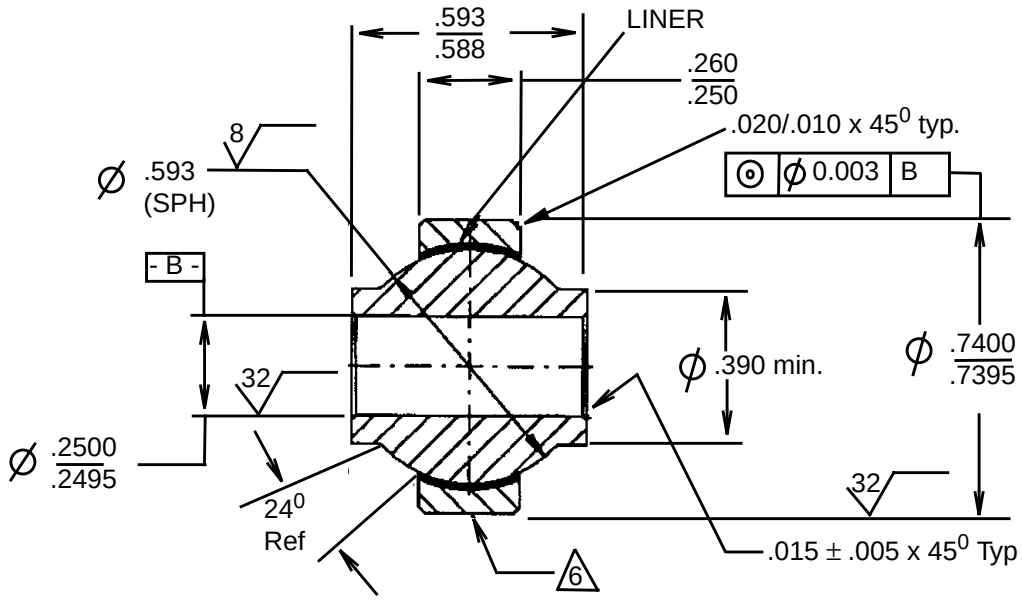
de HAVILLAND

CAGE CODE 71867

SOURCE CONTROL DRAWING

ONLY THE ITEM(S) LISTED ON THIS DRAWING AND IDENTIFIED BY VENDOR'S NAME(S), ADDRESS(ES) AND PART NUMBER(S) HAVE BEEN APPROVED FOR USE IN DE HAVILLAND AIRCRAFT. A SUBSTITUTE ITEM SHALL NOT BE USED WITHOUT PRIOR APPROVAL BY DE HAVILLAND ENGINEERING STANDARDS

SOURCE CONTROL DRAWING



✶ DSC 567 BEARING IS DIMENSIONALLY EQUIVALENT TO DSC3-4 EXCEPT AS FOLLOWS:

BEARING REQUIREMENTS

1. MATERIALS:

OUTER RACE: 17-4PH STAINLESS STEEL PER AMS 5643, Rc 28-37

BALL: 440C PER AMS 5630, Rc 55-62

LINER: NON-PEELABLE, NON-FABRIC, MACHINEABLE HOMOGENEOUS COMPOSITE CONTAINING PTFE.

2. FINISH: BALL CHROME PLATE PER QQ-C-320, CLASS 2, SPHERICAL OD, 0.0005 - 0.0003 THK
3. NO - LOAD BREAKAWAY TORQUE = 0.1 IN - LBS MAX.
4. MAXIMUM CLEARANCE: RADIAL = 0.0008" AXIAL PLAY = 0.0035".
5. STATIC LIMIT LOADS: RADIAL = 6040 LBS, AXIAL = 430 LBS

CONTINUOUS DYNAMIC RADIAL LOAD = 2220 LBS MAX.

△6. IDENTIFY, LASER MARK OR ELECTROLYTIC ETCH THE MANUFACTURER'S PART NUMBER AND DSC NUMBER ON THE OUTER RACE OF THE BEARING

LINER CHARACTERISTICS

LINER SHALL MEET THE AS81820 REQUIREMENTS EXCEPT AS FOLLOWS:

7. CONFORMITY PER PARAGRAPH 3.4.4.2 & 3.4.4.3 EXCEPT:
   - NORMAL CONFORMITY - H/10 THICKNESS TO BE .008" - .018",
   - MIDPOINT TO OCCUR BETWEEN THE H/10 POSITIONS NOT TO EXCEED .030",
   - MINIMUM LINER THICKNESS .008",
   - CIRCUMFERENTIAL CONFORMITY - VARIATION IN THE MEASURED VALUES NOT TO EXCEED .006".
8. MIXTURE OF PTFE SHALL BE INCLUDED IN THE LINER SYSTEM TO ENABLE EXTREMELY LOW COEFFICIENT OF FRICTION (COF) LEVELS OF 0.15

SEE ENGINEERING STANDARDS APPROVAL RECORD FOR ORIGINAL SIGNATURES AND CHANGE SUMMARY

DRAWN	B. EDWARDS	**TITLE:** **BEARING, PLAIN, SELF-LUBRICATING, SELF-ALIGNING, LOW TORQUE, LOW FRICTION**	**DSC 567**
CHECKED	U. GOLAN		
STRESS	B. YOUNG		PAGE 1 OF 3
APPROVED	U. GOLAN		

REV: | REV: | REV: | REV: | REV: | APPROVED: 28 APR 2004

9. OPERATING TEMPERATURE RANGE - 100^0F TO + 300^0F (- 73 TO + 149^0C)
10. THE LINER SURFACE SPEED APPLICATION UP TO 10 FEET PER MINUTE (FPM).

BEARING QUALIFICATION CRITERIA

11. MAX. COF OF 0.18 SHOULD BE TESTED UNDER 14,000 PSI AT AMBIENT TEMPERATURE AND AT LOW TEMPERATURE OF - 70^0F.
12. MAX. COF OF 0.15 SHOULD BE MEASURED ON THE NEW BEARING THROUGHOUT THE OPERATING LOAD RANGE AT AMBIENT TEMBERATURE AND AT LOW TEMPERATURE OF -65^0F (-54^0C).
13. RUNNING COEFFICIENT OF FRICTION (DYNAMIC COF) IS REQUIRED TO BE AS CLOSE AS POSSIBLE TO STATIC COF.
14. MAX. TOTAL DEFLECTION .010" UNDER RADIAL STATIC LIMIT LOAD.
    NO PERMANENT SET DEFORMATION GREATER THAN .0035"
    (AFTER THE LOAD APPLIED FOR 3 MINUTES).
15. AT ULTIMATE STATIC (RADIAL & AXIAL) LOADS; (ULT= 1.5 LIMIT)
    - BEARING COMPONENTS SHALL REMAIN INTACT WITH THE OUTER RACE IN PLACE (NO PUSH OUT OF THE BALL)
    - RACE OR BALL FRACTURE SHALL NOT OCCUR.
    - PLASTIC DEFORMATION IS ALLOWED
    - LOCAL LINER DISTRESS MAY OCCUR.
16. LINER MUST BE BONDED TO THE OUTER RACE.
17. THE BEARING AND BALL MUST BE FINGER MOVABLE THROUGH THE ENTIRE MISALIGNMENT ANGLE RANGE.

QUALIFICATION TEST

18. SUPPLIER SHALL SUBMIT A QUALIFICATION TEST PROCEDURE PLAN FOR BOMBARDIER APPROVAL.
19. SUPPLIER SHALL TEST 1 SAMPLE BEARING, BASED ON THE FOLLOWING BEARING SPECTRUM:

No. of Cycles	Radial Load	Oscillation	Frequency
11,200,000	602 lbs	$\pm 1.5^0$	1 Hz - 2Hz

20. THE BEARING TEMPERATURE SHALL BE MONITORED AND MAINTAINED BELOW 200^0 F, WHEN THE FREQUENCY IS HIGHER THAN 1 HZ.
21. FOLLOWING QUALIFICATION TEST, MAXIMUM WEAR SHALL NOT BE MORE THAN .0015" OVER THE LIFE OF THE BEARING.
22. THE SUPPLIER SHALL SUBMIT A QUALIFICATION TEST REPORT VALIDATING THE BEARING MEETS ALL OF THE ABOVE REQUIREMENTS.

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Ⓐ PARA 19: SAMPLE 1 WAS 3

REV:
REV:
REV:
REV:
REV:
REV: A Dec 16 2004

SEE ENGINEERING STANDARDS APPROVAL RECORD FOR ORIGINAL SIGNATURES AND CHANGE SUMMARY

DRAWN	B. EDWARDS	**TITLE:** **BEARING, PLAIN, SELF-LUBRICATING, SELF-ALIGNING, LOW TORQUE, LOW FRICTION**	**DSC 567**
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PART NUMBER BREAKDOWN:

DSC567 - 4

BORE DIAMETER
(In 1/16ths inch)

BASIC PART NUMBER

DSC P/N	APPROVED VENDOR
	KAMATICS CORPORATION
DSC567-4	KSC414104VS

VENDOR ADDRESS AND CAGE CODE:

KAMATICS CORPORATION, BLOOMFIELD CT.- CAGE CODE 50632

PROCUREMENT INFORMATION:

PROCUREMENT DEPARTMENT SHALL SPECIFY THE DSC NUMBER AND MANUFACTURER'S PART NUMBER ON THE PURCHASE ORDER

SEE ENGINEERING STANDARDS APPROVAL RECORD FOR ORIGINAL SIGNATURES AND CHANGE SUMMARY