

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE  
DEPARTMENT OF DEFENSE

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION  
SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODSS SPECIFIED IN  
THE SOLICITATION: MIL-B-8914

INCH DESIGN										DIMENSIONS IN INCHES										DIMENSIONS IN MILLIMETERS									

TABLE 1. TOLERANCE VALUE

Ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIA., d <sub>mp</sub>		ALLOWABLE DEVIATION FROM COTTER PIN DIA., d	
OVER	INCL	HIGH	LOW	HIGH	LOW
.1250	.50000	+0	-.0015	+.010	-0

DIMENSIONS IN INCHES

ØD BASIC OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN DIA., D <sub>mp</sub>		ALLOWABLE DEVIATION FROM OUTER RING WIDTH C	
OVER	INCL	HIGH	LOW	HIGH	LOW
.4375	1.1250	+.0010	-.0005	+0	-.005

DIMENSIONS IN MILLIMETERS

Ød BASIC BORE		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN DIA., d <sub>mp</sub>		ALLOWABLE DEVIATION FROM COTTER PIN DIA., d	
OVER	INCL	HIGH	LOW	HIGH	LOW
3.175	12.700	+0	-.0038	+.25	-0

ØD BASIC OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN DIA., D <sub>mp</sub>		ALLOWABLE DEVIATION FROM OUTER RING WIDTH C	
OVER	INCL	HIGH	LOW	HIGH	LOW
11.112	28.575	+.025	-.013	+0	-.13

## REQUIREMENTS:

MATERIAL: STEEL, MIL-S-8690, QQ-S-624, QQ-S-633, FED-STD NO. 66 STEEL NO. 50100, 51100 AND 52100.  
SEALS, ACETAL RESIN, NYLON, OR EQUIVALENT, CONSTRUCTION OPTIONAL.

- ⑧ FINISH: ROLLER OD AND SIDES CHROME PLATED IN ACCORDANCE WITH QQ-C-320, CLASS 2, EXCEPT THICKNESS TO BE .010-.018 mm (.0004-.0007 INCHES). EXPOSED SURFACES OF OTHER PARTS AS MOUNTED, ZINC-NICKEL IN ACCORDANCE WITH AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE 1, CLASS 2, .0003 TO .0006 INCHES THICK.

## EXAMPLE OF PART NUMBER:

8 FEE 20 A G = CAM FOLLOWER NEEDLE BEARING .500 STUD, SEALED BEARING, LUBRICATOR IN FLANGED END OF STUD,  
1.250 GRIP LENGTH, 1.672 STUD LENGTH WITHOUT COTTER PIN HOLE, WITH MIL-G-81322 GREASE.  
G = MIL-G-81322 GREASE; NO CODE = MIL-G-23827 GREASE  
A = NO COTTER PIN HOLE (NOT REQUIRED FOR TYPES T OR TEE) OMIT FOR COTTER PIN HOLE  
GRIP LENGTH IN .0625 INCH INCREMENTS  
F = UNSEALED WITH LUBRICATOR IN FLANGED END OF STUD  
T = UNSEALED WITH LUBRICATOR IN THREADED END OF STUD, NO COTTER PIN HOLE  
" - " = UNSEALED WITHOUT LUBRICATOR  
FEE = SEALED WITH LUBRICATOR IN FLANGED END OF STUD  
TEE = SEALED WITH LUBRICATOR IN THREADED END OF STUD, NO COTTER PIN HOLE  
R = SEALED BEARING WITHOUT LUBRICATOR  
STUD DIAMETER IN .0625 INCH INCREMENTS

PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY- AT      NAVY-AS AIR FORCE- 11      DLA-	MILITARY SPECIFICATION SHEET TITLE BEARING, ROLLER, NEEDLE, TRACK ROLLER, INTERNAL STUD, TYPE VII, ANTIFRICTION, INCH	SPECIFICATION SHEET NUMBER MS21432 05 DEC 94 REV B
REVIEW: AF-84 DLA-IS USER: PROJECT NUMBER: 3110-0909		SUPERSEDING MS2132 A      21 MARCH 1977 AMSC- N/A      FSC -3110
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DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

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Form Approved  
OMB No. 0704-0188

NOTES:

- (B) 1. THE COMPLETE MS IDENTIFICATION MAY BE OBTAINED BY ADDING THE FOLLOWING SUFFIX CODE LETTERS TO THE BASIC MS NUMBER SHOWN IN THE TABULATION:
- "F" DESIGNATES LUBRICATOR IN FLANGED END OF STUD.
  - "T" DESIGNATES LUBRICATOR IN THREADED END OF STUD AND COTTER PIN HOLE OMITTED
  - "A" DESIGNATES COTTER PIN HOLE OMITTED
  - "S" DESIGNATES A SEALED BEARING.
- THIRD DASH NUMBER DESIGNATES GRIP LENGTH IN 0.0625 INCH INCREMENTS (SEE EXAMPLE).
2. MS21432-3 MAY BE CODED FOR RELUBRICATION FACILITIES IN THE FLANGED END ONLY. LUBRICATION FITTING FOR THE MS21432-3 MAY BE SHIPPED SEPARATELY AND INSTALLED ON ASSEMBLY. LUBRICATORS INSTALLED IN THE THREADED END OF STUD SHALL BE FLUSH. LUBRICATORS INSTALLED IN THE FLANGED END OF STUD ON MS21432-3 AND -4 MAY EXTEND 1.3 mm (0.05 IN.) BEYOND THE FLANGED END THEREBY RECESSITATING AN INCREASE IN " " OF 1.3 mm (0.05 IN.). ON ALL OTHER SIZES THE LUBRICATOR SHALL BE FLUSH OR INDENTED.
3. THE TRACK BRINELL CAPACITY IS CRITICAL IN RESPECT TO THE ROLLER CAPACITY OF THE BREAKING. AN INCREASE IN HARDNESS OF THE TRACK WILL INCREASE THE BRINELL CAPACITY OF THE TRACK, BUT IN NO CASE SHOULD THE ROLLING CAPACITY OF THE BEARING BE EXCEEDED.
4. THE LIMIT LOAD RATING CAN BE DEFINED AS THE MAXIMUM LOAD WHICH CAN BE APPLIED TO A BEARING WITHOUT IMPAIRING THE SUBSEQUENT FUNCTIONING OF THE BEARING IN AIRFRAME APPLICATIONS.
- THE ULTIMATE OR STATIC FRACTURE LOAD RATING IS NOT LESS THAN 1.5 TIMES THE LIMIT LOAD RATING.
- TO FULLY REALIZE THIS RATING, COMPUTATION MUST BE PROVIDED FOR STUD DEFLECTION IN ORDER TO ASSURE FULL TRACK CONTACT UNDER LOAD.
5. FOR INSPECTION PURPOSES NOMINAL STUD LENGTH IS THE SUM OF NOMINAL GRIP AND THE THREAD LENGTH (" " DIMENSION).
6. BEARING SHALL BE PREPACKED WITH GREASE AS CODED.
7. BEARING TO BE WRAPPED IN GREASE PROOF PAPER, INDIVIDUALLY PACKAGED AND MARKED WITH THE DATE OF LUBRICATION.
8. ALL DIMENSIONS TO MET AFTER PLATING.

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