FEDERAL SUPPLY CLASS
5340

RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

NOTICE

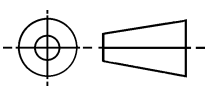
THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MIL-C-85052/1B, NOTICE 1, AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MIL-C-85052/1B, NOTICE 1. ANY PART NUMBERS ESTABLISHED BY THE ORIGINAL SPECIFICATION REMAIN UNCHANGED.

THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES PROVIDE FOR (A) THE PUBLICATION OF PORTIONS OF UNREVISED GOVERNMENT SPECIFICATIONS AND STANDARDS WITHOUT CONSENSUS VOTING AT THE SAE COMMITTEE LEVEL, AND (B) THE USE OF THE EXISTING GOVERNMENT SPECIFICATION OR STANDARD FORMAT.

UNDER DEPARTMENT OF DEFENSE POLICIES AND PROCEDURES, ANY QUALIFICATION REQUIREMENTS AND ASSOCIATED QUALIFIED PRODUCTS LISTS ARE MANDATORY FOR DOD CONTRACTS. ANY REQUIREMENT RELATING TO QUALIFIED PRODUCTS LISTS (QPL'S) HAS NOT BEEN ADOPTED BY SAE AND IS NOT PART OF THIS SAE TECHNICAL DOCUMENT.

ISSUED 2001-03 REAFFIRMED 2007-01

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3

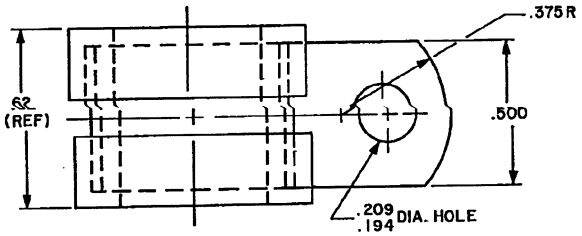
SAE Aerospace
An SAE International Group

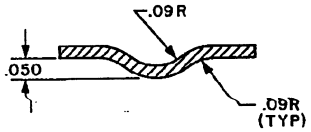
AEROSPACE STANDARD

CLAMP, LOOP, TUBE 17-7 PH CRES, 275 °F,
FUEL AND PETROLEUM BASED HYDRAULIC FLUID RESISTANT

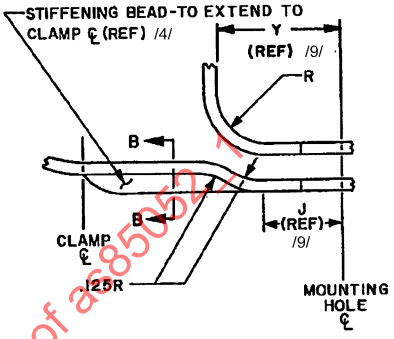
AS85052/1
SHEET 1 OF 5

The complete requirements for acquiring the clamps described herein shall consist of this document and the latest issue in effect of specification MIL-C-85052.

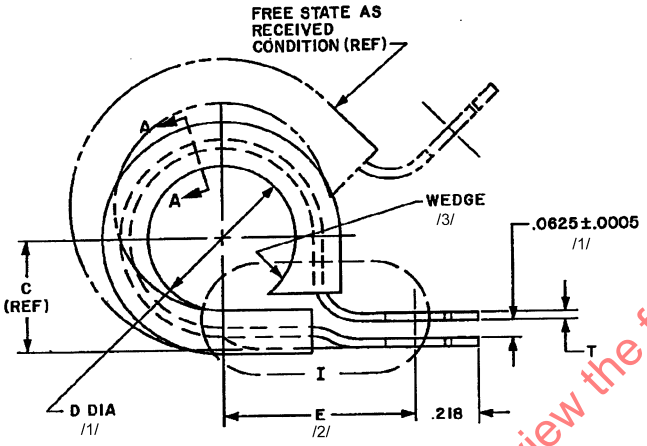




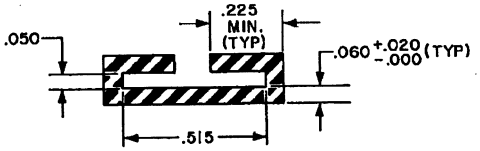
SECTION B-B



DETAIL I
(CUSHION REMOVED)



TOLERANCES: .XXX ± .010, .XX ± .03 UNLESS OTHERWISE SPECIFIED.



SECTION A-A
(CUSHION ONLY)

TABLE I

DASH NUMBER	C (REF)	D DIA. /1/	E ±.032 /2/	J (REF)	R ±.010	T	Y (REF)
2	.192	.125	.468	--	.090	.020 ±.002	.325
3	.224	.188	.499	--			
4	.255	.250	.530	.235			
5	.286	.312	.561				
6	.318	.375	.592				
7	.349	.438	.624				
8	.380	.500	.655				
9	.423	.562	.741	.256	.125	.032 ±.002	.363
10	.454	.625	.772				
11	.486	.688	.804				
12	.517	.750	.835				
13	.548	.812	.866				

DASH NUMBER	C (REF)	D DIA. /1/	E ±.032 /2/	J (REF)	R ±.010	T	Y (REF)
14	.580	.875	.898	.256	.125	.032 ±.002	.368
15	.611	.938	.929				
16	.642	1.000	.960				
17	.681	1.062	1.001	.262		.040 ±.003	.370
18	.712	1.125	1.032				
19	.744	1.188	1.064				
20	.775	1.250	1.095				
21	.806	1.312	1.126				
22	.838	1.375	1.158				
23	.869	1.438	1.189				
24	.900	1.500	1.220				

NOTES:

/1/ DIAMETER “D” IS THE NOMINAL DIAMETER FOR WHICH A CLAMP SIZE IS INTENDED FOR USE. DIAMETER “D” SHALL BE VERIFIED BY THE “DIAMETRAL RETENTION” TEST OF THE GENERAL SPECIFICATION.

/2/ DIMENSION “E” SHALL BE MEASURED WITH THE CLAMP INSTALLED ON A MANDREL OF “D” DIAMETER. ±.001 AND AN .0625 ±.0005 SPACER BETWEEN THE UPPER AND LOWER FOOT AS SHOWN.

/3/ WEDGE SHALL BE REQUIRED ON SIZE -6 AND LARGER. THE WEDGE SHALL BE MOLDED AS AN INTEGRAL PART OF THE CUSHION AND CONTOURED TO FIT “D” DIAMETER.

/4/ STIFFENING BEAD SHALL BE REQUIRED ON SIZE -4 AND LARGER. ALL RADII ON THE STIFFENING BEAD SHALL BE SMOOTH AND BLENDED. NO SHARP TOOL MARKS ARE ALLOWED.

5. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE INCHES.

6. METAL BANDS SHALL HAVE ALL BURRS, SHARP EDGES AND SCALE REMOVED.

/7/ WEDGE SHALL TOUCH CUSHION ON LOWER FOOT WITH CLAMP INSTALLED ON MANDREL WITHOUT SPACER.

/8/ IF MIL-C-85052/4 CLAMP SUPPORTS ARE USED, THE MAXIMUM TUBE OVERHANG SHALL BE 1/2 TUBE O.D. THIS WASHER CAN BE DETRIMENTAL IF THE CLAMP IS NOT FULLY SUPPORTED.

/9/ REFERENCE DIMENSIONS “Y” AND “J” ARE PROVIDED TO GAIN MAXIMUM SUPPORT FOR THE LOWER FOOT BY CLOSELY FITTING THE UPPER FOOT BEND RADIUS TO THE STIFFENING BEAD BLEND RADIUS WHEN CLOSED AGAINST EACH OTHER.

/10/ UNLESS OTHERWISE SPECIFIED, PROPERTY MEASUREMENTS SHALL BE PERFORMED IMMEDIATELY AFTER REMOVAL FROM THE IMMERSION BATH.

REQUIREMENTS

MARKING:

BAND - THE COMPLETE STANDARD PART NUMBER AND MANUFACTURER’S NAME, TRADEMARK, OR FSCM NUMBER SHALL BE IMPRESSION STAMPED ON THE BAND IN AN AREA NOT COVERED BY THE CUSHION. ALL MARKING SHALL BE ABOVE TUBE THEORETICAL CENTERLINE.

- CLAMP BANDS OF -2, -3, -4 SIZES MAY BE MARKED WITH THE MANUFACTURERS INDENTIFICATION, THE SIZE, AND THE SPECIFICATION SHEET NUMBER DUE TO SPACE LIMITATIONS.

CUSHION - NONE

MATERIALS:

METAL BAND - 17-7PH, CORROSION RESISTANT STEEL PER MIL-S-25043, ANNEALED, STRESS RELIEVE AND HEAT TREAT TO TH1100 CONDITION PER MIL-H-6875, AFTER FORMING.

CUSHION - NITRILE BUTADIENE RUBBER, 65-75 DUROMETER, COLOR - YELLOW, PER THE GENERAL SPECIFICATION WITH ADDITIONAL REQUIREMENTS SHOWN ON THIS SPECIFICATION SHEET.

FINISH:

METAL BAND - PASSIVATE PER QQ-P-35.

CUSHION - NONE.

PART NUMBER:

PART NUMBERS SHALL CONSIST OF THE FOLLOWING: (IN SEQUENCE)

1. THE LETTER “M”
2. THE GENERAL SPECIFICATION NUMBER
3. A SLASH, AND SLASH NUMBER OF THIS SPECIFICATION SHEET
4. A DASH, AND THE APPROPRIATE SIZE DASH NUMBERS FROM TABLE I
   EXAMPLE: M85052/1-S

CUSHION REQUIREMENTS:

1. PHYSICAL PROPERTIES -AS SPECIFIED IN TABLE II. UNLESS OTHERWISE SPECIFIED, RESULTS ARE AN AVERAGE OF 5 SPECIMENS AND TOLERANCE ON TEMPERATURE = ± 5°F.

TABLE II

TEST	TEST METHOD	REQUIRED ORIGINAL PROPERTIES	ALLOWABLE CHANGE FROM ACTUAL ORIGINAL PROPERTIES AFTER:		
			FUEL IMMERSION MIL-T5624 JP-4 168 HRS. AT +100°F /10/	HYDRAULIC FLUID IMMERSION MIL-H-5606 70 HRS. AT +156°F /10/	HEAT AGING 70 HRS. AT 275°F
HARDNESS, DUROMETER "A"	ASTM D2240	65-75	-20 MAX.	-15 MAX.	+10 MAX.
TENSILE STRENGTH - PSI	ASTM D412	2000 MIN.	-30% MAX.	-10% MAX.	-40% MAX.
ELONGATION - %	ASTM D412	500 MIN.	-10% MAX.	-10% MAX.	-75% MAX.
TEAR STRENGTH - PPI	ASTM D624 DIE "B"	300 MIN.	-35% MAX.	-10% MAX.	-40% MAX.
SPECIFIC GRAVITY	------	AS MEASURED	------	------	±2%
VOLUME CHANGE - %	ASTM D471-75				
1. AFTER CONDITIONING		------	+15% MAX.	+10% MAX.	-10% MAX.
2. AFTER 24 HRS. AIR DRY		------	+10% MAX.	+10% MAX.	------

2. OZONE RESISTANCE - REQUIRED PER MIL-C-85052.

3. COMPRESSION SET
   - SEE MIL-C-85052
   - AIR AGE AT 212° F
   - NOT TO EXCEED 55% AVERAGE OF 3 SPECIMENS.

4. FLAMMABILITY
   - SEE MIL-C-85052
   - SPECIMENS: -16 SIZE CLAMP ASSEMBLIES UNBENT UNTIL FLAT.
   - VERTICAL BURN TEST.

INTENDED USE:

THESE CLAMPS ARE INTENDED FOR USE AS FOLLOWS:

TEMPERATURE RANGE:

-65°F TO +275°F. (FOR HIGHER TEMPERATURE RATED CLAMPS, SEE MIL-C-85052/3 CLAMPS.)

SYSTEMS:

1. ALL AROMATIC FUEL SYSTEM APPLICATIONS REQUIRING A HIGH DEGREE OF CUSHION EXPOSURE TO SYSTEM FLUID.
2. ALL FLUID AND ELECTRICAL SYSTEMS ON AIRCRAFT AND AEROSPACE VEHICLES USING PETROLEUM BASED HYDRAULIC SYSTEMS.

VIBRATION RATING:

DEPENDING ON MOUNTING METHODS. (SEE RECOMMENDED MOUNTING DATA)

RECOMMENDED MOUNTING METHODS:

MOUNTING METHODS AFFECT THE VIBRATION CAPABILITIES OF THESE CLAMPS. TYPICAL MOUNTING METHODS AND VIBRATION RATINGS ARE SHOWN IN FIGURES I, II, AND III. THE METHOD SHOWN IN FIGURE II IS RECOMMENDED WHENEVER POSSIBLE. THE METHOD SHOWN IN FIGURE III SHOULD ONLY BE USED IN VERY HIGH VIBRATION AREAS OR AS NECESSARY.