

AS85052/3

FEDERAL SUPPLY CLASS
5340

RATIONALE

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

NOTICE

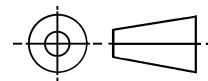
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THE ORIGINAL MILITARY SPECIFICATION WAS ADOPTED AS AN SAE STANDARD UNDER THE PROVISIONS OF THE SAE TECHNICAL STANDARDS BOARD (TSB) RULES AND REGULATIONS (TSB 001) PERTAINING TO ACCELERATED ADOPTION OF GOVERNMENT SPECIFICATIONS AND STANDARDS. TSB RULES 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.

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THIRD ANGLE PROJECTION



ISSUED 2001-03 REAFFIRMED 2007-01

CUSTODIAN: SAE-G-3

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

CLAMP, LOOP, TUBE 17-7 PH CRES, 500 °F

AS85052/3
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.

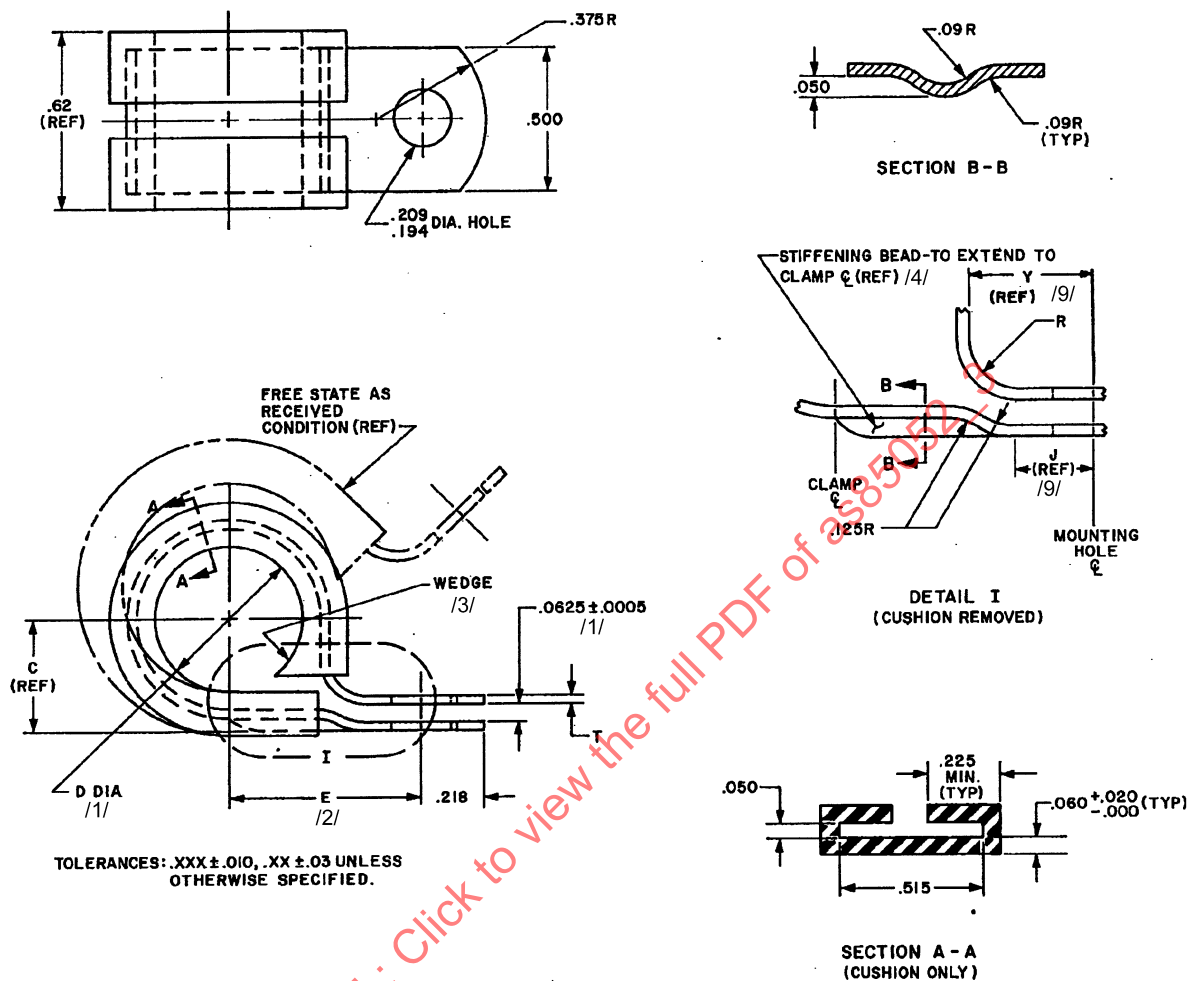


TABLE I

DASH NUMBER	C (REF)	D DIA. (1/1)	E ± .032 (2/1)	J (REF)	R ± .010	T	Y (REF)
2	.192	.125	.468	--			
3	.224	.188	.499	--			
4	.255	.250	.530		.090	.020 ± .002	.325
5	.286	.312	.561				
6	.318	.375	.592	.235			
7	.349	.438	.624				
8	.380	.500	.655				
9	.423	.562	.741				
10	.454	.625	.772			.032 ± .002	.368
11	.486	.688	.804	.256	.125		
12	.517	.750	.835				
13	.548	.812	.866				

DASH NUMBER	C (REF)	D DIA. (1/1)	E ± .032 (2/1)	J (REF)	R ± .010	T	Y (REF)
14	.580	.875	.898				
15	.611	.938	.929	.256		.032 ± .002	.368
16	.642	1.000	.960				
17	.681	1.062	1.001				
18	.712	1.125	1.032				
19	.744	1.188	1.064		.125		
20	.775	1.250	1.095				
21	.806	1.312	1.126	.262		.040 ± .003	.370
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. ± 0.001 AND AN $.0625 \pm 0.0005$ 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 OF THE STIFFENING BEAD SHALL BE SMOOTH AND BLENDED, NO SHARP TOOL MARKS ARE ALLOWED.
5. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN 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.

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 MANUFACTURER'S IDENTIFICATION, 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
- FABRIC REINFORCED, SILICONE RUBBER, 65-75 DUROMETER ON UNREINFORCED MATERIAL, COLOR LIGHT BLUE, PER THE GENERAL SPECIFICATION WITH ADDITIONAL REQUIREMENTS SHOWN ON THIS SPECIFICATION SHEET. THE FABRIC REINFORCING MATERIAL SHALL BE MOLDED INTO THE BAND SIDE OF THE CLAMP CUSHION AT A 45° ANGLE (SEE FIGURE A).

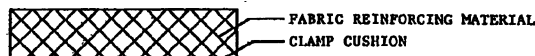


FIGURE A

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: M85052/3-8

CUSHION REQUIREMENTS:

1. PHYSICAL PROPERTIES -AS SPECIFIED IN TABLE II. UNLESS OTHERWISE SPECIFIED, RESULTS ARE AN AVERAGE OF 5 SPECIMENS AND TOLERANCE ON TEMPERATURE = $\pm 5^{\circ}\text{F}$.

TABLE II

TEST	TEST METHOD	REQUIRED ORIGINAL PROPERTIES	ALLOWABLE CHANGE FROM ACTUAL ORIGINAL PROPERTIES AFTER:		
			HEAT AGING 70 HRS. AT +500°F	OIL IMMERSION IN MIL-L-7808 70 HRS. AT +302°F	DIP TEST *
HARDNESS, DURENOMETER "A"	ASTM D2240	65-75			
TENSILE STRENGTH - PSI	** ASTM D412	1200 MIN.	+10 PTS MAX. 1000 MIN.	-30 PTS MAX. 300 MIN.	+5 PTS 800 MIN.
ELONGATION - %	** ASTM D412	30 MIN.	30 MIN.	30 MIN.	30 MIN.
TEAR STRENGTH - PPI	ASTM D624 (DIE "B")	300 MIN.	300 MIN.	300 MIN.	300 MIN.
VOLUME CHANGE - %	ASTM D471	REPORT	-----	+45% MAX.	+5% MAX.
WEIGHT CHANGE - %	ASTM D471	REPORT	-5% MAX.	-----	-----
SPECIFIC GRAVITY	ASTM D471	REPORT	-----	-----	-----

* DIP TEST - TEST SAMPLES SHALL BE DIPPED IN A-A-711, TYPE I SOLVENT AND ALLOWED TO DRY AT ROOM TEMPERATURE FOR 24 HRS. THIS PROCEDURE SHALL BE REPEATED 10 TIMES.

** TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM D412 ON THE FABRIC REINFORCED CUSHION TEST SPECIMEN, EXCEPT AS NOTED HEREIN. DIE "A" DUMBBELL SPECIMENS SHALL BE CUT FROM THE ACTUAL CUSHION WITH THE FABRIC WEAVE AT 45° TO THE DIRECTION OF PULL AND WITH THE EARS FOLDED OUT TO FLATTEN THE SPECIMEN. THE RATE OF SEPARATION OF THE JAWS SHALL BE 12 INCHES PER MINUTE. THE TENSILE STRENGTH AND PERCENT ELONGATION SHALL BE MEASURED WHEN THE FABRIC REINFORCING MATERIAL BEGINS TO SEPARATE FROM THE ELASTOMER OR THE SPECIMEN BREAKS COMPLETELY.

TENSILE STRENGTH SHALL BE BASED ON OVERALL THICKNESS OF RUBBER AND FABRIC REINFORCING MATERIAL. SPECIMEN FAILURES DUE TO FABRIC SEPARATION AT THE TEST FIXTURE JAWS SHALL BE DISCARDED AND ANOTHER SAMPLE TESTED.

2. COMPRESSION SET
 - SEE MIL-C-85052
 - AIR AGE AT 302 °F
 - NOT TO EXCEED 30% AVERAGE OF 3 SPECIMENS.
3. 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 +500°F. THESE CLAMPS HAVE CUSHIONS WHICH HAVE BEEN COMPOUNDED FOR HIGH TEMPERATURE CAPABILITY AT THE SACRIFICE OF FLUID RESISTANCE. USE IS RECOMMENDED ONLY IN THOSE AREAS WITH OPERATING TEMPERATURES FROM 275°F TO 500°F WHERE FLUID EXPOSURE IS MINIMAL. FOR APPLICATION BELOW 275°F THE USE OF CLAMPS WITH A HIGHER DEGREE OF FLUID RESISTANCE IS RECOMMENDED SUCH AS MIL-C-85052/1 OR /2 CLAMPS.

SYSTEMS:

ALL FLUID AND ELECTRICAL SYSTEM APPLICATIONS IN HIGH TEMPERATURE AREAS.

VIBRATION RATING:

DEPENDING ON MOUNTING METHODS. (SEE RECOMMENDED MOUNTING DATA)