

NOTICE

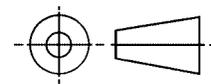
THIS DOCUMENT HAS BEEN TAKEN DIRECTLY FROM U.S. MILITARY SPECIFICATION MS9307B AND CONTAINS ONLY MINOR EDITORIAL AND FORMAT CHANGES REQUIRED TO BRING IT INTO CONFORMANCE WITH THE PUBLISHING REQUIREMENTS OF SAE TECHNICAL STANDARDS. THE INITIAL RELEASE OF THIS DOCUMENT IS INTENDED TO REPLACE MS9307B. ANY 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.

SAENORM.COM : Click to view the full PDF of as9307

THIRD ANGLE PROJECTION



ISSUED 1999-12 REAFFIRMED 2004-07

AS9307

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

PREPARED BY SAE COMMITTEE E-25

PROCUREMENT SPECIFICATION: AMS 7452-93



**AEROSPACE STANDARD**

STUD, SHOULDERED AND STEPPED,  
HEXAGON WRENCHING STEEL,  
.250-28 UNF-3A X .375-24 UNF-3A

**AS9307**  
SHEET 1 OF 4

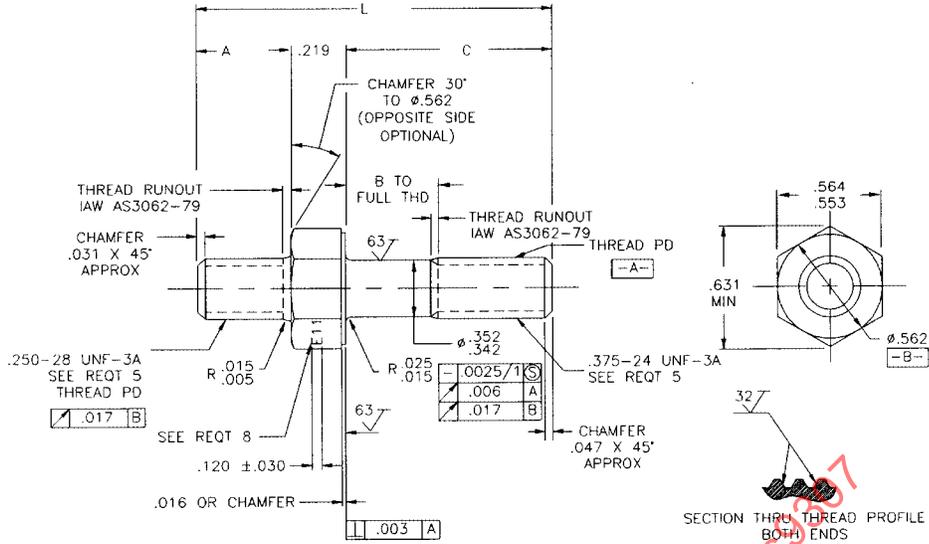


FIGURE 1.

TABLE I . DASH NUMBERS AND DIMENSIONS

| DASH NO. | A    | B<br>+.000<br>-.060 | C     | L<br>REF | APPROX<br>WEIGHT<br>LBS/100 | DASH NO. | A    | B<br>+.000<br>-.060 | C     | L<br>REF | APPROX<br>WEIGHT<br>LBS/100 |
|----------|------|---------------------|-------|----------|-----------------------------|----------|------|---------------------|-------|----------|-----------------------------|
| -001     | .438 | 1/                  | .750  | 1.406    | 4.16                        | -050     | .500 | 1/                  | .750  | 1.469    | 4.32                        |
| -002     | .438 | 1/                  | .812  | 1.469    | 4.32                        | -051     | .500 | 1/                  | .812  | 1.531    | 4.49                        |
| -003     | .438 | 1/                  | .875  | 1.531    | 4.49                        | -052     | .500 | 1/                  | .875  | 1.594    | 4.66                        |
| -004     | .438 | 1/                  | .938  | 1.594    | 4.66                        | -053     | .500 | 1/                  | .938  | 1.656    | 4.83                        |
| -005     | .438 | 1/                  | 1.000 | 1.656    | 4.83                        | -054     | .500 | 1/                  | 1.000 | 1.719    | 5.00                        |
| -006     | .438 | 1/                  | 1.062 | 1.719    | 5.00                        | -055     | .500 | 1/                  | 1.062 | 1.781    | 5.17                        |
| -007     | .438 | .125                | 1.125 | 1.781    | 5.17                        | -056     | .500 | .125                | 1.125 | 1.844    | 5.34                        |
| -008     | .438 | .188                | 1.188 | 1.844    | 5.34                        | -057     | .500 | .188                | 1.188 | 1.906    | 5.49                        |
| -009     | .438 | .250                | 1.250 | 1.906    | 5.49                        | -058     | .500 | .250                | 1.250 | 1.969    | 5.66                        |
| -010     | .438 | .312                | 1.312 | 1.969    | 5.66                        | -059     | .500 | .312                | 1.312 | 2.031    | 5.82                        |
| -011     | .438 | .375                | 1.375 | 2.031    | 5.82                        | -060     | .500 | .375                | 1.375 | 2.094    | 5.99                        |
| -012     | .438 | .438                | 1.438 | 2.094    | 5.99                        | -061     | .500 | .438                | 1.438 | 2.156    | 6.16                        |
| -013     | .438 | .500                | 1.500 | 2.156    | 6.16                        | -062     | .500 | .500                | 1.500 | 2.219    | 6.33                        |
| -014     | .438 | .562                | 1.562 | 2.219    | 6.33                        | -063     | .500 | .562                | 1.562 | 2.281    | 6.50                        |
| -015     | .438 | .625                | 1.625 | 2.281    | 6.50                        | -064     | .500 | .625                | 1.625 | 2.344    | 6.67                        |
| -016     | .438 | .688                | 1.688 | 2.344    | 6.67                        | -065     | .500 | .688                | 1.688 | 2.406    | 6.82                        |
| -017     | .438 | .750                | 1.750 | 2.406    | 6.82                        | -066     | .500 | .750                | 1.750 | 2.469    | 6.99                        |
| -018     | .438 | .812                | 1.812 | 2.469    | 6.99                        | -067     | .500 | .812                | 1.812 | 2.531    | 7.15                        |
| -019     | .438 | .875                | 1.875 | 2.531    | 7.15                        | -068     | .500 | .875                | 1.875 | 2.594    | 7.32                        |
| -020     | .438 | .938                | 1.938 | 2.594    | 7.32                        | -069     | .500 | .938                | 1.938 | 2.656    | 7.49                        |
| -021     | .438 | 1.000               | 2.000 | 2.656    | 7.49                        | -070     | .500 | 1.000               | 2.000 | 2.719    | 7.66                        |
| -022     | .438 | 1.062               | 2.062 | 2.719    | 7.66                        | -071     | .500 | 1.062               | 2.062 | 2.781    | 7.83                        |
| -023     | .438 | 1.125               | 2.125 | 2.781    | 7.83                        | -072     | .500 | 1.125               | 2.125 | 2.844    | 8.15                        |
| -024     | .438 | 1.250               | 2.250 | 2.906    | 8.15                        | -073     | .500 | 1.250               | 2.250 | 2.969    | 8.49                        |
| -025     | .438 | 1.375               | 2.375 | 3.031    | 8.49                        | -074     | .500 | 1.375               | 2.375 | 3.094    | 8.82                        |
| -026     | .438 | 1.500               | 2.500 | 3.156    | 8.82                        | -075     | .500 | 1.500               | 2.500 | 3.219    | 9.16                        |
| -027     | .438 | 1.625               | 2.625 | 3.281    | 9.16                        | -076     | .500 | 1.625               | 2.625 | 3.344    | 9.48                        |
| -028     | .438 | 1.750               | 2.750 | 3.406    | 9.48                        | -077     | .500 | 1.750               | 2.750 | 3.469    | 9.82                        |
| -029     | .438 | 1.875               | 2.875 | 3.531    | 9.82                        | -078     | .500 | 1.875               | 2.875 | 3.594    | 10.15                       |
| -030     | .438 | 2.000               | 3.000 | 3.656    | 10.15                       | -079     | .500 | 2.000               | 3.000 | 3.719    | 10.21                       |

TABLE I . DASH NUMBERS AND DIMENSIONS - CONTINUED

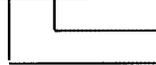
| DASH NO. | A    | B<br>+.000<br>-.060 | C     | L<br>REF | APPROX<br>WEIGHT<br>LBS/100 | DASH NO. | A    | B<br>+.000<br>-.060 | C     | L<br>REF | APPROX<br>WEIGHT<br>LBS/100 |
|----------|------|---------------------|-------|----------|-----------------------------|----------|------|---------------------|-------|----------|-----------------------------|
| -100     | .562 | 1/                  | .750  | 1.531    | 4.49                        | -150     | .625 | 1/                  | .750  | 1.594    | 4.66                        |
| -101     | .562 | 1/                  | .812  | 1.594    | 4.66                        | -151     | .625 | 1/                  | .812  | 1.656    | 4.83                        |
| -102     | .562 | 1/                  | .875  | 1.656    | 4.83                        | -152     | .625 | 1/                  | .875  | 1.719    | 5.00                        |
| -103     | .562 | 1/                  | .938  | 1.719    | 5.00                        | -153     | .625 | 1/                  | .938  | 1.781    | 5.17                        |
| -104     | .562 | 1/                  | 1.000 | 1.781    | 5.17                        | -154     | .625 | 1/                  | 1.000 | 1.844    | 5.34                        |
| -105     | .562 | 1/                  | 1.062 | 1.844    | 5.34                        | -155     | .625 | 1/                  | 1.062 | 1.906    | 5.49                        |
| -106     | .562 | .125                | 1.125 | 1.906    | 5.49                        | -156     | .625 | .125                | 1.125 | 1.969    | 5.66                        |
| -107     | .562 | .188                | 1.188 | 1.969    | 5.66                        | -157     | .625 | .188                | 1.188 | 2.031    | 5.82                        |
| -108     | .562 | .250                | 1.250 | 2.031    | 5.82                        | -158     | .625 | .250                | 1.250 | 2.094    | 5.99                        |
| -109     | .562 | .312                | 1.312 | 2.094    | 5.99                        | -159     | .625 | .312                | 1.312 | 2.156    | 6.16                        |
| -110     | .562 | .375                | 1.375 | 2.156    | 6.16                        | -160     | .625 | .375                | 1.375 | 2.219    | 6.33                        |
| -111     | .562 | .438                | 1.438 | 2.219    | 6.33                        | -161     | .625 | .438                | 1.438 | 2.281    | 6.50                        |
| -112     | .562 | .500                | 1.500 | 2.281    | 6.50                        | -162     | .625 | .500                | 1.500 | 2.344    | 6.67                        |
| -113     | .562 | .562                | 1.562 | 2.344    | 6.67                        | -163     | .625 | .562                | 1.562 | 2.406    | 6.82                        |
| -114     | .562 | .625                | 1.625 | 2.406    | 6.82                        | -164     | .625 | .625                | 1.625 | 2.469    | 6.99                        |
| -115     | .562 | .688                | 1.688 | 2.469    | 6.99                        | -165     | .625 | .688                | 1.688 | 2.531    | 7.15                        |
| -116     | .562 | .750                | 1.750 | 2.531    | 7.15                        | -166     | .625 | .750                | 1.750 | 2.594    | 7.32                        |
| -117     | .562 | .812                | 1.812 | 2.593    | 7.32                        | -167     | .625 | .812                | 1.812 | 2.656    | 7.49                        |
| -118     | .562 | .875                | 1.875 | 2.656    | 7.49                        | -168     | .625 | .875                | 1.875 | 2.719    | 7.66                        |
| -119     | .562 | .938                | 1.938 | 2.719    | 7.66                        | -169     | .625 | .938                | 1.938 | 2.781    | 7.83                        |
| -120     | .562 | 1.000               | 2.000 | 2.781    | 7.83                        | -170     | .625 | 1.000               | 2.000 | 2.844    | 8.15                        |
| -121     | .562 | 1.062               | 2.062 | 2.844    | 8.15                        | -171     | .625 | 1.062               | 2.062 | 2.906    | 8.49                        |
| -122     | .562 | 1.125               | 2.125 | 2.906    | 8.49                        | -172     | .625 | 1.125               | 2.125 | 2.969    | 8.82                        |
| -123     | .562 | 1.250               | 2.250 | 3.031    | 8.82                        | -173     | .625 | 1.250               | 2.250 | 3.094    | 9.16                        |
| -124     | .562 | 1.375               | 2.375 | 3.156    | 9.16                        | -174     | .625 | 1.375               | 2.375 | 3.219    | 9.48                        |
| -125     | .562 | 1.500               | 2.500 | 3.281    | 9.48                        | -175     | .625 | 1.500               | 2.500 | 3.344    | 9.82                        |
| -126     | .562 | 1.625               | 2.625 | 3.406    | 9.82                        | -176     | .625 | 1.625               | 2.625 | 3.469    | 10.15                       |
| -127     | .562 | 1.750               | 2.750 | 3.531    | 10.15                       | -177     | .625 | 1.750               | 2.750 | 3.594    | 10.21                       |
| -128     | .562 | 1.875               | 2.875 | 3.656    | 10.21                       | -178     | .625 | 1.875               | 2.875 | 3.719    | 10.27                       |
| -129     | .562 | 2.000               | 3.000 | 3.781    | 10.27                       | -179     | .625 | 2.000               | 3.000 | 3.844    | 10.35                       |

1/ THREAD TO HEAD. MAXIMUM TWO INCOMPLETE THREADS.

REQUIREMENTS:

- MATERIAL:** STEEL IN ACCORDANCE WITH AMS 6322-80.
- FINISH:** CADMIUM PLATE IN ACCORDANCE WITH AMS 2400-80.
- HARDNESS:** 26-32HRC.
- DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
- THREADS:** THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/2. ACCEPTABILITY OF SCREW THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 22.
- SURFACE TEXTURE:** SURFACE TEXTURE, SHALL BE IN ACCORDANCE WITH AS291-64.
- MAGNETIC PARTICLE INSPECTION:** MAGNETIC PARTICLE INSPECTION SHALL BE IN ACCORDANCE WITH AMS 2640-83.
- MARKING:** MATERIAL IDENTIFICATION AND MARKING IN ACCORDANCE WITH AMS 2800-76. DEPRESSED .010 MAX.
- TOLERANCE:** UNLESS OTHERWISE SPECIFIED, TOLERANCES SHALL BE LINEAR DIMENSIONS ±.010, ANGULAR DIMENSIONS ±5°.
- EDGES:** BREAK SHARP EDGES .003-.015, UNLESS OTHERWISE SPECIFIED.
- MANUFACTURING SPECIFICATION:** AMS 7452
- PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS9307-001



MS9307-001 INDICATES: STUD, SHOULDERED AND STEPPED, HEXAGON WRENCHING, STEEL, .250-28 UNF-3A X .375-24 UNF-3A; LENGTH 1.406.