

FED. SUPPLY CLASS

53GP

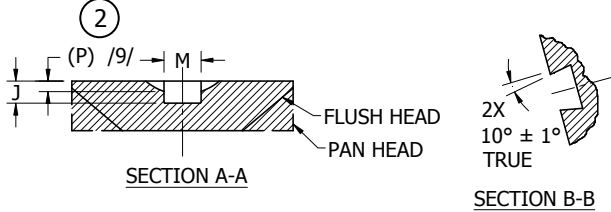
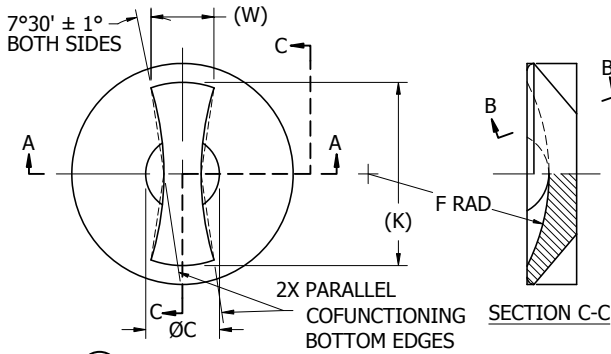


FIGURE 1 – STYLE I DOVETAIL SLOT

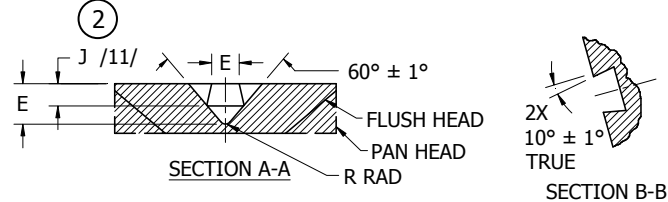
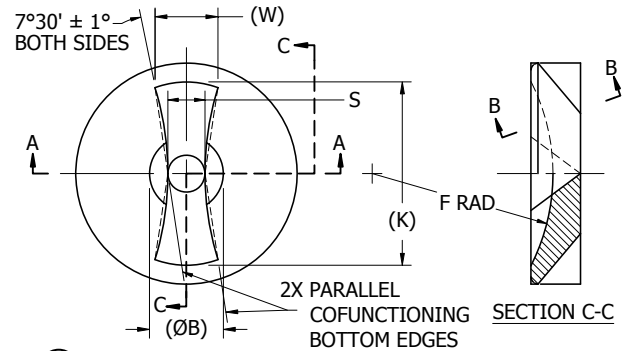


FIGURE 2 – STYLE II CONICAL DOVETAIL SLOT

TABLE I – DIMENSIONS

| RECESS DIMENSIONS |        |         |         |      |         |          |      |      |      | 100° FLUSH    |        |      |          |               |      |       |      |
|-------------------|--------|---------|---------|------|---------|----------|------|------|------|---------------|--------|------|----------|---------------|------|-------|------|
| STYLES I & II     |        | STYLE I |         |      |         | STYLE II |      |      |      | STYLE II ONLY |        |      |          | STYLES I & II |      |       |      |
| RECESS NO.        | F RAD  | ØC /10/ | M WIDTH |      | (P) /9/ | S /12/   | (ØB) |      | E    | R RAD         | J /10/ | /11/ | (K) /10/ | (W) /10/      |      |       |      |
|                   | ± .005 | MAX     | MIN     | MAX  | MIN     | MAX      | MIN  | MAX  | MIN  | MAX           | MIN    | MAX  | MIN      | MAX           | MIN  | MAX   | MIN  |
| 0                 | .115   | /a/     | /a/     | .034 | .030    | /8/      | –    | –    | –    | –             | –      | –    | –        | –             | –    | –     | –    |
| 1                 | .165   | .111    | .101    | .054 | .050    | .013     | –    | –    | –    | –             | –      | –    | –        | –             | –    | –     | –    |
| 2                 | .187   | .131    | .121    | .064 | .060    | .013     | .069 | .060 | .129 | .092          | .087   | .025 | .020     | .053          | .050 | .265  | .100 |
| 3                 | .281   | .156    | .146    | .064 | .060    | .014     | .070 | .060 | .127 | .090          | .085   | .025 | .020     | .045          | .042 | .305  | .110 |
| 4                 | .437   | .206    | .196    | .078 | .074    | .015     | .087 | .074 | .165 | .118          | .112   | .030 | .025     | .054          | .051 | .422  | .134 |
| 5                 | .500   | .256    | .246    | .084 | .080    | .020     | .093 | .080 | .170 | .122          | .114   | .033 | .025     | .064          | .061 | .490  | .160 |
| 6                 | .625   | .306    | .294    | .100 | .096    | .022     | .108 | .096 | .221 | .163          | .153   | .040 | .030     | .088          | .084 | .639  | .198 |
| 7                 | .687   | .356    | .344    | .118 | .113    | .027     | .127 | .113 | .252 | .183          | .173   | .045 | .035     | .100          | .096 | .715  | .224 |
| 8                 | .750   | .406    | .394    | .148 | .143    | .031     | .157 | .143 | .283 | .200          | .190   | .055 | .045     | .105          | .101 | .766  | .256 |
| 9                 | .875   | .456    | .444    | .168 | .163    | .033     | .179 | .163 | .324 | .231          | .221   | .060 | .050     | .118          | .114 | .877  | .300 |
| 10                | 1.000  | .511    | .499    | .188 | .183    | .036     | .199 | .183 | .356 | .252          | .242   | .065 | .055     | .141          | .137 | 1.020 | .344 |
| 12                | 1.200  | .613    | .597    | .223 | .218    | .043     | .234 | .218 | .394 | .280          | .270   | .070 | .060     | .162          | .158 | 1.200 | .400 |
| 14                | 1.400  | .718    | .702    | .253 | .248    | .050     | .264 | .248 | .462 | .335          | .320   | .078 | .065     | .192          | .188 | 1.400 | .454 |
| 16                | 1.600  | .818    | .802    | .283 | .278    | .056     | .294 | .278 | .500 | .370          | .355   | .078 | .065     | .217          | .213 | 1.600 | .520 |
| 18                | 1.800  | .903    | .887    | .320 | .314    | .060     | –    | –    | –    | –             | –      | –    | –        | .244          | .238 | 1.820 | .548 |
| 20                | 2.000  | 1.008   | .992    | .356 | .350    | .068     | .366 | .350 | .600 | .480          | .465   | .078 | .065     | .271          | .265 | 2.010 | .608 |

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS33750J.

|                                          |                                                                                                            |                                                     |
|------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| THIRD ANGLE PROJECTION                   | CUSTODIAN<br>NATIONAL AEROSPACE STANDARDS COMMITTEE                                                        | REVISION<br><b>2</b>                                |
| PROCUREMENT SPECIFICATION<br><b>NONE</b> | TITLE<br><b>RECESS, DOVETAIL SLOT AND CONICAL DOVETAIL SLOT, DIMENSIONS OF RECESS, GAGE AND DRIVER FOR</b> | CLASSIFICATION<br>DESIGN STANDARD<br><b>MS33750</b> |

② TABLE I – DIMENSIONS (CONT.)

| RECESS NO. | 100° REDUCED FLUSH HEAD |      |      |       |      |               |      |          |          |      | FLAT PAN HEAD |      |       |      |               |      |          |          |
|------------|-------------------------|------|------|-------|------|---------------|------|----------|----------|------|---------------|------|-------|------|---------------|------|----------|----------|
|            | STYLE II ONLY           |      |      |       |      | STYLES I & II |      |          |          |      | STYLE II ONLY |      |       |      | STYLES I & II |      |          |          |
|            | (ØB)                    | E    |      | R RAD |      | J /13/        |      | (K) /13/ | (W) /13/ | (ØB) | E             |      | R RAD |      | J /13/        |      | (K) /13/ | (W) /13/ |
|            |                         | MAX  | MIN  | MAX   | MIN  | MAX           | MIN  |          |          |      | MAX           | MIN  | MAX   | MIN  | MAX           | MIN  |          |          |
| 0          | —                       | —    | —    | —     | —    | —             | —    | —        | —        | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 1          | —                       | —    | —    | —     | —    | —             | —    | —        | —        | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 2          | .113                    | .078 | .075 | .025  | .020 | .039          | .036 | .224     | .100     | .129 | .092          | .087 | .025  | .020 | .053          | .050 | .258     | .098     |
| 3          | .127                    | .090 | .085 | .025  | .020 | .045          | .042 | .300     | .110     | .127 | .090          | .082 | .025  | .020 | .045          | .042 | .302     | .105     |
| 4          | .159                    | .113 | .107 | .030  | .025 | .049          | .046 | .394     | .134     | .165 | .118          | .112 | .030  | .025 | .054          | .051 | .414     | .135     |
| 5          | .170                    | .122 | .114 | .033  | .025 | .064          | .061 | .484     | .160     | .170 | .122          | .114 | .033  | .025 | .064          | .061 | .485     | .152     |
| 6          | .200                    | .145 | .135 | .040  | .030 | .070          | .066 | .571     | .198     | .221 | .163          | .153 | .040  | .030 | .088          | .084 | .635     | .190     |
| 7          | .236                    | .169 | .159 | .045  | .035 | .086          | .082 | .660     | .224     | .252 | .183          | .173 | .045  | .035 | .095          | .091 | .692     | .216     |
| 8          | .275                    | .193 | .183 | .055  | .045 | .098          | .094 | .731     | .256     | .283 | .200          | .190 | .055  | .045 | .105          | .101 | .772     | .254     |
| 9          | .308                    | .217 | .207 | .060  | .050 | .104          | .100 | .819     | .300     | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 10         | .343                    | .241 | .231 | .065  | .055 | .130          | .126 | .978     | .344     | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 12         | .394                    | .280 | .270 | .070  | .060 | .162          | .158 | 1.200    | .400     | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 14         | .450                    | .325 | .310 | .078  | .065 | .182          | .178 | 1.330    | .454     | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 16         | —                       | —    | —    | —     | —    | —             | —    | —        | —        | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 18         | —                       | —    | —    | —     | —    | —             | —    | —        | —        | —    | —             | —    | —     | —    | —             | —    | —        | —        |
| 20         | —                       | —    | —    | —     | —    | —             | —    | —        | —        | .600 | .480          | .465 | .078  | .065 | .271          | .265 | 2.010    | .608     |

## NOTES:

- (1) Dimensions in inches.
- (2) Style I or II shall be specified on the purchase order.
- (3) This is a design standard not to be used as a part number.
- (4) Style I Recess is inactive for new design after 1 January 1988 and fastener procurement after 1 July 1988.
- (5) Style I Drivers (Sheet 4) are still available for procurement and may be used for installing conical high torque fasteners.
- ② (6) ® The government has been given permission to use these registered trademarks.
- (7) Patent Notice: The government does not have a royalty free license under proprietary rights to portions of the information contained herein. Portions of the information contained herein are patented under the following U.S. patents: No. 3540362 (expires 17 November 1987). No. 4033003 (expires 3 June 1993). No. 4160300 (expires 15 September 1994). No. 449722 (expires 1 February 2002). No. 439134 (expires 20 May 2003). And no. 4590825 (expires 27 May 2003). Other patents pending.
- /8/ Recess No. 0 has no dimple.
- /9/ Dimension "(P)" is the theoretical intersection of the dimple apex and the fastener centerline.
- /10/ Consult specification sheet or product standard for values "J", "(K)" and "(W)" not listed.
- ② /11/ Dimension "J" is within the "cone" of the Style II recess, therefore it is theoretical. Inspect "J" depth with a dial indicating depth gage equipped with a blade type styles incorporating "F RAD" for "(K)" width.

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SHEET 2



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- /12/ Dimension "S" is measured at the intersection of "(ØB)" and the top edge of the recess.
  - /13/ Consult specification sheet or product standard for values of "J", "(K)", and "(W)" not listed.
  - /14/ AGDS is American Gage Design Standard.
  - /15/ Style I driver may be used with Style II recess.
  - /16/ Style II driver may not be used with Style I recess.
  - ~~/17/ Procurement specification for driver is MIL-B-9946.~~
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  - /18/ Wheel can be positioned for Style I or Style II applications.

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SHEET 3