SAE Aerospace
An SAE International Group

# AEROSPACE STANDARD

SAE AS1159

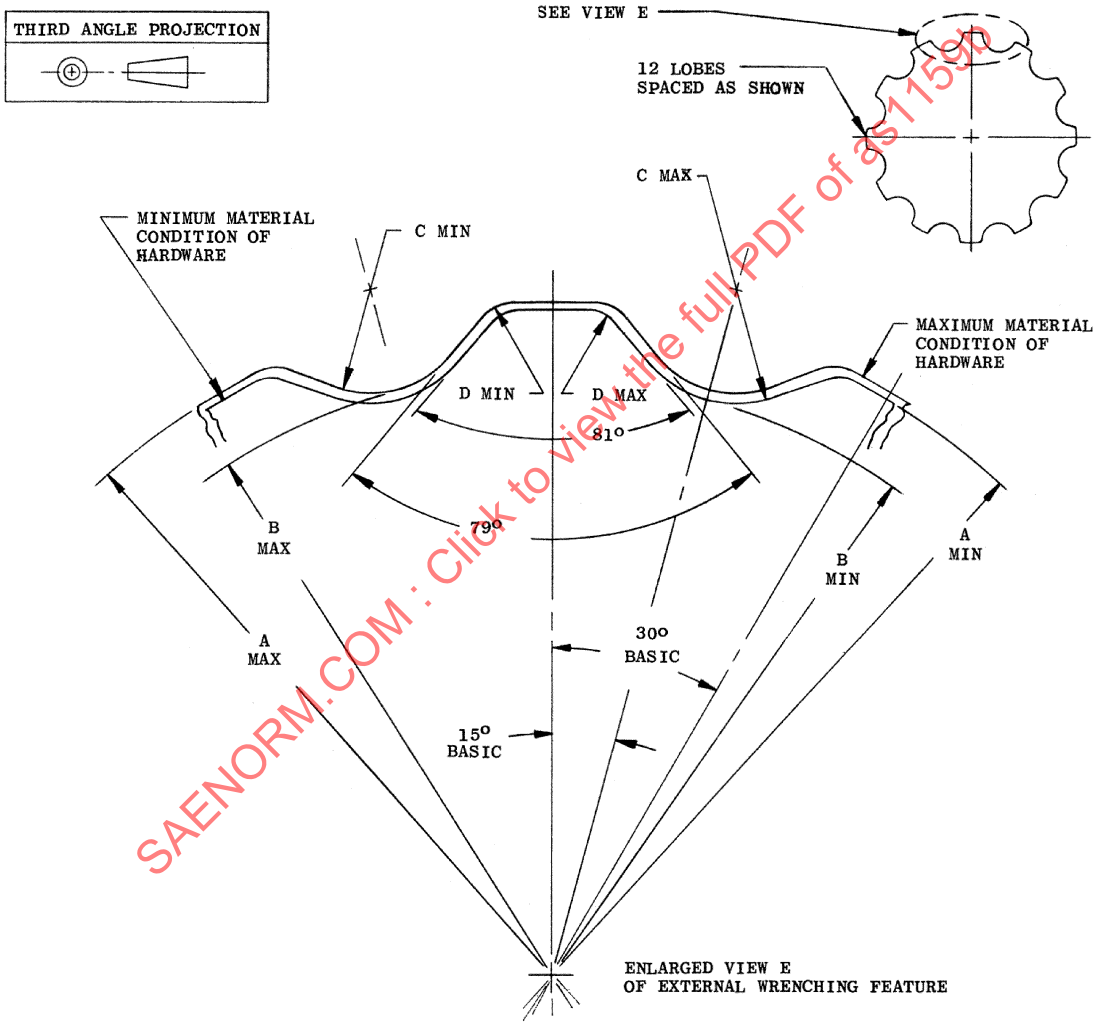
REV. B

| | |
|---|---|
| Issued | 1970-01 |
| Revised | 1973-09 |
| Noncurrent | 1979-10 |
| Reaf. Noncur. | 2006-10 |

## Wrenching Configuration, 12 Lobed, For Threaded Fasteners

### RATIONALE

This document has been reaffirmed to comply with the SAE 5-year Review policy.




VARIATIONS IN SIZE, FORM, AND POSITION OF THE 12 LOBES ARE PERMITTED WITHIN THE WRENCHING LENGTH, PROVIDING THE ACTUAL PROFILE FALLS WITHIN THE MAXIMUM AND MINIMUM MATERIAL CONDITIONS SHOWN.

DIMENSIONS ARE PRIOR TO DEFORMATION OF THE LOCKING ELEMENT ON SELF LOCKING NUTS, DEFORMATION SHALL NOT PREVENT THE ASSEMBLY OF THE WRENCH ON THE PRODUCT.

APPLICABLE WRENCHING TOOL SHALL HAVE AN INTERNAL WRENCHING CONFIGURATION PER AS 1325.





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TABLE I
(U.S. CUSTOMARY UNITS)

| DASH NO. | NOMINAL WRENCHING SIZE SEE NOTE | MAXIMUM MATERIAL CONDITION | | | | MINIMUM MATERIAL CONDITION | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A DIA. MAX. | B DIA. MAX. | C RAD. MIN. | D RAD MIN | A DIA. MIN. | B DIA. MIN. | C RAD MAX. | D RAD MAX. |
| 06 | .1875 | .223 | .197 | .020 | .005 | .219 | .193 | .025 | .010 |
| 07 | .2188 | .259 | .229 | .023 | .005 | .255 | .225 | .028 | .010 |
| 08 | .2500 | .295 | .261 | .025 | .005 | .291 | .257 | .030 | .010 |
| 10 | .3125 | .368 | .327 | .030 | .009 | .363 | .322 | .035 | .015 |
| 12 | .3750 | .439 | .391 | .035 | .009 | .434 | .386 | .040 | .015 |
| 14 | .4375 | .512 | .456 | .040 | .014 | .507 | .451 | .045 | .020 |
| 16 | .5000 | .585 | .522 | .045 | .014 | .580 | .517 | .050 | .020 |
| 18 | .5625 | .656 | .586 | .050 | .019 | .650 | .580 | .055 | .025 |
| 20 | .6250 | .733 | .652 | .055 | .019 | .727 | .646 | .060 | .025 |
| 22 | .6875 | .806 | .717 | .060 | .024 | .800 | .711 | .065 | .030 |
| 24 | .7500 | .879 | .783 | .065 | .024 | .873 | .777 | .070 | .030 |
| 26 | .8125 | .951 | .849 | .070 | .029 | .944 | .842 | .075 | .035 |
| 28 | .8750 | 1.023 | .913 | .075 | .029 | 1.016 | .906 | .080 | .035 |
| 30 | .9375 | 1.097 | .979 | .080 | .034 | 1.090 | .972 | .085 | .040 |
| 32 | 1.0000 | 1.168 | 1.044 | .085 | .034 | 1.161 | 1.037 | .090 | .040 |
| 34 | 1.0625 | 1.239 | 1.108 | .090 | .039 | 1.232 | 1.101 | .095 | .045 |
| 36 | 1.1250 | 1.319 | 1.175 | .095 | .039 | 1.311 | 1.167 | .100 | .045 |
| 38 | 1.1875 | 1.391 | 1.240 | .100 | .044 | 1.383 | 1.232 | .105 | .050 |
| 40 | 1.2500 | 1.463 | 1.305 | .105 | .044 | 1.455 | 1.297 | .110 | .050 |
| 42 | 1.3125 | 1.536 | 1.370 | .110 | .049 | 1.528 | 1.362 | .115 | .055 |
| 44 | 1.3750 | 1.609 | 1.437 | .115 | .049 | 1.601 | 1.429 | .120 | .055 |
| 46 | 1.4375 | 1.681 | 1.502 | .120 | .054 | 1.672 | 1.493 | .125 | .060 |
| 48 | 1.5000 | 1.753 | 1.566 | .125 | .054 | 1.744 | 1.557 | .130 | .060 |
| 50 | 1.5625 | 1.825 | 1.631 | .130 | .059 | 1.816 | 1.622 | .135 | .065 |
| 52 | 1.6250 | 1.899 | 1.698 | .135 | .059 | 1.890 | 1.689 | .140 | .065 |
| 54 | 1.6875 | 1.970 | 1.762 | .140 | .064 | 1.961 | 1.753 | .145 | .070 |
| 56 | 1.7500 | 2.044 | 1.828 | .145 | .064 | 2.035 | 1.819 | .150 | .070 |

NOMINAL WRENCHING SIZE VALUES INDICATE NOMINAL WIDTH ACROSS FLATS OF CORRESPONDING HEXAGON OR DOUBLE HEXAGON (12 POINT) WRENCHING CONFIGURATIONS.