

**MS9678 (ASG)**

6 SCALLOPS EQUALLY SPACED AND LOCATED WITHIN .010 EITHER SIDE OF TRUE POSITION

MARK PART NUMBER AND MANUFACTURERS IDENT PER AS 478 CLASS A

CHAMFER 28°-32° TO .375 DIA

5° MAX

15° BASIC POSITION OF SCALLOPS RELATIVE TO DOUBLE HEXAGON

THIS SURFACE MUST BE SQUARE WITH SHANK WITHIN .003 FIR.

SECTION THRU THREAD PROFILE

FED. SUP CLASS 5306

MAX 2 INCOMPLETE THREADS (SEE NOTE 4)

CHAMFER .047 x 45° APPROX

.3125-24 UNJP-3A SPEC MIL-8-8879

SECTION B-B

| PART NUMBER | L     | K         | APPROX WEIGHT LB/100 | PART NUMBER | L     | K           | APPROX WEIGHT LB/100 | PART NUMBER | L     | K           | APPROX WEIGHT LB/100 |
|-------------|-------|-----------|----------------------|-------------|-------|-------------|----------------------|-------------|-------|-------------|----------------------|
| MS9678-03   | .438  | .088-.108 | 1.94                 | MS9678-20   | 1.500 | .565-.625   | 3.88                 | MS9678-41   | 3.875 | 2.940-3.000 | 8.22                 |
| MS9678-04   | .500  | .088-.108 | 2.05                 | MS9678-21   | 1.562 | .628-.688   | 3.99                 | MS9678-42   | 4.000 | 3.065-3.125 | 8.45                 |
| MS9678-05   | .562  | .088-.108 | 2.16                 | MS9678-22   | 1.625 | .693-.750   | 4.11                 | MS9678-43   | 4.125 | 3.190-3.250 | 8.68                 |
| MS9678-06   | .625  | .088-.108 | 2.27                 | MS9678-23   | 1.688 | .752-.812   | 4.23                 | MS9678-44   | 4.250 | 3.315-3.375 | 8.91                 |
| MS9678-07   | .688  | .088-.108 | 2.39                 | MS9678-24   | 1.750 | .815-.875   | 4.35                 | MS9678-45   | 4.375 | 3.440-3.500 | 9.13                 |
| MS9678-08   | .750  | .088-.108 | 2.51                 | MS9678-25   | 1.875 | .940-1.000  | 4.57                 | MS9678-46   | 4.500 | 3.565-3.625 | 9.35                 |
| MS9678-09   | .812  | .088-.108 | 2.62                 | MS9678-26   | 2.000 | 1.065-1.125 | 4.79                 | MS9678-47   | 4.625 | 3.690-3.750 | 9.57                 |
| MS9678-10   | .875  | .088-.108 | 2.73                 | MS9678-27   | 2.125 | 1.190-1.250 | 5.02                 | MS9678-48   | 4.750 | 3.815-3.875 | 9.79                 |
| MS9678-11   | .938  | .088-.108 | 2.85                 | MS9678-28   | 2.250 | 1.315-1.375 | 5.26                 | MS9678-49   | 4.875 | 3.940-4.000 | 10.00                |
| MS9678-12   | 1.000 | .088-.125 | 2.96                 | MS9678-29   | 2.375 | 1.440-1.500 | 5.48                 | MS9678-50   | 5.000 | 4.065-4.125 | 10.22                |
| MS9678-13   | 1.062 | .128-.168 | 3.07                 | MS9678-30   | 2.500 | 1.565-1.625 | 5.70                 | MS9678-51   | 5.125 | 4.190-4.250 | 10.45                |
| MS9678-14   | 1.125 | .190-.250 | 3.19                 | MS9678-31   | 2.625 | 1.690-1.750 | 5.93                 | MS9678-52   | 5.250 | 4.315-4.375 | 10.68                |
| MS9678-15   | 1.188 | .252-.312 | 3.30                 | MS9678-32   | 2.750 | 1.815-1.875 | 6.16                 | MS9678-53   | 5.375 | 4.440-4.500 | 10.91                |
| MS9678-16   | 1.250 | .315-.375 | 3.42                 | MS9678-33   | 2.875 | 1.940-2.000 | 6.40                 | MS9678-54   | 5.500 | 4.565-4.625 | 11.15                |
| MS9678-17   | 1.312 | .378-.438 | 3.53                 | MS9678-34   | 3.000 | 2.065-2.125 | 6.62                 | MS9678-55   | 5.625 | 4.690-4.750 | 11.38                |
| MS9678-18   | 1.375 | .440-.500 | 3.65                 | MS9678-35   | 3.125 | 2.190-2.250 | 6.84                 | MS9678-56   | 5.750 | 4.815-4.875 | 11.61                |
| MS9678-19   | 1.438 | .502-.562 | 3.76                 | MS9678-36   | 3.250 | 2.315-2.375 | 7.07                 | MS9678-57   | 5.875 | 4.940-5.000 | 11.83                |
|             |       |           |                      | MS9678-37   | 3.375 | 2.440-2.500 | 7.32                 | MS9678-58   | 6.000 | 5.065-5.125 | 12.05                |
|             |       |           |                      | MS9678-38   | 3.500 | 2.565-2.625 | 7.55                 |             |       |             |                      |
|             |       |           |                      | MS9678-39   | 3.625 | 2.690-2.750 | 7.78                 |             |       |             |                      |
|             |       |           |                      | MS9678-40   | 3.750 | 2.815-2.875 | 8.00                 |             |       |             |                      |

- SHANK SHALL BE STRAIGHT WITHIN .003 FIR PER INCH OF BOLT LENGTH.
- THE CONCENTRICITY OF THREAD PD IN RELATION TO THE SHANK SHALL BE WITHIN .006 FIR.
- THE CONCENTRICITY OF THE SHANK IN RELATION TO THE WASHER FACE DIAMETER AND DOUBLE HEXAGON OD SHALL BE WITH .008 FIR.
- INCOMPLETE THREADS NOT TO ENTER FILLET.
- MATERIAL: CORROSION AND HEAT RESISTANT STEEL AMS 5731.
- FLUORESCENT PENETRANT INSPECTION PER AMS 2645.
- MANUFACTURING SPECIFICATION: AMS 7477.
- SURFACE ROUGHNESS: AS 291, UNLESS OTHERWISE SPECIFIED, SURFACES TO BE 125 MICROINCHES EXCEPT UPSET HEAD.
- BREAK SHARP EDGES .003 TO .015 UNLESS OTHERWISE SPECIFIED.
- DIMENSIONS IN INCHES, UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS  $\pm .010$ , ANGULAR DIMENSIONS  $\pm 5^\circ$ .
- DO NOT USE UNASSIGNED PART NUMBERS.

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THIS STANDARD WAS DEVELOPED COOPERATIVELY WITH THE ENGINE AND PROPELLER UTILITY PARTS COMMITTEE OF THE SAE.

REINSTATED AFTER 27 JUN 84

|                           |             |   |                   |
|---------------------------|-------------|---|-------------------|
| P.A.                      | AS          | TITLE   | MILITARY STANDARD |
| Other Cust                | (B)         | BOLT, MACHINE-CRES AMS 5731, DOUBLE HEXAGON EXTENDED WASHER HEAD, CUP WASHER LOCKED, .3125-24 UNJP-3A | MS9678 (ASG)      |
| 99                        |             |   |                   |
| PROCUREMENT SPECIFICATION | SUPERSEDES: |   | PAGE 1 OF 1       |

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REVISED  
(A) 21 DEC 83 (B) 27 JUN 84