

FED SUPPLY CLASS

5320

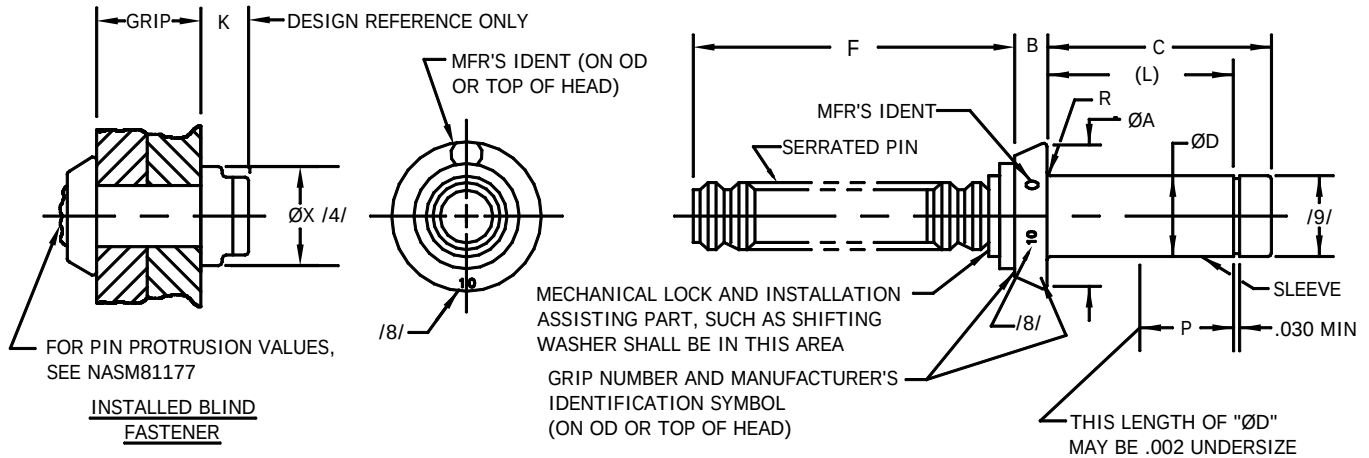


TABLE I – FASTENER DIMENSIONS AND STRENGTHS

| SIZE DASH NUMBER/5/     |                  |     | NOM<br>SIZE | ØA           | B            | ØD           | F<br>MIN | K<br>MAX | P    | R<br>RAD<br>MAX | ØX<br>MIN<br>/4/ | INSTALLED FASTENER             |                           | HOLE<br>LIMITS |
|-------------------------|------------------|-----|-------------|--------------|--------------|--------------|----------|----------|------|-----------------|------------------|--------------------------------|---------------------------|----------------|
| DOUBLE<br>ACTION<br>/6/ | SINGLE<br>ACTION |     |             |              |              |              |          |          |      |                 |                  | MINIMUM<br>SINGLE<br>SHEAR LBF | MINIMUM<br>TENSILE<br>LBF |                |
|                         | /7/              | /7/ |             |              |              |              |          |          |      |                 |                  |                                |                           |                |
| 05                      | S05              | U05 | .1563       | .272<br>.250 | .070<br>.062 | .164<br>.162 | .844     | .202     | .215 | .010            | .195             | 2340                           | 1350                      | .167<br>.164   |
| 06                      | S06              | U06 | .1875       | .332<br>.305 | .135<br>.125 | .199<br>.197 | .875     | .231     | .250 | .015            | .238             | 3450                           | 2100                      | .202<br>.199   |
| -                       | -08              | U08 | .2500       | .432<br>.400 | .140<br>.130 | .260<br>.258 | 1.000    | .279     | .305 | .018            | .315             | 5900                           | 3650                      | .263<br>.260   |
| -                       | -10              | U10 | .3125       | .522<br>.480 | .141<br>.131 | .312<br>.310 | 1.218    | .319     | .350 | .021            | .373             | 8500                           | 5200                      | .315<br>.312   |
| -                       | -12              | U12 | .3750       | .627<br>.580 | .205<br>.195 | .374<br>.372 | 1.562    | .364     | .405 | .025            | .448             | 12200                          | 7500                      | .377<br>.374   |
| -                       | -14              | U14 | .4375       | .727<br>.675 | .207<br>.197 | .437<br>.435 | 1.562    | .419     | .460 | .030            | .522             | 16700                          | 10150                     | .441<br>.437   |
| -                       | -16              | U16 | .5000       | .832<br>.770 | .270<br>.260 | .499<br>.496 | 1.562    | .540     | .598 | .035            | .598             | 21800                          | 13500                     | .504<br>.500   |

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS90354, REVISION T, AMENDMENT 1. PART NUMBERS REMAIN MS90354.

|                                        |                                                                                                                                |                                                     |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| THIRD ANGLE PROJECTION                 | CUSTODIAN<br>NATIONAL AEROSPACE STANDARDS COMMITTEE                                                                            | REVISION<br><b>3</b>                                |
| PROCUREMENT SPECIFICATION<br>NASM81177 | TITLE<br><b>FASTENER, BLIND, HIGH STRENGTH, PULL TYPE, POSITIVE MECHANICAL LOCK, PROTRUDING HEAD, ALLOY STEEL, 112 KSI Fsu</b> | CLASSIFICATION<br>PART STANDARD<br><b>NASM90354</b> |

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MATERIAL:

SLEEVE AND SERRATED PIN: ALLOY STEEL PER ASTM A108 ~~ASTM A 321~~.

MECHANICAL LOCK: CARBON STEEL OR ALLOY STEEL CONFORMING TO THE CHEMICAL COMPOSITION OF 1010 (UNS G10100), 1020 (UNS G10200), 1144 (UNS G11440), 4037 (UNS G40370), OR 4130 (UNS G41300) OF AIR4127 ~~FEDERAL STANDARD 66~~ OR A286 CRES CONFORMING TO THE CHEMICAL LIMITS OF AMS5737, OR TYPE 316 CRES CONFORMING TO THE CHEMICAL REQUIREMENTS OF AMS5690.

HARDNESS:

SLEEVE: KNOOP (1000 GRAM LOAD) 326-466

SERRATED PIN: HRC 48 TO 53

MECHANICAL LOCK: NOT APPLICABLE

FINISH:

SLEEVE: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2 OR ALUMINUM COATING PER MIL-DTL-83488.

SERRATED PIN: CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3 WITH HYDROGEN EMBRITTLEMENT RELIEF PER NASM81177 OR ALUMINUM COATING PER MIL-DTL-83488.

MECHANICAL LOCK: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2 (CARBON AND ALLOY STEEL). PASSIVATE PER AMS2700, METHOD 1, CLASS 4 (A286 AND TYPE 316 CRES) OR ALUMINUM COATING PER MIL-DTL-83488, AT MANUFACTURER'S OPTION.

LUBRICATION:

NONE, EXCEPT MANUFACTURER'S OPTION TO LUBRICATE LOCK MECHANISM WITH LOX COMPATIBLE DRY FILM LUBRICATION.

CODE:

3

MS90354 - 08 06 D L W

BASIC MS NUMBER: \_\_\_\_\_

INSTALLATION METHOD: \_\_\_\_\_

"-" = FASTENERS INSTALLED WITH A DOUBLE ACTION TOOL FOR SIZES 05 AND 06, OR WITH A SINGLE ACTION TOOL FOR SIZES 08, 10, 12, 14 AND 16  
"S" = FASTENERS INSTALLED WITH A SINGLE ACTION TOOL, FOR SIZES 05 AND 06 /7/  
"U" = SINGLE ACTION FASTENERS INSTALLED WITH A SINGLE ACTION TOOL, FOR ALL SIZES /7/

SIZE DASH NUMBER: \_\_\_\_\_  
(SEE TABLE I)

INSTALLATION TYPE:

NO CODE = WITHOUT DRIVE WASHER FOR BLUNT NOSED TOOL INSTALLATION  
"W" = WITH DRIVE WASHER FOR BLUNT NOSED TOOL INSTALLATION

PINTAIL LENGTH:

NO CODE = STANDARD PINTAIL  
"L" = LONGER PINTAIL

FINISH:

NO CODE = CADMIUM PLATING  
"D" = ALUMINUM COATING

GRIP DASH NUMBER: \_\_\_\_\_  
(SEE TABLE II)

REVISION

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NASM90354

SHEET 2



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EXAMPLE OF PART NUMBER:

- MS90354-0806D = FASTENER, BLIND, HIGH STRENGTH, PULL TYPE, POSITIVE MECHANICAL LOCK, PROTRUDING HEAD, ALLOY STEEL, 112 KSI Fsu, Ø.2500, .344 MIN GRIP, INSTALLED WITH A SINGLE ACTION TOOL, ALUMINUM COATED.
- MS90354U0806DLW = SINGLE ACTION FASTENER, BLIND, HIGH STRENGTH, PULL TYPE, POSITIVE MECHANICAL LOCK, PROTRUDING HEAD, ALLOY STEEL, 112 KSI Fsu, Ø.2500, .344 MIN GRIP, INSTALLED WITH A SINGLE ACTION TOOL, ALUMINUM COATED, LONGER TAIL, WITH DRIVE WASHER FOR BLUNT NOSED TOOL INSTALLATION.

NOTES:

- (1) DIMENSIONS IN INCHES AND APPLY AFTER FINISH AND PRIOR TO THE APPLICATION OF LUBRICATION UNLESS OTHERWISE SPECIFIED.
- (2) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (3) UNLESS OTHERWISE SPECIFIED HEREIN, REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF MANUFACTURE. HOWEVER, EXISTING MATERIAL INVENTORY CERTIFIED TO A PREVIOUS REVISION OF THE APPLICABLE MATERIAL SPECIFICATION(S) IS ACCEPTABLE FOR USE UNTIL DEPLETION.
- /4/ MAXIMUM DIAMETER OF BLIND HEAD (ØX) SHALL NOT EXCEED MAXIMUM DIAMETER OF MANUFACTURED HEAD (ØA).
- /5/ SIZES "05" AND "06" WITH "-" ARE INSTALLED WITH A DOUBLE ACTION TOOL. ALL OTHER SIZES ARE INSTALLED WITH A SINGLE ACTION TOOL. SIZES "U05" AND "U06" MAY BE INSTALLED WITH A DOUBLE OR SINGLE ACTION TOOL. SEE NASM81177, APPENDIX A FOR TOOL SELECTION CHART.
- /6/ 05, 06, S05, S06, 08, 10, 12, 14 AND 16 ARE INACTIVE FOR NEW DESIGN AFTER 1 JAN 91. USE U05, U06, S05 AND S06.
- /7/ LETTER "U" SIGNIFIES SINGLE ACTION FASTENER WITHOUT FRANGIBLE TYPE OF LOCKING COLLAR OR LOCKING COLLAR CAP. "U" AND "S" CODE FASTENERS IN SIZES "05" AND "06" ARE COLOR IDENTIFIED GREEN ON LOCKING COLLAR, SHIFTING WASHER, OR SERRATED PIN. "S" CODE FASTENERS MAY BE SUPPLIED WITH A LOCKING COLLAR CAP.
- /8/ SINGLE DIGIT MARKING IS PERMISSIBLE FOR GRIP DASH NUMBERS LESS THAN 10.
- /9/ DIAMETER OF SERRATED PIN HEAD SHALL NOT EXCEED "ØD" MAX. "ØD" MAY BE .002 BELOW "ØD" MIN. IN AREA "P" ONLY.
- (10) TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS ±.010
- (11) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.
- (12) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- (13) DUE TO INSTALLATION LOADS BEING HIGHER THAN PERFORMANCE LOAD REQUIREMENTS, MAGNETIC PARTICLE INSPECTION IS NOT REQUIRED.
- (3) (14) FOR DESCRIPTION OF STATUS NOTES SEE NAS380.

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NASM90354

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