

REV.
B

AS33671

FEDERAL SUPPLY CLASS
5975

FIGURE "A"

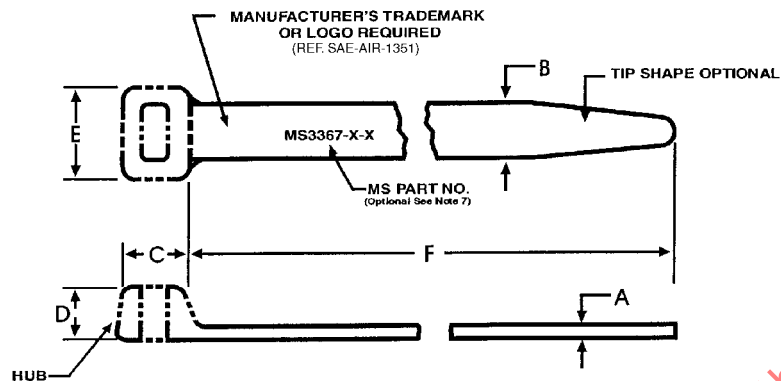


FIGURE "A"
ALTERNATE HEAD DESIGN 1

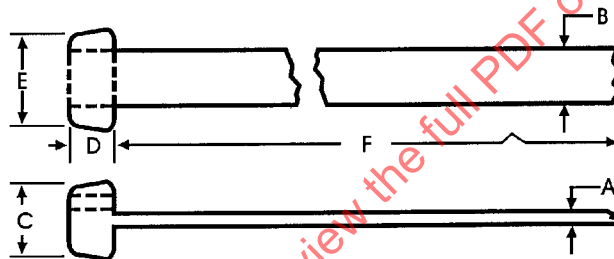


FIGURE "B"
ALTERNATE HEAD DESIGN 2
(In Line Low Profile Parallel Entry)

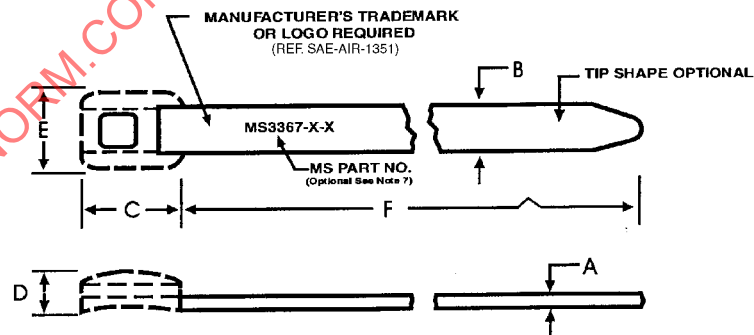
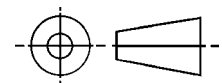


FIGURE 1

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AE-8/AE-8C2

PROCUREMENT SPECIFICATION: AS23190

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

STRAP, TIEDOWN, ELECTRICAL
COMPONENTS, ADJUSTABLE, SELF-
CLINCHING, PLASTIC, TYPE I, CLASS 1

AS33671
SHEET 1 OF 5

**REV.
B**

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TABLE 1

| Dash Number | Figure Ref. | Bundle Dia. Inch | | A | | B | | C | | D | | E | | F | | Min. Tensile Strength LB. | Strap Identification code (see note 8) | MS Installation Tool | Tool Tension Setting Range (See notes 5 & 9) |
|-------------|-------------|------------------|--------|------|------|------|------|------|-----|-----|-----|-----|--|-------|-----|---------------------------|--|----------------------|--|
| | | MIN | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MIN | | | | | | | |
| -1 | A | 1/16 | 1-3/4 | .055 | .190 | .275 | .240 | .320 | | | | | | 6.30 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |
| -2 | A | 1/16 | 4 | .055 | .192 | .275 | .240 | .365 | | | | | | 13.35 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |
| -3 | A | 3/16 | 3-1/2 | .083 | .310 | .375 | .330 | .535 | | | | | | 12.00 | 120 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -4 | A | 1/16 | 5/8 | .046 | .100 | .175 | .170 | .195 | | | | | | 2.72 | 18 | MIN (Miniature) | MS90387-1 | 1 to 3 | |
| -5 | A | 1/16 | 1-1/4 | .055 | .146 | .220 | .200 | .260 | | | | | | 4.68 | 30 | INT (Inter-mediate) | MS90387-1 | 3 to 5 | |
| -6 | A | 3/16 | 8 | .083 | .310 | .375 | .330 | .550 | | | | | | 26.25 | 120 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -7 | A | 1/16 | 3 | .055 | .192 | .275 | .240 | .365 | | | | | | 10.20 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |
| -8 | A | See Note #3 | 5 | .095 | .360 | .435 | .360 | .590 | | | | | | 17.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -9 | A | See Note #3 | 6 | .095 | .360 | .435 | .360 | .590 | | | | | | 21.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -10 | A | See Note #3 | 7-3/16 | .095 | .360 | .435 | .360 | .590 | | | | | | 24.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -11 | A | See Note #3 | 8 | .095 | .360 | .435 | .360 | .590 | | | | | | 28.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -12 | A | See Note #3 | 9-3/4 | .095 | .360 | .435 | .360 | .590 | | | | | | 32.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -13 | A | See Note #3 | 11 | .095 | .360 | .435 | .360 | .590 | | | | | | 36.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -14 | A | See Note #3 | 12 1/4 | .095 | .360 | .435 | .360 | .590 | | | | | | 39.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -15 | A | See Note #3 | 13 | .095 | .360 | .435 | .360 | .590 | | | | | | 44.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -16 | A | See Note #3 | 14-1/2 | .095 | .360 | .435 | .360 | .590 | | | | | | 48.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |

TABLE 1 (CONTINUED)

| Dash Number | Figure Ref. | Bundle Dia. Inch | | A | | B | | C | | D | | E | | F | | Min. Tensile Strength LB. | Strap Identification code (see note 8) | MS Installation Tool | Tool Tension Setting Range (See notes 5 & 9) |
|-------------|-------------|------------------|--------|------|------|------|------|------|------|------|------|------|------|-------|-----|---------------------------|--|----------------------|--|
| | | MIN | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MIN | | | | | | |
| -17 | A | See Note #3 | 16 1/4 | .095 | .360 | .435 | .360 | .360 | .360 | .360 | .360 | .590 | .590 | 51.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -18 | A | See Note #3 | 18 1/4 | .095 | .360 | .435 | .360 | .360 | .360 | .360 | .360 | .590 | .590 | 57.00 | 175 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -19 | A | See Note #3 | 4.00 | .095 | .510 | .550 | .510 | .550 | .420 | .420 | .420 | .860 | .860 | 14.00 | 250 | Extra HVY (E Heavy) | See note 13 | See note 13 | |
| -20 | A | See Note #3 | 5.00 | .095 | .510 | .550 | .510 | .550 | .420 | .420 | .420 | .860 | .860 | 19.00 | 250 | Extra HVY (E Heavy) | See note 13 | See note 13 | |
| -21 | A | See Note #3 | 6.00 | .095 | .510 | .550 | .510 | .550 | .420 | .420 | .420 | .860 | .860 | 21.00 | 250 | Extra HVY (E Heavy) | See note 13 | See note 13 | |
| -22 | A | See Note #3 | 8.00 | .095 | .510 | .550 | .510 | .550 | .420 | .420 | .420 | .860 | .860 | 27.00 | 250 | Extra HVY (E Heavy) | See note 13 | See note 13 | |
| -23 | B | 3/8 | 1-3/4 | .055 | .200 | .625 | .200 | .625 | .250 | .250 | .250 | .370 | .370 | 6.30 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |
| -24 | B | 3/8 | 4 | .055 | .200 | .625 | .200 | .625 | .250 | .250 | .250 | .370 | .370 | 13.35 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |
| -25 | B | 9/16 | 3-1/2 | .083 | .350 | .890 | .350 | .890 | .330 | .330 | .330 | .535 | .535 | 12.00 | 120 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -26 | B | 3/16 | 5/8 | .046 | .100 | .470 | .100 | .470 | .180 | .180 | .180 | .260 | .260 | 2.72 | 18 | MIN (Miniature) | MS90387-1 | 1 to 3 | |
| -27 | B | 3/16 | 1-1/4 | .055 | .146 | .550 | .146 | .550 | .220 | .220 | .220 | .300 | .300 | 4.68 | 30 | INT (Inter-mediate) | MS90387-1 | 3 to 5 | |
| -28 | B | 9/16 | 8 | .083 | .350 | .890 | .350 | .890 | .330 | .330 | .330 | .550 | .550 | 26.25 | 120 | HVY (Heavy) | MS90387-2 | 5 to 8 | |
| -29 | B | 3/8 | 3 | .055 | .200 | .625 | .200 | .625 | .250 | .250 | .250 | .370 | .370 | 10.20 | 50 | STD (Standard) | MS90387-1 | 6 to 8 | |

TABLE 2

| COLOR DASH NO. | COLOR | COLOR DASH NO. | COLOR |
|----------------|--------|----------------|---------|
| -0 1/ | BLACK | -5 | GREEN |
| -1 | BROWN | -6 | BLUE |
| -2 | RED | -7 | PURPLE |
| -3 | ORANGE | -8 | GRAY |
| -4 | YELLOW | -9 1/ | NATURAL |

1/ ONLY STRAPS IN NATURAL AND BLACK COLORS SHALL BE STOCKED BY THE GOVERNMENT.

REQUIREMENTS:

1. MATERIAL:

- a. STRAP: NYLON PER ASTM D 4066 (REF. SAE-AS23190), BLACK SHALL BE WEATHER RESISTANT.
- b. STRAP LOCK:
 1. METAL TYPE PER ASTM A 266 CLASS 304 OR 316 (REF. SAE-AS23190), SEE NOTE 4.
 2. PLASTIC TYPE PER ASTM D 4066 (REF. SAE-AS23190), SEE NOTE 4.
- c. COLOR:
 1. COLOR SHALL CONFORM TO EIA 359, EXCEPT BLACK AND NATURAL.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. THE EDGES OF THE STRAP SHALL BE SMOOTH AND WELL ROUNDED SO AS NOT TO CUT OR ABRASE WIRES, CABLES, OR THE USER OF THE DEVICE.
3. FOR TESTING PURPOSES OF 175 LB TENSILE STRENGTH AND GREATER, STRAPS WITH AN EFFECTIVE LENGTH GREATER THAN 5 INCHES THAT ARE NOT CAPABLE OF BEING FASTENED SECURELY AROUND A 1-1/2 INCH DIAMETER MANDREL OR WIRE BUNDLE ARE TO BE FASTENED AROUND A MANDREL OR WIRE BUNDLE OF THE MINIMUM DIAMETER THAT THE STRAPS ARE CAPABLE OF BEING FASTENED AROUND.
4. LOCKING DEVICES OF ANY DESIGN ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS OF THE PROCUREMENT SPECIFICATION SAE-AS23190. WHEN METAL LOCKING DEVICES ARE USED, THEY MUST BE SECURELY ANCHORED AND SHALL NOT BE EXPOSED OUTSIDE OF THE HUB.
5. TYPE 1 TIEDOWN STRAPS MAY BE USED ON WIRE BUNDLES CONTAINING SOLID DIELECTRIC COAXIAL CABLES PROVIDED THAT THE TENSION SETTING ON THE MS90387 INSTALLING TOOL IS NOT GREATER THAN THAT REQUIRED TO PREVENT AXIAL SLIPPAGE.
6. CONTOUR INDICATED BY PHANTOM LINES MAY VARY FROM THAT SHOWN TO SUIT INDIVIDUAL MANUFACTURER'S DESIGN. SLIGHT MOLDING TAPER IS PERMITTED.
7. IF THE MANUFACTURER ELECTS TO INCLUDE THE MS PART NUMBER ON THE PRODUCT, THE PART NUMBER IS TO BE PLACED NEAR OR AROUND THE MANUFACTURER'S LOGO OR TRADEMARK SUCH THAT WHEN THE STRAP IS CUT OFF, AFTER IT IS APPLIED, THE PART NUMBER REMAINS INTACT.

EXAMPLE OF PART NUMBER:

MS3367 - 1 - 5

COLOR DASH NO.
SIZE DASH NO.
BASIC PART NO.