FEDERAL SUPPLY CLASS
4030

RATIONALE

REVISION NEEDED TO CORRECT FIGURES, TABLES AND PART NUMBER INFORMATION

THE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE LATEST ISSUE OF SAE AS85049.

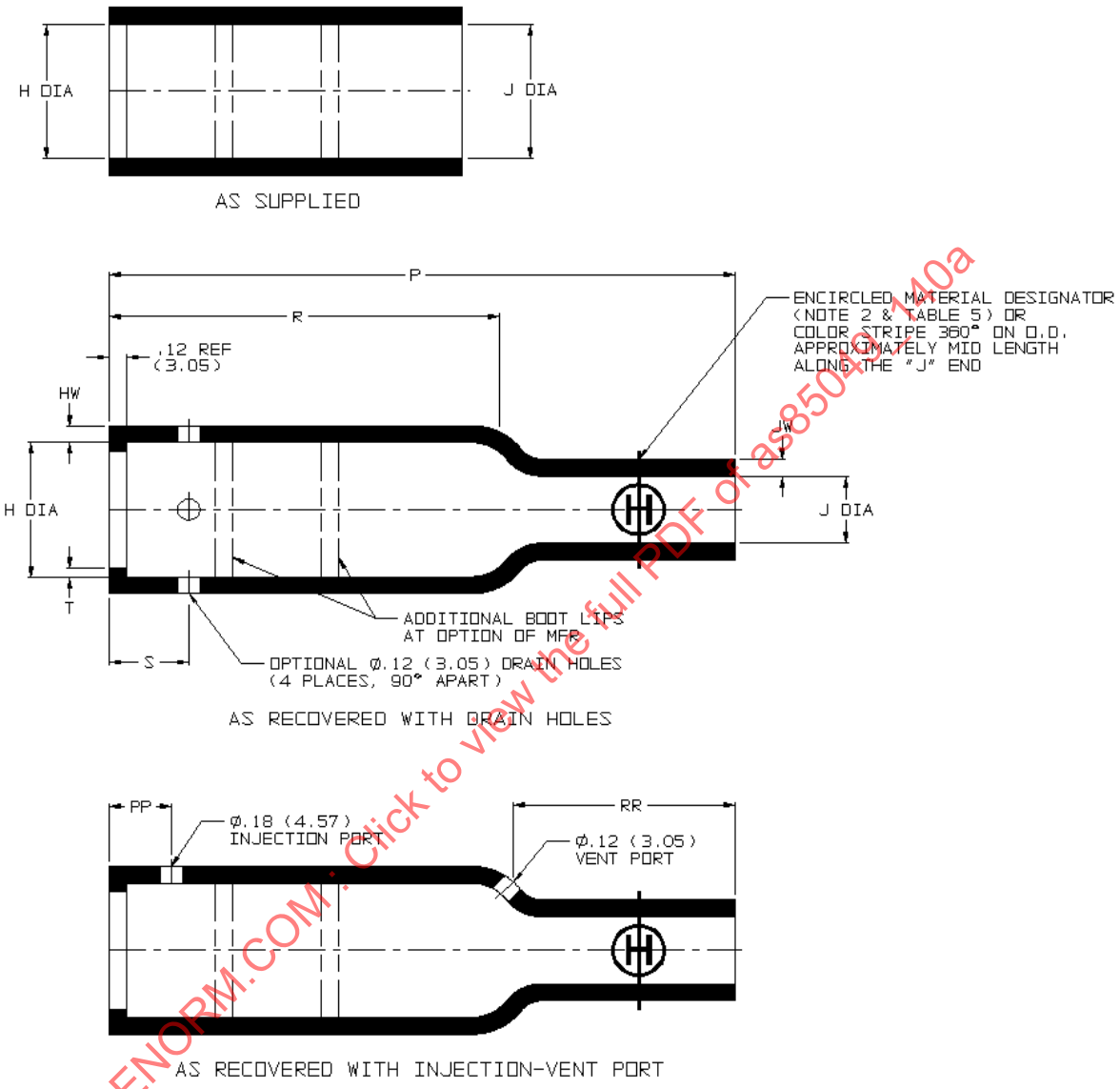
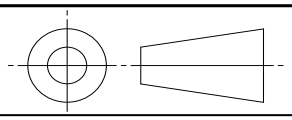



FIGURE 1 – STRAIGHT BOOT (SEE TABLE 1)



**SAE values your input. To provide feedback on this Technical Report, please visit**
**http://www.sae.org/technical/standards/AS85049/140A**

THIRD ANGLE PROJECTION



ISSUED 2006-11 REVISED 2011-01

CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS85049

SAE Aerospace
An SAE International Group

# AEROSPACE STANDARD

(R) CONNECTOR ACCESSORIES, ELECTRICAL BOOTS, HEAT-SHRINKABLE, STRAIGHT, CATEGORY 7

SAE AS85049/140

TABLE 1- FOR STRAIGHT BOOT (FIGURE 1)

| DASH NUMBER | H | H | J | J | J | P | R | T | HW | JW | PP | S | RR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DIAMETER AS SUPPLIED MINIMUM | DIAMETER AS RECOVERED MAXIMUM | DIAMETER AS SUPPLIED MINIMUM MATERIAL A, B, H | DIAMETER AS SUPPLIED MINIMUM MATERIAL C, D, G | DIAMETER AS RECOVERED MAXIMUM | DIMENSION AS RECOVERED ±10% | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED ±20% | DIMENSION AS RECOVERED MAXIMUM | DIMENSION AS RECOVERED ±10% | DIMENSION AS RECOVERED ±10% | DIMENSION AS RECOVERED ±10% |
| 01 | 0.92 | 0.41 | 0.92 | 0.47 | 0.24 | 1.50 | 0.83 | 0.04 | 0.07 | 0.09 | 0.60 | 0.48 | N/A |
| | (23.4) | (10.4) | (23.4) | (11.9) | (6.1) | (38.1) | (21.1) | (1.0) | (1.8) | (2.2) | (15.2) | (12.2) | |
| 02 | 1.12 | 0.56 | 1.12 | 0.58 | 0.26 | 2.16 | 1.09 | 0.04 | 0.07 | 0.09 | 0.60 | 0.49 | 0.85 |
| | (28.4) | (14.2) | (28.4) | (14.7) | (6.6) | (54.9) | (27.7) | (1.0) | (1.8) | (2.2) | (15.2) | (12.4) | (21.6) |
| 03 | 1.22 | 0.70 | 1.22 | 0.63 | 0.28 | 2.63 | 1.39 | 0.04 | 0.08 | 0.10 | 0.60 | 0.75 | 0.96 |
| | (31.0) | (17.8) | (31.0) | (16.0) | (7.1) | (66.8) | (35.3) | (1.0) | (2.0) | (2.5) | (15.2) | (19.1) | (24.4) |
| 04 | 1.42 | 0.88 | 1.42 | 0.73 | 0.38 | 3.15 | 1.63 | 0.04 | 0.08 | 0.10 | 0.60 | 0.75 | 1.17 |
| | (36.1) | (22.4) | (36.1) | (18.5) | (9.7) | (80.0) | (41.4) | (1.0) | (2.0) | (2.5) | (15.2) | (19.1) | (29.7) |
| 05 | 1.68 | 1.11 | 1.68 | 0.87 | 0.39 | 4.08 | 2.22 | 0.07 | 0.09 | 0.11 | 0.60 | 0.75 | 1.44 |
| | (42.7) | (28.2) | (42.7) | (22.1) | (9.9) | (103.6) | (56.4) | (1.8) | (2.3) | (2.7) | (15.2) | (19.1) | (36.6) |
| 06 | 2.04 | 1.38 | 2.04 | 1.39 | 0.63 | 5.13 | 2.54 | 0.07 | 0.13 | 0.16 | 0.60 | 0.57 | 2.12 |
| | (51.8) | (35.1) | (51.8) | (35.3) | (16.0) | (130.3) | (64.5) | (1.8) | (3.3) | (4.0) | (15.2) | (14.5) | (53.8) |
| 07 | 2.60 | 1.75 | 2.60 | 1.80 | 0.80 | 6.50 | 3.31 | 0.08 | 0.16 | 0.19 | 0.60 | 0.68 | 2.59 |
| | (66.0) | (44.5) | (66.0) | (45.7) | (20.3) | (165.1) | (84.1) | (2.0) | (4.1) | (4.9) | (15.2) | (17.3) | (65.8) |
| 08 | 3.22 | 2.27 | 3.22 | 2.25 | 1.00 | 7.00 | 3.75 | 0.08 | 0.16 | 0.19 | 0.60 | 0.68 | 2.64 |
| | (81.8) | (57.7) | (81.8) | (57.2) | (25.4) | (177.8) | (95.3) | (2.0) | (4.1) | (4.9) | (15.2) | (17.3) | (67.1) |

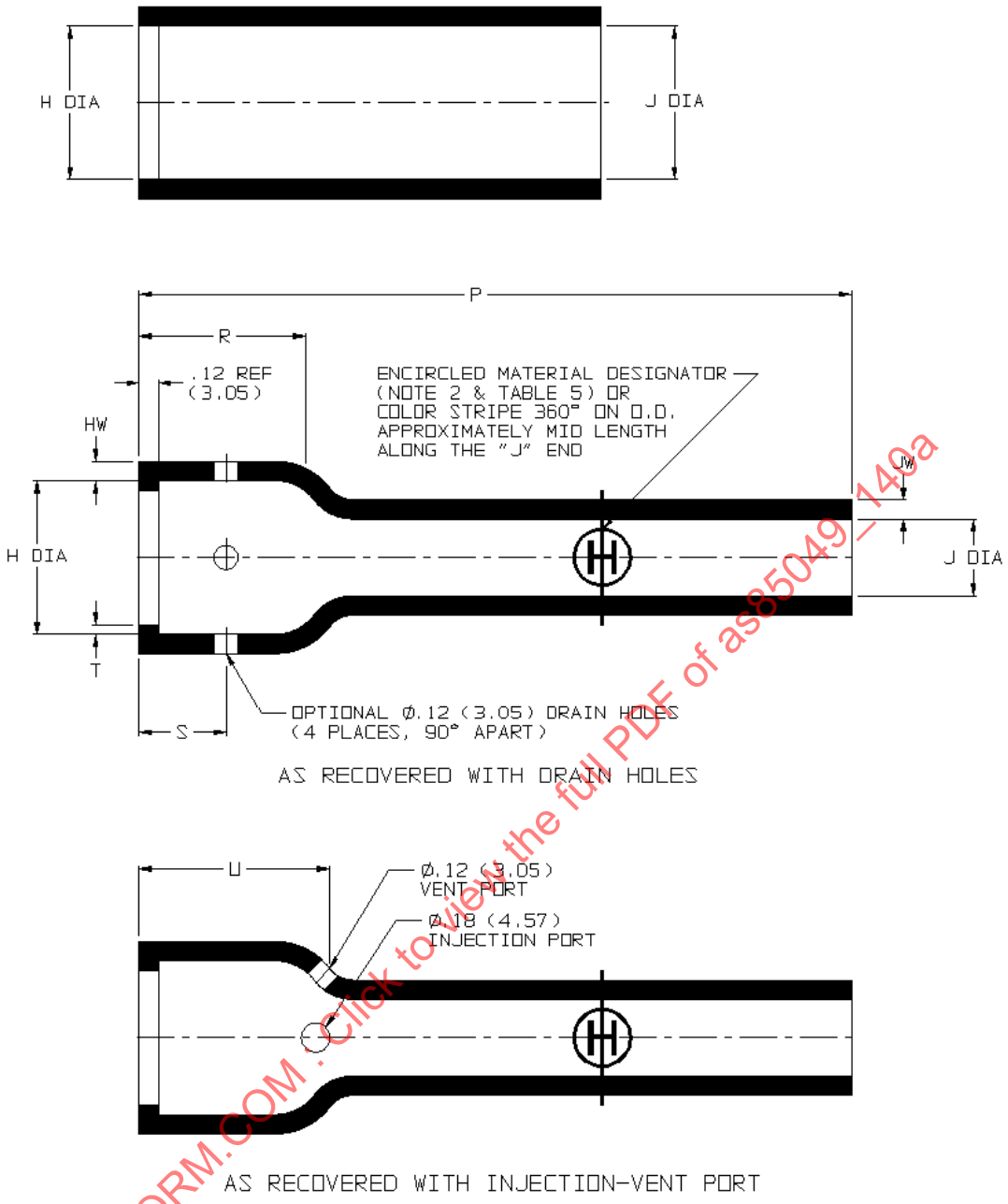



FIGURE 2 – STRAIGHT LOW PROFILE BOOT (SEE TABLE 2)

TABLE 2- STRAIGHT LOW PROFILE BOOT (FIGURE 2)

| DASH NUMBER | H DIAMETER AS SUPPLIED MINIMUM | H DIAMETER AS RECOVERED MAXIMUM | J AS SUPPLIED MINIMUM MATERIAL | J AS SUPPLIED MINIMUM MATERIAL | J DIAMETER AS RECOVERED MAXIMUM | P DIMENSION AS RECOVERED ±10% | R DIMENSION AS RECOVERED REF | T DIMENSION AS RECOVERED REF | HW DIMENSION AS RECOVERED ±20% | JW DIMENSION AS RECOVERED MAXIMUM | S DIMENSION AS RECOVERED ±10% | U 1/ DIMENSION AS RECOVERED ±10% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | 0.88 (22.4) | 0.47 (11.9) | 0.88 (22.4) | 0.55 (14.0) | 0.25 (6.4) | 4.17 (105.9) | 0.46 (11.7) | 0.04 (1.0) | 0.06 (1.5) | 0.05 (1.1) | 0.23 (5.8) | 0.56 (14.2) |
| 10 | 0.98 (24.9) | 0.59 (15.0) | 0.98 (24.9) | 0.63 (16.0) | 0.30 (7.6) | 4.77 (121.2) | 0.48 (12.2) | 0.04 (1.0) | 0.06 (1.5) | 0.05 (1.1) | 0.24 (6.1) | 0.59 (15.0) |
| 11 | 1.16 (29.5) | 0.75 (19.1) | 1.16 (29.5) | 0.72 (18.3) | 0.33 (8.4) | 5.46 (138.7) | 0.48 (12.2) | 0.04 (1.0) | 0.07 (1.8) | 0.05 (1.1) | 0.47 (11.9) | 0.61 (15.5) |
| 12 | 1.34 (34.0) | 0.91 (23.1) | 1.34 (34.0) | 0.84 (21.3) | 0.39 (9.9) | 6.28 (159.5) | 0.48 (12.2) | 0.04 (1.0) | 0.07 (1.8) | 0.05 (1.1) | 0.47 (11.9) | 0.62 (15.7) |
| 13 | 1.47 (37.3) | 1.18 (30.0) | 1.47 (37.3) | 0.91 (23.1) | 0.43 (10.9) | 7.00 (177.8) | 0.55 (14.0) | 0.07 (1.7) | 0.08 (2.0) | 0.05 (1.1) | 0.47 (11.9) | 0.71 (18.0) |
| 14 | 1.72 (43.7) | 1.34 (34.0) | 1.72 (43.7) | 1.07 (27.2) | 0.48 (12.2) | 8.00 (203.2) | 0.60 (15.2) | 0.07 (1.7) | 0.08 (2.0) | 0.05 (1.1) | 0.47 (11.9) | 0.78 (19.8) |
| 15 | 1.97 (50.0) | 1.62 (41.1) | 1.97 (50.0) | 1.24 (31.5) | 0.57 (14.5) | 8.00 (203.2) | 0.60 (15.2) | 0.07 (1.7) | 0.09 (2.3) | 0.06 (1.5) | 0.30 (7.6) | 0.82 (20.8) |
| 16 | 2.47 (62.7) | 1.85 (47.0) | 2.47 (62.7) | 1.54 (39.1) | 0.71 (18.0) | 8.00 (203.2) | 0.63 (16.0) | 0.08 (2.0) | 0.10 (2.5) | 0.06 (1.5) | 0.63 (16.0) | 0.92 (23.4) |
| 17 | 2.73 (69.3) | 2.36 (59.9) | 2.73 (69.3) | 1.70 (43.2) | 0.79 (20.1) | 8.00 (203.2) | 0.63 (16.0) | 0.08 (2.0) | 0.10 (2.5) | 0.06 (1.5) | 0.63 (16.0) | 0.93 (23.6) |
| 18 | 3.22 (81.8) | 2.64 (67.1) | 3.22 (81.8) | 2.01 (51.1) | 0.91 (23.1) | 8.00 (203.2) | 0.63 (16.0) | 0.08 (2.0) | 0.10 (2.5) | 0.06 (1.5) | 0.63 (16.0) | 1.23 (31.2) |

1/ DIMENSION APPLICABLE TO BOTH INJECTION AND VENT PORTS

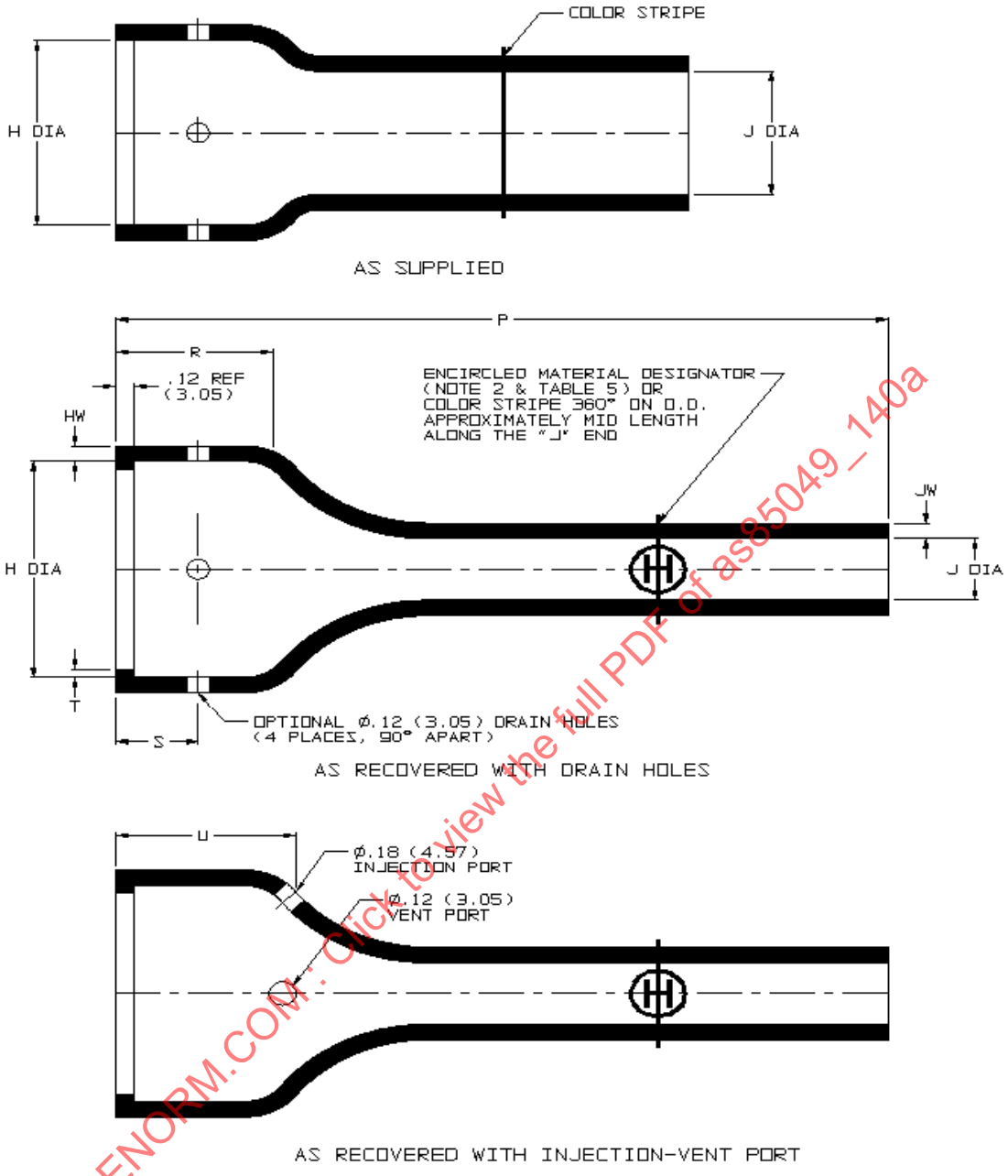





FIGURE 3 – STRAIGHT LOW PROFILE MINIATURE BOOT (SEE TABLE 3)

TABLE 3- STRAIGHT LOW PROFILE MINIATURE BOOT (FIGURE 3)

| DASH NUMBER | H DIAMETER AS SUPPLIED MINIMUM | H DIAMETER AS RECOVERED MAXIMUM | J DIAMETER AS SUPPLIED MINIMUM MATERIAL A, B, H | J DIAMETER AS SUPPLIED MINIMUM MATERIAL C, D, G | J DIAMETER AS RECOVERED MAXIMUM | P DIMENSION AS RECOVERED ±10% | R DIMENSION AS RECOVERED ±10% | T DIMENSION AS RECOVERED ±10% | HW DIMENSION AS RECOVERED ±20% | JW DIMENSION AS RECOVERED MAXIMUM | S DIMENSION AS RECOVERED ±10% | U DIMENSION AS RECOVERED ±10% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 0.76 | 0.51 | 0.25 | 0.18 | 0.08 | 2.37 | 0.46 | 0.04 | 0.06 | 0.05 | 0.47 | 0.62 |
| | (19.3) | (13.0) | (6.4) | (4.6) | (2.0) | (60.2) | (11.7) | (1.0) | (1.5) | (1.14) | (11.9) | (15.75) |
| 20 | 1.03 | 0.75 | 0.30 | 0.22 | 0.10 | 2.92 | 0.48 | 0.04 | 0.07 | 0.05 | 0.47 | 0.80 |
| | (26.2) | (19.1) | (7.6) | (5.6) | (2.5) | (74.2) | (12.2) | (1.0) | (1.8) | (1.14) | (11.9) | (20.32) |
| 21 | 1.35 | 1.02 | 0.38 | 0.26 | 0.12 | 3.32 | 0.48 | 0.04 | 0.07 | 0.05 | 0.47 | 0.90 |
| | (34.3) | (25.9) | (9.7) | (6.6) | (3.0) | (84.3) | (12.2) | (1.0) | (1.8) | (1.14) | (11.9) | (22.86) |
| 22 | 1.72 | 1.34 | 0.45 | 0.31 | 0.14 | 3.92 | 0.48 | 0.07 | 0.07 | 0.05 | 0.47 | 1.03 |
| | (43.7) | (34.0) | (11.4) | (7.9) | (3.6) | (99.6) | (12.2) | (1.7) | (1.8) | (1.14) | (11.9) | (26.16) |

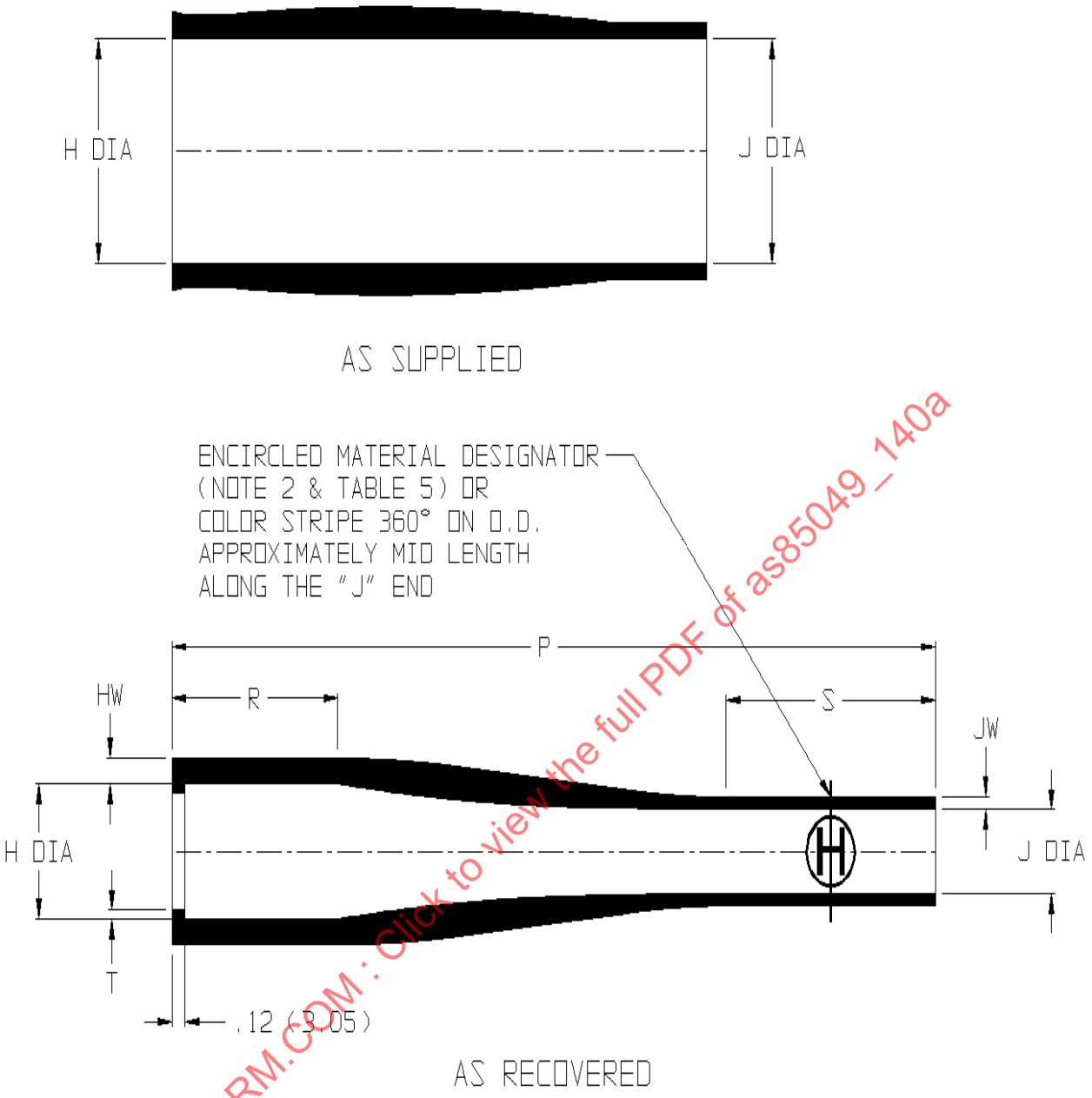



FIGURE 4 – STRAIGHT SEALING BOOT (SEE TABLE 4)

TABLE 4 - STRAIGHT SEALING BOOT (FIGURE 4)

| DASH NUMBER | H DIAMETER AS SUPPLIED MINIMUM | H DIAMETER AS RECOVERED MAXIMUM | J DIAMETER AS SUPPLIED MINIMUM MATERIAL A, B, G, H | J DIAMETER AS RECOVERED MAXIMUM | P DIMENSION AS RECOVERED ±10% | R DIMENSION AS RECOVERED ±10% | T DIMENSION AS RECOVERED ±10% | HW DIMENSION AS RECOVERED ±20% | JW DIMENSION AS RECOVERED MAXIMUM |
|---|---|---|---|---|---|---|---|---|---|
| 23 | 0.84 (21.3) | 0.55 (14.0) | 0.66 (16.8) | 0.21 (5.3) | 5.30 (134.6) | 1.10 (27.9) | 0.06 (1.5) | 0.16 (4.1) | 0.04 (1.0) |
| 24 | 1.00 (25.4) | 0.65 (16.5) | 1.00 (25.4) | 0.33 (8.4) | 6.00 (152.4) | 1.20 (30.5) | 0.06 (1.5) | 0.16 (4.1) | 0.06 (1.5) |
| 25 | 1.30 (33.0) | 0.80 (20.3) | 1.30 (33.0) | 0.43 (10.9) | 6.00 (152.4) | 1.20 (30.5) | 0.06 (1.5) | 0.16 (4.1) | 0.06 (1.5) |
| 26 | 1.70 (43.2) | 0.90 (22.9) | 1.70 (43.2) | 0.56 (14.2) | 6.90 (175.3) | 1.50 (38.1) | 0.06 (1.5) | 0.16 (4.1) | 0.08 (2.0) |
| 27 | 2.10 (53.3) | 1.10 (27.9) | 2.10 (53.3) | 0.70 (17.8) | 6.90 (175.3) | 1.50 (38.1) | 0.06 (1.5) | 0.16 (4.1) | 0.08 (2.0) |
| 28 | 2.85 (72.4) | 1.45 (36.8) | 2.85 (72.4) | 0.95 (24.1) | 7.24 (183.9) | 1.60 (40.6) | 0.06 (1.5) | 0.20 (5.1) | 0.10 (2.54) |

TABLE 5 - AVAILABLE MATERIALS

| MATERIAL DESIGNATOR 2/ | MATERIAL 4/ | OPERATING TEMPERATURE RANGE | MATERIAL DESIGNATOR COLOR STRIPE 2/ | SHRINK TEMPERATURE 3/ |
|---|---|---|---|---|
| A 1/ | POLYOLEFIN SEMI-RIGID | -55 TO +135 °C (-67 TO +275 °F) | WHITE | 121 °C (250 °F) |
| B 1/ | POLYOLEFIN FLEXIBLE | -55 TO +135 °C ( -67 TO +275 °F) | RED | 100 °C (212 °F) |
| C | SILICONE | -75 TO +180 °C (-103 TO +356°F) | ORANGE | 135 °C (275 °F) |
| D | FLEXIBLE FLUORO-ELASTOMER | -55 TO +200 °C ( -67 TO +392 °F) | YELLOW | 175 °C (347 °F) |
| G 1/ | POLYOLEFIN | -30 TO +105 °C (-22 TO +221 °F) | GREEN | 120 °C (248 °F) |
| H 1/ | ELASTOMERIC, | -75 TO +150 °C (-103 TO +275 °F) | BLUE | 135 °C (275 °F) |

1/ OPTIONAL ADHESIVE MATERIAL APPLIED ON INSIDE SURFACE SHALL BE CONTROLLED BY THE SUPPLIER TO MAINTAIN THE ADHESION AT OPERATING TEMPERATURE.
2/ MATERIAL DESIGNATOR SHALL BE A CONTINUOUS COLOR STRIPE RING, APPROXIMATELY 1/8 INCH WIDE, OR AN ENCIRCLED MATERIAL DESIGNATOR LOCATED AS SHOWN IN FIGURES 1 THRU 4. COLOR OR MATERIAL DESIGNATOR SHALL REMAIN DISTINGUISHABLE OVER THE SPECIFIED TEMPERATURE RANGE. THE SIZE OF THE MATERIAL DESIGNATOR SHALL BE RECOGNIZABLE AFTER RECOVERED, AND THE COLOR SHALL BE CONTRASTING TO THE COLOR OF THE BOOT AT THE MANUFACTURERS CHOICE.
3/ COMPONENTS SHRINK UPON APPLICATION OF HEAT IN EXCESS OF VALUES LISTED.
4/ MATERIAL SHALL BE CERTIFIED TO AS5258

NOTES:

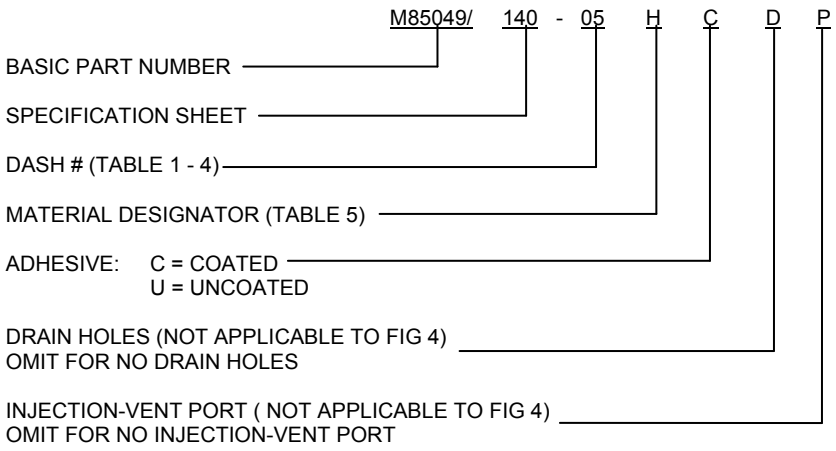
1. DIMENSIONS ARE IN INCHES
2. UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: .XX = ± .020 (0.51mm), .XXX = ± .010 (0.25mm)
3. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED ON 25.4mm = 1 INCH. METRIC EQUIVALENTS ARE SHOWN IN PARENTHESES.

REQUIREMENTS:

CONNECTOR ACCESSORY DESIGN AND CONSTRUCTION:

1. DIMENSIONS AND CONFIGURATIONS AS SPECIFIED IN FIGURES 1 THRU 4 AND TABLES 1 THRU 4. DIMENSIONS H AND J REDUCED BY 0.06 (1.5mm) INCHES WHEN ADHESIVE IS USED (SEE EXAMPLE PART NUMBER).
2. MATERIAL TYPE AND IDENTIFICATION AS SPECIFIED IN TABLE 5

3. PART OR IDENTIFYING NUMBER (PIN) EXAMPLE:




QUALIFICATIONS:

1. THE CONNECTOR ACCESSORIES SHALL MEET QUALIFICATION REQUIREMENTS OF SAE AS85049 CATEGORY 7 AND HEREIN. ONLY QUALIFICATION BY CERTIFICATION OF DIMENSIONS AND MATERIALS IS REQUIRED.

APPLICATION NOTES:

1. MAY BE USED IN CONJUNCTION WITH AS85049/60 (-1, AND-2 CONFIGURATIONS), AS85049/62, M85049/69, AS85049/82 THRU /90, AS85049/109 THRU /117 ADAPTERS

SUPERSESSION DATA:

SUPERSESSION OR EQUIVALENT DATA FOR REFERENCE ONLY

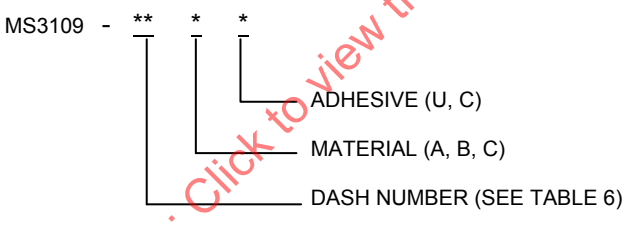



TABLE 6- AS31091 SUPERSSEION BY AS85049/140
CROSS REFERENCE

| DASH # | | MATERIAL | | ADHESIVE | | DRAIN HOLE | |
|---|---|---|---|---|---|---|---|
| MS3109 | M85049/140 | MS3109 | M85049/140 | MS3109 | M85049/140 | MS3109 | M85049/140 |
| 01 THRU 09 | 09 THRU 18 | A | A | C | C | REQ | D |
| 11 THRU 18 | 01 THRU 08 | B<br>C | B<br>D | U | U | NONE | OMIT |