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REV.  
B

AS85049™/141

FEDERAL SUPPLY CLASS  
4030

## RATIONALE

AS85049/141B HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

## NOTICE

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

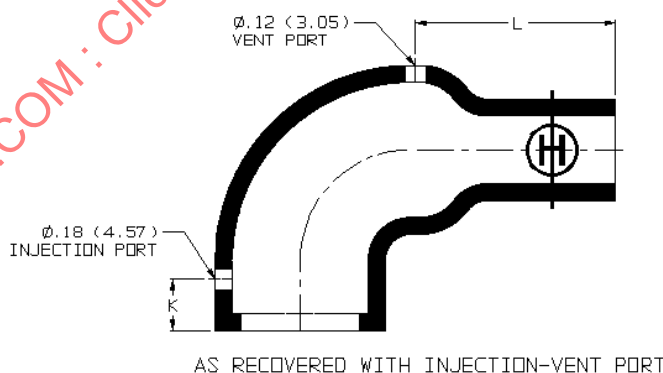
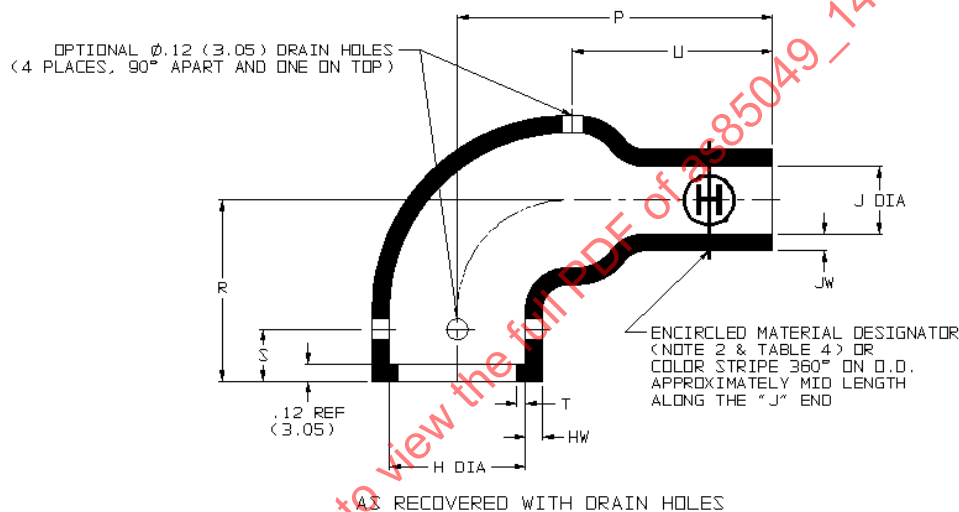
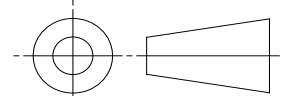


FIGURE 1 – RIGHT ANGLE BOOT (SEE TABLE 1)

For more information on this standard, visit  
<https://www.sae.org/standards/content/AS85049/141B>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS85049



## AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,  
HEAT SHRINKABLE, 90 DEGREE,  
CATEGORY 7

AS85049™/141  
SHEET 1 OF 10

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TABLE 1 - RIGHT ANGLE BOOT (FIGURE 1)

| DASH NUMBER | H                            | H                             | J                                    | J                                    | J                             | P                                 | R                          | T                          | HW                                | JW                             | S                                 | U                                 | K                                 | L                                 |
|-------------|------------------------------|-------------------------------|--------------------------------------|--------------------------------------|-------------------------------|-----------------------------------|----------------------------|----------------------------|-----------------------------------|--------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|             | DIAMETER AS SUPPLIED MINIMUM | DIAMETER AS RECOVERED MAXIMUM | DIAMETER AS SUPPLIED MINIMUM A, B, H | DIAMETER AS SUPPLIED MINIMUM C, D, G | DIAMETER AS RECOVERED MAXIMUM | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED $\pm 20\%$ | DIMENSION AS RECOVERED MAXIMUM | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED $\pm 10\%$ |
| 01          | 0.92<br>(23.4)               | 0.41<br>(10.4)                | 0.92<br>(23.4)                       | 0.47<br>(11.9)                       | 0.24<br>(6.1)                 | 0.84<br>(21.3)                    | 0.65<br>(16.5)             | 0.04<br>(1.0)              | 0.05<br>(1.3)                     | 0.05<br>(1.3)                  | 0.45<br>(11.4)                    | 0.47<br>(11.9)                    | 0.60<br>(15.2)                    | 0.58<br>(14.7)                    |
| 02          | 1.12<br>(28.4)               | 0.61<br>(15.5)                | 1.12<br>(28.4)                       | 0.58<br>(14.7)                       | 0.26<br>(6.6)                 | 1.33<br>(33.8)                    | 0.76<br>(19.3)             | 0.04<br>(1.0)              | 0.06<br>(1.5)                     | 0.05<br>(1.3)                  | 0.47<br>(11.9)                    | 1.02<br>(25.9)                    | 0.75<br>(19.1)                    | 0.98<br>(24.9)                    |
| 03          | 1.22<br>(31.0)               | 0.71<br>(18.0)                | 1.22<br>(31.0)                       | 0.63<br>(16.0)                       | 0.28<br>(7.1)                 | 1.44<br>(36.6)                    | 0.83<br>(21.1)             | 0.04<br>(1.0)              | 0.07<br>(1.8)                     | 0.07<br>(0.18)                 | 0.47<br>(11.9)                    | 1.09<br>(27.7)                    | 0.75<br>(19.1)                    | 0.98<br>(24.9)                    |
| 04          | 1.42<br>(36.1)               | 0.89<br>(22.6)                | 1.42<br>(36.1)                       | 0.73<br>(18.5)                       | 0.33<br>(8.4)                 | 1.72<br>(43.7)                    | 0.90<br>(22.9)             | 0.04<br>(1.0)              | 0.07<br>(1.8)                     | 0.07<br>(0.18)                 | 0.47<br>(11.9)                    | 1.16<br>(29.5)                    | 0.75<br>(19.1)                    | 1.18<br>(30.0)                    |
| 05          | 1.68<br>(42.7)               | 1.12<br>(28.4)                | 1.68<br>(42.7)                       | 0.87<br>(22.1)                       | 0.39<br>(9.9)                 | 2.11<br>(53.6)                    | 1.14<br>(29.0)             | 0.07<br>(1.8)              | 0.08<br>(2.0)                     | 0.08<br>(2.0)                  | 0.47<br>(11.9)                    | 1.47<br>(37.3)                    | 0.76<br>(19.3)                    | 1.30<br>(33.0)                    |
| 06          | 2.04<br>(51.8)               | 1.38<br>(35.1)                | 2.04<br>(51.8)                       | 1.39<br>(35.3)                       | 0.63<br>(16.0)                | 3.07<br>(78.0)                    | 1.32<br>(33.5)             | 0.07<br>(1.8)              | 0.13<br>(3.3)                     | 0.13<br>(3.3)                  | 0.53<br>(13.5)                    | 2.50<br>(63.5)                    | 1.00<br>(25.4)                    | 2.12<br>(53.8)                    |
| 07          | 2.60<br>(66.0)               | 1.77<br>(45.0)                | 2.60<br>(66.0)                       | 1.80<br>(45.7)                       | 0.80<br>(20.3)                | 3.84<br>(97.5)                    | 1.64<br>(41.7)             | 0.08<br>(2.0)              | 0.15<br>(3.8)                     | 0.15<br>(3.8)                  | 0.64<br>(16.3)                    | 2.75<br>(69.9)                    | 1.00<br>(25.4)                    | 2.80<br>(71.1)                    |
| 08          | 3.22<br>(81.8)               | 2.40<br>(61.0)                | 3.22<br>(81.8)                       | 2.25<br>(57.2)                       | 1.00<br>(25.4)                | 4.64<br>(117.9)                   | 2.03<br>(51.6)             | 0.08<br>(2.0)              | 0.16<br>(4.1)                     | 0.16<br>(4.1)                  | 0.64<br>(16.3)                    | 3.12<br>(79.2)                    | 1.00<br>(25.4)                    | 3.15<br>(80.0)                    |

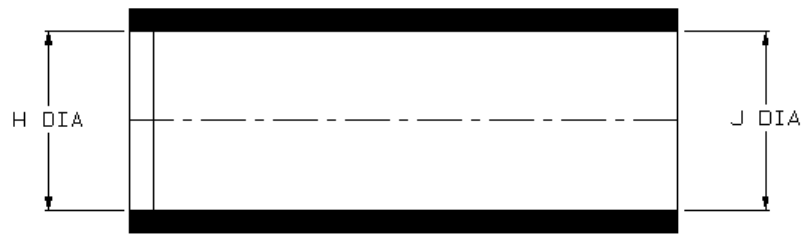


## AEROSPACE STANDARD

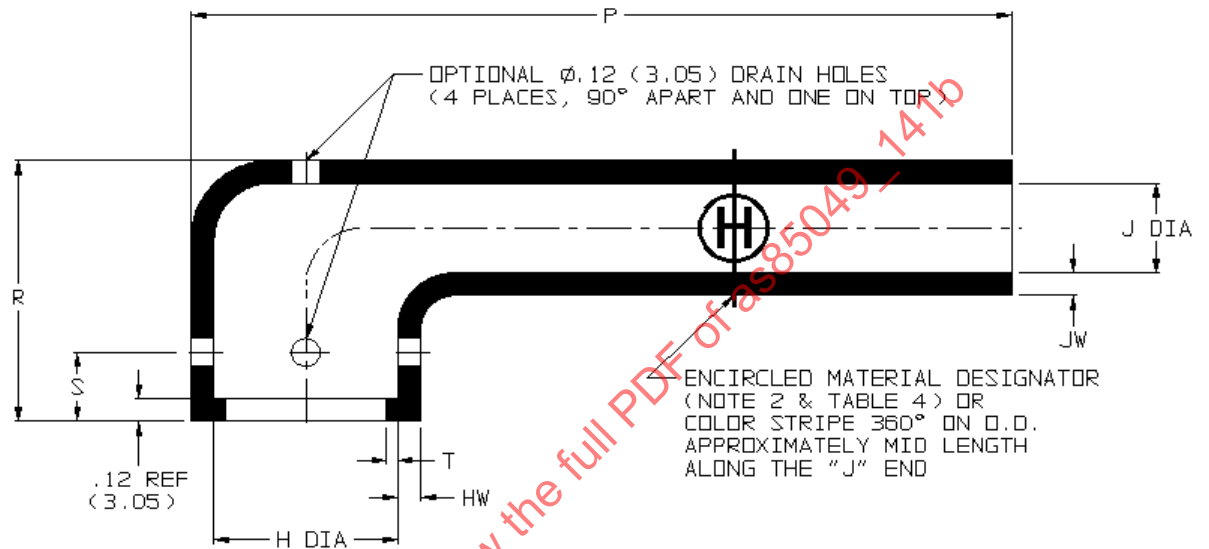
CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,  
HEAT SHRINKABLE, 90 DEGREE,  
CATEGORY 7

AS85049™/141  
SHEET 2 OF 10

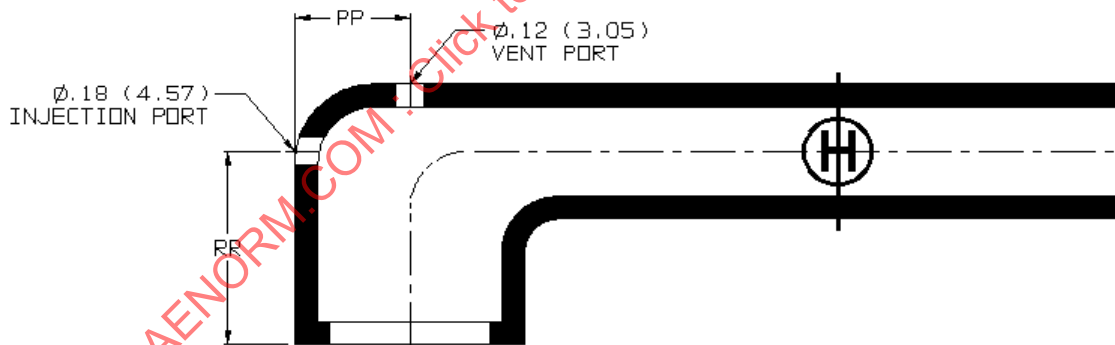
REV.  
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AS SUPPLIED



AS RECOVERED WITH DRAIN HOLES



AS RECOVERED WITH INJECTION-VENT PORT

FIGURE 2 - RIGHT ANGLE LOW PROFILE BOOT (SEE TABLE 2)

|                                                                                     |                                                                                       |  |                                      |                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--------------------------------------|-------------------------|
|  | <b>AEROSPACE STANDARD</b>                                                             |  | <b>AS85049™/141</b><br>SHEET 3 OF 10 | <b>REV.</b><br><b>B</b> |
|                                                                                     | CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,<br>HEAT SHRINKABLE, 90 DEGREE,<br>CATEGORY 7 |  |                                      |                         |

TABLE 2 - RIGHT ANGLE LOW PROFILE BOOT (FIGURE 2)

| DASH NUMBER | H                            | H                             | J                                             | J                                             | J                             | P                                 | R                          | T                          | HW                                | JW                             | S                                 | PP                                | 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 $\pm 10\%$ | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED REF | DIMENSION AS RECOVERED $\pm 20\%$ | DIMENSION AS RECOVERED MAXIMUM | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED $\pm 10\%$ | DIMENSION AS RECOVERED $\pm 10\%$ |
| 09          | 0.88<br>(22.4)               | 0.45<br>(11.4)                | 0.88<br>(22.4)                                | 0.55<br>(14.0)                                | 0.25<br>(6.4)                 | 4.14<br>(105.2)                   | 0.73<br>(18.5)             | 0.04<br>(1.0)              | 0.06<br>(1.5)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.27<br>(6.9)                     | 0.49<br>(12.4)                    |
| 10          | 1.01<br>(25.7)               | 0.59<br>(15.0)                | 1.01<br>(25.7)                                | 0.63<br>(16.0)                                | 0.30<br>(7.6)                 | 4.88<br>(124.0)                   | 0.78<br>(19.8)             | 0.04<br>(1.0)              | 0.06<br>(1.5)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.33<br>(8.4)                     | 0.59<br>(15.0)                    |
| 11          | 1.16<br>(29.5)               | 0.74<br>(18.8)                | 1.16<br>(29.5)                                | 0.72<br>(18.3)                                | 0.33<br>(8.4)                 | 5.76<br>(146.3)                   | 0.82<br>(20.8)             | 0.04<br>(1.0)              | 0.07<br>(1.8)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.41<br>(10.4)                    | 0.61<br>(15.5)                    |
| 12          | 1.34<br>(34.0)               | 0.90<br>(22.9)                | 1.34<br>(34.0)                                | 0.84<br>(21.3)                                | 0.39<br>(9.9)                 | 6.78<br>(172.2)                   | 0.86<br>(21.8)             | 0.04<br>(1.0)              | 0.07<br>(1.8)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.48<br>(12.2)                    | 0.62<br>(15.7)                    |
| 13          | 1.47<br>(37.3)               | 1.16<br>(29.5)                | 1.47<br>(37.3)                                | 0.91<br>(23.1)                                | 0.43<br>(10.9)                | 7.29<br>(185.2)                   | 0.96<br>(24.4)             | 0.07<br>(1.8)              | 0.08<br>(2.0)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.61<br>(15.5)                    | 0.70<br>(17.8)                    |
| 14          | 1.72<br>(43.7)               | 1.34<br>(34.0)                | 1.72<br>(43.7)                                | 1.07<br>(27.2)                                | 0.48<br>(12.2)                | 8.41<br>(213.6)                   | 1.08<br>(27.4)             | 0.07<br>(1.8)              | 0.08<br>(2.0)                     | 0.06<br>(1.5)                  | 0.47<br>(11.9)                    | 0.72<br>(18.3)                    | 0.78<br>(19.8)                    |
| 15          | 1.97<br>(50.0)               | 1.62<br>(41.1)                | 1.97<br>(50.0)                                | 1.24<br>(31.5)                                | 0.57<br>(14.5)                | 8.84<br>(224.5)                   | 1.16<br>(29.5)             | 0.07<br>(1.8)              | 0.09<br>(2.3)                     | 0.06<br>(1.4)                  | 0.47<br>(11.9)                    | 0.83<br>(21.1)                    | 0.82<br>(20.8)                    |
| 16          | 2.47<br>(62.7)               | 1.85<br>(47.0)                | 2.47<br>(62.7)                                | 1.54<br>(39.1)                                | 0.71<br>(18.0)                | 8.95<br>(227.3)                   | 1.31<br>(33.3)             | 0.08<br>(2.0)              | 0.10<br>(2.5)                     | 0.06<br>(1.4)                  | 0.63<br>(16.0)                    | 0.95<br>(24.1)                    | 0.92<br>(23.4)                    |
| 17          | 2.73<br>(69.3)               | 2.35<br>(59.7)                | 2.73<br>(69.3)                                | 1.70<br>(43.2)                                | 0.79<br>(20.1)                | 9.19<br>(233.4)                   | 1.38<br>(35.1)             | 0.08<br>(2.0)              | 0.10<br>(2.5)                     | 0.06<br>(1.4)                  | 0.63<br>(16.0)                    | 1.18<br>(30.0)                    | 0.93<br>(23.6)                    |
| 18          | 3.22<br>(81.8)               | 2.64<br>(67.1)                | 3.22<br>(81.8)                                | 2.01<br>(51.1)                                | 0.91<br>(23.1)                | 9.33<br>(237.0)                   | 1.75<br>(44.5)             | 0.08<br>(2.0)              | 0.10<br>(2.5)                     | 0.06<br>(1.4)                  | 0.63<br>(16.0)                    | 1.31<br>(33.3)                    | 1.23<br>(31.2)                    |



## AEROSPACE STANDARD

CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,  
HEAT SHRINKABLE, 90 DEGREE,  
CATEGORY 7

AS85049™/141  
SHEET 4 OF 10

REV.  
B

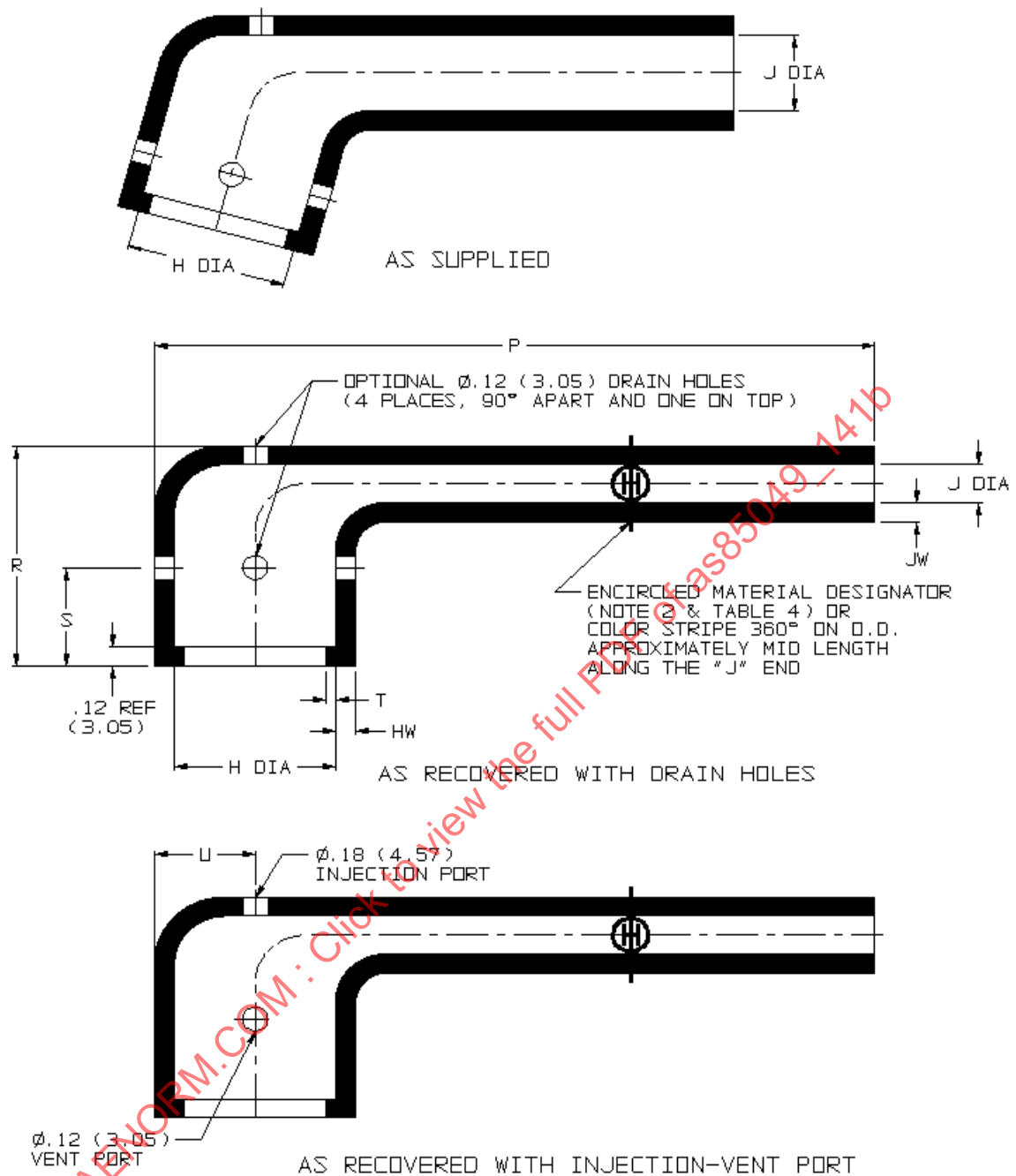


FIGURE 3 - RIGHT ANGLE LOW PROFILE MINIATURE BOOT (SEE TABLE 3)

|                                                                                     |                                                                                       |  |                                      |                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--------------------------------------|-------------------------|
|  | <b>AEROSPACE STANDARD</b>                                                             |  | <b>AS85049™/141</b><br>SHEET 5 OF 10 | <b>REV.</b><br><b>B</b> |
|                                                                                     | CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,<br>HEAT SHRINKABLE, 90 DEGREE,<br>CATEGORY 7 |  |                                      |                         |

TABLE 3 - RIGHT ANGLE LOW PROFILE MINIATURE BOOT (FIGURE 3)

| DASH<br>NUMBER | H                                     | H                                      | J                                                | J                                                            | J                                      | P                                    | R                                   | T                                   | HW                                   | JW                                      | S                                    | U 1/                                 |
|----------------|---------------------------------------|----------------------------------------|--------------------------------------------------|--------------------------------------------------------------|----------------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|-----------------------------------------|--------------------------------------|--------------------------------------|
|                | DIAMETER<br>AS<br>SUPPLIED<br>MINIMUM | DIAMETER<br>AS<br>RECOVERED<br>MAXIMUM | DIAMETER<br>AS<br>SUPPLIED<br>MINIMUM<br>A, B, H | DIAMETER<br>AS<br>SUPPLIED<br>MINIMUM<br>MATERIAL<br>C, D, G | DIAMETER<br>AS<br>RECOVERED<br>MAXIMUM | DIMENSION<br>AS<br>RECOVERED<br>±10% | DIMENSION<br>AS<br>RECOVERED<br>REF | DIMENSION<br>AS<br>RECOVERED<br>REF | DIMENSION<br>AS<br>RECOVERED<br>±20% | DIMENSION<br>AS<br>RECOVERED<br>MAXIMUM | DIMENSION<br>AS<br>RECOVERED<br>±10% | DIMENSION<br>AS<br>RECOVERED<br>±10% |
| 19             | 0.76<br>(19.3)                        | 0.51<br>(13.0)                         | 0.25<br>(6.4)                                    | 0.18<br>(4.6)                                                | 0.08<br>(2.0)                          | 1.75<br>(44.5)                       | 0.64<br>(16.3)                      | 0.04<br>(1.0)                       | 0.06<br>(1.5)                        | 0.05<br>(1.1)                           | 0.47<br>(11.9)                       | 0.22<br>(5.6)                        |
| 20             | 1.03<br>(26.2)                        | 0.75<br>(19.1)                         | 0.30<br>(7.6)                                    | 0.22<br>(5.6)                                                | 0.10<br>(2.5)                          | 2.65<br>(67.3)                       | 0.71<br>(18.0)                      | 0.04<br>(1.0)                       | 0.07<br>(1.8)                        | 0.05<br>(1.1)                           | 0.47<br>(11.9)                       | 0.33<br>(8.4)                        |
| 21             | 1.35<br>(34.3)                        | 1.02<br>(25.9)                         | 0.38<br>(9.7)                                    | 0.26<br>(6.6)                                                | 0.12<br>(3.0)                          | 3.20<br>(81.3)                       | 0.74<br>(18.8)                      | 0.04<br>(1.0)                       | 0.07<br>(1.8)                        | 0.05<br>(1.1)                           | 0.47<br>(11.9)                       | 0.45<br>(11.4)                       |
| 22             | 1.72<br>(43.7)                        | 1.34<br>(34.0)                         | 0.45<br>(11.4)                                   | 0.31<br>(7.9)                                                | 0.14<br>(3.6)                          | 4.55<br>(115.6)                      | 0.84<br>(21.3)                      | 0.07<br>(1.8)                       | 0.07<br>(1.8)                        | 0.05<br>(1.1)                           | 0.47<br>(11.9)                       | 0.61<br>(15.5)                       |

1/ DIMENSION APPLICABLE FOR INJECTION AND VENT PORT

**AEROSPACE STANDARD**CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,  
HEAT SHRINKABLE, 90 DEGREE,  
CATEGORY 7**AS85049™/141**  
SHEET 6 OF 10**REV.  
B**

TABLE 4 - AVAILABLE MATERIALS

| MATERIAL DESIGNATOR<br>2/ | MATERIAL 4/               | OPERATING TEMPERATURE RANGE         | MATERIAL DESIGNATOR COLOR STRIPE 2/ | SHRINK TEMPERATURE 3/ |
|---------------------------|---------------------------|-------------------------------------|-------------------------------------|-----------------------|
| A 1/                      | POLYOLEFIN SEMI-RIGID     | -55 TO +135 °C<br>(-67 TO +275 °F)  | WHITE                               | 121 °C<br>(250 °F)    |
| B 1/                      | POLYOLEFIN FLEXIBLE       | -55 TO +135 °C<br>(-67 TO +275 °F)  | RED                                 | 100 °C<br>(212 °F)    |
| C                         | SILICONE                  | -75 TO +180 °C<br>(-103 TO +356 °F) | ORANGE                              | 135 °C<br>(275 °F)    |
| D                         | FLEXIBLE FLUORO-ELASTOMER | -55 TO +200 °C<br>(-67 TO +392 °F)  | YELLOW                              | 175 °C<br>(347 °F)    |
| G 1/                      | POLYOLEFIN HALOGEN, FREE  | -30 TO +105 °C<br>(-22 TO +221 °F)  | GREEN                               | 120 °C<br>(248 °F)    |
| H 1/                      | ELASTOMERIC,<br>/         | -75 TO +150 °C<br>(-103 TO +275 °F) | BLUE                                | 135 °C<br>(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 3. 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 =  $\pm 0.020$  (0.51 MM), .XXX =  $\pm 0.010$  (0.25 MM)
3. METRIC EQUIVALENTS ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED ON 25.4 MM = 1 INCH. METRIC EQUIVALENTS ARE SHOWN IN PARENTHESES.

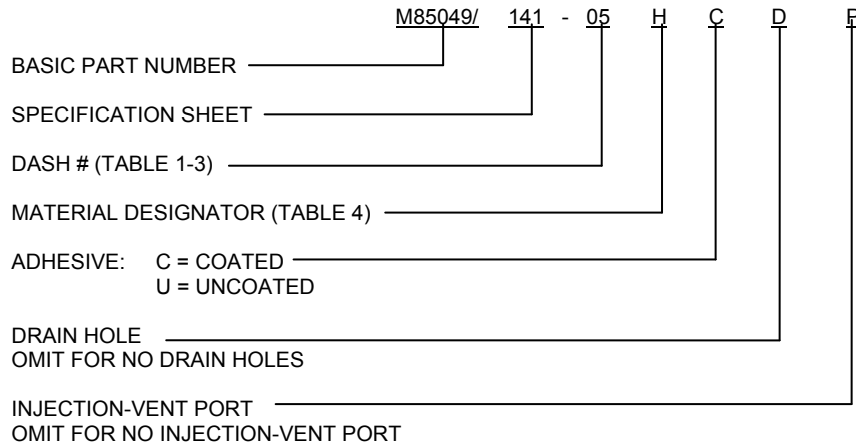
#### REQUIREMENTS:

##### CONNECTOR ACCESSORY DESIGN AND CONSTRUCTION:

1. DIMENSIONS AND CONFIGURATIONS AS SPECIFIED IN FIGURES 1 THRU 3 AND TABLES 1 THRU 3. DIMENSIONS H AND J REDUCED BY 0.06 INCH (1.5 MM) WHEN ADHESIVE IS USED (SEE EXAMPLE PART NUMBER).
2. MATERIAL TYPE AND IDENTIFICATION AS SPECIFIED IN TABLE 4

|                                                                                     |                                                                                       |  |                                      |                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|--------------------------------------|-------------------------|
|  | <b>AEROSPACE STANDARD</b>                                                             |  | <b>AS85049™/141</b><br>SHEET 7 OF 10 | <b>REV.</b><br><b>B</b> |
|                                                                                     | CONNECTOR ACCESSORIES, ELECTRICAL BOOTS,<br>HEAT SHRINKABLE, 90 DEGREE,<br>CATEGORY 7 |  |                                      |                         |

### 3. PART OR IDENTIFYING NUMBER (PIN) EXAMPLE:



### QUALIFICATIONS:

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

### APPLICATION NOTES:

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

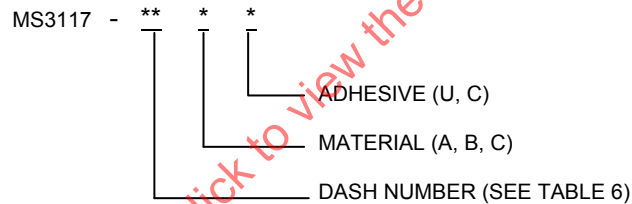


TABLE 5 - AS3117 SUPERSESSION BY AS85049/141  
CROSS REFERENCE

| DASH #                      |                             | MATERIAL |      | ADHESIVE |      | DRAIN HOLE |       | INJECTION-VENT PORTS |       |
|-----------------------------|-----------------------------|----------|------|----------|------|------------|-------|----------------------|-------|
| MS3117                      | /141                        | MS3117   | /141 | MS3117   | /141 | MS3117     | /141  | MS3117               | /141  |
| FIG 1<br>-01<br>THRU<br>-10 | FIG 2<br>-09<br>THRU<br>-18 | B        | A    | C        | C    | REQ        | D     | NONE                 | BLANK |
| FIG 2<br>-11<br>THRU<br>-18 | FIG 1<br>-01<br>THRU<br>-08 | A        | B    | U        | U    | NONE       | BLANK |                      |       |
|                             |                             | C        | D    |          |      |            |       |                      |       |