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AS118B-84

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USE INSTEAD OF

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Title of Document: Hose Assembly, Nonmetallic - 3000 PSI, TFE, Flareless, 45° to 45°, Lightweight

Date of Specific Issue Adopted: March 1984

Releasing Industry Group: Society of Automotives Engineers, Inc.

NOTICE: The procurement document for this component is AS1339B.

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## Military Coordinating Activity:

Air Force - 11

(Project 4720-0667)

## Review Activities:

Army - AV, MI  
Air Force - 99  
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**AS118**

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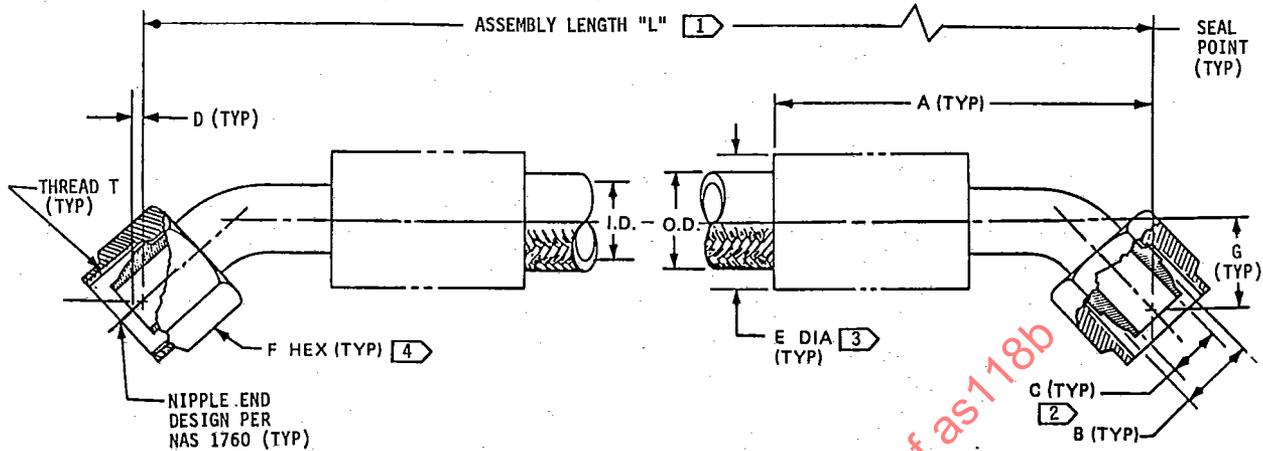


FIGURE 1

DIMENSIONS IN INCHES

TABLE I

| HOSE ASSEMBLY NO. AND SIZE CODE | SIZE REF | THREAD T PER MIL-S-8879 REF | I.D. MIN | A MAX | B SEAL DIA BASIC | C (2) DRILL DIA MIN | D REF | E (3) DIA MAX WITHOUT SLEEVING | F HEX REF | G   |      | BALL SIZE MIN THRU DIA (2) |         |
|---------------------------------|----------|-----------------------------|----------|-------|------------------|---------------------|-------|--------------------------------|-----------|-----|------|----------------------------|---------|
|                                 |          |                             |          |       |                  |                     |       |                                |           | MIN | MAX  | MS19059 DASH NO.           | DIA IN. |
| AS118E                          | 1/4      | .4375-20 UNJF-3B            | .212     | 2.12  | .2930            | .135                | .11   | .69                            | .56       | .31 | .50  | 4807                       | .109    |
| AS118G                          | 3/8      | .5625-18 UNJF-3B            | .298     | 2.44  | .4120            | .240                | .12   | .80                            | .69       | .44 | .62  | 4812                       | .188    |
| AS118H                          | 1/2      | .7500-16 UNJF-3B            | .391     | 2.75  | .5600            | .340                | .13   | .97                            | .88       | .50 | .75  | 4816                       | .313    |
| AS118J                          | 5/8      | .8750-14 UNJF-3B            | .485     | 3.25  | .6730            | .410                | .14   | 1.11                           | 1.00      | .56 | .81  | 4818                       | .375    |
| AS118K                          | 3/4      | 1.0625-12 UNJ -3B           | .602     | 3.75  | .8100            | .510                | .16   | 1.38                           | 1.25      | .62 | .88  | 4821                       | .469    |
| AS118M                          | 1        | 1.3125-12 UNJ -3B           | .852     | 4.50  | 1.0620           | .760                | .21   | 1.66                           | 1.50      | .81 | 1.09 | 4829                       | .719    |

SHEET COMPLETELY REVISED

|   |   |   |   |   |   |   |     |
|---|---|---|---|---|---|---|-----|
| 1 | B | 2 | B | 3 | A | 4 | --- |
|---|---|---|---|---|---|---|-----|

LIST OF ACTIVE SHEETS

PREPARED BY SAE SUBCOMMITTEE G-3D, AEROSPACE HOSE, OF SAE COMMITTEE G-3, AEROSPACE FITTINGS, HOSE, & TUBING ASSEMBLIES

**SAE** The Engineering Resource For Advancing Mobility.  
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

**AEROSPACE STANDARD**  
HOSE ASSEMBLY, NONMETALLIC, 3000 PSI, TFE, FLARELESS, 45° TO 45°, LIGHTWEIGHT

**AS118**  
SH 1 OF 4

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TABLE II

| SLEEVE CODE | SLEEVE MATERIAL  | TEMP. LIMIT OF | TOLERANCE  | HOSE OR SLEEVE OUTSIDE DIAMETER [5] |              |              |               |                |                |
|-------------|--|----------------|------------|-------------------------------------|--------------|--------------|---------------|----------------|----------------|
|             |  |                |            | HOSE SIZE                           |              |              |               |                |                |
|             |  |                |            | 1/4                                 | 3/8          | 1/2          | 5/8           | 3/4            | 1              |
| -           | (--) INDICATES HOSE ONLY, NO SLEEVE (AS 1624)                | 400            | MAX<br>MIN | .390<br>.360                        | .490<br>.455 | .615<br>.585 | .730<br>.690  | .990<br>.950   | 1.270<br>1.230 |
| A           | ABRASION SLEEVE TUBULAR (TFE-AS1291-CODE B) [6]              | 400            | MAX<br>MIN | .500<br>.440                        | .600<br>.540 | .730<br>.670 | .840<br>.780  | 1.110<br>1.050 | 1.400<br>1.340 |
| B           | ABRASION SLEEVE COIL (NYLON AS1294) [7]                      | 275            | MAX<br>MIN | .450<br>.390                        | .550<br>.490 | .695<br>.635 | .810<br>.750  | 1.080<br>1.020 | 1.360<br>1.300 |
| C           | FIRESLEEVE (AS1072 SIL-FG) (15 MIN) [8] [9] [13]             | 400            | MAX<br>MIN | .625<br>.500                        | .750<br>.625 | .875<br>.750 | 1.000<br>.875 | 1.250<br>1.125 | 1.500<br>1.375 |
| D           | ABRASION SLEEVE INTEGRAL SILICONE COMPOSITE [10] [14]        | 350            | MAX<br>MIN | .500<br>.460                        | .600<br>.560 | .700<br>.660 | .830<br>.790  | 1.120<br>1.070 | 1.400<br>1.350 |
| E           | ABRASION SLEEVE SHRINK-ON (FEP) [11]                         | 350            | MAX<br>MIN | .424<br>.374                        | .540<br>.480 | .665<br>.615 | .790<br>.730  | 1.070<br>1.010 | 1.350<br>1.290 |
| F           | ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS 1073 - CODE B) [11] | 275            | MAX<br>MIN | .450<br>.400                        | .560<br>.505 | .695<br>.645 | .810<br>.750  | 1.080<br>1.020 | 1.360<br>1.300 |
| G           | FIRESLEEVE (AS1072 SIL FG) (5 MIN) [8] [9] [12]              | 400            | MAX<br>MIN | .625<br>.500                        | .750<br>.625 | .875<br>.750 | 1.000<br>.875 | 1.250<br>1.125 | 1.500<br>1.375 |
| H           | FIRESLEEVE INTEGRAL SILICONE (15 MIN) (AS 1722) [13]         | 400            | MAX<br>MIN | .660<br>.600                        | .745<br>.685 | .895<br>.835 | 1.005<br>.945 | 1.220<br>1.160 | 1.515<br>1.455 |
| J           | FIRESLEEVE INTEGRAL SILICONE (5 MIN) [12]                    | 400            | MAX<br>MIN | .660<br>.600                        | .745<br>.685 | .895<br>.835 | 1.005<br>.945 | 1.220<br>1.160 | 1.515<br>1.455 |
| K           | INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER [10]            | 300            | MAX<br>MIN | .490<br>.444                        | .570<br>.535 | .695<br>.650 | .800<br>.760  | 1.070<br>1.030 | 1.350<br>1.310 |
| L           | ABRASION SLEEVE COIL (PTFE-AS1293) [7]                       | 400            | MAX<br>MIN | .500<br>.440                        | .600<br>.540 | .730<br>.670 | .862<br>.802  | 1.110<br>1.050 | 1.400<br>1.340 |

TABLE III

| HOSE ASSEMBLY LENGTH | AVAILABLE INCREMENTS       | TOLERANCE                 |
|----------------------|----------------------------|---------------------------|
| UNDER 18 INCHES      | (NOT LESS THAN) .125 INCH  | (PLUS OR MINUS) .125 INCH |
| 18 TO 36 INCHES      | (NOT LESS THAN) .250 INCH  | (PLUS OR MINUS) .250 INCH |
| 36 TO 50 INCHES      | (NOT LESS THAN) .500 INCH  | (PLUS OR MINUS) .500 INCH |
| OVER 50 INCHES       | (NOT LESS THAN) 1.000 INCH | (PLUS OR MINUS) 1 PERCENT |

TABLE IV

| HOSE OR SLEEVE CODE | HOSE OR TYPE SLEEVE                    | UNITS  | MAXIMUM WEIGHT |      |      |      |      |      |
|---------------------|--|--------|----------------|------|------|------|------|------|
|                     |  |        | HOSE SIZE      |      |      |      |      |      |
|                     |  |        | 1/4            | 3/8  | 1/2  | 5/8  | 3/4  | 1    |
| -                   | HOSE ONLY                              | LBS/IN | .009           | .015 | .020 | .027 | .055 | .085 |
| A                   | ABRASION SLEEVE (TFE-AS1291-B)         | LBS/IN | .003           | .004 | .004 | .005 | .007 | .009 |
| B                   | ABRASION SLEEVE (NYLON AS1294)         | LBS/IN | .001           | .002 | .003 | .003 | .004 | .005 |
| C                   | FIRESLEEVE (15 MIN) AS1072             | LBS/IN | .007           | .009 | .011 | .012 | .017 | .021 |
| D                   | ABRASION SLEEVE INTEGRAL WITH HOSE     | LBS/IN | .012           | .016 | .024 | .034 | .067 | .110 |
| E                   | ABRASION SLEEVE (FEP)                  | LBS/IN | .002           | .003 | .003 | .005 | .006 | .007 |
| F                   | ABRASION SLEEVE (AS1073D)              | LBS/IN | .002           | .003 | .003 | .004 | .005 | .006 |
| G                   | FIRESLEEVE (5 MIN) AS1072              | LBS/IN | .007           | .009 | .011 | .012 | .017 | .021 |
| H                   | FIRESLEEVE INTEGRAL (15 MIN) WITH HOSE | LBS/IN | .019           | .027 | .035 | .047 | .099 | .117 |
| J                   | FIRESLEEVE INTEGRAL (5 MIN) WITH HOSE  | LBS/IN | .019           | .027 | .035 | .047 | .099 | .117 |
| K                   | ABRASION SLEEVE POLYESTER WITH HOSE    | LBS/IN | .012           | .016 | .022 | .030 | .060 | .090 |
| L                   | ABRASION SLEEVE (PTFE-AS1293)          | LBS/IN | .003           | .004 | .005 | .005 | .006 | .007 |
| NONE                | FIRE SLEEVE CLAMP                      | LBS/EA | .020           | .020 | .025 | .026 | .026 | .033 |
| NONE                | FITTING END (HOSE SIZE - 45°)          | LBS/EA | .078           | .126 | .218 | .327 | .597 | .860 |

SHEET COMPLETELY REVISED

PREPARED BY SAE SUBCOMMITTEE G-3D, AEROSPACE HOSE, OF SAE COMMITTEE G-3, AEROSPACE FITTINGS, HOSE, & TUBING ASSEMBLIES

**AEROSPACE STANDARD**

HOSE ASSEMBLY, NONMETALLIC, 3000 PSI, TFE, FLARELESS, 45° TO 45°, LIGHTWEIGHT

**AS118**

**SH 2**

Issued AUGUST 1976 Revised (A) OCTOBER 1979 (B) MARCH 1984

AS118

CONSTRUCTION AND PERFORMANCE: AS 1339. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

OPERATING CHARACTERISTICS: SEE AS 1339.

MATERIALS: HOSE AND FITTINGS - PER AS 1339.  
SLEEVES - SEE APPLICABLE STANDARD, TABLE II

MARKING: MARKING SHALL BE PER AS 1339 ON A STAINLESS STEEL BAND NOT OVER 1.0 INCH WIDE, OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF 1/16 INCH HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOVEMENT AND RESULTANT CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND. HOSE ASSEMBLY DATE AND "PT" SYMBOL SHALL BE ELECTROETCHED ON THE BAND OR ON AN END FITTING OR A FIRE-SLEEVE CLAMP.

FLAG NOTES:

- 1 LENGTH "L" IS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE THIRD DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "SEAL POINT" TO "SEAL POINT." FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE III. TO CONVERT "SEAL POINT" TO "SEAL POINT" TO "END TO END" MEASUREMENT, ADD TWO TIMES "D" TO LENGTH "L".
- 2 A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING I.D. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE I SHALL PASS THROUGH THE END FITTING AFTER IT IS ASSEMBLED TO THE HOSE.
- 3 DISTANCE ACROSS CORNERS OF THE COUPLING NUT MAY EXCEED THIS DIMENSION.
- 4 STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH MS21921 OR MS27073 AND MATE WITH MS33514 FITTING ENDS. NONSTANDARD COUPLING NUTS MAY BE USED, PROVIDED THEY ARE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT, AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING. NUTS SHALL MEET TORQUE TEST REQUIREMENTS PER AS 1339.
- 5 DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER TAPE RULE (OFTEN REFERRED TO AS A PI-TAPE).
- 6 TUBULAR ABRASION (TFE) SLEEVES SHALL HAVE AN I.D. NO GREATER THAN HOSE O.D. + .05 INCH. AXIAL MOVEMENT OF THE SLEEVE INSTALLED ON THE HOSE SHALL NOT EXCEED .05 INCH. ENDS OF THE TUBULAR SLEEVE SHALL BE TERMINATED WITH A LENGTH OF MIL-I-23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR, PER TABLE V FIGURE 2.
- 7 COIL ABRASION SLEEVES, WHEN ASSEMBLED ON A STRAIGHT HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN COILS NOT EXCEEDING .05 INCH. DISPLACEMENT OF THE COILS OF THE SLEEVE, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE COILS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENTS. ENDS OF THE COIL SLEEVE SHALL BE TERMINATED WITH A LENGTH OF HEAT SHRINKABLE SLEEVING IN ACCORDANCE WITH TABLE V AND FIGURE 2. CODE "B" (NYLON COIL) ABRASION SLEEVES SHALL BE TERMINATED WITH MIL-I-23053/5 CLASS 1 OR 3, COLOR BLACK. CODE "L" (COIL ABRASION) SLEEVES SHALL BE TERMINATED WITH MIL-I-23053/12A, CLASS 1, COLOR TRANSPARENT, PTFE. (OPTIONAL MIL-I-23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR).

TABLE V

| HOSE SIZE  | LENGTH (INCHES) |
|------------|-----------------|
| 1/4<br>3/8 | 2.00 ± .25      |
| 1/2<br>5/8 | 2.50 ± .25      |
| 3/4<br>1   | 3.00 ± .25      |

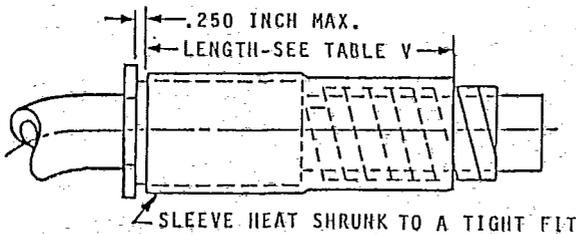


FIGURE 2

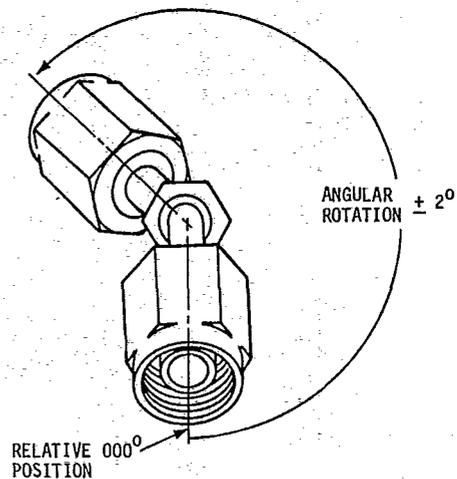


FIGURE 3

SHEET COMPLETELY REVISED

PREPARED BY SAE SUBCOMMITTEE G-3D, AEROSPACE HOSE, OF SAE COMMITTEE G-3, AEROSPACE FITTINGS, HOSE, & TUBING ASSEMBLIES

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HOSE ASSEMBLY, NONMETALLIC, 3000 PST, TFE, FLARELESS, 45° TO 45°, LIGHTWEIGHT

**AS118**

**SH 3**

Issued OCTOBER 1979 Revised (A) MARCH 1984