

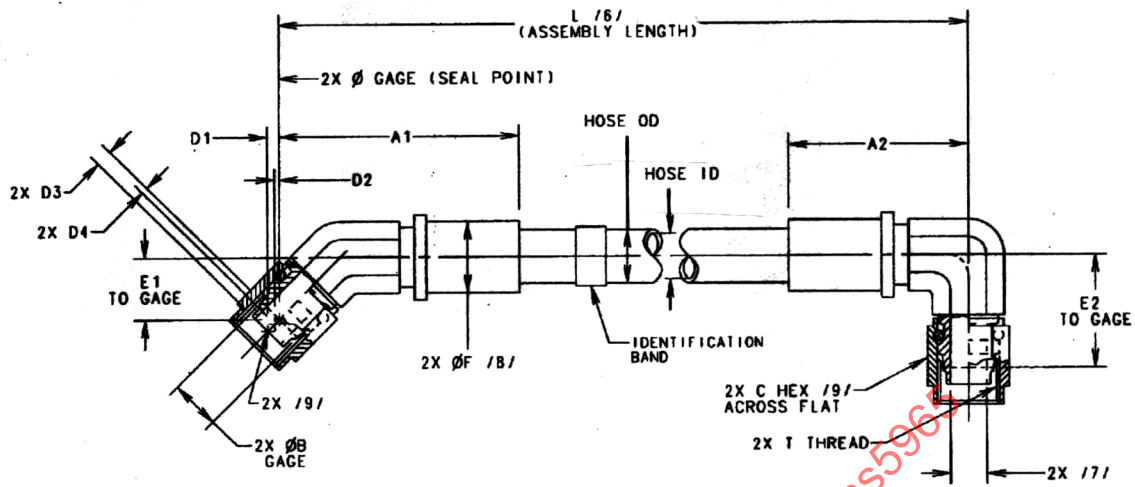


FIGURE 1 - HOSE ASSEMBLY DIMENSIONS

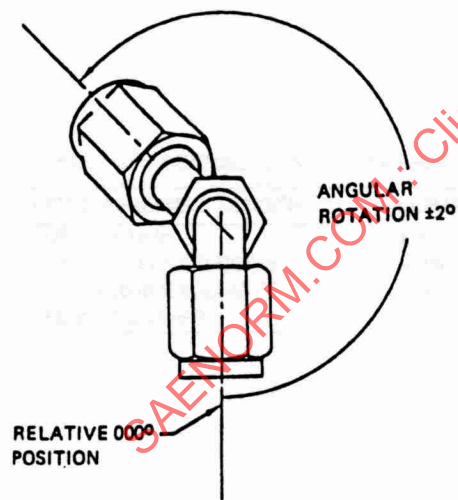


FIGURE 2 - FITTING ORIENTATION / 17 /

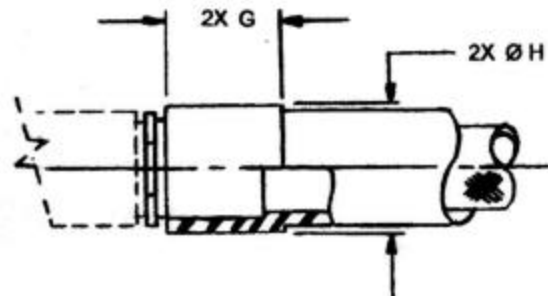


FIGURE 3 - INTEGRAL FIRESLEEVECUFF / 13 /

CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: AS5960 / 2 /

**SAE Aerospace**  
An SAE International Group**AEROSPACE STANDARD**HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE  
CRES BRAID REINFORCED, 400 °F, 5080 PSI  
FLARELESS, 45° ELBOW TO 90° ELBOW**AS5965**  
SHEET 1 OF 5

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TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)  
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TABLE 1 - HOSE ASSEMBLY DIMENSIONS

| HOSE<br>ASSEMBLY<br>AS5965<br>SIZE CODE | SIZE  | THREAD T<br>PER AS8879 | A1<br>MAX | A2<br>MAX | Ø B<br>GAGE<br>BASIC | C<br>HEX | (D1)<br>/9/ | (D2)<br>/9/ | (D3)<br>/9/ | (D4)<br>/9/ |
|-----------------------------------------|-------|------------------------|-----------|-----------|----------------------|----------|-------------|-------------|-------------|-------------|
| E                                       | .250  | .4375-28UNJEF-3B       | 3.05      | 2.78      | .2930                | .56      | .11         | .039        | .16         | .055        |
| G                                       | .375  | .5625-24UNJEF-3B       | 3.16      | 3.05      | .4120                | .69      | .11         | .039        | .16         | .055        |
| H                                       | .500  | .7500-20UNJEF-3B       | 3.73      | 3.39      | .5600                | .88      | .13         | .047        | .19         | .066        |
| J                                       | .625  | .8750-20UNJEF-3B       | 4.06      | 3.69      | .6730                | 1.00     | .14         | .047        | .20         | .066        |
| K                                       | .750  | 1.0625-18UNJEF-3B      | 4.49      | 4.05      | .8100                | 1.25     | .16         | .047        | .23         | .066        |
| M                                       | 1.000 | 1.3125-16UNJ-3B        | 5.39      | 4.92      | 1.0620               | 1.50     | .21         | .047        | .30         | .066        |
| N                                       | 1.250 | 1.6250-16UNJ-3B        | 6.83      | 5.31      | 1.3160               | 1.81     | .21         | --          | .30         | --          |

TABLE 1 - HOSE ASSEMBLY DIMENSIONS (CONTINUED)

| HOSE<br>ASSEMBLY<br>AS5965<br>SIZE CODE | SIZE  | E1<br>MIN | E1<br>MAX | E2<br>MIN | E2<br>MAX | Ø F<br>MAX /8/ | BALL SIZE MIN<br>THRU IN<br>/7/ |
|-----------------------------------------|-------|-----------|-----------|-----------|-----------|----------------|---------------------------------|
| E                                       | .250  | .328      | .458      | .74       | .87       | .88            | .113                            |
| G                                       | .375  | .368      | .498      | .81       | .94       | 1.00           | .192                            |
| H                                       | .500  | .487      | .617      | .99       | 1.12      | 1.20           | .281                            |
| J                                       | .625  | .500      | .630      | 1.14      | 1.34      | 1.41           | .349                            |
| K                                       | .750  | .586      | .786      | 1.35      | 1.55      | 1.69           | .434                            |
| M                                       | 1.000 | .631      | .831      | 1.57      | 1.77      | 2.00           | .638                            |
| N                                       | 1.250 | .750      | .950      | 1.74      | 1.94      | 2.25           | .786                            |

TABLE 2 - HOSE AND SLEEVE OUTSIDE DIAMETER /10/

| SLEEVE<br>CODE | SLEEVE MATERIAL                                              | TEMP<br>LIMIT<br>°F | TOLER<br>ANCE | SIZE<br>.250 | SIZE<br>.375   | SIZE<br>.500   | SIZE<br>.625   | SIZE<br>.750   | SIZE<br>1.000  | SIZE<br>1.250  |
|----------------|--------------------------------------------------------------|---------------------|---------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| -              | (-) INDICATES HOSE ONLY<br>NO SLEEVE (SEE AS5960) REF        | 400°F               | MAX<br>MIN    | .510<br>.450 | .620<br>.560   | .760<br>.700   | .960<br>.835   | 1.120<br>.995  | 1.430<br>1.305 | 1.685<br>1.560 |
| C              | FIRE SLEEVE (AS1072 SIL-FG)<br>(15 MIN) /11/ /12/ /14/       | 400°F               | MAX<br>MIN    | .970<br>.810 | 1.090<br>1.000 | 1.220<br>1.060 | 1.500<br>1.260 | 1.590<br>1.470 | 1.950<br>1.780 | 2.190<br>1.940 |
| F              | ABRASION SLEEVE SHRINK-ON<br>(POLYOLEFIN AS1073-CODE B) /16/ | 275°F               | MAX<br>MIN    | .560<br>.480 | .700<br>.590   | .910<br>.760   | 1.045<br>.895  | 1.205<br>1.080 | 1.530<br>1.370 | 1.785<br>1.660 |
| H              | FIRE SLEEVE, INTEGRAL<br>SILICONE (15 MIN) /14/              | 400°F               | MAX<br>MIN    | .815<br>.755 | .940<br>.880   | 1.060<br>1.000 | 1.200<br>1.075 | 1.420<br>1.295 | 1.740<br>1.615 | 2.000<br>1.875 |
| K              | INTEGRAL ABRASION SLEEVE<br>(BRAIDED POLYESTER) /15/         | 300°F               | MAX<br>MIN    | .590<br>.530 | .710<br>.650   | .860<br>.735   | 1.065<br>.885  | 1.205<br>1.130 | 1.530<br>1.405 | 1.815<br>1.690 |

TABLE 3 - HOSE ASSEMBLY LENGTH TOLERANCE

| HOSE ASSEMBLY LENGTH  | TOLERANCE |
|-----------------------|-----------|
| UNDER 18 in           | ±.125 in  |
| 18 TO 36 in EXCLUSIVE | ±.250 in  |
| 36 TO 50 in EXCLUSIVE | ±.500 in  |
| 50 in AND OVER        | ± 1%      |

TABLE 4 - WEIGHT (MAX)

| HOSE<br>OR<br>SLEEVE<br>CODE | HOSE OR TYPE SLEEVE                              | UNITS | SIZE<br>.250 | SIZE<br>.375 | SIZE<br>.500 | SIZE<br>.625 | SIZE<br>.750 | SIZE<br>1.000 | SIZE<br>1.250 |
|------------------------------|--------------------------------------------------|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| -                            | HOSE ONLY (SEE AS5960) REF                       | LB/IN | .022         | .037         | .046         | .070         | .105         | .170          | .220          |
| C                            | TUBULAR FIRESLEEVE AS1072 (15 min)               | LB/IN | .017         | .020         | .022         | .030         | .035         | .040          | .042          |
| F                            | ABRASION SLEEVE (AS1073-CODE B)                  | LB/IN | .003         | .004         | .005         | .006         | .008         | .010          | .015          |
| H                            | FIRESLEEVE INTEGRAL SILICONE<br>ON HOSE (15 min) | LB/IN | .040         | .060         | .070         | .095         | .140         | .220          | .265          |
| K                            | ABRASION SLEEVE, POLYESTER<br>ON HOSE            | LB/IN | .025         | .040         | .050         | .070         | .110         | .180          | .230          |
| NONE                         | FIRESLEEVE CLAMP                                 | LB/EA | .020         | .025         | .025         | .025         | .032         | .032          | .035          |
| NONE                         | FITTING END (45° ELBOW) /18/                     | LB/EA | .063         | .111         | .189         | .266         | .342         | .637          | .955          |
| NONE                         | FITTING END (90° ELBOW) /18/                     | LB/EA | .066         | .116         | .198         | .300         | .360         | .670          | 1.030         |

TABLE 5 - INTEGRAL FIRESLEEVE CUFF DIMENSIONS /13/

| HOSE SIZE | G MAX | H Ø MAX |
|-----------|-------|---------|
| 04        | 2.56  | 1.04    |
| 06        | 2.68  | 1.17    |
| 08        | 2.88  | 1.29    |
| 10        | 3.32  | 1.45    |
| 12        | 3.38  | 1.65    |
| 16        | 3.38  | 1.98    |
| 20        | 3.81  | 2.23    |

## NOTES:

## 1. MATERIALS:

- a. HOSE AND FITTINGS - PER AS5960.
- b. THE COLLARS/SOCKETS MAY BE STAINLESS STEEL.
- c. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2.

- /2/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS5960. USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS, OR ACCREDITED DISTRIBUTORS, AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS5960 FOR THIS STANDARD WHEN ISSUED. PRIOR TO PRI-QPL ISSUANCE, USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS. WHEN ISSUED, REFER TO <http://www.pri.sae.org/as5960> FOR CURRENT PRI QPL ONLINE.
3. CONSTRUCTION AND PERFORMANCE PER AS5960. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.
4. OPERATING CHARACTERISTICS PER AS5960.
- /5/ MARKING: MARKING SHALL BE PER AS5960 ON A STAINLESS STEEL BAND NOT OVER 1.0 IN WIDE OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .06 in 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 PERMANENTLY MARKED ON THE BAND OR ON AN END FITTING OR A FIRESLEEVE CLAMP.
- /6/ 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 GAGE POINT ON 45° ELBOW TO "CENTERLINE OF 90° ELBOW". FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE 3. TO CONVERT FROM "GAGE POINT TO CENTERLINE" TO "FITTING END TO CENTERLINE", ADD D1 FOR NAS1760 END STYLE, OR D2 FOR AS4458 GLOBE SEAL END STYLE, TO LENGTH "L".
- /7/ HOSE ASSEMBLY INSIDE DIAMETER SHALL BE VERIFIED BY PASSING THE DESIGNATED, OR LARGER, SPHERICAL BALL PER TABLE 1 THROUGH THE HOSE ASSEMBLY.
- /8/ DISTANCE ACROSS CORNERS OF COUPLING NUT AND NIPPLE OR SOCKET/COLLAR HEX MAY EXCEED THIS DIMENSION.
- /9/ FITTING ENDS MUST COMPLY WITH NAS1760, AS4458, OR BE FUNCTIONALLY EQUIVALENT. DIMENSION D1 AND D3 APPLY TO NAS1760 AND D2 AND D4 APPLY TO AS4458. FITTINGS SHALL MATE WITH prEN6123 OR AS5827. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH OR FUNCTIONALLY EQUIVALENT TO AS4370, AS1790, OR AS1792 EXCEPT FOR THREAD PITCH.
- /10/ DIAMETERS ARE LISTED FOR CLAMP SELECTION.
- /11/ THE TABLE 2 SLEEVE DIAMETERS FOR AS1072 SLEEVES APPLY WHEN THE SLEEVE IS COMPRESSED, OR CLAMPED TO CONTACT THE HOSE. IN THIS CASE A WRINKLE MAY OCCUR OVER APPROXIMATELY 10% OF THE SLEEVE CIRCUMFERENCE.
- /12/ THE CUT ENDS OF THE FIRESLEEVE SHALL BE COATED WITH RTV SILICONE RUBBER PRIOR TO INSTALLATION TO PREVENT WICKING OF FLUIDS. THE FIRESLEEVE ENDS SHALL BE SECURED TO THE HOSE ASSEMBLY END FITTINGS WITH CORROSION RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR VOIDS IN THE FIRESLEEVE, WHICH EXPOSE THE FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.
- /13/ THE ENDS OF THE INTEGRAL FIRESLEEVE AND FITTING SOCKET/COLLAR MAY BE COVERED WITH A SILICONE CUFF OR MOLDED SILICONE AS REQUIRED TO COMPLY WITH /14/
- /14/ IDENTIFICATION MARKING: ADD "AS1055 TYPE IIb CLASS B-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIREPROOF" (15 MIN), WITH AS1055.
- /15/ INTEGRAL ABRASION SLEEVE SHALL FORM AN INTEGRAL PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .200 in FROM THE END OF THE COLLAR.
- /16/ THE SHRINK-ON POLYOLEFIN SLEEVE SHALL COVER THE ENTIRE HOSE AND A MINIMUM OF 50% OF THE COLLARS ON BOTH ENDS OF THE ASSEMBLY.