

INCH-POUND

MIL-DTL-83796/17A
w/AMENDMENT 1
24 May 2012
SUPERSEDING
MIL-DTL-83796/17A
26 April 2010

DETAIL SPECIFICATION SHEET

HOSE ASSEMBLY, RUBBER, LIGHTWEIGHT, MEDIUM PRESSURE,
INTERNAL SUPPORT COIL, FIELD ATTACHABLE END FITTINGS,
FLARELESS TO FLANGE, WITH LOCKWIRE HOLE

This specification is approved for use by all
Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-83796.

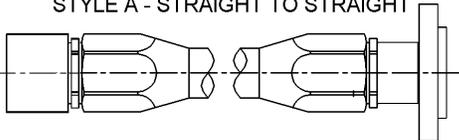
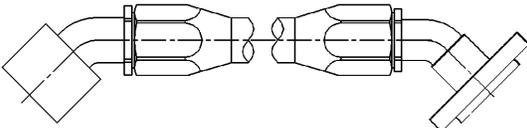
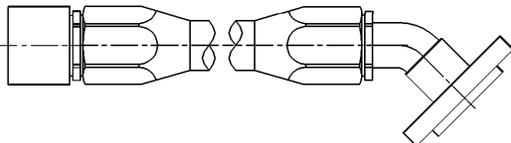
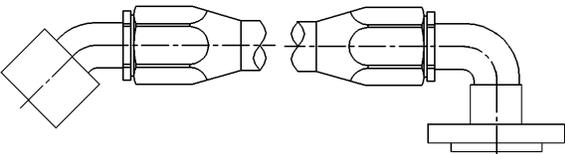
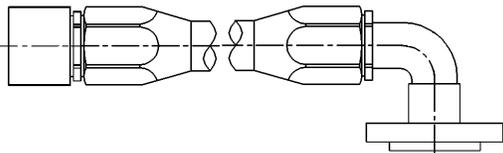
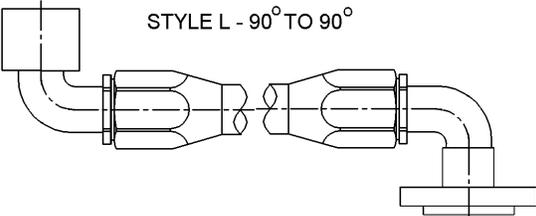
| | | | |
|---|-----------|--|-----------|
| FITTING 1 | FITTING 2 | FITTING 1 | FITTING 2 |
| STYLE A - STRAIGHT TO STRAIGHT | | STYLE G - 45° TO 45° | |
|  | |  | |
| STYLE B - SAME AS STYLE A BUT WITH FIRESLEEVE | | STYLE H - SAME AS STYLE G BUT WITH FIRESLEEVE | |
| STYLE C - STRAIGHT TO 45° | | STYLE J - 45° TO 90° | |
|  | |  | |
| STYLE D - SAME AS STYLE C BUT WITH FIRESLEEVE | | STYLE K - SAME AS STYLE J BUT WITH FIRESLEEVE | |
| STYLE E - STRAIGHT TO 90° | | STYLE L - 90° TO 90° | |
|  | |  | |
| STYLE F - SAME AS STYLE E BUT WITH FIRESLEEVE | | STYLE M - SAME AS STYLE L BUT WITH FIRESLEEVE | |

FIGURE 1. Hose assembly styles, field attachable fittings, flareless-to-flange.

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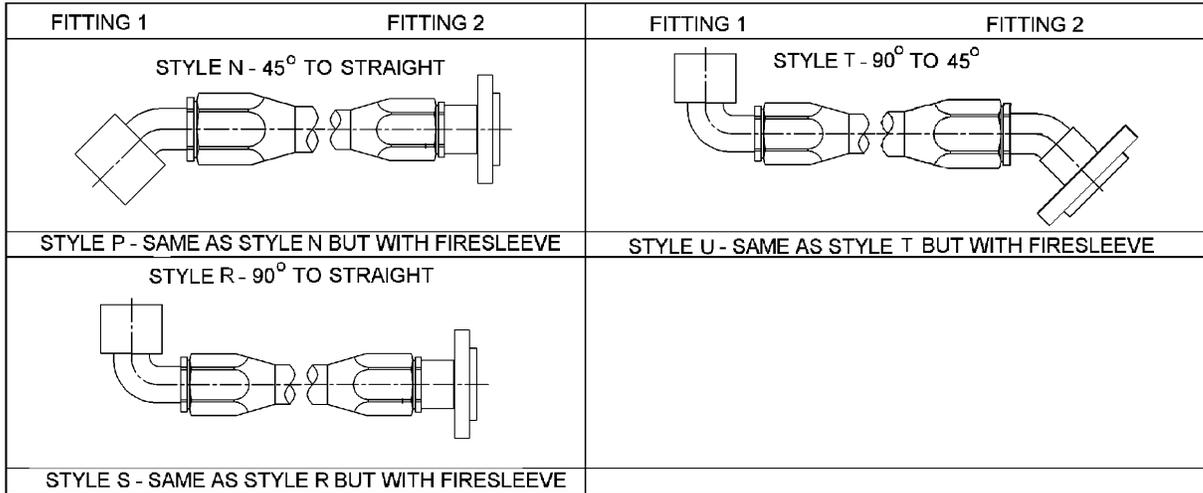


FIGURE 1. Hose assembly styles, field attachable fittings, flareless-to-flange – Continued.

Hose cut-off factor (HCOF). HCOF is calculated as shown in table I.

TABLE I. Hose assembly, field attachable fittings, HCOF, styles A thru U.

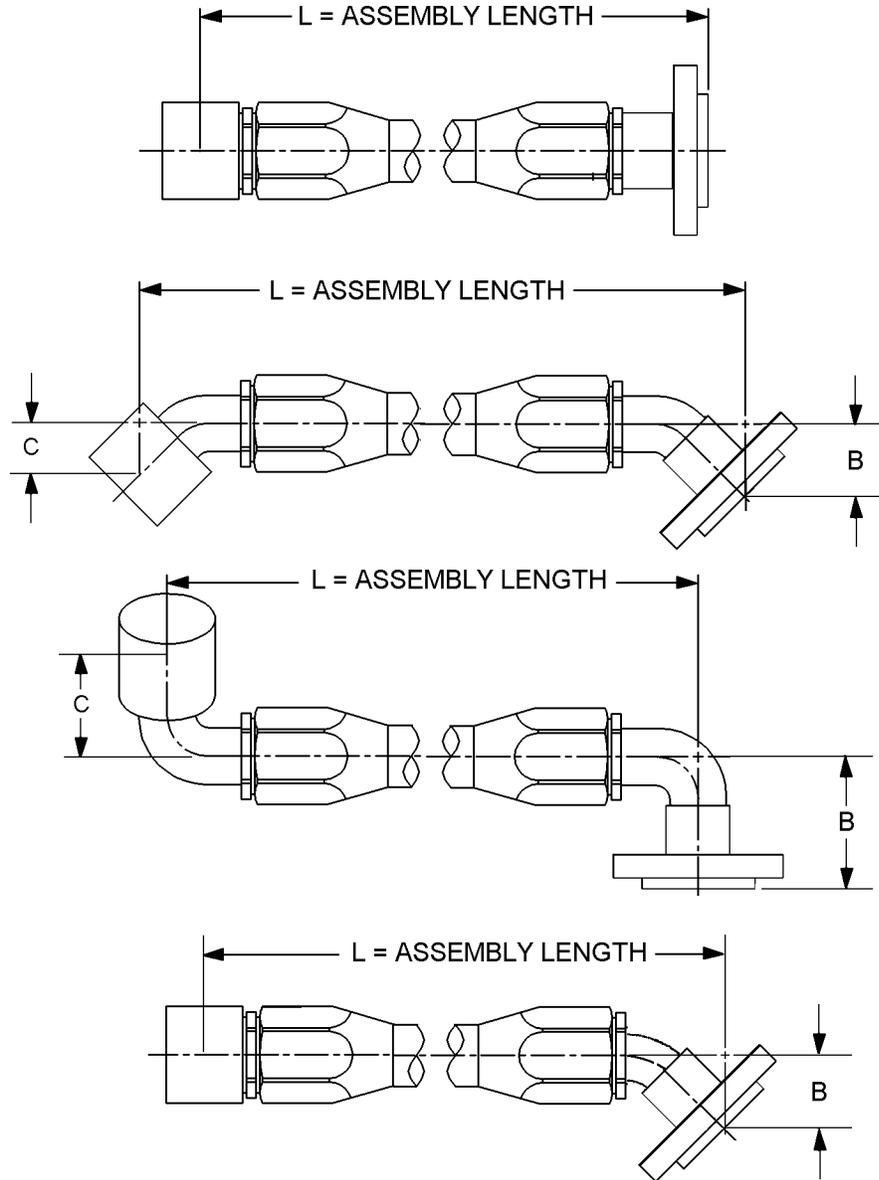
| Style | Fitting ends MIL-DTL-83798 | | MIL-DTL-83797 hose cut off factor (HCOF) ^{1/} inches versus hose dash size number | | | | | | |
|---------|-------------------------------|-----------|---|------|------|------|------|------|------|
| | Fitting 1 | Fitting 2 | -08 | -10 | -12 | -16 | -20 | -24 | -32 |
| A and B | M83798/4 | M83798/7 | 2.34 | 2.42 | 2.62 | 3.06 | 3.57 | 3.67 | 4.20 |
| C and D | M83798/4 | M83798/8 | 2.41 | 2.59 | 2.94 | 3.47 | 3.91 | 4.36 | 5.03 |
| E and F | M83798/4 | M83798/9 | 2.34 | 2.56 | 2.96 | 3.53 | 4.03 | 4.54 | 5.32 |
| G and H | M83798/5 | M83798/8 | 2.69 | 2.94 | 3.47 | 4.09 | 4.61 | 5.11 | 5.82 |
| J and K | M83798/5 | M83798/9 | 2.62 | 2.90 | 3.49 | 4.15 | 4.73 | 5.29 | 6.11 |
| L and M | M83798/6 | M83798/9 | 2.30 | 2.54 | 3.18 | 3.86 | 4.46 | 4.94 | 5.72 |
| N and P | M83798/5 | M83798/7 | 2.62 | 2.77 | 3.15 | 3.48 | 4.17 | 4.42 | 4.49 |
| R and S | M83798/6 | M83798/7 | 2.30 | 2.41 | 2.84 | 3.38 | 3.90 | 4.07 | 4.60 |
| T and U | M83798/6 | M83798/8 | 2.37 | 2.58 | 3.16 | 3.80 | 4.34 | 4.76 | 6.43 |

^{1/} Example of HCOF: for a -08, ½ hose OD, 20-1/2 inch assembly length, style A, the bulk hose length = 20.50 - the HCOF = 20.50 - 2.34 = 18.16. Bulk hose length required is 18.16 inches.

Hose assembly length. The hose assembly length is calculated as shown on figure 2.

Hose assembly elbow fitting drop height. Elbow fitting drop height B and C is calculated as shown on figure 2.

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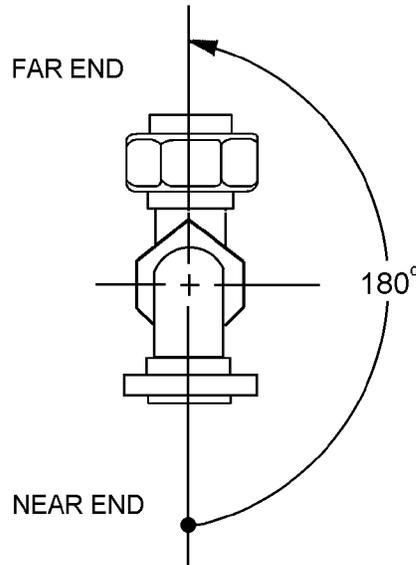
NOTES:

1. Drop height B and C can be found in the applicable MIL-DTL-83798 slash sheet specified in table I.
2. Hose length "L" is measured from one fitting end to another fitting end.

FIGURE 2. Hose assembly dimensions.

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Angular displacement. Angular displacement shall be as shown on figure 3.



NOTES:

1. Angular displacement for hose assemblies with elbow fittings on both ends shall have the angular displacement between elbows, measured counter-clockwise from the centerline of the nearest fitting, positioned at six-o' clock, to the centerline of the other fitting (see SAE-J517).
2. The near end of the connector shall be put in numerical order relative to the far end (see table I). Example: Near end adapter 45°, far end 90°.
3. Angular displacement shall be measured in degrees with a tolerance of $\pm 3^\circ$ for lengths up to 2 feet (61 cm) and $\pm 5^\circ$ for all lengths over 2 feet (61 cm).
4. The angular displacement shall be expressed in two digits number of degrees divided.
5. Making the angular determination in the wrong direction will result in an unacceptable part.

FIGURE 3. Elbow fitting angular alignment.

REQUIREMENTS

Hose assemblies shall be specified on figures 1, 2, and 3.

Fittings shall mate with parts in accordance with SAE-AS33514 and the mounting pad in accordance with MS33786, as applicable.

Hose assembly length tolerance shall be in accordance with MIL-DTL-83796.

Internal support coil. Internal support coil shall be in accordance with Defense Supply Center Columbus drawing 08001. Sleeves shall be spot welded to end of spring to prevent damage to ID of hose assembly.

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Support coil length. The support coil length shall be the overall hose assembly length minus the sum of the overall lengths of each end fitting. Sleeves shall be spot welded to end of spring to prevent damage to ID of hose assembly.

Size codes shall be as specified in table II. Flange fittings not available for sizes -03, -04, -05, and -06.

TABLE II. Size code. 1/ 2/

| Dash number | | -08 | -10 | -12 | -16 | -20 | -24 | -32 |
|-------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Size code | | H | J | K | M | N | P | R |
| Hose OD reference | Inches fraction | 1/2 | 5/8 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 |
| | Inches decimal | .500 | .625 | .750 | 1.000 | 1.250 | 1.500 | 2.000 |
| | mm | 12.70 | 15.88 | 19.05 | 25.40 | 31.75 | 38.10 | 50.80 |

1/ Dimensions are in inches.

2/ Metric equivalents are given for information only.

Materials and finishes shall be in accordance with MIL-DTL-83796 and in table III.

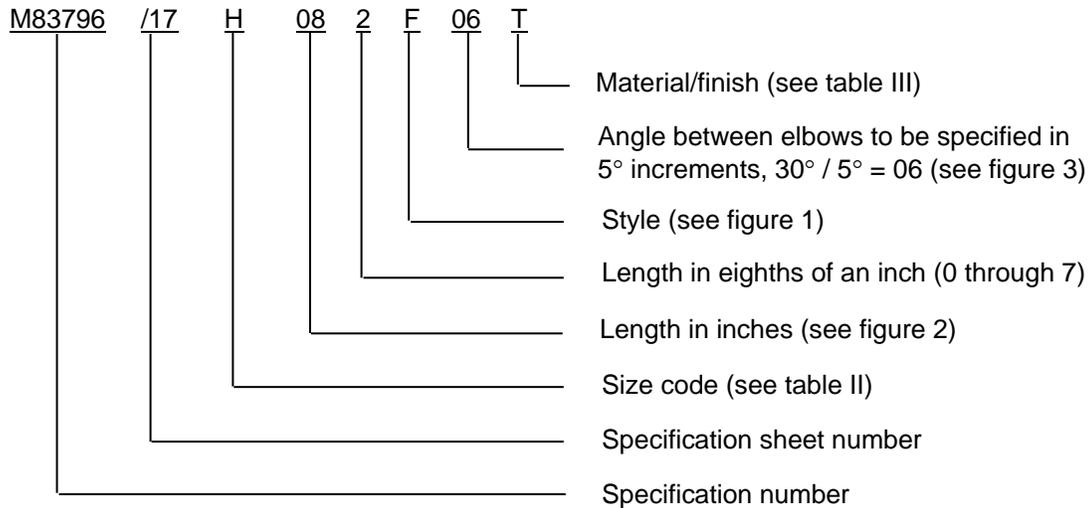
TABLE III. Material and finish code.

| Part or Identifying Number (PIN) code dash letter | Material | Plating Finish |
|---|--------------------|---|
| Blank | Aluminum | Anodize in accordance with MIL-A-8625, type II |
| -T | Titanium <u>1/</u> | Anodized in accordance with SAE-AMS2488, type 2 or fluoride phosphated in accordance with SAE-AMS2486 |

1/. Not to be used in oxygen systems.

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PIN example:



M83796/17H082F06T indicates - Hose assembly for 1/2 hose OD, 8 1/4 inches in length, style F, 30° between elbows, titanium alloy.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-83796, this document references the following:

- | | |
|---------------|-------------|
| MIL-A-8625 | SAE-AMS2486 |
| MIL-DTL-83797 | SAE-AMS2488 |
| MIL-DTL-83798 | SAE-AS33514 |
| MS33786 | SAE-J517 |
| 08001 | |

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CONCLUDING MATERIAL

Custodians:

Army - AV
Navy - AS
Air Force - 99
DLA - CC

Preparing activity:
DLA - CC

(Project 4720-2012-009)

Review activities:

Army - AT
Navy - MC, SA
Air force - 71, 85

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.