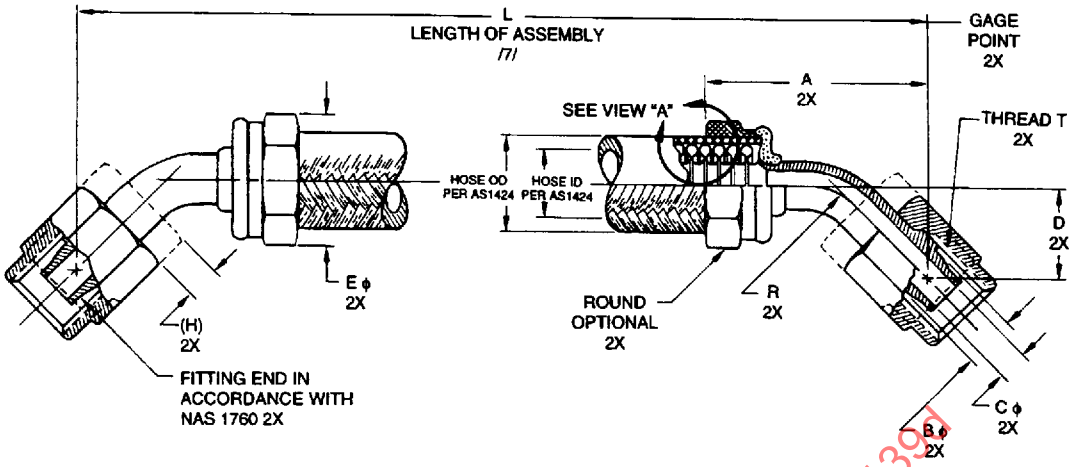
FEDERAL SUPPLY CLASS



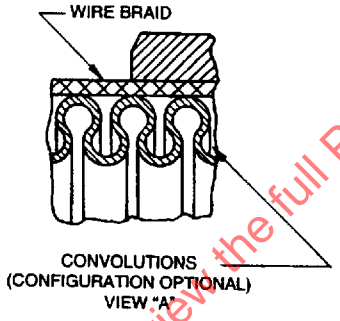


FIGURE 1 - HOSE ASSEMBLY

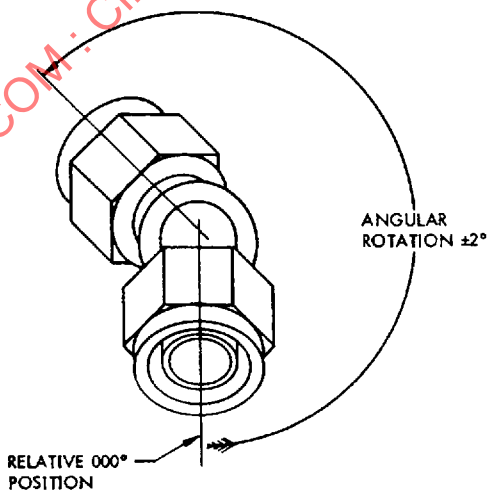


FIGURE 2 - FITTING ANGULAR ORIENTATION /11/

ISSUED 1977-02 REVISED 1999-12

CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: /2/ AS1424

SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

HOSE ASSEMBLY, METAL - MEDIUM PRESSURE, FLARELESS, WELDED, 45° TO 45°

AS139
SHEET 1 OF 5

REV. D

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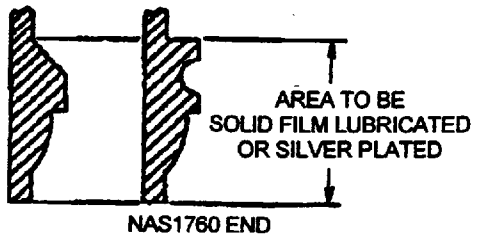


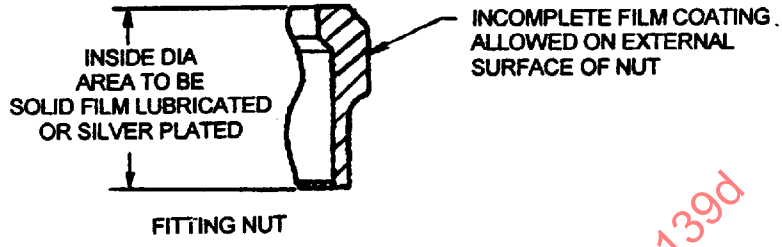


FIGURE 3 - LUBRICANT APPLICATION AREA /17/ /18/

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY SIZE CODE	HOSE SIZE (REF)	A MAX	B GAGE BASIC	C MIN THRU /8/	D MIN	D MAX	E MAX	(H) NOM	R (REF)	THREAD T PER AS8879 (ISO 3161) (REF)
E	.250	1.62	.2930	.141	.49	.61	.900	.40	.250	.4375-20UNJF-3B
F	.312	1.75	.3500	.197	.51	.63	1.100	.40	.312	.5000-20UNJF-3B
G	.375	1.88	.4120	.250	.54	.73	1.200	.40	.375	.5625-18UNJF-3B
H	.500	2.12	.5600	.360	.67	.92	1.300	.47	.500	.7500-16UNJF-3B
J	.625	2.38	.6730	.455	.83	1.08	1.500	.53	.625	.8750-14UNJF-3B
K	.750	2.69	.8100	.568	.86	1.11	1.740	.53	.750	1.0625-12UNJ-3B
M	1.000	3.19	1.0620	.760	.90	1.15	2.300	.53	1.000	1.3125-12UNJ-3B
N	1.250	3.69	1.3160	.920	.94	1.32	2.850	.54	1.250	1.6250-12UNJ-3B

TABLE 2 - ASSEMBLY LENGTH TOLERANCE

HOSE ASSEMBLY LENGTH	LENGTH TOLERANCE
UNDER 10 in	±.062 in
10 TO 36 in EXCLUSIVE	±.125 in
36 TO 50 in EXCLUSIVE	±.250 in
50 in AND OVER	±1%

TABLE 3 - HOSE ASSEMBLY PHYSICAL CHARACTERISTIC

HOSE SIZE CODE	70 °F /5/ OPERATING PRESSURE PSI MAX	70 °F /5/ PROOF PRESSURE PSI MIN	70 °F /5/ BURST PRESSURE PSI MIN
E	2000	3000	8000
F	1800	2700	7200
G	1600	2400	6400
H	1400	2100	5600
J	1200	1800	4800
K	1050	1575	4200
M	800	1200	3200
N	550	825	2200

TABLE 4 - SPHERICAL BALL SIZE FOR DETERMINING MINIMUM HOSE ASSEMBLY ID /8/

HOSE SIZE	ELBOW FITTING
E	.120
F	.167
G	.212
H	.306
J	.387
K	.483
M	.646
N	.782

TABLE 5 - WEIGHTS (NOM)

HOSE SIZE	HOSE LB/IN	STANDARD FITTING (LB) 45° ELBOW
E	.016	.05
F	.018	.08
G	.020	.09
H	.028	.14
J	.038	.22
K	.042	.42
M	.058	.61
N	.072	.97

NOTES:

/1/ MATERIALS:

a. CLASS "N": INNERTUBE - NICKEL ALLOY TYPE 625
ALL OTHER COMPONENTS - 321 CORROSION RESISTANT STEEL

b. CLASS "S": ALL COMPONENTS - 321 CORROSION RESISTANT STEEL

/2/ THIS HOSE ASSEMBLY STANDARD SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS1424. SEE NOTE /15/. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.

NOTES (Continued):

3. MARKING SHALL BE PER AS1424 ON A STAINLESS STEEL BAND NOT OVER 1.0 in WIDE OR ON THE END FITTINGS. THE CHARACTERS SHALL BE A MINIMUM OF .060 HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOTION AND CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND.

4. THESE ASSEMBLIES ARE INTENDED FOR USE IN LOW AND MEDIUM PRESSURE PNEUMATIC SYSTEMS UP TO 850 °F WITH SHORT EXCURSIONS TO 1200 °F. MAXIMUM RATED OPERATING PRESSURE IS DEPENDENT ON AMBIENT OPERATING TEMPERATURE AND CAN BE DETERMINED FROM AS1424.

/5/ SEE AS1424 FOR PRESSURES AT ELEVATED TEMPERATURE.

6. CONSTRUCTION AND PERFORMANCE PER AS1424. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

/7/ LENGTH "L" IS A FOUR DIGIT NUMBER OF WHICH THE FIRST THREE DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE FOURTH DIGIT, IN FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "GAGE POINT" TO "GAGE POINT". SEE TABLE 2 FOR ASSEMBLY LENGTH TOLERANCE.

/8/ A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING ID. HOWEVER, THE APPLICABLE, OR LARGER, BALL DIAMETER LISTED IN TABLE 4 MUST BE CAPABLE OF PASSING THROUGH THE ASSEMBLY.

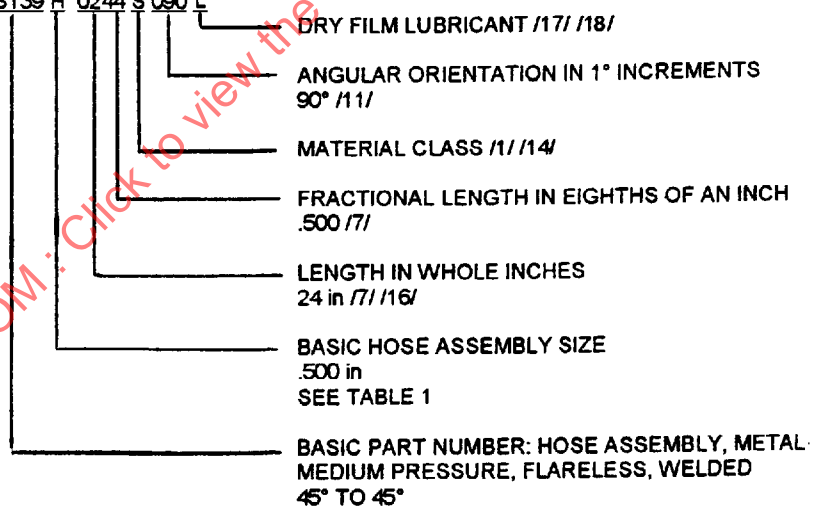
9. DIMENSIONS AND TOLERANCING: ASME Y14.5M-1994.

10. THESE HOSE ASSEMBLIES SHALL ONLY BE USED WHEN THE APPLICATION DOES NOT PRACTICALLY PERMIT THE USE OF A HOSE ASSEMBLY WITH AT LEAST ONE STRAIGHT END FITTING.

/11/ THE FITTING ORIENTATION DASH NUMBER IS A THREE DIGIT NUMBER DEFINING THE RELATIVE POSITION OF THE END FITTINGS IN 1° INCREMENTS (EXAMPLE 090 = 90°). FITTING ORIENTATION SHALL BE MEASURED COUNTERCLOCKWISE FROM THE NEAREST END FITTING WHICH SHALL BE IN THE RELATIVE 000° POSITION (SEE FIGURE 2). WHEN END FITTINGS ARE POINTING IN THE SAME DIRECTION, THE DASH NUMBER SHALL BE "000".

12. THIS PART STANDARD TAKES PRECEDENT IN CASE OF CONFLICT.

13. EXAMPLE OF PART NUMBER: AS139 H 0244 S 090 L



/14/ IF NO MATERIAL CLASS IS DESIGNATED IN ASSEMBLY PART NUMBERS ISSUED PRIOR TO REVISION B, CLASS "S" SHALL BE SUPPLIED.

/15/ A CLASS "N" ASSEMBLY MAY BE SUPPLIED IN LIEU OF CLASS "S" TO MEET AS1424 REQUIREMENTS.

/16/ PRIOR REVISION "A" OF THIS STANDARD DEFINED THE ASSEMBLY LENGTH AS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES. CURRENT REVISION NOW DEFINES THE ASSEMBLY LENGTH AS A FOUR DIGIT NUMBER OF WHICH THE FIRST THREE DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES. PART NUMBERS TO THE PREVIOUS REVISION "A" HAVING TWO DIGITS FOR WHOLE INCHES MAY BE USED WITHOUT CHANGE.

/17/ SUFFIX LETTER "L": APPLY A SOLID FILM LUBRICANT TO THE SEAL AND SHOULDER AREA OF THE NAS1760 END AND TO THE ENTIRE INTERNAL SURFACES OF THE NUT AND NUT RETAINING WIRE (IF USED). OVERSPRAY ON THE EXTERNAL FITTING END AND EXTERNAL NUT SURFACE IS PERMISSIBLE. SEE FIGURE 3. SOLID FILM LUBRICATED ENDS SHALL MEET THE REQUIREMENTS OF NOTE /19/.