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REV.
A

AS5461

FEDERAL SUPPLY CLASS
4720

RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

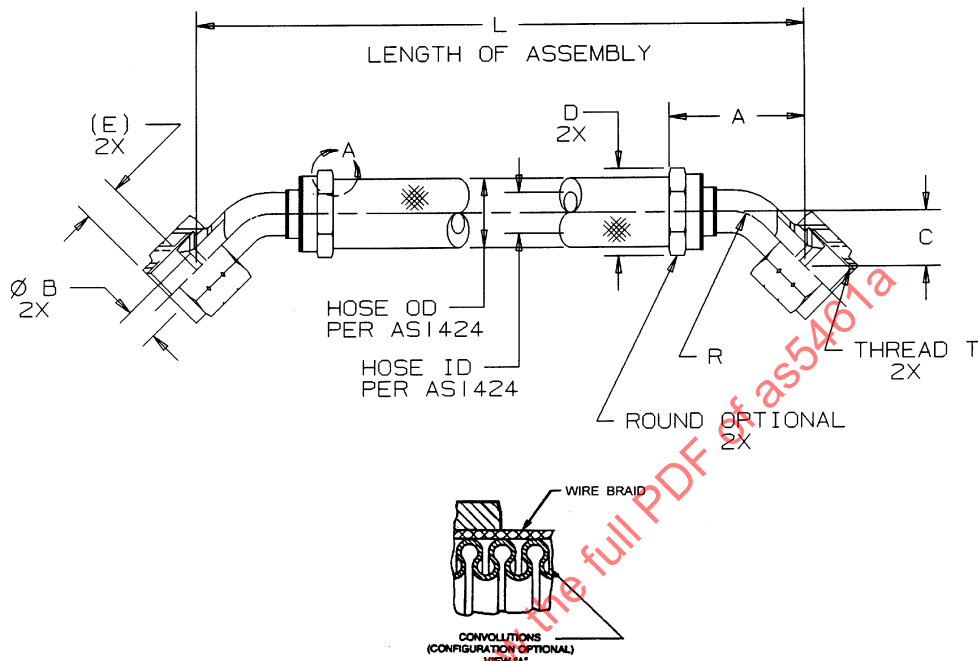


FIGURE 1 - HOSE ASSEMBLY

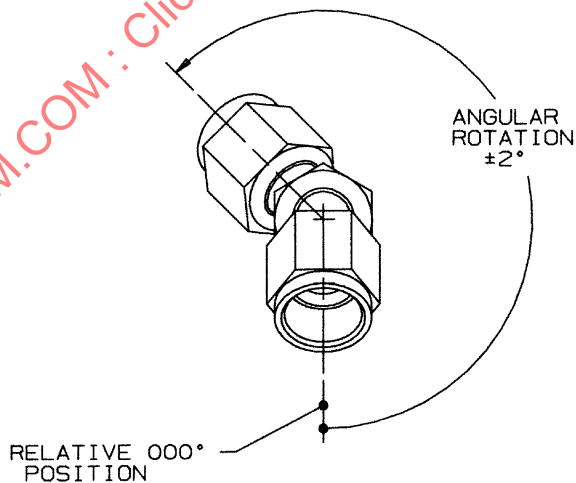
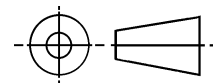


FIGURE 2 - FITTING ANGULAR ORIENTATION /11/

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: /2/ AS1424

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

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

AS5461
SHEET 1 OF 5

**REV.
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ISSUED 2001-03 REVISED 2003-01 REAFFIRMED 2007-07

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TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY SIZE CODE	HOSE SIZE (REF)	A MAX	B MIN THRU /8/	C MIN	C MAX	D MAX	(E) NOM	R (REF)	THREAD T PER AS8879 (ISO 3161) (REF)
E	.250	1.34	.141	.32	.38	.900	.372	.250	.4375-20UNJF-3B
F	.312	1.41	.197	.39	.45	1.100	.375	.312	.5000-20UNJF-3B
G	.375	1.50	.250	.44	.50	1.200	.375	.375	.5625-18UNJF-3B
H	.500	1.71	.360	.54	.60	1.300	.438	.500	.7500-16UNJF-3B
J	.625	1.93	.455	.61	.67	1.500	.515	.625	.8750-14UNJF-3B
K	.750	2.25	.568	.65	.72	1.740	.562	.750	1.0625-12UNJ-3B
M	1.000	2.84	.760	.76	.82	2.300	.620	1.000	1.3125-12UNJ-3B
N	1.250	3.16	.920	.90	.96	2.850	.620	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 ROOM TEMPERATURE PHYSICAL CHARACTERISTIC /5/

HOSE SIZE CODE	OPERATING PRESSURE PSI NOM	PROOF PRESSURE PSI MIN	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

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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	.07
G	.020	.08
H	.028	.13
J	.038	.20
K	.042	.33
M	.058	.55
N	.072	.83

NOTES:

/1/ MATERIALS:

- CLASS "A": INNER TUBE - CORROSION RESISTANT STEEL TYPE 321
BRAID - CORROSION RESISTANT STEEL TYPE 321
BRAID RETAINERS - CORROSION RESISTANT STEEL TYPE 321 OR 347
FITTING COMPONENTS - NICKEL ALLOY TYPE 625 OR 718
- CLASS "B": INNER TUBE - NICKEL ALLOY TYPE 625
BRAID - CORROSION RESISTANT STEEL TYPE 321
BRAID RETAINERS - CORROSION RESISTANT STEEL TYPE 321 OR 347
FITTING COMPONENTS - NICKEL ALLOY TYPE 625 OR 718
- CLASS "N": INNER TUBE - NICKEL ALLOY TYPE 625
BRAID - CORROSION RESISTANT STEEL TYPE 321
BRAID RETAINERS - CORROSION RESISTANT STEEL TYPE 321 OR 347
FITTING COMPONENTS - CORROSION RESISTANT STEEL TYPE 321 OR 347
- CLASS "S": INNER TUBE - CORROSION RESISTANT STEEL TYPE 321
BRAID - CORROSION RESISTANT STEEL TYPE 321
BRAID RETAINERS - CORROSION RESISTANT STEEL TYPE 321 OR 347
FITTING COMPONENTS - CORROSION RESISTANT STEEL TYPE 321 OR 347

NOTES (CONTINUED):

- /2/ THIS HOSE ASSEMBLY 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.
- CHANGE-OVER FROM USER-QPL TO PRI-QPL SHALL BE PERFORMED IN ACCORDANCE WITH AS1424 AND COMPLETED WITHIN SIX MONTHS FROM THE DATE OF ISSUE OF PRI QPL-AS1424. USERS OF THIS STANDARD SHALL PROCURE THIS PRODUCT FROM ACCREDITED MANUFACTURER(S), OR THEIR ACCREDITED DISTRIBUTOR(S), AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST QPL-AS1424 FOR THIS STANDARD.
3. CONSTRUCTION AND PERFORMANCE PER AS1424. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.
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. 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.
- /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. 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 PRECEDENCE IN CASE OF CONFLICT.
13. EXAMPLE OF PART NUMBER:
- AS5461 H 0244 S 090 L

 - DRY FILM LUBRICANT /16/ /17/ - IF REQUIRED
 - ANGULAR ORIENTATION IN 1° INCREMENTS /11/
 - HOSE MATERIAL CLASS /1/
 - FRACTIONAL LENGTH IN EIGHTHS OF AN INCH /7/
 - LENGTH IN WHOLE INCHES /7/
 - BASIC HOSE ASSEMBLY SIZE
SEE TABLE 1
 - BASIC PART NUMBER
14. FITTING ENDS SHALL MATE WITH AS4395. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH OR EQUIVALENT TO AN818 OR AS4370.
- /15/ A CLASS "N" ASSEMBLY MAY BE SUPPLIED IN LIEU OF CLASS "S" TO MEET AS1424 REQUIREMENTS.