This military standard is approved by the Department of Defense and is mandatory on all activities. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

Review activities: DLA- CS

User activities: ARMY - ME

P.A. AIR FORCE-82 (A)

Other Cust NAVY- AS USAF- 99

PROCUREMENT SPECIFICATION NONE

SUPERSEDES: AND10086

TITLE FITTING INSTALLATION, FLARED TUBE AND HOSE, SWIVEL.

MILITARY STANDARD

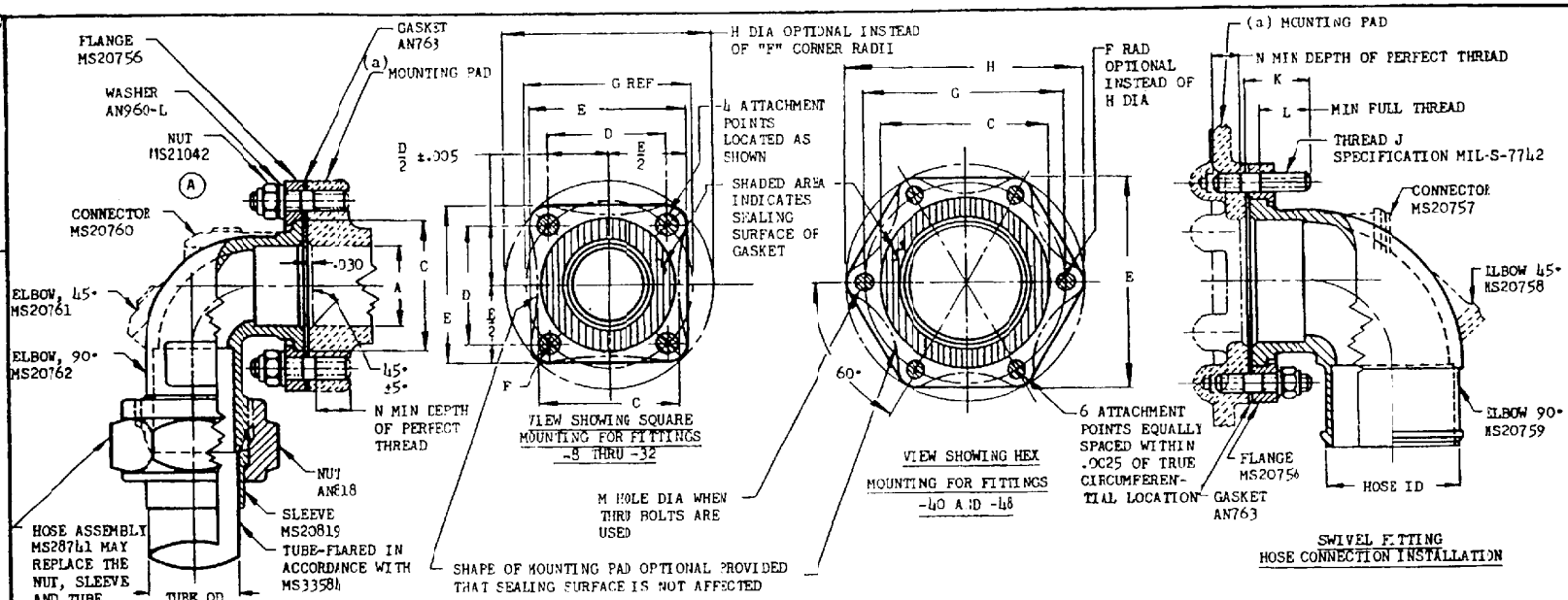
MS 33786

SHEET 1 OF 2

DD FORM 1 SEP 67 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

THIS IS A DESIGN STANDARD. NOT TO BE USED AS A PART NUMBER.



INSTALLATION DIMENSIONS

DASH NO. REF	NOMINAL TUBE AND HOSE SIZE REF	A ±.003 DIA	C +.000 -.005 DIA	D ±.005	E		F RAD	G ±.005 DIA	H DIA	THREAD J	K ±.020	L	M BOLT HOLE +.010 -.000	(c) N	(b) WRENCH TORQUE INCH LBS.
-8	.500	.383	.875	.950	1.390	±.016	.219	1.344	1.782	NO. 10-32 NF-3A	.625	.500	.205	.281	40
-10	.625	.469	1.000	1.038	1.468			1.468	1.906						
-12	.750	.609	1.250	1.156	1.594			1.635	2.094						
-12-16			1.500	1.312	1.750			1.855	2.312						
-16	1.000	.844													
-20	1.250	1.078	1.844	1.656	2.188	±.020	.266	2.342	2.875	1/4 -28 UNF-3A	.688	.562	.266	.375	100
-20-24			2.125	1.812	2.375		.281	2.562	3.094		.750	.525			
-24	1.500	1.312													
-32	2.000	1.781	2.750	2.375	3.000		.312	3.359	3.953	5/16-24 UNF-3A	.812	.688	.328	.469	225
-40	2.500	2.281	3.281		4.000		.375	3.812	4.500						
-48	3.000	2.781	3.781		4.500		.625	4.312	5.000						

(a) DETAIL DESIGN AND CONSTRUCTION OF SWIVEL FITTING MOUNTING PAD OPTIONAL EXCEPT THAT GASKET SEALING SURFACE, AS NOTED, MUST BE FINISHED SMOOTH WITH A SURFACE ROUGHNESS NOT TO EXCEED 150 MICROINCHES RMR.
(b) TABULATED TORQUE VALUES INDICATE LIMITS FOR PROPER SEALING OF FITTING TO PAD.
(c) FOR STUDS AND CAP SCREWS ONLY.
(d) THREAD J APPLIES TO EXTERNAL PORTION OF STUDS AND INTERNAL TAPPED THREAD FOR CAP SCREWS.
CONNECTORS HAVE FIXED OR INTEGRAL MOUNTING FLANGES BUT ALL FITTINGS PROVIDED FOR A GIVEN TUBE OR HOSE SIZE ARE FULLY INTERCHANGEABLE IN MOUNTING DIMENSIONS.
MAX OPERATING PRESSURES: THRU 1 IN.- 1,500 PSI, 1-1/4 THRU 3 IN. - 500 PSI, ABOVE 3 IN. - 200 PSI.
MOUNTING WITH STUDS, STANDARD THRU-BOLTS WITH SELF-LOCKING NUTS OR CAP SCREWS WITH HEADS LOCKWIRED AND THREADED INTO HELICAL COIL OR THREADED INSERTS FOR SOFT METALS.
DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.005.

FED. SUP CLASS 4730

APPROVED 1 Apr 59 REVISED (A) 1 FEB 85

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Review activities: DLA-CS

User activities: ARMY - ME

P.A. AIR FORCE - 82 (A)

Other Cust AIR FORCE -99 NAVY - AS

PROCUREMENT SPECIFICATION NONE

SUPERSEDES: AND 10086

TITLE FITTING INSTALLATION, FLARED TUBE AND HOSE, SWIVEL.

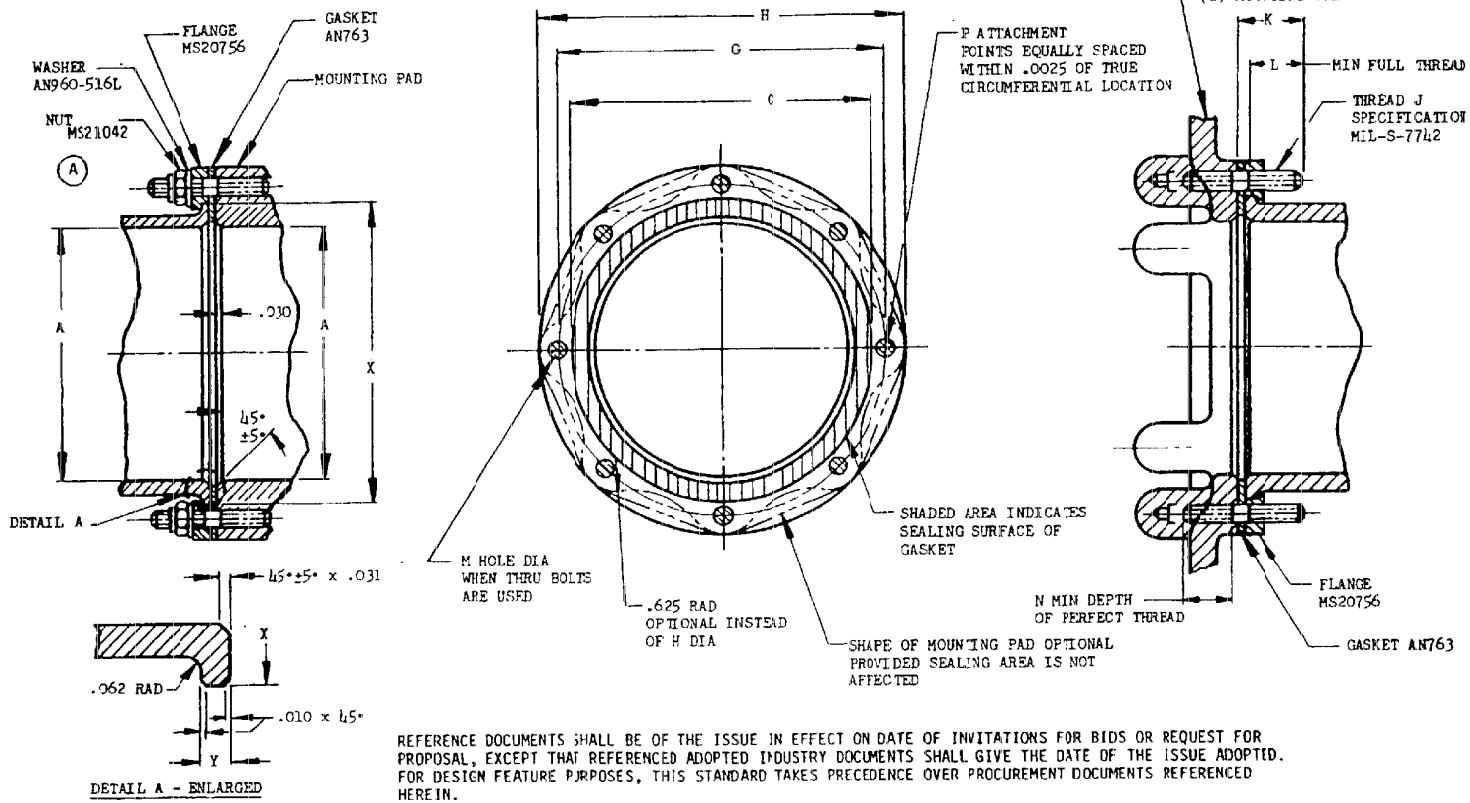
MILITARY STANDARD

MS 33786

SHEET 2 OF 2

DD FORM 1 SEP 57 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.



REFERENCE DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS OR REQUEST FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

DASH NO. REF	NOMINAL TUBE AND HOSE SIZE (REF)	A +.020 -.005 DIA	C DIA		G ±.005 DIA	H MIN DIA	THREAD J (d) UNF-3A	K ±.020	L	M BOLT HOLE +.010 -.000	(c) N	P	X		Y +.005 -.000	(b) WRENCH TORQUE INCH LBS.
56	3.500	3.281	4.281	+.020 -.000	4.875	5.562	5/16-24	.812	.688	.328	.469	8	4.214	+.000 -.010	.188	225
64	4.000	3.781	4.781		5.438	6.125							4.777			
80	5.000	4.781	5.781		6.438	7.125						10	5.777		.208	
96	6.000	5.781	6.781	+.030 -.000	7.438	8.125						12	6.777	+.000 -.020		
112	7.000	6.781	7.781		8.500	9.188						14	7.840		.220	

DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.005, ANGLES ±1/2°.

SEE SHEET 1 FOR NOTES.

FED. SUP. CLASS

APPROVED 1 APR 59 REVISED (A) FOR CHANGES SEE SHEETS 1 AND 2

Project Number 4730-0664