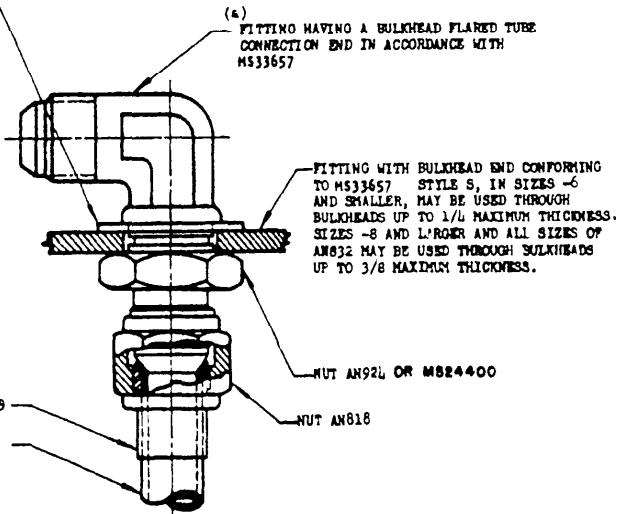


USE WASHER AN960, 1/16 THICK FOR FITTINGS SIZE -6 OR SMALLER, AND 3/32 THICK FOR FITTINGS SIZE -8 OR LARGER WHEN BULKHEAD IS 3/16 THICK OR LESS. WHEN BULKHEAD IS THICKER THAN 3/16, WASHER IS NOT REQUIRED PROVIDED HOLE IN BULKHEAD IS EQUAL TO THE HOLE IN APPLICABLE AN960 WASHER. WASHER IS NOT REQUIRED WHERE FITTING END HAS HEX INSTEAD OF FLANGE SHOWN, PROVIDED HOLE IN BULKHEAD IS EQUAL TO HOLE SIZE IN APPLICABLE AN960 WASHER.



SLEEVE MS20819  
TUBING - FLARED IN ACCORDANCE WITH MS33504 OR MS33583

(A) FITTING HAVING A BULKHEAD FLARED TUBE CONNECTION END IN ACCORDANCE WITH MS33657

FITTING WITH BULKHEAD END CONFORMING TO MS33657, STYLE S, IN SIZES -6 AND SMALLER, MAY BE USED THROUGH BULKHEADS UP TO 1/4 MAXIMUM THICKNESS. SIZES -8 AND LARGER AND ALL SIZES OF AN832 MAY BE USED THROUGH BULKHEADS UP TO 3/8 MAXIMUM THICKNESS.

NUT AN924 OR MS24400

NUT AN818

BULKHEAD AND FLARED TUBE INSTALLATION

TABLE I

DASH NOS. REF	TUBING OD INCHES	WRENCH TORQUE FOR TIGHTENING AN818 NUT (POUND INCH)						HOSE ASSEMBLIES (POUND INCH)	
		ALUMINUM-ALLOY TUBING		STEEL TUBING		ALUMINUM-ALLOY TUBING (FLARE MS33583) FOR USE ON OXYGEN LINES ONLY		MIL-H-8790	MIL-H-26666
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
-2	1/8	20	30	75	85	---	---	SEE NOTES 1] AND 2] BELOW	SEE NOTES 1] AND 2] BELOW
-3	3/16	25	35	95	105	---	---		
-4	1/4	50	65	135	150	---	---		
-5	5/16	70	90	170	200	100	125		
-6	3/8	110	130	270	300	200	250		
-8	1/2	230	260	450	500	300	400		
-10	5/8	330	360	650	700	---	---		
-12	3/4	460	500	900	1000	---	---		
-16	1	500	700	1200	1400	---	---		
-20	1-1/4	800	900	1520	1680	---	---		
-24	1-1/2	800	900	1900	2100	---	---		
-28	1-3/4	---	---	---	---	---	---		
-32	2	1800	2000	2660	2940	---	---		

1] WHEN THE HOSE FITTING (WIPPLE AND NUT) IS ALUMINUM, THE MIN/MAX VALUES FOR ALUMINUM ALLOY TUBING SHALL APPLY.

2] WHEN THE HOSE FITTING (WIPPLE AND NUT) IS STEEL, THE MIN/MAX VALUES FOR STEEL TUBING SHALL APPLY.

INSTALLATION OF FITTING HAVING THE CONNECTION END IN ACCORDANCE WITH MS33656 IS SIMILAR, EXCEPT THAT THE END IS NOT USED THROUGH BULKHEADS. WRENCH TORQUES FOR ASSEMBLING THE TUBING ARE THE SAME.

NOMINAL USE: AIRFRAME FLUID CONNECTIONS

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

P.A. Air Force - II Other Code Navy - AS Army - AV	TITLE FITTINGS -- INSTALLATION OF FLARED TUBE, STRAIGHT THREADED CONNECTORS, DESIGN STANDARD FOR	MILITARY STANDARD <b>MS21344</b>
PROCUREMENT SPECIFICATION	SUPERSEDES: AND10064	SHEET 1 OF 3

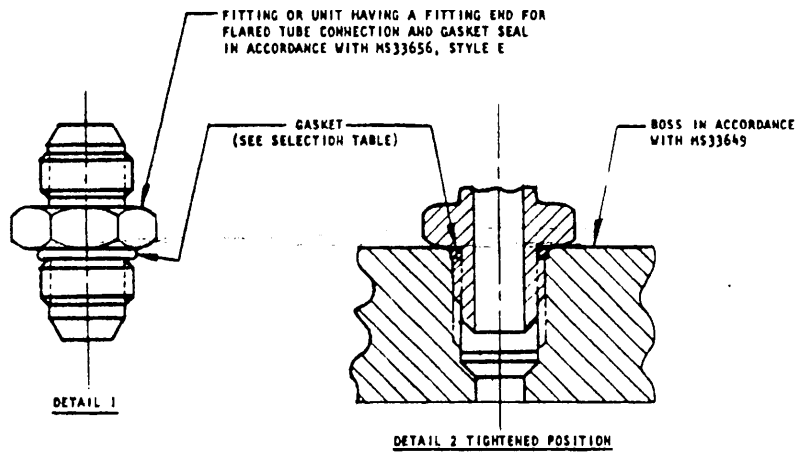
User activities:  
Army - EL, MI

Review activities:  
Army - AV, WC, MU

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.

REVISED  
APPROVED 17 Aug 71

FED. SUP CLASS



NON-POSITIONING TYPE FITTING INSTALLATION SUITABLE FOR NOMINAL OPERATING PRESSURES UP TO AND INCLUDING 3000 PSI

PROCEDURE FOR INSTALLATION OF MS33656 FITTING END, STYLE E.

1. LUBRICATE THE GASKET IN APPROPRIATE LIQUID (SEE TABLE II).
2. INSTALL GASKET ON THE FITTING AS SHOWN IN DETAIL 1.
3. SCREW THE FITTING ASSEMBLY INTO THE BOSS UNTIL IT BOTTOMS TIGHTLY ON THE BOSS AS SHOWN IN DETAIL 2.

TABLE II		
GASKET SELECTION TABLE		
APPLICATION	MS NO.	APPROPRIATE LUBRICATING LIQUID
HYDRAULIC	MS28778	MIL-H-5606 OR PETROLATUM
ENGINE OIL	MS28778	ENGINE OIL
FUEL	MS29512	APPLICABLE FUEL
PNEUMATIC	MS28778	MIL-G-4343

User activities:  
Army - EL, MI

Revised activities:  
Army - AN, WC, WJ

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

APPROVED 17 Aug 71 REVISED

P.A. Air Force - 11	TITLE	MILITARY STANDARD
Other Code Navy - AS Army - AV	FITTING--INSTALLATION OF FLARED TUBE, STRAIGHT THEADED CONNECTOR, DESIGN STANDARD FOR	MS21344
PROCUREMENT SPECIFICATION	SUPERSEDES: AND10084	SHEET 2 OF 2

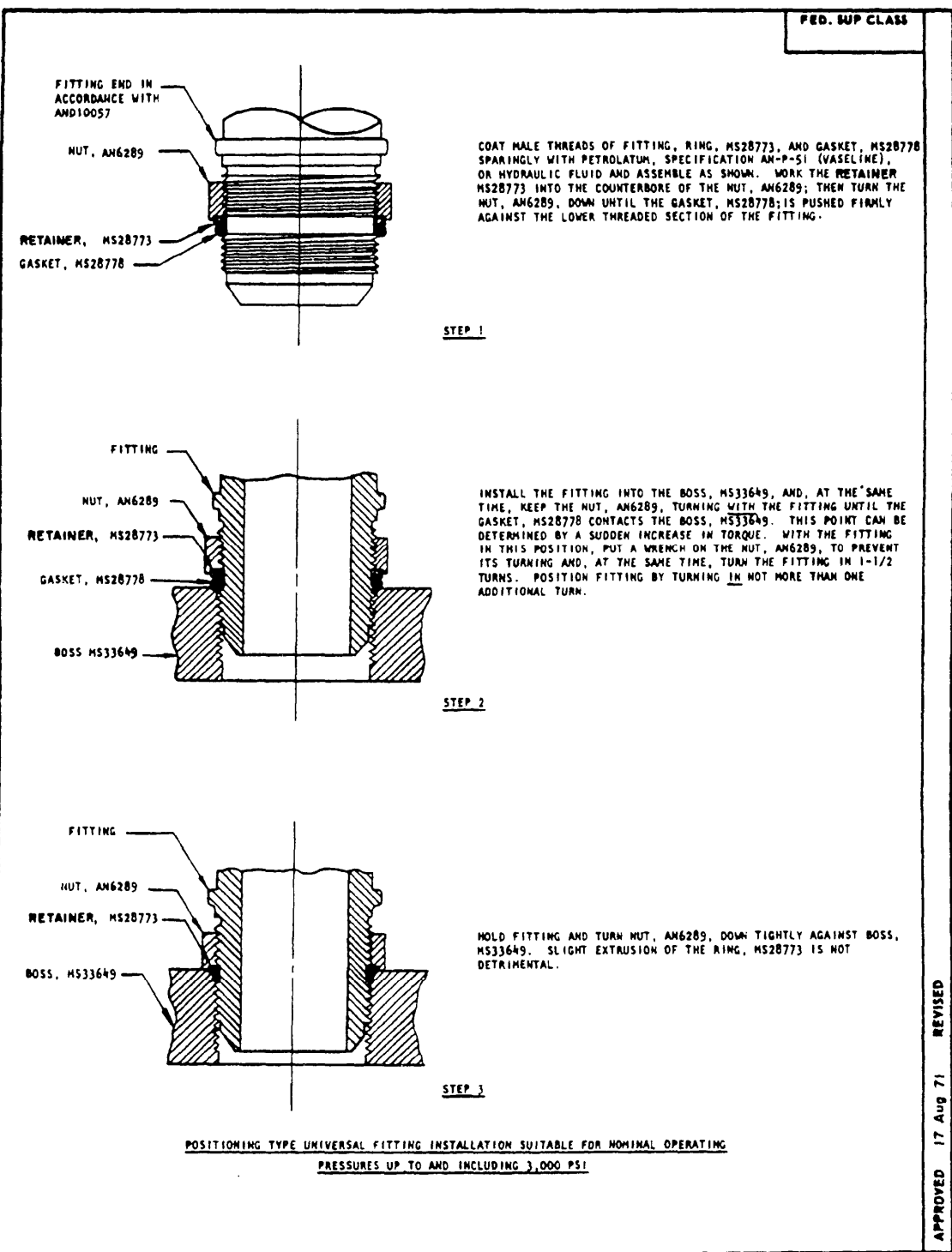
DD FORM 672-1

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

User activities:  
Army - EL, MI

Review activities:  
Army - AV, WC, MU

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.



APPROVED 17 Aug 71 REVISED

P.A. Air Force - 11 Other Code Navy - AS Army - AV	TITLE	MILITARY STANDARD
	FITTINGS--INSTALLATION OF FLARED TUBE, STRAIGHT THREADED CONNECTORS, DESIGN STANDARD FOR	MS21344
PROCUREMENT SPECIFICATION	SUPERSEDES: AND10084	SHEET 3 OF