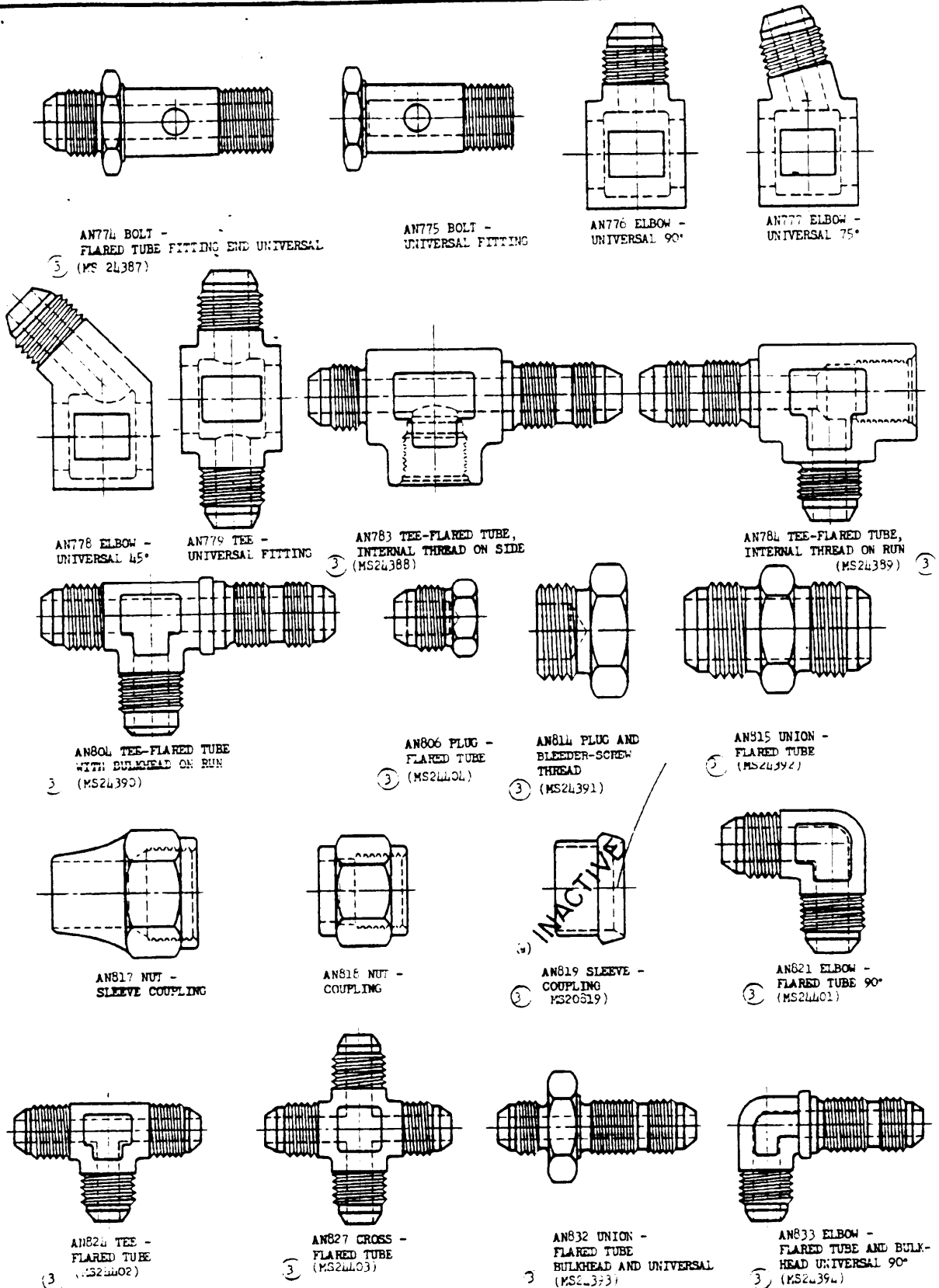


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(e) INACTIVE FOR DESIGN AFTER 26 AUG 57. USE MS20619. STRAIGHT THREADED FITTINGS-FLARED TUBE TYPE. SEE SHEET 3 FOR PIPE THREADED FITTINGS, AND SHEET 4 FOR HOSE CLAMP TYPE FITTINGS. MS STANDARDS SHOWN IN PARENTHESIS ARE PRECISION TYPE FITTINGS. 3 FOR CHANGES SEE SHEETS 2, 3, AND 4.

**AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD**  
**FITTINGS-STYLES OF PIPE THREADED, FLARED TUBE AND HOSE**

**AND10059**

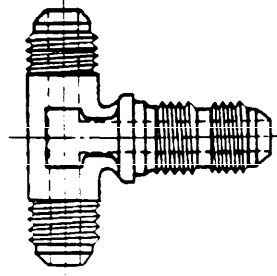
SHEET 1 OF 1

NOT A PART NUMBER

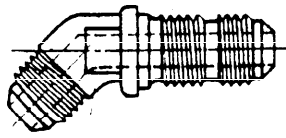
APPROVED 22 Dec 42 REVISED 22 Dec 48 22 JUN 54 9 Jan 64

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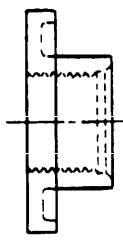
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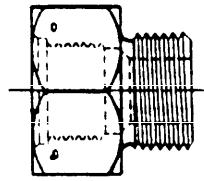
AN83L TEE - BULKHEAD AND UNIVERSAL FLARED TUBE (MS24395)



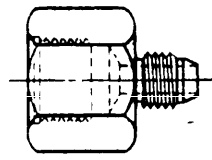
AN83T ELBOW - FLARED TUBE AND UNIVERSAL, 45° (MS24396)



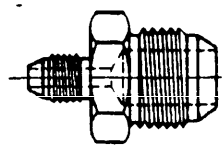
AN87I FLANGE - STRAIGHT THREAD BOSS WELDING



AN893 BUSHING - SCREW THREAD REDUCER (MS24397)



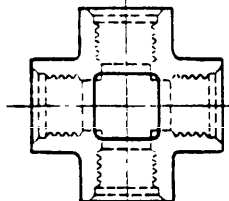
AN89L BUSHING - SCREW THREAD EXPANDER (MS24398)



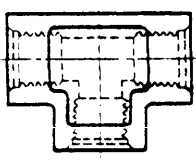
AN919 REDUCER - EXTERNAL THREAD FLARED TUBE (MS24399)



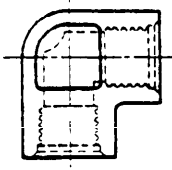
AN92L NUT - FLARED TUBE, BULKHEAD AND UNIVERSAL FITTING (MS24400)



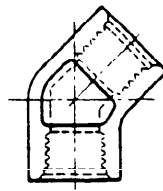
AN937 CROSS - INTERNAL SCREW THREAD



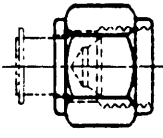
AN936 TEE - INTERNAL SCREW THREAD



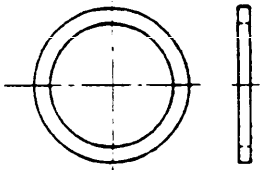
AN939 ELBOW - INTERNAL SCREW THREAD 90°



AN94L ELBOW - INTERNAL SCREW THREAD 45°



AN929 CAP - PRESSURE SEAL FLARED TUBE FITTING



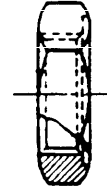
AN901 GASKET - METAL TUBE CONNECTION SEAL



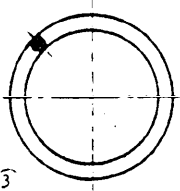
AN902 GASKET - FLARED TUBE UNIVERSAL FITTING



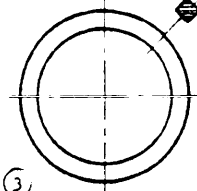
AN960 WASHER - PLAIN



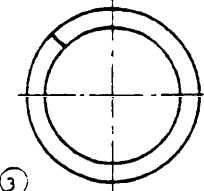
AN6286 NUT - FLARED TUBE, BULKHEAD AND UNIVERSAL FITTING



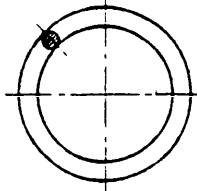
MS28778 GASKET - STRAIGHT THREAD TUBE FITTING BOSS



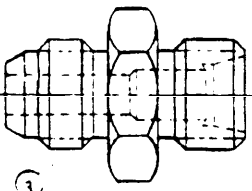
MS28777 RING - HYDRAULIC FITTING GASKET BACK-UP



MS9058 RING - BACK-UP BOSS CONNECTION



MS29512 GASKET - FUEL RESISTANT STRAIGHT THREAD TUBE FITTING, BOSS



MS21900 ADAPTER FLARELESS TUBE TO AN FLARED TUBE (MS24405)

(a) AN902 CANCELED 22 JUNE 1954.

STRAIGHT THREADED FITTINGS - FLARED TUBE TYPE. SEE SHEET 3 FOR PIPE THREADED FITTINGS, AND SHEET 4 FOR HOSE CLAMP TYPE FITTINGS.

AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD  
 FITTINGS - STYLES OF PIPE THREADED, FLARED TUBE AND HOSE

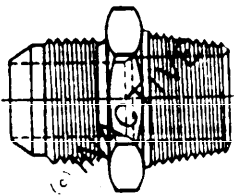
AND10059  
 SHEET 2

NOT A PART NUMBER

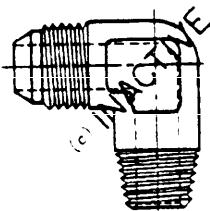
APPROVED 19 Dec 42 REVISED 1 22 Dec 48 2 22 Jun 54 3 FOR CHANGES SEE SHEETS 1, 2, 3, AND 4

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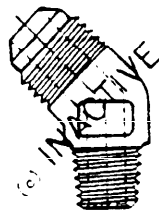
AIR FORCE  
 AIR FORCE  
 NOTE: This drawing was approved by joint action of the Army and Navy Departments as the Army-Navy standard for this product. This drawing supersedes all antecedent standard drawings for the same product and shall be considered obsolete for the purpose of procurement, or for use in new designs, not later than 6 months after the latest date of approval shown. It may be put into effect, however, at an earlier date after promulgation.



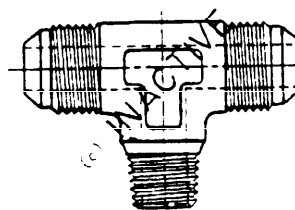
AN816 NIPPLE -  
 FLARED TUBE AND  
 PIPE THREAD



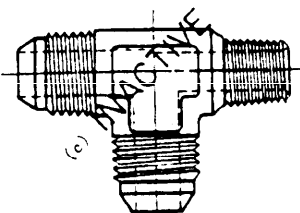
MS20822 ELBOW -  
 FLARED TUBE AND  
 PIPE THREAD, 90°



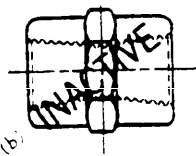
MS20821 ELBOW -  
 FLARED TUBE AND  
 PIPE THREAD, 45°



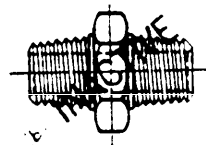
MS20820 TEE - FLARED  
 TUBE WITH PIPE  
 THREAD ON SIDE



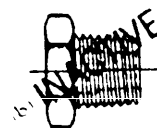
MS20821 TEE - FLARED  
 TUBE WITH PIPE  
 THREAD ON RUN



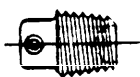
AN910 COUPLING -  
 PIPE THREAD



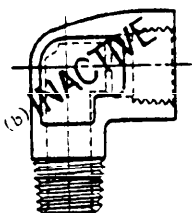
AN911 NIPPLE -  
 PIPE THREAD



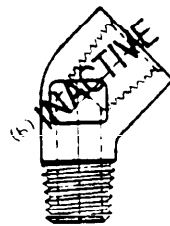
AN912 BUSHING -  
 REDUCER



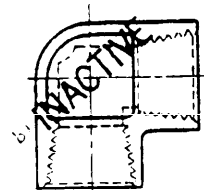
MS20812 ELBOW  
 SQUARE HEAD  
 PIPE THREAD



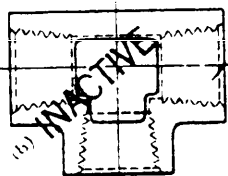
AN914 ELBOW -  
 INTERNAL AND EXTERNAL  
 PIPE THREAD 90°



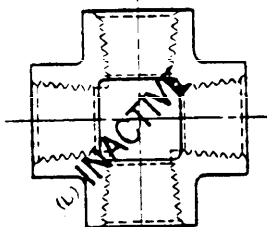
AN915 ELBOW -  
 INTERNAL AND EXTERNAL  
 PIPE THREAD 45°



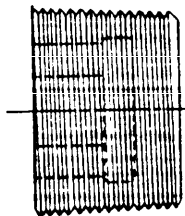
AN916 ELBOW -  
 INTERNAL PIPE  
 THREAD 90°



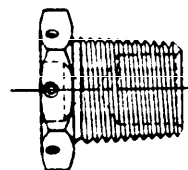
AN917 TEE -  
 INTERNAL PIPE THREAD



AN918 CROSS -  
 INTERNAL PIPE THREAD



AN932 PLUG -  
 COUNTERSUNK HEX  
 HEAD PIPE



AN933 PLUG -  
 PIPE, HEX HEAD

PIPE THREADED FITTINGS. SEE SHEETS 1 AND 2 FOR STRAIGHT THREADED FITTINGS, AND SHEET 1 FOR HOSE CLAMP TYPE FITTINGS.

(a) AN910, AN911, AN912, AN914, AN915, AN916, AN917 AND AN918 INACTIVE FOR DESIGN AFTER 27 JUNE 1951, EXCEPT IN OXYGEN SYSTEMS AND GROUND SERVICE EQUIPMENT.

(b) AN816, MS20822, MS20821, MS20820 AND MS20821 INACTIVE FOR DESIGN AFTER 9 JANUARY 1951 EXCEPT IN OXYGEN SYSTEMS AND GROUND SERVICE EQUIPMENT.

AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD  
 FITTINGS-STYLES OF PIPE THREADED, FLARED TUBE  
 AND HOSE

AND10059

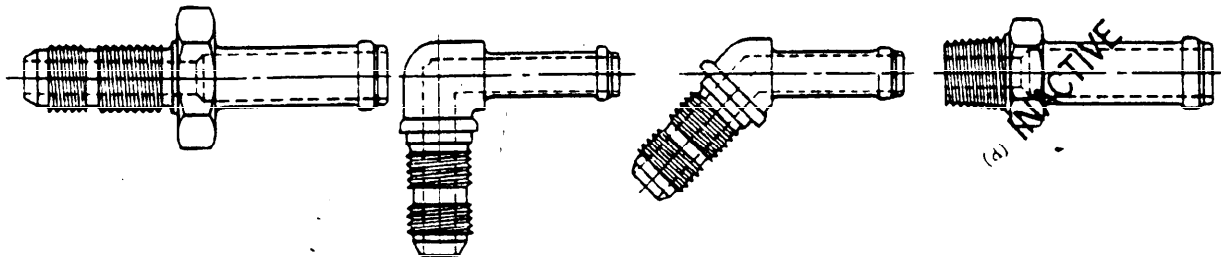
SHEET 3

NOT A PART NUMBER

APPROVED 22 Dec 48 REVISED 3 FOR A-10 SEE SHEETS 1, 2, 3, AND 4.

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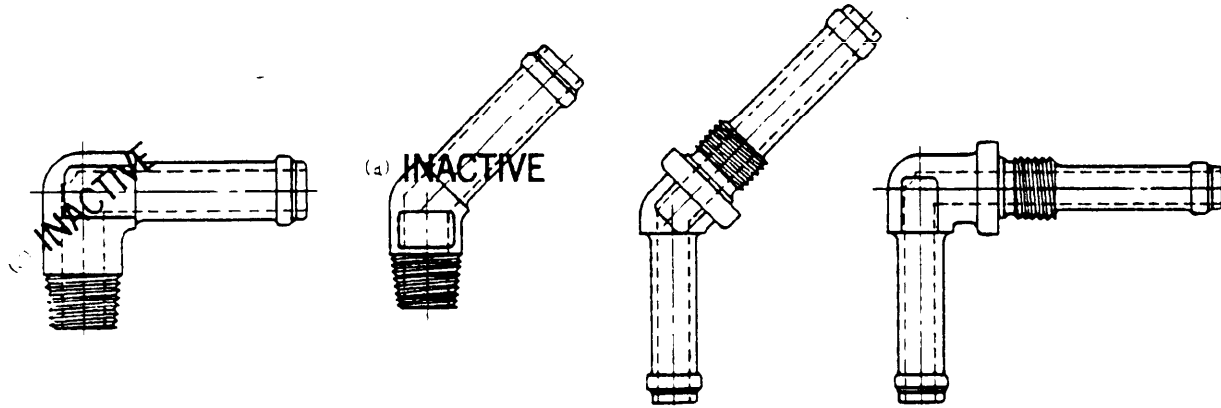


AN807 ADAPTER-  
HOSE TO UNIVERSAL

AN836 ELBOW-  
HOSE TO UNIVERSAL 90°

AN839 ELBOW-  
HOSE TO UNIVERSAL 45°

AN840 ADAPTER-  
HOSE TO PIPE THREAD

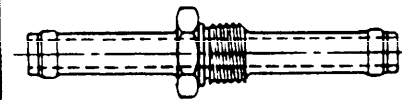


AN842 ELBOW-  
PIPE THREAD, AND  
HOSE 90°

AN844 ELBOW-  
PIPE THREAD, AND  
HOSE 45°

AN846 ELBOW-  
HOSE BULKHEAD 45°

AN848 ELBOW-  
HOSE BULKHEAD 90°



AN849 CONNECTOR-  
HOSE BULKHEAD

(c) AN810, AN812 AND AN811 INACTIVE FOR DESIGN AFTER 22 JUNE 1951.

- 3. BEADED TUBE FITTINGS. SEE SHEETS 1 AND 2 FOR STRAIGHT THREADED FITTINGS, AND SHEET 3 FOR PIPE THREADED FITTINGS.
- 3. BEADED TUBE FITTINGS LISTED ON THIS SHEET ARE NOT PERMITTED FOR USAGE IN HYDRAULIC AND PNEUMATIC SYSTEMS.

APPROVED 22 Dec 48 REVISED 3 FEB 49 SEE S PETS 1, 2, 3, AND 4

AIR FORCE-NAVY AERONAUTICAL DESIGN STANDARD  
FITTINGS - STYLES OF PIPE THREADED, FLARED TUBE  
AND HOSE

AND10059

SHEET 1

NOT A PART NUMBER