

HOSE CLAMP INTERCHANGEABILITY AND CROSS REFERENCE CHART

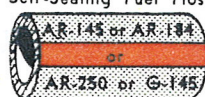

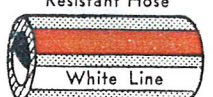
NOTE: (*) To interpret chart, the following example is given: What clamps can be used on non-self sealing hose of 1-1/8 in. O.D.? See asterisk line 6—read straight across. The

"inside diameter of clamps" in the 7th column indicates 1-1/8 in. hose clamp which corresponds with size of hose in examples. Reading across, we find that the following clamps can

be used: 1. AN748-38—2. Aero Seal Type QS-100 Clamp M-2—3. Murray Corporation AC-3—4. Wittek FB-A-10—5. FB-CA-10—6. 42A-11615-10—7. AN746-9.

























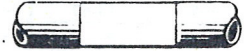















Non Self-Sealing Hose			Self-Sealing Hose			For further information on Hose, see "Hose Chart" in alphabetical index of Cross Reference Charts.									
Aromatic Resistant Spec. AN-ZZ-H-456a			Spec. 26587				1	2	3	4	5	6	7	8	9
Non-Aromatic Resistant Spec. AN-H-26			Approx. Wall Thickness			Inside Dia. of Clamp	AN748 Revision 1	Aero Seal Type QS-100	Murray Corp. AC	Wittek FB-A	Wittek FB-CA	42A11615	AN746	Wittek FB	Bell 40C20
Inside Dia.	Max. Outside Dia.	Approx. Wall Size	Inside Dia.	Approx. Outside Dia.	Approx. Wall Thickness										
						1/2"								-4	-0
1/4"	5/8"	3/16"				5/8"	-22	M-4						-5	-2
3/8"	3/4"	3/16"				3/4"	-26	M-6	-0	-4	-4	-4	-6	-4	-4
1/2"	7/8"	3/16"				7/8"	-30	M-8	-1	-6	-6	-6	-7	-6	-6
5/8"	1"	3/16"				1"	-34	M-10	-2	-8	-8	-8	-8	-8	-8
(*) 3/4"	1-1/8"	3/16"				1-1/8"	-38	M-12	-3	-10	-10	-10	-9		
7/8"	1-1/4"	3/16"				1-1/4"	-44		-4	-12	-12	-12	-10	-12	-12
1"	1-3/8"	3/16"	5/8"	1-5/16"		1-3/8"	-46		-5				-11		
			3/4"	1-7/16"		1-1/2"	-48	M-16	-6	-16	-16	-16	-12	-16	-16
1-1/8"	1-5/8"	1/4"				1-5/8"	-56	M-20	-7				-13		
1-1/4"	1-3/4"	1/4"	1"	1-11/16"		1-3/4"	-58	M-24	-8	-20	-20	-20	-14		
1-3/8"	1-7/8"	1/4"				1-7/8"	-66		-9				-15		
1-1/2"	2"	1/4"	1-1/4"	2-1/16"		2"	-66	M-28	-10	-28	-28	-24	-16	-28	
1-3/4"	2-1/4"	1/4"	1-1/2"	2-5/16"		2-1/4"	-74	M-32	-12	-36	-36	-28	-18	-36	
2"	2-1/2"	1/4"				2-1/2"	-82	M-36	-14	-44	-44	-32	-20	-44	
2-1/4"	2-3/4"	1/4"	2"	2-13/16"		2-3/4"	-91	M-40	-15			-36	-22	-52	
2-1/2"	3"	1/4"				3"	-98	M-44	-16	-60	-60	-40	-24	-60	
2-3/4"	3-1/4"	1/4"	2-1/2"	3-5/16"		3-1/4"	-107	M-48				-44	-26	-68	
3"	3-1/2"	1/4"				3-1/2"	-114	M-52				-48	-28	-76	
3-1/4"	3-3/4"	1/4"				3-3/4"		M-56				-52	-30	-84	
3-1/2"	4"	1/4"				4"		M-60				-56	-32	-92	
3-3/4"	4-1/4"	1/4"				4-1/4"		M-60				-60		-100	
4"	4-1/2"	1/4"				4-1/2"		M-64				-64	-36		

Wall thickness varies from approximately 5/16" to approximately 3/8".

<p>Aromatic Resistant Self-Sealing Fuel Hose</p> 	<p>Identification Number Stamped Every 12 Inches. AR-145—G-145—Goodyear Make AR-184—Goodrich Make AR-250—U. S. Rubber Make All To Spec. 26587</p>	<p>NOTE: Stocked in 5/8" I.D. and larger diameters. Goodrich hose stamped 166' may be continued in service until replacement is necessary in which case the above approved hose will be used.</p>
<p>Aromatic Resistant Aircraft Hose</p> 	<p>Part No. AN884 including latest amendments to Specification Nos. 26577 and AN-ZZ-H-456a.</p>	<p>NOTE: Stocked in 3/16" I.D. and larger diameters. All hose installed in airplane fuel systems using over 91 octane fuel, will be aromatic resistant or self-sealing aromatic resistant hose.</p>
<p>Non Aromatic Resistant Hose</p> 	<p>Part No. AN878—Hose Aircraft Standard lengths to be fabricated from hose aircraft oil and coolant Spec. AN-H-26 which supersedes Spec. 26577A. Part No. AN880—Hose Aircraft Standard lengths, Spec. No. 20-103 and 26577A. Part No. AN882—Hose Aircraft Standard lengths, Spec. No. AN-ZZ-H-456.</p>	<p>NOTE: Non aromatic-resistant aircraft hose is stocked in 1/4" I.D. and larger sizes. This type of hose is not self-sealing. Hose of this type installed in the fuel systems of airplanes operating on a fuel of 100 octane or higher will be removed and replaced. Airplanes operating on a fuel of 91 octane or lower may use this type of hose in fuel systems. This type of hose will be used in the oil and coolant systems of all airplanes since hose of this type has less tendency to "cold flow."</p>

NOTE: Some hose clamps have been procured under AN748-44, -52, -61, -69, -78, -98, -121, -137, -153, -169, -186, and -202. The dash numbers represent sixty-fourths of an inch. In the future, hose clamps will be procured under AN748, Revision 1, dash numbers representing thirty-seconds of an inch as shown in Column 1 of Chart.

MARKINGS OF UNITED STATES AIRCRAFT LINES














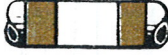





KIND OF LINE	UNITED STATES AN BANDING	KIND OF LINE	UNITED STATES AN BANDING
AIR PRESSURE (Compressed)		Hydraulic Pressure Oil	
Max. 20 P. S. I.		Manifold Pressure	
Min. 25 P. S. I.		Manifold Pressure Line to Fuel Tank Pressure Unit	
AIR DUCTS (Cabin Heaters)		OIL (Lubricating)	
Cold		OXYGEN (A)*	
Hot		Distribution	
ANTI-ICING		Filler	
Alcohol		PITOT PRESSURE (B)*	
Glycerine and Alcohol		Airspeed	
CO-DETECTOR SYSTEM		Stall Warning	
COOLANT		Purging	
Prestone		Smoke Screen Equipment	
Water		STATIC PRESSURE	
EXHAUST ANALYZER		Airspeed, Altimeter, Rate of Climb	
Exhaust Lines from Combustion Type Heaters		Stall Warning	
Fire Extinguishers		STEAM	
Flotation Equipment		VACUUM	
FUEL		VENT (Closed Compartments)	
Gasoline		WATER (Drinking)	
Propane			
(HEATERS)			
Air Vapor Supply Lines, to Combustion Type Cabin Heaters			

*NOTES: In airplanes where there is an oxygen filler line from a filler valve to the oxygen cylinders, and a distribution line from the oxygen cylinders to the dispensing equipment, the identification marking shall be as indicated.

(A) Where no filler and distribution system exists, the oxygen lines shall be identified by light green.

(B) The two black bands of the pitot pressure stall warning shall be spaced one-eighth inch apart. All bands shall be one-half inch wide and shall encircle the tube. Bands shall be located near each end of the tube and at such intermediate points as may be necessary to follow through the system.

MARKINGS OF BRITISH AIRCRAFT LINES

SERVICE	COLOUR DESIGNATION	SERVICE	COLOUR DESIGNATION
FUEL		Fire Extinguisher	
OIL		CO ₂ for Flotation Gear Actuation for Walter Kidde Gear	
COOLANT		VARIABLE PITCH PROPELLER	
COMPRESSED AIR		EXACTOR CONTROL	
HYDRAULIC		DE-ICING, Wing, Air	
AUTOMATIC CONTROLS		DE-ICING, Wing, Fluid	
ENGINE STARTING		DE-ICING, Windscreen, Fluid	
OXYGEN		DE-ICING, Propeller	
VACUUM FOR FLYING INSTRUMENTS		DE-ICING, Carburetor	
		MISCELLANEOUS SERVICES not included in the above	
		(No color designation)	

NOTES: Colours quoted are in accordance with BSS (British Standard Service) 381. The colour numbers are as follows:

Blue—No. 4

Brown—No. 14

Green—No. 18

Red—No. 38

Yellow—No. 56

Any doubtful cases of classification and any suggested additions to this list shall be referred to the DTD (Director of Technical Development) for approval.

The bands shall be approximately of the following sizes for any pipe diameter:

Broad bands 1/2" wide

Narrow bands 1/4" wide

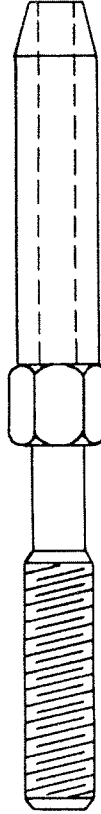
Distance between bands not more than 1/4".

CABLE TERMINAL CROSS REFERENCE CHART FOR SWAGING



Terminal Threaded End To Be Used With Clevis	Terminal AN	Sleeve Army	Terminal Navy	Terminal Consolidated	Terminal Curtiss	Terminal North American	End Douglas	Terminal Martin	Terminal Beech	Cable Size
L.H. 6-40	AN666-2L	39B617-2L	310621-10A-2L A-310621-2L	310621-10A-2L A-310621-2L	310621-10A-2L A-310621-2L	310621-10A-2L A-310621-2L	2049216-10A-2L 5018957-10A-2L	27-1-10A-2L C12-1-10A-2L	10A-2L	1/16
R.H. 6-40	AN666-2R	39B617-2R	310621-10A-2R A310621-2R	310621-10A-2R A310621-2R	310521-10A-2R A310521-2R	310621-10A-2R A310621-2R	2049216-10A-2R 5018957-10A-2R	27-1-10A-2R C12-1-10A-2R	10A-2R	1/16
L.H. 10-32	AN666-3L	39B617-3L	310621-21A-3L A310621-3L	310621-21A-3L A310621-3L	310621-21A-3L A310621-3L	310621-21A-3L A310621-3L	2049216-21A-3L 5018957-21A-3L	27-1-21A-3L C12-1-21A-3L		3/32
R.H. 10-32	AN666-3R	39B617-3R	310621-21A-3R A310621-3R	310621-21A-3R A310621-3R	310621-21A-3R A310621-3R	310621-21A-3R A310621-3R	2049216-21A-3R 5018957-21A-3R	27-1-21A-3R C12-1-21A-3R		3/32
L.H. 1/4-28	AN666-4L	39B617-4L	310621-34A-4L A310621-4L	310621-34A-4L A310621-4L	310621-34A-4L A310621-4L	310521-34A-4L A310621-4L	2049216-34A-4L 5018957-34A-4L	27-1-34A-4L C12-1-34A-4L		1/8
R.H. 1/4-28	AN666-4R	39B617-4R	310621-34A-4R A310621-4R	310621-34A-4R A310621-4R	310621-34A-4R A310621-4R	310621-34A-4R A310621-4R	2049216-34A-4R 5018957-34A-4R	27-1-34A-4R C12-1-34A-4R		1/8
L.H. 1/4-28	AN666-5L	39B617-5L	310621-34A-5L A310621-5L	310621-34A-5L A310621-5L	310621-34A-5L A310621-5L	310621-34A-5L A310621-5L	2049216-34A-5L 5018957-34A-5L	27-1-34A-5L C12-1-34A-5L		5/32
R.H. 1/4-28	AN666-5R	39B617-5R	310621-34A-5R A310621-5R	310621-34A-5R A310621-5R	310621-34A-5R A310621-5R	310621-34A-5R A310621-5R	2049216-34A-5R 5018957-34A-5R	27-1-34A-5R C12-1-34A-5R		5/32
L.H. 5/16-24	AN666-6L	39B617-6L	310621-46A-6L A310621-6L	310621-46A-6L A310621-6L	310621-46A-6L A310621-6L	310621-46A-6L A310621-6L	2049216-46A-6L 5018957-46A-6L	27-1-46A-6L C12-1-46A-6L		3/16
R.H. 5/16-24	AN666-6R	39B617-6R	310621-46A-6R A310621-6R	310621-46A-6R A310621-6R	310621-46A-6R A310621-6R	310621-46A-6R A310621-6R	2049216-46A-6R 5018957-46A-6R	27-1-46A-6R C12-1-46A-6R		3/16

CABLE TERMINAL CROSS REFERENCE CHART FOR SWAGING



Terminal Turnbuckle End	Terminal AN	Sleeve Army	Terminal Navy	Terminal Consolidated	Terminal Curtiss	Terminal North American	Terminal Vultee	End Douglas	Terminal Marlin	Terminal Ryan	Terminal Boeing	Fitting Lockhead	Terminal Fairchild	Terminal Republic	Terminal Beech	Cable Size	
L.H.10-40	AN669-2L	398620-2R	310621-8D-2L S-310621-252L	310621-8D-2L S-310621-252L	310621-8D-2L S-310621-252L	310621-8D-2L S-310621-252L	V5360-2L	2049220-8DS-2L 5018957-8DS-2L	27-4-8D-2L C12-4-8D-2L	S-162-2L	BAC1827-2L	LS838-2L	S-8D-2L			1/16	
R.H.6-40	AN669-2R	398620-2R	310621-8D-2R S-310621-252R	310621-8D-2R S-310621-252R	310621-8D-2R S-310621-252R	310621-8D-2R S-310621-252R	V5360-2R	2049220-8DS-2R 5018957-8DS-2R	27-4-8D-2R C12-4-8D-2R	S-162-2R	BAC1827-2R	LS838-2R	S-8D-2R			1/16	
L.H.10-32	AN669-L3L	398620-L-3L	310621-L16D-3L S-310621-253L	310621-L16D-3L S-310621-253L	310621-L16D-3L S-310621-253L	310621-L16D-3L S-310621-253L	V5360-3L	2049219-16D-3L 5018957-16D-3L	27-4-L16D-3L C12-4-L16D-3L	S-162-33L	BAC1827-33L	LS841-3L		L16D-3L		3/32	
R.H.10-32	AN669-L-3R	398620-L-3R	310621-L16D-3R S-310621-253R	310621-L16D-3R S-310621-253R	310621-L16D-3R S-310621-253R	310621-L16D-3R S-310621-253R	V5360-3R	2049219-16D-3R 5018957-16D-3R	27-4-L16D-3R C12-4-L16D-3R	S-162-33R	BAC1827-33R	LS841-3R				3/32	
L.H.10-32	AN669-S-3L	398620-S-3L	310621-S16D-3L S310621-S253L	310621-S16D-3L S310621-S253L	310621-S16D-3L S310621-S253L	310621-S16D-3L S310621-S253L	V5360-3L	2049220-16DS-3L 5018957-16DS-3L	27-4S16D-3L C12-4-S16D-3L	S-162-3L	BAC1827-3L	LS838-3L				3/32	
R.H.10-32	AN669-S-3R	398620-S-3R	310621-S16D-3R S310621-S253R	310621-S16D-3R S310621-S253R	310621-S16D-3R S310621-S253R	310621-S16D-3R S310621-S253R	V5360-3R	2049220-16DS-3R 5018957-16DS-3R	27-4S16D-3R C12-4-S16D-3R	S-162-3R	BAC1827-3R	LS838-3R				3/32	
L.H.12-28	None	398620-L-4L	310621-L21D-4L S310621-L254L	310621-L21D-4L S310621-L254L	310621-L21D-4L S310621-L254L	310621-L21D-4L S310621-L254L	V5360-4L	2049219-21D-4L 5018957-21D-4L	27-4-L21D-4L C12-4-L21D-4L	S-162-44L	BAC1827-24L	LS841-4L				1/8	
R.H.12-28	None	398620-L-4R	310621-L21D-4R S310621-L254R	310621-L21D-4R S310621-L254R	310621-L21D-4R S310621-L254R	310621-L21D-4R S310621-L254R	V5360-4R	2049219-21D-4R 5018957-21D-4R	27-4-L21D-4R C12-4-L21D-4R	S-162-44R	BAC1827-24R	LS841-4R				1/8	
L.H.12-28	None	398620-S-4L	310621-S21D-4L S310621-S254-L	310621-S21D-4L S310621-S254-L	310621-S21D-4L S310621-S254-L	310621-S21D-4L S310621-S254-L	V5360-4L	2049220-21DS-4L 5018957-21DS-4L	27-4-S21D-4L C12-4S21D-4L	S-162-4L	BAC1827-4L	LS838-4L		S-21D-4L	S-21D-4L	1/8	
R.H.12-28	None	398620-S-4R	310621-S21D-4R S310621-S254-R	310621-S21D-4R S310621-S254-R	310621-S21D-4R S310621-S254-R	310621-S21D-4R S310621-S254-R	V5360-4R	2049220-21DS-4R 5018957-21DS-4R	27-4S21D-4R C12-4S21D-4R	S-162-4R	BAC1827-4R	LS838-4R				1/8	
L.H.1/4-28	AN669-L-4L																1/8
R.H.1/4-28	AN669-L-4R																1/8
L.H.1/4-28	AN669-S-4L																1/8
R.H.1/4-28	AN669-S-4R																1/8

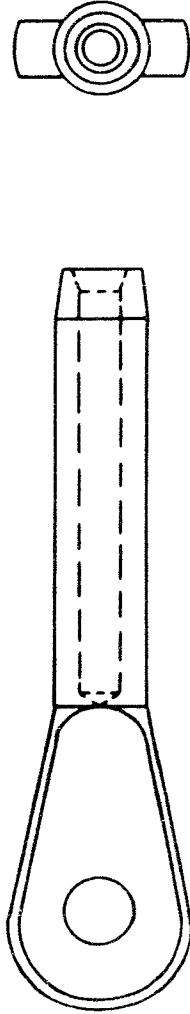
NOTE: THESE TERMINALS REPLACE THOSE WITH THE 12-28 THREAD WHICH ARE INACTIVE FOR FUTURE PROCUREMENT. WHEN REPLACEMENTS ARE MADE CAUTION IS TO BE EXERCISED TO PREVENT THE USE OF COMPANION PARTS HAVING THREAD SIZES SMALLER THAN 1/4-28 THREAD.

CABLE TERMINAL CROSS REFERENCE CHART FOR SWAGING



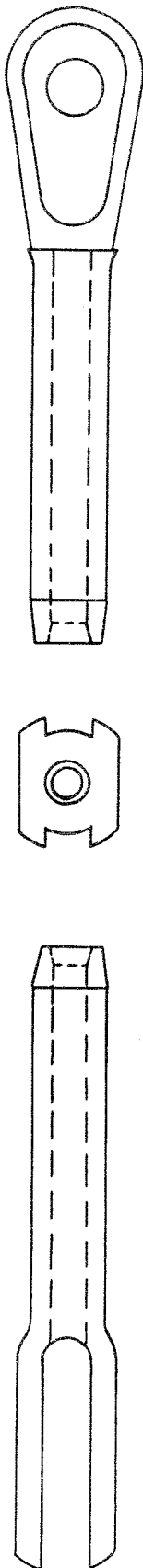
Terminal Tubebuckle End	Terminal AN	Sleeve Army	Terminal Navy	Terminal Consolidated	Terminal Curtiss	Terminal North American	Terminal Vultee	End Douglas	Terminal Martin	Terminal Ryan	Terminal Boeing	Fitting Lockhead	Terminal Fairchild	Terminal Republic	Terminal Berch	Cable Size
L.H.1/4-28	AN669-L-5L	398620-L-5L	310621-L32D-5L S310621-L255-L	310621-L32D-5L S310621-L255-L	310621-L32D-5L S310621-L255-L	310621-L32D-5L S310621-L255-L	VS360-55L	2049219-32D-5L 5018957-32D-5L	27-4-L32D-5L C12-4-L32D-5L	S-162-55L	BAC1827-25L	LS841-5L			L-32D-5L	5/32
R.H.1/4-28	AN669-L-5R	398620-L-5R	310621-L32D-5R S310621-L255-R	310621-L32D-5R S310621-L255-R	310621-L32D-5R S310621-L255-R	310621-L32D-5R S310621-L255-R	VS360-55R	2049219-32D-5R 5018957-32D-5R	27-4-L32D-5R C12-4-L32D-5R	S-162-55R	BAC1827-25R	LS841-5R			L-32D-5R	5/32
L.H.1/4-28	AN669-S-5L	398620-S-5L	310621-S32D-5L S310621-S255-L	310621-S32D-5L S310621-S255-L	310621-S32D-5L S310621-S255-L	310621-S32D-5L S310621-S255-L	VS360-55L	2049220-32D5-5L 5018957-32D5-5L	27-4-S32D-5L C12-4-S32D-5L	S-162-5L	BAC1827-5L	LS838-5L			S-32D-5L	5/32
R.H.1/4-28	AN669-S-5R	398620-S-5R	310621-S32D-5R S310621-S255-R	310621-S32D-5R S310621-S255-R	310621-S32D-5R S310621-S255-R	310621-S32D-5R S310621-S255-R	VS360-55R	2049220-32D5-5R 5018957-32D5-5R	27-4-S32D-5R C12-4-S32D-5R	S-162-5R	BAC1827-5R					5/32
L.H.5/16-24	AN669-L-6L	398620-L-6L	310621-L46D-6L S310621-L256-L	310621-L46D-6L S310621-L256-L	310621-L46D-6L S310621-L256-L	310621-L46D-6L S310621-L256-L	VS360-66L	2049219-46D-6L 5018957-46D-6L	27-4-L46D-6L C12-4-L32D-6L	S-162-66L	BAC1827-66L	LS841-6L		L-46D-6L		3/16
R.H.5/16-24	AN669-L-6R	398620-L-6R	310621-L46D-6R S310621-L256-R	310621-L46D-6R S310621-L256-R	310621-L46D-6R S310621-L256-R	310621-L46D-6R S310621-L256-R	VS360-66R	2049219-46D-6R 5018957-46D-6R	27-4-L46D-6R C12-4-L46D-6R	S-162-66R	BAC1827-66R	LS841-6R		L-46D-6R		3/16
L.H.5/16-24	AN669-S-6L	398620-S-6L	310621-S46D-6L S310621-S256-L	310621-S46D-6L S310621-S256-L	310621-S46D-6L S310621-S256-L	310621-S46D-6L S310621-S256-L	VS360-66L	2049220-46D5-6L 5018957-46D5-6L	27-4-S46D-6L C12-4-S46D-6L	S-162-6L	BAC1827-6L	LS838-6L				3/16
R.H.5/16-24	AN669-S-6R	398620-S-6R	310621-S46D-6R S310621-S256-R	310621-S46D-6R S310621-S256-R	310621-S46D-6R S310621-S256-R	310621-S46D-6R S310621-S256-R	VS360-66R	2049220-46D5-6R 5018957-46D5-6R	27-4-S46D-6R C12-4-S46D-6R	S-162-6R	BAC1827-6R	LS838-6R				3/16
L.H.3/8-24	AN669-7L	398620-7L	310621-80D-7L S310621-257L	310621-80D-7L S310621-257L	310621-80D-7L S310621-257L	310621-80D-7L S310621-257L	VS360-7L	2049219-80D-7L 5018957-80D-7L	27-4-80D-7L C12-4-80D-7L	S-162-7L	BAC1827-7L	LS841-7L				7/32
R.H.3/8-24	AN669-7R	398620-7R	310621-80D-7R S310621-257-R	310621-80D-7R S310621-257-R	310621-80D-7R S310621-257-R	310621-80D-7R S310621-257-R	VS360-7R	2049219-80D-7R 5018957-80D-7R	27-4-80D-7R C12-4-80D-7R	S-162-7R	BAC1827-7R	LS841-7R				7/32
L.H.3/8-24	AN669-8L	398620-8L	310621-80D-8L S310621-258-L	310621-80D-8L S310621-258-L	310621-80D-8L S310621-258-L	310621-80D-8L S310621-258-L	VS360-8L	2049219-80D-8L 5018957-125D-8L	27-4-80D-8L C12-4-80D-8L	S-162-8L	BAC1827-8L					1/4
R.H.3/8-24	AN669-8R	398620-8R	310621-80D-8R S310621-258-R	310621-80D-8R S310621-258-R	310621-80D-8R S310621-258-R	310621-80D-8R S310621-258-R	VS360-8R	2049219-80D-8R 5018957-125D-8R	27-4-80D-8R C12-4-80D-8R	S-162-8R	BAC1827-8R					1/4
L.H.7/16-20	AN669-9L	398620-9L	310621-25D-9L S310621-259-L	310621-25D-9L S310621-259-L	310621-25D-9L S310621-259-L	310621-25D-9L S310621-259-L	VS360-9L		27-4-25D-9L	S-162-9L	BAC1827-9L					9/32
R.H.7/16-20	AN669-9R	398620-9R	310621-25D-9R S310621-259-R	310621-25D-9R S310621-259-R	310621-25D-9R S310621-259-R	310621-25D-9R S310621-259-R	VS360-9R		27-4-25D-9R	S-162-9R	BAC1827-9R					9/32
L.H.1/2-20	AN669-10L	398620-10L	310621-260-L	310621-260-L	310621-260-L	310621-260-L			27-4-260-L	S-162-9R	BAC1827-9R					5/16
R.H.1/2-20	AN669-10R	398620-10R	310621-260-R	310621-260-R	310621-260-R	310621-260-R			27-4-260-R	S-162-9R	BAC1827-9R					5/16

CABLE TERMINAL CROSS REFERENCE CHART FOR SWAGING



Terminal Eye End	Terminal AN	Eye Army	Terminal Navy	Terminal Consolidated	Terminal Curtiss	Terminal North American	Terminal Vultee	End Douglas	Terminal Martin	Terminal Ryan	Terminal Boeing	Fitting Lockheed	Terminal Republic	Terminal Beech	Cable Size
"	AN668-2	398618-2	310621-B-2 B310621-22	310621-B-2 B310621-22	200505-2	310621-B-2 B310621-22	VS361-2	2049217-B-2 5018957-8B-2	27-2-B-2 C12-2-B-2	S-160-2	BAC1826-2	LS839-2		B-2	1/16
"	AN668-3	398618-3	310621-B-3 B310621-23	310621-B-3 B310621-23	200505-3	310621-B-3 B310621-23	VS361-3	2049217-B-3 5018957-16B-3	27-2-B-3 C12-2-B-3	S-160-3	BAC1826-3	LS839-3			3/32
"	AN668-4	398618-4	310621-B-4 B310621-24	310621-B-4 B310621-24	200505-4	310621-B-4 B310621-24	VS361-4	2049217-B-4 5018957-21B-4	27-2-B-4 C12-2-B-4	S-160-4	BAC1826-4	LS839-4		B-4	1/8
"	AN668-5	398618-5	310621-B-5 B310621-25	310621-B-5 B310621-25	200505-5	310621-B-5 B310621-25	VS361-5	2049217-B-5 5018957-32B-5	27-2-B-5 C12-2-B-5	S-160-5	BAC1826-5	LS839-5		B-5	5/32
"	AN668-6	398618-6	310621-B-6 B310621-26	310621-B-6 B310621-26	200505-6	310621-B-6 B310621-26	VS361-6	2049217-B-6 5018957-46B-6	27-2-B-6 C12-2-B-6	S-160-6	BAC1826-6	LS839-6		B-6	3/16
"	AN668-7	398618-7	310621-B-7 B310621-27	310621-B-7 B310621-27	200505-7	310621-B-7 B310621-27	VS361-7	2049217-B-7 5018957-80B-7	27-2-B-7 C12-2-B-7	S-160-7	BAC1826-7	LS839-7			7/32
"	AN668-8	398618-8	310621-B-8 B310621-28	310621-B-8 B310621-28	200505-8	310621-B-8 B310621-28	VS361-8	2049217-B-8 5018957-125B-8	27-2-B-8 C12-2-B-8	S-160-8	BAC1826-8				1/4
"	AN668-9	398618-9	310621-B-9 B310621-29	310621-B-9 B310621-29	200505-9	310621-B-9 B310621-29	VS361-9		27-2-B-9 C12-2-B-9	S-160-9	BAC1826-9				9/32
"	AN668-10	398618-10													5/16

CABLE TERMINAL CROSS REFERENCE CHART FOR SWAGING



Terminal Fork End	Terminal AN	Fork Army	Terminal Navy	Terminal Consolidated	Terminal Curtiss	Terminal North American	Terminal Vulzee	End Douglas	Terminal Martin	Terminal Ryan	Terminal Boeing	Fitting Lockhead	Terminal Republic	Terminal Beech	Cable Size
"	AN667-2	39B619-2	310621-C-2 C-310621-42	310621-C-2 C-310621-42	310621-C-2 C-310621-42	310621-C-2 C-310621-42	V5362-2	204928-C-2 5018957-8C-2	27-3-C-2 C12-3-C-2	S-161-2	BAC1825-2	LS840-2			1/16
"	AN667-3	39B619-3	310621-C-3 C-310621-43	310621-C-3 C-310621-43	310621-C-3 C-310621-43	310621-C-3 C-310621-43	V5362-3	2049218-C-3 5018957-16C-3	27-3-C-3 C12-3-C-3	S-161-3	BAC1825-3	LS840-3			3/32
"	AN667-4	39B619-4	310621-C-4 C-310621-44	310621-C-4 C-310621-44	310621-C-4 C-310621-44	310621-C-4 C-310621-44	V5362-4	2049218-C-4 5018957-21C-4	27-3-C-4 C12-3-C-4	S-161-4	BAC1825-4	LS840-4			1/8
"	AN667-5	39B619-5	310621-C-5 C-310621-45	310621-C-5 C-310621-45	310621-C-5 C-310621-45	310621-C-5 C-310621-45	V5362-5	2049218-C-5 5018957-32C-5	27-3-C-5 C12-3-C-5	S-161-5	BAC1825-5	LS840-5			5/32
"	AN667-6	39B619-6	310621-C-6 C-310621-46	310621-C-6 C-310621-46	310621-C-6 C-310621-46	310621-C-6 C-310621-46	V5362-6	2049218-C-6 5018957-46C-6	27-3-C-6 C12-3-C-6	S-161-6	BAC1825-6	LS840-6			3/16
"	AN667-7	39B619-7	310621-C-7 C-310621-47	310621-C-7 C-310621-47	310621-C-7 C-310621-47	310621-C-7 C-310621-47	V5362-7	2049218-C-7 5018957-80C-7	27-3-C-7 C12-3-C-7	S-161-7	BAC1825-7	LS840-7			7/32
"	AN667-8	39B619-8	310621-C-8 C-310621-48	310621-C-8 C-310621-48	310621-C-8 C-310621-48	310621-C-8 C-310621-48	V5362-8	2049218-C-8 5018957-125C-8	27-3-C-8 C12-3-C-8	S-161-8	BAC1825-8				1/4
"	AN667-9	39B619-9	210621-C-9 C-310621-49	210621-C-9 C-310621-49	210621-C-9 C-310621-49	210621-C-9 C-310621-49	V5362-9		27-3-C-9 C12-3-C-9	S-161-9	BAC1825-9				9/32
"	AN667-10	39B619-10													5/16

INTERCHANGEABLE HYDRAULIC "V" RING PACKINGS

AN Stand-ard AN6225	W. REF.	I. D.	O. D.	Stk. Ht.	AAF Stand-ard 40B629	Cleve. Pneum. Tool L-7A	Bendix Avia. 1855	Douglas Airc. 5135865	N. Amer. Avia. B1298G or 5R3*	United Airc. 20333	Airc. Acces. Corp. 2002	Curtiss-Wright SS114
-1	3/16	1/8	1/2	.083	-6-004			-3-004	3-0-4	-3-004	-3-004	-6-004
-2	3/16	3/16	9/16	.083	-6-006			-3-006	3-0-6	-3-006	-3-006	-6-006
-3	3/16	1/4	5/8	.083	-6-008			-3-008	3-0-8	-3-008	-3-008	-6-008
-4	3/16	5/16	11/16	.083	-6-010			-3-010	3-0-10	-3-010	-3-010	-6-010
-5	3/16	3/8	3/4	.083	-6-012			-3-012	3-0-12	-3-012	-3-012	-6-012
-6	3/16	7/16	13/16	.083	-6-014			-3-014	3-0-14	-3-014	-3-014	-6-014
-7	3/16	1/2	7/8	.083	-6-016			-3-016	3-0-16	-3-016	-3-016	-6-016
-8	1/4	1/4	3/4	.083	-8-008			-4-008	4-0-8	-4-008	-4-008	-8-008
-9	1/4	5/16	13/16	.083	-8-010			-4-010	4-0-10	-4-010	-4-010	-8-010
-10	1/4	3/8	7/8	.083	-8-012			-4-012	4-0-12	-4-012	-4-012	-8-012
-11	1/4	7/16	15/16	.083	-8-014			-4-014	4-0-14	-4-014	-4-014	-8-014
-12	1/4	1/2	1	.083	-8-016			-4-016	4-0-16	-4-016	-4-016	-8-016
-13	1/4	9/16	1-1/6	.083	-8-018			-4-018	4-0-18	-4-018	-4-018	-8-018
-14	1/4	5/8	1-1/8	.083	-8-020			-4-020	4-0-20	-4-020	-4-020	-8-020
-15	1/4	11/16	1-3/16	.083	-8-022			-4-022	4-0-22	-4-022	-4-022	-8-022
-16	1/4	3/4	1-1/4	.083	-8-024			-4-024	4-0-24	-4-024	-4-024	-8-024
-17	1/4	13/16	1-5/16	.083	-8-026			-4-026	4-0-26	-4-026	-4-026	-8-026
-18	1/4	7/8	1-3/8	.083	-8-028			-4-028	4-0-28	-4-028	-4-028	-8-028
-19	1/4	15/16	1-7/16	.083	-8-030			-4-030	4-0-30	-4-030	-4-030	-8-030
-20	1/4	1	1-1/2	.083	-8-100			-4-100	4-1-0	-4-100	-4-100	-8-100
-21	1/4	1-1/16	1-9/16	.083	-8-102			-4-102	4-1-2	-4-102	-4-102	-8-102
-22	1/4	1-1/8	1-5/8	.083	-8-104			-4-104	4-1-4	-4-104	-4-104	-8-104
-23	1/4	1-3/16	1-11/16	.083	-8-106			-4-106	4-1-6	-4-106	-4-106	-8-106
-24	1/4	1-1/4	1-3/4	.083	-8-108	125L175-7A		-4-108	4-1-8	-4-108	-4-108	-8-108
-25	5/16	1-1/4	1-7/8	.140	10-108		185S2	-5-108	5-1-8	-5-108	-5-108	-10-108
-26	5/16	1-3/8	2	.140	10-112		185S6	-5-112	5-1-12	-5-112	-5-112	-10-112
-27	5/16	1-1/2	2-1/8	.140	10-116	150L212-7A	185S9	-5-116	5-1-16	-5-116	-5-116	-10-116
-28	5/16	1-5/8	2-1/4	.140	10-120	162L225-7A	185S13	-5-120	5-1-20	-5-120	-5-120	-10-120
-29	5/16	1-3/4	2-3/8	.140	10-124	175L237-7A	185S16	-5-124	5-1-24	-5-124	-5-124	-10-124
-30	5/16	1-7/8	2-1/2	.140	10-128	187L250-7A	185S19	-5-128	5-1-28	-5-128	-5-128	-10-128
-31	5/16	2	2-5/8	.140	10-200	200L262-7A	185S21	-5-200	5-2-0	-5-200	-5-200	-10-200
-32	5/16	2-1/8	2-3/4	.140	10-204	212L275-7A	185S23	-5-204	5-2-4	-5-204	-5-204	-10-204
-33	5/16	2-1/4	2-7/8	.140	10-208	225L287-7A	185S25	-5-208	5-2-8	-5-208	-5-208	-10-208
-34	5/16	2-3/8	3	.140	10-212		185S28	-5-212	5-2-12	-5-212	-5-212	-10-212
-35	5/16	2-1/2	3-1/8	.140	10-216		185S29	-5-216	5-2-16	-5-216	-5-216	-10-216
-36	3/8	2-1/2	3-1/4	.156	12-216	250L325-7A	185S30	-6-216	6-2-16	-6-216	-6-216	-12-216
-37	3/8	2-5/8	3-3/8	.156	12-220	262L337-7A		6-220	6-2-20	-6-220	-6-220	-12-220
-38	3/8	2-3/4	3-1/2	.156	12-224	275L350-7A	185S35	6-224	6-2-24	-6-224	-6-224	-12-224
-39	3/8	2-7/8	3-5/8	.156	12-228			6-228	6-2-28	-6-228	-6-228	-12-228
-40	3/8	3	3-3/4	.156	12-300	300L375-7A	185S39	6-300	6-3-0	-6-300	-6-300	-12-300
-41	3/8	3-1/8	3-7/8	.156	12-304			6-304	6-3-4	-6-304	-6-304	-12-304
-42	3/8	3-1/4	4	.156	12-308	325L400-7A	185S42	6-308	6-3-8	-6-308	-6-308	-12-308
-43	3/8	3-3/8	4-1/8	.156	12-312			6-312	6-3-12	-6-312	-6-312	-12-312
-44	3/8	3-1/2	4-1/4	.156	12-316	350L425-7A	185S45	6-316	6-3-16	-6-316	-6-316	-12-316
-45	3/8	3-5/8	4-3/8	.156	12-320		185S46	6-320	6-3-20	-6-320	-6-320	-12-320
-46	3/8	3-3/4	4-1/2	.156	12-324	375L450-7A	185S47	6-324	6-3-24	-6-324	-6-324	-12-324
-47	3/8	3-7/8	4-5/8	.156	12-328			6-328	6-3-28	-6-328	-6-328	-12-328
-48	7/16	3-7/8	4-3/4	.197	14-328			7-328	7-3-28	-7-328	-7-328	-14-328
-49	7/16	4	4-7/8	.197	14-400	400L487-7A	185S51	7-400	7-4-0	-7-400	-7-400	-14-400
-50	7/16	4-1/4	5-1/8	.197	14-408	425L512-7A	185S54	7-408	7-4-8	-7-408	-7-408	-14-408
-51	7/16	4-1/2	5-3/8	.197	14-416	450L537-7A	185S56	7-416	7-4-16	-7-416	-7-416	-14-416
-52	7/16	4-3/4	5-5/8	.197	14-424	475L562-7A	185S58	7-424	7-4-24	-7-424	-7-424	-14-424
-53	7/16	5	5-7/8	.197	14-500	500L587-7A	185S60	7-500	7-5-0	-7-500	-7-500	-14-500
-54	7/16	5-1/4	6-1/8	.197	14-500	525L612-7A	185S63	7-508	7-5-8	-7-508	-7-508	-14-508
-55	7/16	5-1/2	6-3/8	.197	14-516	550L637-7A	185S65	7-516	7-5-16	-7-516	-7-516	-14-516
-56	1/2	5-1/2	6-1/2	.197	16-516			8-516	8-5-16	-8-516	-8-516	-16-516
-57	1/2	5-3/4	6-3/4	.197	16-524		185S68	8-524	8-5-24	-8-524	-8-524	-16-524
-58	1/2	6	7	.197	16-600	600L700-7A	185S70	8-600	8-6-0	-8-600	-8-600	-16-600
-59	1/2	6-1/4	7-1/4	.197	16-608	625G725-7A	185S71	8-608	8-6-8	-8-608	-8-608	-16-608
-60	1/2	6-1/2	7-1/2	.197	16-616		185S72	8-616	8-6-16	-8-616	-8-616	-16-616

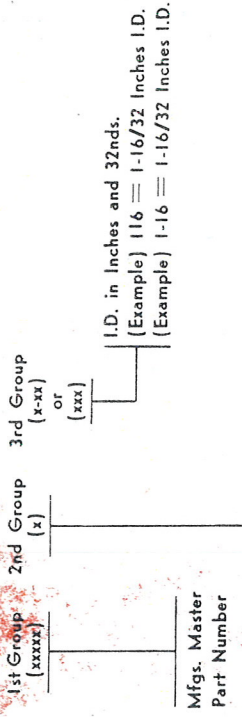
*N. Amer. Avia. later part number.

INTERCHANGEABLE HYDRAULIC "V" RING PACKINGS

RESTRICTED
T. O. No. 00-45-1

AN Standard	W. Ref.	I.D.	O.D.	Sk. Ht.	AAF Standard	Clev. Pneum. Tool L-7A	Bendix Avia. 1855	Douglas Airc. 5135865	N. American Aviation B1298G	United Aircraft 20333	Aircraft Accessories Corp. 2002	Curtiss-W. S5114
-61	1/2	6 3/4	7 3/4	.197	16-624		185573	8-624	8-6-24	8-624	-8-624	-16-624
-62	1/2	7	8	.197	16-700		185574	8-700	8-7-0	8-700	-8-700	-16-700
-63	1/2	7 1/4	8 1/4	.197	16-708		185575	8-708	8-7-8	8-708	-8-708	-16-708
-64	1/2	7 1/2	8 1/2	.197	16-716		185576	8-716	8-7-16	8-716	-8-716	-16-716
-65	1/2	7 3/4	8 3/4	.197	16-724		185577	8-724	8-7-24	8-724	-8-724	-16-724
-66	1/2	8	9	.197	16-800		185578	8-800	8-8-0	8-800	-8-800	-16-800
-67	1/2	8 1/2	9 1/2	.197	16-816		185580	8-816	8-8-16	8-816	-8-816	-16-816
-68	1/2	9	10	.197	16-900			8-900	8-9-0	8-900	-8-900	-16-900
-69	1/2	9 1/2	10 1/2	.197	16-916			8-916	8-9-16	8-916	-8-916	-16-916
-70	1/2	10	11	.197	16-1000		185586	8-1000	8-10-0	8-1000	-8-1000	-16-1000
-71	1/2	10 1/2	11 1/2	.197	16-1016			8-1016	8-10-16	8-1016	-8-1016	-16-1016
-72	1/2	11	12	.197	16-1100			8-1100	8-11-0	8-1100	-8-1100	-16-1100

Decoding of Numbers as Follows:

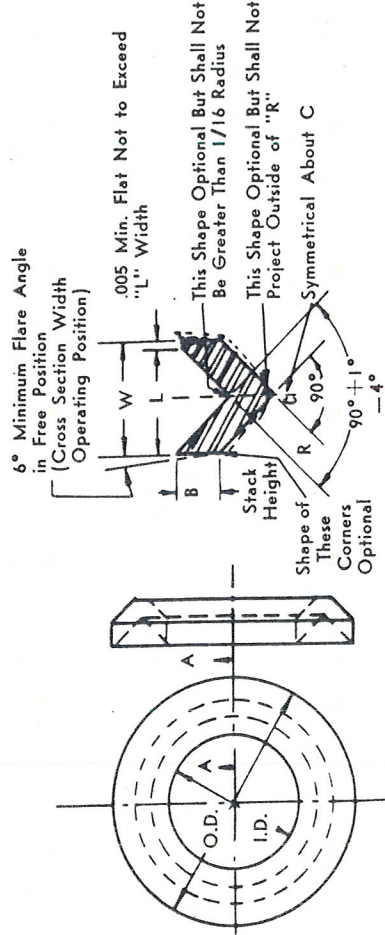
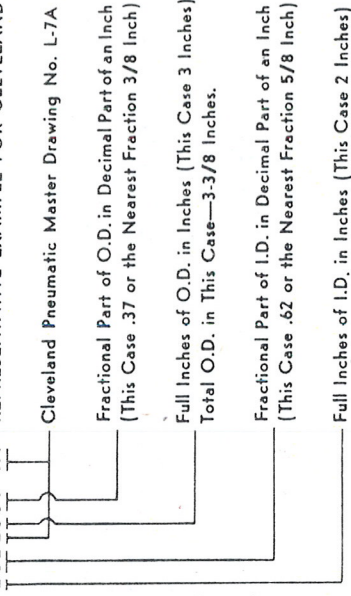


Width in 32nds (AAF—Curtiss-Wright)
Width in 16ths (All Others)
(A Letter Before or After This Figure
Denotes Name of Original Vendor.)

Example:

1st Group	2nd Group	3rd Group
(AAF) 40B629	16	624
(Douglas) 5135865	8	624
(N. A.) B1298G	8	6-24
(Unit. Air.) 20333	8	624
(Air. Acc.) 2002	8	624
(Curtiss) S5114	16	624

2 6 2 L 3 3 7 - 7 A REPRESENTATIVE EXAMPLE FOR CLEVELAND PNEUMATIC



Bendix Aviation Numbers Not According to Coding System.

SOLENOID CROSS REFERENCE CHART

Showing vertical interchangeability between red lines

	Class 03-C Manufacturer	Mfg. No.	Type	ASC Stock No.	Circuit Volts
1.	Electric Auto-Lite	WSG-4002	B-4	4249 WSG-4002	24
2.	Electric Auto-Lite	WSG-4003	B-4	4249 WSG-4003	24
3.	Cutler-Hammer	6041H17	B-4	42576014H17A	24
4.	Eclipse Aviation	73110-521-1	C-1	4213731105211	24
5.	Cutler-Hammer	6041H73	C-1	42576041H73	24
6.	Cutler-Hammer	6041H17	C-1	42576041H17	24
7.	Electric Auto-Lite	WSG-4002	C-1	4249 WSG-4002	24
8.	Electric Auto-Lite	WSG-4003	C-1	4249 WSG-4003	24
9.	Star Mach. Mfg. Co.	1510-12	B-1	4241151012	12
10.	Eclipse Aviation	C-59899	B-1	421359899	12
11.	Pausin Engineering Co.	P6	B-1	4233P6	12
12.	Electric Auto-Lite	WSH-4001	A-3	4249 WSH-4001	12
13.	Cutler-Hammer	6041H43	A-3	42576041H43	12
14.	Electric Auto-Lite	WSJ-4001	B-8	4249 WSJ-4001	24
15.	Jack & Heintz	JH2700	B-8	4224JH2700	24
16.	Eclipse Aviation	66198 (*)	D-1	421366198	24
17.	Eclipse Aviation	2944A5	C-1		24
18.	Eclipse Aviation	500-5-A (*)	C-1	4213816695005	24
19.	Star Mach. Mfg. Co.	2525	C-1		24
20.	Eclipse Aviation	81669-499-6 (*)	A-1A	4213816694996	12
21.	Eclipse Aviation	81669-499-4 (*)	A-1A		12
22.	Eclipse Aviation	81669-499-1 (*)	A-1A		12
23.	Koehler (oil dilution valve solenoid)	37D6210	AN (4078-1)		12 or 24
24.	U.A.P.	"	1070A		12 or 24
25.	U.A.P.	"	1070		12 or 24
26.	U.A.P.	"	U-1070-W		12 or 24
27.	U.A.P.	"	U-1070-M		12 or 24
28.	U.A.P.	"	U-1070-E		12 or 24
29.	Air Associates	"	M-441-M-2		12 or 24
30.	Air Associates	"	M-441		12 or 24
31.	Parker	"	AL-9761		12 or 24

- (*) (16) 66198 cannot replace B-8
- (*) (18) 500-5-A used with type F-1 starter
- (*) (20) 81669-499-6 used with type C-20 starter
- (*) (21) 81669-499-4 Unshielded
- (*) (22) 81669-499-1 Has commercial type shielding

DATA ON AIRCRAFT CAMERAS AND INSTALLATIONS

INTERCHANGEABILITY BETWEEN RED LINES

CAMERA	USE	MEANS OF OPERATION	LENSES (Focal Length Max. Aper.)	LENS ANGLES (Across Diagonal, Side to Side) HALF ANGLES	AREA COVERED AT 10,000 FEET (Miles)	FILTER	SHUTTER SPEEDS (Seconds)	TYPE OF SHUTTER	TYPE OF FOCAL PLANE	FILM MAGAZINE USED	NEGATIVE SIZE (Inches)	FILM LOAD SIZE	NUMBER OF EXPOSURES PER LOAD		
2	K-3B	Day Reconnaissance	Manual or Electrical (12 volts)	6"—F/6.3	With A-1-B Mag. $46\frac{1}{2}^{\circ}$ $30^{\circ} \times 37\frac{1}{2}^{\circ}$	A-1-B Mag. 2.2 x 2.85	Part of Camera	1/50, 1/100, 1/200, 1/300	Vacuum	A-1-B	7 x 9	9 1/2" x 75'	110		
				8 1/4"—F/5.0	$23^{\circ} \times 28\frac{1}{2}^{\circ}$	1.6 x 2.1		A-2A	1/50, 1/100, 1/150	Between Lens	Vacuum	(C)	9 x 9	9 1/2" x 150'	190
				12"—F/5.0	$16\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.1 x 1.4		A-5	1/50, 1/100, 1/150	Open Frame	B-1	8 x 10	8" x 10"	1	
3	K-17	Day Reconnaissance	Manual or Electrical (24 volts)	6"—F/6.3	$46\frac{1}{2}^{\circ}$ $37\frac{1}{2}^{\circ} \times 37\frac{1}{2}^{\circ}$	A-5 Mag. 2.85 x 2.85	Part of Camera	1/50, 1/100, 1/200, 1/300	Vacuum	A-5A	9 x 9	9 1/2" x 200'	250		
				12"—F/5.0	$20\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.4 x 1.4		A-5	1/75, 1/150, 1/225	Between Lens	Vacuum	A-5	9 x 9	9 1/2" x 150'	190
				24"—F/6.0	$10\frac{1}{2}^{\circ} \times 10\frac{1}{2}^{\circ}$	0.71 x 0.71		A-6	1/50, 1/100, 1/150	Open Frame	B-1	8 x 10	8" x 10"	110	
4	K-17B	Charting	Manual or Electrical (24 volts)	6"—F/6.3	$46\frac{1}{2}^{\circ}$ $37\frac{1}{2}^{\circ} \times 37\frac{1}{2}^{\circ}$	A-5 Mag. 2.85 x 2.85	Part of Camera	1/50, 1/100, 1/150	Between Lens	Vacuum	A-5A	9 x 9	9 1/2" x 200'	250	
				12"—F/5.0	$10\frac{1}{2}^{\circ} \times 10\frac{1}{2}^{\circ}$	0.71 x 0.71		A-5			1/75, 1/150, 1/225	A-5	9 x 9	9 1/2" x 150'	190
				24"—F/6.0	$20\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$			A-6			1/50, 1/100, 1/150				
5	K-7C	Day Reconnaissance	Manual	24"—F/6.0	$22\frac{1}{2}^{\circ}$ $10\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	0.71 x 1.4	A-4 or A-6	1/50, 1/100, 1/150	Between Lens	Vacuum	A-7	9 x 18	9 1/2" x 75'	47	
6	K-18	Day Reconnaissance	Manual or Electrical (24 volts)	24"—F/6.0	$22\frac{1}{2}^{\circ}$ $10\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	0.71 x 1.4	A-6	1/50, 1/100, 1/150	Between Lens	Vacuum	A-8	9 x 18	9 1/2" x 400'	260	
								A-7	9 x 18	9 1/2" x 75'	47				
7	K-12	Night Reconnaissance	Manual and Electrical (12 volts)	13 1/2"—F/3.5	$25\frac{1}{2}^{\circ}$ $16\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.1 x 1.4	None	1/30, 1/45, 1/70	Between Lens	Open Frame	B-1	8 x 10	8" x 10"	1 (Night)	
8	K-19	Night Reconnaissance	Electrical (24 volts)	13 1/2"—F/3.5	$25\frac{1}{2}^{\circ}$ $16\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.1 x 1.4	A-6 (Clear)	1/25, 1/50, 1/100	Between Lens	Open Frame	B-1	8 x 10	8" x 10"	1 (Night)	
								A-5	9 x 9	9 1/2" x 20'	190				
9	K-19A	Night Reconnaissance	Electrical (24 volts)	12"—F/2.5	B-1 Mag. 28° $18\frac{1}{2}^{\circ} \times 22\frac{1}{2}^{\circ}$	1.26 x 1.58	A-6 (Clear)	1/25, 1/50, 1/100	Between Lens	Open Frame	B-1	8 x 10	8" x 10"	1 (Night)	
								A-5 Mag. 28° $20\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.4 x 1.4	A-5	9 x 9	9 1/2" x 150'	190		
10	K-19B	Night Reconnaissance	Electrical (24 volts)	12"—F/2.5	B-1 Mag. 28° $18\frac{1}{2}^{\circ} \times 22\frac{1}{2}^{\circ}$	1.26 x 1.58	A-6 (Clear)	1/25, 1/50, 1/100	Between Lens	Open Frame	B-1	8 x 10	8" x 10"	1 (Night)	
								A-5 Mag. 28° $20\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.4 x 1.4	A-5	9 x 9	9 1/2" x 150'	190		
11	K-20	Day Reconnaissance (Hand-Heid)	Manual	6 3/8"—F/4.5	$26\frac{1}{2}^{\circ}$ $17\frac{1}{2}^{\circ} \times 26\frac{1}{2}^{\circ}$	1.2 x 1.5	Special Filter	1/125, 1/250, 1/500	Between Lens	Vacuum (self-made)	Part of Camera	4 x 5	5 1/4" x 20'	50	
12	K-25	Day Reconnaissance	Electrical (24 volts)	6 3/8"—F/4.5	$26\frac{1}{2}^{\circ}$ $17\frac{1}{2}^{\circ} \times 21\frac{1}{2}^{\circ}$	1.2 x 1.5	Special Filter	1/125, 1/250, 1/500	Between Lens	Open Frame	Part of Camera	4 x 5	5 1/4" x 20'	50	
13	K-15	Day Reconnaissance	Manual	20"—F/5.6 40"—F/8.0 Telephoto	6° $3\frac{1}{2}^{\circ} \times 5^{\circ}$	0.23 x 0.33	Part of Camera	1/75, 1/150, 1/300	Focal Plane	Glass	Part of Camera	5 x 7	7" x 12 1/3"	30	
14	K-15A	Day Reconnaissance	Electrical (24 volts)	40"—F/8.0 Telephoto	6° $3\frac{1}{2}^{\circ} \times 5^{\circ}$	0.23 x 0.33	Part of Camera	1/200, 1/400, 1/600	Focal Plane	Glass	Part of Camera	5 x 7	7" x 36'	90	
15	K-22	Day Reconnaissance	Electrical (24 volts)	6"—F/6.3	A-5 Mag. $40\frac{1}{2}^{\circ}$ $37\frac{1}{2}^{\circ} \times 37\frac{1}{2}^{\circ}$	2.85 x 2.85	Part of Camera	Shutter A 1/135, 1/350	Focal Plane	Vacuum	A-5A	9 x 9	9 1/2" x 200'	250	
				12"—F/5.0	$20\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.4 x 1.4		A-5		9 x 9	9 1/2" x 150'	190			
				24"—F/6.0	$10\frac{1}{2}^{\circ} \times 10\frac{1}{2}^{\circ}$	0.71 x 0.71		A-6		8 x 10	8" x 10"	110			
				40"—F/8.0	$6\frac{1}{2}^{\circ} \times 6\frac{1}{2}^{\circ}$	0.43 x 0.43		Infinitely variable		Open Frame	B-1	8 x 10	8" x 10"	1	
				40"—F/5.0	$6\frac{1}{2}^{\circ} \times 6\frac{1}{2}^{\circ}$										
16	K-21	Orientation Day and Night	Electrical (24 volts)	7"—F/2.5	32° $12\frac{1}{2}^{\circ} \times 26\frac{1}{2}^{\circ}$	1.35 x 1.9	A-5	1/300, 1/600, Time	Focal Plane	Open Frame	Part of Camera	5 x 7	7" x 6' 7" x 15'	10 (Night) 30	
17	T-5	Topographic Mapping	Manual or Electrical (24 volts)	6"—F/6.3	$46\frac{1}{2}^{\circ}$ $37\frac{1}{2}^{\circ} \times 37\frac{1}{2}^{\circ}$	2.85 x 2.85	Part of Camera	1/50, 1/100, 1/200, 1/300	Between Lens	Vacuum	*Part of Camera	9 x 9	9 1/2" x 150'	190	
18	K-24	Orientation Day and Night	Electrical (24 volts) and Manual	6 3/8"—F/4.5	29° $19\frac{1}{2}^{\circ} \times 19\frac{1}{2}^{\circ}$	1.35 x 1.35	A-5	Four Curtains a. 1/150, b. 1/450 c. 1/900, d. Time	Focal Plane	Glass	*Part of Camera	5 x 5	5 1/2" x 6' 5 1/2" x 26' 5 1/2" x 56'	1 (Night) 55 125	
				7"—F/2.5											
				12"—F/5.0											
19	F-24 BRITISH	Day and Night Reconnaissance	Electrical or Manual (12 or 24 volts)	3 1/4"—F/6.3	$47\frac{1}{2}^{\circ}$ $37\frac{1}{2}^{\circ} \times 37\frac{1}{2}^{\circ}$	2.9 x 2.9	Gelatine Filters and Lens Heater	Type A 1/40, 1/120	Focal Plane	Glass	*Part of Camera	5 x 5	5 1/2" x 6'	12	
				5"—F/4.0	$35\frac{1}{2}^{\circ}$ $26\frac{1}{2}^{\circ} \times 26\frac{1}{2}^{\circ}$	1.9 x 1.9		Type B 1/100, 1/300				5 x 5	5 1/2" x 26'	50	
				8"—F/2.9	$17\frac{1}{2}^{\circ} \times 17\frac{1}{2}^{\circ}$	1.2 x 1.2						5 x 5	5 1/2" x 56'	125	
				8"—F/5.0	$10^{\circ} \times 10^{\circ}$	0.68 x 0.68									
20	K-8AB	Day Reconnaissance	Electrical (12 volts)	12"—F/5.0	28° $16\frac{1}{2}^{\circ} \times 20\frac{1}{2}^{\circ}$	1.1 x 1.4	A-6	1/50, 1/100, 1/180	Between Lens	Vacuum	A-1B	7 x 9	9 1/2" x 75'	110	
				24"—F/6.0	$13\frac{1}{2}^{\circ}$ $8\frac{1}{2}^{\circ} \times 10\frac{1}{2}^{\circ}$	0.55 x 0.71		1/50, 1/100, 1/165				A-5	9 x 9	9 1/2" x 150'	190

DATA ON AIRCRAFT CAMERAS AND INSTALLATIONS (Cont'd)

INTERCHANGEABILITY BETWEEN RED LINES

1	MOUNT USED	WEIGHT OF CAMERA (Loaded, Lbs) NO FILTERS OR CABLES	WEIGHT OF INSTALLATION (Lbs) TYPICAL	**INTER-VALOMETER	Part No.	SPOOLS Core Dia. Flange Dia.	T. O.'s FOR HANDBOOKS OF INSTRUCTION	CAMERA SPEC. NO.	OUTLINE DIMENSION DRAWING NO.	LENS SPEC.	CONE SPEC.	STATUS (See Key)	SOURCE (See Key)	REMARKS
2	A-8	A-1-B Mag. 6" 44 8 1/4" 44 12" 40.5	A-1-B Mag. A-8 Mount 65 65 60	Yes	047158 41B10427	2 1/8" 4" 2 1/8" 5-3/16"	10-10-1 (1934-1939) 10-10-24 (after 1939) 10-10-26 (1932-1933)	75-23C	H37G6031	75-146 75-149 75-148 75-145A	75-154	L. S.	F. A. C.	(a) With A-5 Magazine, add 14 lbs (b) With A-11 Mount, add 6 lbs (c) A-5 will fit but should not be used T. O. 10-1-57
3	A-8 A-11	A-5 Mag. 6" 51.2 12" 54.0 24" 73.4	A-5 Mag. A-8 Mount 75 80 95	Yes	41B10427 047158	2 1/8" 5-3/16" 2 1/8" 4"	10-10-27	75-94	H42J11917	75-146 75-148 75-145A	75-144	L. S.	F. A. C.	(a) Corresponds to the K-3B (b) With A-11 Mount, add 6 lbs
4	A-8 A-11	51.2	See Remarks	Yes	41B10427	2 1/8" 5-3/16"		75-94B	H42J11917	75-146	75-144	S.	F. A. C.	Used for Trimetrogon. Mount usually part of airplane
5	A-8 A-11	66.6	A-8 Mount 87	None	047158	2 1/8" 4"	10-10-20	75-52	H37G6023	75-145A		L. S.	F. A. C.	(a) With A-11 Mount, add 6 lbs
6	A-8 A-11	A-7 Mag. 70.0	A-8 Mount 102	Yes	43B9257 047158	2 1/8" 6 5/8" 2 1/8" 4"	10-10-28	75-92A	H42J11918	75-145A		L. S.	F. A. C.	(a) Corresponds to the K-7C
7	A-8 A-11	64	B-1 Mag. With 4 M-23 Bombs, A-8 Mount 118	None			10-10-11	75-65	H38G4407	75-213	Part No. 10754E	L. S.	F. A. C.	A-1A, A-1B, A-5 Magazines can be used
8	A-8 A-11	B-1 Mag. 65.4	B-1 Mag. With 4 M-23 Bombs, A-8 Mount 118	None	41B10427 047158	2 1/8" 5-3/16" 2 1/8" 4"	10-10-29	75-97A	H42J11919	75-213		L. S.	F. A. C.	(a) Corresponds to the K-12 (b) With A-5 Mag, add 24 lbs Later models to have 12"-F/2.5 Lens (c) See Remarks under K-21
9	A-8 A-11	B-1 Mag. 65.4	B-1 Mag. With 4 M-23 Bombs, A-8 Mount 118	None	41B10427 047158	2 1/8" 5-3/16" 2 1/8" 4"	10-10-29	75-97B	H42J11919	75-196		S.	F. A. C.	(a) Same as K-19 except for different lens (b) See Remarks under K-21
10	A-8 A-11	B-1 Mag. 65.4	B-1 Mag. With 4 M-23 Bombs, A-8 Mount 118	None	41B10427 047158	2 1/8" 5-3/16" 2 1/8" 4"	10-10-29	75-97B	H42J11919	75-196		S. S.	F. A. C.	(a) Same as K-19A except for increased sensitivity of photo electric cell for high altitude night photography (b) See Remarks under K-21
11	Hand-Held	11	11	None	41B6993	1 1/4" 2 1/8"	10-10AC-12 Fairchild 10-10AD-2 Folmer	75-227	H41G6387	75-212		S.	F. A. C. F. G. C.	When electrified becomes K-25
12	Special	11.2	31	None	41B6993	1 1/4" 2 1/8"	10-10AC-15	75-218	H42D11147	75-212		S.	F. G. C. F. A. C.	
13	Adapter, A-8 A-11	40	A-8 Mount 57	None	32B7478	1 1/2" 2 1/8"	10-10-31	31096B	H42G2216	75-214 75-216	31115	L. S.	F. A. C.	(a) With A-11 Mount add 6 lbs (b) With A-19 Mount sub. 1 lb (c) Being converted to K-15A
14	Adapter, A-8 A-11	50	A-8 Mount 75	Yes	42B11609	7/8" 2 3/8"	10-10-41	31096B	H42G2216	75-216	31115	L. S.	F. A. C.	(a) With A-11 Mount add 6 lbs (b) With A-19 Mount sub. 1 lb
15	A-8 A-11	A-5 Mag. 6" 60 12" 56 24" 80 40" 85	A-11 Mount 80 75 100 105	Yes	41B10427 047158	2 1/8" 5-3/16" 2 1/8" 4"	10-10AC-13	75-221	H42J11922	75-146 75-148 75-31174 75-216 75-212	75-222	S.	F. A. C.	
16	A-17 A-17A	32.0	A-17 Mount 45	Yes	42B4015	7/8" 1-13/16"	10-10AD-3	75-210	H42G11921	75-197		S.	F. G. C.	(a) Number of Night Exposures depends upon number of flash bombs carried
17	A-22 A-23	84.5	A-23 Mount 110	Built in	41B10427	2 1/8" 5-3/16"	10-10AC-20	31068	H42J11920	75-146		S.	F. A. C.	(a) View finder, and intervalometer part of camera
18	A-17 A-17A	With long Roll 26.4	A-17 Mount 38	Yes	43D8607	7/8" 2 3/8"	10-10AB-1	75-234	H42G11146	7" 75-197 12" 75-148 20" 75-215	75-240 75-230	S.	E. K. C.	(a) Lens angles given are for 7"-F/2.5 Lens (b) See Remarks under K-21
19	Adapter, British Type 25 Type 26 Type 16 Type 21 A-17 Mt. (U. S.)	With long Roll 3 1/4" 16 5" 16.5 8" 18 14" 20.5 20" 21	37 37 39 41 42 1/4	Type 35 Control (British)	43D8607	7/8" 2 3/8"		None	None			S.		SOURCE Fairchild Aviation Corp. (F.A.C.) Folmer Graftex Corp. (F.G.C.) Eastman Kodak Co. (E.K.C.) STATUS S—Standard SS—Substitute Standard *—Magazine Removable **—For Orientation Purposes B-4 or B-7 Intervalometer, for Reconnaissance B-2, B-3 Series, B-5, B-7 A-1 Control used for Multi-Camera Installations
20	A-8	A-1B Mag. 12" 59.0 A-5 Mag. 24" 80.0	115 138	Yes	047158	2 1/8" 4" 2 1/8" 5 3/16"				75-148 75-145A			F. A. C.	

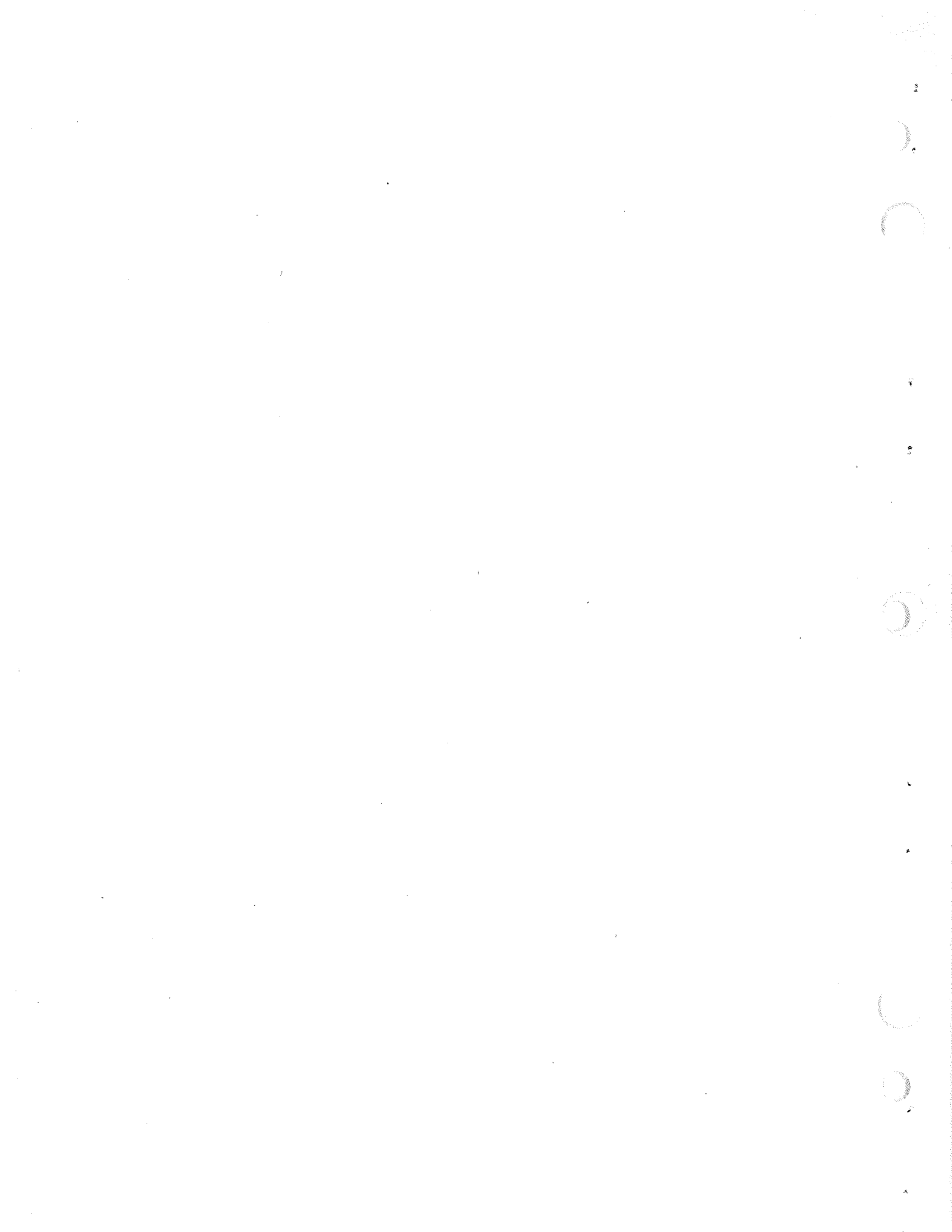
DATA ON GUN CAMERAS FOR AIRCRAFT

Vertical interchangeability between red lines

TYPE	STATUS	VOLTAGE	SIZE (In Inches)	WEIGHT	SIZE OF FILM	LENS SPEED AND FOCAL LENGTH	SHUTTER SPEED (Frames Per Second)	MFR.	MAGAZINE	REMARKS
M 1	Limited Standard	12	8 x 4 x 3	3 lb	16 mm	F/4.5 3" Plain	16-32-64	Fairchild	A-6	
M 4	Limited Standard	12	8 x 4 x 3	3 lb	16 mm	F/3.5 35 mm Plain	16-32-64	Fairchild Bell & Howell	A-6	
M 2	Limited Standard	12	8 x 4 x 3	3 lb	16 mm	F/4.5 3" 90° Erecting	16-32-64	Fairchild Bell & Howell	A-6	
M 5	Limited Standard	12	8 x 4 x 3	3 lb	16 mm	F/3.5 35 mm 90° Erecting	16-32-64	Bell & Howell	A-6	
N 1	Limited Standard	24	8 x 4 x 3	3 lb	16 mm	F/4.5 3" Plain	16-32-64	Fairchild Bell & Howell	A-6	
N 4	Limited Standard	24	8 x 4 x 3	3 lb	16 mm	F/3.5 35 mm Plain	16-32-64	Fairchild Bell & Howell	A-6	Standardized Model called for in C.T.I. No. 532
N 2	Limited Standard	24	8 x 4 x 3	3 lb	16 mm	F/4.5 3" 90° Erecting	16-32-64	Fairchild Bell & Howell	A-6	
N 5	Limited Standard	24	8 x 4 x 3	3 lb	16 mm	F/3.5 35 mm 90° Erecting	16-32-64	Bell & Howell	A-6	
N 6	Standard	24	8 x 4 x 3	3 lb	16 mm	F/3.5 35 mm Plain. Has 90° Erector Accessory	16-32-64	Fairchild	A-6	Has been procured to supersede all previous models. Actually can be used interchangeably with any "N" type camera

DRY CELL TYPE BATTERIES . . . CROSS REFERENCE CHART
SHOWING HORIZONTAL INTERCHANGEABILITY ONLY

Signal Corps	Eveready	General	Burgess	Bond	Bright Star	Usa-lite	Ray-O-Vac	Length	Diameter or Depth	Height	Voltage	REMARKS
3A1	777		222	111			321		1-3/8	6-1/16	3	Flashlight
3A2	763	H15A	4156	1215	15-50		4151	3-7/16	2-19/32	2-3/32	22-1/2	
3A8					15-90		2151	6-5/8	4-1/16	3-1/8	22-1/2	
3A9	703		532				531	2-3/8	13/16	2-5/8	4-1/2	
3A15-A		H-2-F	2FBP				921	2-5/8	1-1/4	4	1-1/2	
3A23	6	6	44	6		6	6		2-1/2	6-1/2	1-1/2	
3A26			V-30-F				9303	8-1/4	4-1/2	7-3/8	45	
3A27	761T	H-3-D	237OP1 771		71-17	603	231W	4-1/16	1-1/2	3-3/16	4-1/2	
3A28	751						431	2	1-1/2	2-1/4	4-1/2	
3A30	950 1050	"D"	2	"D"	10M & 10		2LP		1-1/4	2-1/4	1-1/2	
3A31	781	H-3-B	5360	317			531R	2-13/16	13/16	2-11/16	4-1/2	
3A32	X176	10888CF	2F2B108					8	5	7	See Remarks	This is a 4-unit battery consisting of 3-volt "A," 1.44-Volt "B," 1.3 1/2-Volt "C" and 4 1/2-Volt Microphone
3A33	X175	P-90A	A-90					6-1/8	3-1/2	5-11/16	45-135	
3A34	773	V-30AAA	V-30P1	517	51-03	606	351				7-1/2 Max.	Tapped at Minus 1 1/2-Volt, 3-Volt, 4 1/2-Volt and 6-Volt
		V-5-B	5540				P3A-30	4	7/8	2-3/4		
3A35		3L1	4FH				P94-15	2-5/8	2-5/8	4-5/16	1-1/2	
3A36		V-30-B	B-30&5308	30-17	30-03	623	P-5303	4-3/16	2-9/16	5-7/8	22-1/2-45	
3A37		Type L							15/16	5-15/16	1-1/2	
3A38			XX69					1-11/32	1-3/8	1-7/8	103-1/2	
3A39	X349	100A5F5	P5A100					6-7/8	3-3/4	7-1/2	7-1/2 to 180	
3A40	X371	6084H1	4GB60					5-1/4	4-1/16	7-3/8	1-1/2 to 90	
3A41	X398	20BP40BP						2-3/8	2-1/8	3-1/2	4-1/2-25-1/2-60	
3A42	935	Type "C"	Anti-Cell		11M		44001LP		1	1-7/8		
3A43	X437			5141				2-5/8	4-3/4	6-1/4	1-1/2-45-90	
3A44	1461	641		4141			641	10-3/8	2-3/4	7-1/4	6	
3A46			44X					4	1-7/8		1-1/2	
3A47			W305N					2-31/32	1-17/32	3-11/16	45	
3A48			6TA60					9-15/16	2-1/4	4-7/8	90	
3A49								5-1/16	1-3/8	6-1/4	67-1/2-B 1-1/2-Z	
3A51	467		XX45				AB64	3-11/16	1-5/16	3-11/16	67-1/2	
3A53			23ON				P4367	3-1/16	1-15/16	9/16	22-1/2 + 45	Replaces 3A52 and 3A52A and B
3A56	455	Philco	XX30					2-5/8	29/32	3-3/8	45	
3A58	915		Z1 Cell "AA" Uni-Cell 103		59-1				17/32	1-15/16	1-1/2	Penlight type
3A59	482		M30	6220	30-33	640	P7830	3-15/32	1-11/16	5-7/16	45	Used in Test Equipment No. IE-10
3A63	738	V30AA	Z30			620	P7R30	3	2-5/16	4-1/8	22-1/2 - 45	
3A65	742	4F1	4F	A826	462	634	P94A		2-9/16	4	1-1/2	
3A28P			F28P					2-5/8	1-5/16	4-7/16	3	Overall height 4-7/16
3A4F	742	4F1	4F	4826	462	634	P94A	2-5/8	2-5/8	4-1/16	1-1/2	Replaced by 3A65
3A154		4F4	F4P1		646	639	P694A	2-5/8	2-5/8	4	6	
3AK5H5	687	5H5	G5		561		P85A	3-5/8	2-43/64	4-5/16	7-1/2	
3A30BP			30BP					2-29/32	1-7/32	3-5/8	22-1/2-45	
3A746	746	3H3	G3	4928	361	683	P83A	4	4-29/32	1-3/8	4-1/2	
3A5502							AB194	6-3/4	3-3/4	4-1/4	1 1/2-A-67 1/2 "B" or 7 1/2 "C"	
3A718	718	8F4	2F4	4827	866	638	P698A	3-7/8	2-11/16	5-5/16	6	
Misc. 738	738	V30AA	Z30	4829		620	P7R30	3-1/16	2-1/4	4	22-1/2-45	Same as 3A63
Misc. 741	741	8F1			860	635	P98A	3-13/16	2-21/32	5-11/32	1-1/2	
Misc. 745	745	8CFL	8FL		865	645	P98L	3-29/32	1-7/16	10-11/16	1-1/2	
Misc. 747	747	8CFA	2F4L	4825	868	646	P698L	3-29/32	1-7/16	10-11/16	6	
3AK762	762	V30B	B-30	6220	30-03	624	P3303	4-1/16	2-9/16	5-5/16	45	
BA200 U	409	V4F	4FH	123	460		941	2-5/8	2-5/8	4-5/16		For lanterns covered by Q.M.C.
BA203 U	718	8F4		4827				3-7/8	2-11/16	5-5/16	6	
		Philco									22-1/2 + 45	
3A53A	445	461-1003	23ON					3-1/16	1-15/16	5-3/16		





AN-AC-NAF
CONVERSION CHARTS



INSTRUCTIONS FOR THE USE OF AN, AC, NAF CONVERSION CHARTS

These charts are designed to provide a convenient tabulation from which it can be determined, for purposes of substitution or replacement, how fittings of the various standard styles as used by the Army Air Forces and the Naval Aircraft Factory compare with each other. **The fittings illustrated appear in AN numerical order.**

To illustrate, the following examples demonstrate how the charts are used.

Example 1: Assume a case where it is necessary to replace part Number AC811-CT-8D but no AC fitting is available. What comparable fitting you have in stock could be substituted?

Procedure: Refer to Index and note that part Number AC811-CT is listed on page 12. From page 12 it will be noted that part Number AN822 is the current part Number. Comparing dimensions A and B for parts Number AN822-8D and AC811-CT-8D shows that AN822-8D is slightly longer on dimension A. However, this will be satisfactory as the existing tubing can be pulled back or cut back and reflared to use AN822-8D. Next check the thread sizes. From "Thread Sizes—Tube Fittings" on page 3 it is determined that the thread sizes differ. The tube thread for AN822-8D being $\frac{3}{4}$ -16 while the tube thread on AC811-CT-8D is $\frac{3}{4}$ -18. Therefore, per note 1 page 3 AN818-8D nuts and AN819-8D sleeves must be used with AN822-8D and the replacement made as a complete unit.

Example 2: Assume a case where it is necessary to replace part Number AC811-FT-5D but this part is not available. What comparable fitting could be used instead?

Procedure: Refer to Index from which it is noted that part Number AC811-FT is listed on page 9. On page 9 it is found that part Number AN816-5D is the current part comparing to AC-811-FT-5D.

Example 3: Assume a replacement on part Number NAF 213826-10D. What AN fitting should be used?

Procedure: Referring to Index, page 15, it is found that part Number NAF213826-10D is comparable to part Number AN832-10D. Therefore, per note 2, page 3, the replacement should be made with part AN832-10D plus nuts AN817-10D. However, in case nuts AN817-10D are not available, part Number AN832-10D with the existing nuts NAF 213690-10D can be used. This is determined from thread sizes, page 3, which shows that the tube thread for NAF fittings -10 size is $\frac{7}{8}$ -14 or the same tube thread as for AN fittings -10 size.

AN ★ AC ★ NAF CONVERSION CHARTS

1. All similar parts of same dash numbers are interchangeable as a complete unit (fitting with nuts and sleeves). AN fittings are the current active standard for both Army Air Force and Bureau of Aeronautics new design.
2. In accordance with the Bureau of Aeronautics' letter of December 26, 1942, manufacturers do not accept orders for NAF parts as they should be replaced by the AN fittings as a unit. NAF parts are inactive for new design.
3. The AC 811 fittings are inactive for new design.
4. AN and AC 811 tube fittings in sizes 1/8", 3/16", 1/4", 5/16", 3/4" and 2" are interchangeable and can be used with any combination of sleeves and nuts EXCEPT the combination of an AC 811 fitting with an 811 sleeve and AN nut or an AC 811 fitting with an AN nut and AN sleeve. This per Wright Field's Memorandum EXP-M-51/AD1058, Addendum No. 3 dated November 7, 1942. ENG-M-51/AD-1058 Addendum No. 7 dated March 20, 1943, and Wright Field letter GVA:REH-70-5M dated June 2, 1943.
5. Manufacturers do not accept orders for AC 811 brass fittings as they have been advised by Wright Field under date of December 4, 1942, that they could discontinue manufacturing them.
6. The AN 819 sleeve is interchangeable with the AC 811 sleeve in all sizes. AN 819 aluminum bronze (Duronze III) sleeves can be used with all sizes of aluminum alloy and steel tubing. Sleeves fabricated of steel must be used with steel tubing only.
7. General Limitation Order L-313 issued by the War Production Board under date of September 23, 1943, restricts any producer of aircraft plumbing fittings to furnish only "AN" standard fittings after March 1, 1944. Only certain exceptions, such as direct purchases by Army Air Forces or Navy Bureau of Aeronautics and maintenance requirements, are allowed.

MATERIALS SPECIFICATIONS

Aluminum: AN-QQ-A-351 Cond. T., AN-QQ-A-367 Grade No. 1.

Steel: AN-S-9, AN-S-14, AN-S-16, AN-QQ-S-684, AN-QQ-S-687, AN-QQ-S-689. Steel AN 913 plugs use specification AN-QQ-S-646 only.

Bronze: AN-QQ-B-721 Class A, one-half hard, AN-QQ-B-666 Grade B and AN-QQ-B-691, Comp. 2.

Brass: AN-QQ-B-611.

No cast fittings approved.

FINISH SPECIFICATIONS

Aluminum Alloy, anodized, AN-QQ-A-696.

Brass, Bronze and Steel, Cadmium Plated, AN-QQ-P-421. Zinc plating may be substituted per directive from Bureau of Aeronautics and Wright Field.

THREAD SIZES—TUBE FITTINGS

DASH† NUMBERS	— 2	— 3	— 4	— 5	— 6	— 7	— 8	— 10	— 12	— 16	— 20	— 24	— 25	— 28	— 32
TUBE SIZE	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1 1/4	1 1/2	1 1/2	1 3/4	2
AN	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18		3/4-16	7/8-14	1 1/16-12	1 5/16-12	1 5/8-12	1 7/8-12	1 7/8-12	2 1/4-12	2 1/2-12
AC 811	5/16-24	3/8-24	7/16-20	1/2-20	9/16-20	5/8-20	3/4-18	7/8-18	1 1/16-14	1 5/16-14	1 5/8-14	1 7/8-14		2 1/4-12	2 1/2-12
NAF	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	5/8-18	3/4-16	7/8-14	1-14	1 1/4-12	1 1/2-12	1 3/4-12			2 1/4-12
Standard Companion Pipe Thread Size When Pipe Thread Used On Same Fitting	1/8"	1/8"	1/8"	1/8"	* 1/4"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	1 1/4"	1 1/2"	2"

†AN316 and 11-1039-1 lock nuts page 29 do not follow this standard.

PIPE SIZES—PIPE FITTINGS

DASH NUMBERS	— 1	— 2	— 3	— 4	— 5	— 6	— 8	— 10
AN TYPE*	1/8"	1/4"	3/8"	1/2"		3/4"	1"	1 1/4"
NAF TYPE*	1/8"	1/4"	3/8"	1/2"	3/4"	3/4" or 1"	1"	1 1/4"

*Dash Numbers for Reducing Bushing NAF 213765 and AN 912 do not follow this standard.

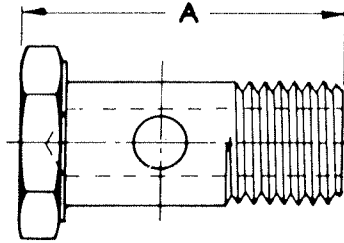
INDEX

AN PART NUMBER	PAGE	AC PART NUMBER	PAGE	PARKER PART NUMBER	PAGE	N.A.F. PART NUMBER	PAGE
AN 316	29	AC 811-BT	10	11-1039-1	29	213690	9
AN 775	6	AC 811-CT	12	423	25	213691	8
AN 776	6	AC 811-CT-45°	12	427	26	213692	9
AN 777	7	AC 811-ET	11	428	27	213694	11
AN 778	7	AC 811-ET-45°	18	1601-PN-FNT	11	213695	12
AN 815	8	AC 811-FT	9	3115-1ET	16	213697	13
AN 816	9	AC 811-HT	8	3115-1HT	15	213698	13
AN 817	9	AC 811-JT	13	3115-1JT	17	213699	14
AN 818	10	AC 811-KT	14	3151-CD	27	213701	24
AN 819	10	AC 811-RT	14	3151-CD-45°	27	213702	20
AN 820	11	AC 811-ST	13	3151-DD	28	213703	22
AN 821	11	AC 811-T	10	3151-MMO	28	213706	19
AN 822	12	AC 835	19	3151-KMMOO	29	213707	21
AN 823	12	AC 836	19	3152-1	25	213708	23
AN 824	13	AC 850	21	3152-4	26	213709	18
AN 825	13	AC 851	23	3152-6	24	213711	12
AN 826	14	AC 852	21	3152-9	24	213712	12
AN 827	14	AC 853	23	3175-3	8	213713	9
AN 828	15	AC 895- 1 to - 7	27	3175-4	6	213732	12
AN 829	16	AC 895-10 to -16	28	3175-5	7	213745	14
AN 830	17	AC 895-30 to -36	28	3175-6	7	213748	29
AN 832	15	AC 895-40 to -46	29	3175-11	6	213755	27
AN 833	16	AC 895-50 to -54	24	3181-2	6	213756	28
AN 834	17	AC 895-70 to -75	26	3181-5	6	213758	27
AN 837	18	AC 895-80 to -88	25	3181-6	7	213759	28
AN 840	19	AC 895-90 to -95	24	3181-8	7	213765	25
AN 841	20	AC 39B1024	29	3181-9	8	213767	24
AN 842	21	AC 40B374	6	HLF-16	19	213768	26
AN 843	22	AC 40D370	6	LHLF-16	19	213826	15
AN 844	23	AC 40D371	7	HLC-16	21	213829	16
AN 910	24	AC 40D372	7	LHLC-16	21	213830-2	29
AN 911	24	AC 40D373	8	HLC45°-16	23	213830-3	29
AN 912	25			IHLC45°-16	23	213830-4	29
AN 913	26			4210	28	213830-5	29
AN 914	27			4211	28	213830-6	29
AN 915	27			4212	29	213830-7	29
AN 916	28			4213	24	213830-8	29
AN 917	28			4214	24	213830-10	29
AN 918	29			4215	27	213830-12	29
AN 920	8					213830-16	29
AN 920	15					310503	11
AN 921	16					310504	17
AN 922	18						
AN 923	17						
AN 924	29						

RESTRICTED
T. O. No. 00-45-1

WEATHER- HEAD NUMBER	PAGE	WEATHER- HEAD NUMBER	PAGE	WEATHER- HEAD NUMBER	PAGE
7002	24	9100	10	245624	26
7003	24	9116	10	245952 to 56	24
7004	27	9129	11	276401 to 7	6
7005	28	9150	10	276411 to 17	6
7007	28	9180	10	276421 to 27	7
7013	15	9185	10	276431 to 37	7
7014	16	9200	9	276441 to 47	7
7016	17	9216	9	276451 to 57	7
7034	25	9300	8	276460 to 67	6
7035	27	9316	8	276470 to 77	6
7036	25	9350	12	276481 to 87	4
7038	25	9366	12	276491 to 97	4
7040	25	9400	12	276889	26
7042	25	9416	12	285647	26
7051	26	9500	11		
7095	29	9516	11		
7100	9	9600	13		
7127	11	9616	13		
7200	9	9700	13		
7227	19	9716	13		
7228	19	9750	14		
7229	19	9766	14		
7230	20	9950	14		
7240	9	9966	14		
7300	8	27227	19		
7350	12	27228	19		
7356	18	27377	23		
7377	23	27378	23		
7378	23	27427	21		
7379	23	27428	21		
7390	12	47002	24		
7400	12	47003	24		
7427	21	47005	28		
7428	21	47051	26		
7429	21	47100	9		
7430	22	47229	19		
7440	12	47430	22		
7500	11	245079	26		
7600	13	245104	26		
7700	13	245105	26		
7750	14	245115	26		
7950	14	245130 to 35	24		
9013	15	245364	26		
9014	16	245389 to 93	24		
9016	17	245623	26		

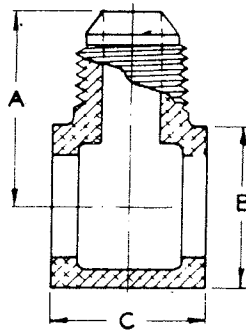
BOLT:
UNIVERSAL FITTING



SIZE & MATERIAL		AN PART NO.		AC AND PARKER PART NUMBERS					
Alum. all Types	Steel all Types	ACTIVE		INACTIVE					
		Part No.	Dimension A	Part No.	Parker Part No.	Weatherhead No.		Dimension A	Parker Special
						Dural	Steel		
4D	4	AN 775-4	1 3/8	AC 40B374-4	3175-11-4	276481	276491	1 1/2	3181-2-4
5D	5	-5	1 3/8	-5	-5	276482	276492	1 1/2	-5
6D	6	-6	1 9/16	-6	-6	276483	276493	1 11/16	-6
8D	8	-8	1 5/16	-8	-8	276484	276494	2	-8
10D	10	-10	2 1/4	-10	-10	276485	276495	2 5/16	-10
12D	12			-12	-12	276486	276496	2 3/4	-12
16D	16			-16	-16	276487	276497	3 1/4	-16

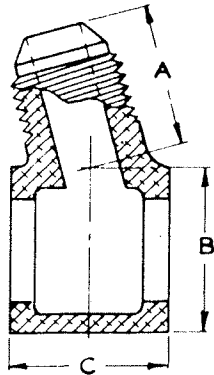
The AC 40B374 series are interchangeable with the Parker 3175-11 series.
The Parker 3181-2 series can be replaced with either the AC 40B374 or Parker 3175-11 series, but only as a complete unit. (Fittings, bolt and washers).

ELBOW:
UNIVERSAL 90°



Size and Material		AN PART NUMBER			AC AND PARKER PART NUMBERS								
Alum. all Types	Steel all Types	INACTIVE			INACTIVE								
		Part No.	Dimensions			Part No.	Parker Part No.	Weatherhead No.		Dimensions			Parker Special
			A	B	C			Dural	Steel	A	B	C	
4D	4	AN 776-4	1 1/8	13/16	3/4	AC 40D370-4	3175-4-4	276401	276411	1 1/16	13/16	3/4	3181-5-4
5D	5	-5	1 1/8	13/16	3/4	-5	-5	276402	276412	1 1/8	13/16	3/4	-5
6D	6	-6	1 1/4	1	7/8	-6	-6	276403	276413	1 1/8	1	7/8	-6
8D	8	-8	1 7/16	1 3/16	1 1/8	-8	-8	276404	276414	1 3/8	1 3/16	1 1/8	-8
10D	10	-10	1 21/32	1 3/8	1 3/8	-10	-10	276405	276415	1 9/16	1 3/8	1 3/8	-10
12D	12					-12	-12	276406	276416	1 13/16	1 11/16	1 3/8	-12
16D	16					-16	-16	276407	276417	2 3/16	2 1/16	2	-16

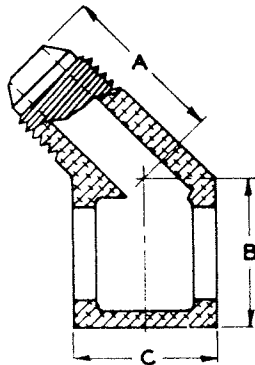
The AC 40D370 series are interchangeable with the Parker 3175-4.
The Parker 3181-5 series can be replaced with either the AC 40D370 or Parker 3175-4 series, but only as a complete unit. (Fitting, bolt and washers).
AN 776 series inactive For new design, use AN 833, page 16.
It has been requested that the AN 776 series be made active as it is impossible to use the AN 833 series when two bosses are close together.



ELBOW:
UNIVERSAL 75°

Size & Material		AN PART NUMBER				AC AND PARKER PART NUMBERS							
Alum. all Types	Steel all Types	ACTIVE				INACTIVE							
		Part No.	Dimensions			Part No.	Parker Part No.	Weatherhead No.		Dimensions			Parker Spec. No.
A	B	C	Dural	Steel	A			B	C				
4D	4	AN 777-4	1 ³ / ₁₆	1 ³ / ₁₆	3/4	AC 40D371-4	3175-5-4	276421	276431	3/4	1 ³ / ₁₆	3/4	3181-6-4
5D	5	-5	1 ³ / ₁₆	1 ³ / ₁₆	3/4	-5	-5	276422	276432	3/4	1 ³ / ₁₆	3/4	-5
6D	6	-6	7/8	1	7/8	-6	-6	276423	276433	3/4	1	7/8	-6
8D	8	-8	1 ¹ / ₃₂	1 ³ / ₁₆	1 ¹ / ₈	-8	-8	276424	276434	1 ⁵ / ₁₆	1 ³ / ₁₆	1 ¹ / ₈	-8
10D	10	-10	1 ³ / ₁₆	1 ³ / ₈	1 ³ / ₈	-10	-10	276425	276435	1	1 ³ / ₈	1 ³ / ₈	-10
12D	12					-12	-12	276426	276436	1 ¹ / ₈	1 ¹¹ / ₁₆	1 ⁵ / ₈	-12
16D	16					-16	-16	276427	276437	1 ⁵ / ₁₆	2 ¹ / ₁₆	2	-16

The AC 40D371 series are interchangeable with the Parker 3175-5 series.
The Parker 3181-6 series can be replaced with either the AC 40D371 or Parker 3175-5 series, but only as a complete unit. (Fitting, bolt and washers)

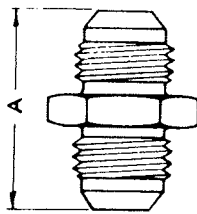


ELBOW:
UNIVERSAL 45°

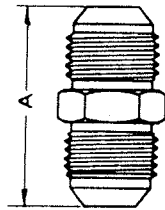
Size & Material		AN PART NUMBER				AC AND PARKER PART NUMBERS							
Alum. all Types	Steel all Types	INACTIVE				INACTIVE							
		Part No.	Dimensions			Part No.	Parker Part No.	Weatherhead No.		Dimensions			Parker Special
A	B	C	Dural	Steel	A			B	C				
4D	4	AN 778-4	1	1 ³ / ₁₆	3/4	AC 40D372-4	3175-6-4	276441	276451	1 ⁵ / ₁₆	1 ³ / ₁₆	3/4	3181-8-4
5D	5	-5	1	1 ³ / ₁₆	3/4	-5	-5	276442	276452	1 ⁵ / ₁₆	1 ³ / ₁₆	3/4	-5
6D	6	-6	1 ¹ / ₁₆	1	7/8	-6	-6	276443	276453	1	1	7/8	-6
8D	8	-8	1 ⁵ / ₁₆	1 ³ / ₁₆	1 ¹ / ₈	-8	-8	276444	276454	1 ¹ / ₄	1 ³ / ₁₆	1 ¹ / ₈	-8
10D	10	-10	1 ⁵ / ₃₂	1 ³ / ₈	1 ³ / ₈	-10	-10	276445	276455	1 ⁵ / ₁₆	1 ³ / ₈	1 ³ / ₈	-10
12D	12					-12	-12	276446	276456	1 ⁷ / ₁₆	1 ¹¹ / ₁₆	1 ⁵ / ₈	-12
16D	16					-16	-16	276447	276457	1 ⁵ / ₈	2 ¹ / ₁₆	2	-16

The AC 40D372 series are interchangeable with the Parker 3175-6 series.
The Parker 3181-8 series can be replaced with either the AC 40D372 or Parker 3175-6 series, but only as a complete unit. (Fittings, bolt and washers).
AN 778 series inactive. For new design use AN 837, page 18.
It has been requested that the AN 778 series be made active as it is impossible to use the AN 837 series when two bosses are close together.

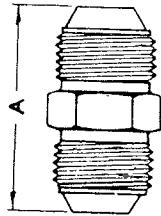
UNION: FLARED TUBE



AN TYPE



NAF TYPE



AC 811 TYPE

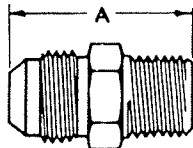
RESTRICTED
T. O. No. 00-45 -1

Size and Material	AN PART NUMBERS				NAF PART NUMBERS				AC AND PARKER PART NUMBERS												
	ACTIVE		INACTIVE		ACTIVE		INACTIVE		INACTIVE				INACTIVE								
	Part No.	Dimen. A	Part No.	Dimen. A	Part No.	Dimen. A	Part No.	Dimen. A	Part No.	Dimen. A	Weatherhead No. Dural	Weatherhead No. Brass	Part No.	Part No.	Part No.	Part No.	Dimen. A	Weatherhead No. Dural	Weatherhead No. Steel	Parker No. (Special)	
Alum. Types	2	1 7/32	AN 815-2	3/4	213691-2	1 1/32	7300x2	AC811 HT-2	1 1/2	9300x2	9316x2	AC 40D373-	3175-3								
Steel & AC only	3	1 1/32	-3	1 1/16	-3	1 1/16	x3	-3	1 3/32	x3	x3	-3	-3	1 3/16	276460	276470				3181-9	
Brass AN NAF & AC only	4	1 1/4	-4	1 1/2	-4	1 1/2	x4	-4	1 1/4	x4	x4	-4	-4	1 5/16	276461	276471				-3	
	5	1 1/4	-5	1 7/32	-5	1 7/32	x5	-5	1 13/32	x5	x5	-5	-5	1 3/8	276462	276472				-4	
	6	1 3/8	-6	1 5/16	-6	1 5/16	x6	-6	1 7/32	x6	x6	-6	-6	1 3/4	276463	276473				-5	
	7		-7	1 3/8	-7	1 3/8	x7	-7	1 9/32	x7	x7	-7	-7								-6
	8	1 9/16	-8	1 1/2	-8	1 19/32	x8	-8	1 11/32	x8	x8	-8	-8	1 7/16	276464	276474					-8
	10	1 53/64	-10	1 3/4	-10	1 13/16	x10	-10	1 1/2	x10	x10	-10	-10	1 9/16	276465	276475					-10
	12	2 7/64	-12	1 29/32	-12	1 31/32	x12	-12	1 29/32	x12	x12	-12	-12	2	276466	276476					-12
	16	2 3/16	-16	1 61/64	-16	2 1/4	x16	-16	1 13/16	x16	x16	-16	-16	2	276467	276477					-16
	20	2 9/32	-20		-20	2 19/32	x20	-20	2 3/16	x20	x20	-20	-20	2 1/2							-20
	24	2 17/32	-24		-24	2 15/16	x24	-24	2 1/2	x24	x24	-24	-24	2 3/4							-24
	28	2 13/16	-28		-28		x28	-28	2 15/16	x28	x28	-28	-28								-28
	32	3 1/16	-32		-32	3 19/32	x32	-32	3 1/2	x32	x32	-32	-32								-32

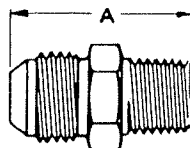
The AN 815 series replaces the AN 920 series and they are interchangeable except when used to connect two solid lines.
The AC 40D373, Parker 3175-3 and 3181-9 series are interchangeable.

RESTRICTED

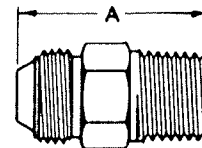
NIPPLE: FLARED TUBE AND PIPE THREAD



AN TYPE



NAF TYPE

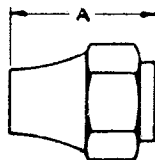


AC 811 TYPE

Size and Material			AN PART No.		NAF PART NUMBER			AC AND PARKER PART NUMBER					
Alum. all Types	Steel AN Only	Brass NAF & AC Only	ACTIVE		INACTIVE			INACTIVE					
			Part No.	Dim. A	Part No.	Dim. A	Weatherhead No. Dural	Brass	Part No.	Dim. A	Weatherhead No. Dural	Brass	
2D	2	2	AN 816-2	1 ¹ / ₄	NAF 213692-2	1	7200x2			AC 811FT-2	1 ⁵ / ₁₆	9200x2	9216x2
3D	3	3	-3	1 ³ / ₄	-3	1 ¹ / ₄	x3			-3	1 ¹ / ₃₂	x3	x3
4D	4	4	-4	1 ⁷ / ₄	-4	1 ³ / ₄	x4			-4	1 ¹ / ₈	x4	x4
5D	5	5	-5	1 ⁹ / ₄	-5	1 ⁷ / ₄	x5			-5	1 ⁷ / ₃₂	x5	x5
6D	6	6	-6	1 ³ / ₈	-6	1 ³ / ₈	x6			-6	1 ⁹ / ₃₂	x6	x6
7D		7	-7	1 ¹ / ₂	-7	1 ²⁷ / ₆₄ *	x7			-7	1 ⁵ / ₁₆	x7	x7
8D	8	8	-8	1 ¹ / ₂	-8	1 ¹⁷ / ₃₂	x8			-8	1 ¹¹ / ₃₂	x8	x8
10D	10	10	-10	1 ⁵ / ₄	-10	1 ⁵ / ₄	x10			-10	1 ¹⁹ / ₃₂	x10	x10
12D	12	12	-12	1 ⁶¹ / ₆₄	-12	1 ¹⁵ / ₁₆	x12			-12	1 ³ / ₄	x12	x12
16-12D	16-12	16-12	-16-12	2 ¹ / ₃₂	213713-20	2 ³ / ₃₂	7240x16			-16-12	1 ²⁹ / ₃₂	x16x12	x16x12
16D	16	16	-16	2 ⁷ / ₃₂	213692-16	2 ⁹ / ₃₂	7200x16			-16	1 ³¹ / ₃₂	x16	x16
20D	20	20	-20	2 ²³ / ₆₄	-20	2 ¹ / ₂	x20			-20	2 ³ / ₁₆	x20	x20
21D	21		-21	2 ²¹ / ₆₄									
25D	25		-25	2 ³³ / ₆₄									
28D	28	28	-28	2 ⁵³ / ₆₄						-28	2 ²³ / ₃₂	x28	x28
32D	32	32	32	3 ¹ / ₄	-32	3 ¹ / ₁₆	x32			-32	3 ³ / ₁₆	x32	x32

Not made because not called for by any manufacturer.

AN 816-8 and NAF 213692-8 are interchangeable.
*Item non-procurable

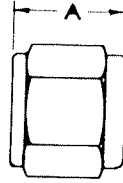


NUT: SLEEVE, COUPLING

Size and Material			AN PART NUMBER		NAF PART NUMBERS			
Alum. NAF & AN	Steel AN Only	Brass NAF Only	ACTIVE		INACTIVE			
			Part No.	Dimensions A Hex	Part No.	Dimensions A Hex	Weatherhead No. Dural	Brass
2D	2	2	AN 817-2	2 ⁷ / ₃₂ 3 ⁸ / ₁₆	NAF 213690-2	3 ⁴ / ₁₆ 7 ¹⁶ / ₁₆	7100x2	47100x2
3D	3	3	-3	1 ⁵ / ₁₆ 7 ¹⁶ / ₁₆	-3	5 ⁵ / ₆₄ 1 ² / ₂	x3	x3
4D	4	4	-4	1 9 ¹⁶ / ₁₆	-4	1 ⁵ / ₁₆ 9 ¹⁶ / ₁₆	x4	x4
5D	5	5	-5	1 ¹¹ / ₁₆ 5 ⁸ / ₁₆	-5	1 ¹¹ / ₃₂ 5 ⁸ / ₁₆	x5	x5
6D	6	6	-6	1 ³ / ₃₂ 1 ¹¹ / ₁₆	-6	1 ¹ / ₈ 1 ¹¹ / ₁₆	x6	x6
7D		7			-7	1 ³ / ₁₆ 3 ⁴ / ₁₆	x7	x7
8D	8	8	-8	1 ⁹ / ₃₂ 7 ⁸ / ₁₆	-8	1 ¹ / ₈ 7 ⁸ / ₁₆	x8	x8
10D	10	10	-10	1 ²¹ / ₆₄ 1	-10	1 ¹ / ₂ 1	x10	x10
12D	12	12	-12	1 ²¹ / ₃₂ 1 ¹ / ₄	-12	1 ¹ / ₈ 1 ¹ / ₈	x12	x12
16D	16	16	-16	1 ¹⁵ / ₁₆ 1 ¹ / ₂	-16	1 ¹⁵ / ₁₆ 1 ⁷ / ₁₆	x16	x16
20D	20	20	-20	2 ³ / ₁₆ 2	-20	2 ³ / ₁₆ 1 ³ / ₄	x20	x20
24D	24	24	-24	2 ⁵ / ₁₆ 2 ¹ / ₄				
28D	28	28	-28	2 ¹ / ₂ 2 ⁵ / ₈				
32D	32	32	-32	2 ³ / ₄ 2 ¹⁵ / ₁₆				

The AN 817 and the NAF 213690 have the same threads up to and including the -10 size.
If AN 817 is used in place of an NAF 213690 on a NAF fitting, care should be taken to see that the bottom of the nut does not strike the hex of the connector, as this will cause leakage.
The NAF 213690 in the sizes -2 to -10 inclusive can be used in place of AN 817.
Not to be used for replacement. Use AN 818 nut and 819 sleeve.

NUT: COUPLING

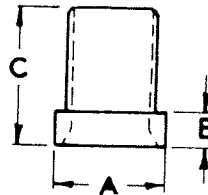


Size and Material			AN PART NUMBER			AC AND PARKER PART NUMBER				
Alum. All Types	Steel AN Only	Brass AC Only	ACTIVE			INACTIVE				
			Part No.	Dimensions A Hex		Part No.	Dimensions A Hex		Weatherhead No. Dural Brass	
2D	2	2	AN 818-2	17/32	3/8	AC 811BT-2	7/16	3/8	9100x2	9116x2
3D	3	3	-3	19/32	7/16	-3	17/32	7/16	x3	x3
4D	4	4	-4	39/64	9/16	-4	37/64*	9/16*	x4	x4
5D	5	5	-5	43/64	5/8	-5	43/64*	5/8*	x5	x5
6D	6	6	-6	23/32	11/16	-6	19/32	11/16	x6	x6
7D						-7	41/64	3/4	x7	x7
8D	8	8	-8	27/32	7/8	-8	11/16	7/8	x8	x8
10D	10	10	-10	31/32	1	-10	47/64	1	x10	x10
12D	12	12	-12	11/64	1 1/4	-12	57/64	1 3/16	x12	x12
16D	16	16	-16	1 1/8	1 1/2	-16	29/32	1 1/2	x16	x16
20D	20	20	-20	17/32	2	-20	15/64	1 15/16	x20	x20
24D	24	24	-24	1 13/32	2 1/4	-24	1 1/4	2 1/4	x24	x24
28D	28	28	-28	1 9/16	2 5/8	-28	1 29/64	2 5/8	x28	x28
32D	32	32	-32	1 47/64	2 15/16	-32	1 19/32	3	x32	x32

The AC 811 nuts can be used in sizes 2, 3, 4, 5, 28 and 32 with either AN or 811 sleeves in place of the AN 818 nut.

*Items non-procurable.

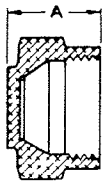
SLEEVE: COUPLING



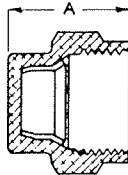
Size and Material			AN PART NUMBER			AC AND PARKER PART NUMBER							
Alum. All Types	Steel AN Only	Durozone	ACTIVE			INACTIVE							
			Part No.	A	Dimensions B C	Part No.	A	Dimensions B C	Weatherhead No. Dural Durozone Steel				
2D*	2	2Z	AN 819-2	.267	1/8	11/32	AC 811T-2	.262	7/64	9/32	9150x2	9180x2	9185x2
3D*	3	3Z	-3	.329	9/64	13/32	-3	.325	9/64	11/32	x3	x3	x3
4D*	4	4Z	-4	.383	9/64	13/32	-4	.378	1/8	11/32	x4	x4	x4
5D*	5	5Z	-5	.446	5/32	7/16	-5	.441	9/64	13/32	x5	x5	x5
6D*	6	6Z	-6	.533	11/64	1/2	-6	.501	11/64	15/32	x6	x6	x6
7D		7Z					-7	.564	13/64	17/32	x7	x7	x7
8D	8	8Z	-8	.683	7/32	9/16	-8	.683	13/64	17/32	x8	x8	x8
10D	10	10Z	-10	.799	15/64	21/32	-10	.808	13/64	19/32	x10	x10	x10
12D	12	12Z	-12	.974	17/64	11/16	-12	.978	1/4	11/16	x12	x12	x12
16D	16	16Z	-16	1.224	9/32	25/32	-16	1.228	1/4	3/4	x16	x16	x16
20D	20	20Z	-20	1.536	5/16	29/32	-20	1.541	17/64	7/8	x20	x20	x20
24D	24	24Z	-24	1.786	11/32	1-1/8	-24	1.791	9/32	1	x24	x24	x24
28D	28	28Z	-28	2.161	3/8	1-1/8	-28	2.153	21/64	1-1/8	x28	x28	x28
32D	32	32Z	-32	2.411	13/32	1-3/16	-32	2.403	23/64	1-1/4	x32	x32	x32

*Procurable only under AC 811 Numbers.

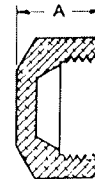
CAP: FLARED TUBE FITTING



AN TYPE



NAF TYPE

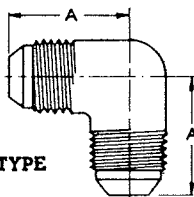


AC 811 TYPE

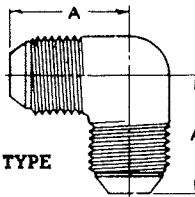
Size and Material		AN PART NUMBER			NAF PART NUMBER				PARKER PART NUMBER				
Alum. all Types	Brass or Bronze, AC or NAF only	ACTIVE			INACTIVE				INACTIVE				
		Part No.	Dimensions A Hex		Part No.	Dimensions A Hex		Weatherh'd No. Dural Bronze	Parker Part No.	Dimensions A Hex		Weatherhead No. Dural Brass	
2D	2	AN 820-2	1/2	3/8	NAF 310503-2	1 9/32	7/16	7127x2	1601PN-FNT-2	1 5/32	3/8	9129x2	Not popular and only called for in a few sizes by the industry.
3D	3	-3	9/16	7/16	-3	2 1/32	1/2	x3	-3	1 5/32	7/16	x3	
4D	4	-4	1 9/32	9/16	-4	1 1/16	9/16	x4	-4	1/2	9/16	x4	
5D	5	-5	3 3/4	5/8	-5	3/4	5/8	x5	-5	1 7/32	5/8	x5	
6D	6	-6	5/8	1 1/16	-6	1 3/16	1 1/16	x6	-6	1/2	1 1/16	x6	
7D	7				-7	3/4	3/4	x7	-7	9/16	3/4	x7	
8D	8	-8	3/4	7/8	-8	1	7/8	x8	-8	2 3/32	7/8	x8	
10D	10	-10	2 7/32	1	-10	1 5/32	1	x10	-10	2 3/32	1	x10	
12D	12	-12	2 9/32	1 1/4	-12	1 3/16	1 3/8	x12	-12	7/8	1 3/16	x12	
16D	16	-16	1 1/4	1 1/2	-16	1 3/8	1 7/16	x16	-16	3 1/32	1 1/2	x16	
20D	20	-20	1 1/16	2				x20	-20	1 3/16	1 15/16	x20	
24D	24	-24	1 3/16	2 1/4				x24	-24	1 1/4	2 1/4	x24	
28D	28	-28	1 1 1/32	2 5/8				x28	-28	1 9/16	2 5/8	x28	
32D	32	-32	1 7/16	2 15/16				x32	-32	1 25/32	2 15/16	x32	

AN 820-2, -3, -5, -6, -8, and -10 are interchangeable with NAF 310503-2, -3, -5, -6, -8, and -10.

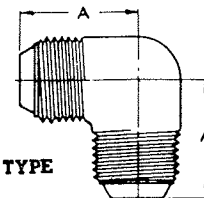
ELBOW: FLARED TUBE 90°



AN TYPE



NAF TYPE

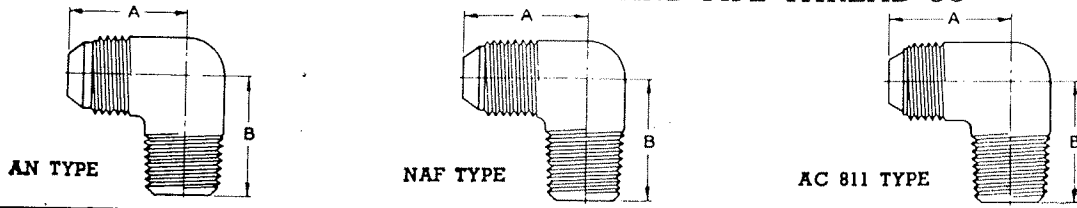


AC 811 TYPE

SIZE AND MATERIAL			AN PART No.		NAF PART NUMBER			AC AND PARKER PART No.				
Alum. all Types	Steel AN Only	Brass Bronze NAF and AC Only	INACTIVE		INACTIVE			INACTIVE				
			Part No.	Dim. A	Part No.	Dim. A	Weatherhead No. Dural Bronze	Part No.	Dim. A	Weatherhead No. Dural Brass		
2D	2	2	AN 821-2	4 7/64	NAF 213694-2	4 5/64	7500x2	AC 811ET-2	5/8	9500x2	9516x2	Not made because not called for by any manufacturer.
3D	3	3	-3	5 1/64	-3	3/4	x3	-3	3/4	x3	x3	
4D	4	4	-4	5 5/64	-4	13/16	x4	-4	7/8	x4	x4	
5D	5	5	-5	5 9/64	-5	5 7/64	x5	-5	1 5/16	x5	x5	
6D	6	6	-6	1 1/32	-6	6 3/64	x6	-6	2 9/32	x6	x6	
7D	7	7	-7		-7	1 1/32	x7	-7	3 1/32	x7	x7	
8D	8	8	-8	1 7/32	-8	1 7/32	x8	-8	1 1/16	x8	x8	
10D	10	10	-10	1 2 7/64	-10	1 3/8	x10	-10	1 7/32	x10	x10	
12D	12	12	-12	1 3/8	-12	1 1/2	x12	-12	1 7/16	x12	x12	
16D	16	16	-16	1 25/32	-16	1 3/4	x16	-16	1 19/32	x16	x16	
20D	20	20	-20	2 1/32	-20	2 3/64	x20	-20	1 29/32	x20	x20	
24D	24	24	-24	2 19/64	-24	2 5/16	x24	-24	2 3/16	x24	x24	
28D	28	28	-28	2 25/32				-28	2 19/32	x28	x28	
32D	32	32	-32	3 1/32	-32	2 27/32		-32	2 7/8	x32	x32	

AN 821-8 and NAF 213694-8 are interchangeable.
AN 821 series inactive. For new design use AN 833, see page 16.
We have requested that the AN 821 series be made active.
*Item non-procurable

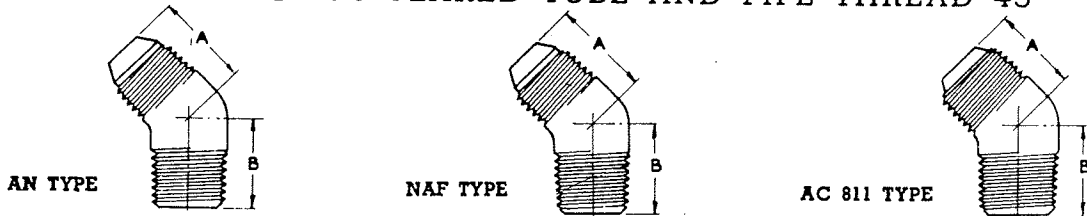
ELBOW: FLARED TUBE AND PIPE THREAD 90°



SIZE AND MATERIAL			AN PART NUMBER		NAF PART NUMBER				AC AND PARKER PART NUMBER			
Alum. all Types	Steel AN Only	Brass Bronze NAF & AC Only	ACTIVE		INACTIVE				INACTIVE			
			Part No.	Dimensions A B	Part No.	Dimensions A B	Weatherhead No. Dural Bronze	Part No.	Dimensions A B	Weatherhead No. Dural Brass		
2D	2	2	AN 822-2	47/64 1 1/16	NAF 213695-2	49/64 1 1/16	7400x2	AC 811CT-2	5/8 1 1/16	9400x2	9416x2	
3D	3	3	-3	51/64 1 1/16	-3	25/32 23/32	x3	-3	3/4 3/4 *	x3	x3	
4D	4	4	-4	55/64 3/4	-4	13/16 25/32	x4	-4	7/8 3/4 *	x4	x4	
5D	5	5	-5	59/64 3/4	-5	55/64 13/16	x5	-5	15/16 3/4 *	x5	x5	
6D	6	6	-6	1 1/32 1 1/16	-6	1 15/64	x6	-6	15/16 1 1/16	x6	x6	
7D		7			-7	1 1/64 19/64	x7	-7	15/16 1 1/8	x7	x7	
8D	8	8	-8	1 7/32 1 3/16	-8	1 13/64 1 13/64	x8	-8	1 1/16 1 3/16	x8	x8	
10D	10	10	-10	1 27/64 1 7/16	-10	1 25/64 1 15/32	x10	-10	1 1/32 1 7/16	x10	x10	
12D	12	12	-12	1 5/8 1 9/16	-12	1 35/64 1 35/64	x12	-12	1 7/16 1 9/16	x12	x12	
16-12D	16-12	16-12	-16-12	1 25/32 1 11/16	213732-8	1 11/16 1 53/64	7440x16	-16-12	1 7/16 1 11/16	x16x12	x16x12	
16D	16	16	-16	1 25/32 1 15/16	213695-16	1 13/16 1 57/64	7400x16	-16	1 5/8 1 15/16	x16	x16	
20D	20	20	-20	2 1/32 2 11/32	-20	2 5/32 2 3/32	x20	-20	1 15/16 2 5/16	x20	x20	
21D	21	21	-21	2 2 2 11/32								
25D	25	25	-25	2 11/64 2 15/32								
28D	28	28	-28	2 25/32 2 3/4								
32D	32	32	-32	3 1/32 2 21/32	-32	2 15/16 2 19/32	x32	-32	2 7/8 3 1/8	x32	x32	

*Items non-procurable

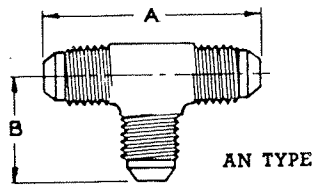
ELBOW: FLARED TUBE AND PIPE THREAD 45°



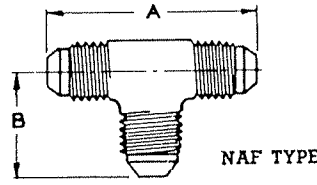
SIZE AND MATERIAL			AN PART NUMBER		NAF PART NUMBER				AC AND PARKER PART NUMBER			
Alum. all Types	Steel AN Only	Brass Bronze NAF & AC Only	ACTIVE		INACTIVE				INACTIVE			
			Part No.	Dimensions A B	Part No.	Dimensions A B	Weatherhead No. Dural Bronze	Part No.	Dimensions A B	Weatherhead No. Dural Brass		
2D	2	2	AN 823-2	41/64 1/2	NAF 213711-2	19/32 9/16	7350x2	AC 811CT45°-2	5/8 19/32	9350x2	9366x2	
3D	3	3	-3	41/64 1/2	-3	39/64 9/16	x3	-3	1 1/16 2 1/32	x3	x3	
4D	4	4	4	45/64 5/8	-4	2 1/32 5/8	x4	-4	1 1/8 1 1/8	x4	x4	
5D	5	5	-5	3/4 5/8	-5	45/64 5/8	x5	-5	3/4 1 1/8	x5	x5	
6D	6	6	-6	13/16 27/32	-6	25/32 27/32	x6	-6	13/16 7/8	x6	x6	
7D		7			-7	51/64 29/32	x7	-7	13/16 29/32	x7	x7	
8D	8	8	-8	2 1/32 1 5/16	-8	3 1/32 1 5/16	x8	-8	7/8 1 5/16	x8	x8	
10D	10	10	-10	1 3/32 1 5/32	-10	1 3/64 1 5/32	x10	-10	1 1 1 1/4	x10	x10	
12D	12	12	-12	1 17/64 1 3/16	-12	1 1/8 1 3/16	x12	-12	1 3/16 1 3/16	x12	x12	
16-12D	16-12	16-12	-16-12	1 29/64 1 1/4	213712-3	1 9/32 1 13/64	7390x16	-16-12	1 3/8 1 1/4	x16x12	x16x12	
16D	16	16	-16	1 29/64 1 15/32	213711-16	1 5/16 1 15/32	7350x16	-16	1 3/8 1 7/16	x16	x16	
20D	20	20	-20	1 37/64 1 21/32	-20	1 1/2 1 3/4		-20	1 1/2 1 3/4	x20	x20	
21D	21	21	-21	1 37/64 1 17/32								
25D	25	25	-25	1 49/64 1 21/32								
28D	28	28	-28	1 41/64 2								
32D	32	32	-32	2 13/64 2 3/32	-32	2 1/4 2 11/16	x32	-32	2 1/4 2 3/8	x32	x32	

*Items non-procurable

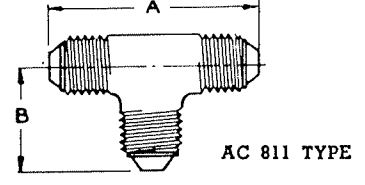
TEE: FLARED TUBE



AN TYPE



NAF TYPE



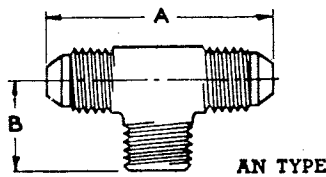
AC 811 TYPE

SIZE AND MATERIAL			AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBER					
Alum. all Types	Steel AN Only	Brass Bronze AC and NAF Only	ACTIVE			INACTIVE				INACTIVE					
			Part No.	Dimensions A	B	Part No.	Dimensions A	B	Weatherhead No. Dural	Bronze	Part No.	Dimensions A	B	Weatherhead No. Dural	Brass
2D	2	2	AN 824-2	1 ⁵ / ₃₂	4 ⁷ / ₆₄	NAF213697-2	1 ¹³ / ₃₂	4 ⁵ / ₆₄	7700x2		AC 811JT-2	1 ¹ / ₄	5 ⁸ / ₁₆	9700x2	9716x2
3D	3	3	-3	1 ¹⁹ / ₃₂	5 ¹ / ₆₄	-3	1 ¹ / ₂	3 ³ / ₄	x3		-3	1 ¹ / ₂	3 ³ / ₄	x3	x3
4D	4	4	-4	1 ²³ / ₃₂	5 ⁵ / ₆₄	-4	1 ⁵ / ₈	1 ³ / ₁₆	x4		-4	1 ³ / ₄	7 ⁷ / ₁₆	x4	x4
5D	5	5	-5	1 ²⁷ / ₃₂	5 ⁹ / ₆₄	-5	1 ²⁵ / ₃₂	5 ⁷ / ₆₄	x5		-5	1 ⁷ / ₈	1 ⁵ / ₁₆	x5	x5
6D	6	6	-6	2 ¹ / ₁₆	1 ¹ / ₃₂	-6	1 ³¹ / ₃₂	6 ³ / ₆₄	6		-6	1 ¹³ / ₁₆	2 ⁹ / ₃₂	x6	x6
7D		7	-7			-7	2 ¹ / ₁₆	1 ¹ / ₃₂	x7		-7	1 ¹⁵ / ₁₆	3 ¹ / ₃₂	x8	x8
8D	8	8	-8	2 ⁷ / ₁₆	1 ⁷ / ₃₂	-8	2 ⁷ / ₁₆	1 ⁷ / ₃₂	x8		-8	2 ⁷ / ₈	1 ¹ / ₁₆	x10	x10
10D	10	10	-10	2 ²⁷ / ₃₂	1 ²⁷ / ₆₄	-10	2 ³ / ₄	1 ³ / ₈	x10		-10	2 ⁷ / ₁₆	1 ⁷ / ₃₂	x12	x12
12D	12	12	-12	3 ¹ / ₄	1 ⁵ / ₈	-12	3	1 ¹ / ₂	x12		-12	2 ⁷ / ₈	1 ⁷ / ₁₆	x16	x16
16D	16	16	-16	3 ⁹ / ₁₆	1 ²⁵ / ₃₂	-16	3 ¹ / ₂	1 ³ / ₄	x16		-16	3 ³ / ₁₆	1 ¹⁹ / ₃₂	x20	x20
20D	20	20	-20	4 ¹ / ₁₆	2 ¹ / ₃₂	-20	4 ³ / ₃₂	2 ³ / ₆₄	x20		-20	3 ¹³ / ₁₆	1 ²⁹ / ₃₂	x24	x24
24D	24	24	-24	4 ¹⁹ / ₃₂	2 ¹⁹ / ₆₄	-24	4 ⁵ / ₈	2 ⁵ / ₁₆	x24		-24	4 ³ / ₈	2 ⁵ / ₁₆	x28	x28
28D	28	28	-28	5 ⁹ / ₁₆	2 ²⁵ / ₃₂	-28	5 ¹¹ / ₁₆	2 ²⁷ / ₃₂	x32		-28	5 ³ / ₁₆	2 ¹⁹ / ₃₂	x32	x32
32D	32	32	-32	6 ¹ / ₁₆	3 ¹ / ₃₂	-32	5 ¹¹ / ₁₆	2 ²⁷ / ₃₂	x32		-32	5 ³ / ₄	2 ⁷ / ₈		

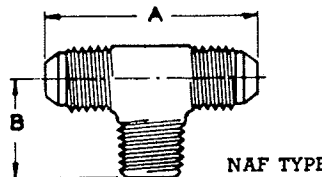
Not made because not called for by any manufacturer.

AN 824-8 and NAF 213697-8 are interchangeable.
*Item non-procurable

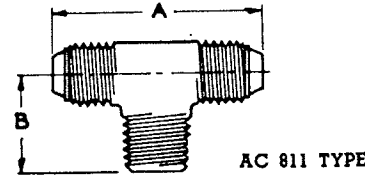
TEE: FLARED TUBE WITH PIPE THREAD ON SIDE



AN TYPE



NAF TYPE



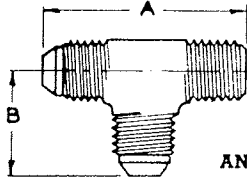
AC 811 TYPE

SIZE AND MATERIAL			AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBER					
Alum. all Types	Steel AN Only	Brass or Bronze	ACTIVE			INACTIVE				INACTIVE					
			Part No.	Dimensions A	B	Part No.	Dimensions A	B	Weatherhead No. Dural	Bronze	Part No.	Dimensions A	B	Weatherhead No. Dural	Brass
2D	2	2	AN 825-2	1 ¹⁵ / ₃₂	1 ¹ / ₁₆	NAF 213698-2	1 ¹⁷ / ₃₂	1 ¹ / ₁₆	7600x2		AC 811ST-2	1 ¹ / ₄	1 ¹ / ₁₆	9600x2	9616x2
3D	3	3	-3	1 ¹⁹ / ₃₂	1 ¹ / ₁₆	-3	1 ⁹ / ₁₆	2 ³ / ₃₂	x3		-3	1 ¹ / ₂	3 ³ / ₄ *	x3	x3
4D	4	4	-4	1 ²³ / ₃₂	3 ³ / ₄	-4	1 ⁵ / ₈	2 ⁵ / ₃₂	x4		-4	1 ³ / ₄	3 ³ / ₄ *	x4	x4
5D	5	5	-5	1 ²⁷ / ₃₂	3 ³ / ₄	-5	1 ²³ / ₃₂	1 ³ / ₁₆	x5		-5	1 ⁷ / ₈	3 ³ / ₄ *	x5	x5
6D	6	6	-6	2 ¹ / ₁₆	1 ¹ / ₁₆	-6	2	1 ⁵ / ₆₄	x6		-6	1 ⁷ / ₈	1 ¹ / ₁₆	x6	x6
7D	7	7				-7	2 ¹ / ₃₂	1 ⁹ / ₆₄	x7		-7	1 ⁷ / ₈	1 ¹ / ₄	x7	x7
8D	8	8	-8	2 ⁷ / ₁₆	1 ³ / ₁₆	-8	2 ¹³ / ₃₂	1 ¹³ / ₆₄	x8		-8	2 ⁷ / ₈	1 ³ / ₁₆	x8	x8
10D	10	10	-10	2 ²⁷ / ₃₂	1 ⁷ / ₁₆	-10	2 ²⁵ / ₃₂	1 ¹⁵ / ₃₂	x10		-10	2 ⁷ / ₁₆	1 ⁷ / ₁₆	x10	x10
12D	12	12	-12	3 ¹ / ₄	1 ⁹ / ₁₆	-12	3 ³ / ₃₂	1 ¹⁵ / ₆₄	x12		-12	2 ⁷ / ₈	1 ⁹ / ₁₆	x12	x12
16-12D	16-12	16-12	-16-12	3 ⁹ / ₁₆	1 ¹¹ / ₁₆						-16-12	2 ⁷ / ₈	1 ¹¹ / ₁₆	x16x12	x16x12
16D	16	16	-16	3 ⁹ / ₁₆	1 ¹⁵ / ₁₆	-16	3 ⁵ / ₈	1 ¹⁷ / ₆₄	x16		-16	3 ³ / ₄	1 ¹⁵ / ₁₆	x16	x16
20D	20	20	-20	4 ¹ / ₁₆	2 ¹¹ / ₃₂	-20	4 ⁵ / ₁₆	2 ¹ / ₃₂	x20		-20	3 ³ / ₄	2 ⁵ / ₁₆	x20	x20
21D	21	21	-21	4 ¹ / ₁₆	2 ³ / ₁₆										
25D	25	25	-25	4 ¹⁹ / ₃₂	2 ¹⁵ / ₃₂										
28D	28	28	-28	5 ⁹ / ₁₆	2 ³ / ₄										
32D	32	32	-32	6 ¹ / ₁₆	2 ³¹ / ₃₂	-32	5 ²⁷ / ₃₂	2 ¹⁵ / ₃₂	x32		-32	5 ³ / ₄	3 ¹ / ₁₆	x32	x32

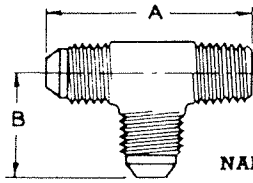
Not made because not called for by any manufacturer.

*Items non-procurable

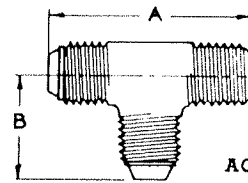
TEE: FLARED TUBE WITH PIPE THREAD ON THE RUN



AN TYPE



NAF TYPE



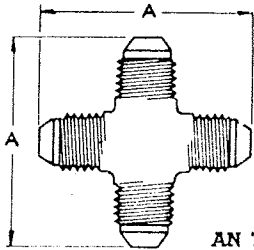
AC 811 TYPE

SIZE AND MATERIAL			AN PART NUMBER		NAF PART NUMBER				AC AND PARKER PART NUMBER			
Alum. all Types	Steel AN Only	Brass AC and NAF Only	ACTIVE		INACTIVE				INACTIVE			
			Part No.	Dimensions A B	Part No.	Dimensions A B	Weatherhead No. Dural Bronze	Part No.	Dimensions A B	Weatherhead No. Dural Brass		
2D	2	2	AN 826-2	1 ²⁷ / ₆₄ 4 ⁷ / ₆₄	NAF 213699-2	1 ²⁵ / ₆₄ 4 ⁹ / ₆₄	7750x2		AC 811RT-2	1 ⁵ / ₁₆ 5/8	9750x2	9766x2
3D	3	3	-3	1 ³¹ / ₆₄ 5 ¹ / ₆₄	-3	1 ¹⁵ / ₃₂ 2 ⁵ / ₃₂	x3		-3	1 1/2 3/4	x3	x3
4D	4	4	-4	1 ³⁹ / ₆₄ 5 ⁵ / ₆₄	-4	1 ¹⁹ / ₃₂ 1 ³ / ₁₆	x4		-4	1 3/8 7/8	x4	x4
5D	5	5	-5	1 ⁴³ / ₆₄ 5 ⁹ / ₆₄	-5	1 ⁴⁵ / ₆₄ 5 ⁷ / ₆₄	x5		-5	1 ¹¹ / ₁₆ 1 ⁵ / ₁₆	x5	x5
6D	6	6	-6	2 ³ / ₃₂ 1 ¹ / ₃₂	-6	2 ¹ / ₁₆ 1	x6		-6	1 ³¹ / ₃₂ 2 ⁹ / ₃₂	x6	x6
7D		7			-7	2 ¹¹ / ₆₄ 1 ¹ / ₃₂	x7		-7	2 ³ / ₃₂ 3 ¹ / ₃₂	x7	x7
8D	8	8	-8	2 ¹³ / ₃₂ 1 ⁷ / ₃₂	-8	2 ²⁷ / ₆₄ 1 ⁷ / ₃₂	x8		-8	2 ¹ / ₄ 1 ¹ / ₁₆	x8	x8
10D	10	10	-10	2 ⁵⁵ / ₆₄ 1 ²⁷ / ₆₄	-10	2 ²⁷ / ₃₂ 1 ²⁵ / ₆₄	x10		-10	2 ²¹ / ₃₂ 1 ⁷ / ₃₂	x10	x10
12D	12	12	-12	3 ³ / ₁₆ 1 5/8	-12	3 ³ / ₆₄ 1 ³⁵ / ₆₄	x12		-12	3 1 ⁷ / ₁₆	x12	x12
16-12D	16-12	16-12	-16-12	3 ¹⁵ / ₃₂ 1 ²⁵ / ₃₂					-16-12	3 ⁹ / ₃₂ 1 ¹⁹ / ₃₂	x16x12	x16x12
16D	16	16	-16	3 ¹⁵ / ₃₂ 1 ²⁵ / ₃₂	-16	3 ⁴¹ / ₆₄ 1 ¹³ / ₁₆	x16		-16	3 ¹⁷ / ₃₂ 1 ¹⁹ / ₃₂	x16	x16
20D	20	20	-20	4 3/8 2 ¹ / ₃₂	-20	4 ⁹ / ₆₄ 2 ⁵ / ₃₂	x20		-20	4 ⁷ / ₃₂ 1 ²⁹ / ₃₂	x20	x20
24D		24			-24	4 1/2 2 ²⁷ / ₆₄	x24		-24	4 3/4 2 ³ / ₁₆	x24	x24
25D	25	24	-25	4 44/64 2 15/32								
28D	28	28	-28	5 ¹⁷ / ₃₂ 2 ²⁵ / ₃₂					-28	5 ⁹ / ₃₂ 2 ¹⁹ / ₃₂	x28	x28
32D	32	32	-32	6 3 ¹ / ₃₂	-32	5 ⁵ / ₁₆ 2 ¹⁵ / ₁₆	x32		-32	5 ¹³ / ₁₆ 2 ⁷ / ₈	x32	x32

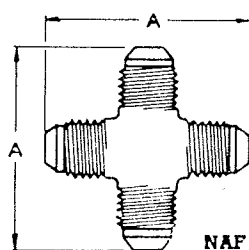
Not made because not called for by any manufacturer.

*Item non-procurable

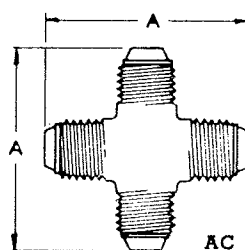
CROSS: FLARED TUBE



AN TYPE



NAF TYPE

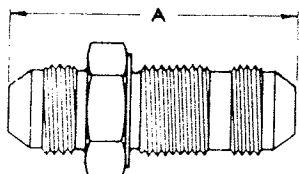


AC 811 TYPE

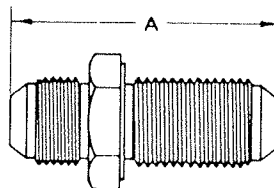
SIZE AND MATERIAL			AN PART NUMBER		NAF PART NUMBER				AC AND PARKER PART NUMBER			
Alum. all Types	Steel AN Only	Brass AC & NAF Only	ACTIVE		INACTIVE				INACTIVE			
			Part No.	Dim. A	Part No.	Dim. A	Weatherhead No. Dural Bronze	Part No.	Dim. A	Weatherhead No. Dural Brass		
2D	2	2	AN 827-2	1 ¹⁵ / ₃₂	NAF 213745-2	1 ¹³ / ₃₂	7950x2		AC 811KT-2	1 1/4	9950x2	9966x2
3D	3	3	-3	1 ¹⁹ / ₃₂	-3	1 1/2	x3		-3	1 1/2	x3	x3
4D	4	4	-4	1 ²³ / ₃₂	-4	1 5/8	x4		-4	1 3/4	x4	x4
5D	5	5	-5	1 ²⁷ / ₃₂	-5	1 ²⁵ / ₃₂	x5		-5	1 7/8	x5	x5
6D	6	6	-6	2 ¹ / ₁₆	-6	1 ³¹ / ₃₂	x6		-6	1 ¹³ / ₁₆	x6	x6
7D		7			-7	2 ¹ / ₁₆	x7		-7	1 ¹⁵ / ₁₆	x7	x7
8D	8	8	-8	2 ⁷ / ₁₆	-8	2 ⁷ / ₁₆	x8		-8	2 ¹ / ₈	x8	x8
10D	10	10	-10	2 ²⁷ / ₃₂	-10	2 3/4	x10		-10	2 ⁷ / ₁₆	x10	x10
12D	12	12	-12	3 1/4	-12	3	x12		-12	2 7/8	x12	x12
16D	16	16	-16	3 ⁹ / ₁₆	-16	3 1/2	x16		-16	3 ³ / ₁₆	x16	x16
20D	20	20	-20	4 ¹ / ₁₆	-20	4 ³ / ₃₂	x20		-20	3 ¹³ / ₁₆	x20	x20
24D	24	24	-24	4 ¹⁹ / ₃₂	-24	4 5/8	x24		-24	4 3/8	x24	x24
28D	28	28	-28	5 ⁹ / ₁₆					-28	5 ³ / ₁₆	x28	x28
32D	32	32	-32	6 1/16	-32	5 ¹¹ / ₁₆	x32		-32	5 3/4	x32	x32

Not made because not called for by any manufacturer.

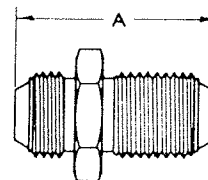
UNION: FLARED TUBE 3/8 BULKHEAD AND UNIVERSAL



AN TYPE



NAF TYPE



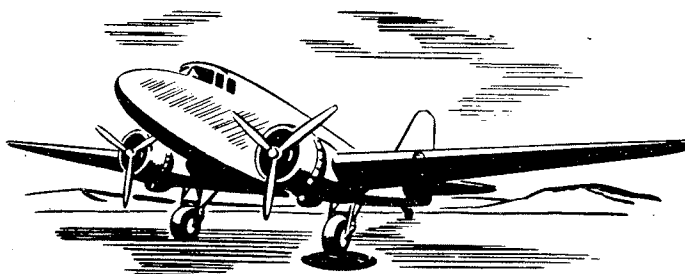
AC 811 TYPE

SIZE AND MATERIAL			AN PART NUMBER				NAF PART NUMBER				AC AND PARKER PART NUMBER					
Alum. all Types	Steel AN Only	Bronze Brass NAF & AC Only	ACTIVE		INACTIVE		INACTIVE				INACTIVE					
			Part No.	Dim. A	Part No.	Dim. A	Part No.	Dim. A	Part No.	Dim. A	Weatherhead No. Dural	Weatherhead No. Bronze	Part No.	Dim. A	Weatherhead No. Dural	Weatherhead No. Brass
2D	2	2	AN 832-2	1 ⁵³ / ₆₄	AN 828-2	1 ⁵ / ₈	AN 920-2	6 ³ / ₆₄	NAF 213826-2	1 ¹⁹ / ₃₂	7013x2		3115-1HT-2	1 ⁵ / ₁₆	9013x2	
3D	3	3	-3	1 ⁵⁵ / ₆₄	-3	1 ¹¹ / ₁₆	-3	1 ¹ / ₃₂	-3	1 ⁵ / ₈	x3		-3	1 ¹ / ₂	x3	
4D	4	4	-4	2 ³ / ₆₄	-4	1 ⁵⁷ / ₆₄	-4	1 ⁷ / ₃₂	-4	1 ²³ / ₃₂	x4		-4	1 ¹¹ / ₁₆	x4	
5D	5	5	-5	2 ³ / ₆₄	-5	1 ⁵⁷ / ₆₄	-5	1 ⁷ / ₃₂	-5	1 ¹³ / ₁₆	x5		-5	1 ¹³ / ₁₆	x5	
6D	6	6	-6	2 ⁷ / ₃₂	-6	2 ³ / ₃₂	-6	1 ⁵ / ₁₆	-6	1 ¹⁵ / ₁₆	x6		-6	1 ³ / ₈	x6	
7D	7	7							-7	2 ³ / ₆₄	x7		-7	1 ¹¹ / ₁₆	x7	
8D	8	8	-8	2 ²⁹ / ₆₄	-8	2 ⁷ / ₃₂	-8	1 ¹ / ₂	-8	2 ¹ / ₄	x8		-8	1 ³ / ₄	x8	
10D	10	10	-10	2 ²³ / ₃₂	-10	2 ¹⁵ / ₃₂	-10	1 ⁴³ / ₆₄	-10	2 ¹ / ₂	x10		-10	1 ⁷ / ₈	x10	
12D	12	12	-12	3 ¹ / ₃₂	-12	2 ⁴⁵ / ₆₄	-12	1 ²⁹ / ₃₂	-12	2 ¹¹ / ₁₆	x12		-12	2 ³ / ₁₆	x12	
16D	16	16	-16	3 ⁵ / ₆₄	-16	2 ²⁷ / ₃₂	-16	1 ⁶¹ / ₆₄	-16	3	x16		-16	2 ¹ / ₄	x16	
20D	20	20	-20	3 ⁹ / ₃₂	-20	2 ⁶¹ / ₆₄			-20	3 ¹⁹ / ₆₄	x20		-20	2 ¹¹ / ₁₆	x20	
24D	24	24	-24	3 ⁵ / ₁₆	-24	3 ¹¹ / ₆₄			-24	3 ³⁹ / ₆₄	x24		-24	3 ³ / ₁₆	x24	
28D	28	28	-28	3 ²⁷ / ₆₄	-28	3 ²⁹ / ₆₄			-28		x28		-28		x28	
32D	32	32	-32	3 ⁵³ / ₆₄	-32	3 ¹¹ / ₁₆			-32	4 ⁷ / ₃₂	x32		-32		x32	

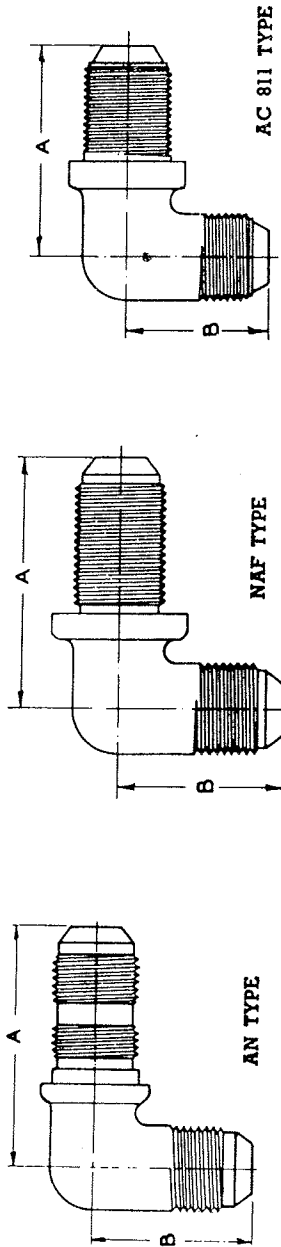
Not made because not called for by any manufacturer.

Not popular and only called for in a few sizes by the industry.

AN 832, AN 828 and AN 920 series are interchangeable except that the AN 828 cannot be used as a universal fitting and the AN 920 cannot be used as a bulkhead fitting



ELBOW: FLARED TUBE BULKHEAD AND UNIVERSAL 90°



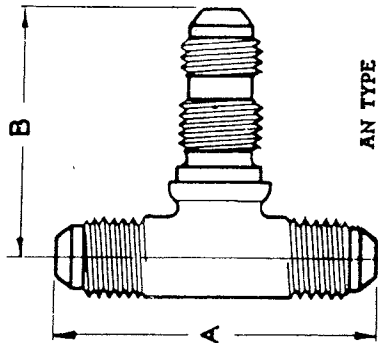
RESTRICTED
T. O. No. 00-45 -1

SIZE AND MATERIAL		AN PART NUMBER						NAF PART NUMBER						AC AND PARKER NUMBER								
		ACTIVE			INACTIVE			ACTIVE			INACTIVE			ACTIVE			INACTIVE					
Alum. Types	Steel & AC	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Weatherhead No.	Weatherhead No.	
2D	2	AN 833-2	1 13/32	53/64	AN 921-2	53/64	57/64	AN 921-2	59/64	47/64	NAF 213829-2	1 23/64	51/64	7014x2	3115-1ET-2	1 1/8	23/32	3115-1ET-2	1 1/8	23/32	9014x2	
3D	3	-3	1 7/16	57/64	-3	1 29/64	57/64	-3	1 5/16	51/64	-3	1 7/16	27/32	x3	-3	1 3/32	1 3/16	-3	1 3/32	1 3/16	x3	
4D	4	-4	1 37/64	61/64	-4	1 19/32	61/64	-4	1 3/64	55/64	-4	1 17/32	29/32	x4	-4	1 15/32	1 5/16	-4	1 15/32	1 5/16	x4	
5D	5	-5	1 39/64	1 1/64	-5	1 21/32	1 1/64	-5	1 7/64	89/64	-5	1 5/8	31/32	x5	-5	1 5/8	1 1/32	-5	1 5/8	1 1/32	x5	
6D	6	-6	1 81/64	1 5/64	-6	1 29/32	1 5/64	-6	1 19/64	1 1/32	-6	1 25/32	1 1/16	x6	-6	1 19/16	1	-6	1 19/16	1	x6	
7D	7																					
8D	8	-8	2 7/32	1 11/32	-8	2 1/32	1 11/32	-8	1 17/32	1 7/32	-8	1 29/32	1 11/64	x7	-8	1 21/32	1 3/32	-8	1 21/32	1 3/32	x7	
10D	10	-10	2 3/8	1 35/64	-10	2 5/16	1 35/64	-10	1 45/64	1 27/64	-10	2 1/16	1 11/32	x8	-10	1 25/32	1 3/16	-10	1 25/32	1 3/16	x8	
12D	12	-12	2 1/2	1 49/64	-12	2 1/2	1 49/64	-12	1 61/64	1 5/8	-12	2 1/2	1 1/2	x10	-12	2 1/2	1 1/2	-12	2 1/2	1 1/2	x10	
16D	16	-16	2 25/32	1 89/64	-16	2 23/32	1 89/64	-16	1 81/64	1 5/8	-16	2 1/2	1 5/8	x12	-16	2 3/16	1 13/16	-16	2 3/16	1 13/16	x12	
20D	20	-20	3 1/4	2 1/32	-20	3 3/32	2 13/64	-20	2 3/64	1 25/32	-20	3 1/8	1 29/32	x16	-20	2 5/16	1 13/16	-20	2 5/16	1 13/16	x16	
24D	24	-24	3 13/32	2 21/64	-24	3 15/32	2 1/64	-24	2 31/64		-24	3 1/8			-24	2 15/16	2 3/16	-24	2 15/16	2 3/16	x20	
28D	28	-28	3 5/8	2 19/32	-28	3 7/8	2 51/64	-28	2 51/64		-28	3 7/8			-28	3 3/8		-28	3 3/8			
32D	32	-32	4 3/8	2 3/4	-32	4 11/64	3 5/64	-32	4 11/64		-32	4 11/64			-32	4 3/8		-32	4 3/8			

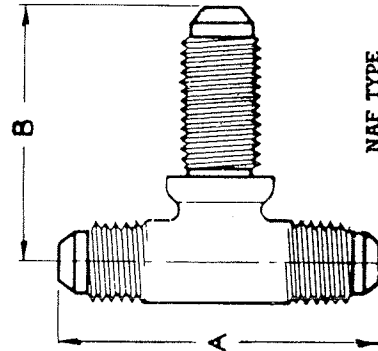
The AN 833, 829 and 921 series are interchangeable except that the AN 829 cannot be used as a universal fitting and the AN 921 cannot be used as a bulkhead fitting. See chart AN 776 page 6 and chart AN 821 page 11.

RESTRICTED

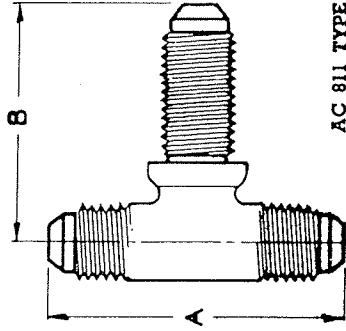
TEE: BULKHEAD AND UNIVERSAL, FLARED TUBE



AN TYPE



NAF TYPE

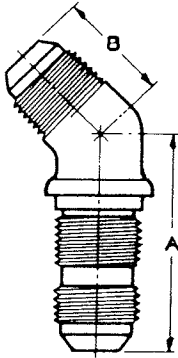


AC 811 TYPE

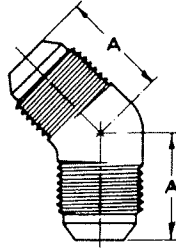
SIZE AND MATERIAL	AN PART NUMBERS										NAF PART NUMBER						AC AND PARKER PART NUMBER					
	ACTIVE					INACTIVE					INACTIVE						INACTIVE					
	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Part No.	Dimensions A	Dimensions B	Weatherhead No. Alum.	Weatherhead No. Bronze	Part No.	Dimensions A	Dimensions B	Weatherhead No. Alum.	Weatherhead No. Brass			
Alum. AN Types Only	-2D	AN 834	1 1/2	1 1/2	AN 830	1 1/2	1 1/2	AN 923	1 1/2	1 1/2	NAF 310504	7016x2	3115-1JT	1 1/2	1 1/2	9016x2						
Steel AN Types Only	-3D		1 3/4	1 3/4		1 3/4	1 3/4		1 3/4	1 3/4		x3			1 3/4	1 3/4	x3					
Bronze AN Types Only	-4D		1 3/4	1 3/4		1 3/4	1 3/4		1 3/4	1 3/4		x4			1 3/4	1 3/4	x4					
Steel AN Types Only	-5D		2 1/2	2 1/2		2 1/2	2 1/2		2 1/2	2 1/2		x5			2 1/2	2 1/2	x5					
Bronze AN Types Only	-6D		2 1/2	2 1/2		2 1/2	2 1/2		2 1/2	2 1/2		x6			2 1/2	2 1/2	x6					
Steel AN Types Only	-8D		2 1/2	2 1/2		2 1/2	2 1/2		2 1/2	2 1/2		x8			2 1/2	2 1/2	x8					
Bronze AN Types Only	-10D		3 1/2	3 1/2		3 1/2	3 1/2		3 1/2	3 1/2		x10			3 1/2	3 1/2	x10					
Steel AN Types Only	-12D		3 1/2	3 1/2		3 1/2	3 1/2		3 1/2	3 1/2		x12			3 1/2	3 1/2	x12					
Bronze AN Types Only	-16D		4 1/2	4 1/2		4 1/2	4 1/2		4 1/2	4 1/2		x16			4 1/2	4 1/2	x16					
Steel AN Types Only	-20D		4 1/2	4 1/2		4 1/2	4 1/2		4 1/2	4 1/2					4 1/2	4 1/2						
Bronze AN Types Only	-24D		5 1/2	5 1/2		5 1/2	5 1/2		5 1/2	5 1/2					5 1/2	5 1/2						
Steel AN Types Only	-28D		5 1/2	5 1/2		5 1/2	5 1/2		5 1/2	5 1/2					5 1/2	5 1/2						
Bronze AN Types Only	-32D		6 1/2	6 1/2		6 1/2	6 1/2		6 1/2	6 1/2					6 1/2	6 1/2						

The AN 834 and 923 series are interchangeable except that the AN 830 cannot be used as a universal fitting and the AN 923 cannot be used as a bulkhead fitting.

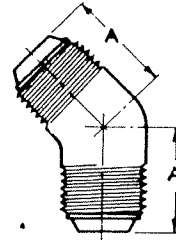
ELBOW: FLARED TUBE BULKHEAD AND UNIVERSAL 45°



AN TYPE



NAF TYPE



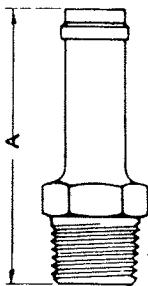
AC 811 TYPE

SIZE AND MATERIAL			AN PART NUMBER			AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBER			
Alum. all Types	Steel AN Only	Brass or Bronze	ACTIVE			INACTIVE			INACTIVE				INACTIVE			
			Part No.	Dimensions A B		Part No.	Dimensions A B		Part No.	Dim. A	Weatherhead No. Dural Bronze		Part No.	Dim. A	Weatherhead No. Dural Bronze	
2D	2	2	AN 837-2	1 3/8	4 1/64	AN 922-2	3/8	4 1/64	NAF 213709-2	3 7/64	7356x2		AC 811ET 45°-2	5/8		
3D	3	3	-3	1 3/8	4 1/64	-3	3/8	4 1/64	-3	2 9/64	x3		-3	1 1/16	Not made because not called for by any manufacturer. Not popular and only called for in a few sizes by the industry.	
4D	4	4	-4	1 17/32	4 5/64	-4	1 1/32	3/4	-4	2 1/32	x4		-4	1 1/16		
5D	5	5	-5	1 17/32	3/4	-5	1 1/32	3/4	-5	2 3/32	x5		-5	3/4		
6D	6	6	-6	1 43/64	1 3/16	-6	1 5/32	1 3/16	-6	2 5/32	x6		-6	1 3/16		
8D	8	8	-8	1 15/16	3 1/32	-8	1 3/4	3 1/32	-8	1 5/16	x8		-8	7/8		
10D	10	10	-10	2 11/64	1 3/32	-10	1 33/64	1 3/32	-10	1 3/64	x10		-10	1		
12D	12	12	-12	2 7/16	1 17/64	-12	1 47/64	1 17/64	-12	1 9/64	x12		-12	1 3/16		
16D	16	16	-16	2 9/16	1 29/64	-16	1 55/64	1 29/64	-16	1 5/16	x16		-16	1 3/8		
20D	20	20	-20	2 21/32	1 37/64				-20	1 7/16			-20	1 1/2		
24D	24	24	-24	2 43/64	1 49/64				-24	1 5/8			-24	1 11/16		
28D	28	28	-28	2 3/4	1 61/64								-28	1 7/8		
32D	32	32	-32	2 21/32	2 13/64				-32	2			-32	2 1/8		

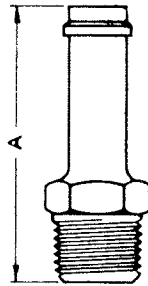
AN 837 and AN 922 are interchangeable except that the AN 922 cannot be used as a bulkhead fitting. See chart AN 778, page 7.



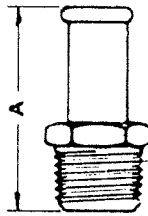
NIPPLE: PIPE THREAD, HOSE



AN TYPE



NAF TYPE



AC TYPE

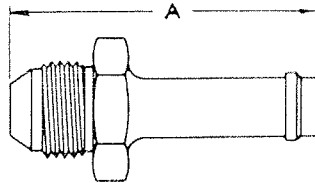
SIZE AND MATERIAL			AN PART NO.		NAF PART NUMBER				AC AND PARKER PART NUMBERS						
Alum. all Types	Brass Bronze	Pipe Size	Hose I.D.	ACTIVE		INACTIVE				INACTIVE					
				Part No.	Dim. A	Part No.	Dim. A	Part No.	Dim. A	Weatherhead No. Dural	Weatherhead No. Brass	Part No.	Dim. A	Weatherhead No. Dural	Weatherhead No. Brass
4D	4	1/8	1/4	AN 840-4	2 5/64	NAF 213706-4	2 5/64	AC 835-4	1 9/16	7228x4	AC 836-4	2 1/16	7227x4	27227x4	
6D	6	1/4	3/8	-6	2 11/32	-6	2 11/32	-6	1 3/4	x6	-6	2 1/2	x6	x6	
8D	8	3/8	1/2	-8	2 3/8	-8	2 3/8	-8	1 3/4	x8	-8	2 1/2	x8	x8	
9D	9	3/8	5/8	-9	2 3/8	-9	2 3/8	-9	1 3/4	x9	-9	2 1/2	x8	x8	
10D	10	1/2	5/8	-10	2 37/64	-10	2 37/64	-10	2 3/16	x10	-10	2 3/16	x10	x10	
11D	11	3/4	3/4	-11	2 13/32	-11	2 13/32	-11	2 3/16	x11	-11	2 1/16	x12	x12	
12D	12	3/4	3/4	-12	2 5/8	-12	2 5/8	-12	2 3/16	x12	-12	2 1/16	x12	x12	
13D	13	3/4	1	-13	2 5/8	-13	2 5/8	-13	2 3/16	x13	-13	2 1/16	x12	x12	
16D	16	3/4	1	-16	2 5/8	-16	2 5/8	-16	2 3/16	x16	-16	2 1/16	x16	x16	
17D	17	1	1	-17	2 7/32	-17	2 7/32	HLF-16-16*	2 7/16	x17	HLF-16-16*	2 1/16	x16x16	x16x16	
20D	20	1 1/4	1 1/4	-20	2 57/64	-20	3 5/64	AC 835-20	2 11/16	x20	AC 835-20	3 1/16	x20	x20	
21D	21	1	1 1/4	-21	2 7/8	-21	2 7/8	-21	2 11/16	x24	-24	3 17/32	x24	x24	
24D	24	1 1/2	1 1/2	-24	2 15/16	-24	3 1/8	-24	3 1/32	x24	-24	3 17/32	x24	x24	
25D	25	1 1/4	1 1/2	-25	2 29/32	-25	2 29/32	-25	3 1/32	x24	-24	3 17/32	x24	x24	

All parts are interchangeable.

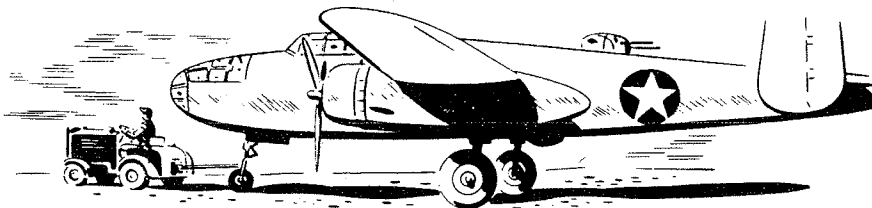
* Parker Number.

†-24 size in Air Corps series compares to -25 size in AN series due to combination of pipe size and hose I. D.

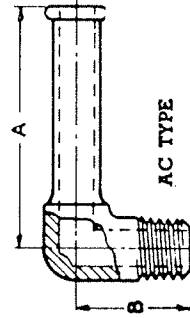
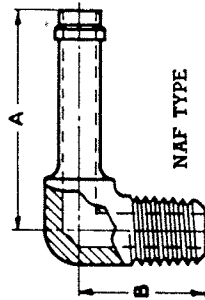
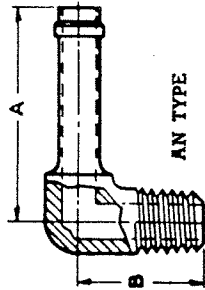
NIPPLE: FLARED TUBE, HOSE



Size & Material		AN PART NO.		NAF PART NUMBER			
Alum. all Types	Bronze	ACTIVE		INACTIVE			
		Part No.	Dimension A	Part No.	Dimension A	Weatherhead No.	
						Dural	Bronze
4D	4	AN 841-4	2 $\frac{1}{4}$	NAF 213702-4	1 $\frac{3}{16}$	7230x4	
6D	6	-6	2 $\frac{5}{16}$	-6	1 $\frac{5}{16}$	x6	Not made because not called for by any manufacturer.
8D	8	-8	2 $\frac{7}{16}$	-8	2 $\frac{1}{8}$	x8	
10D	10	-10	2 $\frac{9}{16}$	-10	2 $\frac{1}{2}$	x10	
12D	12	-12	2 $\frac{11}{16}$	-12	2 $\frac{9}{16}$	x12	
16D	16	-16	2 $\frac{3}{8}$	-16	2 $\frac{3}{4}$	x16	



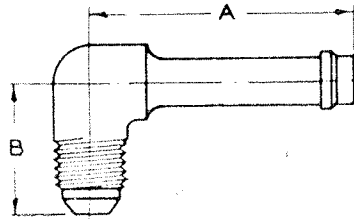
ELBOW: PIPE THREAD, HOSE 90°



SIZE AND MATERIAL			AN PART NUMBER				NAF PART NUMBER				AC AND PARKER PART NUMBERS						
Alum. or all Types	Brass or Bronze	Pipe Size	Hose I.D.	ACTIVE		INACTIVE		ACTIVE		INACTIVE		ACTIVE		INACTIVE			
				Part No.	Dimensions A B	Part No.	Dimensions A B	Part No.	Dimensions A B	Part No.	Dimensions A B	Part No.	Dimensions A B	Part No.	Dimensions A B		
4D	4	1/8	1/4	AN 842-4	1 25/32	25/32	NAF 213707-4	1 25/32	25/32	AC 850-4	1 5/16	3/4	AC 852-4	1 13/16	3/4	Weatherhead No. Dural	Weatherhead No. Brass
6D	6	1/4	3/8	-6	1 29/32	1 3/32	-6	1 29/32	1 3/32	-6	1 1/2	1	-6	2 1/8	1	74228x4	27428x4
8D	8	3/8	1/2	-8	1 63/64	1 3/16	-8	1 63/64	1 3/16	-8	1 1/2	1	-8	2 1/4	1	x6	x6
10D	10	1/2	5/8	-10	2 11/64	1 31/64	-10	2 7/64	1 31/64	-10	1 7/8	1 1/4	-10	2 3/8	1 1/4	x8	x8
12D	12	3/4	3/4	-12	2 13/64	1 19/32	-12	2 13/64	1 19/32	-12	2	1 3/8	-12	2 1/2	1 3/8	x10	x10
16D	16	3/4	1	-16	2 13/64	1 19/32	-16	2 13/64	1 19/32	-16	2	1 1/2	-16	2 1/2	1 1/2	x12	x12
17D	17	1	1	-17	2 11/32	1 61/64	-17	2 11/32	1 61/64	-17	2	1 5/8	-17	2 3/4	1 5/8	x16	x16
20D	20	1 1/4	1 1/4	-20	2 33/64	2 1/16	-20	2 45/64	2 1/16	-20	2	1 3/4	-20	3 1/8	2	x16x16	x16x16
21D	21	1	1 1/4	-21	2 11/32	2 1/16	-21	2 11/32	2 1/16	-21	2 3/8	1 1 1/16	-21	2 7/8	1 1 1/16	x20x20	x20x20
24D	24	1 1/2	1 1/2	-24	2 41/64	2 3/16	-24	2 53/64	2 3/16	-24	2 3/4	2	-24	3 1/4	2	x20	x20
25D	25	1 1/4	1 1/2	-25	2 41/64	2 1/32	-25	2 41/64	2 1/32	-25	2 3/4	2	-25	3 1/4	2	x24	x24

All parts are interchangeable. * Parker Number. †-24 size in Air Corps series compares to -25 size in AN series due to combination of pipe size and hose I. D.

ELBOW: FLARED TUBE, HOSE 90°

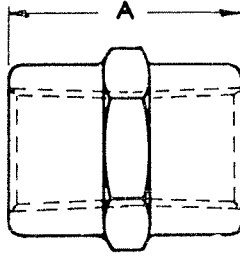


SIZE & MATERIAL		AN PART NUMBER			NAF PART NUMBER				
Alum. all Types	Bronze	ACTIVE			INACTIVE				
		Part No.	Dimensions A B		Part No.	Dimensions A B		Weatherhead No. Dural Bronze	
4D	4	AN 843-4	1 ¹³ / ₁₆	1 ³ / ₁₆	NAF 213703-4	1 ¹ / ₂	1 ¹³ / ₁₆	7430x4	47430x4
6D	6	-6	1 ²⁹ / ₃₂	6 ³ / ₁₆	-6	1 ¹⁹ / ₃₂	6 ³ / ₁₆	x6	x6
8D	8	-8	2	1 ⁷ / ₃₂	-8	1 ¹¹ / ₁₆	1 ⁷ / ₃₂	x8	x8
10D	10	-10	2 ³ / ₃₂	1 ³ / ₈	-10	2 ¹ / ₃₂	1 ³ / ₈	x10	x10
12D	12	-12	2 ⁵ / ₃₂	1 ¹ / ₂	-12	2 ³ / ₃₂	1 ¹ / ₂	x12	x12
16D	16	-16	2 ⁹ / ₃₂	1 ³ / ₄	-16	2 ⁷ / ₃₂	1 ³ / ₄	x16	x16

DECIMAL EQUIVALENTS

$\frac{1}{64}$.0156	$\frac{17}{64}$.2656	$\frac{33}{64}$.5156	$\frac{49}{64}$.7656
$\frac{1}{32}$.0312	$\frac{9}{32}$.2812	$\frac{17}{32}$.5312	$\frac{25}{32}$.7812
$\frac{3}{64}$.0468	$\frac{19}{64}$.2968	$\frac{35}{64}$.5468	$\frac{51}{64}$.7968
$\frac{1}{16}$.0625	$\frac{5}{16}$.3125	$\frac{9}{16}$.5625	$\frac{13}{16}$.8125
$\frac{5}{64}$.0781	$\frac{21}{64}$.3281	$\frac{37}{64}$.5781	$\frac{53}{64}$.8281
$\frac{3}{32}$.0937	$\frac{11}{32}$.3437	$\frac{19}{32}$.5937	$\frac{27}{32}$.8437
$\frac{7}{64}$.1093	$\frac{23}{64}$.3593	$\frac{39}{64}$.6093	$\frac{55}{64}$.8593
$\frac{1}{8}$.125	$\frac{3}{8}$.375	$\frac{5}{8}$.625	$\frac{7}{8}$.875
$\frac{9}{64}$.1406	$\frac{25}{64}$.3906	$\frac{41}{64}$.6406	$\frac{57}{64}$.8906
$\frac{5}{32}$.1562	$\frac{13}{32}$.4062	$\frac{21}{32}$.6562	$\frac{29}{32}$.9062
$\frac{11}{64}$.1718	$\frac{27}{64}$.4218	$\frac{43}{64}$.6718	$\frac{59}{64}$.9218
$\frac{3}{16}$.1875	$\frac{7}{16}$.4375	$\frac{11}{16}$.6875	$\frac{15}{16}$.9375
$\frac{13}{64}$.2031	$\frac{29}{64}$.4531	$\frac{45}{64}$.7031	$\frac{61}{64}$.9531
$\frac{7}{32}$.2187	$\frac{15}{32}$.4687	$\frac{23}{32}$.7187	$\frac{31}{32}$.9687
$\frac{15}{64}$.2343	$\frac{31}{64}$.4843	$\frac{47}{64}$.7343	$\frac{63}{64}$.9843
$\frac{1}{4}$.25	$\frac{1}{2}$.5	$\frac{3}{4}$.75	1-1.0

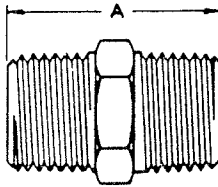
COUPLING: PIPE THREAD



SIZE & MATERIAL		AN PART NO.		NAF PART NUMBER				AC AND PARKER PART NUMBERS				
Alum. all Types	Brass or Bronze	ACTIVE		INACTIVE				INACTIVE				
		Part No.	Dimension A	Part No.	Dimension A	Weatherhead No.		Part No.	Dimension A	W. No. Brass	Parker Part No.	Parker Part No.
1/8D	1/8	AN 910-1	27/32	NAF 213767-1	27/32	7003x2	47003x2	AC 895-50	27/32	245952	3152-9-1/8	4213-1/8
1/4D	1/4	-2	1 1/8	-2	1 1/8	x4	x4	-51	1 1/32	245953	-1/4	-1/4
3/8D	3/8	-3	1 7/32	-3	1 7/32	x6	x6	-52	1 7/64	245954	-3/8	-3/8
1/2D	1/2	-4	1 9/32	-4	1 9/32	x8	x8	-53	1 23/64	245955	-1/2	-1/2
3/4D	3/4	-6	1 5/8	-5	1 5/8	x12	x12	-54	1 1/2	245956	-3/4	-3/4
1D	1	-8	1 15/16	-6	1 15/16	x16	x16				-1	-1
1 1/4D	1 1/4	-10	1 15/16								-1 1/4	-1 1/4

All parts are interchangeable.

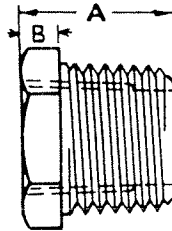
NIPPLE: PIPE THREAD



SIZE & MATERIAL		AN PART NO.		NAF PART NUMBER				AC AND PARKER PART NUMBERS					
Alum. all Types	Bronze or Brass	ACTIVE		INACTIVE				INACTIVE					
		Part No.	Dimension A	Part No.	Dimension A	Weatherhead No.		Part No.	Dimension A	Weatherhead No. Dural	Brass	Parker Numbers	
1/8D	1/8	AN 911-1	31/32	NAF 213701-1	31/32	7002x2	47002x2	AC 895-90	29/32	245130	245389	3152-6-1/8	4214-1/8
1/4D	1/4	-2	1 7/16	-2	1 7/16	x4	x4	-91	1 5/16	245131	245390	-1/4	-1/4
3/8D	3/8	-3	1 15/32	-3	1 15/32	x6	x6	-92	1 11/32	245132	245391	-3/8	-3/8
1/2D	1/2	-4	1 27/32	-4	1 27/32	x8	x8	-93	1 3/4	245133	245392	-1/2	-1/2
3/4D	3/4	-6	1 29/32	-6	1 29/32	x12	x12	-94	1 25/32	245134	245393	-3/4	-3/4
1D	1	-8	2 5/16	-8	2 5/16	x16	x16	-95	2 3/16	245135		-1	-1
1 1/4D	1 1/4	-10	2 11/32	-10	2 11/32	x20	x20					-1 1/4	-1 1/4

All parts are interchangeable.

BUSHING: REDUCER



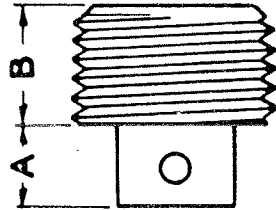
SIZE AND MATERIAL		AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBERS					
Alum. all Types	Bronze or Brass	ACTIVE			INACTIVE				INACTIVE					
		Part No.	Dimensions A	B	Part No.	Dimensions A	B	Weatherhead No. Dural	Bronze	Part No.	Dimensions A	B	Parker Part No.	Parker Part No.
1/4 x 1/8D	1/4 x 1/8	AN 912-1	25/32	3/16	NAF 213765-1	25/32	3/16	7034x2		AC 895-80	3/4	3/16	3152-1 1/4 x 1/8	423- 1/4 x 1/8
3/8 x 1/4D	3/8 x 1/4	-2	25/32	3/16	-3	25/32	3/16	7036x4		-82	25/32	25/32	- 3/8 x 1/4	- 3/8 x 1/4
3/8 x 1/8D	3/8 x 1/8	-3	25/32	3/16	-2	25/32	3/16	x2		-81	25/32	7/32	- 3/8 x 1/8	- 3/8 x 1/8
1/2 x 3/8D	1/2 x 3/8	-4	1 1/64	1/4	-5	1 1/64	1/4	7038x6		-84	1	1/4	- 1/2 x 3/8	- 1/2 x 3/8
1/2 x 1/4D	1/2 x 1/4	-5	1 1/64	1/4	-4	1 1/64	1/4	x4		-83	1	1/4	- 1/2 x 1/4	- 1/2 x 1/4
1/2 x 1/8D	1/2 x 1/8	-6	1 1/64	1/4	-9	1 1/64	1/4	x2					- 1/2 x 1/8	- 1/2 x 1/8
3/4 x 1/2D	3/4 x 1/2	-7	1 1/16	9/32	-7	1 1/16	9/32	7040x8		-86	1 1/32	9/32	- 3/4 x 1/2	- 3/4 x 1/2
3/4 x 3/8D	3/4 x 3/8	-8	1 1/16	9/32	-6	1 1/16	9/32	x6		-85	1 1/32	9/32	- 3/4 x 3/8	- 3/4 x 3/8
3/4 x 1/4D	3/4 x 1/4	-9	1 1/16	9/32	-10	1 1/16	9/32	x4					- 3/4 x 1/4	- 3/4 x 1/4
1 x 3/4D	1 x 3/4	-10	1 1/4	9/32	-8	1 1/4	9/32	7042x12		-87	1 1/4	5/16	-1 x 3/4	-1 x 3/4
1 x 1/2D	1 x 1/2	-11	1 1/4	9/32	-12	1 1/4	9/32	x8					-1 x 1/2	-1 x 1/2
1 x 3/8D	1 x 3/8	-12	1 1/4	9/32	-11	1 1/4	9/32	x6		-88	1 1/32	5/16	-1 x 3/8	-1 x 3/8
1 1/4 x 3/4D	1 1/4 x 3/4	-13	1 9/32	5/16									-1 1/4 x 3/4	-1 1/4 x 3/4

Not made because not called for by any manufacturer.

All parts are interchangeable.



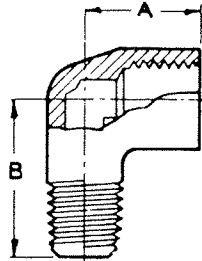
PLUG: PIPE THREAD SQUARE HEAD



SIZE AND MATERIAL		AN PART NUMBER				NAF PART NUMBER				AC AND PARKER PART NUMBERS							
Alum. all Types	Iron AC Only	Brass or Bronze	ACTIVE				INACTIVE				INACTIVE						
			Part No.	Dimensions A	Dimensions B	Weatherhead No.	Part No.	Dimensions A	Dimensions B	Weatherhead No.	Part No.	Dimensions A	Dimensions B	Dural	Weatherhead No. Brass	Weatherhead No. Iron	Parker Numbers
1/8 D	1/4	1/8	AN 913-1	1/4	21/64	7051x2	NAF 213768-1	1/4	21/64	7051x2	AC 895-70	1/4	17/64	245104	276989	3152-4 1/4	427-1/8
1/4 D	1/4	1/4	-2	9/32	31/64	x4	-2	9/32	x4	x4	-71	9/32	13/32	245623		1/4	1/4
3/8 D	3/8	3/8	-3	5/16	31/64	x6	-3	5/16	x6	x6	-72	5/16	13/32	245105	285647	3/8	3/8
1/2 D	1/2	1/2	-4	3/8	5/8	x8	-4	3/8	x8	x8	-73	3/8	35/64	245624	245115	1/2	1/2
3/4 D	3/4	3/4	-6	7/16	41/64	x12	-5	7/16	x12	x12	-74	7/16	35/64	245079		3/4	3/4
1 D	1	1	-8	1/2	51/64	x16	-6	1/2	x16	x16	-75	1/2	11/16	245364		-1	-1
1 1/4 D	1 1/4	1 1/4	-10	9/16	61/64											-1 1/4	-1 1/4

All parts are interchangeable.

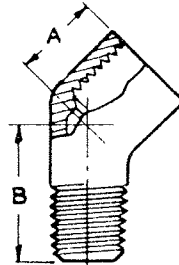
ELBOW: INTERNAL AND EXTERNAL PIPE THREAD 90°



Size & Material		AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBERS						
Alum. all Types	Brass or Bronze	ACTIVE			INACTIVE				INACTIVE						
		Part No.	Dimensions A B		Part No.	Dimensions A B		Weatherhead No. Dural Bronze		Part No.	Dimensions A B		Parker No.		
1/8D	1/8	AN 914-1	39/64	55/64	NAF 213758-1	39/64	55/64	7004x2		Not made because not called for by any manufacturer.	AC 895-1	35/64	59/64	3151CD-1/8	428-1/8
1/4D	1/4	-2	57/64	17/32	-2	57/64	17/32	x4			-2	23/32	17/64	-1/4	-1/4
3/8D	3/8	-3	15/16	119/64	-3	15/16	119/64	x6			-3	53/64	1 1/4	-3/8	-3/8
1/2D	1/2	-4	1 11/64	139/64	-4	1 11/64	139/64	x8			-4	1 1/4	1 31/64	-1/2	-1/2
3/4D	3/4	-6	1 11/32	147/64	-5	1 11/32	147/64	x12			-5	1 3/16	1 21/32	-3/4	-3/4
1D	1	-8	1 19/32	27/64	-6	1 19/32	27/64	x16			-6	1 7/16	1 63/64	-1	-1
1 1/4D	1 1/4	-10	1 3/4	2 1/4							-7	1 11/16	2 1/4	-1 1/4	-1 1/4

All parts are interchangeable.

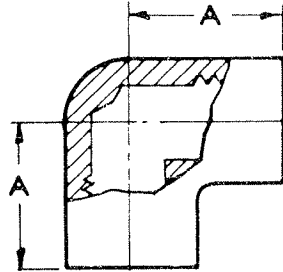
ELBOW: INTERNAL AND EXTERNAL PIPE THREAD 45°



Size and Material		AN PART NUMBER			NAF PART NUMBER				PARKER PART NUMBERS					
Alum. all Types	Brass or Bronze	ACTIVE			INACTIVE				INACTIVE					
		Part No.	Dimensions A B		Part No.	Dimensions A B		Weatherhead No. Dural Bronze		Part No.	Dimensions A B		Part No.	
1/8D	1/8	AN 915-1	15/32	23/32	NAF 213755-1	15/32	23/32	7035x2		Not made because not called for by any manufacturer.	3151-CD-45°-1/8	9/16	23/32	4215-1/8
1/4D	1/4	-2	5/8	13/64	-2	5/8	13/64	x4			-1/4	1 1/16	29/32	-1/4
3/8D	3/8	-3	23/32	11/16	-3	23/32	1 1/16	x6			-3/8	13/16	1 1/32	-3/8
1/2D	1/2	-4	29/32	1 11/32	-4	29/32	1 11/32	x8			-1/2	27/32	1 7/32	-1/2
3/4D	3/4	-6	3 1/32	1 3/8	-5	3 1/32	1 3/8	x12			-3/4	1	1 1/4	-3/4
1D	1	-8	1 1/8	1 23/32	-6	1 1/8	1 23/32	x16			-1	1 5/32	1 3/8	-1
1 1/4D	1 1/4	-10	1 5/32	1 7/8							-1 1/4	1 11/32	1 3/8	-1 1/4

All parts are interchangeable.

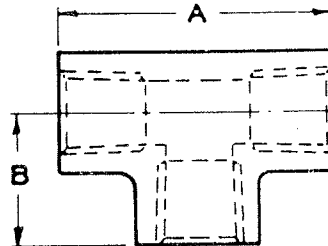
ELBOW:
INTERNAL PIPE THREAD 90°



SIZE & MATERIAL		AN PART NO.		NAF PART NUMBER				AC AND PARKER PART NUMBERS			
Alum. all Types	Brass or Bronze	ACTIVE		INACTIVE				INACTIVE			
		Part No.	Dimension A	Part No.	Dimension A	Weatherhead No.		Part No.	Dim. A	Parker (3181)	Parker No.
1/8D	1/8	AN 916-1	4 1/64	NAF 213756-1	4 1/64	7005x2	47005x2	AC 895-10	3 5/64	DD-1/8	4210-1/8
1/4D	1/4	-2	57/64	-2	57/64	x4	x4	-11	23/32	-1/4	-1/4
3/8D	3/8	-3	31/32	-3	31/32	x5	x5	-12	53/64	-3/8	-3/8
1/2D	1/2	-4	1 15/64	-4	1 15/64	x8	x8	-13	1 1/64	-1/2	-1/2
3/4D	3/4	-6	1 11/32	-5	1 11/32	x12	x12	-14	1 3/16	-3/4	-3/4
1D	1	-8	1 5/8	-6	1 5/8	x16	x16	-15	1 7/16	-1	-1
1 1/4D	1 1/4	-10	1 11/16					-16	1 11/16	-1 1/4	-1 1/4

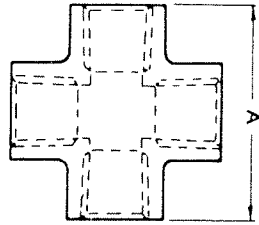
All parts are interchangeable.

TEE:
INTERNAL PIPE THREAD



Size and Material		AN PART NUMBER			NAF PART NUMBER				AC AND PARKER PART NUMBERS					
Alum. all Types	Brass or Bronze	ACTIVE			INACTIVE				INACTIVE					
		Part No.	Dimensions A B		Part No.	Dimensions A B		Weatherhead No.		Part No.	Dimensions A B		Parker Part No.	Parker Part No.
1/8D	1/8	AN 917-1	1 9/32	4 1/64	NAF 213759-1	1 9/32	4 1/64	7007x2	Not made because not called for by any manufacturer.	AC 895-30	1 3/32	3 5/64	3151MMO-1/8	4211-1/8
1/4D	1/4	-2	1 25/32	57/64	-2	1 25/32	57/64	x4		-31	1 7/16	23/32	-1/4	-1/4
3/8D	3/8	-3	1 15/16	31/32	-3	1 15/16	31/32	x6		-32	1 21/32	53/64	-3/8	-3/8
1/2D	1/2	-4	2 15/32	1 15/64	-4	2 15/32	1 15/64	x8		-33	2 1/32	1 1/64	-1/2	-1/2
3/4D	3/4	-6	2 11/16	1 11/32	-5	2 11/16	1 11/32	x12		-34	2 3/8	1 3/16	-3/4	-3/4
1D	1	-8	3 1/4	1 5/8	-6	3 1/4	1 5/8	x16		-35	2 7/8	1 7/16	-1	-1
1 1/4D	1 1/4	-10	3 3/8	1 11/16						-36	3 3/8	1 11/16	-1 1/4	-1 1/4

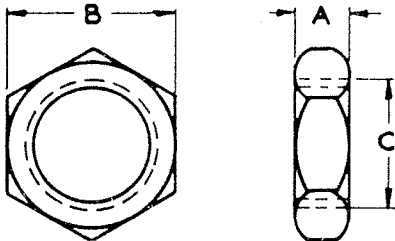
All parts are interchangeable.



CROSS:
INTERNAL PIPE THREAD

Size & Material		AN PART NO.		NAF PART NUMBER				AC AND PARKER PART NUMBERS			
Alum. all Types	Brass and Bronze	ACTIVE		INACTIVE				INACTIVE			
		Part No.	Dim. A	Part No.	Dim. A	Weatherhead No.		Part No.	Dim. A	Parker Part No.	Parker Part No.
1/8D	1/8	AN 918-1	1 9/32	NAF 213748-1	1 9/32	709Sx2		AC 895-40	1 5/64	3151-KMMOO-1/8	4212-1/8
1/4D	1/4	-2	1 25/32	-2	1 25/32	x4		-41	1 27/64	-1/4	-1/4
3/8D	3/8	-3	1 15/16	-3	1 15/16	x6		-42	1 41/64	-3/8	-3/8
1/2D	1/2	-4	2 15/32	-4	2 15/32	x8		-43	2 1/64	-1/2	-1/2
3/4D	3/4	-6	2 11/16	-5	2 11/16	x12		-44	2 23/64	-3/4	-3/4
1D	1	-8	3 1/4	-6	3 1/4	x16		-45	2 55/64	-1	-1
1 1/4D	1 1/4	-10	3 3/8					-46	3 3/8	-1 1/4	1 1/4

All parts are interchangeable.



NUT:
FLARED TUBE BULKHEAD AND UNIVERSAL FITTING

	A	B	C		A	B	C
NAF 213830-2	7/32	1/2	5/16-24 *	11-1039-1-1	3/16	1/2	5/16-24 *
-3	7/32	9/16	3/8-24 *	-2	7/32	9/16	3/8-24 *
-4	1/4	5/8	7/16-20 *	-3	1/4	5/8	7/16-20 *
-5	1/4	3/4	1/2-20 *	-4	1/4	11/16	1/2-20 *
-6	9/32	7/8	9/16-18 x	-5	1/4	3/4	9/16-20 w
-7	5/16	1	3/8-18	-7	1/4	7/8	5/8-20
-8	5/16	1 1/8	3/4-16 x	-10	1/4	1	3/4-18 w
-10	1 1/32	1 5/16	7/8-14 x	-14	1/4	1 1/4	7/8-18 w
-12	3/8	1 1/2	1 1/4 x	-19	9/32	1 7/16	1 1/16-14 w
-16	1 3/32	1 7/8	1 1/4-12	-26	9/32	1 3/4	1 5/16-14 w
AN 316-5R	5/32	1/2	5/16-24 *	AN 924-2	7/32	9/16	5/16-24 *
-6R	3/16	9/16	3/8-24 *	-3	7/32	5/8	3/8-24 *
-7R	7/32	5/8	7/16-20 *	-4	1/4	1 1/16	7/16-20 *
-8R	1/4	3/4	1/2-20 *	-5	1/4	3/4	1/2-20 *
AC 39B1024-6	1/4	3/4	9/16-20 w	-6	1 7/64	1 3/16	9/16-18 x
-8	1/4	1	3/4-18 w	-8	5/16	1	3/4-16 x
-10	1/4	1 1/4	7/8-18 w	-10	2 3/64	1 1/8	7/8-14 x
-12	9/32	1 9/16	1 1/16-14 w	-12	1 3/32	1 3/8	1 1/16-12
-16	5/16	1 3/4	1 5/16-14 w	-16	1 3/32	1 5/8	1 5/16-12
				-20	1 3/32	1 15/16	1 5/8-12

AN 831 has been superseded by AN 924.

* x w—Interchangeable with each other.

