

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
For-Seal Thread	9/16-18	11/16-16	13/16-16	1-14	1-3/16-12	1-7/16-12	1-11/16-12	2-12
Maximum PSI	6000	6000	6000	6000	6000	6000	4000	4000
Adjustable Fittings PSI	6000	6000	6000	6000	6000	5000	4000	3000

Rated pressures are for low surge, static type applications.

• **Typical Application**

High pressure hydraulic, pneumatic and chemical processing.

• **Pressure***

Operating pressure to 6000 psi (1-1/4" and 1-1/2" maximum 4,000 psi). See thread chart.

• **Sealing Method**

Face O-Ring.

• **Vibration**

Excellent resistance.

• **Material**

12L14 Steel.

• **Plating**

All fittings are zinc plated, except braze parts which are oil dipped.

• **Used With**

Steel and stainless steel tubing (tubing for brazing must be non-coated).

• **Advantages**

Tubing is brazed for permanent leakproof connection.

• **Conformance**

Meets SAE J1453.

• **How to Order**

Individually by catalog number. O-Ring supplied with fittings.

• **NOTE**

Refer to current price list for availability of cataloged items. Quotations and delivery of non-stock items supplied on request. Configuration and dimensions subject to change without notice. Additional information can be found in SAE J1453.

• **Assembly Instruction**

See pages 150 & 151. See page 230 & 231 for assembly equipment.

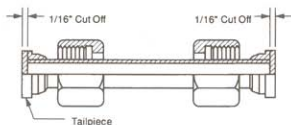
• **Label Set: FS-2400** (adhesive)

* Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure rating applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting.

Torque Requirements

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
Torque Ft-Lb. For-Seal SW. Nut	10-12	18-20	32-35	46-50	65-70	92 100	125 140	150 165
Torque Ft-Lb O-Ring Boss Straight Thread O-Ring Locknut Torque	14-16	24-26	50-60	72-80	125 135	200 220	210 280	270 360

Tube Preparation And Cleaning



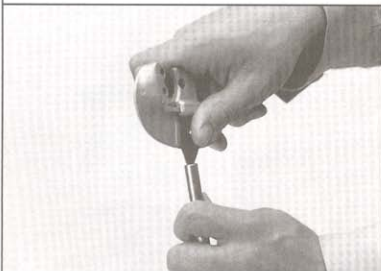
NOTE: Subtract 1/16" from tube length for each connection.

Figure 1

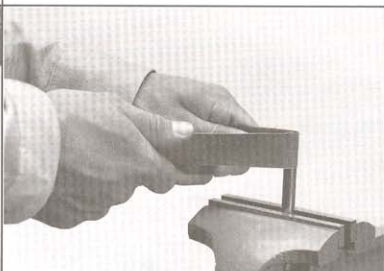


1. Establish the length of tubing required allowing 1/16" cut-off factor for each connection. (See Fig. 1)

2. Cut the tubing to proper length keeping ends reasonably square. A fine tooth hack saw or cut-off saw works well for this job. The use of a tubing cutter is not recommended due to possible collapse of the tube end, retarding the capillary action required for proper braze flow.



3. Clean the end of the tube with an alkaline cleaner to remove all traces of oil or grease. Deburr the end of the tube with a file and polish the outside of the tube down to bare metal with clean emery paper. Oil and grease residue must be removed first to avoid working the oily residue into the tube surface.



4. After polishing, wipe off any metal particles using a clean solvent if necessary. Avoid touching the tube end after final cleaning as this may leave greasy spots which will braze poorly.

Clean the tailpiece with an alkaline cleaner.

Fluxing and Brazing Cleanup

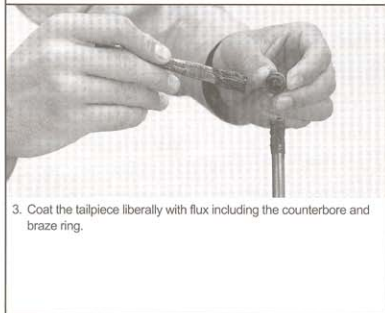
Flux may be cleaned up using hot water and wire brush, using care not to scratch the tailpiece sealing surface.



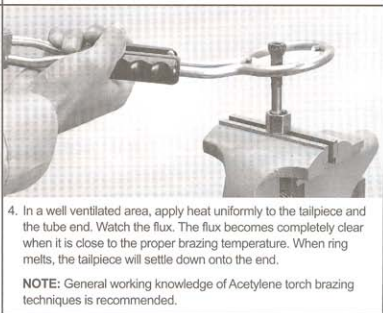
1. Assemble proper size braze ring into counterbore of tailpiece. The correct size braze ring will be slightly smaller than the inside diameter of the counterbore.



2. Clamp the tube securely in a vise, slide nut on tube, with threads pointing outward. Coat the tube end with flux and several inches of the tube outside diameter.

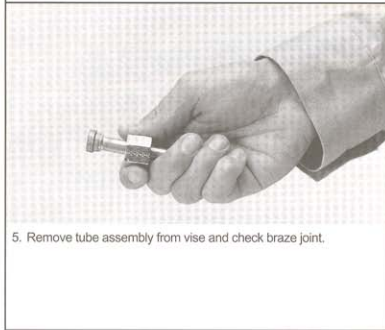


3. Coat the tailpiece liberally with flux including the counterbore and braze ring.

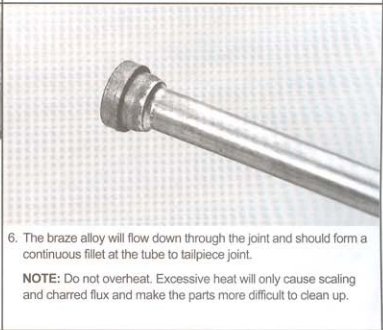


4. In a well ventilated area, apply heat uniformly to the tailpiece and the tube end. Watch the flux. The flux becomes completely clear when it is close to the proper brazing temperature. When ring melts, the tailpiece will settle down onto the end.

NOTE: General working knowledge of Acetylene torch brazing techniques is recommended.



5. Remove tube assembly from vise and check braze joint.



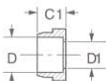
6. The braze alloy will flow down through the joint and should form a continuous fillet at the tube to tailpiece joint.

NOTE: Do not overheat. Excessive heat will only cause scaling and charred flux and make the parts more difficult to clean up.

Tailpiece Silver Braze (Ref. SAE No. 520115)

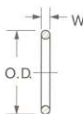


Oil Dipped



Tube O.D.	Catalog Number	D	D1	C1
1/4	4165x4	.256	.172	.374
3/8	4165x6	.381	.264	.374
1/2	4165x8	.506	.378	.374
5/8	4165x10	.631	.484	.413
3/4	4165x12	.757	.609	.551
1	4165x16	1.007	.811	.610
1-1/4	4165x20	1.257	1.024	.610
1-1/2	4165x24	1.507	1.260	.610

For-Seal® Cadmium Free Braze Ring



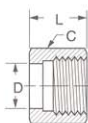
Tube O.D.	Catalog Number	Wire Dia.	O.D.
1/4	4640x4	.046	.250
3/8	4640x6	.046	.375
1/2	4640x8	.046	.500
5/8	4640x10	.046	.625
3/4	4640x12	.062	.750
1	4640x16	.062	1.000
1-1/4	4640x20	.062	1.250
1-1/2	4640x24	.062	1.500

Bulkhead Nut (Ref. SAE No. 520118)



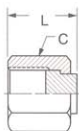
Tube O.D.	Catalog Number	Hex C	L
1/4	4924x4	13/16	.27
3/8	4924x6	1	.31
1/2	4924x8	1-1/8	.35
5/8	4924x10	1-5/16	.41
3/4	4924x12	1-1/2	.41
1	4924x16	1-3/4	.41
1-1/4	4924x20	2	.41
1-1/2	4924x24	2-3/8	.41

Nut (Ref. SAE No. 520110)

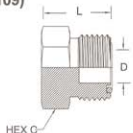


Tube O.D.	Catalog Number	Hex C	D	L
1/4	4105x4	11/16	.412	.58
3/8	4105x6	13/16	.531	.67
1/2	4105x8	15/16	.652	.83
5/8	4105x10	1-1/8	.829	.93
3/4	4105x12	1-3/8	.950	1.02
1	4105x16	1-5/8	1.144	1.10
1-1/4	4105x20	1-7/8	1.415	1.10
1-1/2	4105x24	2-1/4	1.727	1.10

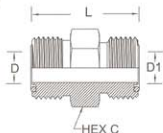
Cap (Ref. SAE No. 520112)



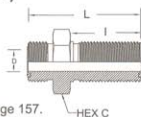
Tube O.D.	Catalog Number	Hex C	L
1/4	4129x4	11/16	.67
3/8	4129x6	13/16	.75
1/2	4129x8	15/16	.90
5/8	4129x10	1-1/8	1.00
3/4	4129x12	1-3/8	1.10
1	4129x16	1-5/8	1.17
1-1/4	4129x20	1-7/8	1.17
1-1/2	4129x24	2-1/4	1.17

Plug
(Ref. SAE No. 520109)


Tube O.D.	Catalog Number	Hex C	D	L
1/4	4229x4	5/8	.172	.659
3/8	4229x6	3/4	.264	.751
1/2	4229x8	7/8	.378	.854
5/8	4229x10	1-1/16	.484	1.020
3/4	4229x12	1-1/4	.609	1.080
1	4229x16	1-1/2	.811	1.100
1-1/4	4229x20	1-3/4	1.024	1.100
1-1/2	4229x24	2-1/8	1.260	1.100

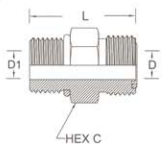
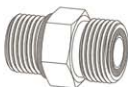
Union
(Ref. SAE No. 520101)


Tube O.D.	Tube O.D.	Catalog Number	Hex C	D	D1	L
1/4	1/4	4305x4	5/8	.172	.172	1.08
3/8	1/4	4305x6x4	3/4	.264	.172	1.17
3/8	3/8	4305x6	3/4	.264	.264	1.22
1/2	3/8	4305x8x6	7/8	.378	.264	1.33
1/2	1/2	4305x8	7/8	.378	.378	1.39
5/8	1/2	4305x10x8	1-1/16	.484	.378	1.57
5/8	5/8	4305x10	1-1/16	.484	.484	1.68
3/4	1/2	4305x12x8	1-1/4	.609	.378	1.69
3/4	5/8	4305x12x10	1-1/4	.609	.484	1.80
3/4	3/4	4305x12	1-1/4	.609	.609	1.86
1	3/4	4305x16x12	1-1/2	.812	.609	1.92
1	1	4305x16	1-1/2	.811	.811	1.94
1-1/4	1-1/4	4305x20	1-3/4	1.024	1.024	2.02
1-1/2	1-1/2	4305x24	2-1/8	1.260	1.260	2.09

Bulkhead Union
(Ref. SAE No. 520601)


For bulkhead nut, see page 157.

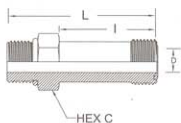
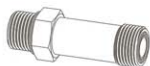
Tube O.D.	Catalog Number	Hex C	D	I	L
3/8	4325x6	1	.264	1.34	2.09
1/2	4325x8	1-1/8	.378	1.44	2.30
3/4	4325x12	1-1/2	.609	1.64	2.72
1	4325x16	1-3/4	.812	1.66	2.76
1-1/4	4325x20	2	1.024	1.66	2.76
1-1/2	4325x24	2-3/8	1.260	1.66	2.76

**Straight Thread O-Ring
Connector**
(Ref. SAE No. 520120)


For replacement Straight Thread O-ring, see page 147.

Tube O.D.	Port Size	Catalog Number	Hex C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

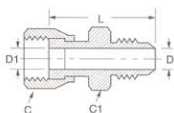
Straight Thread O-Ring to Male For-Seal® Extended (Ref. SAE No. 520122)



For replacement Straight Thread O-ring, see page 147.

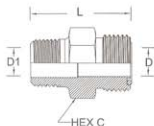
Tube O.D.	Port Size	Catalog Number	Hex C	D	I	L
3/8	3/8	4316x6	3/4	.264	1.46	2.27
1/2	1/2	4316x8	7/8	.378	1.75	2.67
3/4	3/4	4316x12	1-1/4	.609	2.52	3.76
1	1	4316x16	1-1/2	.811	2.87	4.14
1-1/4	1-1/4	4316x20	1-7/8	1.024	3.41	4.76
1-1/2	1-1/2	4316x24	2-1/8	1.260	3.82	5.26

Male JIC 37° to Female Swivel For-Seal®

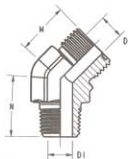


Female Tube O.D.	Male Tube Size	Catalog Number	Hex C	Hex C1	D	D1	L
1/4	1/4	4213x4	11/16	5/8	.172	.165	1.50
3/8	3/8	4213x6	13/16	3/4	.297	.284	1.62
1/2	1/2	4213x8	15/16	7/8	.392	.358	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	.453	2.25
3/4	3/4	4213x12	1-3/8	1-1/4	.609	.547	2.48
1	1	4213x16	1-5/8	1-1/2	.811	.783	2.84

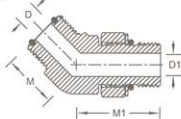
Male Connector



Tube O.D.	Male Pipe Thread	Catalog Number	Hex C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

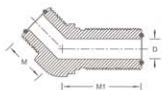
45° Male Elbow


Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N	Across Flats
1/4	1/8	4355x4	.172	.188	.63	.64	9/16
3/8	1/4	4355x6	.264	.281	.74	.86	3/4
1/2	3/8	4355x8	.378	.406	.80	.95	7/8
5/8	1/2	4355x10	.484	.531	.92	1.17	1-1/16
3/4	3/4	4355x12	.609	.719	1.02	1.20	1-5/16
1	1	4355x16	.812	.939	1.18	1.48	1-5/8
1-1/4	1-1/4	4355x20	1.026	1.252	1.26	1.67	1-5/8
1-1/2	1-1/2	4355x24	1.262	1.502	1.45	1.77	1-7/8

**45° Elbow - For-Seal® to
Straight Thread O-Ring
(Ref. SAE No. 520320)**


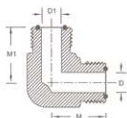
For replacement straight thread O-ring, see page 147.

Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	2.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	2.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	2.11	1-7/8

**45° Bulkhead Elbow
(Ref. SAE No. 520801)**


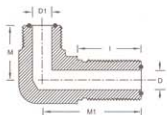
For Bulkhead Nut, see page 157.

Tube O.D.	Catalog Number	D	M	M1	Across Flats
1/4	4375x4	.172	.63	1.73	9/16
3/8	4375x6	.264	.74	1.91	3/4
1/2	4375x8	.378	.80	2.01	3/4
5/8	4375x10	.484	.92	2.23	1-1/16
3/4	4375x12	.609	1.02	2.39	1-3/16
1	4375x16	.811	1.18	2.57	1-7/16
1-1/4	4375x20	1.045	1.26	2.64	1-11/16
1-1/2	4375x24	1.312	1.45	2.64	1-7/8

**90° Union Elbow
(Ref. SAE No. 520201)**


Tube O.D.	Tube O.D.	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4505x4	.172	.172	.85	.85	9/16
1/4	3/8	4505x4x6	.172	.264	.92	.98	3/4
3/8	3/8	4505x6	.264	.264	.98	.98	3/4
1/2	1/2	4505x8	.378	.378	1.10	1.10	3/4
5/8	5/8	4505x10	.484	.484	1.31	1.31	1-1/16
3/4	3/4	4505x12	.609	.609	1.47	1.47	1-3/16
1	1	4505x16	.811	.811	1.64	1.64	1-7/16
1-1/4	1-1/4	4505x20	1.045	1.045	1.76	1.76	1-5/8
1-1/2	1-1/2	4505x24	1.312	1.312	1.92	1.92	1-7/8

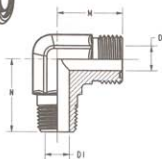
90° Elbow - Bulkhead Union (Ref. SAE No. 520701)



For bulkhead nut, see page 157.

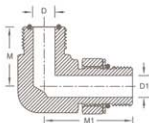
Tube O.D.	Tube O.D.	Catalog Number	D	D1	M	M1	I	Across Flats
1/4	1/4	4525x4	.172	.172	.89	1.85	1.24	9/16
3/8	3/8	4525x6	.264	.264	1.02	2.05	1.34	3/4
1/2	1/2	4525x8	.378	.378	1.14	2.18	1.44	7/8
1/2	5/8	4525x8x10	.484	.378	1.26	2.48	1.60	1-1/16
5/8	5/8	4525x10	.484	.484	1.36	1.36	1.44	1-1/16
3/4	3/4	4525x12	.609	.609	1.52	2.64	1.60	1-5/16
1	1	4525x16	.811	.811	1.67	2.80	1.64	1-5/8
1-1/4	1-1/4	4525x20	1.024	1.024	1.79	2.97	1.66	1-7/8
1-1/2	1-1/2	4525x24	1.260	1.260	1.95	3.13	1.66	1-7/8

90° Male Connector



Tube O.D.	Male Pipe	Catalog Number	D	D1	M	N	Across Flats
1/4	1/8	4405x4	.172	.188	.85	.78	9/16
3/8	1/4	4405x6	.264	.281	.80	1.09	3/4
1/2	3/8	4405x8	.378	.406	1.10	1.22	3/4
5/8	1/2	4405x10	.484	.531	1.31	1.47	1-1/16
3/4	3/4	4405x12	.609	.719	1.47	1.59	1-5/16
1	1	4405x16	.812	.939	1.64	1.97	1-5/8
1-1/4	1-1/4	4405x20	1.026	1.252	1.76	2.38	1-5/8
1-1/2	1-1/2	4405x24	1.262	1.502	1.92	2.64	1-7/8

90° Elbow - Straight Thread O-Ring to Male For-Seal® (Ref. SAE No. 520220)

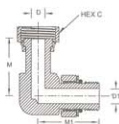


For replacement straight thread O-ring, see page 147.

Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4515x4	.172	.172	.85	1.29	9/16
1/4	5/16	4515x4x5	.172	.234	.85	1.29	9/16
1/4	3/8	4515x4x6	.172	.264	.92	1.45	3/4
1/4	1/2	4515x4x8	.172	.390	.97	1.60	3/4
3/8	1/4	4515x6x4	.264	.172	.98	1.37	3/4
3/8	5/16	4515x6x5	.264	.234	.98	1.37	3/4
3/8	3/8	4515x6	.264	.264	.98	1.45	3/4
3/8	1/2	4515x6x8	.264	.390	1.04	1.60	3/4
3/8	5/8	4515x6x10	.264	.484	1.15	1.97	3/4
3/8	3/4	4515x6x12	.264	.609	1.25	2.17	1-3/16
1/2	3/8	4515x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4515x8	.378	.390	1.10	1.60	3/4
1/2	5/8	4515x8x10	.378	.484	1.21	1.97	1-1/16
1/2	3/4	4515x8x12	.378	.484	1.32	2.17	1-1/16
5/8	1/2	4515x10x8	.484	.390	1.31	1.80	1-1/16
5/8	5/8	4515x10	.484	.484	1.31	1.97	1-1/16
5/8	3/4	4515x10x12	.484	.609	1.41	2.17	1-3/16
3/4	1/2	4515x12x8	.609	.390	1.47	1.84	1-3/16
3/4	5/8	4515x12x10	.609	.484	1.47	2.01	1-5/16
3/4	3/4	4515x12	.609	.609	1.47	2.17	1-5/16
3/4	1	4515x12x16	.609	.811	1.62	2.35	1-5/16
1	3/4	4515x16x12	.811	.609	1.64	2.32	1-5/8
1	7/8	4515x16x14	.811	.609	1.64	2.32	1-5/8
1	1	4515x16	.811	.811	1.64	2.35	1-5/8
1	1-1/4	4515x16x20	.811	1.081	1.76	2.45	1-5/8
1-1/4	1	4515x20x16	1.024	.811	1.76	2.42	1-5/8
1-1/4	1-1/4	4515x20	1.024	1.081	1.76	2.45	1-7/8
1-1/4	1-1/2	4515x20x24	1.024	1.312	1.92	2.59	1-7/8
1-1/2	1-1/4	4515x24x20	1.312	1.081	1.92	2.59	1-7/8
1-1/2	1-1/2	4515x24	1.312	1.312	1.92	2.59	1-7/8

90° Elbow - For-Seal® Female Swivel to Male Straight Thread O-Ring

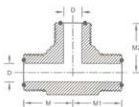
(Ref. SAE No. 520281)



Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Hex C	Across Flats
1/4	1/4	4535x4	.165	.180	1.04	1.29	11/16	9/16
3/8	3/8	4535x6	.264	.300	1.15	1.45	13/16	3/4
1/2	1/2	4535x8	.358	.398	1.49	1.60	15/16	7/8
5/8	5/8	4535x10	.453	.498	1.62	1.97	1-1/8	1-1/16
3/4	3/4	4535x12	.547	.616	1.82	2.17	1-3/8	1-3/8
1	1	4535x16	.783	.852	2.10	2.35	1-5/8	1-5/8
1-1/4	1-1/4	4535x20	1.026	1.090	2.29	2.45	1-7/8	1-5/8
1-1/2	1-1/2	4535x24	1.262	1.326	2.41	2.59	2-1/4	1-7/8

Union Tee

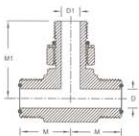
(Ref. SAE No. 520401)



Tube O.D. A	Tube O.D. B	Tube O.D. C	Catalog Number	D	D1	M	M1	M2	Across Flats
1/4	1/4	1/4	4705x4	.172	.172	.85	.85	.85	9/16
3/8	3/8	3/8	4705x6	.264	.264	.98	.98	.98	3/4
3/8	3/8	1/2	4705x6x6x8	.264	.378	1.04	1.04	1.10	3/4
1/2	3/8	1/2	4705x6x6x8	.264	.378	.98	.98	1.10	3/4
1/2	1/2	1/2	4705x8	.378	.378	1.10	1.10	1.10	3/4
5/8	5/8	5/8	4705x10	.484	.484	1.31	1.31	1.31	1-1/16
3/4	3/4	1/4	4705x12x12x4	.609	.172	1.47	1.47	1.19	1-5/16
3/4	3/4	3/8	4705x12x12x6	.609	.264	1.47	1.47	1.25	1-5/16
3/4	3/4	3/4	4705x12	.609	.609	1.47	1.47	1.47	1-3/16
1	1	3/4	4705x16x16x12	.811	.609	1.64	1.64	1.62	1-5/8
1	1	1	4705x16	.811	.811	1.64	1.64	1.64	1-5/8
1-1/4	1-1/4	1	4705x20x20x16	1.024	.811	1.76	1.76	1.76	1-5/8
1-1/4	1-1/4	1-1/4	4705x20	1.024	1.024	1.76	1.76	1.76	1-5/8
1-1/2	1-1/2	1-1/2	4705x24	1.260	1.260	1.92	1.92	1.92	1-7/8

Straight Thread Branch Tee

(Ref. SAE No. 520429)

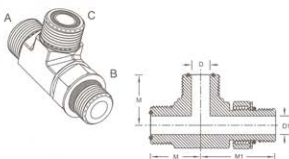


Tube O.D.	Port Size	Catalog Number	D	D1	M	M1	Across Flats
1/4	1/4	4715x4	.172	.172	.85	1.29	9/16
3/8	3/16	4715x6x6x3	.264	.130	.98	1.26	3/4
3/8	3/8	4715x6	.264	.264	.98	1.45	3/4
3/8	1/2	4715x6x6x8	.264	.391	1.04	1.60	7/8
1/2	3/8	4715x6x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4715x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4715x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	4715x12	.609	.609	1.47	2.17	1-3/16
3/4	1	4715x12x12x16	.609	.812	1.62	2.35	1-5/8
1	1	4715x16	.811	.845	1.64	2.35	1-5/8
1-1/4	1	4715x20x20x16	1.046	.845	1.76	2.45	1-15/16
1-1/4	1-1/4	4715x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	4715x24	1.260	1.313	1.92	2.59	1-7/8

For replacement straight thread O-ring, see page 147.

Straight Thread O-Ring Run Tee

(Ref. SAE No. 520428)



For replacement straight thread O-ring, see page 147.

Tube O.D.	Port Size	Tube O.D.	Catalog Number	D	D1	M	M1	M2	Across Flats
A	B	C							
1/4	1/4	1/4	4716x4	.172	.172	.85	1.29	.85	9/16
1/4	1/4	3/8	4716x4x4x6	.172	.264	1.39	1.45	1.39	3/4
3/8	3/8	3/8	4716x6	.264	.264	.98	1.45	.98	3/4
1/2	1/2	1/2	4716x8	.378	.391	1.10	1.60	1.10	7/8
5/8	5/8	5/8	4716x10	.484	.484	1.31	1.97	1.31	1-1/16
3/4	3/4	3/4	4716x12	.609	.609	1.47	2.17	1.47	1-3/16
3/4	3/4	1	4716x12x12x16	.609	.812	1.62	2.32	1.64	1-7/16
3/4	1	3/4	4716x12x16x12	.609	.812	1.62	2.35	1.62	1-7/16
1	1	3/4	4716x16x16x12	.812	.609	1.64	2.35	1.62	1-7/16
1	1	1	4716x16	.812	.845	1.64	2.35	1.64	1-7/16
1-1/4	1-1/4	1-1/4	4716x20	1.046	1.081	1.76	2.45	1.76	1-7/8
1-1/2	1-1/2	1-1/2	4716x24	1.313	1.313	1.92	2.59	1.92	1-7/8

Bulkhead Run Tee

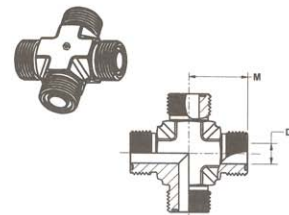
(Ref. SAE No. 520958)



For Bulkhead Nut, see page 157.

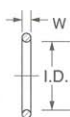
Tube O.D.	Catalog Number	D	I	M	M2	Across Flats
1/4	4726x4	.172	1.24	.89	1.85	9/16
3/8	4726x6	.264	1.34	1.02	2.05	3/4
1/2	4726x8	.378	1.44	1.14	2.18	3/4
5/8	4726x10	.484	1.60	1.36	2.48	1-1/16
3/4	4726x12	.609	1.64	1.52	2.65	1-3/16
1	4726x16	.812	1.66	1.67	2.80	1-7/16
1-1/4	4726x20	1.024	1.66	1.79	2.97	1-5/8
1-1/2	4726x24	1.260	1.66	1.95	3.13	1-7/8

Male For-Seal® Cross



Tube O.D.	Catalog Number	D	M	Across Flats
1/4	4955x4	.172	.89	9/16
3/8	4955x6	.264	1.02	3/4
1/2	4955x8	.378	1.14	7/8
5/8	4955x10	.484	1.36	1-1/16
3/4	4955x12	.609	1.52	1-5/16
1	4955x16	.812	1.67	1-5/8
1-1/4	4955x20	1.026	1.79	1-5/8
1-1/2	4955x24	1.262	1.95	1-7/8

O-Ring, For-Seal®



Material: Buna N, 90 Durometer
 Temperature: -40°F to +250°F (-40°C to +121°C)
 Standard o-ring complies with SAE specification SAE J515 Type CH

Tube O.D.	Catalog Number	W	I.D.
1/4	4629x4	.070 ± .005	.301 ± .005
3/8	4629x6	.070 ± .005	.364 ± .005
1/2	4629x8	.070 ± .005	.489 ± .005
5/8	4629x10	.070 ± .005	.614 ± .005
3/4	4629x12	.070 ± .005	.739 ± .005
1	4629x16	.070 ± .006	.926 ± .006
1-1/4	4629x20	.070 ± .006	1.176 ± .006
1-1/2	4629x24	.070 ± .010	1.489 ± .010