TABLE 3 - DIMENSIONS OF 37 DEGREE FLARED HYDRAULIC TUBE FITTING ASSEMBLIES (FIGURE 1)

Nominal Tube OD	F (Ref) mm	F (Ref) in	G (Ref) mm	G (Ref) in)	H (Ref) mm	H (Ref) in
1-1/8	4.8	0.19	3.0	0.12	12.2	0.48
3/16	6.4	0.25	3.0	0.12	14.2	0.56
1/4	4.8	0.19	4.3	0.17	15.0	0.59
5/16	7.6	0.30	2.8	0.11	16.8	0.66
3/8	7.1	0.28	4.8	0.19	17.5	0.69
1/2	7.9	0.31	4.8	0.19	20.6	0.81
5/8	9.7	0.38	6.9	0.27	23.9	0.94
3/4	9.1	0.36	6.4	0.25	26.2	1.03
7/8	9.7	0.38	7.9	0.31	30.2	1.19
1	8.6	0.34	10.4	0.41	33.3	1.31
1-1/4	8.6	0.34	9.9	0.39	38.1	1.50
1-1/2	12.7	0.50	14.0	0.55	38.9	1.53
2	14.0	0.55	13.5	0.53	44.4	1.75

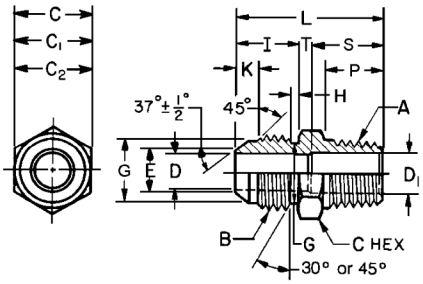


FIGURE 2A - MALE CONNECTOR (070102)

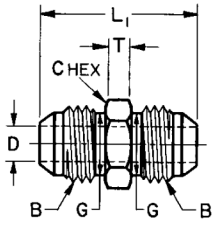


FIGURE 2B - UNION (070101)

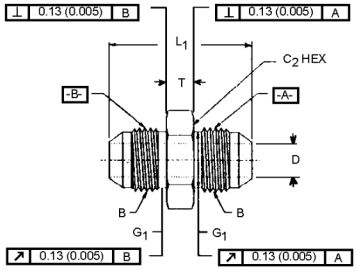


FIGURE 2C - LARGE HEX UNION* (070119)

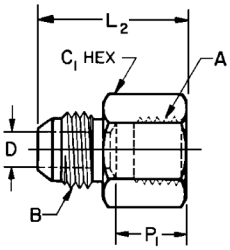


FIGURE 2D - FEMALE CONNECTOR (070103)

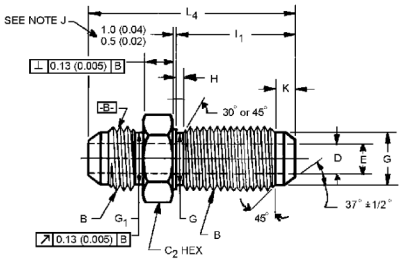


FIGURE 3A - BULKHEAD UNION (070601) SEE NOTE J

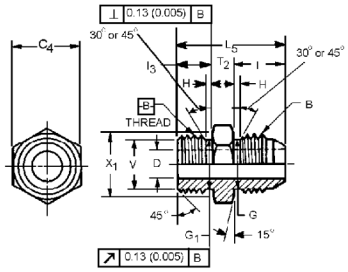


FIGURE 3B - STRAIGHT THREAD CONNECTOR SHORT* (070120)

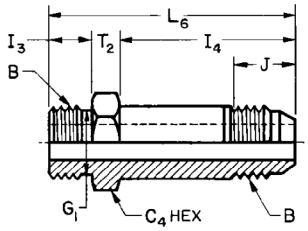


FIGURE 3C - STRAIGHT THREAD CONNECTOR LONG* (071720)

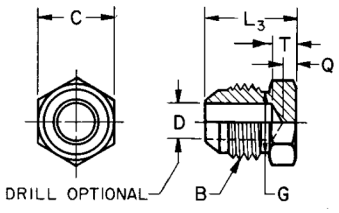


FIGURE 3D - PLUG (070109)

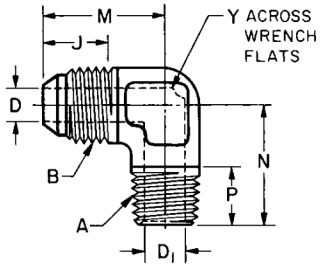


FIGURE 4A - 90 DEGREE MALE ELBOW (070202)

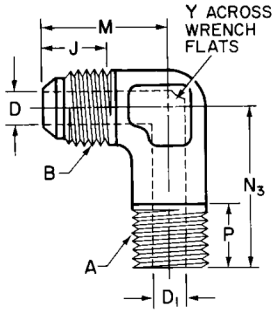


FIGURE 4B - 90 DEGREE MALE LONG ELBOW (071502)

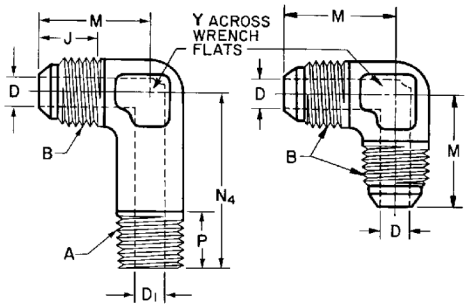


FIGURE 4C - 90 DEGREE MALE EXTRA LONG ELBOW (071602)

FIGURE 4D - 90 DEGREE UNION ELBOW (070201)

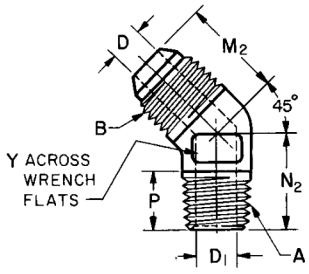


FIGURE 4E - 45 DEGREE MALE ELBOW (070302)

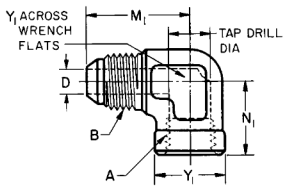


FIGURE 5A - 90 DEGREE FEMALE ELBOW (070203)

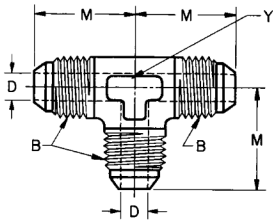


FIGURE 5B - UNION TEE (070401)

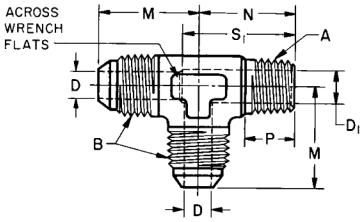


FIGURE 5C - MALE RUN TEE (070424)

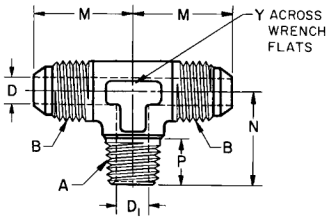


FIGURE 5D - MALE BRANCH TEE (070425)

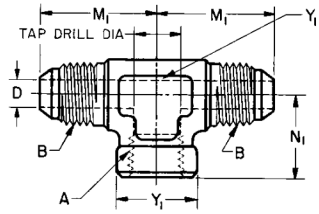


FIGURE 6A - FEMALE BRANCH TEE (070427)

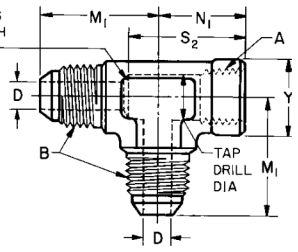


FIGURE 6B - FEMALE RUN TEE (070426)

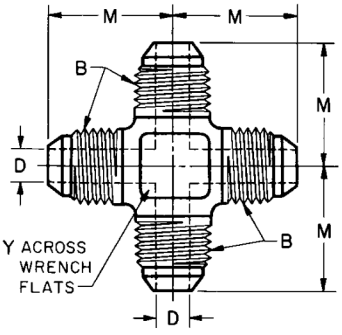


FIGURE 6C - CROSS (070501)

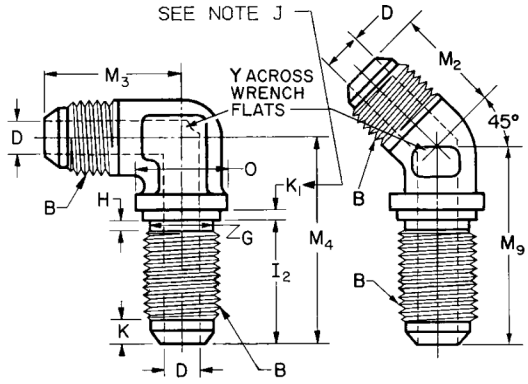


FIGURE 7A - 90 DEGREE BULKHEAD ELBOW (070701)

FIGURE 7B - 45 DEGREE BULKHEAD ELBOW (070801)

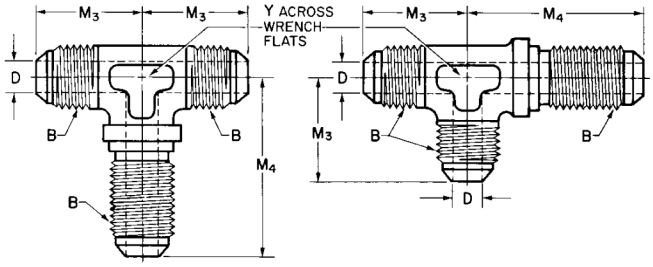


FIGURE 7C - BULKHEAD BRANCH TEE (070959)

FIGURE 7D - BULKHEAD RUN TEE (070958)

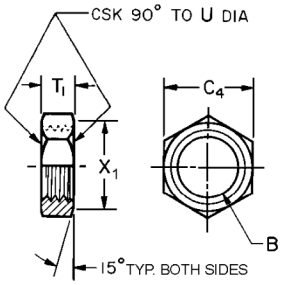


FIGURE 8A - STRAIGHT THREAD LOCKNUT* (070117)

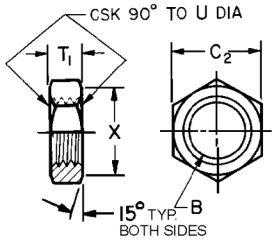


FIGURE 8B - BULKHEAD LOCKNUT (070118)

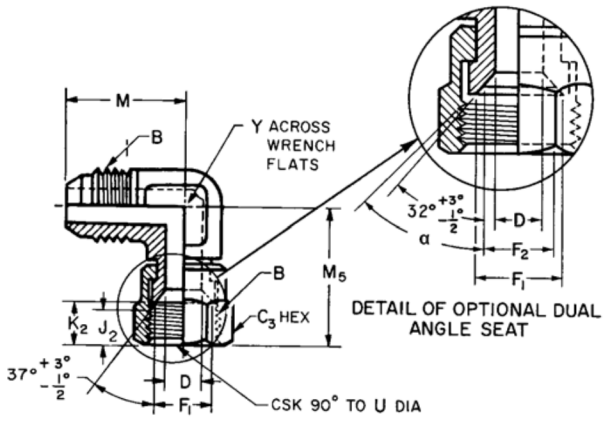


FIGURE 8C - 90 DEGREE SWIVEL ELBOW (070221)

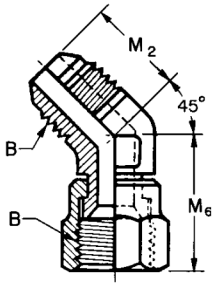


FIGURE 9A - 45 DEGREE SWIVEL ELBOW (070321)

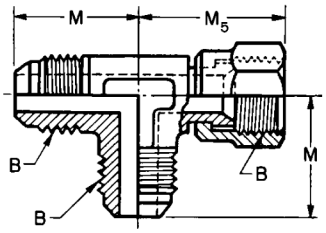


FIGURE 9B - SWIVEL RUN TEE (070432)

THE DESIGN AND METHOD OF ATTACHING THE SWIVEL NUT SHALL BE OPTIONAL WITH THE MANUFACTURER PROVIDING THE TABULATED DIMENSIONS ARE MAINTAINED AND THE NUT TURNS FREELY.

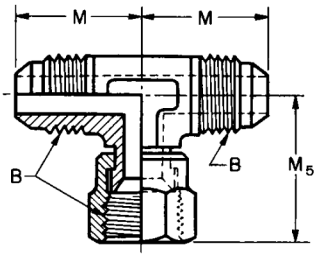


FIGURE 9C - SWIVEL BRANCH TEE (070433)

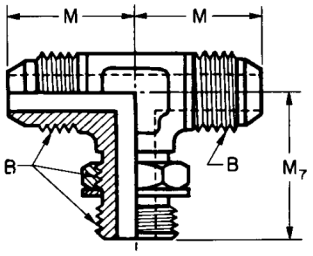
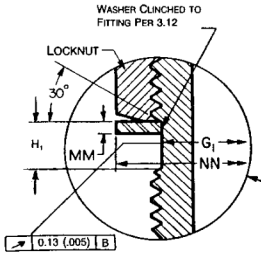
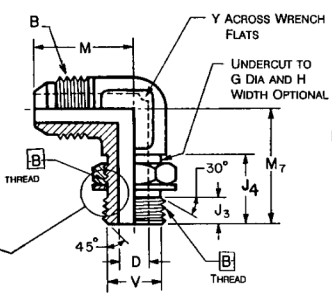


FIGURE 9D - STRAIGHT THREAD BRANCH TEE† (070429)





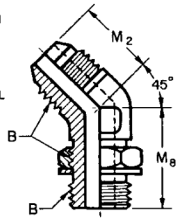


FIGURE 10A - 90 DEGREE STRAIGHT THREAD ELBOW† (070220)

FIGURE 10B - 45 DEGREE STRAIGHT THREAD ELBOW† (070320)

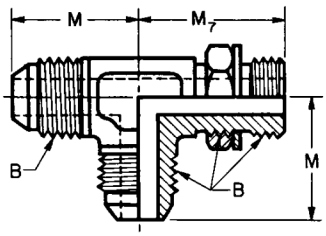


FIGURE 10C - STRAIGHT THREAD RUN TEE† (070428)

NOTES: UNSPECIFIED DETAIL WITH RESPECT TO DIMENSIONS, TOLERANCES, CONTOURS, MATERIAL, WORKMANSHIP, ETC., MUST CONFORM TO GENERAL SPECIFICATIONS FOR HYDRAULIC TUBE FITTINGS. THE DIMENSIONAL DESIGNATIONS FOR TUBE ENDS IN FIGURES 2A TO 10F, FOR SWIVEL ENDS IN FIGURES 8C TO 9C, FOR O-RING BOSS ENDS IN FIGURES 3B AND 3C, AND FOR ADJUSTABLE STRAIGHT THREAD ENDS IN FIGURES 9D TO 10F SHALL APPLY TO CORRESPONDING ENDS OF OTHER FIGURES ON THIS AND PRECEDING PAGE UNLESS SHOWN OTHERWISE. FIGURES 2A TO 10F ON THIS AND PRECEDING PAGE APPLY TO TABLE 4. CODES SHOWN IN BRACKETS ADJACENT TO FIGURE NUMBERS REPRESENT RESPECTIVE FITTING IDENTIFICATION IN ACCORDANCE WITH SAE J846.

* MODIFICATION OF 1/8-1 IN SIZES IN THESE TYPES OF FITTINGS FOR USE WITH MS 33649 (OR SUPERSEDED AND 10050) BOSSES IS SHOWN IN FIGURE 35 AND TABLE 15.

† IF DESIRED BY THE PURCHASER AND SO SPECIFIED, THESE FITTINGS MAY BE FURNISHED WITH LARGE HEXAGON LOCKNUT SHOWN IN FIGURE 8B.

TABLE 4 - DIMENSIONS OF ALL BODIES AND LOCKNUTS (FIGURES 2A TO 10C)

Nom Tube OD, in	A Dryseal Pipe Thread SAE J476 (ANSI B1.20.3)	B[g] Thread Size, in SAE J425 (ISO R725) Class 2A Ext Class 2B Int	C[h] Hex Nom in	C_1[h] Hex Nom in	C_2[h] Hex Nom in	C_3[h] Hex Min in	C_4[h] Hex Nom in	D[l][m] Metric Drill Size mm	D[l] Drill in	D_1[b][l] Drill mm	D_1[b][l] Drill in	E Dia mm ±0.08	E Dia in ±0.003	F_1 Dia mm ±0.25	F_1 Dia in ±0.010	F_2 Dia mm ±0.13	F_2 Dia in ±0.005
1/8	1/8-27	5/16-24	7/16	9/16	9/16	7/16	7/16	1.6	0.062	4.8	0.188	2.11	0.083	4.85	0.190	2.67	0.105
3/16	1/8-27	3/8-24	7/16	9/16	5/8	1/2	1/2	3.2	0.125	4.8	0.188	3.71	0.146	6.20	0.245	4.32	0.170
1/4	1/8-27	7/16-20	1/2	9/16	11/16	9/16	9/16	4.4	0.172	4.8	0.188	4.90	0.193	7.35	0.290	6.35	0.250
5/16	1/8-27	1/2-20	9/16	9/16	3/4	5/8	5/8	6.0	0.234	4.8	0.188	6.48	0.255	8.90	0.350	7.93	0.312
3/8	1/4-18	9/16-18	5/8	3/4	13/16	11/16	11/16	7.5	0.297	7.0	0.281	8.08	0.318	10.90	0.430	8.89	0.350
1/2	3/8-18	3/4-16	13/16	7/8	1	7/8	7/8	9.9	0.391	10.3	0.406	10.82	0.426	14.35	0.565	12.70	0.500
5/8	1/2-14	7/8-14	15/16	1-1/8	1-1/8	1	1	12.3	0.484	13.5	0.531	13.69	0.539	17.15	0.675	15.88	0.625
3/4	3/4-14	1-1/16-12	1-1/8	1-3/8	1-3/8	1-1/4	1-1/4	15.5	0.609	18.3	0.719	16.87	0.664	21.45	0.845	17.65	0.695
7/8	3/4-14	1-3/16-12	1-1/4	1-3/8	1-1/2	1-3/8	1-3/8	18.3(18.0)	0.719	18.3	0.719	20.02	0.788	24.65	0.970	20.83	0.820
1	1-11-1/2	1-5/16-12	1-3/8	1-5/8	1-5/8	1-1/2	1-1/2	(21.5)21.4	0.844	23.8	0.938	23.19	0.913	27.80	1.095	24.00	0.945
1-1/4	1-1/4-11-1/2	1-5/8-12	1-11/16	2	1-7/8	2	1-7/8	(27.5)27.4	1.078	31.7	1.250	29.13	1.147	35.70	1.405	29.85	1.175
1-1/2	1-1/2-11-1/2	1-7/8-12	2	2-3/8	2-1/8	2-1/4	2-1/8	(33.5)33.3	1.312	38.0	1.500	35.08	1.381	41.15	1.620	35.81	1.410
2	2-11-1/2	2-1/2-12	2-5/8	2-7/8	2-3/4	2-7/8	2-3/4	45.2(45.0)	1.781	49.0	1.938	47.75	1.880	56.75	2.235	48.51	1.910

Nom Tube OD in	G Dia mm +0.05 −0.25	G Dia in +0.002 −0.010	G_1[a] Dia mm +0.05 −0.08	G_1[a] Dia in +0.002 −0.003	H mm +0.8 −0.0	H in +0.030 −0.000	H_1 mm +0.3 −0.0	H_1 in +0.010 −0.000	I mm ±0.4	I in ±0.016	I_1 mm ±0.5	I_1 in ±0.02	I_2 mm ±0.5	I_2 in ±0.02	I_3 mm ±0.13	I_3 in ±0.005	I_4 mm ±0.5	I_4 in ±0.02	J[k] Full Thread Min mm	J[k] Full Thread Min in
1/8	6.35	0.250	6.35	0.250	1.6	0.063	3.2	0.125	11.4	0.448	28.2	1.11	23.4	0.92	7.54	0.297	29.7	1.17	11.00	0.433
3/16	7.92	0.312	7.95	0.313	1.6	0.063	3.3	0.131	12.2	0.479	28.2	1.11	23.4	0.92	7.54	0.297	31.8	1.25	11.81	0.464
1/4	9.25	0.364	9.25	0.364	1.9	0.075	4.0	0.156	14.0	0.550	30.5	1.20	25.9	1.02	9.14	0.360	35.3	1.39	13.59	0.535
5/16	10.82	0.426	10.85	0.427	1.9	0.075	4.0	0.156	14.0	0.550	30.5	1.20	25.9	1.02	9.14	0.360	36.8	1.45	13.59	0.535
3/8	12.22	0.481	12.24	0.482	2.1	0.083	4.0	0.156	14.1	0.556	32.5	1.28	27.7	1.09	9.93	0.391	39.6	1.56	13.74	0.541
1/2	16.74	0.659	16.76	0.660	2.4	0.094	4.8	0.187	16.7	0.657	36.6	1.44	31.8	1.25	11.13	0.438	47.8	1.88	16.31	0.642
5/8	19.61	0.772	19.63	0.773	2.7	0.107	5.6	0.219	19.3	0.758	40.1	1.58	35.3	1.39	12.70	0.500	53.1	2.09	18.87	0.743
3/4	23.95	0.943	24.00	0.945	3.2	0.125	5.9	0.234	21.9	0.864	44.4	1.75	39.6	1.56	15.09	0.594	63.5	2.50	21.56	0.849
7/8	27.13	1.068	27.18	1.070	3.2	0.125	5.9	0.234	22.6	0.890	44.4	1.75	39.6	1.56	15.09	0.594	68.3	2.69	22.22	0.875
1	30.30	1.193	30.35	1.195	3.2	0.125	5.9	0.234	23.1	0.911	44.4	1.75	39.6	1.56	15.09	0.594	72.1	2.84	22.76	0.896
1-1/4	38.25	1.506	38.28	1.507	3.2	0.125	5.9	0.234	24.3	0.958	45.7	1.80	40.9	1.61	15.09	0.594	88.1	3.47	23.95	0.943
1-1/2	44.58	1.755	44.60	1.756	3.2	0.125	5.9	0.234	27.5	1.083	46.0	1.81	41.1	1.62	15.09	0.594	98.6	3.88	27.13	1.068
2	60.45	2.380	60.48	2.381	3.2	0.125	5.9	0.234	33.9	1.333	53.1	2.09	48.5	1.91	15.09	0.594	122.9	4.84	33.48	1.318

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