



AEROSPACE STANDARD

Society of Automotive Engineers, Inc.

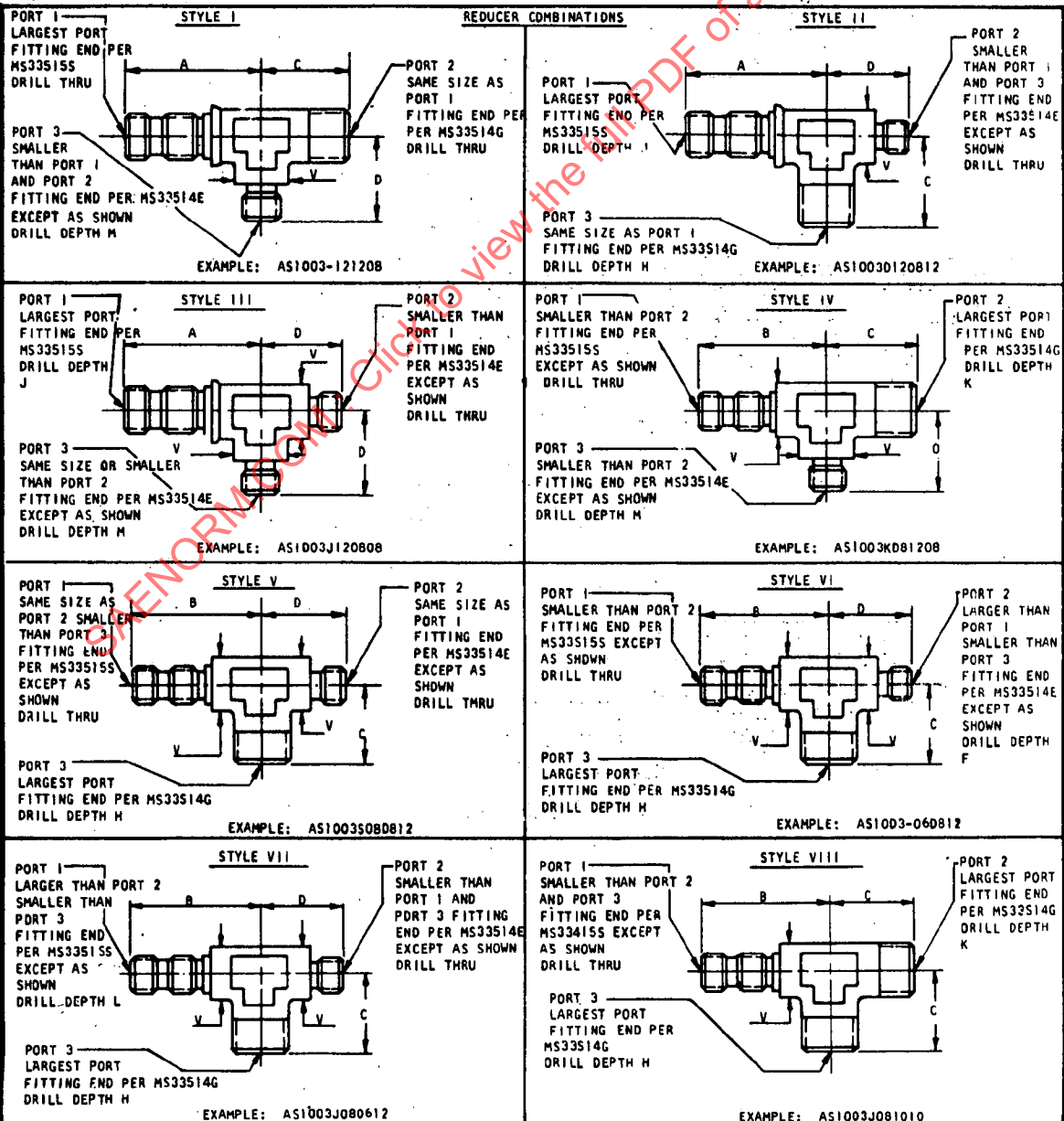
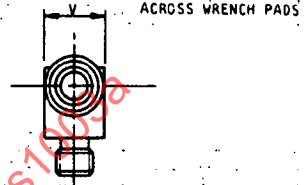
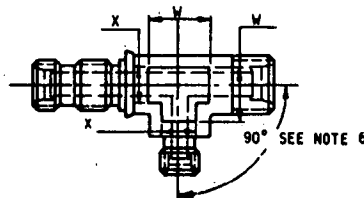
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

AS 1003A

Issued 3-15-66

Revised 11-1-68

TEE, REDUCER, BULKHEAD ON RUN, FLARELESS TUBE



SAE Technical Board rules provide that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

FORGING SIZE	A	C	H	V	W	X
3	1.414	0.930	0.969	0.375	0.375	0.250
4	1.523	0.961	1.000	0.438	0.375	0.250
5	1.555	1.055	1.094	0.500	0.469	0.312
6	1.711	1.086	1.125	0.562	0.500	0.312
8	1.992	1.336	1.375	0.750	0.688	0.438
10	2.273	1.524	1.562	0.875	0.781	0.438
12	2.492	1.649	1.688	1.062	0.906	0.500
16	2.617	1.742	1.781	1.312	1.094	0.625
20	2.898	2.023	2.062	1.625	1.312	0.750
24	3.180	2.211	2.234	1.875	1.500	0.875
32	3.773	2.398	2.438	2.562	2.032	1.094

LEG LENGTH B ± 0.016											
FORGING SIZE											
3	4	5	6	8	10	12	16	20	24	32	
1.367	1.413	1.445	1.555	1.664	1.804	1.914	2.039	2.320	2.602	2.992	2
1.460	1.492	1.602	1.711	1.851	1.961	2.086	2.367	2.649	3.039	3	
	1.555	1.665	1.774	1.914	2.024	2.149	2.430	2.712	3.102	4	
		1.665	1.774	1.914	2.024	2.149	2.430	2.712	3.102	5	PORT
			1.820	1.960	2.070	2.195	2.476	2.758	3.148	6	#1
				2.132	2.242	2.367	2.648	2.930	3.320	8	SIZE
					2.383	2.508	2.789	3.071	3.461	10	
						2.617	2.898	3.180	3.570	12	
							2.898	3.180	3.570	16	
								3.180	3.570	20	
									3.570	32	

LEG LENGTH D ± 0.016											.203
FORGING SIZE											1.
3	4	5	6	8	10	12	16	20	24	32	
0.883	0.883	0.977	0.992	1.149	1.274	1.335	1.429	1.710	1.898	2.085	2
	0.930	1.024	1.039	1.196	1.320	1.383	1.476	1.757	1.945	2.132	3
		1.055	1.070	1.227	1.352	1.414	1.507	1.788	1.976	2.163	4
			1.070	1.227	1.352	1.414	1.507	1.788	1.976	2.163	5
				1.243	1.368	1.430	1.523	1.804	1.992	2.179	6
					1.461	1.523	1.616	1.897	2.085	2.272	8
						1.586	1.679	1.960	2.148	2.335	10
							1.742	2.023	2.211	2.398	12
								2.023	2.211	2.398	16
									2.211	2.398	20
										2.398	24

DRILL DEPTH F ± 0.016												
FORGING SIZE												
4	5	6	8	10	12	16	20	24	32			
1.062	1.177	1.219	1.438	1.609	1.750	1.953	2.344	2.656	3.078	3		
	1.203	1.250	1.469	1.641	1.781	1.984	2.375	2.688	3.109	4		
		1.250	1.469	1.641	1.781	1.984	2.375	2.688	3.109	5		PORT #2
			1.485	1.656	1.797	2.000	2.391	2.703	3.125	6		SIZE
				1.750	1.891	2.094	2.484	2.797	3.219	8		
					1.953	2.156	2.547	2.859	3.281	10		
						2.219	2.609	2.922	3.344	12		
							2.609	2.922	3.344	16		
								2.922	3.344	20		
									3.344	24		

DRILL DEPTH I ± 0.016												
FORGING SIZE												
3	4	5	6	8	10	12	16	20	24	32	PORT #3 SIZE	
1.018	1.047	1.141	1.172	1.422	1.609	1.734	1.828	2.109	2.297	2.484		2
1.031	1.062	1.156	1.188	1.438	1.625	1.750	1.844	2.125	2.312	2.500		3
	1.094	1.187	1.219	1.469	1.656	1.781	1.875	2.156	2.344	2.531		4
		1.203	1.234	1.484	1.672	1.797	1.891	2.172	2.359	2.547		5
			1.266	1.516	1.703	1.828	1.922	2.203	2.391	2.578		6
				1.578	1.766	1.891	1.984	2.266	2.453	2.641		8
					1.812	1.938	2.031	2.312	2.500	2.688		10
						2.016	2.109	2.391	2.578	2.766		12
							2.219	2.500	2.688	2.875		16
								2.609	2.797	2.984		20
									2.922	3.109		24
										3.344		32

DRILL DEPTH K ± 0.016												
FORGING SIZE												
3	4	5	6	8	10	12	16	20	24	32	PORT #2 SIZE	
1.018	1.047	1.141	1.172	1.422	1.609	1.734	1.828	2.109	2.297	2.484		2
1.031	1.062	1.156	1.188	1.438	1.625	1.750	1.844	2.125	2.312	2.500		3
	1.094	1.187	1.219	1.469	1.656	1.781	1.875	2.156	2.344	2.531		4
		1.203	1.234	1.484	1.672	1.797	1.891	2.172	2.359	2.547		5
			1.266	1.516	1.703	1.828	1.922	2.203	2.391	2.578		6
				1.578	1.766	1.891	1.984	2.266	2.453	2.641		8
					1.812	1.938	2.031	2.312	2.500	2.688		10
						2.016	2.109	2.391	2.578	2.766		12
							2.219	2.500	2.688	2.875		16
								2.609	2.797	2.984		20
									2.922	3.109		24
										3.344		32

DRILL DEPTH H ± 0.016												
FORGING SIZE												
3	4	5	6	8	10	12	16	20	24	32	PORT #3 SIZE	
1.500	1.609	1.641	1.797	2.078	2.359	2.578	2.703	2.984	3.266	3.659		2
1.516	1.625	1.666	1.812	2.094	2.375	2.594	2.719	3.000	3.281	3.675		3
	1.656	1.703	1.844	2.125	2.406	2.625	2.750	3.031	3.312	3.696		4
		1.703	1.859	2.141	2.422	2.641	2.766	3.047	3.328	3.610		5
			1.891	2.172	2.453	2.672	2.797	3.078	3.359	3.640		6
				2.234	2.516	2.734	2.859	3.141	3.422	3.703		8
					2.562	2.781	2.906	3.188	3.468	3.750		10
						2.859	2.984	3.266	3.547	4.141		12
							3.094	3.375	3.656	4.250		16
								3.484	3.766	4.359		20
									3.891	4.484		24
										4.719		32

DRILL DEPTH H ± 0.016											
FORGING SIZE											
3	4	5	6	8	10	12	16	20	24	32	
0.922	0.921	1.015	1.031	1.188	1.312	1.375	1.469	1.750	1.938	2.125	2
0.969	1.062	1.078	1.234	1.359	1.422	1.516	1.797	1.984	2.172	2.375	3
	1.094	1.109	1.266	1.391	1.453	1.547	1.828	2.016	2.203	2.406	4
		1.109	1.266	1.391	1.453	1.547	1.828	2.016	2.203	2.406	5
			1.281	1.406	1.469	1.562	1.844	2.032	2.219	2.418	6
				1.500	1.562	1.656	1.938	2.125	2.312	2.500	8
					1.562	1.719	2.000	2.187	2.375	2.562	10
						1.781	2.062	2.250	2.438	2.625	12
							2.062	2.250	2.438	2.625	16
								2.250	2.438	2.625	20
									2.438	2.625	24

DRILL DEPTH L ± 0.016												
FORGING SIZE												
24	20	16	12	10	8	6	5	4	3	PORT #3 SIZE		
4.156	4.516	4.516	4.516	4.359	4.266	4.094	4.047	4.047	3.984			32
3.891	3.891	3.891	3.781	3.641	3.469	3.422	3.422	3.359	3.295			24
3.484	3.484	3.375	3.234	3.062	3.016	3.016	2.953	2.891	2.828			20
3.094	2.984	2.844	2.672	2.625	2.625	2.562	2.500	2.438	2.375			16
2.750	2.609	2.438	2.391	2.391	2.328	2.266	2.203	2.141	2.078			12
2.422	2.250	2.203	2.203	2.141	2.078	2.016	1.953	1.891	1.828			10
2.062	2.016	2.016	1.953	1.891	1.828	1.766	1.703	1.641	1.578			8
1.844	1.844	1.781	1.719	1.656	1.594	1.531	1.469	1.406	1.344			6
1.703	1.641	1.578	1.516	1.453	1.391	1.328	1.266	1.203	1.141			5
1.594	1.531	1.469	1.406	1.344	1.281	1.219	1.156	1.094	1.031			4