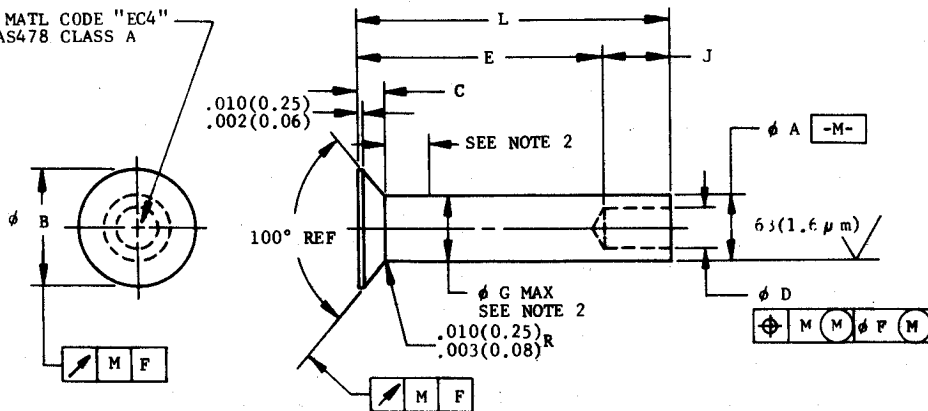


AS3228

SHEET 1 OF 4

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 infringement of patents."

MARK MATL CODE "EC4"
PER AS478 CLASS A



NOMINAL DIAMETER		A		B		C		D	
IN.	(mm)	IN.	(mm)	IN.	(mm)	IN.	(mm)	IN.	(mm)
.062	1.57	.061-.063	1.55-1.60	.099-.107	2.52- 2.71	.019-.023	0.49-0.58	.021-.026	0.54-0.66
.094	2.39	.093-.095	2.37-2.41	.164-.172	4.17- 4.36	.033-.037	0.84-0.93	.045-.050	1.15-1.27
.125	3.18	.123-.126	3.13-3.20	.210-.218	5.34- 5.53	.039-.043	1.00-1.09	.060-.065	1.53-1.65
.156	3.96	.154-.157	3.92-3.98	.272-.280	6.91- 7.11	.052-.056	1.33-1.42	.092-.097	2.34-2.46
.188	4.78	.186-.189	4.73-4.80	.337-.347	8.56- 8.81	.067-.071	1.71-1.80	.107-.112	2.72-2.84
.250	6.35	.248-.252	6.30-6.40	.460-.470	11.69-11.93	.092-.096	2.34-2.43	.154-.159	3.92-4.03

NOMINAL DIAMETER		F		G MAX		J (REF)	
IN.	(mm)	IN.	(mm)	IN.	(mm)	IN.	(mm)
.062	1.57	.010	0.25	.064	1.62	.090	2.29
.094	2.39	.010	0.25	.096	2.43	.105	2.67
.125	3.18	.010	0.25	.128	3.25	.130	3.30
.156	3.96	.015	0.38	.158	4.01	.155	3.94
.188	4.78	.015	0.38	.191	4.85	.180	4.57
.250	6.35	.020	0.50	.254	6.45	.230	5.84

1. MATERIAL: CRES AMS 7228
2. ϕ G FOR DISTANCE OF .060(1.52) FOR LENGTHS .188(4.78) AND SHORTER AND .100(2.54) FOR LENGTHS LONGER THAN .188(4.78).
3. SURFACE TEXTURE: SYMBOLS PER ANSI Y14.36-1978; REQUIREMENTS PER ANSI B46.1-1978. UNLESS OTHERWISE SPECIFIED, SURFACES TO BE 250 MICROINCHES (6.3 MICROMETRES).
4. DIMENSIONS AND TOLERANCES: ANSI Y14.5-1973.
5. DIMENSIONS IN INCHES (MILLIMETRES), METRIC CONVERSIONS IN PARENTHESES ARE IN INTERNATIONAL SYSTEMS UNITS (SI).
6. BREAK SHARP EDGES .003-.015(0.08-0.38) UNLESS OTHERWISE SPECIFIED.
7. DO NOT USE UNASSIGNED PART NUMBERS.

THIRD ANGLE PROJECTION



PREPARED BY SAE COMMITTEE E-25, ENGINE AND PROPELLER STANDARD UTILITY PARTS

Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE STANDARD

RIVET - TUBULAR, COUNTERSUNK, AMS 7228

AS3228

SHEET 1 OF 4

Copyright 1979 by the Society of Automotive Engineers, Inc.
All rights reserved.

Printed in U.S.A.

REAFFIRMED

11/91 5/95

Revised June 1979

AS3228

SHEET 2 OF 4

A = .062 (1.57)				A = .094 (2.39)			
L		PART NO.	E		PART NO.	E	
IN.	(mm)		IN.	(mm)		IN.	(mm)
APPROX MASS		PART NO.	APPROX MASS		PART NO.	APPROX MASS	
LB/100	kg/100		LB/100	kg/100		LB/100	kg/100
.146-.166	.006	AS3228-001	.051-.081	.013	AS3228-051	.036-.066	.031
.178-.198	.007	AS3228-002	.083-.103	.016	AS3228-052	.068-.098	.037
.209-.229	.008	AS3228-003	.114-.144	.018	AS3228-053	.099-.129	.043
.240-.260	.010	AS3228-004	.145-.175	.022	AS3228-054	.130-.160	.049
.271-.291	.011	AS3228-005	.176-.206	.024	AS3228-055	.161-.191	.055
.302-.322	.012	AS3228-006	.207-.237	.027	AS3228-056	.192-.222	.062
.334-.354	.013	AS3228-007	.239-.269	.030	AS3228-057	.224-.254	.068
.365-.385	.015	AS3228-008	.270-.300	.032	AS3228-058	.255-.285	.074
.396-.416	.016	AS3228-009	.301-.331	.035	AS3228-059	.286-.316	.084
.428-.448	.017	AS3228-010	.333-.363	.037	AS3228-060	.318-.348	.086
.459-.479	.018	AS3228-011	.364-.394	.040	AS3228-061	.349-.379	.093
.490-.510	.019	AS3228-012	.395-.425	.043	AS3228-062	.380-.410	.099
.521-.541	.021	AS3228-013	.426-.456	.046	AS3228-063	.411-.441	.105
.552-.572	.022	AS3228-014	.457-.487	.048	AS3228-064	.442-.472	.110
.584-.604	.023	AS3228-015	.489-.519	.051	AS3228-065	.474-.504	.117
.615-.635	.024				AS3228-066	.505-.535	.123
.645-.665	.025				AS3228-067	.536-.566	.129
.678-.698	.026				AS3228-068	.568-.598	.136
.709-.729	.027				AS3228-069	.599-.629	.142
.740-.760	.028				AS3228-070	.630-.660	.148
.771-.791	.029				AS3228-071	.661-.691	.154
.802-.822	.030				AS3228-072	.692-.722	.160
.834-.854	.031				AS3228-073	.724-.754	.167
.865-.885	.032				AS3228-074	.755-.785	.173
.896-.916	.033				AS3228-075	.786-.816	.179
.928-.948	.034				AS3228-076	.818-.848	.185
.959-.979	.035				AS3228-077	.849-.879	.191
.990-1.010	.036				AS3228-078	.880-.910	.197
1.052-1.072	.037				AS3228-079	.912-.942	.203
1.115-1.135	.038				AS3228-080	1.005-1.035	.210
1.178-1.198	.039				AS3228-081	1.068-1.098	.217
1.240-1.260	.040				AS3228-082	1.130-1.160	.224
1.302-1.322	.041				AS3228-083	1.192-1.222	.231
1.365-1.385	.042				AS3228-084	1.255-1.285	.238
1.428-1.448	.043				AS3228-085	1.318-1.348	.245
1.490-1.510	.044				AS3228-086	1.380-1.410	.252

PREPARED BY SAE COMMITTEE E-25, ENGINE AND PROPELLER STANDARD UTILITY PARTS

Society of Automotive Engineers, Inc.

AEROSPACE STANDARD

RIVET - TUBULAR, COUNTERSUNK, AMS 7228

AS3228

SHEET 2 OF 4

Issued Revised

AS3228

SHEET 3 OF 4

A ¹ .125 (3.18)												A ¹ .156 (3.96)											
L		PART NO.		E		APPROX MASS		PART NO.		E		APPROX MASS											
IN.	(mm)			IN.	(mm)	LB/100	kg/100			IN.	(mm)	LB/100	kg/100										
.178-.198	4.53-5.02	AS3228-102	.043-.073	1.10-1.85	.066	.030		AS3228-154	.080-.110	2.04-2.79	.137	.062											
.209-.229	5.31-5.81	AS3228-103	.074-.104	1.88-2.64	.076	.035		AS3228-155	.111-.141	2.82-3.58	.153	.070											
.240-.260	6.10-6.60	AS3228-104	.105-.135	2.67-3.42	.087	.040		AS3228-156	.142-.172	3.61-4.36	.170												
.271-.291	6.89-7.39	AS3228-105	.136-.166	3.46-4.21	.098	.044		AS3228-157	.174-.204	4.42-5.18	.188	.085											
.302-.322	7.68-8.17	AS3228-106	.167-.197	4.25-5.00	.109	.049		AS3228-158	.205-.235	5.21-5.96	.205	.093											
.334-.354	8.49-8.99	AS3228-107	.199-.229	5.06-5.81	.120	.054		AS3228-159	.236-.266	6.00-6.75	.222	.101											
.365-.385	9.28-9.77	AS3228-108	.230-.260	5.85-6.60	.131	.059		AS3228-160	.268-.298	6.81-7.56	.239	.108											
.396-.416	10.06-10.56	AS3228-109	.261-.291	6.63-7.39	.142	.064		AS3228-161	.299-.329	7.60-8.35	.256	.116											
.428-.448	10.88-11.37	AS3228-110	.293-.323	7.45-8.20	.153	.069		AS3228-162	.330-.360	8.39-9.14	.273	.124											
.459-.479	11.66-12.16	AS3228-111	.324-.354	8.23-8.99	.164	.074		AS3228-163	.361-.391	9.17-9.93	.290	.131											
.490-.510	12.45-12.95	AS3228-112	.355-.385	9.02-9.77	.174	.079		AS3228-164	.392-.422	9.96-10.71	.307	.139											
.521-.541	13.24-13.74	AS3228-113	.386-.416	9.81-10.56	.185	.084		AS3228-165	.424-.454	10.77-11.53	.324	.147											
.552-.572	14.03-14.52	AS3228-114	.417-.447	10.60-11.35	.196	.089		AS3228-166	.455-.485	11.56-12.31	.341	.155											
.584-.604	14.84-15.34	AS3228-115	.449-.479	11.41-12.16	.207	.094		AS3228-167	.486-.516	12.35-13.10	.358	.162											
.615-.635	15.63-16.12	AS3228-116	.480-.510	12.20-12.95	.218	.099		AS3228-168	.518-.548	13.16-13.91	.376	.170											
.645-.665	16.39-16.89	AS3228-117	.511-.541	12.98-13.74	.229	.104		AS3228-169	.549-.579	13.95-14.70	.393	.178											
.678-.698	17.23-17.72	AS3228-118	.543-.573	13.29-14.04	.240	.109		AS3228-170	.580-.610	14.74-15.49	.410	.186											
.709-.729	18.01-18.51	AS3228-119	.574-.604	14.58-15.34	.251	.114		AS3228-171	.611-.641	15.52-16.28	.426	.193											
.740-.760	18.80-19.30	AS3228-120	.605-.635	15.37-16.12	.262	.119		AS3228-172	.642-.672	16.31-17.06	.443	.201											
.771-.791	19.59-20.09	AS3228-121	.636-.666	16.16-16.91	.272	.124		AS3228-173	.674-.704	17.12-17.88	.461	.209											
.802-.822	20.38-20.87	AS3228-122	.667-.697	16.95-17.70	.283	.128		AS3228-174	.705-.735	17.91-18.66	.478	.217											
.834-.854	21.19-21.69	AS3228-123	.699-.729	17.76-18.51	.294	.134		AS3228-175	.736-.766	18.70-19.45	.495	.224											
.865-.885	21.98-22.47	AS3228-124	.730-.760	18.55-19.30	.305	.138		AS3228-176	.768-.798	19.51-20.26	.512	.232											
.896-.916	22.76-23.26	AS3228-125	.761-.791	19.33-20.09	.316	.143		AS3228-177	.799-.829	20.30-21.05	.529	.240											
.928-.948	23.58-24.07	AS3228-126	.793-.823	20.15-20.90	.327	.148		AS3228-178	.830-.860	21.09-21.84	.546	.248											
.959-.979	24.36-24.86	AS3228-127	.824-.854	20.93-21.69	.338	.153		AS3228-179	.862-.892	22.66-23.41	.563	.253											
.990-1.010	25.15-25.65	AS3228-128	.855-.885	21.72-22.47	.349	.158		AS3228-180	.893-.923	24.26-25.01	.580	.259											
1.052-1.072	26.73-27.22	AS3228-129	.917-.947	23.30-24.05	.371	.168		AS3228-181	.924-.954	25.86-26.61	.614	.279											
1.115-1.135	28.33-28.82	AS3228-130	.980-1.010	24.90-25.65	.393	.178		AS3228-182	1.018-1.110	27.44-28.19	.647	.294											
1.178-1.198	29.93-30.42	AS3228-131	1.043-1.073	26.50-27.25	.415	.188		AS3228-183	1.142-1.172	29.01-29.76	.683	.310											
1.240-1.260	31.50-32.00	AS3228-132	1.105-1.135	28.07-28.82	.436	.198		AS3228-184	1.205-1.235	30.61-31.36	.716	.325											
1.302-1.322	33.08-33.57	AS3228-133	1.167-1.197	29.65-30.40	.458	.208		AS3228-185	1.268-1.298	32.21-32.96	.751	.340											
1.365-1.385	34.68-35.17	AS3228-134	1.230-1.260	31.25-32.00	.480	.218		AS3228-186	1.330-1.360	33.79-34.54	.785	.356											
1.428-1.448	36.28-36.77	AS3228-135	1.293-1.323	32.85-33.60	.502	.228		AS3228-187	1.392-1.422	35.36-36.11	.819	.371											
1.490-1.510	37.85-38.35	AS3228-136	1.355-1.385	34.42-35.17	.523	.237		AS3228-188	1.455-1.485	36.96-37.71	.850	.385											
1.552-1.572	39.43-39.92	AS3228-137	1.417-1.447	36.00-36.75	.545	.247		AS3228-189	1.518-1.548	38.56-39.31	.885	.402											
1.615-1.635	41.03-41.52	AS3228-138	1.480-1.510	37.60-38.35	.567	.257		AS3228-190	1.580-1.610	40.16-40.89	.922	.418											
1.678-1.698	42.63-43.12	AS3228-139	1.543-1.573	39.20-39.95	.589	.267		AS3228-191	1.642-1.672	41.71-42.46	.956	.434											
1.740-1.760	44.20-44.70	AS3228-140	1.605-1.635	40.77-41.52	.611	.277		AS3228-192	1.705-1.735	43.31-44.06	.989	.449											
1.802-1.822	45.78-46.27							AS3228-193	1.768-1.798	44.91-45.66	1.039	.464											
1.865-1.885	47.38-47.87							AS3228-194	1.830-1.860	46.49-47.24	1.058	.480											
1.928-1.948	48.98-49.47										1.092	.495											
1.990-2.010	50.55-51.05																						

PREPARED BY SAE COMMITTEE E-25, ENGINE AND PROPELLER STANDARD UTILITY PARTS

Society of Automotive Engineers, Inc.

AEROSPACE STANDARD

RIVET - TUBULAR; COUNTERSUNK, AMS 7228

AS3228

SHEET 3 OF 4

PREPARED BY SAE COMMITTEE E-25, ENGINE AND PROPELLER STANDARD UTILITY PARTS

Society of Automotive Engineers, Inc.

AEROSPACE STANDARD
RIVET - TUBULAR; COUNTERSUNK, AMS 7228

AS3228

SHEET 3 OF 4

Issued Revised