

REV. A

AS9686

FEDERAL SUPPLY CLASS  
5306

RATIONALE

THIS DOCUMENT HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE 5-YEAR REVIEW POLICY.

THE INITIAL SAE PUBLICATION OF THIS DOCUMENT WAS TAKEN DIRECTLY FROM U.S. MILITARY STANDARD MS9686, NOTICE 1. THIS SAE STANDARD RETAINS THE SAME PART NUMBERS ESTABLISHED BY THE ORIGINAL MILITARY DOCUMENT.

ANY REQUIREMENTS ASSOCIATED WITH QUALIFIED PRODUCTS LISTS (QPL) MAY CONTINUE TO BE MANDATORY FOR DOD CONTRACTS. REQUIREMENTS RELATING TO QPL'S HAVE NOT BEEN ADOPTED BY THE SAE FOR THIS STANDARD AND ARE NOT PART OF THIS SAE DOCUMENT.

WARNING

THIS DOCUMENT INCLUDES CADMIUM AS A PLATING MATERIAL. THE USE OF CADMIUM HAS BEEN RESTRICTED AND/OR BANNED FOR USE IN MANY COUNTRIES DUE TO ENVIRONMENTAL AND HEALTH CONCERNS. THE USER SHOULD CONSULT WITH LOCAL OFFICIALS ON THE ENVIRONMENTAL AND HEALTH REGULATIONS REGARDING ITS USE.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

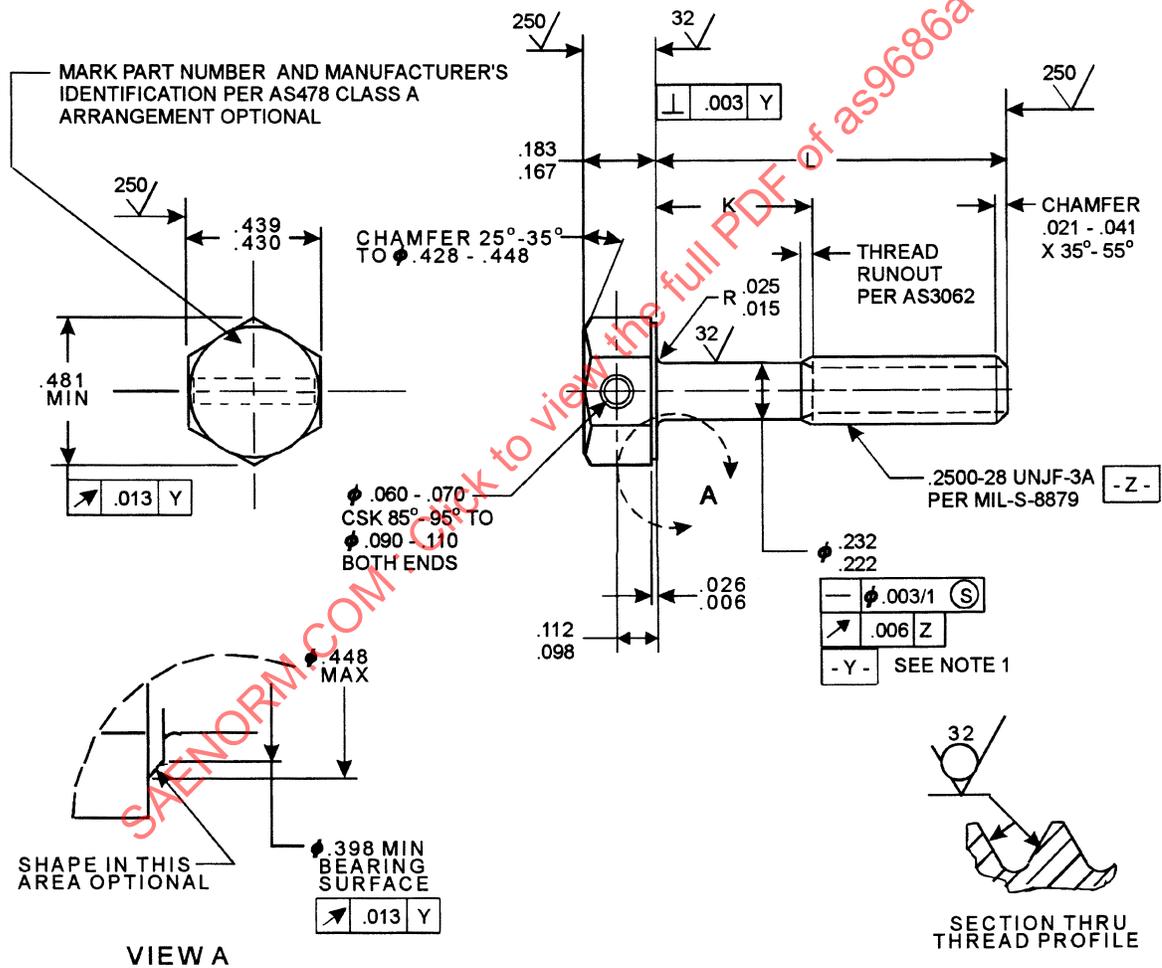


FIGURE 1 - BOLT

PREPARED BY SAE COMMITTEE E-25, GENERAL STANDARDS FOR AEROSPACE & PROPULSION SYSTEMS

**SAE** The Engineering Society  
For Advancing Mobility  
Land Sea Air and Space  
**INTERNATIONAL**  
400 Commonwealth Drive, Warrendale, PA 15096-0001

**AEROSPACE STANDARD**

(R) BOLT, MACHINE - HEXAGON HEAD, DRILLED, 1 HOLE, PD SHANK, STEEL, UNS K14675, DIFFUSED NICKEL-CADMIUM PLATE, 195 KSI MIN, .2500-28 UNJF-3A

**AS9686**  
SHEET 1 OF 3

**REV. A**

Copyright 2007 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)  
Fax: 724-776-0790

Tel: 724-776-4970 (outside USA)  
Email: CustomerService@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

ISSUED 1998-11 REVISED 2003-06 REAFFIRMED 2007-06

REV.  
A

AS9686

TABLE 1 - PART NUMBERS AND DIMENSIONS

PART NO.	L	K	APPROX. MASS LB/100	PART NO.	L	K	APPROX. MASS LB/100
MS9686-04	.365 - .385	.079 - .099	1.29	MS9686-34	2.490 - 2.510	1.690 - 1.750	3.71
MS9686-05	.428 - .448	.079 - .099	1.36	MS9686-35	2.615 - 2.635	1.815 - 1.875	3.85
MS9686-06	.490 - .510	.079 - .099	1.43	MS9686-36	2.740 - 2.760	1.940 - 2.000	3.99
MS9686-07	.552 - .572	.079 - .099	1.50	MS9686-37	2.865 - 2.885	2.065 - 2.125	4.13
MS9686-08	.615 - .635	.079 - .099	1.57	MS9686-38	2.990 - 3.010	2.190 - 2.250	4.27
MS9686-09	.678 - .698	.079 - .099	1.64	MS9686-39	3.115 - 3.135	2.315 - 2.375	4.42
MS9686-10	.740 - .760	.079 - .099	1.71	MS9686-40	3.240 - 3.260	2.440 - 2.500	4.56
MS9686-11	.802 - .822	.079 - .099	1.79	MS9686-41	3.365 - 3.385	2.565 - 2.625	4.71
MS9686-12	.865 - .885	.079 - .125	1.86	MS9686-42	3.490 - 3.510	2.690 - 2.750	4.85
MS9686-13	.928 - .948	.128 - .188	1.93	MS9686-43	3.615 - 3.635	2.815 - 2.875	4.99
MS9686-14	.990 - 1.010	.190 - .250	2.00	MS9686-44	3.740 - 3.760	2.940 - 3.000	5.14
MS9686-15	1.052 - 1.072	.252 - .312	2.07	MS9686-45	3.865 - 3.885	3.065 - 3.125	5.28
MS9686-16	1.115 - 1.135	.315 - .375	2.14	MS9686-46	3.990 - 4.010	3.190 - 3.250	5.42
MS9686-17	1.178 - 1.198	.378 - .438	2.22	MS9686-47	4.115 - 4.135	3.315 - 3.375	5.57
MS9686-18	1.240 - 1.260	.440 - .500	2.29	MS9686-48	4.240 - 4.260	3.440 - 3.500	5.71
MS9686-19	1.302 - 1.322	.502 - .562	2.36	MS9686-49	4.365 - 4.385	3.565 - 3.625	5.85
MS9686-20	1.365 - 1.385	.565 - .625	2.43	MS9686-50	4.490 - 4.510	3.690 - 3.750	6.00
MS9686-21	1.428 - 1.448	.628 - .688	2.50	MS9686-51	4.615 - 4.635	3.815 - 3.875	6.14
MS9686-22	1.490 - 1.510	.690 - .750	2.57	MS9686-52	4.740 - 4.760	3.940 - 4.000	6.28
MS9686-23	1.552 - 1.572	.752 - .812	2.65	MS9686-53	4.865 - 4.885	4.065 - 4.125	6.42
MS9686-24	1.615 - 1.635	.815 - .875	2.72	MS9686-54	4.990 - 5.010	4.190 - 4.250	6.56
MS9686-25	1.678 - 1.698	.878 - .938	2.79	MS9686-55	5.115 - 5.135	4.315 - 4.375	6.70
MS9686-26	1.740 - 1.760	.940 - 1.000	2.86	MS9686-56	5.240 - 5.260	4.440 - 4.500	6.85
MS9686-27	1.802 - 1.822	1.002 - 1.062	2.93	MS9686-57	5.365 - 5.385	4.565 - 4.625	6.99
MS9686-28	1.865 - 1.885	1.065 - 1.125	3.00	MS9686-58	5.490 - 5.510	4.690 - 4.750	7.13
MS9686-29	1.928 - 1.948	1.128 - 1.188	3.08	MS9686-59	5.615 - 5.635	4.815 - 4.875	7.29
MS9686-30	1.990 - 2.010	1.190 - 1.250	3.15	MS9686-60	5.740 - 5.760	4.940 - 5.000	7.42
MS9686-31	2.115 - 2.135	1.315 - 1.375	3.29	MS9686-61	5.865 - 5.885	5.065 - 5.125	7.56
MS9686-32	2.240 - 2.260	1.440 - 1.500	3.43	MS9686-62	5.990 - 6.010	5.190 - 5.250	7.71
MS9686-33	2.365 - 2.385	1.565 - 1.625	3.57				

**AEROSPACE STANDARD**

(R) BOLT, MACHINE - HEXAGON HEAD, DRILLED, 1 HOLE,  
PD SHANK, STEEL, UNS K14675, DIFFUSED NICKEL-  
CADMIUM PLATE, 195 KSI MIN, .2500-28 UNJF-3A

**AS9686**  
SHEET 2 OF 3

**REV.**  
**A**