

MS 9219 (ASG)	MARK MS9219 AND MANUFACTURER'S IDENTIFICATION PER AS 478 CLASS A		FED SUP CLASS 5306																																																																																																																																																																																																																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PART NO.</th> <th>L</th> <th>K</th> <th>APPROX WEIGHT LB/100</th> <th>PART NO.</th> <th>L</th> <th>K</th> <th>APPROX WEIGHT LB/100</th> <th>PART NO.</th> <th>L</th> <th>K</th> <th>APPROX WEIGHT LB/100</th> </tr> </thead> <tbody> <tr><td>MS9219-04</td><td>500</td><td>.088-.108</td><td>2.06</td><td>MS9219-22</td><td>1.625</td><td>.890-.750</td><td>4.10</td><td>MS9219-40</td><td>3.750</td><td>2.815-2.875</td><td>7.95</td></tr> <tr><td>MS9219-05</td><td>.562</td><td>.088-.108</td><td>2.17</td><td>MS9219-23</td><td>1.888</td><td>.752-.812</td><td>4.22</td><td>MS9219-41</td><td>3.875</td><td>2.940-3.000</td><td>8.17</td></tr> <tr><td>MS9219-06</td><td>.625</td><td>.088-.108</td><td>2.28</td><td>MS9219-24</td><td>1.750</td><td>.815-.875</td><td>4.33</td><td>MS9219-42</td><td>4.000</td><td>3.065-3.125</td><td>8.40</td></tr> <tr><td>MS9219-07</td><td>.688</td><td>.088-.108</td><td>2.39</td><td>MS9219-25</td><td>1.875</td><td>.940-1.000</td><td>4.55</td><td>MS9219-43</td><td>4.125</td><td>3.190-3.250</td><td>8.63</td></tr> <tr><td>MS9219-08</td><td>.750</td><td>.088-.108</td><td>2.51</td><td>MS9219-26</td><td>2.000</td><td>1.065-1.125</td><td>4.77</td><td>MS9219-44</td><td>4.250</td><td>3.315-3.375</td><td>8.86</td></tr> <tr><td>MS9219-09</td><td>.812</td><td>.088-.108</td><td>2.62</td><td>MS9219-27</td><td>2.125</td><td>1.190-1.250</td><td>5.00</td><td>MS9219-45</td><td>4.375</td><td>3.440-3.500</td><td>9.08</td></tr> <tr><td>MS9219-10</td><td>.875</td><td>.088-.108</td><td>2.73</td><td>MS9219-28</td><td>2.250</td><td>1.315-1.375</td><td>5.23</td><td>MS9219-46</td><td>4.500</td><td>3.565-3.625</td><td>9.30</td></tr> <tr><td>MS9219-11</td><td>.938</td><td>.088-.108</td><td>2.85</td><td>MS9219-29</td><td>2.375</td><td>1.440-1.500</td><td>5.45</td><td>MS9219-47</td><td>4.625</td><td>3.690-3.750</td><td>9.52</td></tr> <tr><td>MS9219-12</td><td>1.000</td><td>.125-.145</td><td>2.96</td><td>MS9219-30</td><td>2.500</td><td>1.565-1.625</td><td>5.67</td><td>MS9219-48</td><td>4.750</td><td>3.815-3.875</td><td>9.74</td></tr> <tr><td>MS9219-13</td><td>1.062</td><td>.128-.188</td><td>3.07</td><td>MS9219-31</td><td>2.625</td><td>1.690-1.750</td><td>5.90</td><td>MS9219-49</td><td>4.875</td><td>3.940-4.000</td><td>9.95</td></tr> <tr><td>MS9219-14</td><td>1.125</td><td>.190-.250</td><td>3.19</td><td>MS9219-32</td><td>2.750</td><td>1.815-1.875</td><td>6.13</td><td>MS9219-50</td><td>5.000</td><td>4.065-4.125</td><td>10.17</td></tr> <tr><td>MS9219-15</td><td>1.188</td><td>.252-.312</td><td>3.30</td><td>MS9219-33</td><td>2.875</td><td>1.940-2.000</td><td>6.36</td><td>MS9219-51</td><td>5.125</td><td>4.190-4.250</td><td>10.40</td></tr> <tr><td>MS9219-16</td><td>1.250</td><td>.315-.375</td><td>3.41</td><td>MS9219-34</td><td>3.000</td><td>2.065-2.125</td><td>6.58</td><td>MS9219-52</td><td>5.250</td><td>4.315-4.375</td><td>10.63</td></tr> <tr><td>MS9219-17</td><td>1.312</td><td>.378-.438</td><td>3.52</td><td>MS9219-35</td><td>3.125</td><td>2.190-2.250</td><td>6.80</td><td>MS9219-53</td><td>5.375</td><td>4.440-4.500</td><td>10.86</td></tr> <tr><td>MS9219-18</td><td>1.375</td><td>.440-.500</td><td>3.64</td><td>MS9219-36</td><td>3.250</td><td>2.315-2.375</td><td>7.03</td><td>MS9219-54</td><td>5.500</td><td>4.565-4.625</td><td>11.10</td></tr> <tr><td>MS9219-19</td><td>1.438</td><td>.502-.562</td><td>3.75</td><td>MS9219-37</td><td>3.375</td><td>2.440-2.500</td><td>7.27</td><td>MS9219-55</td><td>5.625</td><td>4.690-4.750</td><td>11.33</td></tr> <tr><td>MS9219-20</td><td>1.500</td><td>.565-.625</td><td>3.87</td><td>MS9219-38</td><td>3.500</td><td>2.565-2.625</td><td>7.50</td><td>MS9219-56</td><td>5.750</td><td>4.815-4.875</td><td>11.56</td></tr> <tr><td>MS9219-21</td><td>1.562</td><td>.628-.688</td><td>3.98</td><td>MS9219-39</td><td>3.625</td><td>2.690-2.750</td><td>7.73</td><td>MS9219-57</td><td>5.875</td><td>4.940-5.000</td><td>11.78</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>MS9219-58</td><td>6.000</td><td>5.065-5.125</td><td>12.00</td></tr> </tbody> </table>				PART NO.	L	K	APPROX WEIGHT LB/100	PART NO.	L	K	APPROX WEIGHT LB/100	PART NO.	L	K	APPROX WEIGHT LB/100	MS9219-04	500	.088-.108	2.06	MS9219-22	1.625	.890-.750	4.10	MS9219-40	3.750	2.815-2.875	7.95	MS9219-05	.562	.088-.108	2.17	MS9219-23	1.888	.752-.812	4.22	MS9219-41	3.875	2.940-3.000	8.17	MS9219-06	.625	.088-.108	2.28	MS9219-24	1.750	.815-.875	4.33	MS9219-42	4.000	3.065-3.125	8.40	MS9219-07	.688	.088-.108	2.39	MS9219-25	1.875	.940-1.000	4.55	MS9219-43	4.125	3.190-3.250	8.63	MS9219-08	.750	.088-.108	2.51	MS9219-26	2.000	1.065-1.125	4.77	MS9219-44	4.250	3.315-3.375	8.86	MS9219-09	.812	.088-.108	2.62	MS9219-27	2.125	1.190-1.250	5.00	MS9219-45	4.375	3.440-3.500	9.08	MS9219-10	.875	.088-.108	2.73	MS9219-28	2.250	1.315-1.375	5.23	MS9219-46	4.500	3.565-3.625	9.30	MS9219-11	.938	.088-.108	2.85	MS9219-29	2.375	1.440-1.500	5.45	MS9219-47	4.625	3.690-3.750	9.52	MS9219-12	1.000	.125-.145	2.96	MS9219-30	2.500	1.565-1.625	5.67	MS9219-48	4.750	3.815-3.875	9.74	MS9219-13	1.062	.128-.188	3.07	MS9219-31	2.625	1.690-1.750	5.90	MS9219-49	4.875	3.940-4.000	9.95	MS9219-14	1.125	.190-.250	3.19	MS9219-32	2.750	1.815-1.875	6.13	MS9219-50	5.000	4.065-4.125	10.17	MS9219-15	1.188	.252-.312	3.30	MS9219-33	2.875	1.940-2.000	6.36	MS9219-51	5.125	4.190-4.250	10.40	MS9219-16	1.250	.315-.375	3.41	MS9219-34	3.000	2.065-2.125	6.58	MS9219-52	5.250	4.315-4.375	10.63	MS9219-17	1.312	.378-.438	3.52	MS9219-35	3.125	2.190-2.250	6.80	MS9219-53	5.375	4.440-4.500	10.86	MS9219-18	1.375	.440-.500	3.64	MS9219-36	3.250	2.315-2.375	7.03	MS9219-54	5.500	4.565-4.625	11.10	MS9219-19	1.438	.502-.562	3.75	MS9219-37	3.375	2.440-2.500	7.27	MS9219-55	5.625	4.690-4.750	11.33	MS9219-20	1.500	.565-.625	3.87	MS9219-38	3.500	2.565-2.625	7.50	MS9219-56	5.750	4.815-4.875	11.56	MS9219-21	1.562	.628-.688	3.98	MS9219-39	3.625	2.690-2.750	7.73	MS9219-57	5.875	4.940-5.000	11.78									MS9219-58	6.000	5.065-5.125	12.00
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<ol style="list-style-type: none"> 1. SHANK SHALL BE STRAIGHT WITHIN .003 FIR. PER INCH OF BOLT LENGTH 2. THE CONCENTRICITY OF THREAD PD IN RELATION TO THE SHANK SHALL BE WITHIN .006 FIR. 3. THE CONCENTRICITY OF THE SHANK IN RELATION TO THE WASHER FACE DIAMETER AND DOUBLE HEXAGON OD SHALL BE WITHIN .015 FIR. 4. INCOMPLETE THREADS NOT TO ENTER FILLET. 5. MATERIAL: STEEL AMS 6304. 6. HARDNESS: ROCKWELL C42-46. 7. FINISH: DIFFUSED NICKEL-CADMIUM PLATE AMS 2416. DIMENSIONS SPECIFIED ARE AFTER PLATING CONTACT POINTS PERMISSIBLE. PD MAY BE REDUCED .0012 MAXIMUM BEFORE PLATING. 8. MANUFACTURING SPECIFICATION: AMS 7459. PARTS SUBJECT TO MAGNETIC PARTICLE INSPECTION PER AMS 2640 BEFORE PLATING. 9. SURFACE ROUGHNESS: AS 291 UNLESS OTHERWISE SPECIFIED SURFACES TO BE 125 MICROINCHES EXCEPT UPSET HEAD. 10. BREAK SHARP EDGES .003-.015 UNLESS OTHERWISE SPECIFIED. 11. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: LINEAR DIMENSIONS $\pm .010$, ANGULAR DIMENSIONS $\pm 5^\circ$. 12. DO NOT USE UNASSIGNED PART NUMBERS. 																																																																																																																																																																																																																																																			
AS & AMS ARE SOCIETY OF AUTOMOTIVE ENGINEERS, INC. PUBLICATIONS THIS STANDARD WAS DEVELOPED COOPERATIVELY WITH THE ENGINE AND PROPELLER UTILITY PARTS COMMITTEE OF THE SAE.																																																																																																																																																																																																																																																			
P.A. USAF - ASD Other Cust Navy - Weps		TITLE BOLT, MACHINE - STEEL AMS 6304, DIFFUSED NICKEL-CADMIUM PLATE, DOUBLE HEXAGON EXTENDED WASHER HEAD, 3125-24 UNJF-3A						MILITARY STANDARD MS9219 (ASG)																																																																																																																																																																																																																																											
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This standard has been approved by the ASD (Department of the Air Force) and the Department of the Navy and is mandatory for use by that activity. All other military activities are required to employ this standard where suitable.

 Reviewers and Users
 USAF - ASD
 Navy - Weps

 REVISED
 APPROVED 10 Dec 63