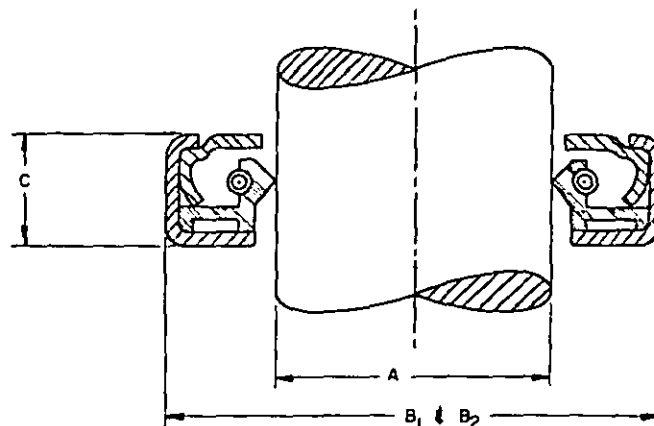


FED. SUP CLASS
5330

REQUIREMENTS:

1. THE ABOVE DESIGN IS FOR REFERENCE ONLY. OTHER DESIGNS WHICH MEET THE FUNCTIONAL REQUIREMENTS OF THIS TYPE SEAL ARE ACCEPTABLE.
2. SEALING MEMBERS SHALL CONFORM TO ONE OF THE FOLLOWING CLASSES.
 CLASS 1: POLYMER-IMPREGNATED LEATHER OR CHROME RETAINED LEATHER IN ACCORDANCE WITH KK-L-164, TANNAGE III. LEATHER SEALING MEMBERS SHALL BE MOLD-PROOFED IN ACCORDANCE WITH O-L-166 (FOR NORMAL OPERATING TEMPERATURE).
 CLASS 2: OIL RESISTANT SYNTHETIC ELASTOMER (FOR NORMAL OPERATING TEMPERATURE).
 CLASS 3: OIL RESISTANT ELASTOMER IN ACCORDANCE WITH HIGH AND LOW TEMPERATURE TESTS OF MIL-S-45005 (FOR EXTREME OPERATING TEMPERATURE).
3. MARKING SHALL CONSIST OF THE MS NUMBER AND MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.
4. THE PART NUMBER CONSISTS OF THE MS NUMBER AND 2 DASH NUMBERS.
 FIRST DASH NUMBER INDICATES THE SIZE.
 SECOND DASH NUMBER INDICATES THE CLASS.
 EXAMPLE: MS51000-103 INDICATES SIZE NUMBER 103 WITH CLASS 3 SEALING MEMBER.
5. DIMENSIONS ARE IN INCHES. TOLERANCES ARE $\pm .002$ FOR SEAL O.D. UP TO AND INCLUDING 2.000 INCHES, $+.003$, $-.002$ FOR SEAL O.D. OVER 2.000 INCHES AND UP TO AND INCLUDING 3.000 INCHES, AND $+.004$, $-.002$ FOR SEAL O.D. UP TO 7.000 INCHES. OVER 7 INCHES AND UP TO 12.000 INCHES, $+.005$, $-.002$.
6. MAXIMUM HOUSING FILLET RADIUS .030 FOR SEALS UP TO AND INCLUDING 1-5/8 INCH O.D. AND .040 FOR SEALS OVER 1-5/8 INCH O.D.
7. WIDTH TOLERANCE FOR SEALS SHALL BE $\pm .015$, FOR WIDTHS UP TO .400 $\pm .020$ FOR WIDTHS OVER .400.

NOTES:

1. THIS STANDARD IS NOT INTENDED TO LIMIT CONSTRUCTION TO FEATURES OTHER THAN AS SHOWN HEREIN BY DIMENSIONS, NOTATIONS OR REFERENCED DOCUMENTS.
2. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
3. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS.
4. THE USE OF RECYCLED MATERIALS WHICH MEET THE REQUIREMENTS OF THE APPLICABLE MATERIAL SPECIFICATION WITHOUT JEOPARDIZING THE INTENDED USE OF THE ITEM SHALL BE ENCOURAGED.

(F) ENTIRE STANDARD REVISED

P. A. ARMY-AT Other Cost	INTERNATIONAL INTEREST	TITLE SEAL, PLAIN ENCASED: SINGLE SEALING MEMBER, SPRING LOADED	MILITARY STANDARD
PROCUREMENT SPECIFICATION MIL-S-45005	SUPERSEDES: CLHX1, CLHX2, CLHX3, CLHX4 (IN PART)		MS51000
		SHEET 1	OF 4

USER ACTIVITIES ARMY-NE

REVIEWER ACTIVITIES ARMY-AV, NI, AR; OLA-15

This military standard is approved for use by the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense. AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

APPROVED 14 NOVEMBER 1957 REVISED (F) 27 OCT 86

FED. SUP CLASS
5330

USER ACTIVITIES ARMY-HE

REVIEWER ACTIVITIES ARMY-AV, MI, AR; DLA-15

This military standard is approved for use by the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense. AMSC N/A

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FIRST DASH NO. (SIZE)	A SHAFT DIA. (NOM)	B1 SEAL O.D. (5)	B2 HOUSING BORE (REF)	C WIDTH (7)
101	5/16	1.003	.999	3/8
102	3/8	1.003	.999	3/8
103	7/16	1.003	.999	3/8
104	1/2	1.254	1.250	3/8
105	9/16	1.254	1.250	3/8
106	5/8	1.379	1.375	13/32
107	11/16	1.379	1.375	13/32
108	3/4	1.379	1.375	13/32
109	13/16	1.379	1.375	13/32
110	7/8	1.379	1.375	13/32
111	15/16	1.629	1.625	7/16
112	1	1.629	1.625	7/16
113	1-1/16	1.832	1.828	7/16
114	1-1/8	1.832	1.828	7/16
115	1-3/16	1.988	1.984	7/16
116	1-1/4	2.004	2.000	7/16
117	1-5/16	2.066	2.062	7/16
118	1-3/8	2.066	2.062	7/16
119	1-7/16	2.378	2.374	1/2
120	1-1/2	2.378	2.374	1/2
121	1-9/16	2.506	2.502	1/2
122	1-5/8	2.506	2.502	1/2
123	1-11/16	2.754	2.750	1/2
124	1-3/4	2.754	2.750	1/2
125	1-13/16	2.754	2.750	1/2
126	1-7/8	3.004	3.000	1/2
127	1-15/16	3.004	3.000	1/2
128	2	3.004	3.000	1/2
129	2-1/16	3.004	3.000	1/2
130	2-1/8	2.879	2.875	7/16
131	2-1/8	2.879	2.875	15/32
132	2-1/8	3.004	3.000	1/2
133	2-3/16	3.255	3.250	1/2
134	2-1/4	3.255	3.250	1/2
135	2-5/16	3.255	3.250	1/2
136	2-3/8	3.255	3.250	1/2
137	2-7/16	3.255	3.250	1/2
138	2-1/2	3.505	3.500	1/2
139	2-9/16	3.755	3.750	1/2
140	2-5/8	3.755	3.750	1/2
141	2-11/16	3.755	3.750	1/2
142	2-3/4	3.755	3.750	1/2
143	2-13/16	3.755	3.750	1/2
144	2-7/8	3.755	3.750	1/2
145	2-15/16	3.755	3.750	1/2

FIRST DASH NO. (SIZE)	A SHAFT DIA. (NOM.)	B1 SEAL O.D. (5)	B2 HOUSING BORE (REF)	C WIDTH (7)
146	3	3.881	3.876	1/2
147	3-1/16	4.130	4.125	9/16
148	3-1/8	4.130	4.125	9/16
149	3-3/16	4.255	4.250	5/8
150	3-1/4	4.380	4.375	5/8
151	3-5/16	4.380	4.375	5/8
152	3-3/8	4.380	4.375	5/8
153	3-7/16	4.380	4.375	5/8
154	3-1/2	4.630	4.625	5/8
155	3-9/16	4.630	4.625	5/8
156	3-5/8	4.756	4.751	5/8
157	3-11/16	4.756	4.751	5/8
158	3-3/4	4.756	4.751	5/8
159	3-13/16	4.756	4.751	5/8
160	3-7/8	4.881	4.876	5/8
161	3-15/16	4.881	4.876	5/8
162	4	5.130	5.125	5/8
163	4-1/16	5.255	5.250	5/8
164	4-1/8	5.255	5.250	5/8
165	4-3/16	5.255	5.250	5/8
166	4-1/4	5.255	5.250	5/8
167	4-5/16	5.506	5.501	5/8
168	4-3/8	5.506	5.501	5/8
169	4-7/16	5.506	5.501	5/8
170	4-1/2	6.005	6.000	5/8
171	4-9/16	6.005	6.000	5/8
172	4-5/8	6.005	6.000	5/8
173	4-11/16	6.005	6.000	5/8
174	4-3/4	6.005	6.000	5/8
175	4-13/16	6.005	6.000	5/8
176	4-7/8	6.005	6.000	5/8
177	4-15/16	6.005	6.000	5/8
178	5	6.256	6.250	5/8
179	5-1/8	6.381	6.375	5/8
180	5-1/4	6.506	6.500	5/8
181	5-3/8	6.631	6.625	5/8
182	5-1/2	6.756	6.750	5/8
183	5-5/8	6.881	6.875	5/8
184	5-3/4	7.006	7.000	5/8
185	5-7/8	7.131	7.125	5/8
186	6	7.506	7.500	3/4
187	6-1/4	7.756	7.750	3/4
188	6-1/2	8.006	8.000	3/4
189	6-3/4	8.257	8.250	3/4
190	7	8.507	8.500	3/4

(F) ENTIRE STANDARD REVISED

APPROVED 14 NOVEMBER 1957 REVISED (F) 27 OCT 86

P. A. ARMY-AT Other Cost	INTERNATIONAL INTEREST	TITLE SEAL, PLAIN ENCASED: SINGLE SEALING MEMBER, SPRING LOADED	MILITARY STANDARD
PROCUREMENT SPECIFICATION MIL-S-45005		SUPERSEDES: CLHX1, CLHX2, CLHX3, CLHX4 (IN PART)	MS51000
DD FORM 672-1 FULLY COORDINATED		SHEET 2 OF 4	

USER ACTIVITIES: ARMY-HE

REVIEWER ACTIVITIES: ARMY-AV, MI, AR; DLA-15

This military standard is approved for use by the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense. ANSC N/A

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

INTERCHANGEABILITY TABLE

THE FOLLOWING MS DASH NUMBERS ARE CANCELLED AFTER 12 JUNE 1968.
THE CANCELLED SEALS SHOULD BE USED FOR MAINTENANCE PURPOSES UNTIL EXISTING STOCK IS EXHAUSTED. USE ONLY THE SUPERSEDING SEAL DASH NUMBERS FOR NEW DESIGN AND PROCUREMENT.

CLASS 2

CANCELLED PART NUMBER-CLASS-SIZE	SUPERSEDING PART NUMBER-SIZE-CLASS
MS51000 - 2 - 1	MS51000 - 101 - 2
- 2 - 2	- 102 - 2
- 2 - 3	- 103 - 2
- 2 - 4	- 104 - 2
- 2 - 5	- 105 - 2
- 2 - 6	- 106 - 2
- 2 - 7	- 107 - 2
- 2 - 8	- 108 - 2
- 2 - 9	- 109 - 2
- 2 - 10	- 110 - 2
- 2 - 11	- 111 - 2
- 2 - 12	- 112 - 2
- 2 - 13	- 113 - 2
- 2 - 14	- 114 - 2
- 2 - 15	- 115 - 2
- 2 - 16	- 116 - 2
- 2 - 17	- 117 - 2
- 2 - 18	- 118 - 2
- 2 - 19	- 119 - 2
- 2 - 20	- 120 - 2
- 2 - 21	- 121 - 2
- 2 - 22	- 122 - 2
- 2 - 23	- 123 - 2
- 2 - 24	- 124 - 2
- 2 - 25	- 125 - 2
- 2 - 26	- 126 - 2
- 2 - 27	- 127 - 2
- 2 - 28	- 128 - 2
- 2 - 29	- 129 - 2
- 2 - 30	- 130 - 2
- 2 - 31	- 131 - 2
- 2 - 32	- 132 - 2
- 2 - 33	- 133 - 2
- 2 - 34	- 134 - 2
- 2 - 35	- 135 - 2
- 2 - 36	- 136 - 2
- 2 - 37	- 137 - 2
- 2 - 38	- 138 - 2
- 2 - 39	- 139 - 2
- 2 - 40	- 140 - 2
- 2 - 41	- 141 - 2
- 2 - 42	- 142 - 2
- 2 - 43	- 143 - 2
- 2 - 44	- 144 - 2
- 2 - 45	- 145 - 2

CLASS 1

CANCELLED PART NUMBER-CLASS-SIZE	SUPERSEDING PART NUMBER-SIZE-CLASS
MS51000 - 1 - 46	MS51000 - 148 - 1
- 1 - 47	- 149 - 1
- 1 - 48	- 150 - 1
- 1 - 49	- 151 - 1
- 1 - 50	- 152 - 1
- 1 - 51	- 153 - 1
- 1 - 52	- 154 - 1
- 1 - 53	- 155 - 1
- 1 - 54	- 156 - 1
- 1 - 55	- 157 - 1
- 1 - 56	- 158 - 1
- 1 - 57	- 159 - 1
- 1 - 58	- 160 - 1
- 1 - 59	- 161 - 1
- 1 - 60	- 162 - 1
- 1 - 61	- 163 - 1
- 1 - 62	- 164 - 1
- 1 - 63	- 165 - 1
- 1 - 64	- 166 - 1
- 1 - 65	- 167 - 1
- 1 - 66	- 168 - 1
- 1 - 67	- 169 - 1
- 1 - 68	- 170 - 1
- 1 - 69	- 171 - 1
- 1 - 70	- 172 - 1
- 1 - 71	- 173 - 1
- 1 - 72	- 174 - 1
- 1 - 73	- 175 - 1
- 1 - 74	- 176 - 1
- 1 - 75	- 177 - 1
- 1 - 76	- 178 - 1
- 1 - 77	- 179 - 1
- 1 - 78	- 180 - 1
- 1 - 79	- 181 - 1
- 1 - 80	- 182 - 1
- 1 - 81	- 183 - 1
- 1 - 82	- 184 - 1
- 1 - 83	- 185 - 1
- 1 - 84	- 186 - 1
- 1 - 85	- 187 - 1
- 1 - 86	- 188 - 1
- 1 - 87	- 189 - 1
- 1 - 88	- 190 - 1
- 1 - 89	- 191 - 1
- 1 - 90	- 192 - 1
- 1 - 91	- 193 - 1
- 1 - 92	- 194 - 1

(F) ENTIRE STANDARD REVISED

P. A. ARMY-AT Other Cost	INTERNATIONAL INTEREST	TITLE SEAL, PLAIN ENCASED: SINGLE SEALING MEMBER, SPRING LOADED	MILITARY STANDARD MS51000	
PROCUREMENT SPECIFICATION MIL-S-45005	SUPERSEDES: CLHX1, CLHX2, CLHX3, CLHX4 (IN PART)	SHEET 3 OF 4		

DD FORM 1 MAY 72 672-1 FULLY COORDINATED

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

5330-0661

APPROVED 14 NOVEMBER 1957 REVISED (F) 27 OCT 86

FED. SUP CLASS
5330

USER ACTIVITIES: ARMY-ME

REVIEWER ACTIVITIES: ARMY-AV, MI, AR, DLA-IS

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DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

P. A. ARMY-AT
Other CostINTERNATIONAL
INTEREST

TITLE

SEAL, PLAIN ENCASED: SINGLE
SEALING MEMBER, SPRING LOADED

MILITARY STANDARD

MS51000

PROCUREMENT SPECIFICATION
MIL-S-45005

SUPERSEDES:

CLHX1, CLHX2, CLHX3, CLHX4 (IN PART)

SHEET 4

OF 4

DD FORM 672-1 FULLY COORDINATED

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

5330-0661

INTERCHANGEABILITY TABLE

THE FOLLOWING MS DASH NUMBERS ARE CANCELLED AFTER 12 JUNE 196

THE CANCELLED SEALS SHOULD BE USED FOR MAINTENANCE PURPOSES UNTIL EXISTING STOCK IS EXHAUSTED. USE ONLY THE SUPERSEDING SEAL DASH NUMBERS FOR NEW DESIGN AND PROCUREMENT.

CLASS 2

CANCELLED PART NUMBER-CLASS-SIZE	SUPERSEDING PART NUMBER-SIZE-CLASS
MS51000 - 2 - 46	MS51000 - 148 - 2
2 - 47	149 - 2
2 - 48	150 - 2
2 - 49	151 - 2
2 - 50	152 - 2
2 - 51	153 - 2
2 - 52	154 - 2
2 - 53	155 - 2
2 - 54	156 - 2
2 - 55	157 - 2
2 - 56	158 - 2
2 - 57	159 - 2
2 - 58	160 - 2
2 - 59	161 - 2
2 - 60	162 - 2
2 - 61	163 - 2
2 - 62	164 - 2
2 - 63	165 - 2
2 - 64	166 - 2
2 - 65	167 - 2
2 - 66	168 - 2
2 - 67	169 - 2
2 - 68	170 - 2
2 - 69	171 - 2
2 - 70	172 - 2
2 - 71	173 - 2
2 - 72	174 - 2
2 - 73	175 - 2
2 - 74	176 - 2
2 - 75	177 - 2
2 - 76	178 - 2
2 - 77	179 - 2
2 - 78	180 - 2
2 - 79	181 - 2
2 - 80	182 - 2
2 - 81	183 - 2
2 - 82	184 - 2
2 - 83	185 - 2
2 - 84	186 - 2
2 - 85	187 - 2
2 - 86	188 - 2
2 - 87	189 - 2
2 - 88	190 - 2
2 - 89	191 - 2
2 - 90	192 - 2
2 - 91	193 - 2
2 - 92	194 - 2

CLASS 3

CANCELLED PART NUMBER-CLASS-SIZE	SUPERSEDING PART NUMBER-SIZE-CLASS
MS51000 - 3 - 1	MS51000 - 101 - 3
3 - 2	102 - 3
3 - 3	103 - 3
3 - 4	104 - 3
3 - 5	105 - 3
3 - 6	106 - 3
3 - 7	107 - 3
3 - 8	108 - 3
3 - 9	109 - 3
3 - 10	110 - 3
3 - 11	111 - 3
3 - 12	112 - 3
3 - 13	113 - 3
3 - 14	114 - 3
3 - 15	115 - 3
3 - 16	116 - 3
3 - 17	117 - 3
3 - 18	118 - 3
3 - 19	119 - 3
3 - 20	120 - 3
3 - 21	121 - 3
3 - 22	122 - 3
3 - 23	123 - 3
3 - 24	124 - 3
3 - 25	125 - 3
3 - 26	126 - 3
3 - 27	127 - 3
3 - 28	128 - 3
3 - 29	129 - 3
3 - 30	130 - 3
3 - 31	131 - 3
3 - 32	132 - 3
3 - 33	133 - 3
3 - 34	134 - 3
3 - 35	135 - 3
3 - 36	136 - 3
3 - 37	137 - 3
3 - 38	138 - 3
3 - 39	139 - 3
3 - 40	140 - 3
3 - 41	141 - 3
3 - 42	142 - 3
3 - 43	143 - 3
3 - 44	144 - 3
3 - 45	145 - 3
3 - 46	146 - 3
3 - 47	147 - 3

CLASS 3

CANCELLED PART NUMBER-CLASS-SIZE	SUPERSEDING PART NUMBER-SIZE-CLASS
MS51000 - 3 - 45	MS51000 - 148 - 3
3 - 46	149 - 3
3 - 47	150 - 3
3 - 48	151 - 3
3 - 49	152 - 3
3 - 50	153 - 3
3 - 51	154 - 3
3 - 52	155 - 3
3 - 53	156 - 3
3 - 54	157 - 3
3 - 55	158 - 3
3 - 56	159 - 3
3 - 57	160 - 3
3 - 58	161 - 3
3 - 59	162 - 3
3 - 60	163 - 3
3 - 61	164 - 3
3 - 62	165 - 3
3 - 63	166 - 3
3 - 64	167 - 3
3 - 65	168 - 3
3 - 66	169 - 3
3 - 67	170 - 3
3 - 68	171 - 3
3 - 69	172 - 3
3 - 70	173 - 3
3 - 71	174 - 3
3 - 72	175 - 3
3 - 73	176 - 3
3 - 74	177 - 3
3 - 75	178 - 3
3 - 76	179 - 3
3 - 77	180 - 3
3 - 78	181 - 3
3 - 79	182 - 3
3 - 80	183 - 3
3 - 81	184 - 3
3 - 82	185 - 3
3 - 83	186 - 3
3 - 84	187 - 3
3 - 85	188 - 3
3 - 86	189 - 3
3 - 87	190 - 3
3 - 88	191 - 3
3 - 89	192 - 3
3 - 90	193 - 3
3 - 91	194 - 3
3 - 92	195 - 3

FED. SUP CLASS
5330

APPROVED 14 NOVEMBER 1957 REVISED (F) 27 OCT 86