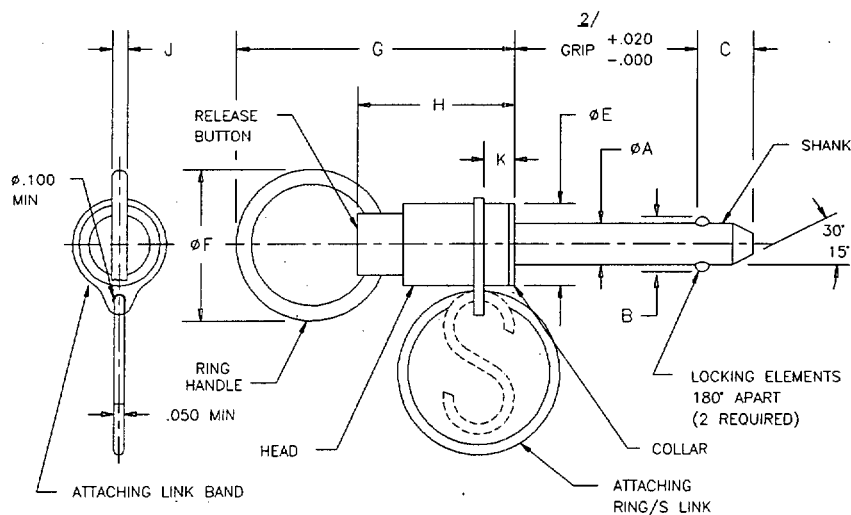


THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DOSSIS SPECIFIED IN THE SOLICITATION: MIL-P-23460

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

THIS ILLUSTRATION OF THE HANDLE IS FOR IDENTIFICATION PURPOSES ONLY AND IS NOT INTENDED TO RESTRICT DESIGNS AND SHAPES WHICH WILL OTHERWISE CONFORM TO SPECIFICATION REQUIREMENTS AND ARE WITHIN THE ENVELOPE DIMENSIONS.



RING HANDLE PIN, DOUBLE ACTING

TABLE I. DIMENSIONS AND MECHANICAL PROPERTIES.

NOM DIA	Ø A		B	C	Ø E		Ø F		G	H	J	K		DOUBLE SHEAR MIN	TENSILE STRENGTH MIN	RECOMMENDED HOLE DIAMETER	
	MAX	MIN			MAX	MIN	MAX	MIN				MAX	MIN			MAX	MIN
3/16	.1885	.1870	.220	.410	.450	.360	1.125	1.000	1.945	.935	.080	.480	.415	5,150	200	.194	.190
1/4	.2485	.2470	.289	.410	.450	.360	1.125	1.000	1.945	.935	.080	.480	.415	9,200	230	.254	.250
5/16	.3110	.3095	.375	.410	.505	.390	1.125	1.000	1.945	.935	.080	.480	.415	14,400	510	.3165	.3125
3/8	.3735	.3720	.440	.510	.630	.510	1.125	1.000	2.025	1.000	.080	.540	.445	20,600	575	.379	.375
7/16	.4360	.4345	.509	.510	.630	.510	1.125	1.000	2.025	1.000	.080	.540	.445	28,000	710	.4425	.4375
1/2	.4985	.4970	.594	.590	.755	.640	1.125	1.000	2.200	1.070	.080	.540	.445	36,800	1,160	.505	.500
9/16	.5610	.5595	.666	.660	.755	.640	1.125	1.000	2.200	1.070	.080	.540	.445	46,000	1,420	.5675	.5525
5/8	.6235	.6220	.750	.760	.870	.805	1.500	1.312	2.690	1.250	.120	.575	.510	57,500	2,070	.630	.625
3/4	.7485	.7470	.887	.790	.960	.890	1.500	1.312	2.690	1.250	.120	.595	.530	82,500	2,950	.757	.750
7/8	.8735	.8720	1.045	.950	1.150	1.070	1.500	1.312	2.860	1.500	.120	.730	.665	112,500	3,900	.882	.875
1	.9985	.9970	1.219	1.100	1.280	1.200	1.500	1.312	3.010	1.700	.120	.865	.800	147,000	5,480	1.010	1.000

1/ FOR COST PURPOSES 1/4, 1/2 AND 5/8 INCH PINS ARE PREFERRED OVER 3/16, 7/16 AND 9/16 INCH PINS RESPECTIVELY.

2/ GRIP SHALL BE MEASURED TO THE EDGE OF THE LOCKING ELEMENT HOLE PRIOR TO STAKING.

Ⓔ ENTIRE SPECIFICATION REVISED

INCH-POUND

PREPARING ACTIVITY: DLA-IS
CUSTODIANS: ARMY- AV NAVY- AS
AIR FORCE- 99
REVIEW: ARMY - GL, AIR FORCE - 82
USER:
PROJECT NUMBER: 5315-0485

MILITARY SPECIFICATION SHEET
TITLE
PIN, QUICK RELEASE, POSITIVE LOCKING,
DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER
MS17990 1 JUN 94
REV E
SUPERSEDING
MS17990D 15 NOV 1991
AMSC- N/A FSC 5315

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

Page 1 of 6

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-P-23460

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

REQUIREMENTS:

1. MATERIAL:

ATTACHING LINK OR RING:

CRES 17-7PH (UNS S17700) PER AMS 5678 OR
CRES 302 (UNS S30200) PER ASTM A313.

ATTACHING LINK BAND:

CRES 17-7PH (UNS S17700) OR
CRES 302 (UNS S30200) PER QQ-S-766.

HEAD:

CRES 302 (UNS S30200) PER QQ-S-763 OR
CRES 303 (UNS S30300) PER ASTM A484 OR ASTM A582.

BUTTON:

ALUMINUM ALLOY 2017 (UNS A92017) PER QQ-A-225/5.
ALUMINUM ALLOY 2024 (UNS A92024) PER QQ-A-225/6.
CRES 302 (UNS S30200) PER QQ-S-763 OR
CRES 303 (UNS S30300) PER ASTM A484 OR ASTM A582.

HANDLE (RING):

CRES 17-7PH (UNS S17700) PER AMS 5678 OR
OR CRES 302 (UNS S30200) PER ASTM A313.

LOCKING ELEMENTS:

CRES CL440C (UNS S44004) PER AMS 5630, AMS 5880 OR QQ-S-763.

SHANK AND SPINDLE:

CRES 17-4PH (UNS S17400) PER AMS 5643 OR
PH15-7MO (UNS S15700) PER AMS 5520 OR AMS 5657.

SPRING:

CRES 17-7PH (UNS S17700) PER AMS 5678, OR
CRES 302 (UNS S30200) CLASS 1 PER ASTM A313.

2. HEAT TREATMENT:

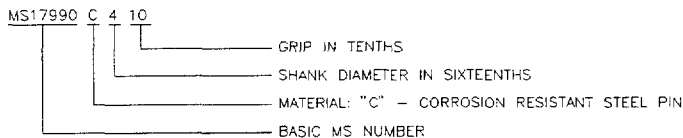
SHANK AND SPINDLE PER MIL-H-6875, CONDITION H-1000 FOR CRES 17-4PH, AND CONDITION
CH-900 FOR PH15-7MO, ROCKWELL C40 MINIMUM.

LOCKING ELEMENTS AND SPRING PER MIL-H-6875.

3. SURFACE TREATMENT:

CRES PARTS - PASSIVATE PER QQ-P-35.
ALUMINUM ALLOY PARTS - ANODIZE PER MIL-A-8625, TYPE I OR II, CLASS 2 OR
CHEMICAL FILM PER MIL-C-5541, CLASS 1A. HANDLES MUST BE BLACK.

4. EXAMPLE OF PART IDENTIFYING NUMBER (PIN):



5. ALL REFERENCES TO ALLOY STEEL IN THE MANUFACTURE OF THESE PINS HAVE BEEN ELIMINATED. ALL PART NUMBERS LISTED IN REVISION D WITH "-" INDICATING ALLOY STEEL PINS ARE CANCELLED AND SUPERCEDED IN REVISION E BY THE SAME NUMBER WITH "C" REPLACING THE "-". HOWEVER, AT THE DISCRETION OF THE CUSTOMER, ALLOY STEEL PINS, IN ACCORDANCE WITH THE REQUIREMENTS OF REVISION D TO THIS SPECIFICATION SHEET, MAY BE ORDERED FOR UP TO TWO YEARS AFTER THE DATE OF ISSUANCE OF THIS SPECIFICATION SHEET BY SPECIFYING "-" IN LIEU OF "C" IN THE PART NUMBER.

EXAMPLE OF SUPERCEDED PART NUMBER: MS17990_410 IS CANCELLED AND SUPERCEDED BY MS17990C410.

NOTES:

- DIMENSIONS ARE IN INCHES.
- IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
- UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.

PREPARING ACTIVITY: DLA-IS
CUSTODIANS: ARMY- AV NAVY- AS
AIR FORCE- 99
REVIEW: ARMY - GL, AIR FORCE - 82
USER:
PROJECT NUMBER: 5315-0485

MILITARY SPECIFICATION SHEET
TITLE
PIN, QUICK RELEASE, POSITIVE LOCKING,
DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER
MS17990 1 JUN 94
REV E
SUPERSEDING
MS17990D 15 NOV 1991
AMSC- N/A FSC 5315

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

Page 2 of 6

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-P-23460

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

TABLE II. GRIP LENGTHS

GRIP LENGTH	DASH NUMBERS					
	NOMINAL DIAMETER					
	3/16	1/4	5/16	3/8	7/16	1/2
.300	C303	C403	C503			
.400	C304	C404	C504			
.500	C305	C405	C505	C605	C705	
.600	C306	C406	C506	C606	C706	
.700	C307	C407	C507	C607	C707	C807
.800	C308	C408	C508	C608	C708	C808
.900	C309	C409	C509	C609	C709	C809
1.000	C310	C410	C510	C610	C710	C810
1.200	C311	C411	C511	C611	C711	C811
1.300	C312	C412	C512	C612	C712	C812
1.400	C313	C413	C513	C613	C713	C813
1.500	C314	C414	C514	C614	C714	C814
1.600	C315	C415	C515	C615	C715	C815
1.700	C316	C416	C516	C616	C716	C816
1.800	C317	C417	C517	C617	C717	C817
1.900	C318	C418	C518	C618	C718	C818
2.000	C319	C419	C519	C619	C719	C819
2.100	C320	C420	C520	C620	C720	C820
2.200	C321	C421	C521	C621	C721	C821
2.300	C322	C422	C522	C622	C722	C822
2.400	C323	C423	C523	C623	C723	C823
2.500	C324	C424	C524	C624	C724	C824
2.600	C325	C425	C525	C625	C725	C825
2.700	C326	C426	C526	C626	C726	C826
2.800	C327	C427	C527	C627	C727	C827
2.900	C328	C428	C528	C628	C728	C828
3.000	C329	C429	C529	C629	C729	C829
3.100	C330	C430	C530	C630	C730	C830
3.200	C331	C431	C531	C631	C731	C831
3.300	C332	C432	C532	C632	C732	C832
3.400	C333	C433	C533	C633	C733	C833
3.500	C334	C434	C534	C634	C734	C834
3.600	C335	C435	C535	C635	C735	C835
3.700	C336	C436	C536	C636	C736	C836
3.800	C337	C437	C537	C637	C737	C837
3.900	C338	C438	C538	C638	C738	C838
4.000	C339	C439	C539	C639	C739	C839
4.100	C340	C440	C540	C640	C740	C840
4.200	C341	C441	C541	C641	C741	C841
4.300	C342	C442	C542	C642	C742	C842
4.400	C343	C443	C543	C643	C743	C843
4.500	C344	C444	C544	C644	C744	C844
4.600	C345	C445	C545	C645	C745	C845
4.700	C346	C446	C546	C646	C746	C846
4.800	C347	C447	C547	C647	C747	C847
4.900	C348	C448	C548	C648	C748	C848
5.000	C349	C449	C549	C649	C749	C849
5.100	C350	C450	C550	C650	C750	C850
5.200	C351	C451	C551	C651	C751	C851
5.300	C352	C452	C552	C652	C752	C852
5.400	C353	C453	C553	C653	C753	C853
5.500	C354	C454	C554	C654	C754	C854
5.600	C355	C455	C555	C655	C755	C855
5.700	C356	C456	C556	C656	C756	C856
5.800	C357	C457	C557	C657	C757	C857
5.900	C358	C458	C558	C658	C758	C858
6.000	C359	C459	C559	C659	C759	C859
6.100	C360	C460	C560	C660	C760	C860

PREPARING ACTIVITY: DLA-IS
CUSTODIANS: ARMY- AV NAVY- AS
AIR FORCE- 99
REVIEW: ARMY - GL, AIR FORCE - 82
USER:
PROJECT NUMBER: 5315-0485

MILITARY SPECIFICATION SHEET
TITLE
PIN, QUICK RELEASE, POSITIVE LOCKING,
DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER
MS17990 1 JUN 94
REV E
SUPERSEDING
MS17990D 15 NOV 1991
AMSC- N/A FSC 5315

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

Page 3 of 6

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODIGS SPECIFIED IN THE SOLICITATION: MIL-P-23460

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

TABLE II. GRIP LENGTHS (CON'T)

GRIP LENGTH	DASH NUMBERS					
	NOMINAL DIAMETER					
	3/16	1/4	5/16	3/8	7/16	1/2
6.100	C361	C461	C561	C661	C761	C861
6.200	C362	C462	C562	C662	C762	C862
6.300	C363	C463	C563	C663	C763	C863
6.400	C364	C464	C564	C664	C764	C864
6.500	C365	C465	C565	C665	C765	C865
6.600	C366	C466	C566	C666	C766	C866
6.700	C367	C467	C567	C667	C767	C867
6.800	C368	C468	C568	C668	C768	C868
6.900	C369	C469	C569	C669	C769	C869
7.000	C370	C470	C570	C670	C770	C870
7.100	C371	C471	C571	C671	C771	C871
7.200	C372	C472	C572	C672	C772	C872
7.300	C373	C473	C573	C673	C773	C873
7.400	C374	C474	C574	C674	C774	C874
7.500	C375	C475	C575	C675	C775	C875
7.600	C376	C476	C576	C676	C776	C876
7.700	C377	C477	C577	C677	C777	C877
7.800	C378	C478	C578	C678	C778	C878
7.900	C379	C479	C579	C679	C779	C879
8.000	C380	C480	C580	C680	C780	C880
8.100	C381	C481	C581	C681	C781	C881
8.200	C382	C482	C582	C682	C782	C882
8.300	C383	C483	C583	C683	C783	C883
8.400	C384	C484	C584	C684	C784	C884
8.500	C385	C485	C585	C685	C785	C885
8.600	C386	C486	C586	C686	C786	C886
8.700	C387	C487	C587	C687	C787	C887
8.800	C388	C488	C588	C688	C788	C888
8.900	C389	C489	C589	C689	C789	C889
9.000	C390	C490	C590	C690	C790	C890
9.100	C391	C491	C591	C691	C791	C891
9.200	C392	C492	C592	C692	C792	C892
9.300	C393	C493	C593	C693	C793	C893
9.400	C394	C494	C594	C694	C794	C894
9.500	C395	C495	C595	C695	C795	C895
9.600	C396	C496	C596	C696	C796	C896
9.700	C397	C497	C597	C697	C797	C897
9.800	C398	C498	C598	C698	C798	C898
9.900	C399	C499	C599	C699	C799	C899

PREPARING ACTIVITY: DLA-IS

CUSTODIANS: ARMY- AV NAVY- AS

AIR FORCE- 99

REVIEW: ARMY - GL, AIR FORCE - 82

USER:

PROJECT NUMBER: 5315-0485

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

PIN, QUICK RELEASE, POSITIVE LOCKING,
DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER

MS17990

1 JUN 94

REV E

SUPERSEDING

MS17990D

15 NOV 1991

AMSC- N/A

FSC 5315

A. Approved for public release; distribution is unlimited.

Page 4 of 6

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

Form Approved
OMB No. 0704-0188

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-P-23460

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

TABLE II. GRIP LENGTHS (CON'T)

GRIP LENGTH	DASH NUMBERS				
	NOMINAL DIAMETER				
	9/16	5/8	3/4	7/8	1
.700	C907				
.800	C908				
.900	C909	C1009	C1209		
1.000	C910	C1010	C1210	C1410	C1610
1.100	C911	C1011	C1211	C1411	C1611
1.200	C912	C1012	C1212	C1412	C1612
1.300	C913	C1013	C1213	C1413	C1613
1.400	C914	C1014	C1214	C1414	C1614
1.500	C915	C1015	C1215	C1415	C1615
1.600	C916	C1016	C1216	C1416	C1616
1.700	C917	C1017	C1217	C1417	C1617
1.800	C918	C1018	C1218	C1418	C1618
1.900	C919	C1019	C1219	C1419	C1619
2.000	C920	C1020	C1220	C1420	C1620
2.100	C921	C1021	C1221	C1421	C1621
2.200	C922	C1022	C1222	C1422	C1622
2.300	C923	C1023	C1223	C1423	C1623
2.400	C924	C1024	C1224	C1424	C1624
2.500	C925	C1025	C1225	C1425	C1625
2.600	C926	C1026	C1226	C1426	C1626
2.700	C927	C1027	C1227	C1427	C1627
2.800	C928	C1028	C1228	C1428	C1628
2.900	C929	C1029	C1229	C1429	C1629
3.000	C930	C1030	C1230	C1430	C1630
3.100	C931	C1031	C1231	C1431	C1631
3.200	C932	C1032	C1232	C1432	C1632
3.300	C933	C1033	C1233	C1433	C1633
3.400	C934	C1034	C1234	C1434	C1634
3.500	C935	C1035	C1235	C1435	C1635
3.600	C936	C1036	C1236	C1436	C1636
3.700	C937	C1037	C1237	C1437	C1637
3.800	C938	C1038	C1238	C1438	C1638
3.900	C939	C1039	C1239	C1439	C1639
4.000	C940	C1040	C1240	C1440	C1640
4.100	C941	C1041	C1241	C1441	C1641
4.200	C942	C1042	C1242	C1442	C1642
4.300	C943	C1043	C1243	C1443	C1643
4.400	C944	C1044	C1244	C1444	C1644
4.500	C945	C1045	C1245	C1445	C1645
4.600	C946	C1046	C1246	C1446	C1646
4.700	C947	C1047	C1247	C1447	C1647
4.800	C948	C1048	C1248	C1448	C1648
4.900	C949	C1049	C1249	C1449	C1649
5.000	C950	C1050	C1250	C1450	C1650
5.100	C951	C1051	C1251	C1451	C1651
5.200	C952	C1052	C1252	C1452	C1652
5.300	C953	C1053	C1253	C1453	C1653
5.400	C954	C1054	C1254	C1454	C1654
5.500	C955	C1055	C1255	C1455	C1655
5.600	C956	C1056	C1256	C1456	C1656
5.700	C957	C1057	C1257	C1457	C1657
5.800	C958	C1058	C1258	C1458	C1658
5.900	C959	C1059	C1259	C1459	C1659
6.000	C960	C1060	C1260	C1460	C1660

PREPARING ACTIVITY: DLA-IS

CUSTODIANS: ARMY- AV NAVY- AS

AIR FORCE- 99

REVIEW: ARMY - GL, AIR FORCE - 82

USER:

PROJECT NUMBER: 5315-0485

DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET

TITLE

PIN, QUICK RELEASE, POSITIVE LOCKING,
DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER

MS17990

1 JUN 94

REV E

SUPERSEDING
MS17990

15 NOV 1991

AMSC- N/A

FSC 5315

A. Approved for public release; distribution is unlimited.

Page 5 of 6

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

TABLE II. GRIP LENGTHS (CON'T)

GRIP LENGTH	DASH NUMBERS				
	NOMINAL DIAMETER				
	9/16	5/8	3/4	7/8	1
6.100	C961	C1061	C1261	C1461	C1661
6.200	C962	C1062	C1262	C1462	C1662
6.300	C963	C1063	C1263	C1463	C1663
6.400	C964	C1064	C1264	C1464	C1664
6.500	C965	C1065	C1265	C1465	C1665
6.600	C966	C1066	C1266	C1466	C1666
6.700	C967	C1067	C1267	C1467	C1667
6.800	C968	C1068	C1268	C1468	C1668
6.900	C969	C1069	C1269	C1469	C1669
7.000	C970	C1070	C1270	C1470	C1670
7.100	C971	C1071	C1271	C1471	C1671
7.200	C972	C1072	C1272	C1472	C1672
7.300	C973	C1073	C1273	C1473	C1673
7.400	C974	C1074	C1274	C1474	C1674
7.500	C975	C1075	C1275	C1475	C1675
7.600	C976	C1076	C1276	C1476	C1676
7.700	C977	C1077	C1277	C1477	C1677
7.800	C978	C1078	C1278	C1478	C1678
7.900	C979	C1079	C1279	C1479	C1679
8.000	C980	C1080	C1280	C1480	C1680
8.100	C981	C1081	C1281	C1481	C1681
8.200	C982	C1082	C1282	C1482	C1682
8.300	C983	C1083	C1283	C1483	C1683
8.400	C984	C1084	C1284	C1484	C1684
8.500	C985	C1085	C1285	C1485	C1685
8.600	C986	C1086	C1286	C1486	C1686
8.700	C987	C1087	C1287	C1487	C1687
8.800	C988	C1088	C1288	C1488	C1688
8.900	C989	C1089	C1289	C1489	C1689
9.000	C990	C1090	C1290	C1490	C1690
9.100	C991	C1091	C1291	C1491	C1691
9.200	C992	C1092	C1292	C1492	C1692
9.300	C993	C1093	C1293	C1493	C1693
9.400	C994	C1094	C1294	C1494	C1694
9.500	C995	C1095	C1295	C1495	C1695
9.600	C996	C1096	C1296	C1496	C1696
9.700	C997	C1097	C1297	C1497	C1697
9.800	C998	C1098	C1298	C1498	C1698
9.900	C999	C1099	C1299	C1499	C1699

PREPARING ACTIVITY: DLA-IS
 CUSTODIANS: ARMY- AV NAVY- AS
 AIR FORCE- 99
 REVIEW: ARMY - GL, AIR FORCE - 82
 USER:
 PROJECT NUMBER: 5315-0485

MILITARY SPECIFICATION SHEET
 TITLE
 PIN, QUICK RELEASE, POSITIVE LOCKING,
 DOUBLE ACTING, RING HANDLE

SPECIFICATION SHEET NUMBER
 MS17990 1 JUN 94
 REV E

SUPERSEDING
 MS17990D 15 NOV 1991

AMSC- N/A FSC 5315

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

Page 6 of 6