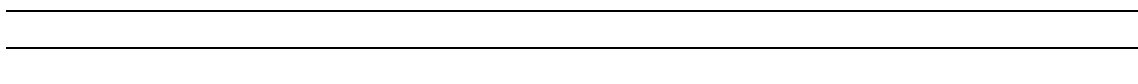


FIRE EXTINGUISHER, SINGLE OUTLET

MASS Systems Part Number	AgustaWestland Part Number	Volume
FX03800-1	4F2620V00431	72 CUBIC-INCH (1.18 LITER)
FX03800-2	4F2620V00531	36 CUBIC-INCH (.59 LITER)

**SUPPLEMENT TO
COMPONENT MAINTENANCE MANUAL 26-22-02
TECHNICAL PROPERTIES AND
ILLUSTRATED PARTS LIST**





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PMA PARTS NOTICE

MASS Systems, AMETEK Ameron, LLC will provide full warranty on all fire extinguishers provided the component parts used in the repair and overhaul process have formal after market FAA-PMA authority for use on the fire extinguisher application.



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

RECORD OF REVISIONS

REV. NO.	ISSUE DATE	DATE FILED	BY
0	Oct 25/12	Oct 25/12	SB
1	Apr 12/13	Apr 12/13	SB
2	May 9/13	May 9/13	SB

REV. NO.	ISSUE DATE	DATE FILED	BY



RECORD OF TEMPORARY REVISIONS

REVISION NO.	PAGE NUMBER	ISSUE DATE	BY	DATE REMOVED	BY



LIST OF EFFECTIVE PAGES

SUBJECT	PAGE	DATE
Title Page	T-1	May 9/13
Notices	T-2	Oct 25/12
Record of Revisions	RR-1	May 9/13
Record of Temporary Revisions	RTR-1	Oct 25/12
Service Bulletin List	SBL-1	Oct 25/12
List of Effective Pages	LEP-1	Oct 25/12
Technical Properties	1	May 9/13
	2	May 9/13
	3	Oct 25/12
Testing and Fault Isolation	101	Oct 25/12
	102	Oct 25/12
Assembly (Including Storage)	701	Oct 25/12
	702	Oct 25/12
	703	Oct 25/12
	704	Oct 25/12
Special Tools, Fixtures, and Equipment	901	Oct 25/12
Illustrated Parts List	1001	Oct 25/12
	1002	May 9/13



TECHNICAL PROPERTIES

Table 1

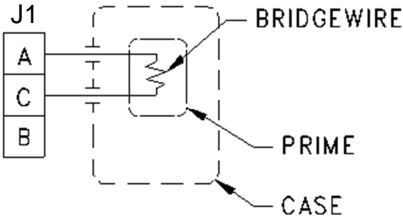
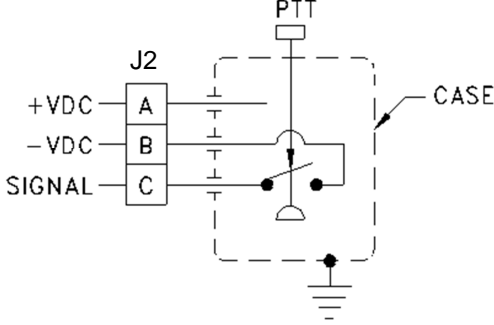
PROPERTY	SPECIFICATION
Description Part Number Nomenclature Complies With	FX03800-1 & -2 Fire Extinguisher. Dual Outlet MIL-C-22284 , DOT-SP 10440-1000 (FX03800-1), DOT-SP 10440-1100 (FX03800-2)
Functional Properties Internal Volume (FX03800-1) Internal Volume (FX03800-2) Extinguishing Agent (FX03800-1) Extinguishing Agent (FX03800-2) Pressurizing Gas	72 cubic-inches (1.18 liter) 36 cubic-inches (.59 liter) Pentafluoroethane (C ₂ HF ₅) HFC-125 Bromotrifluoromethane (CBrF ₃) Halon 1301 Nitrogen (N ₂)
Pressure Data At 70°F (21°C) Charge Pressure Hydrostatic Test Pressure * FX03800-1 FX03800-2 Burst Pressure FX03800-1 FX03800-2 Leakage Rate Safety Relief	360 to 385 psig (2482 to 2654 kPag) 2000 psig (13789 kPag) 2200 psig (15168 kPag) 3000 psig (20684 kPag) minimum 3300 psig (22752 kPag) minimum 1.0 x 10 ⁻⁶ scc/second maximum 1800 to 2000 psig (12411 to 13789 kPag)
Ambient Temperature Range	-67°F to +266°F (-55°C to +130°C)
Weight Data Empty Fire Extinguisher ** Extinguishing Agent (full charge) Nitrogen Charge Charged Fire Extinguisher ** Allowable weight deviation – actual weight versus weight marked on identification plate	See Table 2 See Table 2 See Table 2 See Table 2 Minus 0.10 pound (0.05 kg)

* The fire extinguisher hydrostatic test interval is every 5 years. If 5 years have not elapsed, hydrostatic test can be waived Per CFR Title 49, section 180.205.

** Weight does not include the cartridges (Item 10).



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

PROPERTY	SPECIFICATION
<p>Cartridge Data, Single Bridgewire</p> <p>Voltage</p> <p>Current Rating – All-Fire</p> <p style="padding-left: 40px;">No-Fire</p> <p>Test Current</p> <p>Bridgewire Resistance</p> <p>Electrical Connector, 3 Pin, Mates with Service Life</p> <p>Maximum Life (Service and Storage)</p> <p>Classification</p> <p>Torque</p> <p>Lockwire Size</p> <p>Electrical Schematic</p>	<p>16 to 32 VDC</p> <p>3.5 amps minimum for 50 milliseconds</p> <p>1.0 amps or 1.0 watt for 5 minutes</p> <p>20 milliamps maximum continuous</p> <p>0.9 to 1.1 Ohm</p> <p>D38999/26WA98SA (J1)</p> <p>12-years max. service</p> <p>15 years total</p> <p>1.4s, UN0323</p> <p>90 to 100 inch-pounds (10.2 to 11.3 N·m)</p> <p>0.032 inch (0.81 mm)</p> 
<p>Temperature Compensated Pressure Switch Data (TCPS) at 70°F (21°C)</p> <p>Voltage Rating</p> <p>Current Rating</p> <p>Actuates Closed – Decreasing Pressure</p> <p>Connector Pins</p> <p>Press-To-Test</p> <p>Electrical Connector</p> <p>Electrical Connector Mates With</p> <p>Electrical Schematic</p>	<p>28 VDC nominal</p> <p>0.5 Amps Nominal</p> <p>Below 256 psig (1765 kPag)</p> <p>Normally Open between Pins B and C with pressure</p> <p>Actuates Closes between Pins B and C</p> <p>D38999/21YA98PN</p> <p>D38999/26WA98SN</p> 
<p>Outlet Disc Data</p> <p>Burst Pressure Data at 70°F (21°C)</p> <p>ID Flange Length</p> <p>Flange Thickness</p>	<p>2000 to 2200 psig (13790 to 15168 kPag)</p> <p>0.258 to 0.268 inch (6.55 to 6.81 mm)</p> <p>0.095 to 0.105 inch (2.41 to 2.67 mm)</p>



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

PROPERTY	SPECIFICATION
Safety Relief Fill fitting Data Burst Pressure Data at 70°F (21°C) Torque Thread size	1800 to 2000 psig (12411 to 13790 kPag) 110 to 115 inch-pounds (12,4 to 13,0 N·m) MS33514G4
Discharge Outlet Fitting Data Thread Size Torque Lockwire Size	MS33656E12 (1.0625-12 UNJ-3A) J1 25 to 30 foot-pounds (33.9 to 40.7 N·m) 0.032 inch (0.81 mm)

Table 2

FIRE EXTINGUISHER PART NO. VS. WEIGHT				
PART NO.	EMPTY FIRE EXT. (nominal)	AGENT	NITROGEN	CHARGED FIRE EXT. (nominal)*
FX03800-1	2.51 lbs (1.14 kg)	2.06 to 2.16 lbs (.93 to .98 kg)	0.05 lb (0.02 kg)	4.71 lbs (2.14 kg)
FX03800-2	2.14 lbs (.97 kg)	1.18 to 1.28 lbs (.54 to .58 kg)	0.025 lb (0.01 kg)	3.44 lbs (1.56 kg)

* Charged Fire Extinguisher maximum weight does not include protective caps.

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TESTING AND FAULT ISOLATION

Test the Temperature compensated pressure switch (TCPS) P/N SS00800-1 or SS00900-1 using Table 101 or Table 102, respectively, to compare temperature versus pressure switch points requirements. Table 101 and Table 102 provides the pressure tolerance band (min. & max) that each TCPS is allowed to switch over from an open circuit to a closed circuit between pins B & C as pressure is decreasing. The TCPS should output an “open circuit” for pressures above the max. switch point value and a “closed circuit” for pressures below the min. switch point value at the specified temperature.

Press-to-test switch button will not provide a closed circuit between pins B & C if applied pressure to TCPS is greater than 1.5 times the max. tolerance pressure at the specified temperature.

TCPS Switch Points - Temperature versus Pressure (SS00800-1)
Table 101

TEMP °F	PRESSURE - PSIG		TEMP °C	PRESSURE KPAG	
	MIN	MAX		MIN	MAX
60	230	280	15,6	1586	1931
62	235	285	16,7	1620	1965
64	240	290	17,8	1655	2000
66	246	296	18,9	1696	2041
68	251	301	20,0	1730	2075
70	256	301	21,1	1765	2110
72	262	312	22,2	1806	2151
74	267	317	23,3	1841	2186
76	273	323	24,4	1883	2227
78	278	328	25,6	1917	2262
80	284	334	26,7	1958	2303
82	290	340	27,8	2000	2344
84	296	346	28,9	2041	2386
86	302	352	30,0	2082	2427
88	308	358	31,1	2124	2468
90	314	364	32,2	2165	2510
92	316	371	33,3	2179	2558
94	318	378	34,4	2193	2606
96	319	384	35,6	2199	2647
98	321	391	36,7	2213	2696
100	322	397	37,8	2220	2737

NOTE: If the measured temperature is not in the table, use the higher temperature listed for the required pressure.



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

TCPS Switch Points - Temperature versus Pressure (SS00900-1)
Table 102

TEMP °F	PRESSURE - PSIG		TEMP °C	PRESSURE KPAG	
	MIN	MAX		MIN	MAX
60	230	280	15,6	1586	1931
62	235	285	16,7	1622	1966
64	240	290	17,8	1658	2002
66	246	296	18,9	1693	2038
68	251	301	20,0	1729	2074
70	256	306	21,1	1765	2110
72	260	310	22,2	1790	2135
74	263	313	23,3	1815	2159
76	267	317	24,4	1840	2184
78	270	320	25,6	1864	2209
80	274	324	26,7	1889	2234
82	280	330	27,8	1929	2274
84	286	336	28,9	1969	2314
86	291	341	30,0	2009	2354
88	297	347	31,1	2049	2394
90	328	353	32,2	2261	2434
92	331	359	33,3	2282	2474
94	334	365	34,4	2303	2514
96	338	370	35,6	2330	2554
98	341	376	36,7	2351	2594
100	344	382	37,8	2372	2634

NOTE: If the measured temperature is not in the table, use the higher temperature listed for the required pressure.

Recommended Test Intervals:

Weight check: The recommended weight check interval for the fire extinguisher should be every 5 years.

Bridgewire check: The recommended bridgewire check interval for the cartridges should be every 3 years.

ASSEMBLY (INCLUDING STORAGE)

The Nitrogen gas charge pressure for the actual temperature of the fire extinguisher is listed in Table 701 and Table 702.

**Temperature versus Charge Pressure – PSIG (FX03800-1)
Table 701**

TEMP °F	PRESSURE - PSIG		TEMP °F	PRESSURE PSIG	
	MIN	MAX		MIN	MAX
59	327	352	80	381	406
60	330	355	81	384	409
61	333	358	82	388	413
62	335	360	83	391	416
63	338	363	84	395	420
64	341	366	85	398	423
65	344	369	86	401	426
66	347	372	87	405	430
67	349	374	88	408	433
68	352	377	89	412	437
69	355	380	90	415	440
70	360	385	91	418	443
71	363	388	92	422	447
72	366	391	93	425	450
73	368	393	94	429	454
74	371	396	95	432	457
75	374	399	96	435	460
76	377	402	97	439	464
77	380	405	98	442	467
78	382	407	99	446	471
79	385	410	100	449	474



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

Temperature versus Charge Pressure – KPAG (FX03800-1)
Table 702

TEMP °C	PRESSURE - KPAG		TEMP °C	PRESSURE KPAG	
	MIN	MAX		MIN	MAX
15.0	2255	2427	26.7	2627	2799
15.6	2274	2446	27.2	2650	2822
16.1	2293	2465	27.8	2674	2846
16.7	2312	2484	28.3	2697	2869
17.2	2332	2504	28.9	2721	2893
17.8	2351	2523	29.4	2744	2916
18.3	2370	2542	30.0	2768	2940
18.9	2389	2561	30.6	2791	2963
19.4	2409	2581	31.1	2814	2986
20.0	2428	2600	31.7	2838	3010
20.6	2447	2619	32.2	2861	3033
21.1	2482	2654	32.8	2885	3057
21.7	2501	2673	33.3	2908	3080
22.2	2521	2693	33.9	2932	3104
22.8	2540	2712	34.4	2955	3127
23.3	2559	2731	35.0	2979	3151
23.9	2578	2750	35.6	3002	3174
24.4	2598	2770	36.1	3025	3197
25.0	2617	2789	36.7	3049	3221
25.6	2636	2808	37.2	3072	3244
26.1	2655	2827	37.8	3096	3268



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

Temperature versus Charge Pressure – PSIG (FX03800-2)
Table 703

TEMP °F	PRESSURE - PSIG		TEMP °F	PRESSURE PSIG	
	MIN	MAX		MIN	MAX
59	327	352	80	393	418
60	330	355	81	397	422
61	333	358	82	400	425
62	336	361	83	404	429
63	339	364	84	408	433
64	342	367	85	412	437
65	345	370	86	415	440
66	348	373	87	419	444
67	351	376	88	423	448
68	354	379	89	426	451
69	357	382	90	430	455
70	360	385	91	434	459
71	363	388	92	438	463
72	367	392	93	441	466
73	370	395	94	445	470
74	373	398	95	449	474
75	377	402	96	452	477
76	380	405	97	456	481
77	383	408	98	460	485
78	386	411	99	464	489
79	390	415	100	467	492



SUPPLEMENT COMPONENT MAINTENANCE MANUAL

Temperature versus Charge Pressure – KPAG (FX03800-2)
Table 704

TEMP °C	PRESSURE - KPAG		TEMP °C	PRESSURE KPAG	
	MIN	MAX		MIN	MAX
15.0	2255	2427	26.7	2710	2882
15.6	2275	2447	27.2	2737	2909
16.1	2296	2468	27.8	2758	2930
16.7	2317	2489	28.3	2785	2957
17.2	2337	2509	28.9	2813	2985
17.8	2358	2530	29.4	2841	3013
18.3	2379	2551	30.0	2861	3033
18.9	2399	2571	30.6	2889	3061
19.4	2420	2592	31.1	2917	3089
20.0	2441	2613	31.7	2937	3109
20.6	2461	2633	32.2	2965	3137
21.1	2482	2654	32.8	2992	3164
21.7	2503	2675	33.3	3020	3192
22.2	2530	2702	33.9	3041	3213
22.8	2551	2723	34.4	3068	3240
23.3	2572	2744	35.0	3096	3268
23.9	2599	2771	35.6	3116	3288
24.4	2620	2792	36.1	3144	3316
25.0	2641	2813	36.7	3172	3344
25.6	2661	2833	37.2	3199	3371
26.1	2689	2861	37.8	3220	3392



SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

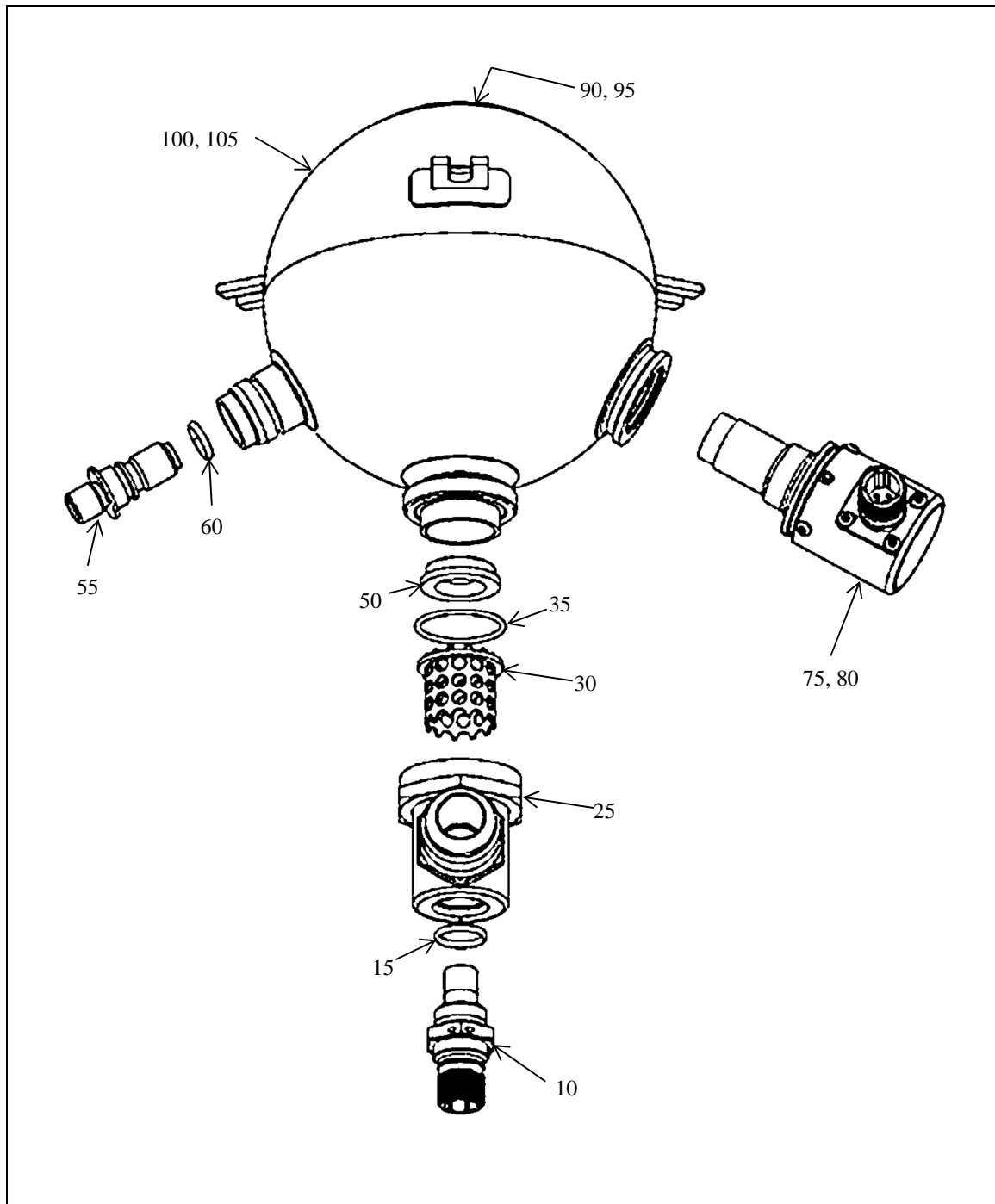
Special tools, fixtures, and test equipment required for maintenance of the fire extinguisher are listed in Table 901. Equivalent items may be substituted.

**Special Tools, Fixtures, and Equipment
Table 901**

NOMENCLATURE	PART OR SPECIFICATION NUMBER	SOURCE (CAGE)
Cap, Hydrostatic Test, Discharge Boss	91021	MASS Systems, AMETEK
Cradle, Fire Extinguisher	91033-1	Ameron, LLC (0FRR4)
Outlet Safety Cap	27319-1	
Resurfacing Tool, Discharge Boss	91044-1, -2	
Safety Chamber, Cartridge	91035-2	
TCPS Test Box	91900-1	MASS Systems, AMETEK
Welding Fixture	91100-1	Ameron, LLC (0FRR4)



ILLUSTRATED PARTS LIST



Fire Extinguisher FX03800 Series Exploded View
IPL Figure 1001



ILLUSTRATED PARTS LIST

Fire Extinguisher P/N FX03800 IPL Table 1001

FIG. ITEM NO.	PART NUMBER	AIRLINE PART NO.	NOMENCLATURE							EF F	UNITS PER ASSY
			1	2	3	4	5	6	7		
1 -1	FX03800-1		FIRE EXT., 72 CUBIC INCH (AW P/N 4F2620V00431)							A	RF
1 -1	FX03800-2		FIRE EXT., 36 CUBIC INCH (AW P/N 4F2620V00531)							B	RF
10	CT01800-1		. CARTRIDGE								1
15	MS29513-016		. . O-RING								1
-20	SU00950-1		. TAG, CAUTION								1
25	27370-3		. OUTLET, DISCHARGE								1
30	22740-1		. . SCREEN WELDMENT (NHA ITEMS 30 AND 35)								1
35	MS29513-023		. . O-RING (SCD SU01251-23) (NHA ITEMS 30 AND 35)								1
-40	FX03805-1		. CHARGED CONTAINER							A	1
-45	FX03805-2		. CHARGED CONTAINER							B	1
50	RD01000-1		. . DISC, RUPTURE (WELDED)								1
55	M35240130-3		. . FILL FITTING, FIREX (WELDED)								1
60	M31470900		. . O-RING								1
-65	SU03400-4		. . ANTI-RECOIL CAP								1
-70	27319-1		. . CAP, OUTLET SAFETY								1
75	SS00900-1		. . PRESSURE SWITCH, TEMP. COMPENSATED (TCPS) (WELDED)							A	1
80	SS00800-1		. . PRESSURE SWITCH, TEMP. COMPENSATED (TCPS) (WELDED)							B	1
-85	33019-1		. . SHIM(S) (TCPS)								A/R
90	FX03708-2		. . IDENT & DATA PLATE							A	1
95	FX03708-3		. . IDENT & DATA PLATE							B	1
100	FX03810-1		. . WELDMENT, CONTAINER							A	1
105	FX03810-2		. . WELDMENT, CONTAINER							B	1
-115	SU03400-12		. . ANTI-RECOIL CAP (DISCHARGE OUTLET)								1

- Item not illustrated

Items -40 & -45 per applicable items 50 thru 115