



TECHNICAL DATA

UPGRADE INSTRUCTIONS FIRECYCLE® II TO FIRECYCLE® III MULTI-CYCLE

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

The Firecycle® II system is a single interlocked preaction system that has the ability to cycle on and off until the fire is potentially out. Firecycle® II is no longer offered by The Viking Corporation. The system is being phased out due to integral components of the system, namely the mother board of the release control panel, no longer being manufactured. An upgrade option for Firecycle® II to Firecycle® III Multi-Cycle single interlocked preaction system is available. The cycling function for Firecycle® III Multi-Cycle is the same as for Firecycle® II but utilizes recent technology and does not require the large power supply of Firecycle® II.

2. TECHNICAL DATA

WARNING!: FIRECYCLE II SYSTEMS MAY ONLY BE UPGRADED TO A FIRECYCLE III SINGLE INTERLOCK PREACTION SYSTEM. UPGRADING TO A DOUBLE INTERLOCK SYSTEM IS NOT PERMITTED.

Qty.	Description	Part Number
1	VFR-400 Release Control Panel	14152-1
2	18 amp hour batteries	09867
1	Battery Cabinet	09866
1	Firecycle® III Multi-Cycle Single Interlocked Preaction System Valve TRIMPAC®	13801E-1
1	Drain Package for TRIMPAC®	1-1/2" - 11894-1 2" - 11894-2 2-1/2" & 3" - 11894-3 4", 6" & 8" - 11894-4

NOTE: FIRECYCLE® II DETECTORS AND DETECTOR CABLE ARE COMPATIBLE WITH THE FIRECYCLE® III MULTI-CYCLE RELEASE CONTROL PANEL AND DO NOT REQUIRE REPLACEMENT FOR UPGRADE PURPOSES.

3. REMOVING FIRECYCLE® II FROM SERVICE:

WARNING

Any system maintenance that involves placing a control valve or detection system out of service will impair the fire protection capabilities of that system. Prior to proceeding, appropriate impairment procedures per NFPA 25 shall be followed with the notification of all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected areas.

Failure to follow these instructions could cause improper system operation, resulting in serious personal injury and/or property damage.

NOTE: ALL AUXILIARY OR CENTRAL STATION ALARM NOTIFICATION FACILITIES SHOULD BE NOTIFIED THAT MAINTENANCE IS BEING PERFORMED ON THE SYSTEM.

1. Close the main control valve.
2. Turn off the power supply to the Firecycle® II Release Control Panel.
3. Silence local alarm.
4. Remove power and neutral wires from L1 and L2 in the Firecycle® II Release Control Panel and the ground wire and terminate correctly. (This may require the aid of a qualified electrician)
5. Remove battery power supply leads from Model A-1 Battery Charger, landing contacts B+ and B-. (Removing this power supply will cause the solenoid valves in the valve trim box to open and drain priming water pressure out of the valve trim piping)
6. Remove Firecycle® detector cable leads from landing contacts 15 and 16 in the Firecycle® II Release Control Panel.
7. Remaining interface wiring between panels and alarms can now be removed.
CAUTION: Confirm outside interfacing alarms have been disabled.
8. Turn off air supply to system.
9. Open system drain valve.
10. Remove valve trim to ¼" priming valve.

Viking Technical Data may be found on
The Viking Corporation's Web site at
<http://www.vikinggroupinc.com>.
The Web site may include a more recent
edition of this Technical Data Page.



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4. INSTALLATION OF FIRECYCLE® III MULTI-CYCLE UPGRADE COMPONENTS

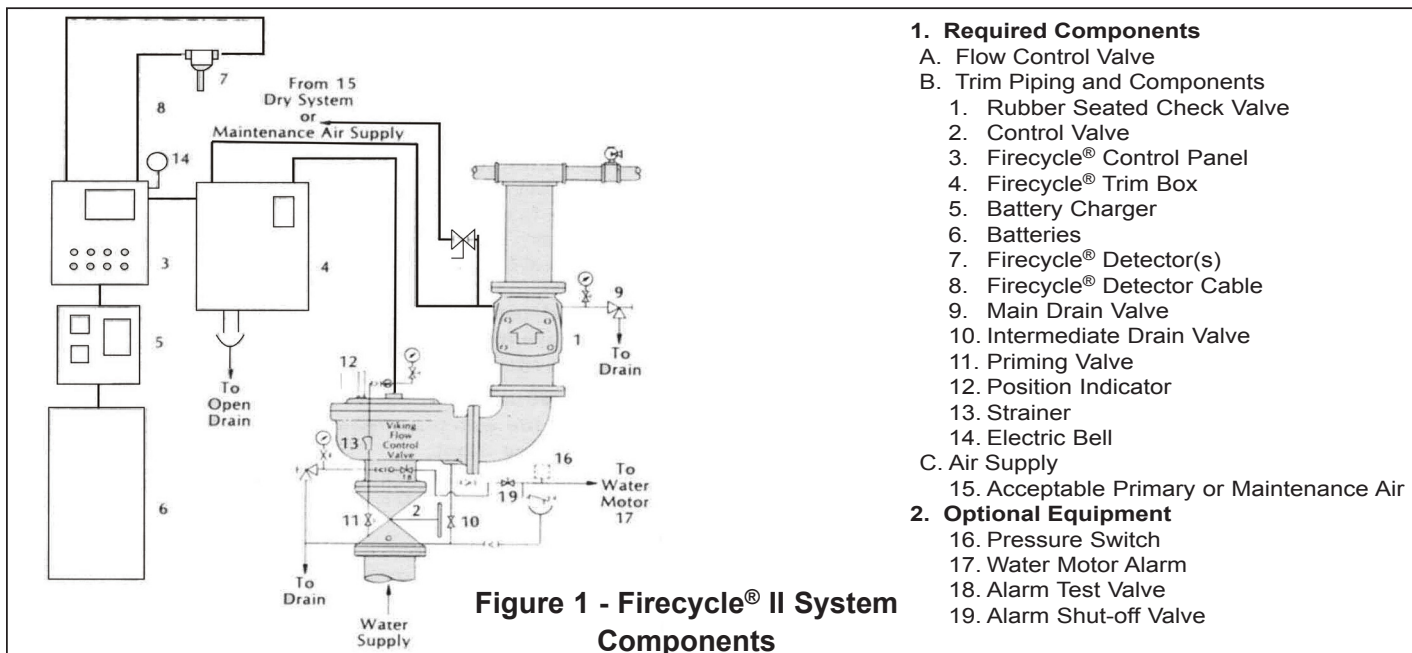
1. Mount the Model E-1 TRIMPAC® in an appropriate location near the riser. Refer to Technical Data [Form F_051304 Rev. 15.1](#).
2. Disconnect all wiring tied into the Firecycle® II Release Control Panel.
3. Remove Firecycle® II Multi-Cycle Release Control Panel, Valve Trim Box, Batteries, Battery Box, Battery Charger.
4. Install the Model VFR-400 Release Control Panel.
5. Wire the VFR-400 panel per the wiring diagram for program #6. The wiring diagram is found in the [VFR-400 Installation, Operation and Instruction Manual](#).
6. Once last connection is made, move Program switch down.
7. Press the FUNCTION (bottom) button until the display reads "PASSWORD = 000".
8. To enter a password, press the SELECT button until the proper number is displayed above the ^ symbol, then press the SET button to move to the next digit. After entering the third number the display will change. (All panels are shipped with a 000 password.)
9. Press the FUNCTION (bottom) button until the display reads "PROGRAM #6".
10. Press the SELECT button until the display reads "PROGRAM #6".
11. Press the SET button.
12. Set the soak timer to the desired duration.
13. The panel is completely programmed except for the custom banner and zone messages. Move the program switch back up.

5. PLACE FIRECYCLE® III MULTI-CYCLE PRE-ACTION SYSTEM IN SERVICE

1. Verify that the VFR-400 Release Control Panel, Detector Circuits, and Detectors have been properly installed and energized according to instructions provided in Viking Technical Data.
2. Verify that the system has been properly drained. (When the plunger is depressed on drip check, no water should flow) System Drain should be open. Verify that the emergency release is closed.
3. Verify that the system main water control valve is closed.
4. Verify that the system water supply piping is pressurized up to the closed system main water supply control valve and the priming line is pressurized up to the closed priming valve.
5. Apply supervisory air pressure to 35 psi (2.4 bar) (55 psi (3.8 bar) for systems with greater than 175 psi (12 bar) water pressure) on system piping.
6. Open priming valve. Prime pressure should rise on priming pressure gauge.
7. Press SYSTEM RESET on the VFR-400 Release Control Panel.
8. Open the flow test valve.
9. Partially open the water supply control valve. Close the flow test valve. Fully open the water supply control valve.
10. Press SYSTEM RESET on the VFR-400 Release Control Panel.

6. TEST FIRECYCLE® III MULTI-CYCLE SYSTEM

Test the system according to the instructions found in the Technical Data for Model E-1 TRIMPAC® and the Model VFR-400 Release Control Panel.



1. Required Components

- A. Flow Control Valve
- B. Trim Piping and Components
 1. Rubber Seated Check Valve
 2. Control Valve
 3. Firecycle® Control Panel
 4. Firecycle® Trim Box
 5. Battery Charger
 6. Batteries
 7. Firecycle® Detector(s)
 8. Firecycle® Detector Cable
 9. Main Drain Valve
 10. Intermediate Drain Valve
 11. Priming Valve
 12. Position Indicator
 13. Strainer
 14. Electric Bell
- C. Air Supply
 15. Acceptable Primary or Maintenance Air

2. Optional Equipment

16. Pressure Switch
17. Water Motor Alarm
18. Alarm Test Valve
19. Alarm Shut-off Valve



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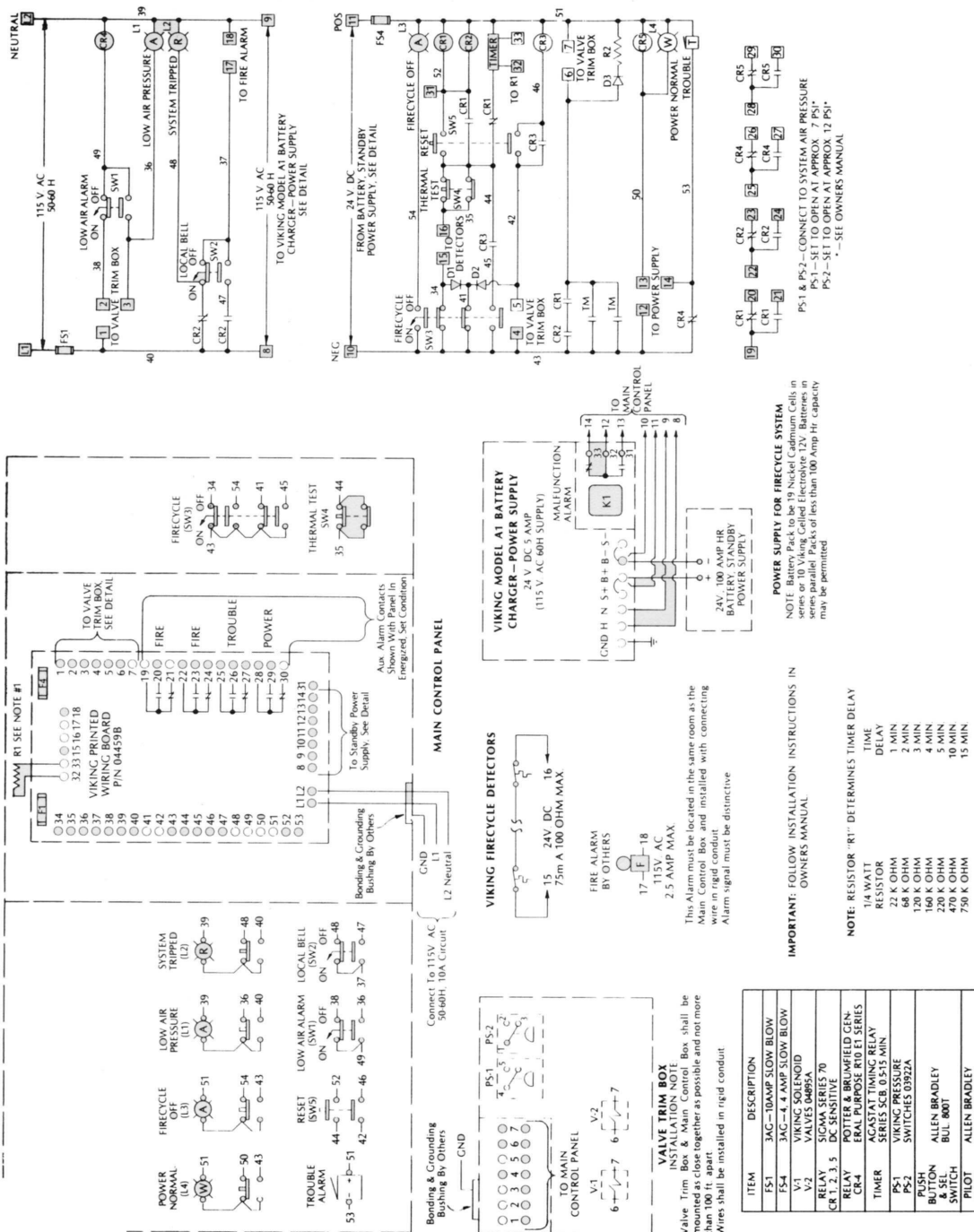


Figure 2 - Firecycle® II Control Panel Wiring Diagram



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	Component	Description	Part Numbers	Corresponding Data Pages	
A	System Valve				
	A.1	Flow Control Valve	Various	500 through 508	
B	TRIMPAC®		13801E-1	Form F_051304	
	B.1 - B.17	TRIMPAC® Components	Refer to Figure 10		
C	TRIMPAC® Drain Package				
	C.1	Auxiliary Drain Valve (NC)	1-1/2" - 11894-1 2" - 11894-2 2-1/2" & 3" - 11894-3 4", 6" & 8" - 11894-4	Form F_051304	
	C.2	Drip Check Valve			
	C.3	Drain Cup			
	C.4	Folw Test Valve (NC)			
D	Riser				
	D.1	Water Supply Control Valve	-	-	
E	Check Valve				
	E.1	1-1/2" & 2" - Model L-1 or M-1 Check Valve 3" - 8" - Easy Riser® Check Valve	Various	804a-d 815a-f	
	E.2	Check Valve Trim	Various		
F	Release System				
	F.1	Model VFR-400 Release Control Panel	14152-1	Form F_041307	
	F.2	Firecycle® Detectors	Firecycle® III	Various	Form F_071697
			Firecycle® III-OH	Various	Form F_040902
	F.3	Detector Cables	FPL Cable	16 Gauge - 09954 18 Gauge - 19750	Form F_031915
Table 2 - TRIMPAC® System Components					
Refer to Figure 3 for component identification					

NOTE: When viewing this data page online, [blue](#) text represents hyperlinks and will open the desired data page when clicked.

Legend for Figure 3

- Dotted lines indicate electrical system wiring required but not listed in "System Components" Table. For additional wiring requirements refer to technical data for components used.
- Dashed lines indicate pipe required but not included with TRIMPAC trim packages. Minimum 1/2" nominal piping recommended.
-  Smaller diameter hoses are the (4) included flexible braided stainless steel hoses. Also available as a kit (P/N) 12072
-  Larger diameter hose is the included PVC Drain Hose. Also available separately (P/N 12071).
- ** 1/2" (15 mm) NPT for non-interruptible Alarm Pressure Switch (Optional)



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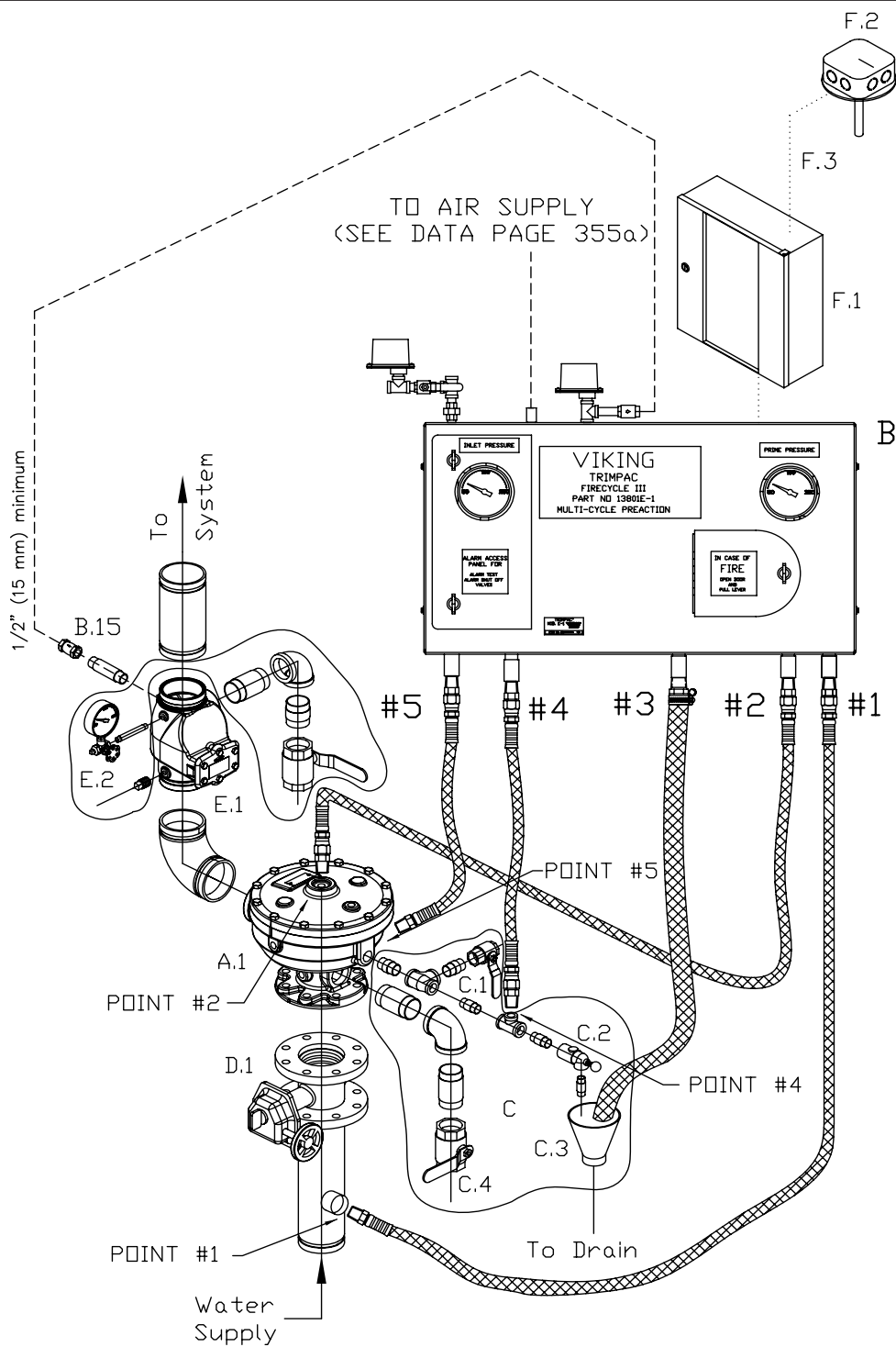


Figure 3 - Firecycle® III Multi-Cycle Single Interlocked Preaction System
 Note: The 6" angle style valve is shown. Refer to data page Form F_051304 for other valve sizes.

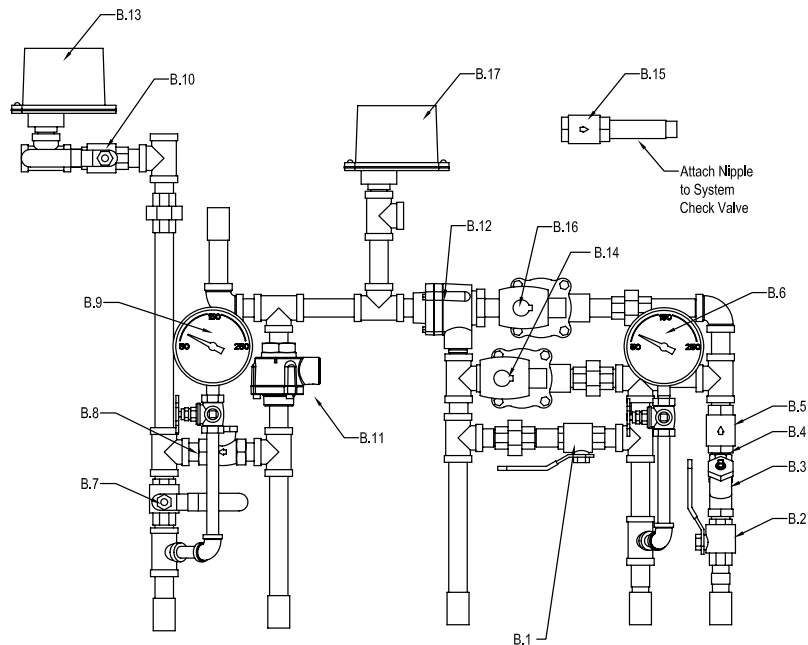


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B. TRIMPAC, FIRECYCLE III Preaction

- B.1 Emergency Release (Normally Closed)
- B.2 Priming Valve (Normally Open)
- B.3 Strainer
- B.4 1/8" Restriction
- B.5 Spring Loaded Check Valve
- B.6 Priming Pressure Water Gauge and Valve
- B.7 Alarm Test Valve (Normally Closed)
- B.8 Drain Check Valve
- B.9 Water Supply Pressure Gauge and Valve
- B.10 Alarm Shut-Off Valve (Normally Open)
- B.11 Pressure Operated Relief Valve (PORV)
- B.12 Pneumatic Actuator
- B.13 Water Flow Alarm Pressure Switch (Optional)
- B.14 Solenoid Valve (Normally Closed)
- B.15 Spring Loaded Check Valve
- B.16 Solenoid Valve (Normally Open)
- B.17 Air Pressure Supervisory Switch

Note: Emergency release (B.1) is closed when the handle is in line with the pipe. This allows the door to close when the valve is in the normal position.

Figure 4 - TRIMPAC® Components