



# TOTALFLOW

## *Technical Bulletin 92*

### Fairchild Actuator Hardware Modification

### Totalflow Technical Bulletin

Version 1.0, Revision AC (5 February, 2004)

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#### ABB Automation Inc.

Automation

ABB Automation Inc.  
P.O. Box 8900  
Bartlesville, Oklahoma  
74005 USA

Telephone  
(918) 338-4888  
Telefax  
(918) 338-4699

Internet  
[www.abb.com/usa](http://www.abb.com/usa)



## 1. Purpose

This document describes a compatibility problem between the Totalflow valve control package and the “OZ” or earlier versions of the Fairchild MP 2400 actuator. This bulletin supersedes bulletin #81.

## 2. Description

Fairchild redesigned the logic board (Part # 044-IPI-101-01 Revision E or lower) on their actuators. This style of logic board is round where the previous version was square (See drawing below). This board also has two latching relays on it (white rectangles that are larger than any other component on the board). This design utilizes two latching relays to give end of travel indications (i.e. Full Open and Full Closed). Under certain conditions it is possible for the new actuator to indicate a full open and a full closed contact at the same time. These conditions can occur when the valve either manually or automatically moves to one of the stops (full open or closed). This condition can occur during setup or normal operation.

ABB-Totalflow attempted to resolve this situation with the 6713 valve control firmware part number 2015489-016 or later. The firmware added a new Fairchild parameter that could be accessed through terminal mode. This feature is enabled by typing `vact =100`. **NOTE: this is only to be used on Fairchild M/P actuators.** This feature extends the power on time when an end of travel condition is sensed. This allows the actuator to put the relay into the correct condition.

Unfortunately the firmware feature did not resolve all full open/closed latching problems encountered. For this reason we asked Fairchild to produce a hardware change to their electronic board to resolve this situation. All actuators with revision “PA” or later should have the new electronic board (Part # 044-IPI-101-01 revision F or later) that corrects this problem.

## 3. Resolution

Fairchild has agreed to modify electronic boards with the above symptoms. The modification requires the board be returned to Fairchild for hardware modifications. Fairchild will charge a \$40 fee for this modification. Customers may contact Fairchild directly or ABB-Totalflow for repair instructions. **This repair fee offering will expire on 4/15/2004! Repairs after this date will be at Fairchild’s standard repair rates. Contact Fairchild directly for pricing and shipping information.**

### Fairchild

Customers wanting to send boards directly to Fairchild should call 336-659-3400 for an RA#

Fairchild Return Address:

Fairchild Industrial Products

Attn: RA# (customer should insert their Fairchild Return authorization number here)

3920 Westpoint Blvd.

Winston-Salem, NC 27103

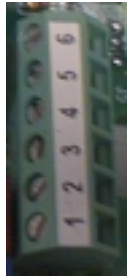


ABB-Totalflow

Call 1 800 442-3097 option 2, 1 for RA# and shipping instructions.

**NOTE:** Care should be taken when removing and re-installing the Fairchild electronic board. The board is attached using a 9 pin phoenix type connector, standoff, and 10 wires with quick connects. Use the diagram below when installing the electronic board.

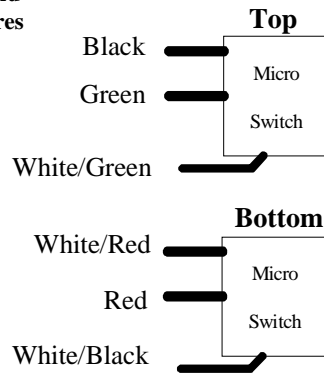
**Image of Fairchild 6 Pin Power and Motor Direction Connector**



Pin #6 = Black  
Pin #5 = White  
Pin #4 = Green  
Pin #3 = Red

**Fairchild Actuator Board #044-IPI-101-01 Revision F**

**Image of Fairchild Limit Switch Wires**



**Image of additional diode (D4) Added to produce the Fairchild Revision F electronic board.**

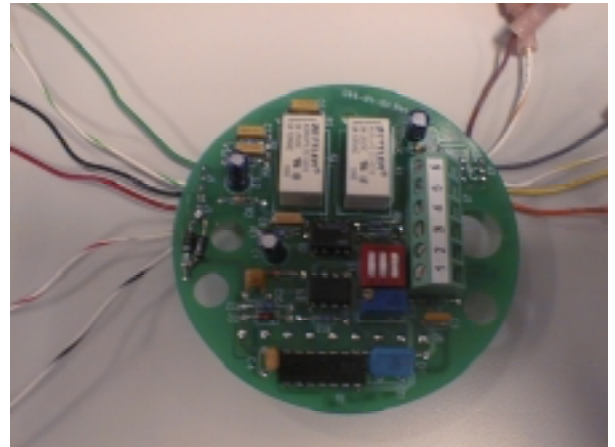


**Image showing Fairchild Wiring that mates with Totalflow contact closure (DI's) wiring**



Fairchild Electronic Board	Totalflow Digital Input Wiring
Brown	Gray
Gray	Brown
Yellow	Violet
Orange	Orange
White/Orange	Unused
White/Yellow	Unused

**Image of Fairchild Rev. F Actuator Board with Latching Relays**



**Three position Switch**



Switch #1 = Closed  
Switch #2 = Open  
Switch #3 = Open