

General Information or Other (PAR)

Event # 40610

Rep Org: FAIRBANKS MORSE ENGINE		Notification Date / Time: 03/25/2004 17:56 (EST)	
Supplier: FAIRBANKS MORSE ENGINE		Event Date / Time: 03/25/2004 (CST)	
Last Modification: 03/25/2004			
Region: 3	Docket #:		
City: BELOIT	Agreement State: Yes		
County:	License #:		
State: WI			
NRC Notified by: TODD COLLINS (FAX)	Notifications:	JOHN MADERA	R3
HQ Ops Officer: STEVE SANDIN		RONALD BELLAMY	R1
Emergency Class: NON EMERGENCY		DAVID GRAVES	R4
10 CFR Section:		VERN HODGE	NRR
21.21	UNSPECIFIED PARAGRAPH	JACK FOSTER	NRR

PART 21 NOTIFICATION INVOLVING POTENTIAL SAFETY HAZARD FOR BLOWERS ON OP ENGINES

"Subject:Roots Blower on OP Engines

"On March 23, 2004, Fairbanks Morse Engine evaluation determined a potential safety hazard exists for blowers (P/N 16609294) on OP engines. It is possible that the aluminum rotors can slip on the steel shaft and cause rotor-to-rotor or rotor-to-housing contact which could cause blower failure and inability of engine to perform its safety function.

"The defect was caused by improper cleaning of the shaft prior to casting the rotor onto the shaft. This causes an inadequate bond and allows the aluminum rotor to move axially on the steel shaft. Sample testing of rotors has found this condition to exist to varying degrees on approximately 75% of rotors produced between 1998 and 2003.

"(4) blowers were shipped to nuclear utilities that may be affected:

- "Utility Site Blower S/N
- "Exelon Limerick (RB813A, RB3871, RB816)
- "Entergy ANO-2 (RB814)

"To date, no engine failures have been experienced as a result of this problem. However, the potential exists. All slipped rotors have been found during routine maintenance inspections. This condition has been found to manifest itself within a low number of hours of operation. Therefore, the longer the rotors run and maintain proper clearance, the less likely they are to be affected by this condition.

"The affected utilities will be notified to evaluate inspection results and replace as necessary."

\*\*\*\*\*

JE19



701 White Avenue  
 Beloit, Wisconsin 53511  
 Tel: 608.364.8424  
 Fax: 608.364.8417  
 Ted.stevenson@fairbanksmorse.com

March 25, 2004

Document Control Desk  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555

Subject: Roots Blower on OP Engines

On March 23, 2004, Fairbanks Morse Engine evaluation determined a potential safety hazard exists for blowers (P/N 16609294) on OP engines. It is possible that the aluminum rotors can slip on the steel shaft and cause rotor-to-rotor or rotor-to-housing contact which could cause blower failure and inability of engine to perform its safety function.

The defect was caused by improper cleaning of the shaft prior to casting the rotor onto the shaft. This causes an inadequate bond and allows the aluminum rotor to move axially on the steel shaft. Sample testing of rotors has found this condition to exist to varying degrees on approximately 75% of rotors produced between 1998 and 2003.

(4) blowers were shipped to nuclear utilities that may be affected:

<u>Utility</u>	<u>Site</u>	<u>Blower S/N</u>
Exelon	Limerick	(RB813A, RB3871, RB816)
Entergy	ANO-2	(RB814)

To date, no engine failures have been experienced as a result of this problem. However, the potential exists. All slipped rotors have been found during routine maintenance inspections. This condition has been found to manifest itself within a low number of hours of operation. Therefore, the longer the rotors run and maintain proper clearance, the less likely they are to be affected by this condition.

The affected utilities will be notified to evaluate inspection results and replace as necessary.

Sincerely,

A handwritten signature in black ink that reads "Todd M. Collins".

Todd Collins  
 Manager, QA

an EnPro Industries company