General Information or Other (PAR) Event # 43235

Rep Org: FAIRBANKS MORSE	**Notification Date / Time:** 03/14/2007 11:41 (EST)
Supplier: FAIRBANKS MORSE	**Event Date / Time:** 03/13/2007 12:00 (CDT)
	Last Modification: 03/14/2007
Region: 3	**Docket #:**
City: BELOIT	**Agreement State:** Yes
County:	**License #:**
State: WI	
NRC Notified by: DOMINIC DEDOLPH	**Notifications:** RICHARD SKOKOWSKI R3
HQ Ops Officer: JOHN MacKINNON	OMID TABATABAI NRR
Emergency Class: NON EMERGENCY	
10 CFR Section:	
21.21 UNSPECIFIED PARAGRAPH	

10 CFR 21 NOTIFICATON - IDENTIFICATION OF DEFECT WOODWARD GOVERNOR PIVOT PIN DEFECT

Pursuant to 10 CFR 21.21 (d)(3)(ii), Fairbanks Morse Engine is submitting a written notification on the identification of a defect that is considered to be a substantial safety hazard.

(II) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Facility:

Duane Arnold Energy Center

Basic component which fails to comply or contains a defect:

Woodward governor actuator model EGB13P, part number 16403190, Woodward part number 9903-561 for Fairbanks Morse Engine Emergency Diesel Generator (EDG).

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Fairbanks Morse Engine
701 White Avenue

IE19

General Information or Other (PAR) Event # 43235
Beloit, WI 53511

(IV) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Nature of defect:

Per Woodward service bulletin 01393 dated January 2007, a pivot pin within the governor actuator was manufactured from incorrect material. The subsequent case hardening of the pivot pin made from incorrect material resulted in through hardening, making the pivot pin more brittle.

Safety hazard which could be created by such defect:

Per Woodward service bulletin 01393, a potential for pivot pin fracture exists which would result in the governor actuator going to the minimum fuel setting. The EDG would not be capable of carrying load under this condition.

The inability of an EDG to carry a load during a design basis event would be considered a loss of safety function.

(v) The date on which the information of such defect or failure to comply was obtained.

Fairbanks Morse Engine received Woodward service bulletin 01393 on 1/11/07. Duane Arnold Energy Center was notified of this situation via e-mail dated 1/12/07.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

The list of potentially affected governor actuators identified in Woodward service bulletin 01393 contains only 3 units (serial numbers 14693610, 14687576 and 14699005) that were purchased by Fairbanks Morse Engine on purchase order 1079037-I. All 3 units were sold to Duane Arnold Energy Center and had not been assembled to the EDGs.

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

The 3 units were repaired at Woodward on 1/18/07 by replacing the though hardened pivot pin with one that was from a lot that was verified via destructive analysis to be hardened to the properly case depth. All future lots of pivot pins will have case depth measurements taken to ensure proper case depth.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, Is being, or will be given to purchasers or licensees.

The need for repair of the 3 units was communicated to Duane Arnold Energy Center on 1/12/07. The repaired governor actuators were returned to Duane Arnold Energy Center on 1/26/07.

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FAIRBANKS MORSE ENGINE

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Dominic D. Dedolph
Manager, Quality Assurance
ASQ-CQM, CQE, CQA, CQT

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

March 13, 2007

Subject: 10 CFR 21 NOTIFICATION - IDENTIFICATION OF DEFECT
WOODWARD GOVERNOR PIVOT PIN DEFECT

Greetings,

Pursuant to 10 CFR 21.21 (d)(3)(ii), Fairbanks Morse Engine is submitting a written notification on the identification of a defect that is considered to be a substantial safety hazard.

There are two attachments to this letter. The FME Notification Report Serial Number 07-01 provides the information requested by 10 CFR 21.21 (d)(4). The Woodward service bulletin 01393 is attached as supporting documentation. Should there be any questions, please contact me at the phone number listed above or Ted Stevenson at 608-364-8424.

Sincerely,

Dominic Dedolph

Dominic Dedolph
Manager, Quality Assurance

Attachment

c: T. Stevenson
J. Eves
B. Schoenike
A. Gioffredi

FME Notification Report Serial Number 07-01
Fairbanks Morse Engine
10CFR 21.21 (d)(3)(ii) Notification

(i) Name and address of the individual or individuals informing the Commission.

Mr. Dominic D. Dedolph
Manager, Quality Assurance
Fairbanks Morse Engine
701 White Avenue
Beloit, WI 53511

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

Facility:

Duane Arnold Energy Center
3277 Daec Road
Palo IA 52324

Basic component which fails to comply or contains a defect:

Woodward governor actuator model EGB13P, part number 16403190, Woodward part number 9903-561 for Fairbanks Morse Engine Emergency Diesel Generator (EDG).

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

Fairbanks Morse Engine
701 White Avenue
Beloit, WI 53511

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Nature of defect:

Per Woodward service bulletin 01393 dated January 2007 (enclosed), a pivot pin within the governor actuator was manufactured from incorrect material. The subsequent case

hardening of the pivot pin made from incorrect material resulted in through hardening, making the pivot pin more brittle.

Safety hazard which could be created by such defect:

Per Woodward service bulletin 01393, a potential for pivot pin fracture exists which would result in the governor actuator going to the minimum fuel setting. The EDG would not be capable of carrying load under this condition.

The inability of an EDG to carry a load during a design basis event would be considered a loss of safety function.

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(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

The 3 units were repaired at Woodward on 1/18/07 by replacing the though hardened pivot pin with one that was from a lot that was verified via destructive analysis to be hardened to the properly case

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(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

The need for repair of the 3 units was communicated to Duane Arnold Energy Center on 1/12/07. The repaired governor actuators were returned to Duane Arnold Energy Center on 1/26/07.

WOODWARD

SERVICE BULLETIN

EGB Actuator
Pivot Pins with Incorrect Material

January 2007 01393

Issue	Some 375590 Pivot Pins were produced with incorrect material.
Description	The 375590 Pivot Pins are normally produced with a case hardening steel. This allows for good wear with ductility. A limited number of Pivot Pins were produced with a through-hardening steel, resulting in a more brittle part. When assembled, over-tightening of mating parts can cause the Pivot Pin to fracture. This situation was identified in our assembly process on two EGB-10 type actuators after completing the internal zero droop adjustment. The internal zero droop adjustment is only set during initial actuator setup. While the issue has only been detected during assembly, there is a remote chance that the failure could occur during operation. As of the date of the release of this service bulletin, there have been no reports of this issue occurring on units in operation. If the Pivot Pin fractures while in operation, the actuator will go to its minimum fuel setting, causing the engine to shut down. Customers should evaluate the criticality of their application when making a determination on whether to return the component(s) and/or unit(s) to Woodward for replacement/repair.
Affected Units	Potentially affected units include component level items shipped as spare parts as well as completed actuators. See Affected Units listed below.
Corrective Action	Affected Pivot Pins shipped as spare parts can be returned to Woodward for replacement. Affected EGB actuators can be returned to Woodward for repair.
Customer Action	Non-conforming Pivot Pins will be replaced under warranty. • Contact your Woodward customer service representative for a return authorization number (RAN) and return the part(s) or actuator(s) to Woodward. Please refer to this service bulletin number when scheduling your return. Service bulletin actions will be performed at no charge through 31 January 2008 or within the product warranty period.

Westward Item Number	Sales Invoice	Qty	Ship Date	Westward Sales Order	Customer Purchase Order
8241-820	14853821	1	10-Aug-06	2285447	10946C
8240-381	14745963	1	17-May-06	2238209	10585S
8241-943	14745965	1	17-May-06	2238209	10585S
8241-685	14682357	1	29-Mar-06	2217807	10401C
8241-814	14756816	1	30-May-06	2245706	10623C
8240-381	14550534	1	23-Dec-05	2109583	WAP-218
8240-854	14815225	1	18-Jul-06	2238338	66000261
375590	N/A	1	24-Feb-06	2213137	66000157
375590	N/A	1	2-May-06	2252197	66000381
375590	N/A	1	28-Apr-06	2250242	66000367
375590	N/A	1	11-Apr-06	2239791	66000328
8242-125	14610237	1	16-Feb-06	2176469	SRX-SBC70366
8240-381	14894362	1	19-Sep-06	2295191	706353
8240-381	14753772	1	24-May-06	2281835	706134
8241-978	14574275	1	11-Jan-06	2161416	5803X
8241-684	14944650	1	27-Oct-05	2303760	7056X
8240-790	14877111	1	30-Aug-06	2299861	5873X
8241-833	14904680	1	25-Sep-06	2323069	7282X
8241-810	14791993	1	28-Jun-06	2265499	06W-5241
8241-947	14745967	1	23-May-06	2229286	68357
8241-885	14723656	1	9-May-06	2219595	2872C
8241-885	14736136	1	9-May-06	2219595	2872C
8241-885	14736138	1	9-May-06	2219595	2872C
8241-955	14957257	1	3-Nov-06	2318777	10631-4
8241-955	14935472	1	19-Oct-06	2318777	10631-4
8242-126	14699007	1	17-Apr-06	2209853	10173-3
9903-561	14687576	1	12-Apr-06	2209101	1079037-I
9903-561	14683610	1	12-Apr-06	2209101	1079037-I
9903-561	14699005	1	12-Apr-06	2209101	1079037-I
8240-797	14800464	1	28-Jun-06	2276277	60617A
375590	N/A	1	16-Dec-05	2175685	51207A
8240-381	14841732	1	4-Aug-06	1623548	5600024730
8240-381	14705765	1	19-Apr-06	1623548	5600024730
8240-381	14935586	1	27-Oct-06	2175700	164036
8240-381	14621145	1	20-Feb-06	2175700	164036
8240-381	14706893	1	19-Apr-06	1623548	5600024730
8240-381	14622706	1	20-Feb-06	2175700	164036
8240-381	14832834	1	4-Aug-06	1623548	5600024730
8240-381	14949064	1	27-Oct-06	2175700	164036
8240-381	14946801	1	27-Oct-06	2175700	164036
8240-381	14944649	1	27-Oct-06	2175700	164036
8241-943	14750395	1	22-May-06	1679211	5500002263
8240-381	14705891	1	19-Apr-06	1623548	5600024730
8240-381	14610236	1	20-Feb-06	2175700	164036
8241-914	14579258	1	13-Jan-06	2141442	POS13885-C
8241-914	14637997	1	28-Feb-06	2199344	POS15389-C
8241-914	14636137	1	28-Feb-06	2199344	POS15389-C
8241-914	14636136	1	28-Feb-06	2199344	POS15389-C
8241-914	14662808	1	17-Mar-06	2199344	POS15389-C
9903-483	14853823	1	11-Aug-06	2278289	74690
9903-515	14660801	1	16-Mar-06	2196889	72164
9903-572	14960504	1	6-Nov-06	2311223	75623
9903-515	14653993	1	16-Mar-06	2196889	72164
8240-381	14771779	1	28-Jun-06	2264526	674009
8242-128	14815223	1	20-Jul-06	2243657	PON002657
8241-866	14922808	1	17-Oct-06	2315404	TL132/60425EX
375590	N/A	5	13-Dec-05	2167321	B-050370
9900-529	14830338	1	25-Jul-06	2292754	SPM7L5-06-M-1762
375590	N/A	1	19-Apr-06	2238615	1496269
8240-786	14878465	1	30-Aug-06	2282796	EGB200606H1846GV

Woodward Item Number	Serial Number	Qty	Shipped	WoodWard Sales Order	Customer Purchase Order
8241-855	14944651	1	24-Oct-06	2336922	CE732C
8241-926	14638861	1	7-Mar-06	2200302	P288/144316
8241-946	14658604	1	30-Mar-06	2193943	P288/143814
8241-946	14669710	1	30-Mar-06	2193943	P288/143814
375590	N/A	1	15-Mar-06	2218376	P288/145506
8241-946	14682358	1	30-Mar-06	2193943	P288/143814
375590	N/A	3	15-Sep-06	2320997	P288/152103
375590	N/A	1	22-Aug-06	2310340	P288/151301
375590	N/A	1	1-Aug-06	2294732	P288/150433
375590	N/A	1	30-Jun-06	2280220	P288/149348
8242-127	14791995	1	30-Jun-06	2233803	p288/146462
8241-926	14638862	1	7-Mar-06	2200302	P288/144316
8241-683	14758815	1	30-May-06	2221142	P288/145688
8241-946	14682362	1	30-Mar-06	2193943	P288/143814
375590	N/A	1	11-May-06	2251415	P288/147539
375590	N/A	2	12-Apr-06	2233816	P288/146510
8241-946	14566938	1	30-Mar-06	2193943	P288/143814
8241-683	14589406	1	19-Jan-06	2168868	P288/143349
8241-946	14660802	1	30-Mar-06	2193943	P288/143814
8241-946	14652621	1	30-Mar-06	2193943	P288/143814
8241-946	14652623	1	30-Mar-06	2193943	P288/143814
8241-946	14652622	1	30-Mar-06	2193943	P288/143814
8241-946	14657379	1	30-Mar-06	2193943	P288/143814
9903-517	14555565	1	14-Apr-06	2143994	4100074585
9903-515	14571136	1	24-Jan-06	2149681	BF079703/OR
9903-576	14574282	1	21-Feb-06	2153353	96580250
8241-799	14841731	1	23-Aug-06	2263995	3E1051 FB641803
8241-799	14622707	1	3-Mar-06	2178685	3L4062 31206662
8241-781	14951861	1	10-Nov-06	2323810	4J6924 B60007401
8241-781	14957267	1	28-Nov-06	2331921	4J7608 B60007401
8242-051	14991809	1	14-Dec-06	2324231	3362
8241-804	14708431	1	24-May-06	2221608	2006/031013
8242-117	14576871	1	23-Feb-06	2103061	2005-0926ZCW
375590	N/A	1	5-May-06	IP	43342556
375590	N/A	1	28-Sep-06	IP	44252159

WOODWARD

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Woodward has company-owned plants, subsidiaries, and branches, as well as authorized distributors and other authorized service and sales facilities throughout the world.

Complete address / phone / fax / email information for all locations is available on our website.

2007/1/Fort Collins