

# **Product Installation Study**

# PowerTracker® Digital Power Filter

#### **Project Information**

Project Name:	DPF Installation Study
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#### **Document Information**

Written By: File Name: Date: Adam Goodman DPFStudy-FKM.doc 9/10/03

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### **Executive Summary**

Electronic equipment of all types suffer damage and disruption due to powerline disturbances. This fact is unchallenged throughout the electronics industry yet it is very difficult to quantify the costs associated with downtime, parts replacement and service calls for various types of electronic equipment. In an attempt to quantify the effect of the EFI Digital Power Filter (DPF) on the operation of digital copiers, EFI Electronics Corporation conducted an installation study to compare the frequency of copier malfunction and damage requiring a service call between digital copiers installed without DPF protection verses copiers protected by a DPF.

The copiers that were installed without DPF protection were protected by various brands of inexpensive surge protection strips. The results of the 12 month study of 50 installations determined a 32% reduction in service calls when protecting the copier with the DPF.

### Background

FKM Copier Products, an authorized dealer for Kyocera Mita copiers located in Irvine, CA. monitored 50 copiers, 25 of which were not protected by a DPF and 25 of which were protected by a DPF. The non-protected and protected copiers were similar equipment installed in similar environments. See Appendix A.

The copiers were monitored between 8/15/2002 and 8/27/2003. The combined number of months that the non-protected copiers were monitored was 271 months, while the protected copiers were installed and monitored a total of 278 combined months.

### **Data Results**

The 25 copiers that were not protected by a DPF experienced 101 service calls, while the 25 copiers that were protected by a DPF experienced 70.

This means that the copiers that were not protected by the DPF operated an average of 2.68 months without a service call while the copiers that were protected averaged 3.97 months without a service call.

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#### Conclusion

The copiers that were not protected by a DPF were serviced a total of 101 times during the 271 combined months that the copiers were installed, for an average of 2.68 months between service calls. This equates to each copier being serviced 4.48 times a year.

The copiers that were protected by a DPF were serviced a total of 70 times during the 278 combined months that the copiers were installed, for an average of 3.97 months between service calls. This equates to each copier being serviced 3.02 times a year.

	Copy Machines	Number of Service Calls	Copier Combined Operation Months	Operational Months between Service Call	Service Calls per Year
Non – Protected	25	101	271	2.68	4.48
DPF Protected	25	70	278	3.97	3.02

By protecting the copier with a DPF, FKM Copier Products decreased service calls by 32% and <u>eliminated 1.45 service calls for</u> <u>each DPF protected copier.</u>



## **Business Impact**

Installing the DPF has a significant impact on service contract profitability through decreased service calls. Installing the DPF on a copier for 3 years would eliminate 4 service calls and installing the DPF for 5 years would eliminate 7 service calls.

Extrapolated Service Calls Savings				
3 Year	5 Year Installation			
Installation				
4 Service Calls	7 Service Calls			

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# Appendix A

Model	# Not	#	Percentage
	Protected	Protected	
	by DPF	by DPF	
1810	1	1	4%
2030	1	1	4%
3530	6	6	24%
4530	11	11	44%
5530	3	3	12%
6230	1	1	4%
8000DN	1	1	4%
C830DN	1	1	4%
Total	25	25	100%

Kyocera Mita models that were monitored in the study: