Form PTO-1595 (Rev. 07/05) OMB No. 0651-0027 (exp. 6/30/2008)	07-18-2	2006	U.S. DEPARTMENT OF COMM United States Patent and Tradem		
OMB 140. 0631-0027 (exp. 0/30/2008)		HEE	***	ark Office	
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To the Director of the U.S. Patent a			documents or the new address(es) be	elow	
1. Name of conveying party(ies) Yuetao Zhang Daniel D. Wilhelm Brian Liimatta			ress of receiving party(ies)	387	
Yuetao Zhang		Name: Cummins F	iltration Inc.	E.S. 52.	
Daniel D. Wilhelm Brian Liimatta				19 1	
<u> </u>				 129 11	
Additional name(s) of conveying party(ies) 3. Nature of conveyance/Execut			2021 Elm Hill Biles		
Execution Date(s) 6/28/2006, 7/5/200	` '	Street Address:	2931 EIIII AIII PIKE		
Assignment	Merger	-			
Security Agreement			City: Nashville		
Joint Research Agreement	☐ Change of Name	Chata			
Government Interest Assignm	nent	State: Tennessee			
Executive Order 9424, Confirm		Country: USA	Zip: <u>37214</u>		
Other	natory Electrics	A .d .d!#: d /- \	0	₩ No	
4. Application or patent number	r(s)·		& address(es) attached? Yes filed together with a new appl		
A. Patent Application No.(s)		B. Patent No.(ication.	
			•		
New Application 07/14-2006 AKELECH1 00000022 11485238	$\overline{}$				
04 FC 8021 40.00 DP)				
5. Name and address to whom	Additional numbers a				
concerning document should be	•	involved: One	of applications and patents		
Name: L. Scott Paynter		7. Total foo (37.0	CED 1 21(b) 8 3 /11) \$ 40.00		
Internal Address:		7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00 Authorized to be charged by credit card			
micrial / todroco		T TAGETOTIZES OF	be charged to deposit accou	nt	
Street Address: One Indiana Square		Enclosed	o bo onargou to doposit doodd		
Suite 2800		· 	ed (government interest not affect	ting title)	
		8. Payment Info			
City: <u>Indianapolis</u>	 .		Last 4 Numbers 1039		
State: Indiana Z	ip: <u>46204</u>	-	Expiration Date 04/09		
Phone Number: (317) 238-6321		h Denosit Acc	count Number		
Fax Number: (317) 238-6371	Fax Number: (317) 238-6371		b. Deposit Account Number		
Email Address: Ipaynter@kdlegal.co	<u>m</u>	Autnorized	User Name		
9. Signature:	-dy Obril		July 12, 2006		
	Signature		Date		
L. Scott Paynt			al number of pages including cover	6	
Name of	Person Signing	she	eet, attachments, and documents:		

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT REEL: 018103 FRAME: 0543

ASSIGNMENT

WHEREAS, Yuctao Zhang, 4642 Rosebud Drive, Columbus, Indiana 47203; Daniel D. Wilhelm, 737 Creamer Drive, Nashville, Indiana 47448; and Brian P. Liimatta, 3224 Skyview Court, Columbus, Indiana 47203, hereinafter referred to as Assignors, have made one or more new and useful inventions in a SYSTEMS, APPARATUSES, AND METHODS OF DETERMINING PLUGGING OR DEPLUGGING OF A DIESEL OXIDATION CATALYST DEVICE for which Assignors have made or will make application for Letters Patent of the United States (hereinafter the "Application"); and

WHEREAS, Cummins Filtration, Inc., hereinafter referred to as Assignee, a corporation of the State of Indiana, having a principal place of business at 2931 Elm Hill Pike, Nashville, Tennessee 37214, desires to acquire all of the entire right, title and interest in, to and under the one or more inventions disclosed, described and claimed or intended so to be in the Application, and in, to and under the Application, and in, to and under any and all Letters Patent, United States and foreign, which may be obtained therefore and thereon;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar (\$1.00) and other good, valuable and sufficient considerations to Assignors in hand paid, the receipt of which is hereby acknowledged, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto Assignee, all of the entire right, title, and interest in, to and under the one or more inventions disclosed, described and claimed or intended so to be in the Application entitled SYSTEMS, APPARATUSES, AND METHODS OF DETERMINING PLUGGING OR DEPLUGGING OF A DIESEL OXIDATION CATALYST DEVICE, and any and all other applications thereon and arising therefrom, including any and all applications claiming the

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PATENT REEL: 018103 FRAME: 0544 benefit thereof, and any and all divisions, continuations, and continuations-in-part thereof, and any and all patents to be issued and obtained therefor and thereon, United States and foreign, including all reissues and extensions thereof.

Assignors acknowledge that the Application was executed concurrently herewith unless a different execution date is indicated in item (a) below. Assignors hereby authorize Assignee, its counsel, or its agents to fill-in some or all of the following list of information items (a) through (c) at the discretion of the Assignee, its counsel, or its agents:

(a)	Execution Date of the Application:	
(b)	Patent Office Number of the Application:	
(c)	Filing Date of the Application:	

Assignors hereby authorize and request the Honorable Assistant Secretary and Commissioner for Patents and Trademarks to issue said Letters Patent to Assignee, its assigns and legal representatives.

Assignors agree to assign and execute any and all other papers necessary or desirable for the procurement of Letters Patent on said invention in this and all foreign countries for the use of Assignee.

WITNESS Assignor's hand this 28 day of June , 2006. Tuctao Zhang
STATE OF LADIADA): SS COUNTY OF Barlholomew)
Before me, a Notary Public, in and for said County and State, personally appeared Yuetao Zhang, who, being first duly sworn upon his oath, acknowledged the execution of the foregoing "Assignment" as his voluntary act and deed.
WITNESS my hand and Notarial Seal this 25 May of June, 2006.
Connie & Jackson
Notary Public Printed: CONNIE L. JACKSON
Resident of Bartho lonew County

My Commission Expires:

March 4, 2009

WITNESS Assignor's hand this 28th day of June, 2006. Daniel D. Wilhelm
STATE OF
WITNESS my hand and Notarial Scal this 28 thay of June, 2006.
Connie & Jackson Notary Public
Printed: CONNIE L. Jackson
My Commission Expires: Resident of Bartholomes County March 4 2009
ference -1, 2007

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WITNESS Assignor's hand this 5 day of 5414, 2006.
Dring Femalo
Brian P. Liimatta

STATE OF IND)	
COUNTY OF BE	RTHOLUMEW):SS)

Before mc, a Notary Public, in and for said County and State, personally appeared Brian P. Liimatta, who, being first duly sworn upon his oath, acknowledged the execution of the foregoing "Assignment" as his voluntary act and deed.

WITNESS my hand and Notarial Seal this St day of July _____, 2006.

Printed: TERRY J. NEFF

Resident of TARKSON County

My Commission Expires:

18-APR-2012

KD_IM-712090_1.DOC

RECORDED: 07/12/2006