

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3570652

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MICHAEL J. CUNNINGHAM	09/23/2015
PHANINDRA V. GARIMELLA	10/06/2015
VENKATA R. LAKKIREDDY	09/21/2015
MING-FENG HSIEH	10/08/2015
RECEIVING PARTY DATA	
Name:	CUMMINS EMISSION SOLUTIONS, INC.
Street Address:	500 JACKSON STREET
City:	COLUMBUS
State/Country:	INDIANA
Postal Code:	47201
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	14854414
CORRESPONDENCE DATA	
Fax Number:	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	312-832-4500
Email:	ipdocketing@foley.com, dkong@foley.com
Correspondent Name:	FOLEY & LARDNER LLP
Address Line 1:	3000 K STREET NW
Address Line 2:	SUITE 600
Address Line 4:	WASHINGTON, D.C. 20007
ATTORNEY DOCKET NUMBER:	106389-3682
NAME OF SUBMITTER:	MARSHALL J BROWN
SIGNATURE:	/marshall j brown/
DATE SIGNED:	10/15/2015
Total Attachments: 6	
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PATENT

REEL: 036798 FRAME: 0444

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Cummins Emission Solutions, Inc.
500 Jackson Street
Columbus, IN 47201
U.S.A.

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

ON-BOARD DIAGNOSTIC METHODS FOR PARTIAL FILTRATION FILTERS

as set forth in this United States Patent Application

check one ☐ executed concurrently herewith,
 ☐ executed on _____,
 ☒ Serial No. 14/854,414 Filed 9/15/2015

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **Foley & Lardner LLP** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **Foley & Lardner LLP** do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Executed this 23rd day of SEPTEMBER, 2015.


MICHAEL J. CUNNINGHAM

State of INDIANA)
County of Bartholomew)

On 23rd Sept. 2015, before me, Connie Jo Sproessig, Information Security
Date Here insert Name and Title of the Officer (Notary Public)

personally appeared MICHAEL J. CUNNINGHAM
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/their executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Connie Jo Sproessig
Signature of Notary Public



Place Notary Seal Above

Executed this 6th day of October, 2015

Ph. V. Phanindra.

PHANINDRA V. GARIMELLA

State of Indiana
County of Jackson

On October 6, 2015, before me, Tamblyn R. Fisher, Notary Public
Date Here insert Name and Title of the Officer (Notary Public)

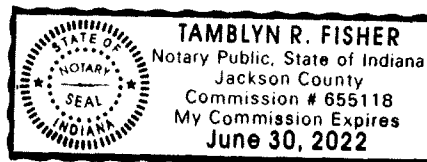
personally appeared PHANINDRA V. GARIMELLA
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/their executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Tamblyn R. Fisher
Signature of Notary Public



Place Notary Seal Above

Executed this 21 day of September, 2015.



VENKATA R. LAKKIREDDY

State of INDIANA)
County of BARTHOLOMEW)

On 21st Sept. 2015, before me, Connie Jo Spruessig, Information Security
Date Here insert Name and Title of the Officer (Notary Public)

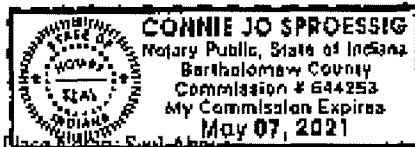
personally appeared VENKATA R. LAKKIREDDY
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/their executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY that the foregoing paragraph is true and correct.

WITNESS my hand and official seal,

Signature Connie Jo Spruessig
Signature of Notary Public



Executed this 8 day of Oct, 20 15


MING-FENG HSIEH

State of Indiana
County of Jackson

On October 8, 2015, before me, Tamblyn R. Fisher Notary Public
Date Here insert Name and Title of the Officer (Notary Public)

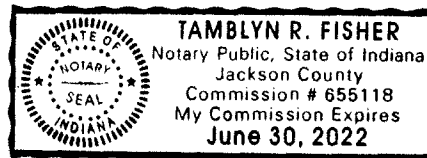
personally appeared MING-FENG HSIEH
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/their executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Tamblyn R. Fisher
Signature of Notary Public



Place Notary Seal Above