

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | | | |
|---|-------------------------------|---------------|----------------|---------------------|------------|-----------------|------------|-------------------|------------|---------------------|------------|--------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Mark Bays</td> <td>05/09/2011</td> </tr> <tr> <td>Thomas A. Grana</td> <td>05/09/2011</td> </tr> <tr> <td>Daniel D. Wilhelm</td> <td>05/05/2011</td> </tr> <tr> <td>Stephen J. Charlton</td> <td>05/09/2011</td> </tr> <tr> <td>John C. Wall</td> <td>01/10/2010</td> </tr> </tbody> </table> | | Name | Execution Date | Mark Bays | 05/09/2011 | Thomas A. Grana | 05/09/2011 | Daniel D. Wilhelm | 05/05/2011 | Stephen J. Charlton | 05/09/2011 | John C. Wall | 01/10/2010 |
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| Stephen J. Charlton | 05/09/2011 | | | | | | | | | | | | |
| John C. Wall | 01/10/2010 | | | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | | | |
| Name: | Cummins Inc. | | | | | | | | | | | | |
| Street Address: | 500 Jackson Street | | | | | | | | | | | | |
| City: | Columbus | | | | | | | | | | | | |
| State/Country: | INDIANA | | | | | | | | | | | | |
| Postal Code: | 47202 | | | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12894965</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 12894965 | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | |
| Application Number: | 12894965 | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | |
| Fax Number: | 3176361507 | | | | | | | | | | | | |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | | | | | | | |
| Phone: | 317-238-6333 | | | | | | | | | | | | |
| Email: | lschodrowski@kdlegal.com | | | | | | | | | | | | |
| Correspondent Name: | Douglas A. Collier | | | | | | | | | | | | |
| Address Line 1: | Krieg DeVault LLP | | | | | | | | | | | | |
| Address Line 2: | One Indiana Square, Sute 2800 | | | | | | | | | | | | |
| Address Line 4: | Indianapolis, INDIANA 46204 | | | | | | | | | | | | |
| ATTORNEY DOCKET NUMBER: | CECO-611 | | | | | | | | | | | | |
| NAME OF SUBMITTER: | Douglas A. Collier | | | | | | | | | | | | |

OP \$40.00 12894965

| | |
|--|----------------------|
| Signature: | /Douglas A. Collier/ |
| Date: | 09/05/2013 |
| Total Attachments: 8 source=Executed Assignment CECO 611#page1.tif source=Executed Assignment CECO 611#page2.tif source=Executed Assignment CECO 611#page3.tif source=Executed Assignment CECO 611#page4.tif source=Executed Assignment CECO 611#page5.tif source=Executed Assignment CECO 611#page6.tif source=Executed Assignment CECO 611#page7.tif source=Executed Assignment CECO 611#page8.tif | |

ASSIGNMENT

WHEREAS, Mark Bays of 11389 W. Old Nashville Road, Columbus, IN 47201, Thomas A. Grana of 4340 Bunting Lane, Columbus, IN 47203, Daniel D. Wilhelm of 737 Creamer Drive, Nashville, IN 47448, Stephen J. Charlton of 6027 Channel Dr., Columbus, IN 47201 and John C. Wall of 8275 Woodland Creek Drive West, Columbus, IN, 47201, hereinafter referred to as Assignors, have made one or more new and useful inventions in a SYSTEM, METHOD, AND APPARATUS FOR DETERMINING AFTERTREATMENT FLUID QUALITY for which Assignors have made or will make application for Letters Patent of the United States (hereinafter the "Application"); and

WHEREAS, Cummins, Inc., hereinafter referred to as Assignee, a corporation of the State of Indiana, having a principal place of business at 500 Jackson Street, Columbus, Indiana 47202, 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 SYSTEM, METHOD, AND APPARATUS FOR DETERMINING AFTERTREATMENT FLUID QUALITY, and any and all other applications thereon and arising therefrom, including

any and all applications claiming the 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 hereby authorize Assignee, its counsel, or its agents to fill-in some or all of the following list of information items (a) through (b) at the discretion of the Assignee, its counsel, or its agents:

- (a) Execution Date of the Application: May 9, 2011
- (b) Patent Office Number of the Application: 12/894,965
- (c) Filing Date of the Application: September 30, 2010

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 9 day of MAY, ²⁰¹¹~~2010~~.

Mark Bays

Mark Bays

STATE OF Indiana)
) : SS
COUNTY OF Bartholomew)



Before me, a Notary Public, in and for said County and State, personally appeared Mark Bays, 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 9th day of May, ²⁰¹¹~~2010~~.

Donna Dettmer

Notary Public

Printed: DONNA DETTMER

Resident of BARTHOLOMEW County

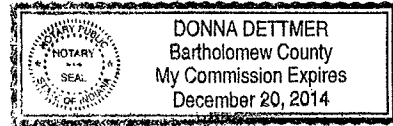
My Commission Expires:

December 20, 2014

WITNESS Assignor's hand this 9 day of May, ~~2010~~ 2011

Thomas A Grana
Thomas A. Grana

STATE OF Indiana)
) : SS
COUNTY OF Bartholomew)



Before me, a Notary Public, in and for said County and State, personally appeared Thomas A. Grana, 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 9th day of May, ~~2010~~ 2011

Donna Dettmer
Notary Public

Printed: DONNA DETTMER

Resident of BARTHOLOMEW County

My Commission Expires:

December 20, 2014

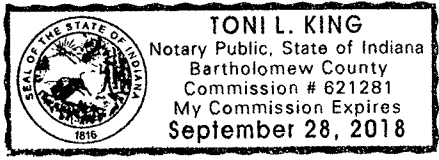
WITNESS Assignor's hand this 5 day of MAY, 2011 ~~2010~~.

Daniel D. Wilhelm
Daniel D. Wilhelm

STATE OF Indiana)
) : SS
COUNTY OF Bartholomew)

Before me, a Notary Public, in and for said County and State, personally appeared Daniel D. Wilhelm, 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 5th day of May, 2011, ~~2010~~.



Toni L. King
Notary Public

Printed: Toni L. King

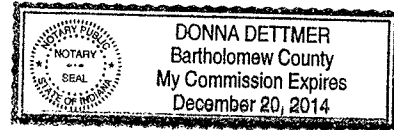
Resident of Bartholomew County

My Commission Expires:
September 28, 2018

WITNESS Assignor's hand this 9th day of May, ²⁰¹¹~~2010~~.

[Signature]
Stephen J. Charlton

STATE OF Indiana)
) : SS
COUNTY OF Bartholomew)



Before me, a Notary Public, in and for said County and State, personally appeared Stephen J. Charlton, 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 9th day of May, ²⁰¹¹~~2010~~.

[Signature]
Notary Public

Printed: DONNA DETTMER

Resident of BARTHOLOMEW County

My Commission Expires:

December 20, 2014

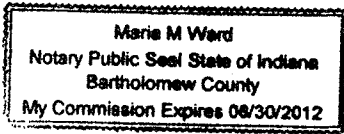
WITNESS Assignor's hand this 10 day of JANUARY, 2010.

John C Wall
John C. Wall

STATE OF Indiana)
COUNTY OF Bartholomew) : SS

Before me, a Notary Public, in and for said County and State, personally appeared John C. Wall, 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 10 day of January, 2010.



Marie M. Ward
Notary Public

Printed: MARIE M. Ward

Resident of Bartholomew County

My Commission Expires:

30 August 2012

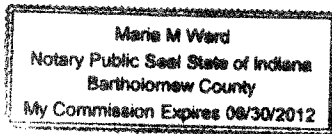
WITNESS Assignor's hand this 10 day of JANUARY, 2010.

John C. Wall
John C. Wall

STATE OF Indiana)
COUNTY OF Bartholomew) : SS

Before me, a Notary Public, in and for said County and State, personally appeared John C. Wall, 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 10 day of January, 2010.



Marie M. Ward
Notary Public

Printed: MARIA M. Ward

Resident of Bartholomew County

My Commission Expires:

30 August 2012

KD_3155696_1.DOC