## 505712047 10/08/2019

# **PATENT ASSIGNMENT COVER SHEET**

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5758857

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name                      | Execution Date |
|---------------------------|----------------|
| VAIBHAV DARAMWAR          | 08/28/2015     |
| JENNIFER KAY LIGHT-HOLETS | 09/03/2015     |
| DAVID A. BRUSH            | 09/04/2015     |

### **RECEIVING PARTY DATA**

| Name:           | CUMMINS INC.       |
|-----------------|--------------------|
| Street Address: | 500 JACKSON STREET |
| City:           | COLUMBUS           |
| State/Country:  | INDIANA            |
| Postal Code:    | 47201              |

### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 15432464 |

### **CORRESPONDENCE DATA**

**Fax Number:** (317)713-3699

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.

**Phone:** 317-713-3500

**Email:** taft-ip-docket@taftlaw.com

Correspondent Name: CUMMINS INC. TAFT, STETTINIUS & HOLLISTE

Address Line 1: ONE INDIANA SQUARE

Address Line 2: SUITE 3500

Address Line 4: INDIANAPOLIS, INDIANA 46204-2023

| ATTORNEY DOCKET NUMBER: | CECO-01435         |  |
|-------------------------|--------------------|--|
| NAME OF SUBMITTER:      | LISA SCHODROWSKI   |  |
| SIGNATURE:              | /Lisa Schodrowski/ |  |
| DATE SIGNED:            | 10/08/2019         |  |

### **Total Attachments: 7**

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COMBINED DECLARATION AND ASSIGNMENT FOR UTILITY AND DESIGN PATENT APPLICATIONS

DECLARATION

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD TO IMPROVE AFTERTREATMENT IN AN INTERNAL COMBUSTION ENGINE

the application of which was assigned Application No.  $\underline{PCT/US2015/046549}$  and filed on  $\underline{August}$  24, 2015.

The above-identified application was made or authorized to be made by me.

I hereby acknowledge that any willful false statement made in this declaration is punishable under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.

ASSIGNMENT

WHEREAS. Paul Douglas Free of 9875 North County Road 600 East, Hope. Indiana 47246, Jennifer Kay Light-Holets of 1231 Winter Hawk Court, Greenwood, Indiana 46143. Vaibhay Daramwar of 2110 Lakecrest Drive, Columbus, Indiana 47201, and David A. Brush of 7995 W. West Pointe Drive, Columbus, Indiana 47201, hereinafter referred to as Assignors, have made one or more new and useful inventions in SYSTEM AND METHOD TO IMPROVE AFTERTREATMENT IN AN INTERNAL COMBUSTION ENGINE for which Assignors have made a U.S. Patent Application No. 62/040,633 on August 22, 2014 and have made or will make application for Letters Patent of the United States (hereinafter the "Applications"); and

WHEREAS, Cummins Inc., hereinalter referred to as Assignce, 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

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 1 of 7

inventions disclosed, described and claimed or intended so to be in the Applications, an in, to and under the Applications, 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 Applications, 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 therein, 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 (d) at the discretion of the Assignee, its counsel, or its agents:

| (a) | Application Number:      | PCT/US2015/046549 |
|-----|--------------------------|-------------------|
| (b) | Application Filing Date: | August 24, 2015   |
| (a) | Application Number:      | 62/040.633        |
| (b) | Application Filing Date: | August 24, 2014   |

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 2 of 7

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.

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 3 of 7

| WITNESS Assignor's hand this 4 day of SEPTEMEE, 2015.  Paul Druglos FRLe Paul Douglas Free                     |   |  |
|--|---|--|
| STATE OF   | id County and State, personally appeared Paul<br>his oath, acknowledged the execution of the<br>deed, |  |
| WITNESS my hand and Notarial Seal this 47/day of SEPTEMBER, 2015.  |   |  |
| TOBY REECE JOHNSON Notary Public - Seal State of Indiana Bartholomsw County My Commission Expires Sep 10, 2022 | Notary Public  Printed: TOBY REECE JOHNSON  Resident of BARTHOLOMED County                            |  |

My Commission Expires:

SEP 10, 2002

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 4 of 7

| WITNESS Assignor's hand this 3 day of 5   | September 2015.  |
|---|--|
| Jer   | engles K. Josh Holets miler Kny Light-Holets   |
| STATE OF <u>INDIANA</u> ): SS<br>COUNTY OF <u>BASTHELONICA</u> )  |  |
| Before me, a Notary Public, in and for sa Jennifer Kay Light-Holets, who, being first duly execution of the foregoing "Assignment" as his | nid County and State, personally appeared sworn upon his oath, acknowledged the voluntary act and deed.  |
| WITNESS my hand and Notarial Seal th  | A CONTRACTOR OF THE CONTRACTOR |
| TOBY REECE JOHNSON  Notary Public - Seel  State of Indiana Bartholomae County  Ny Commission Expires Sep 10, 2022                         | Notary Public  Printed: To BY Resce JUHNSON  Resident of BACTHOLONEW County  |

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 5 of 7

My Commission Expires:

<u>SEPTEMBEL 11, 20</u>22

| WITNESS Assignor's hand this 28   | b_day orAvqus+  |
|---|---|
|   | N.  |
|   | Vaibhav Daramwar  |
| STATEOF INGIANA   | }   |
| STATE OF Indiana COUNTY OF BAKTHOLOGIEW   | ): SS<br>)  |
| Before me. a Notary Public.<br>Vaibhay Daramwar, who, being firs<br>the foregoing "Assignment" as his v         | in and for said County and State, personally appeared to duly sworn upon his oath, acknowledged the execution of oluntary act and deed. |
|   | arial Scal this <u>2844</u> day of <u>August</u> , 2015.  |
| TOBY REECE JOHNSON Notary Public - Seal State of Indiana Bartholomasi County My Commission Expires Sep 10, 2022 | Notary Public  Printed: Toby Revee Johnson  |
| My Commission Expires:  | Resident of BACTHOLD YES County   |

COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 6 of 7

| WITNESS Assignor's hand this 474 day of 6 | SEPTEMBER, 2015. |
|---|------------------|
|   | Droed W. Bu. V   |
| Da  | od A. Brush      |
|   |                  |

STATE OF <u>/ND/ANA</u>) ): SS COUNTY OF <u>BARTHOLOWEL</u>)

Before me, a Notary Public, in and for said County and State, personally appeared David A. Brush, who, being first duly swom upon his oath, acknowledged the execution of the foregoing "Assignment" as his voluntary act and deed.

WITNESS my hand and Notarial Scal this 44 day of SEPTEMBER. 2015.

Notary Public

TOBY REECE JOHNSON
Notary Public - Seal
State of Indiana
Bartholomew County
My Commission Expires Sep 10, 2022

Printed: TOBY REECE JEHNSON

Resident of BAKTHOLOMEW County

My Commission Expires:

SEP 10, 2022

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COMBINED DECLARATION/ASSIGNMENT CECO-1227/14-0115-EBU Page 7 of 7

> PATENT REEL: 050655 FRAME: 0790

**RECORDED: 10/08/2019**