506053892 05/11/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6100606

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JEFFREY DAVID SELWYN DIWAKER ABRAHAM	11/28/2017
ANANTH VERMURI	11/28/2017
MICHAEL HAAS	11/28/2017
ADAM W. KIDD	12/05/2017

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:	16871659

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 DOUGLAS A. COLLIER **Correspondent Name:**

Address Line 1: TAFT, STETTINIUS & HOLLISTER LLP Address Line 2: ONE INDIANA SQUARE, SUITE 3500 Address Line 4: INDIANAPOLIS, INDIANA 46204-2023

ATTORNEY DOCKET NUMBER: CECO-1769 LISA SCHODROWSKI NAME OF SUBMITTER: SIGNATURE: /Lisa Schodrowski/ **DATE SIGNED:** 05/11/2020

Total Attachments: 8 source=CDA#page1.tif source=CDA#page2.tif

> **PATENT** REEL: 052626 FRAME: 0131 506053892

source=CDA#page3.tif		
source=CDA#page4.tif		
source=CDA#page5.tif		
source=CDA#page6.tif		
source=CDA#page7.tif		
source=CDA#page8.tif		

PATENT REEL: 052626 FRAME: 0132

COMBINED DECLARATION AND ASSIGNMENT OF PATENT RIGHTS

WHEREAS, the below-named persons (hereinafter referred to as "Assignors" or "Inventors") have made one or more new and useful inventions which are claimed, disclosed and/or described in the patent application identified in Section 1. below (hereinafter collectively referred to as "the Invention");

WHEREAS, Cummins Inc. (hereinafter referred to as "Assignee") a legal entity organized under the laws of Indiana, desires to acquire the entire right, title and interest in to and under the Invention and any and all United States, foreign and international patent applications and patents which claim, disclose and/or describe the Invention; and

NOW, THEREFORE, for good, valuable and sufficient consideration to the Assignors, the receipt and sufficiency of which are hereby acknowledged, Assignors and Assignee agree as follows:

I. DECLARATION

As one of the below-named Inventors I hereby declare that:

This declaration is directed to the application entitled METHOD, ENGINE, AND CONTROL SYSTEM FOR CONTROLLING SOOT LOADING OF EXHAUST GAS AFTERTREATMENT COMPONENTS which:

A is attached hereto, or		
was filed as U.S. or PCT Application No	on	
The above-identified application was made or authorized	prized to be made by me.	
	un subuur suu uu ka la ora ku uu	a en la della en en e

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both,

II. ASSIGNMENT OF PATENT RIGHTS

A. Assignment of Patent Rights

Assignors hereby assign and transfer to Assignee, its successors and assigns, the entire right, title, and interest in to and under (i) the Invention, (ii) any and all United States, foreign and international patent applications which claim, disclose or describe the Invention including, without limitation, the application identified in Section I. above, (iii) any and all continuations, continuations-in-part, divisionals, foreign counterparts, reexaminations, reissues, extensions and applications claiming the benefit of or priority to any of the foregoing, (iv) any and all rights to claim priority to any of the foregoing, and (v) any and all rights to bring an action under, receive and collect damages for infringement of any of the foregoing and/or obtain injunctive relief for infringement of any of foregoing (hereinafter collectively referred to as "the Assigned Patent Rights").

Assignors acknowledge and agree that the Assigned Patent Rights include any and all asfiled and future applications not filed at the time of execution of this agreement which disclose, describe and/or claim subject matter of the Invention, or which claim priority to or the benefit of an application or patent which discloses, describes and/or claims subject matter of the Invention. With respect to such future applications, Assignors hereby authorize Assignee, its counsel, or its agents to append information identifying such applications as an Exhibit A to this document at the discretion of Assignee, its attorneys, or its agents.

B. Agreement to Execute Additional Documents and Provide Further Assistance

Assignors agree to execute any and all other documents necessary or desirable to document, memorialize or perfect Assignee's interest in the Assigned Patent Rights and to execute any and all other documents and to provide any further assistance necessary or desirable for the procurement of patent

21609738,1

rights on the above referenced invention in the United Sates and all foreign countries.

21609738.1

PATENT REEL: 052626 FRAME: 0134

C. Binding, Complete and Enforceable Agreement

Assignors acknowledge that (i) this is an enforceable agreement; (ii) this agreement embodies the entire and only understanding between Assignors and Assignee with respect to the subject matter of this agreement; (iii) no oral explanation or oral information by either party hereto shall alter the meaning or interpretation of this agreement; and (iv) if any provision of this agreement is held to be unlawful or unenforceable, such provision shall be limited or eliminated to the minimum extent necessary so that the remainder of this agreement will continue in full force and effect and be enforceable.

D. Execution

This agreement may be executed in counterparts or duplicate originals, both of which shall be regarded as one and the same instrument, and which shall be the official and governing version in the interpretation of this agreement. This agreement may be executed by facsimile signatures or other electronic means and such signatures shall be deemed binding as if they were original signatures.

[Signature Pages Follow]

igned and executed this 2 p day of November	3 2017	ud.
effrey David Selwyn Diwakar Abraham		
		2
OUNTY OF BARTHOLOMEW): SS		
Desail of SS		÷
efore me, a Notary Public, in and for said County and S liwakar Abraham, who, being first duly sworn upon his pregoing "Combined Declaration and Assignment of Pa	or her oath, acknowledged th	ne execution of th
efore me, a Notary Public, in and for said County and S riwakar Abraham, who, being first duly sworn upon his pregoing "Combined Declaration and Assignment of Pa	or her oath, acknowledged the ent Rights" as his or her vol	ne execution of th
efore me, a Notary Public, in and for said County and S iwakar Abraham, who, being first duly sworn upon his	or her oath, acknowledged the ent Rights" as his or her vol	ne execution of the untary act and de
efore me, a Notary Public, in and for said County and Sliwakar Abraham, who, being first duly sworn upon his pregoing "Combined Declaration and Assignment of Parallel Seal this 28° day lotary Public	or her oath, acknowledged the ent Rights" as his or her vol	ne execution of the untary act and de
efore me, a Notary Public, in and for said County and Sliwakar Abraham, who, being first duly sworn upon his pregoing "Combined Declaration and Assignment of Particles of Par	or her oath, acknowledged then Rights" as his or her vol	ne execution of the untary act and de

20 01.000000	
Signed and executed this 28 day of November , 2017	<u>Z</u> .
0H4	is the second of
Ananth Vermuri	, x.
STATE OF INDIANA	
COUNTY OF BARTHOLDMEW): SS	
Before me, a Notary Public, in and for said County and State, personally appeared being first duly sworn upon his or her oath, acknowledged the execution of the fore Declaration and Assignment of Patent Rights" as his or her voluntary act and deed.	egoing "Combined
WITNESS my signature and Notarial Seal this 250 day of November	, 2019
Very/	
Notary Public Notary Public	
The property of the first and the state of t	
Notary Public Printed: TERN J. NEFF Resident of JACKSTN County	

Signed and executed this <u>28</u> day of <u>November</u> ,	2017
Michael Haas	
STATE OF INDIANA COUNTY OF BARTHOLOMEW SEGORE me, a Notary Public, in and for said County and State, personally ap	negrad Michael Dans, who
being first duly sworn upon his or her oath, acknowledged the execution of Declaration and Assignment of Patent Rights" as his or her voluntary act an	the foregoing "Combined d deed.
WITNESS my signature and Notarial Seal this 28th day of NOVEMBE	, 2017
Printed: TERRY J. NEFF Notar Stal	RRY J. NEFF y Public- Seal le of Indiana n Expires Apr 18, 2020
My Commission Expires: 18-APR-2020	

Signed and executed this 5 day of December	ner-	2017	*
adam W. Wild			
Adam W. Kidd			
STATE OF INDIANA): SS COUNTY OF BARTHOLOMEN)			
Before me, a Notary Public, in and for said County being first duly sworn upon his or her oath, acknow Declaration and Assignment of Patent Rights" as hi	ledged the s or her vo	execution of the for luntary act and deed	egoing "Combined
Notary Barblis	uay ot	TERRY J. Notary Publi	NEFF
Printed: TERRY J. NEFF Resident of JACKSON County		State of Inc My Commission Expire	diana 🕻
My Commission Expires: 18-APR-2020	ž.		

EXHIBIT A TO COMBINED DECLARATION AND ASSIGNMENT OF PATENT RIGHTS

Identification of As Filed and Future Applications:

Country: US

Application No.: 62/585,070

Date: November 13, 2017

PCT Application No. PCT/US18/56897

Date October 22, 2018

21509738.1

PATENT REEL: 052626 FRAME: 0140

RECORDED: 05/11/2020