PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL J. CUNNINGHAM	01/20/2022
NEAL W. CURRIER	09/06/2022
SAURABH YASHWANT JOSHI	01/27/2022
ANTONIUS PADUA NUSAWARDHANA	06/09/2022
ALEKSEY YEZERETS	06/09/2022

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	17592770
PCT Number:	US2020045143
Application Number:	62883925

CORRESPONDENCE DATA

Fax Number: (202)672-5399

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2026725300

Email: kschwalbach@foley.com, ipdocketing@foley.com

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Address Line 2: SUITE 600

Address Line 4: WASHINGTON, D.C. 20007

ATTORNEY DOCKET NUMBER:	106389-7139
NAME OF SUBMITTER:	KATIE SCHWALBACH
SIGNATURE:	/Katie Schwalbach/
DATE SIGNED:	09/19/2022

Total Attachments: 18 source=Executed_Assignment#page1.tif source=Executed_Assignment#page2.tif source=Executed_Assignment#page3.tif source=Executed_Assignment#page4.tif source=Executed_Assignment#page5.tif source=Executed_Assignment#page6.tif source=Executed_Assignment#page7.tif source=Executed_Assignment#page8.tif source=Executed_Assignment#page9.tif source=Executed_Assignment#page10.tif source=Executed_Assignment#page11.tif source=Executed_Assignment#page12.tif source=Executed_Assignment#page13.tif source=Executed_Assignment#page14.tif source=Executed_Assignment#page15.tif source=Executed_Assignment#page16.tif source=Executed_Assignment#page17.tif source=Executed Assignment#page18.tif

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 Inc. 500 Jackson Street Columbus, Indiana 47201

(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

SYSTEMS AND METHODS FOR MEASURING EXHAUST GAS SPECIES AND SCR CATALYST NOX STORAGE FOR SCR-RELATED CONTROLS AND DIAGNOSTICS

as set forth in Patent Application

check one	[] executed concurrently herewith,
	[] executed on
	[X] Serial No. <u>62/883,925</u> Filed <u>8/7/2019</u>
	[X] Serial No. <u>PCT/US2020/045143</u> Filed <u>8/6/2020</u>

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 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.

	Executed this 2	Æ th day of <i>∫αμμακ</i>	1 1 ms
			MICHAEL J. CUDWINGHAM
	Executed this _	day of	, 20
			NEAL W. CURRIER
	Executed this _	day of	, 20
			SAURABH YASHWANT JOSHI
	Executed this	day of	, 20
			ANTONIUS PADUA NUSAWARDHANA
	Executed this	day of	, 20
			ALEKSEY YEZERETS
4837-4458-8744.1		Page	3 of 3

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Executed this	_ day of	, 20
		MICHAEL J. CUNNINGHAM
Executed this 6th	_day of September	20_22.
		Neal Currier Neal W Currier NEAL W. CURRIER
		TILITES W. CORRECT
Executed this	_ day of	, 20
		SAURABH YASHWANT JOSHI
Executed this	_ day of	, 20
		ANTONIUS PADUA NUSAWARDHANA
Executed this	_ day of	, 20
		ALEKSEY YEZERETS

Page 3 of 3

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ASSIGNMENT - WORLDWIDE

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Page 1 of 3

4837-4458-8744.1

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Executed this day of	, 20,
	MICHAEL J. CUNNINGHAM
Executed this day of	, 20
	NEAL W. CURRIER
Executed this 2 7 day of 50	2022 SAURABH YASHWANT JOSHI
Executed this day of	, 20
	ANTONIUS PADUA NUSAWARDHANA
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Executed this	_ day of	
	-	MICHAEL J. CUNNINGHAM
E 4 141	1	20
Executed this	_ day of	
	-	NEAL W. CVPPHED
		NEAL W. CURRIER
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	-	SAURABH YASHWANT JOSHI
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		ANTONIUS PADUA NUSAWARDHANA
Executed this	_ day of	. 20
		<u> </u>
	-	ALEKSEY YEZERETS

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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.

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Name:	MICHAEL J. CUNNINGHAM		
Signature:		Date:	

Name:	NEAL W. CURRIER		
Signature:		Date:	

Name: SAURABH Y	ASHWANT JOSHI		
Signature:		Date:	

Name:	ANTONIUS PADUA NUSAWARDHANA		
Signature:		Date:	

Name:	ALEKSEY YEZERETS		
Signature:	Aleksey Gezerots	Date:	June 9, 2022