PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XING JIN	01/20/2021
LISA A. ORTH-FARRELL	01/20/2021
GARY C. SALEMME	02/03/2020
MANIK NARULA	01/20/2021

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:	17790411

CORRESPONDENCE DATA

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FAEGRE DRINKER BIDDLE & REATH LLP **Correspondent Name:**

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ATTORNEY DOCKET NUMBER:	CI-19-0152-02-US	
NAME OF SUBMITTER:	SHAHEEN KASU	
SIGNATURE:	/Shaheen Kasu/	
DATE SIGNED:	07/17/2023	

Total Attachments: 5

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> **PATENT** REEL: 064284 FRAME: 0764 508013822

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> PATENT REEL: 064284 FRAME: 0765

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First Named Inventor: Xing Jin

Title: SYSTEMS AND METHODS FOR CONDITIONING AN AFTERTREATMENT SYSTEM USING AN ELECTRIC

MACHINE TO DRIVE A COMBUSTION ENGINE

WHEREAS, we, **Xing Jin**, residing at 7038 Stoney Ridge Dr., Columbus, Indiana 47201; **Lisa A. Orth-Farrell**, residing at 12835 East 100 North, Columbus, Indiana 47203; **Gary C. Salemme**, residing at 4015 Sandpiper Lane, Columbus, Indiana 47203; and **Manik Narula**, residing at 288 Westbrook Court., Columbus, Indiana 47201, have invented certain new and useful improvements as described in a patent application entitled **SYSTEMS AND METHODS FOR CONDITIONING AN AFTERTREATMENT SYSTEM USING AN ELECTRIC MACHINE TO DRIVE A COMBUSTION ENGINE, filed with the United States Patent and Trademark Office ("USPTO") on January 30, 2020; and designated United States Patent Application Serial No. 62/967,919 (the "Application"); and**

WHEREAS, Cummins Inc. a corporation of the State of Indiana, and having an at address 500 Jackson Street, Columbus, Indiana 47201 ("Assignee"), is desirous of acquiring the entire right, title and interest in and to the invention, the Application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the undersigned hereby transfer and assign to Assignee, its successors and assigns, the entire right, title, and interest in and to the inventions, the Application, corresponding United States (US) applications (including provisionals, nonprovisionals, divisionals, continuations, continuations-in-part, reissues, reexaminations, substitutions and extensions thereof), corresponding non-US applications, all Letters Patent or similar legal protection issuing thereon (and absolute entitlement thereto), all rights and benefits under any applicable treaty or convention, all rights to apply for, prosecute, and obtain patents or similar legal protection anywhere in the world (in its own name if desired), all rights to claim priority to the Application, and all rights of action and damages for any past, present or future infringement relating thereto, including all rights of actions and damages from publication of any of the aforementioned patent applications and/or issuance of any patent relating thereto;

The undersigned will not execute any writing or do any act whatsoever conflicting with these obligations, and will, at any time upon request, without further or additional consideration, execute such additional assignments and other writings and do such additional acts as Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining any original, divisional, continuation, continuation-in-part, reexamination, or reissue patent or application (or substitutions or extensions) of the United States or of any and all non-US countries on said inventions, and in enforcing any rights or choses in action accruing as a result of such applications or patents, by (including, without limitation) giving testimony in any proceedings or transactions involving such applications or patents, and by executing preliminary statements and other affidavits (where said Assignee will reimburse the undersigned for reasonable expenses associated with such enforcement assistance). The foregoing covenant and agreement shall inure to the benefit of the assigns and legal representatives of the undersigned and Assignee; and the undersigned authorize the Commissioner of Patents and Trademarks of the United States or non-US equivalent thereof to issue the Letters Patent or similar legal protection to the Assignee.

The undersigned authorize the Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the filing date and application number of the Application when ascertained.

IN WITNESS WHEREOF, we have hereunto set our hand and affixed my seal on the date indicated below:

US.123710620.01

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First Named Inventor: Xing Jin

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SYSTEMS AND METHODS FOR CONDITIONING AN AFTERTREATMENT SYSTEM USING AN ELECTRIC

MACHINE TO DRIVE A COMBUSTION ENGINE

Xing Jin

Date 0//20/202

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First Named Inventor: Xing Jin

Title: SYSTEMS AND METHODS FOR CONDITIONING AN

AFTERTREATMENT SYSTEM USING AN ELECTRIC MACHINE TO DRIVE A COMBUSTION ENGINE

Lisa A Orth-Farrell

Lisa A. Orth-Farrell

Date 1/20/2021

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First Named Inventor: Xing Jin

Title: SYSTEMS AND METHODS FOR CONDITIONING AN

AFTERTREATMENT SYSTEM USING AN ELECTRIC

MACHINE TO DRIVE A COMBUSTION ENGINE

Gary C. Salemme

Date 2/3/20

ASSIGNMENT

Attorney Docket No.: CI-19-0152-01-US Page 5 of 5

First Named Inventor: Xing Jin

Title: SYSTEMS AND METHODS FOR CONDITIONING AN AFTERTREATMENT SYSTEM USING AN ELECTRIC MACHINE TO DRIVE A COMBUSTION ENGINE

/Manik Narula/	
Manik Narula	
Date 1-20-2021	

US.123710620.01

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