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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PALLAV JHA	03/24/2017
AXEL OTTO ZUR LOYE	03/20/2017
JOSEPH SCOT ROEDERER	03/14/2017
STEVEN L. LEFFLER	03/24/2017
JOHN A. RENNEKAMP	04/12/2017
AMIT A. KULKARNI	03/21/2017
PETER VINSON WOON	03/29/2017
ANDREW GUY KITCHEN	04/20/2017

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:	15429105

CORRESPONDENCE DATA

Fax Number:

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: 317-237-0300

Email: inteas@faegrebd.com

Correspondent Name: ROBERT D. NULL

Address Line 1: 300 NORTH MERIDIAN STREET, SUITE 2700

Address Line 4: INDIANAPOLIS, INDIANA 46204

ATTORNEY DOCKET NUMBER: CI-11-0097-03-US-E

NAME OF SUBMITTER: ROBERT D. NULL

SIGNATURE: /robert d. null/

PATENT 504360221 REEL: 042323 FRAME: 0454

DATE SIGNED:	05/10/2017			
Total Attachments: 8				
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PATENT REEL: 042323 FRAME: 0455

Attorney Docket No.: CI-11-0097-03-US Page 1 of 8

First Named Inventor: Pallav Jha et al.

Title: AIR INTAKE SYSTEM FOR INTERNAL COMBUSTION ENGINE

WHEREAS, we, Pullav Jha, residing at 5560 Treeline Drive, Columbus, Indiana 47201; Axel Otto zur Loye, residing at 1015 Tanbank Drive, Columbus, Indiana 47203; Joseph Scot Roederer residing at 10993 East Coffey Drive, Columbus, Indiana 47203; Steven L. Leffler residing at 240 N. 17th Street, Vincennes, Indiana 47591; John A. Rennekamp residing at 720 W. 6th Street, Seymour, Indiana 47274; Amit A. Kulkarni residing at 2305 Broadmoor Lane, Columbus, Indiana 47203; Peter Vinson Woun residing at 2624 California Street, Columbus, Indiana 47201; and Andrew Guy Kitchen residing at 20 Bradbury Road, Newmham, Daventry, Great Britain NN113HD have invented certain new and useful improvements in an invention titled AIR INTAKE SYSTEM FOR INTERNAL COMBUSTION ENGINE as described in United States Patent Application No. 15/429,105, filed on February 9, 2017 (the "Application"), and

WHEREAS, Cummins Inc., a corporation of the State of Indiana, and having an address of 500 Jackson Street, Columbus, Indiana 47201. United States of America ("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, we hereby assign; convey, and transfer to Assignee our entire worldwide right, title, and interest in and to the invention, the Application, domestic and foreign patent applications claiming priority to the Application (including provisionals, divisionals, continuations, and continuations-in-part), all Letters Patent and registrations issuing thereon, and all rights and benefits under any applicable treaty or convention; and we authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the aforementioned the Letters Patent, registrations, and/or rights and benefits in any form, to Assignce.

We authorize Assignee, its successors and assigns, or anyone Assignee may properly designate, to (1) insert in this instrument the filing date and application number of the Application when ascendined, if applicable, (2) apply for Letters Patent, registrations, and all rights and benefits in any form in its own name in any and all countries, and (3) record this assignment agreement in any governmental office of any country having granted said Letters Patents, registrations, and/or rights and benefits, and (4) assign this agreement without further consideration.

We represent to Assignee that we have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. We agree that we, or our executors or administrators, will at any time upon request, without additional consideration but at the expense of Assignee, execute such additional writings and do such additional acts as Assignee may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

Pallay Aba

Date 3/24/2017

State of Indiana

County of TACKSON

Subscribed and sworn to (or affirmed) before me on this $\frac{2\sqrt{9}}{2}$ day of $\frac{MARCH}{2}$, 2017, by Pallav Jha, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

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(Seal)

TERRY J. NEFF Notary Public- Seal State of Indiana My Commission Expires Apr 18, 2020

Attorney Docket No.: CI-11-0097-03-US

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First Named Inventor: Pallav Jha et al.

AIR INTAKE SYSTEM FOR INTERNAL

COMBUSTION ENGINE

Date March 20, 2017

State of Indiana

County of BARTHOLDMEN

Subscribed and sworn to (or affirmed) before me on this 20 th day of MARCH 2017, by Otto zur Loye, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Signature

(Seal)

TOBY REECE JOHNSON Notary Public - Seal State of Indiana Bartholomew County

mission Expires Sep 10, 2022

Attorney Docket No.: CI-11-0097-03-US

Page 3 of 8

First Named Inventor: Pallav Jha et al.

Title: AIR INTAKE SYSTEM FOR INTERNAL

COMBUSTION ENGINE

Joseph Scot Rogderer

State of Indiana County of *BAR THOLOMEW*

Subscribed and swom to (or affirmed) before me on this /4 th day of MARCH, 2017, by

Joseph Scot Rogderer, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Signature

TOBY REECE JOHNSON Motary Public - Seal State of Indiana **Bartholomew County**

My Commission Expires Sep 10, 2022

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Attorney Docket No.: CI-11-0097-03-US

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First Named Inventor: Pallav Jha et al.

AIR INTAKE SYSTEM FOR INTERNAL

COMBUSTION ENGINE

State of Indiana

County of JACKSON

Subscribed and swom to (or affirmed) before me on this 24th day of MAPCH. 2017, by Steven L. Leffler, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

TERRY J. NEFF Notary Public- Seal State of Indiana

My Commission Expires Apr 18, 2020

	Attorney Docket No.: CI-11-0097-03-US Page 5 of 8					
ASSIGNMENT	First Named Inventor: Pallav Jha et al.					
	Title: AIR INTAKE SYSTEM FOR INTERNAL COMBUSTION ENGINE					

John A. Rennekamp

Date 12 Apr 2017

State of in	diana
County of	JACKSON

Subscribed and sworn to (or affirmed) before me on this $\frac{12^{\frac{10}{2}}}{12^{\frac{10}{2}}}$ day of $\frac{12^{\frac{10}{2}}}{12^{\frac{10}{2}}}$. 2017, by John A. Rennekamp, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Signature (Seal)

TERRY J. NEFF Notary Public- Seat State of Indiana My Commission Expires Apr 18, 2020

	Attorney Docket No.: CI-11-0097-03-US Page 6 of 8				
ASSIGNMENT	First Named Inventor: Pallav Scot Jha et al.				
	Title:	AIR INTAKE SYSTEM FOR INTE	ERNAL		
xxxxyxxxxxyy00000000000000000000000000	-	Nagashara			

Amit A. Kulkarni

Date 3/21/2017

State of Indiana County of JACKSON)			
Subscribed and sworn to (or affirmed) before the on this A. Kulkarni, proved to me on the basis of satisfactory ev	2/d day o	of MARCH ne person who app	, 2017, by Amit

Signature (Sent)

TERRY J. NEFF Notary Public- Seat State of Indiana My Commission Expires Apr 18, 2020

Attorney Docket No.: CI-11-0097-03-US I

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First Named Inventor: Pallav Jha et al.

le: AIR INTAKE SYSTEM FOR INTERNAL

COMBUSTION ENGINE

eter Vinson Woon

Date 3/29//7

State of Indiana

County of BARTHOLOMEW)

Subscribed and sworn to (or affirmed) before me on this <u>24+L</u> day of <u>MARCH</u>, 2017, by Peter Vinson Woon, proceed to me on the basis of satisfactory evidence to be the person who appeared before me.

Signature

(Seal)

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

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Attorney Docket No.: CI-11-0097-03-US

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First Named Inventor: Pallav Jha et al.

itle: AIR INTAKE SYSTEM FOR INTERNAL

COMBUSTION ENGINE

Andrew Guy Kitcher

Date 20 April 2017

State of Indiana County of County of

Subscribed and sworn to (or affirmed) before me on this 20th day of 1000 day of 2017, by Andrew Guy Kitchen, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Signature Tambly R. Fishe

(Seal)

TAMBLYN R. FISHER

TAMBLYN R. FISHER

Notary Public, State of Indians

Jackson County

Commission # 655118

My Commission Expires

June 30, 2022

US.110311425.01

RECORDED: 05/10/2017

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