506717414 06/16/2021

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRETT A. ZOOK	06/16/2021
CHRISTOPHER F. GALLMEYER	02/18/2021
KARTHIK JAYASANKARAN	02/11/2021
KAMALAKANNAN THAMMIREDDI VAJRAM	02/08/2021

RECEIVING PARTY DATA

Name:	CATERPILLAR INC.
Street Address:	100 NE ADAMS STREET, SUITE 100
City:	PEORIA
State/Country:	ILLINOIS
Postal Code:	61629-9510

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17181231

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.

Email: jyates@bscattorneys.com

Correspondent Name: CATERPILLAR INC./BRANNON SOWERS & CRACRAFT

Address Line 1: 100 N.E. ADAMS STREET, SUITE 100

Address Line 4: PEORIA, ILLINOIS 61629-9510

ATTORNEY DOCKET NUMBER:	20-0870US01
NAME OF SUBMITTER:	JONATHAN F. YATES
SIGNATURE:	/Jonathan F. Yates/
DATE SIGNED:	06/16/2021

Total Attachments: 5

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PATENT REEL: 056558 FRAME: 0316

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 20-0870US01

ASSIGNMENT

WHEREAS We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

DERATING OPERATING STRATEGY AND GASEOUS FUEL ENGINE CONTROL SYSTEM

for which We will or have filed a patent application; and

WHEREAS, Caterpillar Inc., a corporation of the State of Delaware, having an address at 100 NE Adams Street, Peoria, Illinois 61629-9510 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;

NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our entire right, title, and interest in and to this invention, and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and I hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, WE HEREBY covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed and will not execute any agreement in conflict with this Assignment;

AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

AND, WE HEREBY authorize Assignee or the attorneys/representatives of Assignee to insert here in parentheses the country, application number, and official filing date (<u>United States</u> Application No. <u>17/181,231</u>, filed <u>February 22, 2021</u>).

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

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SOLECIONT INVENTION Worldwide Rights Atterney Docket No. 20-0870US01 (1438 1. FIRE NAME OF SOLE OF FIRE FASSIONOR Brett A Zook 1845 40st 450 South F WATERCOS RIAME 6/16/21 CONCERNORS Latayette, IN 47909 2. WINESS NAME WATRESS SIGNATURE 13439 KOOPERE COTECENSION Page 2 of 5

> PATENT REEL: 056558 FRAME: 0318

Full name of sole or second assignor Christopher F Gallmeyer	ASSIGNOR'S SIGNATURE	DATE 2/18/2021
ADDRESS 1208 W. Walnut St, Chillicothe, IL 61523		спідеманір United States
		3
1. WITNESS NAME	WITNESS SIGNATURE	DATE
Retricia A Gallmager	Retrico a Sailmeyr	3-15-2026
ADDRESS		citizenship (Likiteri Status
2. WITNESS NAME	WITNESS SIGNATURE	DATE
Emma Gallnete	Erra Elling	2/18/21
ADDRESS 1208 W. Wednut St. Chillicothe, IL 61527		CITIZENSHIP Ubited Stutes
	,	

3. FUEL NAME OF THIRD ASSIGNOR	ASSIGNOR'S SIGNATURE	DATE
Karthik Jayasankaran	JkNh.	02/11/2021
ADDRESS 10723 N Glenfield Drive, Dunlap IL 61525		CITIZENSHIP India
1: WiTNESS NAME Prasanna M Ballat	WITNESS SIGNATURE	DATE 2/11/2021
ADDRESS 2122 W Broad and Drive Dunlap, IL 61525, U.S.A.		CITIZENSHIP U.S.
2. WITNESS NAME Varsha Venkatraman	WITNESS SIGNATURE	DATE: 02/11/2021
ADDRESS 10723 N GLENFIELD DRIVE, DUNLAP, IL 61528		CITIZENSHIP India

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 20-0870US01

4. FULL NAME OF FOURTH ASSIGNOR Kamalakannan Thammireddi Vajram	ASSIGNOR'S SIGNATURE TV: H-46	DATE 02/08/2021
ADDRESS 2401 W Alta Rd, Apt 1107, Peoria, IL. 61615		CITIZENSHIP India
1, WITNESS NAME	WITNESS SIGNATURE	DATE
ADORESS		CITIZENSHIP
2. WITNESS NAME	witness signature	CATE
ADDRESS		CITIZENSHIP

PATENT RECORDED: 06/16/2021 REEL: 056558 FRAME: 0321