503634528 01/05/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3681158

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHEN YUAN	12/11/2015
KRISHNAKUMAR DHARAPURAM RAMAMOORTHY	12/15/2015
OSAMA MOHAMMAD ALKHOULI	12/10/2015

RECEIVING PARTY DATA

Name:	CATERPILLAR INC.	
Street Address:	100 N.E. ADAMS STREET	
Internal Address:	INTELLECTUAL PROPERTY DEPARTMENT	
City:	PEORIA	
State/Country:	ILLINOIS	
Postal Code:	61629-6490	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14987987

CORRESPONDENCE DATA

Fax Number: (202)408-4400

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: 202-408-4000

Email: regional-desk@finnegan.com

CATERPILLAR/FINNEGAN, HENDERSON, L.L.P. **Correspondent Name:**

Address Line 1: 901 NEW YORK AVENUE, NW Address Line 4: WASHINGTON, D.C. 20001-4413

ATTORNEY DOCKET NUMBER:	08350.2232-00000
NAME OF SUBMITTER:	SUN KIM
SIGNATURE:	/Sun Kim/
DATE SIGNED:	01/05/2016

Total Attachments: 6

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PATENT REEL: 037471 FRAME: 0021

SOLE/JOINT INVENTION
(Worldwide Rights)
Attorney Docket No. 98350.2232
Client Ref. No. 15-1322

ASSIGNMENT

WHEREAS (We, the below pamed inventor(s), thereinafter referred to as Assignor(s)), have made an invention entitled:

MULTIPHASE MOTOR GENERATOR SYSTEM AND CONTROL METHOD THEREOF

for which CAVe will or have fled a patent operication, and

VHISTEAS Carerpillar Inc. a corporation of Delaware whose post office actives is intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-6490 (here rafter referred to as Assigned), is degrees of securing the ordine right, like, and interest in and in this invention, and in and to the patient application for this invention and are and all patients to be esseed 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.
I/Ne, as Assignoris), have sold, assigned, transferred, and set over, and do hereby self, assign, transfer, and set over unto the Assignee. Its lawful successors and assigns, myrour entire right, life, and interest in and to this invention, and this application, and all divisions, and continuations thereof, and all patients which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patient office on the basis of this application, and all applications for patients which may hereafter be filled for this invention in any country or jurisdiction or patient office, and all extensions, renewals, and reissues thereof, and I/We hereby authorize and request any official of any country or jurisdiction or patient office, whose duty it is to issue parents on applications as described above, to issue all patients for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment.

ANC, ITWE HERESY coveriant that ITWe have the full right to convey the interest assigned by this Assignment, and ITWe have not executed and will not execute any agreement in conflict with this Assignment.

AND, ITVE HEREBY further covenant and agree that VIVe will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/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 caths 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.

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IN TESTIMONY WHEREOF, I/We have	hereunto sel our hands.	
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3609 Prestwick Ct., Columbus, OH 43220		CTIONS P P.R. China

SOLEJJOINT INVENTION (Worldwide Rights) Attorney Docker No. 08350.2232 Client Ref. No. 15-1322

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SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 98359,2232 Client Ref. No. 15-1322

Osama Mohammad ALKHÖULI	ASSESSED STANFORE	UK E
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40780		STEERSON

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.2232 Client Ref. No. 15-1322

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

MULTIPHASE MOTOR GENERATOR SYSTEM AND CONTROL METHOD THEREOF

ASSIGNMENT

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

WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-6490 (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, I/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, my/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/We 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, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/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, I/WE HEREBY authorize Assignee or the attorneys/representatives of Assignee to insert here in

filed).	o Official filling date (_Application No,
IN TESTIMONY WHEREOF, I/We have	hereunto set our hands.	
1. FULL NAME OF SOLE OR FIRST ASSIGNOR Chen YUAN	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 3609 Prestwick Ct., Columbus, OH 432	20	CITIZENSHIP P.R. China

Page 1 of 3

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350,2232 Client Ref. No. 15-1322

1. WITNESS NAME	Witness signature	DATE:
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. FULL NAME OF SECOND ASSIGNOR, IF ANY Krishnakumar Dharapuram RAMAMOORTHY	ASSIGNOR'S SIGNATURE D. P. Krydyddigodd	DATE 12/15/2015
ADDRESS 1512 W Candletree drive APT#207, Peoria, IL 61614		CITIZENSHIP INDIA
1. WITNESS NAME	WITNESS SIGNATURE	DATE
Racium SI	Ca.	12/14/2015
205 W Brenyn C	1. Dunlay), 26, 600	CITIZENSHIP
2 WITNESS NAME Dav & Brennan (WITNESS SIGNATURE DU	12/14/2015
ADDRESS 1700 W HICKLY Grove Rd	Dunlap IL 61825	CITIZENSHIP US A
<i>V</i>	•	

PATENT REEL: 037471 FRAME: 0026

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.2232 Client Ref. No. 15-1322

3. FULL NAME OF THIRD ASSIGNOR, IF ANY OSama Mohammad ALKHOULI	ASSIGNOR'S SIGNATURE CENTRAL ALPHOCAL TO THE STATE OF T	12/10/2015
ADDRESS 1700 W Hickory Grove Rd. Apt 8-102, Dunlap, IL 61525		сітіzененір Jordan
1. WITNESS NAME SREENINGSO PENTELA	WITNESS SIGNATURE	DATE 12/10/2015
ADDRESS 10825 NO OVERTONE ST		PHENEZITIO A (Q C A)
PEORIA 14 616	015	
15		
z. WITNESS NAME William T. Jenkins	WITNESS SIGNATURE *	12/10/2015
ADDRESS 50 West Beach St.		CITIZENSHIP US
Cauton, IL 61520		:

RECORDED: 01/05/2016