PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5740978

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TIMOTHY NOAH BLATCHLEY	02/19/2016
JAMES GEORGE GEBBIE	02/18/2016
CLAY WESLEY MARANVILLE	02/18/2016
ANGEL FERNANDO PORRAS	02/18/2016

RECEIVING PARTY DATA

Name:	FORD GLOBAL TECHNOLOGIES, LLC	
Street Address:	FAIRLANE PLAZA SOUTH, SUITE 800	
Internal Address:	330 TOWN CENTER DRIVE	
City:	DEARBORN	
State/Country:	MICHIGAN	
Postal Code:	48126	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16584697

CORRESPONDENCE DATA

Fax Number: (971)271-8021

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.

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 971-271-8020

 Email:
 Tapia@mccrus.com

Correspondent Name: MCCOY RUSSELL LLP

Address Line 1: 806 S.W. BROADWAY, SUITE 600 Address Line 4: PORTLAND, OREGON 97205

ATTORNEY DOCKET NUMBER:	84207629
NAME OF SUBMITTER:	ASHLEY R. TAPIA
SIGNATURE:	/Ashley R. Tapia/
DATE SIGNED:	09/26/2019

Total Attachments: 4

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PATENT REEL: 050536 FRAME: 0689

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Attorney Docket N	lumber 83628175	1
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Title of Invention	METHOD AND SYSTEM FOR OPERATING A HEAT PUMP OF A VEHICLE
This declaration is direct	ed to:
United	tacked application, or I States application or PCT international application numberfiled on
The above-identified app	plication was made or authorized to be made by me.
I hereby state that I have including the claims.	we reviewed and understand the contents of the specification in the above-identified application.
I believe that I am the or	iginal inventor or an original joint inventor of a claimed invention in the application.
continuation-in-part app	o disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for discations, material information which became available between the filing date of the prior nal or PCT international filing date of the continuation-in-part application.
of the State of Delaward hereinafter referred to a interest, domestic and for of the ASSIGNEE, its suffer the inventions and diname or names, or in my insert the serial/applications its success applications, in and to the	nent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto NOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws e, having its principal place of business at Dearborn, County of Wayne, and State of Michigan, is the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and reign, in and to the inventions and discoveries in the above-identified invention including the right uccessors, assigns or other legal representatives to make applications and to receive Letters Patent scoveries in any and all countries, entities and intergovernmental organizations, in its or their own of name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to thou number and filing date of the application to receive Letters Patent herein: Serial No, Filing Date February 23, 2016), and I hereby sell, assign and set over to the sors, assigns or other legal representatives, all rights of priority, including any provisional me inventions and discoveries in any and all countries, entities and intergovernmental organizations are claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, we applications.
including applications to organizations, and to per	myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, or Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental from any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives ecure thereto the rights herein sold, assigned and set over.
And I hereby represent as	nd watrant that I have not granted any rights inconsistent with the rights granted herein.
or imprisonment of not n	at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine nore than five (S) years or both.
LEGAL NAME OF INV Inventor: Timothy.)	ENTOR Noah Blatchley
Signature:	
Note: All Application Data Use an additional declaratio	s Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, or form for each additional inventor.

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Attorney Docket Number	X 36 2X 1 75
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	OPERATING A HEAT PUMP OF A HICLE
This declaration is directed to:	
The attached application, or United States application or PCT international application	ion number
The above-identified application was made or authorized to be made by a	₩.
I hereby state that I have reviewed and understand the contents of the including the claims.	specification in the above-identified application.
I believe that I am the original inventor or an original joint inventor of a c	laimed invention in the application.
I am aware of the duty to disclose information which is material to pater continuation-in-part applications, material information which became application and the national or PCT international filing date of the continu	available between the filing date of the prior
Pursuant to my employment agreement heretofore made or by contract FORD GLOBAL TECHNOLOGIES, LLC, a Ford Motor Company substof the State of Delaware, having its principal place of business at Deahereinafter referred to as the ASSIGNEE, its successors, assigns or other interest, domestic and foreign, in and to the inventions and discoveries it of the ASSIGNEE, its successors, assigns or other legal representatives for the inventions and discoveries in any and all countries, entities and in name or names, or in my name, at its or their election (and I hereby authorisert the serial/application number and filing date of the application 15/051,401 , Filing Date February 23,2016 ASSIGNEE, its successors, assigns or other legal representatives, applications, in and to the inventions and discoveries in any and all countricuding all applications claiming benefit of the filing date hereof, reexaminations and reissue applications.	idiary, organized and existing by virtue of the laws rborn, County of Wayne, and State of Michigan, for legal representatives, the entire right, title and a the above-identified invention including the right to make applications and to receive Letters Patent stergovernmental organizations, in its or their own orize the ASSIGNEE or ASSIGNEE's attorney to on to receive Letters Patent herein: Serial No. [5], and I hereby sell, assign and set over to the dll rights of priority, including any provisional stries, entities and intergovernmental organizations.
And I hereby agree for myself, my heirs, successors, assigns or other le including applications for Letters Patent of any and all kinds and in any organizations, and to perform any and all acts which the ASSIGNEE, its may deem necessary to secure thereto the rights herein sold, assigned and	and all countries, entities and intergovernmental successors, assigns or other legal representatives
And I hereby represent and warrant that I have not granted any rights inco	nsistent with the rights granted herein.
I hereby acknowledge that any willful false statement made in this decla or imprisonment of not more than five (5) years or both.	ration is punishable under 18 U.S.C. 1001 by fine
LEGAL NAME OF INVENTOR	and the Land
Inventor: James Géorgé Gebbie	Date: <u><!--//-->//6</u>
Signature:	· · · ·
Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming Use an additional declaration form for each additional inventor.	the entire inventive entity, must accompany this form.

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Attorney Docket Number	: 030201/5 :
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Title of Invention	METHOD AND SYSTEM FOR OPERATING A HEAT PUMP OF A VEHICLE
This declaration is direct	ed to:
United	States application, or
The above-identified app	lication was made or authorized to be made by me.
I hereby state that I have including the claims.	re reviewed and understand the contents of the specification in the above-identified application,
I believe that I am the or	ginal inventor or an original joint inventor of a claimed invention in the application.
continuation-in-part app	disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for lications, material information which became available between the filing date of the prior ral or PCT international filing date of the continuation-in-part application.
FORD GLOBAL TECH of the State of Delaward hereinafter referred to a interest, domestic and for of the ASSIGNEE, its state for the inventions and diname or names, or in my insert the serial/applica 15/051,401 ASSIGNEE, its success applications, in and to the	nent agreement heretofore made or by contractual obligation, I do sell, assign and set over unto NOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws a having its principal place of business at Dearborn, County of Wayne, and State of Michigan, the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and reign, in and to the inventions and discoveries in the above-identified invention including the right accessors, assigns or other legal representatives to make applications and to receive Letters Patent scoveries in any and all countries, entities and intergovernmental organizations, in its or their own name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to tion number and filing date of the application to receive Letters Patent herein: Serial No. , Filing Date Fedruary 23,2016), and I hereby sell, assign and set over to the tors, assigns or other legal representatives, all rights of priority, including any provisional e inventions and discoveries in any and all countries, entities and intergovernmental organizations as claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, are applications.
including applications for organizations, and to per	nyself, my heirs, successors, assigns or other legal representatives to execute any and all papers, r Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental form any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives ecure thereto the rights herein sold, assigned and set over.
And I bereby represent a	nd warrant that I have not granted any rights inconsistent with the rights granted herein.
or imprisonment of not n	at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine tore than five (5) years or both.
LEGAL NAME OF INV Inventor: Clay Wes	ENTOR ley Maranville Date: 2/18///
Signature: Lay wes	Wall
	Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form, in form for each additional inventor.

Attorney Docker Number	83628175	

1 THE OF INVENTION METHOD AND SYSTEM FOR OPERATING A HEAT PUMP OF A VEHICLE
This declaration is directed to:
The attached application, or United States application or PCT international application number filed on
The above-identified application was made or authorized to be made by me.
I hereby state that I have reviewed and understand the contents of the specification in the above-identified application, including the claims.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I am aware of the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.
Pursuant to my employment agreement heretofore made or by contractual obligation, I do sell, assign and set over unto FORD GLOBAL TECHNOLOGIES, LLC, a Ford Motor Company subsidiary, organized and existing by virtue of the laws of the State of Delaware, having its principal place of business at Dearborn, County of Wayne, and State of Michigan, hereinafter referred to as the ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, domestic and foreign, in and to the inventions and discoveries in the above-identified invention including the right of the ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for the inventions and discoveries in any and all countries, entities and intergovernmental organizations, in its or their own name or names, or in my name, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to insent the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 15/051,401 Filing Date February 23,2016 and I hereby sell, assign and set over to the ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority, including any provisional applications. in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including all applications claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals, reexaminations and reissue applications.
And I hereby agree for myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, including applications for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental organizations, and to perform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein sold, assigned and set over.
And I hereby represent and warrant that I have not granted any rights inconsistent with the rights granted herein.
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years or both.
LEGAL NAME OF INVENTOR Inventor: Angel Fernando Porras 7 P Date: 02//8/20/6
Signature: 1/2/2///////
Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional declaration form for each additional inventor.

PATENT REEL: 050536 FRAME: 0694

RECORDED: 09/26/2019