PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4934819

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
JOSEPH ULREY	04/20/2018	
RUSSELL SENIOR	04/13/2018	
GREGORY MCCONVILLE	04/13/2018	
AMEY KARNIK	04/13/2018	

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:	15963863

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.

Phone: 971-271-8020 Email: Tapia@mccrus.com MCCOY RUSSELL LLP **Correspondent Name:**

Address Line 1: 806 S.W. BROADWAY, SUITE 600

Address Line 4: PORTLAND, OREGON 97205

ATTORNEY DOCKET NUMBER: 83947383 NAME OF SUBMITTER: **ASHLEY R. TAPIA** /Ashley R. Tapia/ **SIGNATURE: DATE SIGNED:** 04/26/2018

Total Attachments: 4

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PATENT REEL: 045649 FRAME: 0743

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Attorney Docket Number	92047292
Attorney Docket Number	03747303

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

ittle of invention	METHOD AND SYSTEM FOR VARIABLE DISPLACEMENT ENGINE DIAGNOSTICS
This declaration is direct	ed to:
United	ached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and ten they become known.)
number into this form wi	en they become known.)
The above-identified app	lication was made or authorized to be made by me.
I hereby state that I havincluding the claims.	e reviewed and understand the contents of the specification in the above-identified application,
I believe that I am the ori	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 hal or PCT international filing date of the continuation-in-part application.
FORD GLOBAL TECHI of the State of Delaware hereinafter referred to as interest, domestic and for of the ASSIGNEE, its sufor the inventions and diname or names, or in my insert the serial/applicat 15/963,863 ASSIGNEE, its success applications, in and to the including all application reexaminations and reissues.	
including applications fo organizations, and to per	myself, 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 hereby represent ar	nd warrant that I have not granted any rights inconsistent with the rights granted herein.
or imprisonment of not m	at any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine ore than five (5) years or both.
LEGAL NAME OF INV. Inventor: Joseph Ul	13 m 15 m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Signature: Signature:	Was Date. Date.
////	
Note: An Application Data Use an additional declaratio	Sheet (PTO/S\$\frac{1}{2}14 or equivalent), including naming the entire inventive entity, must accompany this form. In form for each additional inventor.

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

Title of Invention	METHOD AND SYSTEM FOR VARIABLE DISPLACEMENT ENGINE	
	DIAGNOSTICS	
This declaration is directed	ed to:	
The attached application, or United States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and number into this form when they become known.)		
The above-identified app	dication was made or authorized to be made by me.	
I hereby state that I havincluding the claims.	re reviewed and understand the contents of the specification in the above-identified application,	
I believe that I am the ori	iginal 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 insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 15/963,863, Filing Date April 26, 2018), 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 INV	1/10/0010	
Inventor: Russell So	<u>Pate: 4/13/2018</u>	
Signature:		
	a Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form on form for each additional inventor.	

Attorney Docket Number	83947383

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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.
FORD GLOBAL TECH of the State of Delawar hereinafter referred to a interest, domestic and fo of the ASSIGNEE, its st for the inventions and di name or names, or in my insert the serial/applica 15/963,863 ASSIGNEE, its succes applications, in and to the including all application reexaminations and reiss. And I hereby agree for	ment 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 accessors, assigns or other legal representatives to make applications and to receive Letters Patent accessors, assigns or other legal representatives to make applications, in its or their own of 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 April 26, 2018, and I hereby sell, assign and set over to the sors, assigns or other legal representatives, all rights of priority, including any provisional ne 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, are applications. 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
organizations, and to pe may deem necessary to s	rform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives secure thereto the rights herein sold, assigned and set over.
And I hereby represent a	and warrant that I have not granted any rights inconsistent with the rights granted herein.
	nat any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine nore than five (5) years or both.
LEGAL NAME OF INV	
Inventor: Gregory Signature:	McConville Date: 1/13/398
Bignature.	
	ta Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. on form for each additional inventor.

RECORDED: 04/26/2018

Attorney Docket Number	83947383	

ASSIGNMENT AND DECLARATION (37 C.F.R. 1.63) FOR UTILITY, PROVISIONAL OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76)

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The above-identified app	olication was made or authorized to be made by me.
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continuation-in-part app	o disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for oblications, material information which became available between the filing date of the prior nal or PCT international filing date of the continuation-in-part application.
FORD GLOBAL TECH of the State of Delawar hereinafter referred to a interest, domestic and for the ASSIGNEE, its sofor the inventions and domaine or names, or in minsert the serial/applications. 15/963,863 ASSIGNEE, its success applications, in and to the including all applications and reises. And I hereby agree for including applications if	myself, my heirs, successors, assigns or other legal representatives to execute any and all papers, for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental
may deem necessary to	erform any and all acts which the ASSIGNEE, its successors, assigns or other legal representatives 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.	
or imprisonment of not	hat any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine more than five (5) years or both.
LEGAL NAME OF IN Inventor: Amey K	$(G)(I_1,I_2,I_3,I_4,I_4,I_4,I_4,I_4,I_4,I_4,I_4,I_4,I_4$
Inventor: Amey K Signature:	Oh under
Signature.	
	ta Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.