504108397 11/22/2016 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4155066

SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY D	ΑΤΑ			
		Name	Execution Date	
JUSTIN CARTWRIGHT			11/02/2016	
KIRK PULAY			11/02/2016	
RECEIVING PARTY DA	TA			
Name:	FORD G	FORD GLOBAL TECHNOLOGIES, LLC		
Street Address:	FAIRLA	FAIRLANE PLAZA SOUTH, SUITE 800		
Internal Address:	330 TO	330 TOWN CENTER DRIVE		
City:	DEARB	DEARBORN		
State/Country:	MICHIGAN			
Postal Code:	48126	48126		
PROPERTY NUMBERS Property Type	Total: 1	Number		
Property Type		Number 5359395		
Property Type Application Number: CORRESPONDENCE D Fax Number:	11 DATA (5359395 503)459-4142		
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i>	DATA (be sent to	5359395		
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone:	DATA (pe sent to provided;	5359395 503)459-4142 <i>the e-mail address first; if that is unsucc</i> <i>if that is unsuccessful, it will be sent via</i> 503-459-4141		
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email:	DATA (pe sent to provided;	503)459-4142 the e-mail address first; if that is unsucc if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com	a US Mail.	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name:	DATA (pe sent to provided; f	5359395 503)459-4142 the e-mail address first; if that is unsucc if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com ALLEMAN HALL MCCOY RUSSELL & TUT	a US Mail.	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email:	DATA (pe sent to provided; F A 8	503)459-4142 the e-mail address first; if that is unsucc if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com	a US Mail.	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1:	DATA (pe sent to provided; f f f f F	503)459-4142 the e-mail address first; if that is unsuce if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com ALLEMAN HALL MCCOY RUSSELL & TUT 806 S.W. BROADWAY, SUITE 600	a US Mail.	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	DATA (pe sent to provided; f f f f F	5359395 503)459-4142 the e-mail address first; if that is unsucc if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com ALLEMAN HALL MCCOY RUSSELL & TUT 306 S.W. BROADWAY, SUITE 600 PORTLAND, OREGON 97205	a US Mail.	
Property Type Application Number: CORRESPONDENCE D Fax Number: <i>Correspondence will b</i> <i>using a fax number, if</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 4:	DATA (pe sent to provided; f f f f F	503)459-4142 the e-mail address first; if that is unsuce if that is unsuccessful, it will be sent via 503-459-4141 parry@ahmrt.com ALLEMAN HALL MCCOY RUSSELL & TUT 806 S.W. BROADWAY, SUITE 600 PORTLAND, OREGON 97205 83738361	a US Mail.	

Attorney Docket Number | 83738361

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)

 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 the above-identified invention including the right of the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 15/359,395	Title of Invention	METHOD AND SYSTEM FOR IGNITION COIL CONTROL	
Childed States application or PCT international application number filed on	This declaration is direct	ed to:	
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 ackisting by vitue 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 is 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 ewort of the application number, and filing date of the application to receive Letters Patent herein: Serial No. 15/350,395 . Filing Date November 22, 2016 . , and 1 hereby sell, assign and set over to the ASSIGNEE, its successors, assigns or other legal representatives, or not maner, assign or other legal representatives, the rights of priority, including any provisional applications, in and to the inventions and discoveries in any and all countries, entities and intergovernmental organizations including applications. And I hereby agree for myself, my heirs, successors, assigns or other legal	United	States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and	
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, litle 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 ASSIGNEE, its successors, assigns or other legal representatives, on all successors, and all countries, in all industions and reissue applications and intergovernmental organizations including and pelications, in and the inventions and discoveries in any and all countries, entities and intergovernmental applications, and to be inventions and discoveries in any and all countries, entities and intergovernmental applications, and to perform any and all acts which the ASSIGNEE. Its successors, ass	The above-identified app	ilication was made or authorized to be made by me.	
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 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. 15/359.395	I hereby state that I hav including the claims.	ve reviewed and understand the contents of the specification in the above-identified application,	
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 is auccessors, assigns or other legal representatives to make applications, in its or their own name or names, or in my name, at its or their election (and 1 hereby authorize the ASSIGNEE's attorney to insert the serial/application number and filing date of the application to receive Letters Patent herein. Serial No. 15/359.305	I believe that I am the or	iginal inventor or an original joint inventor of a claimed invention in the application.	
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. <u>15/359.395</u> , Filing Date <u>November 22, 2016</u> , 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.	continuation-in-part app	lications, material information which became available between the filing date of the prior	
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: Justin Cartwright Date: NoN: 2, 2016 Signature: Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	FORD GLOBAL TECH of the State of Delawar hereinafter referred to a interest, domestic and fo of the ASSIGNEE, its si for the inventions and di name or names, or in my insert the serial/applica 15/359.395 ASSIGNEE, its succes applications, in and to th including all application	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, s 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 aname, 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 <u>November 22, 2016</u>), and I hereby sell, assign and set over to the sors, assigns or other legal representatives, all rights of priority, including any provisional to inventions and discoveries in any and all countries, entities and intergovernmental organizations ns claiming benefit of the filing date hereof, continuations, continuations-in-part, divisionals,	
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: Justin Cartwright Date: NoV: 2, 2016 Signature: Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	including applications for Letters Patent of any and all kinds and in any and all countries, entities and intergovernmental		
or imprisonment of not more than five (5) years or both. LEGAL NAME OF INVENTOR Inventor: Justin Cartwright Date: NoV: 2, 2016 Signature: Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	And I hereby represent a	nd warrant that I have not granted any rights inconsistent with the rights granted herein.	
Inventor: Justin Cartwright Date: NoV: 2, 2016 Signature: Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.	or imprisonment of not n	nore than five (5) years or both.	
Signature:		ention rtwright Date: Nov: 2, 2016	
Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.			

PATENT REEL: 040405 FRAME: 0824

Please direct all correspondence to customer number: 36865

Attorney Docket Number 83738361

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 IGNITION COIL CONTROL	
This declaration is direct	ed to:	
United	tached application, or States application or PCT international application number filed on (I hereby authorize the insertion of the application filing date and then they become known.)	
The above-identified app	lication was made or authorized to be made by me.	
I hereby state that I hav including the claims.	re reviewed and understand the contents of the specification in the above-identified application,	
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.		
PORD GLOBAL TECH of the State of Delaward hereinafter referred to a interest, domestic and fo of the ASSIGNEE, its su for the inventions and di name or names, or in my insert the serial/applica 15/359.395	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, s 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 increasors, 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 November 22, 2016), and I hereby sell, assign and set over to the	
ASSIGNEE, its success applications, in and to the	sors, assigns or other legal representatives, all rights of priority, including any provisional re 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,	
including applications for 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 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 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 nore than five (5) years or both.	
LEGAL NAME OF INV	$\mathbf{v} \in \{1, \dots, n\}$	
Inventor: Kirk Pula	Date: 11/02/2016	
Signature:	· · · · · · · · · · · · · · · · · · ·	

Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, most accompany this form. Use an additional declaration form for each additional inventor.

PATENT REEL: 040405 FRAME: 0825

RECORDED: 11/22/2016