#### 505296648 01/25/2019

### PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
RALPH WAYNE CUNNINGHAM	07/12/2016
ROSS DYKSTRA PURSIFULL	07/11/2016

#### **RECEIVING PARTY DATA**

Name:	FORD GLOBAL TECHNOLOGIES, LLC
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City:	DEARBORN
State/Country:	MICHIGAN
Postal Code:	48126

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16257675

#### CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER:	FGT163109CON1
NAME OF SUBMITTER:	LAURA ROBERTS
SIGNATURE:	/Laura Roberts/
DATE SIGNED:	01/25/2019

### **Total Attachments: 2**

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**PATENT REEL: 048137 FRAME: 0500** 505296648

Attorney Docket Number	83664925

# 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	POWERTRAIN LASH MANAGEMENT		
This declaration is direct	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 have reviewed and understand the contents of the specification in the above-identified application, including the claims.			
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.		
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 magnitude 15/210, 631 ASSIGNEE, its successapplications, in and to the including all application reexaminations and reise And I hereby agree for including applications for organizations, and to perform the state of the st	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 oreign, in and to the inventions and discoveries in the above-identified invention including the right nuccessors, assigns or other legal representatives to make applications and to receive Letters Patent iscoveries in any and all countries, entities and intergovernmental organizations, in its or their own yname, at its or their election (and I hereby authorize the ASSIGNEE or ASSIGNEE's attorney to attoin number and filing date of the application to receive Letters Patent herein: Serial No.  Filing Date July 14,2016  I, and I hereby sell, assign and set over to the inventions and discoveries in any and all countries, entities and intergovernmental organizations and claiming benefit of the filling date hereof, continuations, continuations-in-part, divisionals, see applications.  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 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 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: Ralph W	ayne Cunningham Date: /_ JUI/ 2010		
Signature: Laff.	W. Centyl		
Note: An Amplication De	ita Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.		
Lice an additional declarati	ion form for each additional inventor.		

PATENT REEL: 048137 FRAME: 0501 Title of Invention

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Attorney Docket Number	83664925

## 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)

POWERTRAIN LASH MANAGEMENT

This declaration is directed to:		
The attached application, or		
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 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 insert the serial/application number and filing date of the application to receive Letters Patent herein: Serial No. 15/210,631 , Filing Date July 14,2016 ), 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.		
TO ALT STATE AND AND THE WORLD		
Inventor: Ross Dykstra Pursifull Date: // John Zollo		
and The Hard D		
Signature: / des Lensify 12		
Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.		
Note: An Application Data Sheet (P10/Sh/14 or equivalent), including haming the entire inventive entiry, must accompany uns form.  Use an additional declaration form for each additional inventor.		
DATENT		

RECORDED: 01/25/2019 REEL: 048137 FRAME: 0502