

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT4507683

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YICHAO GUO	08/11/2016
ROBERT STACK	07/06/2017
GANG WU	08/15/2016
MARCIO QUILES	10/18/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	FCA US LLC
<b>Street Address:</b>	1000 CHRYSLER DRIVE
<b>City:</b>	AUBURN HILLS
<b>State/Country:</b>	MICHIGAN
<b>Postal Code:</b>	48326-2757
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15176379
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(248)944-6537
<i>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.</i>	
<b>Phone:</b>	248-944-6500
<b>Email:</b>	chris.davenport@fcagroup.com
<b>Correspondent Name:</b>	FCA US LLC CIMS 483-02-19
<b>Address Line 1:</b>	800 CHRYSLER DR EAST
<b>Address Line 4:</b>	AUBURN HILLS, MICHIGAN 48326-2757
<b>ATTORNEY DOCKET NUMBER:</b>	709920US1
<b>NAME OF SUBMITTER:</b>	RALPH E. SMITH
<b>SIGNATURE:</b>	/RALPH E SMITH/
<b>DATE SIGNED:</b>	07/18/2017
<b>Total Attachments: 4</b>	
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ASSIGNMENT

We, Yichao Guo of Rochester Hills, Oakland County, MI  
Robert Stack of Grand Blanc, Genessee County, MI  
Gang Wu of Troy, Oakland County, MI  
Marcio Quiles of Lake Orion, Oakland County, MI

have invented a new and useful process, machine, manufacture, composition of matter, or an improvement thereof, entitled:

**RESPONSE AMPLITUDE MODIFICATION FOR MODIFICATION FOR HYBRID  
ELECTRIC VEHICLE MISFIRE DETECTIONS**

for which we have executed an application for Letters Patent of the United States on  
*8-11-16; 8-15-16; 10-18-16 & 7-6-17.*

FCA US LLC, a Delaware limited liability company having its principal place of business at Auburn Hills, Michigan, desires to acquire the entire right, title, and interest in the invention and under the Letters Patent, and similar protection to be obtained, worldwide.

In consideration of the payment by FCA US LLC to us of the sum of \$1.00 and other good and valuable consideration, receipt being acknowledged, we sell, assign, and transfer unto FCA US LLC, our full and entire right, title, and interest in the invention worldwide and to any provisional application and all Letters Patent or similar legal protection to be obtained for the invention worldwide by the application or any continuation, division, renewal, substitute, re-examination, reissue, or any legal equivalent, for the full term or terms that may be granted.

We authorize our attorneys, authorized to prosecute said application, to insert the filing date and Serial Number of the application, to wit, Serial No. 15/176,379, filed August 10, 2016. We authorize and request the Commissioner of Patents to issue all Letters Patent of the United States to FCA US LLC.

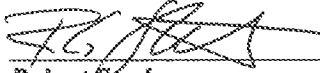
We warrant that we have the right to sell, assign, and transfer our full and entire right, title, and interest in the invention and that no assignment, sale, agreement, or encumbrance has been or will be made or entered into that will conflict with this sale, assignment, and transfer.

We further agree to communicate to FCA US LLC or its representatives, any facts known to us respecting the invention, testify in any legal proceedings relating to the invention when called upon, and sign all instruments and documents and render such assistance which, in the judgment of FCA US LLC, is necessary to vest in it and protect the legal right, title, and interest assigned in this Assignment.

This Assignment will be binding on our heirs and legal representatives.

Yichao Guo

Date \_\_\_\_\_



Robert Slack

Date 6 July 2017

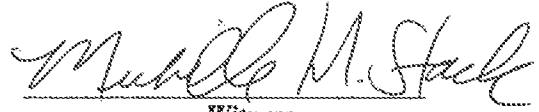
Gang Wu

Date \_\_\_\_\_

Marcio Quiles

Date \_\_\_\_\_

Witness



Witness

Witness

Witness

Yichao Guo  
*Yichao Guo*

Date 8/11/2016

[Signature]  
*Witness*

\_\_\_\_\_  
*Robert Stack*

Date \_\_\_\_\_

\_\_\_\_\_  
*Witness*

\_\_\_\_\_  
*Gang Wu*

Date \_\_\_\_\_

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*Witness*

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*Marcio Quiles*

Date \_\_\_\_\_

\_\_\_\_\_  
*Witness*

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**Yichao Guo**

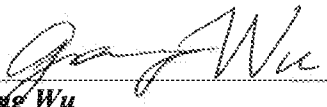
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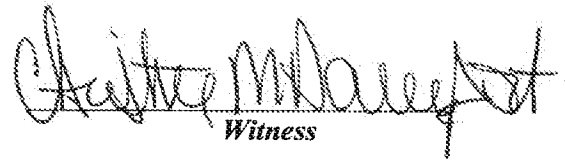
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**Robert Stack**

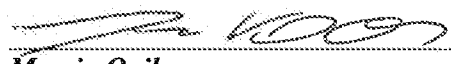
Date .....

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**Witness**

  
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**Gang Wu**

Date 8/15/2016

  
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**Witness**

  
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**Marcio Quiles**

Date 10/18/16

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**Witness**