

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3119194

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KENNETH A. FULLER	09/18/2014
CHRISTOPHER E. LAMASTER	10/07/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ROLLS-ROYCE CORPORATION
<b>Street Address:</b>	2001 S. TIBBS AVENUE
<b>Internal Address:</b>	MAIL DROP U27
<b>City:</b>	INDIANAPOLIS
<b>State/Country:</b>	INDIANA
<b>Postal Code:</b>	46241
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	61769527
<b>Application Number:</b>	14190609
<b>PCT Number:</b>	US1418588
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)456-8100
<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>	7034568000
<b>Email:</b>	CTIPTON@COOLEY.COM, jscott@COOLEY.COM
<b>Correspondent Name:</b>	COOLEY LLP
<b>Address Line 1:</b>	1299 PENNSYLVANIA AVENUE
<b>Address Line 2:</b>	SUITE 700 ATTN: PATENT GROUP
<b>Address Line 4:</b>	WASHINGTON, D.C. 20004
<b>ATTORNEY DOCKET NUMBER:</b>	ROLL-003/00US 313621-2059
<b>NAME OF SUBMITTER:</b>	JOHN R. MILLS
<b>SIGNATURE:</b>	/John R. Mills Reg. # 56,414/
<b>DATE SIGNED:</b>	11/21/2014
<b>Total Attachments: 5</b>	
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PATENT

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ASSIGNMENT

Kenneth A. FULLER, residing at 9037 Stones Bluff Place, Camby, IN 46113, and Christopher E. LAMASTER, residing at 5537 Floating Leaf Drive, Indianapolis, IN 46237 (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent of the United States, entitled **METHODS AND APPARATUS FOR MEASURING AXIAL SHAFT DISPLACEMENT WITHIN GAS TURBINE ENGINES**, and which is a:

- (1) ☒ provisional application
  - (a) ☐ to be filed herewith; or
  - (b) ☒ bearing Application No. 61/769,527, and filed on February 26, 2013;
- (2) ☒ non-provisional application
  - (a) ☐ to be filed herewith; or
  - (b) ☒ bearing Application No. 14/190,609, and filed on February 26, 2014; and/or
- (3) ☒ PCT application
  - (a) ☒ bearing Application No. PCT/US2014/018588, and filed on February 26, 2014.

**WHEREAS**, Rolls-Royce Corporation, a corporation duly organized under and pursuant to the laws of Delaware, and having its principal place of business at 2001 S. Tibbs Avenue, Mail Drop U27, Indianapolis, IN 46241 (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application for patent identified in paragraph (1), (2) and/or (3); the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to these application(s); any provisional or other right to recover damages, including royalties, for prior infringements of these applications; and any patent(s) of the United States or other countries that may be granted therefor or thereon.

**NOW, THEREFORE**, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application for patent identified in paragraph (1), (2) and/or (3);

- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);
- (e) any application(s) for patent of the United States or other countries claiming priority to the application for patent identified in paragraph (1), (2) and/or (3) or any application(s) for patent claiming the Invention(s), including any division(s), continuation(s), and continuation(s)-in-part;
- (f) any provisional or other right to recover damages, including royalties, for prior infringements of any application for patent identified in the preceding paragraphs (b)-(e); and
- (g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b) – (e), including any reissue(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said applications, and said patents, including interference proceedings, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of COOLEY LLP to insert in the spaces provided above the filing date, the application number, and the

attorney docket number of the application(s) identified in paragraph (1), (2) and/or (3) when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Date: 9/18/2014 By: Kenneth A. Fuller  
Kenneth A. FULLER

State of IN )  
County of Marion ) ss.  
On September 18, 2014, before me, Lisa Phillips,  
Notary Public, personally appeared Kenneth A. Fuller,  
who proved to me on the basis of satisfactory evidence, to be the person(s) whose  
name(s) is/are subscribed to the within instrument and acknowledged to me that  
he/she/they executed the same in his/her/their authorized capacity(ies), and that by  
his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of  
which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Lisa Phillips  
Signature of Notary Public

My Commission Expires: 6-16-2018

OFFICIAL SEAL  
LISA PHILLIPS  
NOTARY PUBLIC - INDIANA  
MARION COUNTY  
My Comm. Expires 06-16-2018

Place Notary Seal Above

Date: 10/7/14

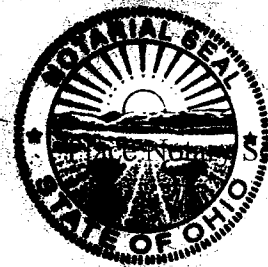
By: *[Signature]*  
Christopher E. LAMASTER

State of Ohio  
County of Hamilton <sup>ss.</sup>

On Oct 7<sup>th</sup>, 2014, before me, Amanda R. Hughes  
Notary Public, personally appeared Christopher E. Lamaster,  
who proved to me on the basis of satisfactory evidence, to be the person(s) whose  
name(s) is/are subscribed to the within instrument and acknowledged to me that  
he/she/they executed the same in his/her/their authorized capacity(ies), and that by  
his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of  
which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*Amanda R. Hughes*  
Signature of Notary Public



Amanda R. Hughes  
Notary Public, State of Ohio  
My Commission Expires 12-12-2018

My Commission Expires: 12/12/2018

Date: 9-24-2014

By: [Signature]

Name: Todd Reynolds  
 Title: IP Professional  
 Company: Rolls-Royce Corporation

State of Indiana )  
 ) ss.  
 County of Marion )

On 24 Sept 2014, before me, Ginger Rezy,  
 Notary Public, personally appeared Todd Reynolds,  
 who proved to me on the basis of satisfactory evidence, to be the person(s) whose  
 name(s) is/are subscribed to the within instrument and acknowledged to me that  
 he/she/they executed the same in his/her/their authorized capacity(ies), and that by  
 his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of  
 which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

My Commission Expires: 08-28-2020



Place Notary Seal Above