#### 503615326 12/16/2015

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3661957

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
Paul FLETCHER	09/23/2015
Philip PETERS	09/24/2015

### **RECEIVING PARTY DATA**

Name:	Rolls-Royce PLC
Street Address:	62 Buckingham Gate
City:	London
State/Country:	Great Britain
Postal Code:	SW1E 6AT

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

Property Type	Number
Application Number:	14961124

### CORRESPONDENCE DATA

Fax Number: (703)836-2787

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: 703-836-6400 Email: email@oliff.com Correspondent Name: JAMES A. OLIFF Address Line 1: OLIFF PLC

Address Line 2: P.O. BOX 320850

Address Line 4: ALEXANDRIA, VIRGINIA 22320-4850

ATTORNEY DOCKET NUMBER:	168925
NAME OF SUBMITTER:	CYNTHIA KLINE
SIGNATURE:	/Cynthia Kline/
DATE SIGNED:	12/16/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

### **Total Attachments: 4**

source=12.16.15 168925 AssgnDec#page1.tif source=12.16.15 168925 AssgnDec#page2.tif source=12.16.15 168925 AssgnDec#page3.tif

> **PATENT REEL: 037309 FRAME: 0645** 503615326

source=12.16.15 168925 AssgnDec#page4.tif

PATENT REEL: 037309 FRAME: 0646

# ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

### ASSIGNMENT

	Insert	(1)	Stephen Gallimore	(2)	Paul Fletcher	
(1-8)	Legal Name(s)	(3)	Philip Peters	(4)		
	of Inventor(s)	(5)		(6)		
		(7)		(8)		•
		the un		ncy of which are	er good and valuable consideration paid to each of thereby acknowledged, each undersigned agrees to	•
(9)	Insert Name of Assignee	(9)	ROLLS-ROYCE PLC			
(10)	Insert Address of Assignee	(10)	62 Buckingham Gate, London	, SWIE 6AT, Gre	eat Britain	•
		the en invent contin	tire right, title and interest for the ion, and in all applications for patuation, international, confirmation	United States of A tent including any n, substitute and re	eirs, successors, assigns and legal representatives, America as defined in 35 U.S.C. § 100, in the and all provisional, non-provisional, divisional, eissue application(s), and all Letters Patent, ay be granted on the invention known as	
(11)	Insert Identification	(11)	Bearing Structure			
	such as Title, Case Number, or Foreign Application Number		5668 LMT			•
		(Attor	rney Docket No. <u>168925</u>		}}	•
(12)	Alternative	(12)	U.S. Application Number	14/961,12	24	
	Identification for filed applications	filed	December 7, 2015			

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or patents for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office and other issuing authorities to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

### (13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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.

PATENT REEL: 037309 FRAME: 0647 In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Inventor Signature	Stephen Gallimore	(SEAL)
			Paul Fletche	
Date		Inventor Signature	Paul Fletcher	(SEAL)
Date		Inventor Signature	Philip Peters	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date	With the second	Inventor Signature		(SEAL)
This as	ssignment should preferably be signed before should be signed before at least two witness	:: (a) a Notary Public if wit es who also sign here:	hin the U.S.A. (b) a U.S. Consul if outside the U	.S.A. If neither,
Date		Witness for Stephen Gallimore		
Date		Witness for Stephen Gallimore	Arione Remmers	
Date	23 September 2015	Witness for Paul , Fletcher	Ze	
Date	23 SEPTEMBER 2015	Witness for Paul Fletcher	THOMAS MATTHEWS	
Date	-	Witness for Philip Peters		
Date		Witness for Philip Peters		
Date		- Witness for		
Date		_ Witness for		

# ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

### ASSIGNMENT

	Insert	(1)	Stephen Gallimo	ire	(2)	Paul Fletcher	
(1-8)	Legal Name(s)	(3)	Philip Peters		(4)		
	of Inventor(s)	(5)			(6)		
		(7)			(8)		
		the unc		ipt and sufficien	cy of which are l	r good and valuable consideration paid to each of hereby acknowledged, each undersigned agrees to	
(9)	Insert Name of Assignee	(9)	ROLLS-ROYCE	3 PLC			
(10)	Insert Address of Assignee	(10)	62 Buckingham	Gate, London,	SW1E 6AT, Gre	eat Britain	
		the ent invent contin	ire right, title and i ion, and in all appli uation, internationa	interest for the U ications for pate al, confirmation,	Inited States of A nt including any substitute and re	cirs, successors, assigns and legal representatives America as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, cissue application(s), and all Letters Patent, ay be granted on the invention known as	,
(11)	Insert Identification	(11)	Bearing Structur	re			
	such as Title, Case Number, or Foreign Application Number		5668 LMT				
		(Attor	ney Docket No.	168925			)
(12)	Alternative	(12)	U.S. Application	Number	14/961,12	4	
	Identification for filed applications	filed	December 7,	, 2015			

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning any application or patents for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office and other issuing authorities to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

### (13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date		Inventor Signature	Stephen Gallimore	_ (SEAL)
Date		Inventor Signature	Paul Fletcher	(SEAL)
Date	24 Simonson 2015	Inventor Signature	Philip Petors	(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
Date		Inventor Signature		(SEAL)
	signment should preferably be signed before: should be signed before at least two witnesses		hin the U.S.A. (b) a U.S. Consul if outside the U.S.	A. If neither,
Date		Witness for Stephen Gallimore		
Date		Witness for Stephen Gallimore		
Date		Witness for Paul Fletcher		
Date		Witness for Paul Fletcher		
Date	24th September 2015	Witness for Philip Peters	DG JCHNSON	
Date	24th SEPTEMBER 2015	Witness for Philip Peters	The GRAGAM V. COM	<u>45.</u>
Date		Witness for	Notes to the state of the state	
Date		Witness for		