PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Duncan Alexander Stuart MACDOUGALL	10/08/2015
Kevin Anthony BROWN	10/08/2015
Matthew David JACKSON	10/08/2015

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:	14967887

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	169817
NAME OF SUBMITTER:	JESSICA ABARCA
SIGNATURE:	/Jessica Abarca/
DATE SIGNED:	02/09/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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PATENT 503685024 REEL: 037692 FRAME: 0501

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PATENT REEL: 037692 FRAME: 0502

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)	DUNCAN ALEXANDER STUART MACDOUGALL	(2)	KEVIN ANTHONY BROWN
(1-8)	Legal Name(s)	(3)	MATTHEW DAVID JACKSON	(4)	ROGER WHITE
	of Inventor(s)	(5)		(6)	
		(7)		(8)	
	,	the un	sideration of the sum of one dollar (\$1.00) dersigned, the receipt and sufficiency of wl, and hereby does assign, transfer and set o	nich are I	r good and valuable consideration paid to each of hereby acknowledged, each undersigned agrees to
(9)	Insert Name of Assignee	(9)	ROLLS-ROYCE PLC		
(10)	Insert Address of Assignee	(10)	62 Buckingham Gate, London, SW1E 6	AT, Gre	at Britain
		(hereir	nafter designated as the Assignee) and Assi	gnee's he	tirs, successors, assigns and legal confecentatives
		the ent inventi continu	tire right, title and interest for the United St ion, and in all applications for patent include	ates of A ling any te and re	umerica as defined in 35 U.S.C. § 100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent.
(11)	Insert Identification	the ent inventi continu	tire right, title and interest for the United St ion, and in all applications for patent includuation, international, confirmation, substitu	ates of A ling any te and re	umerica as defined in 35 U.S.C. § 100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent.
(11)	such as Title, Case Number, or Foreign	the ent inventi continu extensi	tire right, title and interest for the United Stion, and in all applications for patent includuation, international, confirmation, substitutions, reissues and reexamination certificate	ates of A ling any te and re	umerica as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent
(11)	such as Title, Case	the entinventicontinuextensi	tire right, title and interest for the United States, and in all applications for patent includation, international, confirmation, substitutions, reissues and reexamination certificate AN OUTPUT MEMBER	ates of A ling any te and re	umerica as defined in 35 U.S.C. §100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent
(11)	such as Title, Case Number, or Foreign	the entinventicontinuextensi	tire right, title and interest for the United Station, and in all applications for patent includation, international, confirmation, substitutions, reissues and reexamination certificate AN OUTPUT MEMBER 5697 DEN The process of the United States of the United	ates of A ling any te and re s that ma	umerica as defined in 35 U.S.C. § 100, in the and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent, by be granted on the invention known as
	such as Title, Case Number, or Foreign Application Number	the entinventicontinuextensi	tire right, title and interest for the United Station, and in all applications for patent includation, international, confirmation, substitutions, reissues and reexamination certificate AN OUTPUT MEMBER 5697 DEN The process of the United States of the United	ates of A ling any te and re	and all provisional, non-provisional, divisional, issue application(s), and all Letters Patent, sy be granted on the invention known as

- 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: 037692 FRAME: 0503

In witness whereof, executed	by the undersigned on t	he date(s) opposite the	undersigned name(s).
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Date	8th October 2015.	Inventor Signature	DUNCAN ALEXANDER STUART MACDOUGALL	(SEAL
Date	08 0c70BER 2015	Inventor Signature	KEVIN ANTHONY BROWN	(SEAL)
Date	08th Octobbe 2015	Inventor Signature	MATTHEW DAVID JACKSON	(SEAL)
Date		Inventor Signature	ROGER WHITE	(SEAL)
Date		Inventor Signature		(SEAL)

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:

Date	8H October 2015	Witness for Duncan Alexander Stuart MacDougall	Tulul
Date	8th October 2015	Witness Duncan Alexander Stuart MacDougall	
Date	Rth October 2015	Witness for Kevin Anthony Brown	Thulut
Date	9th October 2015	Witness Duncan Kevin Anthony Brown	
Date	BTH OCTOBER 2015	Witness for Matthew David Jackson	Toul
Date	8th October 2015	Witness Duncan Matthew David Jackson –	The state of the s

Date	Roger White	
Date	Witness Roger White	

Witness for