PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3842796

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Glenn A KNIGHT	03/21/2016
Alan R MAGUIRE	03/21/2016
Daniel ROBINSON	04/08/2016
George BOSTOCK	03/22/2016
MARK J WILSON	04/07/2016

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:	15136409

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:	170905
NAME OF SUBMITTER:	ANNALYNN H. STEIN
SIGNATURE:	/Annalynn H. Stein/ for James A. Oliff
DATE SIGNED:	04/22/2016

Total Attachments: 10

PATENT REEL: 038357 FRAME: 0494

503796149



PATENT REEL: 038357 FRAME: 0495

ASSIGNMENT

(1-8)	1-8) Insert Legal Name(s) Inventor(s)		Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George; Wilson, Mark J	
	In consideration of the sum of sufficiency of which are hereb	one dolla y acknow	or (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and redeged, each undersigned agrees to assign, and hereby does assign, transfer and set over to	 1
(9)	Insert Name of Assig	ROLLS-ROYCE plc		
(10)	Insert Address of As	signee	62 Buckingham Gate, London, SW1E 6AT, Great Britain	****
	for the United States of Ameri provisional, non-provisional, c	ca as defi livisional	and Assignce's heirs, successors, assigns and legal representatives, the entire right, title and interestined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as	i.
(11)	Insert Identification	(11)	Compressor Tip Injector	
	such as Title, Case Number, or Foreign		5825 JPH	
	Application Number	(Attor	rney Docket No.)
(12)	Alternative	(12)	U.S. Application Number	
	Identification for			****
	filed applications	filed		
	for the invention and a as the Assignee may d 2) Each undersigned ag be declared concernin every way possible in 3) Each undersigned ag necessary in connectic Industrial Property or 4) Each undersigned ag confirm by reissue or 5) Each undersigned at other issuing authoriti as Assignee of the ent assigned, and that he I agrees that this assign representatives. 6) Each undersigned he identification that may	also to deem ne grees to g any a obtaining rees to on with similar grees to reexam athorize es to is ire internation to the ment is pretty grees y be need to the similar grees to the similar grees to is ire international green g	execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ng evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of	ď

PATENT REEL: 038357 FRAME: 0496

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.

Invent (Print	Col	A WHI	, WHIGHT	-	$M_{\rm L} \sim M_{\odot}$
Date	24	<u>, </u>	<u>ch 2016</u>	Inventor Signa	ure (SEAL)
Const					(a) a Notary Public if within the U.S.A. (b) a U.S. gned before at least two witnesses who also sign here:
Date	21	March	2016	Witness	<u> Ma</u>
no ta	21	March	2016	38/26	l. Ata

ASSIGNMENT

Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George;

Insert Legal Name(s) of

(1-8)	Insert Legal Name(s) of Inventor(s)		Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George; Wilson, Mark J		
	In consideration of the sum of sufficiency of which are hereb	one dolla y acknow	r (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and ledged, each undersigned agrees to assign, and hereby does assign, transfer and set over to	j	
(9)	Insert Name of Assig	gnee	ROLLS-ROYCE pic		
(10)	Insert Address of Assignee		62 Buckingham Gate, London, SW1E 6AT, Great Britain	-	
	for the United States of Ameri provisional, non-provisional, a	ca as defi livisional	and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest ned in 35 U.S.C. § 100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters mation certificates that may be granted on the invention known as	•	
(11)	Insert Identification	(11)	Compressor Tip Injector		
	such as Title, Case Number, or Foreign		5825 JPH	777	
	Application Number		(Attorney Docket No.		
(12)	Alternative	(12)	U.S. Application Number		
	Identification for			بنب	
	filed applications	filed			
	for the invention and as the Assignee may c 2) Each undersigned as be declared concerning every way possible in 3) Each undersigned as necessary in connecting Industrial Property or 4) Each undersigned as confirm by reissue or 5) Each undersigned as other issuing authoriting as Assignee of the entassigned, and that he agrees that this assign representatives. 6) Each undersigned by	also to a leem ne grees to g any a obtaining rees to on with similar grees to reexamuthorize tes to is tire inte has not ment is ereby g	execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ng evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of	s d	

Patent and Trademark Office for recordation of this document.

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.

Inventor	' ALAN ROBE	RT MAGUIR	€:	
(Print n	39 39 39		<u>&</u> *-	
Date	21 March 2016	Inventor Signature	Mon slagues	(SEAL)
			a) a Notary Public if within the U.S.A. and before at least two witnesses who al	
Date	21 March 201	Witness		
Date	21 March 201	G Witness	(CS)MONTH	

ASSIGNMENT

(1-8)	-8) Insert Legal Name(s) of Inventor(s)		Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George; Wilson, Mark J			
	In consideration of the sum of sufficiency of which are hereb	one dollo y acknow	r (\$1,00) and other good and valuable consideration paid to each of the undersigned, the receipt and dedged, each undersigned agrees to assign, and hereby does assign, transfer and set over to			
(9)	Insert Name of Assig	gnee	ROLLS-ROYCE pic			
(10)	Insert Address of As	signee	62 Buckingham Gate, London, SWIE 6AT, Great Britain			
	for the United States of Ameri- provisional, non-provisional, d	ca as defi livisional	and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest ned in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as			
(11)	Insert Identification	(11)	Compressor Tip Injector			
	such as Title, Case Number, or Foreign		5825 JPH			
	Application Number	(Attor	rney Docket No)			
(12)	Alternative	(12)	U.S. Application Number			
	Identification for					
	filed applications	filed				
	filed applications filed 1) Each undersigned agrees to for the invention and also to e as the Assignee may deem net. 2) Each undersigned agrees to be declared concerning any any every way possible in obtaining. 3) Each undersigned agrees to necessary in connection with Industrial Property or similar. 4) Each undersigned agrees to confirm by reissue or reexam. 5) Each undersigned authorized other issuing authorities to issue as Assignee of the entire interesting assigned, and that he has not a agrees that this assignment is representatives. 6) Each undersigned hereby gridentification that may be necessary to the entire interesting and the entire interesting and the entire interesting agrees that this assignment is representatives.		execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ing evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of			

PATENT REEL: 038357 FRAME: 0500

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.

Invent	or O and a a comme	0			
(Print	manne) Robinson, Da	niel			
Date	08/04/16	Inventor Signatus	· Alpha	<u>) </u>	(AL)
Consi	This assignment should preferably but if outside the U.S.A. If neither, then				
Date	08/04/16	Witness		D. EDWAEDS	>
Data	04/04/16	Winnes	coon the	oh FAndri	eu)

ASSIGNMENT

(8-8)

(1-8)	-8) Insert Legal Name(s) of Inventor(s)		Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George; Wilson, Mark J
	In consideration of the sum of sufficiency of which are hereb	ose dolla y seknow	r (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and dedged, each undersigned agrees to assign, and hereby does assign, transfer and set over to
(9)	Insert Name of Assig	gnee	ROLLS-ROYCE plc
(10)	Insert Address of Assignee		62 Buckingham Gate, London, SWIE 6AT, Great Britain
	for the United States of Ameri provisional, non-provisional, (ca es defi livisional	and Assignce's heirs, successors, assigns and legal representatives, the entire right, title and interest ned in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as
(11)	Insert Identification	(11)	Compressor Tip Injector
	such as Title, Case Number, or Foreign		5825 JPH
	Application Number	(Attor	mey Docket No.
(12)	Alternative	(12)	U.S. Application Number
	Identification for		
	filed applications	filed	
	for the invention and as the Assignce may of 2) Each undersigned at the declared concerning every way possible in 3) Each undersigned at necessary in connection of the confirm by reissue or 5) Each undersigned at confirm by reissue or 5) Each undersigned at other issuing authoritias Assignee of the entassigned, and that he agrees that this assign representatives. 6) Each undersigned he identification that may	also to deem ne grees to grees to obtaining rees to on with similar grees to reexamuthorize ies to is tire inte has not unent is ereby gybe necessary be necessary gybe nec	execute all papers necessary in connection with any interference which may pplication or patents for the invention and to cooperate with the Assignee in ing evidence and going forward with such interference. execute all papers and documents and perform any act which may be claims or provisions of the International Convention for Protection of

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 opposite the undersigned name.

Invent	ar	GEORGE	Bosto	68		
(Print	name)				200 d	
Date	22	MARCH	2016	inventor Signatu	ure 44 (SEAL)	
Const	This a ut if out	ssignment sho	uld preferably by the state of	be signed before: en it should be sig	(a) a Notary Public if within the U.S.A. (b) a U.S. gned before at least two witnesses who also sign here:	
Date	22	MARCH	2016	Witness	MATTHEN MURUS	
Date	22	MARCH 7	<i>l</i> 016	Witness	are CHRIS ROWE	:

ASSIGNMENT

(1-8)	Insert Legal Name(s) of Inventor(s)		Knight, Glenn A; Maguire, Alan R; Robinson, Daniel; Bostock, George; Wilson, Mark J					
	In consideration of the sum of sufficiency of which are hereb	one dolla y acknov	or (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt an riedged, each undersigned agrees to assign, and hereby does assign, transfer and set over to					
(9)	Insert Name of Assi	gnee	ROLLS-ROYCE plc					
(10)	Insert Address of As	signce	62 Buckingham Gate, London, SW1E 6AT, Great Britain					
	for the United States of Ameri provisional, non-provisional, c	ca as defi livisional	and Assignce's heirs, successors, assigns and legal representatives, the entire right, title and intensined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all continuation, international, confirmation, substitute and reissue application(s), and all Letters ination certificates that may be granted on the invention known as					
(11)	Insert Identification such as Title, Case Number, or Foreign	(11)	Compressor Tip Injector					
			5825 JPH					
	Application Number	(Attor	ney Dockei No.					
(12)	Alternative	(12)	U.S. Application Number					
	Identification for filed applications	filed						
	 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. 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. 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. 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. 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. Each undersigned hereby grants the firm of Oliff ple 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. 							

PATENT REEL: 038357 FRAME: 0504

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.

Invent	" MARK J HILL	oN		
(Print	1865 839C.)			
Date	7th April 2016	Inventor Signat		(SEAL)
Const	This assignment should preferal all if outside the U.S.A. If neither,	aly be signed before then it should be si	(a) a Notary Public if within the U.S. gned before at least two witnesses who	.A. (b) a U.S. o also sign here:
Date	7th April 2016	Witness	~ ini	
RAMES:	38 :	Winess.	00	
	7 About 2016		1/ 12 - 10	