

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT7067047

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THOMAS E. BRIGGS, JR.	12/08/2021
CHARLES E. ROBERTS, JR.	12/09/2021
KEVIN L. HOAG	12/08/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SOUTHWEST RESEARCH INSTITUTE
<b>Street Address:</b>	6220 CULEBRA ROAD
<b>City:</b>	SAN ANTONIO
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	78238-5166
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17451888
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(603)668-2970
<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>	6036686560
<b>Email:</b>	mstlaurent@gtp.com
<b>Correspondent Name:</b>	STEVEN J. GROSSMAN
<b>Address Line 1:</b>	55 S. COMMERCIAL STREET
<b>Address Line 2:</b>	GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC
<b>Address Line 4:</b>	MANCHESTER, NEW HAMPSHIRE 03101
<b>ATTORNEY DOCKET NUMBER:</b>	SWR4104
<b>NAME OF SUBMITTER:</b>	STEVEN J. GROSSMAN
<b>SIGNATURE:</b>	/STEVEN J. GROSSMAN/
<b>DATE SIGNED:</b>	12/10/2021
<b>Total Attachments: 9</b>	
source=SWR4104_Assignment#page1.tif	
source=SWR4104_Assignment#page2.tif	
source=SWR4104_Assignment#page3.tif	

source=SWR4104\_Assignment#page4.tif  
source=SWR4104\_Assignment#page5.tif  
source=SWR4104\_Assignment#page6.tif  
source=SWR4104\_Assignment#page7.tif  
source=SWR4104\_Assignment#page8.tif  
source=SWR4104\_Assignment#page9.tif

## **ASSIGNMENT OF THE UNITED STATES PATENT APPLICATION**

WHEREAS, I/WE, **Thomas E. BRIGGS, Jr., Charles E. ROBERTS, Jr. and Kevin L. HOAG**, made certain new and useful inventions and improvements for which I/We filed, or will be filing, an application for Letters Patent of the United States, identified as U.S. patent application serial number **17/451,888**, filed on **October 22, 2021**, which application is entitled:

### **TECHNIQUES FOR ENGINE COOLING USING SUPERCRITICAL FLUIDS AND A COMBUSTION ENGINE SYSTEM IMPLEMENTING THE SAME**

AND, WHEREAS, **SOUTHWEST RESEARCH INSTITUTE**, a corporation organized and existing under and by virtue of the laws of the State of Texas, U.S.A., and having an office and place of business at 6220 Culebra Road, San Antonio, Texas 78238-5166, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, I/We have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, continuations-in-part, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed under the Patent Cooperation Treaty, in any regional patent offices and in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and I/We do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letter Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, I/We do hereby agree that I/We and my/our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me/us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be;

AND, furthermore, I/We covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me/us.

AND, as a named inventor, I hereby declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims, and I am aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby acknowledge that any wilful 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 TESTIMONY WHEREOF, I have hereunto set my hand this \_8\_ day of \_December\_, 2021.

  
\_\_\_\_\_  
**Thomas E. BRIGGS**

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
**Charles E. ROBERTS, Jr.**

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
**Kevin L. HOAG**

## **ASSIGNMENT OF THE UNITED STATES PATENT APPLICATION**

WHEREAS, I/WE, **Thomas E. BRIGGS, Jr., Charles E. ROBERTS, Jr. and Kevin L. HOAG**, made certain new and useful inventions and improvements for which I/We filed, or will be filing, an application for Letters Patent of the United States, identified as U.S. patent application serial number **17/451,888**, filed on **October 22, 2021**, which application is entitled:

### **TECHNIQUES FOR ENGINE COOLING USING SUPERCRITICAL FLUIDS AND A COMBUSTION ENGINE SYSTEM IMPLEMENTING THE SAME**

AND, WHEREAS, **SOUTHWEST RESEARCH INSTITUTE**, a corporation organized and existing under and by virtue of the laws of the State of Texas, U.S.A., and having an office and place of business at 6220 Culebra Road, San Antonio, Texas 78238-5166, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, I/We have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, continuations-in-part, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed under the Patent Cooperation Treaty, in any regional patent offices and in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and I/We do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letter Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, I/We do hereby agree that I/We and my/our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me/us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be;

AND, furthermore, I/We covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me/us.

AND, as a named inventor, I hereby declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims, and I am aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 C.F.R. § 1.56.

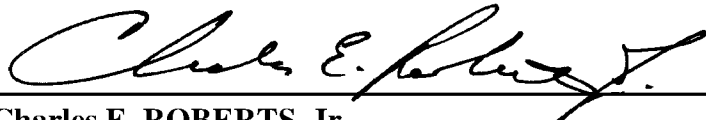
I hereby acknowledge that any wilful false statement made in this declaration is punishable under 18 U.S. C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

---

**Thomas E. BRIGGS**

IN TESTIMONY WHEREOF, I have hereunto set my hand this 9<sup>th</sup> day of December, 2021.



---

**Charles E. ROBERTS, Jr.**

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

---

**Kevin L. HOAG**



## **ASSIGNMENT OF THE UNITED STATES PATENT APPLICATION**

WHEREAS, I/WE, **Thomas E. BRIGGS, Jr., Charles E. ROBERTS, Jr. and Kevin L. HOAG**, made certain new and useful inventions and improvements for which I/We filed, or will be filing, an application for Letters Patent of the United States, identified as U.S. patent application serial number **17/451,888**, filed on **October 22, 2021**, which application is entitled:

### **TECHNIQUES FOR ENGINE COOLING USING SUPERCRITICAL FLUIDS AND A COMBUSTION ENGINE SYSTEM IMPLEMENTING THE SAME**

AND, WHEREAS, **SOUTHWEST RESEARCH INSTITUTE**, a corporation organized and existing under and by virtue of the laws of the State of Texas, U.S.A., and having an office and place of business at 6220 Culebra Road, San Antonio, Texas 78238-5166, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, I/We have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, continuations-in-part, or renewals thereof, all Letters Patent which may be granted there from, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed under the Patent Cooperation Treaty, in any regional patent offices and in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted there from; and I/We do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letter Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, I/We do hereby agree that I/We and my/our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to me/us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be;

AND, furthermore, I/We covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me/us.

AND, as a named inventor, I hereby declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims, and I am aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby acknowledge that any wilful 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 TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
Thomas E. BRIGGS

IN TESTIMONY WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_\_, 2021.

\_\_\_\_\_  
Charles E. ROBERTS, Jr.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 8 day of December, 2021.

Kevin L. Hoag  
Kevin L. HOAG