

## PATENT ASSIGNMENT

Electronic Version v1.1  
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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Charles E. Roberts Jr.</td> <td>10/26/2012</td> </tr> <tr> <td>Christopher J. Chadwell</td> <td>11/09/2012</td> </tr> </tbody> </table>		Name	Execution Date	Charles E. Roberts Jr.	10/26/2012	Christopher J. Chadwell	11/09/2012				
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RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>Southwest Research Institute</td> </tr> <tr> <td>Street Address:</td> <td>6220 Culebra Road</td> </tr> <tr> <td>City:</td> <td>San Antonio</td> </tr> <tr> <td>State/Country:</td> <td>TEXAS</td> </tr> <tr> <td>Postal Code:</td> <td>78238-5166</td> </tr> </table>		Name:	Southwest Research Institute	Street Address:	6220 Culebra Road	City:	San Antonio	State/Country:	TEXAS	Postal Code:	78238-5166
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13655372</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13655372						
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CORRESPONDENCE DATA											
<p>Fax Number: 2105228365  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 210-522-5560        Email: shirley.mcdonald@swri.org        Correspondent Name: Shirley E. McDonald        Address Line 1: 6220 Culebra Road        Address Line 4: San Antonio, TEXAS 78238-5166</p>											
ATTORNEY DOCKET NUMBER:	3569 CDV										
NAME OF SUBMITTER:	Shirley E. McDonald										
<p>Total Attachments: 3        source=3569 Signed Assignment#page1.tif        source=3569 Signed Assignment#page2.tif        source=3569 Signed Assignment#page3.tif</p>											

OP \$40.00 13655372

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of	§	
Charles E. Roberts Jr., et al	§	
	§	
Serial No.: 13/655,372	§	Action: Assignment
	§	
Filed: October 18, 2012	§	

Title: Diesel Engine Exhaust Aftertreatment System and Method of Operation

TO: Commissioner of Patents  
and Trademarks  
Alexandria, VA 22313

WHEREAS, we, CHARLES E. ROBERTS JR., a citizen of the United States, residing at 10906 Bar X Trail, Helotes, Bexar County, Texas, and CHRISTOPHER J. CHADWELL, a citizen of the United States, residing at 9022 Shade Tree, San Antonio, Bexar County, Texas, are joint inventors of new and useful improvements in *DIESEL ENGINE EXHAUST AFTERTREATMENT SYSTEM AND METHOD OF OPERATION* for which we have executed an application for Letters Patent which was filed on October 18, 2012; and,

WHEREAS, we represent that we are joint owners of said invention and application for Letters Patent; and,

WHEREAS, SOUTHWEST RESEARCH INSTITUTE, hereinafter called "ASSIGNEE," a Texas Corporation having its principal office at 6220 Culebra Road, San Antonio, Bexar County, Texas 78238-5166, is desirous of acquiring our right, title and interest in and to the said application and the invention therein described and claimed and any Letters Patent that may be issued upon said application or for the invention therein contained;

NOW, THEREFORE, for and in consideration of the sum of Sixty-Five Dollars (\$65.00), lawful money of the United States, and other valuable consideration, the receipt and sufficiency whereof we hereby acknowledge, we, the said CHARLES E. ROBERTS JR. and CHRISTOPHER J. CHADWELL, hereinafter called "ASSIGNORS," have sold, assigned and transferred, and do hereby sell, assign and transfer unto the said ASSIGNEE, its successors and assigns, our entire right, title and interest in and to (a) said invention and worldwide rights therein, including the right to claim the

priority date of said application and all other rights arising under the International Convention for the Protection of Industrial Property; (b) said application, including all divisions, continuations, continuations-in-part and substitutions thereof; and (c) all United States and foreign patents which shall issue on said invention, including all reissues, renewals, divisions and extensions thereof, for the United States, its territories and possessions and all foreign countries, including the right to file applications for Letters Patent on said invention in any and all foreign countries, the same to be held and enjoyed by said ASSIGNEE, its assigns and successors, as fully and entirely as the same would have been held and enjoyed by us, had this Assignment and sale not been made.

ASSIGNORS request that any and all such Letters Patent for said invention be issued to ASSIGNEE, its successors, assigns and legal representatives, or to such nominees as it may designate.

ASSIGNORS covenant and agree that we and our executors or administrators will, at any time upon the request and at the expense of said ASSIGNEE, execute and deliver any and all papers and perform all lawful acts that may be necessary or desirable, in the opinion of said ASSIGNEE, to enable and assist said ASSIGNEE to (a) obtain Letters Patent, both domestic and foreign, on said invention; (b) establish, maintain and secure title in said ASSIGNEE, its successors and assigns, to said invention, application and Letters Patent, including making such title of lawful public record; and (c) defend, establish or otherwise preserve the validity of said Letters Patent against any and all infringers, and perform such other acts as are necessary to give full force and effect to this Assignment.

ASSIGNORS further covenant with ASSIGNEE that the rights and property herein conveyed are free and clear of any encumbrances, and that ASSIGNORS have the full right to convey the same as herein expressed.

IN TESTIMONY WHEREOF, ASSIGNORS have duly executed this Assignment on the date indicated below.



Charles E. Roberts Jr.

10/26/2012  
Date

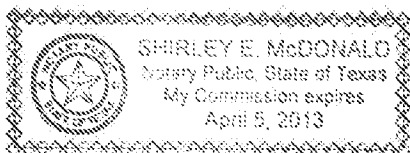
*C. Chadwell*  
Christopher J. Chadwell

11/9/2012  
Date

STATE OF TEXAS       §  
                                  §  
COUNTY OF BEXAR   §

BEFORE ME, the undersigned authority, on this day personally appeared CHARLES E. ROBERTS JR., known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN under my hand and seal of office this 26th day of October, 2012.

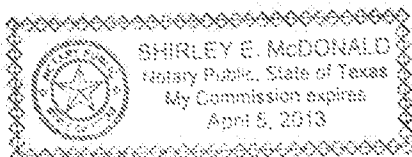


*Shirley E. McDonald*  
Notary Public, State of Texas

STATE OF TEXAS       §  
                                  §  
COUNTY OF BEXAR   §

BEFORE ME, the undersigned authority, on this day personally appeared CHRISTOPHER J. CHADWELL, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN under my hand and seal of office this 9th day of November, 2012.



*Shirley E. McDonald*  
Notary Public, State of Texas