

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT												
NATURE OF CONVEYANCE:	Corrective Assignment to correct the original electronic Cover Sheet, the 5th inventor's name is omitted, previously recorded on Reel 029190 Frame 0435. Assignor(s) hereby confirms the Assignment.												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Takahiro SAITO</td> <td>09/19/2012</td> </tr> <tr> <td>Nobuaki KOBAYASHI</td> <td>09/19/2012</td> </tr> <tr> <td>Hiroshi OHNO</td> <td>09/24/2012</td> </tr> <tr> <td>Atsushi NAKAI</td> <td>09/27/2012</td> </tr> <tr> <td>Yoshio OKAMOTO</td> <td>09/28/2012</td> </tr> </tbody> </table>		Name	Execution Date	Takahiro SAITO	09/19/2012	Nobuaki KOBAYASHI	09/19/2012	Hiroshi OHNO	09/24/2012	Atsushi NAKAI	09/27/2012	Yoshio OKAMOTO	09/28/2012
Name	Execution Date												
Takahiro SAITO	09/19/2012												
Nobuaki KOBAYASHI	09/19/2012												
Hiroshi OHNO	09/24/2012												
Atsushi NAKAI	09/27/2012												
Yoshio OKAMOTO	09/28/2012												
RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>HITACHI AUTOMOTIVE SYSTEMS, LTD.</td> </tr> <tr> <td>Street Address:</td> <td>2520, Takaba</td> </tr> <tr> <td>Internal Address:</td> <td>Hitachinaka-shi</td> </tr> <tr> <td>City:</td> <td>Ibaraki</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>312-8503</td> </tr> </table>		Name:	HITACHI AUTOMOTIVE SYSTEMS, LTD.	Street Address:	2520, Takaba	Internal Address:	Hitachinaka-shi	City:	Ibaraki	State/Country:	JAPAN	Postal Code:	312-8503
Name:	HITACHI AUTOMOTIVE SYSTEMS, LTD.												
Street Address:	2520, Takaba												
Internal Address:	Hitachinaka-shi												
City:	Ibaraki												
State/Country:	JAPAN												
Postal Code:	312-8503												
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>13660168</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13660168								
Property Type	Number												
Application Number:	13660168												
CORRESPONDENCE DATA													
Fax Number:	7033126666												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	7033126600												
Email:	rperez@antonelli.com												
Correspondent Name:	Antonelli, Terry, Stout & Kraus, LLP												
Address Line 1:	1300 N. 17th Street												
Address Line 2:	Suite 1800												
Address Line 4:	Arlington, VIRGINIA 22209												

ATTORNEY DOCKET NUMBER:	1478.52642X00
NAME OF SUBMITTER:	Paul J. Skwierawski
<p>Total Attachments: 11</p> <p>source=Cover Sheet#page1.tif</p> <p>source=Assignment#page1.tif</p> <p>source=Assignment#page2.tif</p> <p>source=Patent Assignment Receipt#page1.tif</p> <p>source=Notice of Recordation#page1.tif</p> <p>source=Notice of Recordation#page2.tif</p> <p>source=Original Electronic Cover Sheet#page1.tif</p> <p>source=Original Electronic Cover Sheet#page2.tif</p> <p>source=Official Filing Receipt#page1.tif</p> <p>source=Official Filing Receipt#page2.tif</p> <p>source=Official Filing Receipt#page3.tif</p>	

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

Attorney Docket No. 1478.52642X00

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

<b>1. Name of conveying party(ies):</b> <b>Takahiro SAITO</b> <b>Nobuaki KOBAYASHI, Hiroshi OHNO, Atsushi NAKAI,</b> <b>Yoshio OKAMOTO</b>  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>2. Name and address of receiving party(ies)</b> Name: <b>HITACHI AUTOMOTIVE SYSTEMS, LTD.</b>  Street Address: <b>2520, Takaba, Hitachinaka-shi,</b> <b>Ibaraki 312-8503 Japan</b>  Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>3. Nature of conveyance/ Execution Date:</b> September 19, 2012; September 19, 2012; September 24, 2012; September 27, 2012; September 28, 2012.  <input type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input type="checkbox"/> Executive Order 9424, Confirmatory License <input checked="" type="checkbox"/> Other. Corrected Assignment. In the original electronic Cover Sheet, the 5 <sup>th</sup> inventor's name was omitted. A copy of the Official Filing Receipt is attached. Reel 029190 Frame 0435.	

<b>4. Application number(s) or patent number(s):</b> <input type="checkbox"/> This document is being filed together with a new application.	
<b>A. Patent Application No.(s)</b>  <b>13/660,168</b>	<b>B. Patent Registration No.(s)</b>  
Additional number(s) attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

<b>5. Name and address of party to whom correspondence concerning document should be mailed:</b>  Name: <b>ANTONELLI, TERRY, STOUT &amp; KRAUS, LLP</b>  Internal Address:  <b>1300 NORTH 17<sup>TH</sup> STREET - SUITE 1800</b>  City: <b>ARLINGTON</b> State: <b>VA</b> Zip <b>22209</b>  Phone Number: <b>(703) 312-6600</b> Facsimile Number: <b>(703) 312-6666</b> Email Address: <b>email@antonelli.com</b>	<b>6. Total number of applications and patents involved:</b> 1
	<b>7. Total fee (37 CFR 3.41).....</b> \$40.00  <input type="checkbox"/> Authorized to be charged by credit card <input type="checkbox"/> Authorized to be charged to deposit account <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> None required (government interest not affecting title)
	<b>8. Payment Information:</b>  a. Credit Card Last 4 numbers: Expiration date:  b. Deposit account number: 01-2135  Authorized User Name:

DO NOT USE THIS SPACE

<b>9. Statement and signature.</b> <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i>		
<b>Paul J. Skwierawski, Reg#32,173</b>	<b>/Paul J. Skwierawski/</b> <sup>PSJ</sup>	<b>11/27/2012</b>
Name of Person Signing	Signature	Date
Total number of pages including cover sheet, attachments, and document: <b>11</b>		

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450

# ASSIGNMENT

U.S. Rights - Sole or Joint

P12JEX0074S

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto.

name and  
address of  
assignee

HITACHI AUTOMOTIVE SYSTEMS, LTD.  
2520, Takaba, Hitachinaka-shi,  
Ibaraki 312-8503 Japan

(hereinafter ASSIGNEE) all right, title and interest for the United States, its territories and possessions in and to his invention relating to

title of  
invention

FUEL INJECTION VALVE

as set forth in his/her United States Patent Application

check one

( x ) executed concurrently herewith

( ) executed on \_\_\_\_\_

( ) Serial No. \_\_\_\_\_ Filed \_\_\_\_\_

in and to said United States Patent Application including any and all divisions or continuations and Convention applications based in whole or in part on said invention or upon said application, including the right to make applications for Letters Patents throughout the world in respect to the invention and to claim priority under the International Convention for the Protection of Industrial Property, and in and to any and all Letters Patent of any country which may issue on any such application or for said invention, including any and all reissues, reexaminations, or extensions, to be held and enjoyed by said ASSIGNEE, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not be made;

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, its successors or assigns in accordance herewith;

Each of the undersigned warrants and covenants that he/she has the full and unencumbered right to sell and assign the interests herein sold and assigned and that he/she has not executed and will not execute any document or instrument in conflict herewith;

Each of the undersigned further covenants and agrees that at any time upon request of said ASSIGNEE, its successors, legal representatives or assigns he/she will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him/her relating to said invention or patent application and that he/she will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns to perfect title to said invention, to said application including divisions and continuations thereof and to any and all Letters Patent which may be granted therefor or thereon, including reissues, reexaminations, or extensions, in said ASSIGNEE, its successors, or assigns or to assist said ASSIGNEE, its successors, legal representatives or assigns in obtaining, reissuing or enforcing Letters Patent of the United States for said invention;

Each of the undersigned hereby grants the firm of **ANTONELLI, TERRY, STOUT & KRAUS, LLP** the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

names and  
signatures  
of  
inventors

T. Saito date 09/19/2012 N. Kobayashi date 09/19/2012  
Name: Takahiro Saito Name: Nobuaki Kobayashi

Hiroshi Ohno date 09/24/2012 A. Nakai date 09/27/2012  
Name: Hiroshi Ohno Name: Atsushi Nakai

PATENT

REEL: 029361 FRAME: 0576

Yoshio Okamoto date 9/28/2012  
Name: Yoshio Okamoto

\_\_\_\_\_  
Name: \_\_\_\_\_ date \_\_\_\_\_

\_\_\_\_\_  
Name: \_\_\_\_\_ date \_\_\_\_\_

\_\_\_\_\_  
Name: \_\_\_\_\_ date \_\_\_\_\_

## PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

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>Takahiro Saito</td><td>09/19/2012</td></tr><tr><td>Nobuaki Kobayashi</td><td>09/19/2012</td></tr><tr><td>Hiroshi Ohno</td><td>09/24/2012</td></tr><tr><td>Atsushi Nakai</td><td>09/27/2012</td></tr></tbody></table>		Name	Execution Date	Takahiro Saito	09/19/2012	Nobuaki Kobayashi	09/19/2012	Hiroshi Ohno	09/24/2012	Atsushi Nakai	09/27/2012
Name	Execution Date										
Takahiro Saito	09/19/2012										
Nobuaki Kobayashi	09/19/2012										
Hiroshi Ohno	09/24/2012										
Atsushi Nakai	09/27/2012										
RECEIVING PARTY DATA											
<table border="1"><tr><td>Name:</td><td>HITACHI AUTOMOTIVE SYSTEMS, LTD.</td></tr><tr><td>Street Address:</td><td>2520, Takaba, Hitachinaka-shi,</td></tr><tr><td>City:</td><td>Ibaraki</td></tr><tr><td>State/Country:</td><td>JAPAN</td></tr><tr><td>Postal Code:</td><td>312-8503</td></tr></table>		Name:	HITACHI AUTOMOTIVE SYSTEMS, LTD.	Street Address:	2520, Takaba, Hitachinaka-shi,	City:	Ibaraki	State/Country:	JAPAN	Postal Code:	312-8503
Name:	HITACHI AUTOMOTIVE SYSTEMS, LTD.										
Street Address:	2520, Takaba, Hitachinaka-shi,										
City:	Ibaraki										
State/Country:	JAPAN										
Postal Code:	312-8503										
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>13660168</td></tr></tbody></table>		Property Type	Number	Application Number:	13660168						
Property Type	Number										
Application Number:	13660168										
CORRESPONDENCE DATA											
Fax Number:	7033126666										
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>											
Phone:	703-312-6600										
Email:	svannarath@antonelli.com										
Correspondent Name:	ANTONELLI, TERRY, STOUT & KRAUS, LLP										
Address Line 1:	1300 NORTH SEVENTEENTH STREET										
Address Line 2:	SUITE 1800										
Address Line 4:	ARLINGTON, VIRGINIA 22209-3873										
ATTORNEY DOCKET NUMBER:	1478.52642X00										
NAME OF SUBMITTER:	Ronald J. Shore										
Total Attachments: 2 source=52642X00ASN#page1.tif source=52642X00ASN#page2.tif											

OP \$40.00 13660168



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/660,168	10/25/2012	3747	1260	1478.52642X00	17	1

CONFIRMATION NO. 2789

20457

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

FILING RECEIPT



0000000057616631

Date Mailed: 11/19/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Takahiro SAITO, Isesaki-shi, JAPAN;  
Nobuaki KOBAYASHI, Maebashi-shi, JAPAN;  
Hiroshi OHNO, Honjyo-shi, JAPAN;  
Atsushi NAKAI, Isesaki-shi, JAPAN;  
Yoshio OKAMOTO, Omitama-shi, JAPAN;

Applicant(s)

HITACHI AUTOMOTIVE SYSTEMS, LTD., Ibaraki, JAPAN

Assignment For Published Patent Application

HITACHI AUTOMOTIVE SYSTEMS, LTD., Ibaraki, JAPAN

Power of Attorney: None

Domestic Applications for which benefit is claimed - None.

*A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.*

**Foreign Applications** (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

JAPAN 2012-029347 02/14/2012

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

**If Required, Foreign Filing License Granted:** 11/14/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/660,168**

**Projected Publication Date:** 08/15/2013

**Non-Publication Request:** No

**Early Publication Request:** No  
**Title**

FUEL INJECTION VALVE

**Preliminary Class**

123

## PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 3



countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

**LICENSE FOR FOREIGN FILING UNDER**  
**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

---

**SelectUSA**

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage, facilitate, and accelerate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit [SelectUSA.gov](http://SelectUSA.gov).