

## 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>Rustu CESUR</td> <td>05/09/2013</td> </tr> <tr> <td>Lawrence J. TOGNETTI</td> <td>04/30/2013</td> </tr> <tr> <td>Pengfei MA</td> <td>05/09/2013</td> </tr> <tr> <td>Jiao ZHANG</td> <td>05/09/2013</td> </tr> <tr> <td>Tonglin SHANG</td> <td>05/09/2013</td> </tr> </tbody> </table>		Name	Execution Date	Rustu CESUR	05/09/2013	Lawrence J. TOGNETTI	04/30/2013	Pengfei MA	05/09/2013	Jiao ZHANG	05/09/2013	Tonglin SHANG	05/09/2013
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Tonglin SHANG	05/09/2013												
RECEIVING PARTY DATA													
Name:	Caterpillar Inc.												
Street Address:	100 N.E. Adams Street												
Internal Address:	Intellectual Property Department												
City:	Peoria												
State/Country:	ILLINOIS												
Postal Code:	61629-9510												
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>13718907</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13718907								
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Application Number:	13718907												
CORRESPONDENCE DATA													
Fax Number:	2024084400												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	202-408-4000												
Email:	faxserve@finnegan.com												
Correspondent Name:	CATERPILLAR/FINNEGAN, HENDERSON, L.L.P.												
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ATTORNEY DOCKET NUMBER:	08350.0940-00000												
NAME OF SUBMITTER:	Virginia McNelis-Clark												

OP \$40.00 13718907

Signature:	/Virginia McNelis-Clark/
Date:	08/16/2013
<b>Total Attachments: 9</b> source=0709assignment_001#page1.tif source=0709assignment_001#page2.tif source=0709assignment_001#page3.tif source=0709assignment_001#page4.tif source=0709assignment_001#page5.tif source=0709assignment_001#page6.tif source=0709assignment_001#page7.tif source=0709assignment_001#page8.tif source=0709assignment_001#page9.tif	

FORM PTO-1595  
1-31-92

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
Attorney Docket No. 08350.0940-00000  
Attorney Customer Number: 58,982

To the Director of the U.S. Patent and Trademark Office:  
Please record the attached original documents or copy thereof.

Mail Stop Assignment Recordation Services

1. Name of conveying party:  
a) Rustu CESUR  
b) Lawrence J. TOGNETTI  
c) Pengfei MA  
d) Jiao ZHANG  
e) Tonglin SHANG

2. Name and address of receiving party(ies):  
Name: Caterpillar Inc.

Additional name(s) of conveying party(ies) attached?  Yes  No

Internal Address: Intellectual Property Department

3. Nature of conveyance:  
Street Address: 100 N.E. Adams Street

Assignment  Merger  
City: Peoria

Security Agreement  Change of Name  
State: IL Zip Code: 61629-9510

Other:  
Additional name(s) & Address(es) attached?

Execution Date: a) May 9, 2013  
b) April 30, 2013  
c) May 9, 2013  
d) May 9, 2013  
e) May 9, 2013

Yes  No

Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application: Application No. 13/718,907 filed on December 18, 2012

A. Patent Number(s):  
Additional numbers attached?  Yes  No

4. Name and address of party to whom correspondence concerning document should be mailed:  
Name: Christopher P. Isaac

Total number of applications and registrations involved: 1

5. Total fee (37 CFR 3.41): \$40  
 Enclosed (Please charge deficiency to deposit account)  
 Authorized to be charged to deposit account

Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Street Address: 901 New York Avenue, N.W.

City: Washington, D.C.

State: Zip: 20001

6. Deposit Account No. 06-0916

7. Statement and signature.  
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.

Ryan C. Stockett, Reg. No. 53,642 /Ryan C. Stockett/  
Signature Date  
August 16, 2013

Total number of pages including cover sheet, attachments and documents: 9

**ASSIGNMENT**

WHEREAS I/We, the below named inventor(s), hereinafter referred to as Assignor(s), have made an invention entitled:

**HYDRAULIC CONTROL SYSTEM HAVING SWING MOTOR ENERGY RECOVERY**

for which I/We will or have filed a patent application; and

WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-9510 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;


NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, provisional application serial no. 61/695,466, filed August 31, 2012 and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office and all patents which may be granted on this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

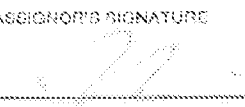
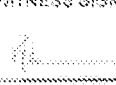
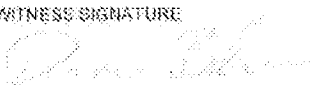
AND, I/WE HEREBY authorize the attorneys/representatives that I/WE have empowered to prosecute this application to insert here in parentheses the country, application number, and official filing date (Application No. 13/718,907, filed December 18, 2012).

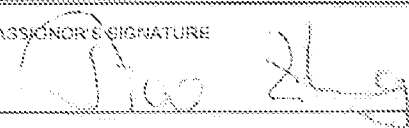
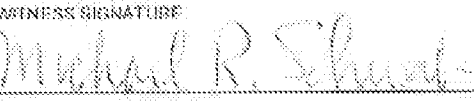
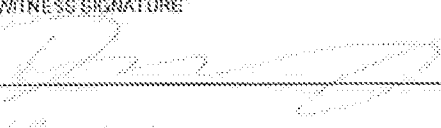
IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

1. FULL NAME OF SOLE OR FIRST ASSIGNOR Rustu Cesur	ASSIGNOR'S SIGNATURE 	DATE 05/12/2013
ADDRESS 168 W. 20th Street, Lombard, IL 60148		CITIZENSHIP TURKEY

1. WITNESS NAME <i>Dennis Blum</i>	WITNESS SIGNATURE <i>Dennis Blum</i>	DATE <i>May 11 2011</i>
ADDRESS <i>700 Alvan Dr #104 Naperville IL 60565</i>		CITIZENSHIP <i>USA</i>
2. WITNESS NAME <i>Kristen Ford</i>	WITNESS SIGNATURE <i>[Signature]</i>	DATE <i>05/11/2011</i>
ADDRESS <i>7707 Emerald Ln Naperville IL 60565</i>		CITIZENSHIP <i>USA</i>

2. FULL NAME OF SECOND ASSIGNOR <i>Lawrence J. TOGNETTI</i>	ASSIGNOR'S SIGNATURE	DATE
ADDRESS <i>4506 W Cedar Hills Drive, Duntap, IL 61525</i>		CITIZENSHIP <i>USA</i>
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

3. FULL NAME OF THIRD ASSIGNOR Pengfei Ma	ASSIGNOR'S SIGNATURE 	DATE 5/9/13
ADDRESS 1744 Cornell Court, Naperville, IL 60565		CITIZENSHIP CHINA
1. WITNESS NAME Morgan Zacc	WITNESS SIGNATURE 	DATE 05/09/13
ADDRESS 2707 Cornelia W Naperville IL 60565		CITIZENSHIP USA
2. WITNESS NAME Dana Brea	WITNESS SIGNATURE 	DATE 05/09/13
ADDRESS 700 Cornelia Dr. #109 Naperville IL 60565		CITIZENSHIP USA

4. FULL NAME OF FOURTH ASSIGNOR Jiao Zhang	ASSIGNOR'S SIGNATURE 	DATE 5/9/2013
ADDRESS 1851 Pathway Drive, Naperville, IL 60565		CITIZENSHIP USA
1. WITNESS NAME Michael R. Schwarz	WITNESS SIGNATURE 	DATE 5/9/2013
ADDRESS 2500 Hoss Dr. Crest Hill IL 60413		CITIZENSHIP USA
2. WITNESS NAME Zhangong Du	WITNESS SIGNATURE 	DATE 05/09/13
ADDRESS 245 Box Car Avenue Naperville, IL 60540		CITIZENSHIP Canada

5. FULL NAME OF FIFTH ASSIGNOR Tonglin Shang		ASSIGNOR'S SIGNATURE <i>Tonglin Shang</i>	DATE 5/9/2013
ADDRESS 1483 Raven Drive, Bolingbrook, IL 60490		CITIZENSHIP CANADA	
1. WITNESS NAME Michael R. Schwab		WITNESS SIGNATURE <i>Michael R. Schwab</i>	DATE 5/9/2013
ADDRESS 2320 Hesa Dr. Crest Hill IL 60403		CITIZENSHIP USA	
2. WITNESS NAME Zhangang Du		WITNESS SIGNATURE <i>Zhangang Du</i>	DATE 05/09/13
ADDRESS 245 Box Car Avenue Naperville IL 60540		CITIZENSHIP Canada	

## ASSIGNMENT

WHEREAS I/We, the below named inventor(s), hereinafter referred to as Assignor(s), have made an invention entitled:

### HYDRAULIC CONTROL SYSTEM HAVING SWING MOTOR ENERGY RECOVERY

for which I/We will or have filed a patent application; and

WHEREAS, **Caterpillar Inc.**, a corporation of **Deleware** whose post office address is **Intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-9510** (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, and in and to the patent application for this invention and any and all patents to be issued upon this application throughout the world;

NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, **provisional application serial no. 61/695,466, filed August 31, 2012** and this application, and all divisions, and continuations thereof, and all patents which may be granted thereon, and all reissues thereof, as well as all rights to claim priority in any country or jurisdiction or patent office on the basis of this application, and all applications for patents which may hereafter be filed for this invention in any country or jurisdiction or patent office and all patents which may be granted on this invention in any country or jurisdiction or patent office, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request any official of any country or jurisdiction or patent office whose duty it is to issue patents on applications as described above, to issue all patents for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in any country or jurisdiction or patent office, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns;

AND, I/WE HEREBY authorize the attorneys/representatives that I/WE have empowered to prosecute this application to insert here in parentheses the country, application number, and official filing date (**Application No. 13/718,907, filed December 18, 2012**).

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

1. FULL NAME OF SOLE OR FIRST ASSIGNOR <b>Rustu Cesur</b>	ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>168 W. 20<sup>th</sup> Street, Lombard, IL 60148</b>		CITIZENSHIP <b>TURKEY</b>



1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

2. FULL NAME OF SECOND ASSIGNOR Lawrence J. TOGNETTI	ASSIGNOR'S SIGNATURE <i>Lawrence J. Tognetti</i>	DATE 4/30/2013
ADDRESS <del>7407 N. Patton Lane, Peoria, IL 61614</del>		CITIZENSHIP USA
4506 W cedar Hills, Dunkap, IL 61525		
1. WITNESS NAME <i>Roger Provenzano</i>	WITNESS SIGNATURE <i>Roger Provenzano</i>	DATE 4/30/2013
ADDRESS <i>306 S Elm St.</i>		CITIZENSHIP USA
<i>Washington, IL 61571</i>		
2. WITNESS NAME <i>Adam Reeg</i>	WITNESS SIGNATURE <i>Adam Reeg</i>	DATE 4/30/2013
ADDRESS <i>708 W. Santa Fe Ave</i>		CITIZENSHIP USA
<i>Chillicothe, IL 61523</i>		

3. FULL NAME OF THIRD ASSIGNOR <b>Pengfei Ma</b>		ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>1744 Cornell Court, Naperville, IL 60565</b>		CITIZENSHIP <b>CHINA</b>	
1. WITNESS NAME		WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP	
2. WITNESS NAME		WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP	

4. FULL NAME OF FOURTH ASSIGNOR <b>Jiao Zhang</b>		ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>1651 Pathway Drive, Naperville, IL 60565</b>		CITIZENSHIP <b>USA</b>	
1. WITNESS NAME		WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP	
2. WITNESS NAME		WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP	

5. FULL NAME OF FIFTH ASSIGNOR <b>Tonglin Shang</b>	ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>1483 Raven Drive, Bolingbrook, IL 60490</b>		CITIZENSHIP <b>CANADA</b>
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP