

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3303131

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                          |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                              |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>                   |
| RUSTU CESUR   | 12/10/2012                              |
| JIAO ZHANG  | 12/04/2012                              |
| TONGLIN SHANG   | 12/04/2012                              |
| BRYAN J. HILLMAN  | 05/13/2014                              |
| PETER SPRING  | 12/15/2012                              |
| LAWRENCE J. TOGNETTI  | 06/09/2014                              |
| PENGFEI MA  | 12/04/2014                              |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | CATERPILLAR INC.                        |
| <b>Street Address:</b>  | INTELLECTUAL PROPERTY DEPARTMENT        |
| <b>Internal Address:</b>  | 100 N.E. ADAMS STREET                   |
| <b>City:</b>  | PEORIA                                  |
| <b>State/Country:</b>   | ILLINOIS                                |
| <b>Postal Code:</b>   | 61629-9510                              |
| <b>PROPERTY NUMBERS Total: 1</b>  |   |
| <b>Property Type</b>  | <b>Number</b>                           |
| Application Number:   | 13718938                                |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  | (202)408-4400                           |
| <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>   | 202-408-4000                            |
| <b>Email:</b>   | sheryl.hardy@finnegan.com               |
| <b>Correspondent Name:</b>  | CATERPILLAR/FINNEGAN, HENDERSON, L.L.P. |
| <b>Address Line 1:</b>  | 901 NEW YORK AVENUE, NW                 |
| <b>Address Line 4:</b>  | WASHINGTON, D.C. 20001-4413             |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 08350.0668-00000                        |
| <b>NAME OF SUBMITTER:</b>   | NICHOLAS CERULLI                        |
| <b>SIGNATURE:</b>   | /Nicholas Cerulli/                      |

|   |            |
|---|------------|
| <b>DATE SIGNED:</b>   | 04/09/2015 |
| <b>Total Attachments: 8</b><br>source=Assignment#page1.tif<br>source=Assignment#page2.tif<br>source=Assignment#page3.tif<br>source=Assignment#page4.tif<br>source=Assignment#page5.tif<br>source=Assignment#page6.tif<br>source=Assignment#page7.tif<br>source=Assignment#page8.tif |            |

## ASSIGNMENT

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

### HYDRAULIC CONTROL SYSTEM HAVING ELECTRONIC FLOW LIMITING

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, 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. \_\_\_\_\_, filed \_\_\_\_\_ ).

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

|  |  |                              |
|--|--|------------------------------|
| 1. FULL NAME OF SOLE OR FIRST ASSIGNOR<br><b>Rustu CESUR</b> | ASSIGNOR'S SIGNATURE<br> | DATE<br><b>12/10/2008</b>    |
| ADDRESS<br><b>168 W. 20th Street, Lombard, IL 60148</b>      |  | CITIZENSHIP<br><b>TURKEY</b> |
|  |  |                              |

SOLE/JOINT INVENTION  
(Worldwide Rights)  
Attorney Docket No. 08350.0668-00000  
Client Ref. No. 11-1922

|  |   |                           |
|--|---|---------------------------|
| 1. WITNESS NAME<br><i>Alexander Egelja</i>                 | WITNESS SIGNATURE<br><i>A Egelja</i>    | DATE<br><i>12-10-2012</i> |
| ADDRESS<br><i>4616 Trossenova Ct, Naperville, IL 60566</i> |   | CITIZENSHIP<br><i>USA</i> |
|  |   |                           |
| 2. WITNESS NAME<br><i>Wiley Mosby</i>                      | WITNESS SIGNATURE<br><i>Wiley Mosby</i> | DATE<br><i>12/10/2012</i> |
| ADDRESS<br><i>1241 FM 1410 RD. Devers, TX, 77535</i>       |   | CITIZENSHIP<br><i>USA</i> |
|  |   |                           |

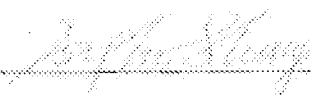
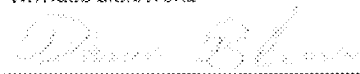

|  |                      |                           |
|--|----------------------|---------------------------|
| 2. FULL NAME OF SECOND ASSIGNOR<br><b>Jiao ZHANG</b>       | ASSIGNOR'S SIGNATURE | DATE                      |
| ADDRESS<br><b>1651 Pathway Drive, Naperville, IL 60565</b> |                      | CITIZENSHIP<br><b>USA</b> |
|  |                      |                           |
| 1. WITNESS NAME  | WITNESS SIGNATURE    | DATE                      |
| ADDRESS  |                      | CITIZENSHIP               |
|  |                      |                           |
| 2. WITNESS NAME  | WITNESS SIGNATURE    | DATE                      |
| ADDRESS  |                      | CITIZENSHIP               |
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SOLE/JOINT INVENTION  
 (Worldwide Rights)  
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|                 |                   |             |
|-----------------|-------------------|-------------|
| 1. WITNESS NAME | WITNESS SIGNATURE | DATE        |
| ADDRESS         |                   | CITIZENSHIP |
|                 |                   |             |
| 2. WITNESS NAME | WITNESS SIGNATURE | DATE        |
| ADDRESS         |                   | CITIZENSHIP |
|                 |                   |             |

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|---|---|--------------------|
| 2. FULL NAME OF SECOND ASSIGNOR<br>Jiao ZHANG       | ASSIGNOR'S SIGNATURE<br><i>Jiao Zhang</i> | DATE<br>12/04/2012 |
| ADDRESS<br>1651 Pathway Drive, Naperville, IL 60565 |   | CITIZENSHIP<br>USA |
|   |   |                    |
| 1. WITNESS NAME<br><i>Kristen Patel</i>             | WITNESS SIGNATURE<br><i>Kristen Patel</i> | DATE<br>12/04/2012 |
| ADDRESS<br>2201 Lakeside Dr                         |   | CITIZENSHIP<br>USA |
| NAPERVILLE, IL 60564                                |   |                    |
| 2. WITNESS NAME<br><i>Dawn Blum</i>                 | WITNESS SIGNATURE<br><i>Dawn Blum</i>     | DATE<br>12/04/2012 |
| ADDRESS<br>7970 Lakeside Dr #104                    |   | CITIZENSHIP<br>USA |
| Naperville, IL 60565                                |   |                    |

SOLE/JOINT INVENTION  
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 Client Ref. No. 11-1922

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|---|--|--|--------------------|
| 3. FULL NAME OF THIRD ASSIGNOR<br>Tonglin SHANG     |  | ASSIGNOR'S SIGNATURE<br> | DATE<br>12/14/2012 |
| ADDRESS<br>1483 Raven Drive, Bolingbrook, IL 60490  |  | CITIZENSHIP<br>CANADA  |                    |
| 1. WITNESS NAME<br>Darius Blum                      |  | WITNESS SIGNATURE<br>    | DATE<br>12/14/2012 |
| ADDRESS<br>1116 Jackson Dr. Downers Grove, IL 60140 |  | CITIZENSHIP<br>USA   |                    |
| 2. WITNESS NAME<br>Kathleen Bove                    |  | WITNESS SIGNATURE<br>     | DATE<br>12/14/2012 |
| ADDRESS<br>2301 Commons Dr. Naperville, IL 60563    |  | CITIZENSHIP<br>USA   |                    |

|   |  |                      |      |
|---|--|----------------------|------|
| 4. FULL NAME OF FOURTH ASSIGNOR<br>Bryan J. HILLMAN |  | ASSIGNOR'S SIGNATURE | DATE |
| ADDRESS<br>1523 W. Marlene Avenue, Peoria, IL 61614 |  | CITIZENSHIP<br>USA   |      |
| 1. WITNESS NAME                                     |  | WITNESS SIGNATURE    | DATE |
| ADDRESS   |  | CITIZENSHIP          |      |
| 2. WITNESS NAME                                     |  | WITNESS SIGNATURE    | DATE |
| ADDRESS   |  | CITIZENSHIP          |      |

SOLE/JOINT INVENTION  
 (Worldwide Rights)  
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 Client Ref. No. 11-1922

|  |  |                       |      |
|--|--|-----------------------|------|
| 3. FULL NAME OF THIRD ASSIGNOR<br>Tonglin SHANG    |  | ASSIGNOR'S SIGNATURE  | DATE |
| ADDRESS<br>1483 Raven Drive, Bolingbrook, IL 60490 |  | CITIZENSHIP<br>CANADA |      |
| 1. WITNESS NAME                                    |  | WITNESS SIGNATURE     | DATE |
| ADDRESS  |  | CITIZENSHIP           |      |
| 2. WITNESS NAME                                    |  | WITNESS SIGNATURE     | DATE |
| ADDRESS  |  | CITIZENSHIP           |      |

|   |  |                      |                  |
|---|--|----------------------|------------------|
| 4. FULL NAME OF FOURTH ASSIGNOR<br>Bryan J. HILLMAN |  | ASSIGNOR'S SIGNATURE | DATE<br>5-13-11  |
| ADDRESS<br>1523 W. Marlene Avenue, Peoria, IL 61614 |  | CITIZENSHIP<br>USA   |                  |
| 1. WITNESS NAME<br>Dennis L. Johnson                |  | WITNESS SIGNATURE    | DATE<br>12-10-09 |
| ADDRESS<br>4438 W. 1st Ave, Peoria, IL 61614        |  | CITIZENSHIP<br>USA   |                  |
| 2. WITNESS NAME<br>Bryan J. Hillman                 |  | WITNESS SIGNATURE    | DATE<br>5-13-11  |
| ADDRESS<br>1523 W. Marlene Avenue, Peoria, IL 61614 |  | CITIZENSHIP<br>USA   |                  |

SOLE/JOINT INVENTION  
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Attorney Docket No. 08350.0658-00000  
Client Ref. No. 11-1922

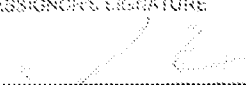

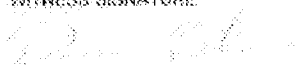
|  |  |                                   |
|--|--|-----------------------------------|
| 5. FULL NAME OF FIFTH ASSIGNOR<br><b>Peter SPRING</b>          | ASSIGNOR'S SIGNATURE<br><i>P. Spring</i> | DATE<br><i>Dec/15/2012</i>        |
| ADDRESS<br><b>Guenzenenweg CH-3647 Reutigen Switzerland</b>    |  | CITIZENSHIP<br><b>SWITZERLAND</b> |
|  |  |                                   |
| 1. WITNESS NAME<br><i>Franeiska Spring</i>                     | WITNESS SIGNATURE<br><i>[Signature]</i>  | DATE<br><i>12/15/2012</i>         |
| ADDRESS<br><i>Pilgerweg 10, 8800 Thalwil, Switzerland</i>      |  | CITIZENSHIP<br><i>Switzerland</i> |
|  |  |                                   |
| 2. WITNESS NAME<br><i>Edward Spring</i>                        | WITNESS SIGNATURE<br><i>Ed. Spring</i>   | DATE<br><i>12/15/2012</i>         |
| ADDRESS<br><i>Guenzenenweg 299, 3647 Reutigen, Switzerland</i> |  | CITIZENSHIP<br><i>Switzerland</i> |
|  |  |                                   |
| 6. FULL NAME OF SIXTH ASSIGNOR<br><b>Lawrence J. TOGNETTI</b>  | ASSIGNOR'S SIGNATURE                     | DATE                              |
| ADDRESS<br><b>7407 N. Patton Lane, Peoria, IL 61614</b>        |  | CITIZENSHIP<br><b>USA</b>         |
|  |  |                                   |
| 1. WITNESS NAME  | WITNESS SIGNATURE                        | DATE                              |
| ADDRESS  |  | CITIZENSHIP                       |
|  |  |                                   |
| 2. WITNESS NAME  | WITNESS SIGNATURE                        | DATE                              |
| ADDRESS  |  | CITIZENSHIP                       |
|  |  |                                   |



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

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|---|---|--------------------|
| 2. FULL NAME OF SECOND ASSIGNOR<br>Lawrence J. TOGNETTI | ASSIGNOR'S SIGNATURE<br><i>Lawrence J. Tognetti</i> | DATE<br>6/9/2014   |
| ADDRESS<br>7407 N. Patton Lane, Peoria, IL 61614        |   | CITIZENSHIP<br>USA |
|   |   |                    |
| 1. WITNESS NAME<br><i>Adam W. Rice</i>                  | WITNESS SIGNATURE<br><i>Adam W. Rice</i>            | DATE<br>6/9/2014   |
| ADDRESS<br>708 N. Santa Fe, Chillicothe, IL 61523       |   | CITIZENSHIP<br>USA |
|   |   |                    |
| 2. WITNESS NAME<br><i>Matt T. Guercio</i>               | WITNESS SIGNATURE<br><i>Matt Guercio</i>            | DATE<br>6/9/14     |
| ADDRESS<br>1500 W. Cloverdale, Chillicothe, IL 61523    |   | CITIZENSHIP<br>USA |
|   |   |                    |

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 Attorney Docket No. 08359.0868-00000  
 Client Ref. No. 11-1922

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|--|--|---|------------------|
| 7. FULL NAME OF SEVENTH ASSIGNOR<br>Pengfei MA           |  | ASSIGNOR'S SIGNATURE<br> | DATE<br>12/18/11 |
| ADDRESS<br>1744 Cornell Court, Naperville, IL 60565      |  | CITIZENSHIP<br>CHINA  |                  |
| 1. WITNESS NAME<br>Andrew P. Chen                        |  | WITNESS SIGNATURE<br>    | DATE<br>12/18/11 |
| ADDRESS<br>2202 S. Greenway Ave.<br>Naperville, IL 60565 |  | CITIZENSHIP<br>USA  |                  |
| 2. WITNESS NAME<br>Dennis Blum                           |  | WITNESS SIGNATURE<br>    | DATE<br>12/18/11 |
| ADDRESS<br>7500 S. Greenway Ave.<br>Naperville, IL 60565 |  | CITIZENSHIP<br>USA  |                  |