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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3328738

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| INSU CHANG | 04/13/2015 |
| SALIM A JALIWALA | 04/13/2015 |
| YANCHAI ZHANG | 04/13/2015 |
| JAMES S. CHASE | 04/13/2015 |
| RECEIVING PARTY DATA | |
| Name: | CATERPILLAR INC. |
| Street Address: | 100 NE ADAMS STREET |
| Internal Address: | AH 9510 |
| City: | PEORIA |
| State/Country: | ILLINOIS |
| Postal Code: | 61629 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14697657 |
| CORRESPONDENCE DATA | |
| Fax Number: | (309)675-1236 |
| <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> | |
| Phone: | 309-636-2223 |
| Email: | US_Docket_Clerk@cat.com |
| Correspondent Name: | CATERPILLAR INC. INTELLECTUAL PROPERTY D |
| Address Line 1: | 100 N.E. ADAMS STREET |
| Address Line 2: | AH 9510 |
| Address Line 4: | PEORIA, ILLINOIS 61629-9510 |
| ATTORNEY DOCKET NUMBER: | 15-0039 |
| NAME OF SUBMITTER: | KELLY A UMHOLTZ |
| SIGNATURE: | /kelly a umholtz/ |
| DATE SIGNED: | 04/28/2015 |
| Total Attachments: 8 | |

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source=15-0039-US-Assignment#page8.tif

ASSIGNMENT

WHEREAS we, the below named inventors, (hereinafter referred to as Assignors), have made an invention entitled:

SYSTEM AND METHOD FOR POSITIONING IMPLEMENT OF MACHINE

for which we will or have filed a patent application; and

WHEREAS, Caterpillar Inc., a Delaware corporation having a place of business at Peoria, State of Illinois, United States of America (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, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, 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 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;

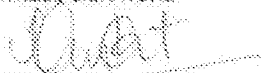
AND, WE HEREBY covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed and will not execute any agreement in conflict with this Assignment;


AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to 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, WE HEREBY authorize the attorneys/representatives that 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, we have hereunto set our hands.

| | | |
|--|--|----------------------------|
| 1. FULL NAME OF FIRST ASSIGNOR Insu Chang | ASSIGNOR'S SIGNATURE  | DATE 04/13/2015 |
| ADDRESS 1505 North Peoria Avenue Apt 1006, Peoria, Illinois 61603, US | | CITIZENSHIP South Korea |

| | | |
|--|--|----------------------|
| 1. WITNESS NAME Venkata Dandibhotla | WITNESS SIGNATURE  | DATE 04/13/2015 |
| ADDRESS 2608 West Willowlake Drive, Apt 131, Peoria, Illinois 61614, US | | CITIZENSHIP India |

| | | |
|--|---|------------------------|
| 2. WITNESS NAME Manh C. Phan | WITNESS SIGNATURE  | DATE 04/13/2015 |
| ADDRESS 1018 East Hazard Avenue, Peoria Heights, Illinois 61616, US | | CITIZENSHIP Vietnam |

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IN TESTIMONY WHEREOF, we have hereunto set our hands.

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|--|--|-----------------|
| 2. FULL NAME OF SECOND ASSIGNOR Salim A. Jaliwala | ASSIGNOR'S SIGNATURE  | DATE 4-13-15 |
| ADDRESS 7103 N Draycott Pl Peoria, IL 61615 | CITIZENSHIP US | |

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|-----------------------------------|---|-------------------|
| 1. WITNESS NAME CARL NOTHNAGLE | WITNESS SIGNATURE <i>Carl R Notnagle</i> | DATE 4/13/2015 |
| ADDRESS 22532 2500 N. AVE | CITIZENSHIP USA | |
| 0410 ILLINOIS 61349 | | |

| | | |
|---|--|--------------------|
| 2. WITNESS NAME VENKATA DANIBHOTLA | WITNESS SIGNATURE <i>Danibhotla</i> | DATE 04/13/2015 |
| ADDRESS 2608 W WILLOWLAKE DRIVE, APT 131 | CITIZENSHIP INDIA | |
| DEORIA IL 61614 | | |

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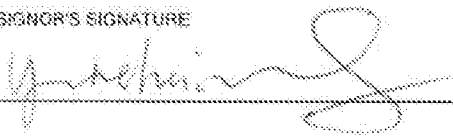
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our 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 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;

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AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to 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;

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IN TESTIMONY WHEREOF, we have hereunto set our hands.

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| 3. FULL NAME OF THIRD ASSIGNOR Yanchai Zhang | ASSIGNOR'S SIGNATURE  | DATE 04/13/2015 |
| ADDRESS 731 S Breckenridge Dr. Dunlap, IL61525, US | | CITIZENSHIP China |

| | | |
|--|------------------------------------|---------------------|
| 1. WITNESS NAME CARL NOTHNAGLE | WITNESS SIGNATURE Carl Notnagle | DATE 4/13/2015 |
| ADDRESS 26532 2800 N. AVE OHIO, ILLINOIS 61849 | | CITIZENSHIP U.S. |

| | | |
|--|--|----------------------|
| 2. WITNESS NAME VENKATA DANDISHOTLA | WITNESS SIGNATURE  | DATE 4/13/2015 |
| ADDRESS 2608 WEST WILLOWLAKE DR, APT 131 PEORIA IL 61614 USA | | CITIZENSHIP INDIA |

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IN TESTIMONY WHEREOF, we have hereunto set our hands:

| | | |
|---|--|-------------------|
| 4. FULL NAME OF FOURTH ASSIGNOR James S. Chase | ASSIGNOR'S SIGNATURE  | DATE 8/13/2015 |
| ADDRESS 14927 N Ivy Lake Road, Chillicothe, IL 61523 | | CITIZENSHIP US |

| | | |
|--|---|-----------------------|
| 1. WITNESS NAME Benjamin Streeter | WITNESS SIGNATURE <i>Benjamin Streeter</i> | DATE Apr. 13, 2015 |
| ADDRESS 1727 W. Latham Lane Peoria, IL 61614 | CITIZENSHIP U.S.A. | |

| | | |
|--|--|----------------------|
| 2. WITNESS NAME Jaci Skelton | WITNESS SIGNATURE <i>Jaci Skelton</i> | DATE Apr 13, 2015 |
| ADDRESS 1305 Misty Drive Chillicothe, IL 61523 | CITIZENSHIP USA | |