

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>Brian A. Byers</td> <td>06/11/2012</td> </tr> <tr> <td>David R. Wisley</td> <td>06/19/2012</td> </tr> <tr> <td>Fazal A. Goraya</td> <td>06/05/2012</td> </tr> <tr> <td>Gerard O. McCann</td> <td>06/06/2012</td> </tr> <tr> <td>Justin L. Steinlage</td> <td>06/05/2012</td> </tr> <tr> <td>Kevin Grover</td> <td>06/14/2012</td> </tr> <tr> <td>Nathan S. Pauli</td> <td>06/06/2012</td> </tr> <tr> <td>Yun Liu</td> <td>06/05/2012</td> </tr> </tbody> </table>		Name	Execution Date	Brian A. Byers	06/11/2012	David R. Wisley	06/19/2012	Fazal A. Goraya	06/05/2012	Gerard O. McCann	06/06/2012	Justin L. Steinlage	06/05/2012	Kevin Grover	06/14/2012	Nathan S. Pauli	06/06/2012	Yun Liu	06/05/2012
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<table border="1"> <tr> <td>Name:</td> <td>Caterpillar Inc.</td> </tr> <tr> <td>Street Address:</td> <td>100 NE Adams Street</td> </tr> <tr> <td>Internal Address:</td> <td>AH 9510</td> </tr> <tr> <td>City:</td> <td>Peoria</td> </tr> <tr> <td>State/Country:</td> <td>ILLINOIS</td> </tr> <tr> <td>Postal Code:</td> <td>61629</td> </tr> </table>		Name:	Caterpillar Inc.	Street Address:	100 NE Adams Street	Internal Address:	AH 9510	City:	Peoria	State/Country:	ILLINOIS	Postal Code:	61629						
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CORRESPONDENCE DATA																			
Fax Number:	(309)675-1236																		
Phone:	309-675-5140																		
Email:	US_Docket_Clerk@cat.com																		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																			
Correspondent Name:	Caterpillar Inc. Intellectual Property D																		
Address Line 1:	AH 9510																		
Address Line 2:	100 N.E. Adams Street																		

CH \$40.00 13538044

Address Line 4: PEORIA, ILLINOIS 61629-9510

ATTORNEY DOCKET NUMBER:

11-1313

NAME OF SUBMITTER:

Kelly A. Umholtz

Total Attachments: 16

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ASSIGNMENT

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

MACHINE CONTROL SYSTEM

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 Brian A. Byers	ASSIGNOR'S SIGNATURE <i>Brian Byers</i>	DATE <i>6/11/12</i>
ADDRESS		CITIZENSHIP
2262 S Franzy Dr., Decatur, IL 62521		US

1. WITNESS NAME LARRY LYNCH	WITNESS SIGNATURE <i>Larry W Lynch</i>	DATE 6/11/2012
ADDRESS 5495 RYAN DR		CITIZENSHIP USA
OREANA, IL, 62554		

2. WITNESS NAME Mark Highcock	WITNESS SIGNATURE <i>Mark Highcock</i>	DATE 6/11/2012
ADDRESS 324 Kings Mantle Ct.		CITIZENSHIP USA
Mt ZION, IL 62549		

ASSIGNMENT

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

MACHINE CONTROL SYSTEM

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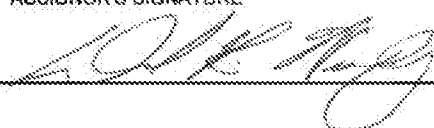
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our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

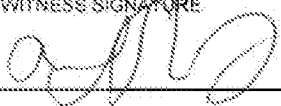
AND, WE HEREBY covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed and will not execute any agreement in conflict with this Assignment;

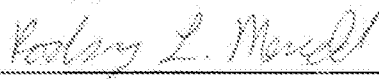
AND, WE HEREBY further covenant and agree that we will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any 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.

2. FULL NAME OF SECOND ASSIGNOR	ASSIGNOR'S SIGNATURE	DATE
David R. Wisley		9/19/2012
ADDRESS		CITIZENSHIP
4707 W Bridalwood Dr., Peoria, IL 61615		US

1. WITNESS NAME Tim Schwartz	WITNESS SIGNATURE 	DATE 6/19/12
ADDRESS 614 Peoria St., Washington, IL 61571	CITIZENSHIP US	

2. WITNESS NAME Rodney L. Menold	WITNESS SIGNATURE 	DATE 19 Jun 2012
ADDRESS 1015 N. Country Lane, Peoria, IL 61604	CITIZENSHIP US	

ASSIGNMENT

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

MACHINE CONTROL SYSTEM

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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;

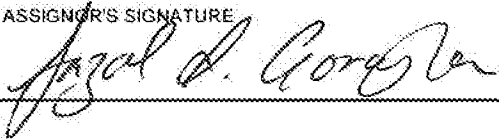
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our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

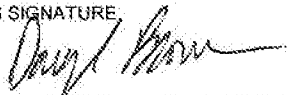
AND, WE HEREBY covenant that we have the full right to convey the interest assigned by this Assignment, and we have not executed and will not execute any agreement in conflict with this Assignment;


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;

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IN TESTIMONY WHEREOF, we have hereunto set our hands.

3. FULL NAME OF THIRD ASSIGNOR Fazal A. Goraya	ASSIGNOR'S SIGNATURE 	DATE 06/05/2012
ADDRESS 1600 W Blue Sage Drive Apt. 3116, Peoria, IL		CITIZENSHIP CA

1. WITNESS NAME DARYL BROWER	WITNESS SIGNATURE 	DATE 6/6/2012
ADDRESS 221 E. HALLOCK HOLLOW RD. EDELSTEIN, IL 61526		CITIZENSHIP USA

2. WITNESS NAME Nathan Pauli	WITNESS SIGNATURE 	DATE 6/6/2012
ADDRESS 6229 Beacon, Peoria IL 61604		CITIZENSHIP USA

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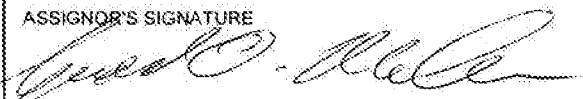
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our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

3. FULL NAME OF FOURTH ASSIGNOR Gerard O. McCann	ASSIGNOR'S SIGNATURE 	DATE June/6/2012
ADDRESS 13326 N. State Rt 40, Dunlap, IL 61525		CITIZENSHIP US

1. WITNESS NAME <i>Alice L Kim</i>	WITNESS SIGNATURE <i>Alice L Kim</i>	DATE <i>6-6-12</i>
ADDRESS <i>11811 N. Jason Dr, Dunlap, IL 61525</i>	CITIZENSHIP <i>US</i>	

2. WITNESS NAME <i>Matthew S. Phillips</i>	WITNESS SIGNATURE <i>Matthew S Phillips</i>	DATE <i>6/6/12</i>
ADDRESS <i>7111 N. Wildlife Dr. Peoria, IL 61614</i>	CITIZENSHIP <i>USA</i>	

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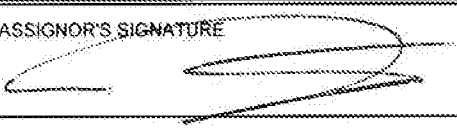
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IN TESTIMONY WHEREOF, we have hereunto set our hands.

3. FULL NAME OF FIFTH ASSIGNOR Justin L. Steinlage	ASSIGNOR'S SIGNATURE 	DATE 6/9/2012
ADDRESS 31201 State Route 9, Mackinaw, IL 61755		CITIZENSHIP US

1. WITNESS NAME David L. Dickrell	WITNESS SIGNATURE 	DATE 6-5-2012
ADDRESS 136 Glenview Ave		CITIZENSHIP U.S.
East Peoria, IL 61611		

2. WITNESS NAME KEVIN DAVIS	WITNESS SIGNATURE 	DATE 6-5-2012
ADDRESS 700 Grandyle Dr		CITIZENSHIP US
Washington, IL 61571		

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MACHINE CONTROL SYSTEM

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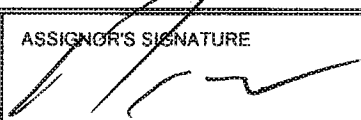
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IN TESTIMONY WHEREOF, we have hereunto set our hands.

3. FULL NAME OF SIXTH ASSIGNOR Kevin Grover	ASSIGNOR'S SIGNATURE 	DATE 6/14/12
ADDRESS 1737 Raven Dr., Chambersburg, PA 17202		CITIZENSHIP US

1. WITNESS NAME <i>Andrew Cleavage</i>	WITNESS SIGNATURE <i>[Signature]</i>	DATE <i>6/19/12</i>
ADDRESS <i>31 Cabra Ave, Fairview, NC, 28730</i>	CITIZENSHIP <i>USA</i>	

2. WITNESS NAME <i>Tony den Hoed</i>	WITNESS SIGNATURE <i>Tony den Hoed</i>	DATE <i>6/14/12</i>
ADDRESS <i>4067 N. Westbrook Ct. Maize KS</i>	CITIZENSHIP <i>USA</i>	

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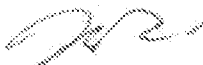
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IN TESTIMONY WHEREOF, we have hereunto set our hands.

3. FULL NAME OF SEVENTH ASSIGNOR Nathan S. Pauli	ASSIGNOR'S SIGNATURE 	DATE 6/6/2012
ADDRESS 6229 Beacon, Peoria, IL 61604		CITIZENSHIP US

1. WITNESS NAME FAZAL GORAYA	WITNESS SIGNATURE <i>Fazal Goraya</i>	DATE 06/05/2012
ADDRESS 1600 W BLUE SAGE DR. #3116, PEORIA, IL, 61615		CITIZENSHIP CANADA

2. WITNESS NAME DARYL BROWER	WITNESS SIGNATURE <i>Daryl Brower</i>	DATE 6/6/2012
ADDRESS 221 E HALLOCK HOLLOW RD. EDELSTEIN, IL 61526		CITIZENSHIP USA

ASSIGNMENT

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

MACHINE CONTROL SYSTEM

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;

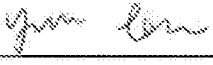
NOW THEREFORE, be it known that for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, we, as Assignors, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, our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

3. FULL NAME OF EIGHTH ASSIGNOR	ASSIGNOR'S SIGNATURE	DATE
Yun Liu		06/05/2012
ADDRESS	CITIZENSHIP	
2210 W. Kenfield Court, Peoria, IL 61615	CN	

1. WITNESS NAME <i>Benjamin P. Taylor</i>	WITNESS SIGNATURE <i>Benjamin P. Taylor</i>	DATE <i>6/5/2012</i>
ADDRESS <i>213 Timber Lane Rear, East Peoria, IL 61611</i>		CITIZENSHIP <i>USA</i>

2. WITNESS NAME <i>ZHENG HU</i>	WITNESS SIGNATURE <i>[Signature]</i>	DATE <i>6/5/2012</i>
ADDRESS <i>1317 N Schreblin Ct Peoria IL 61604</i>		CITIZENSHIP <i>CHN</i>