

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT												
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT												
<b>CONVEYING PARTY DATA</b>													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Mirko V. Barbir</td> <td>12/15/2010</td> </tr> <tr> <td>Stacy Linn Grove</td> <td>12/15/2010</td> </tr> <tr> <td>Yun Liu</td> <td>12/16/2010</td> </tr> <tr> <td>Gerry Owen McCann</td> <td>12/21/2010</td> </tr> <tr> <td>John Dewey Gates</td> <td>12/14/2010</td> </tr> </tbody> </table>		Name	Execution Date	Mirko V. Barbir	12/15/2010	Stacy Linn Grove	12/15/2010	Yun Liu	12/16/2010	Gerry Owen McCann	12/21/2010	John Dewey Gates	12/14/2010
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Mirko V. Barbir	12/15/2010												
Stacy Linn Grove	12/15/2010												
Yun Liu	12/16/2010												
Gerry Owen McCann	12/21/2010												
John Dewey Gates	12/14/2010												
<b>RECEIVING PARTY DATA</b>													
<b>Name:</b>	Caterpillar Inc.												
<b>Street Address:</b>	100 N.E. Adams Street												
<b>Internal Address:</b>	Intellectual Property Department												
<b>City:</b>	Peoria												
<b>State/Country:</b>	ILLINOIS												
<b>Postal Code:</b>	61629												
<b>PROPERTY NUMBERS Total: 1</b>													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12980481</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	12980481								
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Application Number:	12980481												
<b>CORRESPONDENCE DATA</b>													
<b>Fax Number:</b>	(202)408-4400												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
<b>Phone:</b>	2024084000												
<b>Email:</b>	neil.powell@finnegan.com												
<b>Correspondent Name:</b>	Neil T. Powell												
<b>Address Line 1:</b>	901 New York Ave., NW												
<b>Address Line 2:</b>	Finnegan, Henderson												
<b>Address Line 4:</b>	Washington, DISTRICT OF COLUMBIA 20001												
<b>NAME OF SUBMITTER:</b>	Neil T. Powell												

OP \$40.00 12980481

**Total Attachments: 20**

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**ASSIGNMENT**

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

**CLUTCH TEMPERATURE ESTIMATION FOR A MOBILE MACHINE**

for which I executed an application for United States Letters Patent concurrently herewith; and

WHEREAS, Caterpillar Inc., a corporation of Delaware whose post office address is Intellectual Property Department, 100 N.E. Adams Street, Peoria, IL 61629-6490 (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I, 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 No. \_\_\_\_\_, filed \_\_\_\_\_ (if any), and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and all rights to claim priority on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application, and all applications for Letters Patent which may hereafter be filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

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

AND, I HEREBY further covenant and agree that I 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 the United States and any foreign country, 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, I have hereunto set our hands.

1. FULL NAME OF FIRST ASSIGNOR Mirko V. Barbir	ASSIGNOR'S SIGNATURE <i>Mirko V. Barbir</i>	DATE December 15, 2018
ADDRESS 673 Springhill Circle		CITIZENSHIP United States
Naperville, IL 60563		

1. WITNESS NAME <b>RICK LASKO</b>	WITNESS SIGNATURE <i>Rick Lasko</i>	DATE <b>15 DEC 10</b>
ADDRESS <b>12201 IGNACE CT.</b>		CITIZENSHIP <b>USA</b>
<b>HOMER GLEN, IL 60491</b>		

2. WITNESS NAME <b>JAMES W. SCHAEFFER</b>	WITNESS SIGNATURE <i>James W. Schaeffer</i>	DATE <b>15 Dec 2010</b>
ADDRESS <b>496 BLOOMFIELD CIRCLE WEST</b>		CITIZENSHIP <b>USA</b>
<b>OSWEGO, IL 60543</b>		

2. FULL NAME OF SECOND ASSIGNOR <b>Stacy Linn Grove</b>	ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>200 Devonshire Rd.</b>		CITIZENSHIP <b>United States</b>
<b>Washington, Illinois 61571</b>		

1. WITNESS NAME	WITNESS SIGNATURE	DATE
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3. FULL NAME OF THIRD ASSIGNOR <b>Yun Liu</b>	ASSIGNOR'S SIGNATURE	DATE
ADDRESS <b>2210 W. Kenfield Ct.</b>		CITIZENSHIP <b>People's Republic of China</b>
<b>Peoria, Illinois 61615</b>		

SOLE/JOINT INVENTION  
(Worldwide Rights)  
Attorney Docket No. 08350.0187-00000

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4. FULL NAME OF FOURTH ASSIGNOR Gerry Owen McCann	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 13326 N. State Route 40 Dunlap, Illinois 61525		CITIZENSHIP United States

1 WITNESS NAME	WITNESS SIGNATURE	DATE
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2 WITNESS NAME	WITNESS SIGNATURE	DATE
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5 FULL NAME OF FIFTH ASSIGNOR John Dewey Gates	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 611 Vista Drive Oswego, Illinois 60543		CITIZENSHIP United States

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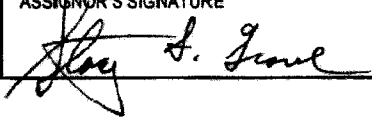
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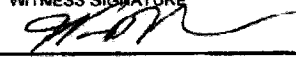
1. FULL NAME OF FIRST ASSIGNOR Mirko V. Barbir	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 673 Springhill Circle		CITIZENSHIP United States
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2. FULL NAME OF SECOND ASSIGNOR Stacy Linn Grove	ASSIGNOR'S SIGNATURE 	DATE 12-15-10
ADDRESS 200 Devonshire Rd.		CITIZENSHIP United States
Washington, Illinois 61571		

1. WITNESS NAME WILLIAM JAMES MOYER	WITNESS SIGNATURE 	DATE 15 Dec 10
ADDRESS 13435 N. LAKEWOOD DR.		CITIZENSHIP USA
DUNLAP, IL 61525		

2. WITNESS NAME BRENT E. RIEKE	WITNESS SIGNATURE 	DATE 15 Dec 2010
ADDRESS 46 JASPER DRIVE		CITIZENSHIP USA
MORTON IL 61550		

3. FULL NAME OF THIRD ASSIGNOR Yun Liu	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 2210 W. Kenfield Ct.		CITIZENSHIP People's Republic of China
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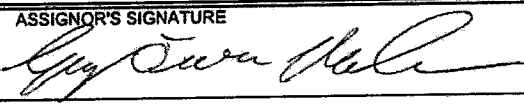
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3. FULL NAME OF THIRD ASSIGNOR Yun Liu	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 2210 W. Kenfield Ct. Peoria, Illinois 61615		CITIZENSHIP People's Republic of China

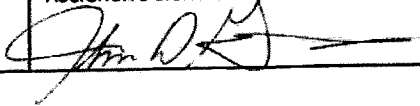
1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

4. FULL NAME OF FOURTH ASSIGNOR Gerry Owen McCann	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 13326 N. State Route 40		CITIZENSHIP United States
Dunlap, Illinois 61525		

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

5. FULL NAME OF FIFTH ASSIGNOR John Dewey Gates	ASSIGNOR'S SIGNATURE 	DATE 14 DEC 10
ADDRESS 611 Vista Drive		CITIZENSHIP United States
Oswego, Illinois 60543		

1. WITNESS NAME <i>Jan Macdonald</i>	WITNESS SIGNATURE <i>[Signature]</i>	DATE <i>12/15/2010</i>
ADDRESS <i>340 Navajo Lane</i>		CITIZENSHIP <i>USA</i>
<i>Hoffman Estates, IL 60169</i>		

2. WITNESS NAME <i>ALPESH SHAH</i>	WITNESS SIGNATURE <i>A.B. Shah</i>	DATE <i>12/15/2010</i>
ADDRESS <i>161 Fieldcrest Dr</i>		CITIZENSHIP <i>USA</i>
<i>Bartlett, IL 60103</i>		