

FORM PTO-1619A  
Expires 09/30/99  
OMB 0651-0027



10-09-2001

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT



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9.78.01

PATENTS ONLY

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

### Submission Type

☒ New

☐ Resubmission (Non-Recordation)  
Document ID#

☐ Correction of PTO Error  
Reel #  Frame #

☐ Corrective Document  
Reel #  Frame #

### Conveyance Type

☒ Assignment ☐ Security Agreement

☐ License ☐ Change of Name

☐ Merger ☐ Other

**U.S. Government**  
(For Use ONLY by U.S. Government Agencies)

☐ Departmental File ☐ Secret File

### Conveying Party(ies)

☒ Mark if additional names of conveying parties attached

Name	Execution Date Month Day Year
Name (line 1) <input type="text" value="Travis E. Barnes"/>	<input type="text" value="9-21-01"/>
Name (line 2) <input type="text"/>	

### Second Party

Name	Execution Date Month Day Year
Name (line 1) <input type="text" value="Michael S. Lukich"/>	<input type="text" value="8-8-01"/>
Name (line 2) <input type="text"/>	

### Receiving Party

☐ Mark if additional names of receiving parties attached

Name (line 1) <input type="text" value="Caterpillar, Inc. Patent Department"/>	<input type="checkbox"/> If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)		
Name (line 2) <input type="text"/>			
Address (line 1) <input type="text" value="100 NE Adams Street"/>			
Address (line 2) <input type="text"/>			
Address (line 3) <input type="text" value="Peoria"/>	<input type="text" value="Illinois"/>	<input type="text" value="61629"/>	
	City	State/Country	Zip Code

### Domestic Representative Name and Address

Enter for the first Receiving Party only.

Name <input type="text"/>
Address (line 1) <input type="text"/>
Address (line 2) <input type="text"/>
Address (line 3) <input type="text"/>
Address (line 4) <input type="text"/>

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Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:  
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

PATENT  
REEL: 012217 FRAME: 0298

**Correspondent Name and Address**

Area Code and Telephone Number 812-333-5355

Name Michael B. McNeil

Address (line 1) Liell & McNeil Attorneys PC

Address (line 2) PO BOX 2417

Address (line 3) Bloomington, IN 47402

Address (line 4)

**Pages**

Enter the total number of pages of the attached conveyance document including any attachments.

#

**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

**Patent Application Number(s)**

09/825,407

**Patent Number(s)**

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

**Patent Cooperation Treaty (PCT)**

Enter PCT application number

only if a U.S. Application Number  
has not been assigned.

PCT

PCT

PCT

PCT

PCT

PCT

**Number of Properties**

Enter the total number of properties involved.

#

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40

Method of Payment:

Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Enclosed ☒

Deposit Account ☐

Deposit Account Number:

# 500226

Authorization to charge additional fees:

Yes ☒

No ☐

**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. Charges to deposit account are authorized, as indicated herein.*

Michael B. McNeil

Name of Person Signing

Michael B. McNeil  
Signature

09-28-01

Date

RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

Conveying Party(ies)

☒ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) David M. Milam

Execution Date  
Month Day Year

9-24-01

Name (line 2)

Execution Date  
Month Day Year

5-1-01

Name (line 1) George M. Matta

Name (line 2)

Execution Date  
Month Day Year

4-30-01

Name (line 1) Douglas E. Handly

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

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Application Number(s) or Patent Number(s)

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Patent Application Number(s)

Patent Number(s)



RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

Conveying Party(ies)

☐ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Denis El Darazi

Execution Date  
Month Day Year  
6-5-01

Name (line 2)

Name (line 1) Meixing Lu

Execution Date  
Month Day Year  
5-1-01

Name (line 2)

Name (line 1) Nolan W. Wartick

Execution Date  
Month Day Year  
5-10-01

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)



## ASSIGNMENT

WHEREAS, Travis E. Barnes, residing at Metamora, Illinois, hereinafter referred to as ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Michael S. Lukich, Nolan W. Wartick, David M. Milam, Douglas E. Handley and Meixing Lu a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

Travis E. Barnes  
TRAVIS E. BARNES

9/21/01  
Date

IN WITNESS OF the execution hereof by TRAVIS E. BARNES we have hereunto set our hands.

[Signature] 9/21/01  
Witness (1) Date

Address: 107 Danforth  
Washington, IL 61571

[Signature] 21 Sept 2001  
Witness (2) Date

Address: 115 Regent Ct.  
E. Peoria, IL 61611

## ASSIGNMENT

WHEREAS, Michael S. Lukich, residing at Chillicothe, Illinois, hereinafter referred to as ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Nolan W. Wartick, David M. Milam, Douglas E. Handley, Travis E. Barnes and Meixing Lu a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

Michael S. Lukich  
MICHAEL S. LUKICH

8/18/01  
Date

IN WITNESS OF the execution hereof by MICHAEL S. LUKICH we have hereunto set our hands.

[Signature] 8/18/01  
Witness (1) Date

Address: 105 Venable Ct

Chillicothe, IL 61710

[Signature] 8/18/01  
Witness (2) Date

Address: PO Box 27

Chillicothe, IL

61428

# ASSIGNMENT

WHEREAS, David M. Milam, residing at <sup>Bloomington</sup>~~Metamora~~, Illinois, hereinafter referred to as ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Michael S. Lukich, Nolan W. Wartick, Douglas E. Handley, Travis E. Barnes and Meixing Lu a new and useful

## MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

David M. Milam  
DAVID M. MILAM

9-24-01  
Date

IN WITNESS OF the execution hereof by DAVID M. MILAM we have hereunto set our hands.

Trent H. Hopkins 9/25/01  
Witness (1) Date  
Address: 312 James Parkway  
Washington, IL 61571  
Trent Hopkins

Greg Kaufman 9/25/01  
Witness (2) Date  
Address: 1591 UPPER SPRING BAY Rd.  
METAMORA, IL. 61548  
GREG KAUFMAN

## ASSIGNMENT

WHEREAS, George M. Matta, residing at Washington, Illinois, hereinafter referred to as ASSIGNOR has invented together with Denis El Darazi, Michael S. Lukich, Nolan W. Wartick, David M. Milam, Douglas E. Handley, Travis E. Barnes and Meixing Lu a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

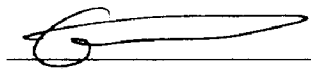
1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.



GEORGE M. MATTA

5/1/01

Date

IN WITNESS OF the execution hereof by GEORGE M. MATTA we have hereunto set our hands.

Mahesh Srinivasan 5/1/01

Witness (1) Date

Address: 1606 W. DAYTONA Dr

Peoria, IL 61614

Kristyne A Maxwell 5/1/01

Witness (2) Date

Address: 2327 W. Pintura Ct.

Peoria, IL 61614



## ASSIGNMENT

WHEREAS, Douglas E. Handly, residing at Morton, Illinois, hereinafter referred to as ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Michael S. Lukich, Nolan W. Wartick, David M. Milam, Travis E. Barnes and Meixing Lu a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.


4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

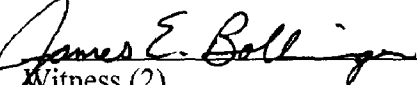
IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

  
DOUGLAS E. HANDLY

4/30/01  
Date

IN WITNESS OF the execution hereof by DOUGLAS E. HANDLY we have hereunto set our hands.

  
Witness (1) 4/30/01  
Date  
Address: 3619 W. Richwoods Blvd  
Peoria, IL 61604

  
Witness (2) 4/30/01  
Date  
Address: 614 N. CENTER ST.  
LACON, IL 61540

## ASSIGNMENT

WHEREAS, Denis El Darazi, residing at Peoria, Illinois, hereinafter referred to ASSIGNOR has invented together with George M. Matta, Michael S. Lukich, Nolan W. Wartick, David M. Milam, Douglas E. Handley, Travis E. Barnes and Meixing Lu a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

for which ASSIGNOR has made or will make application for Letters Patent of the United States; 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 acquiring the entire right, title and interest in and to said invention and any Letters Patent granted thereon by the United States of America and any foreign country;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

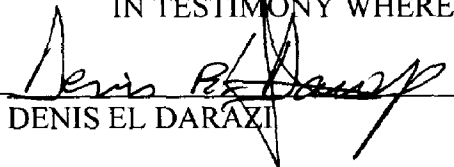
1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

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4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

  
DENIS EL DARAZI

6/5/01  
Date

IN WITNESS OF the execution hereof by DENIS EL DARAZI we have hereunto set our hands.

Jihad Khoury 6/5/01  
Witness (1) Date  
Address: 3619 W. Richwoods  
Peoria IL 61604

Byron E. Nolan 6/5/01  
Witness (2) Date  
Address: 22 Bay Shore Dr.  
Lacon, IL 61540

## ASSIGNMENT

WHEREAS, Meixing Lu, residing at Peoria, Illinois, hereinafter referred to ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Michael S. Lukich, Nolan W. Wartick, David M. Milam, Douglas E. Handley and Travis E. Barnes a new and useful

### MODEL BASED RAIL PRESSURE CONTROL FOR VARIABLE DISPLACEMENT PUMPS

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NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

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2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.

IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

Meixing Lu  
MEIXING LU

5/1/01  
Date

IN WITNESS OF the execution hereof by MEIXING LU we have hereunto set our hands.

IBRAHIM A ABDELRAHMAN  
Witness (1) Date 5/1/01  
Address: 4717 N. KNOXVILLE AVE  
APT 422 - PEORIA, IL 61614

Mark R. Sommers 5/1/01  
Witness (2) Date  
Address: 114 Running Elk Ct  
Spartanburg, Illinois 61565

## ASSIGNMENT

WHEREAS, Nolan W. Wartick, residing at Peoria, Illinois, hereinafter referred to as ASSIGNOR has invented together with George M. Matta, Denis El Darazi, Michael S. Lukich, David M. Milam, Douglas E. Handley, Travis E. Barnes and Meixing Lu a new and useful

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NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and for other good and valuable consideration received by ASSIGNOR from ASSIGNEE, the receipt of which is hereby acknowledged by ASSIGNOR;

1. ASSIGNOR hereby sells, assigns, transfers and conveys unto ASSIGNEE the entire right, title and interest in and to said invention, any application therefor, and any Letters Patent granted thereon by the United States of America and any foreign country, including any continuing application, reissue or extension thereof, together with the right to file applications and obtain patents for said invention in any foreign country, and covenant that ASSIGNOR has the full right to do so.

2. At the request and expense of ASSIGNEE, ASSIGNOR agrees to communicate to ASSIGNEE any facts known respecting said invention, to execute all papers necessary to file any application on said invention necessary or desirable to aid ASSIGNEE in obtaining and enforcing proper protection for said invention in the United States of America and any foreign country.

3. ASSIGNOR hereby authorizes and requests the COMMISSIONER OF PATENTS AND TRADEMARKS to issue the United States Letters Patent on said invention, when granted, to Caterpillar Inc.

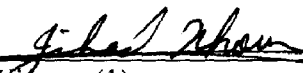
4. This assignment shall inure to the benefit of ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon ASSIGNOR, ASSIGNOR'S heirs and legal representatives.


IN TESTIMONY WHEREOF, ASSIGNOR has executed this instrument.

  
NOLAN W. WARTICK

5/10/01  
Date

IN WITNESS OF the execution hereof by NOLAN W. WARTICK we have hereunto set our hands.

      5/10/01  
Witness (1)      Date  
Address: 3619 W. Richwoods Blvd  
Peoria IL, 61604

      5/10/01  
Witness (2)      Date  
Address: 6235 N. Hamilton Rd  
Peoria, IL 61614