

Form PTO-1595 (Rev. 07/05)  
OMB No. 0651-0027 (exp. 6/30/2008)U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

jp		RECORDATION FORM COVER SHEET PATENTS ONLY		S-	
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.					
<b>1. Name of conveying party(ies)</b> Caterpillar Inc.			<b>2. Name and address of receiving party(ies)</b> Name: <u>United States Department of Energy</u> Internal Address: _____		
Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Street Address: <u>1000 Independence Ave., S.W.</u>		
<b>3. Nature of conveyance/Execution Date(s):</b> Execution Date(s) <u>09/15/2008</u> <input type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Joint Research Agreement <input type="checkbox"/> Government Interest Assignment <input checked="" type="checkbox"/> Executive Order 9424, Confirmatory License <input type="checkbox"/> Other _____			City: <u>Washington</u> State: <u>D.C.</u> Country: <u>USA</u> Zip: <u>20585</u>		
Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>4. Application or patent number(s):</b> A. Patent Application No.(s) <u>60/458,460 - 10/743,811 - 10/738,169</u> <u>10/742,996 - 10/746,500 - 10/740519</u>			<input type="checkbox"/> This document is being filed together with a new application. B. Patent No.(s) <u>7189158, 7114482, 6874695, 7400059</u> <u>7276815, 7055486, 7007491, 7102356</u>		
Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
<b>5. Name and address to whom correspondence concerning document should be mailed:</b> Name: <u>Mark P. Dvorscak</u> Internal Address: <u>U. S. Dept. of Energy, IPLD</u> Street Address: <u>9800 S. Cass Ave</u> City: <u>Argonne</u> State: <u>IL</u> Zip: <u>60439</u> Phone Number: <u>630-252-2393</u> Fax Number: <u>630-252-2779</u> Email Address: _____			<b>6. Total number of applications and patents involved:</b> <u>1</u>		
			<b>7. Total fee (37 CFR 1.21(h) &amp; 3.41) \$</b> _____ <input type="checkbox"/> Authorized to be charged by credit card <input type="checkbox"/> Authorized to be charged to deposit account <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> None required (government interest not affecting title)		
			<b>8. Payment Information</b> a. Credit Card Last 4 Numbers _____ Expiration Date _____ b. Deposit Account Number _____ Authorized User Name _____		
<b>9. Signature:</b> <u>Michael J. Dobbs</u> Signature <u>Michael J. Dobbs #58,093</u> Name of Person Signing			<u>11/6/08</u> Date Total number of pages including cover sheet, attachments, and documents: <b>8</b>		

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

700390220

PATENT  
REEL: 021794 FRAME: 0412

Form PTO-1595 (Rev. 07/05)  
OMB No. 0651-0027 (exp. 6/30/2008)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

**S-**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)**

Caterpillar Inc.

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) 09/15/2008

- ☐ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☒ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

**2. Name and address of receiving party(ies)**

Name: United States Department of Energy

Internal Address: \_\_\_\_\_

Street Address: 1000 Independence Ave., S.W

City: Washington

State: D.C.

Country: USA Zip: 20585

Additional name(s) & address(es) attached? ☐ Yes ☒ No

**4. Application or patent number(s):**

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

10/739,226 -

11/342,529

B. Patent No.(s)

7,137,839 - 7,092,848 - 6,958,642-  
7,030,580.

Additional numbers attached? ☐ Yes ☒ No

**5. Name and address to whom correspondence concerning document should be mailed:**

Name: Mark P. Dvorscak

Internal Address: U. S. Dept. of Energy, IPLD

Street Address: 9800 S. Cass Ave

City: Argonne

State: IL Zip: 60439

Phone Number: 630-252-2393

Fax Number: 630-252-2779

Email Address: \_\_\_\_\_

**6. Total number of applications and patents involved: 1**

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ \_\_\_\_\_**

- ☐ Authorized to be charged by credit card  
☐ Authorized to be charged to deposit account  
☐ Enclosed  
☒ None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_

Expiration Date \_\_\_\_\_

b. Deposit Account Number \_\_\_\_\_

Authorized User Name \_\_\_\_\_

**9. Signature:**



Signature

11/6/08

Date

Michael J. Dobbs #58,093

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

**8**

Documents to be recorded (including cover sheet) should be faxed to (671) 273-0140, or mailed to:  
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**PATENT**  
**REEL: 021794 FRAME: 0413**

## CONFIRMATORY LICENSE

**Title of Invention:** (see attached report)

**Inventor(s):** (see attached report)

**Patent Application Serial No:** (see attached report)

**Filing Date:** (see attached report)

**Patent Number:** (see attached report)

**Issue Date:** (see attached report)

**Name of Contractor** (i.e. Contractor, Subcontractor, Grant, or Cooperative Agreement, as applicable):  
Caterpillar Inc.

**DOE Contract No.** (i.e. Contract, Subcontract, Grant, or Cooperative Agreement, as applicable):  
DE-FC04-2000AL67017

**DOE Case No.:**

**Contractor Docket No.:** (see attached report)

The Contractor has reported the above-identified invention as a Subject Invention to DOE and has elected to retain title thereto.

Accordingly, this document is confirmatory of the nonexclusive, nontransferable, irrevocable, paid-up, worldwide license in this subject invention, patent application and any resulting patent, including any continuation, divisional, reissue, or supplemental application thereof, to practice or to have practiced for or on behalf of the United States throughout the world; and of all other rights acquired by the Government by the patent rights clause in the above-identified contract.

It is understood and agreed that this license does not preclude the Government from asserting rights under the provisions of said contract or of any other agreement between the Government and the Contractor, or from asserting any other rights of the Government with respect to the above-identified subject invention.

The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application.

Signed this 15th day of Sept., 2008

Caterpillar Inc.

Contractor Name (Typed)

572

James B. Buda  
Official's Name and Title (Typed) James B. Buda Vice President

100 N.E. Adams Street  
Peoria, Illinois 61629-7310  
Business Address

## CONFIRMATORY LICENSE ATTACHMENT(S)

**TITLE: ENGINE LUBRICATION CIRCUIT INCLUDING TWO PUMPS**

Application Number: 10/419550  
Application Date: 4/21/2003  
Patent Number: 7114482  
Grant Date: 10/3/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 01-803

113387 ✓

**TITLE: CONTROL SYSTEM FOR, AND A METHOD OF, HEATING AN OPERATOR STATION OF A WORK MACHINE**

Application Number: 10/308901  
Application Date: 12/3/2002  
Patent Number: 6874695  
Grant Date: 4/5/2005  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 01-811

113386 ✓

**TITLE: AIRFLOW CONTROL SYSTEM**

Application Number: 10/952098  
Application Date: 9/29/2004  
Patent Number: 7189158  
Grant Date: 3/13/2007  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 02-267

112449 ✓

**TITLE: ELECTRIFICATION OF CLASS 8 TRUCKS**

Application Number: 60/458460  
Application Date: 3/28/2003  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213

113403 ✓

**TITLE: ELECTRICAL SYSTEM ARCHITECTURE**

Application Number: 10/740621  
Application Date: 12/22/2003  
Patent Number: 7400059 ✓  
Grant Date: 7/15/2008  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 01

**TITLE: POWER MANAGEMENT SYSTEM**

Application Number: 10/740798  
Application Date: 12/22/2003  
Patent Number: 7276815 ✓  
Grant Date: 10/2/2007  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 02

**TITLE: INTEGRATED COOLING SYSTEM**

Application Number: 10/743811  
Application Date: 12/24/2003  
Patent Number: ✓  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 03

**TITLE: POWER SYSTEM WITH AN INTEGRATED LUBRICATION CIRCUIT**

Application Number: 10/738169  
Application Date: 12/18/2003 ✓  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 04

**TITLE: SHORE POWER INTERFACE**

Application Number: 10/742996  
Application Date: 12/23/2003 ✓  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 05

**TITLE: MULTIPLE PUMP HOUSING**

Application Number: 10/746500  
Application Date: 12/29/2003 ✓  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 06

**TITLE: FLUID DELIVERY CONTROL SYSTEM**

Application Number: 10/742885  
Application Date: 12/23/2003  
Patent Number: 7055486 ✓  
Grant Date: 6/6/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-213 07

**TITLE: THERMAL MANAGEMENT SYSTEM FOR A VEHICLE**

Application Number: 10/740442  
Application Date: 12/22/2003 ✓  
Patent Number: 7007491  
Grant Date: 3/7/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-276

**TITLE: ELECTRICAL LEAKAGE DETECTION CIRCUIT**

Application Number: 10/742884  
Application Date: 12/23/2003  
Patent Number: 7102356 ✓  
Grant Date: 9/5/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-302

**TITLE: ELECTRICAL CONNECTOR**

Application Number: 10/740454  
Application Date: 12/22/2003  
Patent Number: 7137839- ✓  
Grant Date: 11/21/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-495

**TITLE: POWER SYSTEM**

Application Number: 10/740519 ✓  
Application Date: 12/22/2003  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-497

**TITLE: FLUID DELIVERY CONTROL SYSTEM**

Application Number:  
Application Date:  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-498

**TITLE: CONTROL SYSTEM HEALTH TEST SYSTEM AND METHOD**

Application Number: 10/740455  
Application Date: 12/22/2003  
Patent Number: 7092848 ✓  
Grant Date: 8/15/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-499

**TITLE: RESETTABLE CIRCUIT BREAKER**

Application Number: 10/739226  
Application Date: 12/19/2003  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-AL200067017  
Caterpillar Docket Number: 03-501

**TITLE: GROUND DIFFERENCE COMPENSATING SYSTEM**

Application Number: 10/739225  
Application Date: 12/19/2003  
Patent Number: 6958642 ✓  
Grant Date: 10/25/2005  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-AL200067017  
Caterpillar Docket Number: 03-502

**TITLE: MOTOR/GENERATOR TRANSIENT RESPONSE SYSTEM**

Application Number: 10/740520  
Application Date: 12/22/2003  
Patent Number: 7030580 ✓  
Grant Date: 4/18/2006  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC04-2000AL67017  
Caterpillar Docket Number: 03-504

**TITLE: POWER SYSTEM**

Application Number: 11/342529  
Application Date: 1/31/2006  
Patent Number:  
Grant Date:  
Assignee Name: Caterpillar Inc.  
Government License No: DE-FC26-2000AL67017  
Caterpillar Docket Number: 05-291