U.S. PTO 12/081893 04/23/2008

FORM PTO-1595 1-31-92 05-02-2008 Patent and Trademark Attorney Docket No. 08 Attorney Customer Num Mail Stop Assignment Record Please record the attached original doc. 10349992 1. Name of conveying party: a) Mary Lou KESSE b) Chris L. WYNKOOP b) Chris L. WYNKOOP c) Zhiyong WEI d) Michael S. LUKICH b) Chris L. WYNKOOP e) Wade D. SCRIVNER c) Zhiyong WEI f) Amit JAYACHANDRAN Additional name(s) of conveying party(ies) attached? Yes No Internal Address: Intellectual Property Depth 100 N.E. Adams Street 3. Nature of conveyance: Street Address: 100 N.E. Adams Street	Office 350.7813
To the Director of the U.S. Patent and 1 Please record the attached original doc 10349992 1. Name of conveying party:	nuer. 30,90
1. Name of conveying party: a) Mary Lou KESSE b) Chris L. WYNKOOP c) Zhiyong WEI d) Michael S. LUKICH b) Chris L. WYNKOOP c) Zhiyong WEI f) Amit JAYACHANDRAN Additional name(s) of conveying party(ies) attached? ☐ Yes ☑ No 2. Name and address of receiving party Name: Caterpillar Inc. Internal Address: Intellectual Property Dep	ation Servi
a) Mary Lou KÉSSE d) Michael S. LUKICH b) Chris L. WYNKOOP e) Wade D. SCRIVNER c) Zhiyong WEI f) Amit JAYACHANDRAN Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No Internal Address: Intellectual Property Dep	(ies):
c) Zhiyong WEI f) Amit JAYACHANDRAN Additional name(s) of conveying party(ies) attached? Yes No Internal Address: Intellectual Property Dep	().
3. Nature of conveyance: Street Address: 100 N.E. Adams Street	artment
☐ Merger City: Peoria	
Agreement	29-6490
Other: Additional name(s) & Address(es) attached?	
Execution Date: a) April 15, 2008 d) April 11, 2008 b) April 14, 2008 e) April 15, 2008	
Application number(s) or patent number(s): If this document is being filed together with a new application, the execution de	ate of the
application: a) April 15, 2008; b) April 14, 2008; c) April 11, 2008; d) April 11, 2008; e) April 15, 2008; f) April 14, 2008 A. Patent Application Number(s): B. Patent Number(s):	
Additional numbers attached? Yes No	
Name and address of party to whom correspondence concerning document should be mailed: Total number of applications and registrations	involved: 1
Name: Christopher P. Isaac 5. Total fee (37 CFR 3.41): \$40 Enclosed (Please charge deficie account)	ncy to depos
Authorized to be charged to dep	osit account
Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.	
Street Address: 901 New York Avenue, N.W.	
City: Washington, D.C.	
State: Zip: 20001 6. Deposit Account No. <u>06-0916</u>	
7. 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 document.	of the origin
Ryan C. Stockett, Reg. No. 53,642 Ryan C. Stockett	8
Signature Date	
Total number of pages including cover sheet, attachments and documents: 1288189)3
94 FC:8921	19.63 OP

PATENT REEL: 020895 FRAME: 0840

U.S. PTO 12/081893 04/23/2008

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.7813 Client Ref. No. 07-813

ASSIGNMENT

WHEREAS I, the below named inventor, [hereinafter referred to as Assignor], have made an invention entitled:

EXHAUST SYSTEM IMPLEMENTING FEED FORWARD AND FEEDBACK CONTROL

6. 4 1 4 5 4 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	tates Letters Patent concurrently herewith or filed ; and	an application for United
Department, 100 N.E. Adams Street, Peoria, securing the entire right, title, and interest in and	tion of Delaware whose post office address is Int IL 61629-6490 (hereinafter referred to as Assigned to this invention in all countries throughout the whis invention and the Letters Patent to be issued to	ee), is desirous of vorld, and in and to the
other good and valuable consideration the receisold, assigned, transferred, and set over, and disuccessors and assigns, my entire right, title, are not part of the United States which may be granted basis of the above provisional application, as we applications for Letters Patent which may hereal which may be granted on this invention in any for hereby authorize and request the Commissione foreign country whose duty it is to issue patents	or and in consideration of the sum of One Dollar (sipt of which from Assignee is hereby acknowledge to hereby sell, assign, transfer, and set over unto the interest in and to this invention, provisional application, and all divisions, and continuations the ed thereon, and all reissues thereof, and all rights ell as all rights to claim priority on the basis of this after be filed for this invention in any foreign country or provided in the country, and all extensions, renewals, and are of Patents and Trademarks of the United States on applications as described above, to issue all Lins, in accordance with the terms of this Assignments.	ed, I, as Assignor, have the Assignee, its lawful blication Serial No. thereof, and all Letters to claim priority on the application, and all ry and all Letters Patent reissues thereof; and I and any official of any Letters Patent for this
AND, I HEREBY covenant that I have the have not executed and will not execute any agree	ne full right to convey the interest assigned by this eement in conflict with this Assignment;	Assignment, and I/We
Assignee, its successors and assigns, any facts proceeding, sign all lawful papers when called unecessary or desirable to perfect the title to this divisional, continuation, and reissue applications Assignee, its successors and assigns, to obtain	agree that I/We will, without further consideration, is known to me respecting this invention, and testifupon to do so, execute and deliver any and all papinvention in said Assignee, its successors or assist, make all rightful oaths and generally do everyth and enforce proper patent protection for this invest any expense incident to the execution of such papers.	y in any legal pers that may be igns, execute all ing possible to aid ntion in the United States
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Page 1 of 1

Listing of Inventors Continued on Page 2 hereof ☒ Yes ☐ No

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Listing of Inventors Continued on Page 3 hereof ☒ Yes ☐ No

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Listing of Inventors Continued on Page 4 hereof ☑ Yes ☐ No

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ADDRESS 5712 N. Cypress Drive, Apt. 3803, Peoria, IL 6	1615	CITIZENSHIP INDIA
ADDRESS 5712 N. Cypress Drive, Apt. 3803, Peoria, IL 6	1615	CITIZENSHIP INDIA
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ADDRESS 5712 N. Cypress Drive, Apt. 3803, Peoria, IL 6 1. WITNESS NAME ADDRESS	1615 WITNESS SIGNATURE	CITIZENSHIP INDIA DATE CITIZENSHIP

PATENT

ASSIGNMENT

WHEREAS I, the below named inventor, [hereinafter referred to as Assignor], have made an invention entitled:

EXHAUST SYSTEM IMPLEMENTING FEED FORWARD AND FEEDBACK CONTROL

for which I executed an application for United States Letters Patent concurrently herewith or filed an application for United States Letters Patent on (__) (Serial No. _____); and

Department, 100 N.E. Adams Street, Peoria, Il	on of Delaware whose post office address is Inte . 61629-6490 (hereinafter referred to as Assigned to this invention in all countries throughout the work is invention and the Letters Patent to be issued up	e), is desirous of orld, and in and to the
other good and valuable consideration the receip sold, assigned, transferred, and set over, and do successors and assigns, my entire right, title, and filed, and this Patent of the United States which may be grante basis of the above provisional application, as we applications for Letters Patent which may hereaft which may be granted on this invention in any for hereby authorize and request the Commissioner foreign country whose duty it is to issue patents of invention to Assignee, its successors and assigns	hereby sell, assign, transfer, and set over unto the interest in and to this invention, provisional application, and all divisions, and continuations the different and all reissues thereof, and all rights to all rights to claim priority on the basis of this after be filed for this invention in any foreign country reign country, and all extensions, renewals, and reof Patents and Trademarks of the United States are applications as described above, to issue all Legarity.	d, I, as Assignor, have the Assignee, its lawful dication Serial No. thereof, and all Letters to claim priority on the application, and all vand all Letters Patent eissues thereof; and I and any official of any etters Patent for this at;
have not executed and will not execute any agree	ement in conflict with this Assignment;	Assignment, and I/vve
AND, I HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me 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.		
IN TESTIMONY WHEREOF, I have here	unto set my hands.	
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Listing of Inventors Continued on Page 2 hereof ☑ Yes ☐ No

PATENT REEL: 020895 FRAME: 0845

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Listing of Inventors Continued on Page 3 hereof ☒ Yes ☐ No

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ADDRESS 20806 N. Sequoia CV, Chillicothe, IL 61523-932 1. WITNESS NAME ADDRESS	WITNESS SIGNATURE	CITIZENSHIP USA DATE CITIZENSHIP

Listing of Inventors Continued on Page 4 hereof $\ \square$ Yes $\ \square$ No

5. FULL NAME OF FIFTH ASSIGNOR Wade D. SCRIVNER	ASSIGNOR'S SIGNATURE	DATE
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2. WITNESS NAME	WITNESS SIGNATURE	DATE
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6. FULL NAME OF SIXTH ASSIGNOR . Amit JAYACHANDRAN	ASSIGNOR'S SIGNATURE	DATE
	ASSIGNOR'S SIGNATURE	DATE 14/08
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PATENT REEL: 020895 FRAME: 0848

RECORDED: 04/23/2008