FORM PTO-1595 1-31-92

To the Director of the U.S. Patent and T

12/081459 04/16/2008 04-23-2008



U.S. Department of Commerce Patent and Trademark Office Attorney Docket No. 08350,7157 Attorney Customer Number: 58,982

Mail Stop Assignment Recordation Service

To the Director of the U.S. Patent and T 103498350 Please record the attached original documents or copy thereor. Name of conveying party: 2. Name and address of receiving party(ies): Robert Quincy ELLIOTT, Michael Scott BRITTON, and Name: Caterpillar Inc. Mark Andrew SPORER Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No Internal Address: 3. Nature of conveyance: Street Address: 100 N.E. Adams Street Ø Assignment Merger City: Peoria Security Change of Name State: IL Zip Code: 61629-6490 Agreement Other: Additional name(s) & Address(es) attached? **Execution Date: April 15, 2008** ☐ Yes ⊠ No Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application: April 15, 2008 A. Patent Application Number(s): В. Patent Number(s): **New Appln** Additional numbers attached? ☐ Yes No 4. Name and address of party to whom correspondence 5. Total number of applications and registrations concerning document should be mailed: involved: 1 Name: Christopher P. Isaac 6. Total fee (37 CFR 3.41): \$40 \boxtimes Enclosed (Please charge deficiency to deposit account) Authorized to be charged to deposit account Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P. Street Address: 901 New York Avenue, N.W. City: Washington, D.C. State: 7. Zip: 20001 Deposit Account No. 06-0916 8. 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 origina document. Daniel R. Lupo, Reg. No. 59,269 April 16, 2008 Date Total number of pages including cover sheet, attachments, and documents: 84/17/2008 AWONDAF1 68888844 12881459

> PATENT REEL: 020846 FRAME: 0238

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U.S. PTO 12/081459 04/16/2008

JOINT INVENTION (Worldwide Rights)
Attorney Docket No. 08350.7157
Client Ref. No. 07-157

ASSIGNMENT

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

SOFT START	MOTOR CONTROL USING	BACK-EMF	
for which I executed an application for United States Letters Patent on () (Serial No);		ently herewith or filed a	ın application for United
WHEREAS, Caterpillar Inc., a corporati Department, 100 N.E. Adams Street, Peoria, Il securing the entire right, title, and interest in and application for United States Letters Patent on the	L 61629-6490 (hereinafter to this invention in all coun	referred to as Assigned tries throughout the wo	e), is desirous of orde, and in and to the
NOW THEREFORE, be it known that for other good and valuable consideration the receipt sold, assigned, transferred, and set over, and do successors and assigns, my entire right, title, an, filed, and this applied for the United States which may be granted there the above provisional application, as well as all reformed the restriction on this invention in any foreign country, and request the Commissioner of Patents and Townse duty it is to issue patents on applications Assignee, its successors and assigns, in according	ot of which from Assignee is hereby sell, assign, transfer interest in and to this invection, and all divisions, and on, and all relssues thereof ights to claim priority on the or this invention in any foreight and all extensions, renewal rademarks of the United States of the Unite	hereby acknowledged er, and set over unto the ention, provisional appli d continuations thereof f, and all rights to claim e basis of this application gn country and all Letter s, and reissues thereof ates and any official of the all Letters Patent for	I, I, as Assignor, have e Assignee, its lawful cation Serial No. f, and all Letters Patent priority on the basis of on, and all applications ers Patent which may be f, and I hereby authorize any foreign country
AND, I HEREBY covenant that I have the have not executed and will not execute any agree			Assignment, and We
AND, I HEREBY further covenant and a 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 and any foreign country, it being understood that the Assignee, its successors and assigns.	known to me respecting thi pon to do so, execute and o invention in said Assignee, o, make all rightful oaths and and enforce proper patent p	s invention, and testify deliver any and all pape its successors or assig d generally do everythic protection for this inven	in any legal ers that may be gns, execute all ng possible to aid ation in the United States
IN TESTIMONY WHEREOF, I have her	eunto set my hands.		
1. FULL NAME OF FIRST ASSIGNOR Robert Quincy ELLIOTT	ASSIGNOR'S SIGNATURE Robert Quinny	Ellente	DATE 15 April 2008
ADDRESS 103 Westbourne Ct., Cary, NC 27519			CITIZENSHIP USA
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Listing of Inventors Cantinued on Page 2 hereof (2) Yes [] No			

Page 1 of 2

REEL: 020846 FRAME: 0239

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Listing of Inventors Continued on Page 3 hereof 🖾 Yes 🖸 No

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JOINT INVENTION (Worldwide Rights) Attorney Docket No. 08350.7157 Client Ref. No. 07-157

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RECORDED: 04/16/2008