Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date | |
|---------------------|----------------|--|
| Ivan Daryl Chapman | 05/19/2004 | |
| Charles Mackintosh | 05/17/2004 | |
| Pinkhas A. Rapaport | 05/17/2004 | |

RECEIVING PARTY DATA

| Name: | General Motors Corporation |
|-------------------|----------------------------|
| Street Address: | P.O. Box 300 |
| Internal Address: | 300 Renaissance Center |
| City: | Detroit |
| State/Country: | MICHIGAN |
| Postal Code: | 48265 |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 12021394 | |

CORRESPONDENCE DATA

Fax Number: (248)641-0270

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 248-641-1600
Email: ablendea@hdp.com
Correspondent Name: Anna M. Budde
Address Line 1: P.O. Box 828

Address Line 4: Bloomfield, MICHIGAN 48303

| ATTORNEY DOCKET NUMBER: | 8540G-000254/US/COA |
|-------------------------|---------------------|
| NAME OF SUBMITTER: | Andrea Blendea |

Total Attachments: 5

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PATENT REEL: 020430 FRAME: 0243

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NOVEMBER 23, 2004

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HARNESS, DICKEY & PIERCE, P.L.C. LINDA M. DESCHERE P.O. BOX 828 BLOOMFIELD HILLS, MI 48303

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BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CHAPMAN, IVAN DARYL

DOC DATE: 05/19/2004

ASSIGNOR:

MACKINTOSH, CHARLES

DOC DATE: 05/17/2004

ASSIGNOR:

RAPAPORT, PINKHAS A.

DOC DATE: 05/17/2004

ASSIGNEE:

GENERAL MOTORS CORPORATION LEGAL STAFF - INTELLECTUAL PROPERTY

P.O. BOX 300, 300 RENAISSANCE CENTER, MAIL CODE 482-C23-B21 DETROIT, MICHIGAN 48265

P.O. Box 1450, Alexandria, Virginia 22313–1450 - WWW USETO.GOV REEL: 020430 FRAME: 0245

015384/0650 PAGE 2

SERIAL NUMBER: 10851396 FILING DATE: 05/21/2004

PATENT NUMBER: ISSUE DATE:

TITLE: FLUID FLOW PULSING FOR INCREASED STABILITY IN PEM FUEL CELL

SEDLEY PYNE, PARALEGAL ASSIGNMENT DIVISION OFFICE OF PUBLIC RECORDS

PATENT REEL: 020430 FRAME: 0246

| Form PTO-1595 06 - 02 - 2002 (Rev. 10/02) OMB No. 0651-0027 (exp. 6/30/2005) | U.S. Patent and Trademark Office |
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| Tab settings ⇒ ⇒ ▼ 102756696 | Please Record the attached original documents or copy thereof. |
| 1. Name of conveying party(ies): Ivan Daryl Chapman Charles Mackintosh Pinkhas A. Rapaport Additional name of conveying party(ies) attached? Yes No | 2. Name and address of receiving party(ies) Name: GENERAL MOTORS CORPORATION Internal Address: Legal Staff - Intellectual Property Mail Code 482-C23-B21 |
| 3. Nature of conveyance: Assignment | Street Address: P.O. Box 300 300 Renaissance Center City: Detroit State: MI Zip: 48265 Additional Name(s) & address(es) attached? Yes No |
| • | 85 396 n, the execution date of the application is: 05/19/04; 05/17/04; B. Patent No.(s) |
| Additional numbers atta | ached? ☐ Yes ☒ No |
| Name and address of party to whom correspondence concerning this document should be mailed: | 6. Total number of applications and patents involved: 1 |
| Name: Linda M. Deschere | 7. Total fee (37 CFR 3.41) \$ 40.00 |
| Internal Address: <u>Harness, Dickey & Pierce, P.L.C.</u> | ☐ Enclosed ☐ Authorized to be charged to deposit account |
| Street Address: P.O. Box 828 | The Commissioner is hereby authorized to charge any additional fees that may be required or credit any overpayments to Deposit Account No. 07-0960. A duplicate copy of this sheet is enclosed. |
| City: Bloomfield Hills State: MI Zip: 48303 | |

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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.

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P.O. Box 1450 Alexandria, VA 22313-1450

PATENT

REEL: 020430 FRAME: 0247

ASSIGNMENT

Atty. Ref. 8540G-000254 (GP-304244)

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

| | FLU | ID FLO | DW PULSING FOR INCREASED STABILITY IN PEM FUEL CE | LL |
|---|--|---|---|--|
| for wh | | ignor is | s about to make or has made United States or International ap | plication for |
| | (a) | \boxtimes | executed on even date preparatory to filing (each inventor this Assignment on the same day as he/she signs the Decl Power of Attorney); | |
| | (b) | | executed on,; or | |
| | (c) | | filed on, and assigned Serial No or PCT I Application No, and | nternationa |
| | 482-C- | 23-B21 | GENERAL MOTORS CORPORATION, having a place of busing 1, P.O. Box 300, 300 Renaissance Center, Detroit, Michige to as Assignee, is desirous of acquiring an interest therein: | |
| unto A United laws o as des therefo Patent | of is he ssigned States f the Ur scribed or to be are gr | ereby a e and it of Ame nited St in the held a anted a | REFORE, for good and valuable consideration, the receipt and acknowledged, Assignor by these presents does sell, assign a ts successors in interest, the full and exclusive right, title and interica and all foreign countries, including the right to claim prioritates, the Paris Convention, and any foreign countries, to the sate aforesaid application, said application for patent and all Let and enjoyed by Assignee to the full end of the term for which and any extensions thereof as fully and entirely as the same for had this assignment and sale not been made; | and transfer terest in the ty under the aid invention tters Patent said Letters |
| United continue patent purpos Letters | uested States uation, any rese of pr | for the sand continuities and to continuities of the continuities | reby covenants and agrees to execute all instruments or docume making and prosecution of any applications of any type for poin all foreign countries including, but not limited to, any uation-in-part, divisional, renewal or substitute thereof, and re-examination, or extension thereof, and for litigation regarding title and to the said invention, the United States application for for the benefit of Assignee without further or other compensation. | atent in the provisional as to letter g, or for the or patent, or |
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| (Applic | Assigr cation N er of sai | nor here lod applic | reby authorizes and requests my attorney to insert here in p, filed) the filing date and ication when known. | arentheses I applicatior |

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PATENT REEL: 020430 FRAME: 0248

ASSIGNMENT

IVAN DARYL CHAPMAN

D5-19-84

Dated

Charles Mackintosh

οδ-17-ογ Dated

PINKHAS A. RAPAPORT

Place

Pl

RECORDED: 01/29/2008