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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LESLIE BROMBERG	12/18/2018
DANIEL R. COHN	12/18/2018
JOHN B. HEYWOOD	12/13/2018

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15919175

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ATTORNEY DOCKET NUMBER:	101328-447 (MIT11381K)
NAME OF SUBMITTER:	RORY P. PHEIFFER
SIGNATURE:	/Rory P. Pheiffer/
DATE SIGNED:	01/11/2019

Total Attachments: 7

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PATENT REEL: 047967 FRAME: 0071 505274518

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> PATENT REEL: 047967 FRAME: 0072

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned Leslie Bromberg of 176 Wilshire Drive, Sharon MA 02067-1562, Daniel R. Cohn of 100 Memorial Drive, Apartment 11-22B, Cambridge, MA 02412, and John B. Heywood of 218 Mill Street, Newtonville, MA 02460-2444 hereby

Sells, assigns and transfers to Massachusetts Institute of Technology, having a place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, its successors, assigns and legal representatives, all hereinafter referred to as the ASSIGNEE, his/her entire right, title and interest for the United States and all foreign countries: in and to any and all inventions which are disclosed in the application for United States Letters Patent "OPTIMIZED FUEL MANAGEMENT SYSTEM FOR DIRECT INJECTION ETHANOL ENHANCEMENT OF GASOLINE ENGINES," filed on March 12, 2018, and given serial number 15/919,175 (Attorney Docket No.: 101328-447) in and to said application and all divisional, continuing, substitute, renewal, reissue, reexamination, or other application for Letters Patent which has been or shall be filed in the United States or any foreign country on any of said inventions, and in and to all original and reissued patents which have been or shall be issued in the United States and all foreign countries on said inventions including the right to apply for patent rights in each foreign country and all right to priority.

Agrees that said ASSIGNEE may apply for and receive Letters Patent for said inventions in its own name and when requested, without charge to but at the expense of said ASSIGNEE, agrees to carry out in good faith the intent and purpose of this Assignment by executing all divisional, continuing, substitute, renewal, resissue, reexamination, and all other patent application on any and all said inventions; by executing all rightful declarations, oaths, assignments, and other papers; by communicating to said ASSIGNEE all facts known to him/her relating to said inventions and the history thereof, and generally by doing everything possible which said ASSIGNEE shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and for vesting title to said inventions and all applications for patents and all patents on said inventions, in said ASSIGNEE. Each of the undersigned also hereby appoints ASSIGNEE as its common agent for purposes of prosecuting international patent applications and any material patent applications for which such common agency is recognized.

Page 1 of 5

Hereby requests the Director of the United States Patent and Trademark Office and non-U.S. patent authorities to issue said Letters Patent to said ASSIGNEE.

Covenants with said ASSIGNEE that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by him/her, and that full right to convey the same as herein expressed is possessed by him/her.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

Desales 18, 2018		red L. Coh
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	Ihns Heyers	~{·		
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