

INTELLECTUAL PROPERTY RIGHTS & NON-DISCLOSURE AGREEMENT

FOR GENERAL MOTORS PROJECT AT

University of Michigan

ENGR 255 – Introductory Multidisciplinary Design Experience

ENGR 355 – Multidisciplinary Engineering Design I

ENGR 455 – Multidisciplinary Engineering Design II

ENGR 599 – Graduate Seminar Multidisciplinary Engineering

ENTITLED

“GM: Stochastic Pre-Ignition”

Name of Student of University of Michigan (the “University”): _____
(the “Student”), in the College of Engineering.

The Student and one or more of Student’s classmates and/or professors, (the Student together with such classmates and professor are referred to as the “The Academic Group”), are participating in at least one of ENGR 255, ENGR 355, ENGR 455, and ENGR 599 for GM (“Project”); and

GM Global Technology Operations LLC (“GM”) may provide to the Student Proprietary Information (defined below) that may serve as source materials for the Student in connection with the Project; and

GM is willing to share the Proprietary Information with the Student, provided that the Student acknowledges that the Proprietary Information furnished to it by GM constitutes highly confidential, trade secret information and agrees to maintain the confidentiality of the Proprietary Information; and

Student agrees to assign to GM all his or her rights in any writings, designs, inventions and works arising from participation in the Project.

In consideration of the opportunity to participate in the Project, the Student agrees to the following:

1. The term “Proprietary Information” shall mean any and all information disclosed by or made available by GM to the Student whether oral, visual, written, machine readable (video, audio, computer mass storage device, etc.) or other form.
2. The Student agrees to only use the Proprietary Information for the Project and not for any other purpose, whether commercial or non-commercial.

3. The Student agrees not to make any copies of the Proprietary Information unless Student has written permission from GM.
4. The Student will hold in strict confidence and not disclose, except to others in The Academic Group who have signed below or on a corresponding confidentiality agreement with GM, any Proprietary Information except information the Student can document (a) is in the public domain through no fault of the Student or The Academic Group, (b) was properly known to the Student, without restriction, prior to disclosure by GM at any time, (c) was properly disclosed to the Student by another person without restriction, (d) was developed by the Student independently of the disclosed Proprietary Information of GM, and reasonable written documentation exists to demonstrate such development; or (e) is subject to disclosure under operation of law, in which case the Student shall inform GM and shall cooperate with GM to minimize the extent of the disclosure. The Student will not reverse engineer or attempt to derive the composition or underlying information, structure or ideas of any Proprietary Information. The foregoing does not grant the Student a license in or to any of the Proprietary Information.
5. Upon completion of the Project, the Student will promptly dispose of all Proprietary Information by shredding, deleting, or promptly returning all Proprietary Information and all copies, extracts, papers, presentations, notes, drafts and other media, objects or items in which it may be contained or embodied.
6. The Student will promptly notify GM of any loss, theft or unauthorized release of the Proprietary Information.
7. The Student will not disclose to GM, or use any proprietary information belonging to others (including prior employers) unless the Student has their prior written approval, or any of the Student's prior inventions that GM is not entitled to use.
8. Technology Rights and Licenses. Student agrees that this is a student project and that GM owns all rights, title and interest to all writings, designs, inventions and works that Student conceives, makes, invents, creates or suggests in connection with the Project (collectively the "Creations"). The Student assigns to GM all such Creations. The Student will promptly disclose such Creations to GM. At GM's request, Student will sign patent applications and other lawful papers that GM considers helpful to secure and enforce any intellectual property rights. GM will bear all expenses related to such activities.

9. The Student understands that this Agreement does not obligate GM to disclose any information or enter into any agreement or relationship with any party.
10. The Student acknowledges and agrees that due to the unique nature of the Proprietary Information, any breach of this Agreement would cause irreparable harm to GM for which damages are not an adequate remedy and that GM shall therefore be entitled to seek an injunction (court instruction to have the Student stop sharing the Proprietary Information) to prevent sharing of the Proprietary Information.
11. The terms of this Agreement will remain in effect with respect to any particular Proprietary Information until the Student can document that it falls into one of the exceptions stated in Paragraph 4 above.
12. This Agreement is governed by the laws of the State of Michigan, U.S.A. and may be modified or waived only in writing. If any provision is found to be unenforceable, such provision will be limited or deleted to the minimum extent necessary so that the remaining terms remain in full force and effect.
13. Nothing in this Agreement shall be interpreted or construed as creating or establishing any partnership, joint venture, employment relationship, franchise or agency or any other similar relationship between the Student and GM.

I have read the above information thoroughly and agree to its terms and conditions.

STUDENT

Printed Name of Student

Signature of Student

Date

ACKNOWLEDGED AND SIGNED BY UNIVERSITY PROGRAM DIRECTOR

Printed Name and Title

Signature

Date

GM Contact Information:

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ATTACHMENT A

FURTHER DESCRIPTION OF THE PROJECT:

Project Title:2025 Fuel Efficiency

Project Description:

Vehicle Fuel economy is the single most important criteria for selling vehicles in the future. The Corporate Average Fuel Economy (CAFE) for model year 2025 will be on average 54.5 miles per gallon (mpg). The current CAFÉ on average is 29 mpg.

In order to meet the new CAFE requirements many improvements will be required on the vehicle system. One sub-system that contributes to fuel economy is the transmission. In order to improve the fuel economy of the vehicle you have to increase the transmission efficiency. One way to increase the transmission efficiency is by operating the transmission at the optimal temperature.

The objectives of this project are:

1. Determine the optimal temperature or temperature range to operate a given transmission for a range of input torques, input speeds and all forward gear conditions.
2. Develop a model to achieve optimal temperature.