

## PATENT ASSIGNMENT COVER SHEET

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NATURE OF CONVEYANCE:	ASSIGNMENT				
CONVEYING PARTY DATA					
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>TOYOTA MOTOR ENGINEERING &amp; MANUFACTURING NORTH AMERICA, INC.</td> <td>01/31/2014</td> </tr> </tbody> </table>		Name	Execution Date	TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC.	01/31/2014
Name	Execution Date				
TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC.	01/31/2014				
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PROPERTY NUMBERS Total: 1					
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Patent Number:</td> <td>8643173</td> </tr> </tbody> </table>		Property Type	Number	Patent Number:	8643173
Property Type	Number				
Patent Number:	8643173				
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Date:	02/11/2014				
Total Attachments: 1 source=TJKK_Assignment#page1.tif					

**ASSIGNMENT**

WHEREAS, **Toyota Motor Engineering & Manufacturing North America, Inc.** a corporation of the State of Kentucky, with a place of business at 25 Atlantic Avenue, Erlanger, KY 41018 (hereinafter referred to as "Assignor"), is an owner having rights, title and interest (hereinafter referred to as "Assignor's ownership interest") in and to the following United States Letters Patent No. 8,643,173 entitled **Cooling Apparatuses and Power Electronics Modules with Single-Phase and Two-Phase Surface Enhancement Features** (hereinafter referred to as "Letters Patent").

WHEREAS, **Toyota Jidosha Kabushiki Kaisha**, a business of Japan, with a place of business at 1 Toyota-Cho, Toyota City, Aichi Prefecture 471-8571, Japan (hereinafter referred to as "Assignee") is desirous of acquiring Assignor's ownership interest in and to the Letters Patent, and the inventions therein described.

NOW, THEREFORE, for good and valuable consideration, receipt whereof is hereby acknowledged, Assignor hereby sells, assigns and transfers unto said Assignee, its successors and assigns, Assignor's ownership interest in and to the Letters Patent, and the inventions therein disclosed, and any improvements thereon, the same to be held and enjoyed by the said Assignee for its own use and benefit, and for the use and benefit of its successors, assigns or other legal representatives to the full end of the term for which the Letters Patent has been granted or may be granted, as fully and entirely as the same would have been held and enjoyed by said Assignor, if this assignment and sale had not been made; together with all claims for damages by reason of past infringement of the Letters Patent, with the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns and other legal representatives.

**Toyota Motor Engineering &  
Manufacturing North America, Inc.**

Date: 1/31/14

Name: 

Title: IP Counsel