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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
SHARDUL S. PANWAR	04/29/2022
MICHAEL P. ROWE	05/18/2022
MADURAN PALANISWAMY	05/02/2022
RYOHEI TSURUTA	05/14/2022

RECEIVING PARTY DATA

Name:	TOYOTA MOTOR ENGINEERING & MANUFACTURING NORTH AMERICA, INC.	
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City:	PLANO	
State/Country:	TEXAS	
Postal Code:	75024	
Name:	TOYOTA JIDOSHA KABUSHIKI KAISHA	
Name:		
Street Address:	1, TOYOTA-CHO	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17747638

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 22562-6525 / 2021-958

NAME OF SUBMITTER: MATTHEW D. EPSTEIN

PATENT PATENT REEL: 059954 FRAME: 0390

SIGNATURE:	/Matthew D. Epstein/	
DATE SIGNED: 05/19/2022		
Total Attachments: 2		
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PATENT REEL: 059954 FRAME: 0391

ASSIGNMENT

WHEREAS, we, **Shardul S. Panwar**, of 683 Skynob Dr., Ann Arbor, MI 48105; **Michael P. Rowe**, of 155 Knollwood St., Pinckney, MI 48169; **Maduran Palaniswamy**, of 2331 Lancashire Drive, Apt. No. TA, Ann Arbor, MI 48105, and **Ryohei Tsuruta**, of 3229 Buckhorn Ct., Ann Arbor, MI 48105, collectively referred to hereinafter as the *ASSIGNOR(S)*, invented certain new and useful **SHAPE-MEMORY MATERIAL ACTUATORS** for which we executed an application for a United States Patent and for which said application for United States Patent was filed on <u>May 18, 2022</u>, under

☑ Patent Application Serial No. ____17/747,638

☑ Attorney Docket No. <u>22562-6525 / 2021-958 / IP-A-5935</u>;

WHEREAS, the ASSIGNOR(S) hereby authorize(s) and request(s) the attorney(s) and/or agent(s) empowered to act on **Toyota Motor Engineering & Manufacturing North America**, Inc. and **Toyota Jidosha Kabushiki Kaisha's** behalf in the aforementioned application, to insert above the filing date and application number of said application, when known;

WHEREAS, **Toyota Motor Engineering & Manufacturing North America, Inc.**, a corporation of the State of Kentucky, with a place of business at 6565 Headquarters Drive W1-3C, Plano, Texas 75024 and **Toyota Jidosha Kabushiki Kaisha**, a business of Japan, with a place of business at 1, Toyota-cho, Toyota-shi, Aichi-ken 471-8571, Japan, hereinafter collectively called the *ASSIGNEES*, are desirous of jointly acquiring *ASSIGNOR(S)* entire right, title and interest in and to said application and the inventions therein disclosed and any Letters Patent that may issue thereon;

AND, WHEREAS, it is the intent of the ASSIGNOR(S) to assign all rights, title and interest to the above referenced application to the ASSIGNEES, including, but not limited to, all substantive rights in the above-referenced application as well as the right to claim priority, the right to be granted a patent in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States;

NOW, THEREFORE, for good and valuable consideration, receipt whereof is hereby acknowledged, *ASSIGNOR(S)* hereby sell, assign and transfer unto said *ASSIGNEES*, their successors and assigns, the entire right, title and interest, including the right to claim priority in and to said application, the inventions therein disclosed, and any improvements thereon, and in any and all Letters Patent that may be granted therefor in the United States and its territorial possessions and in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States, and in and to any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof;

ASSIGNOR(S) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions, and in any and all countries and Regional Patent Offices, including, without limitation, the PCT Contracting States, to issue, when granted, any Letters Patent thereon, and any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof, to said ASSIGNEES, their successors and assigns, as the assignees of the entire right title and interest in and to the same, for the sole use and behalf of the ASSIGNEES and the ASSIGNEEs' successors and assigns, to the full end of the term for which the Letters Patent may be granted, including the term of any and all divisions, continuations, substitutions, renewals, re-

PATENT REEL: 059954 FRAME: 0392 examinations, extensions and reissues thereof, as fully and entirely as the same would have been held by the *ASSIGNOR(S)* had this assignment not been made;

ASSIGNOR(S) hereby authorize said ASSIGNEES, their successors and assigns, to file in their own names applications for patent in foreign countries in connection with the inventions hereby transferred, under the International Convention claiming the priority of said United States application or otherwise, and to secure in their own names the Letters Patent issued thereon, including any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof; and

ASSIGNOR(S) hereby agree that, upon request, ASSIGNOR(S) will sign all papers, and make all rightful oaths, and do all acts which said ASSIGNEES, their successors or assigns, may consider necessary in connection with said United States application, and in connection with any other United States application or foreign applications that may be filed in connection with said inventions, and with any improvements thereon, and in connection with any Letters Patent issued thereon, including any and all divisions, continuations, substitutions, renewals, re-examinations, extensions and reissues thereof.

ASSIGNOR(S):

Ву:	/Shardul S. Panwar/ Shardul S. Panwar	
Date:	4/29/2022	
Ву:	Michael P. Rowe	
Date:	5/18/2022	
Ву:	Maduran falaniswamy/ Maduran Palaniswamy	
Date:	5/2/2022	
Ву:	/Kyoluci Tsuruta/ Ryohei Tsuruta	
Date:	5/14/2022	

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