504665110 11/30/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4711832

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RYOSUKE HIYOSHI	10/10/2017
YOSHIAKI TANAKA	10/10/2017
YOSHIHIDE KIYOSAWA	10/05/2017
JUN HANDA	10/05/2017
KISHIRO NAGAI	10/05/2017
JUNICHIRO ONIGATA	10/10/2017
YOSHIHIKO YAMADA	10/10/2017

RECEIVING PARTY DATA

Name:	NISSAN MOTOR CO., LTD.
Street Address:	2, Takara-cho, Kanagawa-ku
City:	Yokohama-shi, Kanagawa
State/Country:	JAPAN
Postal Code:	221-0023
Name:	HARMONIC DRIVE SYSTEMS INC.
Street Address:	25-3, MINAMIOI 6-CHOME
City:	SHINAGAWA-KU, TOKYO
State/Country:	JAPAN
Postal Code:	140-0013
Name:	HITACHI AUTOMOTIVE SYSTEMS, LTD.
Street Address:	2520, TAKABA
City:	HITACHINAKA-SHI, IBARAKI
State/Country:	JAPAN
Postal Code:	312-8503

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15578506	

CORRESPONDENCE DATA

Fax Number: (202)672-5399

PATENT REEL: 044264 FRAME: 0775 Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2026725300

Email: rhale@foley.com, ipdocketing@foley.com **Correspondent Name:** FOLEY AND LARDNER LLP SUITE 500

Address Line 1: 3000 K STREET NW

Address Line 4: WASHINGTON, D.C. 20007

ATTORNEY DOCKET NUMBER:	023971-1003
NAME OF SUBMITTER:	EFFIE HALE FOR GLENN LAW
SIGNATURE:	/Effie Hale/
DATE SIGNED:	11/30/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 9

source=CombDecl_Assign#page1.tif source=CombDecl_Assign#page2.tif source=CombDecl_Assign#page3.tif source=CombDecl_Assign#page4.tif source=CombDecl_Assign#page5.tif source=CombDecl_Assign#page6.tif source=CombDecl_Assign#page7.tif source=CombDecl_Assign#page8.tif source=CombDecl_Assign#page9.tif

> PATENT REEL: 044264 FRAME: 0776

COMBINED ASSIGNMENT AND DECLARATION

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred and by these presents hereby sells, assigns, and transfers, unto

- 1. NISSAN MOTOR CO., LTD.
 - 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 Japan
- 2. HARMONIC DRIVE SYSTEMS INC.
 - 25-3, Minamioi 6-chome, Shinagawa-ku, Tokyo 140-0013 Japan
- HITACHI AUTOMOTIVE SYSTEMS, LTD. 2520, Takaba, Hitachinaka-shi, Ibaraki 312-8503 Japan

(hereinafter referred to as "ASSIGNEE") its successors and assigns, his or her full and exclusive right, title and interest for the United States, its territories and possessions, in and to the invention relating to

VARIABLE COMPRESSION RATIO MECHANISM FOR INTERNAL COMBUSTION ENGINE

as set forth in the following patent application(s):

check		the attached application
one	\boxtimes	U.S. application or PCT international application number PCT/JP2016/062730 filed April 22 , 2016

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application(s), all applications claiming priority to the above-identified application(s), and all applications to which the above-identified application(s) claim priority, and all other applications for Letters Patent of the United States for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention for the Protection of Industrial Property and any other international agreement associated with said applications, all applications claiming priority to said application(s), and all applications to which said application(s) claim priority; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may

Page 1 of 3

be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY further sells and assigns to ASSIGNEE any and all claims for damages by way of past, present and future infringement of any of the rights stemming from the aforementioned patent application(s) and patent(s), as well as but not limited to the right to collect damages and royalties for infringement occurring from the date of publication of any said application(s), with the right, but not the obligation, to sue for and collect such damages and royalties for said infringement

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in the United States on the above-identified invention in the name of the ASSIGNOR or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks for the United States to issue each said U.S. Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, review, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, and depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of FOLEY & LARDNER LLP do not represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE. Since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

4831-4796-6481.1 Page 2 of 3

INVENTOR DECLARATION FOR U.S. PATENT APPLICATION

As a below named inventor, I HEREBY DECLARE:

THAT this declaration is directed to:

check		the attached application
one	\boxtimes	U.S. application or PCT international application number PCT/JP2016/062730 filed April 22, 2017

THAT the above-identified application was made or authorized to be made by me.

THAT I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

NAMES AND SIGNATURES OF INVENTORS		
Name: Ryosuke HIYOSHI	Signature: Ryosake Hiyoshi	Date: October 10,2017
Name: Yoshiaki TANAKA	Signature: Gwehiaki Tanuka	Date: October 10, 2017
Name: Yoshihide KIYOSAWA	Signature:	Date:
Name:	Signature:	Date:
Jun HANDA Name:	Signature:	Date:
Kishiro NAGAI Name:	Signature:	Date:
Junichiro ONIGATA		Dates
Name: Yoshihiko YAMADA	Signature:	Date:

Page 3 of 3

COMBINED ASSIGNMENT AND DECLARATION

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred and by these presents hereby sells, assigns, and transfers, unto

- 1. NISSAN MOTOR CO., LTD.
 - 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 Japan
- 2. HARMONIC DRIVE SYSTEMS INC.
 - 25-3, Minamioi 6-chome, Shinagawa-ku, Tokyo 140-0013 Japan
- 3. HITACHI AUTOMOTIVE SYSTEMS, LTD. 2520, Takaba, Hitachinaka-shi, Ibaraki 312-8503 Japan

(hereinafter referred to as "ASSIGNEE") its successors and assigns, his or her full and exclusive right, title and interest for the United States, its territories and possessions, in and to the invention relating to

VARIABLE COMPRESSION RATIO MECHANISM FOR INTERNAL COMBUSTION ENGINE

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application(s), all applications claiming priority to the above-identified application(s), and all applications to which the above-identified application(s) claim priority, and all other applications for Letters Patent of the United States for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention for the Protection of Industrial Property and any other international agreement associated with said applications, all applications claiming priority to said application(s), and all applications to which said application(s) claim priority; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may

4831-4796-6481.1 Page 1 of 3

be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY further sells and assigns to ASSIGNEE any and all claims for damages by way of past, present and future infringement of any of the rights stemming from the aforementioned patent application(s) and patent(s), as well as but not limited to the right to collect damages and royalties for infringement occurring from the date of publication of any said application(s), with the right, but not the obligation, to sue for and collect such damages and royalties for said infringement

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in the United States on the above-identified invention in the name of the ASSIGNOR or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks for the United States to issue each said U.S. Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, review, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, and depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of FOLEY & LARDNER LLP do not represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE. Since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Page 2 of 3

INVENTOR DECLARATION FOR U.S. PATENT APPLICATION

As a below named inventor, I HEREBY DECLARE:

	THAT this declara	tion is directed to:
check		the attached application
one	\boxtimes	U.S. application or PCT international application number PCT/JP2016/062730 filed April 22, 2017

THAT the above-identified application was made or authorized to be made by me.

THAT I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

NAMES AND SIGNATURES OF INVENTORS		
Name: Ryosuke HIYOSHI	Signature:	Date:
Name: Yoshiaki TANAKA	Signature:	Date:
Name: Yoshihide KIYOSAWA	Signature: 7./1	Date: 10/05/2017
Name: Jun HANDA	Signature:	10/05/2017 Date: 10/05/2017
Name:	Signature:	Date:
Kishiro NAGAI		
Name:	Signature:	Date:
Junichiro ONIGATA		
Name:	Signature:	Date:
Yoshihiko YAMADA		

COMBINED ASSIGNMENT AND DECLARATION

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred and by these presents hereby sells, assigns, and transfers, unto

- 1. NISSAN MOTOR CO., LTD.
 - 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 Japan
- 2. HARMONIC DRIVE SYSTEMS INC.

25-3, Minamioi 6-chome, Shinagawa-ku, Tokyo 140-0013 Japan

3. HITACHI AUTOMOTIVE SYSTEMS, LTD. 2520, Takaba, Hitachinaka-shi, Ibaraki 312-8503 Japan

(hereinafter referred to as "ASSIGNEE") its successors and assigns, his or her full and exclusive right, title and interest for the United States, its territories and possessions, in and to the invention relating to

VARIABLE COMPRESSION RATIO MECHANISM FOR INTERNAL COMBUSTION ENGINE

as set forth in the following patent application(s):

check		the attached application
one	\boxtimes	U.S. application or PCT international application number PCT/JP2016/062730 filed April 22, 2016

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application(s), all applications claiming priority to the above-identified application(s), and all applications to which the above-identified application(s) claim priority, and all other applications for Letters Patent of the United States for the above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention for the Protection of Industrial Property and any other international agreement associated with said applications, all applications claiming priority to said application(s), and all applications to which said application(s) claim priority; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may

Page 1 of 3

be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY further sells and assigns to ASSIGNEE any and all claims for damages by way of past, present and future infringement of any of the rights stemming from the aforementioned patent application(s) and patent(s), as well as but not limited to the right to collect damages and royalties for infringement occurring from the date of publication of any said application(s), with the right, but not the obligation, to sue for and collect such damages and royalties for said infringement

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in the United States on the above-identified invention in the name of the ASSIGNOR or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks for the United States to issue each said U.S. Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, review, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, declarations, and depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of FOLEY & LARDNER LLP do not represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE. Since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Page 2 of 3

INVENTOR DECLARATION FOR U.S. PATENT APPLICATION

As a below named inventor, I HEREBY DECLARE:

THAT this declaration is directed to:

check		the attached application
one	\boxtimes	U.S. application or PCT international application number PCT/JP2016/062730 filed April 22, 2017

THAT the above-identified application was made or authorized to be made by me.

THAT I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

NAMES AND SIGNATURES OF INVENTORS		
Name: Ryosuke HIYOSHI	Signature:	Date:
Name: Yoshiaki TANAKA	Signature:	Date:
Name:	Signature:	Date:
Yoshihide KIYOSAWA Name:	Signature:	Date:
Jun HANDA		Date:
Name: Kishiro NAGAI	Signature: Kishiro pagai	10/5/2017
Name: Junichiro ONIGATA	Signature: Sunishiro Onigala	Date:
Name: Yoshihiko YAMADA	Signature: yoshikiko yamada	Date: 10/10/2017

Page 3 of 3

4831-4796-6481.1

RECORDED: 11/30/2017