

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT6214375

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
GENERAL ELECTRIC COMPANY	02/25/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	GE GLOBAL SOURCING LLC
<b>Street Address:</b>	901 MAIN AVENUE
<b>City:</b>	NORWALK
<b>State/Country:</b>	CONNECTICUT
<b>Postal Code:</b>	06851
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16417238
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(314)584-4062
<i>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.</i>	
<b>Phone:</b>	3145844080
<b>Email:</b>	Docket@splglaw.com
<b>Correspondent Name:</b>	THE SMALL PATENT LAW GROUP LLC
<b>Address Line 1:</b>	225 S. MERAMEC, SUITE 725
<b>Address Line 4:</b>	ST. LOUIS, MISSOURI 63105
<b>ATTORNEY DOCKET NUMBER:</b>	WABP10560USCON12 (131US4)
<b>NAME OF SUBMITTER:</b>	JOSEPH F. HARDING
<b>SIGNATURE:</b>	/JOSEPH F. HARDING/
<b>DATE SIGNED:</b>	07/23/2020
<b>Total Attachments: 13</b>	
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INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This **INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT** (“Assignment”), effective as of February 25, 2019 (“Effective Date”), is by and between General Electric Company (“Assignor”) and GE Global Sourcing LLC (“Assignee”).

WHEREAS, pursuant to that certain Separation, Distribution and Sale Agreement, dated as of May 20, 2018 among Assignor, Transportation Systems Holdings Inc. (“SpinCo”), Westinghouse Air Brake Technologies Corporation, and Wabtec US Rail, Inc. (the “Separation Agreement”), Assignor agreed to Transfer, or cause certain of its affiliates to Transfer, and SpinCo agreed to receive or cause certain of its Affiliates to receive, the SpinCo Assets, in each case on the terms and subject to the conditions contained in the Separation Agreement;

WHEREAS, in accordance with its obligations under the Separation Agreement, prior to the date of the Initial Assignment (as defined below), Assignor transferred, directly or indirectly, all of its outstanding equity interests in Assignee to SpinCo;

WHEREAS, in furtherance of the Separation Agreement, Assignor and Assignee entered into that certain Amended and Restated Intellectual Property Assignment Agreement effective as of November 1, 2018 (the “Initial Assignment”), pursuant to which Assignor delivered and transferred to Assignee all of Assignor’s right, title and interest in and to the Tiger Intellectual Property, Tiger Software (excluding any Software listed on Schedule 2.01(a) of the Separation Agreement) and Tiger Data/Technology in exchange for a cash payment of \$567,000,000 and the Promissory Note for \$567,000,000 between Assignor and Assignee dated November 1, 2018 (collectively, the “Consideration”);

WHEREAS, with respect to any Tiger Intellectual Property, Tiger Software (excluding any Software listed on Schedule 2.01(a) of the Separation Agreement) or Tiger Data/Technology developed or identified after the effective date of the Initial Assignment that constitutes SpinCo Assets and that is required to be transferred to SpinCo pursuant to the Separation Agreement, including as set forth on Exhibit A hereto (the “Assigned IP”), Assignor desires to deliver and transfer to Assignee such Assigned IP pursuant to this Assignment; and

WHEREAS, the Consideration was provided in exchange for both the Initial Assignment and this Assignment.

NOW, THEREFORE, for good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, Assignor and Assignee hereby agree as follows:

1. Unless otherwise defined herein, all capitalized terms used herein shall have the meanings ascribed to such terms in the Separation Agreement.
2. Assignor hereby sells, assigns and transfers to Assignee its entire worldwide right, title and interest in, to and under the Assigned IP, together with any and all goodwill connected with and symbolized by the Assigned IP, the same to be held and enjoyed by Assignee for its own use and enjoyment and the use and enjoyment of its successors, assigns and other legal representatives as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment

and sale had not been made, as assignee of its respective entire right, title and interest therein, including, without limitation, all rights in and to all income, royalties, damages and payments now or hereafter due or payable with respect thereto, all causes of action (whether in law or in equity) with respect thereto, and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment.

3. This Assignment is binding upon, and inures to the benefit of, the parties hereto and their respective legal representatives, successors and assigns. It is understood that any finding of invalidity of one assignment as effected hereby shall not affect the assignment of other Assigned IP. All questions concerning the construction, validity and interpretation of this Assignment and the performance of the obligations imposed by this Assignment shall be governed by, and construed in accordance with, the laws of the State of New York without regard to the choice of law principles thereof.
4. Upon reasonable request by Assignee, Assignor will execute additional documents and take other actions as may be necessary or desirable to record or memorialize the assignments of the Assigned IP set forth herein, and to vest in Assignee such right, title, and interest in and to the Assigned IP as sold, assigned and transferred to Assignee hereunder.
5. Assignor hereby authorizes and requests the officials of the United States Copyright Office and the United States Patent and Trademark Office, and the corresponding entities or agencies in any applicable foreign jurisdiction, to record Assignee as assignee and owner of the entire right, title and interest in, to and under the Assigned IP.
6. No waiver, modification or change of any of the provisions of this Assignment shall be valid unless in writing and signed by the party against whom such claimed waiver, modification or change is sought to be enforced.
7. This Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Assignment delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Assignment.

IN WITNESS WHEREOF, the parties hereto, through their authorized representatives, have caused this Assignment to be duly executed and delivered as of the Effective Date.

**As Assignor:**

General Electric Company

By: \_\_\_\_\_

Name:

Title:

*Michael Jones*  
*VP, BD*

**As Assignee:**

GE Global Sourcing LLC

By: \_\_\_\_\_

Name:

Title:

*[Signature Page to Intellectual Property Assignment Agreement]*

IN WITNESS WHEREOF, the parties hereto, through their authorized representatives, have caused this Assignment to be duly executed and delivered as of the Effective Date.

**As Assignor:**

General Electric Company

By: \_\_\_\_\_

Name:

Title:

**As Assignee:**

GE Global Sourcing LLC

By:  \_\_\_\_\_

Name: Brittany Owens

Title: Authorized Signatory

*[Signature Page to Intellectual Property Assignment Agreement]*

**EXHIBIT A**

**ASSIGNED IP**

1. See attachment titled Assigned IP Patents – Closing which is hereby incorporated herein by reference.

# Assigned IP Patents - Closing

Docket	dash	CO	Title	Filing Description	App Number	App Date	Parent Number	Issue Date	Status
271415	3	US	OPTICAL ROUTE EXAMINATION SYSTEM AND METHOD	Continuation-in-part	16/244286	1/20/2019			Application
281438	3	US	VEHICLE CONTROL SYSTEM AND METHOD		15/044592	2016-02-16			Allowed
268899	8	US	BRIDGE	Continuation	16/125131	2018-09-07			Allowed
278009	6	US	BUSBAR	Divisional	29/668068	2018-10-26			Allowed
247489	9	US	SYSTEMS AND METHODS FOR DIAGNOSING AN ENGINE	DIV-DIVISIONAL FILING	16/023302	6/29/2018			Application
248398A	2	US	SYSTEMS AND METHODS FOR ENGINE CONTROL	DIV-DIVISIONAL FILING	16/023202	6/29/2018			Application
270928A	3	US	VISUAL SCHEDULING SYSTEM AND METHOD OF VEHICLE MOVEMENT THROUGH YARDS		29/650438	6/6/2018			Application
275931	6	US	METHOD AND SYSTEMS FOR EGR CONTROL	DIV-DIVISIONAL FILING	15/941291	3/30/2018			Application
276403	1	US	METHOD AND SYSTEMS FOR EGR CONTROL SYSTEM FOR CONTROLLING INJECTION OF FUEL IN ENGINE	PRI-PRIORITY APPLICATION	14/564158	12/9/2014			Application
275962	5	US	METHOD FOR OPERATING AN INTERNAL COMBUSTION ENGINE	PCT-PATENT COOPERATION TREATY	15/577834	11/29/2017			Application
277145	3	US	ARRANGEMENT FROM ONE HEAD AND A FUEL INJECTOR	PCT-PATENT COOPERATION TREATY	15/564433	10/5/2017			Application
278442	1	US	SYSTEMS FOR FUEL DELIVERY	PRI-PRIORITY APPLICATION	14/811928	7/29/2015			Application
278975	6	US	SYSTEM AND METHOD FOR ENGINE CONTROL	DIV-DIVISIONAL FILING	16/107848	8/21/2018			Application
279783	3	US	DUAL-FUEL-COMBUSTION ENGINE	PCT-PATENT COOPERATION TREATY	15/736332	12/14/2017			Application
281433	3	US	DISPLAY SCREEN WITH SHIPMENT MANAGEMENT GRAPHICAL USER INTERFACE	DDV-DESIGN DIVISIONAL	29/645296	4/25/2018			Application
282080	6	US	DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE	DDV-DESIGN DIVISIONAL	29/654995	6/29/2018			Application
282830	3	US	TURBOCHARGER TRANSITION SECTION	DDV-DESIGN DIVISIONAL	29/644877	4/20/2018			Application
283612	2	WO	SYSTEM AND METHOD FOR ENGINE CONTROL	ORD-UTILITY PATENT FILING	PCT/US2018/026496	4/6/2018			Application
284900	8	US	SENSOR ASSEMBLY	DDV-DESIGN DIVISIONAL	29/613171	8/8/2017			Application
284901	9	US	SENSOR ASSEMBLY	DDV-DESIGN DIVISIONAL	29/589735	1/4/2017			Application
284939	7	US	SENSOR SIGNAL PROCESSING SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	15/370749	12/6/2016			Application
285511	2	US	SYSTEM AND METHOD FOR DETERMINING GRADE ERRORS OF A ROUTE		15/959264	4/22/2018			Application
285610A	1	US	LOCOMOTIVE CONTROL SYSTEM WITH TASK MANAGER	CON-CONTINUATION	16/114318	8/28/2018			Application
285869	2	US	SYSTEMS AND METHOD FOR EXHAUST GAS RECIRCULATION	GIP-CONTINUATION IN PART	16/043321	7/24/2018			Application
286168	2	US	DEPLOYABLE STEP	DDV-DESIGN DIVISIONAL	29/649299	5/29/2018			Application
287405	3	US	CABLE CONNECTOR	DDV-DESIGN DIVISIONAL	29/655039	6/29/2018			Application
314208	3	WO	CURRENT REDUCTION SYSTEM FOR INVERTERS CONNECTED TO A COMMON BUS	ORD-UTILITY PATENT FILING	PCT/US2018/026399	4/6/2018			Application
314410	2	US	METHOD AND SYSTEMS FOR A MULTISTAGE EXHAUST GAS COOLER	ORD-UTILITY PATENT FILING	15/973299	5/7/2018			Application
314410	3	WO	METHOD AND SYSTEMS FOR A MULTISTAGE EXHAUST GAS COOLER	ORD-UTILITY PATENT FILING	PCT/US2018/026395	4/6/2018			Application
314410	4	US	METHOD AND SYSTEMS FOR A MULTISTAGE EXHAUST GAS COOLER	CON-CONTINUATION	15/973299	5/7/2018			Application
315330	2	WO	A POWER SYSTEM AND AN ASSOCIATED METHOD THEREOF MONITORING SYSTEM FOR DETECTING DEGRADATION OF A PROPULSION SUBSYSTEM	ORD-UTILITY PATENT FILING	PCT/US2018/025935	4/3/2018			Application
316169	3	WO	BUSBAR	ORD-UTILITY PATENT FILING	PCT/US2018/030231	4/30/2018			Application
316738	3	US	BUSBAR	DDV-DESIGN DIVISIONAL	29/643127	4/4/2018			Application
317177	1	US	INVERTER SYSTEMS	PRO-PROVISIONAL	62/665169	5/1/2018			Application
317600	1	US	METHODS AND SYSTEMS FOR A DUAL FUEL ENGINE	PRO-PROVISIONAL	62/692530	6/29/2018			Application
317784	1	US	CONTROL SYSTEM AND METHOD FOR VEHICLES WITH DYNAMIC BRAKING	PRO-PROVISIONAL	62/663761	4/27/2018			Application
318134	3	US	BUSBAR	DDV-DESIGN DIVISIONAL	29/658897	8/3/2018			Application
318138	1	US	GEARBOX ASSEMBLY	PRO-PROVISIONAL	62/657469	4/13/2018			Application
318159	1	US	BUS BAR ASSEMBLY	PDS-PRIORITY DESIGN APPLICATION	29/649331	5/29/2018			Application
318357	2	US	BATTERY EXCHANGE SYSTEM FOR BATTERY-POWERED VEHICLES	ORD-UTILITY PATENT FILING	16/100375	8/10/2018			Application
318454	1	US	USING AUXILIARY BATTERY	PRO-PROVISIONAL	62/689304	6/25/2018			Application
318850	1	US	ENGINE CONTROL SYSTEM	PDS-PRIORITY DESIGN APPLICATION	29/640103	3/12/2018			Application
318850	1	US	RAIL VEHICLE TRACTION PIN						Application



319228	1	US	HIGH VOLTAGE CHOPPER PANEL BUSBAR SYSTEM AND METHOD FOR ARRANGING TRANSPORTATION SYSTEMS FOR TRAVEL	PDS-PRIORITY DESIGN APPLICATION	29/650744	6/8/2018	Application
319380	2	US	METHODS AND SYSTEMS FOR MITIGATING KNOCK TO ENGINE CYLINDERS BASED ON INDIVIDUAL CYLINDER KNOCK SENSOR OUTPUTS	ORD-UTILITY PATENT FILING	15/923461	3/16/2018	Application
319517	1	US	PRO-PROVISIONAL				
319756	1	US	MODULAR EXHAUST OUTLET	PDS-PRIORITY DESIGN APPLICATION	62/670567	5/11/2018	Application
320110	2	US	MOTOR SUSPENSION ASSEMBLY	PRO-PROVISIONAL	29/649613	5/31/2018	Application
320304	1	US	METHOD AND SYSTEMS FOR PARTICULATE MATTER CONTROL	ORD-UTILITY PATENT FILING	15/981657	5/16/2018	Application
320924	1	US	POWER GENERATION SYSTEM AND ASSOCIATED METHOD	PRO-PROVISIONAL	62/669245	5/9/2018	Application
			ADAPTIVE NETWORK MESSAGE TRANSMISSION SCHEDULING DEVICE	PRI-PRIORITY APPLICATION	15/991255	5/29/2018	Application
323187	1	US	PRO-PROVISIONAL				
324031	1	US	LOCOMOTIVE POSITIONING DATA VERIFICATION SYSTEM	PRO-PROVISIONAL	62/646189	3/21/2018	Application
324050	1	US	SOOT REDUCTION ASSEMBLES FOR ENGINES	PRO-PROVISIONAL	62/715096	8/6/2018	Application
324050	2	US	ENGINE MIXING STRUCTURES	ORD-UTILITY PATENT FILING	62/616702	1/12/2018	Application
324050A	1	US	SOOT REDUCTION ASSEMBLES FOR ENGINES	PRO-PROVISIONAL	16/059730	8/9/2018	Application
324161	1	US	MODULAR CAM SHAFT	PDS-PRIORITY DESIGN APPLICATION	62/623194	1/29/2018	Application
324618	1	US	PRESSURE REGULATOR BLOCK	PDS-PRIORITY DESIGN APPLICATION	29/649945	6/4/2018	Application
324618A	1	US	PRESSURE REGULATOR AND PISTON	PDS-PRIORITY DESIGN APPLICATION	29/653090	6/12/2018	Application
324621	1	US	OIL FILTER HOUSING	PDS-PRIORITY DESIGN APPLICATION	29/649583	5/31/2018	Application
325076	1	US	EXHAUST STACK	PDS-PRIORITY DESIGN APPLICATION	29/653323	6/14/2018	Application
325628	1	US	Locomotive Control to Reduce Derailment Risk	PRO-PROVISIONAL	62/715859	8/8/2018	Application
326052	1	US	LOCOMOTIVE CONTROL SYSTEM	CP-CONTINUATION IN PART	15/958831	4/20/2018	Application
326053	1	US	LOCOMOTIVE CONTROL SYSTEM	PRI-PRIORITY APPLICATION	15/958872	4/20/2018	Application
326189	1	US	LOCOMOTIVE CONTROL SYSTEM	CP-CONTINUATION IN PART	15/958839	4/20/2018	Application
326190	1	US	LOCOMOTIVE CONTROL SYSTEM	PRI-PRIORITY APPLICATION	15/958860	4/20/2018	Application
326566	1	US	LOCOMOTIVE CONTROL SYSTEM AND METHOD	PRO-PROVISIONAL	62/776526	9/4/2018	Application
326657	1	US	LOCOMOTIVE PROPULSION SYSTEM	PRI-PRIORITY APPLICATION	16/050361	7/31/2018	Application
			SYSTEMS AND METHODS FOR CONTROLLING DYNAMIC AVALANCHE IN SWITCHING DEVICES				
315520	1	US	TURBINE-COMPRESSOR ASSEMBLY AND METHOD		16/193926	11/16/2018	Application
317242	1	US	SYSTEM AND METHODS FOR DETECTING SURGE IN A LOCOMOTIVE ENGINE SYSTEM		62/804935	2/13/2019	Application
317760	1	US	LOCOMOTIVE COMMUNICATION SYSTEM USING INCOMPATIBLE MODULATION TECHNIQUES		16/192506	11/15/2018	Application
320331	1	US	METAL MEMBER WITH BRAZING POCKET		16/184804	11/8/2018	Application
320502	1	US	RESISTORS FOR LOCOMOTIVE DYNAMIC BRAKING		29/676554	1/11/2019	Application
326632	1	US	LOCOMOTIVE HEAT EXCHANGER APPARATUS AND METHOD OF MANUFACTURING A HEAT EXCHANGER APPARATUS		16/193717	11/16/2018	Application
325364	1	US	LOCOMOTIVE ENGINE		16/217451	12/12/2018	Application
325416	1	US	Auxiliary Power Unit		62/732948	9/18/2018	Application
325418	1	US	METHOD AND SYSTEMS FOR AN AUXILIARY POWER UNIT FOR A LOCOMOTIVE		29/664365	9/24/2018	Application
325438	1	US	METHOD AND SYSTEM FOR LOCOMOTIVE SOFTWARE		16/140329	9/24/2018	Application
263373A	1	US	MANAGEMENT		16/153177	10/5/2018	Application
278956	1	US	FUEL INJECTOR WEAR CORRECTION METHODOLOGY		14/708920	2015-05-11	Application
279016AB	1	US	VEHICLE CONVOY CONTROL SYSTEM AND METHOD		16/032931	7/11/2018	Application
288663	1	US	SYSTEM AND METHOD FOR PREDICTING MECHANICAL FAILURE		14/869478	9/29/2015	Application
			SYSTEM FOR CONTROLLING OR MONITORING A VEHICLE SYSTEM ALONG A ROUTE				
313194A	2	US	METHOD AND SYSTEM FOR DETERMINING REMAINING USEFUL LIFE FOR AN INJECTOR OF A RECIPROCATING ENGINE		15/439474	2/22/2017	Application
314182	2	US	SYSTEMS AND METHODS FOR POWER MODULES		15/946956	4/6/2018	Application
314975	1	US	ALERTER AUGMENTATION SYSTEM		15/397485	1/3/2017	Application
316308	1	US	CONTROL SYSTEM AND METHOD		15/397545	1/3/2017	Application
316362	1	US			15/397469	1/3/2017	Application

316395	1	US	VEHICLE CONTROL SYSTEM AND METHOD FOR IMPLEMENTING SAFETY PROCEDURE	15/407363	1/17/2017	Application
316410	2	US	ADAPTIVE VEHICLE CONTROL SYSTEM	15/482240	4/7/2017	Application
316427	1	US	VEHICLE COMMUNICATION SYSTEM	15/412692	1/23/2017	Application
316444	1	US	TRANSFER OF VEHICLE CONTROL SYSTEM AND METHOD	15/402797	1/10/2017	Application
317891	1	US	REMOTE LOCOMOTIVE DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE	29/597317	3/16/2017	Application
317894	1	US	ONBOARD LOCOMOTIVE DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE	29/597322	3/16/2017	Application
324741	1	US	REMOTE VEHICLE OPERATOR ASSIGNMENT SYSTEM	16/046493	7/26/2018	Application
324742	1	US	SYSTEM AND METHOD INTEGRATING AN ENERGY MANAGEMENT SYSTEM	15/992749	5/30/2018	Application
324809	1	US	FREQUENCY-BASED LOCOMOTIVE COMMUNICATION SYSTEM	62/758791	11/12/2018	Application
324811	1	US	SYSTEM AND METHOD FOR LOCOMOTIVE COMMUNICATION	62/749904	10/24/2018	Application
325438A	1	US	METHOD AND SYSTEMS FOR AN AUXILIARY POWER UNIT FOR A LOCOMOTIVE	16/140359	9/24/2018	Application
326530	1	US	ELECTRONIC JOB AID SYSTEM FOR OPERATOR OF A VEHICLE SYSTEM	62/675017	5/22/2018	Application
326591	1	US	LOCOMOTIVE SUSPENSION SYSTEM	16/137192	9/20/2018	Application
326697	1	US	LOCOMOTIVE ENGINE ASSIST SYSTEM	16/168019	10/23/2018	Application
326698	1	US	VEHICLE CONVOY CONTROL SYSTEM AND METHOD	16/101072	8/10/2018	Application
501572	1	US	LOCOMOTIVE COMMUNICATION SYSTEM AND METHOD	16/210883	12/5/2018	Application
325855	1	US	HYBRID PROPULSION SYSTEM AND METHOD OF CONTROLLING SAME	16/234586	12/28/2018	Application
326561	1	US	PISTON CROWN FOR A COMBUSTION SYSTEM AND AN ASSOCIATED METHOD THEREOF	16/252641	1/20/2019	Application
327224	1	US	HYBRID PROPULSION SYSTEM AND METHOD OF CONTROLLING SAME	16/234584	12/28/2018	Application
326905	1	US	SECURE LOCOMOTIVE COMMUNICATION SYSTEM	16/178896	11/2/2018	Application
320502A	1	US	CLOSED SOCKET BRAZED JOINT ASSEMBLY	16/245918	1/11/2019	Application
326853	1	US	SYSTEMS FOR MINING VEHICLE COLLISION AVOIDANCE	16/129405	9/12/2018	Application
265141	7	US	INSPECTION SYSTEM AND METHOD	16/229824	12/21/2018	Application
327574	1	US	SYSTEMS FOR A TURBOCHARGER OF A LOCOMOTIVE	16/264174	1/31/2019	Application
323086	3	US	LOCOMOTIVE SYSTEM WITH SENSOR PROBE ASSEMBLY FOR MONITORING OIL HEALTH	16/146322	9/28/2018	Application
502692	1	US	REPAIR SYSTEM AND METHOD FOR REPAIRING CAVITATION DAMAGE FOR A FUEL PUMP OF A LOCOMOTIVE	16/271277	2/8/2019	Application
327535	1	US	TURBOCHARGER SYSTEMS AND METHOD FOR CAPTURING A PROCESS GAS	16/276177	2/14/2019	Application
317650	2	US	RAIL VEHICLE COLLISION AVOIDANCE SYSTEM	15/981698	5/16/2018	Application
287435	1	US	VEHICLE COMMUNICATION SYSTEM	15/242832	8/22/2016	Application
247449A	4	US	METHOD AND SYSTEM FOR LOCOMOTIVE COMMUNICATIONS	16/185962	2018-11-09	Application
263373A	1	US	LOCOMOTIVE SYSTEM WITH SOFTWARE MANAGEMENT HUB SENSOR SYSTEM	16/153177	2018-10-05	Application
284898	9	US	LOCOMOTIVE OPERATION CONTROL SYSTEM	16/165716	2018-10-19	Application
285548	2	US	TRIP OPTIMIZATION SYSTEM AND METHOD FOR A TRAIN	16/238262	2019-01-02	Application
204173	75	US	SYSTEMS AND METHOD FOR A TRACTION SYSTEM	16/195950	2018-11-20	Application
282747	7	US	RIBBED CONVOLUTION MUFFLER	16/132952	2018-09-17	Application
314367	3	US	DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE	29/669077	2018-11-05	Application
271365	4	US	ELECTRIC GROUND FAULT DETECTION SYSTEM AND METHOD	29/666116	2018-10-10	Application
284493	2	US	LOCOMOTIVE CONTROL SYSTEM	16/164204	2018-10-18	Application
287151	3	US	ROUTE EXAMINING SYSTEM AND METHOD	16/262438	2019-01-30	Application
270504	10	US	BUSBAR CLEAT	16/170741	2014-10-29	Application
286154	3	US	BUSBAR	29/668228	2018-10-29	Application
317154	2	US	Divisional	29/668240	2018-10-29	Application

273456	5	US	VEHICLE TRACTION CONTROL SYSTEM AND METHOD	Continuation	16/163,225	2018-10-17		Application
27367	4	US	DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE	Divisional	29/668,652	2018-10-31		Application
262736A	2	US	EQUIPMENT CONTROL SYSTEM	Continuation	16/165,746	2018-10-19		Application
262087A	2	US	LOCOMOTIVE DATA COMMUNICATION SYSTEM	Continuation-in-part	16/182,210	2014-02-28		Application
283087	3	US	COMMUNICATION SYSTEM AND METHOD OF A VEHICLE CONSISTING OF A VEHICLE AND A REMOTE CONTROL SYSTEM	Continuation	16/193,783	2018-11-16		Application
318230	2	US	LOCOMOTIVE CONTROL SYSTEM	Secondary	16/199,464	2018-11-26		Application
287165	2	US	MULTIPLE VEHICLE CONTROL SYSTEM	Continuation	16/212,166	2018-12-06		Application
313456	2	US	VEHICLE CONTROL SYSTEM	Continuation	16/212,238	2018-12-06		Application
318468	2	US	LOCOMOTIVE CONTROL SYSTEM	Priority	16/222,822	2018-12-17		Application
282158	5	US	SYSTEMS AND METHOD FOR A VEHICLE NETWORK	Continuation	16/243,778	2019-01-09		Application
313342	3	US	INTEGRATED ROBOTIC SYSTEM AND METHOD FOR AUTONOMOUS VEHICLE MAINTENANCE	Continuation-in-part	16/240,237	2019-01-04		Application
314710	3	US	LOCOMOTIVE SENSOR SYSTEM FOR MONITORING ENGINE AND LUBRICANT HEALTH	Continuation-in-part	16/251,897	2019-01-18		Application
310875	4	US	VEHICLE CONTROL SYSTEM	Continuation-in-part	16/263,870	2019-01-31		Application
314195	3	US	METHOD AND SYSTEM FOR REMOTE INSPECTION OF INDUSTRIAL ASSETS	Continuation	16/277,056	2016-10-04		Application
120476	1	US	METHOD OF SERVICING AN ELECTRO-DYNAMIC APPARATUS	ORD-UTILITY PATENT FILING	10/261135	9/30/2002	US7410674	8/12/2008 Issued
120577	1	US	AN IMPROVED METHOD FOR CONTROL OF LOCOMOTIVE ENGINE OVER SPEED DUE TO UNCONTROLLED LUBE OIL INGESTION	ORD-UTILITY PATENT FILING	11/468395	8/31/2006	US7759810	7/20/2010 Issued
120901	1	US	VENTILATION SYSTEM FOR ELECTRIC-DRIVE VEHICLE	ORD-UTILITY PATENT FILING	10/126701	4/19/2002	US6837322	1/4/2005 Issued
121329	2	US	METHOD AND SYSTEM FOR COMMUNICATING AMONG A PLURALITY OF MOBILE ASSETS	ORD-UTILITY PATENT FILING	10/278246	10/24/2002	US6759951	7/6/2004 Issued
121708	2	US	LOCOMOTIVE BRAKE VALVE CUT-OUT FAILURE DETECTION AND CORRECTION	ORD-UTILITY PATENT FILING	10/271329	10/15/2002	US6866347	3/15/2005 Issued
121708	4	US	ADAPTIVE BRAKE VALVE CUTOUT SCHEME DURING DISTRIBUTED POWER COMMUNICATION LOSS	ORD-UTILITY PATENT FILING	10/361535	2/10/2003	US6824226	11/30/2004 Issued
122059	2	US	MULTIMODE HYBRID ENERGY RAILWAY VEHICLE SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	10/435261	5/9/2003	US7231877	6/19/2007 Issued
122059	3	US	MULTIMODE HYBRID ENERGY RAILWAY VEHICLE SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	11/180251	7/13/2005	US7430967	10/7/2008 Issued
122633	2	US	LUBRICANT MANAGEMENT APPARATUS AND METHOD FOR A VEHICLE	ORD-UTILITY PATENT FILING	10/277260	10/22/2002	US7756717	7/13/2010 Issued
124340	2	US	AUTOMATIC COUPLING OF LOCOMOTIVE TO RAILCARS	ORD-UTILITY PATENT FILING	10/360055	2/6/2003	US7177732	2/13/2007 Issued
124351	1	US	METHOD AND SYSTEM FOR DETECTING INCIPIENT FAILURES IN A TRACTION SYSTEM	ORD-UTILITY PATENT FILING	10/366145	2/13/2003	US6829556	12/7/2004 Issued
124789	2	US	IMPROVED DETECTION OF LOCOMOTIVE SANDING SYSTEM	ORD-UTILITY PATENT FILING	10/606723	6/26/2003	US7152888	12/26/2006 Issued
125066	2	US	COMPONENT HEALTH AND FUNCTIONALITY METHOD AND SYSTEM FOR COORDINATED TRANSFER OF CONTROL OF A REMOTE CONTROLLED LOCOMOTIVE	ORD-UTILITY PATENT FILING	10/249840	5/12/2003	US6837466	1/4/2005 Issued
127131	1	US	IN CYLINDER COMBUSTION RECIPE FOR MEETING TIER 2 APPARATUS AND METHOD FOR SUPPRESSING DIESEL ENGINE EMISSIONS	ORD-UTILITY PATENT FILING	10/249874	5/14/2003	US7073481	7/11/2006 Issued
1868USA	1	US	LOCOMOTIVE EMISSIONS REGULATIONS	ORD-UTILITY PATENT FILING	09/528929	3/20/2000	US6325044	12/4/2001 Issued
1913USA	4	US	REDUCED EMISSIONS ELEVATED ALTITUDE DIESEL FUEL INJECTION TIMING CONTROL	ORD-UTILITY PATENT FILING	09/389742	9/7/1999	US6286480	9/11/2001 Issued
1919USA	2	US	REDUCED EMISSIONS ELEVATED ALTITUDE SPEED CONTROL FOR DIESEL ENGINES	ORD-UTILITY PATENT FILING	09/389743	9/7/1999	US6158416	12/12/2000 Issued
1926USA	2	US	INCREASED COMPRESSION RATIO DIESEL ENGINE ASSEMBLY FOR RETARDED FUEL INJECTION TIMING	ORD-UTILITY PATENT FILING	09/412627	10/4/1999	US6318308	11/20/2001 Issued
1930USA	1	US	TORQUE MAXIMIZATION AND VIBRATION CONTROL FOR AC LOCOMOTIVES	ORD-UTILITY PATENT FILING	09/405633	9/24/1999	US6163121	12/19/2000 Issued
1982	2	US	Track database integrity monitor for enhanced railroad safety distributed power	ORD-UTILITY PATENT FILING	09/999461	10/31/2001	US6434452	8/13/2002 Issued

2020USA	1	US	NOISE REDUCTION TECHNIQUES FOR LOCOMOTIVE CABINS	ORD-UTILITY PATENT FILING	09/461781	12/15/1999	US6238282	5/29/2001	Issued
2021USA	2	US	LOCOMOTIVE SANITATION APPARATUS AND METHOD OF PROTECTION THE SAME FROM FREEZING	ORD-UTILITY PATENT FILING	09/479449	1/12/2000	US6247191	6/19/2001	Issued
2053	2	US	TEMPERATURE CONTROL FOR TURBOCHARGED ENGINE	ORD-UTILITY PATENT FILING	10/050288	1/16/2002	US6604515	8/12/2003	Issued
2060USA	1	US	TRACTION MOTOR SPEED SENSOR SUPPORT ARRANGEMENT	ORD-UTILITY PATENT FILING	09/648061	8/25/2000	US6581464	6/24/2003	Issued
2063USA	2	US	RAILROAD LOCOMOTIVE TRACTION MOTOR ISOLATION	ORD-UTILITY PATENT FILING	09/775901	2/12/2001	US6497182	12/24/2002	Issued
20DD1827	2	US	DIESEL ENGINE CYLINDER SKIP FIRING SYSTEM	ORD-UTILITY PATENT FILING	08/901747	7/28/1997	US5826563	10/27/1998	Issued
20DD1889	2	US	COOLING SYSTEM FOR INTERNAL COMBUSTION ENGINE	ORD-UTILITY PATENT FILING	09/241111	2/1/1999	US6196167	3/6/2001	Issued
20DD1903	3	US	ENHANCED SPLIT COOLING SYSTEM	ORD-UTILITY PATENT FILING	09/249516	2/12/1999	US6098576	8/8/2000	Issued
20DD1941	1	US	METHOD FOR CORRECTING HOT MAINFOLD CONDITION IN A TURBOCHARGED DIESEL ENGINE	ORD-UTILITY PATENT FILING	09/563972	5/3/2000	US6345594	2/12/2002	Issued
20DD1942	2	US	ENGINE COOLING APPARATUS AND METHOD	ORD-UTILITY PATENT FILING	09/398408	9/17/1999	US6227153	5/8/2001	Issued
20DD1943	2	US	METHOD AND APPARATUS FOR OPERATING A LOCOMOTIVE ENGINE	ORD-UTILITY PATENT FILING	09/413929	10/7/1999	US6170452	1/9/2001	Issued
20DD1944	2	US	DIESEL ENGINE START ASSIST APPARATUS	ORD-UTILITY PATENT FILING	09/414464	10/7/1999	US6286488	9/11/2001	Issued
20DD1945	2	US	ELECTRICAL CIRCUIT DISRUPTER	ORD-UTILITY PATENT FILING	09/415713	10/12/1999	US6198056	3/6/2001	Issued
20DD1981	2	US	COOLING SYSTEM FOR TIER 1 REDUCED EMISSIONS DIESEL ELECTRIC RAIL	ORD-UTILITY PATENT FILING	09/576626	5/22/2000	US6230668	5/15/2001	Issued
20DD2005	1	US	LOCOMOTIVE ENGINE INLET AIR APPARATUS AND METHOD OF CONTROLLING INLET AIR TEMPERATURE	ORD-UTILITY PATENT FILING	09/515459	2/29/2000	US6327980	12/11/2001	Issued
20DD2024	1	US	INTERNAL COMBUSTION ENGINE HAVING INTEGRAL ANTI-POLISHING RING	ORD-UTILITY PATENT FILING	09/596972	6/20/2000	US6234134	5/22/2001	Issued
20DD2025	1	US	INTERNAL COMBUSTION ENGINE AND METHOD FOR CONTROLLING THE PRODUCTION OF OXIDES OF NITROGEN	ORD-UTILITY PATENT FILING	09/596977	6/20/2000	US6314937	11/13/2001	Issued
20DD2026	1	US	METHOD AND SYSTEM FOR CONTROLLING A COMPRESSION IGNITION ENGINE DURING PARTIAL LOAD CONDITIONS TO REDUCE EXHAUST EMISSION	ORD-UTILITY PATENT FILING	09/553411	4/20/2000	US6283100	9/4/2001	Issued
20DD2034	1	US	METHOD FOR REDUCING EXHAUST EMISSIONS AND CONTAINING CYLINDER PEAK PRESSURE OR TURBOCHARGED DIESEL ENGINESA AT LOW AMBIENT TEMPERATURES BY CONTROLLING	ORD-UTILITY PATENT FILING	09/572132	5/16/2000	US6286311	9/11/2001	Issued
20DD2035	1	US	CAM SENSOR ELIMINATION IN LARGE FOUR STROKE COMPRESSION IGNITION ENGINES	ORD-UTILITY PATENT FILING	09/657347	9/8/2000	US6571776	6/3/2003	Issued
20DD2036	1	US	DIESEL ENGINE BOG RECOVERY	ORD-UTILITY PATENT FILING	09/658367	5/2/2000	US6289873	9/18/2001	Issued
20DD2037	1	US	VARIABLE FUEL LIMIT FOR DIESEL ENGINE	ORD-UTILITY PATENT FILING	09/669999	9/25/2000	US6493627	12/12/2002	Issued
20DD2038	1	US	METHOD AND SYSTEM FOR CONTROLLING FUEL INJECTION TIMING IN AN ENGINE FOR POWERING A LOCOMOTIVE	ORD-UTILITY PATENT FILING	09/535934	3/24/2000	US6325050	12/4/2001	Issued
20DD2039	1	US	LOCOMOTIVE TRANSIENT SMOKE CONTROL STRATEGY USING LOAD APPLICATION DELAY AND INJECTION TIMING ADVANCE	ORD-UTILITY PATENT FILING	09/560592	4/28/2000	US6341596	1/29/2002	Issued
20DD2044	1	US	METHOD AND APPARATUS FOR CONTROLLING ENGINE OVERSPEED DUE TO LUBE OIL INGESTION	ORD-UTILITY PATENT FILING	09/593254	6/13/2000	US6429540	8/6/2002	Issued
20DD2044	2	US	METHOD AND APPARATUS FOR CONTROLLING ENGINE OVERSPEED DUE TO LUBE OIL INGESTION	DIV-DIVISIONAL FILING	10/154581	5/24/2002	US6552439	4/22/2003	Issued
20DD4030	1	US	CRANKCASE VENTILATION SYSTEM	ORD-UTILITY PATENT FILING	09/776361	2/12/2001	US6439174	8/27/2002	Issued
20DD4070	1	US	AUTOMATIC START/STOP SYSTEM AND METHOD FOR LOCOMOTIVE ENGINES	ORD-UTILITY PATENT FILING	09/873841	6/4/2001	US6650993	11/18/2003	Issued
20DD4070	3	US	AUTOMATIC START/STOP SYSTEM AND METHOD FOR LOCOMOTIVE ENGINES	CP-CONTINUATION IN PART	10/678528	10/3/2003	US6941218	9/6/2005	Issued
20DD4072	1	US	AIR DIFUSER USED ON LOCOMOTIVES WITH AIR DRYERS	ORD-UTILITY PATENT FILING	09/681563	4/30/2001	US6497053	12/24/2002	Issued
20EB4093	1	US	METHOD FOR TRAINING SERVICE PERSONNEL TO SERVICE SELECTED EQUIPMENT	ORD-UTILITY PATENT FILING	09/839024	4/20/2001	US6950829	9/27/2005	Issued
20LC1579	4	US	PWM RECTIFIER CONTROL WITH SWITCHING LOSSES EQUALLY DISTRIBUTED AMONG MULTIPLE SWITCHING DEVICES	ORD-UTILITY PATENT FILING	08/845094	4/21/1997	US6075717	6/13/2000	Issued
20LC1853	2	US	SELF-TEST CIRCUIT FOR A SHORTED DIODE PROTECTION PANEL IN A DIESEL ELECTRIC LOCOMOTIVE	ORD-UTILITY PATENT FILING	08/845126	4/21/1997	US5892342	4/6/1999	Issued

201C1863	2	US	METHOD AND APPARATUS FOR SHOOT-THROUGH DETECTION AND ACCOMMODATION IN AN ELECTRIC POWER SYSTEM INCLUDING A SYNCHRONOUS GENERATOR POWER...	ORD-UTILITY PATENT FILING	08/796308	2/7/1997	US5929610	7/27/1999	Issued
201C1881	2	US	AC LOCOMOTIVE OPERATION WITHOUT DC CURRENT SENSOR	ORD-UTILITY PATENT FILING	08/908259	8/7/1997	US5998880	12/7/1999	Issued
201C1886	1	US	MONOCOQUE LOCOMOTIVE	DIV-DIVISIONAL FILING	08/850464	5/5/1997	US5839815	11/24/1998	Issued
201C1887	2	US	INDIRECT MONITORING AND CONTROL OF VISIBLE EXHAUST EMISSIONS FROM A DIESEL ENGINE	ORD-UTILITY PATENT FILING	08/901746	7/28/1997	US5901683	5/11/1999	Issued
201C1894	2	US	ORIFICE CONTROLLED BYPASS SYSTEM FOR A HIGH PRESSURE AIR COMPRESSOR SYSTEM	ORD-UTILITY PATENT FILING	08/946540	10/7/1997	US6027311	2/22/2000	Issued
201C1901	2	US	WHEEL DIAMETER CALBRATION SYSTEM FOR VEHICLE SLIP/SLIDE CONTROL	ORD-UTILITY PATENT FILING	09/118875	7/20/1998	US6148269	11/14/2000	Issued
201C1905	2	US	METHOD FOR DETECTING LOCKED AXLE CONDITIONS WITHOUT A SPEED SENSOR	ORD-UTILITY PATENT FILING	09/239662	1/29/1999	US5990648	11/23/1999	Issued
201C1906	1	US	USE OF TRACTION INVERTER FOR SUPPLYING POWER FOR NON-TRACTION APPLICATIONS	CRP-CONTINUATION IN PART	09/134117	8/14/1998	US6023137	2/8/2000	Issued
201C1934	4	US	METHOD AND APPARATUS FOR CONTROL OF A RAIL CONTAMINANT CLEANING SYSTEM	ORD-UTILITY PATENT FILING	09/398295	9/20/1999	US6276281	8/21/2001	Issued
201C1946	2	US	FLUID STORAGE AND TREATMENT APPARATUS	ORD-UTILITY PATENT FILING	09/408067	9/29/1999	US6105617	8/22/2000	Issued
201C2057	1	US	A METHOD FOR DETECTING A LOCKED AXLE CONDITION	PRP-PRIORITY APPLICATION	10/066233	1/31/2002	US6728606	4/27/2004	Issued
201C2057	2	US	A METHOD FOR DETERMINING THE ROTATIONAL VELOCITY OF AN AXLE AND DETECTING A LOCKED AXLE CONDITION	CRP-CONTINUATION IN PART	10/797297	3/9/2004	US7912257	3/29/2011	Issued
201C2059	3	US	A METHOD FOR DETECTING A LOCKED AXLE ON A LOCOMOTIVE AC TRACTION MOTOR	ORD-UTILITY PATENT FILING	09/634192	8/9/2000	US6532405	3/11/2003	Issued
201C2069	1	US	A METHOD FOR DETECTING ELECTRICAL FAULTY CONDITIONS IN POWER DEVICES OF A PROPULSION SYSTEM	PRP-PRIORITY APPLICATION	09/828382	4/6/2001	US6781808	8/24/2004	Issued
201C2085	1	US	TRACTION MOTOR SPEED SENSOR FAILURE DETECTION FOR AC LOCOMOTIVES	ORD-UTILITY PATENT FILING	09/704213	10/26/2000	US6456908	9/24/2002	Issued
201C2095	1	US	IMPROVING ACCELERATION RATES OF LOCOMOTIVES	ORD-UTILITY PATENT FILING	10/358661	2/5/2003	US6873888	3/29/2005	Issued
201C2025	3	US	CONFIGURABLE LOCOMOTIVE (skip file)	CRP-CONTINUATION IN PART	11/008708	12/9/2004	US7302895	12/4/2007	Issued
201C2025	4	US	Method and apparatus for distributed power train control	CON-CONTINUATION	11/094006	3/30/2005	US7949441	5/24/2011	Issued
201Z2012	1	US	METHOD AND APPARATUS FOR ONBOARD LOCOMOTIVE FUEL USAGE INDICATOR	ORD-UTILITY PATENT FILING	09/695192	10/24/2000	US6564172	5/13/2003	Issued
201Z5005	1	US	CONTINUOUS ON-BOARD DIAGNOSTIC LUBRICANT MONITORING SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	09/688330	10/2/2000	US6463796	10/15/2002	Issued
20R1915	2	US	METHOD AND APPARATUS FOR REDUCING MONOTONIC AUDIBLE NOISE IN A POWER CONVERSION SYSTEM	ORD-UTILITY PATENT FILING	09/243657	2/3/1999	US6043996	3/28/2000	Issued
20TR1844	3	US	INTERFERENCE REDUCTION BY HARMONIC PHASE SHIFT IN MULTIPLE PWM RECTIFIER OPERATION	ORD-UTILITY PATENT FILING	08/845092	4/21/1997	US5923550	7/13/1999	Issued
20TR1877	2	US	TRACTION VEHICLE/WHEEL SLIP AND SLIDE CONTROL	CON-CONTINUATION	09/680784	10/6/2000	US6499815	12/31/2002	Issued
20TR1877	3	US	TRACTION VEHICLE/WHEEL SLIP AND SLIDE CONTROL	ORD-UTILITY PATENT FILING	08/799599	2/12/1997	US6152546	11/28/2000	Issued
20TR1884	4	US	REMOVAL OF MOISTURE FROM INDUCTION MOTORS	ORD-UTILITY PATENT FILING	08/906522	8/4/1997	US5896021	4/20/1999	Issued
20TR1895	2	US	AC MOTORIZED WHEEL ARRANGEMENT	ORD-UTILITY PATENT FILING	08/923483	9/4/1997	US6148940	11/21/2000	Issued
20TR1895	3	US	AC MOTORIZED WHEEL ARRANGEMENT	CON-CONTINUATION	09/643409	8/22/2000	US6651762	11/26/2003	Issued
20TR1897	2	US	AC MOTORIZED WHEEL CONTROL SYSTEM	DIV-DIVISIONAL FILING	09/191778	11/13/1998	US6150780	11/21/2000	Issued
20TR1897	3	US	AC MOTORIZED WHEEL CONTROL SYSTEM	DIV-DIVISIONAL FILING	09/192080	11/13/1998	US6041285	3/21/2000	Issued
20TR1897	4	US	AC MOTORIZED WHEEL CONTROL SYSTEM	DIV-DIVISIONAL FILING	09/192072	11/13/1998	US6054829	4/25/2000	Issued
20TR1897	5	US	AC MOTORIZED WHEEL CONTROL SYSTEM	ORD-UTILITY PATENT FILING	08/923484	9/4/1997	US5939846	8/17/1999	Issued
20TR1909	2	US	MODULAR BUS BAR AND SWITCH ASSEMBLY FOR TRACTION INVERTER	ORD-UTILITY PATENT FILING	09/072102	5/4/1998	US6160696	12/12/2000	Issued
20TR2090	1	US	SIX DEGREES OF FREEDOM ELASTOMERIC JOINT	ORD-UTILITY PATENT FILING	09/768835	1/24/2001	US6543955	4/8/2003	Issued
20TR2097	1	US	MULTIPLE INVERTERS FOR MOTORS	ORD-UTILITY PATENT FILING	10/602807	6/24/2003	US7138773	11/21/2006	Issued
20TS1892	2	US	TRACTION MOTOR BRUSH HOLDER SUPPORT EVALUATION METHOD AND APPARATUS	ORD-UTILITY PATENT FILING	09/015229	1/29/1998	US6023851	2/15/2000	Issued
20TS1931	3	US	INSULATED COIL AND COILED FRAME AND METHOD FOR MAKING SAME	ORD-UTILITY PATENT FILING	09/300242	4/27/1999	US6137202	10/24/2000	Issued
20TS1933	2	US	GROUND INSULATION FOR COILS	ORD-UTILITY PATENT FILING	09/300243	4/27/1999	US6137394	10/24/2000	Issued
20TS1935	2	US	ROTOR BAR SWAGING PROCESS	ORD-UTILITY PATENT FILING	09/300904	4/28/1999	US6092277	7/25/2000	Issued

243591	8	US	EMISSIONS CONTROL SYSTEMS AND METHODS	CON-CONTINUATION	16/058625	8/8/2018	US10202884	2/12/2019	Issued
276411	2	US	FUEL INJECTOR	ORD-UTILITY PATENT FILING	14/964988	12/10/2015	US10006596	6/26/2018	Issued
277294	2	US	METHOD OF CONTROLLING A DUAL FUEL ENGINE	ORD-UTILITY PATENT FILING	14/876040	10/6/2015	US10018129	7/10/2018	Issued
277521	1	US	SYSTEM AND METHOD FOR DETERMINING OPERATIONAL RESTRICTIONS FOR VEHICLE CONTROL	PRI-PRIORITY APPLICATION	14/698890	4/29/2015	US9676403	6/13/2017	Issued
280981	1	US	SYSTEM AND METHOD FOR DETERMINING OPERATIONAL GROUP ASSIGNMENTS OF VEHICLES IN A VEHICLE SYSTEM	CP-CONTINUATION IN PART	14/631495	2/25/2015	US9453735B2	9/27/2016	Issued
284900	1	US	SENSOR ASSEMBLY	PDS-PRIORITY DESIGN APPLICATION	29/549058	12/18/2015	USD796976	9/12/2017	Issued
284901	1	US	SENSOR ASSEMBLY	DCP-DESIGN CONTINUATION IN PART	29/548993	12/18/2015	USD778189	2/7/2017	Issued
3051USA	2	US	TOTAL TRANSPORTATION MANAGEMENT SYSTEM	ORD-UTILITY PATENT FILING	09/658370	9/8/2000	US7219067	5/15/2007	Issued
3053USA	2	US	ADAPTIVE TRAIN MODEL	ORD-UTILITY PATENT FILING	09/752276	12/29/2000	US7117137	10/3/2006	Issued
3054USA	2	US	METHODS AND APPARATUS FOR VERY CLOSE FOLLOWING TRAIN MOVEMENT	ORD-UTILITY PATENT FILING	09/752108	12/29/2000	US6580976	6/17/2003	Issued
3067USA	2	US	METHODS AND APPARATUS FOR LOCOMOTIVE CONSIST DETERMINATION	ORD-UTILITY PATENT FILING	09/750381	12/28/2000	US6421587	7/16/2002	Issued
4066	5	US	HYBRID ENERGY LOCOMOTIVE SYSTEM AND METHOD	CP-CONTINUATION IN PART	10/378431	3/3/2003	US7532960	5/12/2009	Issued
41PR7389	1	US	INTERFACE MONITOR FOR COMMUNICATING BETWEEN DIFFERENT COMMUNICATION PROTOCOLS	ORD-UTILITY PATENT FILING	08/804052	2/21/1997	US6105093	8/15/2000	Issued
74HA3015	1	US	AUTOMATIC TRAIN CONTROL SYSTEM AND METHOD	CP-CONTINUATION IN PART	08/856754	5/15/1997	US5828979	10/27/1998	Issued
74HA3019	1	US	BROKEN RAIL DETECTION	ORD-UTILITY PATENT FILING	09/019166	2/6/1998	US6102340	8/15/2000	Issued
74HA3026	1	US	VALVE ASSEMBLY FOR ELECTRICALLY CONTROLLED PNEUMATIC BRAKES	CP-CONTINUATION IN PART	09/604367	6/27/2000	US6435623	8/20/2002	Issued
74HA3032	1	US	METHOD AND SYSTEM FOR PROXIMITY DETECTION AND LOCATION DETERMINATION	ORD-UTILITY PATENT FILING	09/027256	2/20/1998	US6218961	4/17/2001	Issued
74HA3037	1	US	SCHEDULING SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	08/787168	1/23/1997	US5794172	8/11/1998	Issued
74HA3040	1	US	TRAIN SCHEDULE REPAIRER	ORD-UTILITY PATENT FILING	09/083157	5/22/1998	US6459964	10/1/2002	Issued
74HA3041	1	US	SEGMENTED BRAKE PIPE SYSTEM	ORD-UTILITY PATENT FILING	09/272423	3/19/1999	US6099518	8/1/2000	Issued
74HA3055	1	US	TRAIN BUILDING PLANNING METHOD	ORD-UTILITY PATENT FILING	09/472463	12/27/1999	US6832204	12/14/2004	Issued
74HA3066	1	US	METHODS AND APPARATUS FOR LOCOMOTIVE TRACKING	CP-CONTINUATION IN PART	09/751830	12/29/2000	US6490523	12/3/2002	Issued
74HA3066	2	US	METHOD AND APPARATUS FOR LOCOMOTIVE TRACKING	ORD-UTILITY PATENT FILING	09/475589	12/28/1999	US6456937	9/24/2002	Issued
74HA3071	1	US	METHOD AND APPARATUS FOR CONTROLLING REMOTE LOCOMOTIVE OPERATION	ORD-UTILITY PATENT FILING	09/677301	9/29/2000	US5505103	1/7/2003	Issued
74HA3073	1	US	METHOD FOR DETERMINING STATIONARY LOCOMOTIVE LOCATION IN A RAILYARD	ORD-UTILITY PATENT FILING	09/663112	9/15/2000	US6405127	6/11/2002	Issued
74HA3077	2	US	FEED VALUE AND REFERENCE PRESSURE ENHANCEMENT	ORD-UTILITY PATENT FILING	10/034977	12/27/2001	US6443538	9/3/2002	Issued
74HA3078	2	US	BRAKE SYSTEM DIAGNOSTICS USING A HAND-HELD RADIO DEVICE	ORD-UTILITY PATENT FILING	10/034332	12/28/2001	US6837550	1/4/2005	Issued
74HN4057	1	US	CODED TRACK CIRCUIT WITH DIAGNOSTIC CAPABILITY	ORD-UTILITY PATENT FILING	08/856460	5/14/1997	US5769364	6/23/1998	Issued
RD25242	3	US	METHOD AND APPARATUS FOR ELECTROCHEMICALLY DEBURRING A DIESEL INJECTOR NOZZLE	ORD-UTILITY PATENT FILING	08/975135	11/20/1997	US6110350	8/29/2000	Issued
RD25623	3	US	SYSTEM AND METHOD FOR TUNING LOOK-AHEAD ERROR MEASUREMENTS IN A RAIL-BASD TRANSPORTATION HANDLING CONTROLLER	ORD-UTILITY PATENT FILING	08/999201	12/29/1997	US5983144	11/9/1999	Issued
RD25624	3	US	SYSTEM AND METHOD FOR GENERATING A FUEL-OPTIMAL REFERENCE VELOCITY PROFILE FOR A RAIL-BASD TRANSPORTATION HANDLING CONTROLLER	ORD-UTILITY PATENT FILING	08/999199	12/29/1997	US6243694	6/5/2001	Issued
RD26319	7	US	VOLTAGE CLAMP SNUBBERS FOR THREE LEVEL CONVERTER	ORD-UTILITY PATENT FILING	09/108043	6/30/1998	US5982646	11/9/1999	Issued
RD27434	2	US	METHOD AND APPARATUS FOR TURBOCHARGING AN ENGINE OF A LOCOMOTIVE	ORD-UTILITY PATENT FILING	09/617968	10/2/2000	US6415606	7/9/2002	Issued
RD27527	2	US	METHOD AND APPARATUS FOR POWER ELECTRONICS HEALTH MONITORING	ORD-UTILITY PATENT FILING	09/473663	12/29/1999	US6405154	6/11/2002	Issued
277438	1	US	ELECTRICAL MACHINE COOLING STRUCTURE	ORD-UTILITY PATENT FILING	14/716415	5/19/2015	US10014751	7/3/2018	Issued
279016A	1	US	SYSTEM AND METHOD OF DYNAMIC GROUPING OF VEHICLE SYSTEMS	ORD-UTILITY PATENT FILING	15/583123	5/1/2017	US10053120	8/21/2018	Issued
280981A	1	US	SYSTEM AND METHOD FOR DETERMINING OPERATIONAL GROUP ASSIGNMENTS OF VEHICLES IN A VEHICLE SYSTEM	ORD-UTILITY PATENT FILING	15/248961	8/26/2016	US9849807	12/26/2017	Issued
283465	1	US	SYSTEM AND METHOD FOR MONITORING COUPLER FATIGUE	ORD-UTILITY PATENT FILING	14/954528	11/30/2015	US9937936	4/10/2018	Issued

313194	2	US	SYSTEM FOR CONTROLLING OR MONITORING A VEHICLE SYSTEM ALONG A ROUTE		15/439424	2/22/2017	US10137912	11/27/2018	Issued
314006	1	US	SYSTEMS AND METHODS FOR VOLTAGE SENSING		15/397588	1/3/2017	US10054619	8/21/2018	Issued
315751	1	US	DIGITAL TWIN SYSTEM FOR A COOLING SYSTEM		15/438866	2/22/2017	US9881430	1/30/2018	Issued
232386	7	US	SYSTEM METHOD AND MANAGING DATA FOR USE BY A PLURALITY OF DISTRIBUTING AND MANAGING DATA FOR USE BY A PLURALITY OF SUBSYSTEMS ON A LOCOMOTIVE		13/655719	8/19/2012	US8914169	12/16/2014	Issued
285548	1	US	VEHICLE OPERATION CONTROL SYSTEM		15/198102	2016-06-30	US10185326	2019-01-22	Issued
317062	2	US	VEHICLE INSPECTION SYSTEM		15/949375	2018-04-10			Published
232386	8	US	SYSTEM, METHOD, AND COMPUTER SOFTWARE CODE FOR DISTRIBUTING AND MANAGING DATA FOR USE BY A PLURALITY OF SUBSYSTEMS ON A LOCOMOTIVE		14/533446	2014-11-05			Published
277168	7	US	METHOD AND SYSTEM TO DETERMINE LOCOMOTIVE SPEED BUS BAR AND POWER ELECTRONIC DEVICE WITH CURRENT SHAPING TERMINAL CONNECTOR AND METHOD OF MAKING A TERMINAL CONNECTOR		16/158867	2018-10-12			Published
271210	6	US	SYSTEM AND METHOD FOR ENGINE CONTROL	Divisional	16/149 946	2018-10-02			Published
283612	3	US	VIDEO SYSTEM AND METHOD FOR DATA COMMUNICATION	Continuation-in-part	16/139,462	2018-09-24			Published
272741	6	US	DEVICE, METHOD, AND SYSTEM FOR EMISSIONS CONTROL	Divisional	16/136,423	2018-09-20			Published
247901	4	US	STARTER MOTOR SYSTEM FOR A LOCOMOTIVE	Continuation	16/249781	16-Jan-19			To Be Filed
326840A	1	US	AN ORNAMENTAL DESIGN FOR AN OIL PAN		29/677037	16-Jan-19			Application
326840Z	1	US							Application