

11-26-2001



To the Director of the U.S. Patent and T.

101900660

Record the attached original documents or copy thereof.

1. Name of conveying party(ies):

THE CHASE MANHATTAN BANK, as Collateral Agent

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☐ Assignment☐ Merger☐ Security Agreement☐ Change of Name☒ Other Termination of Security Interest recordal
starting at Reel/Frame 9423/0239

Execution Date: May 1, 2001

2. Name and address of receiving party(ies):

Name: Westinghouse Air Brake Company

Address: 1001 Air Brake Avenue

City: Wilmerding State: PA Zip: 15148

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s)

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No(s).

139 applications see attached Appendix B

B. Patent No(s).

444 patents see attached Appendix A

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Jody L. Burtner, Senior Paralegal

REED SMITH LLP

Address: P.O. Box 488

City: Pittsburgh State: PA Zip: 15230

6. Total number of applications and patents involved:

583

7. Total fee (37 CFR 3.41):

\$ 23,320.00

☒ Enclosed☐ Authorized to be charged to deposit account☒ Charge any deficiency to deposit account

8. Deposit account number:

18-0582

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9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true and correct copy of the original document.

Jody L. Burtner

Name of Person Signing

Signature

November 16, 2001

Date

Total number of pages including cover sheet, attachments, and document: 149

Mail documents to be recorded with required cover sheet information to:
 Director of the U.S. Patent and Trademark Office, Box Assignments
 Washington, D.C. 20231

Patent List
Appendix A to Recordation Form Cover Sheet

1.	D305122
2.	D310510
3.	D315114
4.	D319039
5.	D319423
6.	RE30408
7.	RE31059
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Patent Application List
Appendix B to Recordation Cover Sheet

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2.	08/238116
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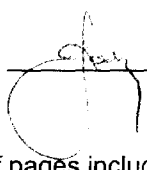
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137.	60/011887
138.	60/075036
139.	60/075579

FORM PTO-1595 (Substitute)	REC	08-24-2001  101822120	U.S. DEPARTMENT OF COMMERCE U.S. Patent Office
To the Director of the U.S. Patent and Trad. and original documents or copy thereof.			
1. Name of conveying party(ies): <u>18/16/01</u> THE CHASE MANHATTAN BANK, as Collateral Agent Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No		2. Name and address of receiving party(ies): Name: <u>Westinghouse Air Brake Company</u> Address: <u>1001 Air Brake Avenue</u> ¹⁶ City: <u>Wilmerding</u> State: <u>PA</u> Zip: <u>15148</u> Additional name(s) & address(es) attached? ☐ Yes ☒ No	
3. Nature of conveyance: ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☒ Other <u>Termination of Security Interest recordal starting at Reel/Frame 9423/0239</u> Execution Date: <u>May 1, 2001</u>			
4. Application number(s) or patent number(s) If this document is being filed together with a new application, the execution date of the application is: _____ A. Patent Application No(s). B. Patent No(s). See attached schedule Additional numbers attached? ☐ Yes ☒ No			
5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>Jody L. Burtner, Senior Paralegal</u> <u>REED SMITH LLP</u> Address: <u>P.O. Box 488</u> City: <u>Pittsburgh</u> State: <u>PA</u> Zip: <u>15230</u>		6. Total number of applications and patents involved: <u>933</u> 7. Total fee (37 CFR 3.41): <u>\$37,320.00</u> ☒ Enclosed ☐ Authorized to be charged to deposit account ☒ Charge any deficiency to deposit account 8. Deposit account number: <u>18-0582</u> (Attach duplicate copy of this page if paying by deposit account)	
DO NOT USE THIS SPACE			
9. Statement and signature To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true and correct copy of the original document. <u>Jody L. Burtner</u> Name of Person Signing  Signature <u>August 16, 2001</u> Date Total number of pages including cover sheet, attachments, and document: <u>247</u>			

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 Washington, D.C. 20231

08/23/2001 LMUELLER 00000128 853069

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PATENT
 REEL: 012280 FRAME: 0313

Case	Country	Stat	Patent	Issue	Client	Long Title	Long Title
Number			Number	Date			
22	SOFRC	ISSUED	85/3069	01/29/86	PTDS	FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY	/PARKING BRAKE
POR-29	AUSAL	ISSUED	594,323	02/21/86	VAPR	ELECTRODE CONFIGURATION FOR HIGH VOLTAGE	
10	TRANS	ISSUED	85/0012	02/28/86	NAFW	AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
POR-26	UNIKM	ISSUED	2,172,480	02/28/86	VAPR	ELECTRODE CONFIGURATION FOR HIGH VOLTAGE	
85	TRANS	ISSUED	85/0011	02/28/86	PTDS	MANUALLY RELEASABLE PARKING BRAKE DEVICE	
134	VENDA	ISSUED	85/0034	02/28/86	PTDS	COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER AND RESERVOIR ADJUST	STER ARRANGEMENT
124	UNIKM	ISSUED	2172678	03/19/86	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUST	
147	NEUZL	ISSUED	215531	03/19/86	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
114	USA	ISSUED	4,577,910	03/25/86	LPDM	QUICK RELEASE VALVE ARRANGEMENT	
10	USA	ISSUED	4,577,870	03/25/86	NAFW	AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
134	TRANS	ISSUED	85/0040	04/11/86	PTDS	COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER AND RESERVOIR ADJUST	STER ARRANGEMENT
159	USA	ISSUED	4,583,790	04/22/86	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
POR-7	CANAD	ISSUED	1,203,624	04/22/86	VAPR	METHOD FOR AUTOMATED ANALYSIS OF VEHICLE PERFORMANCE	
POR-10	USA	ISSUED	4,583,466	04/22/86	VAPR	STEP LIFT FOR RAILWAY CARS	
104	VENDA	ISSUED	85/0052	04/25/86	LPDM	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
174	SOFRC	ISSUED	85/6755	04/30/86	CARD	DRAFT GEAR ASSEMBLY	
148	USA	ISSUED	4,586,755	05/06/86	LPDM	BUY BRAKE CONTROL SYS. ARRANGED TO LIMIT MAX. BRK PRESS	DURING COMB. INDEP. AND AUTOMAT
174	VENDA	ISSUED	85/0035	05/30/86	LPDM	QUICK RELEASE VALVE ARRANGEMENT	
155E 13	USA	ISSUED	4,592,217	06/03/86	PULS	MARKER ATTACHMENT FOR RAILROAD EQUIPMENT	

PATENT
REEL: 9423 FRAME: 0241

PATENT
REEL: 012280 FRAME: 0315

7135	AUSAL	ISSUED	549521	06/10/86	NAFW	IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE	E
8148	BOPHU	ISSUED	84/0132	06/20/86	PTDS	SOLFNOID OPERATED VALVE	
8103	CANAD	ISSUED	1206561	06/24/86	PTDS	VIGILANCE SAFETY CONTROL SYSTEM	
8179	TRANS	ISSUED	84/0118	07/04/86	NAFW	IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8276	USA	ISSUED	4598953	07/08/86	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RVV TRANSIT VEHICLE	
PULSE-2	USA	ISSUED	4,599,723	07/08/86	PULS	METHOD OF ENCODING DATA FOR SERIAL TRANSMISSION	
8224	SOFRC	ISSUED	85/8592	07/30/86	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8104	SOFRC	ISSUED	85/4720	07/30/86	LPDW	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
8178	SOFRC	ISSUED	85/8722	07/30/86	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8222	VENDA	ISSUED	85/0033	08/01/86	PTDS	FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY /PARKING BRAKE	
8101	CANAD	ISSUED	1209059	08/05/86	WLTD	HYDRO PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER	
8259	SOFRC	ISSUED	85/9407	08/27/86	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8243	UNIKN	ISSUED	2180319	08/28/86	CARD	FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
VAPOR-30	USA	ISSUED	4,611,104	09/09/86	VAPR	ELECTROMECHANICAL SWITCH ACTUATOR HAVING HIGH SECURITY KEY ACTUATOR	
8243	FRANC	ISSUED	8612759	09/12/86	CARD	FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
8307	USA	ISSUED	4,613,016	09/23/86	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8104	TRANS	ISSUED	85/0060	09/26/86	LPDW	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
7092	CANAD	ISSUED	1212402	10/07/86	PTDS	ADJUSTABLE VARIABLE LOAD CONTROL VALVE DEVICE	
8189	BOPHU	ISSUED	85/0015	10/14/86	PTDS	MANUALLY RELEASABLE PARKING BRAKE DEVICE	
8269	VENDA	ISSUED	85/0109	10/17/86	PTDS	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRA
8269	SOFRC	ISSUED	85/9835	10/29/86	PTDS	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRA
8299	UNIKN	ISSUED	2182742	10/30/86	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM... POWER AND NON-POWER CA

8259	VENDA	ISSUED	85/0108	10/31/86	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8247	VENDA	ISSUED	86/0013	10/31/86	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8319	USA	ISSUED	4620567	11/04/86	PTDS	SOLENOID OPERATED VALVE	
7144	CANAD	ISSUED	1213634	11/04/86	NAFW	CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE	
8117	CANAD	ISSUED	1213633	11/04/86	PTDS	VIGILANCE SAFETY CONTROL SYSTEM	
8292	USA	ISSUED	4,624,506	11/25/86	PTDS	COMPOUND ELECTRO-PNEUMATIC BRAKE CONTROL SYSTEM	
8247	SOFRC	ISSUED	86/1248	11/26/86	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8285	SOFRC	ISSUED	86/1651	11/26/86	CARD	ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8138	PCI	ISSUED	50573	12/03/86	WFR8	BRAKE CYLINDER WITH TWO PISTONS	
VAPOR 3	USA	ISSUED	4,627,242	12/09/86	VAPR	THERMOELECTRIC COOLER	
8179	BOPHU	ISSUED	84/0181	12/11/86	NAFW	IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8269	BOPHU	ISSUED	85/0183	12/11/86	PTDS	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRAKE
8214	BOPHU	ISSUED	85/0057	12/11/86	LPDW	QUICK RELEASE VALVE ARRANGEMENT	
8222	BOPHU	ISSUED	85/0056	12/11/86	PTDS	FLUID PRESSURE BRAKE ACTUATOR WITH SPRING-APPLIED EMERGENCY	/PARKING BRAKE
8104	BOPHU	ISSUED	85/0091	12/11/86	LPDW	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
7122	JAPAN	ISSUED	1351664	12/11/86	PTDS	HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH	MANUAL RELEASE MEANS
VAPOR-32	USA	ISSUED	4,628,835	12/16/86	VAPR	WASTE FLUID INCINERATOR HAVING HEAT RECOVERY MEANS	
8291	USA	ISSUED	4631514	12/23/86	PTDS	MAJUNCTION DETECTION ARRANGEMENT FOR JERK CONTROLLED BRAKE	COMMAND SYSTEM
8178	VENDA	ISSUED	85/0093	12/23/86	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
PULSE-11	USA	ISSUED	4,638,237	01/20/87	PULS	BATTERY CONDITION INDICATOR	
8290	USA	ISSUED	4639047	01/27/87	PTDS	WAVE VEHICLE BRAKE SYSTEM W/IMPROVED BLENDING CONTROL OF	PNEUMATIC & ELEC. BRAKES
6986	JAPAN	ISSUED	1364209	02/09/87	NAFW	VARIABLE LOAD VALVE DEVICE	
8272	USA	ISSUED	4,645,187	02/24/87	CARD	DRAFT GEAR ASSEMBLY	

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8276	SOFRC	ISSUED	86/4519	02/25/87	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RRV TRANSIT VEHICLE	
8182	USA	ISSUED	4,647,024	03/03/87	CARD	FRICTIONAL SHOCK ABSORBING METHOD AND APPARATUS	
8269	TRANS	ISSUED	85/0120	03/13/87	PTDS	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRA
8222	TRANS	ISSUED	85/0041	03/13/87	PTDS	FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY	/PARKING BRAKE
8214	TRANS	ISSUED	85/0037	03/13/87	LPDW	QUICK RELEASE VALVE ARRANGEMENT	
8261	USA	ISSUED	4,649,805	03/17/87	PTDS	VEHICLE BRAKE APPLICATION APPARATUS	
8370	USA	ISSUED	4,651,071	03/17/87	NABL	BRAKE CONTROL SYSTEM FOR SUPPLEMENTING ELECTRIC BRAKE WITH	FRICTION BRAKE
8148	CANAD	ISSUED	1219513	03/24/87	PTDS	SOLENOID-OPERATED VALVE	
9243	SCFRG	ISSUED	86/5027	03/25/87	CARC	FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
8307	SOFRC	ISSUED	86/5988	03/25/87	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
PULSE-14	USA	ISSUED	4,654,629	03/31/87	PULS	VEHICLE MARKER LIGHT	
VAPOR-33	USA	ISSUED	4,653,227	03/31/87	VAPH	DOOR OPERATING ASSEMBLY	
VAPOR-10	CANAD	ISSUED	1,220,089	04/07/87	VAPP	STEP LIFT FOR RAILWAY CAR	
8126	USA	ISSUED	4,657,230	04/14/87	CARC	OVERTRAVEL SPRING ASSEMBLY FOR SHOCK ADJUSTER	
8299	USA	ISSUED	4659149	04/21/87	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CA
8299	SOFRC	ISSUED	86/6140	04/29/87	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CA
8259	TRANS	ISSUED	85/0114	05/01/87	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8178	TRANS	ISSUED	85/0106	05/01/87	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8247	TRANS	ISSUED	86/0012	05/01/87	PTDS	FAIL SAFE PULSE TRAIN PRESENCE DETECTOR	
8224	USA	ISSUED	4,662,485	05/05/87	CARC	RAILWAY VEHICLE BRAKE PISTON AND ADJUSTER	
8307	VENDA	ISSUED	86/0054	05/29/87	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8276	VENDA	ISSUED	86/0048	05/29/87	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RRV TRANSIT VEHICLE	

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6963	JAPAN	ISSUED	1381770	06/09/87	PTDS	ADJUSTABLE VARIABLE LOAD VALVE DEVICE	
8361	USA	ISSUED	4671576	06/09/87	PTDS	DECELERATION CONTROL SYSTEM	
8190	BOPHU	ISSUED	84/0081	06/11/87	MAFW	EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
8243	USA	ISSUED	4,674,729	06/23/87	CARD	FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
8220	NEUZL	ISSUED	213583	06/24/87	LPDM	PISTON ASSEMBLY	
8253	USA	ISSUED	4676346	06/30/87	PTDS	BRAKE SLACK ADJUSTING APPARATUS	
8247	BOPHU	ISSUED	86/0020	07/03/87	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8362	USA	ISSUED	4678241	07/07/87	PTDS	EQUALIZER DISCHARGE VALVE FOR A RAILROAD CAR AIR BRAKE SYSTEM	
8369	USA	ISSUED	4679863	07/14/87	NABC	EMERGENCY BRAKE COMMAND READ-CONVERT DEVICE...CARS WITH ELECTRICAL BRAKE CONTROL	
8299	VENDA	ISSUED	86/0056	07/24/87	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE SYSTEM...POWER AND NON-POWER CAR	
8190	CANAD	ISSUED	1225112	08/04/87	MAFW	EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
8247	USA	ISSUED	4685052	08/04/87	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8285	USA	ISSUED	4,683,991	08/04/87	CARD	ACTUATING MEANS FOR SLACK ADJUSTED OVER TRAFFIC CONTROL MECHANISM	
8290	USA	ISSUED	4685750	08/11/87	PTDS	RAIL VEHICLE BRAKE SYSTEM WITH IMPROVED BLENDING CONTROL OF PNEUMATIC & ELEC. BRAKES	
6829	USA	ISSUED	4,690,463	09/01/87	MAFW	FRT BRAKE CONTROL VALVE PISTON SLIDE VALVE, BRAKE APPLICATION FUNCTION	
8357	USA	ISSUED	4696626	09/29/87	PTDS	RAILROAD CAR AIR COMPRESSOR UNIT	
8299	TRANS	ISSUED	86/0064	10/12/87	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE SYSTEM...POWER AND NON-POWER CARS	
8276	TRANS	ISSUED	86/0052	10/12/87	PTDS	ELECTROPNEUMATIC BRAKE CONTROL SYS FOR RAIL TRANSIT VEHICLE	
8307	TRANS	ISSUED	86/0061	10/12/87	MAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
VAPOR-34	USA	ISSUED	4,704,870	11/10/87	VAPR	THERMOELECTRIC COOLER	
8409	USA	ISSUED	4,706,791	11/17/87	USSD	IRREVERSIBLE FREE WHEELING CLUTCH	
8234	BOPHU	ISSUED	85/0055	11/19/87	PTDS	COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER / AIR RESERVOIR AND STEER ARRANGEMENT	
829	BOPHU	ISSUED	86/0100	11/19/87	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE SYSTEM...POWER AND NON-POWER CAR	

8307	BOPHU	ISSUED	86/0094	11/19/87	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8276	BOPHU	ISSUED	86/0078	11/19/87	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RMY TRANSIT VEHICLE	
6829	SOFRC	ISSUED	87/2764	11/25/87	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8307	SOFRC	ISSUED	87/1941	12/30/87	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8394	USA	ISSUED	4/721515	01/26/88	LPDW	CONTROL SYSTEM OF A DUAL CYLINDER TYPE D EHUIMIDIFIER	
8116	CANAD	ISSUED	1232523	02/09/88	PTDS	METHOD OF BONDING A LAMINATED ASSEMBLY	
8285	ITALY	ISSUED	1191280	02/24/88	CARD	ACTUATING MEANS FOR SLACK ADJUSTER OVER BRAKE CONTROL MECHANISM	
6829	VENDA	ISSUED	87/0038	02/26/88	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8119	9OPHU	ISSUED	85/0016	03/01/88	NAFW	AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
8253	BOPHU	ISSUED	85/0179	03/01/88	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8276	NEUWL	ISSUED	216538	03/04/88	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RMY TRANSIT VEHICLE	
8343	BOPHU	ISSUED	87/0040	03/14/88	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8343	USA	ISSUED	4,733,602	03/29/88	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8214	CANAD	ISSUED	1234849	04/05/88	PTDS	QUICK RELEASE VALVE ARRANGEMENT	
8307	NEUWL	ISSUED	217149	04/18/88	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8396	SOFRC	ISSUED	87/6327	04/27/88	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVID
8396	USA	ISSUED	4,744,609	05/17/88	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVID
8189	CANAD	ISSUED	1237680	06/07/88	PTDS	MANUALLY RELEASABLE PARKING BRAKE DEVICE	
8179	CANAD	ISSUED	1237749	06/07/88	NAFW	IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8392	USA	ISSUED	4,750,787	06/14/88	LPDW	RELAT VALVE FOR AN AIR BRAKE SYSTEM	
8361	UNIKN	ISSUED	2172355	06/15/88	PTDS	DECELERATION CONTROL SYSTEM	
8150	CANAD	ISSUED	1238889	07/05/88	NAFW	SPRING LOCKING HANDLE MECHANISM	

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8431	USA	ISSUED	4,755,692	07/05/88	USSD	VITAL SAFETY MONITORING CIRCUIT	
8428	USA	ISSUED	4,756,669	07/12/88	PTDS	AIR COMPRESSOR CONTROL APPARATUS AND METHOD	
8178	BOPHU	ISSUED	85/0160	07/14/88	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8446	USA	ISSUED	4,758,254	07/19/88	PTDS	MOISTURE REMOVAL APPARATUS	
8410	SOFRG	ISSUED	87/9026	07/27/88	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8368	USA	ISSUED	4,763,261	08/09/88	PTDS	WHEEL SPEED DETECTING ARRANGEMENT	
8445	USA	ISSUED	4,765,806	08/23/88	PTDS	CONTROL METHOD FOR DUAL CYLINDER MOISTURE REMOVAL APPARATUS	
8396	VENDA	ISSUED	87/0086	08/26/88	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVIDE
8389	E ACCELER BRK APPL FUNCTION USA	ISSUED	4,770,472	09/13/88	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION
8374	USA	ISSUED	4,771,868	09/20/88	NAFW	HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RLY	CAR BRAKE ASSEMBLY
8104	CANAD	ISSUED	1242232	09/20/88	LPDW	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
8426	USA	ISSUED	4,773,447	09/27/88	PTDS	ELECTROMAGNETIC VALVE	
8455	USA	ISSUED	4,776,642	10/11/88	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK RELEASE	DEVICE FUNCTION
8389	SOFRG	ISSUED	88/1846	10/26/88	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION
8454	USA	ISSUED	4,783,124	11/08/88	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8148	JAPAN	ISSUED	1466862	11/10/88	PTDS	SOLENOID-OPERATED VALVE	
PULSE-12	USA	ISSUED	4,785,197	11/15/88	PULS	TILT SWITCH	
VAPOR-29	CANAD	ISSUED	1,244,864	11/15/88	VAPR	ELECTRODE CONFIGURATION FOR HIGH VOLTAGE	
8429	USA	ISSUED	4,784,585	11/15/88	PTDS	ELECTRIC AIR COMPRESSOR	
8285	UNITKN	ISSUED	2172351	11/16/88	CARD	ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8415	USA	ISSUED	4,786,117	11/22/88	NAFW	VARIABLE LOAD VALVE	
8247	AUSAL	ISSUED	576066	12/06/88	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8465	USA	ISSUED	4,790,415	12/13/88	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT	BRAKE SHOE CLEARANCE

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PATENT
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8224	CANAD	ISSUED	1266467	12/13/88	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8234	CANAD	ISSUED	1246641	12/13/88	WLTD	COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR ADJUSTMENT ARRANGEMENT	
8276	UNKN	ISSUED	2176857	12/14/88	PTDS	ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RAIL TRANSIT VEHICLE	
8410	USA	ISSUED	4,793,446	12/27/88	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8452	USA	ISSUED	4,793,720	12/27/88	CARD	RAILWAY CAR RESILIENT SIDE BEARING	
8430	USA	ISSUED	4,795,902	01/03/89	PTDS	OPTICAL MASTER CONTROLLER	
8396	RODHU	ISSUED	87/0147	01/09/89	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE & GRADUATING VALV ARRANGED PROVIDE	
E ACCELER BRK APPL FUNCTION							
8400	USA	ISSUED	4,796,513	01/10/89	PTDS	SPRING BRAKE CYLINDER	
8440	USA	ISSUED	4,799,740	01/24/89	PTDS	ELECTRO-PNEUMATIC MASTER CONTROLLER FOR A N AIR BRAKE SYSTEM	
8460	USA	ISSUED	4,802,559	02/07/89	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE	
8343	VENDA	ISSUED	87/0029	02/09/89	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8343	TRANS	ISSUED	87/0029	02/09/89	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8396	TRANS	ISSUED	87/0086	02/09/89	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE & GRADUATING VALV ARRANGED PROVIDE	
E ACCELER BRK APPL FUNCTION							
8285	AUSAL	ISSUED	577930	02/22/89	CARD	ACTUATING MEANS FOR SLACK ADJUSTED OVER TRAVE CONTROL METHOD WITH	
8415	SOFRC	ISSUED	88/4948	02/22/89	NAFW	VARIABLE LOAD VALVE	
8224	ITALY	ISSUED	1203729	02/23/89	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8433	USA	ISSUED	4,809,419	03/07/89	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR DRAFT GEARS	
8397	USA	ISSUED	4,811,651	03/14/89	PTDS	SPRING BRAKE CYLINDER	
8447	USA	ISSUED	4,812,148	03/14/89	PTDS	ARRANGEMENT FOR CONTROLLING REMOVAL OF MOISTURE CYLINDER TYPE MOISTURE REMOVER	
8421	SOFRC	ISSUED	88/5228	03/29/89	NAFW	TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE TRUCK MOUNTED BRAKE ASSEMBLY	
8437	USA	ISSUED	4,819,123	04/04/89	PTDS	COMPRESSED AIR SUPPLY SYSTEM	
VAPOR-26	CANAD	ISSUED	1,252,351	04/11/89	VAPR	DOOR SEAL	

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8451	USA	ISSUED	4,819,993	04/11/89	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8473	USA	ISSUED	4,821,518	04/18/89	CLDW	CLUTCH BOOSTER	
8272	AUSAL	ISSUED	5,798,991	05/10/89	CARD	DRAFT GEAR ASSEMBLY	
8424	USA	ISSUED	4,830,437	05/16/89	PTDS	BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERATING STATUS	
8421	USA	ISSUED	4,830,148	05/16/89	NAFW	TRUSS TYPE BRAKE BEAM FOR RAILWAY VEHICLE (TRUCK-MOUNTED BRAKE ASSEMBLY)	
8220	CANAD	ISSUED	1,254,157	05/16/89	LPDW	PISTON ASSEMBLY	
8453	USA	ISSUED	4,830,438	05/16/89	NAFW	FREIGHT BRAKE EMERGENCY VALVE	
8469	USA	ISSUED	4,830,580	05/16/89	LPDW	TWO STAGE AIR COMPRESSOR UNIT	
8276	AUSAL	ISSUED	5,842,111	05/18/89	PTDS	ELECTROPNEUMATIC BRAKE CONTROL SYSTEM FOR RAIL TRANSIT VEHICLE	
8272	CANAD	ISSUED	1,254,535	05/23/89	CARD	DRAFT GEAR ASSEMBLY	
8182	CANAD	ISSUED	1,254,534	05/23/89	CARD	FRICTIONAL SHOCK-ABSORBING METHOD AND APPARATUS	
8247	CANAD	ISSUED	1,254,644	05/23/89	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8220	AUSAL	ISSUED	5,812,448	05/26/89	LPDW	PISTON ASSEMBLY	
8299	NEWZL	ISSUED	2,181,191	06/06/89	PTDS	CROSS BLENDING ELECTRO-DYNAMIC ELECTRON BRAKE	SYSTEM FOR POWER AND NON POWER CAR
8391	USA	ISSUED	4,836,093	06/06/89	LPDW	PISTON ASSEMBLY	
8307	AUSAL	ISSUED	7,640,477	06/08/89	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8415	BOPHU	ISSUED	8,801,000	06/09/89	NAFW	VARIABLE LOAD VALVE	
8259	CANAD	ISSUED	1,255,720	06/13/89	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8244	CANAD	ISSUED	1,255,721	06/13/89	LPDW	BRAKE PIPE CHARGING CUT-OFF ARRANGEMENT	
8122	CANAD	ISSUED	1,256,039	06/20/89	WLTD	BRAKE ACTUATOR DEVICE HAVING A HYDRAULIC SLACK ADJUSTING ARRANGEMENT	
PULSE-33	USA	ISSUED	4,840,056	06/20/89	PULS	FUEL MEASURING SYSTEM	
VAPOR-32	CANAD	ISSUED	1,256,321	06/27/89	VAPR	WASTE FLUID INCINERATOR HAVING HEAT RECOVERY MEANS	
8469	USA	ISSUED	4,845,428	07/04/89	PTDS	MAGNETIC ROTATIONAL DETECTING ARRANGEMENT FOR SENSING SPEED OF RAILWAY VEHICLE	

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PATENT
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PULSE 4	USA	ISSUED	4,847,770	07/11/89	PULS	INITIAL TERMINAL TESTER	
8178	CANAD	ISSUED	1,257,579	07/18/89	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8454	SOFRAC	ISSUED	88/8255	07/25/89	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8468	USA	ISSUED	4,850,654	07/25/89	NAFW	FREIGHT BRAKE EMERGENCY VALVE	
8451	SOFRAC	ISSUED	88/8296	07/26/89	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	SOFRAC	ISSUED	88/8290	07/26/89	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SE	RVICE FUNCTION
6829	ARGNT	ISSUED	239,228	07/31/89	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
6829	TRANS	ISSUED	87/0040	08/03/89	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8299	AUSAL	ISSUED	587,295	08/10/89	PIDS	GROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CA
8224	AUSAL	ISSUED	583,072	08/11/89	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8259	CHINA	ISSUED	85109613.1	08/23/89	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
PULSE-30	USA	ISSUED	4,862,433	08/29/89	PULS	TIMER CIRCUIT FOR DRAG OPERATION IN AN ENGINEMAN	MONITORING DEVICE
8458	USA	ISSUED	4,865,278	09/12/89	PIDS	CONTROL COMMAND SYSTEM FOR RAILWAY VEHICLE	
8243	CANAD	ISSUED	1,259,343	09/12/89	CARD	FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	
8472	USA	ISSUED	4,866,938	09/19/89	CLDW	CYLINDER SEALING (CONT. OF 8342)	
8415	VENDA	ISSUED	88/0067	09/21/89	NAFW	VARIABLE LOAD VALVE	
8269	CANAD	ISSUED	1,260,515	09/26/89	WLTD	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING APPLIED/AIR-RELEASED BRA
8487	USA	ISSUED	4,875,742	10/24/89	CLDW	SOLENOID OPERATED HYD. CTRL. VALV.	
8351	USA	ISSUED	4,875,739	10/24/89	NAFW	INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
8433	SOFRAC	ISSUED	89/0026	10/25/89	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8415	TRANS	ISSUED	88/0064	11/16/89	NAFW	VARIABLE LOAD VALVE	
8224	*FRANC	ISSUED	8602246	11/17/89	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	

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8224	BRAZ	ISSUED	P18505798	11/28/89	CARD	RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8272	BRAZ	ISSUED	P18504464	11/28/89	CARD	DRAFT GEAR ASSEMBLY	
VAPOR-35	USA	ISSUED	4,882,876	11/28/89	VAPR	DOOR OPERATOR WITH LOCKING MECHANISM	
8507	USA	ISSUED	4883089	11/28/89	PTDS	RAILWAY CAR PRESSURE CONTROL VALVES	
6829	UNIKN	ISSUED	2189299	11/29/89	MAFW	FRI BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
PULSE-18	USA	ISSUED	4,885,689	12/05/89	PULS	MULTILINGUAL CODE RECEIVER	
PULSE-15	USA	ISSUED	305,122	12/19/89	PULS	FRONT PANEL FOR DATA RECORDER	
8506	USA	ISSUED	4,887,516	12/19/89	MAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8454	VENDA	ISSUED	88/0110	01/08/90	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8451	VENDA	ISSUED	88/0108	01/19/90	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	VENDA	ISSUED	88/0109	01/19/90	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8383	SOFRC	ISSUED	89/3654	01/31/90	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
VAPOR-33	CANAD	ISSUED	1,265,387	02/06/90	VAPR	DOOR OPERATING ASSEMBLY	
8243	AUSAL	ISSUED	589439	02/08/90	CARD	FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
VAPOR-34	CANAD	ISSUED	1,266,093	02/20/90	VAPR	THERMOELECTRIC COOLER	
VAPOR-36	USA	ISSUED	4,901,474	02/20/90	VAPR	PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK	
8457	USA	ISSUED	4901953	02/20/90	PTDS	CONTROLLER FOR RAILWAY VEHICLES	
8451	TRANS	ISSUED	88/0117	02/22/90	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8489	USA	ISSUED	4,904,027	02/27/90	REPO	DIGITAL AIR BRAKE CONTROL SYSTEM	
8525	USA	ISSUED	4911615	03/27/90	CLDW	HYDRAULIC PUMP UNLOADER	
8470	USA	ISSUED	4,915,018	04/10/90	MAFW	IMPROVED DIAPHRAGM PISTON ASSEMBLY	
8433	USA	ISSUED	4,916,794	04/17/90	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8451	BOPRU	ISSUED	88/0184	05/01/90	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION

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8454	BOPMU	ISSUED	88/0182	05/01/90	NAFM	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	BOPMU	ISSUED	88/0183	05/01/90	NAFM	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION	
8453	SOFRC	ISSUED	89/5980	05/30/90	NAFM	FREIGHT BRAKE EMERGENCY VALVE	
8307	CANAD	ISSUED	1270211	06/12/90	NAFM	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8383	USA	ISSUED	4941099	07/10/90	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
PULSE-2C	USA	ISSUED	4,940,292	07/10/90	PULS	RAPID RELEASE VALVE MECHANISM	
8361	CANAD	ISSUED	1271972	07/24/90	PTDS	DECELERATION CONTROL SYSTEM	
8489	SOFRC	ISSUED	89/7261	07/25/90	LPDM	DIGITAL AIR BRAKE CONTROL SYSTEM	
8502	USA	ISSUED	4,944,964	07/31/90	KEPV	BRAKE VALVE DEVICE ARRANGED FOR FRICTION-PNEUMATIC CONTROL	
8509	USA	ISSUED	4,949,754	08/21/90	PTDS	PRESSURE CONTROL VALVE FOR RAILWAY VEHICLES	
8300	USA	ISSUED	4,951,554	08/28/90	NAFM	LOW STRESS DIAPHRAGM	
8550	USA	ISSUED	4,951,516	08/28/90	PTDS	FORCE MULTIPLICATION MECHANISM	
8429	BOPMU	ISSUED	87/0058	09/05/90	NAFM	FRT BRAKE CONTROL VALVE... PISTON SLIDE VALVE BRAKE	APPLICATION FUNCTION
PULSE-29	USA	ISSUED	310,510	09/11/90	PULS	DEFAULT CONTROLLER FOR RAILWAY VEHICLES	
8488	USA	ISSUED	4,957,208	09/18/90	PTDS	MULTI-CONTACT ELECTRICAL CONNECTOR PORTION FOR AUTO RLY CONTR	
8396	AUSAL	ISSUED	597,103	09/18/90	NAFM	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVID
E ACCELER BRK APPL FUNCTION							
8551	USA	ISSUED	4957193	09/18/90	PTDS	ACTUATING CYLINDER HAVING MECHANICAL ADVANTAGE	
8276	CANAD	ISSUED	1,275,136	10/09/90	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
7091	JAPAN	ISSUED	1582983	10/22/90	NAFM	HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER	
8351	SOFRC	ISSUED	90/0338	10/31/90	NAFM	INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
6522	CANAD	ISSUED	1,276,211	11/13/90	NAFM	EMPTY-LOAD CHANGEOVER APPARATUS	
8389	AUSAL	ISSUED	600,104	11/20/90	NAFM	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION

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8510	USA	ISSUED	4,972,145	11/20/90	PTDS	SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE	AXLE RAIL VEHICLES
8566	USA	ISSUED	4,971,399	11/20/90	LPDW	SYSTEM FOR ASSURING RECHARGE OF BRAKE PIPE	PRESSURE...LOCOMOTIVE BRAKE VALV
VAPOR-36	TAIWAN	ISSUED	4,219,921	12/01/90	VAPR	PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND	LOCK
8410	AUSAL	ISSUED	600,538	12/03/90	MAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8535	USA	ISSUED	4,974,910	12/04/90	MAFW	FREIGHT BRAKE CONTROL VALVE HAVING IMPROVED QUICK SERVICE	FUNCTION
6961	USA	ISSUED	4,974,911	12/04/90	MAFW	VENT VALVE DEVICE	
8539	USA	ISSUED	4,979,391	12/25/90	PTDS	TRANSDUCED OPERATIONAL FAULT DETERMINATION SYSTEM	
8531	USA	ISSUED	4,986,500	01/22/91	LPDW	ADJUSTABLE AIR BRAKE HOSE SUPPORT FOR RAILWAY VEHICLES	
8427	USA	ISSUED	4,987,563	01/22/91	PTDS	WHEEL SPIN CONTROL SYSTEM	
8427	SOFRAC	ISSUED	90/1322	01/30/91	PTDS	WHEEL SPIN CONTROL SYSTEM	
8552	USA	ISSUED	4,993,521	02/19/91	PTDS	IMPROVED TREAD BRAKE UNIT	
8488	SOFRAC	ISSUED	90/3253	02/27/91	PTDS	MULTI-CONTACT ELECTRICAL CONNECTOR PORTION FOR AUTO RHY CYCLER	
8502	SOFRAC	ISSUED	90/3254	02/27/91	LPDW	BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL	
8531	SOFRAC	ISSUED	90/3201	02/27/91	LPDW	ADJUSTABLE AIR BRAKE HOSE SUPPORT FOR RAILWAY VEHICLES	
8519	SOFRAC	ISSUED	90/3199	02/27/91	LPDW	BRAKE ASSURANCE CIRCUIT OPERATIVE IN RESPONSE TO A LOW BRAKE PIPE PRESSURE	
PULSE-6	USA	ISSUED	315,114	03/05/91	PULS	END OF TRAIN MARKER LIGHT	
8504	USA	ISSUED	4,999,779	03/12/91	PTDS	AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8528	SOFRAC	ISSUED	90/3961	03/27/91	PTDS	PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE	ASSEMBLY
6961	SOFRAC	ISSUED	90/3963	03/27/91	MAFW	VENT VALVE DEVICE	
8532	USA	ISSUED	5,005,915	04/09/91	MAFW	EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8299	CANAD	ISSUED	1,283,148	04/16/91	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CAR
6829	CANAD	ISSUED	1,283,149	04/16/91	MAFW	FRI BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8427	TAIWAN	ISSUED	NI 4,4301	05/15/91	PTDS	WHEEL SPIN CONTROL SYSTEM	

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8383	TAIWAN	ISSUED	44299	05/15/91	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
PULSE-22	USA	ISSUED	5,016,840	05/21/91	PULS	METHOD TO AUTHORIZE H.O.T. UNIT TO TRANSMIT EMERGENCY	COMMANDS TO ASSOC. REAR UNIT
6973	JAPAN	ISSUED	UM1854566	06/10/91	PTDS	FOUR WAY BALL VALVE	
8433	UNKN	ISSUED	2214267	07/03/91	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8592	USA	ISSUED	5031731	07/16/91	PTDS	BRAKE ACTUATOR WITH SLACK ADJUSTER DISABLING MECHANISM	
8390	USA	ISSUED	5035582	07/30/91	PTDS	ELECTRO PNEUMATIC GOVERNOR FOR A COMPRESSED AIR SYSTEM	
8588	USA	ISSUED	5,036,468	07/30/91	LPDW	ARRANGEMENT FOR READING AN ABSOLUTE POSITION ENCODER	POSITION OF BRAKE HANDLE
8504	SCFRG	ISSUED	9077232	07/31/91	PTDS	AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8523	USA	ISSUED	5319039	08/13/91	LPDW	LOCOMOTIVE BRAKE CONSOLE	
8611	USA	ISSUED	5,042,393	08/27/91	CARD	LOCKING ASSEMBLY TO SECURE BEARING ASSEMBLY	PAIR OF RAILWAY CARS
8522	USA	ISSUED	0319423	08/27/91	LPDW	LOCOMOTIVE BRAKE CONSOLE	
8630	USA	ISSUED	5,044,698	09/03/91	NAFW	IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING AIR LEAKAGE	PROTECTION
8606	USA	ISSUED	5046921	09/10/91	PTDS	MOISTURE REMOVAL DEVICE FOR A COMPRESSED AIR SYSTEM	
8528	USA	ISSUED	5,058,712	10/22/91	PTDS	PRE-LOADING DIVISION FOR CONNECTION OF A DISC BRAKE	ASSEMBLY
8454	TRANS	ISSUED	88/0120	10/29/91	NAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8582	USA	ISSUED	5,064,251	11/12/91	LPDW	ELECTROPNEUMATIC AIR BRAKE CONTROL SYSTEM FOR RAILWAY	VEHICLES
8608	USA	ISSUED	5,065,679	11/19/91	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RAY CARS TOGETHER IN A
SEMI PERMANENT MANNER							
8616	USA	ISSUED	5,069,312	12/03/91	NAFW	HANDBRAKE FOR SINGLE-CYLINDER TRUCK-MOUNTED RAILWAY CAR	BRAKE
8556	USA	ISSUED	5,071,198	12/10/91	NAFW	EMER. VAL FOR ABD. FR. BRAKE CONTROL VALVE DEVICE	
8633	USA	ISSUED	5,072,913	12/17/91	NAFW	SPRING LOADED LOCKING HANDLE FOR ANGLES OF TUG FORCE	
8383	ITALY	ISSUED	1231593	12/18/91	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8578	USA	ISSUED	5,076,401	12/31/91	PTDS	SPRING APPLIED HYDRAULICALLY RELEASED POSITIVE CLEARANCE	SLACK ADJ. MECHANISM

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8276	BRAZL	ISSUED	8603163	12/31/91	PIDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RRV TRANSIT VEHICLE	
8620	USA	ISSUED	5,080,243	01/14/92	CARD	ASSEMBLY MECHANISM FOR AN ARTICULATED COUPLING SYSTEM	
8421	AUSAL	ISSUED	613648	01/17/92	NAFW	TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE TRUCK-MOUNTED BRAKE ASSEMBLY	
PULSE-31	USA	ISSUED	5,083,274	01/21/92	PULS	RAILROAD BRAKE PRESSURE RECORDING	
8489	ITALY	ISSUED	1231980	01/22/92	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
8433	AUSAL	ISSUED	613,138	01/28/92	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8652	USA	ISSUED	5,083,586	01/28/92	LPDW	MTG. ARRANGE FOR CONN. A FLUID PRESS. VAL TO A PIPE BRKT. BY A	HOLLOW ADAPT MEMBER
8179	JAPAN	ISSUED	1637432	01/31/92	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8638	USA	ISSUED	5,085,243	02/04/92	PIDS	HYDRAULIC ISOLATION VAL FOR RRV VEHICLE NOTE: ALSO A C.I.P. CASE	
8587	USA	ISSUED	5,086,641	02/11/92	LPDW	ARRANGEMENT FOR DYNAMIC CALIBRATING AN A BSOLUTE POSITION EN	COOLER
8594	USA	ISSUED	5090780	02/25/92	PIDS	BINARY WEIGHTED DIGITAL FLOW REGULATING SYSTEM	
8575	USA	ISSUED	5,092,204	03/03/92	CARD	APPAR. FOR ALIGNING SPHERICAL MEMBER DURING ASSEMBLY OF ARTICULATED CPLG SYSTEM	
8541	USA	ISSUED	5,096,266	03/17/92	LPDW	DUAL-RESPONSE VENT VALVE DEVICE	
8584	USA	ISSUED	5098169	03/24/92	PIDS	MAGNET VALVE SAFETY CHECK & FAULT INDICATOR INTEGRATOR	
8101	JAPAN	ISSUED	1649364	03/30/92	PIDS	HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER	
8619	USA	ISSUED	5,100,207	03/31/92	NAFW	EMPTY/LOAD CHANGEVER VALVE FOR RAILWAY CAR	
8622	USA	ISSUED	5,104,203	04/14/92	LPDW	ARRANGMT FOR EMULATING A J-TYPE RELAY AIR VALVE USABLE IN A	RRV BRAKING SYSTEM
8637	USA	ISSUED	5,106,270	04/21/92	LPDW	AIR-COOLED AIR COMPRESSOR	
8593	USA	ISSUED	5,106,168	04/21/92	NAFW	EMPTY/LOAD CHANGEVER VALVE FOR RAILWAY CAR	
8530	USA	ISSUED	5,105,955	04/21/92	CARD	SPHERICAL CONNECTOR APPARATUS IN AN ARTICULATED SLACKLESS	TYPE...RRV APPLICATION
8396	CANAD	ISSUED	1300208	05/05/92	NAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVID
8389	CANAD	ISSUED	1300209	05/05/92	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION
8446	CANAD	ISSUED	1300038	05/05/92	PIDS	MOISTURE REMOVAL APPARATUS	

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8458	CANAD	ISSUED	1300723	05/12/92	PTDS	CONTROL COMMAND SYSTEM FOR RAILWAY VEHICLES	
8440	CANAD	ISSUED	1300724	05/12/92	PTDS	ELECTROPNEUMATIC MASTER CONTROLLER FOR A AIR BRAKE SYSTEM	
8259	JAPAN	ISSUED	UM1904780	05/13/92	NAFW	IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8661	USA	ISSUED	5,113,694	05/19/92	NAFW	MODIFIED PRESS. REGULATOR VAL FOR SINGLE CAR TESTING DEVICE	
8410	CANAD	ISSUED	1301079	05/19/92	NAFW	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8374	CANAD	ISSUED	1301078	05/19/92	NAFW	HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RLY	CAR BRAKE ASSEMBLY
8627	USA	ISSUED	5,115,927	05/26/92	CARD	STRENGTHENING MECHANISM FOR A FEMALE ARTICULATED COUPLING	MEMBER
8110	JAPAN	ISSUED	1909081	05/26/92	NAFW	AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
8383	AUSAL	ISSUED	617457	05/28/92	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8607	USA	ISSUED	5,118,166	06/02/92	NAFW	QUICK SER. FUNCTION FOR RLY. FREIGHT BRAKE CONTROL VALVE	DEVICE
PULSE 1	USA	ISSUED	5,117,866	06/02/92	PTDS	AIR FLOW REGULATOR FOR FUEL MEASURING SYSTEMS	
8549	USA	ISSUED	5124988	06/23/92	PTDS	DUMP VALVE OPERATION AT FAULT DETERMINATION SYSTEM	
7092	JAPAN	ISSUED	1675356	06/26/92	PTDS	ADJUSTABLE VARIABLE LOAD CONTROL VALVE DEVICE	
8374	BRACL	ISSUED	8706703-0	06/30/92	NAFW	HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RLY	CAR BRAKE ASSEMBLY
8621	USA	ISSUED	5,125,722	06/30/92	PTDS	LOAD COMPENSATION CONTROL VALVE	
8646	USA	ISSUED	5,127,283	07/07/92	CARD	HAND BRAKE MECHANISM FOR RAILWAY CARS	
8117	JAPAN	ISSUED	1680618	07/13/92	PTDS	VIGILANCE SAFETY CONTROL SYSTEM	
8190	JAPAN	ISSUED	1679851	07/13/92	NAFW	EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
VAPOR-37	USA	ISSUED	5,130,503	07/14/92	VAPR	PRESSURE WAVE SWITCH HAVING IMPROVED CONTACT STRUCTURE AND	PRESSURE EQUALIZATION
8665	USA	ISSUED	5,129,140	07/14/92	CPW	VALVE RECONDITIONING PROCESS	
8383	UNIKN	ISSUED	2218763	07/15/92	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8609	USA	ISSUED	5,131,331	07/21/92	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RAILWAY CARS

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8521	USA	ISSUED	5,131,612	07/21/92	LPDM	ARRANGMENT FOR POSITIVELY DETERMINING ACTU AL SOUNDING OF WARN	ING HORN ON RAY VEHIC
8532	USA	ISSUED	5,131,667	07/21/92	NAFW	HOSE COUPLING GASKET	
8276	JAPAN	ISSUED	1919239	07/22/92	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RAY TRANSIT VEHICLE	
8415	CANAD	ISSUED	1305740	07/28/92	NAFW	VARIABLE LOAD VALVE	
8269	JAPAN	ISSUED	1688343	08/11/92	PTDS	MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRA
8189	JAPAN	ISSUED	1688332	08/11/92	PTDS	MANUALLY RELEASABLE PARKING BRAKE DEVICE	
8640	USA	ISSUED	5,139,159	08/18/92	CARD	CONNECTING PIN FOR ARTICULATED COUPLING ARRANGEMENT	
8489	AUSAL	ISSUED	620,442	08/26/92	LPDM	DIGITAL AIR BRAKE CONTROL SYSTEM	
8596	USA	ISSUED	5,141,293	08/25/92	PTDS	HYDRAULIC ISOLATION VALVE FOR RAILWAY VE HICLE	
8175	JAPAN	ISSUED	1691519	08/27/92	PTDS	PENALTY BRAKE APPLICATION MULTIPLICATION- PREVENTION SYSTEM	
6829	MEXIC	ISSUED	164579	09/03/92	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8676	USA	ISSUED	5,144,985	09/08/92	PTDS	VARIABLE LOAD VALVE FOR RAILWAY VEHICLES	
8482	JAPAN	ISSUED	1307572	09/15/92	NABC	VITAL PRESSURE REGULATING SYSTEM FOR RAI LROAD CARS	
8675	USA	ISSUED	5,146,952	09/15/92	PTDS	FLUID PRESSURE CONTROL VALVE DEVICE FOR A RAILWAY CAR	
8642	USA	ISSUED	5,146,939	09/15/92	LPDM	VALVE BUSHING CLEANING DEVICE & METHOD OF CLEANING VALVE	BUSHINGS
VAPOR-36	USA	ISSUED	5,148,631	09/22/92	VAPR	PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND	LOCK
8389	BRAZL	ISSUED	8801207	09/29/92	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION
8656	USA	ISSUED	5,152,410	10/06/92	PTDS	ELECTRO-PNEUMATIC COUPLER CONTROL SYS. . . UNCOUPLING OF RAI	LWAY VEHICLES
8562	USA	ISSUED	5,152,409	10/06/92	CARD	DRAFT GEAR ASSEMBLY	
8623	USA	ISSUED	5,154,204	10/13/92	PTDS	AUTOMATIC DRAIN VALVE FOR A COMPRESSED AIR SYSTEM	
8282	JAPAN	ISSUED	1703083	10/14/92	NABD	RAILWAY VEHICLE PENALTY BRAKE CONTROL SY STEH	
8299	BRAZL	ISSUED	8605510	10/27/92	PTDS	CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	
8276	JAPAN	ISSUED	1705205	10/27/92	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RAY TRANSIT VEHICLE	SYSTEM...POWER AND NON-POWER CA

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8276	JAPAN	ISSUED	1705205	10/27/92	PTDS	ELECTROPNEUMATIC BRK CONTROL SYS FOR RMY TRANSIT VEHICLE	
8415	BRAZL	ISSUED	8803450	11/24/92	NAFM	VARIABLE LOAD VALVE	
8659	USA	ISSUED	5,165,962	11/24/92	NAFM	MASKING FILM FOR COATING PROCESS	
PULSE-7	USA	ISSUED	5,166,610	11/24/92	PULS	DUAL RANGE SPEED INDICATOR WITH ACCELERATION DISPLAY	
8410	BRAZL	ISSUED	8706702-1	11/24/92	NAFM	SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8214	JAPAN	ISSUED	1716111	11/27/92	LPDM	QUICK RELEASE VALVE ARRANGEMENT	
8576	USA	ISSUED	5,167,334	12/01/92	CARD	APPAR TO ENABLE VERSATILITY ATTACHING CPLR TO SEAL ON A	RAILWAY CAR
8641	USA	ISSUED	5,167,333	12/01/92	CARD	APPARATUS PREVENT DETRIMENTAL EXTRANEOUS FOREIGN MATTER	ARTICULATED COUPLING
8653	USA	ISSUED	5,170,818	12/01/92	PTDS	SAFETY VALVE	
8698	USA	ISSUED	5,172,819	12/22/92	CARD	BEARING ASSEMBLY FOR AN ARTICULATED COUPLING APPARATUS	WHICH CONNECTS ADJACENT ENDS OF
A PAIR OF RMY CARS TOGETHER.							
8669	USA	ISSUED	5,172,820	12/22/92	CARD	IMPROVED FEMALE CONNECTION MEMBER USED IN AN ARTICULATED COUPLING ARRANGEMENT	
8630	SOFRC	ISSUED	9116850	12/30/92	NAFM	IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAD LEAKAGE	PROTECTION
8532	SOFRC	ISSUED	911245A	12/30/92	NAFM	EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8539	SOFRC	ISSUED	911245	12/30/92	PTDS	TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8234	JAPAN	ISSUED	1725600	01/19/93	PTDS	COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR, ADJUSTING ARRANGEMENT	
8285	FRANC	ISSUED	2578932-B1	01/22/93	CARD	ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8351	AUSAL	ISSUED	627535	01/29/93	NAFM	INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
8104	JAPAN	ISSUED	1729861	01/29/93	LPDM	CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED RELEASE OPERATION	
8244	JAPAN	ISSUED	1729859	01/29/93	LPDM	BRAKE PIPE CHARGING CUT-OFF ARRANGEMENT	
8222	JAPAN	ISSUED	1729856	01/29/93	PTDS	FLUID PRESSURE BRAKE ACTUATOR WITH SPRING-APPLIED EMERGENCY/PARKING BRAKE	
8179	JAPAN	ISSUED	1729847	01/29/93	NAFM	IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8455	CANAD.	ISSUED	1313392	02/02/93	NAFM	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION	

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8451	CANAD	ISSUED	1313390	02/02/93	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8452	CANAD	ISSUED	1313391	02/02/93	MAFW	FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8465	CANAD	ISSUED	1313353	02/02/93	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT	BRAKE SHOE CLEARANCE
8427	AUSAL	ISSUED	627838	02/05/93	PTDS	WHEEL SPIN CONTROL SYSTEM	
PULSE-10	USA	ISSUED	5,185,700	02/09/93	PULS	SOLID STATE EVEN-RECORDER	
8445	CANAD	ISSUED	1313505	02/09/93	PTDS	CONTROL METHOD FOR DUAL CYLINDER MOISTURE REMOVAL APPARATUS	
8396	JAPAN	ISSUED	1953405	02/12/93	MAFW	FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVID
E ACCELER BRK APPL FUNCTION 8508	CANAD	ISSUED	1313686	02/16/93	PTDS	LOAD DEPENDENT VALVE FOR RAILWAY VEHICLES	
PULSE-25	USA	ISSUED	5,190,359	03/02/93	PULS	PRESSURE RELIEF VALVE FOR RAILWAY BRAKE EMERGENCY SYSTEMS	
8639	USA	ISSUED	5,192,118	03/09/93	LPDW	ELECTRO-PNEUMATIC LOCOMOTIVE BRAKE CONTROL SYSTEM	
8433	MEXIC	ISSUED	167,240	03/11/93	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
VAPOR-35	CANAD	ISSUED	1,315,812	04/06/93	VAPR	DOOR OPERATOR WITH LOCKING MECHANISM	
8122	JAPAN	ISSUED	1755824	04/23/93	PTDS	BRAKE ACTUATOR DEVICE HAVING A HYDRAULIC SLACK ADJUSTING ARR	ANGEMENT
8374	JAPAN	ISSUED	1755853	04/23/93	MAFW	HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RWT	CAR BRAKE ASSEMBLY
8462	CANAD	ISSUED	1316707	04/27/93	PTDS	MAGNETIC ROTATIONAL DETECTING ARRANGEMENT FOR SENSING SPEED	OF RAILWAY VEHICLE
8489	UNITEN	ISSUED	2224322	04/28/93	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
8645	USA	ISSUED	5,207,482	05/04/93	MAFW	VENT VALVE DEVICE HAVING DISABLING MEANS	
8514	USA	ISSUED	5,209,551	05/11/93	PTDS	ANALOG SERVICE BRAKE RESPONSE ENHANCING CIRCUIT FOR RAILWAY	VEHICLES
8706	USA	ISSUED	5,211,451	05/18/93	LPDW	ADJUSTABLE REGULATING DEVICE FOR A RAILWAY LOCOMOTIVE	BRAKE VALVE APPARATUS
8564	USA	ISSUED	5,213,397	05/25/93	MAFW	FREIGHT BRAKE CONTROL VALVE FOR RAILWAY CAR	
8678	USA	ISSUED	5,213,749	05/25/93	LPDW	A METHOD OF FORMING A RUBBER SEAL HAVING A METALLIC INSERT &	SEAL SO PRODUCED
8629	USA	ISSUED	5,219,082	06/15/93	CARD	A MALE CONNECTION MEMBER FOR AN ARTICULATED COUPLING	ARRANGEMENT
8550	CANAD	ISSUED	1,319,033	06/15/93	PTDS	FORCE MULTIPLICATION MECHANISM	

8682	USA	ISSUED	5,220,863	06/22/93	NAFW	GEOMETRICAL DIAPHRAGM AND METHOD OF MAKING	
8644	USA	ISSUED	5,222,788	06/29/93	LPOW	MICROPROCESSOR BASED ELECTRO-PNEU. LOCOMOTIVE BRAKE CONTROL	SYSTEM HAVING BRAKE ASSURANCE
8643	USA	ISSUED	5,224,994	07/06/93	NAFW	APPARATUS & METHOD FOR LIQUID TREATMENT OF ARTICLE SURFACES	
8343	JAPAN	ISSUED	1777682	07/14/93	PTDS	HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8600	USA	ISSUED	5,228,648	07/20/93	NAFW	RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8433	BRAZI	ISSUED	8900266	07/27/93	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
VAPOR-36	CANAD	ISSUED	1,321,219	08/10/93	VAPR	PNEUMATIC DOOR OPERATOR HAVING MOVABLE PNEUMATIC ACTUATOR AND	LOCK
PULSE-26	USA	ISSUED	5,235,849	08/17/93	PULS	RAILROAD COUPLER MOUNT	
8604	USA	ISSUED	5,244,171	09/14/93	PTDS	INTERSLIP SEQUENCE SPEED ALGORITHM	
6829	INDIA	ISSUED	169289	09/18/93	NAFW	FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8696	USA	ISSUED	5,246,030	09/21/93	LPOW	SAFETY VALVE ARRANGEMENT	
8460	CANAD	ISSUED	1322567	09/28/93	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT	BRAKE SHOE CLEARANCE
8423	CANAD	ISSUED	1,322,729	10/05/93	NAFW	TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE BODY MOUNTED BRAKE	ASSEMBLY
8453	CANAD	ISSUED	1,323,063	10/12/93	NAFW	FREIGHT BRAKE EMERGENCY VALVE	
8506	CANAD	ISSUED	1,323,062	10/12/93	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8427	FRANC	ISSUED	2644742-B1	10/15/93	PTDS	WHEEL SPIN CONTROL SYSTEM	
8383	FRANC	ISSUED	89 06362	10/15/93	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8673	USA	ISSUED	5,253,930	10/19/93	PTDS	AIR BRAKE CONTROL SYS. HAVING ELECTROMAGNETIC VALVE DEVICE	WHICH HAS 2 SET POINTS FOR ESTA
8433	CANAD	ISSUED	1,323,487	10/26/93	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8247	BRAZI	ISSUED	8600648-7	10/26/93	PTDS	FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
VAPOR-38	USA	ISSUED	5,259,342	11/09/93	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS	FUELS (parent)
8120	JAPAN	ISSUED	UM1094612	11/26/93	PTDS	DIFFERENTIAL FLUID PRESSURE SWITCH	

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8120	JAPAN	ISSUED	1994.6.12	11/26/93	PTDS	DIFFERENTIAL FLUID PRESSURE SWITCH	
8470	CANAD	ISSUED	1,324,809	11/30/93	NAFW	IMPROVED DIAPHRAGM PISTON ASSEMBLY	
8421-N	BRAZL	ISSUED	8803666	11/30/93	NAFW		
8551	CANAD	ISSUED	1,324,810	11/30/93	PTDS	ACTUATING CYLINDER HAVING MECHANICAL ADVANTAGE	
PULSE-23	USA	ISSUED	5,267,473	12/07/93	PULS	SELF POWERED END OF TRAIN UNIT	
8552	CANAD	ISSUED	1,324,964	12/07/93	PTDS	IMPROVED TREAD BRAKE UNIT	
8383	CANAD	ISSUED	1,325,054	12/07/93	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8504	AUSAL	ISSUED	639,480	12/13/93	PTDS	AXLE HEALTH DISCRIMINATOR SAFETY MEMBER ARRANGEMENT	
8424	CANAD	ISSUED	1,325,264	12/14/93	PTDS	BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERATING STATUS	
8677	USA	ISSUED	5,269,595	12/14/93	NAFW	EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8510	AUSAL	ISSUED	637660	12/19/93	PTDS	SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE	AXLE RAIL VEHICLES
8711	USA	ISSUED	5,271,511	12/21/93	CARD	REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
8504	UNITEN	ISSUED	2,236,155	12/22/93	PTDS	AXLE HEALTH DISCRIMINATOR SAFETY MEMBER ARRANGEMENT	
8650	USA	ISSUED	5,277,323	01/11/94	CARD	LOCKING WEDGE ASSEMBLY FOR ARTICULATED TYPE CPTC ARRANGEMENT	
8630	AUSAL	ISSUED	641272	01/17/94	NAFW	IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING GAP LEAKAGE	PROTECTION
8605	USA	ISSUED	5,280,718	01/23/94	PTDS	TRANSDUCER HEALTH AND OFFSET CALIBRATION PROCESSING SYSTEM	
VAPOR-39	USA	ISSUED	5,280,754	01/23/94	VAPR	TRANSIT CAR POWER DOOR OBSTRUCTION SENSING SYSTEM AND	DEVICE
8600	SOFRC	ISSUED	93/2917	01/26/94	NAFW	RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8433	AUSAL	ISSUED	641,287	02/01/94	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8704	USA	ISSUED	5,286,096	02/15/94	REPD	ARRANGEMENT FOR ENHANCING THE BALL-OFF FUNCTION OF BRAKE	CYLINDER PRESSURES ON A RAILROAD
LOCOMOTIVE							
8510	SOFRC	ISSUED	90/9952	02/23/94	PTDS	SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE	AXLE RAIL VEHICLES
8618	USA	ISSUED	5,290,095	03/01/94	PTDS	WHEEL LOCK DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAILWAY	VEHICLES
PULSE-33	CANAD	ISSUED	1,327,714	03/15/94	PULS	FUEL MEASURING SYSTEM	

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8702	USA	ISSUED	5,293,777	03/15/94	NAFW	HINGED ASSEMBLY FOR AIR BRAKE VALVE TEST FIXTURE	
8427	ITALY	ISSUED	1242483	03/17/94	PTDS	WHEEL SPIN CONTROL SYSTEM	
8719	USA	ISSUED	5,297,856	03/29/94	PTDS	TWO SEPARATE HIGH SPEED AND LOW SPEED DISC BRAKE UNITS FOR RAILWAY VEHICLES	
8539	UNIKN	ISSUED	2242980	04/06/94	PTDS	TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8678	USA	ISSUED	5,303,937	04/19/94	LPDW	A METHOD OF FORMING A RUBBER SEAL HAVING A METALLIC INSERT & SEAL SO PRODUCED	
8718	USA	ISSUED	5,303,987	04/19/94	NAFW	EMPTY/LOAD CHANGEVER VALVE FOR RAILWAY CAR	
8510	UNIKN	ISSUED	2240848	04/20/94	PTDS	SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	
PULSE-34	USA	ISSUED	5,309,315	05/03/94	PULS	COMPUTER CHASSIS CONSTRUCTION	
8489	FRANC	ISSUED	2645818	05/06/94	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
8602	USA	ISSUED	5,315,520	05/24/94	PTDS	FRICTION BRAKE INTERFACE HEALTH CHECK SYSTEM FOR MULTIPLE-AXLE RAILWAY VEHICLES	
8711	SOFRC	ISSUED	92/9009	06/29/94	CARD	REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN ARTICULATED BEARING ASSEMBLY	
8694	USA	ISSUED	5,326,159	07/05/94	NAFW	QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL VALVE DEVICE	
8725	USA	ISSUED	5,332,297	07/26/94	REPC	CHARGING CUT OFF VALVE ARRANGEMENT FOR MICROPROCESSOR BASED ELECTRO-PNEUMATIC AUTOMOTIVE BRA	
KE CONTROL SYSTEM VAPOR-40	USA	ISSUED	5,332,279	07/26/94	VAPK	POWER DOOR OPERATOR FOR MULTI-PASSENGER MASS TRANSIT VEHICLES (electric bus door open	
(ator) 8692	USA	ISSUED	5,333,941	08/02/94	NAFW	HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE DEVICE	
VAPOR-38	USA	ISSUED	5,333,574	08/02/94	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (patent)	
8685	USA	ISSUED	5,339,930	08/23/94	CARD	CONSTANT TENSION DEVICE FOR RAILWAY CAR HANDBRAKE	
8608	AUSAL	ISSUED	648,306	08/23/94	CARD	ARTICULATED OPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF PAIR OF RWT CARS TOGETHER IN A	
SEMI-PERMANENT MANNER 8728	USA	ISSUED	5,340,203	08/23/94	PTDS	VARIABLE LOAD CONTROL VALVE DEVICE	
VAPOR-41	USA	ISSUED	5,341,398	08/30/94	VAPR	POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (K1110)	
8506	BRAZL	ISSUED	8904266-2	08/30/94	NAFW	CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8714	USA	ISSUED	5,350,222	09/27/94	NAFW	AUXILIARY STABILIZER VALVE FOR VX VENT VALVE	

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8489	AUSAL	ISSUED	649,535	10/18/94	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
8532	AUSAL	ISSUED	650862	10/25/94	NATW	EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8551	BRAZL	ISSUED	9000169-9	10/25/94	NATW	INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
8701	USA	ISSUED	5,358,315	10/25/94	REPD	MICROPROCESSOR-BASED ELECTROPNEUMATIC LOCOMOTIVE BRAKE	CONTROL SYSTEM HAVING PNEUMATIC
BACKUP BRAKE CONTROL							
8539	AUSAL	ISSUED	650861	10/31/94	PTDS	TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8502	CANAD	ISSUED	2014423	11/01/94	LPDW	BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL	
8351	CANAD	ISSUED	2,005,295	11/08/94	NATW	INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
PULSE-8	USA	ISSUED	5,365,550	11/15/94	PULS	INITIAL SYNCHRONIZATION & TRACKING CIRCUITS FOR SPREAD	SPECTRUM RECEIVERS
8433	INDIA	ISSUED	172823	11/21/94	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8625	SOFRIC	ISSUED	93/2880	11/30/94	LPDW	AUTOMATIC SLOT IDENTIFICATION AND ADDRESS RECORDING SYSTEM	
8610	AUSAL	ISSUED	651820	12/06/94	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RAY CARS TO
GETTER							
PULSE-26	USA	ISSUED	5,374,015	12/20/94	PULS	RAILROAD TELEMETRY AND CONTROL SYSTEMS	
PULSE-24	USA	ISSUED	5,376,925	12/27/94	PULS	MOTION AND DIRECTION SENSORS	
8613	SOFRIC	ISSUED	93/3107	12/28/94	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
PULSE-27	USA	ISSUED	5,377,938	01/03/95	PULS	RAILROAD TELEMETRY AND CONTROL SYSTEMS	
8504	CANAD	ISSUED	2,025,196	01/17/95	PTDS	AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8489	JAPAN	ISSUED	06-24924	01/23/95	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
PULSE-3	USA	ISSUED	5,383,717	01/24/95	PULS	BRAKE CONTROL OF HELPER LOCOMOTIVE	
8705	USA	ISSUED	5,385,392	01/31/95	LPDW	Recoverable and a Direct Release and Non-Recoverable	Ball-Off Logic Arrangement for
Use On a RR Vehicle							
8770	USA	ISSUED	5,388,675	02/14/95	KFPL	BACKING PLATE FOR DISC BRAKE PADS	
8711	AUSAL	ISSUED	654063	02/15/95	CARD	REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
8709	USA	ISSUED	5,390,772	02/21/95	PTDS	SWITCHABLE HIGH SPEED FROG MECHANISM	
8737	USA	ISSUED	5,393,129	02/28/95	NATW	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	

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8608	ITALY	ISSUED	0456221	04/12/95	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RYR CARS TOGETHER IN A
EMIPERMANENT MANNER							
8608	UNIKN	ISSUED	0456221	04/12/95	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RYR CARS TOGETHER IN A
EMIPERMANENT MANNER							
8608	EPO	ISSUED	0456221	04/12/95	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RYR CARS TOGETHER IN A
EMIPERMANENT MANNER							
8608	GERME	ISSUED	69108769.5	04/12/95	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RYR CARS TOGETHER IN A
EMIPERMANENT MANNER							
8608	FRANC	ISSUED	0456221	04/12/95	CARD	ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RYR CARS TOGETHER IN A
EMIPERMANENT MANNER							
8610	EPO	ISSUED	0456222	04/19/95	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RYR CARS TO
JEITHER							
8610	UNIKN	ISSUED	0456222	04/19/95	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RYR CARS TO
JEITHER							
8610	GERME	ISSUED	69108977.9	04/19/95	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RYR CARS TO
JEITHER							
8610	FRANC	ISSUED	0456222	04/19/95	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RYR CARS TO
JEITHER							
8610	ITALY	ISSUED	0456222	04/19/95	CARD	BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RYR CARS TO
JEITHER							
8692	SOFRC	ISSUED	93/7828	04/26/95	NAFW	HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE
8590	USA	ISSUED	5,415,465	05/16/95	LPDM	APPARATUS & METHOD OF BAILING OFF THE BRAKE CYLINDER	PRESSURE ON A LOCOMOTIVE CONSIS
8739	USA	ISSUED	5,417,143	05/23/95	NAFW	LOCK-OUT MECHANISM FOR EMPTY/LOAD CHANGEOVER VALVE	
8465	JAPAN	ISSUED	1936194	05/26/95	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT	BRAKE SHOE CLEARANCE
8424	JAPAN	ISSUED	1936195	05/26/95	PTDS	BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERA	TION STATUS
VAPOR-36	UNIKN	ISSUED	0435874	05/31/95	VAPR	PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND	LOCK
8427	CANAD	ISSUED	2,005,293	06/06/95	PTDS	WHEEL SPIN CONTROL SYSTEM	
8722	USA	ISSUED	5,423,401	06/13/95	PTDS	BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER	
8691	USA	ISSUED	5,423,129	06/13/95	PTDS	DESICCANT CARTRIDGE OF AN AIR DRYER	
8745	USA	ISSUED	5,423,275	06/13/95	CARD	COMBINATION WEAR AND LUBRICATING LINES ASSEMBLY FOR RAILWAY	CAR TRUCK BOLLSTER BOW
8460	JAPAN	ISSUED	1942647	06/23/95	PTDS	HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT	BRAKE SHOE CLEARANCE
8626	USA	ISSUED	5,428,538	06/27/95	LPDM	SANDING CONTROL SYSTEM FOR RAILWAY VEHICLES	

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8746	SOFR	ISSUED	94/4302	06/28/95	CARD	LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT
VAPOR-38	MEXIL	ISSUED	178,516	06/30/95	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS	FUELS (parent)
8755	USA	ISSUED	5,429,426	07/04/95	NAFW	BRAKE CYLINDER PRESSURE RELAY VALVE FOR RAILROAD	FREIGHT CAR
VAPOR-38	USA	ISSUED	5,433,174	07/18/95	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS	FUELS (parent)
VAPOR-43	USA	ISSUED	5,433,031	07/18/95	VAPR	RESILIENT EDGES FOR POWER OPERATED DOORS (biparting doors)	
8737	SOFR	ISSUED	94/4300	07/26/95	NAFW	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8783	SOFR	ISSUED	94/6566	07/26/95	CARD	A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR	ASSEMBLY USING A BALL AND RACE
ASSEMBLY	SOFR	ISSUED	94/4301	07/26/95	CARD	HIGH CAPACITY DRAFT GEAR ASSEMBLY	
8758	JAPAN	ISSUED	1056479	07/28/95	LPDW	BRAKE ASSURANCE CIRCUIT OPERATIVE IN RESPONSE TO A LOW BRAKE PIPE PRESSURE	
8681	USA	ISSUED	5,437,219	08/01/95	NAFW	LOW STRESS CONICAL TYPE DIAPHRAGM	
8735	USA	ISSUED	5,439,276	08/08/95	LPDW	TAMPER-RESISTANT INDEPENDENT BRAKE VALVE DEVICE FOR	LOCOMOTIVE AIR BRAKE EQUIPMENT
VAPOR-44	USA	ISSUED	5,438,800	08/08/95	VAPR	STABILIZER FOR OUTSIDE SLIDING PLUG DOORS (door leaf)	
6829	JAPAN	ISSUED	1958162	08/10/95	NAFW	FRT BRAKE CONTROL VALVE, PISTON SLIDE VALVE, BRAKE	APPLICATION FUNCTION
8600	AUSAL	ISSUED	658754	08/15/95	NAFW	RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8613	USA	ISSUED	5,443,170	08/22/95	CARD	VARIABLE ANGLE FRICTION COUPLING MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8510	BRAZL	ISSUED	9006339-2	08/29/95	PTDS	SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE	AXLE RAIL VEHICLES
8766	SOFR	ISSUED	94/6617	08/30/95	CARD	SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT	EACH END OF THE DRAWBAR
8740	USA	ISSUED	5,449,295	09/12/95	PTDS	AUTOMATIC ELECTRIC COUPLING MECHANISM FOR A PASSENGER	TRANSIT TYPE VEHICLE
8787	USA	ISSUED	5,451,099	09/19/95	NAFW	RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8788	USA	ISSUED	5,450,782	09/19/95	NAFW	VIBRATION DENSITIZING PISTON WEAR RING FOR RAILROAD CAR	CONTROL VALVE
8614	USA	ISSUED	5,453,942	09/26/95	PTDS	WHEEL SPIN SPEED PROCESSING SYSTEM FOR MULTIPLE AXLE	RAILWAY VEHICLES
8613	USA	ISSUED	5,452,814	09/26/95	CARD	VARIABLE ANGLE FRICTION COUPLING MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8539	BRAZL	ISSUED	PI9100678	09/26/95	PTDS	TRANSDUCEDR OPERATIONAL FAULT DETERMINATION SYSTEM	

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8712	USA	ISSUED	5,454,399	10/03/95	PTDS	APPLICATION & RELEASE MAGNET VALVE	
8782	USA	ISSUED	5,456,504	10/10/95	PTDS	LOCKING AND UNLOCKING APPARATUS FOR ACCESS DOOR ON A PASSENGER RAILWAY VEHICLE	
8781	USA	ISSUED	5,460,100	10/24/95	PTDS	SERVICE BYPASS APPARATUS FOR AUTOMATIC DOOR OPERATOR ON A PASSENGER RAILWAY VEHICLE	
8766	USA	ISSUED	5,462,179	10/31/95	CARD	SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8727	USA	ISSUED	5,467,246	11/14/95	LPDW	ARRANGEMENT FOR EMULATING AN H-TYPE RELAY AIR VALVE WHICH IS UTILIZED IN A RAILWAY BRAKING SYSTEM	
8768	USA	ISSUED	5,465,816	11/14/95	PTDS	SLACK ADJUSTING BRAKE CYLINDER FOR A BRAKE UNIT ON A RAILWAY TRANSIT VEHICLE	
8748	USA	ISSUED	5,466,105	11/14/95	NAFM	FASTENER ASSEMBLY FOR INSTALLING VALVE DEVICES AND THE LIKE	
8528	JAPAN	ISSUED	1995288	11/22/95	PTDS	PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE ASSEMBLY	
8720	USA	ISSUED	5,477,387	11/29/95	PTDS	SPEED VARYING ENERGY LEVEL WHEEL SLIP DETECTION AND SLIP INTENSITY DETERMINATION FOR OFF-ROAD VEHICLES	
VAPOR-36	USA	ISSUED	5,471,957	12/05/95	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-41	MEXIC	ISSUED	180,346	12/07/95	VAPR	POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (P110)	
8694	AUSAL	ISSUED	662,264	12/12/95	NAFM	QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL VALVE DEVICE	
8248	JAPAN	ISSUED	2003892	12/20/95	LPDW	RVV BRAKE CONTROL SYS. ARRANGEMENT TO LIMIT MAX. SPR. PRESS. DURING COMB. INDEX. AND AUTOMATIC BRAKE OPERATION	
8427	JAPAN	ISSUED	2000587	12/20/95	PTDS	WHEEL SPIN CONTROL SYSTEM	
8754	USA	ISSUED	5,480,218	01/02/96	NAFM	RAILWAY BRAKE PIPE WITH ACCESS PORTS	
8468	CANAD	ISSUED	2,005,296	01/09/96	WITD	FREIGHT BRAKE EMERGENCY VALVE	
8489	CANAD	ISSUED	1,337,947	01/16/96	LPDW	DIGITAL AIR BRAKE CONTROL SYSTEM	
VAPOR-46	USA	ISSUED	5,483,769	01/16/96	VAPR	DOOR DRIVE EQUIPMENT FOR MASS TRANSIT VEHICLE (sliding outside plug door)	
8737	AUSAL	ISSUED	663443	01/23/96	NAFM	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8745	SOFRIC	ISSUED	94/4257	01/31/96	CARD	COMBINATION WEAR AND LUBRICATING LIPPER ASSEMBLY FOR RAILROAD CAR TRUCK BOLSTER BOM	
8625	USA	ISSUED	5,491,830	02/13/96	LPDW	AUTOMATIC SLOT IDENTIFICATION AND ADDRESS DECODING SYSTEM	
8847	USA	ISSUED	5,492,511	02/20/96	RPDD	APPARATUS FOR INTERLOCKING THROTTLE, DYNAMIC BRAKE AND REVERSE HANDLES ON A CONTROL STATION OF A RAILWAY LOCOMOTIVE	

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8841	USA	ISSUED	5,492,203	02/20/96	NAFW	RAILROAD CAR BRAKE CYLINDER PISTON TRAVEL INDICATOR AND MOUNT THEREFOR
VAPOR-48	UNIKN	ISSUED	2,271,331	02/28/96	VAPR	IMPROVED DOOR HANGER SYSTEM FOR MASS TRANSIT VEHICLES
8747	SOFR	ISSUED	95/2063	02/28/96	NAFW	IMBEDDED ELECTRICAL CONNECTOR
8792	SOFR	ISSUED	95/2066	02/28/96	CARD	SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE ASSEMBLY
8613	USA	ISSUED	5,495,957	03/05/96	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT GEAR ASSEMBLY
8696	CANAD	ISSUED	2,109,381	03/12/96	LPDW	SAFETY VALVE ARRANGEMENT
8704	JAPAN	ISSUED	2503195	03/13/96	LPDW	ARRANGEMENT FOR ENHANCING THE BAIL OFF FUNCTION OF BRAKE CYLINDER PRESSURES ON A RAILROAD
LOCOMOTIVE	USA	ISSUED	5,500,799	03/19/96	REPD	METHOD OPERATING LOCO.MOUNTED THROTTLE CONTROLLER BETWEEN 2 MODES OF OPERATION INC.A TRANSITION BETWEEN SUCH TWO MODES
8849	USA	ISSUED	5,499,728	03/19/96	PTDS	ELECTRICALLY OPERATED HOOK COUPLER WITH MANUAL OVER RIDE
8759	USA	ISSUED	5,501,347	03/26/96	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT GEAR ASSEMBLY
8613	USA	ISSUED	5,501,347	03/26/96	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT GEAR ASSEMBLY
8625	AUSAL	ISSUED	664889	03/26/96	LPDW	AUTOMATIC SLOT IDENTIFICATION AND ADDRESS DECODING SYSTEM
8810	USA	ISSUED	5,501,512	03/26/96	NAFW	SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANS- DUCERS IN ELECTRO-PNEUMATIC FREIGHT
RIGHT BRAKE CONTROL SYSTEMS	SOFR	ISSUED	95/3929	03/27/96	NAFW	RAILWAY BRAKE PIPE BRACKET ACCESS PLATE
8767	USA	ISSUED	5,503,469	04/02/96	LPDW	APPARATUS TO PREVENT INADVERTENT DISCHARGE AND TRAPPING OF PIPE PRESS. IN AN ELECTRO-PNEU
8816	USA	ISSUED	5,503,011	04/02/96	NAFW	TEST CONNECTOR FOR AUTOMATIC TEST DEVICE
LOCO. BRAKE CONTROL SYSTEM	USA	ISSUED	2,090,307	04/02/96	NAFW	EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR
8809	CANAD	ISSUED	5,503,467	04/02/96	NAFW	PNEUMATIC EMERGENCY BACKUP FOR ELECTRO-PNEUMATIC FREIGHT BRAKE
8877	USA	ISSUED	5,503,280	04/02/96	PTDS	TIMED THRUST UNCOUPLING MECHANISM FOR PASSENGER TRANSIT TYPE RAILWAY CARS
8858	USA	ISSUED	5,505,283	04/09/96	PTDS	HIGH CURRENT HARP FOR AN ELECTRIC TROLLEY BUS
8833	INDIA	ISSUED	175539	04/09/96	CARD	METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR DRAFT GEARS
PULSE-35	USA	ISSUED	5,507,457	04/16/96	PULS	TRAIN INTEGRITY DETECTION SYSTEM
8786	USA	ISSUED	5,509,727	04/23/96	NAFW	Railway Automatic Brake Control Valve Test Unit
8786	SOFR	ISSUED	95/3512	04/24/96	NAFW	Railway Automatic Brake Control Valve Test Unit

8809	SOFRC	ISSUED	95/4705	04/24/96	NAFW	TEST CONNECTOR FOR AUTOMATIC TEST DEVICE
8794	SOFRC	ISSUED	94/8645	04/24/96	CARD	A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY
8844	USA	ISSUED	5,519,299	05/21/96	REPD	METHOD AND APPARATUS FOR DETERMINING AND ENCODING THE POSITION OF A REVERSE HANDLE ON A
8772	USA	ISSUED	5,518,304	05/21/96	NAFW	FILTER ARRANGEMENT AND MOUNTING IN RAILWAY BRAKE PIPE
8389	ARGNT	ISSUED	249,654	05/24/96	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE
8739	AUSAL	ISSUED	666438	05/28/96	NAFW	LOCK-OUT MECHANISM FOR EMPTY/LOAD CHANGEOVER VALVE
8692	AUSAL	ISSUED	666408	05/28/96	NAFW	HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE
8630	BRAZL	ISSUED	9103727-1	05/28/96	NAFW	IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAP LEAKAGE
8361	KORSO	ISSUED	100493	06/10/96	PTDS	DECELERATION CONTROL SYSTEM
8383	JAPAN	ISSUED	2064840	06/24/96	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION
8677	JAPAN	ISSUED	2064957	06/24/96	NAFW	EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR
PULSE 37	USA	ISSUED	5,530,328	06/25/96	PULS	CONSIST POWER MONITOR
8613	USA	ISSUED	5,529,194	06/25/96	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT
8751	SOFRC	ISSUED	95/7080	06/26/96	NAFW	ELECTRIC BRAKE CONTROL SYSTEM AND METHOD FOR RAILROAD CAR
8693	SOFRC	ISSUED	95/7998	06/26/96	CARD	FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY
8813	SOFRC	ISSUED	95/7996	06/26/96	NAFW	PNEUMATIC EMERGENCY BACKUP FOR ELECTRO-PNEUMATIC FREIGHT
8632	SOFRC	ISSUED	95/6931	06/26/96	NAFW	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM
8766	USA	ISSUED	5,535,122	07/09/96	PTDS	A METHOD OF AND AN APPARATUS FOR PROVIDING A SAFETY CHECK
8851	USA	ISSUED	5,537,014	07/16/96	REPD	AN APPARATUS FOR FEEDBACK OF AN ANALOG SIGNAL USED TO
8655	USA	ISSUED	5,537,285	07/16/96	REPD	DIGITAL OUTPUT CONTROL DEVICE AND METHOD FOR OPERATING
8811	USA	ISSUED	5,538,331	07/23/96	IPDW	APPLICATIONS OF EPIC(R) 3102 BRAKE EQUIPMENT TO ELECTRO-
8789	USA	ISSUED	5,538,332	07/23/96	NAFW	VIBRATION INSULATING MEMBERS FOR PISTON VALVE ASSEMBLY

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LOAD SETTING DEVICE FOR RAILWAY CARS

RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER

FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY

DIPSTICK ASSEMBLY

REMOTE CONTROL OF CUT-OUT COCK

SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE

MCCABE, THOMAS, FESSLER, CHARLES B. & NATSCHKE, SCOTT E. INV.

ELECTRIC BRAKE CONTROL SYSTEM AND METHOD FOR RAILROAD CAR

BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER

EMPTY-LOAD CHANGEOVER VALVE FOR RAILWAY CAR

MCCABE, THOMAS, FESSLER, CHARLES B. & NATSCHKE, SCOTT E. INV.

FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY

MCCABE, THOMAS, FESSLER, CHARLES B. & NATSCHKE, SCOTT E. INV.

MCCABE, THOMAS, FESSLER, CHARLES B. & NATSCHKE, SCOTT E. INV.

COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY

TREVOR A. SCOTT, ERIC G. SMITH, ULF STAMMER

INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RAILWAY CAR AND AN

KEY FOR RAILROAD BRAKE SHOE ASSEMBLY

LUBRICATING APPARATUS FOR ARTICULATED COUPLING

SOFTWARE NULLIFICATION OF TRANSDUCER INDUCED OFFSET

METHOD OF PERFORMING DIAGNOSTICS ON AN ELECTRONICALLY CON-

COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY

TITLE CONTROLLER

8843	USA	ISSUED	5,564,657	10/15/96	REPD	ELECTRONICALLY CONTROLLED LOCO THROTTLE CONTROLLER	INCLUDING REMOTE MULTIPLE UNIT
8861	USA	ISSUED	5,564,794	10/15/96	NAFW	TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGULATING VALVE THEREFOR	
8715	USA	ISSUED	5,566,793	10/22/96	RFPD	IMPROVED RAILWAY TYPE BRAKE SHOE	
VAPOR 41	AUSAL	ISSUED	670,079	10/22/96	VAPR	POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
8856	USA	ISSUED	5,570,284	10/29/96	REPD	A METHOD AND APPARATUS FOR REMOTE CONTROL OF A LOCOMOTIVE THROTTLE CONTROLLER	
8613	AUSAL	ISSUED	670275	10/29/96	CARD	VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT GEAR ASSEMBLY	
VAPOR 37	CANAD	ISSUED	2,062,901	10/29/96	VAPR	PRESSURE WAVE SWITCH HAVING IMPROVED CONTACT STRUCTURE AND PRESSURE EQUALIZATION	
PULSE 38	USA	ISSUED	5,570,270	10/29/96	PULS	CHASSIS AND PERSONAL COMPUTER FOR SEVERE ENVIRONMENT EMBEDDED APPLICATIONS	
8790	SOFRC	ISSUED	96/0266	11/30/96	NAFW	MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A RAILROAD CAR BRAKE PIPE PRESSURE	
8485	SOFRC	ISSUED	96/0335	10/30/96	NAFW	TREVOR A. SCOTT ERIC G. SMITH DAVID L. STAMMER W. THOMAS DUGNEED (8 INVENTORS)	
8794	AUSAL	ISSUED	670521	11/05/96	CARD	A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8502	JAPAN	ISSUED	2106812	11/06/96	LPDW	BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL	
8725	JAPAN	ISSUED	2576834	11/07/96	LPDW	CHARGING CUT-OFF VALVE ARRANGEMENT FOR MICROPROCESSOR-BASED ELECTROPNEUMATIC LOCOMOTIVE BRAKE	
8714	JAPAN	ISSUED	2576835	11/07/96	NAFW	AUXILIARY STABILIZER VALVE FOR VENT VALVE	
8866	AUSAL	ISSUED	670714	11/12/96	CARD	SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8600	CANAD	ISSUED	2,090,383	11/12/96	NAFW	RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8492	JAPAN	ISSUED	2583393	11/12/96	NAFW	HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE DEVICE	
8745	JAPAN	ISSUED	2581524	11/21/96	CARD	COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL	
8861	SOFRC	ISSUED	96/1847	11/27/96	NAFW	TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGULATING VALVE THEREFOR	
8846	USA	ISSUED	5,581,472	12/03/96	REPD	METHOD AND APPARATUS FOR FEEDBACK OF TRAINLINE STATUS TO THE CENTRAL PROCESSOR OF A LOCOMOTIVE THROTTLE CONTROLLER	
8815	USA	ISSUED	5,582,206	12/10/96	PTDS	ROTARY MAGNET VALVE	
VAPOR 38	USA	ISSUED	5,582,137	12/10/96	VAPR	METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	

8796	USA	ISSUED	5,584,407	12/17/96	CARD	INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RAILWAY CAR AND AN INTERLOCKING MECHANISM THEREFOR
8747	USA	ISSUED	5,586,668	12/24/96	NAFW	IMBEDDED ELECTRICAL CONNECTOR
8651	USA	ISSUED	5,586,812	12/24/96	CARD	MCCABE, THOMAS, FESSLER, CHARLES B., & MATSCHKE, SCOTT = INV RAILWAY BRAKING APPARATUS
8752	USA	ISSUED	5,586,813	12/24/96	NAFW	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM
8779	USA	ISSUED	5,589,767	12/31/96	PTDS	MECHANISM FOR THE ATTACHMENT OF A SPEED SENSOR
8691	USA	ISSUED	5,590,797	01/07/97	CARD	FRICTION CLUTCH MECHANISM FOR HIGH CAPACITY DRAFT GEAR
8880	USA	ISSUED	5,592,384	01/07/97	LPDW	RAILWAY BRAKE SYSTEM TESTER
8651	USA	ISSUED	5,593,214	01/14/97	CARD	MCCABE, THOMAS, FESSLER, CHARLES B., & MATSCHKE, SCOTT = INV RAILWAY BRAKING APPARATUS
8535	CANAD	ISSUED	2,014,685	01/21/97	NAFW	FREIGHT BRAKE CONTROL VALVE HAVING IMPROVED QUICK SERVICE FUNCTION
6961	CANAD	ISSUED	2,014,686	01/21/97	NAFW	VENT VALVE DEVICE
8972	USA	ISSUED	5,595,267	01/21/97	RFFC	BRAKE SHOE HAVING FATIGUE RESISTANT BACKING PLATE
8528	CANAD	ISSUED	2,015,689	01/21/97	PTDS	PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE ASSEMBLY
8972	USA	ISSUED	5,604,991	02/25/97	PTDS	SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER
8663	SOFRC	ISSUED	96/4015	02/26/97	NAFW	FREIGHT BRAKE CONTROL USING TRAIN NET BRAKING RATIO
8628	SOFRC	ISSUED	96/3750	02/26/97	NAFW	PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC BRAKE
8707	USA	ISSUED	5,613,579	03/25/97	PTDS	LATCH LOCKING SPRING CLIP FOR RETAINING AN INSERTABLE BRAKE SHOE LINING ON A DISC BRAKE MECHANISM
8975	SOFRC	ISSUED	96/5105	03/26/97	CARD	ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE
8907	POLND	ISSUED	172628	04/04/97	VAPR	POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)
8895	USA	ISSUED	5,617,965	04/08/97	CARD	AN INTERLOCKING TYPE MECHANISM FOR A SLACKLESS DRAWBAR ASSEMBLY USED ON A RAILWAY FREIGHT CAR
8907	USA	ISSUED	5,621,657	04/15/97	LPDW	AUTOMATIC DETECTION OF AIR FLOW TRANSDUCER TYPE UNDER SOFTWARE CONTROL
8788	AUSAL	ISSUED	674618	04/22/97	NAFW	VIBRATION DESENSITIZING PISTON WEAR RING FOR RAILROAD CAR CONTROL VALVE
8939	USA	ISSUED	5,630,354	05/20/97	LPDW	EXTENDED LIFE BRAKE CYLINDER HOLDER
8884	SOFRC	ISSUED	96/7296	05/28/97	NAFW	TWO-PIECE CHECK VALVE ASSEMBLY

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8919	SOFR	ISSUED	96/7297	05/28/97	NAFW	TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER	
8928	USA	ISSUED	5,634,696	06/03/97	NAFW	RAILWAY PIPE BRACKET WITH ACCESS PORTS	
8992	USA	ISSUED	5,634,391	06/03/97	LPDW	INERT PLASTIC COATED FLEXIBLE TYPE DIAPHRAGM FOR PUMP	APPLICATION IN A SANITARY TYPE
8722	JAPAN	ISSUED	2659175	06/06/97	PTDS	BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER	
8790	USA	ISSUED	5,638,276	06/10/97	NAFW	MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A RAILROAD CAR BRAKE PIPE PRESSUR	
8858	CANAD	ISSUED	2,147,097	06/17/97	PTDS	HIGH CURRENT HARP FOR AN ELECTRIC TROLLEY BUS	
8928	SOFR	ISSUED	96/6437	06/25/97	NAFW	RAILWAY PIPE BRACKET WITH ACCESS PORTS	
8900	SOFR	ISSUED	96/6215	06/25/97	NAFW	RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8799	USA	ISSUED	5,644,461	07/01/97	LPDW	HIGH VOLTAGE D.C CURRENT LIMITER	
8701	JAPAN	ISSUED	2670425	07/04/97	LPDW	MICROPROCESSOR BASED ELECTROPNEUMATIC LOCOMOTIVE BRAKE	CONTROL SYSTEM HAVING PNEUMATIC
8728	BACKUP BRAKE CONTROL JAPAN	ISSUED	2672779	07/11/97	PTDS	VARIABLE LOAD CONTROL VALVE DEVICE	
8932	USA	ISSUED	5,647,460	07/15/97	REPC	SPRING TYPE RAILROAD BRAKE SHOE LOCKING KEY	
8924	USA	ISSUED	5,650,933	07/22/97	PTDS	TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8936	USA	ISSUED	5,650,561	07/22/97	PULS	DIAGNOSTIC DEVICE FOR DETERMINING THE PNEUMATIC INTEGRITY OF A BUBBLE TYPE FUEL MEASURING	
8958	USA	ISSUED	5,654,889	08/05/97	PTDS	SIMPLIFIED PATTERN RECOGNITION WHEEL SLIDE PROTECTION	
8958	AUSAL	ISSUED	677285	08/07/97	CARD	HIGH CAPACITY DRAFT GEAR ASSEMBLY	
8958	USA	ISSUED	5,657,839	08/19/97	REPC	IMPROVED RAILWAY TYPE BRAKE SHIP	
8950	USA	ISSUED	5,659,204	08/19/97	REPD	AN APPARATUS FOR AND A METHOD OF GENERATING AN ANALOG	SIGNAL FOR CONTROL OF DYNAMIC B
8922	USA	ISSUED	RE35590	08/19/97	PULS	SOLID STATE EVENT RECORDER	
8922	SOFR	ISSUED	96,8800	08/27/97	PTDS	SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	
8924	SOFR	ISSUED	96/8801	08/27/97	PTDS	TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8921	SOFR	ISSUED	96/8802	08/27/97	PTDS	LINEAR CHOKE SHUTTLE/ORSHICE CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	

8685	JAPAN	ISSUED	2690674	08/29/97	NAFW	CONSTANT TENSION DEVICE FOR RAILWAY CAR HANDBRAKE	PRESSURE ON A LOCOMOTIVE CONSISTS
8590	JAPAN	ISSUED	2690270	08/29/97	LPDW	APPARATUS & METHOD OF BAILING OFF THE BRAKE CYLINDER	
8828	USA	ISSUED	5,662,391	09/02/97	NAFW	PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC BRAKE	
8924	USA	ISSUED	5,662,727	09/02/97	PTDS	TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8752	USA	ISSUED	5,669,674	09/23/97	NAFW	ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8987	SOFR	ISSUED	9770031	09/23/97	CARD	A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER	
8884	USA	ISSUED	5,669,412	09/23/97	NAFW	TWO-PIECE CHECK VALVE ASSEMBLY	
8894	USA	ISSUED	5,673,774	10/07/97	PTDS	AUXILIARY VEHICLE CURRENT COLLECTOR	
8910	USA	ISSUED	5,673,493	10/07/97	PTDS	TELESCOPING DESICCANT CARTRIDGE FOR AN AIR DRYER DISPOSED IN AN AIR SYSTEM	
8839	USA	ISSUED	5,677,608	10/16/97	PTDS	EMBEDDED DUAL-LOCAL CONTROL PANEL	
8789	JAPAN	ISSUED	2709046	10/17/97	NAFW	VIBRATION INSULATING MEMBERS FOR PISTON VALVE ASSEMBLY	
8841	JAPAN	ISSUED	2709293	10/17/97	NAFW	RAILROAD CAR BRAKE CYLINDER PISTON TRAVEL INDICATOR AND MOUNT THEREFOR	
8999	USA	ISSUED	5,681,015	10/28/97	PULS	RADIO-BASED ELECTRO-PNEUMATIC CONTROL COMMUNICATIONS SYSTEM	
8921	USA	ISSUED	5,685,896	11/11/97	PTDS	LINEAR CHECK SHUTTER/DRIVER CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	
8991	USA	ISSUED	5,687,633	11/18/97	LPDW	IMPROVED INSERT TYPE MEMBER FOR USE IN A FLEXIBLE TYPE PUMP DIAPHRAGM	
8938	USA	ISSUED	5,691,888	11/25/97	PTDS	POWER CONTROLLING UNIT FOR A TROLLEY POLE SWITCH CONTROLLER	* inventor's full name: CHARLIE
8913	USA	ISSUED	5,689,893	11/25/97	LPDW	DESICCANT CANISTER WITH POSITIONING BORE	
8983	KORSO	ISSUED	131073	11/26/97	PTDS	ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8959	SOFR	ISSUED	9772409	11/26/97	CARD	A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR	
8977	JAPAN	ISSUED	2723492	11/28/97	NAFW	REMOTE CONTROL OF CUT-OUT COCK	
8943	USA	ISSUED	5,692,586	12/02/97	PTDS	BRAKE DEVICE	CONTROL SYSTEM HAVING PNEUMATIC
8701	CANAD	ISSUED	2,105,152	12/02/97	LPDW	MICROPROCESSOR BASED ELECTROPNEUMATIC LOCOMOTIVE BRAKE	
BACKUP BRAKE CONTROL	CONTROL						
8224	GERWE	ISSUED	P3609268.1	12/04/97	CARD	RAILWAY VEHICLE BRAKE PISTON SLACK ADJUSTER	

8900	USA	ISSUED	5,695,258	12/09/97	NAFW	RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8711	EPO	ISSUED	0582035	12/10/97	CARD	REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
VAPOR-41	JAPAN	ISSUED	2727397	12/12/97	VAPR	POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
8792	AUSAL	ISSUED	680970	12/18/97	CARD	SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
9010	USA	ISSUED	5,700,065	12/23/97	PTDS	PENALTY BRAKE SCHEME FOR STRAIGHT AIR PIPE BRAKE CONTROL	EQUIPMENT
9012	USA	ISSUED	5,700,066	12/23/97	PTDS	PENALTY BRAKE DESIGN FOR STRAIGHT AIR PIPE BRAKE CONTROL	EQUIPMENT
8985	USA	ISSUED	5,701,975	12/30/97	CARD	RAILWAY VEHICLE BRAKE SYSTEM	
8635	USA	ISSUED	5,702,774	12/30/97	PTDS	REUSABLE PAINT MASKING MEMBER	
8983	USA	ISSUED	5,702,012	12/30/97	CARD	A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR	
8651	USA	ISSUED	5,701,974	12/30/97	CARD	MCCABE, THOMAS, FESSLER, CHARLES B. & MATSCHKE, SCOTT E. INV.	RAILWAY BRAKING APPARATUS
8741	USA	ISSUED	5,704,770	01/06/98	LPDW	AIR PASSAGE INSERT FOR OIL FILL SPOUT	
8882	USA	ISSUED	5,704,454	01/06/98	RFPD	FATIGUE AND IMPACT RESISTANT RAILWAY BRAKE SHOE	
8627	USA	ISSUED	5,704,396	01/06/98	PTDS	MODULATION ROTARY VALVE	
8672	JAPAN	ISSUED	2736054	01/09/98	CARD	DRAFT GEAR ASSEMBLY	DEVICE
8624	JAPAN	ISSUED	2739046	01/16/98	PTDS	TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8692	CANAD	ISSUED	2,109,375	01/20/98	NAFW	HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	
8774	CANAD	ISSUED	2,109,378	01/20/98	NAFW	AUXILIARY STABILIZER VALVE FOR VENT VALVE	
8689	USA	ISSUED	5,709,436	01/20/98	NAFW	ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALV
8905	USA	ISSUED	5,711,206	01/27/98	LPDW	PISTON AND CYLINDER ASSEMBLY FOR MINIMIZING WATER BLOW-BY	IN AN AIR COMPRESSOR
8738	EPO	ISSUED	0628458	01/28/98	PTDS	VARIABLE LOAD CONTROL VALVE DEVICE	
8847	JAPAN	ISSUED	2742525	01/30/98	LPDW	APPARATUS FOR INTERLOCKING THROTTLE, DYNAMIC BRAKE AND RE-	VERSER HANDLES ON A CONTROL STA
8853	JAPAN	ISSUED	2742526	01/30/98	LPDW	APPARATUS FOR INTERLOCKING REVERSER HANDLE ON A CONTROL	STAND OF A RAILWAY LOCOMOTIVE

8949	USA	ISSUED	5,713,639	02/03/98	PIDS	1	BRAKE CONTROL DEVICE FOR RAILROAD ROLLING STOCK
8987	USA	ISSUED	5,713,261	02/03/98	CARD		A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER
8919	USA	ISSUED	5,714,684	02/03/98	NAFW		TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER
9016	USA	ISSUED	5,715,621	02/10/98	LPDW		REGENERATIVE DESICCANT AIR DRYER
8930	USA	ISSUED	5,718,487	02/17/98	REPO		BRAKE CONTROL SYSTEM FOR DOUBLED ENDED LOCOMOTIVE
8912	USA	ISSUED	5,721,683	02/24/98	REPO		IMMEDIATE COMMUNICATION DESIGN FOR DISCRETE CONTROL SYSTEM
8997	USA	ISSUED	5,720,455	02/24/98	PULS		INTRA-TRAIN RADIO COMMUNICATION SYSTEM
8986	SOFRC	ISSUED	97/3994	02/25/98	CARD		PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY
8951	SOFRC	ISSUED	97/2348	02/25/98	CARD		END DESIGN FOR A RAILWAY TYPE FREIGHT CAR
9014	SOFRC	ISSUED	97/3997	02/25/98	LPDW		Colored Rubber val Seal for use in predetermined type Valves
8988	SOFRC	ISSUED	97/3989	02/25/98	CARD		AN IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE
8737	JAPAN	ISSUED	2753457	02/27/98	NAFW		ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM
8740	MEXIC	ISSUED	188149	03/05/98	VAPR		POWER DOOR OPERATOR FOR MULTI-PASSENGER MASS TRANSIT
8781	AUSAL	ISSUED	683498	03/19/98	CARD		A PNEUMATIC CONNECTION MEMBER FOR A SLACKLESS DRAWBAR
9000	USA	ISSUED	5,730,504	03/24/98	NAFW		Release Assuring Arrangement for Comb. Electro-Pneu./Auto.
9003	SOFRC	ISSUED	97/4626	03/25/98	LPDW		DESICCANT CANISTER WITH POSITIONING BORE
8984	SOFRC	ISSUED	97/6436	03/25/98	NAFW		SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR
9008	SOFRC	ISSUED	97/5963	03/25/98	NAFW		ELECTRO-PNEUMATIC VALVE CONTROL
8985	SOFRC	ISSUED	97/4586	03/25/98	CARD		RAILWAY VEHICLE BRAKE SYSTEM
8988	SOFRC	ISSUED	97/4891	03/25/98	LPDW		THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A
8812	JAPAN	ISSUED	2763284	03/27/98	LPDW		SOFTWARE NULLIFICATION OF TRANSDUCER INDUCED OFFSET
8816	JAPAN	ISSUED	2766631	04/03/98	LPDW		APPARATUS TO PREVENT INADVERTENT DISCHARGE AND TRAPPING OF
9104	USA	ISSUED	5,735,579	04/07/98	PIDS		BRAKE ASSURANCE MODULE

9033	USA	ISSUED	5,738,417	04/14/98	PTDS	BRAKE PIPE SENSING UNIT	
8929	USA	ISSUED	5,740,043	04/14/98	PTDS	RELATIVE SPIN SPEED TRACTION CONTROL	
9058	USA	ISSUED	5,738,311	04/14/98	PULS	DISTRIBUTED POWER TRAIN SEPARATION DETECTION	
8906	USA	ISSUED	5,740,029	04/14/98	REPD	SOFTWARE ALGORITHM PROVIDING DYNAMIC CONFIGURATION OF DEAD	BAND CONTROL CRITERIA WITHIN A
8936	USA	ISSUED	5,740,025	04/14/98	PTDS	ELECTRONIC CONTROLLER FOR A TROLLEY POLE SWITCH MECHANISM	INVENTOR'S FULL NAME: CHARLE
8903	USA	ISSUED	5,740,547	04/14/98	PULS	RAIL NAVIGATION SYSTEM	
8651	USA	ISSUED	5,738,416	04/14/98	CARD	MCCABE, THOMAS, FESSLER, CHARLES D. & MAISCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8904	USA	ISSUED	5,744,707	04/28/98	PULS	TRAIN BRAKE PERFORMANCE MONITOR	
8976	SOFR	ISSUED	5,740,934	04/29/98	NATS	ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
8877	USA	ISSUED	5,747,685	05/05/98	REPC	AUTOMATED TERMINAL TEST PROCEDURE	
9011	USA	ISSUED	5,746,485	05/05/98	PTDS	PENALTY BRAKE CIRCUIT FOR STRAIGHT AIR PIPE BRAKE CONTROL	EQUIPMENT
8899	USA	ISSUED	5,746,484	05/05/98	NATM	E/P INTERFACE WITH PNEUMATIC CONTROL VALVE FOR BACK-UP	BRAKE ARRANGEMENT
8988	USA	ISSUED	5,746,293	05/05/98	PAPO	AN IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE	INTENSIFIER MECHANISM
8998	USA	ISSUED	5,748,269	05/05/98	PULS	ENVIRONMENTALLY-SEALED CONNECTIVE, COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
8879	USA	ISSUED	5,752,212	05/12/98	PTDS	PROPORTIONAL POLARITY SHIFT WHEEL SLIDE PROTECTION	
PULSE-41	USA	ISSUED	5,757,291	05/26/98	PULS	INTEGRATED PROXIMITY WARNING SYSTEM AND END-OF-TRAIN COM-	MUNICATION SYSTEM
VAPOR-49	USA	ISSUED	5,755,060	05/26/98	VAPR	COMPACT PANEL LOCK FOR AN OVERHEAD MOUNTED DOOR PANEL	OPERATOR (filled orig as provis)
8857	CANAD	ISSUED	2,150,882	06/09/98	LPDM	DIPSTICK ASSEMBLY	
9047	USA	ISSUED	5,771,933	06/30/98	PTDS	A Three-Position Solenoid Valve	
VAPOR 52	USA	ISSUED	5,775,232	07/07/98	VAPR	BRIDGE PLATE FOR A MASS TRANSIT VEHICLE	
9046	USA	ISSUED	5,775,367	07/07/98	PTDS	A SOLENOID VALVE CONTROL DEVICE	

PATENT
REEL: 9423 FRAME: 0276

PATENT
REEL: 012280 FRAME: 0350

Case Number	Count	Sub	Stat	Patent Number	Issue Date	Clie nt	long:Title1	long:Title2
7006	USA		ISSUED	4,236,424	12/02/80		CARD HAND BRAKE FOR RAILWAY VEHICLES	
7048	USA		ISSUED	4,292,721	10/06/81		CARD CRIMPING DEVICE FOR USE IN ASSEMBLING DY EXTRAVEL SPRING ASS EMBLY...ADJUSTER	
7059	USA		ISSUED	4,296,868	10/27/81		CARD HOUSING FOR DRAFT GEAR	
6931	CANAD		ISSUED	1115239	12/29/81		CARD HOUSING FOR DRAFT GEAR	
7006	CANAD		ISSUED	1121744	04/13/82		CARD HAND BRAKE FOR RAILWAY VEHICLES	
7061	SOFRC		ISSUED	814066	07/28/82		CARD HAND BRAKE FOR RAILROAD CAR	
7047	USA		ISSUED	4,354,302	10/19/82		CARD JACKING TOOL FOR INSTALLING AND REMOVING DRAFT GEARS ON RAIL WAY CARS	
7061	USA		ISSUED	4,360,648	01/18/83		CARD HAND BRAKE FOR RAILROAD CAR	
7047	AUSAL		ISSUED	537077	09/27/84		CARD JACKING TOOL FOR INSTALLING AND REMOVING DRAFT GEARS ON RAIL WAY CARS	
7061	AUSAL		ISSUED	541155	05/22/85		CARD HAND BRAKE FOR RAILROAD CAR	
8224	UNIKM		ISSUED	2172678	03/19/86		CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8272	SOFRC		ISSUED	85/6755	04/30/86		CARD DRAFT GEAR ASSEMBLY	
8224	SOFRC		ISSUED	85/8592	07/30/86		CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8243	UNIKM		ISSUED	2180319	08/28/86		CARD FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	
8243	FRANC		ISSUED	8612759	09/12/86		CARD FRICTION SHOCK ABSORBING ASSEMBLY AND METHOD OF MAKING	
8285	SOFRC		ISSUED	86/1651	11/26/86		CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8272	USA		ISSUED	4,645,187	02/24/87		CARD DRAFT GEAR ASSEMBLY	
8182	USA		ISSUED	4,647,024	03/03/87		CARD FRICTIONAL SHOCK-ABSORBING METHOD AND APPARATUS	
8273	SOFRC		ISSUED	86/6027	03/25/87		CARD FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	

PATENT
REEL: 9423 FRAME: 0277

PATENT
REEL: 012280 FRAME: 0351

8126	USA	ISSUED	4,657,230	04/14/87	CARD OVERTRAVEL SPRING ASSEMBLY FOR SLACK ADJUSTER	
8224	USA	ISSUED	4,662,485	05/05/87	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8243	USA	ISSUED	4,674,729	06/23/87	CARD FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	
8285	USA	ISSUED	4,683,991	08/04/87	CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8285	ITALY	ISSUED	1191280	02/24/88	CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8285	UNITED KINGDOM	ISSUED	2172351	11/16/88	CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8224	CANADA	ISSUED	1266667	12/13/88	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8452	USA	ISSUED	4,793,720	12/27/88	CARD RAILWAY CAR RESILIENT SIDE BEARING	
8285	AUSAL	ISSUED	577930	02/22/89	CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8224	ITALY	ISSUED	1203729	02/23/89	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8433	USA	ISSUED	4,809,419	03/07/89	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8272	AUSAL	ISSUED	579891	05/10/89	CARD DRAFT GEAR ASSEMBLY	
8272	CANADA	ISSUED	1256535	05/23/89	CARD DRAFT GEAR ASSEMBLY	
8182	CANADA	ISSUED	1256534	05/23/89	CARD FRICTIONAL SHOCK-ABSORBING METHOD AND APPARATUS	
8224	AUSAL	ISSUED	583072	08/11/89	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8243	CANADA	ISSUED	1259343	09/12/89	CARD FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	
8433	SOFRIC	ISSUED	89/0026	10/25/89	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8224	FRANCE	ISSUED	8602246	11/17/89	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8272	BRAZIL	ISSUED	PI8504664	11/28/89	CARD DRAFT GEAR ASSEMBLY	
8224	BRAZIL	ISSUED	PI8505798	11/28/89	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER	
8243	AUSAL	ISSUED	589439	02/08/90	CARD FRICTION SHOCK-ABSORBING ASSEMBLY AND METHOD OF MAKING	
8433	USA	ISSUED	4,916,794	04/17/90	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8433	UNITED KINGDOM	ISSUED	2214267	07/03/91	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS

8611	USA	ISSUED	5,042,393	08/27/91	CARD LOCKING ASSEMBLY TO SECURE BEARING ASSEMBLY...PAIR OF	RAILWAY CARS
8608	USA	ISSUED	5,065,679	11/19/91	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RLY CARS TOGETHER IN A SEMIPERMANENT
8620	USA	ISSUED	5,080,243	01/14/92	CARD ASSEMBLY MECHANISM FOR AN ARTICULATED COUPLING SYSTEM	
8433	AUSAL	ISSUED	613,138	01/28/92	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8575	USA	ISSUED	5,092,204	03/03/92	CARD APPAR. FOR ALIGNING SPHERICAL MEMBER DURING ASSEMBLY OF ARTICULATED CPLG SYSTEM	
8530	USA	ISSUED	5,105,955	04/21/92	CARD SPHERICAL CONNECTOR APPARATUS IN AN ARTICULATED SLACKLESS-TYPE... RLY APPLICATION	
8627	USA	ISSUED	5,115,927	05/26/92	CARD STRENGTHENING MECHANISM FOR A FEMALE ARTICULATED COUPLING	MEMBER
8646	USA	ISSUED	5,127,283	07/07/92	CARD HAND BRAKE MECHANISM FOR RAILWAY CARS	
8609	USA	ISSUED	5,131,331	07/21/92	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RAILWAY CARS
8640	USA	ISSUED	5,139,159	08/18/92	CARD CONNECTING PIN FOR ARTICULATED COUPLING ARRANGEMENT	
8562	USA	ISSUED	5,152,409	10/06/92	CARD DRAFT GEAR ASSEMBLY	
8641	USA	ISSUED	5,167,333	12/01/92	CARD APPARATUS PREVENT DETRIMENTAL EXTRANEOUS FOREIGN MATTER...	ARTICULATED COUPLING
8576	USA	ISSUED	5,167,334	12/01/92	CARD APPAR. TO ENABLE VERSATILITY ATTACHING CPLG TO SEAR ON A	RAILWAY CAR
8669	USA	ISSUED	5,172,820	12/22/92	CARD IMPROVED FEMALE CONNECTION MEMBER USED IN AN ARTICULATED COUPLING ARRANGEMENT	
8698	USA	ISSUED	5,172,819	12/22/92	CARD BEARING ASSEMBLY FOR AN ARTICULATED COUPLING APPARATUS	WHICH CONNECTS ADJACENT ENDS OF A PAIR OF RLY
8285	FRANC	ISSUED	2578932-81	01/22/93	CARD ACTUATING MEANS FOR SLACK ADJUSTER OVER TRAVEL CONTROL MECHANISM	
8433	MEXIC	ISSUED	167,240	03/11/93	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8629	USA	ISSUED	5,219,082	06/15/93	CARD A MALE CONNECTION MEMBER FOR AN ARTICULATED COUPLING	ARRANGEMENT
8433	BRAZL	ISSUED	8900266	07/27/93	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8433	CANAD	ISSUED	1,323,487	10/26/93	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8711	USA	ISSUED	5,271,511	12/21/93	CARD REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
8650	USA	ISSUED	5,277,323	01/11/94	CARD LOCKING WEDGE ASSEMBLY...ARTICULATED TYPE CPLG ARRANGEMENT	

8633	AUSAL	1	ISSUED	641,287	02/01/94	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8711	SOFRC		ISSUED	92/9009	06/29/94	CARD REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
8608	AUSAL		ISSUED	648,306	08/23/94	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8685	USA		ISSUED	5,339,930	08/23/94	CARD CONSTANT TENSION DEVICE FOR RAILWAY CAR HANDRAKE	
8633	INDIA		ISSUED	172823	11/21/94	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8610	AUSAL		ISSUED	651820	12/06/94	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8613	SOFRC		ISSUED	93/3107	12/28/94	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8711	AUSAL		ISSUED	654063	02/15/95	CARD REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN	ARTICULATED BEARING ASSEMBLY
MANNER 8608	ITALY		ISSUED	0456221	04/12/95	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8608	EPO		ISSUED	0456221	04/12/95	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8608	GERUE		ISSUED	69108769.5	04/12/95	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8608	UNIKN		ISSUED	0456221	04/12/95	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8608	FRANC		ISSUED	0456221	04/12/95	CARD ARTICULATED CPLG. APPARATUS FOR CONNECTING ADJACENT ENDS OF	PAIR OF RUY CARS TOGETHER IN A SEMIPERMANENT
MANNER 8610	ITALY		ISSUED	0456222	04/19/95	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8610	GERUE		ISSUED	69108977.9	04/19/95	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8610	FRANC		ISSUED	0456222	04/19/95	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8610	UNIKN		ISSUED	0456222	04/19/95	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8610	EPO		ISSUED	0456222	04/19/95	CARD BEARING ASSEMBLY FOR ARTICULATED COUPLING	APPARATUS...PAIR OF RUY CARS TOGETHER
8745	USA		ISSUED	5,423,275	06/13/95	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY	CAR TRUCK BOLSTER BOWL
8746	SOFRC		ISSUED	94/4302	06/28/95	CARD LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT
8758	SOFRC		ISSUED	94/4301	07/26/95	CARD HIGH CAPACITY DRAFT GEAR ASSEMBLY	
8783	SOFRC		ISSUED	94/6566	07/26/95	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR	ASSEMBLY USING A BALL AND RACE ASSEMBLY
8613	USA	01	ISSUED	5,443,170	08/22/95	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY

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8766	SOFRC	ISSUED	94/6617	08/30/95	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT	EACH END OF THE DRAWBAR
8613	USA C2	ISSUED	5,452,814	09/26/95	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8766	USA	ISSUED	5,462,179	10/31/95	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT	EACH END OF THE DRAWBAR
8745	SOFRC	ISSUED	94/4257	01/31/96	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY	CAR TRUCK BOLSTER BOLT
8792	SOFRC	ISSUED	95/2066	02/26/96	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8613	USA D4 1-3 5	ISSUED	5,495,957	03/05/96	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8613	USA D5	ISSUED	5,501,347	03/26/96	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8433	INDIA D1	ISSUED	175539	04/09/96	CARD METHOD OF AND APPARATUS FOR RECONDITIONING RAILWAY CAR	DRAFT GEARS
8794	SOFRC	ISSUED	94/8645	04/24/96	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8613	USA D3	ISSUED	5,529,194	06/25/96	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT	GEAR ASSEMBLY
8893	SOFRC	ISSUED	95/7998	06/26/96	CARD FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY	
8224	JAPAN	ISSUED	2080831	08/09/96	CARD RAILWAY VEHICLE BRAKE KICKING SLACK ADJUSTER	
8893	USA	ISSUED	5,544,767	08/13/96	CARD FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY	
8792	USA	ISSUED	5,547,089	08/20/96	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8651	USA D6	ISSUED	5,549,363	08/27/96	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & WATSCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8745	USA CP	ISSUED	5,558,025	09/24/96	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY	CAR TRUCK BOLSTER BOLT
8911	USA	ISSUED	5,558,238	09/24/96	CARD FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY	
8651	USA D3	ISSUED	5,558,411	09/24/96	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & WATSCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8651	USA D7	ISSUED	5,558,412	09/24/96	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & WATSCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8651	USA D1	ISSUED	5,558,410	09/24/96	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & WATSCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8796	SOFRC	ISSUED	95/8002	09/25/96	CARD INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RAIL CAR AND AN	INTERLOCKING MECHANISM THEREFOR
8746	USA C	ISSUED	5,560,503	10/01/96	CARD LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT

8725	CANAD	ISSUED	2,119,850	10/08/96	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL
8613	AUSAL	ISSUED	670275	10/29/96	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAFT GEAR ASSEMBLY
8794	AUSAL	ISSUED	670521	11/05/96	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY
8766	AUSAL	ISSUED	670714	11/12/96	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR
8745	JAPAN	ISSUED	2581524	11/21/96	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL
8796	USA	ISSUED	5,584,407	12/17/96	CARD INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RY FRT CAR AND AN INTERLOCKING MECHANISM THEREFOR
8651	USA	ISSUED	5,586,812	12/24/96	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & MATSCHKE, SCOTT = INV RAILWAY BRAKING APPARATUS
8891	USA	ISSUED	5,590,797	01/07/97	CARD FRICTION CLUTCH MECHANISM FOR HIGH CAPACITY DRAFT GEAR ASSEMBLY AND METHOD OF RECONDITIONING DRAFT G
8651	USA	ISSUED	5,593,214	01/14/97	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & MATSCHKE, SCOTT = INV RAILWAY BRAKING APPARATUS
8875	SOFRAC	ISSUED	96/5105	03/26/97	CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE
8695	USA	ISSUED	5,617,965	04/08/97	CARD AN INTERLOCKING TYPE MECHANISM FOR A SLACKLESS DRAWBAR ASSEMBLY USED ON A RAILWAY FREIGHT CAR
8758	AUSAL	ISSUED	677285	08/07/97	CARD HIGH CAPACITY DRAFT GEAR ASSEMBLY
8987	SOFRAC	ISSUED	97/0031	09/23/97	CARD A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER
8983	SOFRAC	ISSUED	97/2409	11/26/97	CARD A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR
8224	GERVE	ISSUED	P3609268.1	12/04/97	CARD RAILWAY VEHICLE BRAKE RIGGING SLACK ADJUSTER
8711	EPO	ISSUED	0582035	12/10/97	CARD REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALL PORTION OF AN ARTICULATED BEARING ASSEMBLY
8792	AUSAL	ISSUED	680970	12/18/97	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE ASSEMBLY
8985	USA	ISSUED	5,701,975	12/30/97	CARD RAILWAY VEHICLE BRAKE SYSTEM
8651	USA	ISSUED	5,701,974	12/30/97	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & MATSCHKE, SCOTT = INV RAILWAY BRAKING APPARATUS
8983	USA	ISSUED	5,702,012	12/30/97	CARD A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR
8272	JAPAN	ISSUED	2736054	01/09/98	CARD DRAFT GEAR ASSEMBLY
8987	USA	ISSUED	5,713,261	02/03/98	CARD A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER
8988	SOFRAC	ISSUED	97/3989	02/25/98	CARD AN IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE INTENSIFIER MECHANISM

8986	SOFRC	ISSUED	97/3996	02/25/98	CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY	VEHICLE BRAKE SYSTEM
8951	SOFRC	ISSUED	97/2348	02/25/98	CARD END DESIGN FOR A RAILWAY TYPE FREIGHT CAR	
8783	AUSAL	ISSUED	683498	03/19/98	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR	ASSEMBLY USING A BALL AND RACE ASSEMBLY
8985	SOFRC	ISSUED	97/4586	03/25/98	CARD RAILWAY VEHICLE BRAKE SYSTEM	
8651	USA	ISSUED	5,738,416	06/14/98	CARD MCCABE, THOMAS, FESSLER, CHARLES B. & WATSCHE, SCOTT E. INV	RAILWAY BRAKING APPARATUS
8988	USA	ISSUED	5,746,293	05/05/98	CARD AN IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE	INTENSIFIER MECHANISM

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Case Number	Country	Sub Case	Stat	Patent Number	Issue Date	Clie nt	long:title1	long:title2
7000	USA		ISSUED	4,181,369	01/01/80	LPDW PNEUMATIC/ELECTRO-PNEUMATIC BRAKE	CIRCUITRY FOR	PUSH/PULL TRAIN OPERATION
6626	JAPAN		ISSUED	1009772	08/26/80	LPDW PNEUMATIC-ELECTRIC SELF-LAPPING BRAKE CO NTROL APPARATUS		
7050	USA		ISSUED	4,309,018	01/05/82	LPDW CLAMP-DOWN DEVICE FOR USE IN SECURING A MEMBER IN AN IMACCES SIBLE AREA		
7000	CANAD		ISSUED	1116659	01/19/82	LPDW PNEUMATIC/ELECTRO-PNEUMATIC BRAKE ... CIRCUITRY FOR		PUSH/PULL TRAIN OPERATION
7050	SOFRIC		ISSUED	81/0244	02/24/82	LPDW CLAMP-DOWN DEVICE FOR USE IN SECURING A MEMBER IN AN IMACCES SIBLE AREA		
7050	VENDA		ISSUED	81/0005	03/19/82	LPDW CLAMP-DOWN DEVICE FOR USE IN SECURING A MEMBER IN AN IMACCES SIBLE AREA		
7050	CANAD		ISSUED	1136597	11/30/82	LPDW CLAMP-DOWN DEVICE FOR USE IN SECURING A MEMBER IN AN IMACCES SIBLE AREA		
7000	JAPAN		ISSUED	1210644	06/12/84	LPDW PNEUMATIC/ELECTRO-PNEUMATIC BRAKE ... CIRCUITRY FOR		PUSH/PULL TRAIN OPERATION
8264	USA		ISSUED	4,552,412	11/12/85	LPDW BRAKE PIPE CHARGING CUT-OFF ARRANGEMENT		
8104	USA		ISSUED	4,558,907	12/17/85	LPDW CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED		RELEASE OPERATION
8214	SOFRIC		ISSUED	85/3348	12/24/85	LPDW QUICK RELEASE VALVE ARRANGEMENT		
8214	USA		ISSUED	4,577,910	03/25/86	LPDW QUICK RELEASE VALVE ARRANGEMENT		
8104	VENDA		ISSUED	85/0052	04/23/86	LPDW CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED		RELEASE OPERATION
8248	USA		ISSUED	4,586,755	05/06/86	LPDW RVT BRAKE CONTROL SYS. ARRANGED TO LIMIT MAX. BRK PRESS.		DURING COMB. INDEP. AND AUTOMATIC BRAKE OPERA
8214	VENDA		ISSUED	85/0035	05/30/86	LPDW QUICK RELEASE VALVE ARRANGEMENT		
8104	SOFRIC		ISSUED	85/4720	07/30/86	LPDW CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED		RELEASE OPERATION
8104	TRANS		ISSUED	85/0060	09/26/86	LPDW CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED		RELEASE OPERATION
8214	SOFRIC		ISSUED	85/0057	12/11/86	LPDW QUICK RELEASE VALVE ARRANGEMENT		
8104	SOFRIC		ISSUED	85/0091	12/11/86	LPDW CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED		RELEASE OPERATION

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6214	TRANS	ISSUED	85/0037	03/13/87	LPDM QUICK RELEASE VALVE ARRANGEMENT	
6220	NEWZL	ISSUED	213583	06/24/87	LPDM PISTON ASSEMBLY	
6394	USA	ISSUED	4721515	01/26/88	LPDM CONTROL SYSTEM OF A DUAL CYLINDER TYPE D ENHANCED	
6214	CANAD	ISSUED	1234869	04/05/88	LPDM QUICK RELEASE VALVE ARRANGEMENT	
6392	USA	ISSUED	4,750,787	06/14/88	LPDM RELAY VALVE FOR AN AIR BRAKE SYSTEM	
6104	CANAD	ISSUED	1242232	09/20/88	LPDM CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED	RELEASE OPERATION
6469	USA	ISSUED	4,830,580	05/16/89	LPDM TWO STAGE AIR COMPRESSOR UNIT	
6220	CANAD	ISSUED	1254157	05/16/89	LPDM PISTON ASSEMBLY	
6220	AUSAL	ISSUED	581248	05/26/89	LPDM PISTON ASSEMBLY	
6391	USA	ISSUED	4,836,093	06/06/89	LPDM PISTON ASSEMBLY	
6244	CANAD	ISSUED	125721	06/13/89	LPDM BRAKE PIPE CHARGING CUT-OFF ARRANGEMENT	
6489	SOFRC	ISSUED	89/7261	07/25/90	LPDM DIGITAL AIR BRAKE CONTROL SYSTEM	
6566	USA	ISSUED	4971399	11/20/90	LPDM SYSTEM FOR ASSURING RECHARGE OF BRAKE PIPE	PRESSURE LOCOMOTIVE BRAKE VALVE
6531	USA	ISSUED	4,986,500	01/22/91	LPDM ADJUSTABLE AIR BRAKE HOSE SUPPORT FOR RAILWAY VEHICLES	
6502	SOFRC	ISSUED	90/3254	02/27/91	LPDM BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL	
6531	SOFRC	ISSUED	90/3201	02/27/91	LPDM ADJUSTABLE AIR BRAKE HOSE SUPPORT FOR RAILWAY VEHICLES	
6519	SOFRC	ISSUED	90/3199	02/27/91	LPDM BRAKE ASSURANCE CIRCUIT OPERATIVE IN RES POSE TO A LOW BRAKE PIPE PRESSURE	
6588	USA	ISSUED	5,036,468	07/30/91	LPDM ARRANGEMENT FOR READING AN ABSOLUTE POSITION ENCODER ... POSITION OF BRAKE HANDLE	
6523	USA	ISSUED	0319039	08/13/91	LPDM LOCOMOTIVE BRAKE CONSOLE	
6522	USA	ISSUED	0319423	08/27/91	LPDM LOCOMOTIVE BRAKE CONSOLE	
6582	USA	ISSUED	5,064,251	11/12/91	LPDM ELECTRO-PNEUMATIC AIR BRAKE CONTROL SYSTEM FOR RAILWAY	VEHICLES
6489	ITALY	ISSUED	1231980	01/22/92	LPDM DIGITAL AIR BRAKE CONTROL SYSTEM	
6652	USA	ISSUED	5,083,586	01/28/92	LPDM MTG. ARRANGE FOR CONVA FLUID PRESS. VAL TO A PIPE BRKT. BY A HOLLOW ADAPT MEMBER	

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8587	USA	ISSUED	5,086,641	02/11/92	LPDV ARRANGEMENT FOR DYNAMIC CALIBRATING AN ABSOLUTE POSITION ENCODER
8541	USA	ISSUED	5,096,266	03/17/92	LPDV DUAL-RESPONSE VENT VALVE DEVICE
8622	USA	ISSUED	5,104,203	04/14/92	LPDV ARRANGMT FOR EMULATING A J-TYPE RELAY AIR VALVE USABLE IN A RUT BRAKING SYSTEM
8637	USA	ISSUED	5,106,270	04/21/92	LPDV AIR-COOLED AIR COMPRESSOR
8665	USA	ISSUED	5,129,145	07/14/92	LPDV VALVE RECONDITIONING PROCESS
8521	USA	ISSUED	5,131,612	07/21/92	LPDV ARRANGMT FOR POSITIVELY DETERMINING ACTU AL SOUNDING OF WARNING HORN ON RVT VEHIC
8489	AUSAL	ISSUED	620,442	08/20/92	LPDV DIGITAL AIR BRAKE CONTROL SYSTEM
8642	USA	ISSUED	5,146,939	09/15/92	LPDV VALVE BUSHING CLEANING DEVICE & METHOD OF CLEANING VALVE BUSHINGS
8214	JAPAN	ISSUED	1716111	11/27/92	LPDV QUICK RELEASE VALVE ARRANGEMENT
8101	JAPAN	ISSUED	1729861	01/29/93	LPDV CONTROL VALVE DEVICE ARRANGED FOR DIRECT OR GRADUATED RELEASE OPERATION
8244	JAPAN	ISSUED	1729859	01/29/93	LPDV BRAKE PIPE CHARGING CUT-OFF ARRANGEMENT
8639	USA	ISSUED	5,192,118	03/09/93	LPDV ELECTRO-PNEUMATIC LOCOMOTIVE BRAKE CONTROL SYSTEM
8489	UNIKM	ISSUED	2224322	04/28/93	LPDV DIGITAL AIR BRAKE CONTROL SYSTEM
8706	USA	ISSUED	5,211,451	05/18/93	LPDV ADJUSTABLE REGULATING DEVICE FOR A RAILWAY LOCOMOTIVE BRAKE VALVE APPARATUS
8678	USA	ISSUED	5,213,749	05/25/93	LPDV A METHOD OF FORMING A RUBBER SEAL HAVING A METALLIC INSERT & SEAL SO PRODUCED
8644	USA	ISSUED	5,222,788	06/29/93	LPDV MICROPROCESSOR BASED ELECTRO-PNEU. LOCOMOTIVE BRAKE CONTROL SYSTEM HAVING BRAKE ASSURANCE CIRCUIT
8696	USA	ISSUED	5,246,030	09/21/93	LPDV SAFETY VALVE ARRANGEMENT
8678	USA	ISSUED	5,303,937	04/19/94	LPDV A METHOD OF FORMING A RUBBER SEAL HAVING A METALLIC INSERT & SEAL SO PRODUCED
8489	FRANC	ISSUED	2645818	05/06/94	LPDV DIGITAL AIR BRAKE CONTROL SYSTEM
8489	AUSAL	ISSUED	669,535	10/18/94	LPDV DIGITAL AIR BRAKE CONTROL SYSTEM
8502	CANAD	ISSUED	2014423	11/01/94	LPDV BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL
8625	SOFRC	ISSUED	93/2880	11/30/94	LPDV AUTOMATIC STOP IDENTIFICATION AND ADDRESS DECODING SYSTEM

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8489	JAPAN	ISSUED	06-24924	01/23/95 LPDM DIGITAL AIR BRAKE CONTROL SYSTEM	
8705	USA	ISSUED	5,385,392	01/31/95 LPDM Recoverable and a Direct Release and Non-Recoverable	Ball-Off Logic Arrangement for use on a RR ve
8590	USA	ISSUED	5,415,465	05/16/95 LPDM APPARATUS & METHOD OF BAILING OFF THE BRAKE CYLINDER	PRESSURE ON A LOCOMOTIVE CONSIST.
8626	USA	ISSUED	5,428,538	06/27/95 LPDM SANDING CONTROL SYSTEM FOR RAILWAY VEHICLES	
8519	JAPAN	ISSUED	1956479	07/28/95 LPDM BRAKE ASSURANCE CIRCUIT OPERATIVE IN RES PONSE TO A LOW BRAK E PIPE PRESSURE	
8735	USA	ISSUED	5,439,276	08/08/95 LPDM TAMPER-RESISTANT INDEPENDENT BRAKE VALVE DEVICE FOR	LOCOMOTIVE AIR BRAKE EQUIPMENT
8727	USA	ISSUED	5,467,246	11/14/95 LPDM ARRANGEMENT FOR EMULATING AN H-TYPE RELAY AIR VALVE WHICH	IS UTILIZED IN A RAILWAY BRAKING SYSTEM
8248	JAPAN	ISSUED	2003892	12/20/95 LPDM RUP BRAKE CONTROL SYS ARRANGED TO LIMIT MAX. BRK PRESS	DURING COMB. INDEP. AND AUTOMATIC BRAKE OPERA
8489	CANAD	ISSUED	1,337,947	01/16/96 LPDM DIGITAL AIR BRAKE CONTROL SYSTEM	
8625	USA	ISSUED	5,491,830	02/13/96 LPDM AUTOMATIC SLOT IDENTIFICATION AND ADDRESS DECODING SYSTEM	
8696	CANAD	ISSUED	2,109,381	03/12/96 LPDM SAFETY VALVE ARRANGEMENT	
8704	JAPAN	ISSUED	2503195	03/13/96 LPDM ARRANGEMENT FOR ENHANCING THE BAIL-OFF FUNCTION OF BRAKE	CYLINDER PRESSURES ON A RAILROAD LOCOMOTIVE
8625	AUSAL	ISSUED	664889	03/26/96 LPDM AUTOMATIC SLOT IDENTIFICATION AND ADDRESS DECODING SYSTEM	
8816	USA	ISSUED	5,503,469	04/02/96 LPDM APPARATUS TO PREVENT INADVERTENT DISCHARGE AND (WRAPPING OF	PIPE PRESS. IN AN ELECTRO-PNEU LOCO BRAKE C
8811	USA	ISSUED	5,538,331	07/23/96 LPDM APPLICATIONS OF EPIC(R) 3102 BRAKE EQUIPMENT TO ELECTRO-	PNEUMATIC SYSTEMS
8857	USA	ISSUED	5,544,419	08/13/96 LPDM DIPSTICK ASSEMBLY	
8502	JAPAN	ISSUED	2106812	11/06/96 LPDM BRAKE VALVE DEVICE ARRANGED FOR ELECTRO-PNEUMATIC CONTROL	
8725	JAPAN	ISSUED	2576834	11/07/96 LPDM CHARGING CUT-OFF VALVE ARRANGEMENT FOR MICROPROCESSOR-BASED	ELECTROPNEUMATIC LOCOMOTIVE BRAKE CONTROL SYS
8880	USA	ISSUED	5,592,384	01/07/97 LPDM RAILWAY BRAKE SYSTEM TESTER	
8907	USA	ISSUED	5,621,657	04/15/97 LPDM AUTOMATIC DETECTION OF AIR FLOW TRANSDUCER TYPE UNDER	SOFTWARE CONTROL
8939	USA	ISSUED	5,630,354	05/20/97 LPDM EXTENDED LIFE BRAKE CYLINDER HOLDER	
8992	USA	ISSUED	5,634,391	06/03/97 LPDM INERT PLASTIC COATED FLEXIBLE TYPE DIAPHRAGM FOR	APPLICATION IN A SANITARY TYPE PUMP
8799	USA	ISSUED	5,644,461	07/01/97 LPDM HIGH VOLTAGE D-C CURRENT LIMITER	

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PATENT
REEL: 012280 FRAME: 0361

8701	JAPAN	ISSUED	2670425	07/04/97	LPDM MICROPROCESSOR-BASED ELECTRO-PNEUMATIC LOCOMOTIVE BRAKE	CONTROL SYSTEM HAVING PNEUMATIC BACKUP BRAKE
COMBICOR						
8590	JAPAN	ISSUED	2690220	08/29/97	LPDM APPARATUS & METHOD OF BAILING OFF THE BRAKE CYLINDER	PRESSURE ON A LOCOMOTIVE CONSIST.
8991	USA	ISSUED	5,687,633	11/18/97	LPDM IMPROVED INSERT TYPE MEMBER FOR USE IN A FLEXIBLE TYPE PUMP DIAPHRAGM	
9013	USA	ISSUED	5,689,893	11/25/97	LPDM DESICCANT CANISTER WITH POSITIONING BORE	
8701	CANADA	ISSUED	2,105,152	12/02/97	LPDM MICROPROCESSOR-BASED ELECTRO-PNEUMATIC LOCOMOTIVE BRAKE	CONTROL SYSTEM HAVING PNEUMATIC BACKUP BRAKE
CONTROL						
8741	USA	ISSUED	5,704,770	07/06/98	LPDM AIR PASSAGE INSERT FOR DIL FILL SPOUT	
8905	USA	ISSUED	5,711,206	01/27/98	LPDM PISTON AND CYLINDER ASSEMBLY FOR MINIMIZING WATER BLOW-BY	IN AN AIR COMPRESSOR
8847	JAPAN	ISSUED	2742525	01/30/98	LPDM APPARATUS FOR INTERLOCKING THROTTLE, DYNAMIC BRAKE AND REVERSER HANDLES ON A CONTROL STAND OF A RAILWAY	
Y LOCOMOTIVE						
8853	JAPAN	ISSUED	2742526	01/30/98	LPDM APPARATUS FOR INTERLOCKING REVERSER HANDLE ON A CONTROL STAND OF A RAILWAY LOCOMOTIVE	
9016	USA	ISSUED	5,715,621	02/10/98	LPDM REGENERATIVE DESICCANT AIR DRYER	
9014	SOFRAC	ISSUED	97/3997	02/25/98	LPDM Molded Rubber Val Seal for use in Predetermined type Valves such as, a Ck Val in a Regenerative Desiccant	
Air Dryer						
9013	SOFRAC	ISSUED	97/4626	03/25/98	LPDM DESICCANT CANISTER WITH POSITIONING BORE	
8982	SOFRAC	ISSUED	97/4691	03/25/98	LPDM THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A MULTIPLE STAGE COMPRESSOR AND METHOD	
8812	JAPAN	ISSUED	2763284	03/27/98	LPDM SOFTWARE NULLIFICATION OF TRANSDUCER INDUCED OFFSET	ERRORS WITHIN A FLOW RATE MEASUREMENT SYSTEM
8816	JAPAN	ISSUED	2766631	04/03/98	LPDM APPARATUS TO PREVENT INADVERTENT DISCHARGE AND TRAPPING OF PIPE PRESS. IN AN ELECTRO-PNEU. LOCO. BRAKE C	
CONTROL SYSTEM						
8857	CANADA	ISSUED	2,150,882	06/09/98	LPDM DIPSTICK ASSEMBLY	

Case Number	Count	Sub	Stat	Patent Number	Issue Date	Client	long:title1	long:title2
6821	USA	1	ISSUED	4,175,792	11/27/79	NAFV CONTINUAL QUICK SERVICE VALVE DEVICE		
6975	SOFRC		ISSUED	79/1232	03/26/80	NAFV RAILWAY VEHICLE BRAKE APPARATUS ARRANGED TO REDUCE EMERGENCY RESERVOIR VOLUME		
6982	SOFRC		ISSUED	79/1200	03/26/80	NAFV NEW POPPET VALVE TYPE BRAKE CONTROL VALVE DEVICE		
7005	SOFRC		ISSUED	79/3204	06/25/80	NAFV IMPROVED ROSE COUPLING		
6986	SOFRC		ISSUED	79/3203	06/25/80	NAFV VARIABLE LOAD VALVE DEVICE		
7005	USA		ISSUED	4,215,881	08/05/80	NAFV IMPROVED ROSE COUPLING		
7020	SOFRC		ISSUED	79/4008	08/27/80	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED B RAKE CYLINDER AND R RESERVOIR		
7020	USA		ISSUED	4,225,193	09/30/80	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED B RAKE CYLINDER AND R RESERVOIR		
7023	USA		ISSUED	RE30408	09/30/80	NAFV BRAKE APPARATUS WITH COMBINED BRAKE CYLINDER AND RESERVOIR		
6986	USA		ISSUED	4,235,477	11/25/80	NAFV VARIABLE LOAD VALVE DEVICE		
7027	SOFRC		ISSUED	80/3282	05/27/81	NAFV IMPROVED CORE FOR FORMING PASSAGEWAYS IN CASTINGS		
6982	CANAD		ISSUED	1111466	10/27/81	NAFV NEW POPPET VALVE TYPE BRAKE CONTROL VALVE DEVICE		
6975	CANAD		ISSUED	1111465	10/27/81	NAFV RAILWAY VEHICLE BRAKE APPARATUS ARRANGED TO REDUCE EMERGENCY RESERVOIR VOLUME		
7005	CANAD		ISSUED	1115308	12/29/81	NAFV IMPROVED ROSE COUPLING		
7020	CANAD		ISSUED	1116660	01/19/82	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED B RAKE CYLINDER AND R RESERVOIR		
8123	TRANS		ISSUED	83/0042	04/28/82	NAFV UNIVERSAL GASKET		
8006	VENDA		ISSUED	81/0071	06/04/82	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED B RAKE CYLINDER AND R RESERVOIR DEVICE		
7027	VENDA		ISSUED	80/0545	06/12/82	NAFV IMPROVED CORE FOR FORMING PASSAGEWAYS IN CASTINGS		
8006	SOFRC		ISSUED	81/3958	06/30/82	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED B RAKE CYLINDER AND R RESERVOIR DEVICE		

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8006	USA	ISSUED	4,339,155	07/13/82	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
7100	SOFRC	ISSUED	81/5775	09/29/82	MAFV INSHOT VALVE ARRANGEMENT RAILWAY BRAKE APPARATUS, BRAKE CYLINDER DEVICE
7098	USA	ISSUED	RE31059	10/19/82	MAFV EMERGENCY PORTION FOR A BRAKE CONTROL VALVE
7135	VENDA	ISSUED	82/0070	06/24/83	MAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
7144	VENDA	ISSUED	82/0074	06/24/83	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
7135	SOFRC	ISSUED	82/5862	06/29/83	MAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
7144	SOFRC	ISSUED	82/6590	07/27/83	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
7144	USA	ISSUED	4,405,182	09/20/83	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
7081	CANAD	ISSUED	1154386	09/27/83	MAFV BRAKE CYLINDER DEVICE
7080	CANAD	ISSUED	1154387	09/27/83	MAFV BRAKE CYLINDER DEVICE
7135	USA	ISSUED	4,418,799	12/06/83	MAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
7144	BOPHU	ISSUED	82/0127	12/28/83	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
8123	VENDA	ISSUED	83/0031	01/13/84	MAFV UNIVERSAL GASKET
8123	SOFRC	ISSUED	83/3265	01/25/84	MAFV UNIVERSAL GASKET
7144	TRANS	ISSUED	82/0079	02/09/84	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
7135	TRANS	ISSUED	82/0077	02/09/84	MAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
6975	JAPAN	ISSUED	1195608	03/12/84	MAFV RAILWAY VEHICLE BRAKE APPARATUS ARRANGED TO REDUCE EMERGENCY RESERVOIR VOLUME
7135	BOPHU	ISSUED	82/0121	04/13/84	MAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
8123	BOPHU	ISSUED	83/0050	05/24/84	MAFV UNIVERSAL GASKET
8150	USA	ISSUED	4,456,219	06/26/84	MAFV SPRING LOCKING HANDLE MECHANISM
8101	USA	ISSUED	4,467,605	08/28/84	MAFV HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER
7100	CANAD	ISSUED	1178992	12/04/84	MAFV INSHOT VALVE ARRANGEMENT RAILWAY BRAKE APPARATUS, BRAKE CYLINDER DEVICE
8006	CANAD	ISSUED	1178993	12/04/84	MAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE

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5982	JAPAN	ISSUED	1247151	01/16/85	NAFV NEW POPPET VALVE TYPE BRAKE CONTROL VALVE DEVICE
8170	SOFRC	ISSUED	84/4369	03/27/85	NAFV EMPTY/LOAD BRAKE CONTROL ARRANGEMENT
8190	VENDA	ISSUED	84/0054	06/21/85	NAFV EMPTY/LOAD BRAKE CONTROL ARRANGEMENT
8179	SOFRC	ISSUED	84/9082	07/31/85	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE
8179	VENDA	ISSUED	84/0109	08/30/85	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE
8190	TRANS	ISSUED	84/0055	09/02/85	NAFV EMPTY/LOAD BRAKE CONTROL ARRANGEMENT
6986	CANAD	ISSUED	1193300	09/10/85	NAFV VARIABLE LOAD VALVE DEVICE
8110	SOFRC	ISSUED	85/0871	10/30/85	NAFV AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING CAPABILITIES OF A SEAL
8110	VENDA	ISSUED	85/0010	12/06/85	NAFV AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING CAPABILITIES OF A SEAL
8179	USA	ISSUED	4,557,181	12/10/85	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE
7135	CANAD	ISSUED	1198758	12/31/85	NAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
8110	TRANS	ISSUED	85/0012	02/28/86	NAFV AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING CAPABILITIES OF A SEAL
8110	USA	ISSUED	4,577,870	03/25/86	NAFV AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING CAPABILITIES OF A SEAL
8259	USA	ISSUED	4,583,790	04/22/86	NAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM
7135	AUSAL	ISSUED	569521	06/10/86	NAFV IMPROVEMENTS IN COMBINED AIR RESERVOIR/BRAKE CYLINDER DEVICE
8179	TRANS	ISSUED	84/0118	07/04/86	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE
8178	SOFRC	ISSUED	85/8722	07/30/86	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON
8259	SOFRC	ISSUED	85/9407	08/27/86	NAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM
8307	USA	ISSUED	4,613,016	09/23/86	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY
8259	VENDA	ISSUED	85/0108	10/31/86	NAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM
7144	CANAD	ISSUED	1213634	11/06/86	NAFV CONTROL VALVE ARRANGEMENT FOR COMBINED BRAKE CYLINDER AND AIR RESERVOIR DEVICE
8179	BOPHU	ISSUED	84/0181	12/11/86	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE

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8178	VENDA	ISSUED	85/0093	12/23/86	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
6986	JAPAN	ISSUED	1364209	02/09/87	NAFV VARIABLE LOAD VALVE DEVICE	
8307	SOFRIC	ISSUED	86/5988	03/25/87	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8259	TRANS	ISSUED	85/0114	05/01/87	NAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8178	TRANS	ISSUED	85/0106	05/01/87	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8307	VENDA	ISSUED	86/0054	05/29/87	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8190	BOPHU	ISSUED	86/0081	06/11/87	NAFV EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
8190	CANAD	ISSUED	1225112	08/06/87	NAFV EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
6829	USA	ISSUED	4,690,463	09/01/87	NAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8307	TRANS	ISSUED	86/0061	10/12/87	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8307	BOPHU	ISSUED	86/0094	11/19/87	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
6829	SOFRIC	ISSUED	87/2764	11/25/87	NAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
6829	VENDA	ISSUED	87/0038	02/26/88	NAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8259	BOPHU	ISSUED	85/0179	03/01/88	NAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8110	BOPHU	ISSUED	85/0016	03/01/88	NAFV AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
8307	HEUZI	ISSUED	217149	04/18/88	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8396	SOFRIC	ISSUED	87/6327	04/27/88	NAFV FRT BRK CONTROL VALV HAVING ENERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVIDE ACCELER BRK
8396	USA	ISSUED	4,744,609	05/17/88	NAFV FRT BRK CONTROL VALV HAVING ENERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVIDE ACCELER BRK
8179	CANAD	ISSUED	1237749	06/07/88	NAFV IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8150	CANAD	ISSUED	1238889	07/05/88	NAFV SPRING LOCKING HANDLE MECHANISM	
8178	BOPHU	ISSUED	85/0160	07/14/88	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
8410	SOFRIC	ISSUED	87/9026	07/27/88	NAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSE MBL Y	
8396	VENDA	ISSUED	87/0086	08/26/88	NAFV FRT BRK CONTROL VALV HAVING ENERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVIDE ACCELER BRK

APPL FUNCTION

8389	USA	ISSUED	4,770,472	09/13/88	MAFW FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE VALVE...FUNCTION
8376	USA	ISSUED	4,771,868	09/20/88	MAFW HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RAY CAR BRAKE ASSEMBLY
8455	USA	ISSUED	4,776,642	10/11/88	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING C IMPROVED QUICK SERVICE FUNCTION
8389	SOFRIC	ISSUED	88/1846	10/26/88	MAFW FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE VALVE...FUNCTION
8454	USA	ISSUED	4,783,124	11/08/88	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION
8415	USA	ISSUED	4,786,117	11/22/88	MAFW VARIABLE LOAD VALVE
8410	USA	ISSUED	4,793,446	12/27/88	MAFW SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY
8396	BOPNU	ISSUED	87/0147	01/09/89	MAFW FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE & GRADUATING VALV ARRANGED PROVIDE ACCELER BRK
8396	TRANS	ISSUED	87/0086	02/09/89	MAFW FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE & GRADUATING VALV ARRANGED PROVIDE ACCELER BRK
8415	SOFRIC	ISSUED	88/4948	02/22/89	MAFW VARIABLE LOAD VALVE
8421	SOFRIC	ISSUED	88/5228	03/29/89	MAFW TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE TRUCK-MOUNTED BRAKE ASSEMBLY
8451	USA	ISSUED	4,819,993	04/11/89	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION
8421	USA	ISSUED	4,830,148	05/16/89	MAFW TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE TRUCK-MOUNTED BRAKE ASSEMBLY
8453	USA	ISSUED	4,830,438	05/16/89	MAFW FREIGHT BRAKE EMERGENCY VALVE
8307	AUSAL	ISSUED	764047	06/08/89	MAFW SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY
8415	BOPNU	ISSUED	88/0100	06/09/89	MAFW VARIABLE LOAD VALVE
8259	CANAD	ISSUED	1255720	06/13/89	MAFW IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM
8178	CANAD	ISSUED	1257379	07/18/89	MAFW CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON
8468	USA	ISSUED	4,850,654	07/25/89	MAFW FREIGHT BRAKE EMERGENCY VALVE
8454	SOFRIC	ISSUED	88/8255	07/25/89	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION
8451	SOFRIC	ISSUED	88/8296	07/26/89	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION
8455	SOFRIC	ISSUED	88/8290	07/26/89	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION

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6629	ARGENT	ISSUED	239226	07/31/89	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
6629	TRANS	ISSUED	87/0040	08/03/89	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8259	CHINA	ISSUED	85109613.1	08/23/89	MAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
8415	VENDA	ISSUED	88/0067	09/21/89	MAFV VARIABLE LOAD VALVE	
8351	USA	ISSUED	4,875,739	10/24/89	MAFV INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
8415	TRANS	ISSUED	88/0064	11/16/89	MAFV VARIABLE LOAD VALVE	
6629	UNIKN	ISSUED	2189299	11/29/89	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8506	USA	ISSUED	4,887,516	12/19/89	MAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8454	VENDA	ISSUED	88/0110	01/08/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	VENDA	ISSUED	88/0109	01/19/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SE RVICE FUNCTION	SERVICE FUNCTION
8451	VENDA	ISSUED	88/0108	01/19/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8451	TRANS	ISSUED	88/0117	02/22/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8470	USA	ISSUED	4,915,018	04/10/90	MAFV IMPROVED DIAPHRAGM PISTON ASSEMBLY	
8451	BOPHU	ISSUED	88/0184	03/01/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	BOPHU	ISSUED	88/0183	03/01/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SE RVICE FUNCTION	SERVICE FUNCTION
8454	BOPHU	ISSUED	88/0182	03/01/90	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8453	SOFRC	ISSUED	89/5980	05/30/90	MAFV FREIGHT BRAKE EMERGENCY VALVE	
8307	CANAD	ISSUED	1270211	06/12/90	MAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8300	USA	ISSUED	4,951,554	08/28/90	MAFV LOW STRESS DIAPHRAGM	
6629	BOPHU	ISSUED	87/0058	09/05/90	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8396	AUSAL	ISSUED	597,103	09/18/90	MAFV FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE &	GRADUATING VALV ARRANGED PROVIDE ACCELER BRK
7091	JAPAN	ISSUED	1582983	10/22/90	MAFV HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER	
8351	SOFRC	ISSUED	90/0338	10/31/90	MAFV INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	

6522	CANAD	ISSUED	1,276,211	11/13/90	MAFV EMPTY-LOAD CHANGEOVER APPARATUS	
6589	AUSAL	ISSUED	600,104	11/20/90	MAFV FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE VALVE...FUNCTION	
6410	AUSAL	ISSUED	600,538	12/03/90	MAFV SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
6961	USA	ISSUED	4,974,911	12/04/90	MAFV VENT VALVE DEVICE	
6535	USA	ISSUED	4,974,910	12/04/90	MAFV FREIGHT BRAKE CONTROL VALVE HAVING IMPROVED QUICK SERVICE FUNCTION	
6961	SOFRIC	ISSUED	90/3963	03/27/91	MAFV VENT VALVE DEVICE	
6532	USA	ISSUED	5,005,915	04/09/91	MAFV EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
6829	CANAD	ISSUED	1283149	04/16/91	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE APPLICATION FUNCTION	
6630	USA	ISSUED	5,044,698	09/03/91	MAFV IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAP LEAKAGE PROTECTION	
6454	TRANS	ISSUED	88/0120	10/29/91	MAFV FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION	
6616	USA	ISSUED	5,069,312	12/03/91	MAFV HANDBRAKE FOR SINGLE-CYLINDER TRUCK-MOUNTED RAILWAY CAR BRAKE	
6656	USA	ISSUED	5,071,198	12/10/91	MAFV EMER. VAL FOR ABD FR. BRAKE CONTROL VALVE DEVICE	
6633	USA	ISSUED	5,072,913	12/17/91	MAFV SPRING LOADED LOCKING HANDLE FOR ANGLE COCK OR THE LIKE	
6421	AUSAL	ISSUED	613648	01/17/92	MAFV RUSS. TYPE BRAKE BEAM FOR RAILWAY VEHICL TRUCK-MOUNTED BRAKE ASSEMBLY	
6178	JAPAN	ISSUED	1637432	01/31/92	MAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM TYPE PISTON	
6619	USA	ISSUED	5,100,207	03/31/92	MAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
6593	USA	ISSUED	5,106,168	04/21/92	MAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
6396	CANAD	ISSUED	1300208	05/05/92	MAFV FRT BRK CONTROL VALV HAVING EMERG PISTON SLIDE VALVE & GRADUATING VALV ARRANGED PROVIDE ACCELER BRK	
6389	CANAD	ISSUED	1300209	05/05/92	MAFV FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE VALVE...FUNCTION	
6259	JAPAN	ISSUED	001904780	05/13/92	MAFV IMPROVED EMPTY/LOAD BRAKE CONTROL SYSTEM	
6661	USA	ISSUED	5,113,694	05/19/92	MAFV MODIFIED PRESS. REGULATOR VAL FOR SINGLE CAR TESTING DEVICE	
6374	CANAD	ISSUED	1301078	05/19/92	MAFV HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RVT CAR BRAKE ASSEMBLY	

8410	CANAD	ISSUED	1301079	05/19/92	MAFW SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8110	JAPAN	ISSUED	1909081	05/26/92	MAFW AN APPARATUS FOR AND A METHOD OF IMPROVING THE SEALING	CAPABILITIES OF A SEAL
8607	USA	ISSUED	5,118,166	06/02/92	MAFW QUICK SER. FUNCTION FOR RLY. FREIGHT BRAKE CONTROL VALVE	DEVICE
8374	BRAZL	ISSUED	8706703-0	06/30/92	MAFW HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RLY	CAR BRAKE ASSEMBLY
8190	JAPAN	ISSUED	1679851	07/13/92	MAFW EMPTY/LOAD BRAKE CONTROL ARRANGEMENT	
8632	USA	ISSUED	5,131,667	07/21/92	MAFW HOSE COUPLING CASSET	
8415	CANAD	ISSUED	1305740	07/28/92	MAFW VARIABLE LOAD VALVE	
8829	MEXIC	ISSUED	164579	09/03/92	MAFW FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8389	BRAZL	ISSUED	8601207	09/29/92	MAFW FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE	VALVE...FUNCTION
8415	BRAZL	ISSUED	8803450	11/24/92	MAFW VARIABLE LOAD VALVE	
8410	BRAZL	ISSUED	8706702-1	11/24/92	MAFW SINGLE CYLINDER TRUCK MOUNTED BRAKE ASSEMBLY	
8659	USA	ISSUED	5,165,962	11/24/92	MAFW MASKING FILM FOR COATING PROCESS	
8532	SOFRC	ISSUED	91/1245A	12/30/92	MAFW EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8630	SOFRC	ISSUED	91/6050	12/30/92	MAFW IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAP LEAKAGE	PROTECTION
8179	JAPAN	ISSUED	1729847	01/29/93	MAFW IMPROVED BRAKE CYLINDER/AIR RESERVOIR DEVICE	
8351	AUSAL	ISSUED	627535	01/29/93	MAFW INDEPENDENT CONTINUAL QUICK SERVICE VALVE DEVICE	
8454	CANAD	ISSUED	1313391	02/02/93	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8455	CANAD	ISSUED	1313392	02/02/93	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK SERVICE FUNCTION	
8451	CANAD	ISSUED	1313390	02/02/93	MAFW FREIGHT BRAKE CONTROL VALVE DEVICE HAVING IMPROVED QUICK	SERVICE FUNCTION
8396	JAPAN	ISSUED	1953405	02/12/93	MAFW FRT BRK CONTROL VALV HAVING ENERG PISTON SLIDE VALVE &	GRADUATING VALV ADJUSTED PROVIDE ACCELER BRK
8374	JAPAN	ISSUED	1755853	04/23/93	MAFW HANDBRAKE MECHANISM FOR SINGLE CYLINDER TRUCK MOUNTED RLY	CAR BRAKE ASSEMBLY
8645	USA	ISSUED	5,207,482	05/04/93	MAFW VENT VALVE DEVICE HAVING DISABLING MEANS	
8564	USA	ISSUED	5,213,397	05/25/93	MAFW FREIGHT BRAKE CONTROL VALVE FOR RAILWAY CAR.	

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8682	USA	ISSUED	5, 220, 863	06/22/93	NAFV CONICAL DIAPHRAGM AND METHOD OF MAKING	
8643	USA	ISSUED	5, 224, 994	07/06/93	NAFV APPARATUS & METHOD FOR LIQUID TREATMENT OF ARTICLE SURFACES	
8600	USA	ISSUED	5, 228, 648	07/20/93	NAFV RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
6829	INDIA	ISSUED	169289	09/18/93	NAFV FRT BRAKE CONTROL VALVE	APPLICATION FUNCTION
8421	CANAD	ISSUED	1, 322, 729	10/05/93	NAFV TRUSS-TYPE BRAKE BEAM FOR RAILWAY VEHICLE TRUCK-MOUNTED BRAKE ASSEMBLY	
8453	CANAD	ISSUED	1, 323, 063	10/12/93	NAFV FREIGHT BRAKE EMERGENCY VALVE	
8506	CANAD	ISSUED	1, 323, 062	10/12/93	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8421-M	BRAZL	ISSUED	8803666	11/30/93	NAFV	
8470	CANAD	ISSUED	1, 324, 809	11/30/93	NAFV IMPROVED DIAPHRAGM PISTON ASSEMBLY	
8677	USA	ISSUED	5, 269, 595	12/14/93	NAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8630	AUSAL	ISSUED	641272	01/17/94	NAFV IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAP LEAKAGE	PROTECTION
8600	SOTRC	ISSUED	93/2917	01/26/94	NAFV RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8702	USA	ISSUED	5, 293, 777	03/15/94	NAFV WINGED ASSEMBLY FOR AIR BRAKE VALVE TEST FIXTURE	
8716	USA	ISSUED	5, 303, 987	04/19/94	NAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8694	USA	ISSUED	5, 326, 159	07/05/94	NAFV QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL	VALVE DEVICE
8692	USA	ISSUED	5, 333, 941	08/02/94	NAFV HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE
8506	BRAZL	ISSUED	8904266-2	08/30/94	NAFV CLAMPING ARRANGEMENT FOR DIAPHRAGM PISTON ASSEMBLY	
8714	USA	ISSUED	5, 350, 222	09/27/94	NAFV AUXILIARY STABILIZER VALVE FOR VENT VALVE	
8351	BRAZL	ISSUED	9000169-9	10/25/94	NAFV INDEPENDENT CONTINUUAL QUICK SERVICE VALVE DEVICE	
8332	AUSAL	ISSUED	650862	10/25/94	NAFV EMPTY LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8351	CANAD	ISSUED	2, 005, 295	11/08/94	NAFV INDEPENDENT CONTINUUAL QUICK SERVICE VALVE DEVICE	
8737	USA	ISSUED	5, 393, 129	02/28/95	NAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	

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8692	SOFRC	ISSUED	93/7828	04/26/95	MAFV HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE
8739	USA	ISSUED	5,417,143	05/23/95	MAFV LOCK-OUT MECHANISM FOR EMPTY/LOW CHANGEOVER VALVE	
8755	USA	ISSUED	5,429,426	07/04/95	MAFV BRAKE CYLINDER PRESSURE RELAY VALVE FOR RAILROAD	FREIGHT CAR
8737	SOFRC	ISSUED	94/4300	07/26/95	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8681	USA	ISSUED	5,437,219	08/01/95	MAFV LOW STRESS CONICAL TYPE DIAPHRAGM	
6829	JAPAN	ISSUED	1998162	08/10/95	MAFV FRT BRAKE CONTROL VALVE...PISTON SLIDE VALVE...BRAKE	APPLICATION FUNCTION
8600	AUSAL	ISSUED	658754	08/15/95	MAFV RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8787	USA	ISSUED	5,451,099	09/19/95	MAFV RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8788	USA	ISSUED	5,450,782	09/19/95	MAFV VIBRATION DESENSITIZING PISTON WEAR RING FOR RAILROAD CAR	CONTROL VALVE
8748	USA	ISSUED	5,466,105	11/14/95	MAFV FASTENER ASSEMBLY FOR INSTALLING VALVE DEVICES AND THE LIKE	
8694	AUSAL	ISSUED	662,264	12/12/95	MAFV QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL	VALVE DEVICE
8754	USA	ISSUED	5,480,218	01/02/96	MAFV RAILWAY BRAKE PIPE WITH ACCESS PORTS	
8737	AUSAL	ISSUED	663443	01/23/96	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8841	USA	ISSUED	5,492,203	02/20/96	MAFV RAILROAD CAR BRAKE CYLINDER PISTON TRAVEL INDICATOR AND	HOIST THEREFOR
8747	SOFRC	ISSUED	95/2063	02/28/96	MAFV IMBEDDED ELECTRICAL CONNECTOR	
8810	USA	ISSUED	5,501,512	03/26/96	MAFV SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANS-	DUERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE CON-
8787	SOFRC	ISSUED	95/3929	03/27/96	MAFV RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8677	CANAD	ISSUED	2,090,307	04/02/96	MAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8813	USA	ISSUED	5,503,467	04/02/96	MAFV PNEUMATIC EMERGENCY BACKUP FOR ELECTRO-PNEUMATIC FREIGHT	BRAKE
8809	USA	ISSUED	5,503,011	04/02/96	MAFV TEST CONNECTOR FOR AUTOMATIC TEST DEVICE	
8786	USA	ISSUED	5,509,727	04/23/96	MAFV Railway Automatic Brake Control Valve Test Unit	
8809	SOFRC	ISSUED	95/4705	04/24/96	MAFV TEST CONNECTOR FOR AUTOMATIC TEST DEVICE	
8786	SOFRC	ISSUED	95/3512	04/24/96	MAFV Railway Automatic Brake Control Valve Test Unit	

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8772	USA	ISSUED	5,518,304	05/21/96	MAFV FILTER ARRANGEMENT AND MOUNTING IN RAILWAY BRAKE PIPE	BRACKET.
8789	ARGENT	ISSUED	2,49,654	05/24/96	MAFV FREIGHT BRAKE CONTROL VALVE HAVING EMERGENCY PISTON SLIDE VALVE...FUNCTION	
8739	AUSAL	ISSUED	6,664,38	05/28/96	MAFV LOCK-OUT MECHANISM FOR EMPTY/LOAD CHANGEOVER VALVE	
8692	AUSAL	ISSUED	6,664,08	05/28/96	MAFV HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE
8630	BRAZL	ISSUED	9,103,727-1	05/28/96	MAFV IMPROVED FREIGHT BRAKE CONTROL VALVE HAVING LAP LEAKAGE PROTECTION	
8677	JAPAN	ISSUED	2,064,957	06/24/96	MAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8752	SOFRC	ISSUED	95/6931	06/26/96	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8813	SOFRC	ISSUED	95/7996	06/26/96	MAFV PNEUMATIC EMERGENCY BACKUP FOR ELECTRO-PNEUMATIC FREIGHT BRAKE	
8751	SOFRC	ISSUED	95/7080	06/26/96	MAFV ELECTRIC BRAKE CONTROL SYSTEM AND METHOD FOR RAILROAD CAR	
8789	USA	ISSUED	5,538,332	07/23/96	MAFV VIBRATION INSULATING MEMBERS FOR PISTON VALVE ASSEMBLY	
8829	USA	ISSUED	5,544,854	08/13/96	MAFV REMOTE CONTROL OF CUT-OUT COCK	
8751	USA	ISSUED	5,551,765	09/03/96	MAFV ELECTRIC BRAKE CONTROL SYSTEM AND METHOD FOR RAILROAD CAR	
8718	JAPAN	ISSUED	2,564,100	09/19/96	MAFV EMPTY/LOAD CHANGEOVER VALVE FOR RAILWAY CAR	
8885	USA	ISSUED	5,559,281	09/24/96	MAFV TREVOR A. SCOTT - ERIC G. SMITH - ULF STAMMER - U. THOMAS DIGNIED (8 INVENTORS)	
8861	USA	ISSUED	5,564,794	10/15/96	MAFV TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGULATING VALVE THEREFOR	
8885	SOFRC	ISSUED	96/0335	10/30/96	MAFV TREVOR A. SCOTT - ERIC G. SMITH - ULF STAMMER - U. THOMAS DIGNIED (8 INVENTORS)	
8790	SOFRC	ISSUED	96/0266	10/30/96	MAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A RAILROAD CAR BRAKE PIPE PRESSURE	
8714	JAPAN	ISSUED	2,576,835	11/07/96	MAFV AUXILIARY STABILIZER VALVE FOR VENT VALVE	
8600	CANAD	ISSUED	2,090,383	11/12/96	MAFV RAILWAY FREIGHT BRAKE RETAINER VALVE DEVICE	
8692	JAPAN	ISSUED	2,583,393	11/21/96	MAFV HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE
8861	SOFRC	ISSUED	96/1847	11/27/96	MAFV TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGULATING VALVE THEREFOR	
8752	USA	ISSUED	5,586,813	12/24/96	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	

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8747	USA	ISSUED	5,586,668	12/24/96	WAFV IMBEDDED ELECTRICAL CONNECTOR		
8535	CANAD	ISSUED	2,016,605	01/21/97	WAFV FREIGHT BRAKE CONTROL VALVE HAVING IMPROVED QUICK SERVICE	FUNCTION	
6961	CANAD	ISSUED	2,016,606	01/21/97	WAFV VENT VALVE DEVICE		
8865	SOFRC	ISSUED	96/4015	02/26/97	WAFV FREIGHT BRAKE CONTROL USING TRAIN NET BRAKING RATIO		
8828	SOFRC	ISSUED	96/3750	02/26/97	WAFV PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	BRAKE	
8788	AUSAL	ISSUED	674618	04/22/97	WAFV VIBRATION DESENSITIZING PISTON WEAR RING FOR RAILROAD CAR	CONTROL VALVE	
8884	SOFRC	ISSUED	96/7296	05/28/97	WAFV TWO-PIECE CHECK VALVE ASSEMBLY		
8919	SOFRC	ISSUED	96/7297	05/28/97	WAFV TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER		
8928	USA	CP	ISSUED	5,634,696	06/03/97	WAFV RAILWAY PIPE BRACKET WITH ACCESS PORTS	
8790	USA	ISSUED	5,638,276	06/10/97	WAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A	RAILROAD CAR BRAKE PIPE PRESSURE	
8900	SOFRC	ISSUED	96/6215	06/25/97	WAFV RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT		
8928	SOFRC	ISSUED	96/6637	06/25/97	WAFV RAILWAY PIPE BRACKET WITH ACCESS PORTS		
8685	JAPAM	ISSUED	2690674	08/29/97	WAFV CONSTANT TENSION DEVICE FOR RAILWAY CAR HANDBRAKE		
8828	USA	ISSUED	5,662,391	09/02/97	WAFV PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	BRAKE	
8884	USA	ISSUED	5,669,412	09/23/97	WAFV TWO-PIECE CHECK VALVE ASSEMBLY		
8752	USA	D1	ISSUED	5,669,674	09/23/97	WAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8789	JAPAM	ISSUED	2709046	10/17/97	WAFV VIBRATION INSULATING MEMBERS FOR PISTON VALVE ASSEMBLY		
8841	JAPAM	ISSUED	2709293	10/17/97	WAFV RAILROAD CAR BRAKE CYLINDER PISTON TRAVEL INDICATOR AND	HOIST THEREFOR	
8829	JAPAM	ISSUED	2723492	11/28/97	WAFV REMOTE CONTROL OF CUT-OUT COCK		
8900	USA	CP	ISSUED	5,695,258	12/09/97	WAFV RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8692	CANAD	ISSUED	2,109,379	01/20/98	WAFV HIGH PRESSURE VALVE FOR RAILWAY CAR BRAKE CONTROL VALVE	DEVICE	
8714	CANAD	ISSUED	2,109,378	01/20/98	WAFV AUXILIARY STABILIZER VALVE FOR VENT VALVE		
8889	USA	ISSUED	5,709,436	01/20/98	WAFV ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALVE DEVICE	

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8919	USA	ISSUED	5,714,684	02/03/98	MAFV TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER	
8737	JAPAN	ISSUED	2753457	02/27/98	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
9031	USA	ISSUED	5,730,504	03/24/98	MAFV Release Assuring Arrangement for Comb. Electro-Pneu./Auto. Pneumatic Brake	
9008	SOFRC	ISSUED	97/5863	03/25/98	MAFV ELECTRO-PNEUMATIC VALVE CONTROL	
8864	SOFRC	ISSUED	97/6436	03/25/98	MAFV SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR RAILWAY FREIGHT VEHICLE	
8976	SOFRC	ISSUED	97/6034	04/29/98	MAFV ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
8899	USA	ISSUED	5,746,484	05/05/98	MAFV E/P INTERFACE WITH PNEUMATIC CONTROL VALVE FOR BACK-UP BRAKE ARRANGEMENT	

PATENT

REEL: 9423 FRAME: 0301

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REEL: 012280 FRAME: 0375

Case Number	Country	Sub Case	Status	Patent Number	Issue Date	Client	Long Title 1	Long Title 2
6968	USA		ISSUED	4,175,773	11/27/79	PIDS PARKING BRAKE CONTROL SYSTEM FOR RAILWAY VEHICLES		
6771	JAPAN		ISSUED	993518	04/22/80	PIDS APPARATUS FOR PREVENTING RELEASE OF AN E EMERGENCY... COMPLETE STOP OF THE TRAIN		
7001	USA		ISSUED	4,199,195	04/22/80	PIDS DYNAMIC/FRICTION BRAKE BLENDING CONTROL SYSTEM		
7001	SOFRC		ISSUED	79/1921	05/28/80	PIDS DYNAMIC/FRICTION BRAKE BLENDING CONTROL SYSTEM		
6973	SOFRC		ISSUED	79/1991	05/28/80	PIDS FOUR-WAY BALL VALVE		
6965	USA		ISSUED	4,215,767	08/05/80	PIDS PARKING BRAKE DEVICE		
6973	USA		ISSUED	4,232,709	11/11/80	PIDS FOUR-WAY BALL VALVE		
7012	USA		ISSUED	4,239,292	12/16/80	PIDS BRAKE GEAR FOR VEHICLES		
6963	USA		ISSUED	4,243,273	01/06/81	PIDS ADJUSTABLE VARIABLE LOAD VALVE DEVICE		
7042	SOFRC		ISSUED	80/3283	05/27/81	PIDS MANUAL RELEASE MECHANISM FOR SPRING-APPLIED PARKING BRAKE		
7042	VENMA		ISSUED	80/0544	06/12/81	PIDS MANUAL RELEASE MECHANISM FOR SPRING-APPLIED PARKING BRAKE		
6952	USA		ISSUED	4,273,218	06/16/81	PIDS FLEXIBLE MOUNTING HUB FOR DISC MEMBER		
7001	CANAD		ISSUED	1105067	07/14/81	PIDS DYNAMIC/FRICTION BRAKE BLENDING CONTROL SYSTEM		
7042	USA		ISSUED	4,279,332	07/21/81	PIDS MANUAL RELEASE MECHANISM FOR SPRING-APPLIED PARKING BRAKE		
6950	USA		ISSUED	4,290,368	09/22/81	PIDS MANUALLY OPERATED SLIDING DOORS FOR RAIL ROAD CAR... CLOSING BY REMOTE CONTROL		
7086	SOFRC		ISSUED	80/6838	09/30/81	PIDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE		
6973	CANAD		ISSUED	1111327	10/27/81	PIDS FOUR-WAY BALL VALVE		
7012	CANAD		ISSUED	1111464	10/27/81	PIDS BRAKE GEAR FOR VEHICLES		
7063	USA		ISSUED	4,302,058	11/24/81	PIDS VARIABLE LOAD VALVE DEVICE		

7085	SOFRC	ISSUED	80/7139	11/25/81	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
6966	CANAD	ISSUED	1116661	01/19/82	PTDS PARKING BRAKE CONTROL SYSTEM FOR RAILWAY VEHICLES
6965	CANAD	ISSUED	1116538	01/19/82	PTDS PARKING BRAKE DEVICE
7085	VENDA	ISSUED	80/0597	02/12/82	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
7085	USA	ISSUED	4319671	03/16/82	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
7079	SOFRC	ISSUED	81/1411	03/31/82	PTDS SPRING-APPLIED, AIR-RELEASED, SLACK ADJUSTING PARKING BRAKE
7086	USA	ISSUED	4323144	04/06/82	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
6952	CANAD	ISSUED	1121745	04/13/82	PTDS FLEXIBLE MOUNTING HUB FOR DISC MEMBER
7078	VENDA	ISSUED	81/0093	06/04/82	PTDS SEGMENTED FLEXIBLE HUB
7122	VENDA	ISSUED	81/0072	06/04/82	PTDS HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH MANUAL RELEASE MEANS
7079	VEHDA	ISSUED	81/0023	06/04/82	PTDS SPRING-APPLIED, AIR-RELEASED, SLACK ADJUSTING PARKING BRAKE
7056	USA	ISSUED	4,334,711	06/15/82	PTDS SYSTEM FOR AUTOMATICALLY DELAYING APPLICATION OF A SHOCK BRAKE FOR A RAILWAY VEHICLE
7122	SOFRC	ISSUED	81/3983	06/30/82	PTDS HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH MANUAL RELEASE MEANS
7086	VENDA	ISSUED	80/0593	08/20/82	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
7078	SOFRC	ISSUED	81/5759	08/25/82	PTDS SEGMENTED FLEXIBLE HUB
7083	USA	ISSUED	4354518	10/19/82	PTDS DIAPHRAGM PISTON OPERATED VALVE DEVICE
7122	USA	ISSUED	4361078	11/30/82	PTDS HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH MANUAL RELEASE MEANS
7057	USA	ISSUED	4,367,903	01/11/83	PTDS SYSTEM FOR AUTOMATICALLY DELAYING APPLICATION OF SHOCK BRAKE FOR RAILWAY VEHICLES
7075	USA	ISSUED	4368752	01/18/83	PTDS COMPOUND CHECK VALVE
8002	USA	ISSUED	4375103	03/01/83	PTDS CHANGEOVER VALVE DEVICE UTILIZING LOWER PRESSURE... DELIVERED OPERATING PRESSURE
7122	TRANS	ISSUED	81/0085	04/08/83	PTDS HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH MANUAL RELEASE MEANS
7042	CANAD	ISSUED	1145689	05/03/83	PTDS MANUAL RELEASE MECHANISM FOR SPRING-APPLIED PARKING BRAKE
7086	CANAD	ISSUED	1149760	07/12/83	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE

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REEL: 9423 FRAME: 0303

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REEL: 012280 FRAME: 0377

7137	USA	ISSUED	4404987	09/20/83	PTDS CAP NUT FOR A TRIP LOCK DEVICE ... FOR OVERRIDING AUTOMATIC RESET
7074	JAPAN	ISSUED	1193797	03/12/84	PTDS SPRING-APPLIED, AIR-RELEASED, SLACK ADJUSTING PARKING BRAKE
7085	JAPAN	ISSUED	1193796	03/12/84	PTDS HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
7079	CANAD	ISSUED	1166171	04/24/84	PTDS SPRING-APPLIED, AIR-RELEASED, SLACK ADJUSTING PARKING BRAKE
8117	SOFRC	ISSUED	83/5785	04/25/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
8117	VENDA	ISSUED	83/0063	04/27/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
7057	CANAD	ISSUED	1167087	05/08/84	PTDS SYSTEM FOR AUTOMATICALLY DELAYING APPLICATION OF A SHOCK BRAKE FOR RAILWAY VEHICLES
7056	CANAD	ISSUED	1168277	05/29/84	PTDS SYSTEM FOR AUTOMATICALLY DELAYING APPLICATION OF A SHOCK BRAKE FOR A RAILWAY VEHICLE
8103	SOFRC	ISSUED	83/7001A	05/30/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
8101	SOFRC	ISSUED	83/7205	05/30/84	PTDS HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER
8116	VENDA	ISSUED	83/0083	06/22/84	PTDS METHOD OF BONDING A LAMINATED ASSEMBLY
8101	VENDA	ISSUED	83/0077	06/22/84	PTDS HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER
8116	SOFRC	ISSUED	83/7867	06/27/84	PTDS METHOD OF BONDING A LAMINATED ASSEMBLY
8117	BOPRU	ISSUED	83/0105	09/06/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
7001	JAPAN	ISSUED	1233437	09/26/84	PTDS DYNAMIC/FRICTION BRAKE BLENDING CONTROL SYSTEM
8154	USA	ISSUED	4478319	10/23/84	PTDS SPRING-APPLIED BRAKE UNIT FOR RAILWAY VEHICLE WITH MANUAL RELEASE ARRANGEMENT
8103	BOPRU	ISSUED	83/0123	11/21/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
8103	TRAHS	ISSUED	83/0086	11/28/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
8117	TRAHS	ISSUED	83/0078	11/28/84	PTDS VIGILANCE SAFETY CONTROL SYSTEM
7078	CANAD	ISSUED	1178901	12/04/84	PTDS SEGMENTED FLEXIBLE HUB
7116	USA	ISSUED	4,486,839	12/04/84	PTDS SYNCHRONOUS WHEEL-SLIP PROTECTION SYSTEM
8101	BOPRU	ISSUED	83/0133	12/12/84	PTDS HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER

7117	USA	ISSUED	4,491,920	01/01/85	PTDS RATE POLARITY SHIFT WHEEL-SLIP CONTROL SYSTEM
6963	CANAD	ISSUED	1180740	01/08/85	PTDS ADJUSTABLE VARIABLE LOAD VALVE DEVICE
8103	USA	ISSUED	4,496,193	01/29/85	PTDS VIGILANCE SAFETY CONTROL SYSTEM
8120	USA	ISSUED	4,503,301	03/05/85	PTDS DIFFERENTIAL FLUID PRESSURE SWITCH
8148	SOFRC	ISSUED	84/5847	03/27/85	PTDS SOLENOID-OPERATED VALVE
7042	JAPAN	ISSUED	1257507	03/29/85	PTDS MANUAL RELEASE MECHANISM FOR SPRING-APPLIED PARKING BRAKE
8116	BOPHU	ISSUED	85/0143	04/15/85	PTDS METHOD OF BONDING A LAMINATED ASSEMBLY
7141	CANAD	ISSUED	1185904	04/23/85	PTDS MAGNETIC BRAKE SHOF
8116	TRANS	ISSUED	83/0101	05/24/85	PTDS METHOD OF BONDING A LAMINATED ASSEMBLY
7057	JAPAN	ISSUED	1265184	05/27/85	PTDS SYSTEM FOR AUTOMATICALLY DELAYING APPLICATION...SHOW BRAKE FOR RAILWAY VEHICLES
8101	TRANS	ISSUED	83/0091	07/21/85	PTDS HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER
8148	VENDA	ISSUED	84/0088	08/30/85	PTDS SOLENOID-OPERATED VALVE
7137	CANAD	ISSUED	1193299	09/10/85	PTDS CAP NUT FOR A TRIP COCK DEVICE...FOR OVERRIDING AUTOMATIC RESET
7116	CANAD	ISSUED	1193695	09/17/85	PTDS SYNCHRONOUS WHEEL-SLIP PROTECTION SYSTEM
8184	USA CP	ISSUED	4544047	10/01/85	PTDS SPRING-APPLIED, AIR-RELEASED, SLACK-ADJUSTING PARKING BRAKE
8148	TRANS	ISSUED	84/0080	11/01/85	PTDS SOLENOID-OPERATED VALVE
8189	USA	ISSUED	4550811	11/05/85	PTDS MANUALLY RELEASABLE PARKING BRAKE DEVICE
8269	USA	ISSUED	4552056	11/12/85	PTDS MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR SPRING-APPLIED/AIR-RELEASED BRAKE
8189	SOFRC	ISSUED	85/0870	11/27/85	PTDS MANUALLY RELEASABLE PARKING BRAKE DEVICE
8189	VENDA	ISSUED	85/0008	12/06/85	PTDS MANUALLY RELEASABLE PARKING BRAKE DEVICE
8234	SOFRC	ISSUED	85/3064	12/24/85	PTDS COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR...ADJUSTER ARRANGEMENT
8222	SOFRC	ISSUED	85/3069	01/29/86	PTDS FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY /PARKING BRAKE
8234	VENDA	ISSUED	85/0034	02/28/86	PTDS COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR...ADJUSTER ARRANGEMENT

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8276	SOFRC	ISSUED	86/4519	02/25/87	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
8222	TRANS	ISSUED	85/0041	03/13/87	PTDS FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY/PARKING BRAKE	
8269	TRANS	ISSUED	85/0120	03/13/87	PTDS MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRAKE
8261	USA	ISSUED	4,649,805	03/17/87	PTDS VEHICLE BRAKE APPLICATION APPARATUS	
8148	CANAD	ISSUED	1219513	03/24/87	PTDS SOLENOID-OPERATED VALVE	
8299	USA	ISSUED	4,659,149	04/21/87	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS
8299	SOFRC	ISSUED	86/6140	04/29/87	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS
8247	TRANS	ISSUED	86/0012	05/01/87	PTDS FAIL SAFE PULSE TRAIN PRESENCE DETECTOR	
8276	VENDA	ISSUED	86/0048	05/29/87	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
8361	USA	ISSUED	4,671,576	06/09/87	PTDS DECELERATION CONTROL SYSTEM	
6963	JAPAN	ISSUED	1381770	06/09/87	PTDS ADJUSTABLE VARIABLE LOAD VALVE DEVICE	
8253	USA	ISSUED	4,676,546	06/30/87	PTDS BRAKE SLACK ADJUSTING APPARATUS	
8247	BOPRU	ISSUED	86/0020	07/03/87	PTDS FAIL-SAFE PULSE TRAIN PRESENCE DETECTION	
8362	USA	ISSUED	4,678,241	07/07/87	PTDS EQUALIZER DISCHARGE VALVE FOR A RAILROAD CAR AIR BRAKE SYSTEM	
8299	VENDA	ISSUED	86/0056	07/24/87	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS
8247	USA	ISSUED	4,685,052	08/04/87	PTDS FAIL SAFE PULSE TRAIN PRESENCE DETECTOR	
8290	USA	ISSUED	4,685,750	08/11/87	PTDS RLY VEHICLE BRAKE SYSTEM W/IMPROVED BLENDING CONTROL OF	PNEUMATIC & ELEC. BRAKES
8357	USA	ISSUED	4,696,626	09/29/87	PTDS RAILROAD CAR AIR COMPRESSOR UNIT	
8299	TRANS	ISSUED	86/0064	10/12/87	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS
8276	TRANS	ISSUED	86/0052	10/12/87	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
8234	BOPRU	ISSUED	85/0055	11/19/87	PTDS COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR ADJUSTMENT ARRANGEMENT	
8276	BOPRU	ISSUED	86/0078	11/19/87	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
8299	BOPRU	ISSUED	86/0100	11/19/87	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS

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8343	SOPAC	ISSUED	87/1941	12/30/87	PTDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE
8116	CANAD	ISSUED	1232523	02/09/88	PTDS METHOD OF BONDING A LAMINATED ASSEMBLY
8276	MEWEL	ISSUED	216538	03/04/88	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE
8343	BOPKU	ISSUED	87/0040	03/14/88	PTDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE
8343	USA	ISSUED	4,733,602	03/29/88	PTDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE
8189	CANAD	ISSUED	1237680	06/07/88	PTDS MANUALLY RELEASABLE PARKING BRAKE DEVICE
8361	UNIKM	ISSUED	2172355	06/15/88	PTDS DECELERATION CONTROL SYSTEM
8428	USA	ISSUED	4,756,669	07/12/88	PTDS AIR COMPRESSOR CONTROL APPARATUS AND METHOD
8446	USA	ISSUED	4,758,254	07/19/88	PTDS MOISTURE REMOVAL APPARATUS
8368	USA	ISSUED	4,763,261	08/09/88	PTDS WHEEL SPEED DETECTING ARRANGEMENT
8445	USA	ISSUED	4,765,806	08/23/88	PTDS CONTROL METHOD FOR DUAL CYLINDER MOISTURE REMOVAL APPARATUS
8426	USA	ISSUED	4,773,447	09/27/88	PTDS ELECTROMAGNETIC VALVE
8148	JAPAN	ISSUED	1468862	11/10/88	PTDS SOLENOID-OPERATED VALVE
8429	USA	ISSUED	4,784,585	11/15/88	PTDS ELECTRIC AIR COMPRESSOR
8247	AUSAL	ISSUED	576066	12/06/88	PTDS FAIL SAFE PULSE TRAIN PRESENCE DETECTOR
8465	USA	ISSUED	4,790,415	12/13/88	PTDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
8276	UNIKM	ISSUED	2176857	12/14/88	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE
8430	USA	ISSUED	4,795,902	01/03/89	PTDS OPTICAL MASTER CONTROLLER
8400	USA	ISSUED	4,796,513	01/10/89	PTDS SPRING BRAKE CYLINDER
8440	USA	ISSUED	4,799,740	01/24/89	PTDS ELECTRO-PNEUMATIC MASTER CONTROLLER FOR A M AIR BRAKE SYSTEM
8460	USA	ISSUED	4,802,559	02/07/89	PTDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE
8343	IRANS	ISSUED	87/0029	02/09/89	PTDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE

8343	VEND	ISSUED	87/0029	02/09/89	PTDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8447	USA	ISSUED	4,812,148	03/14/89	PTDS ARRANGEMENT FOR CONTROLLING REMOVAL OF MOISTURE CYLINDER TYPE MOISTURE REMOVER	
8397	USA	ISSUED	4,811,651	03/14/89	PTDS SPRING BRAKE CYLINDER	
8437	USA	ISSUED	4,819,123	04/04/89	PTDS COMPRESSED AIR SUPPLY SYSTEM	
8424	USA	ISSUED	4,830,437	05/16/89	PTDS BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERATING STATUS	
8276	AUSAL	ISSUED	584,211	05/18/89	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RAIL TRANSIT VEHICLE	
8247	CANAD	ISSUED	1,254,664	05/23/89	PTDS FAULT SAFE PULSE TRAIN PRESENCE DETECTOR	
8299	HEWEL	ISSUED	2,181,991	06/06/89	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM: POWER AND NON-POWER CARS
8462	USA	ISSUED	4,845,428	07/04/89	PTDS MAGNETIC ROTATIONAL DETECTING ARRANGEMENT FOR SENSING SPEED OF RAILWAY VEHICLE	
8299	AUSAL	ISSUED	587,295	08/10/89	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM: POWER AND NON-POWER CARS
8458	USA	ISSUED	4,865,278	09/12/89	PTDS CONTROL COMMAND SYSTEM FOR RAILWAY VEHICLES	
8507	USA	ISSUED	4,883,089	11/28/89	PTDS RAILWAY CAR PRESSURE CONTROL VALVES	
8383	SOFRC	ISSUED	897,3654	01/31/90	PTDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8457	USA	ISSUED	4,901,953	02/20/90	PTDS CONTROLLER FOR RAILWAY VEHICLES	
8383	USA	ISSUED	4,941,099	07/10/90	PTDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8361	CANAD	ISSUED	1,271,972	07/24/90	PTDS DECELERATION CONTROL SYSTEM	
8509	USA	ISSUED	4,949,754	08/21/90	PTDS PRESSURE CONTROL VALVE FOR RAILWAY VEHICLES	
8550	USA	ISSUED	4,951,516	08/28/90	PTDS FORCE MULTIPLICATION MECHANISM	
8488	USA	ISSUED	4,957,208	09/18/90	PTDS MULTI-CONTACT ELECTRICAL CONNECTOR POSITION FOR AUTO RAIL CAR	
8551	USA	ISSUED	4,957,193	09/18/90	PTDS ACTUATING CYLINDER HAVING MECHANICAL ADVANTAGE	
8276	CANAD	ISSUED	1,275,136	10/09/90	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RAIL TRANSIT VEHICLE	
8510	USA	ISSUED	4,972,145	11/20/90	PTDS SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	
8539	USA	ISSUED	4,979,391	12/25/90	PTDS TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	

8427	USA	ISSUED	4987543	01/22/91	PIDS WHEEL SPIN CONTROL SYSTEM	
8427	SOFRC	ISSUED	90/1322	01/30/91	PIDS WHEEL SPIN CONTROL SYSTEM	
8552	USA	ISSUED	4993521	02/19/91	PIDS IMPROVED TREAD BRAKE UNIT	
8488	SOFRC	ISSUED	90/3253	02/27/91	PIDS MULT. CONTACT ELECTRICAL CONNECTOR PORTION FOR AUTO RLY CPLR	
8504	USA	ISSUED	4997779	03/12/91	PIDS AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8528	SOFRC	ISSUED	90/3961	03/27/91	PIDS PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE	ASSEMBLY
8299	CANAD	ISSUED	1283148	04/16/91	PIDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM...POWER AND NON-POWER CARS
8427	ITALY	ISSUED	MI-44301	05/15/91	PIDS WHEEL SPIN CONTROL SYSTEM	
8383	ITALY	ISSUED	44299	05/15/91	PIDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
6973	JAPAN	ISSUED	UM1854566	06/10/91	PIDS FOUR-WAY BALL VALVE	
8592	USA	ISSUED	5031731	07/16/91	PIDS BRAKE ACTUATOR WITH SLACK ADJUSTER DISABLING MECHANISM	
8390	USA	ISSUED	5035882	07/30/91	PIDS ELECTRO PNEUMATIC GOVERNOR FOR A COMPRESSED AIR SYSTEM	
8504	SOFRC	ISSUED	90/7232	07/31/91	PIDS AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8606	USA	ISSUED	5046921	09/10/91	PIDS MOISTURE REMOVAL DEVICE FOR A COMPRESSED AIR SYSTEM	
8528	USA	ISSUED	5,058,712	10/22/91	PIDS PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE	ASSEMBLY
8383	ITALY	ISSUED	1231593	12/18/91	PIDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8578	USA	ISSUED	5,076,401	12/31/91	PIDS SPRING APPLIED HYDRAULICALLY RELEASED ... POSITIVE CLEARANCE SLACK ADJ. MECHANISM	
8276	BRAZL	ISSUED	8603163	12/31/91	PIDS ELECTROPNEUMATIC BRK CONTROL SYS FOR RLY TRANSIT VEHICLE	
8638	USA	ISSUED	5,085,243	02/04/92	PIDS HYDRAULIC ISOLATION VAL FOR RLY VEHICLE NOTE: ALSO A C.I.P. CASE	
8594	USA	ISSUED	5090780	02/25/92	PIDS BINARY WEIGHTED DIGITAL FLOW REGULATING SYSTEM	
8584	USA	ISSUED	5098169	03/24/92	PIDS MAGNET VALVE SAFETY CHECK & FAULT INDICATOR INTEGRATOR	
8101	JAPAN	ISSUED	1649364	03/30/92	PIDS HYDRO-PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER	

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8144	CANAD	ISSUED	1300038	05/05/92	PTDS MOISTURE REMOVAL APPARATUS	
8155	CANAD	ISSUED	1300723	05/12/92	PTDS CONTROL COMMAND SYSTEM FOR RAILWAY VEHICLES	
8160	CANAD	ISSUED	1300724	05/12/92	PTDS ELECTRO-PNEUMATIC MASTER CONTROLLER FOR A H AIR BRAKE SYSTEM	
8183	AUSAL	ISSUED	617457	05/28/92	PTDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8549	USA	ISSUED	5126988	06/23/92	PTDS DUMP VALVE OPERATIONAL FAULT DETERMINATION SYSTEM	
7092	JAPAN	ISSUED	1675356	06/26/92	PTDS ADJUSTABLE VARIABLE LOAD CONTROL VALVE DEVICE	
8627	USA	ISSUED	5,125,722	06/30/92	PTDS LOAD COMPENSATION CONTROL VALVE	
6117	JAPAN	ISSUED	1680618	07/13/92	PTDS VIGILANCE SAFETY CONTROL SYSTEM	
8383	UNIKR	ISSUED	2218763	07/15/92	PTDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8276	JAPAN	ISSUED	1919239	07/22/92	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RUT TRANSIT VEHICLE	
8269	JAPAN	ISSUED	1688343	08/11/92	PTDS MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR	SPRING-APPLIED/AIR-RELEASED BRAKE
8189	JAPAN	ISSUED	1688332	08/11/92	PTDS MANUALLY RELEASABLE PARKING BRAKE DEVICE	
8596	USA	ISSUED	5,141,293	08/25/92	PTDS HYDRAULIC ISOLATION VALVE FOR RAILWAY VEHICLE	
8175	JAPAN	ISSUED	1691519	08/27/92	PTDS PENALTY BRAKE APPLICATION MULTISTEP PREVENTION SYSTEM	
8674	USA	ISSUED	5,144,985	09/08/92	PTDS VARIABLE LOAD VALVE FOR RAILWAY VEHICLES	
8675	USA	ISSUED	5,146,952	09/15/92	PTDS FLUID PRESSURE CONTROL VALVE DEVICE FOR A RAILWAY CAR	
8656	USA	ISSUED	5,152,410	10/06/92	PTDS ELECTRO-PNEUMATIC COUPLER CONTROL SYS... UNCOUPLING OF RAILWAY VEHICLES	
8623	USA	ISSUED	5,154,204	10/13/92	PTDS AUTOMATIC DRAIN VALVE FOR A COMPRESSED AIR SYSTEM	
8299	BRAZL	ISSUED	8605510	10/27/92	PTDS CROSS BLENDING ELECTRO-DYNAMIC/FRICTION BRAKE	SYSTEM... POWER AND NON-POWER CARS
8276	JAPAN VA	ISSUED	1705205	10/27/92	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RUT TRANSIT VEHICLE	
8276	JAPAN A	ISSUED	1705205	10/27/92	PTDS ELECTRO-PNEUMATIC BRK CONTROL SYS FOR RUT TRANSIT VEHICLE	
8653	USA	ISSUED	5,170,818	12/15/92	PTDS SAFETY VALVE	
8539	SOFRIC	ISSUED	911245	12/30/92	PTDS TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	

8234	JAPAN	ISSUED	1725800	01/19/93	PIDS COMBINED HYDRO-PNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR ADJUSTER ARRANGEMENT	
8222	JAPAN	ISSUED	1729856	01/29/93	PIDS FLUID PRESSURE BRAKE ACTUATOR WITH SPRING APPLIED EMERGENCY /PARKING BRAKE	
8465	CANAD	ISSUED	1313553	02/02/93	PIDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE	
8427	AUSAL	ISSUED	627838	02/05/93	PIDS WHEEL SPIN CONTROL SYSTEM	
8445	CANAD	ISSUED	1313505	02/09/93	PIDS CONTROL METHOD FOR DUAL CYLINDER MOISTURE REMOVAL APPARATUS	
8508	CANAD	ISSUED	1313686	02/16/93	PIDS LOAD DEPENDENT VALVE FOR RAILWAY VEHICLES	
8122	JAPAN	ISSUED	1755824	04/23/93	PIDS BRAKE ACTUATOR DEVICE HAVING A HYDRAULIC SLACK ADJUSTING ARRANGEMENT	
8462	CANAD	ISSUED	1316707	04/27/93	PIDS MAGNETIC ROTATIONAL DETECTING ARRANGEMENT FOR SENSING SPEED OF RAILWAY VEHICLE	
8514	USA	ISSUED	5,209,551	05/11/93	PIDS ANALOG SERVICE BRAKE RESPONSE ENHANCING CIRCUIT FOR RAILWAY VEHICLES	
8550	CANAD	ISSUED	1,319,033	06/15/93	PIDS FORCE MULTIPLICATION MECHANISM	
8363	JAPAN	ISSUED	1771682	07/14/93	PIDS HYDRAULIC BRAKE ACTUATOR WITH PARKING BRAKE	
8604	USA	ISSUED	5,244,171	09/14/93	PIDS INTERSLIP SEQUENCE SPEED ALLOCATION	
8460	CANAD	ISSUED	1322567	09/28/93	PIDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE	
8427	FRANC	ISSUED	2644742-81	10/15/93	PIDS WHEEL SPIN CONTROL SYSTEM	
8383	FRANC	ISSUED	89 06362	10/15/93	PIDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8673	USA	ISSUED	5,253,930	10/19/93	PIDS AIR BRAKE CONTROL SYS. HAVING ELECTRO-MAGNETIC VAL DEVICE	WHICH HAS 2 SET POINTS FOR ESTABLISHING A GAP
8247	BRAZL	ISSUED	8600648-7	10/26/93	PIDS FAIL-SAFE PULSE TRAIN PRESENCE DETECTOR	
8120	JAPAN	ISSUED	UM194612	11/26/93	PIDS DIFFERENTIAL FLUID PRESSURE SWITCH	
8120	JAPAN	ISSUED	1994612	11/26/93	PIDS DIFFERENTIAL FLUID PRESSURE SWITCH	
8551	CANAD	ISSUED	1,324,810	11/30/93	PIDS ACTUATING CYLINDER HAVING MECHANICAL ADVANTAGE	
8383	CANAD	ISSUED	1,325,054	12/07/93	PIDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8552	CANAD	ISSUED	1,324,964	12/07/93	PIDS IMPROVED TREAD BRAKE UNIT	

8504	AUSAL	ISSUED	639,480	12/13/93	PTDS AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8424	CANAD	ISSUED	1,325,264	12/14/93	PTDS BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERATING STATUS	
8510	AUSAL	ISSUED	637660	12/19/93	PTDS SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	
8504	UNIKM	ISSUED	2,236,155	12/22/93	PTDS AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8605	USA	ISSUED	5,280,718	01/25/94	PTDS TRANSDUCER HEALTH AND OFFSET CALIBRATION PROCESSING SYSTEM	
8510	SOFRG	ISSUED	90/9952	02/23/94	PTDS SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	
8618	USA	ISSUED	5,290,095	03/01/94	PTDS WHEEL LOCK DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAILWAY VEHICLES	
8427	ITALY	ISSUED	1242483	03/17/94	PTDS WHEEL SPIN CONTROL SYSTEM	
8719	USA	ISSUED	5,297,856	03/29/94	PTDS TWO SEPARATE HIGH SPEED AND LOW SPEED DISC BRAKE UNITS FOR RAILWAY VEHICLES	
8539	UNIKM	ISSUED	2242980	04/06/94	PTDS TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8510	UNIKM	ISSUED	2240846	04/20/94	PTDS SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	
8602	USA	ISSUED	5,315,520	05/24/94	PTDS FRICTION BRAKE INTERFACE HEALTH CHECK SYSTEM FOR MULTIPLE-AXLE RAILWAY VEHICLES	
8728	USA	ISSUED	5,340,203	08/23/94	PTDS VARIABLE LOAD CONTROL VALVE DEVICE	
8539	AUSAL	ISSUED	650861	10/31/94	PTDS TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8504	CANAD	ISSUED	2,025,106	01/17/95	PTDS AXLE HEALTH DISCRIMINATORY SAFETY TIMER ARRANGEMENT	
8709	USA	ISSUED	5,390,772	02/21/95	PTDS SWITCHABLE HIGH SPEED FROG MECHANISM	
8424	JAPAN	ISSUED	1936195	05/26/95	PTDS BRAKE ASSURANCE CIRCUIT TO PRESERVE PROPER LOCOMOTIVE OPERATING STATUS	
8465	JAPAN	ISSUED	1936194	05/26/95	PTDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE	
8427	CANAD	ISSUED	2,005,293	06/06/95	PTDS WHEEL SPIN CONTROL SYSTEM	
8722	USA	ISSUED	5,423,401	06/13/95	PTDS BRAKE ACTUATOR HAVING FOLLET STYLE SLACK ADJUSTER	
8691	USA	ISSUED	5,423,129	06/13/95	PTDS DESICCANT CARTRIDGE OF AN AIR DRYER	
8460	JAPAN	ISSUED	1942667	06/23/95	PTDS HYDRO-PNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE	
8510	BRAZL	ISSUED	9006339-2	08/29/95	PTDS SPEED SENSOR GAP FAULT DETECTION ARRANGEMENT FOR MULTIPLE AXLE RAIL VEHICLES	

8740	USA	ISSUED	5,449,295	09/12/95	PTDS AUTOMATIC ELECTRIC COUPLING MECHANISM FOR A PASSENGER	TRANSIT TYPE VEHICLE
8539	BRAZL	ISSUED	P19108678	09/26/95	PTDS TRANSDUCER OPERATIONAL FAULT DETERMINATION SYSTEM	
8614	USA	ISSUED	5,451,942	09/26/95	PTDS WHEEL SPIN SPEED PROCESSING SYSTEM FOR MULTIPLE AXLE	RAILWAY VEHICLES
8712	USA	ISSUED	5,454,399	10/03/95	PTDS APPLICATION & RELEASE MAGNET VALVE	
8782	USA	ISSUED	5,456,504	10/10/95	PTDS LOCKING AND UNLOCKING APPARATUS FOR ACCESS DOOR ON A	PASSENGER RAILWAY VEHICLE
8781	USA	ISSUED	5,460,100	10/24/95	PTDS SERVICE BYPASS APPARATUS FOR AUTOMATIC DOOR OPERATOR ON A	PASSENGER RAILWAY VEHICLE
8768	USA	ISSUED	5,465,816	11/14/95	PTDS SLACK ADJUSTING BRAKE CYLINDER FOR A BRAKE UNIT ON A	RAILWAY TRANSIT VEHICLE
8528	JAPAN	ISSUED	1995288	11/22/95	PTDS PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE	ASSEMBLY
8720	USA	ISSUED	5,471,387	11/28/95	PTDS SPEED WARNING ENERGY LEVEL WHEEL SLIP DETECTION AND	SLIP INTENSITY DETERMINATION PROCESS
8427	JAPAN	ISSUED	2000587	12/20/95	PTDS WHEEL SPIN CONTROL SYSTEM	
8759	USA	ISSUED	5,499,728	03/19/96	PTDS ELECTRICALLY OPERATED HOOK COUPLER WITH MANUAL OVER RIDE	
8749	USA	ISSUED	5,503,280	04/02/96	PTDS TIMED THRUST UNCOUPLING MECHANISM FOR PASSENGER TRANSIT	TYPE RAILWAY CARS
8058	USA	ISSUED	5,505,283	04/09/96	PTDS HIGH CURRENT HARP STOP AND STOPPED INDICATOR	
8361	KORSEO	ISSUED	100493	06/10/96	PTDS DECELERATION CONTROL SYSTEM	
8383	JAPAN	ISSUED	2064840	06/24/96	PTDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8726	USA	ISSUED	5,535,122	07/09/96	PTDS A METHOD OF AND AN APPARATUS FOR PROVIDING A SAFETY CHECK	OF THE BRAKE RETARDATION, ON A VEHICLE
8757	USA	ISSUED	5,544,057	08/06/96	PTDS LOAD SETTING DEVICE FOR RAILWAY CARS	
8722	AUSAL	ISSUED	668839	09/04/96	PTDS BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER	
8815	USA	ISSUED	5,582,206	12/10/96	PTDS ROTARY MAGNET VALVE	
8779	USA	ISSUED	5,589,767	12/31/96	PTDS MECHANISM FOR THE ATTACHMENT OF A SPEED SENSOR	
8528	CANAD	ISSUED	2,015,689	01/21/97	PTDS PRE-LOADING PIVOTAL PIN CONNECTION FOR A DISC BRAKE	ASSEMBLY
8922	USA	ISSUED	5,604,991	02/25/97	PTDS SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	

PATENT
REEL: 9423 FRAME: 0314

PATENT
REEL: 012280 FRAME: 0388

8707	USA	ISSUED	5,613,579	03/25/97	PIDS LATCH LOCKING SPRING CLIP FOR RETAINING AN INSERTABLE BRAKE SHOE LIVING ON A DISC BRAKE HEAD	
8722	JAPAN	ISSUED	2659175	06/06/97	PIDS BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER	
8858	CANAD	ISSUED	2,147,097	06/17/97	PIDS HIGH CURRENT HARP FOR AN ELECTRIC TROLLEY BUS	
8728	JAPAN	ISSUED	2672779	07/11/97	PIDS VARIABLE LOAD CONTROL VALVE DEVICE	
8624	USA	ISSUED	5,650,933	07/22/97	PIDS TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8863	USA	ISSUED	5,654,889	08/05/97	PIDS SIMPLIFIED PATTERN RECOGNITION WHEEL SLIDE PROTECTION	
8922	SOFR	ISSUED	96,8800	08/27/97	PIDS SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	
8921	SOFR	ISSUED	96/8802	08/27/97	PIDS LINEAR CHOKE SHUT-LE/CRITICE CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	
8924	SOFR	ISSUED	96/8801	08/27/97	PIDS TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8924	USA	ISSUED	5,662,727	09/02/97	PIDS TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8910	USA	ISSUED	5,673,693	10/07/97	PIDS TELESCOPING DESICCANT CARTRIDGE FOR AN AIR DRYER DISPOSED IN AN AIR SYSTEM	
8894	USA	ISSUED	5,673,776	10/07/97	PIDS AUXILIARY VEHICLE CURRENT COLLECTOR	
8839	USA	ISSUED	5,677,608	10/14/97	PIDS EMBEDDED DUPLEX LOCAL CONTROL PANEL	
8921	USA	ISSUED	5,685,896	11/11/97	PIDS LINEAR CHOKE SHUT-LE/CRITICE CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	
8938	USA	ISSUED	5,691,888	11/25/97	PIDS POWER CONTROLLING UNIT FOR A TROLLEY POLE SWITCH CONTROLLER	INVENTOR'S FULL NAME: CHARLES C. STECHING
8383	KORSO	ISSUED	131073	11/26/97	PIDS ELECTRONIC ADHESION ADAPTIVE WHEEL SLIDE PROTECTION	ARRANGEMENT FUNCTION
8943	USA	ISSUED	5,692,586	12/02/97	PIDS BRAKE DEVICE	
9010	USA	ISSUED	5,700,065	12/23/97	PIDS PENALTY BRAKE SCHEME FOR STRAIGHT AIR PIPE BRAKE CONTROL EQUIPMENT	
9012	USA	ISSUED	5,700,066	12/23/97	PIDS PENALTY BRAKE DESIGN FOR STRAIGHT AIR PIPE BRAKE CONTROL EQUIPMENT	
8635	USA	ISSUED	5,702,774	12/30/97	PIDS REUSABLE PAINT MASKING MEMBER	
8927	USA	ISSUED	5,704,396	01/06/98	PIDS MODULATION ROTARY VALVE	
8624	JAPAN	ISSUED	2739046	01/16/98	PIDS TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8728	FPO	ISSUED	0628456	01/28/98	PIDS VARIABLE LOAD CONTROL VALVE DEVICE	

8949	USA	ISSUED	5,713,639	02/03/98	PIDS BRAKE CONTROL DEVICE FOR RAILROAD ROLLING STOCK	
9004	USA	ISSUED	5,735,579	06/07/98	PIDS BRAKE ASSURANCE MODULE	
8929	USA	ISSUED	5,740,043	04/14/98	PIDS RELATIVE SPIR SPEED TRACTION CONTROL	
8936	USA	ISSUED	5,740,025	04/14/98	PIDS ELECTRONIC CONTROLLER FOR A TROLLEY POLE SWITCH MECHANISM	* INVENTOR'S FULL NAME: CHARLES C. STEGLING
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9033	USA	ISSUED	5,738,417	04/14/98	PIDS BRAKE PIPE SENSING UNIT	
9011	USA	ISSUED	5,746,485	05/05/98	PIDS PENALTY BRAKE CIRCUIT FOR STRAIGHT AIR PIPE BRAKE CONTROL	EQUIPMENT
8879	USA	ISSUED	5,752,212	05/12/98	PIDS PROPORTIONAL POLARITY SHIFT WHEEL SLIDE PROTECTION	
9047	USA	ISSUED	5,771,933	06/30/98	PIDS A Three-Position Solenoid Valve	
9046	USA	ISSUED	5,775,367	07/07/98	PIDS A SOLENOID VALVE CONTROL DEVICE	

PATENT
REEL: 9423 FRAME: 0316

PATENT
REEL: 012280 FRAME: 0390

Case Number		Count	Sub Case	Status	Patent Number	Issue Date	Class	Long Title	
PULSE-32	USA			ISSUED	4,353,066	10/05/82	PULS METHOD FOR CALIBRATING BEAM EMITTER TYPE SPEED SENSOR	FOR RR ROLLING STOCK	
PULSE-40	USA			ISSUED	4,487,060	12/11/84	PULS		
PULSE-40A	USA			ISSUED	4,520,662	06/04/85	PULS		
PULSE-40B	USA			ISSUED	4,554,221	11/19/85	PULS		
PULSE-13	USA			ISSUED	4,592,217	06/03/86	PULS MARKER ATTACHMENT FOR RAILROAD EQUIPMENT		
PULSE-2	USA			ISSUED	4,599,723	07/08/86	PULS METHOD OF ENCODING DATA FOR SERIAL TRANSMISSION		
PULSE-11	USA			ISSUED	4,638,237	01/20/87	PULS BATTERY CONDITION INDICATOR		
PULSE-14	USA			ISSUED	4,654,629	03/31/87	PULS VEHICLE MARKER LIGHT		
PULSE-12	USA			ISSUED	4,785,197	11/15/88	PULS TILT SWITCH		
PULSE-33	USA			ISSUED	4,860,056	06/20/89	PULS FUEL MEASURING SYSTEM		
PULSE-4	USA			ISSUED	4,867,770	07/17/89	PULS INITIAL TERMINAL TESTER		
PULSE-30	USA			ISSUED	4,862,433	08/29/89	PULS TIMER CIRCUIT FOR DRAG OPERATION IN AN ENGINEMAN	MONITORING DEVICE	
PULSE-18	USA			ISSUED	4,885,689	12/05/89	PULS MULTILINGUAL CODE RECEIVER		
PULSE-15	USA			ISSUED	5,05,122	12/19/89	PULS FRONT PANEL FOR DATA RECORDER		
PULSE-20	USA			ISSUED	4,960,292	07/10/90	PULS RAPID RELEASE VALVE MECHANISM		
PULSE-29	USA			ISSUED	5,10,510	09/11/90	PULS DEFAULT CONTROLLER FOR RAILWAY VEHICLES		
PULSE-6	USA			ISSUED	5,15,114	03/05/91	PULS FWD OF TRAIN MARKER LIGHT		
PULSE-22	USA			ISSUED	5,016,840	05/21/91	PULS METHOD TO AUTHORIZE H.O.U. UNIT TO TRANSMIT EMERGENCY	COMMS TO ASSOC. REAR UNIT	
PULSE-31	USA			ISSUED	5,083,274	01/21/92	PULS RAILROAD BRAKE PRESSURE RECORDING		

PULSE - 1	USA	ISSUED	5,117,866	06/02/92	PULS AIR FLOW REGULATOR FOR FUEL MEASURING SYSTEMS	
PULSE 7	USA	ISSUED	5,166,610	11/24/92	PULS DUAL RANGE SPEED INDICATOR WITH ACCELERATION DISPLAY	
PULSE - 10	USA	ISSUED	5,185,700	02/09/93	PULS SOLID STATE EVENT RECORDER	
PULSE - 25	USA	ISSUED	5,190,359	03/02/93	PULS PRESSURE RELIEF VALVE FOR RAILWAY BRAKE EMERGENCY SYSTEMS	
PULSE - 26	USA	ISSUED	5,235,849	08/17/93	PULS RAILROAD COUPLER MOUNT	
PULSE - 23	USA	ISSUED	5,267,473	12/07/93	PULS SELF POWERED END OF TRAIN UNIT	
PULSE - 33	CANAD	ISSUED	1,327,714	03/15/94	PULS FUEL MEASURING SYSTEM	
PULSE - 34	USA	ISSUED	5,309,315	05/03/94	PULS COMPUTER CHASSIS CONSTRUCTION	
PULSE - 8	USA	ISSUED	5,365,550	11/15/94	PULS INITIAL SYNCHRONIZATION & TRACKING CIRCUITS FOR SPREAD	SPECTRUM RECEIVERS
PULSE - 28	USA	ISSUED	5,374,015	12/20/94	PULS RAILROAD TELEMETRY AND CONTROL SYSTEMS	
PULSE - 24	USA	ISSUED	5,376,925	12/27/94	PULS MOTION AND DIRECTION SENSORS	
PULSE - 27	USA	ISSUED	5,377,938	01/03/95	PULS RAILROAD TELEMETRY AND CONTROL SYSTEMS	
PULSE - 3	USA	ISSUED	5,383,717	01/24/95	PULS BRAKE CONTROL OF HELPER LOCOMOTIVE	
PULSE - 35	USA	ISSUED	5,507,457	04/16/96	PULS TRAIN INTEGRITY DETECTION SYSTEM	
PULSE - 37	USA	ISSUED	5,530,328	06/25/96	PULS CONSIST POWER MONITOR	
PULSE - 38	USA	ISSUED	5,570,270	10/29/96	PULS CHASSIS AND PERSONAL COMPUTER FOR SEVERE ENVIRONMENT EM	BEDDED APPLICATIONS
PULSE - 36	USA	ISSUED	5,650,561	07/22/97	PULS DIAGNOSTIC DEVICE FOR DETERMINING THE PNEUMATIC INTEGRITY	OF A RUBBLE-TYPE FUEL MEASURING SYSTEM
PULSE - 39	USA	ISSUED	RE35590	08/19/97	PULS SOLID STATE EVENT RECORDER	
8999	USA	ISSUED	5,681,015	10/28/97	PULS RADIO-BASED ELECTRO-PNEUMATIC CONTROL COMMUNICATIONS SYSTEM	
8997	USA	ISSUED	5,720,455	02/24/98	PULS INTRA-TRAIN RADIO COMMUNICATION SYSTEM	
9058	USA	ISSUED	5,738,311	04/14/98	PULS DISTRIBUTED POWER TRAIN SEPARATION DETECTION	
8903	USA	ISSUED	5,740,547	04/14/98	PULS RAIL NAVIGATION SYSTEM	
8904	USA	ISSUED	5,744,707	04/28/98	PULS TRAIN BRAKE PERFORMANCE MONITOR	

8998	USA	ISSUED	5,748,269	05/05/98	PULS ENVIRONMENTALLY-SEALED CONNECTIVELY-COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
PULSE 41	USA	ISSUED	5,757,291	05/26/98	PULS INTEGRATED PROXIMITY WARNING SYSTEM AND END-OF-TRAIN COM-	MUNICATION SYSTEM

PATENT
REEL: 9423 FRAME: 0319

PATENT
REEL: 012280 FRAME: 0393

Case Number	Country	Sub Case	Status	Patent Number	Issue Date	City	(long:Title1)	(long:Title2)
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8770	USA		ISSUED	5,388,675	02/14/95	RFP	BACKING PLATE FOR DISC BRAKE PADS	
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8785	USA		ISSUED	5,560,453	10/01/96	RFP	KEY FOR RAILROAD BRAKE SHOE ASSEMBLY	
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8715	USA		ISSUED	5,566,793	10/22/96	RFP	IMPROVED RAILWAY TYPE BRAKE SHOE	
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8972	USA	CP	ISSUED	5,595,267	01/21/97	RFP	BRAKE SHOE HAVING FATIGUE RESISTANT BACKING PLATE	
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8932	USA		ISSUED	5,647,460	07/15/97	RFP	SPRING-TYPE RAILROAD BRAKE SHOE LOCKING KEY	
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8715	USA	C	ISSUED	5,657,839	08/19/97	RFP	IMPROVED RAILWAY TYPE BRAKE SHOE	
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8882	USA		ISSUED	5,704,454	01/06/98	RFP	FATIGUE AND IMPACT RESISTANT RAILWAY BRAKE SHOE	
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Case Number	Count	Sub	Stat	Patent Number	Issue Date	Client	Long Title1	Long Title2
VAPOR-16	CANAD	01	ISSUED	1,076,165	06/22/80	VAPR HEAVY FUEL OIL NOZZLE		
VAPOR-15	USA		ISSUED	4,247,266	01/27/81	VAPR FLUID PUMP DRIVE SYSTEM		
VAPOR-16	USA	61	ISSUED	4,249,885	02/10/81	VAPR HEAVY FUEL OIL NOZZLE		
VAPOR-17	USA		ISSUED	4,266,485	05/12/81	VAPR Control Sys. for Economic Operation of Multiple Locomotive Trains (Note: Inventors = outsiders)		
VAPOR-18	USA		ISSUED	4,275,664	06/30/81	VAPR STEP/PLATFORM OPERATOR		
VAPOR-7	CANAD		ISSUED	1,109,900	09/29/81	VAPR PACKING ASSEMBLY		
VAPOR-8	CANAD		ISSUED	1,116,018	01/12/82	VAPR MOVABLE HANGERS FOR PLUG DOORS		
VAPOR-19	USA		ISSUED	4,341,398	07/27/82	VAPR Sys for Controlling the Kneeling Operation of a Suspension Equipped Transit Vehicles		
VAPOR-14	CANAD		ISSUED	1,126,276	11/23/82	VAPR VENTILATOR DATA HANDLING AND CONTROL SYSTEM		
VAPOR-21	CANAD		ISSUED	1,136,015	11/23/82	VAPR CONTACTLESS PRESSURE SENSITIVE SWITCH		
VAPOR-20	USA		ISSUED	4,369,344	01/18/83	VAPR SENSITIVE DOOR EDGE MEGACAD MODULE SWITCH ASSEMBLY		
VAPOR-21	USA		ISSUED	4,371,762	02/01/83	VAPR CONTACTLESS PRESSURE SENSITIVE SWITCH		
VAPOR-20	CANAD		ISSUED	1,148,589	06/21/83	VAPR SENSITIVE DOOR EDGE MEGACAD MODULE SWITCH ASSEMBLY		
VAPOR-22	USA		ISSUED	4,407,623	10/06/83	VAPR LIFT ASSEMBLY INCLUDING A REACTION SWITCH		
VAPOR-18	CANAD		ISSUED	1,156,875	11/15/83	VAPR STEP/PLATFORM OPERATOR		
VAPOR-26	USA		ISSUED	4,422,387	12/27/83	VAPR DOOR SEAL		
VAPOR-23	CANAD		ISSUED	1,173,407	08/28/84	VAPR		
VAPOR-24	CANAD		ISSUED	1,178,302	11/20/84	VAPR		
VAPOR-27	USA		ISSUED	4,491,917	01/01/85	VAPR DOOR CONTROL SYSTEM (OTA zero speed sensor)		

VAPOR-25	CANAD	ISSUED	1,183,558	03/05/85	VAPR SPINDLE DOOR OPERATOR
VAPOR-26	CANAD	ISSUED	1,183,730	03/12/85	VAPR DOOR SEAL
VAPOR-29	AUSAL	ISSUED	594,323	02/21/86	VAPR ELECTRODE CONFIGURATION FOR HIGH VOLTAGE
VAPOR-29	UNIKN	ISSUED	2,172,480	02/28/86	VAPR ELECTRODE CONFIGURATION FOR HIGH VOLTAGE
VAPOR-9	CANAD	ISSUED	1,203,624	06/22/86	VAPR METHOD FOR AUTOMATED ANALYSIS OF VEHICLE PERFORMANCE
VAPOR-10	USA	ISSUED	4,583,666	06/22/86	VAPR STEP LIFT FOR RAILWAY CARS
VAPOR-30	USA	ISSUED	4,611,104	09/09/86	VAPR ELECTROMECHANICAL SWITCH ACTUATOR HAVING HIGH SECURITY KEY ACTUATOR
VAPOR-31	USA	ISSUED	4,627,242	12/09/86	VAPR THERMOELECTRIC COOLER
VAPOR-32	USA	ISSUED	4,628,835	12/16/86	VAPR WASTE FLUID INCINERATOR HAVING HEAT RECOVERY MEANS
VAPOR-33	USA	ISSUED	4,653,227	03/31/87	VAPR DOOR OPERATING ASSEMBLY
VAPOR-10	CANAD	ISSUED	1,220,089	04/07/87	VAPR STEP LIFT FOR RAILWAY CARS
VAPOR-34	USA	ISSUED	4,704,870	11/10/87	VAPR THERMOELECTRIC COOLER
VAPOR-29	CANAD	ISSUED	1,244,864	11/15/88	VAPR ELECTRODE CONFIGURATION FOR HIGH VOLTAGE
VAPOR-26	CANAD D1	ISSUED	1,252,351	04/11/89	VAPR DOOR SEAL
VAPOR-32	CANAD	ISSUED	1,256,321	06/27/89	VAPR WASTE FLUID INCINERATOR HAVING HEAT RECOVERY MEANS
VAPOR-35	USA C	ISSUED	4,882,876	11/28/89	VAPR DOOR OPERATOR WITH LOCKING MECHANISM
VAPOR-33	CANAD	ISSUED	1,265,387	02/06/90	VAPR DOOR OPERATING ASSEMBLY
VAPOR-34	CANAD	ISSUED	1,266,093	02/20/90	VAPR THERMOELECTRIC COOLER
VAPOR-36	USA	ISSUED	4,901,474	02/20/90	VAPR PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK
VAPOR-36	TAIWAN	ISSUED	42,921	12/01/90	VAPR PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK
VAPOR-37	USA	ISSUED	5,130,503	07/14/92	VAPR PRESSURE WAVE SWITCH HAVING IMPROVED CONTACT STRUCTURE AND PRESSURE EQUALIZATION
VAPOR-36	USA CP	ISSUED	5,148,631	09/22/92	VAPR PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK
VAPOR-35	CANAD	ISSUED	1,315,812	04/06/93	VAPR DOOR OPERATOR WITH LOCKING MECHANISM

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PATENT
REEL: 9423 FRAME: 0322

PATENT
REEL: 012280 FRAME: 0396

VAPOR-36	CANAD	ISSUED	1,321,219	08/10/93	VAPR PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK	
VAPOR-38	USA	ISSUED	5,259,342	11/09/93	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-39	USA	ISSUED	5,280,754	01/25/94	VAPR TRANSIT CAR POWER DOOR OBSTRUCTION SENSING SYSTEM AND DEVICE	
VAPOR-40	USA	ISSUED	5,332,279	07/26/94	VAPR POWER DOOR OPERATOR FOR MULTI PASSENGER MASS TRANSIT VEHICLES (electric bus door operator)	
VAPOR-38	USA	ISSUED	5,333,574	08/02/94	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-41	USA	ISSUED	5,361,598	08/30/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
VAPOR-36	UNITED	ISSUED	0435874	05/31/95	VAPR PNEUMATIC DOOR OPERATOR HAVING NOVEL PNEUMATIC ACTUATOR AND LOCK	
VAPOR-38	MEXIC	ISSUED	178,516	06/30/95	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-38	USA	ISSUED	5,433,174	07/18/95	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-43	USA	ISSUED	5,433,031	07/18/95	VAPR RESILIENT EDGES FOR POWER OPERATED DOORS (biparting doors)	
VAPOR-44	USA	ISSUED	5,438,800	08/08/95	VAPR STABILIZER FOR OUTSIDE SLIDING PLUG DOORS (door leaf)	
VAPOR-38	USA	ISSUED	5,471,957	12/05/95	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-41	MEXIC	ISSUED	180,346	12/07/95	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
VAPOR-46	USA	ISSUED	5,483,769	01/16/96	VAPR DOOR DRIVE EQUIPMENT FOR MASS TRANSIT VEHICLE (sliding low side plug door)	
VAPOR-46	UNITED	ISSUED	2,271,331	02/28/96	VAPR IMPROVED DOOR HANGER SYSTEM FOR MASS TRANSIT VEHICLES	
VAPOR-41	AUSAL	ISSUED	670,079	10/22/96	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
VAPOR-37	CANAD	ISSUED	2,062,901	10/29/96	VAPR PRESSURE WAVE SWITCH HAVING IMPROVED CONTACT STRUCTURE AND PRESSURE EQUALIZATION	
VAPOR-38	USA	ISSUED	5,582,137	12/10/96	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS FUELS (parent)	
VAPOR-41	POLND	ISSUED	172628	04/04/97	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
VAPOR-41	JAPAN	ISSUED	4727397	12/12/97	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED LOCKS (R110)	
VAPOR-40	MEXIC	ISSUED	188149	03/05/98	VAPR POWER DOOR OPERATOR FOR MULTI-PASSENGER MASS TRANSIT VEHICLES (electric bus door operator)	
VAPOR-49	USA	ISSUED	5,755,060	05/26/98	VAPR COMPACT PANEL LOCK FOR AN OVERHEAD MOUNTED DOOR PANEL OPERATOR (filed orig as provisional ap 60/000	

PATENT
REEL: 9423 FRAME: 0323

PATENT
REEL: 012280 FRAME: 0397

VAPOR 52 USA ISSUED 5,775,232 07/07/98 VAPOR BRIDGE PLATE FOR A MASS TRANSIT VEHICLE

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PATENT
REEL: 9423 FRAME: 0324

PATENT
REEL: 012280 FRAME: 0398

Case Number	Count	Sub Case	Stat	Patent Number	Issue Date	Clie nt	long-title1	long-title2
7085	CANAD	ISSUED	1149759	07/12/83	WLTD HYDROPNEUMATIC BRAKE ACTUATOR ARRANGED TO MAINTAIN CONSTANT BRAKE SHOE CLEARANCE			
7122	CANAD	ISSUED	1166977	05/08/84	WLTD HYDRAULIC BRAKE ACTUATOR HAVING SPRING-APPLIED BACK-UP WITH MANUAL RELEASE MEANS			
8101	CANAD	ISSUED	1209059	08/05/86	WLTD HYDRO PNEUMATIC ACTUATOR WITH AUTOMATIC SLACK ADJUSTER			
8234	CANAD	ISSUED	1246641	12/13/80	WLTD COMBINED HYDROPNEUMATIC BRAKE CYLINDER/ AIR RESERVOIR ADJUSTER ARRANGEMENT			
8122	CANAD	ISSUED	1256039	06/20/89	WLTD BRAKE ACTUATOR DEVICE HAVING A HYDRAULIC SLACK ADJUSTING ARRANGEMENT			
8269	CANAD	ISSUED	1260515	09/26/89	WLTD MANUAL RELEASE AND AUTO RESET ARRANGEMENT FOR SPRING-APPLIED/AIR-RELEASED BRAKE			
8468	CANAD	ISSUED	2,005,296	01/09/96	WLTD FREIGHT BRAKE EMERGENCY VALVE			

UNARCO ALLOWED APPLICATIONS

Case Number	Country	Sub Case	Status	Application Number	Filing Date	Title	Long Title1	Long Title2
8715	AUSAL		ALLOWED	53919/94	01/21/94	RIPC IMPROVED RAILWAY TYPE BRAKE SHOE		
8694	CANAD		ALLOWED	2,119,546	03/21/94	WATN QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL		VALVE DEVICE
8739	CANAD		ALLOWED	2,119,607	03/22/94	WATN LOCK OUT MECHANISM FOR EMPTY/LOAD CHANGEOVER VALVE		
8745	BRAZL		ALLOWED	P1-9403702	10/13/94	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY		CAR TRUCK BOLSTER BOWL
8694	BRAZL		ALLOWED	P1-9403670.5	10/04/94	WATN QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL		VALVE DEVICE
8758	BRAZL		ALLOWED	P1-9403704	10/13/94	CARD HIGH CAPACITY UNIT CLEAN ASSEMBLY		
8737	BRAZL		ALLOWED	P1-9403705	10/13/94	WATN ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM		
8737	CANAD		ALLOWED	2,123,040	05/06/94	WATN ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM		
8739	BRAZL		ALLOWED	P1-9403703.5	10/13/94	WATN LOCK OUT MECHANISM FOR EMPTY/LOAD CHANGEOVER VALVE		
8720	CANAD		ALLOWED	2,123,754	05/17/94	PLUS SHIELD VARYING BACKROT LEVEL WHEEL SLIP DETECTION AND		SLIP INTENSITY DETERMINATION PROCESS
8740	CANAD		ALLOWED	2,124,303	05/25/94	PTDS AUTOMATIC ELECTRIC COUPLING MECHANISM FOR A PASSENGER		TRANSIT TYPE VEHICLE
8735	CANAD		ALLOWED	2,116,312	02/23/94	LPDW TAMPER-RESISTANT INDEPENDENT BRAKE VALVE DEVICE FOR		LOCOMOTIVE AIR BRAKE EQUIPMENT
8614	CANAD		ALLOWED	2,129,402	08/03/94	WHEEL SPIN SPEED PROCESSING SYSTEM FOR MULTIPLE AXLE		RAILWAY VEHICLES
8748	CANAD		ALLOWED	2,129,401	08/03/94	WATN FASTENER ASSEMBLY FOR INSTALLING VALVE DEVICES AND THE LIKE		
8722	EPO		ALLOWED	94115927.9	10/10/94	PTDS BRAKE ACTUATOR HAVING COLLET STYLE STACK ADJUSTER		
8644	CANAD		ALLOWED	2,140,112	01/12/95	LPDW METHOD AND APPARATUS FOR DETERMINING AND ENCODING THE POSI		TION OF A REVERSER HANDLE ON A LOCOMOTIVE
8653	CANAD		ALLOWED	2,140,113	01/12/95	LPDW APPARATUS FOR INTERLOCKING REVERSER HANDLE ON A CONTINUO		STAND ON A RAILWAY LOCOMOTIVE
8769	CANAD		ALLOWED	2,140,115	01/12/95	WATN VIBRATION INSULATING MEMBERS FOR PISTON VALVE ASSEMBLY		
8654	CANAD		ALLOWED	2,140,401	01/17/95	LPDW APPARATUS FOR DETERMINING THE ABSOLUTE POSITION OF TROTTLE		DYNAMIC BRAKE & REVERSER HANDLES ON A LOCOMOTIVE

PATENT
REEL: 9423 FRAME: 0326

PATENT
REEL: 012280 FRAME: 0400

88012	CANAD	ALLOWED	2,144,813	03/16/95 LPOW SOFTWARE MULTIPLICATION OF TRANSDUCER INDUCED OFFSET	ERRORS WITHIN A FLOW RATE MEASUREMENT SYSTEM
8787	AUSAL	ALLOWED	17830/95	05/02/95 MATV RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8787	CANAD	ALLOWED	2,144,932	03/17/95 MATV RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8745	CANAD CP	ALLOWED	2,146,624	04/07/95 CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY	CAR TRUCK BOLSTER BOWL
8745	SOFRC CP	ALLOWED	954706	06/07/95 CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY	CAR TRUCK BOLSTER BOWL
8847	CANAD	ALLOWED	2,148,867	05/08/95 LPOW APPARATUS FOR INTERLOCKING THROTTLE, DYNAMIC BRAKE AND REVERSER HANDLES ON A CONTROL STAND OF A RAILWAY LOCOMOTIVE	
8860	USA	ALLOWED	08/520,464	08/28/95 PIDS EVENT HISTORY DATA ACQUISITION	
8796	CANAD	ALLOWED	2,157,735	09/07/95 CARD INTERLOCKING SLACKLESS DRAWBAR ASSEMBLY FOR RAILWAY CAR AND AN	INTERLOCKING MECHANISM THEREFOR
8894	CANAD	ALLOWED	2,158,819	09/21/95 PIDS AUXILIARY VEHICLE CURRENT COLLECTOR	
8877	CANAD	ALLOWED	2,160,413	10/12/95 REPD AUTOMATED TERMINAL TEST PROCEDURE	
8815	CANAD	ALLOWED	2,160,970	10/19/95 PIDS ROTARY MAGNET VALVE	
8810	SOFRC	ALLOWED	96/0366	07/17/96 NPTM SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANSDUCERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEMS	
8875	USA	ALLOWED	08/602,492	02/20/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8949	CANAD	ALLOWED	2,170,857	03/07/96 PIDS BRAKE CONTROL DEVICE FOR RAILROAD ROLLING STOCK	
8940	USA	ALLOWED	08/594,517	07/31/96 PIDS BRAKE DEVICE	
8962	USA	ALLOWED	08/653,076	05/21/96 PIDS A BRAKE MONITORING DEVICE FOR RAILROAD CAR	
8986	USA	ALLOWED	08/664,391	06/14/96 CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY	VEHICLE BRAKE SYSTEM
8931	USA	ALLOWED	08/670,778	06/20/96 CARD END DESIGN FOR A RAILWAY TYPE FREIGHT CAR	
8933	USA	ALLOWED	08/677,584	07/09/96 MATV BRAKE PIPE REMOTE PRESSURE CONTROL SYSTEM &	MOTOR-DRIVEN REGULATING VALVE THEREFOR
8840	USA	ALLOWED	08/642,569	05/03/96 MATV BRAKE CONTROL FOR MULTI-PLATFORM FREIGHT CAR	
8964	USA CP	ALLOWED	08/637,873	04/25/96 MATV FREIGHT BRAKE CONTROL FOR UNIFORM CAR DECELERATION	
8746	AUSAL D1	ALLOWED	58369/96	07/04/96 CARD LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT
9075	USA	ALLOWED	08/709,197	08/23/96 FIPP A DUAL TYPE COMPOSITION BRAKE BLOCK SPECIFICALLY DESIGNED FOR USE IN PREDETERMINED TYPE BRAKE SYSTEM	

PATENT
REEL: 9423 FRAME: 0327

PATENT
REEL: 012280 FRAME: 0401

8958	USA	ALLOWED	08/745,429	11/12/96 MATW COOLING SPOKE ARRANGEMENT FOR A BRAKE DISC	
8957	USA	ALLOWED	08/748,241	11/12/96 MATW OFFSET ARRANGEMENT FOR BRAKE SYSTEM PROPORTIONALIZATION	LEVER
8991	CANADA	ALLOWED	2,195,274	01/16/97 LPDW IMPROVED INSERT TYPE MEMBER FOR USE IN A FLEXIBLE TYPE PUMP DIAPHRAGM	
8973	USA	ALLOWED	08/790,574	01/28/97 PIOS UNIVERSAL PNEUMATIC BRAKE CONTROL UNIT	
8977	USA	ALLOWED	08/759,411	12/04/96 PIOS PULSE WIDTH MODULATED DRIVE FOR AN INFINITELY VARIABLE	SOLENOID OPERATED BRAKE CYLINDER PRESSURE
CONTROL VALVE					
8877	USA	ALLOWED	08/807,795	02/28/97 REPD AUTOMATED TERMINAL TEST PROCEDURE	
8960	USA	ALLOWED	08/772,326	12/23/96 MATW MICROPROCESSOR CONTROLLED RAILWAY CAR ACCOUNTING AND COMMUNICATION SYSTEM	
9055	USA	ALLOWED	08/835,859	04/08/97 PULS SIMPLIFIED DUAL CONNECTION EP BRAKE SYSTEM	
9014	EPO	ALLOWED	97108004.9	05/16/97 LPDW Molded Rubber Val Seal for use in Predetermined type Valves such as, a Ck Val in a Regenerative Desiccant Air Dryer	
9016	SOFRC	ALLOWED	97/5048	06/06/97 LPDW REGENERATIVE DESICCANT AIR DRYER	
8970	SOFRC	ALLOWED	97/5038	06/06/97 LPDW Pneumatic Emergency Brake Application Valve and an Associated Electrical Signaling Switch	
8961	USA	ALLOWED	08/831,076	04/01/97 ELECTRONIC BLUE FLAG SAFETY EQUIPMENT	
9085	USA	ALLOWED	08/870,877	06/06/97 RFFC TRIM SHOE	
8852	USA	ALLOWED	08/920,207	08/15/97 REPD AN APPARATUS TO ENABLE CONTROLLING A THROTTLE CONTROLLER FROM A REMOTE HOST	
8889	SOFRC	ALLOWED	97/6835	07/31/97 MATW ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A RAILROAD CAR BRAKE CONTROL VALVE DEVICE	
9030	USA	ALLOWED	08/907,936	08/12/97 LPDW COMPRESSOR INLET VALVE	
9085	SOFRC	ALLOWED	97/8930	10/06/97 RFFC TRIM SHOE	
9053	SOFRC	ALLOWED	97/8670	09/26/97 PULS SIMPLIFIED DUAL CONNECTION EP BRAKE SYSTEM	
8942	SOFRC	ALLOWED	97/9421	10/27/97 PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIL BRAKE PIPE PRESSURE EXHAUST VALVE	
8998	SOFRC	ALLOWED	97/9620	10/27/97 PULS ENVIRONMENTALLY-SEALED CONNECTIVELY-COOLED ACTIVE MATRIX LIQUID CRYSTAL DISPLAY (LCD)	
8908	USA	ALLOWED	08/642,954	05/06/96 PIOS RAILWAY BRAKE VALVE ASSEMBLY	Filed by Dority & Manning, Craig M. Kille

HABCO ALLOWED APPLICATIONS

Case Number	Country	Sub Case	Status	Application Number	Filing Date	Title	Long Title 1	Long Title 2
8712	JAPAN		PENDING	06-065869	04/04/94	PIOS APPLICATION & RELEASE MAGNET VALVE		
8681	CANAD		PENDING	2,119,608	03/22/94	NAFV LOW STRESS CONICAL TYPE DIAPHRAGM		
8745	INDIA		PENDING	368/De1/94	03/30/94	CARD COMBINATION WEAR AND LUBRICATING LUBER ASSEMBLY FOR RAILWAY	CAP TRUCK BOOSTER BOWL	
8746	INDIA		PENDING	369/De1/94	03/30/94	CARD LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT	
8758	CHINA		PENDING	9411504.6	08/18/94	CARD HIGH CAPACITY DRAFT GEAR ASSEMBLY		
8758	INDIA		PENDING	422/De1/94	04/12/94	CARD HIGH CAPACITY DRAFT GEAR ASSEMBLY		
8694	SOFRC		PENDING	94/2049	03/23/94	NAFV QUICK SERVICE LIMITING VALVE FOR FREIGHT BRAKE CONTROL	VALVE DEVICE	
8746	CANAD		PENDING	2,120,314	03/30/94	CARD LUBRICATING APPARATUS FOR ARTICULATED COUPLING	ARRANGEMENT	
8758	CANAD		PENDING	2,121,007	04/11/94	CARD HIGH CAPACITY DRAFT GEAR ASSEMBLY		
8783	USA		PENDING	08/238,264	05/04/94	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR	ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8784	USA		PENDING	08/238,263	05/04/94	CARD A MALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY	USING A BALL AND RACE ASSEMBLY	
8722	CANAD		PENDING	2,123,767	05/17/94	PIOS BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER		
8726	CANAD		PENDING	2,123,952	05/19/94	PIOS A METHOD OF AND AN APPARATUS FOR PROVIDING A SAFETY CHECK	OF THE BRAKE RETARDATION, ON A VEHICLE	
8755	CANAD		PENDING	2,124,921	06/01/94	NAFV BRAKE CYLINDER PRESSURE RELAY VALVE FOR RAILROAD	FREIGHT CAR	
8766	CANAD		PENDING	2,125,438	06/08/94	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT	EACH END OF THE DRAWBAR	
8783	CANAD		PENDING	2,125,439	06/08/94	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR	ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8784	CANAD		PENDING	2,125,437	06/08/94	CARD A MALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY	USING A BALL AND RACE ASSEMBLY	
8749	CANAD		PENDING	2,125,746	06/13/94	PIOS TIMED THRUST UNCOUPLING MECHANISM FOR PASSENGER TRANSIT	TYPE RAILWAY CARS	
8745	EPG		PENDING	94107183.9	05/07/94	CARD COMBINATION WEAR AND LUBRICATING LUBER ASSEMBLY FOR RAILWAY	CAP TRUCK BOLSTER BOWL	

PATENT
REEL: 9423 FRAME: 0329

PATENT
REEL: 012280 FRAME: 0403

8624	CANAD	PENDING	2,130,146	08/15/94	PTDS TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8770	CANAD	PENDING	2,117,663	09/02/94	RIPC BACKING PLATE FOR DISC BRAKE PADS	
8768	CANAD	PENDING	2,131,493	09/06/94	PTDS SLACK ADJUSTING BRAKE CYLINDER FOR A BRAKE UNIT ON A RAILWAY TRANSIT VEHICLE	
8624	BRAZL	PENDING	PI 9502200	06/07/95	PTDS TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8624	EPO	PENDING	94114192.1	09/09/94	PTDS TWO STATE TO THREE STATE EMULATOR PROCESS AND APPARATUS	
8766	BRAZL	PENDING	PI 9501633	04/28/95	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8766	EPO	PENDING	94114191.3	09/09/94	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8766	INDIA	PENDING	1079/DEL/94	08/26/94	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8766	JAPAN	PENDING	06-291552	11/25/94	CARD SLACKLESS DRAWBAR USING A BALL AND RACE ASSEMBLY AT EACH END OF THE DRAWBAR	
8783	BRAZL	PENDING	PI 9501333	04/06/95	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8783	EPO	PENDING	94113594.1	09/07/94	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8783	INDIA	PENDING	1080/DEL/94	08/26/94	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8783	JAPAN	PENDING	06-291553	11/25/94	CARD A FEMALE CONNECTION MEMBER FOR A SLACKLESS DRAWBAR ASSEMBLY USING A BALL AND RACE ASSEMBLY	
8651	CANAD	PENDING	2,131,105	08/30/94	CARD MCGABE, THOMAS LESSLER CHARLES R & MCGABE SCOTT RAILWAY BRAKING APPARATUS	
8722	BRAZL	PENDING	PI 9501334-2	04/06/95	PTDS BRAKE ACTUATOR HAVING COLLET STYLE SLACK ADJUSTER	
8788	CANAD	PENDING	2,132,261	09/16/94	NATV VIBRATION DESENSITIZING PISTON WEAR RING FOR RAILROAD LAP CONTROL VALVE	
8794	USA	PENDING	08/308,609	09/19/94	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8635	USA	PENDING	08/288,649	08/09/94	PTDS REUSABLE PAINT MASKING MEMBER	
8754	CANAD	PENDING	2,137,871	12/12/94	NATV RAILWAY BRAKE PIPE WITH ACCESS PORTS	
8772	CANAD	PENDING	2,117,876	10/11/94	NATV FILTER ARRANGEMENT AND MOUNTING IN RAILWAY BRAKE PIPE BRACKET	
8761	CANAD	PENDING	2,134,401	10/26/94	LPDV AIR PASSAGE INSERT FOR OIL FILL SPOUT	
8794	INDIA	PENDING	1607/DEL/94	11/02/94	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8794	CANAD	PENDING	2,134,859	11/01/94	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	

PATENT
REEL: 9423 FRAME: 0330

PATENT
REEL: 012280 FRAME: 0404

8794	JAPAN	PENDING	07-013066	01/30/95	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8794	EPO	PENDING	94117804.8	11/11/94	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8794	BRAZL	PENDING	PI 9500580	02/15/95	CARD A FEMALE CONNECTION MEMBER FOR SLACKLESS DRAWBAR ASSEMBLY	
8792	CANAD	PENDING	2,141,096	01/25/95	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8792	BRAZL	PENDING	PI 9500921.3	03/09/95	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8792	INDIA	PENDING	103/DEL/95	01/25/95	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8792	JAPAN	PENDING	07-013065	01/30/95	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8720	JAPAN	PENDING	07-088053	04/13/95	PIDS SPEED VARYING ENERGY LEVEL WHEEL SLIP DETECTION AND	SLIP INTENSITY DETERMINATION PROCESS
8726	JAPAN	PENDING	07-056181	03/14/95	PIDS A METHOD OF AND AN APPARATUS FOR PROVIDING A SAFETY CHECK	OF THE BRAKE RETARDATION ON A VEHICLE
8748	JAPAN	PENDING	07-143084	06/09/95	NAFW FASTENER ASSEMBLY FOR INSTALLING VALVE DEVICES AND THE LIKE	
8792	EPO	PENDING	95101392.9	02/02/95	CARD SLACKLESS DRAWBAR ASSEMBLY UTILIZING A BALL AND RACE	ASSEMBLY
8843	CANAD	PENDING	2,141,087	01/23/95	LPDW ELECTRONICALLY CONTROLLED LOCK THROTTLE CONTROLLER	INCLUDING REMOTE MULTIPLE UNIT THROTTLE CO
8769	CANAD	PENDING	2,141,720	02/02/95	KRPC WHEEL TREAD CONDITIONING BRAKE SAGE	
8856	CANAD	PENDING	2,141,513	01/31/95	LPDW A METHOD AND APPARATUS FOR REMOTE CONTROL OF A LOCOMOTIVE	THROTTLE CONTROLLER
8747	CANAD	PENDING	2,142,175	02/09/95	NAFW IMBEDDED ELECTRICAL CONNECTOR	
8856	AUSAL	PENDING	14934/95	03/20/95	LPDW A METHOD AND APPARATUS FOR REMOTE CONTROL OF A LOCOMOTIVE	THROTTLE CONTROLLER
8613	USA	PENDING	08/393,419	02/23/95	CARD VARIABLE ANGLE FRICTION CLUTCH MECHANISM FOR A DRAIT	GEAR ASSEMBLY
8786	AUSAL	PENDING	17842/95	05/03/95	NAFW Railway Automatic Brake Control Valve Test Unit	
8786	BRAZL	PENDING	PI 9504890.5	10/30/95	NAFW Railway Automatic Brake Control Valve Test Unit	
8786	CANAD	PENDING	2,148,424	05/02/95	NAFW Railway Automatic Brake Control Valve Test Unit	
8786	EPO	PENDING	95106957.4	05/09/95	NAFW Railway Automatic Brake Control Valve Test Unit	
881	CANAD	PENDING	2,144,012	03/16/95	LPDW APPLICATIONS OF EPICR) 3102 BRAKE EQUIPMENT TO ELECTRO-	PNEUMATIC SYSTEMS

8787	BRAZL	PENDING	P1 9503145-6	08/14/95	RAILWAY BRAKE PIPE BRACKET ACCESS PLATE	
8809	AUSAL	PENDING	16589/95	04/24/95	MAFV TEST CONNECTOR FOR AUTOMATIC TEST DEVICE	
8809	BRAZL	PENDING	P1 9504806-5	10/10/95	MAFV TEST CONNECTOR FOR AUTOMATIC TEST DEVICE	
8809	CANAD	PENDING	2,144,931	03/17/95	MAFV TEST CONNECTOR FOR AUTOMATIC TEST DEVICE	
8816	CANAD	PENDING	2,145,181	03/23/95	LEPDM APPARATUS TO PREVENT INADVERTENT DISCHARGE AND TRAPPING OF PIPE PRESS. IN AN ELECTRO PNEU. LOCK. BRAK	
8759	CANAD	PENDING	2,149,181	05/11/95	PIDS ELECTRICALLY OPERATED HOOK COUPLER WITH MANUAL OVER RIDE	
8745	AUSAL	PENDING	20331/95	05/26/95	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL	
8745	BRAZL	PENDING	P1 9504805-7	10/10/95	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL	
8745	INDIA	PENDING	681/Del/95	04/17/95	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL	
8745	JAPAN	PENDING	08-005193	01/16/96	CARD COMBINATION WEAR AND LUBRICATING LINER ASSEMBLY FOR RAILWAY CAR TRUCK BOLSTER BOWL	
8880	CANAD	PENDING	2,147,096	04/19/95	LEPDM RAILWAY BRAKE SYSTEM TESTER	
8747	AUSAL	PENDING	14935/95	03/20/95	MAFV IMBEDDED ELECTRICAL CONNECTOR	
8747	BRAZL	PENDING	P1 9503146-4	08/14/95	MAFV IMBEDDED ELECTRICAL CONNECTOR	
8785	CANAD	PENDING	2,149,964	05/23/95	RFPCE FOR RAILROAD BRAKE SPEED ASSEMBLY	
8829	CANAD	PENDING	2,151,665	06/13/95	MAFV REMOTE CONTROL OF CUT-OUT COCK	
8879	CANAD	PENDING	2,152,739	06/27/95	PIDS PROPORTIONAL POLARITY SHIFT WHEEL SLIDE PROTECTION	
8885	CANAD	PENDING	2,153,854	07/13/95	MAFV TREVOR A. SCOTT ERIC G. SMITH ULF STAMMER W. THOMAS D'AMOREO (B. INVENTORS)	
8752	JAPAN	PENDING	08-102733	04/24/96	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8863	CANAD	PENDING	2,154,540	07/24/95	PIDS SIMPLIFIED PATTERN RECOGNITION WHEEL SLIDE PROTECTION	
8752	AUSAL	PENDING	342144/95	10/12/95	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8752	BRAZL	PENDING	P1 9501330-6	04/11/96	MAFV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8796	AUSAL	PENDING	45519/96	02/13/96	CARD INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RAIL CAR AND AN INTERLOCKING MECHANISM THEREFOR	
8796	EPO	PENDING	96103045.9	02/29/96	CARD INTERLOCKING SLACKLESS DRAWBAR ASSY FOR RAIL CAR AND AN INTERLOCKING MECHANISM THEREFOR	

PATENT
REEL: 9423 FRAME: 0332

PATENT
REEL: 012280 FRAME: 0406

8856	JAPAN	PENDING	07-316696	12/05/95	LPDV A METHOD AND APPARATUS FOR REMOTE CONTROL OF A LOCOMOTIVE	THROTTLE CONTROLLER
8811	JAPAN	PENDING	08-012695	07/29/96	1. APPLICATIONS OF EPICOR 3102 BRAKE EQUIPMENT TO ELECTRO-PNEUMATIC SYSTEMS	PNEUMATIC SYSTEMS
8852	JAPAN	PENDING	07-298696	11/16/95	LPDV AN APPARATUS TO ENABLE CONTROLLING A THROTTLE CONTROLLER FROM A REMOTE NOS	FROM A REMOTE NOS
8790	AUSAL	PENDING	48236/96	03/22/96	NAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A	RAILROAD CAR BRAKE PIPE PRESSURE
8790	BRAZL	PENDING	P1 9602697-9	06/07/96	NAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A	RAILROAD CAR BRAKE PIPE PRESSURE
8790	CANAD	PENDING	2,162,980	11/15/95	NAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A	RAILROAD CAR BRAKE PIPE PRESSURE
8810	CANAD	PENDING	2,162,971	11/15/95	NAFV SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANS	DUCTERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE
8810	BRAZL	PENDING	9601187	03/29/96	NAFV SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANS	DUCTERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE
8885	AUSAL	PENDING	48238/96	03/22/96	NAFV TREVOR A. SCOTT - ERIC G. SMITH - ULF STAMMER	W. THOMAS DIQUEED (8 INVENTORS)
8885	BRAZL	PENDING	9600318	02/05/96	NAFV TREVOR A. SCOTT - ERIC G. SMITH - ULF STAMMER	W. THOMAS DIQUEED (8 INVENTORS)
8839	CANAD	PENDING	2,175,518	05/01/96	PIDS EMBEDDED DUPLEX LOCAL CONTROL PANEL	SOFTWARE CONTROL
8907	CANAD	PENDING	2,164,159	11/30/95	LPDV AUTOMATIC DETECTION OF AIR FLOW TRANSDUCER TYPE UNDER	IN AN AIR SYSTEM
8910	CANAD	PENDING	2,164,475	12/05/95	PIDS TELESCOPING DESICCANT CARTRIDGE FOR AN AIR DRYER DISPOSED	IN AN AIR SYSTEM
8911	CANAD	PENDING	2,166,594	01/04/96	CARD FREIGHT RAILWAY CAR SLACKLESS DRAWBAR ASSEMBLY	DUCTERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE
8810	AUSAL	PENDING	47989/96	03/04/96	NAFV SYSTEM AND METHOD FOR AUTOMATICALLY CALIBRATING TRANS	DUCTERS IN ELECTRO-PNEUMATIC FREIGHT BRAKE
8926	CANAD	PENDING	2,168,408	01/30/96	RIPC SELF LUBRICATING BRAKE SHOE MATERIAL	CONTROL SYSTEM
8898	USA	PENDING	08/556,198	11/09/95	REPO LIMP-IN CONTROL ARRANGEMENT FOR AN ELECTRO-PNEUMATIC BRAKE	CONTROL SYSTEM
8898	CANAD	PENDING	2,169,038	02/07/96	REPO LIMP-IN CONTROL ARRANGEMENT FOR AN ELECTRO-PNEUMATIC BRAKE	CONTROL SYSTEM
8751	JAPAN	PENDING	08-163216	06/24/96	NAFV ELECTRIC BRAKE CONTROL SYSTEM AND METHOD FOR RAILROAD CAR	RAILROAD CAR BRAKE PIPE PRESSURE
8790	JAPAN	PENDING	08-147296	06/10/96	NAFV MICROPROCESSOR BASED SYSTEM AND METHOD FOR REGULATING A	RAILROAD CAR BRAKE PIPE PRESSURE
8813	JAPAN	PENDING	08-126952	05/22/96	NAFV PNEUMATIC EMERGENCY BACKUP FOR ELECTRO-PNEUMATIC FREIGHT	BRAKE
8879	JAPAN	PENDING	08-113876	05/08/96	PIDS PROPORTIONAL POLARITY SHIFT WHEEL SLIDE PROTECTION	RAILROAD CAR BRAKE PIPE PRESSURE
8861	BRAZL	PENDING	9602742	06/12/96	NAFV TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGULATING VALVE THEREFOR	RAILROAD CAR BRAKE PIPE PRESSURE

8861	CANAD	PENDING	2,170,854	03/01/96	RAIL TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGU-	LATING VALVE THEREFOR
8861	INDIA	PENDING	514/061/96	03/12/96	RAIL TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGU-	LATING VALVE THEREFOR
8861	AUSAL	PENDING	48237/96	03/22/96	RAIL TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGU-	LATING VALVE THEREFOR
8940	CANAD	PENDING	2,170,855	03/01/96	PIDS BRAKE DEVICE	
8943	CANAD	PENDING	2,170,852	03/01/96	PIDS BRAKE DEVICE	
8861	CHINA	PENDING	96108533.9	07/30/96	RAIL TRAIN BRAKE PIPE PRESSURE EXHAUST CONTROL SYSTEM AND REGU-	LATING VALVE THEREFOR
8927	CANAD	PENDING	2,172,901	03/28/96	PIDS MODULATION ROTARY VALVE	
8927	EPO	PENDING	96113466.5	08/22/96	PIDS MODULATION ROTARY VALVE	
8865	USA	PENDING	08/597,277	02/06/96	RAIL FREIGHT BRAKE CONTROL USING RAIL NET BRAKING RATIO	
8884	CANAD	PENDING	2,172,785	03/27/96	RAIL TWO-PIECE CHECK VALVE ASSEMBLY	
8921	CANAD	PENDING	2,173,518	04/04/96	PIDS LINEAR CHOKE SHUTTLE/ORTICE CHECK VALVE MECHANISM FOR A	TWIN TOWER AIR DRYER
8922	CANAD	PENDING	2,174,301	04/16/96	PIDS SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	
8930	CANAD	PENDING	2,174,702	04/22/96	RAIL BRAKE CONTROL SYSTEM FOR DOUBLED ENDS CONDITION	
8828	CANAD	PENDING	2,174,910	04/24/96	RAIL PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	RAKE
8828	AUSAL	PENDING	54709/96	06/03/96	RAIL PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	RAKE
8828	BRAZL	PENDING	9603231	07/30/96	RAIL PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	RAKE
8865	CANAD	PENDING	2,175,419	04/30/96	RAIL FREIGHT BRAKE CONTROL USING RAIL NET BRAKING RATIO	
8865	AUSAL	PENDING	55899/96	06/12/96	RAIL FREIGHT BRAKE CONTROL USING RAIL NET BRAKING RATIO	
8865	BRAZL	PENDING	PI 9603059.3	07/11/96	RAIL FREIGHT BRAKE CONTROL USING RAIL NET BRAKING RATIO	
8903	CANAD	PENDING	2,175,776	05/03/96	PIDS RAIL NAVIGATION SYSTEM	
8929	CANAD	PENDING	2,176,547	05/14/96	PIDS RELATIVE SPIN SPEED TRACTION CONTROL	
8937	CANAD	PENDING	2,183,222	08/13/96	PIDS SIGNAL PROCESSING UNIT FOR A TROLLEY POLE SWITCH	CONTROLLER (N) ABOVE IS CHARLES C. SIEGEL

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PATENT
REEL: 9423 FRAME: 0335

PATENT
REEL: 012280 FRAME: 0409

8971	USA	PENDING	08/643,604	05/06/96 LOW ABRASION RESISTANT PLASTIC BONDED TO A DIAPHRAGM	
8863	JAPAN	PENDING	08-140500	06/03/96 PIDS SIMPLIFIED PATTERN RECOGNITION WHEEL SLIDE PROTECTION	
8900	AUSAL	PENDING	55876/96	06/07/96 MAFV RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8900	BRAZI	PENDING	9603277	08/05/96 MAFV RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8900	CANAD	PENDING	2,177,130	05/22/96 MAFV RAILWAY MANUAL BRAKE CONTROL VALVE TEST UNIT	
8898	JAPAN	PENDING	08-295,348	11/07/96 REPT. IN CONTROL ARRANGEMENT FOR AN ELECTRO-PNEUMATIC BRAKE	CONTROL SYSTEM
8875	CANAD	PENDING	2,177,460	05/27/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8875	AUSAL	PENDING	55877/96	06/07/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8875	BRAZI	PENDING	9603552	08/23/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8875	CHINA	PENDING	96107134.6	06/21/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8875	EPN	PENDING	9611323.9	08/19/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8875	JAPAN	PENDING	09-008546	01/21/97 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8924	CANAD	PENDING	2,178,058	06/03/96 PIDS TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8875	INDIA	PENDING	1294/Del/96	06/12/96 CARD ERGONOMIC HAND WHEEL FOR RAILWAY CAR HAND BRAKE	
8926	FRANC	PENDING	96/12983	10/24/96 RPPC SELF LUBRICATING BRAKE SHOE MATERIAL	
8926	MEXIC	PENDING	965113	10/25/96 RPPC SELF LUBRICATING BRAKE SHOE MATERIAL	
8864	USA CP	PENDING	08/630,075	04/15/96 MAFV SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR	RAILWAY FREIGHT VEHICLE
8962	USA	PENDING	08/657,651	06/03/96 LPDV THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8963	USA	PENDING	08/651,919	05/21/96 PIDS A BRAKE CONTROL DEVICE FOR RAILROAD CARS	*note: filed Non-Convention
8901	USA	PENDING	08/653,153	05/24/96 PIDS METHOD OF DETERMINING CAR POSITION	
8828	JAPAN	PENDING	09-005690	01/16/97 MAFV PNEUMATIC EMPTY/LOAD PROPORTIONING FOR ELECTRO-PNEUMATIC	BRAKE
8884	JAPAN	PENDING	09-005691	01/16/97 MAFV TWO-PIECE CHECK VALVE ASSEMBLY	
8815	JAPAN	PENDING	08-208333	08/07/96 PIDS ROTARY MAGNET VALVE	

8927	JAPAN	PENDING	09-000433	01/06/97 PIDS MODULATED ROTARY VALVE	
8930	AUSAL	PENDING	68008/96	10/09/96 REPD BRAKE CONTROL SYSTEM FOR DOUBLED ENDED LOCOMOTIVE	
8882	CANAD	PENDING	2,180,422	07/03/96 RIPC FATIGUE AND IMPACT RESISTANT RAILWAY BRAKE SHOE	
8919	CANAD	PENDING	2,180,415	07/03/96 MATW TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TUSTER	
8932	CANAD	PENDING	2,180,401	07/03/96 RIPC SPRING-TYPE RAILROAD BRAKE SHOE LOCKING KEY	
8971	CANAD	PENDING	2,180,413	07/03/96 LPDW ABRASION RESISTANT PLASTIC BOWDED TO A DIAPHRAGM	
8963	CANAD	PENDING	2,181,405	07/17/96 PIDS A BRAKE CONTROL DEVICE FOR RAILROAD CARS	*note: filed non-convention
8840	CANAD	PENDING	2,181,871	07/23/96 MATW BRAKE CONTROL FOR MULTI-PLATFORM FREIGHT CAR	
8928	ARGNT	PENDING	338,610	10/22/96 MATW RAILWAY PIPE BRACKET WITH ACCESS FUNKIS	
8901	CANAD	PENDING	2,182,869	07/23/96 PULS METHOD OF DETERMINING CAR POSITION	
8901	EPO	PENDING	96132218.0	08/17/96 PULS METHOD OF DETERMINING CAR POSITION	
8904	CANAD	PENDING	2,192,151	12/05/96 PULS TRAIN BRAKE PERFORMANCE MONITOR	
8928	CANAD	PENDING	2,181,977	07/24/96 MATW RAILWAY PIPE BRACKET WITH ACCESS FEETIS	
8928	BRAZL	PENDING	9603780	09/17/96 MATW RAILWAY PIPE BRACKET WITH ACCESS PORTIS	
8864	CANAD	PENDING	2,181,872	07/23/96 MATW SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR RAILWAY FREIGHT VEHICLE	
8864	BRAZL	PENDING	9603792	09/18/96 MATW SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR RAILWAY FREIGHT VEHICLE	
8964	CANAD	PENDING	2,189,838	11/07/96 MATW FREIGHT BRAKE CONTROL FOR UNIFORM CAR DECELERATION	
8928	TURKE	PENDING	96/793	10/03/96 MATW RAILWAY PIPE BRACKET WITH ACCESS PORTS	
8962	CANAD	PENDING	2,182,338	07/30/96 PIDS A BRAKE MONITORING DEVICE FOR RAILROAD CARS	
8982	CANAD	PENDING	2,182,339	07/30/96 UPDW THERMOSTATICALLY CONTROLLED INTERLOCKING SYSTEM FOR MULTIPLE STAGE COMPRESSOR AND METHOD	
8908	CANAD N, Greenville, SC	PENDING	2,182,442	07/31/96 PIDS RAILWAY BRAKE VALVE ASSEMBLY	(filed by Dority & Manning, Craig H. Kille
8936	CANAD	PENDING	2,183,207	08/13/96 PIDS ELECTRONIC CONTROLLER FOR A TOILET FLUTE SWITCH MECHANISM	* inventor's full name: CHARLES C STEGEL
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89738	CANAD	PENDING	2,182,929	08/08/96	PIDS POWER CONTROLLING UNIT FOR A TROLLEY POLE SWITCH CONTROLLER	* INVENTOR'S FULL NAME: CHARLES C. SIEGLI
89984	CANAD	PENDING	2,182,928	08/08/96	LPBW IMPROVED RESULTANT TYPE SEALING MEMBER FOR SEALING A PUSH	ROD MEMBER OF A RAILWAY TYPE VEHICLE BRAKE
89937	USA	PENDING	08/641,439	05/01/96	PIDS SIGNAL PROCESSING UNIT FOR A TROLLEY POLE SWITCH	CONTROLLER (#3 ABOVE IS CHARLES C. SIEGLI)
89982	USA	PENDING	08/686,433	07/26/96	LPBW THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8767	USA	PENDING	08/688,436	07/30/96	MAFW IMBEDDED ELECTRICAL CONNECTOR	
8884	AUSAL	PENDING	65672/96	09/17/96	MAFW TWO-PIECE CHECK VALVE ASSEMBLY	
8884	BRAZL	PENDING	P1 9605139	10/15/96	MAFW TWO-PIECE CHECK VALVE ASSEMBLY	
8884	CHINA	PENDING	96113418.6	09/16/96	MAFW TWO-PIECE CHECK VALVE ASSEMBLY	
8884	ERO	PENDING	96114694.1	09/13/96	MAFW TWO-PIECE CHECK VALVE ASSEMBLY	
8884	INDIA	PENDING	1925/DEL/96	08/29/96	MAFW TWO-PIECE CHECK VALVE ASSEMBLY	
8901	AUSAL	PENDING	65784/96	09/20/96	PULS METHOD OF DETERMINING CAR POSITION	
8901	BRAZL	PENDING	P1 9605338	10/29/96	PULS METHOD OF DETERMINING CAR POSITION	
8901	JAPAN	PENDING	09 095761	04/14/97	PULS METHOD OF DETERMINING CAR POSITION	
8919	AUSAL	PENDING	67975/96	10/02/96	MAFW TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER	
8919	BRAZL	PENDING	9605341-0	10/29/96	MAFW TEST PLATE ADAPTER FOR MANUAL SINGLE CAR TESTER	
8903	AUSAL	PENDING	67972/96	10/02/96	PULS RAIL NAVIGATION SYSTEM	
8903	BRAZL	PENDING	P1 9605340	10/29/96	PULS RAIL NAVIGATION SYSTEM	
8903	CHINA	PENDING	96108265.8	09/20/96	PULS RAIL NAVIGATION SYSTEM	
8903	JAPAN	PENDING	09 036206	02/20/97	PULS RAIL NAVIGATION SYSTEM	
8903	SOFRIC	PENDING	96/7423	09/02/96	PULS RAIL NAVIGATION SYSTEM	
8992	CANAD	PENDING	2,184,568	08/30/96	LPBW INERT PLASTIC COATED FLEXIBLE TYPE DIAPHRAGM FOR	APPLICATION IN A SANITARY TYPE PUMP
8992	JAPAN	PENDING	9-182576	07/08/97	LPBW INERT PLASTIC COATED FLEXIBLE TYPE DIAPHRAGM FOR	APPLICATION IN A SANITARY TYPE PUMP
8985	CANAD	PENDING	2,184,867	09/05/96	CARD RAILWAY VEHICLE BRAKE SYSTEM	

PATENT
 REEL: 9423 FRAME: 0338

PATENT
 REEL: 012280 FRAME: 0412

8840	JAPAN	PENDING	09-114021	05/01/97	WAVE BRAKE CONTROL FOR MULTI-PLATFORM FREIGHT CAR	
8905	JAPAN	PENDING		05/23/97	UPDOWN PISTON AND CYLINDER ASSEMBLY FOR MINIMIZING WATER BLOW-BY IN AN AIR COMPRESSOR	
8921	JAPAN	PENDING	09-023874	02/06/97	PIDS LINEAR CHOKE SHUTTLE/ORIFICE CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	
8922	JAPAN	PENDING	09-023875	02/06/97	PIDS SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	
8924	JAPAN	PENDING	09-023873	02/06/97	PIDS TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8929	JAPAN	PENDING	09-049382	03/04/97	PIDS RELATIVE SPIN SPEED TRACTION CONTROL	
8982	JAPAN	PENDING	09-127210	05/16/97	UPDOWN THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A MULTIPLE STAGE COMPRESSOR AND METHOD	
8984	JAPAN	PENDING	9-138296	05/28/97	UPDOWN IMPROVED RESILIENT TYPE SEALING MEMBER FOR SEALING A PUSH ROD MEMBER OF A RAILWAY TYPE VEHICLE BRAKE CYLINDER	
8903	EPO	PENDING	96114695.3	09/13/96	PIDS RAIL NAVIGATION SYSTEM	
8939	CANAD	PENDING	2,185,509	09/13/96	UPDOWN EXTENDED LIFE BRAKE CYLINDER HOLDER	
8951	CANAD	PENDING	2,185,775	09/17/96	CARD END DESIGN FOR A RAILWAY TYPE FREIGHT CAR	
8987	AUSAL	PENDING	75444/96	12/18/96	CARD A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER	
8988	CANAD	PENDING	2,187,001	10/02/96	CARD AN IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE INTENSIFIER MECHANISM	
8983	CANAD	PENDING	2,188,232	10/18/96	CARD A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR	
8986	CANAD	PENDING	2,188,107	10/17/96	CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY VEHICLE BRAKE SYSTEM	
8921	AUSAL	PENDING	10064/97	01/07/97	PIDS LINEAR CHOKE SHUTTLE/ORIFICE CHECK VALVE MECHANISM FOR A TWIN TOWER AIR DRYER	
8922	AUSAL	PENDING	70237/96	10/16/96	PIDS SWITCHING/PURGING MECHANISM FOR A TWIN TOWER AIR DRYER	
8924	AUSAL	PENDING	71791/96	11/15/96	PIDS TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
8915	CANAD	PENDING	2,160,415	10/12/96	PIDS Train Integrity Detection System	
8916	CANAD	PENDING	2,160,414	10/12/96	Diagnostic Device for Determining the Pneumatic Integrity of A Bubble-Type Fuel Measuring System	
8905	CANAD	PENDING	2,190,421	11/15/96	UPDOWN PISTON AND CYLINDER ASSEMBLY FOR MINIMIZING WATER BLOW-BY IN AN AIR COMPRESSOR	
8159	USA	PENDING	08/748,200	11/12/96	WAVE WEDGE-SHAPED DISC BRAKE SHOE	

PATENT
REEL: 9423 FRAME: 0339

PATENT
REEL: 012280 FRAME: 0413

8892	USA	PENDING	08/748,199	11/12/96	MAFW (HEAD DISC ASSIST DUAL TRUCK MOUNTED BRAKE ASSEMBLY	
9013	CANAD	PENDING	2,193,561	12/20/96	LEAD DESICCANT CANISTER WITH POSITIONING BORE	
8987	CANAD	PENDING	2,185,763	09/17/96	CARD A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER	
8987	EPO	PENDING	9612071.5	12/21/96	CARD A SLACK ADJUSTABLE FORCE TRANSMITTING CYLINDER	
9015	CANAD	PENDING	2,194,042	12/27/96	FIPP A DUAL TYPE COMPOSITION BRAKE BLOCK SPECIFICALLY DESIGNED	FOR USE IN PREDETERMINED TYPE BRAKE SYSTEM
8929	EPO	PENDING	97101207.5	01/27/97	PTDS RELATIVE SPIR SPEED TRACTION CONTROL	
8936	GERME	PENDING	19718431.6	04/03/97	PTDS ELECTRONIC CONTROLLER FOR A TROLLEY POLE SWITCH MECHANISM	* inventor's full name: CHARLES C. SIEGLIN
8937	MEXIC	PENDING	973207	04/30/97	PTDS SIGNAL PROCESSING UNIT FOR A TROLLEY POLE SWITCH	CONTROLLER (FIG ABOVE IS CHARLES C. SIEGLIN
8937	GERME	PENDING	19718558.3	04/03/97	PTDS SIGNAL PROCESSING UNIT FOR A TROLLEY POLE SWITCH	CONTROLLER (FIG ABOVE IS CHARLES C. SIEGLIN
8938	GERME	PENDING	19718428.6	04/03/97	PTDS POWER CONTROLLING UNIT FOR A TROLLEY POLE SWITCH CONTROLLER	* inventor's full name: CHARLES C. SIEGLIN
8938	MEXIC	PENDING	973205	04/30/97	PTDS POWER CONTROLLING UNIT FOR A TROLLEY POLE SWITCH CONTROLLER	* inventor's full name: CHARLES C. SIEGLIN
8983	AUSAL	PENDING	15079/97	03/04/97	CARD A ROTARY DRAWBAR ASSEMBLY FOR A RAILWAY FREIGHT CAR	
8906	AUSAL	PENDING	12584/97	02/07/97	REPU SOFTWARE ALGORITHM PROVIDING DYNAMIC COMPENSATION OF DEAD	BAND CONTROL CRITERIA WITHIN A MICRO BASED
9004	CANAD	PENDING	2,203,604	04/24/97	PTDS PNEUMATIC TRAINLINE CONTROL UNIT	
9037	USA	PENDING	08/789,794	01/28/97	PTDS DUAL PNEUMATIC TRAINLINE CONTROL UNIT	
9057	USA	PENDING	08/798,774	02/11/97	LPDU CASING ASSEMBLY FOR DESICCANT ELEMENT HOUSING	
9005	USA	PENDING	08/794,302	02/03/97	MAFW PRECISION FILTERED CHOKE	
8970	USA	PENDING	08/747,979	11/12/96	LPDU Pneumatic Emergency Brake Application Valve and an Assoc	ated Electrical Signaling Switch
8951	AUSAL	PENDING	19122/97	04/28/97	CARD END DESIGN FOR A RAILWAY TYPE FREIGHT CAR	
8877	USA	PENDING	08/808,794	02/28/97	REPO AUTOMATED TERMINAL TEST PROCEDURE	
8953	USA	PENDING	08/803,261	02/20/97	MAFW ROSE COUPLING WITH ELECTRICAL CONTACTS	
9023	USA	PENDING	08/803,415	02/20/97	PTDS SAFE BRAKE CUTOFF DETECTION FOR TRAIN	

PATENT
REEL: 9423 FRAME: 0340

PATENT
REEL: 012280 FRAME: 0414

9009	USA	PENDING	08/803,262	02/20/97	MAFW ELECTRIC CONTACT ARRANGEMENT FOR HOSE COUPLING	
9014	USA	PENDING	08/710,209	09/13/96	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Desiccant Air Dryer
8976	USA	PENDING	08/770,584	12/19/96	MAFW ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
8941	USA	PENDING	08/815,422	03/11/97	PULS PNEUMATICALLY DRIVEN TRAIL BRAKE PIPE PRESSURE EXHAUST VALVE	
8841	CANAD	PENDING	2149063	05/23/95	MAFW RAILROAD CAR BRAKE CYLINDER PISTON TRAVEL INDICATOR AND MOUNT THEREFOR	
9008	USA	PENDING	08/772,327	12/23/96	MAFW ELECTRO-PNEUMATIC VALVE CONTROL	
9014	JAPAN	PENDING	09-251067	09/16/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Desiccant Air Dryer
8982	CANAD CP	PENDING	2,202,818	04/16/97	LPDV THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A MULTIPLE STAGE COMPRESSOR AND METHOD	
8892	CANAD	PENDING	2,202,570	04/14/97	MAFW TREAD-DISC ASSIST DUAL TRUCK MOUNTED BRAKE ASSEMBLY	
9011	CANAD	PENDING	2,203,047	04/18/97	PTDS PENALTY BRAKE CIRCUIT FOR STRAIGHT AIR PIPE BRAKE CONTROL EQUIPMENT	
9012	CANAD	PENDING	2,203,048	04/18/97	PTDS PENALTY BRAKE DESIGN FOR STRAIGHT AIR PIPE BRAKE CONTROL EQUIPMENT	
8977	CANAD	PENDING	2,202,937	04/17/97	PTDS PULSE WIDTH MODULATED DRIVE FOR AN INFINITELY VARIABLE SOLENOID OPERATED BRAKE CYLINDER PRESSURE CONTROL VALVE	
9010	CANAD	PENDING	2,202,938	04/17/97	PTDS PENALTY BRAKE SCHEME FOR STRAIGHT AIR PIPE BRAKE CONTROL EQUIPMENT	
8965	USA	PENDING	08/831,576	04/09/97	REPD Modified Airflow Algorithm With Compensation for Variations in Main Reservoir Air Pressure and Ambient Airflow.	
8958	CANAD	PENDING	2,203,197	04/21/97	MAFW COOLING SPOKE ARRANGEMENT FOR A BRAKE DISC	
8959	CANAD	PENDING	2,203,196	04/21/97	MAFW WEDGE-SHAPED DISC BRAKE SHOE	
8968	USA	PENDING	08/826,897	04/09/97	REPD EQUALIZING RESERVOIR COMPENSATION	
8902	USA	PENDING	08/835,860	04/08/97	DUAL CONNECTION EP BRAKE SYSTEM	
9056	USA	PENDING	08/842,685	04/15/97	PTDS AFTERCOOLER WITH INTEGRAL BYPASS LINE	
9014	CANAD	PENDING	2,203,304	04/22/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Desiccant Air Dryer
9016	CANAD	PENDING	2,203,305	04/22/97	LPDV REGENERATIVE DESICCANT AIR DRYER	
8957	CANAD	PENDING	2,203,607	04/24/97	MAFW OFFSET ARRANGEMENT FOR BRAKE SYSTEM PROPORTIONALIZATION LEVER	

PATENT
REEL: 9423 FRAME: 0341

PATENT
REEL: 012280 FRAME: 0415

8973	CANAD	PENDING	2,203,603	04/26/97	PIDS UNIVERSAL PNEUMATIC BRAKE CONTROL UNIT	
9004	CANAD	PENDING	2,203,606	04/26/97	PIDS BRAKE ASSURANCE MODULE	
9033	CANAD	PENDING	2,203,605	04/26/97	PIDS BRAKE PIPE SENSING UNIT	
8988	BRAZL	PENDING	P197D3647-1	06/20/97	CARD AIR IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE	INTENSIFIER MECHANISM
8988	AUSAL	PENDING	28673/97	07/15/97	CARD AIR IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE	INTENSIFIER MECHANISM
8988	CHINA	PENDING	97116115.1	08/01/97	CARD AIR IMPROVED PNEUMATIC PRESSURE TO HYDRAULIC PRESSURE	INTENSIFIER MECHANISM
9014	AUSAL	PENDING	28619/97	07/11/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Device
ant Air Dryer	BRAZL	PENDING	970193	08/25/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Device
ant Air Dryer	CHINA	PENDING	97116527.1	09/09/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Device
ant Air Dryer	INDIA	PENDING	1283/DEL/1997	05/15/97	LPDV Molded Rubber Val Seal for use in Predetermined type Valves	such as, a CK Val in a Regenerative Device
ant Air Dryer	CANAD	PENDING	2,204,325	05/02/97	MAFV E/P INTERFACE WITH PNEUMATIC CONTROL VALVE FOR BACK-UP	BRAKE ARRANGEMENT
8933	CANAD	PENDING	2,204,324	05/02/97	MAFV TRAIN BRAKE PIPE REMOTE PRESSURE CONTROL SYSTEM &	MOTOR-DRIVEN REGULATING VALVE THEREFOR
9031	CANAD	PENDING	2,204,323	05/02/97	MAFV Release Assuring Arrangement for Comb. Electro-Pneu./Auto.	Pneumatic Brake
9044	USA	PENDING	08/789,920	01/28/97	PIDS PNEUMATIC TRAINLINE CONTROL UNIT	
8986	AUSAL	PENDING	24782/97	06/06/97	CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY	VEHICLE BRAKE SYSTEM
8986	BRAZL	PENDING	9703560	06/13/97	CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY	VEHICLE BRAKE SYSTEM
8986	CHINA	PENDING	97113619.X	06/12/97	CARD PNEUMATIC PRESSURE OPERATED PARKING BRAKE FOR A RAILWAY	VEHICLE BRAKE SYSTEM
9013	INDIA	PENDING	1450/Del/97	05/30/97	LPDV DESICCANT CANISTER WITH POSITIONING BORE	
9013	AUSAL	PENDING	28672/97	07/15/97	LPDV DESICCANT CANISTER WITH POSITIONING BORE	
9057	CANAD	PENDING	2,204,944	05/09/97	LPDV CASING ASSEMBLY FOR DESICCANT ELEMENT HOUSING	
8970	CANAD	PENDING	2,204,943	05/09/97	LPDV Pneumatic Emergency Brake Application Valve and an Assoc.	lated Electrical Signaling Switch
8993	USA	PENDING	08/850,600	05/02/97	PIDS PARKING BRAKE MANUAL RELEASE MECHANISM	*NOTE: INVENTOR'S NAME IS Christopher A.
Cathcart	USA	PENDING	08/850,599	05/02/97	PIDS SPRING APPLIED PARKING BRAKE ACTUATOR HAVING A DOCKET STYLE	SLACK ADJUSTER (NOTE: Inventor is Christo

PATENT
REEL: 9423 FRAME: 0342

PATENT
REEL: 012280 FRAME: 0416

8920	USA	PENDING	08/052,799	05/07/97	PIDS WHEEL SLIP CONTROL PARAMETER VARIATION PROCESS	
8925	AUSAL	PENDING	23740/97	05/30/97	CARD RAILWAY VEHICLE BRAKE SYSTEM	
9023	CANAD	PENDING	2,206,111	05/26/97	PIDS SAFE BRAKE CUTOFF DETECTION FOR TRAIN	
8908	BRAZL n, Greenville, SC)	PENDING	P19703402-9	05/26/97	PIDS RAILWAY BRAKE VALVE ASSEMBLY	(filed by Dority & Manning, Craig M. Kille
8908	EPO	PENDING	97108106.2	05/20/97	PIDS RAILWAY BRAKE VALVE ASSEMBLY	(filed by Dority & Manning, Craig M. Kille
8859	JAPAN	PENDING	09-348277	12/17/97	NAFU ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALVE DEVICE
8957	JAPAN	PENDING	09-310913	11/12/97	NAFU OFFSET ARRANGEMENT FOR BRAKE SYSTEM PROPORTIONALIZATION	LEVER
8958	JAPAN	PENDING	09-310912	11/12/97	NAFU COOLING SPOKE ARRANGEMENT FOR A BRAKE DISC	
8976	JAPAN	PENDING	09-351429	12/10/97	NAFU ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
8977	JAPAN	PENDING	09-334500	12/04/97	PIDS PULSE WIDTH MODULATED DRIVE FOR AN INFINITELY VARIABLE	SOLENOID OPERATED BRAKE CYLINDER PRESSURE
CONTROL VALVE						
9016	AUSAL	PENDING	28737/97	07/18/97	LPDW REGENERATIVE DESICCANT AIR DRYER	
9016	CHINA	PENDING	97118294.9	09/12/97	LPDW REGENERATIVE DESICCANT AIR DRYER	
9016	EPO	PENDING	97109339.8	06/10/97	LPDW REGENERATIVE DESICCANT AIR DRYER	
9016	INDIA	PENDING	1648/DEL/1997	06/19/97	LPDW REGENERATIVE DESICCANT AIR DRYER	
9087	USA	PENDING	08/870,943	06/06/97	LPDW ABRASION RESISTANT DIAPHRAGM	
8982	CHINA	PENDING	97115514.3	06/03/97	LPDW THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8982	AUSAL	PENDING	24659/97	06/02/97	LPDW THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8982	EPO	PENDING	97108893.5	06/03/97	LPDW THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8982	INDIA	PENDING	1484/DEL/97	06/03/97	LPDW THERMOSTATICALLY CONTROLLED INTERCOOLER SYSTEM FOR A	MULTIPLE STAGE COMPRESSOR AND METHOD
8970	AUSAL	PENDING	28736/97	07/18/97	LPDW Pneumatic Emergency Brake Application Valve and an Assoc	ated Electrical Signaling Switch
8971	JAPAN	PENDING	09-216499	08/11/97	LPDW ABRASION RESISTANT PLASTIC BONDED TO A DIAPHRAGM	
8971	EPO	PENDING	97116278.1	08/19/97	LPDW ABRASION RESISTANT PLASTIC BONDED TO A DIAPHRAGM	

PATENT
REEL: 9423 FRAME: 0343

PATENT
REEL: 012280 FRAME: 0417

8953	CANAD	PENDING	2,225,105	12/17/97	NAFV HOSE COUPLING WITH ELECTRICAL CONTACTS
9009	CANAD	PENDING	2,207,640	06/12/97	NAFV ELECTRIC CONTACT ARRANGEMENT FOR HOSE COUPLING
8958	AUSAL	PENDING	30126/97	07/23/97	NAFV COOLING SPOKE ARRANGEMENT FOR A BRAKE DISC
8959	AUSAL	PENDING	30134/97	07/23/97	NAFV WEDGE-SHAPED DISC BRAKE SHOE
8957	AUSAL	PENDING	30128/97	07/23/97	NAFV OFFSET ARRANGEMENT FOR BRAKE SYSTEM PROPORTIONALIZATION
8892	AUSAL	PENDING	30127/97	07/23/97	NAFV TREAD-DISC ASSIST DUAL TRUCK MOUNTED BRAKE ASSEMBLY
8991	EPO	PENDING	97202026.7	07/02/97	LPDV IMPROVED INSERT TYPE MEMBER FOR USE IN A FLEXIBLE TYPE PUMP DIAPHRAGM
8992	EPO	PENDING	9720207.5	07/02/97	LPDV INERT PLASTIC COATED FLEXIBLE TYPE DIAPHRAGM FOR APPLICATION IN A SANITARY TYPE PUMP
9008	CANAD	PENDING	2,209,405	07/02/97	NAFV ELECTRO-PNEUMATIC VALVE CONTROL
9008	AUSAL	PENDING	30129/97	07/23/97	NAFV ELECTRO-PNEUMATIC VALVE CONTROL
9008	CHINA	PENDING	97109499.3	12/19/97	NAFV ELECTRO-PNEUMATIC VALVE CONTROL
8854	USA	PENDING	08/879,454	06/20/97	REPO APPARATUS FOR DETERMINING THE ABSOLUTE POSITION OF THROTTLE DYNAMIC BRAKE & REVERSE HANDLES ON A LOCOMOTIVE
9093	USA	PENDING	08/886,734	07/01/97	RPDV Disc Brake Shoe Assembly
9082	USA	PENDING	08/886,614	07/01/97	LPDV AIR COOLED AIR COMPRESSOR AND AFTERCOOLER
9045	USA	PENDING	08/891,357	07/10/97	PTDS FLUID PRESSURE CONTROL DEVICE
9048	USA	PENDING	08/891,217	07/10/97	PTDS Pressure Control Valve Equipped with a Solenoid Valve
8941	CANAD	PENDING	2,209,401	07/02/97	PULS PNEUMATICALLY DRIVEN BRAIN BRAKE PIPE PRESSURE EXHAUST VALVE
9094	USA	PENDING	08/896,464	07/18/97	LPDV DISC DIAPHRAGM FOR AN INTEGRATED COCK VALVE
9063	USA	PENDING	08/897,277	07/21/97	LPDV AFTERCOOLER BYPASS MEANS FOR A LOCOMOTIVE COMPRESSED AIR SYSTEM
9052	USA	PENDING	08/898,373	07/22/97	PULS INTEGRATED CAB SIGNAL PATH NAVIGATION SYSTEM
9051	USA	PENDING	08/898,648	07/22/97	PULS RAIL VISION SYSTEM
8891	JAPAN	PENDING	9-177324	07/02/97	CARD FRICTION CLUTCH MECHANISM FOR HIGH CAPACITY DRAFT GEAR ASSEMBLY AND METHOD OF RECONDITIONING DRAFT GEAR WITH SUCH
9100	USA	PENDING	08/901,606	07/28/97	NAFV DUAL SEAL COUPLING APPARATUS FOR ENABLING QUICK MEASUREMENT OF BRAKE CYLINDER PRESSURE

PATENT
REEL: 9423 FRAME: 0344

PATENT
REEL: 012280 FRAME: 0418

9102	USA	PENDING	08/901,096	07/28/97	WAFV Dual Seal Fitting for Enabling Quick Measurement of Brake Cylinder Pressure
8912	USA	PENDING	08/906,219	08/04/97	REPD IMMEDIATE COMMUNICATION DESIGN FOR DISCRETE CONTROL SYSTEM
8950	USA	PENDING	08/906,504	08/05/97	REPD Method for Limiting Brk Cyl Press on Loco Equipped with
9046	CANAD	PENDING	2,212,308	08/01/97	PTDS A SOLENOID VALVE CONTROL DEVICE
9047	CANAD	PENDING	2,212,321	08/01/97	PTDS A Three-Position Solenoid Valve
9037	CANAD	PENDING	2,212,105	07/31/97	PTDS DUAL PNEUMATIC TRAINLINE CONTROL UNIT
8942	USA	PENDING	08/831,485	03/31/97	PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIN BRAKE PIPE
8881	USA	PENDING	08/831,461	03/31/97	REPD BACKUP CONTROL TECHNIQUE FOR 20 PIPE BRAKING SYSTEM
8967	USA	PENDING	08/831,499	03/31/97	LPDW LOCOMOTIVE COMPRESSED AIR AFTERCOOLER UNIT
9049	USA	PENDING	08/831,498	03/31/97	LPDW Fan Powered Aftercooler & Control Circuit for Locomotive
8966	USA	PENDING	08/870,875	06/06/97	PTDS COUPLER HOOK FORCE GAGE
9059	USA	PENDING	08/816,527	03/13/97	PULS DUAL PURPOSE END OF TRAIN DEVICE FOR ELECTRICALLY CON
8877	USA	PENDING	08/915,623	08/21/97	REPD AUTOMATED TERMINAL TEST PROCEDURE
9041	USA	PENDING	08/912,105	08/18/97	PTDS UNIVERSAL WHEEL SLIP FORCE CONTROL LOGIC
8996	USA	PENDING	08/829,819	03/25/97	PULS ELECTRONIC FAIL-SAFE CIRCUIT FOR ELECTRO-PNEUMATIC BRAKE
8956	USA	PENDING	08/922,470	09/02/97	REPD EMERGENCY BRAKE READBACK HARDWARE AND FAULT DIAGNOSTICS
8948	USA	PENDING	08/922,426	09/03/97	PULS DUAL STATION AIR BRAKE CONTROL
8997	CANAD	PENDING	2,213,764	08/20/97	PULS INTRA-TRAIN RADIO COMMUNICATION SYSTEM
8999	CANAD	PENDING	2,214,682	09/05/97	PULS RADIO-BASED ELECTRO-PNEUMATIC CONTROL COMMUNICATIONS SYSTEM
8889	CANAD	PENDING	2,211,773	07/30/97	WAFV ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A
8976	CANAD	PENDING	2,212,155	07/30/97	WAFV ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR
9060	USA	PENDING	08/888,134	07/03/97	PULS APPLY OF GPS TO RR DISTRIBUTED POWER CONTROL SYSTEMS

PATENT
REEL: 9423 FRAME: 0345

PATENT
REEL: 012280 FRAME: 0419

VAPOR-47	USA	PENDING	08/744,342	11/07/96	VAPR POWER DOOR OPERATOR HAVING ROTARY DRIVE AND DRIVE OPERATED	DIRECT PANEL LOCK (door panel lock overhitch
d power door driv						
VAPOR-47	EPO	PENDING	97116312.6	09/19/97	VAPR POWER DOOR OPERATOR HAVING ROTARY DRIVE AND DRIVE OPERATED	DIRECT PANEL LOCK (door panel lock overhitch
d power door driv						
VAPOR-52	CANAD	PENDING	2,215,086	09/10/97	VAPR BRIDGE PLATE FOR A MASS TRANSIT VEHICLE	
8968	CANAD	PENDING	2,215,085	09/10/97	REPD EQUALIZING RESERVOIR COMPENSATION	
8965	CANAD	PENDING	2,213,349	08/19/97	REPD Modified Airflow Algorithm With Compensation for Variations	In Main Reservoir Air Pressure and Ambient
Airflow.						
VAPOR-53	CANAD	PENDING	2,214,683	09/05/97	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	
VAPOR-53	USA	PENDING	08/804,779	02/24/97	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	
VAPOR-53	EPO	PENDING	97117648.2	10/11/97	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	
VAPOR-53	MEXIC	PENDING	98 1452	02/23/98	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	
VAPOR-38	USA	PENDING	08/503,581	07/17/95	VAPR METHOD AND APPARATUS FOR LOW NOX COMBUSTION OF GASEOUS	FUELS (parent)
VAPOR-40	BRAZL	PENDING	P19401184-2	03/16/94	VAPR POWER DOOR OPERATOR FOR MULTI-PASSENGER MASS TRANSIT	VEHICLES (electric bus door operator)
VAPOR-40	CANAD	PENDING	2,114,096	01/24/94	VAPR POWER DOOR OPERATOR FOR MULTI-PASSENGER MASS TRANSIT	VEHICLES (electric bus door operator)
VAPOR-41	EPO	PENDING	93/909322.5	01/12/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	BRAZL	PENDING	P19305591	04/28/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	CZECH	PENDING	PV 0098-94	01/28/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	FINLN	PENDING	940,104	01/10/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	WENZL	PENDING	251,854	01/06/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	RUMAN	PENDING	94-01738	10/28/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-41	RUS5A	PENDING	94-033350	02/21/94	VAPR	
VAPOR-41	KORSO	PENDING	94-700833	03/14/94	VAPR POWER DOOR DRIVE AND DOOR SUPPORT HAVING MOTOR OPERATED	LOCKS (R110)
VAPOR-42	CANAD	PENDING	2,134,162	10/24/94	VAPR TRANSPONDER HAVING MICROPROCESSOR GENERATED FREQUENCY SHIFT	SIGNALS
VAPOR-43	CANAD	PENDING	2,135,343	11/08/94	VAPR RESILIENT EDGES FOR POWER OPERATED DOORS (bi-parting doors)	
VAPOR-44	CANAD	PENDING	2,136,397	11/22/94	VAPR STABILIZER FOR OUTSIDE SLIDING PLUG DOORS (door leaf)	

VAPOR-45 or operator)	USA	PENDING	08/238,116	05/04/94 VAPR SYSTEM AND APPARATUS FOR CONTROL OF A PNEUMATIC DOOR	OPERATOR (obstruction sensing pneumatic do
VAPOR-45 or operator)	CANAD	PENDING	2,148,036	04/27/95 VAPR SYSTEM AND APPARATUS FOR CONTROL OF A PNEUMATIC DOOR	OPERATOR (obstruction sensing pneumatic do
VAPOR-45 or operator)	MEXIC	PENDING	94-9268	11/30/94 VAPR SYSTEM AND APPARATUS FOR CONTROL OF A PNEUMATIC DOOR	OPERATOR (obstruction sensing pneumatic do
VAPOR-46 or operator)	CANAD	PENDING	2,135,344	11/08/94 VAPR DOOR DRIVE EQUIPMENT FOR MASS TRANSIT VEHICLE (sliding	outside plug door)
VAPOR-50	USA	PENDING	60/011897	02/20/96 VAPR APPARATUS AND METHOD FOR DIFFERENTIAL MODE PRESSURE	MEASUREMENT
VAPOR-51	USA	PENDING	08/744,341	11/07/96 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
973001	USA	PENDING	08/926,635	09/10/97 PTDS ROLLER EQUIPPED UNCOUPLING CAM	
8984 CYLINDER	USA C	PENDING	08/953,800	09/24/97 LPOW IMPROVED RESILIENT TYPE SEALING MEMBER FOR SEALING A PUSH	ROD MEMBER OF A RAILWAY TYPE VEHICLE BRAKE
VAPOR-51	EPO	PENDING	97116040.3	09/16/97 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
9077	USA	PENDING	08/855,418	05/13/97 VAPR POWER OPERATOR FOR SLIDING PLUG DOORS	(9077-VI)
9077	CANAD	PENDING	2,217,078	10/01/97 VAPR POWER OPERATOR FOR SLIDING PLUG DOORS	(9077-VI)
8990 phier A. Cathcart)	CANAD	PENDING	2,217,245	10/02/97 PTDS SPRING APPLIED PARKING BRAKE ACTUATOR HAVING A COLLET STYLE	SLACK ADJUSTER (NOTE: Inventor is Christo
8993 Cathcart	CANAD	PENDING	2,217,242	10/02/97 PTDS PARKING BRAKE MANUAL RELEASE MECHANISM	*NOTE: INVENTOR'S NAME IS Christoph A
9085	AUSAL	PENDING	45334/97	11/21/97 RPPC TRIM SHOE	
9085	INDIA	PENDING	2926/DEL/97	10/13/97 RPPC TRIM SHOE	
9085	BRAZL	PENDING	9705490	11/10/97 RPPC TRIM SHOE	
9085	CHILE	PENDING	2196-97	10/17/97 RPPC TRIM SHOE	
9085	EPO	PENDING	98101793.2	02/03/98 RPPC TRIM SHOE	
9056	CANAD	PENDING	2,216,506	09/26/97 PTDS AFTERCOOLER WITH INTEGRAL BYPASS LINE	
9077	EPO	PENDING	98101774.2	02/03/98 VAPR POWER OPERATOR FOR SLIDING PLUG DOORS	(9077 VI)
8902	CANAD	PENDING	2,216,673	09/24/97 PLUS DUAL CONNECTION EP BRAKE SYSTEM	
9055	CANAD	PENDING	2,216,680	09/24/97 PLUS SIMPLIFIED DUAL CONNECTION EP BRAKE SYSTEM	

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PATENT
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8902	AUSAL	PENDING	44428/97	11/07/97 PULS DUAL CONNECTION EP BRAKE SYSTEM	
8902	SOTRC	PENDING	97/8674	09/26/97 PULS DUAL CONNECTION EP BRAKE SYSTEM	
9055	AUSAL	PENDING	44430/97	11/07/97 PULS SIMPLIFIED DUAL CONNECTION EP BRAKE SYTEM	
9017	USA	PENDING	08/947,799	10/08/97 MATV ANGLE COCK WITH JUNCTION BOX	
8752	CANAD	PENDING	2,153,853	07/13/95 MATV ELECTRO-PNEUMATIC FREIGHT BRAKE CONTROL SYSTEM	
8971	USA	PENDING	08/951,682	10/16/97 LPDW ABRASION RESISTANT PLASTIC BONDED TO A DIAPHRAGM	
9085	CANAD	PENDING	2,219,694	10/30/97 RPPC TRIM SHOE	
9057	JAPAN	PENDING	10-028456	02/10/98 LPDW CASING ASSEMBLY FOR DESICCANT ELEMENT HOUSING	
9044	JAPAN	PENDING	10-016227	01/28/98 PIDS PNEUMATIC TRAINLINE CONTROL UNIT	
8973	JAPAN	PENDING	10-016225	01/28/98 PIDS UNIVERSAL PNEUMATIC BRAKE CONTROL UNIT	
9049	JAPAN	PENDING	10-079706	03/26/98 LPDW Fan Powered Aftercooler & Control Circuit for Locomotive	Compressors having no Integral Aftercooler
8967	JAPAN	PENDING	10-079705	03/26/98 LPDW LOCOMOTIVE COMPRESSED AIR AFTERCOOLER UNIT	
9004	JAPAN	PENDING	10-016226	01/28/98 PIDS BRAKE ASSURANCE MODULE	
9056	JAPAN	PENDING	10-104541	04/15/98 PIDS AFTERCOOLER WITH INTEGRAL BYPASS LINE	
8990	JAPAN	PENDING	10-122335	05/01/98 PIDS SPRING APPLIED PARKING BRAKE ACTUATOR HAVING A COLLET STYLE SLACK ADJUSTER (note Inventor is Christopher A. Cathcart)	
9040	JAPAN	PENDING	10-124652	05/07/98 PIDS WHEEL SLIP CONTROL PARAMETER VARIATION PROCESS	
8993	JAPAN	PENDING	10-122334	05/01/98 PIDS PARKING BRAKE MANUAL RELEASE MECHANISM	NOTE: INVENTOR'S NAME IS Christopher A. Cathcart
8942	AUSAL	PENDING	44431/97	11/07/97 PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIN BRAKE PIPE	PRESSURE EXHAUST VALVE
8942	BRAZL	PENDING	9706449	12/22/97 PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIN BRAKE PIPE	PRESSURE EXHAUST VALVE
9040	CANAD	PENDING	2,218,574	10/16/97 PIDS WHEEL SLIP CONTROL PARAMETER VARIATION PROCESS	
8976	AUSAL	PENDING	33144/97	08/04/97 MATV ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
9038	USA	PENDING	08/958,493	10/27/97 PULS METH. & APPAR. FOR CONTROLLING ELECTRO-PNEUMATIC BRAKES ON	TRAINS USING AN EXISTING LOCOMOTIVE ELECTRIC
8971	USA	PENDING	08/950,845	10/15/97 LPDW ABRASION RESISTANT PLASTIC BONDED TO A DIAPHRAGM	

8998	CANAD	PENDING	2,219,476	10/28/97 PULS ENVIRONMENTALLY-SEALED CONNECTIVELY-COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
8998	EPO	PENDING	97120080.3	11/17/97 PULS ENVIRONMENTALLY-SEALED CONNECTIVELY COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
8998	INDIA	PENDING	3186/DEL/1997	11/06/97 PULS ENVIRONMENTALLY-SEALED CONNECTIVELY-COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
8998	AUSAL	PENDING	44429/97	11/07/97 PULS ENVIRONMENTALLY-SEALED CONNECTIVELY-COOLED ACTIVE MATRIX	LIQUID CRYSTAL DISPLAY (LCD)
VAPOR-51	MEXIC	PENDING	978371	10/30/97 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
8889	AUSAL	PENDING	37560/97	09/12/97 MATW ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALVE DEVICE
972005	USA	PENDING	08/988,271	11/12/97 MATW DUAL VALVE FITTING FOR ENABLING QUICK MEASUREMENT OF PRESS	INVS: LI, WEI, DIMSA, ROBERT J, VELLRI, M
J. SCOTT, D.G.					
8889	EPO	PENDING	97117647.4	10/11/97 MATW ARRANGEMENT FOR CONNECTING A TEST DEVICE OR THE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALVE DEVICE
8881	CANAD	PENDING	2,212,911	08/13/97 PULS BACKUP CONTROL TECHNIQUE FOR 20 PIPE BRAKING SYSTEM	
8942	CANAD	PENDING	2,213,013	08/13/97 PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIN BRAKE PIPE	PRESSURE EXHAUST VALVE
8967	CANAD	PENDING	2,213,077	08/14/97 CPDW LOCOMOTIVE COMPRESSED AIR AFTERCOOLER UNIT	
VAPOR-51	CANAD	PENDING	2,204,556	05/06/97 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
VAPOR-51	UNITK	PENDING	9715229.2	07/18/97 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
VAPOR-51	ITALY	PENDING	1097A000793	09/08/97 VAPR POWERED DOOR DRIVE SYSTEM AND LOCK	
9058	USA CP	PENDING	08/979,310	11/26/97 PULS DISTRIBUTED POWER TRAIN SEPARATION DETECTION	
9051	SOFRC	PENDING	98/2016	03/10/98 PULS RAIL VISION SYSTEM	
9051	CANAD	PENDING	2,226,435	07/07/98 PULS RAIL VISION SYSTEM	
9051	EPO	PENDING	98102039.9	02/06/98 PULS RAIL VISION SYSTEM	
9052	CANAD	PENDING	2,226,433	01/07/98 PULS INTEGRATED CAB SIGNAL RAIL NAVIGATION SYSTEM	
8993	AUSAL	PENDING	56304/98	02/24/98 PTDS PARKING BRAKE MANUAL RELEASE MECHANISM	*NOTE: INVENTOR'S NAME IS CHRISTOPHER A.
8993	EPO	PENDING	98101665.2	07/31/98 PTDS PARKING BRAKE MANUAL RELEASE MECHANISM	*NOTE: INVENTOR'S NAME IS CHRISTOPHER A.
Cathcart					
8979	USA	PENDING	08/978,551	11/26/97 PTDS CONTROL VALVE WITH AXIAL SEALING	

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PATENT
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8978	USA	PENDING	08/978,796	11/26/97	PTDS E-1 AIR DRYER LIQUID SEPARATOR WITH BUBBLE	
9001	USA	PENDING	08/979,649	11/26/97	PTDS E-1 TWIN TOWER AIR DRYER FOR AN AIR COMPRESSOR UNIT	
971006	USA	PENDING	08/972,581	11/18/97	LPOW WEAR RING FOR DIAPHRAGM AND FLANGE	
976001	USA	PENDING	08/993,069	12/18/97	RFPD RAILWAY BRAKE SHOE BACKING PLATE WITH IMPROVED MOUNTING	ALIGNMENT FEATURE
9018	USA	PENDING	08/989,456	12/12/97	LPOW COMBINATION MAIN RESERVOIR AND AIR SYSTEM	
8980	USA	PENDING	08/979,198	11/26/97	PTDS SMUTTLE MECHANISM FOR TWIN TOWER AIR DRYER SYSTEM	
8981	USA	PENDING	08/979,197	11/26/97	PTDS PURGE TUBE WITH FLAPPER VALVE FOR DESICCANT CONTAINING AIR DRYER	
9080	USA	PENDING	08/865,119	05/29/97	VAPR IMPROVEMENTS IN BOILER COIL DESIGN (Boiler coil design)	(9080-VF)
9064	AUSAL	PENDING	52726/98	01/23/98	PTDS PNEUMATIC TRAINLINE CONTROL UNIT	
9064	EPO	PENDING	98100800.6	01/19/98	PTDS PNEUMATIC TRAINLINE CONTROL UNIT	
9060	EPO	PENDING	98101935.9	02/05/98	PTDS WHEEL SLIP CONTROL PARAMETER VARIATION PROCESS	
9004	AUSAL	PENDING	52722/98	01/23/98	PTDS BRAKE ASSURANCE MODULE	
9065	CANAD	PENDING	2,224,763	12/12/97	PTDS FLUID PRESSURE CONTROL DEVICE	
VAPOR-53	KORSO	PENDING	1998-2116	01/23/98	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	
9023	EPO	PENDING	98101132.3	01/23/98	PTDS SAFE BRAKE CUTOFF DETECTION FOR TRAIN	
9023	AUSAL	PENDING	52724/98	01/23/98	PTDS SAFE BRAKE CUTOFF DETECTION FOR TRAIN	
9077	KORSO	PENDING	1998-2117	01/23/98	VAPR POWER OPERATOR FOR SLIDING PLUG DOORS	(9077-VT)
9060	AUSAL	PENDING	52727/98	01/23/98	PTDS WHEEL SLIP CONTROL PARAMETER VARIATION PROCESS	
8990	EPO	PENDING	98101664.5	01/31/98	PTDS SPRING APPLIED PARKING BRAKE ACTUATOR HAVING A COLLET STYLE	SLACK ADJUSTER (note: Inventor is Christo
8998	AUSAL	PENDING	52825/98	01/28/98	PTDS SPRING APPLIED PARKING BRAKE ACTUATOR HAVING A COLLET STYLE	SLACK ADJUSTER (note: Inventor is Christo
9033	EPO	PENDING	98100799.0	01/19/98	PTDS BRAKE PIPE SENSING UNIT	
9033	AUSAL	PENDING	52725/98	01/23/98	PTDS BRAKE PIPE SENSING UNIT	
VAPOR-53	JAPAN	PENDING	10-042196	02/24/98	VAPR DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE	

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VAPOR-4.7	KOR SO	PENDING	1998-2118	01/23/98 VAPOR POWER DODR OPERATOR HAVING ROTARY DRIVE AND DRIVE OPERATED	DIRECT PANEL LOCK (door panel) lock overh
d power door driv					
9094	CANAD	PENDING	2,226,030	12/31/97 UPDW DISC DIAPHRAGM FOR AN INTEGRATED COCK VALVE	
9049	CANAD	PENDING	2,213,074	08/14/97 UPDW Fan Powered Aftercooler & Control Circuit for Locomotive	Compressors having no Integral Aftercooler
8976	CHINA	PENDING	97721337.2	10/17/97 WAFV ELECTRO-PNEUMATIC BRAKE SYSTEM AND CONTROLLER THEREFOR	
8961	AUSAL	PENDING	52723/98	01/23/98 PULS ELECTRONIC BLUE FLAG SAFETY EQUIPMENT	
8961	SOFRIC	PENDING	98/2410	03/20/98 PULS ELECTRONIC BLUE FLAG SAFETY EQUIPMENT	
8961	CANAD	PENDING	2,212,902	08/12/97 PULS ELECTRONIC BLUE FLAG SAFETY EQUIPMENT	
8973	EPO	PENDING	98101254.5	01/26/98 PTDS UNIVERSAL PNEUMATIC BRAKE CONTROL UNIT	
9102	CANAD	PENDING	2,227,389	01/20/98 WAFV Dual Seal fitting for Enabling Quick Measurement of Brake	Cylinder Pressure
9041	AUSAL	PENDING	52860/98	01/30/98 PTDS UNIVERSAL WHEEL SLIP FORCE CONTROL LOGIC	
9041	CANAD	PENDING	2,227,299	01/16/98 PTDS UNIVERSAL WHEEL SLIP FORCE CONTROL LOGIC	
9041	EPO	PENDING	98102257.7	02/10/98 PTDS UNIVERSAL WHEEL SLIP FORCE CONTROL LOGIC	
9056	CHINA	PENDING	98105522.2	03/09/98 PTDS AFTERCOOLER WITH INTEGRAL BYPASS LINE	
9056	EPO	PENDING	98101497.0	01/29/98 PTDS AFTERCOOLER WITH INTEGRAL BYPASS LINE	
8889	CHINA	PENDING	97723013.7	11/26/97 WAFV ARRANGEMENT FOR CONNECTING A TEST DEVICE OR TIRE LIKE TO A	RAILROAD CAR BRAKE CONTROL VALVE DEVICE
9031	AUSAL	PENDING	52063/98	01/14/98 WAFV Release Assuring Arrangement for Comb. Electro-Pneu./Auto.	Pneumatic Brake
9031	SOFRIC	PENDING	980274	01/13/98 WAFV Release Assuring Arrangement for Comb. Electro-Pneu./Auto.	Pneumatic Brake
8965	AUSAL	PENDING	52824/98	01/29/98 PULS Modified Airflow Algorithm With Compensation for Variations	In Main Reservoir Air Pressure and Ambient
Airflow.					
8965	SOFRIC	PENDING	98/2826	04/02/98 PULS Modified Airflow Algorithm With Compensation for Variations	In Main Reservoir Air Pressure and Ambient
Airflow.					
9068	USA	PENDING	09/005,452	01/12/98 PTDS AXIAL VIBRATION DAMPING MEANS IN A BRAKE ACTUATOR	
8711	ITALY	PENDING	0582035	03/06/98 CARO REMOVABLE SHAFT MEMBER ENGAGEABLE IN A BALU PORTION OF AN	ARTICULATED BEARING ASSEMBLY
9000	USA	PENDING	08/903,960	07/31/97 WAFV APPARATUS AND METHOD FOR A RAILWAY FREIGHT CAR BRAKE	CONTROL

9100	CANAD	PENDING	2,227,109	01/16/98	MAIN DUAL SEAL COUPLING APPARATUS FOR ENABLING QUICK MEASUREMENT OF BRAKE CYLINDER PRESSURE
9037	EPO	PENDING	98101261.0	01/26/98	DUAL PNEUMATIC TRAINLINE CONTROL UNIT
9005	SOFRC	PENDING	98/0663	01/27/98	NAFW PRECISION FILTERED CHOKE
9005	AUSAL	PENDING	52879/98	02/02/98	NAFW PRECISION FILTERED CHOKE
8966	CANAD	PENDING	2,227,164	01/16/98	PTDS COUPLER HOOK FORCE GAGE
983001	USA	PENDING	09/017,247	02/02/98	PTDS LOW PROFILE DISCHARGE CHECK VALVE
983002	USA	PENDING	09/017,245	02/22/98	PTDS TWIN TOWER AIR DRYER
973003	USA	PENDING	09/017,126	02/02/98	PTDS SHUTTLE VALVE FOR TWIN TOWER AIR DRYER
9000	AUSAL	PENDING	56387/98	02/24/98	APPARATUS AND METHOD FOR A RAILWAY FREIGHT CAR BRAKE
9000	EPO	PENDING	98103421.8	02/27/98	APPARATUS AND METHOD FOR A RAILWAY FREIGHT CAR BRAKE
9000	SOFRC	PENDING	98/1254	02/16/98	APPARATUS AND METHOD FOR A RAILWAY FREIGHT CAR BRAKE
9057	AUSAL	PENDING	52823/98	01/29/98	LEPDW CASING ASSEMBLY FOR DESICCANT ELEMENT HOUSING
8966	EPO	PENDING	98102198.3	02/07/98	PTDS COUPLER HOOK FORCE GAGE
9009	AUSAL	PENDING	53391/98	02/19/98	NAFW ELECTRIC CONTACT ARRANGEMENT FOR HOSE COUPLING
9009	SOFRC	PENDING	98/1297	02/17/98	NAFW ELECTRIC CONTACT ARRANGEMENT FOR HOSE COUPLING
8953	AUSAL	PENDING	53870/98	02/05/98	NAFW HOSE COUPLING WITH ELECTRICAL CONTACTS
8953	SOFRC	PENDING	98/1299	02/17/98	HOSE COUPLING WITH ELECTRICAL CONTACTS
9004	GERFE	PENDING	19803044.4	01/27/98	PTDS BRAKE ASSURANCE MODULE
9030	CANAD	PENDING	2,229,498	02/13/98	LPDM COMPRESSOR INLET VALVE
9000	CANAD	PENDING	2,229,501	02/13/98	NAFW APPARATUS AND METHOD FOR A RAILWAY FREIGHT CAR BRAKE
9069	USA	PENDING	09/044,295	03/19/98	PULS INDEPENDENT BRAKE HANDLE ASSEMBLY
9062	USA	PENDING	09/038,071	03/11/98	PULS IMPROVED METHOD OF CONTROLLING BRAKE PIPE PRESSURE
9061	USA	PENDING	09/034,592	03/04/98	PULS IMPROVED METHOD OF CONTROLLING 20 PIPE PRESSURE

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9053	USA	PENDING	09/044,352	03/19/98	PULS IMPROVED B. A. R. COMPLIANT ELECTRONIC BRAKING SYSTEM	
PULSE 41	CANAD	PENDING	2,165,084	09/09/96	PULS INTEGRATED PROXIMITY WARNING SYSTEM AND END-OF-TRAIN COM-	MUNICATION SYSTEM
9096	USA	PENDING	08/886,802	07/02/97	VAPR RESILIENT EDGES FOR POWER OPERATED DOORS	
8995	USA	PENDING	09/038,175	03/10/98	PULS COMPUTER CONTROL OF RAILROAD TRAIN BRAKE SYSTEM OPERATION	
972002	USA	PENDING	60/075,036	02/18/98	MAFW ELECTRONIC EMULATION OF PNEUMATIC CONTROL VALVE	
9025	USA	PENDING	09/036,823	03/09/98	MAFW LOW VATTAGE, HIGH FLOW ELECTRICAL CONTROL VALVE	
9029	USA	PENDING	09/037,613	03/10/98	MAFW RIBBED DIAPHRAGM	
8941	AUSAL	PENDING	58343/98	03/10/98	PULS PNEUMATICALLY DRIVEN TRAIN BRAKE PIPE PRESSURE EXHAUST	VALVE
981001	USA	PENDING	09/050,690	03/30/98	LPDW BALL COCK FOR RAILWAY VEHICLE	
974001	USA	PENDING	09/049,519	03/27/98	CARD METHOD FOR INSTALLING A LOCKING WEDGE CARRIER PLATE	ASSEMBLY
974011	USA	PENDING	09/049,553	03/27/98	CARD A LOCKING WEDGE ASSEMBLY FOR A SLACKLESS DRAWBAR ASSEMBLY	
974012	USA	PENDING	09/049,262	03/27/98	CARD A CARRIER PLATE ASSEMBLY FOR A SLACKLESS DRAWBAR ASSEMBLY	
VAPOR-43	USA	PENDING	08/886,802	07/02/97	VAPR RESILIENT EDGES FOR POWER OPERATED DOORS (Biparting doors)	
9069	AUSAL	PENDING	59717/98	03/30/98	LPDW Fan Powered Aftercooler & Control Circuit for Locomotive	Compressors having no Integral Aftercooler
8950	EPO	PENDING	98108155.7	04/30/98	REPD Method for Limiting Brk Cyl Press on Loco Equipped with	Distributed Power and Electronic Brake Sys
8950	SOFRC	PENDING	98/4000	05/12/98	REPD Method for Limiting Brk Cyl Press on Loco Equipped with	Distributed Power and Electronic Brake Sys
9052	EPO	PENDING	98108021.1	05/02/98	PULS INTEGRATED CAB SIGNAL RAIL NAVIGATION SYSTEM	
9052	SOFRC	PENDING	98/4124	05/15/98	PULS INTEGRATED CAB SIGNAL RAIL NAVIGATION SYSTEM	
9102	SOFRC	PENDING	98/4583	05/28/98	MAFW Dual Seal Fitting for Enabling Quick Measurement of Brake	Cylinder Pressure
9100	SOFRC	PENDING	98/4081	05/14/98	MAFW DUAL SEAL COUPLING APPARATUS FOR ENABLING QUICK MEASUREMENT	OF BRAKE CYLINDER PRESSURE
973002	USA	PENDING	09/056,925	04/08/98	PTDS COMPUT COMPRESSION FIXTURE	
98300	USA	PENDING	09/057,673	04/09/98	PTDS ELECTRONIC EMERGENCY BRAKE LOAD WEIGH DEVICE	

PATENT
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8728	ITALY	PENDING	21011 BE/98	03/20/98	PTDS VARIABLE LOAD CONTROL VALVE DEVICE	
9017	SOFRAC	PENDING	98/4170	05/18/98	NAFV ANGLE COCK WITH JUNCTION BOX	
VAPOR-47	JAPAN	PENDING	9-9405	01/22/97	VAPOR POWER DOOR OPERATOR HAVING ROTARY DRIVE AND DRIVE OPERATED	DIRECT PANEL LOCK (door panel lock overhea
d power door driv						
9082	SOFRAC	PENDING	98/4082	05/14/98	LPDV AIR COOLED AIR COMPRESSOR AND AFTERCOOLER	
9082	EPO	PENDING	98107243.2	04/21/98	AIR COOLED AIR COMPRESSOR AND AFTERCOOLER	
9082	CANAD	PENDING	2,731,744	03/11/98	LPDV AIR COOLED AIR COMPRESSOR AND AFTERCOOLER	
9063	CANAD	PENDING	2,231,712	03/11/98	LPDV AFTERCOOLER BYPASS MEANS FOR A LOCOMOTIVE COMPRESSED AIR	SYSTEM
8941	SOFRAC	PENDING	98/1939	03/06/98	PULS PNEUMATICALLY DRIVEN TRAIN BRAKE PIPE PRESSURE EXHAUST	VALVE
9038	CANAD	PENDING	2,231,212	03/03/98	PULS MECH. & APPAR. FOR CONTROLLING ELECTRO-PNEUMATIC BRAKES ON	TRAINS USING AN EXISTING LOCOMOTIVE ELECTR
OHIC AIR BRAKE						
9017	CANAD	PENDING	2,231,075	03/04/98	NAFV ANGLE COCK WITH JUNCTION BOX	
9082	AUSAL	PENDING	63547/98	04/22/98	LPDV AIR COOLED AIR COMPRESSOR AND AFTERCOOLER	
973001	EPO	PENDING	98106554.3	04/09/98	PTDS ROLLER EQUIPPED UNCOUPLING CAM	
984006	USA	PENDING	09/061,314	04/16/98	CARD JOINTED HAND BRAKE RELEASE HANDLE	
984001	USA	PENDING	09/061,313	04/16/98	CARD TWO PIECE HAND BRAKE RELEASE HANDLE	
981002	USA	PENDING	09/069,356	04/29/98	LPDV BRAKE VALVE LATCH WITH ENHANCED LUBRICITY	
9071	USA	PENDING	09/069,373	04/29/98	NAFV FILTER FOR RAILROAD CAR CONTROL VALVE PIPE BRACKET AND	ACCESS PLATE
9038	EPO	PENDING	98109865.8	05/29/98	PULS MECH. & APPAR. FOR CONTROLLING ELECTRO-PNEUMATIC BRAKES ON	TRAINS USING AN EXISTING LOCOMOTIVE ELECTR
OHIC AIR BRAKE						
9038	SOFRAC	PENDING	98/4228	05/19/98	PULS MECH. & APPAR. FOR CONTROLLING ELECTRO-PNEUMATIC BRAKES ON	TRAINS USING AN EXISTING LOCOMOTIVE ELECTR
OHIC AIR BRAKE						
8948	EPO	PENDING	98109913.8	05/29/98	PULS DUAL STATION AIR BRAKE CONTROL	
8948	SOFRAC	PENDING	98/4173	05/18/98	PULS DUAL STATION AIR BRAKE CONTROL	
8941	USA	PENDING	09/084,610	05/26/98	PULS PNEUMATICALLY DRIVEN TRAIN BRAKE PIPE PRESSURE EXHAUST	VALVE
9015	SOFRAC	PENDING	09/08/3925	05/08/98	F1PP A DUAL TYPE COMPOSITION BRAKE BLOCK SPECIFICALLY DESIGNED	FOR USE IN PREDETERMINED TYPE BRAKE SYSTEM
8942	USA	PENDING	09/084,330	05/26/98	PULS COMBINATION MOTOR/PNEUMATIC DRIVEN TRAIN BRAKE PIPE	PRESSURE EXHAUST VALVE

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984008	USA	PENDING	09/059,235	04/13/98	CARD BRAKE VALVE SYSTEM FOR DEDICATED FREIGHT CARS
8962	USA D1	PENDING	09/062,842	04/20/98	PIDS A BRAKE MONITORING DEVICE FOR RAILROAD CARS
9043	USA	PENDING	09/080,858	05/18/98	LPOW COMPRESSOR INTERCOOLER UNLOADER ARRANGEMENT
9015	EPO	PENDING	98109904.7	05/29/98	FIPP A DUAL TYPE COMPOSITION BRAKE BLOCK SPECIFICALLY DESIGNED FOR USE IN PREDETERMINED TYPE BRAKE SYSTEM
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USACO ALLOWED APPLICATIONS

Case Number	Country	Sub Case	Status	Application Number	Filing Date	Title	long:title1	long:title2
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8901	SOFR		ACTIVE	96/7795	08/28/96	PULS METHOD OF DETERMINING CAR POSITION		
8903	INDIA		ACTIVE	1927/Del/96	08/29/96	PULS RAIL NAVIGATION SYSTEM		
8864	JAPAN		ACTIVE	09-088195	04/07/97	NAFM SELECTABLE GRADE AND UNIFORM NET SHOE FORCE BRAKING FOR RAILWAY FREIGHT VEHICLE		
9005	CANAD		ACTIVE	2,209,398	07/02/97	NAFM PRECISION FILTERED CHOKE		
9087	CANAD		ACTIVE	2,220,363	11/06/97	LPBW ABRASION RESISTANT DIAPHRAGM		
972017	USA		ACTIVE	60/075,579	02/23/98	NAFM INTEGRAL INTERMODAL TRAIN		
8950	AUSAL		ACTIVE		05/11/98	REPD Method for limiting Brk Cyl Press on Loco Equipped with Distributed Power and Electronic Brake Sys		
8968	AUSAL		ACTIVE		05/29/98	PULS DUAL STATION AIR BRAKE CONTROL		
8421	INDIA		ACTIVE		05/12/98	NAFM TRUSS-TYPE BRACE BEAM FOR RAILWAY VEHICLE TRUCK MOUNTED BRAKE ASSEMBLY		

TERMINATION OF SECURITY INTEREST

WHEREAS, pursuant to the Intellectual Property Security Agreement dated as of June 30, 1998, which referenced the Credit Agreement dated as of June 30, 1998, (together the "SECURITY DOCUMENTS") by and among the grantors party thereto (each a "GRANTOR" and collectively, the "GRANTORS"), including Westinghouse Air Brake Company, a Delaware corporation, and The Chase Manhattan Bank, a New York banking corporation, as COLLATERAL AGENT, on behalf of itself and each other SECURED PARTY (and each of their successors and assigns) as defined in the SECURITY DOCUMENTS (the "AGENT") for the lenders referenced therein (the "LENDERS"), the AGENT was granted a security interest or lien, for the ratable benefit of the SECURED PARTIES, in the COLLATERAL defined in the SECURITY DOCUMENTS and including the COLLATERAL identified in Schedules I, II, III and IV attached hereto, said Intellectual Property Security Agreement being recorded at the United States Patent and Trademark Office starting at the following: Reel/Frame 9423/0239, on August 11, 1998 and 1765/0656, on August 11, 1998.

WHEREAS, all of the obligations and liabilities set forth in the SECURITY DOCUMENTS have been fully satisfied by GRANTORS; and

WHEREAS, the AGENT is willing to terminate and release any and all security interests or liens on any of the property or assets of GRANTORS, as set forth in the SECURITY DOCUMENTS, including the COLLATERAL identified in Schedules I, II, III and IV attached hereto.

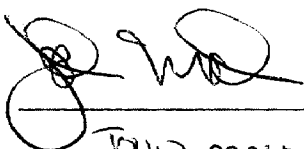
NOW, THEREFORE, intending to be legally bound hereby, the AGENT releases and terminates all security interests in or liens on the COLLATERAL identified in the SECURITY DOCUMENTS and including the COLLATERAL identified in Schedules I, II, III and IV attached hereto.

Further, the AGENT will execute any and all additional documents necessary to terminate and release all security interests in or liens on the COLLATERAL and deliver all such documents as GRANTORS shall request in order to evidence the

release of the AGENT'S lien on GRANTORS' COLLATERAL or other intellectual property.

IN WITNESS WHEREOF, the AGENT has caused this Termination Of Security Interest on GRANTORS' COLLATERAL to be executed by its officer thereunto duly authorized, as of the date written below.

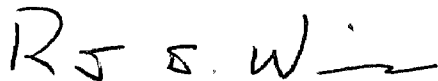
THE CHASE MANHATTAN BANK, as
AGENT

By: 

Name: JOHN MALONE

Title: VICE PRESIDENT

Sworn to and subscribed before me
this 15TH day of MAY, 2001.



Notary Public

My Commission Expires:

