### **EQUIPMENT NEEDED FOR PURCHASE**

# OF	DOT /				
<u>CARS</u>	CLASS	<b>CAPACITY</b>	COMMENTS	PRODUCT	REF#
6	111A100W3	16,000	Non-Coiled, Insulated, Lined, Top & Bottom Unloading	Caustic Soda	11993
2	111A100W2	16,000- 20,000	Non-Coiled, Non-Insulated, Top Unloading Only	Phosphoric Acid	11342
2-3	111A100W1	20,000+	Must Have Coils, Top & Bottom Unloading	Liquid Sulfur	11998
2-3	111A100W1	20,000- 27,000	Storage Only, Must Be Coiled	Wax	11878
20	112A400W	20,000- 34,000	Non-Coiled, Insulated, Storage Only, Must Be 400 Lb. Cars	Anhydrous Ammonia	12051
ANY	112J340W	33,500	Insulated, Top Unload Only	LPG	10734,
56	FLAT	60'	60' Between Couplers, 100 Ton Trucks, 50 Year Cars		11143 11905
60+	FLAT	89'	100 Ton Trucks		11894
60	GONDOLA	2,200- 2,600	100 Ton Trucks, 1980 or Newer		11983
100	GONDOLA	2,200- 4,000	Flat Bottom, 50 Year Cars	Scrap	12013
10-80	GONDOLA	7,000+	Flat Bottom, With or Without End Gates	Woodchips	11882
30-40	LO	2,850- 3,200	Round Hatches, Gravity Gates, 2 Compartment	Sand	11938
200+	LO	3,000	Round Hatches, Gravity Gates, 286,000 Capacity	Sand	11975
10	LO	3,000	Round Hatches, Gravity Gates	Sodium Sulfate	11939
15	LO	4,750	3 Compartment, Gravity Gates or Airslides		12042
30	LO	5,150	Trough Hatches, 286,000 Capacity	Meat / Bone Meal	11963
20	LO	5,250	Gravity Gates	Calcium Chloride	11942
10-12	PD	2,600- 3,000	Round Hatches, 15 PSI, Must be Interchangeable		11915

### THE DEVELOPMENT OF DIESEL LOCOMOTIVES

Any discussion of the diesel locomotive must include Dr. Rudolf Diesel. Born in Paris in 1858, Diesel was the middle child of German immigrants, Theodor and Elise Diesel. At the age of twelve his parents sent him to Germany so that he may learn German and enroll in a trade school where his uncle taught mathematics. Diesel finished at the top of his class. In 1875 Diesel accepted a merit scholarship to the Royal Bavarian Polytechnic of Munich, now known as the University of Technology, Munich. He graduated in 1880 with the highest academic honors

After graduating, he worked for a time for one of his professors, Carl Von Lind, researching refrigeration. After 1890 Rudolf Diesel sought to research methods of fuel efficiency in a steam engine. He worked on a model using ammonia vapor, with disastrous results. The engine exploded resulting in months of hospitalization and ongoing vision and health issues. Diesel turned his efforts to produce an engine based on the Carnot Cycle. The Carnot Cycle is a theoretical model of complete efficiency. It proved to be to cumbersome and Diesel eventually developed an engine using high pressure compression to create combustion.

In a patent for which Diesel applied in 1892, air is compressed to sixty four atmospheres, or more, creating temperatures of 700° centigrade and higher, prior to the gradual introduction of finely divided fuel. The fuel ignites upon introduction and as the amount of fuel is controlled, expansion allows the gas to cool to a much greater degree prior to it's expulsion from the engine. This reduces the amount of heat loss, greatly increasing the efficiency of the engine.

#### To be continued...

http://en.wikipedia.org/wiki/Rudolf\_Diesel http://www.google.com/patents?vid=542846

# THE INSIDE TRACK

## RAILWAY EQUIPMENT LISTING Published By: TRANSMATRIX, INC.

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PHONE: (847) 228-6022 FAX: (847) 228-6029

**November 1, 2010** 

### **EQUIPMENT AVAILABLE FOR LEASE**

# OF	DOT /	OADAOITY	COMMENTO	LAST SOUTENTS	DEE #
<u>CARS</u>	<u>CLASS</u>	CAPACITY	COMMENTS	LAST CONTENTS	KEF#
6	111A100W2	13,300	Non-Coiled, Non-Insulated, Top Unloading Only, 5 Year Minimum Lease	Sulfuric Acid	11627
7	111A100W3	17,500	Exterior Coils, Insulated, New Phenolic Epoxy Linings, Top & Bottom Unloading		11881
7	111A100W1	20,000	Non-Coiled, Non-Insulated, 2 Compartments	Lube Oil	11955
5	111A100W6	20,500	Exterior Coils, Insulated, Stainless Steel, Top & Bottom Unloading	Acetic Acid / Food Grade	12017
20+	111A10W6	20,800	Non-Coiled, Insulated, Top Unloading Only, Stainless Steel	Food Grade	11836
6	111A100W3	21,000	Exterior Coils, Insulated, Top & Bottom Unloading	Various	12040
8-10	111A100W3	23,500	Exterior Coils, Insulated, Plasite 3070 Lined, Top & Bottom Unloading	Cyclohexanol	11978
100	111A100W3	29,000	Exterior Coils, Insulated	Biodiesel	12008
3	111A100W1	30,000	Non-Coiled, Non-Insulated, 2-3 Year Term	Fuel Oil	11956
14	FLAT	66'	Bulkheads, Cushioned Underframe, 100 TonTruck	s	11628
30	GONDOLA	<i>65'</i>	Flat Bottom, 5' Interior Height		12049
42	GONDOLA	2,000	100 Ton Trucks, Single Cradle, Covers	Steel Coils	12030
17	GONDOLA	2,244	100 Ton Trucks, 4'6" Sides	Aggregate	11755
24	GONDOLA	2,800	Flat Bottom, 6' Interior Height	Aggregate	12047
19	GONDOLA	4,240	Single Tub, Rotary Unload		11987
2	HOPPER	3,600	4 Compartment, Gravity Gates	Coal	12048
38	HOPPER	3,850	50 Year Cars, Rapid Discharge	Coal	11550
10	LO	2,931	Round Hatches, Gravity Gates, 100 Ton Trucks	Sand	11549
130+	LO	4,750	Trough Hatches, Gravity Gates	Grain	11959 / 11986
100+	LO	5,701	Round Hatches, Pneumatic Gates	Plastic Pellets	11925
10-20	PD	2,785	Round Hatches, 14.7 PSI, 5 Year Minimum	Cement	12000
30	PD	3,000	North American Built, 15 PSI	Cement	11920
50	PD	5,150	Round Hatches, 14.7 PSI		11988

### **EQUIPMENT NEEDED FOR LEASE**

<b>EQUIPMENT</b>	NEEDED	FOR	IFASE
EQUIPMENT	NEEDED	<b>FUR</b>	LEASE

	EQUITALITY TALLED TON LLAGE					DOT!					
# OF CARS	DOT / CLASS	CAPACITY	COMMENTS	PRODUCT	REF#	# OF CARS	DOT / CLASS	CAPACITY	COMMENTS	PRODUCT	REF#
4	111A100W2	13,500	Exterior Coils, Insulated, Top Unload Only	Oleum	11923	20	PD	5,100+	Round Hatches, 15 P.S.I	None Food Grade	11662
2	111A100W2	16,000- 20,000	Non-Coiled, Non-Insulated, Top Unloading Only, Lined	Phosphoric Acid	11341	27	PD	5,500- 6,000	Round Hatches, 15 PSI, 286,000 Capacity	Limestone	11979
8	111A100W3	17,000	Exterior Coils, Insulated, Lined	Sodium Hydroxide	11784						
4-5	111A100W3	17,500	Exterior Coils, Insulated, Top & Bottom Unloading, Plasite 4100 or Equivalent Lining	Sodium Bisulfite	11922			FOL	JIPMENT <i>AVAILABLE</i> FOR	RSALF	
10-20	111A60W7	20,000	Non-Coiled, Non-Insulated, Top Unloading Only	Nitric Acid	11999	# OF	DOT/				
2-3	111A100W3	20,000	Exterior Coils, Insulated, Top & Bottom Unload	Lignin Liquor	12012	<u>CARS</u>	<u>CLASS</u>	CAPACITY	COMMENTS	LAST CONTENTS	REF#
2-4	111A100W3	20,000	Exterior Coils, Insulated, Top & Bottom Unloading, Plasite 4100 or Equivalent Lining	Sodium Bisulfite	11854	80	111A60W2	13,600	Non-Coiled, Non-Insulated, No Lining, Top Unloading Only	Virgin Sulfuric Acid	11961
100+	111A100W3	20,000	Exterior Coils, Insulated, 3-7 Year Term	Molasses	11776	200	115A60W6	20,800	Non-Coiled, Insulated, Bottom Load Only, Stainless Steel Inner Tank	Beer	11835
6+	111A100W3 111A60ALW3	20,000	Exterior Coils, Insulated, Lined or Aluminum Cars, 3-5 Years	Ammonium Thiosulfate	11906	1	111A100W3	23,500	Exterior Coils, Insulated, Top & Bottom Unloading, Storage Only	Lube Oil	12001
10+	111A100W5	20,000	Non-Coiled, Non-Insulated, Rubber Lined, Top & Bottom Unloading	Hydrofluorosilicic Acid	11980	30+	111A100W3	23,500	Exterior Coils, Insulated, Lined, Stainless Steel Valves	Various Chemicals	11885
10	111A100W5	20,000	Non-Coiled, Non-Insulated, Rubber Lined,	Hydrochloric Acid	11932	12	111A100W1	28,000	Non-Coiled, Non-Insulated		12056
		,	Top Unloading Only	,		21	111A100W1	30,000	Non-Coiled, Non-Insulated, Top & Bottom Unloading		12003
5-10	111A100W3	20,000- 24,000	Exterior Coils, Insulated, Top & Bottom Unloading, Plasite 3070 Lined	Ethylene Glycol	11928	20-30	105J300W	34,000	Non-Coiled, Insulated, Top Unloading	LPG	12020
ANY	111A100W1/3	•	Coiled or Non-Coiled, 3-4 Compartment Cars.	Lube Oil	11940	400+	BOX	<i>50'</i>	70 Ton Trucks, Plate C, Sliding Doors		12050
		26,000	Top & Bottom Unloading			5	FLAT	52' 8"	70 Ton Trucks, Bulkheads, Steel/Wood Floors		11764
10	111A100W1	20,000- 25,000	Non-Coiled, Non-Insulated, Must be 3 Compartment Cars	Motor Oil	11828	12	FLAT	60'	52' 8" Between Bulkheads, 100 Ton Trucks		11763
4	4444400044		•	Madharal	44000	1	FLAT	66'	21' Depressed Center, 150 Ton Trucks		11822
1	111A100W1	23,500- 25,500	Non-Coiled, Non-Insulated, Top & Bottom Unloading, 1 Year Term, Storage Only	Methanol	11990	7	FLAT	70'	100 Ton Trucks, Bulkheads		12019
60-75	111A100W3	23,500	Exterior Coils, Insulated, Top & Bottom Unload	d Carbon Black	12052	165	FLAT	89'	70 Ton Trucks, Steel Decks		11971
2-3	111A100W3	23,500	Exterior Coils, Insulated, Top & Bottom Unloading	Fatty Acids	12025	42	FLAT	92'	Straight Steel Decks, 100 Ton Trucks, 286,000 Capacity		11802
0	111A100W1	25,000	Non-Coiled, Non-Insulated, Single Trip Term	Bio-Diesel	11827	11	GONDOLA	65'	Flat Bottom, 5' Inside Height, 100 Ton Trucks		11883
1	111A100W1	25,500	Exterior Coils, Cars Must Be Lined, Top &	C-12 Lauryl Alcohol	11870	20	GONDOLA	2,245	Flat Bottom, 100 Ton Trucks, 4'6" Inside Height, Midwest Location	Aggregate	12010
			Bottom Unloading, Short Term			18	GONDOLA	2,494	Flat Bottom, 100 Ton Trucks		11935
1-2	112J340W	33,500	Insulated, 3-5 Year Term	Anhydrous Ammonia	11631	30	GONDOLA	2,950	Flat Bottom, 70 Ton Trucks		12015
30	112J340W	33,500	Insulated, Top Unloading Only, 3-5 Year Term	Anhydrous Ammonia	11572	150+	GONDOLA	4,000	Flat Bottom, 100 Ton Trucks		11991
40-45	GONDOLA	4,000+	Rotary Dump, Aluminum, 286,000 Capacity	Coal	12024	100	GONDOLA	4,170- 4,240	100 Ton Trucks, Single Tub, Rotary Dump		11745
5-10	HOPPER	2,300+	100 Ton Trucks, Gravity Gates	Glass Cullet	12055	50+	GONDOLA	4,300	Single Tub, Rotary Dump, ACF Built	Scrap Metal	11952
50	HOPPER	3,800	Rapid Discharge, 3 Year Term	Limestone / Coal	12053	16	HOPPER	2,000	2 Compartments, 100 Ton Trucks	·	11972
50	LO	2,900	Round Hatches, Sparger System	Sodium Chlorate	11941	11	HOPPER	2,604	Ballast Cars, Storage or In-Plant Service Only	Aggregate	12004
50	LO	3,000	Round Hatches, Gravity Gates, 286,000	Sand	11657	50	HOPPER	3,290	3 Pocket, 6 Gravity Gates	Aggregate	12039
30	LO	3,000	Capacity, 2 Compartments	Caria	11007	13	HOPPER	3,600	100 Ton Trucks, Rapid Discharge	Coal	12057
20	LO	4,600+	Trough Hatches, Gravity Gates	Soybeans	12031	13	LO	4,750	Trough Hatches, Gravity Gates	Ammonium Nitrate	12043
4-5	LO	4,750	·	Urea	12027	200	LO	4,750	Trough Hatches, Gravity Gates	Grain	12044
			Dound Hotohoo Provenskie Osta-			47	LO	5,250	Round Hatches, Pneumatic Gates	Plastic Pellets	11902
1-2	LO	6,000- 7,000	Round Hatches, Pneumatic Gates, 3-5 Year Term	Plastic Pellets	11816	9-13	PD	2,785	3 Compartments, 15 PSI Round Hatches, 14.7 P.S.I.	Cement	11918
							PD	3,300		Cement	11626