



Rail Fleet Services Monthly Report May 2015



Metro

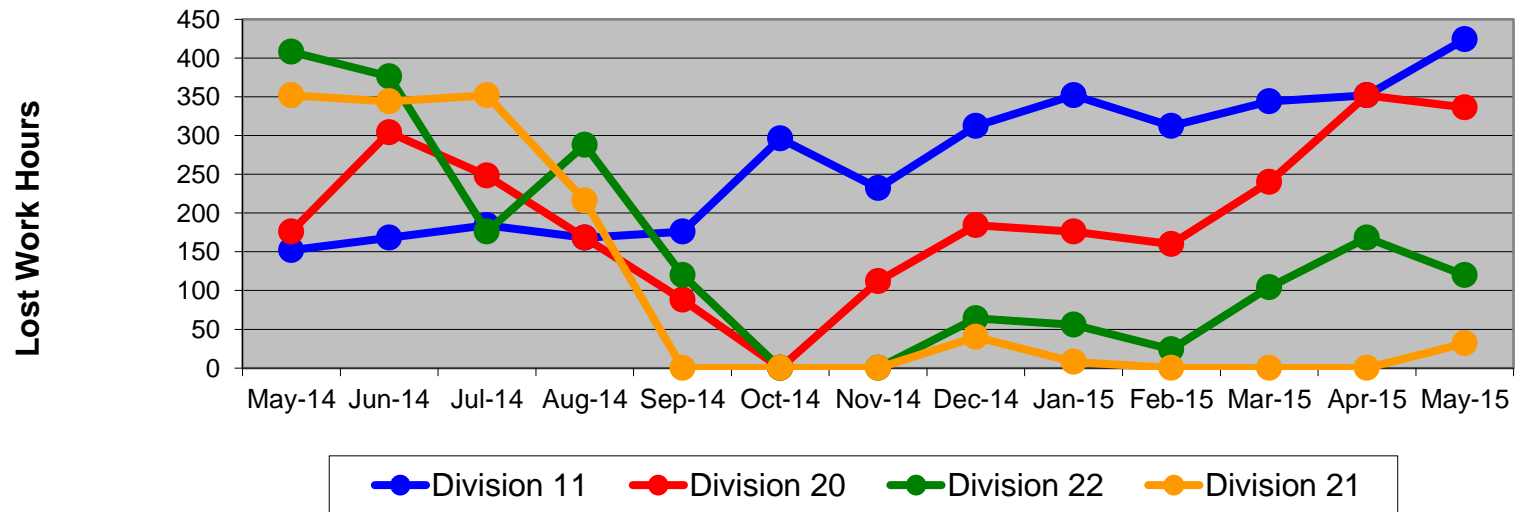
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Industrial Injuries – Lost Work Hours May 2014-2015

	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	13-Month Period
Division 11	152	168	184	168	176	296	232	312	352	312	344	352	424	3,472
Division 20	176	304	248	168	88	0	112	184	176	160	240	352	336	2,544
Division 22	408	376	176	288	120	0	0	64	56	24	104	168	120	1,904
Division 21	352	344	352	216	0	0	0	40	8	0	0	0	32	1,344
Totals	1,088	1,192	960	840	384	296	344	600	592	496	688	872	912	9,264

Industrial Injuries (lost work hours)



Rail Vehicle Accidents & Major Incidents

May 2014-2015

Repair Costs	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	13-Month Period
Blue/Expo Line	\$9,463	\$9,964	\$1,528	\$207	\$42,690	\$12,945	\$5,762	\$3,463	\$9,301	\$17,834	\$17,322	\$12,056	\$1,655	\$144,190
Red/Purple Line	\$0	\$0	\$0	\$0	\$0	\$4,194	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,194
Green Line	\$0	\$0	\$0	\$0	\$0	\$267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$267
Gold Line	\$0	\$5,860	\$50,059	\$1,669	\$0	\$0	\$0	\$5,664	\$0	\$315	\$0	\$0	\$4,833	\$68,400
Totals	\$9,463	\$15,824	\$51,587	\$1,876	\$42,690	\$17,406	\$5,762	\$9,127	\$9,301	\$18,149	\$17,322	\$12,056	\$6,488	\$217,051

Rail Vehicle Accident Costs - May 2015				
Date	Incident #	Problem Code	Incident Description	Repair Cost
Metro Blue/Expo Line				
5/3/15	2590655	Train vs. Vehicle	A 10-73 was reported. Train 107 at the intersection of Flower and 18th Street, Track 2, Southbound.	\$ 1,426
5/8/15	2592668	Train vs. Vehicle	A 10-73 was reported. Train 107 at Long Beach Blvd. and 3rd Street, Track 2, Southbound. Auto turned in front of train causing accident.	\$ 229
Total				\$ 1,655
Metro Gold Line				
5/17/15	2595656	Train vs. Vehicle	A 10-73 was reported. Train 411 at Mc Donnell and 3rd Street. Track 1, Northbound.	\$ 4,833
Total				\$ 4,833
Grand Total				\$ 6,488
(10-71) = Train vs. Object, (10-72) = Train vs. Pedestrian, (10-73) = Train vs. Vehicle (10-74) = Train vs. MTA Vehicle, (10-75) = Derailment				

Note: Repair costs are only the expenses captured during the time period of the report. Actual costs may be significantly higher, if repairs are spread out over several months.

Service Delivery May 2015

May 2015 - Service Delivery

Blue/Expo Line Fleet Size: 92

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	78	76	97%
Weekend:	60	61	102%
Late Pullouts: 0			
Monthly Mileage:	613,271		

Red/Purple Line Fleet Size: 104

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	74	76	103%
Weekend:	54	64	119%
Late Pullouts: 0			
Monthly Mileage:	609,280		

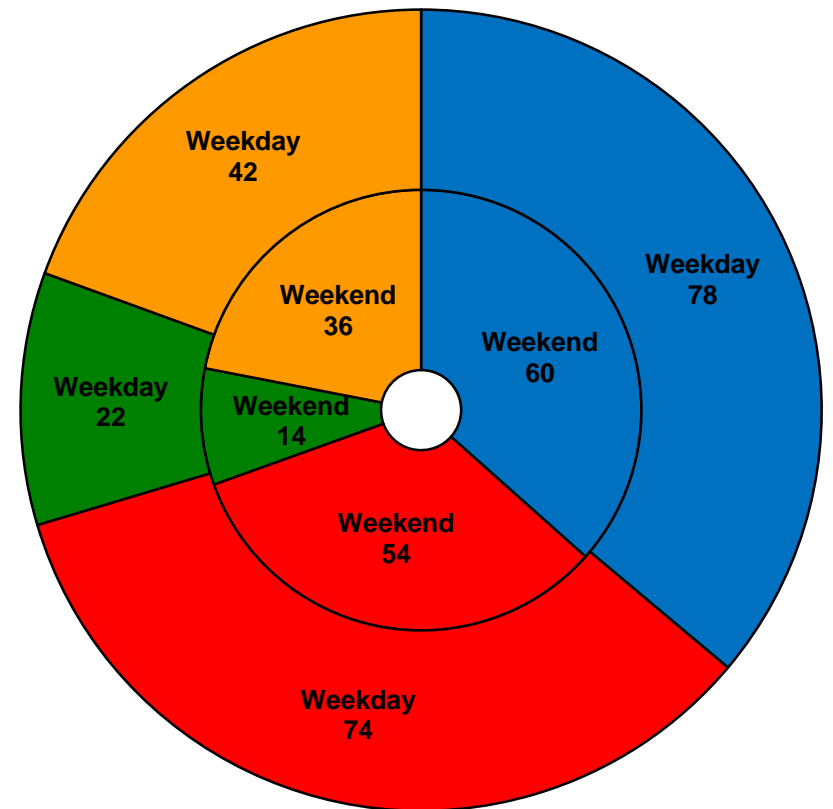
Green Line Fleet Size: 29

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	22	22	100%
Weekend:	14	16	114%
Late Pullouts: 0			
Monthly Mileage:	226,985		

Gold Line Fleet Size: 50*

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	42	42	100%
Weekend:	36	40	111%
Late Pullouts: 0			
Monthly Mileage:	333,276		

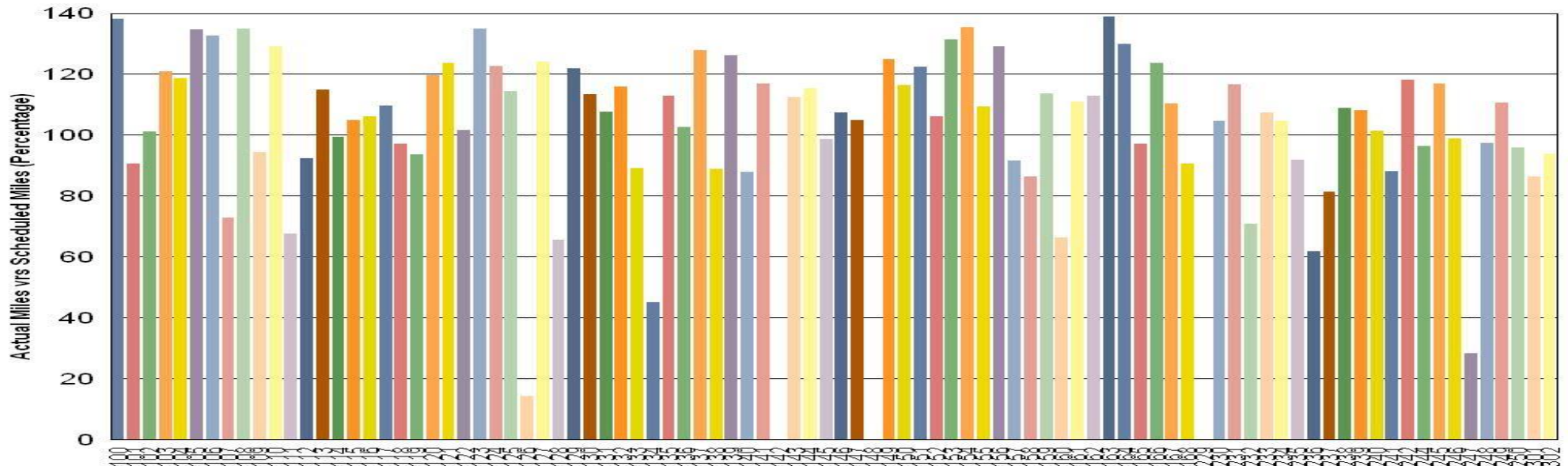
*Two cars are out on the Foothill Gold Line extension to Azusa for testing.



■ Blue/Expo Line ■ Red/Purple Line ■ Green Line ■ Gold Line

Vehicle Utilization May 2015

Metro Blue/Expo Line (92 Cars)



Blue/Expo Line: The following cars were out of service due to:

Car # 126 Being used at Expo II for Acceptance Testing

Car # 142 Accident Repair

Car # 148 Repair and Training Car

Car # 229 Interior and Exterior Painting

Car # 247 Repair and Training Car

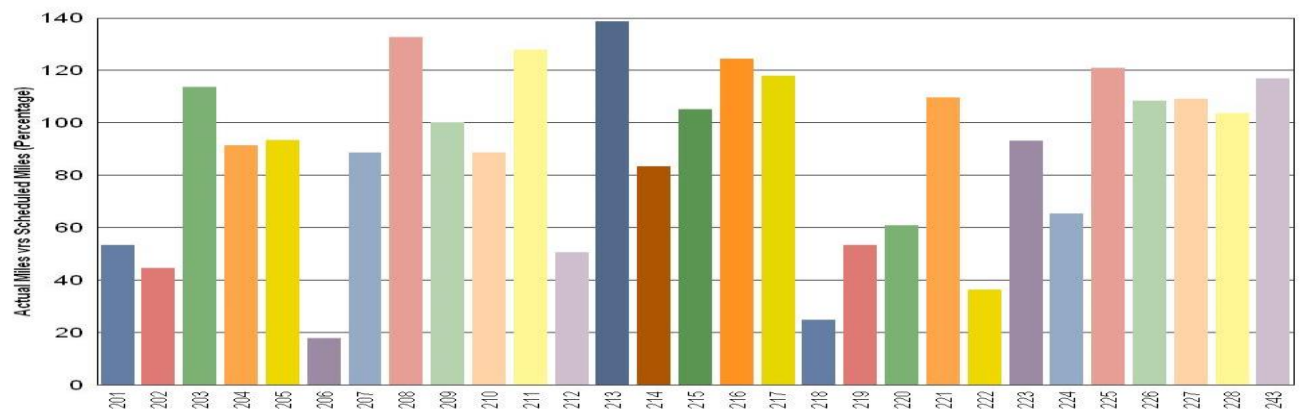
Green Line: The following cars were out of service due to:

Car # 206 EMI / HSCB Fault Troubleshooting

Car # 218 Exterior Paint/Body Rehab

Car # 222 90K Inspection

Metro Green Line (29 Cars)



Note: Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.

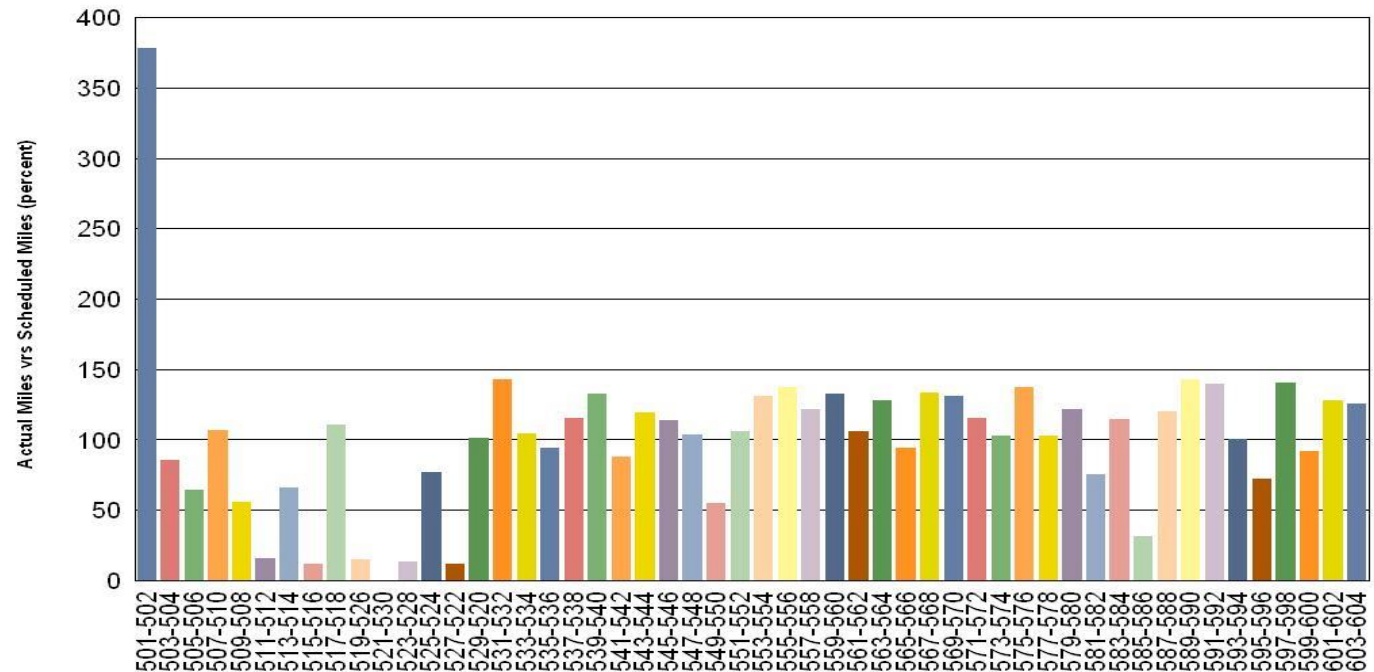
Vehicle Utilization May 2015

Metro Red/Purple Line (104 Cars)

Red/Purple Line:

The following cars were out of service due to:

- Car # 511-512 Trucks Repair
- Car # 515-516 Trucks Repair
- Car # 519-526 Trucks Repair
- Car # 521-530 Trucks Repair & Traction Motor
- Car # 523-528 Trucks Repair
- Car # 527-522 Trucks Repair
- Car # 585-586 Propulsion Fault

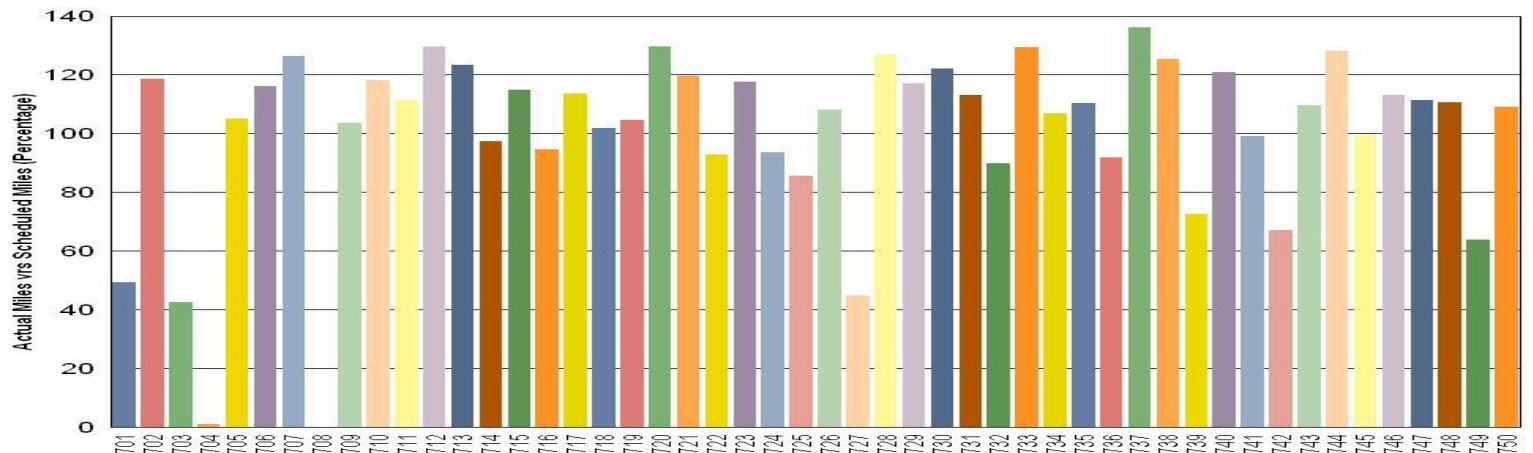


Metro Gold Line (50 Cars)

Gold Line:

The following cars were out of service due to:

- Car # 704 Perform Testing at Monrovia
- Car # 708 Perform Testing at Monrovia



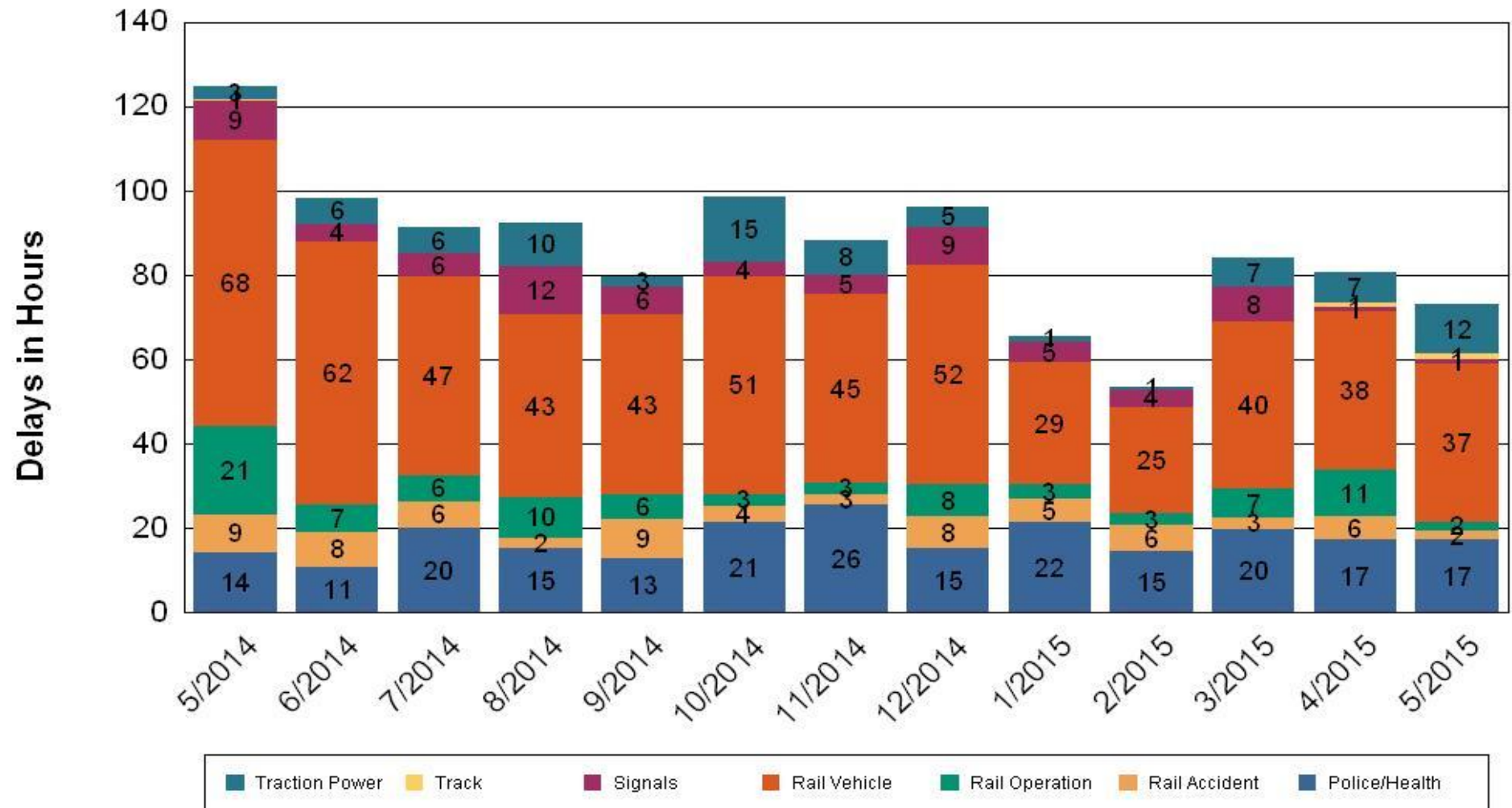
•Percentage includes an average 4% mileage deduction for yard mileage and vehicle testing.



All Train Delays (Hours) May 2014-2015

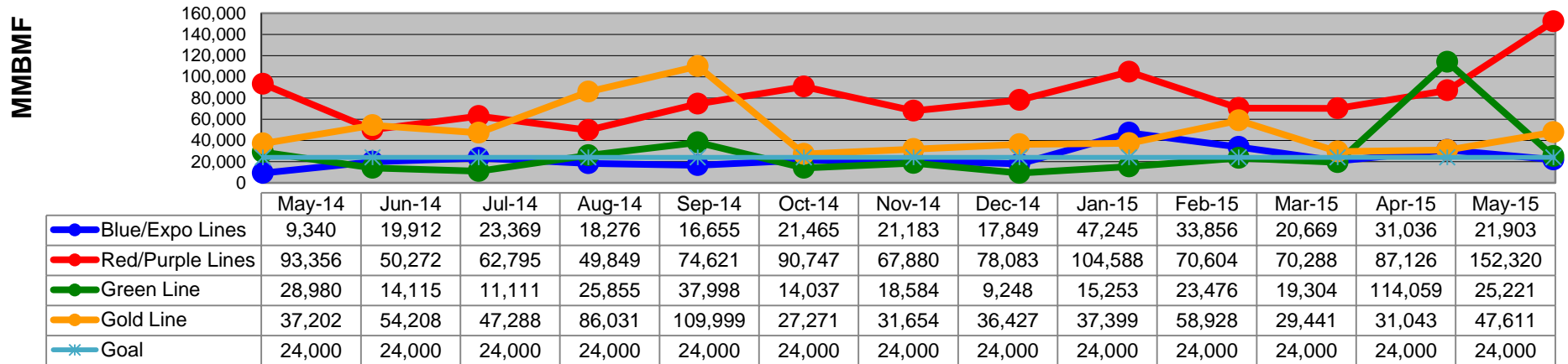
All Train Delays

Totals Include the delay to all trains involved (not just the primary incident)

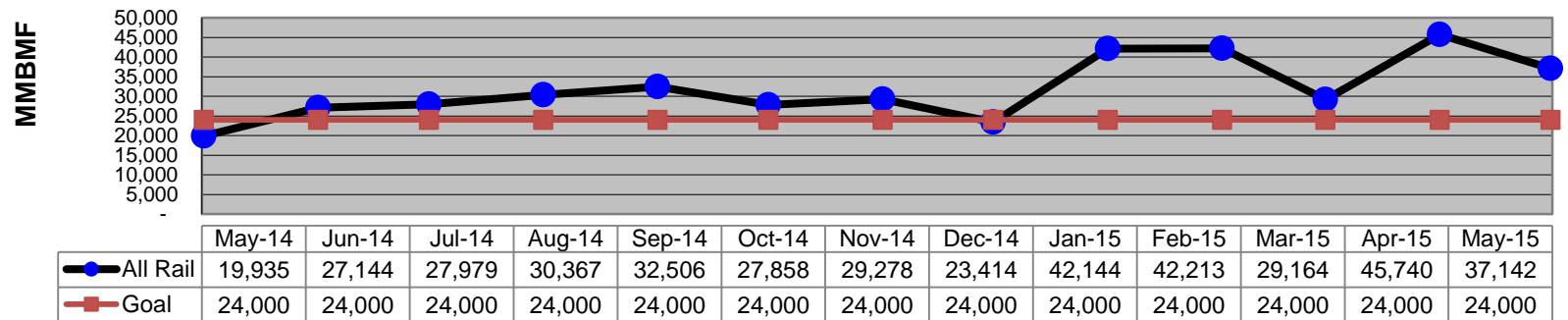


Mean Miles Between Failures (Major) May 2014-2015

Mean Miles Between Major Failures (by line)



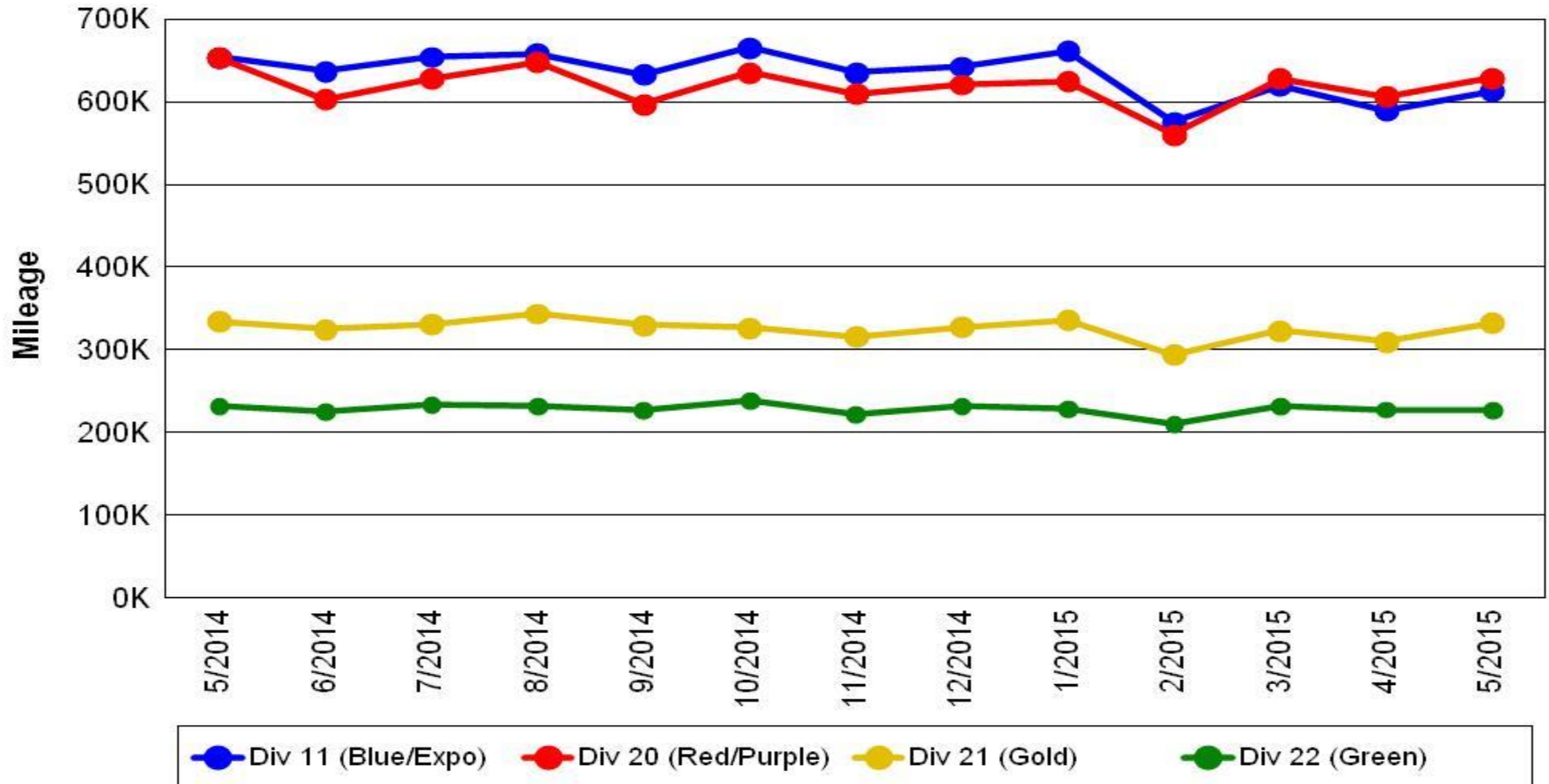
Mean Miles Between Major Failures (all)



Mileage Between Data Range (by month)

May 2014-2015

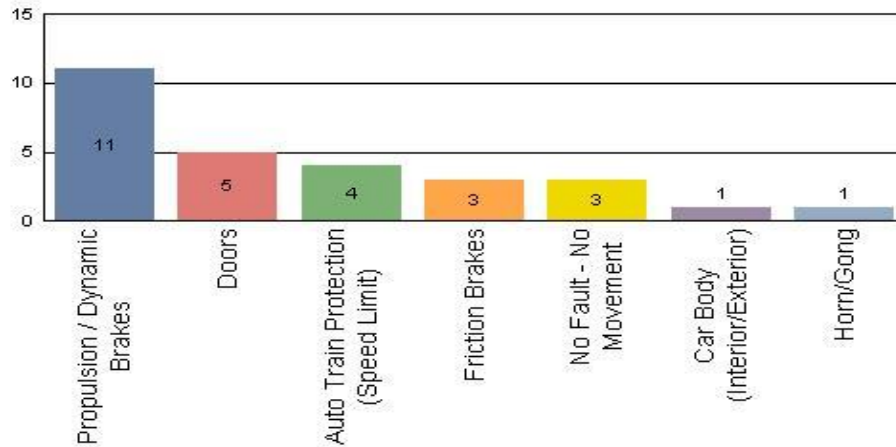
Rail Division Monthly Mileage



Top Incident Categories May 2015

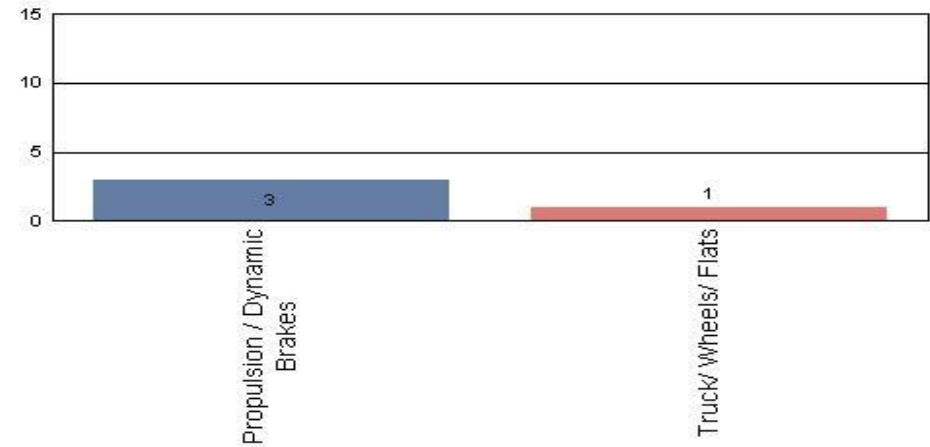
Metro Blue/Expo Line

Top Incident Categories



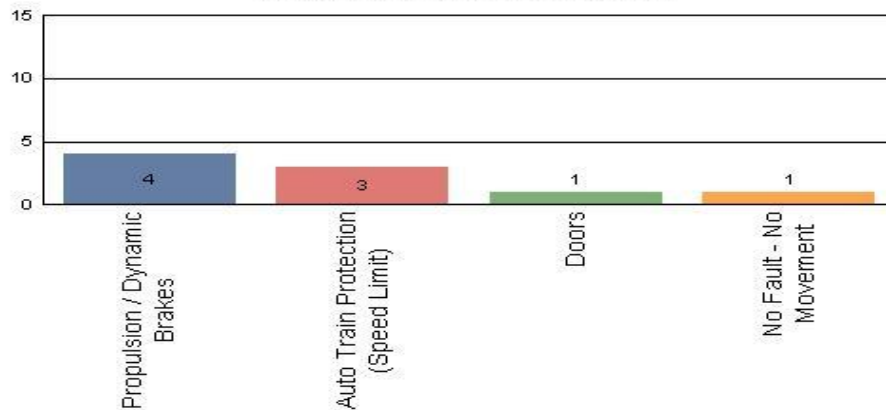
Metro Red/Purple Line

Top Incident Categories



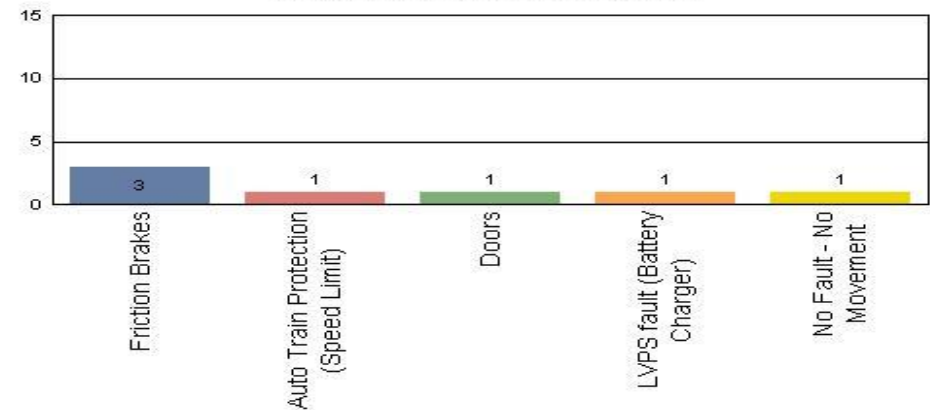
Metro Green Line

Top Incident Categories



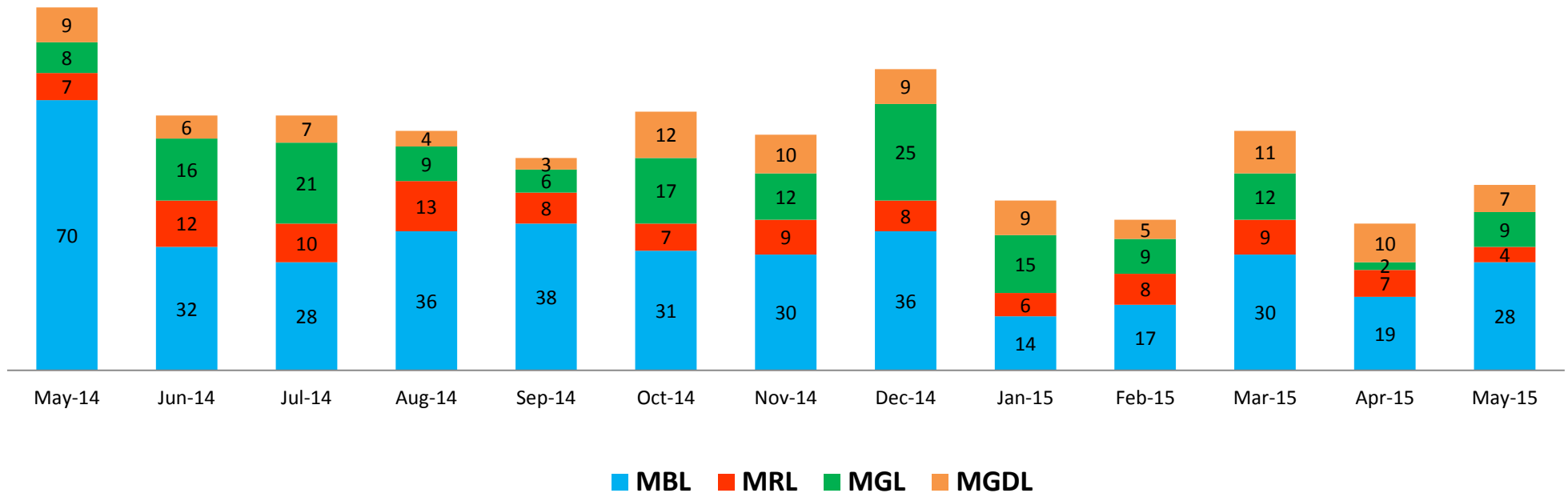
Metro Gold Line

Top Incident Categories



Major Incidents May 2014-2015

Numbers of Major System Failures (by Line)



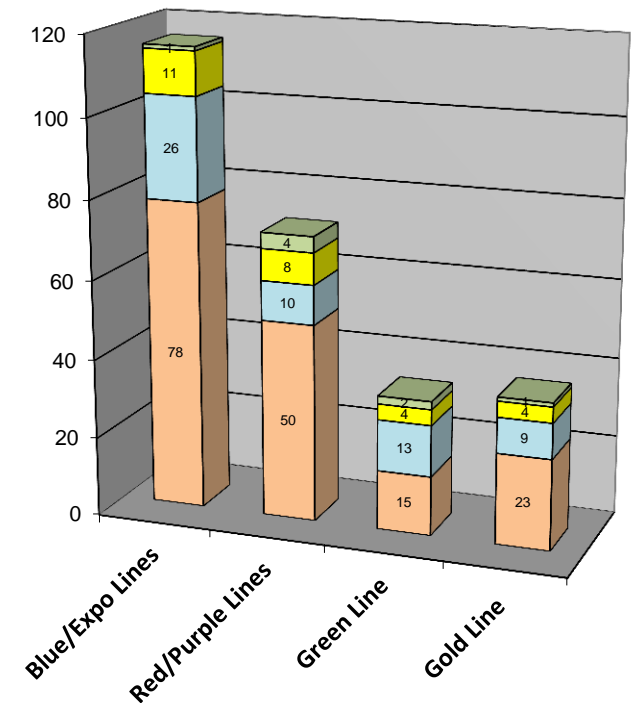
Preventive Maintenance Compliance

May 2014-2015

PM Compliance	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
Blue/Expo Lines	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Red/Purple Lines	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	97%	100%
Green Line	100%	97%	100%	100%	100%	100%	97%	100%	100%	100%	100%	100%	100%
Gold Line	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

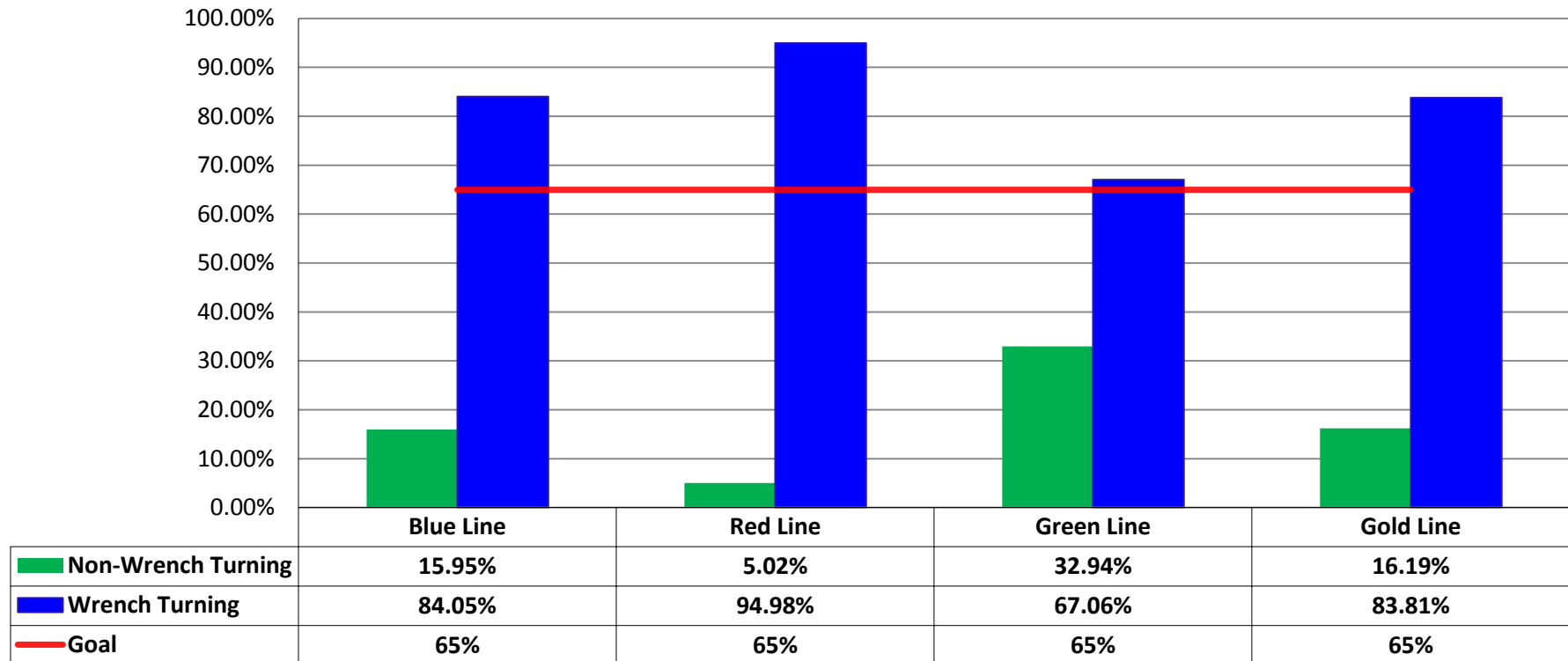
Number of Preventive Maintenance Inspections - May 2015					
Line	A level	B level	C level	D level	Totals
Blue/Expo Lines	78	26	11	1	116
Red/Purple Lines	50	10	8	4	72
Green Line	15	13	4	2	34
Gold Line	23	9	4	1	37
Totals:	166	58	27	8	259

Explanation of PM Inspection levels		Miles			
Line	Type	A level	B level	C level	D level
Blue/Expo Lines	P865/P2020	5,000	15,000	30,000	60,000
Blue/Expo Lines	P2000	7,500	22,500	45,000	90,000
Red/Purple Lines	A650	7,500	22,500	45,000	90,000
Green Line	P2000	7,500	22,500	45,000	90,000
Gold Line	P2550	10,000	30,000	60,000	120,000



RFS Wrench Turning May 2015

RFS - Wrench Turning May 2015



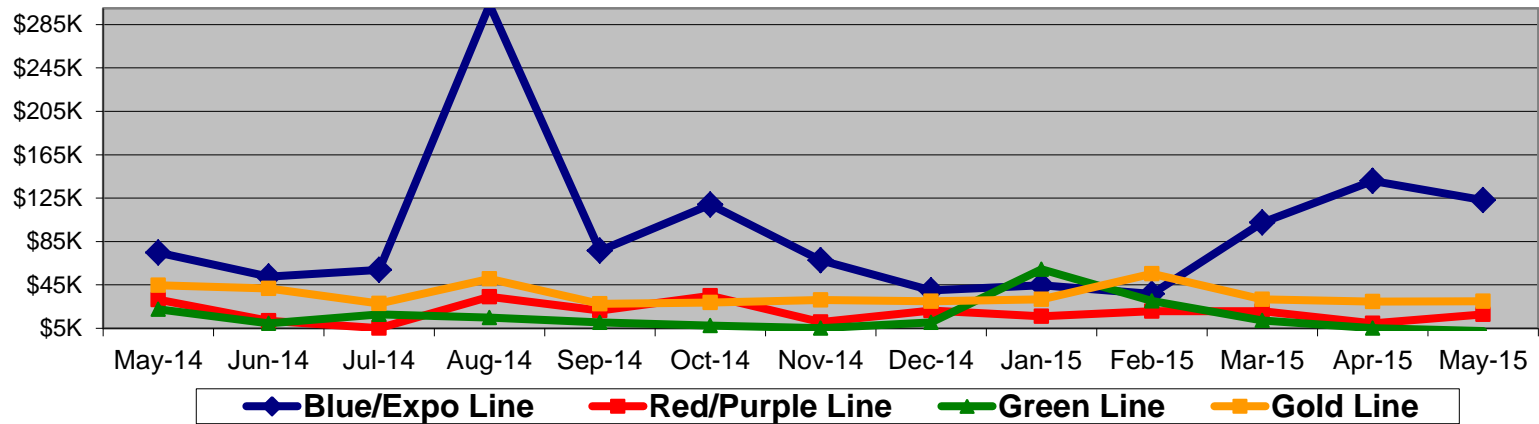
Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader

Vandalism & Graffiti Report

May 2014-2015

Graffiti Costs

	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	13-Month Period
Blue/Expo Line	\$75K	\$53K	\$59K	\$303K	\$77K	\$119K	\$68K	\$40K	\$45K	\$37K	\$103K	\$141K	\$123K	\$1240K
Red/Purple Line	\$32K	\$12K	\$5K	\$34K	\$22K	\$35K	\$11K	\$21K	\$16K	\$21K	\$21K	\$9K	\$18K	\$256K
Green Line	\$22K	\$9K	\$18K	\$15K	\$10K	\$8K	\$5K	\$10K	\$59K	\$30K	\$12K	\$5K	\$3K	\$208K
Gold Line	\$45K	\$42K	\$28K	\$51K	\$28K	\$29K	\$31K	\$30K	\$32K	\$55K	\$32K	\$30K	\$30K	\$461K
Totals:	\$173K	\$116K	\$110K	\$402K	\$136K	\$190K	\$115K	\$102K	\$152K	\$143K	\$167K	\$185K	\$173K	\$2,165K



May 2015 Vandalism & Graffiti - All Rail				
	Qty	Labor	Materials	Totals
Windows Replaced	420	\$ 33,736	\$ 54,576	\$ 88,312
Vandal Shields Replaced	1,032	\$ 20,989	\$ 22,537	\$ 43,526
Seats Cleaned	544	\$ 810	\$ 4,032	\$ 4,842
Seats Inserts Replaced	146	\$ 4,764	\$ 4,638	\$ 9,402
Graffiti Removal - Other	1,017	\$ 15,632	\$ 3,718	\$ 19,350
Repainting Panels	250	\$ 7,875	\$ -	\$ 7,875
Totals	3,409	\$ 83,806	\$ 89,501	\$ 173,307

Graffiti Pictures

May 2015

Blue Line



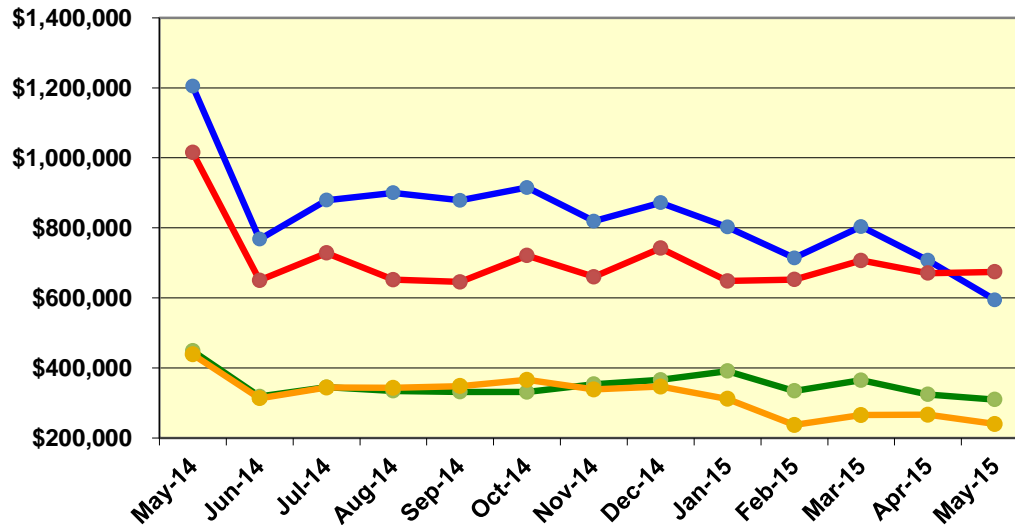
Green Line



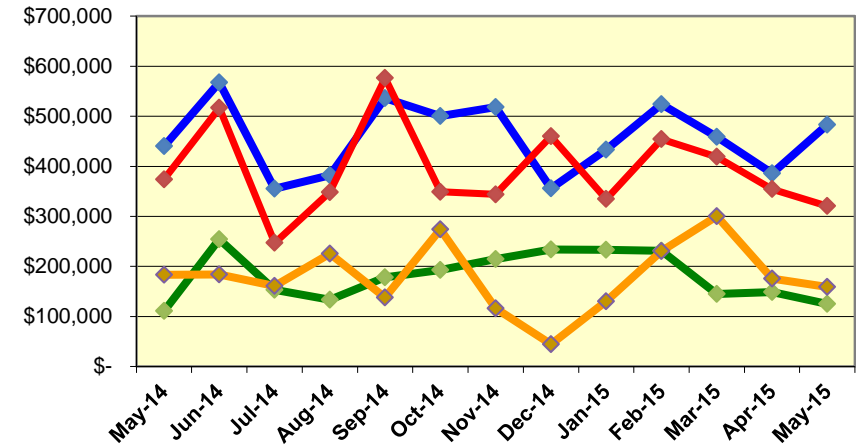
Labor and Material Costs

May 2014-2015

Labor Costs



Material Costs



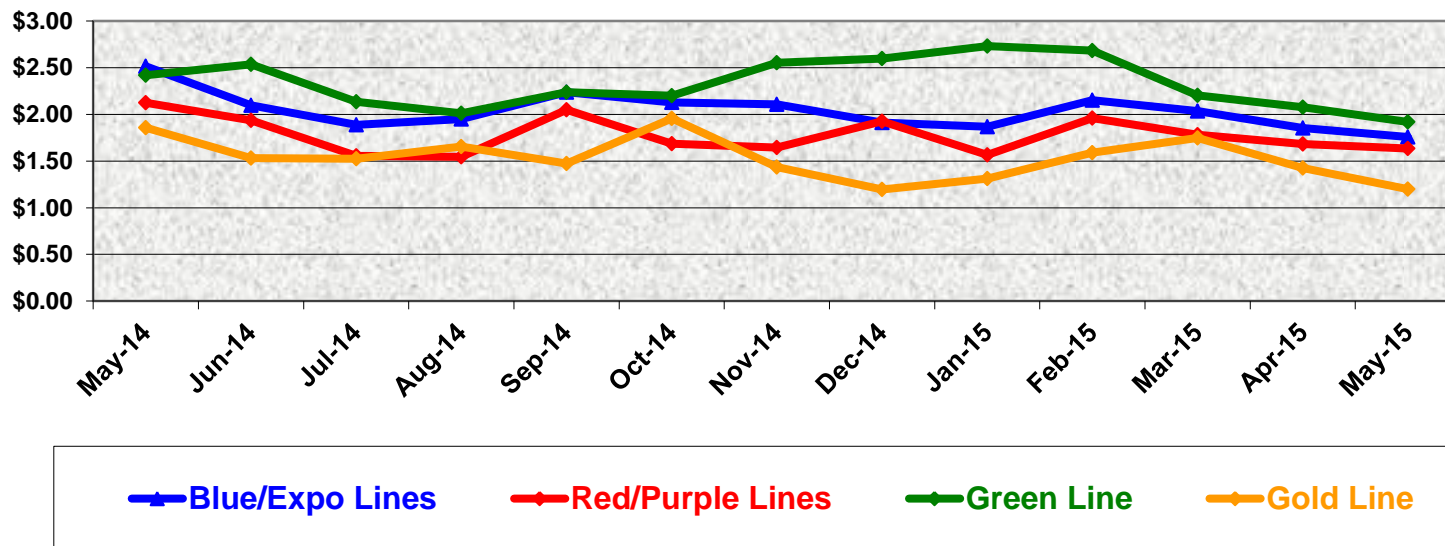
	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
Labor Costs													
Blue/Expo Lines	\$ 1,204,234	\$ 767,717	\$ 879,339	\$ 900,043	\$ 878,598	\$ 915,432	\$ 819,497	\$ 871,682	\$ 802,256	\$ 714,349	\$ 803,757	\$ 707,348	\$ 594,550
Red/Purple Lines	\$ 1,015,092	\$ 650,226	\$ 728,383	\$ 652,202	\$ 645,981	\$ 721,060	\$ 660,321	\$ 741,908	\$ 648,538	\$ 652,406	\$ 706,794	\$ 671,084	\$ 674,681
Green Line	\$ 449,117	\$ 318,516	\$ 345,270	\$ 334,772	\$ 331,870	\$ 331,661	\$ 354,058	\$ 366,422	\$ 391,161	\$ 334,919	\$ 365,457	\$ 324,550	\$ 310,181
Gold Line	\$ 438,759	\$ 313,589	\$ 344,331	\$ 343,246	\$ 348,288	\$ 366,248	\$ 338,610	\$ 347,182	\$ 311,868	\$ 237,438	\$ 265,835	\$ 266,529	\$ 240,056
Totals	\$ 3,107,202	\$ 2,050,048	\$ 2,297,323	\$ 2,230,262	\$ 2,204,736	\$ 2,334,400	\$ 2,172,486	\$ 2,327,193	\$ 2,153,823	\$ 1,939,112	\$ 2,141,842	\$ 1,969,511	\$ 1,819,467

	Material Costs												
Blue/Expo Lines	\$ 440,576	\$ 567,257	\$ 355,405	\$ 382,184	\$ 536,100	\$ 500,390	\$ 518,334	\$ 355,729	\$ 433,347	\$ 524,157	\$ 458,588	\$ 385,794	\$ 483,368
Red/Purple Lines	\$ 373,815	\$ 516,934	\$ 247,048	\$ 348,370	\$ 576,230	\$ 349,031	\$ 343,936	\$ 460,076	\$ 334,623	\$ 454,326	\$ 419,099	\$ 354,492	\$ 320,754
Green Line	\$ 111,344	\$ 254,264	\$ 153,001	\$ 133,386	\$ 178,206	\$ 193,176	\$ 214,902	\$ 234,118	\$ 233,318	\$ 231,562	\$ 144,927	\$ 148,839	\$ 125,054
Gold Line	\$ 183,115	\$ 183,869	\$ 160,751	\$ 225,818	\$ 137,883	\$ 274,059	\$ 116,179	\$ 44,498	\$ 130,036	\$ 230,896	\$ 300,170	\$ 175,922	\$ 159,016
Totals	\$ 1,108,849	\$ 1,522,323	\$ 916,204	\$ 1,089,759	\$ 1,428,418	\$ 1,316,657	\$ 1,193,351	\$ 1,094,420	\$ 1,131,324	\$ 1,440,941	\$ 1,322,783	\$ 1,065,048	\$ 1,088,194

Cost Per Mile May 2014-2015

Cost per mile:	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Average
Blue/Expo Lines	\$2.52	\$2.10	\$1.89	\$1.95	\$2.24	\$2.13	\$2.11	\$1.91	\$1.87	\$2.15	\$2.04	\$1.85	\$1.76	\$2.04
Red/Purple Lines	\$2.13	\$1.93	\$1.55	\$1.54	\$2.05	\$1.68	\$1.64	\$1.92	\$1.57	\$1.96	\$1.78	\$1.68	\$1.63	\$1.78
Green Line	\$2.42	\$2.54	\$2.14	\$2.01	\$2.24	\$2.20	\$2.55	\$2.60	\$2.73	\$2.68	\$2.20	\$2.08	\$1.92	\$2.33
Gold Line	\$1.86	\$1.53	\$1.53	\$1.65	\$1.47	\$1.96	\$1.44	\$1.19	\$1.31	\$1.59	\$1.75	\$1.43	\$1.20	\$1.53

Cost per Mile



ATU Absences vs. Overtime

May 2015

ABSENCE TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	Total
AWP-ABSENT W/O PERMISSION	-	-	176	-	176
BER-BEREAVEMENT	8	-	-	-	8
CTO-COMPENSATORY TIME OFF	628	806	211	340	1,986
CUT-EMPLOYEE LEAVES EARLY	-	-	1	3	4
DSL-DISABILITY LEAVE/LONG	776	680	-	8	1,464
EFH-EMG. FLOAT HOL.	-	104	48	24	176
ETO-EXCUSED TIME OFF	92	41	3	29	164
FMI-FAM IND INJURY	216	16	-	-	232
FML-FAMILY CARE LEAVE	364	407	240	348	1,359
FMS-FAMILY LEAVE SICK	168	186	40	-	394
HLF-HOLIDAY FLOATING	304	416	240	192	1,152
HNP-HOLIDAY NOT PAID	32	-	16	16	64
HOL-HOLIDAY LEGAL	656	504	120	240	1,520
II-INDUSTRIAL INJURY	-	-	120	32	152
JUR-JURY DUTY	24	-	-	-	24
LC1-LABOR CODE 233	344	222	144	227	937
LTI-OCCPIL/LONGTRM INJ LEAVE	424	336	-	-	760
OWP-OFF WITH PERMISSION	-	4	2	2	8
RTO-REQUESTED TIME OFF-NO PAY	56	-	-	0	56
SCK-SICK PAY	406	265	24	368	1,063
SCW-SICK WITHOUT PAY	185	144	244	29	602
SPN-SCHOOL PARTNER NOT PAID	-	-	-	8	8
SUS-DISCIPLINARY SUSPENSION	24	-	-	-	24
TAR-TARDY	2	0	2	0	5
VAC-VACATION	1,015	1,220	518	674	3,427
Total Absence Hours	5,725	5,351	2,148	2,540	15,764
ATU Number of Work Force (budget)	125	104	46	48	323
Full Work Force hours/month	21,663	18,023	7,972	8,318	55,976
Absence as a % of Work Force	26%	30%	27%	31%	28%

OVERTIME TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	Total
CTB-COMPENSATORY TIME TO BANK	46	45	43	22	156
OTP-PREM OVERTIME	4,394	3,925	1,673	1,160	11,151
WLO-Worked Lunch Overtime	163	236	81	44	523
Total Overtime Hours	4,603	4,205	1,797	1,226	11,830
Overtime as a % of Work Force	21%	23%	23%	15%	21%

Note: Overtime also covers other required activities, including Training, Component Overhaul, and Special Events.



Metro

RFS Instruction Department Activities

May 2015

Training classes completed during the month of May 2015

Description	Course Hours	Student Count	Training Hours
<u>Blue & Expo Line Training - (P865/2020 & P2000 LRV):</u>			
RFS 865/2020 VEHICLE SYSTEMS	40	10	400
RFS 2-WEEK RAIL INTRODUCTION	80	5	400
RFS 865/2020 PROPULSION	64	9	576
Total Blue Line Training (Hours):			1,376
<u>Gold Line Training (P2550 LRVs):</u>			
RFS ANSALDOBREDA 2550 TRUCKS	24	8	192
RFS ANSALDOBREDA 2550 FRICTION BRAKES	40	8	320
Total Gold Line Training (Hours):			512
<u>JAC Training (P2000 LRVs):</u>			
RFS SIEMENS 2000 VEHICLE SYSTEMS	32	4	128
RFS SIEMENS 2000 PROPULSION	80	4	320
RFS SIEMENS 2000 FRICTION BRAKES	72	8	576
Total JAC Training (Hours):			1024
<u>Total RFS Instruction for the month of May 2015 (Hours):</u>			<u>2,912</u>

Other Instruction Activities

A650 Curriculum, Administrative, and Technical Support	120
P865/P2020 Curriculum, Administrative, and Technical Support	40
P2000 Curriculum, Administrative, and Technical Support	80
P2550 Curriculum, Administrative, and Technical Support	40
Instructor Vacation and Holiday	136

Total Other Instruction Activities **416**

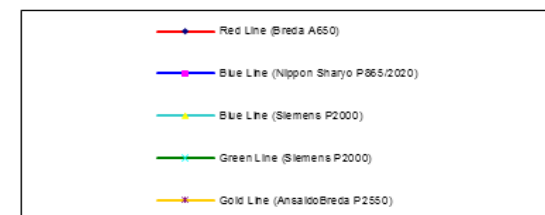
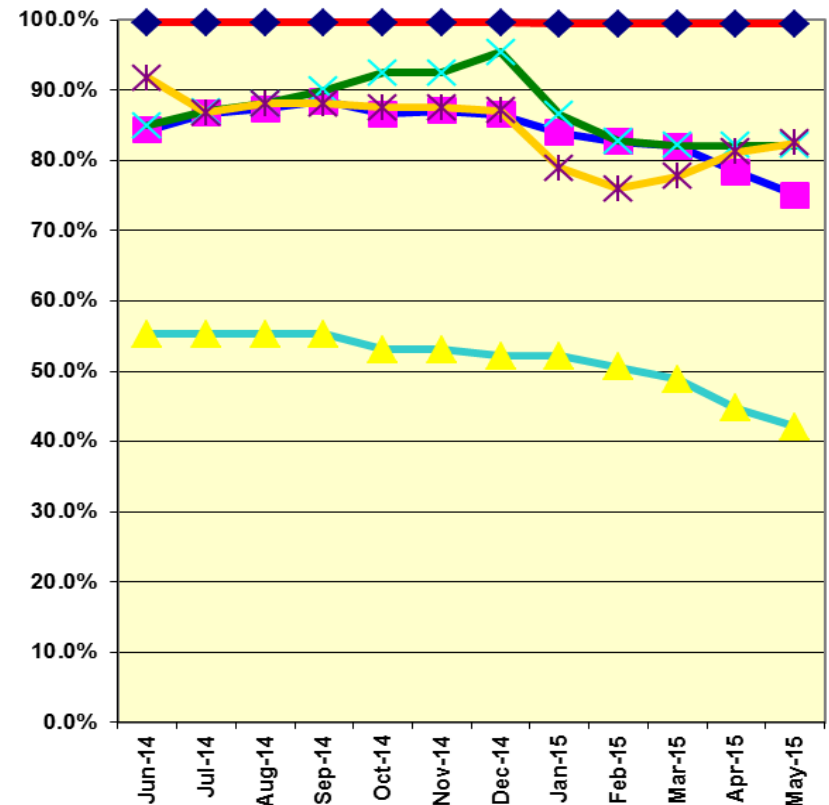
Core Vehicle Training Completed: BLUE RED GREEN GOLD

Percentage of core vehicle training complete: **75.1%** **99.5%** **82.1%** **82.5%**
 Siemens P2000 training complete: **42.1%** **N/A** **N/A** **N/A**

Average Specialist Rail Experience Level in Years: **10.4** **11.8** **8.9** **9.6**



Core Training Completed



Variations caused by new hires, employee transfers, & training completed