



Rail Fleet Services Monthly Report December 2015



Metro

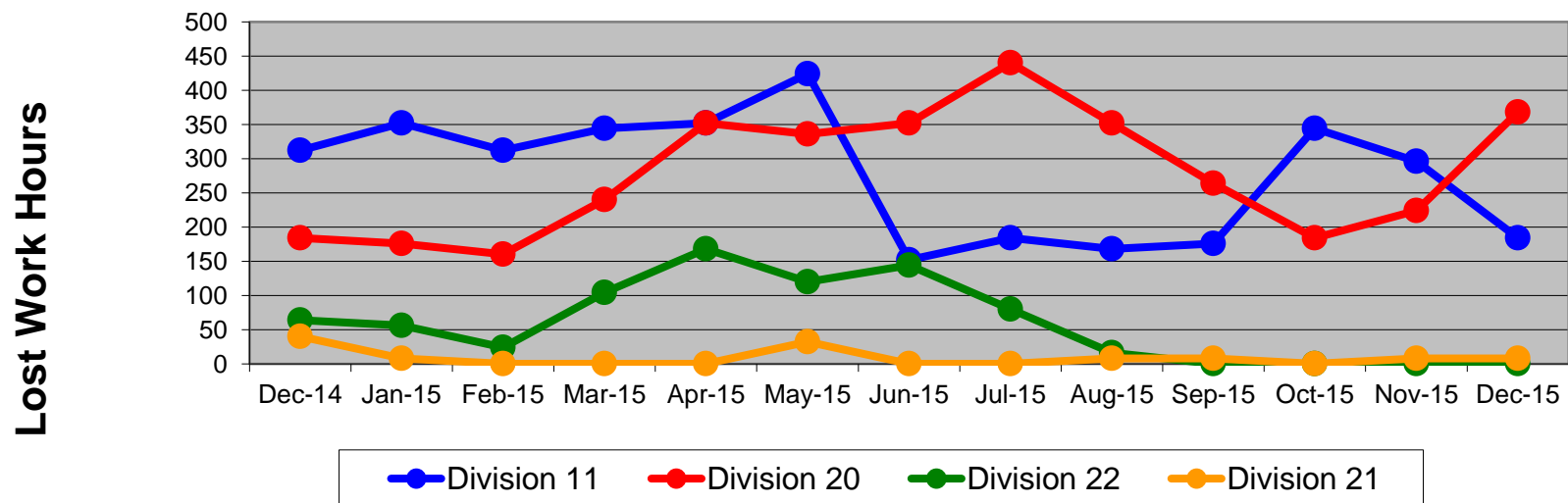
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Industrial Injuries – Lost Work Hours December 2014-2015

	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	13-Month Period
Division 11	312	352	312	344	352	424	152	184	168	176	344	296	184	3,600
Division 20	184	176	160	240	352	336	352	440	352	264	184	224	368	3,632
Division 22	64	56	24	104	168	120	144	80	16	0	0	0	0	776
Division 21	40	8	0	0	0	32	0	0	8	8	0	8	8	112
Totals	600	592	496	688	872	912	648	704	544	448	528	528	560	8,120

Industrial Injuries (lost work hours)



Rail Vehicle Accidents & Major Incidents

December 2014-2015

Repair Costs	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	13-Month Period
Blue/Expo Line	\$3,463	\$9,301	\$17,834	\$17,322	\$12,056	\$1,655	\$4,811	\$5,716	\$1,971	\$2,838	\$40,969	\$65,454	\$17,160	\$200,550
Red/Purple Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Green Line	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,333	\$0	\$1,205	\$0	\$23	\$6,561
Gold Line	\$5,664	\$0	\$315	\$0	\$0	\$4,833	\$1,494	\$8,204	\$2,611	\$0	\$1,074	\$1,547	\$1,547	\$27,289
Totals	\$9,127	\$9,301	\$18,149	\$17,322	\$12,056	\$6,488	\$6,305	\$13,920	\$9,915	\$2,838	\$43,248	\$67,001	\$18,730	\$234,400

Rail Vehicle Accident Costs - December 2015				
Date	Incident #	Problem Code	Incident Description	Repair Cost
Metro Blue/Expo Line				
12/7/15	2671014	Train vs. Pedestrian	A 10-72 was reported. Train 111 vs. Pedestrian at Wilmington Grade Crossing, NB Track 1.	\$ -
12/10/15	2672044	Train vs. Pedestrian	A 10-72 was reported, at 41st Street Grade Crossing.	\$ 1,531
12/10/15	2672178	Train vs. Vehicle	A 10-73 was reported, at 7th and Colorado.	\$ 11,153
12/17/15	2674827	Train vs. Vehicle	A 10-73 was reported. Train 116, 8th and Pacific.	\$ 1,189
12/17/15	2674867	Train vs. Vehicle	A 10-73 was reported. Train 103, at Washington and Hooper, NB Track 1.	\$ 2,939
12/20/15	2675681	Train vs. Vehicle	A 10-73 was reported. Train 122, Track 2 at 41st Street Grade Crossing.	\$ 348
MBL & EXPO Total				\$ 17,160
Metro Green Line				
12/20/15	2672303	Train vs. Object	A 10-71 was reported. Train hit freeway sign with the right side mirror, EB Track 2.	\$ 23
MGL Total				\$ 23
Metro Gold Line				
12/6/15	2670618	Train vs. Vehicle	A 10-73 was reported. 3rd Street and Eastern, SB Track 2.	\$ 1,547
12/16/15	2674052	Train vs. Object	A 10-71 was reported. Debris on the track, SB Track 2, Orange Grove.	\$ -
MGOLD Total				\$ 1,547
Grand Total				\$ 18,730
(10-71) = Train vs. Object, (10-72) = Train vs. Pedestrian, (10-73) = Train vs. Vehicle (10-74) = Train vs. MTA Vehicle, (10-75) = Derailment				



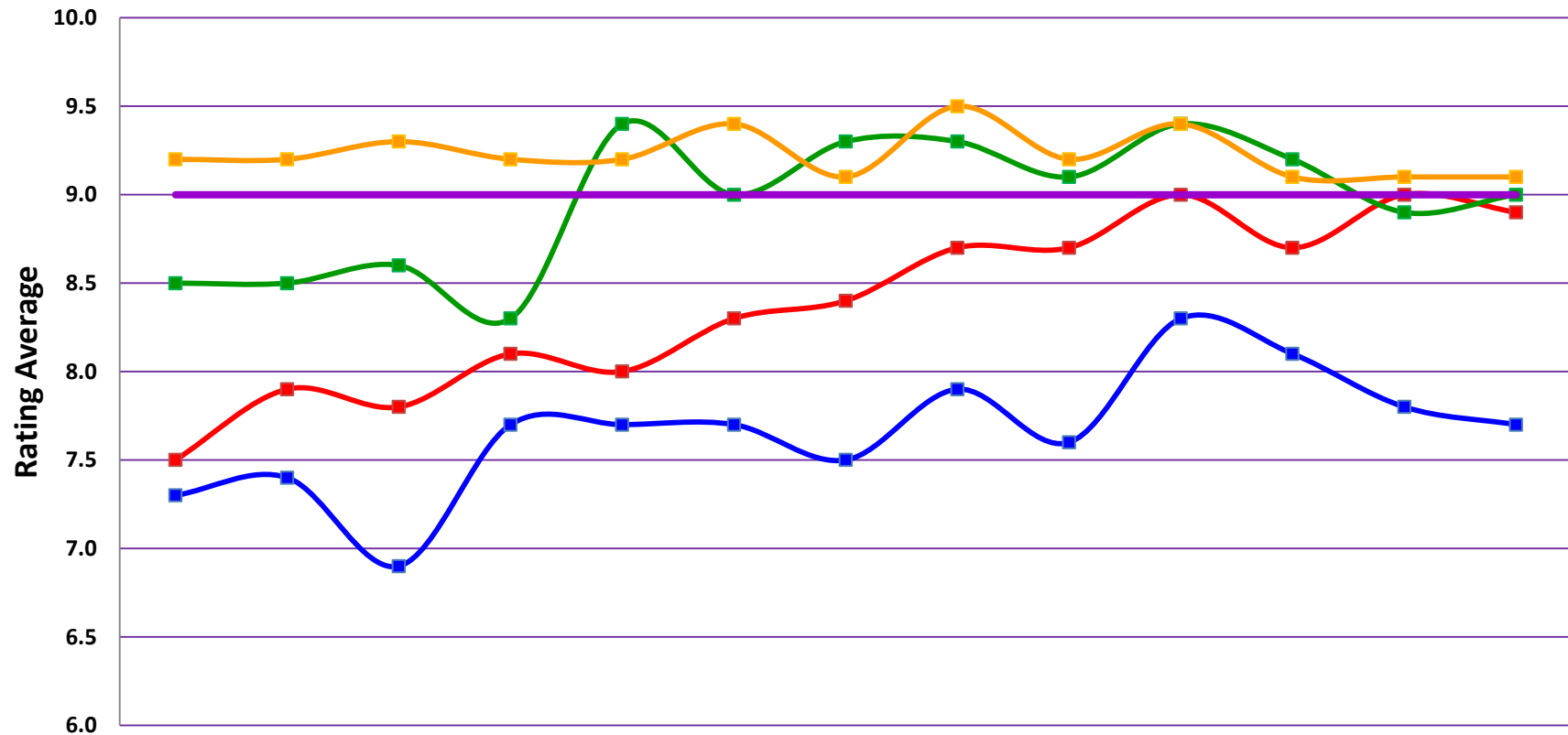
Metro

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.

Rail Vehicle – Car Cleanliness

December 2014-2015

Car Cleanliness Monthly Report



	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Div 11 Blue/Expo	7.3	7.4	6.9	7.7	7.7	7.7	7.5	7.9	7.6	8.3	8.1	7.8	7.7
Div 20 Red/Purple	7.5	7.9	7.8	8.1	8.0	8.3	8.4	8.7	8.7	9.0	8.7	9.0	8.9
Div 22 Green	8.5	8.5	8.6	8.3	9.4	9.0	9.3	9.3	9.1	9.4	9.2	8.9	9.0
Div 21 Gold	9.2	9.2	9.3	9.2	9.2	9.4	9.1	9.5	9.2	9.4	9.1	9.1	9.1
Rail Goal	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0

Service Delivery December 2015

December 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	75	96%
Weekend:	60	57	95%
Late Pullouts: 2			
Monthly Mileage:	606,929		

Red/Purple Line Fleet Size: 104

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	74	80	108%
Weekend:	54	70	130%
Late Pullouts: 0			
Monthly Mileage:	620,968		

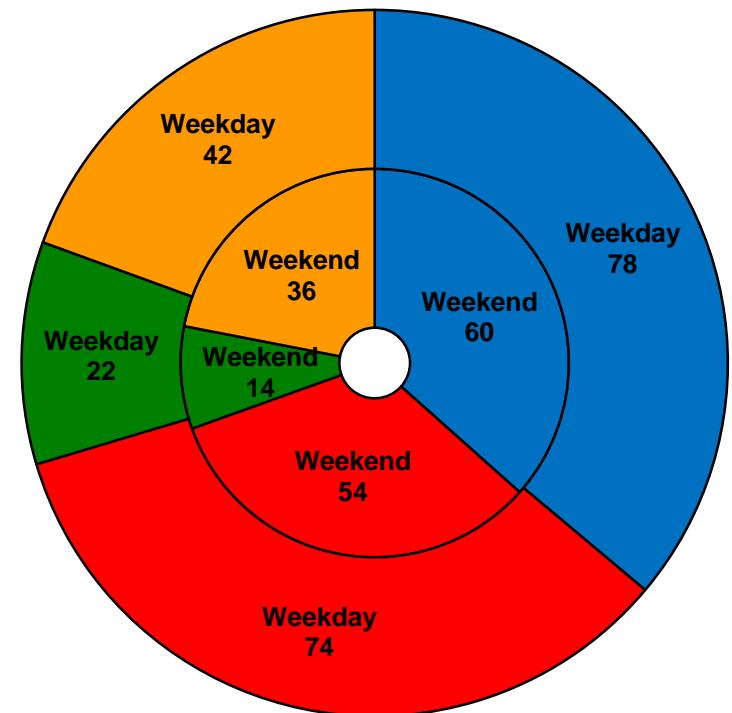
Green Line Fleet Size: 29

<u>Pull Out</u>	<u>Vehicles Required</u>	<u>Average Available</u>	<u>% Up (Down)</u>
Weekday:	22	22	100%
Weekend:	14	15	107%
Late Pullouts: 0			
Monthly Mileage:	229,260		

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	39	108%
Late Pullouts: 0			
Monthly Mileage*:	324,344		

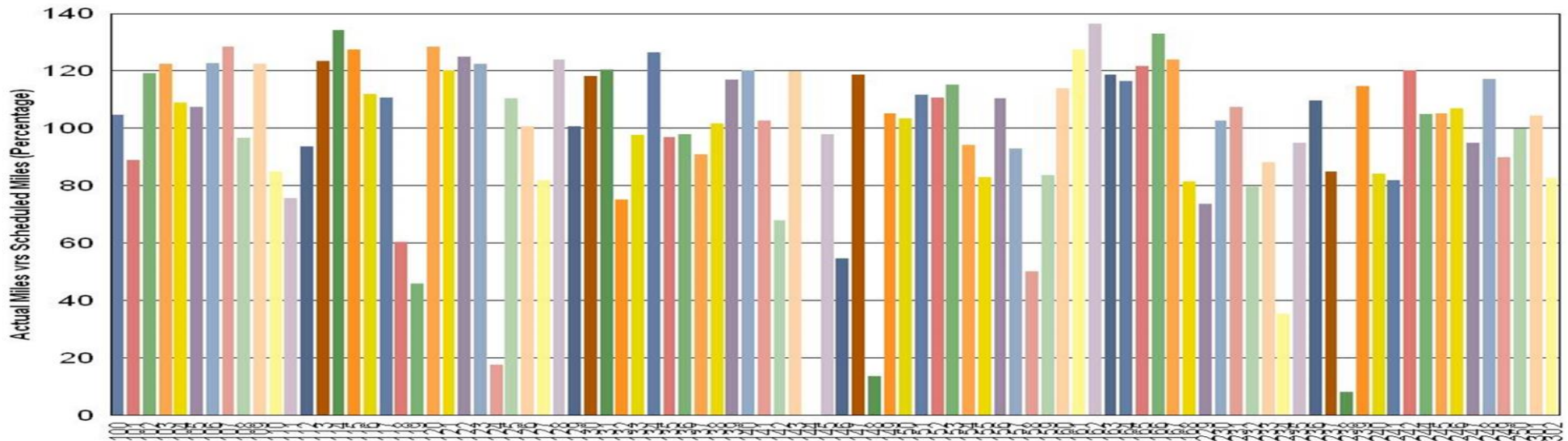
* Gold Line monthly mileage includes Division 21 and 24.



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

Vehicle Utilization December 2015

Metro Blue/Expo Line (92 Cars)



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

Car # 124 60K Inspection and Articulation Overhaul

Car # 144 Major Accident Repair

Car # 148 Repeating Propulsion Faults/Dynamic Brake Faults (back in service at this time)

Car # 234 Open Work Orders, Repeater for Friction Brake and Door Issues

Car # 238 Major Accident Repair (back in service at this time).

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

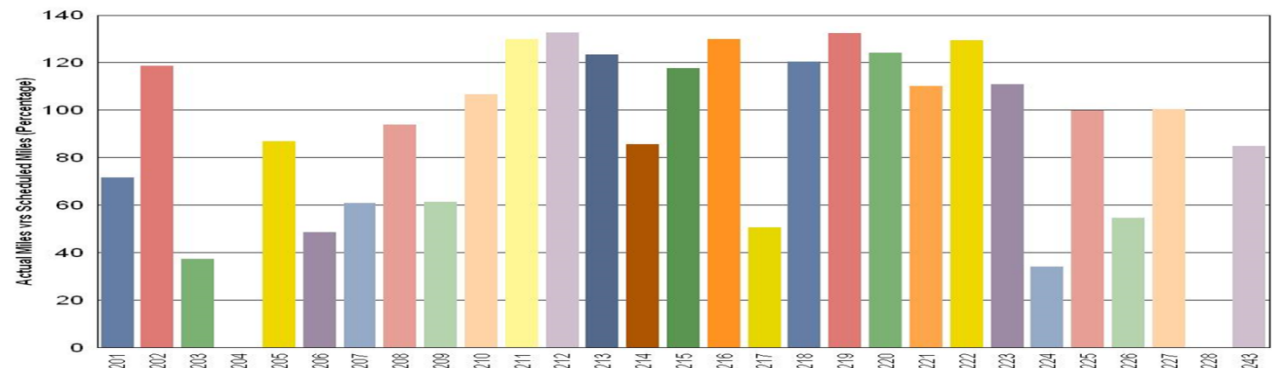
Car # 203 90K Inspection/Open Work Orders

Car # 204 Prop Fault/A-B End Blower Motor Noisy

Car # 224 Exterior Paint & Rehab

Car # 228 Prop Fault – No Parts in stock

Metro Green Line (29 Cars)



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

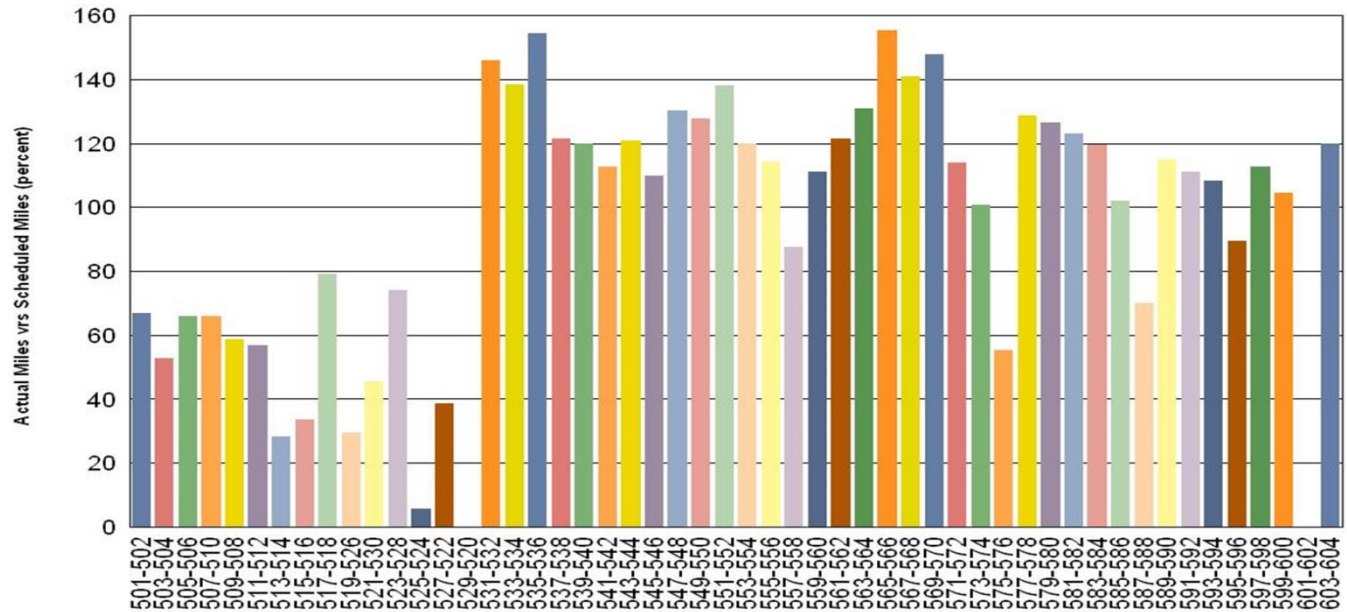
Vehicle Utilization December 2015

Red/Purple Line:

The following cars were out of service due to:

- Car # 513-514 Waiting for PCE Blower
- Car # 515-516 Propulsion
- Car # 519-526 HSBC
- Car # 525-524 Propulsion
- Car # 527-522 Flooring Campaign
- Car # 529-520 Waiting on Traction Motors
- Car # 601-602 Friction Brakes

Metro Red/Purple Line (104 Cars)

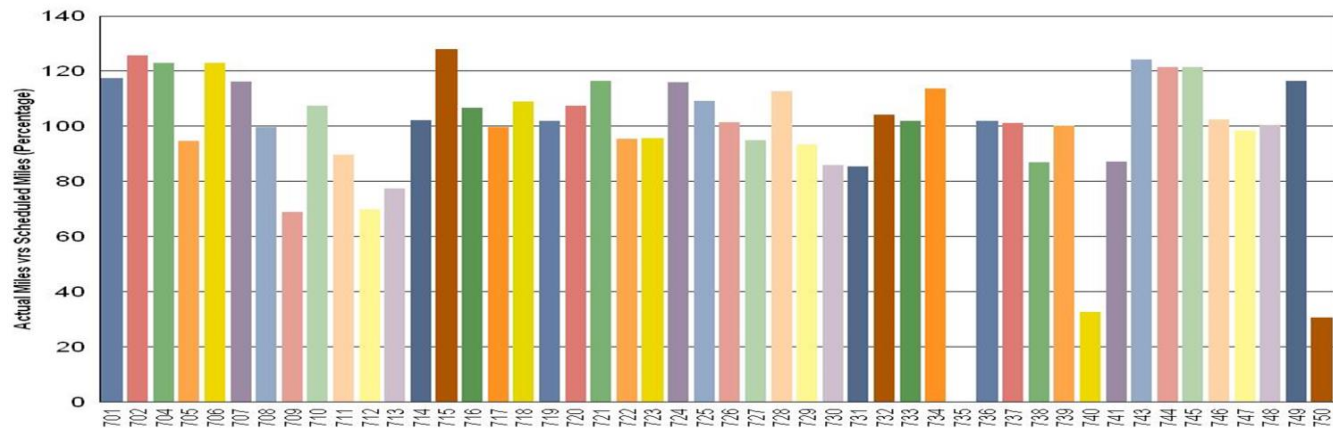


Gold Line:

The following cars were out of service due to:

- Car # 735 Repair of the Auxiliary Inverter
- Car # 740 60K PM Inspection and DVR Wiring Modification
- Car # 750 At Division 24 for Operator Training and a Propulsion Fault Repair

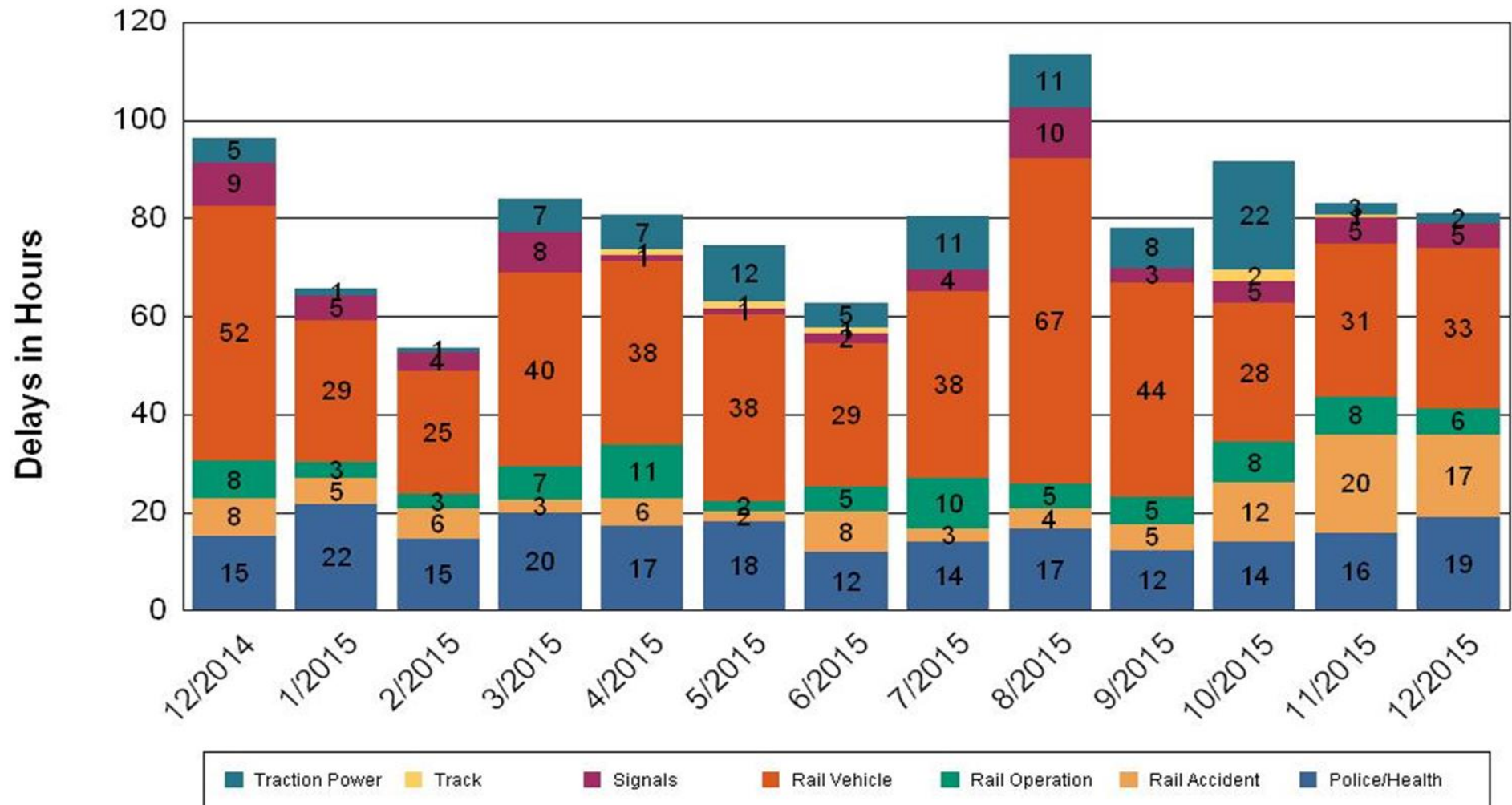
Metro Gold Line (50 Cars)



All Train Delays (Hours) December 2014-2015

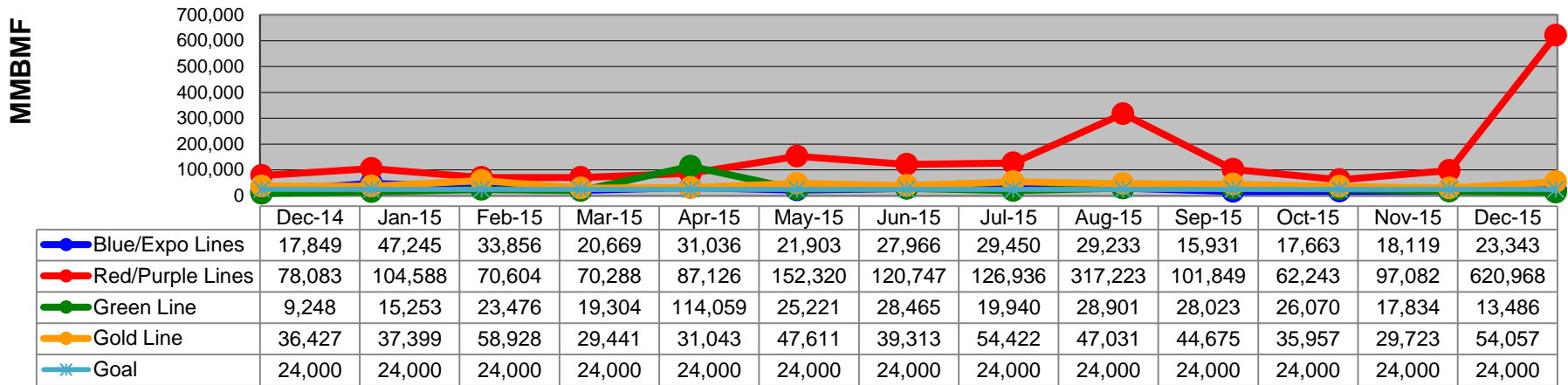
All Train Delays

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

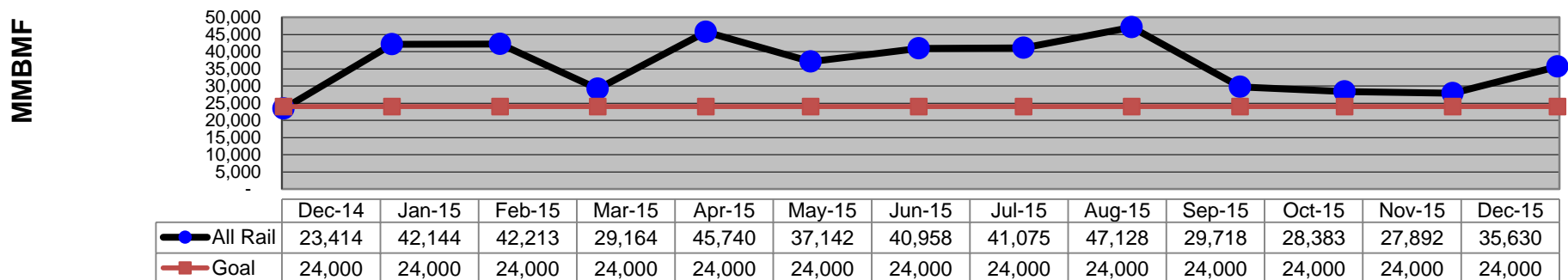


Mean Miles Between Failures (Major) December 2014-2015

Mean Miles Between Major Failures (by line)



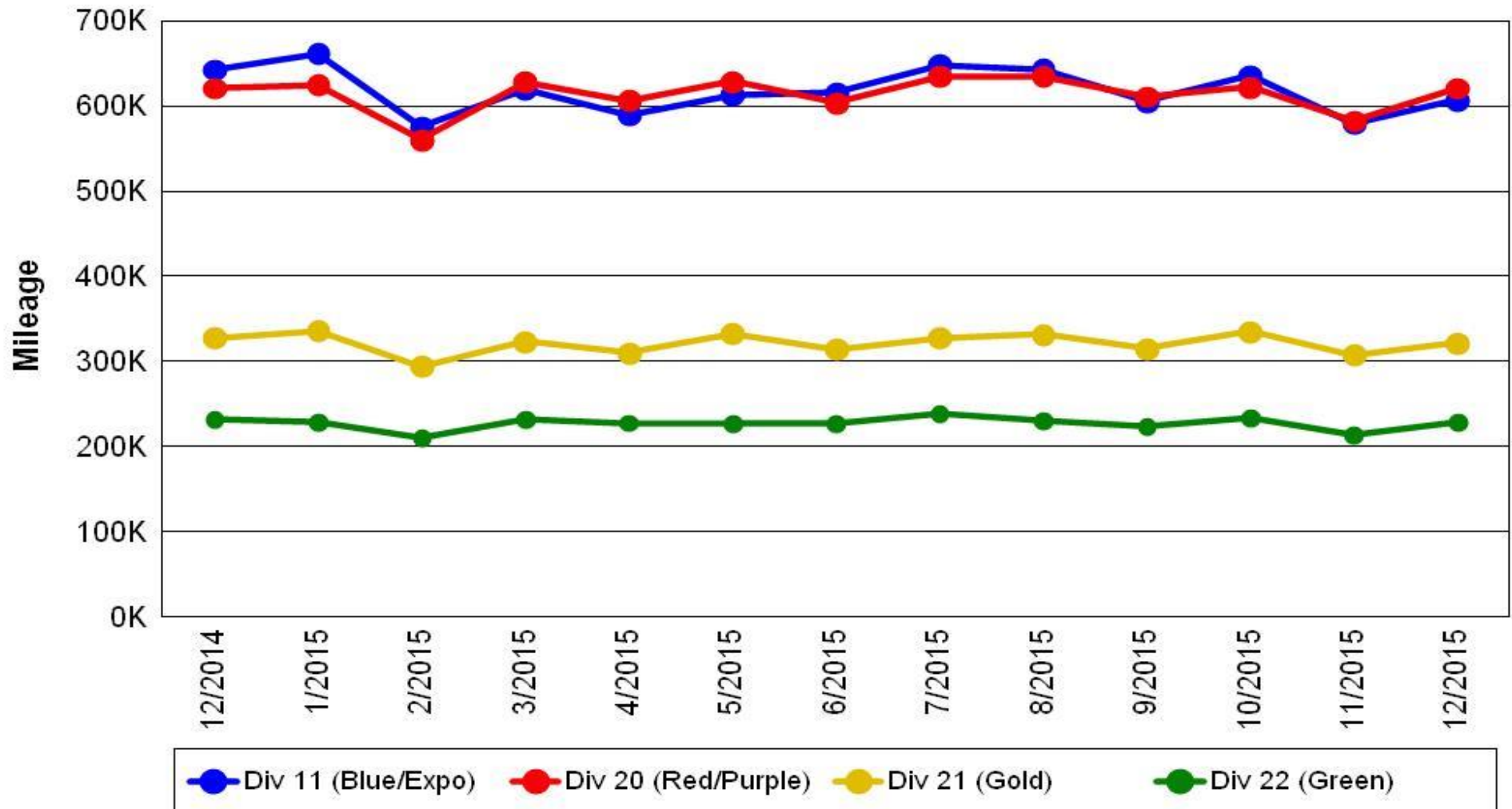
Mean Miles Between Major Failures (all)



Mileage Between Data Range (by month)

December 2014-2015

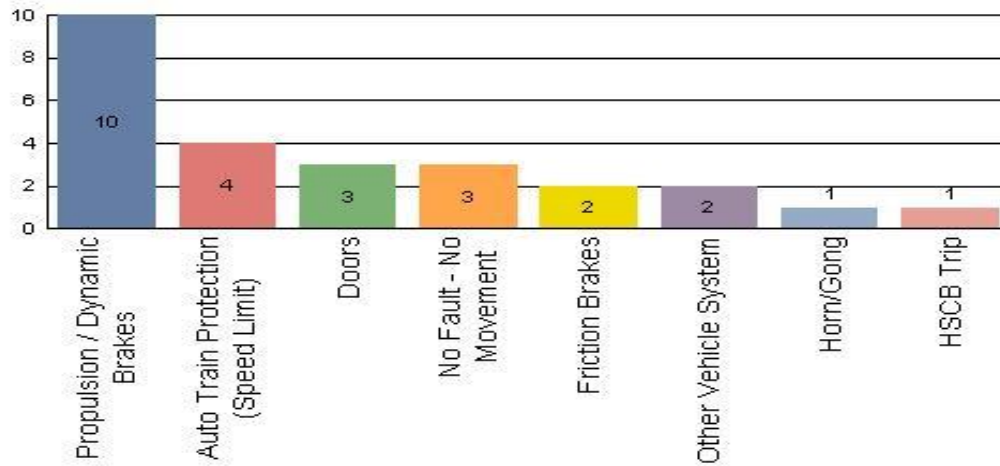
Rail Division Monthly Mileage



Top Incident Categories December 2015

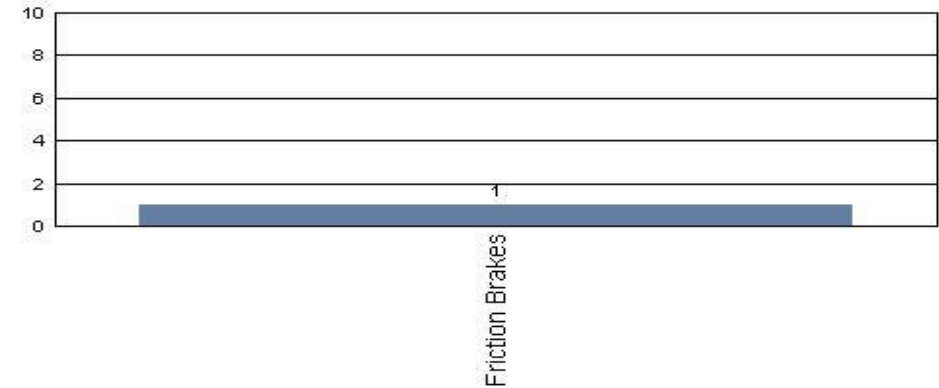
Metro Blue/Expo Line

Top Incident Categories



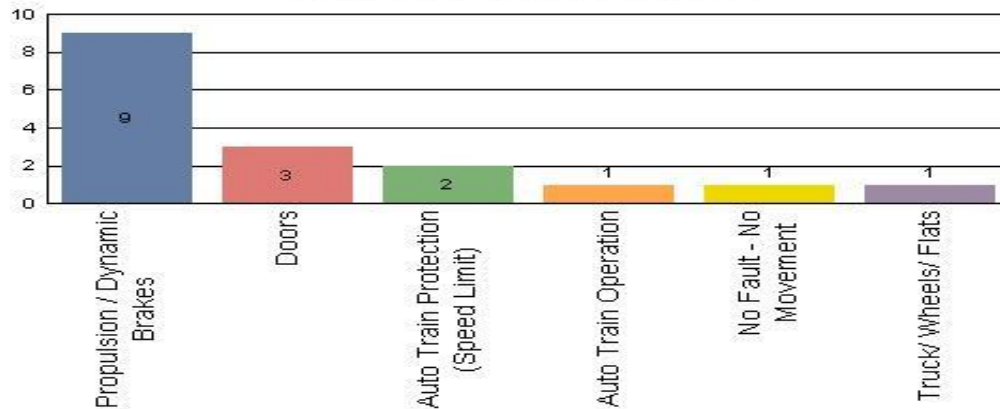
Metro Red/Purple Line

Top Incident Categories



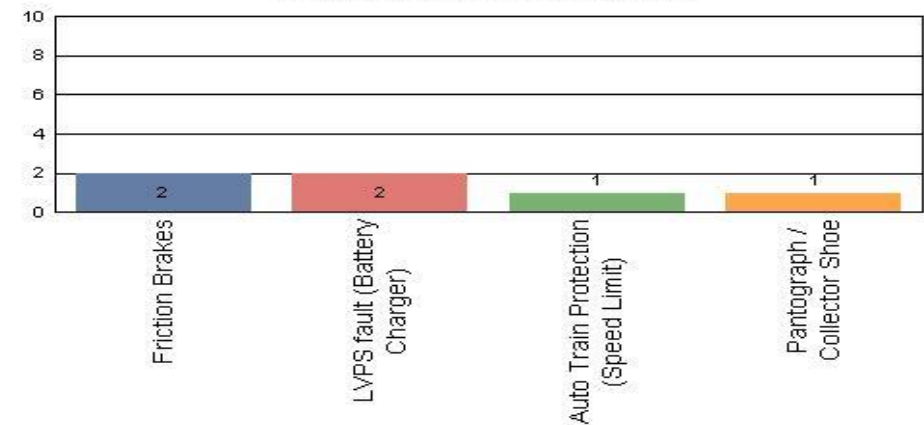
Metro Green Line

Top Incident Categories



Metro Gold Line

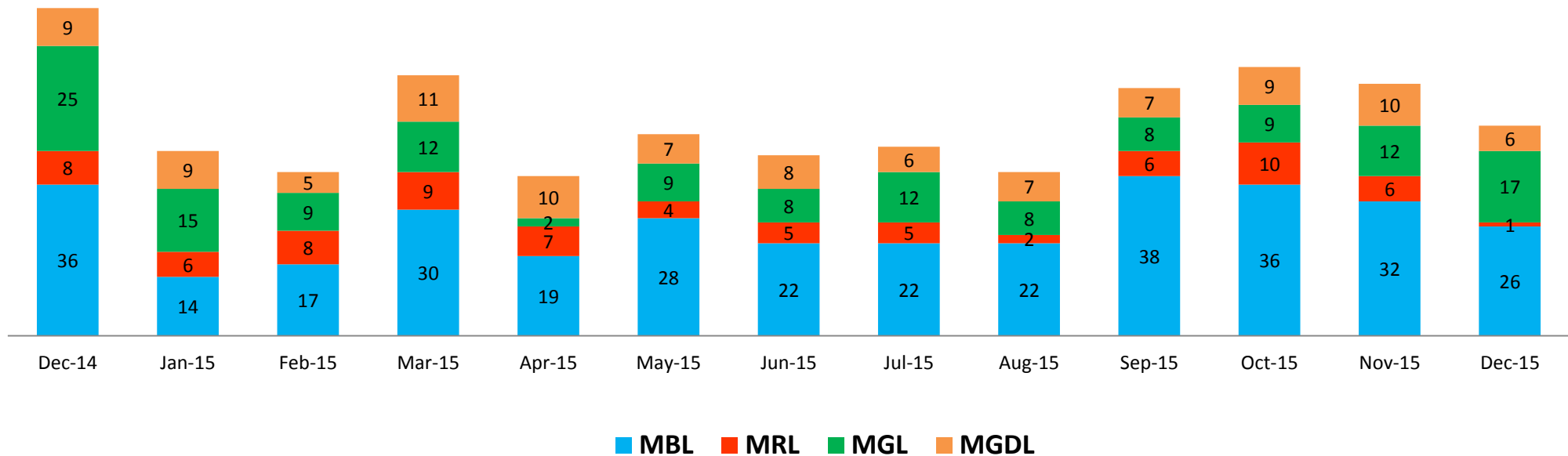
Top Incident Categories



Major Incidents

December 2014-2015

Numbers of Major System Failures (by Line)



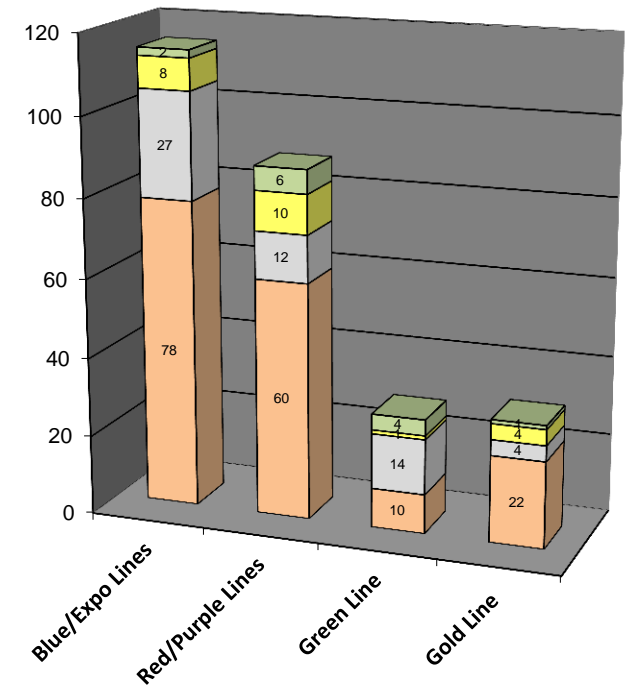
Preventive Maintenance Compliance

December 2014-2015

PM Compliance	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Blue/Expo Lines	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Red/Purple Lines	100%	100%	100%	100%	97%	100%	100%	100%	100%	100%	100%	100%	100%
Green Line	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	93%	97%
Gold Line	100%	100%	100%	100%	100%	100%	96%	100%	100%	100%	94%	100%	100%

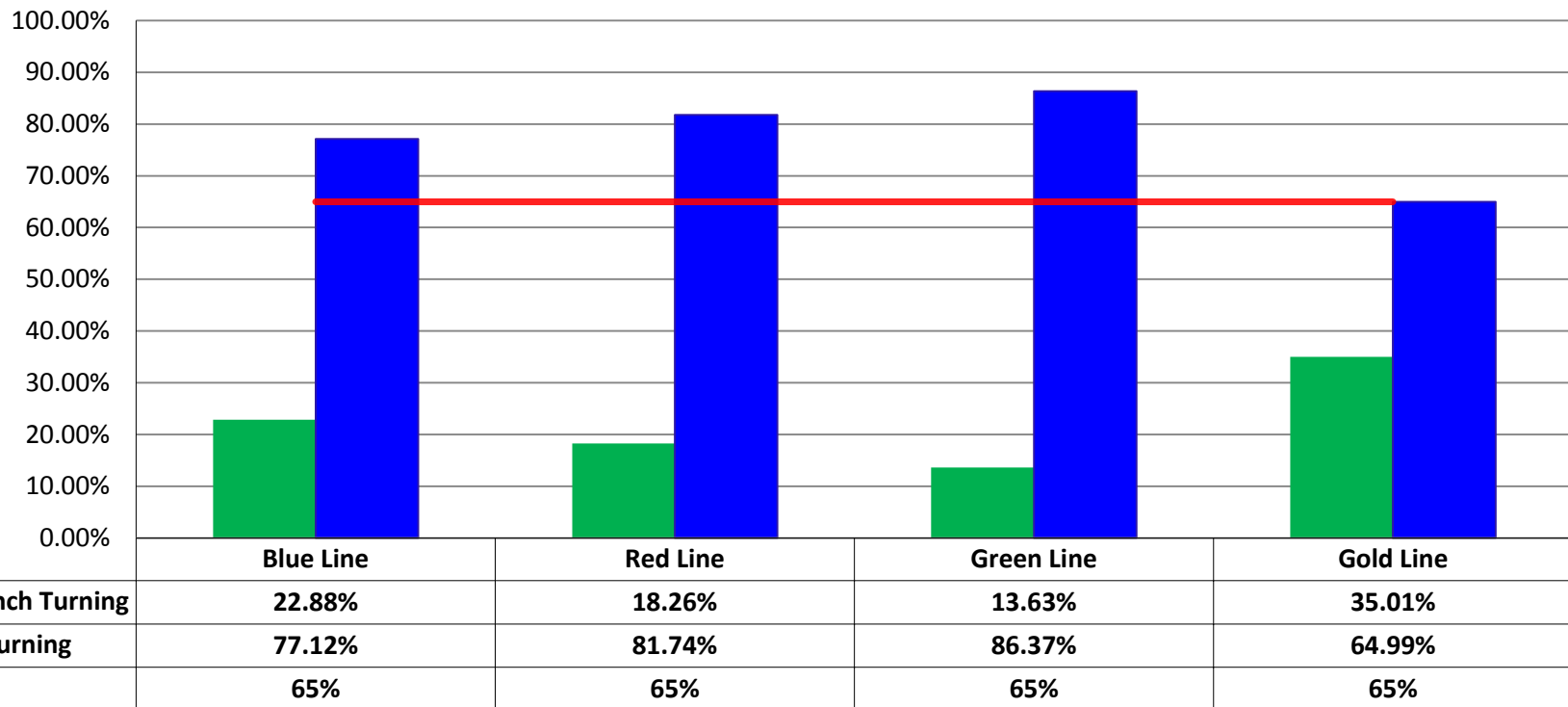
Number of Preventive Maintenance Inspections - December 2015					
Line	A level	B level	C level	D level	Totals
Blue/Expo Lines	78	27	8	2	115
Red/Purple Lines	60	12	10	6	88
Green Line	10	14	1	4	29
Gold Line	22	4	4	1	31
Totals:	170	57	23	13	263

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 Leader Wrench Turning December 2015

RFS - Leader Wrench Turning December 2015



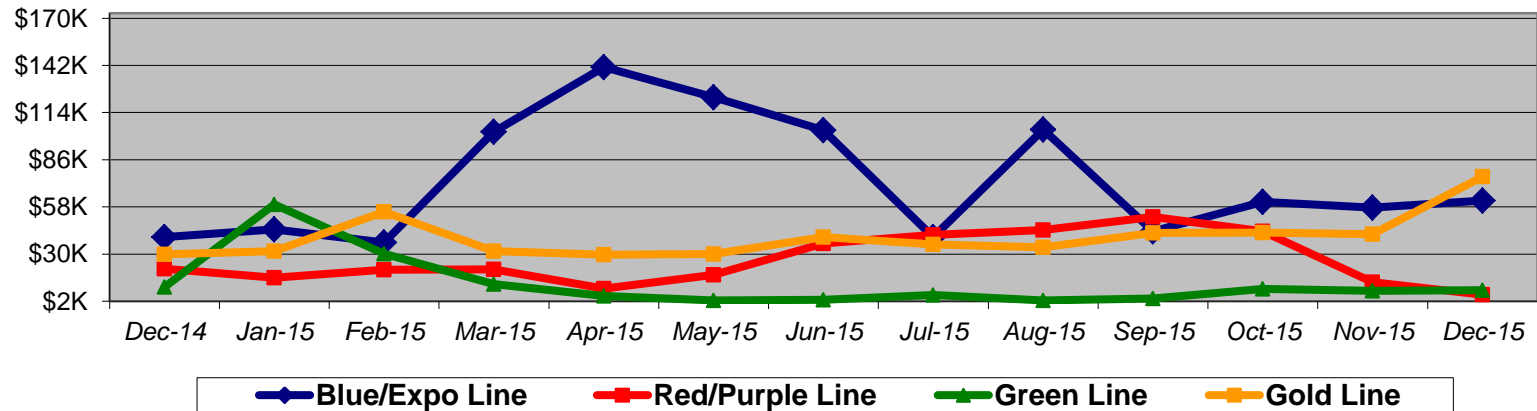
Notes: Labor hours contributed by Maint Specialist Leader, Rail Body/Paint Repair Leader, and Maint Specialist Temporary Leader

Vandalism & Graffiti Report

December 2014-2015

Graffiti Costs

	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	13-Month Period
Blue/Expo Line	\$40K	\$45K	\$37K	\$103K	\$141K	\$123K	\$104K	\$40K	\$104K	\$43K	\$61K	\$58K	\$62K	\$959K
Red/Purple Line	\$21K	\$16K	\$21K	\$21K	\$9K	\$18K	\$36K	\$41K	\$44K	\$52K	\$43K	\$13K	\$6K	\$342K
Green Line	\$10K	\$59K	\$30K	\$12K	\$5K	\$3K	\$3K	\$6K	\$2K	\$4K	\$9K	\$8K	\$9K	\$161K
Gold Line	\$30K	\$32K	\$55K	\$32K	\$30K	\$30K	\$40K	\$36K	\$34K	\$42K	\$43K	\$42K	\$76K	\$521K
Totals:	\$102K	\$152K	\$143K	\$167K	\$185K	\$173K	\$183K	\$123K	\$185K	\$142K	\$156K	\$121K	\$152K	\$1,983K



December 2015 Vandalism & Graffiti - All Rail				
	Qty	Labor	Materials	Totals
Windows Replaced	179	\$ 30,807	\$ 40,074	\$ 70,881
Vandal Shields Replaced	355	\$ 8,271	\$ 7,981	\$ 16,252
Seats Cleaned	305	\$ 3,632	\$ -	\$ 3,632
Seats Inserts Replaced	159	\$ 5,011	\$ 4,969	\$ 9,980
Graffiti Removal - Other	843	\$ 29,602	\$ 11,110	\$ 40,712
Repainting Panels	346	\$ 10,899	\$ -	\$ 10,899
Totals	2,187	\$ 88,222	\$ 64,134	\$ 152,356

Graffiti Pictures December 2015

Blue Line



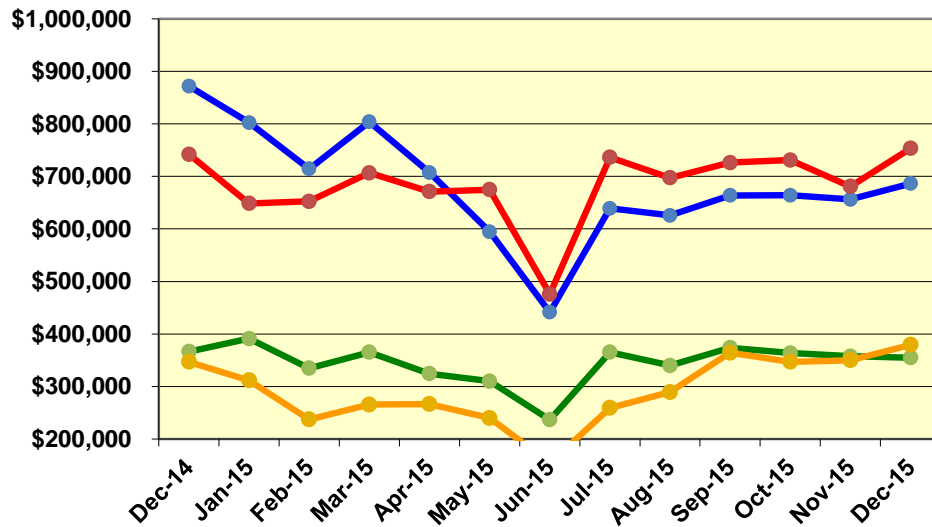
Green Line



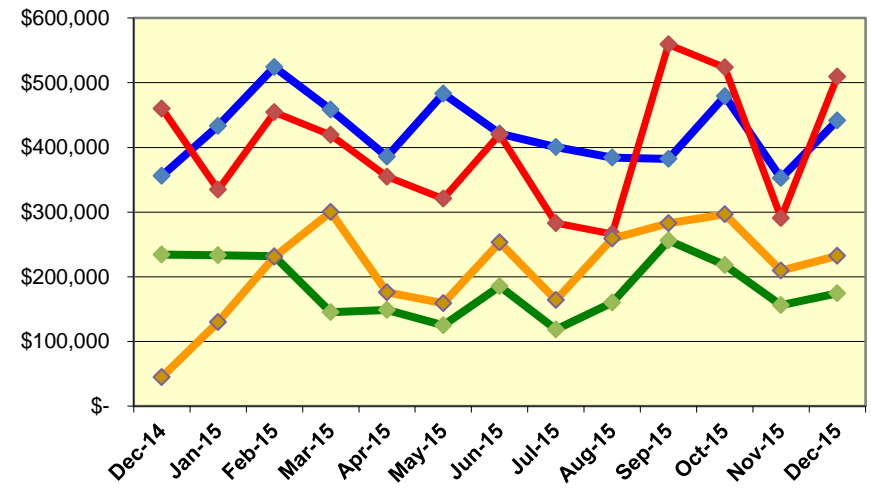
Labor and Material Costs

December 2014-2015

Labor Costs



Material Costs



Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15*	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
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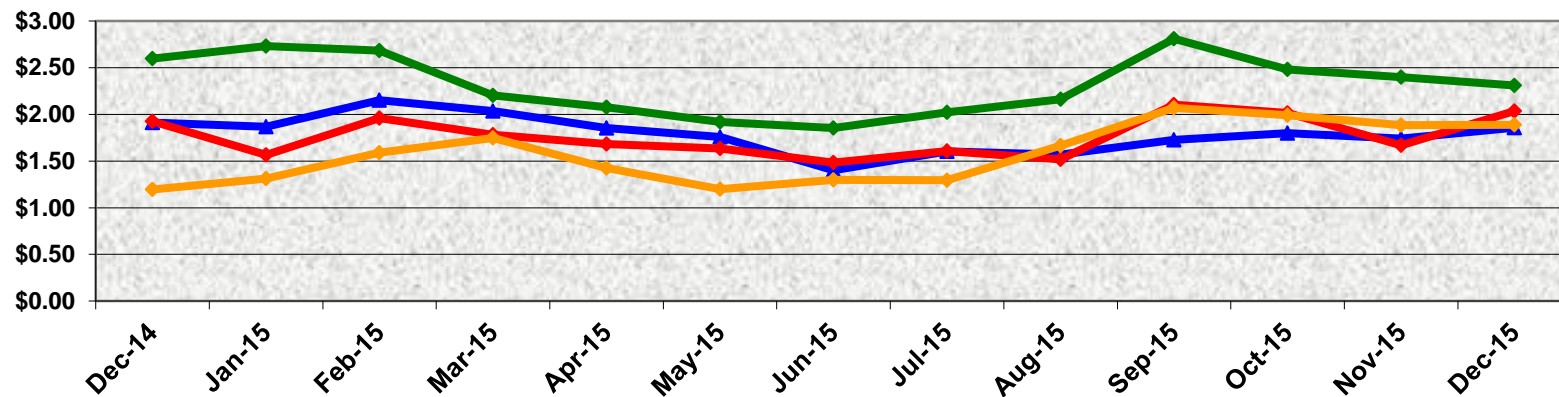
	Labor Costs													
Blue/Expo Lines	\$ 871,682	\$ 802,256	\$ 714,349	\$ 803,757	\$ 707,348	\$ 594,550	\$ 441,364	\$ 638,967	\$ 625,577	\$ 663,752	\$ 663,965	\$ 656,195	\$ 686,227	
Red/Purple Lines	\$ 741,908	\$ 648,538	\$ 652,406	\$ 706,794	\$ 671,084	\$ 674,681	\$ 475,810	\$ 736,269	\$ 697,095	\$ 726,107	\$ 731,128	\$ 680,629	\$ 753,216	
Green Line	\$ 366,422	\$ 391,161	\$ 334,919	\$ 365,457	\$ 324,550	\$ 310,181	\$ 236,931	\$ 365,229	\$ 340,115	\$ 373,698	\$ 363,868	\$ 357,622	\$ 355,057	
Gold Line	\$ 347,182	\$ 311,868	\$ 237,438	\$ 265,835	\$ 266,529	\$ 240,056	\$ 154,498	\$ 259,228	\$ 289,571	\$ 364,544	\$ 347,072	\$ 350,038	\$ 379,336	
Totals	\$ 2,327,193	\$ 2,153,823	\$ 1,939,112	\$ 2,141,842	\$ 1,969,511	\$ 1,819,467	\$ 1,308,603	\$ 1,999,693	\$ 1,952,358	\$ 2,128,101	\$ 2,106,033	\$ 2,044,483	\$ 2,173,836	

	Material Costs													
Blue/Expo Lines	\$ 355,729	\$ 433,347	\$ 524,157	\$ 458,588	\$ 385,794	\$ 483,368	\$ 421,088	\$ 400,315	\$ 384,178	\$ 382,274	\$ 478,960	\$ 352,710	\$ 441,523	
Red/Purple Lines	\$ 460,076	\$ 334,623	\$ 454,326	\$ 419,099	\$ 354,492	\$ 320,754	\$ 420,042	\$ 282,744	\$ 266,405	\$ 559,179	\$ 523,558	\$ 290,721	\$ 509,448	
Green Line	\$ 234,118	\$ 233,318	\$ 231,562	\$ 144,927	\$ 148,839	\$ 125,054	\$ 185,086	\$ 118,559	\$ 159,916	\$ 256,185	\$ 217,820	\$ 155,914	\$ 174,269	
Gold Line	\$ 44,498	\$ 130,036	\$ 230,896	\$ 300,170	\$ 175,922	\$ 159,016	\$ 253,284	\$ 163,954	\$ 258,793	\$ 282,958	\$ 296,684	\$ 209,546	\$ 232,338	
Totals	\$ 1,094,420	\$ 1,131,324	\$ 1,440,941	\$ 1,322,783	\$ 1,065,048	\$ 1,088,194	\$ 1,279,500	\$ 965,571	\$ 1,069,291	\$ 1,480,596	\$ 1,517,022	\$ 1,008,891	\$ 1,357,578	

Cost Per Mile December 2014-2015

Cost per mile:	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Blue/Expo Lines	\$1.91	\$1.87	\$2.15	\$2.04	\$1.85	\$1.76	\$1.40	\$1.60	\$1.57	\$1.73	\$1.80	\$1.74	\$1.86
Red/Purple Lines	\$1.92	\$1.57	\$1.96	\$1.78	\$1.68	\$1.63	\$1.48	\$1.61	\$1.52	\$2.10	\$2.02	\$1.67	\$2.03
Green Line	\$2.60	\$2.73	\$2.68	\$2.20	\$2.08	\$1.92	\$1.85	\$2.02	\$2.16	\$2.81	\$2.48	\$2.40	\$2.31
Gold Line	\$1.19	\$1.31	\$1.59	\$1.75	\$1.43	\$1.20	\$1.30	\$1.30	\$1.67	\$2.07	\$1.99	\$1.88	\$1.89

Cost per Mile



Blue/Expo Lines

Red/Purple Lines

Green Line

Gold Line

ATU Absences vs. Overtime

December 2015

ABSENCE TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
AWP-ABSENT W/O PERMISSION	16	-	-	-	-	16
BER-BEREAVEMENT	56	-	24	72	-	152
CTO-COMPENSATORY TIME OFF	237	279	78	151	-	744
CUT-EMPLOYEE LEAVES EARLY	2	0	0	1	-	3
CVA - CASUAL VACATION	152	289	60	152	40	693
DSL-DISABILITY LEAVE/LONG	968	904	-	400	-	2,272
EFH-EMG. FLOAT HOL.	40	48	8	24	16	136
ETO-EXCUSED TIME OFF	110	53	8	15	10	194
FMI-FAM IND INJURY	-	-	-	64	-	64
FML-FAMILY CARE LEAVE	344	423	121	40	8	936
FMS-FAMILY LEAVE SICK	38	44	-	-	8	90
HLF-HOLIDAY FLOATING	304	376	132	168	64	1,044
HNP-HOLIDAY NOT PAID	-	8	8	8	-	24
HOL-HOLIDAY LEGAL	936	672	168	312	128	2,216
II-INDUSTRIAL INJURY	-	-	-	8	-	8
IIR-INDUS INJURY -REOCCUR.	-	184	-	-	-	184
IS-INVESTIGATIVE SUSPENSION	-	-	-	8	-	8
JUR-JURY DUTY	16	16	-	-	-	32
LC1-LABOR CODE 233	152	143	96	136	48	575
LTI-OCCPIL/LONGTRM INJ LEAVE	184	368	-	-	-	552
MLN-MILITARY ABSENCE-UNPAID	-	8	-	-	-	8
RTO-REQUESTED TIME OFF-NO PAY	12	2	8	-	-	22
SCK-SICK PAY	382	161	164	152	48	907
SCW-SICK WITHOUT PAY	154	47	128	-	-	329
SUS-DISCIPLINARY SUSPENSION	-	-	-	40	-	40
TAR-TARDY	1	1	3	1	-	6
VAC-VACATION	1,393	1,572	334	520	196	4,015
VAS-VACATION WHILE SICK	-	66	-	-	4	70
TRAINING	849	560	480	344	-	2,233
Total Absence Hours	6,345	6,224	1,819	2,614	570	17,572
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	29%	35%	23%	31%	N/A	31%

OVERTIME TYPE and HOURS	3941 & 3947 Blue & Expo	3942 Red	3943 Green	3944 Gold	3948 Monrovia	Total
CTB-COMPENSATORY TIME TO BANK	177	156	69	37	-	440
OTP-PREM OVERTIME	3,093	3,949	1,129	593	228	8,991
TRO OVERTIME	-	-	-	16	-	16
WLO-Worked Lunch Overtime	151	167	82	36	3	438
Total Overtime Hours	3,421	4,272	1,279	682	231	9,885
Overtime as a % of Work Force	16%	24%	16%	8%	N/A	18%

*Training hours captured by Instruction Department are added to Absences report.

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



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RFS Instruction Department Activities

December 2015

Training classes completed during the month of December 2015

Description	Course Hours	Student Count	Training Hours
Blue & Expo Line Training - (P865/2020 & P2000 LRV):			
RFS PROTRAN1 TRAINING	1	5	5
WAYSIDE WORKER PROTECTION	4	5	20
RFS SIEMENS 2000 AUX. INVERTER	32	5	160
REFRIGERANT RECOVERY SYSTEMS (608)	16	5	80
RFS SIEMENS 2000 DOOR CONTROLS	40	5	200
RFS SIEMENS 2000 HVAC	64	6	384

Total Blue Line Training (Hours): 849

Red Line Training (Breda A650 HRV):

RFS WHEEL PRESS	24	4	96
RFS BRED A650 HVAC	64	5	320
RFS BRED A650 DOOR SYSTEMS	24	6	144

Total Red Line Training (Hours): 560

Gold Line Training (P2550 LRVs):

RFS ANSALDOBREDA 2550 MAINLINE DUTY, DEAD TOW AND VEHICLE REC	24	5	120
RFS ANSALDOBREDA 2550 FRICTION BRAKES	40	4	160
RFS ANSALDOBREDA 2550 COUPLER	12	4	48
RFS 2015-FRHT-BRANDT HIGH-RAIL TRUCK	8	2	16

Total Gold Line Training (Hours): 344

Green Line Training (P2000 LRVs):

RFS SIEMENS 2000 PANTOGRAPH	8	5	40
RFS SIEMENS 2000 DOOR CONTROLS	40	5	200
RFS SIEMENS 2000 FRICTION BRAKES	48	5	240

Total Green Line Training (Hours): 480

Total RFS Instruction for the month of December 2015 (Hours): 2,233

Other Instruction Activities

	C	A	TS	Total
A650 Curriculum, Administrative, and Technical Support	4	4	8	16
P865/P2020 Curriculum, Administrative, and Technical Support	20	20	40	80
P2000 Curriculum, Administrative, and Technical Support	40	24	40	104
P2550 Curriculum, Administrative, and Technical Support	16	8	8	32
P3010 Curriculum, Administrative, and Technical Support	120	32	112	264
Instructor Vacations and Holidays				320

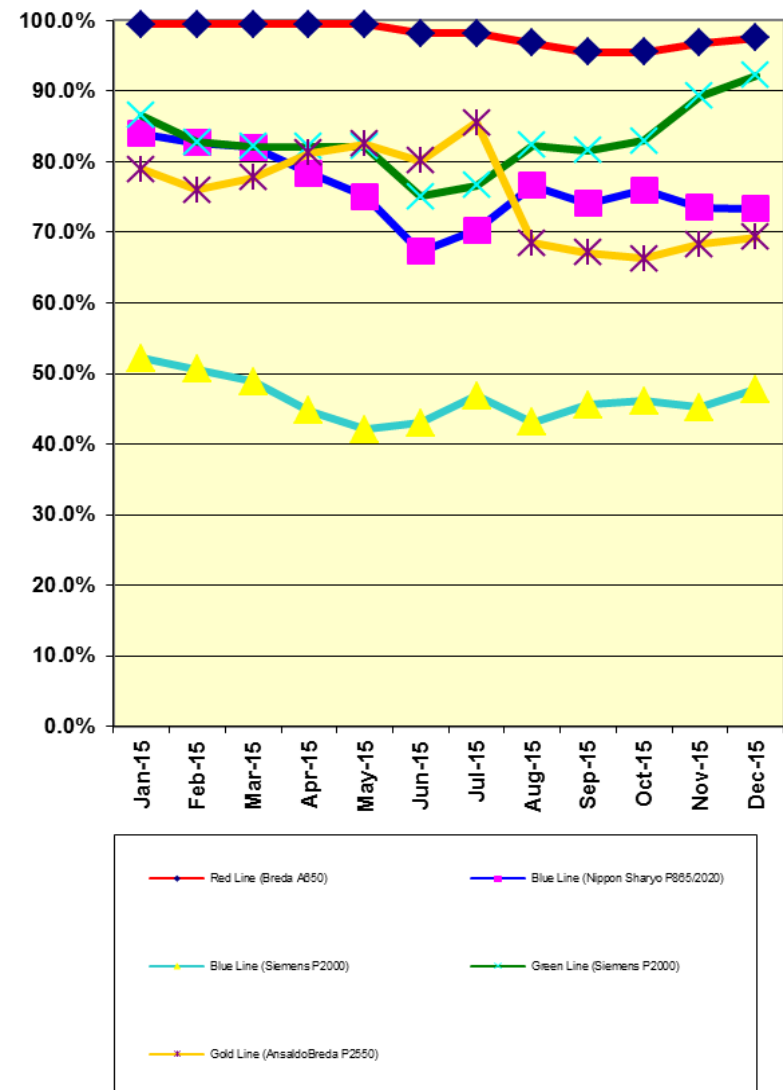
Total Other Instruction Activities 816

Core Vehicle Training Completed: BLUE RED GREEN GOLD

Percentage of core vehicle training complete:	73.3%	97.5%	92.2%	69.3%
Siemens P2000 training complete:	47.8%	N/A	N/A	N/A

Average Specialist Rail Experience Level in Years: 10.8 11.9 9.6 6.9

Core Training Completed



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



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