| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| East/ 60/300 | E-60 (60).PDF | 03525-03526 | 2/21/2011 | 111000035 | Safety Contact Edge Wire | 2 | | | |
| East/ 60/300 | E-60 (60).PDF | 03527-03528 | 12/15/2010 | 101000276 | 1 LS Switch | 1.75 | 39 | | |
| East/ 60/300 | E-60 (60).PDF | 03529-03530 | 10/24/2010 | 101000231 | 1 Pressure Wave Switch | 1.75 | 130.5 | | |
| East/ 60/300 | E-60 (60).PDF | 03533-03534 | 6/29/2010 | 101000140 | 1 Pressure Wave Switch, 1 Contact Edge Roller | 2 | 130.5 | | |
| East/ 60/300 | E-60 (60).PDF | 03535-03536 | 5/3/2010 | 101000095 | 1 LS Switch, 2 Pressure Wave Switches, 1 Anti-Riser | 3 | 351.62 | 351.62 | |
| East/ 60/300 | E-60 (60).PDF | 03537-03538 | 3/4/2010 | 101000039 | 1 LS Switch | 1.75 | 39 | | |
| East/ 60/300 | E-60 (60).PDF | 03539-03540 | 12/24/2009 | 91000264 | 2 Pressure Wave Switches, 2 LS Switches | 2.75 | 339 | 339 | |
| East/ 60/300 | E-60 (60).PDF | 03541-03542 | 11/10/2009 | 91000220 | 1 LS Switch | 1.75 | 39 | | |
| East/ 60/300 | E-60 (60).PDF | 03547-03548 | 5/4/2009 | 91000100 | 1 LS Switch | 1.75 | 39 | | |
| East/ 301/301 | Hardcopy | | 4/2/2010 | 121000092 | 1 T/M Brush | 1.75 | 9.6 | | Replaced for Wear |
| East/ 301/301 | Hardcopy | | 9/3/2011 | 111000199 | 3 T/M Brushes | 2 | 28.8 | | Replaced for Wear |
| East/ 301/301 | Hardcopy | | 2/5/2011 | 111000023 | 1 T/M Brush | 1.75 | 9.6 | | Replaced for Wear |
| East/ 301/301 | Hardcopy | | 1/26/2010 | 101000010 | 1 T/M Brush | 1.75 | 9.6 | | Replaced for Wear |
| East/ 301/301 | Hardcopy | | 9/4/2009 | 91000190 | 1 T/M Brush | 1.75 | 9.6 | | Replaced for Wear |
| East/ 301/301 | Hardcopy | | 1/19/2009 | 91000010 | 2 T/M Brushes | 1.75 | 19.2 | | Replaced for Wear |
| East/ 61/61 | E-61 (60).PDF | 03575-03577 | 9/22/2011 | 111000219 | 1 PRC Varistor | 1.75 | 3.28 | | |

21.5 $245.68

02680

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 562 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| East/ 61/61 | E-61 (60).PDF | 03590-03592 | 11/24/2010 | 101000254 | 1 ZSR Hengstler Relay | 1.75 | | | |
| East/ 61/61 | E-61 (60).PDF | 03602-03604 | 3/30/2010 | 101000068 | 2 (Sets) Main Line Switch Contacts | 2 | 5.6 | | |
| East/ 61/61 | E-61 (60).PDF | 03614-03616 | 8/3/2009 | 91000162 | 1 Brake Switch, LH Aux Contact Block | 1.75 | | | |
| East/ 61/61 | E-61 (60).PDF | 03629-03631 | 10/1/2008 | 81000220 | 1 Brake Switch Aux Contact Block, 1 Brake Switch Sweeper Arm | 2 | | | |
| East/ 62/62 | E-62 (60).PDF | 03657-03659 | 11/22/2011 | 111000285 | 2 Compress Air Filters | 0.5 | 14.38 | 14.38 | |
| East/ 62/62 | E-62 (60).PDF | 03676-03675 | 1/30/2011 | 111000016 | 2 Compress Air Filters | 0.5 | 14.38 | | |
| East/ 62/62 | E-62 (60).PDF | 03713-03715 | 10/8/2009 | 91000209 | Temp Emergency Repair Broken T/L Box Rivets W/ Tie Straps | 2 | | | |
| East/ 502/502 | E-502 (360).PDF | 03573-03574 | 9/29/2009 | 91000202 | 1 Air Dryer Relief Valve, 1 Main Reservoir, Pressure Gauge | 2 | 127.67 | 127.67 | |
| East/ 505/505 | E-505 (360).PDF | 03758-03759 | 1/18/2012 | 121000012 | 2 Compress Oil Sight Glasses | 2.5 | | | |
| East/ 506/506 | E-506 (360).PDF | 03769-03770 | 9/9/2011 | 111000200 | 2 Door Caps (42.5 ea) | 2.5 | 80.1 | | |
| East/ 506/506 | E-506 (360).PDF | 03771-03772 | 9/9/2010 | 101000194 | 1 Door Operator, 1 MCR Relay, 2 Anti-Riser Bars | 3.5 | 103.24 | 103.24 | |
| East/ 506/506 | E-506 (360).PDF | 03773-03774 | 9/4/2009 | 91000084 | 1 LS3 Switch | 1.75 | 39 | | |
| West/ 60/300 | W-60 (60).PDF | 07358-07359 | 1/9/2012 | 111000326 | 2 Pressure Wave Switches, 2 Door Caps, 1 Contact Edge Roller | 3.5 | 341.1 | 341.1 | |
| West/ 60/300 | W-60 (60).PDF | 07364-07365 | 9/5/2011 | 111000205 | 3 Door Caps | 3 | 120.15 | | |
| West/ 60/300 | W-60 (60).PDF | 07368-07369 | 5/6/2011 | 111000104 | 1 LS6 Switch | 0.25 | 39 | | LS SWITCH TAKES 1.75 IN OTHER PLACES |

15 $307.01

5.5

02681

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| West/ 60/300 | W-60 (60).PDF | 07370-07371 | 3/8/2011 | 111000052 | 1 Anti-Rattle Spring, 2 LS6 (94 ea) Switches (154 ea) | [redacted] | [redacted] | 93.94 | |
| West/ 60/300 | W-60 (60).PDF | 07372-07373 | 1/12/2011 | 101000291 | 1 Door Cap, 1 LS6 Switch | [redacted] | [redacted] | 79.05 | |
| West/ 60/300 | W-60 (60).PDF | 07376-07378 | 9/15/2010 | 101000200 | 1 LS6 Switch | [redacted] | [redacted] | | |
| West/ 60/300 | W-60 (60).PDF | 07381-07382 | 5/8/2010 | 101000108 | 1 LS6 Switch, 1 Pressure Wave Switch | 2 | 169.5 | | |
| West/ 60/300 | W-60 (60).PDF | 07383-07384 | 3/19/2010 | 101000062 | 1 Pressure Wave Switch | 1.75 | 130.5 | | |
| West/ 60/300 | W-60 (60).PDF | 07385-07386 | 1/8/2010 | 101000001 | 2 Pressure Wave Switches | 2 | 261 | | |
| West/ 60/300 | W-60 (60).PDF | 07387-07388 | 11/18/2009 | 91000236 | 1 Pressure Wave Switch, 1 Contact Edge Roller | 2 | 130.5 | | |
| West/ 60/300 | W-60 (60).PDF | 07389-07390 | 9/28/2009 | 91000196 | 2 LS6 Switches, 1 Pressure Wave Switch | 2.25 | 208.5 | 208.5 | |
| West/ 301/301 | Hardcopy | | 11/21/2011 | 111000280 | 1 T/M Ground Strap Lug | [redacted] | | | Repaired |
| West/ 301/301 | Hardcopy | | 10/22/2011 | 111000254 | 1 T/M Ground Strap Cable | [redacted] | | | Repaired |
| West/ 301/301 | Hardcopy | | 9/23/2011 | 111000218 | 5 T/M Brushes | [redacted] | [redacted] | | Replaced for Wear |
| West/ 301/301 | Hardcopy | | 8/23/2010 | 101000187 | 1 T/M Brush | [redacted] | [redacted] | | Replaced for Frayed Shunt |
| West/ 301/301 | Hardcopy | | 1/19/2011 | 111000013 | 1 T/M Brush | [redacted] | [redacted] | | Replaced for Wear |
| West/ 61/61 | W-64.PDF | 03493-03495 | 4/11/2011 | 111000079 | 2 Line Switch Main Contacts | [redacted] | [redacted] | | |
| West/ 61/61 | W-64.PDF | 03496-03498 | 10/11/2010 | 101000223 | 1 RH Aux Contact Arm | [redacted] | | | |
| West/ 61/61 | W-64.PDF | 03502-03503 | 4/19/2009 | 91000089 | 2 Line Switch Main Contacts | [redacted] | [redacted] | | |

17.5 $284.79

[redacted] 4.75

02682

ER2682

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| West/ 61/61 | W-61 (60).PDF | 07444-07446 | 12/14/2010 | 101000271 | See Log Book | | | | |
| West/ 61/61 | W-61 (60).PDF | 07456-07457 | 2/15/2010 | 101000029 | 2 Sets Contacts, Brake Switch and Line Switch | [redacted] | [redacted] | [redacted] | |
| West/ 62/62 | W-62 (60).PDF | 07504-07506 | 3/1/2011 | 111000043 | 1 Leaf Spring | 18 | 618.75 | | |
| West/ 506/506 | W-506 (360).PDF | 07588-07589 | 10/14/2011 | 111000237 | 1 LS6 Sw, 1 LS2 Sw, 1 Door Operator Arm Bearing, 1 Door Cap | 2.5 | 212.85 | 212.85 | |
| West/ 506/506 | W-506 (360).PDF | 07592-07593 | 10/13/2009 | 91000199 | 3 LS1 Switches, 1 LS5 Switch, 1 Door Operator Arm Bearing | 2.5 | 250.8 | 250.8 | |
| West/ 507/507 | W-507 (360).PDF | 07598-07599 | 4/19/2010 | 101000019 | 2 Vehicle Batteries | 2 | 507.68 | 507.68 | |
| Eas | | | | | | 402.75 | 18098 | | |

2 $5.6

SUB TOTAL: 197.25 (48.97%)

[redacted] SUB TOTAL: 95.75

GRAND TOTAL: 293.5 (72.9%)

$3,907.73

| The Cost of rebuiding an item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| | Cost ea | Factor/qty | Frequency | Extended cost | |
| Brake job | | | | | |
| Brakes | $114.54 | 2 | 100% | $229.08 | |
| seal | $3.55 | 4 | 100% | $14.20 | |
| adjusting bolts | $33.80 | 2 | 50% | $67.60 | |
| spring | $2.24 | 1 | 25% | $2.24 | |
| wedge | $28.15 | 1 | 50% | $28.15 | |
| plunger | $39.38 | 1 | 50% | $39.38 | |
| | | | | $380.65 | |
| Hub | | | | | |
| Seal | $30.84 | 1 | 100% | $30.84 | 12 June 2008 order from Bombardier |
| inner bearing | $78.13 | 1 | 100% | $78.13 | |
| inners race | $38.19 | 1 | 100% | $38.19 | |
| outer bearing | $48.75 | 1 | 100% | $48.75 | |
| outer race | $27.71 | 1 | 100% | $27.71 | |
| (10)stud | $3.96 | 2 | 20% | $7.92 | |
| brake drum | $556.68 | 0.5 | 50% | $278.34 | |
| Brake drum turned | $55.00 | 0.5 | 50% | $27.50 | |
| Oring | $11.67 | 1 | 100% | $11.67 | |
| silico n | $0.50 | 1 | 100% | $0.50 | |
| oil | $10.00 | 1 | 100% | $10.00 | |
| | | | | $559.55 | |
| | | | | | |
| Pinion seal | | | | | |
| seal | $32.29 | 1 | 100% | $32.29 | |
| permatex | $0.50 | 1 | 100% | $0.50 | |
| No yoke | | | | $32.79 | |
| Unknown yoke | $231.61 | 0.25 | 25% | $57.90 | |
| With yoke | | | | $264.40 | |
| | | | | | |

| The Cost of rebuiding an Item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| | | | | | |
| Spring brake | | | | | |
| Diaphragm | $3.59 | 1 | 100% | $3.59 | ordered 25 Mar 2008 Fleet Pride |
| o-ring | $0.50 | 1 | 100% | $0.50 | |
| piston | $54.03 | 0.05 | 5% | $2.70 | |
| | | | | $6.79 | |
| | | | | | |
| service brake | | | | | |
| diaphragm | $4.53 | 1 | 100% | $4.53 | |
| Boot | $0.90 | 1 | 100% | $0.90 | |
| Rivets | $0.10 | 4 | 100% | $0.40 | |
| plate | $54.03 | 0.05 | 5% | $2.70 | |
| guide | $0.54 | 0.5 | 50% | $0.27 | |
| | | | | $8.80 | |
| | | | | | |
| High pressure head | | | | | |
| Suction valve | $105.83 | 0.5 | 50% | $52.92 | |
| Discahrge Valve | $104.81 | 0.5 | 50% | $52.41 | |
| Felts | $1.09 | 2 | 100% | $2.18 | |
| orings | $4.19 | 1 | 100% | $4.19 | |
| Oring cap | $2.81 | 1 | 100% | $2.81 | |
| seal cap | $12.73 | 1 | 100% | $12.73 | |
| Sleeve | $132.56 | 0.1 | 10% | $13.26 | |
| hold down | $70.04 | 0.1 | 10% | $7.00 | |
| Suction cap | $67.83 | 0.1 | 10% | $6.78 | |
| Discahrge cap | $31.09 | 0.1 | 10% | $3.11 | |
| plunger | $18.25 | 0.1 | 10% | $1.83 | |
| | | | | $159.21 | |
| | | | | | |
| Low pressure head | | | | | |

| The Cost of rebuilding an Item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| Suction valve | $171.24 | 0.5 | 50% | $85.62 | |
| Discahrge Valve | $112.80 | 0.5 | 50% | $56.40 | |
| Felts | $2.85 | 2 | 100% | $5.70 | |
| orings | $4.95 | 1 | 100% | $4.95 | |
| Oring cap | $1.50 | 1 | 100% | $1.50 | |
| seal cap | $5.97 | 1 | 100% | $5.97 | |
| Sleeve | $75.11 | 0.1 | 10% | $7.51 | |
| hold down | $62.55 | 0.1 | 10% | $6.26 | |
| Suction cap | $14.11 | 0.1 | 10% | $1.41 | |
| Discahrge cap | $17.19 | 0.1 | 10% | $1.72 | |
| plunger | $26.55 | 0.1 | 10% | $2.66 | |
| | | | | $179.69 | |
| | | | | | |
| Spindle | | | | | |
| Outer bearing | $18.69 | 1 | 100% | $18.69 | |
| outer race | $11.23 | 1 | 100% | $11.23 | |
| inner seal | $5.31 | 1 | 100% | $5.31 | |
| innner bearing | $4.44 | 1 | 100% | $4.44 | |
| inner race | $12.00 | 1 | 100% | $12.00 | |
| outer seal | $9.53 | 1 | 100% | $9.53 | |
| Heat label | $0.90 | 2 | 100% | $1.80 | |
| cotter pn | $0.09 | 1 | 100% | $0.09 | |
| castle nut | $4.15 | 0.1 | 10% | $0.42 | |
| keyed washer | $15.88 | 0.2 | 20% | $3.18 | |
| washer | $5.20 | 0.1 | 10% | $0.52 | |
| dust cap | $1.56 | 0.1 | 10% | $0.16 | |
| dust shield | $47.50 | 0.05 | 5% | $2.38 | |
| spindle | $361.35 | 0.5 | 50% | $180.68 | |
| grease 1/3 tube | $6.81 | 0.33 | 100% | $2.25 | |
| | | | | $252.65 | |
| | | | | | |
| Guide tire | | | | | |
| Tire | $82.91 | 1 | 100% | $82.91 | |

| | | | | |
|---|---|---|---|---|
| F-2-2 | 1B38995G01 COLLECTOR SHOES | 90 | 40.81 | 3672.90 |
| | 2129F61G01 CURRENT COLLECTOR ASSEMBLY | 3 | 2057.50 | 6172.50 |
| | 2129F61G02 CURRENT COLLECTOR ASSEMBLY | 3 | 1336.98 | 4010.94 |
| | 2129F61G03 CURRENT COLLECTOR ASSEMBLY | 3 | 2057.50 | 6172.50 |
| F-1-3 | 2129F61G04 CURRENT COLLECTOR ASSEMBLY | 3 | 1336.98 | 4010.94 |
| | 3019854H01 MORGAINITE COLLECTOR SHOE | 300 | 42.63 | 12788.99 |
| F-1-4 | 5D73124G02 NORMING POINT | 6 | 3140.00 | 18840.00 |
| | 6D58033G01 NORMING POINT ANTENNA ASSY | 1 | 4057.00 | 4057.00 |
| F-2-2 | 1B38997G01 SHOE HOLDER ATO SUB-ASSEMB | 9 | 63.75 | 573.75 |
| | 3011695H01 SPACER | 63 | 3.32 | 209.16 |
| | 404P533H11 PIN, GROOVE .125 X .875 | 10 | 0.48 | 4.80 |
| | 404P538H47 SPRING | 49 | 0.84 | 41.16 |

| The Cost of rebuiding an item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| bolt | $3.98 | 2 | 20% | $7.96 | |
| nut | $4.90 | 2 | 20% | $9.80 | |
| lock washer | $0.05 | 5 | 50% | $0.25 | |
| washer | $0.12 | 10 | 50% | $1.20 | |
| Rim half | $51.08 | 0.1 | 5% | $5.11 | |
| | | | | $107.23 | |
| | | | | | |
| | | | | | |
| QRV | | | | | |
| Oring | $0.75 | 1 | 100% | $0.75 | |
| Diaphragm | $5.60 | 1 | 100% | $5.60 | |
| Felt | $0.54 | 1 | 100% | $0.54 | |
| | | | | $6.89 | |
| | | | | | |
| FSE | | | | | |
| Kit | $91.56 | 1 | 100% | $91.56 | |
| Muffler | $23.94 | 0.25 | 25% | $5.99 | |
| | | | | $97.55 | |
| | | | | | |
| FSE Package | | | | | |
| 2 FSE's | $97.55 | 2 | 100% | $195.09 | |
| 2 QRV's | $6.89 | 2 | 100% | $13.78 | |
| | | | | $208.87 | |
| | | | | | |
| AD9 | | | | | |
| desicant | $123.50 | 1 | 100% | $123.50 | |
| Purge valve kit | $27.85 | 1 | 100% | $27.85 | |
| Check valve | $20.31 | 0.2 | 20% | $4.06 | ordered 25 Mar 2008 Fleet Pride |
| | | | | $155.41 | |
| | | | | | |
| BS/LS block | | | | | |
| Straight | $4.10 | 2 | 100% | $8.20 | |

404P540H27 BEARING 45 6.95 312.75
404P540H28 BEARING 45 6.95 312.75
4896859H01 SWIVEL STEM 3.50) .375 DI 8 13.11 104.88
4899859H01 PIN 8 11.56 92.48

02-07-13 INVENTORY CONTROL VALUE ANALYSIS REPORT Page 11

STYLE
PART
LOT

| WH. | LOC. | NUMBER | DESCRIPTION | QUANTITY | UNIT COST | TOTAL COST |
|---|---|---|---|---|---|---|
| | | 4899B64H01 | EXTENSION SPRING | 15 | 5.10 | 76.50 |
| | | 5586824H01 | SWIVEL STEM 4.25) .375 D | 12 | 15.13 | 181.56 |
| | | 5586849H01 | INSULATOR BLOCK 2.00 X 1 | 12 | 21.81 | 261.72 |
| | | 6967C72G02 | KNUCKLE CASTING | 8 | 49.20 | 393.60 |
| F-2-3 | | 1838996G01 | SHOE HOLDER POWER SUB ASSE | 5 | 86.53 | 432.65 |
| | | 1839837G01 | POWER SHOE HOLDER SUPPORT | 10 | 46.44 | 464.40 |
| | | 3007712G02 | POWER SHOE HOLDER ASSEMBLY | 50 | 119.41 | 5970.50 |
| | | 5580858G01 | COLLECTOR SHUNT (GND) | 15 | 37.26 | 558.90 |
| | | 5580658G02 | COLLECTOR SHUNT (PWR) | 25 | 29.86 | 746.50 |
| | | 5585879H01 | ARM | 30 | 20.40 | 612.00 |
| | | | | | | |
| | | 3972C01G01 | COIL ASSEMBLY | 1 | 418.75 | 418.75 |
| | | 404P682H02 | RELAY, CONTROL (P8R) | 6 | 781.25 | 4687.50 |
| | | 404P682H22 | RELAY, 4NO / 4NC | 12 | 1247.30 | 14966.20 |
| | | 409P300H05 | CONNECTOR, 10 POS MALE INS | 3 | 1.21 | 3.63 |
| | | | | | | |
| | | 4768A05H11 | RELAY, 24VDC, CRITICAL 4 F | 8 | 162.50 | 1300.00 |
| | | 5583989G40 | MAG VALVE ASSY (U8-782-E) | 3 | 1141.98 | 3425.94 |
| | | 5819C58G03 | FINGER ASSEMBLY | 20 | 22.46 | 449.20 |
| | | 8592C18606 | STD CONTACT & INTERLOCK UM | 2 | 8271.00 | 16542.00 |
| F-3-3 | | 1308907H08 | SPRING (BS/LS) | 4 | 28.75 | 115.00 |

| The Cost of rebuiding an item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| bent | $8.75 | 2 | 100% | $17.50 | |
| Silicon | $0.50 | 1 | 100% | $0.50 | |
| | | | | $26.20 | |
| | | | | | |
| BS/LS arm | | | | | |
| Contact | $4.69 | 1 | 100% | $4.69 | 25.36 |
| pin | $1.30 | 2 | 100% | $2.60 | |
| Cotter pin | $0.09 | 2 | 100% | $0.18 | |
| Spring | $0.16 | 0.2 | 10% | $0.03 | |
| washer | $0.01 | 0.1 | 5% | $0.00 | |
| | | | | $7.50 | |
| | | | | | |
| Collector free | | | | | |
| (8)Bearing h27 | $6.95 | 8 | 100% | $55.60 | |
| (8)Bearing H28 | $6.95 | 8 | 100% | $55.60 | |
| (4) Arm | $20.40 | 4 | 100% | $81.60 | |
| (2)Pin | $13.11 | 2 | 100% | $26.22 | |
| (4)Knuckle | $49.20 | 0.05 | 5% | $2.46 | |
| (4)Cotter pin | $0.06 | 4 | 100% | $0.24 | |
| (4) roll pin | $0.07 | 4 | 100% | $0.28 | |
| (2)Spring | $5.10 | 0.05 | 5% | $0.26 | |
| | | | | $222.26 | |
| | | | | | |
| Dr edge contact rollers | | | | | |
| Contacts | $44.48 | 1 | 100% | $44.48 | |
| Heat shrink | $0.41 | 1 | 100% | $0.41 | |
| | | | | $44.89 | |
| | | | | | |
| Door slide channel | | | | | |
| Teflon Strip | $5.15 | 1 | 100% | $5.15 | |
| Rivets | $0.10 | 2 | 100% | $0.20 | |

1A96920G01 STD UMC, INTERLOCK FINGER 16 8.75 140.00
1B39488G01 COMMUTATING CAPACITOR 0.5 6 96.11 576.66
1C45073H01 MODIFIED RESISTOR ASSY. 3 187.50 562.50
1C45176G01 GATE LEAD PANEL 1 253.54 253.54
1C45176G02 GATE LEAD PANEL 1 253.54 253.54
2107111G01 CONTACT ASSEMBLY 6 27.50 165.00
4078867G01 STATIONARY ASSEMBLY, RH [ 2 24.26 48.52
4078867G04 STATIONARY ASSEMBLY, LH [ 2 90.00 180.00
4078874G01 STD. INTERLOCK MOVING PART 4 25.36 101.44

4227027G01 CONTACT STUD ASSEMBLY 20 12.50 250.00
4767A90G01 STD UMC, CONTACT INTERLOCK 20 4.69 93.80
4778A79G01 STD UMC, INTERLOCK FINGER 22 4.10 90.20
4778A96H02 STD SPG PIN .188 DIA 1.25 42 1.30 54.60
8617A75G01 CONTACT WITH INSERT 6 22.06 132.36
8840D42G06 GENERAL ASSEMBLY, TYPE UT- 1 1201.31 1201.31

| The Cost of rebuilding an Item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| | | | | $5.35 | |
| | | | | | |
| AR-2 | | | | | |
| Kit | $72.68 | 1 | 100% | $72.68 | |
| silicon | $0.50 | 1 | 100% | $0.50 | |
| | | | | $73.18 | |
| | | | | | |
| Door Operator | | | | | |
| Bushings | $4.19 | 2 | 100% | $8.38 | |
| Grease | $1.00 | 1 | 100% | $1.00 | |
| Arm | $393.75 | 0.2 | 20% | $78.75 | |
| gasket | $0.45 | 1 | 100% | $0.45 | |
| seal | $70.30 | 1 | 100% | $70.30 | |
| gear | $730.15 | 0.05 | 5% | $36.51 | |
| spirod | $95.27 | 0.05 | 5% | $4.76 | |
| snap in | $7.56 | 2 | 100% | $15.12 | |
| | | | | $215.27 | |
| Air compressor Basic | | | | | |
| Cyclinder gasket l/p | $1.30 | 1 | 100% | $1.30 | |
| Cyclinder gasket h/p | $1.37 | 1 | 100% | $1.37 | |
| Rings h/p | $22.59 | 1 | 100% | $22.59 | |
| Rings l/p | $23.85 | 1 | 100% | $23.85 | |
| oil pump vanes | $1.80 | 4 | 100% | $7.20 | |
| vane springs | $0.70 | 4 | 100% | $2.80 | |
| insert | $12.60 | 1 | 100% | $12.60 | |
| diaphragm | $6.30 | 1 | 100% | $6.30 | |
| seal cover | $0.50 | 1 | 100% | $0.50 | |
| pin seal | $0.35 | 1 | 100% | $0.35 | |
| oil | $12.16 | 0.5 | 100% | $6.08 | |

| The Cost of rebuiding an item under CBE 552 | | | | | |
|---|---|---|---|---|---|
| | | | | $84.94 | |
| | | | | | |
| **Autolock Stanley** | | | | | |
| Cam spring | $11.45 | 0.2 | 20% | $2.29 | |
| Scmersal switch | $107.42 | 0.2 | 20% | $21.48 | |
| e block | $10.00 | 0.1 | 10% | $1.00 | |
| e rod | $10.00 | 0.2 | 20% | $2.00 | |
| e rod spring | $3.75 | 0.1 | 10% | $0.38 | |
| bushing | $13.38 | 0.4 | 40% | $5.35 | |
| | | | | $32.50 | |
| | | | | | |
| **Autolock Horton** | | | | | |
| Switch | $20.00 | 0.4 | 40% | $8.00 | |
| orings | $0.10 | 0.4 | 10% | $0.04 | |
| pc boards | $105.00 | 0.1 | 10% | $10.50 | |
| Solinoid | $90.00 | 0.05 | 5% | $4.50 | |
| | | | | $23.04 | |
| | | | | | |
| **H/P Head** | | | | | |
| Gasket | 4.15 | 1 | 100% | 4.15 | |
| Flange gasket | 5.71 | 1 | 100% | 5.71 | |
| | | | | 9.86 | |
| | | | | | |
| **L/P Head** | | | | | |
| Gasket | 4.36 | 1 | 100% | 4.36 | |
| Flange gasket | 5.71 | 1 | 100% | 5.71 | |
| | | | | 10.07 | |
| | | | | | |
| **Both heads replaced** | | | | 19.93 | |
| | | | | | |
| | | | | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Item | Qty | Date Enter | Reason | Date Comp | Notes | | |
| Air Compressor | 1 | 1/2/2009 | Rebuild | 1/26/2009 | C8, makes a lot of noise in the crankcase area when pumping up. LP head valve fell apart and destroyed the cylinder, piston and connecting rod. Rebuilt and placed on test stand and test compressor. | | |
| Air Compressor | 1 | 9/23/2009 | Rebuild | 10/14/2009 | C4 - pulled for unusual noises coming from crankcase. Checks good. Noises attributed to folded over head gasket. Ran on test stand for a number of hours. | | |
| Air Compressor | 1 | 11/26/2011 | Rebuild | 12/6/2011 | C8 compressor has oil leak. Replaced bellofram and then it tested good. | | |
| Air Compressor | 3 | | | | 3 | 1 rebuild 2 repaired 10 hours | 10 |
| Air Compressor HP Head | 1 | 5/7/2008 | Rebuild | 6/25/2008 | C4 - t/shoot intercooler pop-off. | | |
| Air Compressor HP Head | 1 | 10/7/2008 | Rebuild | 10/14/2008 | C5 - compressor constantly running, popping off on intercooler relief valve. | | |
| Air Compressor HP Head | 1 | 9/25/2008 | Rebuild | 11/24/2008 | C5 - popoff on relief valve. Rebuilt, needs testing. Failed second test. Located bad discharge valve - repaired and retested good. | | |
| Air Compressor HP Head | 1 | 10/13/2008 | Rebuild | 11/25/2008 | C4 - rebuild and re-test. | | |
| Air Compressor HP Head | 1 | 11/19/2008 | Rebuild | 2/3/2009 | C1 - intercooler pop-off. No "warranty parts" available - ON HOLD. Rebuilt. | | |
| Air Compressor HP Head | 1 | 4/3/2009 | Rebuild | 7/11/2009 | C1 - troubleshoot compressor problem. Most likely, there is nothing wrong. Yep, tested good. | UM REBUILD? | |
| Air Compressor HP Head | 1 | 12/30/2008 | Rebuild | 8/24/2009 | C6 - loss of air pressure. Rebuilt with new valves. Tested good. | | |
| Air Compressor HP Head | 1 | 8/4/2009 | Rebuild | 8/25/2009 | C1 - pop-off at end of cycle. Loaded with oil. Rebuilt with new valves. Tested good. | | |
| Air Compressor HP Head | 1 | 8/1/2009 | Rebuild | 8/26/2009 | ? Rebuilt using new valves. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Compressor HP Head | 1 | 8/3/2009 | Rebuild | 10/11/2009 | Pulled for C1 intercooler pop-off. Loaded with oil. Suction and discharge valve seats worn - replaced. Tested good. | | |
| Air Compressor HP Head | 1 | 10/1/2009 | Rebuild | 10/28/2009 | Not tagged. Requires testing to find fault. | | |
| Air Compressor HP Head | 1 | 9/16/2009 | Rebuild | 10/29/2009 | C4 - pop-off towards end of cycle. Torn down - rebuild. | | |
| Air Compressor HP Head | 1 | 10/30/2009 | Rebuild | 11/9/2009 | C3 - DE says BAD rebuild. He was wrong. It was a failed used valve! Replaced valves and tested good. | | |
| Air Compressor HP Head | 1 | 10/17/2009 | Rebuild | 11/10/2009 | stock to put on C2 - Still has loud knocking sound - probably nothing wrong - requires further testing. (Ex 05/06) | | |
| Air Compressor HP Head | 1 | 10/17/2009 | Rebuild | 11/11/2009 | C2 - loud knocking sounds - fails to pump up to proper pressure. Probably nothing wrong - requires further testing. | | |
| Air Compressor HP Head | 1 | 12/17/2009 | Rebuild | 12/29/2009 | C4 - loud knocking - initial investigation revealed broken discharge valve. | | |
| Air Compressor HP Head | 1 | 1/3/2010 | Rebuild | 1/19/2010 | C6 - Intercooler popping off. Rebuilt suction and reused discharge valve. Tested good. | | |
| Air Compressor HP Head | 1 | 2/16/2010 | RMR | 2/18/2010 | New head from RMR. Requires testing. Pulled apart and corrected several deficiencies. Passed. | | |
| Air Compressor HP Head | 1 | 4/16/2010 | Rebuild | 4/26/2010 | C7 - knocking sounds. | | |
| Air Compressor HP Head | 1 | 6/22/2010 | Rebuild | 7/20/2010 | C8 - intercooler pop-off. | | |
| Air Compressor HP Head | 1 | 1/10/2011 | Rebuild | 1/21/2011 | C10 - jack hammer sounds. Recovered three suction valve roll pins. Rebuilt, tested good. | | |
| Air Compressor HP Head | 1 | 12/14/2010 | Rebuild | 1/23/2011 | C5 - t/shooting knocking sound. | | |
| Air Compressor HP Head | 1 | 3/1/2011 | Rebuild | 3/15/2011 | C8 - broken discharge spring. Installed used suction and new discharge valves. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Compressor HP Head | 1 | 3/6/2011 | Rebuild | 3/16/2011 | C2 - Intermittant popping off at end of cycle. Discharge valve sprink weak and seat not so good. Both valves installed were used. | | |
| Air Compressor HP Head | 1 | 3/6/2011 | Rebuild | 3/20/2011 | C7 - no pump up. (Ex 05/06). Used suction and new discharge valves installed. | | |
| Air Compressor HP Head | 1 | 3/20/2011 | Rebuild | 5/15/2011 | C10 - popping off. Both valves bad - awaiting parts. New valves installed. | | |
| Air Compressor HP Head | 1 | 5/4/2011 | Repair | 6/22/2011 | C10 - popping off. Rebuilt incorrectly - valves swapped, dirty. Re-rebuilt correctly. Tested by another. Passed for now. | | |
| Air Compressor HP Head | 1 | 5/11/2011 | Rebuild | 7/21/2011 | C6 - removed for knocking at start-up. Cleaned up and tested good. | | |
| Air Compressor HP Head | 1 | 7/17/2011 | Rebuild | 9/5/2011 | C6 - Intercooler pop-off. Slightly disassembled. | | |
| Air Compressor HP Head | 1 | 8/1/2011 | Test | 9/15/2011 | Rebuilt. Tagged with "Needs Tested" - test unit. Tested good. | | |
| Air Compressor HP Head | 1 | 7/17/2011 | Rebuild | 9/22/2011 | C8 - Removed for popping off. Rebuilt w/ new valves, tested good. | | |
| Air Compressor HP Head | 1 | 9/23/2011 | Rebuild | 9/23/2011 | C2 - pulled for loss of main air. Head was knocking. Replaced discharge valve, tested good. | | |
| Air Compressor HP Head | 1 | 7/12/2011 | Rebuild | 2/1/2012 | C6 - t/shoot rattling noise. Disassembled and cleaned, Rebuilt and passed testing. | | |
| Air Compressor HP Head | 1 | 2/16/2012 | Rebuild | 3/6/2012 | Removed from C4 for low main air. Rebuild with new valves.. | | |
| Air Compressor HP Head | 1 | 3/4/2012 | Rebuild | 3/13/2012 | removed to t/s low main air c10. insp assem, tested good. | | |
| Air Compressor HP Head | 1 | 2/18/2012 | Rebuild | 3/14/2012 | Removed from C10 for low main air. Rebuild with new valves tested good. | | |
| Air Compressor HP Head | 1 | 3/26/2012 | Rebuild | 4/11/2012 | C4 due to failure. Cleaned up, rebuilt, tested good. | | |
| Air Compressor HP Head | 1 | 4/7/2012 | Test | 4/12/2012 | C5 due to pop-off, did not fix problem. Cleaned up, tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Compressor HP Head | 1 | 3/19/2012 | Rebuild | 4/13/2012 | C7 knocking. Low discharge spring destroyed, replaced valve, cleaned up, tested good. | | |
| Air Compressor HP Head | 1 | 4/15/2012 | Rebuild | 4/19/2012 | C8 popping off. Replaced discharge valve, tested good. | | |
| Air Compressor HP Head | 40 | | | | 40 | 37 rebuilt 3 cleaned and tested manhours 114 | 14 |
| Air Compressor LP Head | 1 | 5/7/2008 | Rebuild | 6/25/2008 | C4 - troubleshoot intercooler pop-off. | | |
| Air Compressor LP Head | 1 | 9/25/2008 | Rebuild | 10/14/2008 | C5 - popoff on relief valve. Rebuilt, needs testing. | | |
| Air Compressor LP Head | 1 | 10/7/2008 | Rebuild | 10/29/2008 | C5 - compressor constantly running, intercooler relief valve constantly popping off. Broken discharge spring sent through intercooler and lodged in HP head. | | |
| Air Compressor LP Head | 1 | 10/13/2008 | Rebuild | 11/25/2008 | C4 - rebuild and re-test. | | |
| Air Compressor LP Head | 1 | 12/31/2008 | Rebuild | 2/3/2009 | C8 - loss of air pressure, broken spring sent to HP head. Rebuilt. | | |
| Air Compressor LP Head | 1 | 12/12/2008 | Rebuild | 4/7/2009 | C8, suspect noisemaker. Tested good on test stand. | | |
| Air Compressor LP Head | 1 | 4/3/2009 | Rebuild | 7/11/2009 | C1 - Located a broken spring lodged in the suction valve. Replaced broken suction valve. Tested good. | | |
| Air Compressor LP Head | 1 | 8/4/2009 | Rebuild | 8/24/2009 | C1 - pop-off at end of cycle. Rebuilt with what looked like new valves. Tested good. | | |
| Air Compressor LP Head | 1 | 9/16/2009 | Rebuild | 10/1/2009 | C4 - pop-off towards end of cycle. | | |
| Air Compressor LP Head | 1 | 10/17/2009 | Rebuild | 11/9/2009 | C2 - loud knocking noise and failure to pump up properly. Probably nothing wrong - requires further testing. Rebuilt using different valves. Tested good. | | |
| Air Compressor LP Head | 1 | 10/30/2009 | Rebuild | 11/11/2009 | C3 - replaced due to intercooler pop-off. | | |
| Air Compressor LP Head | 1 | 12/17/2009 | Rebuild | 12/29/2009 | C4 - loud knocking. Reworked valves. | | |
| Air Compressor LP Head | 1 | 1/3/2010 | Rebuild | 1/19/2010 | C6 - pulled for intercooler popping off. NFF. Tested good. | | |
| Air Compressor LP Head | 1 | 4/16/2010 | Rebuild | 4/26/2010 | C7 - knocking sounds | | |

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| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Compressor LP Head | 1 | 12/14/2010 | Rebuild | 1/21/2011 | C5 - t/shooting knocking sound. Rebuilt, tested good. | | |
| Air Compressor LP Head | 1 | 1/10/2011 | Rebuild | 1/23/2011 | C10 - jack hammer sounds. Pulled for precaution - original equipment. | | |
| Air Compressor LP Head | 1 | 3/6/2011 | Rebuild | 3/15/2011 | C2 - intermittant lifting and popping off at end of cycle. Installed new valves. | | |
| Air Compressor LP Head | 1 | 3/6/2011 | Rebuild | 3/16/2011 | C7 - dicharge spring failure. Suction valve spring missing parts. Installed used suction and new discharge valves. | | |
| Air Compressor LP Head | 1 | 3/1/2011 | Rebuild | 3/20/2011 | C8 - broken discharge spring. Installed used suction and new discharge valves. | | |
| Air Compressor LP Head | 1 | 3/20/2011 | Rebuild | 3/29/2011 | C10 - popping off. Rebuilt, reused valves. NFF. | | |
| Air Compressor LP Head | 1 | 5/4/2011 | Repair | 6/22/2011 | C10 - popping off. Rebuilt incorrectly - valves swapped, dirty. Re-rebuilt correctly. Tested by another. Passed for now. | | |
| Air Compressor LP Head | 1 | 5/11/2011 | Rebuild | 7/21/2011 | C6 - removed for knocking at start-up. Cleaned up and tested good. | | |
| Air Compressor LP Head | 1 | 8/1/2011 | Test | 9/15/2011 | Rebuilt. Tagged with "Needs Tested" - test unit. Tested good. | | |
| Air Compressor LP Head | 1 | 7/12/2011 | Rebuild | 2/1/2012 | C6 - t/shoot rattling noise. Disassembled and cleaned. Rebuilt and passed testing. | | |
| Air Compressor LP Head | 1 | 2/18/2012 | Rebuild | 3/6/2012 | Removed from C10 for low main air. Rebuild with new valves. | | |
| Air Compressor LP Head | 1 | 3/14/2012 | Rebuild | 3/13/2012 | removed to t/s low main air c10. insp assem, tested good. | | |
| Air Compressor LP Head | 1 | 3/26/2012 | Rebuild | 4/11/2012 | C4 due to failure. Low discharge spring destroyed, replaced valve, cleaned up, tested good. | | |
| Air Compressor LP Head | 1 | 4/7/2012 | Test | 4/12/2012 | C5 due to pop-off, did not fix problem. Cleaned up, tested good. | | |
| Air Compressor LP Head | 1 | 3/19/2012 | Rebuild | 4/13/2012 | C7 knocking. Cleaned up, rebuilt, tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Compressor LP Head | 1 | 4/15/2012 | Rebuild | 4/19/2012 | C8 popping off. Cleaned up, tested good. | | |
| Air Compressor LP Head | 30 | | | | 30 | 22 rebuilt & cleaned insp & tested 72 man hours | 72 |
| Air Dryer, AD9 | 1 | 1/30/2009 | Rebuild | 2/3/2009 | C8 - PM502. Rebuilt - requires cleaning and testing. | | |
| Air Dryer, AD9 | 1 | 1/31/2009 | Rebuild | 2/3/2009 | C9 - PM502. | | |
| Air Dryer, AD9 | 1 | 2/9/2009 | Rebuild | 2/22/2009 | Bleeding through purge valve - replaced entire purge valve. | | |
| Air Dryer, AD9 | 1 | 2/18/2009 | Rebuild | 2/22/2009 | C9, popping off relief valve. Adjusted relief valve. Replaced guts with previously rebuilt unit (damaged purge valve cylinder) | | |
| Air Dryer, AD9 | 1 | 1/31/2009 | Rebuild | 3/2/2009 | C10 - PM502. Rebuilt, requires testing. | | |
| Air Dryer, AD9 | 1 | 2/28/2009 | Rebuild | 8/1/2009 | C9? - rebuild purge valve ONLY - per DA. | | |
| Air Dryer, AD9 | 1 | 9/1/2009 | Rebuild | 9/19/2009 | C8 - suspect in bad air bleed-down rates. NFF other than oil contamination. | | |
| Air Dryer, AD9 | 1 | 9/23/2009 | Rebuild | 10/1/2009 | C4 - pulled for good measure and, oh! Oil contamination!! | | |
| Air Dryer, AD9 | 1 | 10/11/2009 | Rebuild | 1/18/2010 | C3 - PM502. | | |
| Air Dryer, AD9 | 1 | 9/29/2009 | Rebuild | 1/19/2010 | C2 - pulled for PM506. | | |
| Air Dryer, AD9 | 1 | 9/29/2009 | Rebuild | 1/20/2010 | C1 - PM506. | | |
| Air Dryer, AD9 | 1 | 2/23/2010 | Rebuild | 3/5/2010 | C5 - PM502. Rebuilt, requires testing. | | |
| Air Dryer, AD9 | 1 | 2/23/2010 | Rebuild | 3/6/2010 | C6 - PM502. Rebuilt, requires testing. | | |
| Air Dryer, AD9 | 1 | 2/23/2010 | Rebuild | 3/7/2010 | C7 - PM502. Rebuilt. Tested good. | | |
| Air Dryer, AD9 | 1 | 3/23/2010 | Rebuild | 3/27/2010 | C8 - PM502. Rebuilt and tested good. | | |
| Air Dryer, AD9 | 1 | 3/23/2010 | Rebuild | 3/28/2010 | C10 - PM502. Rebuilt and tested good. | | |
| Air Dryer, AD9 | 1 | 3/23/2010 | Rebuild | 3/29/2010 | C9 - PM502. Rebuilt and tested good. Left on test stand. | | |
| Air Dryer, AD9 | 1 | 1/11/2011 | Rebuild | 1/13/2011 | C4 - Leaks during pump-up. Rebuilt, tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Dryer, AD9 | 1 | 1/11/2011 | Rebuild | 1/13/2011 | C5 - low main air alarm t/shooting. Recently rebuilt, put on test stand. Tested good. | | |
| Air Dryer, AD9 | 1 | 11/18/2010 | Rebuild | 1/23/2011 | C5 - Leaks (where?) - rebuilt. Tested good. | | |
| Air Dryer, AD9 | 1 | 2/16/2011 | Rebuild | 2/19/2011 | C8 - over purging / leaking through. Rebuilt, tested good. | | |
| Air Dryer, AD9 | 1 | 5/31/2011 | Rebuild | 6/4/2011 | C8 - leaking and popping off. Purge valve sticking, lubed up. Tested good. | | |
| Air Dryer, AD9 | 1 | 3/6/2011 | Rebuild | 9/21/2011 | C7 - leaks, blowing through. Awaiting testing. Tested good. | | |
| Air Dryer, AD9 | 1 | 12/3/2011 | Rebuild | 12/16/2011 | C7 due to leaking. Rebuilt. | | |
| Air Dryer, AD9 | 1 | 12/23/2011 | Rebuild | 3/26/2012 | C4 pulled for leak. Rebuilt and tested on stand for leaks. Leak tested good. | | |
| Air Dryer, AD9 | 1 | 3/25/2012 | Rebuild | 3/26/2012 | Removed from c7 for leak. Tightened end cap bolt and no more leak. | | |
| Air Dryer, AD10 | 26 | | | | 26 | 26 rebuilt | 65 |
| Air Regulator | 1 | 4/22/2008 | Repair | 6/15/2008 | S/M, B1 shop air regulator does not operate properly - needs rebuild kit. Rebuilt and tested good. | | |
| Air Regulator | 1 | 4/22/2008 | Repair | 6/15/2008 | N/M, B3 air regulator does not operate correctly - requires a rebuild kit. Incorrect valve assembly supplied by Grainger - modified to get valve to work. | | |
| Air Regulator | 1 | 11/5/2008 | Repair | 11/5/2008 | South maintenance platform B3. | | |
| Air Regulator | 3 | | | | 3 | 3 rebuilt | 4.5 |
| Air Relay (AR2) | 1 | 4/1/2008 | Rebuild | 5/23/2008 | C2 - tested bad. Requires rebuild. | | |
| Air Relay (AR2) | 1 | 4/1/2008 | Rebuild | 5/23/2008 | C2 - tested bad. Requires rebuild. | | |
| Air Relay (AR2) | 1 | 7/9/2008 | Rebuild | 10/13/2008 | C6, #1 - air leaks out of exhaust at full brake. | | |
| Air Relay (AR2) | 1 | 8/7/2008 | Rebuild | 10/13/2008 | C6, #2 - various leaking points. | | |
| Air Relay (AR2) | 1 | 9/16/2008 | Rebuild | 4/15/2009 | C7, #2 - crack in housing. | | |
| Air Relay (AR2) | 1 | 7/9/2008 | Rebuild | 4/15/2009 | C6, #1 - leaks. | | |
| Air Relay (AR2) | 1 | 4/1/2009 | Rebuild | 4/15/2009 | Unknown problems - tested good. | | |
| Air Relay (AR2) | 1 | 7/1/2009 | Rebuild | 9/7/2009 | D-car. Requires fittings replaced, testing and rebuild if necessary. | | |

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| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Air Relay (AR2) | 1 | 7/1/2009 | Rebuild | 9/7/2009 | test bench - has been in service for several years without a rebuild. Rebuild and test. Tested good. | | |
| Air Relay (AR2) | 1 | 1/2/2010 | Rebuild | 2/4/2010 | C2, #1 - pulled to t/shoot loss of truck brake pressure. NFF - returned to stock. | | |
| Air Relay (AR2) | 1 | 2/28/2010 | Rebuild | 3/10/2010 | C4, #1 - pulled for excessive air coming out of exhaust. Disintergrated o-ring in high-hat (exhaust). | | |
| Air Relay (AR2) | 1 | 1/4/2012 | Rebuild | | C9 #2 pulled for leak. | | |
| Air Relay (AR2) | 1 | 11/20/2011 | Rebuild | | C2 #1 leak. | | |
| Air Relay (AR2) | 1 | 4/8/2012 | Repair | | C1 #1 leaking. | | |
| Air Relay (AR2) | 1 | 4/8/2012 | Repair | | C1 #2 leaking. | | |
| Air Relay (AR2) | 1 | 4/8/2012 | Repair | | C2 #2 leaking. | | |
| Air Relay (AR2) | 16 | | | | 16 | 14 rebuilt 1 tested good 1 trashed | 19 |
| Antiriser, Vehicle | 1 | 1/9/2011 | Repair | 4/5/2011 | C2, leaf 1 - broken angle. Replaced aluminum rod. | | |
| Antiriser, Vehicle | 1 | | | | 1 | 1 rebuilt | 1 |
| Autolock (Horton) | 1 | 5/20/2008 | Rebuild | 5/21/2008 | S/S, B2, 5/6 - C/L switch "floating" and other issues. | | |
| Autolock (Horton) | 1 | 5/19/2008 | Rebuild | 5/21/2008 | N/S, B2, 5/6 - unlock fails. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 5/20/2008 | Rebuild | 5/21/2008 | N/S, B1, 5/6 - unlock fails. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 5/20/2008 | Rebuild | 5/27/2008 | S/M, B2, 3/4 - broken wire/needs cleaning. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 5/22/2008 | Rebuild | 7/1/2008 | N/M, B2, 3/4 - unlock fails. | | |
| Autolock (Horton) | 1 | 6/4/2008 | Rebuild | 7/10/2008 | S/M, B3, 5/6 - loose coil. | | |
| Autolock (Horton) | 1 | 7/6/2008 | Rebuild | 7/10/2008 | N/M, B3, 3/4 - unlock fails. | | |
| Autolock (Horton) | 1 | 7/9/2008 | Rebuild | 7/11/2008 | N/M, B2, 3/4 - UF's and broken R4. Replaced PCb w/new style. | | |
| Autolock (Horton) | 1 | 7/11/2008 | Rebuild | 7/16/2008 | N/M, B3, 5/6 - UF's. Cleaned solenoid - tested good. | | |
| Autolock (Horton) | 1 | 7/14/2008 | Rebuild | 7/16/2008 | S/M, B2, 1/2 - UF's. Cleaned solenoid - tested good. | | |
| Autolock (Horton) | 1 | 7/14/2008 | Rebuild | 7/16/2008 | S/S, B3, 5/6 - UF's and stiffness. Clean solenoid - tested good. | | |

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| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Horton) | 1 | 7/26/2008 | Rebuild | 7/27/2008 | N/M, B3, 3/4 - LF's. Cleaned and tightened solenoid. | | |
| Autolock (Horton) | 1 | 8/1/2008 | Rebuild | 8/8/2008 | S/M, B2, 1/2 - malfunctions. Cleaned solenoid - tested good. | | |
| Autolock (Horton) | 1 | 8/4/2008 | Rebuild | 8/8/2008 | N/M, B2, 7/8 - flakey close/lock. Replaced solenoid shaft; cleaned up; replaced w/new PC board. Tested good. | | |
| Autolock (Horton) | 1 | 8/7/2008 | Rebuild | 8/8/2008 | S/M, B3, 3/4 - LF's. Cleaned solenoid and tested good. | | |
| Autolock (Horton) | 1 | 8/12/2008 | Rebuild | 8/24/2008 | N/M, B1, 3/4 - UF's, binding assy and loose coil wires. Cleaned up and tightened coil. Tested good. | | |
| Autolock (Horton) | 1 | 8/14/2008 | Rebuild | 8/24/2008 | S/S, B2, 1/2 - UF's. Cleaned and tightened coil up. Tested good. | | |
| Autolock (Horton) | 1 | 8/25/2008 | Rebuild | 9/12/2008 | N/S, B2, 7/8 - broken cap and sticking solenoid. | | |
| Autolock (Horton) | 1 | 9/1/2008 | Rebuild | 9/12/2008 | Unknown location - unknown reason. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 8/31/2008 | Rebuild | 9/14/2008 | S/M, B3, 5/6 - UF's. | | |
| Autolock (Horton) | 1 | 9/9/2008 | Rebuild | 9/14/2008 | N/S, B2, 7/8 - numerous unlock fails. Also found loose wire on connector so autolock may be good. Tightened loose wire. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 9/12/2008 | Rebuild | 9/14/2008 | S/M, B1, 5/6 - UF's and broken cap C1. Repaired, cleaned and tested good. | | |
| Autolock (Horton) | 1 | 9/12/2008 | Rebuild | 9/14/2008 | S/S, B2, 1/2 - LF's. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 9/20/2008 | Rebuild | 10/26/2008 | S/M, B1, 7/8 - unlock fail. Replaced board (broken R8). Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 9/22/2008 | Rebuild | 10/26/2008 | S/M, B1, 5/6 - UF's. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 10/25/2008 | Rebuild | 10/26/2008 | S/M, B2, 7/8 - unlock failures. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 10/16/2008 | Rebuild | 10/27/2008 | S/M, B2, 1/2 - shaft binding. Cleaned and tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Horton) | 1 | 11/7/2008 | Rebuild | 11/13/2008 | N/S, B3, 7/8 - cleaned and tested good. | | |
| Autolock (Horton) | 1 | 12/2/2008 | Rebuild | 12/3/2008 | S/S, B1, 5/6 - broken R4. Replaced R4 and tested good. | | |
| Autolock (Horton) | 1 | 12/2/2008 | Rebuild | 12/3/2008 | N/S, B3, 5/6 - loose solenoid. Tightened solenoid, cleaned and tested good. | | |
| Autolock (Horton) | 1 | 3/1/2009 | Rebuild | 3/3/2009 | N/S, B3, 1/2 - numerous LF's. Harness bad. Cleaned up and replaced harness - tested good. | | |
| Autolock (Horton) | 1 | 3/1/2009 | Rebuild | 3/4/2009 | Unknown location, unknown problem - noted C# bent, cleaned up, attached new wiring harness, tested good. | | |
| Autolock (Horton) | 1 | 2/19/2009 | Rebuild | 3/6/2009 | N/S, B2, 7/8 - UF's. Cleaned and tested. | | |
| Autolock (Horton) | 1 | 2/17/2009 | Rebuild | 3/9/2009 | N/S, B3, 1/2 - binding. Cleaned and tested. | | |
| Autolock (Horton) | 1 | 3/16/2009 | Rebuild | 4/5/2009 | S/M, B1, 5/6 - pulled for missing PC mounting screw and reports of intermittent coil chattering. Replaced missing screw, retinned solenoid leads and resecured. | | |
| Autolock (Horton) | 1 | 3/4/2009 | Rebuild | 4/9/2009 | N/S, B2, 1/2 - troubleshooting other problems. | | |
| Autolock (Horton) | 1 | 3/14/2009 | Rebuild | 4/9/2009 | S/M, B1, 5/6 - removed autolock due to autolock failures. Cleaned solenoid - tested good. | | |
| Autolock (Horton) | 1 | 4/8/2009 | Repair | 4/9/2009 | Inventory with broken R1. Replaced R1 - tested good. | | |
| Autolock (Horton) | 1 | 4/8/2009 | Rebuild | 4/9/2009 | S/M, B1, 3/4 - removed due to intermittent malfunctions. Noted loose solenoid coil. Tightened solenoid and cleaned - tested good. | | |
| Autolock (Horton) | 1 | 3/4/2009 | Rebuild | 4/9/2009 | N/S, B2, 1/2 - removed for troubleshooting. Cleaned up and tested good. | | |
| Autolock (Horton) | 1 | 1/27/2009 | Rebuild | 5/22/2009 | S/M, B2, 1/2 - UF's. Cleaned and tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Horton) | 1 | 5/21/2009 | Rebuild | 5/22/2009 | N/S, B3, 1/2 - sluggish in dropping to latch. May just need cleaning. Rebuilt and tested good. | | |
| Autolock (Horton) | 1 | 5/4/2009 | Rebuild | 5/22/2009 | S/S, B1, 1/2 - unlock failures. Cleaned and tested good. | | |
| Autolock (Horton) | 1 | 2/5/2009 | Rebuild | 5/25/2009 | S/S, B1, 5/6 - UF's. Cleaned and tested good. | | |
| Autolock (Horton) | 44 | | | | 44 | 44 rebuilt 2 pc board rpl, 2 rpr, 2 harn rpl | 90 |
| Autolock (Stanley) | 1 | 10/12/2009 | Repair | 10/18/2009 | S/S, B3, 1/2 - no close and lock. Reterminated broken (purple) close and lock wire at switch. | | |
| Autolock (Stanley) | 1 | 12/21/2009 | Repair | 12/21/2009 | Cannibalized several locks to get one to work. Replaced springs and close verified switch. | | |
| Autolock (Stanley) | 1 | 1/1/2010 | Repair | 1/19/2010 | No tag. Tore down to parade rest and replaced broken spring. Tested good. | | |
| Autolock (Stanley) | 1 | 1/1/2010 | Repair | 1/20/2010 | No tag. Tore down to parade rest and rebuilt. Tested good. | | |
| Autolock (Stanley) | 1 | 1/19/2010 | Repair | 1/20/2010 | W/M, B2, 3/4 - malfunction code d2. Debris on NC contacts - cleaned contacts and tore down to parade rest. Tested good. | | |
| Autolock (Stanley) | 1 | 1/19/2010 | Repair | 2/3/2010 | E/M, B1, 7/8 - sticky, flakey operation. Broken spring replaced. Tore down to parade rest. Reassembled. Tested good - returned to stock. | | |
| Autolock (Stanley) | 1 | 1/30/2010 | Repair | 2/3/2010 | E/M, B2, 7/8 - not unlocking. Straightened e-block rod, adjusted plastic shim. | | |
| Autolock (Stanley) | 1 | 2/3/2010 | Repair | 2/7/2010 | E/M, B2, 5/6 - poor operation. Broken emergency release spring. Cleaned up and replaced spring. Tested good. Returned to stock. | | |
| Autolock (Stanley) | 1 | 12/21/2009 | Repair | 3/4/2010 | S/M, B2, 3/4 - pulled to t/shoot doorset. Used for parts, no good. | | |
| Autolock (Stanley) | 1 | 4/10/2010 | Repair | 4/18/2010 | N/M, B3, 1/2 - flakey close and lock. Cleaned out switch and adjusted. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 3/22/2010 | Repair | 4/19/2010 | unknown location, unknown problem. Tightened loose wires. | | |
| Autolock (Stanley) | 1 | 4/12/2010 | Repair | 5/1/2010 | W/S, B1, 7/8 - no close and lock problem. | | |
| Autolock (Stanley) | 1 | 3/25/2010 | Repair | 5/3/2010 | S/M, B2, 3/4 - not dropping. Broken spring - awaiting parts. | | |
| Autolock (Stanley) | 1 | 4/12/2010 | Repair | 5/3/2010 | W/S, B1, 3/4 - broken spring on emergency block - missing spring - awaiting parts. Cleaned all switches, solenoid and replaced spring. | | |
| Autolock (Stanley) | 1 | 4/5/2010 | Repair | 5/3/2010 | N/M, B1, 5/6 - loss of close and lock, broken spring and burr on cam (filed down) - awaiting parts. Cleaned solenoid, replace spring and cleaned main switch. | | |
| Autolock (Stanley) | 1 | 4/29/2010 | Repair | 5/3/2010 | S/M, B3, 3/4 - flakey close and lock and broken spring. Cleaned plunger switch and replaced spring. | | |
| Autolock (Stanley) | 1 | 5/1/2010 | Repair | 5/4/2010 | Unknown location, unknown problem. Filed burrs down on cams. | | |
| Autolock (Stanley) | 1 | 5/16/2010 | Repair | 5/16/2010 | E/M, B2, 1/2 - Broken spring. Replaced in place. | | |
| Autolock (Stanley) | 1 | 5/16/2010 | Repair | 5/29/2010 | E/S, B2, 1/2 - close and lock issues and assembly is loose. | | |
| Autolock (Stanley) | 1 | 4/25/2010 | Repair | 6/4/2010 | E/M, B1, 3/4 - broken spring. Replaced spring. | | |
| Autolock (Stanley) | 1 | 5/17/2010 | Repair | 6/4/2010 | W/S, B2, 1/2 - broke spring, sloppy operation. Needs cleaning. Cleaned? | | |
| Autolock (Stanley) | 1 | 5/21/2010 | Repair | 6/5/2010 | W/M, B1, 7/8 - not dropping all of the way (broken spring). Filed burrs on cams. | | |
| Autolock (Stanley) | 1 | 5/20/2010 | Repair | 6/6/2010 | W/M, B2, 5/6 - bent near close/lock switch arm. Bent arm back to normal position. Needs testing to make sure switch is good. Tested good. | | |
| Autolock (Stanley) | 1 | 5/29/2010 | Repair | 6/6/2010 | N/S, B1, 5/6 - burr on cam not allowing doors to close and lock. Filed burrs. Tested good. | | |

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|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 6/16/2010 | Repair | 6/7/2010 | E/M, B2, 5/6 - pulled for broken close monitor switch, causing "D2" codes and malfunction on open. Replace close monitor switch, tested good. | | |
| Autolock (Stanley) | 1 | 6/16/2010 | Repair | 7/2/2010 | E/M, B2, 5/6 - broken close monitor switch. Replaced close monitor switch. Tested good. | | |
| Autolock (Stanley) | 1 | 6/30/2010 | Repair | 7/2/2010 | W/M, B2, 5/6 for missing e-handle return spring. Replaced spring, tested good. | | |
| Autolock (Stanley) | 1 | 6/20/2010 | Repair | 7/3/2010 | N/S, B2, 1/2 - flaky close and lock. Replaced broken spring and bent switch bracket back to 90 degrees. Tested good. | | |
| Autolock (Stanley) | 1 | 7/1/2010 | Repair | 7/9/2010 | S/M, B3, 7/8 - Lock would not disengage. Inspected, lock looks good. Tested good. | | |
| Autolock (Stanley) | 1 | 6/30/2010 | Repair | 7/9/2010 | E/M, B1, 7/8 - suspect bad close monitor switch. Replace bad close monitor switch, tested good. | | |
| Autolock (Stanley) | 1 | 7/12/2010 | Repair | 7/16/2010 | N/M, B2, 7/8 - removed during door recycle troubleshooting. Cleaned up, replaced spring, tested good. | | |
| Autolock (Stanley) | 1 | 8/2/2010 | Repair | 8/12/2010 | N/M, B3, 7/8 - broken spring and stripped threads. Replaced spring and E-rod. | | |
| Autolock (Stanley) | 1 | 7/10/2010 | Repair | 8/21/2010 | E/S, B2, 5/6 - malf on open. Lock has heavy burrs on cams. | | |
| Autolock (Stanley) | 1 | 7/16/2010 | Repair | 8/21/2010 | N/M, B2, 7/8 - troubleshooting malfunction issues. | | |
| Autolock (Stanley) | 1 | 8/6/2010 | Repair | 8/21/2010 | S/S, B2, 1/2 - closed and locked failures. | | |
| Autolock (Stanley) | 1 | 8/1/2010 | Repair | 8/21/2010 | Unknown location, unknown problem, unknown fix. Documentation sucks - thanks, Nick. | | |
| Autolock (Stanley) | 1 | 8/1/2010 | Repair | 8/21/2010 | Unknown location, unknown problem, unknown fix. Documentation sucks - thanks Nick. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 8/1/2010 | Repair | 8/21/2010 | Unknown location, unknown problem, unknown fix. Documentation sucks - thanks, Nick. | | |
| Autolock (Stanley) | 1 | 8/27/2010 | Repair | 8/29/2010 | W/S, B1, 3/4 - lock not dropping. Changed spring, cleaned up. Tested good. | | |
| Autolock (Stanley) | 1 | 9/8/2010 | Repair | 9/8/2010 | E/M, B1, 1/2 - broken spring, lock slop, dirty. Cleaned and tightened up, replaced spring, tested good. | | |
| Autolock (Stanley) | 1 | 9/8/2010 | Repair | 9/11/2010 | W/M, B1, 3/4 - broken spring, lock slop, and dirty. Cleaned and tightened up lock, replaced spring. Tested good. | | |
| Autolock (Stanley) | 1 | 9/9/2010 | Repair | 9/11/2010 | S/S, B1, 1/2 - no C/L. Cleaned and tightened up. Tested good. | | |
| Autolock (Stanley) | 1 | 5/11/2010 | Repair | 9/12/2010 | W/M, B2, 3/4 - close and lock issues. Replaced C/L switch and spring. | | |
| Autolock (Stanley) | 1 | 8/22/2010 | Repair | 9/12/2010 | W/M, B1, 5/6 - t/shooting lock operation. 1 cam was bad. Replaced base assembly. Cleaned and tightened up. Tested good. | | |
| Autolock (Stanley) | 1 | 8/29/2010 | Repair | 9/14/2010 | E/M, B1, 5/6 - broken EE spring. Replaced EE spring, cleaned C/L Monitor switch. | | |
| Autolock (Stanley) | 1 | 1/1/2010 | Repair | 9/15/2010 | S/M, B2, 3/4 - pulled to t/s doorset. Needs cleaning. Replaced switch, spring, and block. | | |
| Autolock (Stanley) | 1 | 7/4/2010 | Repair | 9/15/2010 | N/M, B1, 7/8 - mail on open. Suspect bad close monitor switch. Scrapped bad switch, awaiting new. Replaced switch, spring and cleaned. | | |
| Autolock (Stanley) | 1 | 9/4/2010 | Repair | 9/19/2010 | N/S, B2, 5/6 - binding on close, missing one spring. Change E-sping and replaced missing spring, cleaned and adjusted. | | |
| Autolock (Stanley) | 1 | 9/15/2010 | Repair | 9/20/2010 | E/M, B1, 1/2 - broken close monitor and actuator bracket. Chenaged E-spring and near close and lock monitor switch. | | |

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|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 8/21/2010 | Repair | 9/27/2010 | N/S, B2, 7/8 - close and lock issues, believed to be good. Requires testing. Replaced ee spring and cleaned both C/L switches. | | |
| Autolock (Stanley) | 1 | 9/22/2010 | Repair | 9/27/2010 | S/M, B1, 1/2 - solenoid will not pick. Cleaned C/L monitor switch and replaced ee spring. | | |
| Autolock (Stanley) | 1 | 9/30/2010 | Repair | 10/3/2010 | E/M, B1, 5/6 - binding and loss of close and lock. Replaced EE spring, adjusted crooked solenoid. | | |
| Autolock (Stanley) | 1 | 10/11/2010 | Repair | 10/13/2010 | S/S, B3, 7/8 - broken EE spring. Replaced bad spring and cleaned up. Tested good. | | |
| Autolock (Stanley) | 1 | 10/11/2010 | Repair | 10/13/2010 | S/M, B1, 3/4 - bad close monitor switch. Replaced close monitor switch & spring. Also repaired cut harness. Cleaned up, tested good. | | |
| Autolock (Stanley) | 1 | 10/11/2010 | Repair | 10/13/2010 | N/S, B2, 1/2 - flakey close and lock. Cleaned up and replaced weak spring. Tested good. | | |
| Autolock (Stanley) | 1 | 10/7/2010 | Repair | 10/14/2010 | S/M, B2, 3/4 - pulled to t/shoot unlock fails. Needs testing. Wire harness pinched near connector, crimped new pins for connector. Tested good. | | |
| Autolock (Stanley) | 1 | 10/8/2010 | Repair | 10/14/2010 | E/M, B1, 5/6 - unlock failures. Inspected and cleaned up. Tested good. | | |
| Autolock (Stanley) | 1 | 10/11/2010 | Repair | 10/14/2010 | N/S, B3, 3/4 - bad EE spring. Replaced spring. Cleaned up and inspected, tested good. | | |
| Autolock (Stanley) | 1 | 10/19/2010 | Rebuild | 10/28/2010 | W/S, B1, 1/2 - broken EE spring. Replaced broken spring, replaced close monitor switch, and cleaned up. Tested good. | | |
| Autolock (Stanley) | 1 | 9/13/2010 | Repair | 11/2/2010 | E/S, B1, 1/2 - broken spring and dirty. Needs a cam spring. Replaced cam spring, release spring, adjusted solenoid, cleaned close monitor switch, teseted good. | | |

02705

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 10/24/2010 | Rebuild | 11/5/2010 | E/M, B2, 7/8 - broken EE spring. Modified near close switch location, added new release spring block/bushing/, cleaned and adjusted. Tested good. | | |
| Autolock (Stanley) | 1 | 10/25/2010 | Rebuild | 11/5/2010 | N/M, B2, 1/2 - pulled for close and lock issues. Clean and test. Cleaned and adjusted solenoid, cleaned up close monitor switch, installed new release block/bushing/spring. Tested good. | | |
| Autolock (Stanley) | 1 | 10/31/2010 | Rebuild | 11/5/2010 | W/M, B2, 3/4 - broken plunger switch. Replaced close monitor switch, added new release block/spring/bushing, cleaned and adjusted. Tested good. | | |
| Autolock (Stanley) | 1 | 11/1/2010 | Rebuild | 11/5/2010 | W/M, B1, 5/6 - EE spring is weak and doesn't force switch down far enough. Cleaned and adjusted solenoid. Installed new release spring/bushing/block. Tested good. | | |
| Autolock (Stanley) | 1 | 10/6/2010 | Repair | 11/10/2010 | N/M, B3, 1/2 - close and lock problem. Cleaned and adjusted solenoid. Cleaned contacts on close monitor switch. Added new release block/spring/bushing. Tested good. | | |
| Autolock (Stanley) | 1 | 11/1/2010 | Rebuild | 11/20/2010 | W/M, B2, 1/2 - broken EE spring. Installed new release spring/block/bushing. Cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 11/8/2010 | Rebuild | 11/20/2010 | E/S, B1, 7/8 - return spring is short and doesn't pull down far enough causing faulty c/l. Cleaned and adjusted solenoid. Installed new release spring/block/bushing. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 11/14/2010 | Rebuild | 11/20/2010 | N/S, B1, 1/2 - close switch "D2" code causing malfunction. Replaced close monitor switch. Cleaned and adjusted solenoid. Installed new release block gear. Tested good. | | |
| Autolock (Stanley) | 1 | 11/13/2010 | Repair | 11/20/2010 | S/S, B1, 3/4 - unlock fails/ close & lock problems. Cleaned and adjusted solenoid. Installed new release spring/block/bushing. Tested good. | | |
| Autolock (Stanley) | 1 | 11/17/2010 | Rebuild | 11/20/2010 | S/M, B2, 3/4 - D2 error codes (close monitor switch). Cleaned close monitor switch. Cleaned and adjusted solenoid. Installed new release hardware. Tested good. | | |
| Autolock (Stanley) | 1 | 11/14/2010 | Rebuild | 11/28/2010 | N/S, B3, 3/4 - close and lock switch red wire pulls out of block. Repinned connection block. Tested good. | | |
| Autolock (Stanley) | 1 | 11/19/2010 | Rebuild | 11/28/2010 | E/M, B2, 5/6 - U/L fails, possibly encoder. Inspected. Tested good. | | |
| Autolock (Stanley) | 1 | 11/27/2010 | Rebuild | 11/28/2010 | E/M, B1, 1/2 - unlock failures. Cleaned flakey close monitor switch. Cleaned and adjusted solenoid. Installed new release spring/bushing/block. Tested good. | | |
| Autolock (Stanley) | 1 | 11/24/2010 | Rebuild | 12/2/2010 | S/S, B2, 5/6 - suspected malfunction. Cleaned and adjusted solenoid. Installed new release block/spring/bushing. Tested good. | | |
| Autolock (Stanley) | 1 | 11/27/2010 | Rebuild | 12/2/2010 | N/M, B1, 1/2 - unlock failures. Cleaned flakey close monitor switch. Cleaned and adjusted solenoid. Installed new release block/bushin/spring. Tested good. | | |
| Autolock (Stanley) | 1 | 11/26/2010 | Rebuild | 12/2/2010 | S/S, B2, 5/6 - unlock failures. Installed new release block/spring/bushing. Tested good. | | |

02707

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 12/23/2010 | Rebuild | 12/29/2010 | E/M, B2, 3/4 - malfunction. Cam-loc dislocated. Also requires modification. Completed disk and large spring modification. Cleaned switches, and solenoid. | | |
| Autolock (Stanley) | 1 | 12/24/2010 | Rebuild | 12/29/2010 | S/M, B1, 1/2 - malfunction on open and generating a "D2" code. Also requires modification. Replaced close monitor sw, and completed disk and large spring modification. | | |
| Autolock (Stanley) | 1 | 12/26/2010 | Rebuild | 12/29/2010 | S/S, B3, 3/4 - flakey close and lock - noted ee-spring broken. Requires ee modification. Completed disk and large spring modification. Cleaned switches and solenoid. | | |
| Autolock (Stanley) | 1 | 11/28/2010 | Rebuild | 1/3/2011 | W/S, B2, 1/2 - broken ee-spring. Installed spring mod, cleaned up, tested good. | | |
| Autolock (Stanley) | 1 | 12/22/2010 | Rebuild | 1/3/2011 | W/M, B1, 5/6 - no close and lock. Cleaned solenoid and locked switch. Tested both the closed and the locked switchs with a fluke meter finding no issues. Tested the autolock on the tester, again no issues noted. | | |
| Autolock (Stanley) | 1 | 12/25/2010 | Rebuild | 1/3/2011 | S/S, B3, 7/8 - malfunction on open - requires modification. Installed disk / bushing / and spring modification. Cleaned solenoid, replaced the telfon washer, cleaned and tested both switches. No furhter issues noted. | | |
| Autolock (Stanley) | 1 | 12/21/2010 | Rebuild | 1/9/2011 | W/M, B1, 5/6 - close switch error code. Bad elevator switch? Found on test stand - works good. Returned to inventory. | | |
| Autolock (Stanley) | 1 | 1/5/2011 | Rebuild | 1/9/2011 | S/S, B2, 3/4 - installed, then, removed for left hand cam popping off. Also, ee-button loose. Tightened ee-button and cannibalized #018 LH cam. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 1/1/2011 | Rebuild | 1/10/2011 | N/M, B1, 3/4 - lock failures. Cleaned solenoid and both switches. Tested switches for continuityfollowed by operational test on test stand. Unit tested good. | | |
| Autolock (Stanley) | 1 | 1/5/2011 | Rebuild | 1/10/2011 | S/M, B1, 7/8 - close and lock issues. Also need modification. Modified. Cleaned close monitor switch. | | |
| Autolock (Stanley) | 1 | 1/5/2011 | Rebuild | 1/10/2011 | S/S, B2, 3/4 - close and lock issues. Also requires modification. Cleaned solenoid and both switches. Tested both switches for continuity followed by an operational test on the test stand. Unit tested good. | | |
| Autolock (Stanley) | 1 | 1/9/2011 | Rebuild | 1/10/2011 | N/M, B1, 3/4 - pulled to troubleshoot. Did not have a warm and fuzzy that this was a problem component - restested good. | | |
| Autolock (Stanley) | 1 | 1/8/2011 | Rebuild | 1/11/2011 | W/M, B1, 3/4 - close and lock issues. Also, requires modification. Installed modification, cleaned the solenoid, replaced the C/M switch, and cleaned /tested the lock switch. | | |
| Autolock (Stanley) | 1 | 1/11/2011 | Rebuild | 1/19/2011 | N/S, B3, 7/8 - broken ee-spring. Requires modification. Cleaned solenoid, and lock switch. Tested lock switch and c/m switch cirutis for continuity. Replaced c/m due to broken spring. | | |
| Autolock (Stanley) | 1 | 1/17/2011 | Rebuild | 1/22/2011 | N/S, B2, 5/6 - bad near close plunger spring. Requires modification. Modified. | | |
| Autolock (Stanley) | 1 | 1/17/2011 | Rebuild | 1/23/2011 | E/S, B2, 3/4 - broken ee-spring. Requires modification. Modified. Cleaned switches. Tested good. | | |
| Autolock (Stanley) | 1 | 1/19/2011 | Rebuild | 1/23/2011 | E/S, B2, 5/6 - broken close monitor switch spring. Requires modification. Modified, close monitor switch cleaned. | | |

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|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 1/20/2011 | Rebuild | 1/23/2011 | E/S, B2, 5/6 - t/shooting malfunction on open. Coded "0C". Probably good - go over and retest.. Adjusted C/M switch plunger and ran for 2 hrs on the test stand with issues. | | |
| Autolock (Stanley) | 1 | 1/21/2011 | Rebuild | 1/23/2011 | N/S, B2, 5/6 - pins binding in cams because of a sagging door. Removed for good measure. Clean up and test. Probably nothing wrong with this one. Tested good, no other work completed to this lock. | | |
| Autolock (Stanley) | 1 | 1/22/2011 | Rebuild | 1/23/2011 | E/S, B2, 3/4 - flakey close and lock, poor operation. NFF. | | |
| Autolock (Stanley) | 1 | 1/22/2011 | Rebuild | 1/24/2011 | E/S, B2, 1/2 - broken ee-spring, poor operation. Requires modification. | | |
| Autolock (Stanley) | 1 | 1/28/2011 | Rebuild | 2/2/2011 | W/S, B1, 5/6 - malfunction on close. Requires modification. | | |
| Autolock (Stanley) | 1 | 1/31/2011 | Rebuild | 2/2/2011 | N/M, B2, 3/4 - broken ee-spring. Requires modification. | | |
| Autolock (Stanley) | 1 | 2/1/2011 | Rebuild | 2/2/2011 | N/M, B2, 5/6 - broken ee-spring. Requires modification. | | |
| Autolock (Stanley) | 1 | 1/31/2011 | Rebuild | 2/2/2011 | N/M, B3, 3/4 - broken return spring. Requires modification. | | |
| Autolock (Stanley) | 1 | 2/4/2011 | Rebuild | 2/7/2011 | N/M, B1, 7/8 - sticking. Require modification. Disassembled, cleaned, reassembled and tested with with no issues found. Installed spring, bushing, disk mod. Unit is installed on the test stand. Tested good. | | |
| Autolock (Stanley) | 1 | 2/11/2011 | Rebuild | 2/13/2011 | N/M, B1, 1/2 - malfunctions on open. Preliminary look-over shows NFF. Test stand results reveal that autolock operates satisfactorily. Returned to stock. | | |
| Autolock (Stanley) | 1 | 2/12/2011 | Rebuild | 2/13/2011 | N/M, B1, 1/2 - no close and lock, and malfunctions. Bench tested fine. Tested satisfactorily on test stand. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 2/11/2011 | Rebuild | 2/14/2011 | S/S, B1, 3/4 - malfunction with "D2" code. Cleaned close monitor switch and replaced spring. Tested satisfactorily. | | |
| Autolock (Stanley) | 1 | 2/17/2011 | Rebuild | 2/17/2011 | N/S, B2, 1/2 - unlock fails. Requires ee modification. Installed new hardware, cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/18/2011 | Rebuild | 2/19/2011 | N/S, B1, 7/8 - broken spring. Added new hardware, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/18/2011 | Rebuild | 2/19/2011 | E/M, B1, 1/2 - malfunction on open. Cleaned close monitor switch. Tested good. | | |
| Autolock (Stanley) | 1 | 2/14/2011 | Rebuild | 2/20/2011 | E/M, B1, 1/2 - installed and got a "d2", needs testing. Installed new close monitor switch and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/14/2011 | Rebuild | 2/20/2011 | N/M, B1, 1/2 - pulled for "d2" code. Cleaned. | | |
| Autolock (Stanley) | 1 | 2/14/2011 | Rebuild | 2/20/2011 | S/S, B2, 3/4 - removed for "d2" code. Cleaned close monitor switch. Tested good. | | |
| Autolock (Stanley) | 1 | 2/16/2011 | Rebuild | 2/23/2011 | N/S, B1, 3/4 - broken return spring. Requires ee modification. Installed new hardware, cleaned & adjusted solenoid, tested CMS. All tested good. | | |
| Autolock (Stanley) | 1 | 2/20/2011 | Rebuild | 2/23/2011 | S/M, B2, 3/4 - flakey close and lock. Replaced pin on female connector, adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/22/2011 | Rebuild | 2/23/2011 | E/S, B1, 5/6 - for failures. Installed new hardware, tested CMS, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/16/2011 | Rebuild | 2/24/2011 | N/S, B3, 5/6 - flakey close monitor switch and being wobbly. Requires ee modification. Tested CMS switch, installed new hardware, cleaned and adjusted solenoid. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 2/26/2011 | Rebuild | 3/3/2011 | E/M, B2, 5/6 - flakey close and lock switch. Requires ee modification. Added new hardware, cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 2/26/2011 | Rebuild | 3/3/2011 | E/M, B2, 5/6 - burr on cam. T/shooting open/close issues. Cleaned and adjusted solenoid, CMS checked good, tested good. | | |
| Autolock (Stanley) | 1 | 3/1/2011 | Rebuild | 3/3/2011 | S/S, B1, 5/6 -"d2" code and no recycle. Requires ee-modification. Installed new release hardware, cleaned & adjusted solenoid, repaired CMS, tested good. | | |
| Autolock (Stanley) | 1 | 3/7/2011 | Rebuild | 3/10/2011 | Found. No tag. Test operate. Make necessary repairs and re-test if needed. Tested good. | | |
| Autolock (Stanley) | 1 | 3/19/2011 | Rebuild | 3/19/2011 | E/M, B1, 5/6 - broken spring. Installed new release hardware, tested CMS, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 3/19/2011 | Rebuild | 3/19/2011 | E/M, B2, 1/2 - broken spring. Installed new release hardware, tested CMS, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 3/21/2011 | Rebuild | 3/23/2011 | W/S, B1, 3/4 - broken ee-spring. Requires ee-spring modification. Installed new release hardware, cleaned CMS, cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 3/21/2011 | Rebuild | 3/23/2011 | W/S, B2, 1/2 - broken ee-spring. Requires ee-spring modification. Installed new release hardware, cleaned CMS, cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 3/21/2011 | Rebuild | 3/23/2011 | W/S, B2, 7/8 - broken ee-spring. Requires ee-spring modification. Installed new release hardware, cleaned CMS, cleaned and adjusted solenoid. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 3/30/2011 | Rebuild | 4/1/2011 | S/M, B1, 5/6 - broken spring on CMS causing D2 codes. Replaced CMS; tested good. | | |
| Autolock (Stanley) | 1 | 4/3/2011 | Rebuild | 4/7/2011 | S/M, B3, 5/6 - broken ee-spring. Requires ee-modification. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/5/2011 | Rebuild | 4/7/2011 | W/M, B2, 3/4 - broken ee-spring. Requires ee-modification. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/5/2011 | Rebuild | 4/7/2011 | W/M, B1, 1/2 - broken ee-spring. Requires ee-modification. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/6/2011 | Rebuild | 4/7/2011 | S/M, B2, 5/6 - broken ee-spring. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/5/2011 | Rebuild | 4/7/2011 | S/M, B3, 1/2 - broken ee-spring. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/6/2011 | Rebuild | 4/8/2011 | S/M, B3, 3/4 - broken ee-spring. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/6/2011 | Rebuild | 4/8/2011 | S/M, B1, 5/6 - broken ee-spring. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/1/2011 | Rebuild | 4/9/2011 | N/M, B2, 5/6 - close and lock failures. Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 4/7/2011 | Rebuild | 4/9/2011 | N/M, B2, 7/8 - pulled for T/S unlock fails/lock not dropping. Cleaned CMS, Installed new release hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/9/2011 | Rebuild | 4/13/2011 | S/M, B2, 5/6 - malfunction on open. Tested CMS, adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/13/2011 | Rebuild | 4/20/2011 | W/S, B1, 7/8 - malfunction on open. Requires ee-modification. Installed new release hardware, cleaned CMS, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/13/2011 | Rebuild | 4/20/2011 | W/S, B2, 5/6 - sticking on open. Requires ee-modification. Installed new release hardware, cleaned CMS, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/20/2011 | Rebuild | 4/20/2011 | W/S, B1, 1/2 - broken ee-spring. Requires ee-spring modification. Installed new release hardware, cleaned CMS, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/16/2011 | Rebuild | 4/21/2011 | W/S, B2, 5/6 - close and lock. Replaced missing spring, tested good. | | |
| Autolock (Stanley) | 1 | 4/16/2011 | Rebuild | 4/21/2011 | N/M, B2, 5/6 - bad close and lock switch plunger. Repaired CMS, cleaned and adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 4/19/2011 | Rebuild | 4/21/2011 | N/S, B1, 3/4 - flakey near-close switch, causing loss of close and lock. Tested CMS, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 4/19/2011 | Rebuild | 4/21/2011 | N/M, B2, 7/8 - removed for c/l issues. Replaced pins on 2 pin connector, cleaned & adjusted solenoid, tested CMS. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 4/20/2011 | Rebuild | 4/21/2011 | N/S, B1, 7/8 - c/l problems, plunger switch sticks. CMS tested good, cleaned & adjusted solenoid. Tested good. | | |
| Autolock (Stanley) | 1 | 4/24/2011 | Rebuild | 4/28/2011 | S/M, B3, 7/8 - requires ee-spring modification. Changed in conjunction with door repair. Installed new hardware, cleaned & adjusted solenoid, CMS good, tested good. | | |
| Autolock (Stanley) | 1 | 11/21/2010 | Rebuild | 5/5/2011 | S/S, B3, 1/2 - broken EE-spring. Also missing one long spring. New release hardware, replaced missing spring, cleaned CMS, tested good. | | |
| Autolock (Stanley) | 1 | 4/23/2011 | Rebuild | 5/5/2011 | N/S, B2, 1/2 - close and lock problems. Tested CMS, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 4/24/2011 | Rebuild | 5/5/2011 | N/S, B2, 1/2 - faulty close and lock indication. Tested good. | | |
| Autolock (Stanley) | 1 | 4/26/2011 | Rebuild | 5/5/2011 | E/M, B2, 1/2 - main close and lock switch is not working correctly. Tested CMS, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 5/11/2011 | Rebuild | 5/29/2011 | N/M, B1, 5/6 - intermittant close and lock issues. Requires ee-modification. Modified. Cleaned near-close switch. | | |
| Autolock (Stanley) | 1 | 5/17/2011 | Rebuild | 6/5/2011 | S/M, B3, 5/6 - broken internal close monitor switch spring. Rebuilt close/monitor switch, using new style spring. | | |
| Autolock (Stanley) | 1 | 5/23/2011 | Rebuild | 6/5/2011 | N/M, B2, 7/8 - binding when lock drops. Adjusted delrin strip to allow more room. | | |
| Autolock (Stanley) | 1 | 5/24/2011 | Rebuild | 6/5/2011 | N/S, B2, 1/2 - didn't fix problem. Probably okay. Just clean and test. Cleaned close/lock monitor switch. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 6/1/2011 | Rebuild | 6/19/2011 | E/S, B1, 3/4 - door would not recycle w/"d0" error code. Requires ee-modification. Rebuilt close monitor switch - used new style spring. Completed ee-mod. | | |
| Autolock (Stanley) | 1 | 6/8/2011 | Rebuild | 6/19/2011 | N/M, B3, 7/8 - broken ee-spring. Cleaned close monitor switch and completed ee-mod. | | |
| Autolock (Stanley) | 1 | 6/10/2011 | Rebuild | 6/19/2011 | S/S, B3, 5/6 - broken ee-spring. Cleaned close monitor switch and completed ee-mod. | | |
| Autolock (Stanley) | 1 | 6/14/2011 | Rebuild | 6/19/2011 | E/S, B1, 7/8 - no tag. Cleaned close monitor switch and installed new style spring. Completed ee-mod. Pinched female pins for better connection. | | |
| Autolock (Stanley) | 1 | 5/30/2011 | Rebuild | 6/20/2011 | N/S, B3, 5/6 - long story short. . . Suspect close monitor switch. Rebuilt close and monitor switch. | | |
| Autolock (Stanley) | 1 | 6/18/2011 | Rebuild | 6/20/2011 | N/S, B1, 5/6 - close and lock failures. Requires ee-modification. | | |
| Autolock (Stanley) | 1 | 6/18/2011 | Rebuild | 6/20/2011 | S/S, B1, 1/2 - close and lock failures. Requires ee-modification. | | |
| Autolock (Stanley) | 1 | 6/18/2011 | Rebuild | 6/20/2011 | W/S, B2, 5/6 - close and lock failures. | | |
| Autolock (Stanley) | 1 | 6/29/2011 | Rebuild | 7/3/2011 | W/M, B2, 5/6 - broken ee-spring. Requires ee-modification. Cleaned, inspected, completed ee-modification and bench tested (good). Tested on the test stand, (good). | | |
| Autolock (Stanley) | 1 | 6/30/2011 | Rebuild | 7/4/2011 | S/M, B2, 3/4 - removed due to old style spring. | | |
| Autolock (Stanley) | 1 | 6/30/2011 | Rebuild | 7/4/2011 | S/M, B1, 1/2 - removed due to old style spring. Cleaned, inspected and bench tested (good). Tested on the test stand, (good). | | |
| Autolock (Stanley) | 1 | 6/30/2011 | Rebuild | 7/5/2011 | S/M, B2, 7/8 - old style changed due to PM1200. Cleaned, inspected and bench tested. Replaced Closed Monitor switch. Test run on T/S good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 7/1/2011 | Rebuild | 7/6/2011 | E/M, B2, 1/2 - no close and lock. Cleaned and inspected. Bench tested good and run on test stand. | | |
| Autolock (Stanley) | 1 | 7/2/2011 | Rebuild | 7/10/2011 | S/M, B2, 1/2 - missing cam spring. Replaced cam spring. Cleaned, inspected, and bench tested (good). Tested on test stand, (good). | | |
| Autolock (Stanley) | 1 | 7/6/2011 | Repair | 7/10/2011 | left pin does not come up far enough to allow cam to release. Raised solenoid. | | |
| Autolock (Stanley) | 1 | 7/5/2011 | Rebuild | 7/11/2011 | E/S, B2, 3/4 - "d2" and "d0" codes causing C/L issues? Adjusted solenoid. | | |
| Autolock (Stanley) | 1 | 7/6/2011 | Rebuild | 7/11/2011 | Unknown location. Both pins slide on cam and get stuck. Adjusted solenoid. | | |
| Autolock (Stanley) | 1 | 7/6/2011 | Rebuild | 7/11/2011 | Unknown location. Left pin slides on cam and gets stuck. Adjusted solenoid. | | |
| Autolock (Stanley) | 1 | 7/9/2011 | Rebuild | 7/20/2011 | E/S, B1, 3/4 - close and lock issues. Cleaned, inspected and tested (good). | | |
| Autolock (Stanley) | 1 | 7/6/2011 | Rebuild | 7/20/2011 | ??, B2, 3/4 - broken spring. Requires ee-modification. Completed retrofit, cleaned, inspected and tested (good). | | |
| Autolock (Stanley) | 1 | 7/19/2011 | Rebuild | 7/20/2011 | inventory. Had issue with close and lock. Found purple wire not attached. Cleaned, inspected, reterminated purple wire, and tested (good). | | |
| Autolock (Stanley) | 1 | 7/18/2011 | Rebuild | 7/20/2011 | S/M, B3, 3/4 - no close and lock. Switch(?) does not work. Near close sw did not work because of broken nylon block on door - cleaned and tested good. | | |
| Autolock (Stanley) | 1 | 7/20/2011 | Rebuild | 7/20/2011 | S/S, B2, 7/8 - requires ee-modification. Cleaned up and installed modification. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 7/20/2011 | Rebuild | 7/25/2011 | S/S, B2, 1/2 - requires ee-modification. Installed retrofit, cleaned, inspected and tested (good). | | |
| Autolock (Stanley) | 1 | 7/24/2011 | Rebuild | 7/28/2011 | E/M, B1, 7/8 - broken ee-spring. Requires ee-modification. Installed new hardware, cleaned up, tested good. | | |
| Autolock (Stanley) | 1 | 7/24/2011 | Rebuild | 7/28/2011 | W/M, B2, 7/8 - broken ee-spring. Requires ee-modification. Installed new hardware, cleaned up, tested good. | | |
| Autolock (Stanley) | 1 | 7/24/2011 | Rebuild | 7/28/2011 | W/M, B1, 7/8 - broken ee-spring. Requires ee-modification. New release hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 7/27/2011 | Rebuild | 7/28/2011 | N/M, B2, 1/2 - needs retrofit. Installed new hardware, new CMS spring, cleaned and tested good. | | |
| Autolock (Stanley) | 1 | 7/24/2011 | Rebuild | 7/29/2011 | W/M, B2, 1/2 - broken ee-spring. Requires ee-modification. New release hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 7/27/2011 | Rebuild | 7/29/2011 | N/M, B3, 1/2 - needs retrofit. Installed new hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 7/31/2011 | Rebuild | 8/3/2011 | N/S, B2, 7/8 - requires ee-modification. Installed new hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 7/31/2011 | Rebuild | 8/5/2011 | N/S, B2, 3/4 - requires ee-modification. Installed new hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 7/31/2011 | Rebuild | 8/10/2011 | N/S, B3, 1/2 - requires ee-modification. Installed new hardware, cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 8/4/2011 | Rebuild | 8/10/2011 | S/S, B3, 7/8 - malfunction on open. Cleaned & tested good. | | |
| Autolock (Stanley) | 1 | 8/5/2011 | Rebuild | 8/10/2011 | S/S, B3, 7/8 - used to t/shoot door malfunctions. Probably okay. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 8/7/2011 | Rebuild | 8/10/2011 | W/M, B2, 7/8 - constant door malfunction, code "d2". CMS tested good, cleaned up solenoid - tested good. | | |
| Autolock (Stanley) | 1 | 8/11/2011 | Rebuild | 9/2/2011 | W/M, B2, 7/8 - t/shoot unlock fails. Probably nothing wrong. Replaced CMS, tested good. | | |
| Autolock (Stanley) | 1 | 8/20/2011 | Rebuild | 9/2/2011 | W/M, B2, 7/8 - flakey close and lock. Tested good. | | |
| Autolock (Stanley) | 1 | 8/27/2011 | Rebuild | 9/2/2011 | N/S, B2, 7/8 - close and lock failures. Tested good. | | |
| Autolock (Stanley) | 1 | 8/31/2011 | Rebuild | 9/2/2011 | W/M, B2, 7/8 - displays "d2" codes. Replaced near-close switch. Requires testing. Tested good. | | |
| Autolock (Stanley) | 1 | 9/4/2011 | Rebuild | 9/21/2011 | N/S, B2, 7/8 - "d1" codes. Cleaned CMS, tested good. | | |
| Autolock (Stanley) | 1 | 9/14/2011 | Rebuild | 9/21/2011 | N/S, B3, 1/2 - c/l not dropping good. Cleaned up, tested good. | | |
| Autolock (Stanley) | 1 | 9/20/2011 | Test | 9/22/2011 | Returned from RMR - relocate near close switch and requires testing. Relocated switch, tested good. | | |
| Autolock (Stanley) | 1 | 9/20/2011 | Test | 9/22/2011 | Returned from RMR - requires testing. Relocated switch, tested good. | | |
| Autolock (Stanley) | 1 | 7/20/2011 | Rebuild | 9/25/2011 | S/S, B1, 7/8 - requires ee-modification. Rebuilt & tested good. | | |
| Autolock (Stanley) | 1 | 10/2/2011 | Rebuild | 10/22/2011 | N/M, B3, 7/8 - poor operation, no pickup. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 10/5/2011 | Rebuild | 10/22/2011 | N/M, B3, 1/2 - "d2" error. Cleaned flakey CMS, cleaned and adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 10/19/2011 | Rebuild | 11/8/2011 | W/S, B1, 5/6 - unlock fails and springs need replaced. | | |
| Autolock (Stanley) | 1 | 10/17/2011 | Rebuild | 11/13/2011 | E/M, B2, 1/2 - "d0" error code - close monitor switch. Cleaned swithches and replace cms spring. | | |
| Autolock (Stanley) | 1 | 11/10/2011 | Repair | 11/13/2011 | N/S, B2, 1/2 - for c/l failures. Cleaned and replaced cms spring. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 11/8/2011 | Repair | 11/15/2011 | W/M, B2, 3/4 - for D0 code. Replaced cms spring & cleaned. | | |
| Autolock (Stanley) | 1 | 11/26/2011 | Rebuild | 11/26/2011 | Removed from N/S B3 7/8 due to trouble shooting no recycle when obs tructed and D2 code. Rpl CMS spring and cleaned. | | |
| Autolock (Stanley) | 1 | 11/20/2011 | Rebuild | 11/27/2011 | ES B1 1/2 for flakey c/l, possible CMS. CMS needed cleaned. | | |
| Autolock (Stanley) | 1 | 7/1/2011 | Rebuild | 12/6/2011 | W/M, B2, 5/6 - no close and lock. Needs to be sent out RMR due to a bad right side cam bearing. Tested good after return from RMR. | | |
| Autolock (Stanley) | 1 | 12/14/2011 | Repair | 12/14/2011 | From E/M B1 7/8 E-release fell off. Repaired and tested. | | |
| Autolock (Stanley) | 1 | 12/19/2011 | Rebuild | 12/19/2011 | Removed for closed and lock issues. Replaced Emergency Handle actuator. | | |
| Autolock (Stanley) | 1 | 12/29/2011 | Repair | 1/5/2012 | NS B2 7/8 for D2 code. Repaired CMS, tested good. | | |
| Autolock (Stanley) | 1 | 1/4/2012 | Repair | 1/5/2012 | WM B2 5/6 for CMS switch. Repaired CMS, tested good. | | |
| Autolock (Stanley) | 1 | 1/1/2012 | Repair | 1/5/2012 | SM B2 3/4 for D2. Repaired CMS, tested good. | | |
| Autolock (Stanley) | 1 | 12/29/2011 | Repair | 1/5/2012 | NS B3 7/8 for D2 code. Repaired CMS, tested good. | | |
| Autolock (Stanley) | 1 | 1/8/2012 | Rebuild | 1/13/2012 | SM B3 3/4 for c/l issues. Switch coming apart. Secured switch, tested good. | | |
| Autolock (Stanley) | 1 | 1/6/2012 | Rebuild | 1/13/2012 | SM B3 3/4 t/s malf on open. Cleaned and tested good. | | |
| Autolock (Stanley) | 1 | 1/6/2012 | Rebuild | 1/13/2012 | SM B3 3/4 t/s malf on open. Cleaned and tested good. | | |
| Autolock (Stanley) | 1 | 1/21/2012 | Rebuild | 1/28/2012 | SS B3 7/8 UF, D1 code. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 1/16/2012 | Rebuild | 1/28/2012 | SS B2 1/2 flakey CMS. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 1/21/2012 | Rebuild | 1/28/2012 | SS B3 7/8 D1 code. Rebuilt, tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 1/19/2012 | Rebuild | 1/28/2012 | SS B3 7/8 malf issues. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 1/16/2012 | Rebuild | 1/28/2012 | SS B2 3/4 D2 and D0 codes. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 1/23/2012 | Rebuild | 1/28/2012 | SM B3 7/8 for sticky CMS. Rebuilt, tested good. | | |
| Autolock (Stanley) | 1 | 1/29/2012 | Rebuild | 2/9/2012 | SM B2 3/4 intermittent c/l, red/blk wire crushed. RH cam bad. Needs RMR. | | |
| Autolock (Stanley) | 1 | 2/9/2012 | Rebuild | 3/15/2012 | SM B3 5/6 pins not fitting. Adjusted CMS. | | |
| Autolock (Stanley) | 1 | 2/9/2012 | Rebuild | 3/15/2012 | SM B3 5/6 malf on closing. Cleaned CMS. | | |
| Autolock (Stanley) | 1 | 2/9/2012 | Rebuild | 3/15/2012 | EM B1 3/4. Cams not moving freely/sticking. Deburred cams and cleaned up. | | |
| Autolock (Stanley) | 1 | 2/3/2012 | Rebuild | 3/15/2012 | SM B3 5/6 for D1 and D2 codes. Cleaned CMS. | | |
| Autolock (Stanley) | 1 | 1/28/2012 | Rebuild | 3/15/2012 | NS B3 3/4 CMS switch loose, flakey c/l. Repaired CMS, cleaned up. | | |
| Autolock (Stanley) | 1 | 3/26/2012 | Rebuild | 3/26/2012 | Removed from b2 5/6 s/m. Rebuilt and tested good. | | |
| Autolock (Stanley) | 1 | 3/25/2012 | Rebuild | 3/26/2012 | Removed from b3 5/6 s/m. Rebuilt cleaned switches and tested. | | |
| Autolock (Stanley) | 1 | 4/9/2012 | Rebuild | 5/23/2012 | SS B2 1/2 for broken plunger switch. Replaced, tested good | | |
| Autolock (Stanley) | 1 | 4/1/2012 | RMR | 12/10/2012 | (T1) S/M B2 5/6 for not dropping right. Broken main bracket. Rebuilt. On test stand. | | |
| Autolock (Stanley) | 1 | 4/8/2011 | Rebuild | | E/S, B1, 1/2 - Damaged from closing too hard? Inspected fine (damage from misadjusted lock), installed new hardware, cleaned & adjusted solenoid, tested good. | | |
| Autolock (Stanley) | 1 | 9/30/2011 | Rebuild | | S/M, B2, 3/4 - malfunction on open. | | |
| Autolock (Stanley) | 1 | 11/8/2011 | Repair | | S/M, B2, 1/2 - for malfunctions, possible bad CMS. Needs to go to RMR. Bad harness, cms, & R/H cam. | | |

2

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Autolock (Stanley) | 1 | 12/28/2011 | Rebuild | | Removed from N/M, B3, 5/6 for D2 codes, and a bad C/M Switch. Cleaned, inspected, tested and replaced the C/M Switch. Tested good on Test Stand. | | |
| Autolock (Stanley) | 1 | 3/25/2012 | Rebuild | | Came from unknown. Rebuilt cleaned switches and replace cam spring. | | |
| Autolock (Stanley) | 236 | | | | 236 | 230 rebuilt 3 sent rmr 3 tested 90 had mod done | 466 → 944? |
| Bearing, Door Roller | 4 | 1/22/2012 | Repair | 1/23/2013 | Removed form C8. -Cleaned, inspected and returned to stock. | | |
| Bearing, Door Roller | 4 | | | | 4 | 4 cleaned insp | 0.5 |
| Brake Parts | 1 | 5/7/2008 | Rebuild | 5/12/2008 | C8, 7/8 brake job. | | |
| Brake Parts | 1 | 5/9/2008 | Rebuild | 5/12/2008 | C4, 7/8 - brake job. | | |
| Brake Parts | 1 | 5/13/2008 | Rebuild | 6/3/2008 | C4, 1/2 - brake job | | |
| Brake Parts | 1 | 6/2/2008 | Rebuild | 6/9/2008 | C4, 3/4 - brake job. | | |
| Brake Parts | 1 | 6/9/2008 | Rebuild | 6/30/2008 | C3, 5/6 - brake job. | | |
| Brake Parts | 1 | 7/4/2008 | Rebuild | 7/8/2008 | C3, 3/4 - brake job. | | |
| Brake Parts | 1 | 7/22/2008 | Rebuild | 7/27/2008 | C3, 5/6 - brake job. | | |
| Brake Parts | 1 | 7/25/2008 | Rebuild | 7/27/2008 | C3, 1/2 - brake job. | | |
| Brake Parts | 1 | 8/4/2008 | Rebuild | 8/12/2008 | C3, 3/4 - brake job. | | |
| Brake Parts | 9 | | | | 9 | claned insp | 4.5 |
| BS/LS | 1 | 2/23/2012 | Rebuild | 12/6/2012 | Is removed from c2 for bent arm. Rebuilt, tested good. Put in inventory. | | |
| BS/LS | 1 | | | | 1 | Rebuilt | 5 |
| BS/LS Aux Arm | 1 | 8/17/2008 | Rebuild | 8/17/2008 | C9, BS, left - hammered. One spring was mis-shaped - replaced. | | |
| BS/LS Aux Arm | 1 | 8/18/2008 | Rebuild | 8/17/2008 | C4, LS - flakey contacts. | | |
| BS/LS Aux Arm | 1 | 10/1/2008 | Rebuild | 10/20/2008 | C1 | | |
| BS/LS Aux Arm | 1 | 7/1/2009 | Rebuild | 10/18/2009 | C1 - LS1 switch (left) cause no reverser operation (IC,RK) | | |
| BS/LS Aux Arm | 1 | 8/19/2009 | Rebuild | 10/18/2009 | C6, BS, LH - pulled to t/shoot intermittent reversal problems. | | |
| BS/LS Aux Arm | 2 | 11/4/2009 | Rebuild | 1/19/2010 | C4 - pulled to troubleshoot dynamic brake fails - no fix. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| BS/LS Aux Arm | 1 | 2/15/2010 | Rebuild | 3/11/2010 | C6, RH BS - poor meter readings. Awaiting parts. -- Rebuilt. | | |
| BS/LS Aux Arm | 1 | 3/11/2010 | Rebuild | 3/11/2010 | Unknown location | | |
| BS/LS Aux Arm | 2 | 4/22/2010 | Rebuild | 5/2/2010 | C4 - Reverser failure t/shooting | | |
| BS/LS Aux Arm | 1 | 3/22/2010 | Rebuild | 6/10/2010 | Unknown car, irregular readings. Replaced contacts. | | |
| BS/LS Aux Arm | 1 | 7/9/2010 | Rebuild | 8/5/2010 | C10, LH - broken contact. Replaced broken contact. | | |
| BS/LS Aux Arm | 1 | 8/5/2010 | Rebuild | 8/20/2010 | C9, BS, RH - bad reading. Replaced contacts and cleaned up. | | |
| BS/LS Aux Arm | 1 | 8/13/2010 | Rebuild | 8/20/2010 | C5, LS, RH - high resistance. Replaced contacts and cleaned up. | | |
| BS/LS Aux Arm | 1 | 8/13/2010 | Rebuild | 8/20/2010 | C7, LS, LH - flaky resistance. Replaced contacts and cleaned up. | | |
| BS/LS Aux Arm | 1 | 8/12/2010 | Rebuild | 8/20/2010 | C2, LS, RH - bad readings. Replaced contacts and cleaned up. | | |
| BS/LS Aux Arm | 1 | 8/13/2010 | Rebuild | 8/20/2010 | C5, LS, LH - high resistance. Replaced contacts and cleaned up. | | |
| BS/LS Aux Arm | 1 | 10/7/2010 | Rebuild | 10/11/2010 | C8 | | |
| BS/LS Aux Arm | 1 | 10/11/2010 | Rebuild | 10/27/2010 | C3, RH BS - flakey readings, bent arms and poor alignment. | | |
| BS/LS Aux Arm | 1 | 10/14/2010 | Rebuild | 10/27/2010 | C7, RH LS - flaky resistance. | | |
| BS/LS Aux Arm | 2 | 10/18/2010 | Rebuild | 10/27/2010 | C2 - loose/bent contacts. | | |
| BS/LS Aux Arm | 2 | 10/25/2010 | Rebuild | 10/27/2010 | C1 - bent and worn. | | |
| BS/LS Aux Arm | 2 | 9/13/2010 | Rebuild | 11/17/2010 | C10 - reversal issues. Replaced contacts. | | |
| BS/LS Aux Arm | 1 | 9/10/2010 | Rebuild | 11/17/2010 | C7, LH BS - high resistance. Awaiting parts. Replaced contacts. | | |
| BS/LS Aux Arm | 1 | 10/18/2010 | Rebuild | 11/17/2010 | C9 - loose/bent contacts. Replaced contacts. | | |
| BS/LS Aux Arm | 1 | 12/8/2010 | Rebuild | 1/19/2011 | C6, LS, RH - flakey resistance. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 11/17/2010 | Rebuild | 4/17/2011 | C10 - fail to reverse (LS1 not picking). Awaiting parts. Rebuilt with new parts. | | |
| BS/LS Aux Arm | 9 | 4/17/2011 | Rebuild | 4/17/2011 | Exhausted stock of parts for arms requiring rebuild. | | |
| BS/LS Aux Arm | 1 | 5/30/2011 | Rebuild | 6/2/2011 | C9, BS, LH - flakey. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 5/31/2011 | Rebuild | 6/2/2011 | C8, LS, RH - flakey. Rebuilt | | |

02723

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| BS/LS Aux Arm | 1 | 6/1/2011 | Rebuild | 6/23/2011 | C8, BS, LH - flakey. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 6/12/2011 | Rebuild | 6/23/2011 | C9, BS, LH - reading over 1 ohm. Contacts in good condition. Put back in stock. | | |
| BS/LS Aux Arm | 1 | 7/6/2011 | Rebuild | 9/15/2011 | C4, LS, RH - caused no fwd direction and reversal issues. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 10/11/2011 | Rebuild | 10/13/2011 | C5, BS, LH - flakey operation, causing zero speed loss. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 11/11/2011 | Rebuild | 11/17/2011 | C8, LS, LH - Pulled for high resistance. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 11/14/2011 | Rebuild | 11/17/2011 | C9, LS, RH - removed for loss of vital zero speed alarm. Rebuilt. | | |
| BS/LS Aux Arm | 1 | 3/8/2012 | Rebuild | 3/18/2012 | from C10, rebuilt and returned to stock. | | |
| BS/LS Aux Arm | 5 | 3/18/2012 | Rebuild | 3/18/2012 | Pulled from inventory for imporoper rebuild. Rebuilt and returned to inventory. | | |
| BS/LS Aux Arm | 54 | | | | 54 | 54 rebuilt | 27 |
| BS/LS Aux Contact Block | 1 | 6/17/2008 | Rebuild | 8/17/2008 | C9, BS, left - fell apart. | | |
| BS/LS Aux Contact Block | 1 | 8/16/2008 | Rebuild | 8/17/2008 | C4, LS - flakey contacts | | |
| BS/LS Aux Contact Block | 1 | 8/13/2008 | Rebuild | 8/17/2008 | C5, RH LS - flakey resistance | | |
| BS/LS Aux Contact Block | 1 | 10/1/2008 | Rebuild | 10/20/2008 | C1 | | |
| BS/LS Aux Contact Block | 1 | 8/3/2009 | Rebuild | 9/16/2009 | LH aux contact block pulled from C1 BS for poor resistance. (PMT) | | |
| BS/LS Aux Contact Block | 1 | 8/19/2009 | Rebuild | 9/16/2009 | C6, BS, LH - pulled to t/shoot intermittent reversal problems. | | |
| BS/LS Aux Contact Block | 1 | 1/18/2010 | Rebuild | 2/23/2010 | C6, RH BS - poor meter readings. Awaiting parts. | | |
| BS/LS Aux Contact Block | 2 | 4/22/2010 | Rebuild | 5/2/2010 | C4 - Reverser failure t/shooting | | |
| BS/LS Aux Contact Block | 1 | 3/22/2010 | Rebuild | 6/10/2010 | Unknown car, irregular readings. Replaced contacts. | | |
| BS/LS Aux Contact Block | 1 | 8/5/2010 | Rebuild | 8/20/2010 | C9, BS, RH - bad reading. Broke block upon disassembly. Scrapped. | | |
| BS/LS Aux Contact Block | 1 | 9/20/2010 | Rebuild | 9/26/2010 | C4, LH LS - loose contact bar. | | |
| BS/LS Aux Contact Block | 1 | 10/7/2010 | Rebuild | 10/11/2010 | C8 - improperly glued contacts destroyed parts. Rebuilt with spare parts. | | |
| BS/LS Aux Contact Block | 1 | 10/14/2010 | Rebuild | 10/26/2010 | C7, RH LS - flaky resistance. | | |
| BS/LS Aux Contact Block | 1 | 10/18/2010 | Rebuild | 10/26/2010 | C9 - loose/bent contacts | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| BS/LS Aux Contact Block | 1 | 10/18/2010 | Rebuild | 10/26/2010 | C2 - loose/bent contacts. | | |
| BS/LS Aux Contact Block | 2 | 10/25/2010 | Rebuild | 10/26/2010 | C1 - bent and worn. | | |
| BS/LS Aux Contact Block | 4 | 9/13/2010 | Rebuild | 11/17/2010 | C10 - reversal issues. Replaced contacts. | | |
| BS/LS Aux Contact Block | 1 | 11/17/2010 | Rebuild | 12/19/2010 | C10 - fail to reverse (LS1 not picking). Awaiting parts | | |
| BS/LS Aux Contact Block | 1 | 5/30/2011 | Rebuild | 6/2/2011 | C9, BS, LH - flakey. Broke block on disassembly. Scrapped. | | |
| BS/LS Aux Contact Block | 1 | 10/11/2011 | Rebuild | 10/13/2011 | C5, BS, LH - flakey operation, causing zero speed loss. Rebuilt. | | |
| BS/LS Aux Contact Block | 1 | 3/8/2012 | Rebuild | 3/18/2012 | from C10, Rebuilt and returned to stock. | | |
| BS/LS Aux Contact Block | 26 | | | | 26 | 23 rebuilt 3 trashed | 11.5 |
| Collector Shoe | 5 | 8/1/2008 | Rebuild | 8/25/2008 | Replaced two worn power shoe sub-assemblies. Cleaned remaining shoes. | | |
| Collector Shoe | 20 | 8/8/2008 | Rebuild | 10/8/2008 | Rejected 12, rebuilt 4, cleaned 4. | | |
| Collector Shoe Sub-assembly | 52 | 8/1/2009 | Rebuild | 8/16/2009 | various places. Cleaned and inspected. Scrapped (14). | | |
| Collector Shoe Sub-assembly | 12 | 1/1/2010 | Rebuild | 1/19/2010 | North train - pulled for questionable wear - 10 cleaned and returned to stock - remaining two stripped for parts and recycling. | | |
| Collector Shoe Sub-assembly | 21 | 5/17/2010 | Rebuild | 5/19/2010 | Collected from several areas. Requires cleaning and inspecting. Seven scrapped. Remainder returned to stock. | | |
| Collector Shoe Sub-assembly | 7 | 6/19/2011 | Rebuild | 6/19/2011 | Various locations, various conditions. Scrapped (5) shoes. Cleaned and returned (2) to stock. | | |
| Collector Shoe Sub-assembly | 12 | 8/8/2011 | Rebuild | 9/19/2011 | Power shoe holder sub-assemblies arrived. Assemble complete power shoe sub-assemblies (holder, insulator block, swivel stem and assorted hardware. | | |
| Collector Shoe Sub-assembly | 14 | 9/13/2011 | Rebuild | 9/19/2011 | Built-up power shoe subassemblies for pending installation on D-tram. | | |
| Collector Shoe Sub-assembly | 143 | | | | 143 | Rebuilt/assm 103 scrap 40 | 25.75 |

02725

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Collector Tree | 1 | 7/1/2008 | Rebuild | 7/24/2008 | | | |
| Collector Tree | 1 | 7/1/2008 | Rebuild | 7/24/2008 | | | |
| Collector Tree | 1 | 8/9/2008 | Rebuild | 8/25/2008 | C10, #1 - bad B-phase arm. | | |
| Collector Tree | 1 | 11/30/2008 | Rebuild | 11/30/2008 | Replacement for #8064. | | |
| Collector Tree | 1 | 11/30/2008 | Rebuild | 11/30/2008 | Unknown location. Bringin inventory up to proper level. | | |
| Collector Tree | 1 | 11/30/2008 | Rebuild | 11/30/2008 | Replacement for #6033. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | Pulled form north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 1 | 4/1/2009 | Rebuild | 4/6/2009 | north - rebuilt for new cars. | | |
| Collector Tree | 3 | 5/1/2009 | Modify | 5/5/2009 | Removed signal arms to conform to new vehicle use. | | |
| Collector Tree | 1 | 9/20/2009 | Rebuild | 9/20/2009 | Rebuilt in preparation of North train install. | | |
| Collector Tree | 1 | 9/20/2009 | Rebuild | 9/20/2009 | Rebuilt in preparation of North train installation. Only A/C swivel pin holes available. | | |
| Collector Tree | 1 | 9/20/2009 | Rebuild | 9/20/2009 | Rebuilt in preparation of North train installation. | | |
| Collector Tree | 1 | 9/20/2009 | Rebuild | 9/20/2009 | Rebuilt in preparation of North train installation. Only BG swivel pin holes available. | | |
| Collector Tree | 1 | 9/20/2009 | Rebuild | 9/20/2009 | Rebuilt in preparation of North train installation. Only A/C swivel pin holes available. | | |
| Collector Tree | 12 | 5/23/2010 | Rebuild | 5/23/2010 | Tore down, discarded unused items, cut arm extensions off of knuckle assembly and serialized. Cleaned and returned to stock. | | |
| Collector Tree | 1 | 8/16/2010 | Rebuild | 8/16/2010 | Replaces worn unit. | | |
| Collector Tree | 1 | 8/16/2010 | Rebuild | 8/16/2010 | Replaces worn unit. | | |
| Collector Tree | 1 | 8/16/2010 | Rebuild | 8/16/2010 | Replaces worn unit. | | |
| Collector Tree | 1 | 6/18/2011 | Repair | 6/19/2011 | C1, 5/6 - 8060 destroyed. Built-up replacement. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Collector Tree | 1 | 6/18/2011 | Rebuild | 7/7/2011 | Replenishing supply. | | |
| Collector Tree | 1 | 7/5/2011 | Rebuild | 7/7/2011 | C9, 5/6 - binding. Rebuilt. | | |
| Collector Tree | 1 | 9/14/2011 | Rebuild | 9/26/2011 | C9, 7/8 - destroyed. Build-up replacement. Only rail and 2 knuckles were reuseable. | | |
| Collector Tree | 1 | 12/21/2011 | Rebuild | 2/10/2012 | C9 B/G for binding. Rebuilt. | | |
| Collector Tree | 1 | 12/21/2011 | Rebuild | 12/11/2012 | C9 pos B/G for binding. Replaced journal bearings, extender arms, an roll pins. This colector tree was rebuilt as an A/C collector tree. | | |
| Collector Tree | 42 | | | | 42 | 39 rebuilt/modified 3 moditied | 79 |
| CSO | 1 | 12/13/2009 | Repair | 12/14/2009 | C3 - air compressor shuts off too high. Found set points set at 130/170 on test stand. Readjusted to 120/155. | | |
| CSO | 1 | 3/22/2010 | Rebuild | 5/31/2010 | C4 - needs to be tested. Test operated good - readjusted range and setpoints. | | |
| CSO | 2 | | | | 2 | 2 tested & adj | 2 |
| Door Edge Contact Roller | 1 | 6/19/2008 | Rebuild | 10/20/2008 | C7, #1 | | |
| Door Edge Contact Roller | 1 | 11/28/2008 | Rebuild | 9/9/2009 | C10, #7 - pulled for constant door edge contact? | | |
| Door Edge Contact Roller | 15 | 9/6/2009 | Rebuild | 9/9/2009 | Most of the rollers were pulled from the west train for PM 506. | | |
| Door Edge Contact Roller | 11 | 10/14/2009 | Rebuild | 10/14/2009 | West PM506 - cleaned up and returned 11 of 16 to stock. | | |
| Door Edge Contact Roller | 6 | 10/14/2009 | Rebuild | 10/18/2009 | West PM506 - replaced bad rollers and returned to stock. | | |
| Door Edge Contact Roller | 3 | 10/18/2009 | Repair | 1/13/2010 | West PM506 - awaiting parts. | | |
| Door Edge Contact Roller | 1 | 10/14/2009 | Rebuild | 1/13/2010 | C3, #1 | | |
| Door Edge Contact Roller | 19 | 1/12/2010 | Rebuild | 1/13/2010 | South | | |
| Door Edge Contact Roller | 12 | 2/10/2010 | Rebuild | 2/11/2010 | South PM506 - boarding side. | | |
| Door Edge Contact Roller | 5 | 2/11/2010 | Rebuild | 2/24/2010 | South PM506 - alighting side. | | |
| Door Edge Contact Roller | 2 | 2/24/2010 | Rebuild | 5/24/2010 | South - awaiting parts | | |
| Door Edge Contact Roller | 3 | 5/4/2010 | Rebuild | 5/24/2010 | unknown location. | | |
| Door Edge Contact Roller | 2 | 5/17/2010 | Rebuild | 5/24/2010 | Mysteriously showed up. | | |
| Door Edge Contact Roller | 5 | 5/26/2010 | Rebuild | 8/15/2010 | South. | | |
| Door Edge Contact Roller | 3 | 8/1/2010 | Rebuild | 8/15/2010 | Unknown location. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door Edge Contact Roller | 9 | 10/1/2010 | Rebuild | 10/1/2010 | 9 rollers, no tag. Scrapped 2, cleaned and inspected 7 - checked good and put in spares. | | |
| Door Edge Contact Roller | 7 | 9/6/2010 | Rebuild | 10/3/2010 | C2 - PM506. Cleaned and inspected. Rebuilt three. | | |
| Door Edge Contact Roller | 8 | 10/8/2010 | Rebuild | 10/15/2010 | C3 - PM506. Cleaned and inspected. All were good, returned to stock. | | |
| Door Edge Contact Roller | 8 | 10/13/2010 | Rebuild | 10/15/2010 | C4 - PM506. Cleaned up and inspected. All were good, returned to stock. | | |
| Door Edge Contact Roller | 2 | 10/21/2010 | Rebuild | 12/30/2010 | C2, 3/4 - constant obstruction. Cleaned up and inspected. Good spares. | | |
| Door Edge Contact Roller | 6 | 11/1/2010 | Rebuild | 12/30/2010 | Unknown reason. Unknown location. Cleaned and inspected. Good spares. | | |
| Door Edge Contact Roller | 23 | 12/28/2010 | Rebuild | 12/30/2010 | Pulled from C5 and C6 for PM 506. Cleaned and inspected. Rebuilt two. All others good. | | |
| Door Edge Contact Roller | 8 | 1/4/2011 | Rebuild | 2/7/2011 | C7 - PM506. | | |
| Door Edge Contact Roller | 3 | 2/6/2011 | Rebuild | 2/7/2011 | Various finds. | | |
| Door Edge Contact Roller | 8 | 2/7/2011 | Rebuild | 2/9/2011 | C10 - PM506. | | |
| Door Edge Contact Roller | 8 | 2/7/2011 | Rebuild | 2/9/2011 | C9 - PM506. | | |
| Door Edge Contact Roller | 1 | 2/8/2011 | Rebuild | 2/13/2011 | C7, leaf 8 - dirty, preventing door edge contacts. Cleaned, inspected and returned to inventory. | | |
| Door Edge Contact Roller | 8 | 2/8/2011 | Rebuild | 2/13/2011 | C6 - PM506. Cleaned and inspected all 8 assemblies, returning 7 to inventory and rebuilding 1 unit before returning it to inventory. | | |
| Door Edge Contact Roller | 4 | 4/1/2011 | Rebuild | 4/5/2011 | Various places. | | |
| Door Edge Contact Roller | 1 | 4/25/2011 | Rebuild | 5/30/2011 | C2, leaf 4 - allows only 19v to wave switch. | | |
| Door Edge Contact Roller | 1 | 5/18/2011 | Rebuild | 5/30/2011 | C5, leaf 1 - grounding? | | |
| Door Edge Contact Roller | 1 | 5/21/2011 | Rebuild | 5/30/2011 | C7, leaf 5 - noise. | | |
| Door Edge Contact Roller | 1 | 5/21/2011 | Rebuild | 5/30/2011 | C5, leaf 6 - grounded. | | |
| Door Edge Contact Roller | 1 | 5/24/2011 | Rebuild | 5/30/2011 | C9, leaf 5 - no recycle, losing voltage through arm. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door Edge Contact Roller | 1 | 5/31/2011 | Rebuild | 6/5/2011 | C5, leaf 6 - no recycle and flakey meter readings. | | |
| Door Edge Contact Roller | 2 | 5/21/2011 | Rebuild | 6/5/2011 | Pulled from supply - did not like the looks of them. Confirmed bad. Rebuilt using four new rollers and two used ones. | | |
| Door Edge Contact Roller | 1 | 6/7/2011 | Rebuild | 6/12/2011 | C9, leaf 8 - flakey voltage readings. | | |
| Door Edge Contact Roller | 1 | 6/7/2011 | Rebuild | 6/12/2011 | C8, leaf 2 - flakey voltage readings. | | |
| Door Edge Contact Roller | 1 | 6/19/2011 | Rebuild | 6/19/2011 | C2, leaf 7 - bad readings? Replaced rollers. | | |
| Door Edge Contact Roller | 1 | 6/26/2011 | Rebuild | 6/27/2011 | C10, leaf 6 - no recycle. | | |
| Door Edge Contact Roller | 1 | 6/28/2011 | Rebuild | 6/29/2011 | C5, leaf 1 - no recycle/bad meter reading. | | |
| Door Edge Contact Roller | 1 | 6/28/2011 | Rebuild | 6/29/2011 | C5, leaf 4 - no recycle and bad readings. | | |
| Door Edge Contact Roller | 1 | 7/7/2011 | Rebuild | 7/11/2011 | C7, leaf #5 - t/shoot constant door edge safety contact. | | |
| Door Edge Contact Roller | 1 | 6/29/2011 | Rebuild | 7/11/2011 | C5, leaf #6 - bad voltage readings. | | |
| Door Edge Contact Roller | 1 | 7/10/2011 | Rebuild | 7/11/2011 | Unknown location. Unknown problem. | | |
| Door Edge Contact Roller | 1 | 8/1/2011 | Rebuild | 9/15/2011 | Unknown location, unknown reason. Cleaned and tested good. | | |
| Door Edge Contact Roller | 2 | 8/27/2011 | Rebuild | 9/15/2011 | C1, Leaf 3/4 - t/shoot constant recycle. Cleaned and tested good. | | |
| Door Edge Contact Roller | 1 | 9/2/2011 | Rebuild | 9/15/2011 | C7, Leaf 6 - constant door recycle. Cleaned and tested good. | | |
| Door Edge Contact Roller | 4 | 9/6/2011 | Rebuild | 9/15/2011 | C1, Leaf 5, 6, 7 & 8 - PM506. Cleaned and tested good. | | |
| Door Edge Contact Roller | 2 | 9/6/2011 | Rebuild | 9/15/2011 | C1, Leaf 1 & 2 - PM506. Cleaned and tested good. | | |
| Door Edge Contact Roller | 2 | 9/6/2011 | Rebuild | 9/15/2011 | C2, leaf 1 & 2 - PM506. Cleaned and tested good. | | |
| Door Edge Contact Roller | 7 | 9/9/2011 | Rebuild | 9/15/2011 | C1, C2 - PM506. Cleaned and tested good. | | |
| Door Edge Contact Roller | 16 | 10/13/2011 | Rebuild | 10/18/2011 | West - PM506. Clean and inspect. Rebuilt as needed and returned all to stock. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door Edge Contact Roller | 26 | 1/3/2012 | Repair | 1/6/2012 | Pulled from North for PM506. 16 LH, 10 RH. Rebuilt 2 RH, 1 LH. Cleaned and inspected the remaining. All 26 good. | | |
| Door Edge Contact Roller | 8 | 1/31/2012 | Rebuild | 3/18/2012 | C9 PM506. rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 1 | 1/6/2012 | Rebuild | 3/18/2012 | C3 pos 7 bad connection. Rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 1 | 3/13/2012 | Rebuild | 3/18/2012 | unknown, rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 1 | 3/27/2012 | Rebuild | 3/27/2012 | No tag. Rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 1 | 3/27/2012 | Rebuild | 4/1/2012 | No tag. Rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 1 | 3/27/2012 | Rebuild | 4/2/2012 | From C10 leaf 6 rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 2 | 4/8/2012 | Rebuild | 4/8/2012 | No tag. Rebuilt and returned to stock. | | |
| Door Edge Contact Roller | 265 | | | | 285 | rebuilt all + 30% | 55.6 |
| Door Operator | 1 | 4/13/2008 | Rebuild | 5/21/2008 | C10, #1 - sheared pin. Replaced worn arm, bearings and pulled sheared pin. | | |
| Door Operator | 1 | 6/7/2008 | Rebuild | 7/2/2008 | C10, #7 - sheared pin. Replaced worn arm shaft and bearings. | | |
| Door Operator | 1 | 5/1/2009 | Modify | 5/13/2009 | Installed new vehicle modifications. | | |
| Door Operator | 1 | 5/1/2009 | Modify | 5/13/2009 | Installed new vehicle modifications. | | |
| Door Operator | 1 | 8/1/2009 | Repair | 2/5/2010 | C3, #7 - Intermittant loss of power. Rebuilt gearbox, tested good. Put in spares. | | |
| Door Operator | 1 | 2/3/2010 | RMR | 2/5/2010 | Returned from RMR (bent arm) - not electrically tested. Tested good. | | |
| Door Operator | 1 | 5/19/2010 | Repair | 5/20/2010 | C3, #5 - locked up operator arm. Broken clip allowed spiroid gear to enter gearbox further, jamming assembly. | | |
| Door Operator | 1 | 4/28/2010 | Rebuild | 7/1/2010 | C3, #6 - Arm siezed in down position. Replaced damaged retaining ring for bearing and worm bushings in gearbox. Spiroid pinion gear clip broke - caused pinion gear to travel into spiroid gear, causing jam. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door Operator | 1 | 7/20/2010 | Repair | 8/11/2010 | C3, #2 - does not operate. Spiroid gear jammed. Spiroid pinion shaft c-clip became dislodged allowing the shaft to back into the motor housing and jamming the gears. Replaced ball bearing, clip, sleeve bearing, reshimmed gear and blown diode (term 1/ | | |
| Door Operator | 1 | 11/29/2010 | Rebuild | 12/18/2010 | C3, #3 - non operational. Gearbox rebuild not required. Replace broken bracket and switch, cleaned up, tested good. | | |
| Door Operator | 1 | 9/10/2010 | Repair | 6/1/2011 | C2, #4 - no operation. Awaiting grease. Replaced sleeve bearings. Replaced drive motor for binding pinion gears. | | |
| Door Operator | 1 | 7/29/2010 | Rebuild | 6/7/2011 | C5, #3 - numerous operational problems. Replaced sleeve bearings. Noted arm is twisted, slightly. | | |
| Door Operator | 1 | 12/10/2011 | Repair | 1/2/2012 | C5 leaf 5 for C/L issues. Adj LS-1 and replaced contact block. | | |
| Door Operator | 1 | 10/25/2011 | Repair | 1/16/2012 | C3, leaf 8 - for failure to close. Rpl contact block & LS 4 & 5 switches. Op checked good. | | |
| Door Operator | 14 | | | | 14 | 9 rebuilt 2 mod 3 repaired | 32 |
| Door Roller Bearings | 36 | 9/6/2009 | Rebuild | 9/9/2009 | Most of the roller bearings were pulled from the west train for PM506. | | |
| Door Roller Bearings | 64 | 10/14/2009 | Rebuild | 10/14/2009 | West PM506. 54 passed and returned to stock. | | |
| Door Roller Bearings | 32 | 1/11/2010 | Rebuild | 1/12/2010 | South - cleaned, inspected and returned to stock. | | |
| Door Roller Bearings | 32 | 1/12/2010 | Rebuild | 1/13/2010 | South - cleaned, inspected and returned to stock - all, but, one. | | |
| Door Roller Bearings | 48 | 2/10/2010 | Rebuild | 2/11/2010 | South PM506 - boarding side. | | |
| Door Roller Bearings | 24 | 9/7/2010 | Rebuild | 9/7/2010 | PM506 from car-2 | | |
| Door Roller Bearings | 24 | 10/8/2010 | Rebuild | 10/14/2010 | C3 - PM506. Cleaned up bearings, scrapped 1. 23 good put in spares. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Door Roller Bearings | 27 | 10/13/2010 | Rebuild | 10/15/2010 | C4 - PM506. Cleaned up and lubed 25, scrapped 2. | | |
| Door Roller Bearings | 32 | 2/7/2011 | Rebuild | 2/8/2011 | C10 - PM506. | | |
| Door Roller Bearings | 64 | 9/9/2011 | Rebuild | 9/15/2011 | Pulled for PM506. Clean, lubricate and inspect. Cleaned, inspected, and lubed up. Scrapped 3. | | |
| Door Roller Bearings | 2 | 10/6/2011 | Rebuild | 10/17/2011 | C8, leaf 5 - PM60 rough rollers. Both trashed. | | |
| Door Roller Bearings | 36 | 10/13/2011 | Rebuild | 10/17/2011 | West - PM506. Clean and inspect. 26 returned to stock. | | |
| Door Roller Bearings | 25 | 10/13/2011 | Rebuild | 10/17/2011 | West - PM506. Clean and inspect. 18 returned to stock. | | |
| Door Roller Bearings | 60 | 1/3/2012 | Repair | 1/6/2012 | Pulled from North for PM506. Cleaned and inspected 52, scrapped 8. | | |
| Door Roller Bearings | 506 | | | | 506 | 54 scraped | 50.6 |
| Door Slide Channel | 1 | 3/8/2010 | Rebuild | 4/12/2010 | C5, #1 - delrin strip broken. Replace. Install new nut at pivot point. | | |
| Door Slide Channel | 1 | 10/2/2010 | Repair | 10/3/2010 | C4, #5 - teflon strip worn through and made into an accordian. | | |
| Door Slide Channel | 4 | 11/1/2010 | Repair | 12/29/2010 | inventory. Requires delrin installed. | | |
| Door Slide Channel | 6 | | | | 6 | rebuilt all | 3 |
| Equalizer (Crossfire) | 1 | 5/9/2008 | Rebuild | 6/16/2008 | C4, 7/8 - brake job. | | |
| Equalizer (Crossfire) | 1 | 5/13/2008 | Rebuild | 6/16/2008 | C4, 1/2 - brake job. | | |
| Equalizer (Crossfire) | 1 | 6/1/2008 | Rebuild | 6/16/2008 | C7, 7/8 - ? | | |
| Equalizer (Crossfire) | 1 | 6/2/2008 | Rebuild | 6/16/2008 | C4, 3/4 - brake job. | | |
| Equalizer (Crossfire) | 1 | 8/9/2008 | Rebuild | 6/16/2008 | C3, 5/6 - brake job. | | |
| Equalizer (Crossfire) | 1 | 8/7/2008 | Rebuild | 10/14/2008 | C6, 5/6 - showing all black although tire gauge shows 120psi. | | |
| Equalizer (Crossfire) | 1 | 7/25/2008 | Repair | 10/15/2008 | C3, 5/6 - broken fitting from brake job. | | |
| Equalizer (Crossfire) | 1 | 7/8/2008 | Rebuild | 10/15/2008 | C4, 5/6 - leaking from | | |
| Equalizer (Crossfire) | 1 | 8/28/2008 | Rebuild | 10/15/2008 | C10, 5/6 - leaks? | | |
| Equalizer (Crossfire) | 1 | 2/10/2009 | Rebuild | 2/10/2009 | C10, 1/2 - rebuilt and re-installed. | | |
| Equalizer (Crossfire) | 10 | | | | 10 | | 2 |
| Filler Strip | 1 | 8/1/2008 | Rebuild | 10/21/2009 | ?? | | |
| Filler Strip | 1 | 8/5/2008 | Rebuild | 10/21/2009 | S/M, B2, 3/4 - sagging. | | |
| Filler Strip | 1 | 9/28/2009 | Rebuild | 10/21/2009 | S/M, B1, 5/6 | | |
| Filler Strip | 1 | 9/28/2009 | Rebuild | 10/21/2009 | S/M, B3, 7/8 | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Filler Strip | 1 | 1/22/2011 | Rebuild | 4/1/2011 | N/M, B2, 1/2 - rubber detaching from aluminum plate. Glued rubber to aluminum plate. | | |
| Filler Strip | 1 | 4/26/2011 | Rebuild | 6/19/2011 | S/M, B2, 3/4 - drooping. | | |
| Filler Strip | 6 | | | | 6 | cleaned reattached seal | 9 |
| FSE Package | 1 | 7/9/2008 | Rebuild | 7/14/2008 | C5 - PM602. | | |
| FSE Package | 1 | 7/9/2008 | Rebuild | 7/14/2008 | C6 - PM602. | | |
| FSE Package | 1 | 7/9/2008 | Rebuild | 7/14/2008 | C7 - PM602. | | |
| FSE Package | 1 | 7/14/2008 | Rebuild | 7/18/2008 | C8 - PM602. | | |
| FSE Package | 1 | 7/14/2008 | Rebuild | 7/18/2008 | C9 - PM602. | | |
| FSE Package | 1 | 7/14/2008 | Rebuild | 7/18/2008 | C10 - PM602. | | |
| FSE Package | 1 | 10/8/2008 | Rebuild | 11/20/2008 | C6 - pulled to tshoot air leakage rate problems. Probably good. Cleaned up and tested good. | | |
| FSE Package | 1 | 11/19/2008 | Rebuild | 11/20/2008 | C8 - test and release/ fix. Cleaned up and tested good. | | |
| FSE Package | 1 | 4/1/2009 | Rebuild | 4/13/2009 | C6. | | |
| FSE Package | 1 | 4/1/2009 | Rebuild | 4/13/2009 | C7. | | |
| FSE Package | 1 | 10/1/2009 | Rebuild | 10/26/2009 | South train prior to it's permanent departure. | | |
| FSE Package | 1 | 10/1/2009 | Rebuild | 10/26/2009 | South train prior to it's permanent departure. | | |
| FSE Package | 1 | 5/31/2009 | Rebuild | 2/2/2010 | C5 - FSE2 leaks. Warranty. | | |
| FSE Package | 1 | 10/20/2009 | Rebuild | 2/2/2010 | C7 - FSE1 valve leaks by. Warranty. | | |
| FSE Package | 1 | 10/21/2009 | Rebuild | 2/2/2010 | C7 - FSE1 leaks by. Warranty. | | |
| FSE Package | 1 | 12/26/2009 | Rebuild | 2/2/2010 | C1 - leaking from RH QRV. Warranty. | | |
| FSE Package | 1 | 2/13/2010 | Rebuild | 3/4/2010 | C9 - warranty - FSE1 valve leaks. Rebuilt both FSEs and QRVs. Leak and ops chk good. | | |
| FSE Package | 1 | 3/30/2010 | Rebuild | 7/10/2010 | C6 - leaks through exhaust port when powered down | | |
| FSE Package | 1 | 4/7/2010 | Rebuild | 7/10/2010 | C4 - leaks through exhaust port | | |
| FSE Package | 1 | 8/30/2010 | Rebuild | 9/24/2010 | C7 - leaks. Rebuilt, requires testing. Rebuilt, tested good. | | |
| FSE Package | 1 | 9/16/2010 | Rebuild | 9/24/2010 | C7 - PM602, check for proper operation, only had fifteen day run time. Tested good. | | |
| FSE Package | 1 | 9/16/2010 | Rebuild | 9/29/2010 | C5 - PM602. | | |

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|---|---|---|---|---|---|---|---|
| FSE Package | 1 | 9/16/2010 | Rebuild | 9/29/2010 | C6 - PM602. | | |
| FSE Package | 1 | 11/11/2010 | Rebuild | 11/22/2010 | C3 - PM602. Rebuilt and tested good. | | |
| FSE Package | 1 | 11/11/2010 | Rebuild | 12/6/2010 | C1 - PM602 | | |
| FSE Package | 1 | 11/11/2010 | Rebuild | 12/6/2010 | C2 - PM602 | | |
| FSE Package | 1 | 12/1/2010 | Rebuild | 12/6/2010 | C9 - pulled for t/shooting brake and proulsion problems - no fix. Rebuild. | | |
| FSE Package | 1 | 12/7/2010 | Rebuild | 1/8/2011 | C10 - PM - rebuilt QRV's #77 and #78, replaced valves.and test operated good. | | |
| FSE Package | 1 | 12/7/2010 | Rebuild | 1/8/2011 | C8 - PM. Rebuilt QRV's #79 and #80 and both FSE valves. | | |
| FSE Package | 1 | 1/1/2012 | Rebuild | 1/9/2012 | C7 leak out of FSE1 muffler. Rebuilt, tested & placed in stock. | | |
| FSE Package | 1 | 2/1/2012 | Rebuild | 3/12/2012 | C3 PM 602. rebuilt tested good. | | |
| FSE Package | 1 | 2/1/2012 | Rebuild | 3/12/2012 | C4 PM 602, rebuilt tested good. | | |
| FSE Package | 1 | 3/16/2012 | Rebuild | 4/13/2012 | C5 for PM602. Rebuilt, tested good. | | |
| FSE Package | 1 | 3/16/2012 | Rebuild | 4/13/2012 | C6 for PM602. Rebuilt, tested good. | | |
| FSE Package | 1 | 3/16/2012 | Rebuild | 4/13/2012 | C7 for PM602. Rebuilt, tested good. | | |
| FSE Package | 35 | | | | 35 | | 70 |
| FSE Valve | 2 | 7/18/2008 | Rebuild | 7/18/2008 | FSE Pkg #005 | | |
| FSE Valve | 2 | 7/18/2008 | Rebuild | 7/18/2008 | FSE Pkg #006 | | |
| FSE Valve | 2 | 7/18/2008 | Rebuild | 7/18/2008 | FSE Pkg #004 | | |
| FSE Valve | 2 | 7/14/2008 | Rebuild | 7/23/2008 | FSE Pkg #001. | | |
| FSE Valve | 2 | 7/14/2008 | Rebuild | 7/23/2008 | FSE Pkg #009. | | |
| FSE Valve | 2 | 7/14/2008 | Rebuild | 7/23/2008 | FSE Pkg #002. | | |
| FSE Valve | 2 | 4/1/2009 | Rebuild | 4/13/2009 | FSE Pkg #007. | | |
| FSE Valve | 2 | 10/1/2008 | Rebuild | 10/25/2009 | C2 - Rebuilt. | | |
| FSE Valve | 2 | 4/1/2009 | Rebuild | 10/25/2009 | FSE Pkg #007. Awaiting parts. Rebuilt. | | |
| FSE Valve | 4 | 10/1/2009 | Rebuild | 2/1/2010 | FSE Pkg #001 and #006. Valve numbers: 012-015. | | |
| FSE Valve | 4 | 2/1/2010 | Rebuild | 2/1/2010 | FSE Pkg #011 and #012. | | |
| FSE Valve | 1 | 2/2/2010 | Repair | 5/4/2010 | Leaks by exhaust port. Lower valve rubber part was not properly installed in shuttle. Corrected. | | |
| FSE Valve | 1 | 4/1/2010 | Rebuild | 5/4/2010 | unknown package | | |
| FSE Valve | 1 | 4/1/2010 | Rebuild | 5/4/2010 | unknown package | | |
| FSE Valve | 1 | 4/1/2010 | Rebuild | 5/4/2010 | unknown package | | |
| FSE Valve | 1 | 4/1/2010 | Rebuild | 5/4/2010 | unknown package | | |

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|---|---|---|---|---|---|---|---|
| FSE Valve | 2 | 9/1/2010 | Rebuild | 10/4/2010 | #024 and #025 pulled from package #003 | | |
| FSE Valve | 2 | 9/29/2010 | Rebuild | 10/4/2010 | #026 and #027 pulled from FSE Pkg #007. | | |
| FSE Valve | 2 | 9/29/2010 | Rebuild | 10/4/2010 | #019 and #017 pulled from FSE pkg #014 | | |
| FSE Valve | 2 | 11/16/2010 | Rebuild | 6/1/2011 | #028 and 029 - pulled from #018. Awaiting parts. | | |
| FSE Valve | 2 | 12/6/2010 | Rebuild | 6/20/2011 | #004 and 030 - pulled from #002. Awaiting parts. | | |
| FSE Valve | 2 | 12/6/2010 | Rebuild | 6/20/2011 | #002 and 031 - pulled from #001. Awaiting parts. | | |
| FSE Valve | 2 | 12/6/2010 | Rebuild | 6/20/2011 | #011 and 016 - pulled from #013. Awaiting parts. | | |
| FSE Valve | 2 | 1/6/2011 | Rebuild | 6/20/2011 | #032 and 033 - pulled from #020. Awaiting parts. | | |
| FSE Valve | 2 | 1/9/2012 | Rebuild | 1/11/2012 | Removed from FSE Package #017 rebuilt and placed in stock. | | |
| FSE Valve | 49 | | | | 49 | | 24.5 |
| Guide Spindle | 1 | 7/1/2009 | Rebuild | 7/12/2009 | | | |
| Guide Spindle | 1 | 7/1/2009 | Rebuild | 7/12/2009 | | | |
| Guide Spindle | 8 | 10/1/2009 | Rebuild | 10/16/2009 | Assembled for anticipated North change-out. | | |
| Guide Spindle | 4 | 9/26/2009 | Rebuild | 10/23/2009 | C5, #2 - no paperwork. Rebuilt in preparation of North PM500. | | |
| Guide Spindle | 4 | 10/21/2009 | Rebuild | 10/23/2009 | Preparation of North PM500. | | |
| Guide Spindle | 8 | 10/28/2009 | Rebuild | 10/30/2009 | Built up in preparation of North's PM500. | | |
| Guide Spindle | 8 | 11/11/2009 | Rebuild | 11/15/2009 | Rebuilt for South PM500 in December. | | |
| Guide Spindle | 8 | 11/29/2009 | Rebuild | 11/29/2009 | Rebuilt for South PM500. | | |
| Guide Spindle | 8 | 12/30/2009 | Rebuild | 1/1/2010 | C1 - PM500. Rebuilt and installed on C2. | | |
| Guide Spindle | 8 | 2/24/2010 | Rebuild | 2/24/2010 | Assembled in preparation of changeout. | | |
| Guide Spindle | 8 | 10/1/2010 | Rebuild | 10/20/2010 | Prep for North PM500 | | |
| Guide Spindle | 8 | 10/1/2010 | Rebuild | 10/25/2010 | Prep for North PM500 | | |
| Guide Spindle | 8 | 10/1/2010 | Rebuild | 10/25/2010 | Prep for North PM500 | | |
| Guide Spindle | 4 | 10/1/2010 | Rebuild | 10/31/2010 | Prep for South PM500 | | |

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|---|---|---|---|---|---|---|---|
| Guide Spindle | 7 | 11/4/2010 | Rebuild | 11/4/2010 | Prep for South PM500 | | |
| Guide Spindle | 8 | 12/10/2010 | Rebuild | 12/10/2010 | Built up to replace guide spindle assemblies pulled for bad hubs found during ultrasound testing. | | |
| Guide Spindle | 8 | 12/13/2010 | Rebuild | 12/13/2010 | Built up to replace guide spindle assemblies pulled for bad hubs found during ultrasound testing. | | |
| Guide Spindle | 5 | 12/16/2010 | Rebuild | 12/16/2010 | Built up, to complete PM501. | | |
| Guide Spindle | 4 | 12/16/2010 | Rebuild | 12/16/2010 | Built up, for spares. | | |
| Guide Spindle | 8 | 8/1/2011 | Rebuild | 8/17/2011 | Preparing for upcoming PM | | |
| Guide Spindle | 8 | 8/1/2011 | Rebuild | 8/27/2011 | Preparing for upcoming PM | | |
| Guide Spindle | 8 | 11/4/2011 | Rebuild | 11/4/2011 | Pulled from North tram for PM500. Rebuilt. | | |
| Guide Spindle | 8 | 11/11/2011 | Rebuild | 12/3/2011 | C8 - PM500 | | |
| Guide Spindle | 8 | 11/15/2011 | Rebuild | 12/12/2011 | C9 - PM500 | | |
| Guide Spindle | 8 | 11/9/2011 | Rebuild | 12/15/2011 | C10 - PM500. Rebuilt. | | |
| Guide Spindle | 166 | | | | 166 | | 415 |
| Guide Tire | 1 | 7/5/2008 | Rebuild | 7/17/2008 | C4, #8 - flat. | | |
| Guide Tire | 1 | 9/13/2008 | Rebuild | 1/26/2009 | C9, #4 - chunk of center tread missing. | | |
| Guide Tire | 1 | 11/7/2008 | Rebuild | 1/26/2009 | C8, #2 - worn. | | |
| Guide Tire | 1 | 1/24/2009 | Rebuild | 1/26/2009 | C9, #1 - numerous cracks (ED) | | |
| Guide Tire | 3 | 3/7/2010 | Rebuild | 3/8/2010 | Bored. | | |
| Guide Tire | 1 | 8/26/2010 | Repair | 9/24/2010 | C10, #5 - undersized. Replaced worn guide tire. | | |
| Guide Tire | 2 | 8/29/2010 | Repair | 9/30/2010 | C1, #2 and #7 - below tolerance. | | |
| Guide Tire | 7 | 10/1/2010 | Rebuild | 11/1/2010 | Prep for North PM500 | | |
| Guide Tire | 1 | 5/9/2011 | Rebuild | 5/26/2011 | C4, #1 - worn. Rebuilt. | | |
| Guide Tire | 1 | 5/30/2011 | Rebuild | 6/2/2011 | C2, #5 - below tolerance. Rebuilt. | | |
| Guide Tire | 1 | 6/20/2011 | Rebuild | 7/8/2011 | C8, #1 - worn. Rebuilt. | | |
| Guide Tire | 1 | 8/29/2011 | Rebuild | 9/5/2011 | C4, #8 - worn. Disassembled, cleaned and returned rims and hardware to stock. | | |
| Guide Tire | 1 | 9/11/2011 | Rebuild | 9/25/2011 | C2, #4 - worn. Returned rims to inventory. | | |
| Guide Tire | 2 | 10/15/2011 | Rebuild | 10/21/2011 | C1, #2 and #7 - worn. Disassembled and scrapped rubber. | | |
| Guide Tire | 1 | 10/20/2011 | Rebuild | 10/21/2011 | C8 #2 - removed for wear. Rebuilt. | | |

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|---|---|---|---|---|---|---|---|
| Guide Tire | 1 | 10/20/2011 | Rebuild | 10/21/2011 | C8 #3 - removed for wear. Disassembled and scrapped rubber. | | |
| Guide Tire | 1 | 10/20/2011 | Rebuild | 10/21/2011 | C9 #3 - removed for wear. Disassembled and scrapped rubber. | | |
| Guide Tire | 3 | 10/24/2011 | Rebuild | 12/29/2011 | Pulled from East tram for wear. Disassmbled and scrapped. | | |
| Guide Tire | 1 | 11/13/2011 | Rebuild | 12/29/2011 | C4, #2 - Pulled for wear. Disassmbled and scrapped. | | |
| Guide Tire | 2 | 1/1/2012 | Rebuild | 1/8/2012 | C2 pulled for wear.Tore apart inspected rim halfs and returned to stock. | | |
| Guide Tire | 33 | | | | 33 | | 24.75 |
| Hub/Drum | 1 | 5/7/2008 | Rebuild | 5/14/2008 | C8, 7/8 brake job. | | |
| Hub/Drum | 1 | 5/9/2008 | Rebuild | 5/14/2008 | C4, 7/8 - brake job. | | |
| Hub/Drum | 1 | 6/2/2008 | Rebuild | 7/4/2008 | C4, 3/4 - brake job. Broke down and cleaned up. Awaiting drum. | | |
| Hub/Drum | 1 | 6/9/2008 | Rebuild | 7/4/2008 | C3, 5/6 - brake job. Broke down and cleaned up. Awaiting drum. | | |
| Hub/Drum | 1 | 7/4/2008 | Rebuild | 7/9/2008 | C3, 3/4 - brake job. | | |
| Hub/Drum | 1 | 7/22/2008 | Rebuild | 7/25/2008 | C3, 5/6 - brake job. | | |
| Hub/Drum | 1 | 7/25/2008 | Rebuild | 7/26/2008 | C3, 1/2 - brake job. Cleaned up and replaced seal. | | |
| Hub/Drum | 1 | 8/8/2008 | Rebuild | 8/10/2008 | C4, 7/8 - seal leak. Cleaned up, replaced seal, reused brake drum. Tagged for C-cars only. | | |
| Hub/Drum | 1 | 9/10/2009 | Repair | 9/10/2009 | C7, 3/4 - leaking hub. Pulled and replaced with warranty part. Pulled hub had bad bearing and race. | | |
| Hub/Drum | 1 | 10/28/2009 | Rebuild | 10/29/2009 | C5, 5/6 - leaking seal. Rebuilt. Had pitted bearings. | | |
| Hub/Drum | 1 | 12/15/2009 | Rebuild | 12/16/2009 | C7, 1/2 - oil seal leaking. | | |
| Hub/Drum | 1 | 12/24/2009 | Rebuild | 12/25/2009 | C10, 3/4 - pulled for high iron content? | | |
| Hub/Drum | 1 | 12/24/2009 | Rebuild | 12/25/2009 | C10, 5/6 - pulled for high iron content? | | |
| Hub/Drum | 2 | 1/6/2010 | Rebuild | 1/7/2010 | C10, #1 axle - Axle Tech and Timken working on axle | | |
| Hub/Drum | 2 | 1/13/2010 | Rebuild | 1/14/2010 | C9, #2 end axle. | | |
| Hub/Drum | 2 | 1/20/2010 | Rebuild | 1/21/2010 | C8, #2 | | |

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|---|---|---|---|---|---|---|---|
| Hub/Drum | 2 | 1/27/2010 | Rebuild | 2/1/2010 | C8, #1 - axle. | | |
| Hub/Drum | 2 | 2/3/2010 | Rebuild | 2/4/2010 | C4, #1 - pulled for oil/bearing change-out. | | |
| Hub/Drum | 1 | 2/25/2010 | Rebuild | 2/26/2010 | C5, 3/4 - seal leak. | | |
| Hub/Drum | 1 | 3/10/2010 | Rebuild | 3/17/2010 | C6, 3/4 - ongoing inspection | | |
| Hub/Drum | 1 | 3/10/2010 | Rebuild | 3/17/2010 | C6, 5/6 - ongoing inspection | | |
| Hub/Drum | 1 | 3/25/2010 | Rebuild | 3/31/2010 | C7, 7/8 - ongoing inspection | | |
| Hub/Drum | 2 | 5/5/2010 | Rebuild | 5/7/2010 | C6, #1 - bearing change-out. | | |
| Hub/Drum | 1 | 10/12/2010 | Rebuild | 10/15/2010 | C3, 3/4 - seal breaking down - requires replacement. Cleaned up hub and bearings, reused bearing. Installed new seal. | | |
| Hub/Drum | 1 | 3/29/2011 | Rebuild | 3/31/2011 | C5, 3/4 - pitting bearings. Cleaned and rebuilt. | | |
| Hub/Drum | 1 | 8/12/2011 | Rebuild | 8/17/2011 | C9, 5/6 - leaking seal. | | |
| Hub/Drum | 1 | 9/14/2011 | Rebuild | 9/29/2011 | C9, 7/8 - leak. Rebuilt. | | |
| Hub/Drum | 1 | 11/9/2011 | Rebuild | 11/14/2011 | C7, 1/2 - leaking seal. Replaced bearings and seal. | | |
| Hub/Drum | 1 | 11/16/2011 | Rebuild | 11/29/2011 | C8 5/6 for leaky seal. Old bearings were starting to pit, and oil was caked and sticky with metal flakes present. | | |
| Hub/Drum | 1 | 1/27/2012 | Rebuild | 1/28/2012 | C10 pos 5/6 for leak. Rebuilt. | | |
| Hub/Drum | 36 | | | | 36 | | 108 |
| Leveling Valve | 1 | 8/9/2008 | Rebuild | 11/21/2008 | C9, 3/4 - leaks. Requires new brass adapter fittings. Otherwise rebuilt. MM says he "rebuilt" this one and it tested good. No other pertinent information available. | | |
| Leveling Valve | 1 | 10/18/2008 | Rebuild | 11/21/2008 | C8, 3/4 - leaks. Rebuilt and tested good. | | |
| Leveling Valve | 1 | 11/28/2008 | Rebuild | 12/10/2009 | C8, #1 - leaking. Removed preservative, rebuilt and tested good. | | |
| Leveling Valve | 1 | 12/26/2009 | Rebuild | 2/7/2010 | C9, 5/6 - arm sticking/releasing air. Pulled apart. | | |
| Leveling Valve | 1 | 1/1/2010 | Rebuild | 2/17/2010 | | | |
| Leveling Valve | 1 | 4/11/2010 | Rebuild | 4/28/2010 | C4, #1 - air leaking out side. | | |
| Leveling Valve | 1 | 5/29/2010 | Rebuild | 6/3/2010 | C5, 3/4 | | |
| Leveling Valve | 1 | 6/1/2010 | Rebuild | 6/3/2010 | C8, 5/6 - poor operation. | | |
| Leveling Valve | 1 | 6/22/2010 | Rebuild | 6/27/2010 | C8, 3/4 - slow reaction. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Leveling Valve | 1 | 6/25/2010 | Rebuild | 6/27/2010 | C7, 5/6 - not leveling. | | |
| Leveling Valve | 1 | 6/26/2010 | Rebuild | 7/14/2010 | C6, 5/6 - poor performance. | | |
| Leveling Valve | 1 | 9/9/2010 | Repair | 9/29/2010 | C8, #1 - does not respond. | | |
| Leveling Valve | 1 | 9/15/2010 | Repair | 10/3/2010 | C10, 5/6 - does not respond. | | |
| Leveling Valve | 1 | 10/23/2010 | Rebuild | 12/10/2010 | C6, 3/4 - not operating. Rebuilt, tested good. | | |
| Leveling Valve | 1 | 11/21/2010 | Rebuild | 12/10/2010 | C1, #1 - Rebuilt, tested good. | | |
| Leveling Valve | 1 | 11/21/2010 | Rebuild | 12/10/2010 | C7, #1 - sticks high. Rebuilt, tested good. | | |
| Leveling Valve | 1 | 12/4/2010 | Rebuild | 12/12/2010 | C8, #1 - leaks (where?) | | |
| Leveling Valve | 1 | 12/16/2010 | Rebuild | 12/19/2010 | C10, 3/4 - leaks. | | |
| Leveling Valve | 1 | 12/16/2010 | Repair | 12/19/2010 | C10, 3/4 - leaks at the top of the bulkhead fitting. Cleaned out bulkhead fitting and tested good. | | |
| Leveling Valve | 1 | 2/13/2011 | Rebuild | 2/28/2011 | C8, #1 end - slow operation. | | |
| Leveling Valve | 1 | 2/26/2011 | Rebuild | 2/28/2011 | C6, #1 end - unresponsive. | | |
| Leveling Valve | 1 | 3/28/2011 | Rebuild | 3/31/2011 | C8, #1 end - poor reaction/dead spot. Rebuilt and tested good. | | |
| Leveling Valve | 1 | 4/17/2011 | Rebuild | 4/28/2011 | C10, #1 end. Does not work. Rebuilt, tested good. | | |
| Leveling Valve | 1 | 5/11/2011 | Rebuild | 6/5/2011 | C8, 5/6 - poor reaction, sticking. Rebuilt. | | |
| Leveling Valve | 1 | 5/30/2011 | Rebuild | 6/5/2011 | C10, 3/4 - poor leveling. Rebuilt. | | |
| Leveling Valve | 1 | 8/30/2011 | Rebuild | 9/5/2011 | Inventory - leaks from valve mounting point. Found stripped screw & loose fittings? Rebuilt with new valve again. | | |
| Leveling Valve | 1 | 8/30/2011 | Rebuild | 9/30/2011 | C5, 5/6 - suspect intermittant sticking. Rebuilt, leak and ops chk good. | | |
| Leveling Valve | 1 | 9/29/2011 | Rebuild | 10/12/2011 | C9 - report of air leak at exhaust. Rebuilt, tested good. | | |
| Leveling Valve | 1 | 10/12/2011 | Rebuild | 10/16/2011 | C8, #1 end - leaking from? Rebuilt & tested ok. | | |
| Leveling Valve | 1 | 1/24/2012 | Rebuild | 2/2/2012 | C7 pos 3/4 for leak. Rebuilt and tested good. | | |
| Leveling Valve | 30 | | | | 30 | | 30 |
| Motor/Gearbox Drive (Stanley) | 3 | 12/18/2009 | Testing | 12/18/2009 | Tested (3) motors that were part of t/shooting efforts, but, did not fix any problems. Tested good. | | |

| This is a sorted copy of the rebuild data base and was used for qty of items rebuilt | | | | | | | |
|---|---|---|---|---|---|---|---|
| Motor/Gearbox Drive (Stanley) | 1 | 8/24/2010 | RMR | 8/25/2010 | Returned from Stanley - tested good. Placed in stock. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 8/1/2010 | Repair | 8/27/2010 | Encoder harness damaged. Installed new crimped pin onto pulled wire. Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 11/17/2010 | Rebuild | 11/28/2010 | S/M, B2, 3/4 - intermittent failures (suspect encoder). Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 11/23/2010 | Rebuild | 12/2/2010 | E/M, B2, 7/8 - pulled for B3 error codes. Encoder cable failures intermittent malfunction open. Tested good, no faults. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 11/26/2010 | Rebuild | 12/2/2010 | S/S, B2, 5/6 - due to closed door input failure (d2) and unscheduled dr closure (d3). Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 10/12/2010 | Repair | 1/2/2011 | N/S, B3, 3/4 - pulled for broken pulley and intermittant malfunction on open. Replace pulley and test operate. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 12/6/2010 | Repair | 1/2/2011 | N/M, B3, 5/6 - intermittant malfunction on open. Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 12/22/2010 | Repair | 1/2/2011 | W/M, B1, 5/6 - malfunction on open. Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 1/1/2011 | Repair | 1/2/2011 | E/S, B1, 1/2 - multiple encoder faults (B1, B3) - tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 1/26/2011 | Rebuild | 2/14/2011 | S/M, B2, 3/4 - malfunction full open, fault code "0d". Placed on test stand - NFF. Returned to stock. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 2/13/2011 | Rebuild | 2/15/2011 | N/S, B1, 1/2 - intermittant freezing. Tested satisfactorily. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 1/21/2011 | Rebuild | 2/16/2011 | E/S, B2, 5/6 - malfunction on open. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 2/20/2011 | Repair | 2/23/2011 | E/M, B1, 1/2 - for intermittent failures. Tested good, no failures. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 2/16/2011 | Rebuild | 2/24/2011 | W/M, B1, 5/6 - "B3" fault code. White encoder cable is pinched. Cable indeed pinched but serviceable. Tested good. | | |
| Motor/Gearbox Drive (Stanley) | 1 | 2/26/2011 | Rebuild | 3/3/2011 | E/M, B2, 5/6 - t/shooting malfunction on open/close issues. Tested good. | | |

# Definitions

- **Maintenance**
  - The act of maintaining or the state of being maintained or the work of keeping something in proper condition upkeep
- **Preventative**
  - The act of preventing or impeding or to slow the course of illness or failure.
- **Corrective**
  - To remove the errors or failures

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Docket 71101 Document 2017-38038
ER2611

# PM vs. CM

- **Example of preventative maintenance**
  - You are completing a PM 301 and you find the brushes worn and you replace them, this is preventative maintenance.
    - Why? Because you prevented a failure from occurring
  - So your time would be recorded as "Vehicle  Preventive Maint. Tasks"
  - You are completing your daily inspection (Central Control, Vehicle & Stations) which is recorded as "Vehicle Operations Labor" and you identify that the station door auto lock is inoperative, you turn off the door and leave it for nights to address.
    - Why? Because all you did was to identify a fault, no work was completed other than you completing your daily inspection.
  - Your 7 day inspections are considered to be Preventative maintenance

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# PM vs. CM

- **Example of corrective maintenance**
  - Night shift address the door turned off by day shift and confirm that the auto lock is broken, they remove and replace the lock, this is corrective maintenance
    - Why? Because you removed the failed component
  - So your time will be recorded as "Platf.Doors Corrective Maint. Tasks"

- **Example of Overhaul task**
  - That same autolock is red tagged and removed from service for inspection/rebuild. Day shift identifies the broken part and replaces it, this is an overhaul task.
  - So your time will be recorded as "Platf.Doors Heavy Maint./Overhaul Tasks"

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# Time Reporting Errors

- **Examples of possible incorrect time reporting**
  - (Day shift)
  - 01-08-11 247/252446000/30 10.00 VEHICLE CORRECTIVE MAINT.
  - 01-12-11 247/252446000/30 2.00 VEHICLE PREVENTIVE MAINT.
  - 01-12-11 247/252446000/30 10.00 VEHICLE CORRECTIVE MAINT.
  - 01-08-11 247/252446000/30 10.00 VEHICLE CORRECTIVE MAINT.
  - 01-12-11 247/252446000/30 10.00 VEHICLE CORRECTIVE MAINT.
  - (Night shift)
  - 01-08-11 247/252446000/30 12.00 VEHICLE PREVENTIVE MAINT.
  - 01-13-11 247/252446000/20 10.00 WAYSIDE CORRECTIVE MAINT.T
  - 01-13-11 247/252446000/20 10.00 WAYSIDE CORRECTIVE MAINT.T
  - 01-14-11 247/252446000/20 12.00 WAYSIDE PREVENTIVE MAINT.T

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# Who does it right?

- The following slides will hopefully help you to record your time correct and accurately

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# Time Tracking – Direct Charge Codes – 1 of 2

| Project | WBS |
|---|---|
| EXAMPLES: | |
| 243/252335400/ A1310 | 01.03.00.10 Management Tasks (Supervisor/Manager) |
| 243/252335400/ A1321 | 01.03.00.21 Human Resources Tasks |
| 243/252335400/ A1322 | 01.03.00.22. Finance Tasks |
| 243/252335400/ A1323 | 01.03.00.23. Other Admin Tasks (SDC Coordinator) |
| 243/252335400/ A1330 | 01.03.00.30. QA / Health & Safety Tasks |
| 243/252335400/ A1340 | 01.03.00.40 Training |
| 243/252335400/ A1350 | 01.03.00.50. Marketing & PR Tasks |
| 243/252335400/ A1360 | 01.03.00.60. Engineering Tasks |
| 243/252335400/ A1370 | 01.03.00.70. Material Management Tasks |
| 243/252335400/ A1390 | 01.03.00.90. Stations Operations Labor |

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# Charge Codes

EXAMPLES

- New code
  - **01.03.00.91. Vehicle Operations Labor**
- Old code
  - **Recovery technician tasks or general recovery / standby activities**
- New code
  - **03.00.00.09 Vehicle Preventive Maint. Tasks**
- Old code
  - **Maintenance Activities Vehicle**
- New code
  - **03.00.00.10 Vehicle Corrective Maint. Tasks**
- Old code
  - **REPAIR ACTIVITIES VEHICLE**

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# Charge Codes

EXAMPLES

- New code
  - **Vehicle Heavy Maint. / Overhaul Tasks**
- Old code
  - **REPAIR ACTIVITIES VEHICLE - GE**

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# Time Tracking – Direct Charge Codes – 2 of 2

| | |
|---|---|
| 243/252335400/ 200X | 02.00.00.09 Wayside Preventive Maint.Tasks |
| 243/252335400/ 200Y | 02.00.00.10 Wayside Corrective Maint.Tasks |
| 243/252335400/ 200Z | 02.00.00.11 Wayside Heavy Maint./Overhaul Tasks **(Rebuilds)** |
| 243/252335400/ 300X | 03.00.00.09 Vehicle Preventive Maint. Tasks |
| 243/252335400/ 300Y | 03.00.00.10 Vehicle Corrective Maint. Tasks |
| 243/252335400/ 300Z | 03.00.00.11 Vehicle Heavy Maint. / Overhaul Tasks **(Rebuilds)** |
| 243/252335400/ 400X | 04.00.00.09 Comms Preventive Maint.Tasks |
| 243/252335400/ 400Y | 04.00.00.10 Comms Corrective Maint.Task |
| 243/252335400/ 400Z | 04.00.00.11 Comms Heavy Maint/ Overhaul Task **(Rebuilds)** |
| 243/252335400/ 500X | 05.00.00.09 Fare Coll.Preventive Maint.Tasks |
| 243/252335400/ 500Y | 05.00.00.10 Fare Coll.Corrective Maint. Tasks |
| 243/252335400/ 500Z | 05.00.00.11 Fare Coll.Heavy Maint. / Overhaul Tasks |
| 243/252335400/ 600X | 06.00.00.09 PS&D Preventive Maint.Tasks **(Official BT word is PDS)** |
| 243/252335400/ 600Y | 06.00.00.10 PS&D Corrective Maint. Tasks |
| 243/252335400/ 600Z | 06.00.00.11 PS&D Heavy Maint./Overhaul Tasks |
| 243/252335400/ 700X | 07.00.00.09 Civil Preventive Maint.Tasks |
| 243/252335400/ 700Y | 07.00.00.10 Civil Corrective Maint. Tasks |
| 243/252335400/ 700Z | 07.00.00.11 Civil Heavy Maint./Overhaul Tasks |
| 243/252335400/ 800X | 08.00.00.09 Platf.Doors Preventive Maint.Tasks |
| 243/252335400/ 800Y | 08.00.00.10 Platf.Doors Corrective Maint. Tasks |
| 243/252335400/ 800Z | 08.00.00.11 Platf.Doors Heavy Maint./Overhaul Tasks |
| 243/252335400/ 900X | 09.00.00.09 Track Preventive Maint.Tasks |
| 243/252335400/ 900Y | 09.00.00.10 Track Corrective Maint. Tasks |
| 243/252335400/ 900Z | 09.00.00.11 Track Heavy Maint./Overhaul Tasks |
| 243/252335400/ AA | 10.00.00.00 Maintenance of OMSF Equipment & Tools Tasks |

02619

# Time tracking – "Indirect Charge" Codes

| Order | Description | |
|---|---|---|
| 9200000740 | FMLA US01 | US01 |
| 9200000771 | Short-term disability US01 | US01 |
| 9200000769 | Disciplinary US01 | US01 |
| 9200000767 | Illness US01 | US01 |
| 9200000765 | Vacation US01 | US01 |
| 9200000763 | Holiday US01 | US01 |
| 9200000761 | Training US01 | US01 |
| 9200000783 | Military Duty US01 | US01 |
| 9200000781 | Jury Duty US01 | US01 |
| 9200000779 | Bereavement / Funeral US01 | US01 |
| 9200000760 | Workman's Comp US01 | US01 |
| 9200000774 | Travel Time US01 | US01 |
| 9200000777 | Other non-productive US01 | US01 |

Use 9200000777 for Meetings and any other indirect activities not covered on the next page

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BOMBARDIER

B-30

Exhibit No. Bx 30
Witness V. McClain
Date 6/28/13

KWD CCR# 711

BEFORE THE LABOR COMMISSIONER

OF THE STATE OF NEVADA

INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS

Claimant/Objector

v.

BOMBARDIER TRANSPORTATION (HOLDINGS) USA, INC.,

Respondent/Employer

RE: CLARK COUNTY DEPT. OF AVIATION CONTRACT CBE 552

# DECLARATION OF VERNON McCLAIN IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT


Andrew Kahn
McCRACKEN STEMERMAN & HOLSBERRY
1630 S. Commerce St., Suite A-1
Las Vegas, Nevada 89102
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(702) 386-5107

*Attorneys for Claimant IUEC*

DECLARATION OF VERNON MCCLAIN IN OPPOSITION TO BOMBARDIER MOTION FOR SUMMARY JUDGMENT

I, Vernon McClain, declare:

1. I was employed to work as an ATS Technician by Bombardier for six years prior to the County taking over this service, and now am employed by the County as an ATS Technician II. Each ATS vehicle weighs at least 30,000 pounds and they cannot be driven on the roads (for various reasons, including the lack of on-board steering): instead these were brought into the Airport by a special large crane lifting them off a truckbed (I was present at their installation: a team of over a dozen personnel was involved). Each ATS vehicle was manufactured and then adjusted for the particular specifications of our Airport, such as control system, signage, sound, etc. Bombardier provided us information about its other airports: all like McCarran acquired cars made just for them, rather than getting used cars from elsewhere (due to the expense of both retrofitting and moving such cars).
2. Generally, the operation of the system is monitored and controlled by the Central Control Operators employed by the County.
3. Another long-time Bombardier technician Ken DePiero and I have reviewed Bombardier records as to the work ATS technicians did to come up with a list of repair work as distinguished from normal maintenance. We considered as "repair" only tasks which (a) took more than 15 minutes (but a number of these tasks took several manhours each), (b) required skills generally not obtained in less than 6 months' training (it generally takes 2 years for anyone to be able to do these repairs on their own without working as part of a coordinated team), and (c) involved parts costing at least $50 (though most cost much more: for example, an autolock costs about $1000). Most of our repair work as we have defined it was not scheduled, but instead resulted from something breaking (on occasion the repair resulted from a routine inspection of a system,

but we have not called the inspection itself a "repair"). The following are the most common repairs we did:

1. Replacing a broken leaf spring (usually takes 3-4 workers and more than 15 manhours)
2. Replacing a vehicle traction motor (usually takes 3-4 workers and more than 12 manhours)
3. Replacing vehicle brake Hub/Drum and brake pads (usually takes 3 workers and more than 12 manhours as the car must be put up on jackstand)
4. Replacing a service brake chamber/diaphragm
5. Replacing a spring brake chamber/diaphragm
6. Replacing vehicle batteries (each weighs around 50 lbs so usually two workers required, requiring usually more than 2 hours)
7. Replacing a station door autolock assembly
8. Replacing station door guides
9. Replacing station door rollers
10. Replacing a station door controller
11. Replacing a station door motor/gearbox assembly
12. Repairing station door wiring and connectors
13. Replacing a station door key switch assembly
14. Replacing guide way clamshell broken or damaged hardware
15. Tightening loose guide way I-beam mounting bolts
16. Replacing guide way I-beam mounting bolts and Fabrica pads
17. Replacing RATC (Regional Automatic Train Control) cabinet electronic circuit boards (this typically requires the skills of the more experienced technicians, ones with several years training)
18. Replacing RATC (Regional Automatic Train Control) cabinet power supplies
19. Replacing Power Distribution system PLC's (Programmable Logic Controllers)
20. Replacing Damaged Guide Tire Spindles
21. Replacing Damaged Collector Tree Assemblies
22. Replacing Worn Collector Shoes
23. Troubleshooting and replacing faulted Vehicle ATC (automatic Train Control) components
24. Troubleshooting and repairing vehicle CCTV components
25. Troubleshooting and repairing wayside CCTV components
26. Changing vehicle main running tires (usually takes 2 hours and involves two workers because of the weight of these tires)
27. Replacing air compressors and their components.
28. Replacing failed Fail Safe Emergency packages.
29. Replacing both vehicle and wayside failed relays
30. Replacing Drive Axle ~~Carries~~ Carriers

Based on our review of the documents made available to us, the cost to the County during the term of CB552 in terms of labor, parts and Bombardier overhead for the wayside repairs was over $225,000, and well over $500,000 for vehicle repairs.

I declare under penalty of perjury of the laws of Nevada that the foregoing is true and correct. Executed this 11 of April 2013.

VERNON MCCLAIN

## CERTIFICATE OF SERVICE VIA UPS OVERNIGHT MAIL

I hereby certify that on April 11, 2013 the undersigned, an employee of McCracken, Stemerman & Holsberry enclosed a copy of **DECLARATION OF VERNON McCLAIN IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT** in an envelope or package provided by an overnight delivery carrier. I placed the envelope or package for collection and overnight delivery at an office or a regularly utilized drop box of the overnight delivery carrier. It was addressed as follows:

Keith Sakelhide, Deputy Labor Commissioner
Office of the Labor Commissioner
555 E. Washington Ave. Suite 4100
Las Vegas, NV 89101

Gary C. Moss
Paul T. Trimmer
JACKSON LEWIS
3800 Howard Hughes Parkway
Suite 600
Las Vegas, NV 89169

Eldon Lee Thompson
Clark County District Attorney's Office
500 S. Grand Central Parkway, Suite 5075
Las Vegas, NV 89106

I declare under penalty of perjury under the laws of the State of Nevada and United States of America that the foregoing is true and correct. Executed on this 11th day of April, 2013.

Dinh Luong

BxB1

CRITERIA (TAKEN FROM VERNON McCLANE'S DECLARATION / HEARING TESTIMONY)

(1) JOB MUST TAKE LONGER THAN 15 MINUTES;
(2) JOB MUST INVOLVE A PART THAT COST AT LEAST $50*; AND
(3) JOB MUST REQUIRE SKILLS GENERALLY NOT OBTAINED W/IN 6 MO. OF TRAINING.

* McCLAIN STATED HE INCLUDED JOBS THAT INVOLVED PARTS LESS THAN $50, SUCH AS REPLACING BOLTS, WHEN SAFETY WAS AT ISSUE.

SUMMARY OF COST OF REPAIRS FOR CBE 552

| | Cost for Rebuilds & Special Purchases Orders | | Cost From "Pass Down" (Reflects less than 1 year.) | | Cost From Log Books | | | Cost From Supplied Documents (WorkOrders) | |
|---|---|---|---|---|---|---|---|---|---|
| | Wayside | tram | Wayside | Tram | Wayside Doors | Tram | Wayside ATC/guideway | Wayside | Tram |
| labor[1] | $73,935.66 | $116,377.09 | $22,625.99 | $51,101.48 | $53,478.29 | $198,223.89 | $58,220.35 | $4,727.60 | $71,579.08 |
| parts cost | $25,811.47 | $141,202.89 | $18,197.96 | $13,986.36 | $9,490.75 | $228,782.02 | $13,889.98 | 575.5 | $45,126.83 |
| Special purchase[2] | $8,800.00 | | | | | | | | |
| MRO/NPR's 2008-2009[3] | $5,000.00 | $36,000.00 | | | | | | | |
| MRO/NPR's est 2009-2012 | $15,000.00 | $90,000.00 | | | | | | | |
| Sub Totals | $128,547.13 | $383,579.98 | $40,823.95 | $65,087.84 | $62,969.04 | $427,005.91 | $72,110.33 | $5,303.10 | $116,705.91 |
| | | | | | | | | | |
| Wayside Total | $309,753.55 | | | | | | | | |
| Tram Total | $992,379.64 | | | | | | | | |
| Wayside + Tram Grand Total | $1,302,133.19 | | | | | | | | |

PART INVOLVED IS UNDER $50.
PART INVOLVED IS UNDER $10, INCLUDING WHEN NO PARTS ARE INVOLVED.
JOB DID NOT REQUIRE TRAINING.
INDIVIDUAL PARTS INVOLVED ARE EACH UNDER $50.
JOB NOT WITHIN CONTRACT DATES (7/1/2008 → 5/2/2012)

[1]Labor cost calculated by multipying hours by $57.83 per hour--the average wage and benefits in 2008 plus 42% for Bombardier overhead.

[2]Special Purchase 32 X 275= $8,800.00
31 Oct 2008: 15 RH & 17 LH door guides were ordered so that all the guides on the C gate doors could be changed these were in addition to the ones that were on hand. The project was to use their labor to change them but the project was not to pay for the parts due to them not being in the scope of work. The priced charged by Bombardier was $275.00 Each.

[3]NPR's & MRO's for repairs & outside contractors

| For | From | To | Limit | Charged to | Estimate: 2009-2012 | Files requested but not provided |
|---|---|---|---|---|---|---|
| Big Town Vehicle A/C repair | 9/1/08 | 8/31/09 | $30,000.00 | Vehicle | $90,000.00 | |
| Calderone Welding cracked vehicle frames | 9/1/08 | 8/31/09 | $6,000.00 | Vehicle | $0.00 | |
| TJK 3rd party inspection and consultation | 9/1/08 | 8/31/09 | $5,000.00 | Wayside | $15,000.00 | |

NEVADA STATE LABOR COMMISSIONER
EXHIBIT BxB1
WITNESS R. Ryan
DATE 9/10/13

BATES 97 SAYS 466 HRS.

## Labor & Parts cost to rebuild Wayside Components for CBE 552

| Part rebuilt | Qty | Dispostion | Man hours | Parts: part | qty | cost | Extended |
|---|---|---|---|---|---|---|---|
| Switch / Door Operator Emerg | 1 | 2 from logs | 1.5 | | | | |
| Bearing / Door Roller | 4 | 4 cleaned insp | 0.5 | | | | |
| Bearing door roller | 35 | From logs | 52.5 | | | | |
| Shop Air Hoses | 2 | | 0.5 | | | | |
| Autolock (Stanley) | 236 | 230 rebuilt 3 sent rmr 3 tested 90 had mod done | 944 | auto lock | 3 | $1,275.44 | $3,826.32 |
| [illegible] | | Rebuilt normal | | | 143 | $32.50 | $4,647.84 |
| [illegible] | 90 | Mod only | 60 | | 90 | $46.76 | $4,208.40 |
| Autolock (Stanley) | 44 | 44 rebuilt 2 pc board rpl, 2 rpr, 2 harn rpl | 88 | est repairs | | | $500.00 |
| [illegible] | | normal rebuild | | | 44 | $23.04 | $1,013.76 |
| Motor/Gearbox (Trans/Stanley) | 38 | 24 tested, 7 from rmr 2 out rmr + 7 from logs | 38 | Assemble | 16 | $409.42 | $6,550.72 |
| Shop Extension Cord | 2 | | 1 | | | | |
| Processor Control (Stanley) | 27 | 2 bad other varied adj, fis, etc +10 from logs | 27 | Unit | 12 | $333.85 | $4,006.20 |
| Power Supply (Stanley) | 2 | | 2 | | 2 | $169.68 | $339.16 |
| Shop Fan | 2 | | 2 | | | | |
| Shop Vacuum Cleaner | 4 | | 2 | | | | |
| Shop Light | 11 | | 5.5 | | | | |
| Shop Air Regulators | 6 | 1 scraped $100.00 | 7.5 | $100 | 5 | $56.03 | $280.15 |
| Filter strip | 6 | | 12 | 209.56+10 | 2 | $219.56 | $439.12 |
| Air Relay (Trans) | 3 | 3 rebuilt | 4.5 | kit | 3 | | |
| Wayside cost/hours | 76951.47 | 51140 | 1278.5 | | | | $26,611.47 |
| [illegible] | | | | | | | |

13.5→27 (119)

6→9.5 (100)
9→12 (108)

INVALID PARTS: $9869.80

INVALID: 248 + 478 = 726 − 13.5 − 1.5 − 3 = 700

## Labor & Parts cost to rebuild Tram Components for CBE 552

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Brake Parts | 9 | claned insp | 4.5 | none | | | |
| BS/LS | 1 | Rebuilt | 3 | special | | | |
| BS/LS Aux Arm | 54 | 54 rebuilt | 27 | | 54 | $7.50 | $405.16 |
| BS/LS Aux Contact Block | 26 | 23 rebuilt 3 trashed | 11.5 | | 26 | $26.20 | $681.20 |
| Service Brake Chamber | 8 | | 8 | | 8 | $6.79 | $54.33 |
| Spring Brake Chamber | 18 | | 18 | | 18 | $17.60 | $316.85 |
| Filler Strip | 6 | cleaned/reattached seal | 9 | glue | 6 | $10.00 | $60.00 |
| Air Compressor | 3 | 1 rebuild 2 repaired 10 hours | 15 | | 1 | $84.94 | $84.94 |
| Valve, Relief 70# Intercooler | 8 | 1 trashed | 4 | | 1 | $24.00 | $24.00 |
| Valve, Relief 155# | 15 | 1 trashed | 11.25 | | 1 | $99.15 | $99.15 |
| Air Compressor HP Head | 40 | 37 rebuilt 3 cleaned and tested manhours 114 | 114 | | 37 | $159.21 | $5,890.66 |
| QRV | 46 | | 15.3 | | 46 | $6.89 | $316.94 |
| Air Relay (AR2) | 16 | 14 rebuilt 1 tested good 1 trashed | 23 | | 14 | $73.18 | $1,024.52 |
| FSE Valve | 49 | | 36.75 | | 49 | $97.55 | $4,779.71 |

5→3 (97)
8→18 (170)
10→15 (116)
11.5→4 (132)
19→32 (73)
24.5→36.75 (110)

100.3

30 → 45 (p. 114)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 24.75 → 49.5 (112) | Guide Tire | 33 | | 49.5 | | 33 | $107.23 | $3,538.52 |
| 25 → 9 (125) | Relay, MorsSmitt V401 | 9 | | 9 | | 1 | $279.81 | $279.81 |
| | Relay, MCR | 16 | | 16 | | 4 | $373.76 | $1,495.00 |
| | Relay, LSR | 9 | | 9 | | 1 | $279.81 | $279.81 |
| | Relay, PBR | 22 | | 22 | | 1 | $781.25 | $781.25 |
| | Relay, CE/1M1/2M2 | 1 | | 1 | none | | | |
| | Relay, BIR | 1 | | 1 | none | | | |
| | Relay, 1214 Hengstler | 63 | | 63 | Failed | 3 | $1,247.10 | $3,741.30 |
| 7 → 14 (127) | Relay, PRCC | 14 | | 14 | Failed | 7 | $279.81 | $1,958.67 |
| | Relay, PRCCa | 10 | | 10 | none | | | |
| 25.75 → 35.75 (100) | Collector Shoe Sub-assembly | 143 | Rebuilt/assem 103 scrap 40 (55.08 ea) | 35.75 | $2,209.20 | 103 | $41.72 | $6,600.36 |
| | Leveling Valve | 30 | | 45 | valve | 30 | $74.38 | $2,231.40 |
| 32 → 56 (106) | Door Operator | 14 | 9 rebuilt 2 mod 3 repaired | 56 | | 9 | $215.27 | $1,937.44 |
| | Door Roller Bearings | 506 | 54 scraped | 50.6 | | 54 | $15.75 | $850.50 |
| 55.5 → 191.25 (105) | Door Edge Contact Roller | 285 | rebuilt all + 30% (2 contact per) | 191.25 | contacts 50% | 285 | $44.89 | $12,793.65 |
| | Switch, Lever | 255 | 53 scrapped | 127.5 | supplies | 53 | $39.00 | $2,067.00 |
| | Air Dryer, AD9 | 28 | 26 rebuilt | 56 | | 26 | $155.41 | $4,040.71 |
| | FSE Package | 35 | | 70 | FSE kit X 2 | 35 | $208.87 | $7,310.45 |
| 72 → 120 (114) | Air Compressor LP Head | 30 | 22 rebuilt 8 cleaned insp & tested 72 man hours | 120 | | 30 | $179.69 | $5,390.73 |
| 79 → 126 (102) | Collector Tree | 42 | 39 rebuilt/modified 3 modified | 126 | | 39 | $222.26 | $8,667.95 |
| | Hub/Drum | 36 | | 108 | | 36 | $559.55 | $20,143.80 |
| 415 → 498 (111) | Guide Spindle | 166 | | 498 | | 166 | $252.65 | $41,940.61 |
| | Propulsion Rectifier Contactor | 2 | | 2 | contacts | 2 | $690.63 | $1,381.26 |
| | Antiriser, Vehicle | 1 | 1 rebuilt | 1 | rod | 1 | $10.00 | $10.00 |
| 1 → 1.5 (132) | Switch, PRC Aux Contact | 3 | | 1.5 | | | $27.29 | |
| | Transducer | 1 | | 1 | none | | | |
| 1.5 → 8 (112) | Valve Holdback | 13 | | 8 | | 2 | $9.05 | $18.10 |
| | CSO | 2 | 2 tested & adj | 2 | none | | | |
| | Equalizer (Crossfire) | 10 | | 2 | | 3 | $25.00 | $75.00 |
| | Door Slide Channel | 6 | rebuilt all | 3 | | 6 | $5.35 | $32.10 |
| | Valve, Sentronics | 4 | | 1 | none | | | |
| | | | | 2012.4 | | | | $141,202.89 |

INVALID HRS: 539.9 = 1472.5 − 208.75 = 1263.75

INVALID PARTS: $24,205.19

63.75 → 127.5 (p. 131)

**Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552**

| File: | 05-01-08.LST | | | | | Wayside | | Vehicle | |
|---|---|---|---|---|---|---|---|---|---|
| date | page | Sft | # | Ty | what | Hrs | parts | Hours | parts |
| 5/1/2008 | 1 | am | 4 | a | fire ext alarm n/s | | | 0.5 | |
| | | pm | 1 | r | [redacted] | 2 | | | |
| 5/2/2008 | | am | 3 | a | [redacted] | 2 | | | |
| 5/3/2008 | 2 | am | 1 | r | [redacted] | 0.5 | | | |
| | | am | 3 | a | fire ext c7 | | | 0.5 | |
| | | pm | 4 | r | adj btry chager c8 | | | 1.5 | |
| | | pm | 5 | r | prc loctited s | | | 3 | |
| 5/4/2008 | 3 | am | 6 | a | fire ext c7 | | | 0.5 | |
| | | am | 9 | r | | | | | |
| 5/5/2008 | 4 | pm | 2 | rpl | aux contact | | | 1 | |
| | | | | | prc loctited s | | | 1 | |
| | | | 3 | r | equipment cover strut | | | 1 | |
| | | | 4 | r | [redacted] | 0.25 | | | |
| 5/6/2008 | | am | 1 | rpl | 2 tail lights | | | 1.5 | |
| | | pm | 4 | rec | [redacted] | 0.5 | | | |
| 5/7/2008 | 6 | pm | 3 | rec | [redacted] | 0.5 | | | |
| | | | 4 | rpl | brake job | | | 6 | $380.65 |
| | | | 4 | r | hub seal leaking | | | 1.4 | |
| | | | 4 | rpl | brake adjusters broken | | | 6 | $380.65 |
| | | | 6 | rpl | lwp & rp heads | | | 3 | $19.93 |
| | | | 6 | rpl | copper hose | | | 2 | |
| 5/8/2008 | | am | 3 | rec | [redacted] | 0.5 | | | |
| | | | | | [redacted] | 0.5 | | | |
| | 7 | pm | 3 | rpl | spring/brake chamber leaking | | | 2 | |
| | | | | | service brake plunger tore | | | 0.5 | |
| | | | 4 | rpl | air compressor resilient mounts | | | 3 | $62.40 |
| 5/9/2008 | | pm | 3 | rpl | brake job c4 7/8 | | | 6 | $380.65 |
| | | | 4 | rpl | tire 7 c4 flat spots | | | 2 | $322.50 |
| | | | 5 | rec | [redacted] | 0.5 | | | |
| 5/10/2008 | | am | 4 | rec | [redacted] | 0.5 | | | |
| | 8 | pm | 2 | rpl | replace c3 both ar1's | | | 2.5 | |
| | | | 6 | rpr | cleaned smoke dectors c9 due to alarms | | | 1 | |
| 5/11/2008 | | am | 5 | rblt | 8 service brake chambers | | | 5 | $44.01 |
| | | | 6 | rec | [redacted] | 0.5 | | | |
| | | | 8 | rec | [redacted] | 2 | | | |
| | | pm | 4 | rpl | safety edge molding for ribbon switch. C7 leaf 6 | | | 3 | $300.00 |
| 5/12/2008 | | am | 7 | rec | fire ext remove at s main | | | 0.5 | |
| | | pm | 1 | rpl | changed tire due to flat spots | | | 2 | $322.50 |

10.75 31 +28 PARTS: $2,193.30

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2 | rpl | 2 resilient mounts c5 air compressor | | 2 | $31.20 |
| | | | 3 | rpl | pinion seal c7 #1 | | 4 | |
| | | | | rpl | used new yoke | | | $264.40 |
| | | | 4 | rpl | pinion shroud c6 #1 | | 1 | |
| | | | 5 | mod | installed rubar material on a/c c5 #2 | | 2 | |
| 5/13/2010 | 10 | pm | 2 | rpl | 2 resilient mounts c9 | | 2 | $31.00 |
| | | | 2 | rpl | 2 resilient mounts c10 | | 2 | $31.00 |
| | | | 3 | r | assited big town with repairs parts changed pc board gas charged wire repaired | 4 | 4 | |
| | | | | | Charge to big town | | | |
| | | | 4 | rpl | brake job c4 1/2 | | 6 | $380.65 |
| | | | | | replace tires 1 had sidewall splits | | | $922.50 |
| | | | 5 | rpl | air compressor shourd | | 1.5 | $30.00 |
| | | | 6 | rpl | [redacted] | 0.25 | | |
| 5/14/2008 | | am | 6 | rblt | 3 hubs used 2 new drums | | | |
| | | | 7 | rblt | 2 service brake chambers | | 2 | $17.60 |
| | 11 | | 9 | r | vapor door motor | | | $391.71 |
| | | pm | 3 | r | motor grind c9 #2 | | 4 | |
| | | | 5 | rpl | leaking spring break chamber c3 #2 | | 2 | |
| | | | 6 | rpl | leaking hub c4 7/8 | | 4 | |
| 5/15/2008 | | pm | 1 | rpl | c4 leaf 4 door cap | | 2 | $40.05 |
| | | | 2 | r | c4 changed a/c board and fixed loose contenction | | 3 | |
| 5/16/2008 | 12 | am | 3 | rec | [redacted] | 10.5 | | |
| | | | 6 | r | [redacted] | 0.5 | | |
| | | | 1 | | [redacted] | 4 | | |
| | | | 2 | r | [redacted] | 6 | | |
| | | | 4 | | [redacted] | 1 | | |
| 5/17/2008 | 13 | am | 6 | rec | fire ext removal c7 | | 0.5 | |
| | | | | | fire ect removal c10 | | 0.5 | |
| | | | 7 | r | late train on n mpb tripped reset | | 1 | |
| | | | 8 | a | [redacted] | 0.5 | | |
| | | pm | 2 | rpl | c4 #2 ar1 for leaks | | 1.5 | |
| 5/18/2008 | | am | 4 | rec | [redacted] | 0.5 | | |
| | | | 5 | rec | [redacted] | 0.5 | | |
| | 14 | pm | 4 | rpr | broken loose equipment cover c4 | | 0.5 | |
| 5/19/2008 | | am | 1 | rec | [redacted] | 1.5 | | |
| | | | 5 | rec | n/m no depart drove out/into main then to sat, left ato stopped short on return to sat drove in left ato | | 0.5 | |
| | | pm | 2 | r | [redacted] | 0.5 | | |
| | 15 | | 4 | rpl | [redacted] | 0 | | |
| | | | 4 | adj | [redacted] | 0.5 | | |
| | | | 9 | rpl | [redacted] | 0.25 | | |
| | | | 10 | rec | overshoot c5&7 stopped short drove in left ato | | 4 | |
| | | | | | | 30.5 | 41 | $1,540.11 |
| | | | | | | | 46 | |

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 11 | BT | in to work on west c4 leak fixed and charged, c3 bubles relived. | | | | |
| 5/20/2008 | | am | 1 | a | n depart w/m | | | 0.5 | |
| | | | 3 | | | 2 | | | |
| | 16 | | 8 | | | 2 | | | |
| | | | 2 | rpl | air bag c8 3/4 | | | 4 | $169.59 |
| | | pm | 3 | rec | | 0.5 | | | |
| | | | 4 | rpl | | 0 | | | |
| | | | | | | 0 | | | |
| 5/21/2008 | 17 | am | 6 | a | | 1.5 | | | |
| | | pm | 4 | adj | | 1 | | | |
| 5/22/2008 | | am | 3 | rec | | 0.5 | | | |
| | | | 6 | | | 0.5 | | | |
| | 18 | pm | 1 | rpl | tail lights c 8 | | | 1.5 | $10.00 |
| | | | 2 | r | | 0.5 | | | |
| | | | 3 | adj | | 0.5 | | | |
| | | | 4 | rpl | | 0 | | | |
| 5/23/2008 | | am | 4 | rec | | 1 | | | |
| | | | 8 | r | | 2 | | | |
| | 19 | pm | 1 | r | | 1 | | | |
| 5/24/2008 | | pm | 3 | r | trainline junction box rivets broke loose repaired | | | 2 | |
| 5/25/2008 | | am | 1 | rec | train stopped short at sat drove in then veh 3 placed in hb | | | 0.5 | |
| | | | 2 | rec | | 1 | | | |
| | | | 5 | rpl | | 0 | | | |
| 5/26/2008 | | am | 1 | rec | | 0.5 | | | |
| | 21 | pm | 1 | rec | overshoot n/s drove in left ato | | | 1 | |
| | | | 2 | rec | | 3 | | | |
| | | | 4 | adj | | 0 | | | |
| | | | | rpl | | 1 | | | |
| | | | 5 | adj | | 1 | | | |
| 5/27/2013 | | am | 2 | rpl | | 0.5 | | | |
| | 22 | pm | 4 | rpl | replace overhead lamps c7 near 5/6 | | | 0.5 | $7.25 |
| 5/28/2008 | | am | 4 | rec | overshoot n/s drove in left ato | | | 1 | |
| 5/29/2008 | 23 | pm | 1 | mod | drilled out revits and installed bolt c8 #2 trainline box | | | 1.5 | |
| 5/30/2008 | | am | 4 | rec | s stopped short of sat drove in had to cycle batteries to get speed code | | | 1 | |
| | | pm | 2 | rpl | replaced headlight c8 | | | 1.5 | $40.00 |
| | 24 | | 3 | rec | overshoot n/s drove in left ato short | | | 1 | |
| | | | | | overshoot n/s drove in left ato long | | | 1 | |
| | | | 5 | rec | w stopped short at sat drove in | | | 1 | |
| 5/31/2008 | | am | 2 | rec | no depart s/m drove to sat left sat, left main stopped after 3 feet changed track sig amp | | | 2 | |
| | | | 3 | rec | same as above drov 3 trips cycled batteries | | | | |
| | | | 4 | rpl | | 1.5 | | | |
| | | | | | | 25.5 | | 16 +4 | $196.84 |

UX1006
02631

ER2631

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | pm | 2 | r | headlight relay cable | | 1 | |
| 6/1/2008 | | pm | 3 | rpl | missing hardware on several overhead lights of north | | 1 | |
| | | | 5 | rpl | equealizer c7 7/8 | | 0.5 | |
| | | | 6 | rpl | overhead lamps c6 5/6 | | 0.5 | |
| 6/2/2008 | 26 | am | 4 | rec | [redacted] | 0.5 | | |
| | | pm | 2 | rpl | brake job c4 3/4 | | 6 | $380.65 |
| | | | | | leaking planetary cover | | | |
| | | | | | tire 3 with sideway splits | | | $322.50 |
| 6/3/2008 | 27 | pm | 1 | rec | s/s problem unkown 2108-2121 | | | |
| | | | 3 | rec | [redacted] | 0.5 | | |
| | | | 5 | rpl | hub c4 3/4 for leak | | 4 | |
| | | | 6 | rpl | air drier c4 | | 2 | |
| | | | 10 | rec | [redacted] | 0.5 | | |
| 6/4/2008 | | | 1 | rec | s stopped short of main cmds cleared but then it would not leave sat did hb X2 | | 0.5 | |
| | 28 | | 5 | rpl | [redacted] | 2 | | |
| | | | | | received lvae 002 from swgert noisy fan due to be sent back | | 4 | |
| | | | | | | | | |
| | | | 8 | rec | s stopped going to sat drove to and fromsat recycled batteries to clear | | 1 | |
| | | | 9 | rec | s stopped at sat a handle pulled drove in and reset drs | | 1 | |
| | | pm | 5 | rpl | [redacted] | 0 | | |
| | 29 | | 6 | adj | [redacted] | 6 | | |
| 6/5/2008 | | am | 1 | rec | south stuck at main 22 min recovery | | 1 | |
| | 30 | | 7 | a | several no departs s/s cleared after ariving at sat | | 0.5 | |
| | | pm | 1 | BT | worked on west need valve for c4 | | | |
| | | | 3 | r | [redacted] | 3 | | |
| 6/6/2008 | 31 | am | 4 | rec | [redacted] | 0.5 | | |
| | | pm | 1 | rec | s stoped on way to sat drove in & back to main cycled batteries | | 1 | |
| | 32 | | 2 | rpl | replace cpu's on c8 rode and recovered per verbal passdown rode and recovered | | 2 | |
| | | | 3 | rec | [redacted] | 2 | | |
| | | | 4 | rpl | dr operator c10 #4 | | 2 | |
| 6/7/2008 | | am | 1 | rec | [redacted] | 0.25 | | |
| | | pm | 5 | rec | same problems on s multiple times got better after 2 hours | | 2 | |
| 6/8/2008 | 33 | am | 1 | rec | [redacted] | 0.25 | | |
| | | | 2 | rec | [redacted] | 0.25 | | |
| | | | 3 | a | [redacted] | 1 | | |
| | | | 4 | a | ss no depart cmds cleared | | 0.5 | |
| | | | 5 | a | ss no depart cmds cleared | | 0.5 | |
| | | pm | 2 | rpl | replaced several graphic lights on west | | 1 | |
| | | | 3 | rpl | [redacted] | 1 | | |
| | | | 4 | rpl | several smp lights | | 1 | |
| | 34 | | 8 | rpl | changed headlights and tail lights c8 | | 2 | |
| | | | | | | 17.75 | 29 | $703.15 |
| | | | | | | | +6 | |

UX1 027632

ER2632

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 9 | rec | w stopped short on flag at sat drove in | | | 1 | |
| | | | | | w stopped short at main drove in | | | 0.5 | |
| 6/9/2008 | | am | 1 | rec | [redacted] | 0.6 | | | |
| | | pm | 1 | rpl | brake job c3 5/6 | | | 6 | $380.85 |
| | | | | rpl | air bag c3 5/6 | | | 4 | $169.59 |
| | 35 | | 4 | rpl | [redacted] | 0.6 | | | |
| | | | 5 | rpl | [redacted] | 1 | | | |
| 6/10/2008 | | am | 2 | r | [redacted] | 0.6 | | | |
| | | | 3 | r | [redacted] | 1 | | | |
| | | | 5 | rec | [redacted] | 1.5 | | | |
| | 36 | pm | 4 | rpl | tire 3 c 6 due to flat spots and valve extension on inside tire | | | 2 | $322.60 |
| 6/11/2008 | | am | 4 | rec | [redacted] | 1.5 | | | |
| | | | 6 | rblt | rebuilt 4 service brake chambers | | | | |
| | 37 | pm | 1 | rpl | battery charger card on c4 | | | 2 | |
| | | | 2 | ts | trouble shooting was extensiove and cont for drs bypassed lite on c5 still not fixed | | | 2 | |
| 6/13/2008 | | am | 4 | rec | late train s main nsi but placed c8 in hb due to pe/be flickering | | | 0.5 | |
| | 38 | pm | 4 | rec | [redacted] | 1 | | | |
| 6/15/2008 | | am | 5 | rblt | [redacted] | 1 | | | |
| | 39 | | 6 | rblt | 3 equalizers | | | 1.5 | |
| | | pm | 1 | rec | [redacted] | 1 | | | |
| 6/16/2008 | | am | 3 | rec | [redacted] | 0.5 | | | |
| | | | 7 | a | no depart s/s cmds cleared | | | 0.5 | |
| 6/17/2008 | 40 | am | 2 | rec | [redacted] | 1.5 | | | |
| | | | 3 | rec | [redacted] | 0.5 | | | |
| | | | 5 | r | [redacted] | 0.5 | | | |
| | | | 6 | rpl | mbp light c10 | | | 0.5 | |
| 6/18/2008 | 41 | am | 12 | rec | no depart s/m put c10 in hb | | | 0.5 | |
| | | | 14 | rec | [redacted] | 0.5 | | | |
| 6/19/2008 | 42 | pm | 4 | rpl | c7 edge conact rollers replaced | | | 1.5 | |
| | | | 6 | rec | [redacted] | 0.5 | | | |
| 6/20/2008 | | pm | 4 | rpl | mcr | | | 1.5 | |
| 6/21/2008 | 43 | am | 1 | a | [redacted] | 0.5 | | | |
| | | pm | 1 | rpl | [redacted] | 1 | | | |
| | | | 6 | rpl | 2 overhead lights on c 6 & c9 | | | 0.5 | $14.50 |
| 6/23/2008 | 44 | pm | 3 | r | broken bolts and wires c10 # 1 a/c | | | 2 | |
| 6/25/2008 | 45 | pm | 2 | rpl | overload contact and 2 resillent mounts c9 #1 a/c | | | 3 | $31.00 |
| 6/26/2008 | 46 | am | 2 | spl | [redacted] | 0.5 | | | |
| 6/27/2008 | | pm | 1 | rblt | spring brake chamber | | | 2 | |
| 6/28/2008 | 47 | pm | 3 | rec | [redacted] | 0.5 | | | |
| 6/29/2008 | | am | 3 | rec | no depart s/m drove to sat left ato main it would not leave place c10 in hb then left | | | 0.5 | |
| 6/30/2008 | 48 | am | 1 | r | [redacted] | 0.5 | | | |
| | | | | | | 16.5 | | 20 +12 | $918.24 |

UX1-008
02633

**Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| File: | | Start of pass | | | | | | |
| 7/1/2008 | 2 | am | 7 | rec | [redacted] | 1 | | |
| | | pm | 2 | mod | Installed ruber material on a/c c7 #1 C6 #1 & #2 | | 2 | |
| 7/2/2008 | | am | 1 | rec | fire ext removal c9 at sat | | 0.5 | |
| | 3 | | 7 | rpl | [redacted] | 1.5 | | |
| | | | 9 | rec | [redacted] | 0.5 | | |
| | | | 1 | BT | worked on c4 6 & 7 changed board c7 | | | |
| | | | 3 | rpl | dr operator c4 #4 | | 1 | |
| 7/3/2008 | 4 | pm | 4 | rpl | removed baffles c9 | | 1 | |
| | | | | | changed several overhead lights | | 1 | $7.25 |
| 7/4/2008 | | am | 3 | rec | [redacted] | 0.5 | | |
| | | pm | 1 | rpl | leaking shock c7 1/2 | | 2.5 | $281.25 |
| | | | 2 | rpl | brake job c3 3/4 | | 6 | $380.65 |
| 7/5/2008 | | am | 2 | rec | [redacted] | 0.5 | | |
| | | | 4 | rec | [redacted] | 0.75 | | |
| | 5 | pm | 3 | r | [redacted] | 1 | | |
| | | | 5 | rpl | guide tire #8 c4 | | 2 | |
| | | | | rpl | service brake chamber due to tear | | 2 | |
| 7/6/2008 | | am | 6 | rec | overshoot s/s in station reset left | | 1 | |
| | 6 | pm | 5 | rpl | defective ls2 switch | | 1 | |
| | | pm | 7 | rec | [redacted] | 0.5 | | |
| | | | | rpl | [redacted] | 0 | | |
| 7/7/2008 | 7 | pm | 3 | BT | checked charged repaired replace as needed for c's 4, 7, 6, 9 | | | |
| | | | 5 | rpl | radio and processor unit c4 | | 2 | |
| | | | 6 | rec | [redacted] | 1 | | |
| 7/8/2008 | 8 | am | 5 | a | no depart w/m | | 0.5 | |
| | | | 8 | rec | [redacted] | 1 | | |
| | 9 | pm | 1 | rec | tpl c7 did hb left ato until maintenance | | 1 | |
| | | | 3 | r | removed tires 5/6 c4 to tighten /replace valve stems | | 3 | |
| | | | 4 | r | [redacted] | 1.5 | | |
| | | | 5 | rpl | pvr c7 due to tpl | | 2 | $279.31 |
| 7/9/2008 | 10 | am | 7 | rec | no depart s/m put c10 hb | | 0.5 | |
| | | pm | 3 | rec | train stop loss of trk sig on the n to sat stopped in middle of tunnel drove to sat left ato | | 1 | |
| | 11 | | 2 | rpl | [redacted] | 0 | | |
| | | | 6 | r | [redacted] | 4 | | |
| 7/10/2008 | | am | 4 | rec | n overshoot at mainstopped short drove in | | 0.5 | |
| | 12 | pm | 2 | r | fixed/rerevited evap cover c6 | | 1 | |
| | | | 3 | r | unclogge evap drain c6 | | 1 | |
| | | | 4 | rec | [redacted] | 0.5 | | |
| | | | 6 | rpl | [redacted] | [redacted] | | |
| 7/11/2008 | | am | 4 | rec | [redacted] | 0.5 | | |
| | | | | | | 15.75 | 22 | $7.25 |

## Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | pm | 1 | rpl | [redacted] | 0 | | | |
| | 13 | | 3 | rec | [redacted] | 0.5 | | | |
| | | | 4 | rpl | [redacted] | 1 | | | |
| | | | 8 | rec | [redacted] | 0.5 | | | |
| 7/12/2008 | | am | 4 | r | hanger that supports a/c return line was chafed c6 #2 | | | 1 | |
| | | pm | 3 | rpl | [redacted] | 1 | | | |
| | | | 4 | rpl; | service brake chamber c8 | | | 2 | |
| | | | 5 | rec | no depart w/s jumper broken nutcracker and drove to warm up brakes | | | 1 | |
| 7/13/2008 | 14 | am | 4 | rec | [redacted] | 1 | | | |
| 7/14/2008 | 15 | am | 1 | rec | [redacted] | 0.5 | | | |
| | | | 3 | rec | [redacted] | 0.5 | | | |
| | | pm | 3 | rpl | [redacted] | 0.5 | | | |
| | | | 4 | rpl | [redacted] | 0 | | | |
| | | | 5 | rpl | overhead lights c4 near 1/2 | | | 0.5 | |
| | | | 6 | adj | [redacted] | 0.5 | | | |
| | 16 | | 12 | rpl | [redacted] | 1.5 | | | |
| | | | 14 | rec | turned off c9 leaf 1 | | | 0.5 | |
| 7/15/2008 | | am | 6 | rec t | [redacted] | 0.5 | | | |
| | | | 8 | rec | overshoot on n going to sat drove in reset left | | | 1 | |
| | 17 | pm | 2 | rpl | [redacted] | 2 | | | |
| | | | 4 | r | c9 leaf 1 pull handle broken shorted resistor | | | 1 | |
| | | | 6 | BT | c4 repaired 2 times leaked both ran out of r22 and no gasket | | | | |
| 7/16/2008 | | am | 4 | rec | [redacted] | 0.5 | | | |
| | 18 | pm | 5 | r | resiliconed c4 #1 dif seal and filled | | | 2 | |
| | | | 10 | rpl | [redacted] | 0.5 | | | |
| 7/17/2008 | 19 | am | 1 | rec | [redacted] | 0.5 | | | |
| | | | 9 | rec | [redacted] | 0.5 | | | |
| | | pm | 1 | r | [redacted] | 1 | | | |
| | | | 2 | rpl | headlights c6 | | | 1 | $20.00 |
| | | | 6 | rpl | changed c3's a5 card due to no propulsion in manual | | | 2 | |
| 7/18/2008 | 20 | am | 7 | built | built 3 service brake chambers | | | | |
| | | | 8 | rec | overshoot n sat had to do reset for next round trip to clear | | | 1 | |
| | | pm | 3 | r | c8 airspring line needed repaired due to leaking | | | 1.5 | |
| 7/19/2008 | | am | 2 | rec | loss of track sig w/m, reset batteries still would not go until after driving in to station | | | 1 | |
| | 21 | | 3 | rec | [redacted] | 6 | | | |
| | | pm | 5 | rec | [redacted] | 0.5 | | | |
| | | | 6 | rec | dr did not shut w/m had to change dr control board | 4 | | 1 | |
| | 22 | | 8 | rpl | holding valve c9 due to leak | | | 1.5 | |
| 7/20/2008 | | am | 6 | rec | overshoot n/s crew 2 | | | 1 | |
| | | | 8 | rec | ato status c8 at n/m not lined up pulled nto main | | | 1 | |
| | | pm | 3 | rpl | [redacted] | 0.75 | | | |
| | | | | | | 24.5 | | 20 | $20 |

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| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 23 | | 8 | rec | overshoot n/s drove in and a couple of trips later same crew x 3 | | 1.5 | |
| 7/21/2008 | | am | 4 | rpl | [redacted] | 3 | | |
| | | pm | 2 | rec | [redacted] | 0.5 | | |
| | 24 | | 3 | rpl | front windshield c3 crew x 4 | | 8 | $1,475.34 |
| | | | 4 | rec | mpb tripped on c7 nel reset | | 1 | |
| 7/22/2008 | | am | 1 | r | [redacted] | 2 | | |
| | | | 2 | rec | [redacted] | 0.5 | | |
| | | pm | 1 | r | cleaned and reseald several leaking planetary cover holes | | 1 | |
| | | | 2 | rpl | 2 resilient mounts on a/c compressor | | [redacted] | |
| | 25 | | 3 | r | brake job c3 5/6 | | 6 | $380.65 |
| 7/23/2008 | | am | 6 | a | roll back c10 and mbp tripped | | 1 | |
| | | pm | 1 | rpl | [redacted] | 2 | | |
| 7/24/2008 | 26 | pm | 2 | r | ground traction motor c6 #1 wo8165d8-1 | | 4 | |
| | | | 3 | rec | [redacted] | 10.5 | | |
| 7/25/2008 | | pm | 2 | rpl | complete brake job c3 1/2 | | 6 | $380.65 |
| | | | 4 | rec | [redacted] | 0.5 | | |
| 7/26/2008 | 27 | pm | 2 | rpl | [redacted] | 10 | | |
| | | | 3 | rpl | changed hub& brakes c3 5/6 due to leaking seal | | 6 | $380.65 |
| | | | 4 | rpl | intercooler safety valve c4 | | 1.5 | |
| 7/27/2008 | | pm | 3 | r | pulled cleaned and reinstalled & tightened 2 losse sockets on the propulsion monitor panel c10 | | 1 | |
| 7/28/2008 | 28 | am | 6 | rblt | assemble 4 service brake chambers | | | |
| | | pm | 1 | rec | [redacted] | 0.5 | | |
| | | | 2 | rec | fire ext removal c6 @ sat | | 1 | |
| | 29 | | 5 | r | [redacted] | 1 | | |
| | | | 7 | r | [redacted] | 1.5 | | |
| | | | 8 | rpl | [redacted] | 2 | | |
| | | | 9 | rec | [redacted] | 1 | | |
| 7/29/2008 | | am | 6,7 | a | [redacted] | 1 | | |
| | 30 | | 8,9 | rec | [redacted] | 0.5 | | |
| | | pm | 2 | BT | worked on c3, charged c4 | | | |
| | | | 3 | rpl | [redacted] | 1 | | |
| | | | 5 | rec | [redacted] | 1 | | |
| 7/30/2008 | 31 | am | 4 | r | [redacted] | 0.5 | | |
| | | | 5 | rec | veh dftc on w had to move leaf 6 rode and monitored | | 0.5 | |
| | | pm | 1 | rpl | c3 tire 8 and c4 tire 3 due to wear | | 6 | $645.00 |
| | | | 5 | rec | [redacted] | 0.5 | | |
| | | | 7 | rec | no depart w/dftc c10 @s/s upon arival cmds cleared rode train to monitor | | 0.5 | |
| 7/31/2008 | 32 | am | 7 | a | [redacted] | 0.5 | | |
| | | | 8 | rec | c5 tire 1/2 low had to air up tire 1 | | 0.5 | |
| | | pm | 1 | rec | changed c5 tire 1/2 during revenue due to sidewall split tire 2 | | 3 | $645.00 |
| | | | 3 | rpl | [redacted] | 0 | | |
| | | | | | | 20 | 15.5 | $31 |

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 6 | rec | [redacted] | 0.5 | | | |
| 8/1/2008 | | am | 2 | rec | turned off c7 leaf 7 | | | 0.5 | |
| | | | 4 | a | several no departs w/s | | | 0.5 | |
| | 33 | | 5 | a | [redacted] | 1 | | | |
| | | pm | 2 | rec | [redacted] | 1 | | | |
| 8/2/2008 | | am | 1 | rec | [redacted] | 0.75 | | | |
| 8/3/2008 | 34 | pm | 2 | rpl | mpb bulb c3 | | | 0.5 | |
| | | | 6 | r | speeded up c7 leaf 7 so as to prevent station drs from recycling | | | 1 | |
| | 35 | | 7 | rec | overshoot n at main | | | 1 | |
| | | | 10 | rec | [redacted] | 1 | | | |
| | | | 11 | rec | n/s overshoot drove in left ato | | | 1 | |
| | | | 12 | rec | n overshoot at mainstopped on flag drove in | | | 1 | |
| 8/4/2008 | | pm | 13 | rec | [redacted] | 1 | | | |
| | | am | 2 | a | no depart n/m b3 b dr malf after several dr cmds cleared | | | 0.5 | |
| | | | 3 | rec | [redacted] | 0.5 | | | |
| | 36 | | 7 | rec | [redacted] | 0.5 | | | |
| | | pm | 1 | rpl | graphic sign cover missing located at reinstalled c5 | | | 0.5 | |
| | | | 2 | rpl | brake job c3 3/4 | | $8.00 | 380.7 | |
| | | | 4 | rpl | [redacted] | 0.5 | | | |
| | | | 9 | rec | [redacted] | 0.5 | | | |
| | | | | | [redacted] | 1 | | | |
| 8/5/2008 | 37 | am | 4 | rec | [redacted] | 1 | | | |
| | | | 5 | rec | overshoot n@s drove in to clear | | | 1 | |
| | | | 8 | rec | loss of track sig & no depart w/m cmds no fix tried to dr out no go then drove in lef | 0.5 | | 1 | |
| | | pm | 2 | rec | [redacted] | | | | |
| | | | 3 | rpl | aquipment cover shock c8 #2 | | | 1 | |
| | | | 7 | rpl | overhead light ballast c9 | | | 1 | $66.25 |
| | 38 | | 8 | rpl | [redacted] | 1 | | | |
| 8/6/2008 | | am | 5 | rec | no depart n/m trash in threshold pax pulled ahandles due to cc late notification | | | 0.5 | |
| | | | 7 | rec | dr recycle s/s cmds cleared | | | 0.5 | |
| | | | 8 | rec | [redacted] | 3 | | | |
| | 39 | pm | 3 | rpl | c7 #7 operator | 0.5 | | 2 | |
| | | | 9 | rec | [redacted] | 0.5 | | | |
| | | | 10 | rec | roll back c7 to n/m had to manually reverse at main to clear | | | 0.5 | |
| 8/7/2008 | | am | 3 | rec | [redacted] | 1 | | | |
| | | pm | 1 | rpl | [redacted] | 0 | | | |
| | 40 | | 2 | rpl | [redacted] | 0.5 | | | |
| | | | 4 | rpl | crossfire c6 5/6 | | | 0.5 | |
| | | | 5 | rpl | overhead light c7 #1 end | | | 0.5 | |
| | | | 6 | rpl | ar-2 on c6 #2 | | | 2 | |
| 8/8/2008 | | pm | 1 | rec | [redacted] | 0.5 | | | |
| | | | | | | 16.75 | | 396.7 | |

Supposed to be charged $380.75.

$6

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02637

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 3 | rpl | hub c4 7/8 due to leaking | | | 4 | |
| 8/9/2008 | 41 | pm | 3 | rec | [redacted] | 0.5 | | | |
| | | | 4 | rec | [redacted] | 1 | | | |
| | | | 5 | rpl | c9 3/4 leveling valve | | | 1.5 | |
| | | | 6 | rpl | c10 b collector tree | | | 2 | |
| 8/10/2008 | | am | 1 | rec | [redacted] | 0.5 | | | |
| | | | 7 | rec | overshoot n@s stopped long allned and left ato. | | | 1 | |
| | | pm | 1 | rec | overshoot n@s sttopped short reset drove in left ato | | | 1 | |
| | 42 | | 10 | a | [redacted] | 1 | | | |
| 8/11/2008 | | pm | 1 | rec | [redacted] | 1 | | | |
| | 43 | | 3 | rpl | [redacted] | 0 | | | |
| | | | 9 | rec | [redacted] | 0.5 | | | |
| 8/12/2008 | | am | 1 | rec | [redacted] | 1 | | | |
| | 44 | | 2 | rec | rollback & service brk fail got to main cleared rollback had to ride & then cycle bcb2 to clear serv | | | 1 | |
| | | | 8 | a | 2 ato status veh 3 rode to investigat | | | 1 | |
| | | pm | 2 | rpl | c4 tire 5/6 due to bad valve stems | | | 3 | $645.00 |
| 8/13/2008 | | am | 1 | rec | [redacted] | 0.5 | | | |
| | 45 | | 6 | rec | overshoot n/s | | | 1 | |
| 8/14/2008 | | pm | 2 | rec | rollback c5 had to go to sat to recover | | | 1 | |
| | | | 3 | rpl | adjusted some and replaced contact block c5 due to rollback | | | 1.5 | |
| | | | 4 | rpl | general interface board c5 | | | 1 | $600.00 |
| | | | 6 | rec | overshoot n@s left ato next 4 trips overshoot | | | 1 | |
| | 46 | | | rpl | program stop board c7 | | | 1 | $600.00 |
| | | am | 4 | rec | Overshoot n@s | | | 1 | |
| | | pm | 2 | rpl | autolock s/a b2 1/2 | | | 1 | |
| | | | 3 | rpl | t/s p/s preamp mod per jcm | | | 2 | |
| | | | 5 | rec | [redacted] | 0.5 | | | |
| 8/15/2008 | 47 | am | 2 | a | [redacted] | 1.5 | | | |
| | | | 3 | rec | [redacted] | 0.5 | | | |
| | | pm | 1 | rec | [redacted] | 0.75 | | | |
| | | | 2 | rec | [redacted] | 1 | | | |
| | | | 3 | rpl | attemped to change headlights c10 but spare was bad | | | 1 | |
| | | | 5 | rec | no depart n/m ehandle pulled turned off b3 5/6 | | | 1 | |
| 8/16/2008 | 48 | pm | 2 | rec | no depart w/m cmds cleared then it stopped on guideway drove in | | | 0.5 | |
| | | | | rpl | took ccs and found l/s c4 contact block bad | | | 2 | |
| | | | 3 | Wld | Welders in to weld fram C8 #2 end | | | | |
| 8/17/2008 | 49 | pm | 3 | rpl | [redacted] | 0.5 | | | |
| | | | 8 | rpl | changed overhead light c4 | | | 0.5 | $7.25 |
| 8/18/2008 | 50 | am | 6 | rec | [redacted] | 1 | | | |
| | | | 8 | a | [redacted] | 1 | | | |
| | | | 9 | rec | n/s no depart ehandles pulled | | | 1 | |
| | | | | | | 12.75 | | 26 | |

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**Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 10 | rec | sd mac cooled brakes needed to warm up | | | 0.5 | |
| | 51 | | 5 | r | tightened air compressor belt c5 | | | 0.5 | |
| | | | 8 | rec | biohazard c7 took oos for janitorial to clean up | | | | |
| 8/19/2008 | | am | 4 | rec | [redacted] | 1 | | | |
| | 52 | | 7 | rec | [redacted] | 0.5 | | | |
| | | pm | 1 | rec | no depart n/s cmds did clear but only after arival | | | 0.5 | |
| | | | 2 | BT | worked on c 8 & 9 charged 9 | | | | |
| | | | 3 | r | reattached cable ladder support on c8 was loose due to welders needed it moved | | | 2 | |
| 8/20/2008 | | am | 1 | rec | [redacted] | 1 | | | |
| | 53 | | 8 | rblt | [redacted] | 0 | $42.06 | | |
| | | | 10 | rec | no depart n/s ehandles pulled | | | 1 | |
| | | pm | 7 | rec | [redacted] | 1 | | | |
| | | | | rpl | [redacted] | 0.5 | | | |
| | | | | rec | [redacted] | 0.5 | | | |
| 8/21/2008 | 54 | pm | 1 | rpl | tire 4 c8 due to possible defect | | | 3 | $322.50 |
| 8/23/2008 | 55 | pm | 1 | r | [redacted] | 1 | | | |
| 8/24/2008 | 56 | am | 6 | a | [redacted] | | | | |
| | | pm | 7 | rpl | [redacted] | | $149.91 | | |
| | | | 8 | rec | [redacted] | | | | |
| 8/25/2008 | | am | 5 | rec | [redacted] | | | | |
| | | | 13 | rec | no depart n/m took several cmds but did go ato after techs were in route | | | 0.5 | |
| | 57 | pm | 1 | rec | [redacted] | 1 | | | |
| | | | | r | [redacted] | 1 | | | |
| | | | 3 | rpl | [redacted] | 1 | | | |
| | | | 5 | rec | no depart n/s all ehandles pulled reset | | | 0.5 | |
| | | | | r | [redacted] | 0.5 | | | |
| 8/28/2008 | 58 | am | 1 | r | disconected crossfire from tire with buble c10 5/6 | | | 0.5 | |
| | 59 | pm | 1 | rpl | tire 6 c10 | | | 3 | $322.50 |
| | | | 2 | r | reattched loose connections on prc & replaced N.O. aux contact c10 | | | 1.5 | |
| 8/29/2008 | | am | 2 | rec | [redacted] | 0.5 | | | |
| | | | 6 | rec | recovered east twice due to c2 atc power supply issues | | | 1 | |
| | | | | rec | [redacted] | 0.5 | | | |
| 8/30/2008 | 60 | am | 3 | rec | recovered east twice due to c2 atc power supply issues reset bcb2 | | | 1 | |
| | | | 4 | rec | [redacted] | 0.5 | | | |
| | | | 5 | rec | recovered east due to c2 atc power supply issues reset bcb2 | | | 1 | |
| | | pm | 1 | rpl | 3 overhead light c5 | | | [redacted] | $21.76 |
| | | | 6 | rec | [redacted] | 0.5 | | | |
| | | | 7 | rec | n/s dftc c7 ehandles pulled, reset left ato | | | 1 | |
| 8/31/2008 | | am | 1 | rec | no depart n/m c7 #1 needed help to close | | | 0.5 | |
| | | | 3 | rec | no depart w/s cmds cleared while in route | | | 0.5 | |
| | | | 4 | rec | [redacted] | 1 | | | |

13.5
12 +191.96

**Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 562**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 61 | | 6 | rec | [redacted] | 2 | | | | |
| | | pm | 3 | rec | [redacted] | 4 | | | | |
| | | | 6 | r | broken latch for a/c cover c6 #2 | | | 1 | $27.94 | |
| | | | 6 | rpl | [redacted] | 0 | | | | |
| | | | 7 | rec | [redacted] | 0.5 | | | | |
| | | | | r | [redacted] | 0.25 | | | | |
| | | | 8 | rec | [redacted] | 0.5 | | | | |
| 9/1/2008 | | am | 1 | rpl | headlight c10 | | | .5 | $10.00 | |
| | 62 | pm | 5 | rpl | power supply c2 | | | 1.5 | | |
| | | | 6 | a | roll back c9 rode with no problems | | | 0.5 | | |
| 9/2/2008 | | am | 1 | a | roll back c9 rode with no problems | | | 0.5 | | |
| | | pm | 3 | rec | [redacted] | 1 | | | | |
| 9/3/2008 | 63 | am | 2 | rec | fire ext removal c9 @ main | | | 0.5 | | |
| | | | 5 | rpl | collector tree c7 #1 B/G | | | 2 | | |
| | | pm | 6 | rec | turned off c7 leaf 1 for not closing | | | 0.5 | | |
| | 64 | | 7 | rec | service brake fail out 2352 in 0011 c10 | | | 0.5 | | |
| 9/4/2008 | | am | 4 | rec | several overshoots on west rode train until night came in | | | 3 | | |
| | | pm | 2 | r | t/s and replaces bad LS1 & 5 c7 #7 | | | 1.5 | | |
| | | | 4 | rec | repaired broken lead on PRC c3 | | | 1.5 | | |
| | | | 5 | [redacted] | [redacted] | | $8,000.00 | | | |
| | | | | [redacted] | [redacted] | | $5,000.00 | | | |
| 9/5/2008 | 65 | pm | 1 | [redacted] | [redacted] | | $5,000.00 | | | |
| 9/6/2008 | | pm | 1 | [redacted] | [redacted] | | | | | |
| 9/7/2008 | | am | 1 | rec | [redacted] | 0.5 | | | | |
| | 66 | pm | 5 | rec | late train w on way to main | | | 0.5 | | |
| | | | 6 | rec | late train west on way to sat | | | 0.5 | | |
| | | | 7 | rec | [redacted] | 0.5 | | | | |
| | | | 8 | rec | [redacted] | 0.5 | | | | |
| 9/8/2008 | 67 | pm | 2 | r | [redacted] | 0.5 | | | | |
| | | | 4 | rec | [redacted] | 0.5 | | | | |
| | | | 6 | rec | [redacted] | 0.5 | | | | |
| 9/9/2008 | | am | 4 | rpl | 1 collector shoe and 2 emergency lamps on north train | | | 2 | $55.31 | 55.31 |
| | 68 | pm | 2 | rec | no depart n/s put c5 in Handback | | | 1 | | |
| | | | 4 | r | [redacted] | 1 | | | | |
| 9/10/2008 | 69 | pm | 3 | rpl | shock c10 7/8 | | | 2.5 | $281.25 | |
| | | | 4 | rpl | 2 resilient monts c8 & 9 | | | 2 | $94.00 | |
| | | | 6 | rpl | sway bar ends c10 #1 | | | 2.5 | $100.00 | |
| | | | 7 | rpl | sway bar ends c9 #1 | | | 2.5 | $100.00 | |
| 9/11/2008 | | pm | 1 | rpl | t/m c8 #1 and changed ground cable | | | 6 | | |
| 9/12/2008 | | am | 1 | rec | [redacted] | 0.5 | | | | |
| | | | 2 | rec | [redacted] | 0.5 | | | | |
| 09/12/085 | 70 | pm | 1 | rpl | all fire extinguishers on south | | | 1.5 | | |
| | | | | | | 10.25 | | 29 | $124.25 | |
| | | | | | | | | 2 | | |

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ER2640

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 3 | rpl | [redacted] | 0 | | |
| | | | 4 | rpl | [redacted] | 0 | | |
| | | | 5 | rec | [redacted] | 0.5 | | |
| 9/13/2008 | | am | 2 | rpl | guide tire c8 #4 | | 2 | |
| | | | 3 | rec | s overshooting had to change emergency track signal mod | | 2 | |
| | 71 | | 5 | rec | late train n/s r/r cleared rode train | | 1 | |
| 9/14/2008 | | pm | 3 | rpl | [redacted] | 0.5 | | |
| | | | 7 | rec | [redacted] | 0.5 | | |
| 9/15/2008 | 72 | am | 2 | rec | no depart s/m obs threshold c8 7/8 | | 0.5 | |
| | | | 5 | rec | unschedule dr opening s in middle of guideway | | 1 | |
| | | pm | 1 | r | adjusted station stopping distance cars 1 & 2 | | 1 | |
| | | | 2 | rec | over shoot c5 n/s | | 1 | |
| | | | 5 | rec | drs fail to close c2 leaf 6 | | 0.5 | |
| 9/16/2008 | 73 | am | 6 | rec | [redacted] | 0.5 | | |
| | | | 8 | rpl | collector shoe c5 # 2 c | | 1.5 | $40.83 |
| | | | 9 | rec | [redacted] | 0.5 | | |
| | | | 10 | rec | [redacted] | 0.5 | | |
| | | pm | 1 | rem | removed 4 fire ext 2 t/m air compressor fse assy er2's & motor/aux box covers | | 16 | |
| 9/17/2008 | 74 | am | 12 | rec | [redacted] | 3 | | |
| | | | 13 | rec | [redacted] | 0.5 | | |
| | | pm | 2 | rpl | fire extinguisher north | | 1.5 | |
| | 75 | | 6 | rpl | 6 resilient mounts on cars 8 9 & 10 | | 6 | $90.00 |
| | | | 7 | rec | [redacted] | 0.5 | | |
| | | | 8 | rec | dr fail to close c9 leaf 8 had to be helped | | 0.5 | |
| 9/18/2008 | | am | 1 | rec | [redacted] | 0.5 | | |
| | | pm | 2 | rpl | c8 tail lights | | 1.5 | $40.00 |
| | 76 | | 6 | rec | [redacted] | 0.5 | | |
| 9/19/2008 | | pm | 3 | r | [redacted] | 0.5 | | |
| | | | 4 | r | removed screw that was causing interference with LS4 c9 | | 1.5 | |
| | | | 5 | rec | [redacted] | 3 | | |
| 9/20/2008 | 77 | am | 2 | rpl | 2 ciollector shoes s 7day | | | $91.82 |
| | | pm | 1 | rec | no depart dftc car 7 changed ls4 c7 | | 0.5 | |
| | | | 2 | rpl | [redacted] | 0 | | |
| | | | 6 | rec | [redacted] | 0.5 | | |
| 9/21/2008 | | am | 1 | rec | overshoot c5 n/m | | 1 | |
| | | | 2 | rec | [redacted] | 1 | | |
| | | | 3 | rec | [redacted] | 0.5 | | |
| | | | 4 | rec | [redacted] | 0.5 | | |
| | 78 | | 5 | rec | [redacted] | 0.5 | | |
| | | | 8 | r | [redacted] | 0.5 | | |
| | | | 14 | rec | 3 train delayed at station on the east comands cleared | | 0.5 | |
| | | | | | | 15 | 36.5 | $132.43 |

UX1018 02641

ER2641

Total invalid hrs: 230.25

698.2

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 79 | pm | 6 | rec | dr fail to close s/s c9 arived and all e handles pulled | | 4 | |
| | | | 7 | rec | dr fail to close s/s c9 had to drive n to sat and recover train turned off leaf 8 | | 1 | |
| | | | 9 | rec | [redacted] | 0.5 | | |
| | | | 10 | rec | [redacted] | 0.5 | | |
| 9/22/2008 | | am | 1 | r | [redacted] | 0.5 | | |
| | | | 9 | rec | [redacted] | 0.5 | | |
| | | | 10 | rec | [redacted] | 0.5 | | |
| | | pm | 3 | rpl | [redacted] | 0.5 | | |
| | | | 5 | rpl | dr arm roller bearing mcr ls-4.c9 leaf 8 | | 4 | $94.80 |
| | | | | | | | total | |
| | | | | | | 2.5 | 2 | |
| 2/4/2012 | 169 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | |
| 2/4/2012 | 169 | am | 3 | r | South Train Delayed @ Station; station door malfunction | 0.5 | | |
| 2/4/2012 | 169 | am | 4 | r | West Train Delayed @ Station; Station Door malfunction | 0.5 | | |
| 2/4/2012 | 170 | pm | 5 | r | West Train Delayed @ Station; Station Door malfunction | 0.5 | | |
| 2/5/2012 | 170 | am | 1 | r | South Train Delayed @ Station; station door malfunction | 0.5 | | |
| 2/5/2012 | 170 | am | 5 | r | South Train CCTV Unreachable not working in CC | | 1 | |
| 2/5/2012 | 170 | am | 8 | r | SD McDonald with all trains held in station | 1 | | |
| 2/5/2012 | 170 | am | 9 | r | South Train Delayed @ Station; station door malfunction | 0.5 | | |
| 2/5/2012 | 170 | am | 10 | r | South Train Delayed @ Station; station door malfunction | 1 | | |
| 2/6/2012 | 171 | am | 1 | r | North Train Loss Vital 0 Spd, Closed & Lock Broken, Reverser Failed | | 2 | |
| 2/6/2012 | 172 | am | 3 | r | SD McDonald with all trains held in station | 1 | | |
| 2/6/2012 | 172 | am | 5 | r | SD McDonald with all trains held in station | 1 | | |
| 2/6/2012 | 172 | pm | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | | |
| 2/7/2012 | 173 | pm | 3 | r | South Train Low Main Air Pressure Alarm, Trainline air to car | | 1 | |
| 2/7/2012 | 173 | pm | 4 | r | East Train Delayed @ Station; station door malfunction | 1 | | |
| 2/8/2012 | 173 | am | 4 | r | SD McDonald with all trains held in station | 1 | | |
| 2/8/2012 | 174 | pm | 4 | r | North Train Multiple ATC Alarms, Stopped; Pushed Pin | | 1 | |
| 2/8/2012 | 174 | pm | 5 | 2 | North Train Multiple ATC Alarms, Stopped on Guide Way | | 2 | |
| 2/9/2012 | 175 | am | 4 | r | SD McDonald with all trains held in station | 1 | | |
| 2/9/2012 | 175 | am | 6 | r | West Train Delayed @ Station; Station Door malfunction | 1 | | |
| 2/9/2012 | 175 | am | 7 | r | West Train Delayed @ Station; Station Door malfunction | 1 | | |
| 2/9/2012 | 175 | pm | 5 | r | SD McDonald with all trains held in station | 1 | | |
| 2/9/2012 | 175 | pm | 5 | r | SD McDonald with all trains held in station | 1 | | |
| 2/10/2012 | 175 | am | 3 | r | East Train Loss of Vital 0 Spd, Closed & Locked Broken, E-Handle Pulled | | 1 | |
| 2/10/2012 | 175 | am | 4 | r | SD McDonald with all trains held in station | 1 | | |
| 2/11/2012 | 176 | am | 7 | r | South Train Low Main Air Pressure Alarm, Trainline air to car | | 1 | |
| 2/12/2012 | 177 | am | 1 | r | SD McDonald with D trains held in station | 1 | | |
| 2/12/2012 | 177 | am | 3 | r | North Train Delayed @ Station; station door malfunction | 1 | | |
| 2/12/2012 | 177 | pm | 6 | r | South Train Delayed @ Station Low Mina Air Press; Trainlined | 1 | | |
| | | | | | | 19 | 9 | |

Vernon START

UX1-017
02642

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2/12/2012 | 177 | pm | 8 | r | SD McDonald with all trains held in station | 1 | |
| 2/13/2012 | 178 | am | 1 | r | SD McDonald with all trains held in station | 1 | |
| 2/13/2012 | 178 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/13/2012 | 178 | am | 3 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 2/13/2012 | 178 | am | 5 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 2/13/2012 | 178 | pm | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 2/13/2012 | 178 | pm | 2 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/14/2012 | 179 | am | 1 | r | Gen low batt voltage, low oil press alarms, invest. (running unloaded) | 1 | |
| 2/14/2012 | 179 | am | 5 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/15/2012 | 179 | am | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/15/2012 | 179 | am | 3 | r | East Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/16/2012 | 180 | am | 4 | r | SD McDonald with all trains held in station | 0.5 | |
| 2/16/2012 | 180 | am | 5 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/16/2012 | 180 | am | 1 | r | East Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/17/2012 | 181 | am | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 2/17/2012 | 181 | am | 2 | r | East Train Holding Brake Fail; E-handle pulled by Pax, recovered | | 1 |
| 2/18/2012 | 181 | am | 1 | r | South Train Low Main Air Pressure Alarm, Trainline air to car | | 0.5 |
| 2/18/2012 | 181 | am | 4 | r | North Train Low Main Air Pressure Alarm, trainlined air to car | | 0.5 |
| 2/18/2012 | 181 | am | 5 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/18/2012 | 182 | am | 6 | r | SD McDonald with C trains held in station | 1 | |
| 2/19/2012 | 182 | am | 1 | r | S Train Delayed @ Sta, ORS request to talk would not clear | 0.5 | 0.5 |
| 2/19/2012 | 182 | am | 2 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 2/19/2012 | 182 | am | 3 | r | SD McDonald | 0.5 | |
| 2/19/2012 | 182 | pm | 6 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 2/20/2012 | 183 | am | 4 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 2/20/2012 | 183 | pm | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/21/2012 | 183 | am | 1 | r | South Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/21/2012 | 183 | am | 4 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/22/2012 | 184 | am | 9 | r | East Train Delayed Loss of Vital 0 Spd, Recovered jumped on Motorbox | | 2 |
| 2/22/2012 | 185 | am | 10 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 2/23/2012 | 186 | am | 3 | r | SD McDonald with D trains reversed to main and held in station | 1 | |
| 2/23/2012 | 186 | am | 4 | r | SD McDonald with D trains reversed to main and held in station | 1 | |
| 2/23/2012 | 186 | pm | 2 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 2/24/2012 | 186 | am | 5 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 2/25/2012 | 187 | am | 5 | r | SD McDonald with C trains held in station | 1 | |
| 2/26/2012 | 187 | pm | 6 | r/r | East Train Reverser fail, jumped on motorbox for direction, replaced LS1 | | 2 |
| 2/26/2012 | 187 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 1 | |
| 2/27/2012 | 188 | pm | 1 | r | South Train Failed to arrive, unsched door open T/L reset departed ato | | 2 |
| 2/28/2012 | 189 | am | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 2/28/2012 | 189 | am | 2 | r | SD McDonald with C trains held in station | 1 | |
| 2/28/2012 | 189 | am | 7 | r | South Train Return To Service; loss of GND shoe, CC operator error | | 1.5 |
| | | | | | | 29 | 10 |

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 652 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2/28/2012 | 189 | pm | 4 | r | South Train failed to arrive, s-door open; recovered train departed ato | 1 | | | |
| 2/29/2012 | 190 | am | 2 | r | Central ORS Workstation cmd links gray'd out, rebooted workstation | 1 | | | |
| 2/29/2012 | 190 | am | 10 | r | C & D Sytem No Response to Poll, Attempted to reset; C7 cleared later | | | 0.5 | |
| 3/2/2012 | 191 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/2/2012 | 191 | am | 3 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/2/2012 | 191 | pm | 5 | r | South Train Delayed @ Station; station door malfunction | 1.5 | | | |
| 3/2/2012 | 191 | am | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/2/2012 | 192 | am | 7 | r | North Train Low Main Pressure Alarm, trainlined air to car | | | 0.5 | |
| 3/2/2012 | 192 | am | 8 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/3/2012 | 192 | pm | 1 | r | East Train Delayed @ Station; several doors malfunctioned | | | 1 | |
| 3/3/2012 | 193 | pm | 6 | r | South Train Delayed @ Station; trainlined air & pushed PB trainline reset | | | 1 | |
| 3/3/2012 | 193 | pm | 7 | r | South Train Compressor Knocking, turned off compressor on C10 | | | 1 | |
| 3/4/2012 | 193 | am | 5 | r | North Train No Response To Pole, Attempted to reset by cycling RCB | | | 1 | |
| 3/4/2012 | 193 | am | 6 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/5/2012 | 194 | am | 1 | r | East Train Reverser failures, cleared by striking C2 motor box w/ a mallet | | | 1 | |
| 3/5/2012 | 194 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/5/2012 | 194 | am | 5 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/5/2012 | 194 | am | 7 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/6/2012 | 195 | am | 5 | r | West Train Delayed @ Station; Doors cutout for high winds | 1 | | | |
| 3/6/2012 | 195 | am | 6 | r | East Train Delayed @ Station; Doors cutout due to high winds | 1 | | | |
| 3/6/2012 | 195 | am | 11 | r | 2 Techs @ C Satellite for high winds, torque settings increased all doors | 2 | | | |
| 3/6/2012 | 195 | am | 13 | r | South And East main station door issues, Doors turned off for wind | 0.5 | | | |
| 3/6/2012 | 195 | pm | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/6/2012 | 196 | am | 8 | rpl | East Train Reverser failures (C2), Replaced LSR and PBR Relays | | | 2 | |
| 3/7/2012 | 196 | am | 2 | r/r | East Train No Propulsion, Corrected wiring issue, Replaced PRCCB | | | 2 | |
| 3/7/2012 | 196 | am | 3 | r | East Train Delayed @ Station; Trainline reset to clear issue | | | 1 | |
| 3/7/2012 | 197 | pm | 4 | rpl | South Train No PRC Indication, Troubleshot replaced wire PRCCA to PRCC | | | 2 | |
| 3/8/2012 | 197 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/8/2012 | 197 | am | 4 | rpl | South PRC propulsion issues; Changed out Brake Switch aux sweeper arm | | | 1 | |
| 3/8/2012 | 197 | am | 8 | rpl | South PRC propulsion issues; Changed out Brake Switch aux contact block | | | 1 | |
| 3/8/2012 | 197 | am | 9 | rpl | South PRC propulsion issues; Changed out relay PRCC C | | | 1 | |
| 3/8/2012 | 197 | pm | 3 | r | South Train Delayed @ Station; station door malfunction | 2 | | | |
| 3/10/2012 | 199 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/10/2012 | 199 | pm | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/11/2012 | 199 | am | 1 | r | North Train Unscheduled stop, lost veh doors locked in tunnel | | | 1 | |
| 3/12/2012 | 200 | am | 4 | r | SD McDonald with all trains held in station | 0.5 | | | |
| 3/12/2012 | 201 | pm | 4 | r | North Train Unscheduled stop, lost veh doors locked in tunnel | | | 1.5 | |
| 3/13/2012 | 202 | am | 2 | r | North Train no CCTV, Rebooted DVR | | | 0.5 | |
| 3/13/2012 | 202 | am | 3 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/13/2012 | 202 | am | 7 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/14/2012 | 202 | am | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| | | | | | | 29.5 | | 19 | |

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3/14/2012 | 202 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/14/2012 | 203 | am | 5 | r | South Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/14/2012 | 203 | am | 15 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/15/2012 | 204 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/15/2012 | 204 | am | 5 | r | SD McDonald with all trains held in station, Drove South to sat for assist | 1.5 | | | |
| 3/15/2012 | 204 | am | 6 | r | North Train Unscheduled stop, lost veh doors locked in tunnel | | | 1.5 | |
| 3/15/2012 | 204 | am | 7 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/16/2012 | 204 | pm | 5 | r | East Train Delayed @ Station; inaccurate sta stop, fail to arrive | 0.5 | | | |
| 3/16/2012 | 204 | am | 4 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/16/2012 | 205 | am | 5 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/16/2012 | 205 | pm | 1 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/16/2012 | 205 | pm | 7 | r | East Train Delayed @ Station; station door malfunction | 4 | | | |
| 3/17/2012 | 205 | am | 1 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/17/2012 | 205 | am | 5 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/17/2012 | 206 | pm | 6 | r | North Train, Low Main Air Pressure; train line valves opened | 1 | | | |
| 3/18/2012 | 206 | am | 1 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| /18/2012 | 206 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/18/2012 | 206 | am | 8 | r | East Train Delayed @ Station; Autolock missing disk and spring | 1 | | | |
| 3/19/2012 | 207 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/19/2012 | 207 | am | 3 | r | South Train location failure, door block failed, cross check fail alarms | | | 1.5 | |
| 3/19/2012 | 207 | am | 7 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/19/2012 | 207 | am | 9 | r | North Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/19/2012 | 208 | am | 1 | r | South Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/19/2012 | 208 | pm | 11 | r | CCo2 PC not working in Central; rebooted PC to correct the issue | 1 | | | |
| 3/20/2012 | 209 | am | 3 | r | South Train Delayed @ Station; station door malfunction | 1.5 | | | |
| 3/20/2012 | 209 | am | 6 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/20/2012 | 209 | pm | 2 | r | Central Network Offline; rebooted cc OH2 PC to correct the issue | 1 | | | |
| 3/21/2012 | 210 | am | 10 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/21/2012 | 210 | am | 11 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/21/2012 | 210 | am | 12 | r | South Train Delayed @ Station; station door malfunction | 1.5 | | | |
| 3/22/2012 | 210 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/22/2012 | 211 | am | 3 | r | South Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/23/2012 | 211 | am | 2 | r | South Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/23/2012 | 211 | am | 3 | r | East Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/23/2012 | 211 | am | 5 | r | West Train Delayed @ Statin; station door malfunction | 0.5 | | | |
| 3/23/2012 | 211 | pm | 1 | r | East Train Delayed @ Station, no call from cc | 1 | | | |
| 3/23/2012 | 212 | pm | 2 | r | South Train Unscheduled Stop on Guide Way; lost close & lock in station | 1 | | | |
| 3/24/2012 | 212 | am | 2 | r | East Train Delayed @ Station; station door malfunction | 0.5 | | | |
| 3/25/2012 | 213 | am | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 3/25/2012 | 213 | am | 2 | r | SD McDonald with all trains held in station | 0.5 | | | |
| 3/25/2012 | 213 | pm | 2 | r | East and West Trains Delayed due to High Winds, Doors turned off @ Sat | 1 | | | |
| | | | | | | 34 | | 3 | |

| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3/25/2012 | 213 | pm | 6 | r | West Train Low Main Air Pressure, Replced compressor heads, Cleaned | | 3 |
| 3/26/2012 | 214 | pm | 7 | r | South Train Flickering PRC/ PE MMP LEDS, Troubleshot and corrected | | 1.5 |
| 3/29/2012 | 216 | am | 4 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 3/29/2012 | 216 | pm | 5 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 3/30/2012 | 217 | pm | 1 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 3/30/2012 | 217 | pm | 2 | r | North Train Delayed @ Station; station door malfunction | 1 | |
| 3/31/2012 | 217 | am | 3 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 3/31/2012 | 218 | pm | 7 | r | C Train Delays due to High Winds, turned off station doors as needed | 1 | |
| 3/31/2012 | 218 | pm | 8 | r | West Train Delayed @ Station; station door malfunction | 1.5 | |
| 4/1/2012 | 218 | am | 3 | r | South Train Delayed @ Station; station door malfunction | 1 | |
| 4/1/2012 | 218 | am | 4 | r | North Train Delayed @ Station; station door malfunction | 1 | |
| 4/1/2012 | 218 | am | 5 | r | North Train No Response To Pole, Attempted to reset | | 0.5 |
| 4/1/2012 | 219 | pm | 5 | r | North Train Delayed @ Station; station door malfunction | 0.5 | |
| 4/4/2012 | 220 | pm | 4 | r | South Train Unscheduled Stop in Tunnel, Recovered, returned to service | | 1 |
| 4/4/2012 | 220 | pm | 6 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 4/5/2012 | 221 | am | 5 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 4/6/2012 | 222 | am | 2 | r | West Train Delayed @ Station; station door malfunction | 0.5 | |
| 4/8/2012 | 223 | am | 1 | r | North Train No Polling on C-5; Troubleshot and corrected the issue | | 1.5 |
| 4/8/2012 | 223 | am | 3 | r | West Traindelayed @ Station; station door malfunction | 0.5 | |
| 4/8/2012 | 223 | pm | 1 | r | North Train Delayed @ Station; station door malfunction | 1 | |
| 4/8/2012 | 223 | pm | 2 | r | West Train Delayed @ Station; station door malfunction | 1 | |
| 4/9/2012 | 224 | am | 5 | r | SD McDonald with all trains held in station | 0.5 | |
| 4/9/2012 | 224 | pm | 2 | r | South Train Delayed @ Staton; station door malfunction | 1 | |
| 4/9/2012 | 224 | pm | 5 | r | West Train Delayed @ Station ; station door malfunction | 0.5 | |
| 4/10/2012 | 225 | am | 5 | r | West Train Delayed @ Station; Multiple station door malfunctions | 1 | |
| 4/10/2012 | 225 | pm | 1 | r | South Train no CCTV in CC; Reset the Veh CCTV Radio | | 0.5 |
| 4/10/2012 | 225 | pm | 5 | r | North Train No PRC Light; Troubleshot and corrected the issue | | 1 |
| 4/11/2012 | 226 | am | 2 | r | SD McDonald, C & D Trains held in Station | 1 | |
| 4/11/2012 | 226 | pm | 2 | r | Train Delayed @ Station; Station Door malfunction | 0.5 | |
| 4/11/2012 | 226 | pm | 3 | r | Train Delayed @ Station; Station Door malfunction | 0.5 | |
| 4/12/2012 | 227 | am | 1 | r | Train Delayed @ Station; Station Door malfunction | 0.5 | |
| 4/12/2012 | 227 | am | 6 | r | SD McDonald; All Trains em reversed to station; trouble w/ return to serv. | 1 | |
| 4/12/2012 | 227 | am | 7 | r | East Train Delayed @ station; station door malfunction | 1 | |
| 4/12/2012 | 228 | pm | 7 | r | South Train Delayed @ Station; Station Door Malfunctions | 0.5 | |
| 4/13/2012 | 228 | am | 5 | r | South Train Delayed @ Station; Nstation door lock upon closure | 1 | |
| 4/14/2012 | 229 | am | 4 | r | North train stopped on guide way, closed & Lock broken @ main term | | 1 |
| 4/14/2012 | 229 | am | 5 | r | North train Unscheduled stop Serv Brake With Reset Manually drove in | | 1 |
| 4/15/2012 | 229 | pm | 7 | r | Train Delayed @ Station; Station Door malfunction | 1 | |
| 4/15/2012 | 229 | am | 1 | r | South Train Delayed @ Station; Vehical Door Mechanical binding | | 1 |
| 4/16/2012 | 230 | am | 1 | r | North Train Delayed @ Satellite;Door malfunctions | 1 | |
| 4/19/2012 | 233 | am | 2 | r | East Train Delayed @ station; station door malfunction | 1 | |
| | | | | | | 25 | 12 |

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| Data From The Daily Computer Log Used By the Technicians Performing Work Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4/19/2012 | 233 | am | 6 | r | West Train Delayed @ Station; station door malfunction | 1 | | | |
| 4/19/2012 | 233 | pm | 1 | r | East Train Delayed @ station; station door masifunction | 1 | | | |
| 4/20/2012 | 234 | am | 2 | r | East Train Delayed @ station; station door masifunction | 1 | | | |
| 4/20/2012 | 234 | am | 4 | r | T3 Server locked up the system; shut down server locked out t3 computers | 2 | | | |
| 4/21/2012 | 234 | am | 2 | r | North Train tach fail/ cross check fail alarms stopped outside station | | | 1.5 | |
| 4/21/2012 | 234 | am | 4 | r | Unscheduled Stop on guide way, East train lost Veh close and lock | | | 1 | |
| 4/25/2012 | 235 | am | 3 | r | Train delay @ station no close & lock station door malfunctions | 1 | | West Trainb | |
| 4/27/2012 | 236 | am | 3 | r | Train Delay at Station sta doors no close & lock, no vital 0 speed, linkage | 1.5 | | | |
| 4/27/2012 | 236 | am | 4 | r | Train Delay at station station doors no close and lock; Ehandle linkage | 1.5 | | | |
| 4/27/2012 | 236 | am | 5 | r | Train Delay at station station doors no close and lock | 1.5 | | | |
| 4/28/2012 | 237 | am | 4 | r | SD McDonald with ther D trains held in station at the Satellite | 1 | | | |
| 4/28/2012 | 237 | pm | 1 | r | SD McDonald with all trains reversed and held in station | 1 | | | |
| 4/30/2012 | 238 | am | 3 | r | East train, door malf, man closed doors, train departed | 1 | | | |
| 5/1/2012 | 239 | pm | 6 | r | East train delayed, door cmds issued, no fix recovered door reset | 1 | | | |
| 5/2/2012 | 239 | am | 1 | r | w Tram train delayed @ sta, C/I Broken, remoter reset no fix | 0.5 | | | |
| 5/2/2012 | 240 | pm | 10 | r | W tram unscheduled stop, fail to arrive, door malf | 0.5 | | | |
| | | | | | | 391 | 18197.96 | 883.7 | 13986.36 |

15 $197.96 2.5 $5,866.63

~~TTT~~

TOTAL HOURS THAT DO NOT MEET 3 CRITERIA: 376.75 (96.4% DISC) 2 751.2 + 50 (90.7%)

VALID HOURS: 14.25 132.5

**Data From Log Books Used By the Technicians Performing Work On The Wayside Doors Under CBE 652**

| File: | page | autolock | DCU | Motor | Wheels | Door guide | leved | adj | e dr switch | rpl dr | repairs | fls | led | c/l switch | pwr spl | filler strip | firm ware | Bracket /mod | speaker |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| North main | AIRPORT-00232 | | | | | | | | | | | | | | | | | | |
| | AIRPORT-00233 | 11 | 1 | 1 | 4 | 2 | | | | | | | | | | | | | |
| | AIRPORT-00234 | 12 | 1 | 1 | | | 1 | 1 | 3 | | | | | | | | | | |
| | AIRPORT-00235 | 5 | 2 | 2 | 2 | | 2 | 3 | | 1 | | | | | | | | | |
| | AIRPORT-00236 | 8 | 1 | | | | | 2 | | | 4 | | | | | | | | |
| | AIRPORT-00237 | 1 | | | | | | | | | | | | | | | | | |
| North sat | AIRPORT-00249 | 7 | 2 | 2 | 4 | 1 | | 1 | | | | 1 | | | | | | | |
| | AIRPORT-00250 | 11 | | | 5 | 4 | 2 | 1 | | | | | | | | | | | |
| | AIRPORT-00251 | 7 | 1 | 2 | 4 | 2 | 3 | 1 | | | | | | | | | | | |
| | AIRPORT-00252 | 4 | 1 | | | 9 | 2 | 2 | | | 2 | | | | | | 12 | | |
| | AIRPORT-00253 | 4 | 2 | | | 2 | | | | | 1 | | 2 | 5 | | | | | |
| | AIRPORT-00254 | 2 | | | | | | | | | | | | | | | | | |
| south main | AIRPORT-00267 | 3 | | 1 | | 2 | | | | | | | | | | | | | |
| | AIRPORT-00268 | 8 | 2 | 3 | 6 | | 3 | | | | | | | | | | | | |
| | AIRPORT-00269 | 12 | | | | 4 | | | | | 2 | | | | | 1 | | | |
| | AIRPORT-00270 | 9 | 1 | 2 | | | 2 | 1 | | | | | | | | | 12 | | |
| | AIRPORT-00271 | 5 | 2 | 4 | | | | 1 | | | 1 | | 2 | | | | | | |
| | missing page/pages 05/01/08 -05/10/09 | | | | | | | | | | | | | | | | | | |
| south sat | AIRPORT-00286 | 9 | 3 | 2 | 2 | 4 | | | | | | | | | | | | | |
| | AIRPORT-00287 | 9 | 2 | 1 | | 8 | | | | | | 1 | | | | | | | |
| | AIRPORT-00288 | 8 | 2 | 1 | | 8 | 2 | 1 | | | | | | | | | 12 | | |
| | AIRPORT-00289 | 7 | 1 | | | 2 | | | | | 1 | | 2 | 1 | | | | | |
| | AIRPORT-00290 | | | | | | | | | | | | | 12 | | | | | |
| East main | AIRPORT-00297 | 3 | 1 | 2 | | | | | | | | | | | 1 | | | | |
| | AIRPORT-00298 | 3 | 4 | 3 | 4 | 4 | | | | | 1 | | | | | | | | |
| | AIRPORT-00299 | 7 | 2 | 3 | | 4 | | 1 | | | | | | | | | | | |
| | AIRPORT-00300 | 5 | | | | | | 5 | | | | | | | | | 8 | 8 | |
| | AIRPORT-00301 | 7 | | 1 | | | | 3 | | | 7 | 1 | | | | | | | |
| | AIRPORT-00302 | 1 | 1 | 1 | | | | | | | 1 | | | | | | | | |

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| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East sat | AIRPORT-00304 | 1 | 1 | | | | | | | | | | | | | | | | |
| | AIRPORT-00305 | 9 | | 3 | | | | 1 | | | | 1 | | | 1 | | | | |
| | AIRPORT-00306 | 6 | 1 | 1 | | | | | | | 4 | | | | | | 8 | 8 | |
| | AIRPORT-00307 | 2 | 1 | 2 | | | | | | | 2 | | | | | | | | |
| West main | AIRPORT-00310 | 10 | | | | 4 | | | | | | | | | | | | | 1 |
| | AIRPORT-00311 | 10 | 1 | 4 | | | | | | | | | | | | | | | |
| | AIRPORT-00312 | 5 | 1 | 2 | | | 1 | | | | 3 | | | | | | 8 | 8 | |
| | AIRPORT-00313 | 4 | | 1 | 4 | | | 1 | | | 8 | | | | | | | | |
| West Sat | AIRPORT-00315 | 8 | 1 | 4 | | | | | | | 1 | | | | | | | | |
| | AIRPORT-00316 | 4 | 2 | 3 | | | | 1 | | | 1 | | | | | | 8 | 9 | |
| | AIRPORT-00317 | 3 | | 2 | | | | 1 | | | | | | | | | | 2 | |
| total labor | | 230 | 40 | 54 | 95 | 60 | 18 | 27 | 3 | 1 | 39 | 4 | 6 | 18 | 2 | 1 | 68 | 35 | 1 |
| Time each | | 1.75 | 1.5 | 1.75 | 1.25 | 1.5 | 0.5 | 0.5 | 0.5 | 6 | 0.5 | 0 | 0.5 | 0.5 | 0.5 | 2 | 0.25 | 0.75 | 1.5 |
| Labor | 801 | 402.5 | 60 | 94.5 | 43.75 | 90 | 9 | 14 | 1.5 | 6 | 19.5 | 1 | 3 | 9 | 1 | 2 | 17 | 26.25 | 1.5 |
| some or all from missing pages | | 65 | | | | | | | | | | | | | | 5 | | | |
| | 123.75 | 113.75 | | | | | | | | | | | | | | 10 | | | |
| total labor | 924.75 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| notes | | 1 | 1 | 1 | 2 | 3 | | | 4 | | | | 4 | 4 | | 1 | | | 4 |
| Qty used | | | | | 105 | 48 | | | 3 | | | | 6 | 18 | | | | | 1 |
| Price each | | | | | 46.75 | 12 | | | 20 | | | | 25 | 22 | | | | | 100 |
| Extended | | | | | 4909 | 576 | | | 60 | | | | 150 | 396 | | | | | 100 |
| 2nd part used | | | | | | 12 | | | | | | | | | | | | | |
| Price each | | | | | | 275 | | | | | | | | | | | | | |
| Extended | | | | | | 3300 | | | | | | | | | | | | | |
| Totals | 9490.75 | | | | 4909 | 3876 | | | 60 | | | | 150 | 396 | | | | | 100 |

43.5 90 1.5 3 9

$6,091

SUBTOT INV. HRS: 147.25

## Data From Log Books Used By the Technicians Performing Work On The Trams Under CBE 552

### Pneumatics

| Train | Page | H/p Head | Up Head | FSE Pkg pm | FSE Pkg repair | Level valve | Hold back | Relief valve | Serv brk | Spring Brk | Sentro. nics | Transd ucer | Air Comp | TD Relays | Gen Repair | Air bag | CSO | AR-2 PM | AR-2 Repair | Shroud | Air Drier PM | Air Drier Repair |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00014 | 2 | 1 | 3 | 1 | 2 | | | 2 | | | | | | | 1 | | | 4 | | | |
| | AIRPORT-00015 | 4 | 2 | | 2 | | | 1 | 2 | | | | | | 1 | | | | | | 2 | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00066 | 2 | 1 | 4 | | 1 | 1 | | 1 | | | | | | | | | 4 | | 1 | | 2 |
| | | 5 | 4 | | 1 | | | | | | | | 1 | | | | 1 | | 1 | | 1 | 1 |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | | | | |
| North | AIRPORT-00120 | | | 3 | | | | | | | | | | | | | | | | | | 2 |
| | AIRPORT-00121 | 1 | 1 | | 1 | 3 | | | | | | | 2 | | | | | | | 1 | | 4 |
| | AIRPORT-00122 | | | 2 | 1 | 5 | 2 | | | | | | | | 1 | | | | | | | 1 |
| | AIRPORT-00123 | 3 | 3 | | 2 | | | 1 | 1 | | | | | | | | | | | 4 | 2 | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00186 | 4 | 2 | | | 9 | | | 4 | 2 | 1 | 1 | 1 | 2 | | | 1 | | 1 | | | 1 |
| | AIRPORT-00187 | 4 | 4 | | | 6 | | | | | | | | | | | | | | 1 | | 1 |
| | AIRPORT-00188 | 2 | 1 | 2 | 1 | 3 | 1 | | | 4 | 1 | 1 | | | 1 | | | | | | | |
| | AIRPORT-00189 | | | | 1 | 3 | 1 | | 2 | | 2 | | | | 2 | | | | | | 3 | 1 |
| | | 27 | 19 | 14 | 10 | 26 | 5 | 2 | 12 | 6 | 4 | 2 | 4 | 2 | 5 | 1 | 2 | 4 | 6 | 7 | 6 | 13 |
| Hours / Job | | 2.5 | 2.5 | 1.5 | 2.5 | 2.6 | 3 | 1.75 | 2.6 | 2.6 | 2 | 1.75 | 5.5 | 2 | 1 | 7.5 | 2.35 | 1 | 2.5 | 2.5 | 1 | 2.5 |
| Total hours | 421.2 | 67.5 | 47.5 | 21 | 25 | 65 | 15 | 3.5 | 30 | 15 | 8 | 3.5 | 22 | 4 | 5 | 7.5 | 4.7 | 4 | 15 | 17.5 | 6 | 32.5 |
| Total for Parts | 1298.76 | 266.22 | 191.33 | | | | | | 38.42 | | | | | 231.5 | | 160.59 | | | | 420 | | |
| Parts | | 4.15 | 4.36 | | | | | | 4.53 | | | | | 116.75 | | | | | | 60 | | |
| | | 5.71 | 5.71 | | | | | | 4 | | | | | | | | | | | | | |

30 $15.12

### Air Conditioning

| Train | Page | A/C Compressor | Condensor fan Motor | Evaporator Fan Motor | Over Loads | Gen Repair | filter Drier | Control board |
|---|---|---|---|---|---|---|---|---|
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | |
| | AIRPORT-00039 | 1 | 1 | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | |
| | AIRPORT-00090 | | 1 | | | | | |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | |
| | AIRPORT-00156 | 1 | 5 | 2 | 1 | 1 | 1 | 1 |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | |
| | AIRPORT-00219 | 1 | 1 | | | | | 2 |
| Hours/Job | | 3 | 8 | 2 | 1 | 1 | 1 | 3 |
| Total Hours | 64.5 | 13.5 | 36 | 7 | 1 | 1 | | 6 |
| Total for Parts | 54209.34 | 25557 | 9905.12 | 3024.26 | 114.91 | | 19 | 15589 |
| Parts | | 8519 | 1238.14 | 1512.13 | 114.91 | | 19 | 5196.4 |

### Drive Axle Tire

| Section | Labor | Parts |
|---|---|---|
| Pneumatics | 421.2 | 1298.76 |
| Air Conditioning | 64.5 | 54209.34 |
| Drive Axle Tire | 919.5 | 40584.52 |
| Spindles | 531 | 2404.39 |
| Vehicle Doors | 587.5 | 19016.51 |
| Motor Box | 587.5 | 929.05 |
| AUX BOX | 93 | 2140.49 |
| ATO & Communication | 123 | 67616.44 |
| Interior & Exterior | 100.5 | 40584.52 |
| Totals | 3427.7 | 228782.02 |

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| | | | | | | | | Drive Axle Tire | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Sway Bar | | | | | |
| Train | Page | Hub | Hub/ Break Job | Pinion Seal | Hub Oring | Drive Tires | Drive Shaft | Tire for other | TPMS | Axle Breather | serv break | Shock | Stabilizer | Sway Bar | Ends | Bushings | Air Bag | Hardware | Leaf Spring |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00028 | | 2 | 2 | | 7 | | 1 | | | | | | | | | | | |
| | AIRPORT-00030 | | | | | | | | | | | 3 | | | | | 1 | 3 | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00066 | 3 | | 1 | | 7 | | | 2 | | | 6 | 2 | | | | | | |
| | AIRPORT-00076 | | | | | 2 | | | | | | | | | | | | | |
| | AIRPORT-00080 | | | | | | | | | | | 6 | 2 | | | | | | 1 |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | |
| North | AIRPORT-00136 | 2 | | 7 | | 5 | | | | 1 | | | | | | | | | |
| | AIRPORT-00137 | | 1 | 5 | | 3 | 3 | | 1 | 2 | | | | | | | | | |
| | AIRPORT-00138 | 6 | | 2 | | 3 | | | 1 | 1 | | | | | | | | | |
| | AIRPORT-00139 | 1 | 1 | 3 | | 3 | | | | | 1 | | | | | | | | |
| | AIRPORT-00140 | 1 | | 4 | | | | | 4 | 2 | | | | | | | | | |
| | AIRPORT-00142 | | | | | | | | | | | 4 | | | 6 | 8 | | | |
| | AIRPORT-00144 | | | | | | | | | | | 4 | 7 | | | 4 | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00203 | 4 | | 3 | | 2 | | | | | | | | | | | | | |
| | AIRPORT-00204 | 1 | 1 | 2 | | 7 | | | | 1 | | | | | | 2 | | | |
| | AIRPORT-00205 | | | 4 | | 6 | 2 | | | 2 | | | | | | | | | |
| | AIRPORT-00206 | | | 9 | | 4 | | | | | 1 | | | | | | | | |
| | AIRPORT-00207 | 10 | | 4 | 3 | | | | | | | | | | | | | | |
| | AIRPORT-00209 | | | | | | | | | | | 1 | 1 | 1 | 2 | 2 | | | |
| | AIRPORT-00209 | | | | | | | | | | | 7 | 4 | | | 6 | | | 2 |
| Hours / Job | | 28 | 5 | 46 | 3 | 49 | 5 | 1 | 8 | 9 | 2 | 31 | 16 | 1 | 8 | 22 | 1 | 3 | 3 |
| Hours per | | 6 | 8 | 6 | 2 | 3 | 2.5 | 2.5 | 1 | 1.5 | 2 | 2 | 2 | 4 | 3 | 5.5 | 8 | 1 | 18 |
| Total hours | 919.5 | 168 | 40 | 276 | 6 | 147 | 12.5 | 2.5 | 8 | 13.5 | 4 | 62 | 32 | 4 | 24 | 55 | 8 | 3 | 54 |
| Total for Parts | 40584.52 | 0 | 1903.3 | [illegible] | 35.01 | 15803 | 1000 | 0 | 6455.2 | 1319.7 | [illegible] | 8718.8 | [illegible] | 766.06 | [illegible] | [illegible] | 169.59 | 0 | 1856.3 |
| Parts | | | 380.65 | [illegible] | 11.67 | 322.5 | 200 | | 1056.9 | 146.63 | 4.53 | 281.25 | 17.39 | 766.06 | [illegible] | [illegible] | 169.59 | | 618.75 |
| | | | | 276 | 6 | | | 2.5 | | | 4 | | 32 | | 24 | 55 | | 3 | |

$593.25 S-BOT: 402.5 Hrs

UX1-028 02651

ER2651

| Spindles | | | | | |
|---|---|---|---|---|---|
| | | | Spindles | | |
| Train | Page | Guide Tire | Unsch | PM | Adj |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | |
| East | AIRPORT-00024 | 5 | 2 | 2 | |
| | AIRPORT-00025 | 19 | | 8 | 2 |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | |
| West | AIRPORT-00074 | 5 | | 24 | 6 |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | |
| North | AIRPORT-00131 | 2 | | 28 | |
| | AIRPORT-00132 | 12 | 9 | 44 | |
| | AIRPORT-00138 | | | | |
| | AIRPORT-00139 | | | | |
| | AIRPORT-00140 | | | | |
| | AIRPORT-00142 | | | | |
| | AIRPORT-00144 | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | |
| South | AIRPORT-00199 | 1 | | 24 | |
| | AIRPORT-00200 | 8 | 2 | 24 | 2 |
| | AIRPORT-00205 | | | | |
| | AIRPORT-00206 | | | | |
| | AIRPORT-00207 | | | | |
| | AIRPORT-00209 | | | | |
| | AIRPORT-00209 | | | | |
| Hours / Job | | 52 | 13 | 154 | 10 |
| Hours per | | 3 | 4 | 2 | 1.5 |
| Total hours | 531 | 156 | 52 | 308 | 15 |
| Total for Parts | 2404.39 | 2404.4 | 0 | | 0 |
| Parts | | 82.91 | | | |
| | | | | | |

52 13

SUBTOT: 67

| | | | Vehicle Door | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Contact Rollers | | LS Switch | | Roller Bearing | | | | Channel | | | | | | | | | | |
| Train | Page | Wave Switch | Unsch | PM | Unsch | PM | Unsch | PM | Arm Roller | Elevator | Assm | Pin | anti riser | repair | Operator | Track cap | mcr | anti rattle | resistor | door edge |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00034 | 2 | 4 | | 4 | | | 2 | 1 | 2 | | | | | | | | | | | |
| | AIRPORT-00035 | 4 | 2 | | 3 | | | | 2 | | | 2 | 1 | 0.5 | 1 | | | | | | |
| | AIRPORT-00036 | 9 | 1 | 16 | | 16 | | 64 | | | | | 4 | | | | | | | | |
| | AIRPORT-00037 | 5 | | 16 | 6 | 16 | | 64 | 1 | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | | | |
| | AIRPORT-00084 | 2 | 1 | | 12 | | | | 1 | | 1 | | | | 1 | 3 | 1 | | | | |
| | AIRPORT-00085 | 1 | | 11 | 5 | 11 | | 44 | 3 | | | | | | 1 | 1 | | 1 | | | |
| | AIRPORT-00086 | 5 | | | 1 | | | | | 2 | | | | | 2 | 3 | 1 | | | | |
| | AIRPORT-00087 | 1 | 2 | 8 | 5 | 8 | | 32 | 1 | | | | | 1 | | | 1 | | 2 | | 2 |
| West | AIRPORT-00088 | 1 | | | 6 | | | | | 2 | | | | 1 | 2 | | 2 | | 1 | | 1 |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | | | |
| North | AIRPORT-00147 | 1 | | | | | | | | 6 | | | | | | | | | | | |
| | AIRPORT-00148 | 7 | 1 | | 4 | | | | | | | 1 | | | 1 | | | | | | |
| | AIRPORT-00149 | 5 | 5 | | 2 | | | | 1 | | | | | | | | | | | | |
| | AIRPORT-00150 | 17 | 2 | | 3 | | | | | | | | | | | | | | | | |
| | AIRPORT-00151 | 3 | | 24 | 3 | | 8 | 96 | 2 | | | | | 2 | 1 | | | | | | |
| | AIRPORT-00152 | 6 | 7 | | 1 | | | | | | | | | | | 3 | | | | | |
| | AIRPORT-00153 | 5 | 2 | 24 | | 24 | 2 | 96 | 2 | 1 | | | | | 1 | | | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00212 | 1 | 3 | | 1 | | | | | | | | | | | 1 | | | | | |
| | AIRPORT-00213 | 4 | 1 | | 12 | | 4 | | | | | | | | | | | | | | |
| | AIRPORT-00214 | 9 | 5 | | | | | | | | | | | | | 1 | | | | | |
| | AIRPORT-00215 | | 2 | | 11 | | | | | | | 1 | | | | | | | | | 1 |
| | AIRPORT-00216 | 12 | | | 1 | | | | | | | | | 1 | | | | 1 | | | |
| | AIRPORT-00217 | 9 | | | 3 | | | | 2 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| Hours / Job | | 109 | 38 | 99 | 83 | 75 | 14 | 398 | 16 | 13 | 1 | 4 | 5 | 6.5 | 10 | 12 | 5 | 2 | 3 | 4 | |
| Hours per | | 1 | 1 | 0.5 | 1 | 0.5 | 0.5 | 0.25 | 2 | 1.5 | 2.5 | 2 | 1 | 1 | 4 | 2.5 | 1.5 | 1 | 1 | 2 | |
| Total hours | 587.6 | 109 | 38 | 49.5 | 83 | 37.5 | 7 | 99.5 | 32 | 19.5 | 2.5 | 8 | 5 | 6.5 | 40 | 30 | 7.5 | 2 | 3 | 8 | |
| Total for Part | 19018.51 | 14225 | 0 | 0 | 0 | 0 | 0 | 0 | 1516.8 | 849.03 | 0 | 675.6 | 283.1 | 0 | 0 | 480.6 | 0 | 31.88 | 0 | 955 | |
| Parts | | 130.5 | | | | | | | 94.8 | 65.31 | | 168.9 | 58.62 | | | 49.05 | | 15.94 | | 238.75 | |
| | | | 38 | 49.5 | 83 | 37.5 | 7 | 99.5 | | | 2.5 | | | 6.5 | 40 | 30 | 7.5 | 2 | 3 | | |

SUBTOT: 406 Hrs. $512.48

UX1028
02653

ER2653

| | | Motor box | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PBR | | LS Switch | | ZSR | | LSR | | L/S B/S | | | | Boards | | | | | | Contact | | Caps | |
| Train | Page | Unsch | PM | Unsch | PM | Unsch | PM | Unsch | PM | Arm | Block | Main | ADJ | Unsch | Test | LS/BS | prcca | prccb | PRC | Rever | | repair |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00017 | | 2 | | 4 | | 2 | | | | | | | | | | | | | | | | |
| | AIRPORT-00018 | | | | | | | | | | | | | | 1 | | | | | | | | |
| | AIRPORT-00019 | | 2 | 2 | 4 | 1 | 2 | | 2 | 3 | 4 | | 1 | | | 1 | | 1 | | | | | |
| | AIRPORT-00020 | | 2 | 1 | 4 | | 2 | | 2 | 1 | 1 | 2 | | | | | | | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00069 | 1 | 4 | 2 | 4 | 1 | 4 | 1 | 4 | 1 | | 1 | | | | | | | | | | | |
| | AIRPORT-00070 | | 2 | 4 | | 2 | | | 1 | 1 | | 4 | | 3 | 1 | | | | | | | | |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | | | | | |
| North | AIRPORT-00125 | | | | | 1 | | | | 1 | | 1 | | | | | | | 1 | | | | |
| | AIRPORT-00126 | | 3 | | 6 | 1 | 3 | | 6 | 6 | 4 | 1 | 1 | | | | | | | | 1 | 2 | 1 |
| | AIRPORT-00127 | 1 | | | | | | | | 2 | 6 | 1 | | 1 | | | | | | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00191 | | | 3 | | 2 | | | | 3 | 1 | | | | | | | | | | | | |
| | AIRPORT-00192 | | 3 | 5 | | 1 | | | 3 | 1 | 3 | 1 | | | | | 1 | | | | | | |
| | AIRPORT-00193 | | | | 6 | 0 | 3 | | | 13 | 8 | 1 | | | | | 1 | | | | | | 2 |
| | AIRPORT-00194 | 1 | 3 | | | | | | 2 | 4 | | 1 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Hours / Job | | 3 | 21 | 17 | 28 | 9 | 16 | 1 | 20 | 38 | 26 | 13 | 2 | 4 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 3 |
| Hours per | | 2.5 | 1 | 2 | 0.5 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1.5 | 2 | 0.5 | 2.5 | 2.5 | 2.5 | 1 | 2 | 2 | 4 | 1 |
| Total hours | 318.5 | 7.5 | 21 | 34 | 14 | 18 | 16 | 2 | 20 | 76 | 52 | 26 | 3 | 8 | 1 | 2.5 | 5 | 2.5 | 1 | 2 | 4 | 3 | 3 |
| Total for Part | 929.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38.4 | 0 | 0 | 0 | 0 | 0 | 284.73 | 497.5 | 44.12 | 39.3 | 30.15 | 0 |
| Parts | | | | | | | | | | | | 2.6 | | | | | | 284.73 | 497.5 | 22.06 | | | |

SUB TOT: 315 hr. $146.82

UX1-029
02654

ER2654

| AUX | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PRCC | | PRCCa | | | Abc | Idr | | PRc | | | | | Battery board | | | | | | | |
| Train | Page | Unsch | PM | Unsch | PM | AMC | contac | 1 & 2 | procb | PRC | Main | Aux | Var | | Unsch | Test | battery | | | | repair | |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00022 | | 4 | 1 | | | | | 1 | | 1 | 1 | | | | 1 | | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00072 | | 4 | 1 | 2 | | | | 1 | 1 | 1 | | | | | | | | | | | |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | | | | 1 |
| North | AIRPORT-00129 | | 3 | | | | | | 2 | 1 | 1 | | | | | | | | | | | 2 |
| | AIRPORT-00130 | | 3 | 1 | | 1 | 1 | | | 1 | 3 | | | 3 | | | | | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00196 | 1 | | 1 | | | | | 1 | 1 | | | | | | | 1 | | | | | |
| | AIRPORT-00192 | 1 | 6 | | | 1 | | 4 | | | 1 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | 3 |
| Hours / Job | | 2 | 20 | 4 | 2 | 2 | 1 | 4 | 5 | 4 | 7 | 1 | 4 | 1 | 1 | 1 | 1 | | | | | 1 |
| Hours per | | 2.5 | 1 | 2.5 | 1 | 2.5 | 1.5 | 1 | 2.5 | 3 | 1.5 | 1.5 | 0.5 | 2 | 0.5 | 0.5 | 1.5 | | | | | 3 |
| Total hours | 93 | 5 | 20 | 10 | 2 | 5 | 1.5 | 4 | 12.5 | 12 | 10.5 | 1.5 | 2 | 2 | 0.5 | 0 | 253.84 | | | | | 0 |
| Total for Part | 2140.49 | 0 | 0 | 0 | 0 | 0 | 0 | 463 | 1423.7 | 0 | 0 | 0 | 0 | 0 | | | 253.84 | | | | | |
| Parts | | | | | | | | 116.75 | 284.73 | | | | | | | | | | | | | |

SUB TOT: 75

| ATO & Communications | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AVR | BIR | | TA. Box | Audio | | | | | MOR | | | Boards | | | | Norm | AMP | | | |
| Train | Page | PM | PM | Batteries | Mod | Unsch | Test | Radio | Tach | TPMS | Cable | Radio | DVR | Unsch | Test | Monitor | Reader | Gage | repair | | | |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | | | | 1 |
| East | AIRPORT-00041 | 2 | 2 | | | | | | | | | | | 1 | 1 | 1 | | | | | | |
| | AIRPORT-00042 | | | | | | | | | | | | | | 2 | | | | | | | |
| | AIRPORT-00043 | | | | | | | | | | | | | 2 | 3 | 5 | | | | | | 3 |
| | AIRPORT-00045 | | | | | 6 | 1 | 1 | | | | | | | | | | | | | | |
| | AIRPORT-00052 | | | | 1 | | | | | | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00092 | | | | | | | 1 | | 1 | | | | 1 | 3 | | | | | | | |
| | AIRPORT-00094 | | | | | | 2 | | | | | | | | | | | | | | | |
| | AIRPORT-00101 | | | | 1 | | | | | | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | | | | 1 |
| North | AIRPORT-00157 | | | | | | | | | | | | | 7 | | | | 2 | | | | 2 |
| | AIRPORT-00160 | | | | | 1 | 7 | 13 | | | | | | | | | | | | | | |
| | AIRPORT-00167 | | | 2 | 3 | | | | | | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | | | | 2 |
| South | AIRPORT-00221 | | | | | | | | 1 | | | | | 3 | 1 | 1 | 1 | 1 | 1 | | | 3 |
| | AIRPORT-00223 | | | | | | | 3 | | | 2 | 1 | 1 | | | | | | | | | |
| | AIRPORT-00230 | | | 3 | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | 12 |
| Hours / Job | | 2 | 2 | 6 | 6 | 7 | 10 | 5 | 1 | 1 | 2 | 1 | 1 | 14 | 10 | 7 | 3 | 1 | 1 | | | 1 |
| Hours per | | 1 | 1.5 | 1.5 | 1.5 | 2.5 | 1 | 1.5 | 2.5 | 1 | 2 | 1.5 | 1.5 | 2 | 0.5 | 1 | 1 | 1 | 1 | | | 12 |
| Total hours | 123 | 2 | 3 | 7.5 | 9 | 17.5 | 10 | 7.5 | 2.5 | 1 | 4 | 1.5 | 1.5 | 28 | 5 | 7 | 3 | 1 | 1 | | | 0 |
| Total for Part | 67616.44 | 0 | 0 | 1269.2 | 0 | 0 | 0 | 0 | 255.75 | 510.25 | 0 | 1398 | 0 | 0 | 0 | 37065 | 26531 | 284.73 | | | | |
| Parts | | | | 253.84 | | | | | 255.75 | 510.25 | | 1398 | | | | 5295 | 8843.5 | 284.73 | | | | |

SUB TOT: 99.5

| | | Interior & Exterior | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dynamic | | Lights | | Ballast | | | | | Cover | Head | LS | Wave | contact | roller | door | H/L | |
| Train | Page | Unsch | Test | Graphic | Over | Graphic | Over | Emer | Lock | Clip | Switch | Light | switch | switch | roller | bearing | pin | Bezel | repair |
| File: "1MAINTENANCE LOG EAST - CARS 1-2" | | | | | | | | | | | | | | | | | | | |
| East | AIRPORT-00047 | 2 | | | 1 | | 4 | | 2 | 1 | 1 | | | | | | | | |
| | AIRPORT-00050 | | | | | | | | | | | 8 | | | | | | | 3 |
| | AIRPORT-00049 | | | | | | | | | | | | | | | | | | |
| | AIRPORT-00050 | | | | | | | | | | | | | | | | | | |
| | AIRPORT-00051 | | | | | | | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG WEST - CARS 3 - 4" | | | | | | | | | | | | | | | | | | | |
| West | AIRPORT-00097 | 1 | | 7 | 1 | | | | | | 1 | | | | | | | | 1 |
| | AIRPORT-00099 | | | | | | | | | | | 14 | | | | | | | |
| | AIRPORT-00101 | | | | | | | | | | | | | | | | | | |
| File: "1MAINTENANCE LOG NORTH - CARS 5 6 - 7" | | | | | | | | | | | | | | | | | | | |
| North | AIRPORT-00162 | | | 5 | 1 | | | 1 | | | 1 | 2 | | | | | | | |
| | AIRPORT-00163 | 8 | | | 4 | | | 1 | 2 | | | | | | | | | | |
| | AIRPORT-00165 | | | | | | | | | | | 8 | | | | | | | |
| File: "1MAINTENANCE LOG SOUTH - CARS 8 9 - 10" | | | | | | | | | | | | | | | | | | | |
| South | AIRPORT-00225 | 2 | | 4 | | | | | 2 | | 1 | | | | | | | | |
| | AIRPORT-00226 | | | | | | | | | | | | | | | | | | 3 |
| | AIRPORT-00228 | | | | | | | | | | | 4 | 4 | 1 | 2 | 2 | 1 | 1 | |
| | | | | | | | | | | | | | | | | | | | |
| Hours / Job | | 11 | 0 | 16 | 7 | 0 | 4 | 2 | 6 | 1 | 4 | 34 | 4 | 1 | 2 | 2 | 1 | 1 | 7 |
| Hours per | | 2 | 2 | 0.5 | 0.5 | 1.5 | 1.5 | 1.5 | 0.5 | 0.5 | 1 | 1 | 0.5 | 1 | 1 | 0.5 | 2 | 1.5 | 1 |
| Total hours | 100.5 | 22 | 0 | 8 | 3.5 | 0 | 6 | 3 | 3 | 0.5 | 4 | 34 | 2 | 1 | 2 | 1 | 2 | 1.5 | 7 |
| Total for Parts | 18213.67 | 16026 | 0 | 116 | 2.5 | 0 | 260 | 285 | 167.64 | 14.98 | 32.52 | 82.5 | 0 | 130.5 | 0 | 0 | 168.9 | 67.65 | 0 |
| Parts | | 1456.9 | | 7.25 | 7.5 | | 65 | 142.5 | 37.94 | 14.98 | 8.13 | 23.25 | | 130.5 | | | 168.9 | 67.65 | |

SUBTOT: 65 $1,276.14

| Data From Log Books Used By the Technicians Performing Work On The Wayside ATC & Guideway Under CBE 652 | | | | | | | |
|---|---|---|---|---|---|---|---|
| FILE: | "7MAINTENANCE LOG RATC ATT GENERATOR UPS GUIDEWAY .PDF" | | | | | | |
| Subject | Page | Reboot | Repair | Labor hrs | Parts cost | Qty | |
| C gate reboot | AIRPORT-00325 | 15 | | 46 | | | |
| | AIRPORT-00326 | 40 | | 120 | | | |
| | AIRPORT-00327 | 40 | | 120 | | | |
| | AIRPORT-00328 | 36 | | 108 | | | |
| | AIRPORT-00329 | 13 | | 39 | | | |
| | AIRPORT-00330 | 12 | | 36 | | | |
| Oldest record 07/21/09 | | | | | | | |
| C Cabinet | AIRPORT-00331 | | FUSE REPLACED | 1 | | | |
| D gate reboot | AIRPORT-00333 | 15 | | 45 | | | |
| | AIRPORT-00334 | 37 | | 111 | | | |
| | AIRPORT-00335 | 39 | | 117 | | | |
| | AIRPORT-00336 | 39 | | 117 | | | |
| | AIRPORT-00337 | 18 | | 54 | | | |
| | AIRPORT-00338 | 8 | | 24 | | | |
| D ATO Cabinet | AIRPORT-00339 | | Replace bad ato computer | 2 | $8,200.00 | 1 | |
| | | | Replaced bad Monitor | 1.5 | $400.00 | 1 | |
| Central | AIRPORT-00341 | | Replace fuse in I/O Cabinet | 1.5 | | 1 | |
| C PDS | AIRPORT-00348 | | Replace Blue light station light | 0.25 | $7.82 | 1 | $7.82 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| D guideway | AIRPORT-00354 | | Rail covers replace | 1 | $5.44 | 1 | $5.44 |
| | | | Deburing Rails | 6 | $0.00 | 6 | |
| | | | Expansion Joints replace | 33 | $4,413.42 | 11 | $401.22 |
| | | | Washers replaced | 1 | $0.00 | 1 | |
| | | | Fabrica pads adjusted | 3 | $0.00 | 2 | |
| | AIRPORT-00356 | | Rail covers replace | 1 | $10.88 | 2 | $5.44 |
| | | | Replaced Radix cable clamps | 2 | $0.00 | 2 | |
| | | | | | | | |
| | | | Repaired Power feed clam shells | 3 | $0.00 | 2 | |
| | | | Replaced Red lights | 4 | $31.28 | 4 | $7.82 |
| C guideway | AIRPORT-00364 | | Rail covers replace | 2 | $10.88 | 2 | $5.44 |
| | | | Replaced Red lights | 0.5 | $7.82 | 1 | $7.82 |
| | | | Expansion Joints replace | 6 | $802.44 | 2 | $401.22 |
| | | | Replace jumper cable | 2 | | 1 | |
| | | | Totals | 1006.75 | $13,889.98 | | |

INVOICED
HRS: 964.25 (95.8% DISCREPANCY)
$ 74.12

UX1032
02657

ER2657

VETRIEW

These are from PM (Maintenance Records) supplied by D.

| Data From Maintenance Records Of Work Performed By the Technicians On The Wayside Under CBE 662 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lane/ PM/ Task | Document File | Page Numbers | Date | Work Order | Parts | Man/Hours | Parts Cost | Comments |
| North/ 506/506 | N-506(360).PDF | 04849-04850 | 1/5/2011 | 101000283 | | | | |
| North/ 1102/1102 | N-1102 (90).PDF | 04923/04924 | 10/15/2012 | 121000327 | Broken hardware on bridge | .6 | | |
| North/ 1102/1102 | N-1102 (90).PDF | 04938-04939 | 1/19/2011 | 111000012 | Broken hardware on bridge | .6 | | |
| North/ 1102/1102 | N-1102 (90).PDF | 04952-04953 | 5/12/2009 | 91000098 | Structural Integrity | 4 | | |
| North/ 1200/1200 | N-1200 (90).PDF | 05036-05037 | 2/18/2011 | 111000034 | 2 Autolocks | 2.5 | | |
| North/ 1200/1200 | N-1200 (90).PDF | 05038-05039 | 1/31/2011 | 111000017 | 1 Autolock | 2 | | |
| North/ 1200/1200 | N-1200 (90).PDF | 05040-05041 | 8/21/2010 | 101000182 | See Pass Down | | | |
| West/ 510/510 | W-510 (365).PDF | 07603-07604 | [redacted] | 121000065 | 1 Clamshell Bracket | 2 | | |
| West/ 1102/1102 | W-1102 (90).PDF | 07627-07628 | 10/31/2011 | 111000268 | 1 B Phase Slider Expansion Joint | 2.5 | 562.5 | |
| West/ 1102/1102 | W-1102 (90).PDF | 07633-07634 | [redacted] | 111000030 | Replaced 1 Broken Clamshell Bolt | 2.5 | | |
| West/ 1200/1200 | W-1200 (180).PDF | 07660-07661 | 10/19/2011 | 111000243 | 1 Autolock | 2 | | |
| West/ 1200/1200 | W-1200 (180).PDF | 07664-07665 | 4/13/2011 | 111000084 | 2 Autolocks | 2.5 | | |
| West/ 1200/1200 | W-1200 (180).PDF | 07666-07667 | 4/4/2011 | 111000069 | 2 Autolocks | 2.5 | | |
| West/ 1200/1200 | W-1200 (180).PDF | 07668-07669 | 10/20/2010 | 101000226 | 8 Close Monitor Strike Brackets, Filed 8 Enclosure Sharp Edges | 15 | | Strike Plate Bracket Retrofit |
| West/ 1200/1200 | W-1200 (180).PDF | 07678-07679 | 10/7/2009 | 91000208 | 1 Closed Monitor Plunger Switch Strike Bracket | 2 | | |
| West/ 1200/1200 | W-1200 (180).PDF | 07680-07681 | 4/13/2009 | 91000088 | 1 E-Handle | 2.5 | | Repaired |
| East/ 1102/1102 | E-1102 (90).PDF | 03795-03796 | 1/16/2012 | 121000003 | 2 Clamshell Bolts | 0.75 | | Drilled out, Replaced |
| East/ 1102/1102 | E-1102 (90).PDF | 03815-03816 | 7/23/2009 | 91000152 | 1 Power Feed Connector Cover | 1.75 | 8 | Replaced |
| East/ 1200/1200 | E-1200 (180) | 03834-03835 | 3/22/2011 | 111000058 | 1 Station Door Rubber Nosing | 2 | | Replaced |
| East/ 1200/1200 | E-1200 (180) | 03836-03837 | 3/18/2011 | 111000054 | 2 Autolocks | 2.25 | | Replaced |
| East/ 1200/1200 | E-1200 (180) | 03838-03839 | 9/23/2010 | 101000206 | Repaired 1 E-Handle Release Rod | 2 | | Repaired |
| East/ 1200/1200 | E-1200 (180) | 03840-03841 | 9/18/2010 | 101000204 | 1 Closed & Lock Switch Actuator Bracket | 2 | | Replaced |

61.25 $8

02658

| Data From Maintenance Records Of Work Performed By the Technicians On The Wayside Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| East/ 1200/1200 | E-1200 (180) | 03844-03845 | 3/23/2010 | 101000057 | 1 Autolock, Replaced Missing Hardware | 2 | | Replaced |
| South/ 1102/1102 | S-1102 (90).PDF | 07198-07199 | 11/23/2011 | 111000286 | 2 C Phase Expansion Joint Sliders | 3.5 | | Repaired |
| South/ 1102/1102 | S-1102 (90).PDF | 07210-07211 | 6/2/2010 | 101000123 | 2 Power Feed Connectors | 2 | 5 | Replaced |
| South/ 1102/1102 | S-1102 (90).PDF | 07218-07219 | 6/10/2009 | 91000123 | 2 Clamshell Nuts Replaced, 1 Power Feed Cable Repaired | 2.5 | | |
| South/ 1102/1102 | S-1102 (90).PDF | 07220-07221 | 2/5/2009 | 91000047 | See Open Items, Log Book | | | |
| South/ 1200/1200 | S-1200 (180).PDF | 07295-07296 | 1/17/2012 | 121000009 | 2 Autolocks | 2.5 | | Replaced |
| South/ 1200/1200 | S-1200 (180).PDF | 07299-07300 | 7/20/2011 | 111000160 | 3 Autolocks | 3 | | Replaced for upgrade |
| South/ 1200/1200 | S-1200 (180).PDF | 07301-07302 | 7/1/2011 | 111000144 | 2 Autolocks | 2.5 | | Replaced for upgrade |
| South/ 1200/1200 | S-1200 (180).PDF | 07307-07308 | 7/24/2010 | 101000162 | Autolocks | | | See log Book |
| | | | | | | 81.75 | 575.5 | |
| | | | | | | 48 | $5 | |

Sub-Tot: 79.25 (96.9% Disc)

$13

02059

| Data From Maintenance Records Of Work Performed By the Technicians On The C System Tram Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lane/ PM/ Task | Document File | Page Numbers | Date | Work Order | Parts | Man/Hours | Parts Cost | Comments |
| East/ 102/102 | | 06222-06223 | 8-Jan | | 3 Collector Shoes | [redacted] | [redacted] | 122.43 |
| East/ 102/102 | | 06114-06115 | 7/16/2011 | | 1 Collector Shoe, 1 T/M Brush | [redacted] | [redacted] | 53.26 |
| East/ 102/102 | | 06116-06117 | 7/10/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06122-06123 | 7/2/2011 | | 1 T/M Brush | [redacted] | [redacted] | |
| East/ 102/102 | | 06138-06139 | 6/4/2011 | | 3 T/M Brushes | [redacted] | [redacted] | 37.35 |
| East/ 102/102 | | 06140-06141 | 5/29/2011 | | 1 Main Running Tire, 1 Guide Tire | 3.5 | 322.5 | |
| East/ 102/102 | | 06148-06149 | 5/15/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06154-06155 | 5/7/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06156-06157 | 5/1/2011 | | 2 Collector Shoes | [redacted] | [redacted] | 81.62 |
| East/ 102/102 | | 06162-06163 | 4/23/2011 | | 2 T/M Brushes | [redacted] | [redacted] | 24.9 |
| East/ 102/102 | | 06170-06171 | 4/9/2011 | | 2 Collector Shoes, 1 T/M Brush | [redacted] | [redacted] | 94.07 |
| East/ 102/102 | | 06172-06173 | 4/3/2011 | | 3 Guide Tires | [redacted] | | |
| East/ 102/102 | | 06178-06179 | 3/26/2011 | | 5 T/M Brushes | [redacted] | [redacted] | 62.25 |
| East/ 102/102 | | 06194-06195 | 2/26/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06198-06199 | 2/19/2011 | | 2 T/M Brushes | [redacted] | [redacted] | |
| East/ 102/102 | | 06214-06215 | 1/22/2011 | | 2 Collector Shoes, 2 T/M Brushes | [redacted] | [redacted] | 106.52 |
| East/ 102/102 | | 05923-05924 | 11/7/2010 | | 1 Guide Tire | [redacted] | | |
| East/ 102/102 | | 05929-05930 | 10/30/2010 | | 2 Collector Shoes, 2 T/M Brushes | [redacted] | [redacted] | 65.71 |
| East/ 102/102 | | 05931-05932 | 10/24/2010 | | 2 T/M Brushes | [redacted] | [redacted] | |
| East/ 102/102 | | 05939-05940 | 10/10/2010 | | 1 Collector Shoe Shunt, 1 T/M Brush | [redacted] | [redacted] | 42.31 |
| East/ 102/102 | | 05965-05966 | 8/9/2010 | | 2 Guide Tires | [redacted] | | |
| East/ 102/102 | | 05985-05986 | 7/25/2010 | | 3 T/M Brushes | [redacted] | [redacted] | |
| East/ 102/102 | | 06029-06030 | 5/8/2010 | | 6 Collector Shoes | [redacted] | [redacted] | 244.86 |
| East/ 102/102 | | 05897-05898 | 4/25/2010 | | 1 Main Running Tire | 3 | 322.5 | |
| East/ 102/102 | | 06055-06056 | 3/21/2010 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06061-06062 | 3/13/2010 | | 2 Collector Shoes, 3 T/M Brushes | [redacted] | [redacted] | 118.97 |
| East/ 102/102 | | 06069-06070 | 2/27/2010 | | 3 Collector Shoes, 4 T/M Brushes | [redacted] | [redacted] | 172.23 |
| East/ 102/102 | | 06077-06078 | 2/13/2010 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 06085-06086 | 1/30/2010 | | 8 Collector Shoes | [redacted] | [redacted] | 326.48 |
| East/ 102/102 | | 05688-05689 | 12/29/2009 | | 1 Guide Tire | [redacted] | | |
| East/ 102/102 | | 05702-05703 | 11/14/2009 | | See Log Book | ? | | |

40.81 each
40.81 + 12.45

32.75
[redacted] 31 $1,897.42

02660

| Data From Maintenance Records Of Work Performed By the Technicians On The C System Tram Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| East/ 102/102 | | 05726-05727 | 10/18/2009 | | 2 Service Brake Chamber Diaphragms | [redacted] | [redacted] | 9.06 |
| East/ 102/102 | | 05732-05733 | 10/10/2009 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 05744-05745 | 9/19/2009 | | 2 Collector Shoes | [redacted] | [redacted] | |
| East/ 102/102 | | 05748-05749 | 9/12/2009 | | 1 Collector shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 05752-05753 | 9/5/2009 | | 2 Collector Shoes, 1 T/M Brush | [redacted] | [redacted] | |
| East/ 102/102 | | 05758-05759 | 8/23/2009 | | 1 Collector, Shoe Shunt | [redacted] | [redacted] | |
| East/ 102/102 | | 05780-05781 | 7/18/2009 | | 3 Collector Shoes, some Brushes (log book) ? | [redacted] | [redacted] | 131.49 |
| East/ 102/102 | | 05792-05793 | 6/27/2009 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 102/102 | | 05802-05803 | 6/8/2009 | | 4 Guide Tires | [redacted] | | |
| East/ 102/102 | | 05810-05811 | 5/24/2009 | | (40.81), (63.75) 1 Collector Shoe, 1 Shoe Holder Assembly | 1.75 | 104.56 | 104.56 |
| East/ 102/102 | | 05824-05825 | 5/2/2009 | | 1 Collector Shoe (50.27) | [redacted] | [redacted] | |
| East/ 102/102 | | 05834-05835 | 4/12/2009 | | 1 Collector Shoe, 2 Collector Shoe Shunts | 2.25 | 141.34 | 141.34 |
| East/ 102/102 | | 05698-05699 | 2/6/2009 | | 1 Collector Shoe, 1 T/M Brush | [redacted] | [redacted] | 50.41 |
| East/ 102/102 | | 05888-05889 | 1/9/2009 | | 1 Collector Shoe, 8 T/M Brushes | [redacted] | [redacted] | 117.61 |
| East/ 202/202 | | 03144-03145 | 4/22/2012 | | 1 T/M Brush | [redacted] | [redacted] | |
| East/ 202/202 | | 03350-03351 | 4/14/2012 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 202/202 | | 03352-03353 | 4/8/2012 | | 2 AR2, 1 Leveling Valve, 2 Graphic Lamps | [redacted] | [redacted] | 14.5 |
| East/ 202/202 | | 03358-03359 | 3/31/2012 | | 1 T/M Brush | [redacted] | [redacted] | |
| East/ 202/202 | | 03360-03361 | 3/25/2012 | | 1 Collector Shoe, 1 T/M Brush | [redacted] | [redacted] | |
| East/ 202/202 | | 00370-03371 | 3/10/2012 | | 4 T/M Brushes, 1 Shock Bolt | [redacted] | [redacted] | 48.06 |
| East/ 202/202 | | 03378-03379 | 2/25/2012 | | 3 T/M Brushes | [redacted] | [redacted] | 27.18 |
| East/ 202/202 | | 03390-03391 | 2/4/2012 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 202/202 | | 03392-03393 | 1/29/2012 | | 1 Main Running Tire | 4.5 | 322.5 | |
| East/ 202/202 | | 03398-03399 | 1/21/2012 | | 4 T/M Brushes | [redacted] | [redacted] | 36.24 |
| East/ 202/202 | | 03406-03407 | 1/7/2012 | | 3 T/M Brushes | [redacted] | [redacted] | |
| East/ 202/202 | | 03408-03409 | 1/1/2012 | | 1 Collector Tree Assembly, 2 Guide Tires | [redacted] | | |
| East/ 202/202 | | 03139-03140 | 12/18/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| East/ 202/202 | | 03145-03146 | 12/10/2011 | | 3 T/M Brushes | [redacted] | [redacted] | |
| East/ 202/202 | | 03155-03156 | 11/20/2011 | | 1 Main Running Tire, 1 AR2 | 3.5 | 322.5 | |
| East/ 202/202 | | 03161-03162 | 11/12/2011 | | 1 T/M Brush, 1 Overhead Lamp | [redacted] | [redacted] | 16.1 |
| East/ 202/202 | | 03169-03170 | 10/29/2011 | | 2 Collector Shoes, 1 Shock Bolt | [redacted] | [redacted] | 93.44 |

214.5
[redacted] 13.25 $1,159.28

175 [illegible] 1.75

| Data From Maintenance Records Of Work Performed By the Technicians On The C System Tram Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| East/ 202/202 | | 03171-03172 | 10/23/2011 | | 3 Guide Tires | [redacted] | | |
| East/ 202/202 | | 03177-03178 | 10/15/2011 | | 2 Guide Tires | [redacted] | | |
| East/ 202/202 | | 03179-03180 | 10/9/2011 | | 2 T/M Brushes | [redacted] | 18.12 | 18.12 |
| East/ 202/202 | | 03193-03194 | 9/17/2011 | | 3 Collector Shoes | [redacted] | 122.43 | 122.43 |
| East/ 202/202 | | 03195-03196 | 9/11/2011 | | 1 Guide Tire | [redacted] | | |
| East/ 202/202 | | 03201-03202 | 9/3/2011 | | 1 Collector Shoe, 3 T/M Brushes | [redacted] | 67.99 | 67.99 |
| East/ 202/202 | | 03213-03214 | 8/13/2011 | | 1 Collector Shoe | [redacted] | 40.81 | |
| West/ 102/102 | | 06110-06111 | 9/23/2011 | | 2 T/M Brushes | [redacted] | 19.2 | |
| West/ 102/102 | | 06126-06127 | 6/25/2011 | | 1 Collector Shoe | [redacted] | 40.81 | |
| West/ 102/102 | | 06128-06129 | 6/19/2011 | | 1 Main Running Tire | 3 | 322.5 | |
| West/ 102/102 | | 06134-06135 | 6/11/2011 | | 1 T/M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06142-06143 | 5/28/2011 | | 2 Collector Shoes | [redacted] | 81.62 | 81.62 |
| West/ 102/102 | | 06144-06145 | 5/22/2011 | | 1 Collector Shoe | [redacted] | 40.81 | |
| West/ 102/102 | | 06150-06151 | 5/14/2011 | | 2 T/M Brushes | [redacted] | 19.2 | |
| West/ 102/102 | | 06152-06153 | 5/8/2011 | | 2 Headlights, 1 Guide Tire, 1 Collector Shoe, 1 T/M Brush (12.45) (40.81) | 2.75 | 102.91 | 102.91 |
| West/ 102/102 | | 06160-06161 | 4/25/2011 | | 1 Main Running Tire | 3 | 322.5 | 322.5 |
| West/ 102/102 | | 06166-06167 | 4/16/2011 | | 1 T/M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06168-06169 | 4/10/2011 | | 1 T/M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06174-06175 | 4/2/2011 | | 1 T/M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06182-06183 | 3/19/2011 | | 1 Collector Shoe | [redacted] | 40.81 | |
| West/ 102/102 | | 06202-06203 | 2/12/2011 | | 1 T/ M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06204-06205 | 2/6/2011 | | 1 T/M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 06218-06219 | 1/15/2011 | | 10 T/M Brushes | [redacted] | [redacted] | |
| West/ 102/102 | | 05901-05902 | 12/18/2010 | | 1 T/ M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 05911-05912 | 11/28/2010 | | 1 Main Running Tire, 1 Collector Shoe | 3.25 | 363.31 | 363.31 |
| West/ 102/102 | | 05917-05918 | 11/20/2010 | | 3 T/M Brushes | [redacted] | 28.8 | 28.8 |
| West/ 102/102 | | 05919-05920 | 11/14/2010 | | 1 Guide Tire | [redacted] | | |
| West/ 102/102 | | 05933-05934 | 10/23/2010 | | 1 Main Running Tire, 1 T/M Brush | 3.25 | 332.1 | 332.1 |
| West/ 102/102 | | 05935-05936 | 10/17/2010 | | 1 T/ M Brush | [redacted] | 9.6 | |
| West/ 102/102 | | 05941-05942 | 10/9/2010 | | 1 Guide Tire | [redacted] | | |
| West/ 102/102 | | 05949-05950 | 9/23/2010 | | 1 Collector Shoe | [redacted] | 40.81 | |
| West/ 102/102 | | 05955-05956 | 9/12/2010 | | 4 L9 Bolts (20) | [redacted] | 80 | |

41.75

[redacted] 11.75

$813.91

02062

Inconsistent does not match up w/ dollar amount. - is actually 1 shoe, 1 brush.

| Data From Maintenance Records Of Work Performed By the Technicians On The C System Tram Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| West/ 102/102 | | 05979-05980 | 8/1/2010 | | 9 T/M Brushes | | 86.4 | 86.4 |
| West/ 102/102 | | 06003-06004 | 6/19/2010 | | 2 Collector Shoes | | 81.62 | |
| West/ 102/102 | | 06007-06008 | 6/13/2010 | | 1 Brake Chamber Diaphragm | 2 | 4.53 | |
| West/ 102/102 | | 06013-06014 | 6/5/2010 | | 5 T/M Brushes, 3 Collector Shoes | 2.75 | 170.43 | 170.43 |
| West/ 102/102 | | 06021-06022 | 5/22/2010 | | 3 Collector Shoes | 2.25 | 122.43 | 122.43 |
| West/ 102/102 | | 06041-06042 | 4/17/2010 | | 1 Collector Shoe | 1.75 | 40.81 | |
| West/ 102/102 | | 06043-06044 | 4/11/2010 | | 1 Leveling Valve | 2.5 | | |
| West/ 102/102 | | 06049-06050 | 4/3/2010 | | 2 Collector Shoes, 1 T/M Brush | 2.25 | 50.41 | 50.41 |
| West/ 102/102 | | 06051-06052 | 3/28/2010 | | 2 Collector Shoes | 2 | 81.62 | |
| West/ 102/102 | | 06067-06068 | 2/28/2010 | | 1 AR2 | 2 | | |
| West/ 102/102 | | 06081-06082 | 2/6/2010 | | 3 Collector Shoes, 3 T/M Brushes | 2.75 | 151.23 | 151.23 |
| West/ 102/102 | | 06083-06084 | 1/31/2010 | | 1 Collector Shoe | 2.75 | 40.81 | |
| West/ 102/102 | | 06089-06090 | 1/23/2010 | | 8 Collector Shoes | 2.5 | 326.48 | 326.48 |
| West/ 102/102 | | 60691-60692 | 1/17/2010 | | 2 T/M Brushes | 1.75 | 19.2 | 19.2 |
| West/ 102/102 | | 06097-06098 | 1/9/2010 | | 4 Collector Shoes | 2.5 | 163.24 | 163.24 |
| West/ 102/102 | | 05700-05701 | 12/5/2009 | | 3 Collector Shoes | 2.25 | 122.43 | |
| West/ 102/102 | | 05716-05717 | 11/7/2009 | | 10 T/M Brushes | 2.25 | 96 | |
| West/ 102/102 | | 05720-05721 | 10/31/2009 | | 1 Collector She, 4 T/M Brushes | 2.5 | 79.21 | |
| West/ 102/102 | | 05730-05731 | 10/11/2009 | | 2 T/M Brushes | 1.75 | 19.2 | |
| West/ 102/102 | | 05738-05739 | 9/27/2009 | | 1 T/M Brush | 1.75 | 9.6 | |
| West/ 102/102 | | 05750-05751 | 9/6/2009 | | 1 Shock | 2 | 281.25 | |
| West/ 102/102 | | 05794-05795 | 6/21/2009 | | 1 Collector Shoe, 1 Collecto Shoe Shunt | 2 | 70.67 | 70.67 |
| West/ 102/102 | | 05828-05829 | 4/25/2009 | | 1 Collector Shoe Shunt | 1.75 | 29.86 | |
| West/ 102/102 | | 05830-05831 | 4/19/2009 | | 2 Collector Shoes | 2 | 81.62 | |
| West/ 102/102 | | 05838-05839 | 4/5/2009 | | 5 Collector Shoes | 1.25 | 204.05 | 204.05 |
| West/ 102/102 | | 05844-05845 | 3/29/2009 | | 1 Collector Shoe | 1.75 | 40.81 | |
| West/ 102/102 | | 05858-05859 | 3/1/2009 | | Some Shoes, 1 Shoe Assembly | ? | 104.56 | 104.56 |
| West/ 102/102 | | 05862-05863 | 2/22/2009 | | 1 Collector Shoe Shunt | 1.75 | 29.86 | |
| West/ 102/102 | | 05868-05869 | 2/14/2009 | | 1 Collector Shoe | 1.75 | 40.81 | |
| West/ 102/102 | | 05872-05873 | 2/7/2009 | | 1 Collector Shoe Shunt | 1.75 | 29.86 | |
| West/ 102/102 | | 05886-05887 | 1/11/2009 | | Carpet Retention Strips (log book) | ? | | |
| West/ 202/202 | | 03346-03347 | 4/21/2012 | | 1 T/M Brush | 1.75 | 9.6 | |
| West/ 202/202 | | 03354-03355 | 4/7/2012 | | 2 Collector Shoes, 2 T/M Brushes | 2.25 | 100.82 | |

26.75
41

$ 2,374.28

| Data From Maintenance Records Of Work Performed By the Technicians On The C System Tram Under CBE 552 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| West/ 202/202 | | 03362-03363 | 3/24/2012 | | 1 Collector Shoe, 2 T/M Brushes | [redacted] | [redacted] | 60.01 |
| West/ 202/202 | | 03366-03337 | 3/17/2012 | | 6 T/M Brushes | [redacted] | [redacted] | 57.6 |
| West/ 202/202 | | 03374-03375 | 3/3/2012 | | 2 Collector Shoes, 2 T/M Brushes | [redacted] | [redacted] | |
| West/ 202/202 | | 03380-03381 | 2/19/2012 | | 1 Shock /bolt | [redacted] | [redacted] | |
| West/ 202/202 | | 03386-03387 | 2/11/2012 | | 4 T/M Brushes | [redacted] | [redacted] | 38.4 |
| West/ 202/202 | | 03394-03395 | 1/28/2012 | | 1 T/M Brush | [redacted] | [redacted] | |
| West/ 202/202 | | 03396-03397 | 1/22/2012 | | 2 Main Running Tires | 4.5 | 645 | 645 |
| West/ 202/202 | | 03133-03134 | 12/31/2011 | | 4 T/M Brushes | [redacted] | [redacted] | |
| West/ 202/202 | | 03141-03142 | 12/17/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| West/ 202/202 | | 03143-03144 | 12/11/2011 | | 1 T/M Brush | [redacted] | [redacted] | |
| West/ 202/202 | | 03149-03150 | 12/8/2011 | | 4 T/M Brushes | [redacted] | [redacted] | |
| West/ 202/202 | | 03159-03160 | 11/13/2011 | | 1 T/M Brush, 1 Guide Tire | [redacted] | [redacted] | |
| West/ 202/202 | | 03175-03176 | 10/16/2011 | | 1 T/M Brush | [redacted] | [redacted] | |
| West/ 202/202 | | 03181-03182 | 10/8/2011 | | 2 T/M Brushes | [redacted] | [redacted] | |
| West/ 202/202 | | 03183-03184 | 10/2/2011 | | 1 Collector Shoe. | [redacted] | [redacted] | |
| West/ 202/202 | | 03189--03190 | 9/24/2011 | | 3 Collector Shoes | [redacted] | [redacted] | |
| West/ 202/202 | | 03191-03192 | 9/18/2011 | | 2 Collector Shoes, 2 T/M Brushes | [redacted] | [redacted] | |
| West/ 202/202 | | 03197-03198 | 9/10/2011 | | 1 Collector Shoe, 1 T/M Brush | [redacted] | [redacted] | |
| West/ 202/202 | | 03199-03200 | 9/4/2011 | | 2 Collector Shoes, 4 Graphic Lamps | [redacted] | [redacted] | 110.62 |
| West/ 202/202 | | 03203-03204 | 8/28/2011 | | 1 Guide Tire | [redacted] | | |
| West/ 202/202 | | 03216-03217 | 8/6/2011 | | 1 Collector Shoe | [redacted] | [redacted] | |
| | | | East & West logs for collectors are total of 143 above is only for 123 | | | | 816.2 | 816.2 |
| | | | | | Totals | 492 | 11910.51 | |

24 $909.96

[redacted] 15

INVAID HRS. SUBTOT: 339.75 (69% DISCREPANCY)

[redacted] SUBTOT: 112

TOTAL SUBTOT: 451.75 (91.8% DISC.)

$7,154.65

$63.75

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lane/ PM/ Task | Document File | Page Numbers | Date | Work Order | Parts | Man/Hours | Parts Cost | | Comments |
| North/ 101/101 | | 05547-05548 | 8/30/2011 | | 1 Collector Sub-Assembly and Collector Shoe | 1.75 | 104.56 | 104.56 | |
| North/ 101/101 | | 05569-05570 | 7/20/2011 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| North/ 101/101 | | 05575-05576 | 7/12/2011 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05577-05578 | 7/6/2011 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| North/ 101/101 | | 05591-05592 | 6/14/2011 | | 2 Collector Shoes | [redacted] | 40.81 | | |
| North/ 101/101 | | 05593-05594 | 6/8/2011 | | 3 T/M Brushes | [redacted] | 28.8 | | |
| North/ 101/101 | | 05599-05600 | 5/31/2011 | | 1Collector Shoe and 1 T/M Brush | [redacted] | 50.41 | | |
| North/ 101/101 | | 05607-05608 | 5/17/2011 | | 2 T/M Brushes | [redacted] | 19.2 | | |
| North/ 101/101 | | 05609-05610 | 5/11/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05615-05616 | 5/3/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05623-05624 | 4/19/2011 | | 1 Collector Shoe and 4 T/M Brushes | [redacted] | 79.21 | 79.21 | |
| North/ 101/101 | | 05639-05640 | 3/22/2011 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| North/ 101/101 | | 05641-05642 | 3/16/2011 | | 1 Collector Shoe and 3 T/M Brushes | [redacted] | 69.61 | 69.61 | |
| North/ 101/101 | | 05649-05650 | 3/2/2011 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| North/ 101/101 | | 05655-05656 | 2/22/2011 | | 2 Collector Shoes | [redacted] | 81.62 | | |
| North/ 101/101 | | 05657-05658 | 2/16/2011 | | 1 T/M Brush | [redacted] | 9.6 | | |
| North/ 101/101 | | 05665-05666 | 2/2/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05671-05672 | 1/25/2011 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| North/ 101/101 | | 05679-05680 | 1/11/2011 | | 2 Collector Shoes ~~and 1 Adjuster Set Screw~~ | [redacted] | 81.62 | | shoes only |
| North/ 101/101 | | 05681-05682 | 1/5/2011 | | 1 T/M Brush | [redacted] | 9.6 | | |
| North/ 101/101 | | 05278-05279 | 12/28/2010 | | 1 Collector Shoe, 2 Brushes | [redacted] | 60.01 | | |
| North/ 101/101 | | 05288-05289 | 12/8/2010 | | 8 motor brushes | [redacted] | 76.8 | 76.8 | |
| North/ 101/101 | | 05294-05295 | 11/30/2010 | | 3 Collector Shoes, 1 Cond gnd strap ($29.86 each) | [redacted] | 152.29 | 152.29 | |
| North/ 101/101 | | 05298-05299 | 11/23/2010 | | 2 Collector shoes, 2 Brushes | [redacted] | 100.82 | | |
| North/ 101/101 | | 05306-05307 | 11/9/2010 | | 4 T/M Brushes | [redacted] | 38.4 | | |

20 $1,420.13

[redacted] 28.25

02665

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 101/101 | | 05308-05309 | 11/3/2010 | | 2 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05314-05315 | 10/26/2010 | | 4 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05316-05317 | 10/20/2010 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05338-05339 | 9/14/2010 | | 8 Collector Shoes | [redacted] | [redacted] | 326.48 | |
| North/ 101/101 | | 05340-05341 | 9/8/2010 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05406-05407 | 8/31/2010 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05410-05411 | 8/24/2010 | | 4 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05414-05415 | 8/17/2010 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05416-05417 | 8/11/2010 | | 10 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05422-05423 | 8/3/2010 | | Manually Closed M101 restoring rail power | [redacted] | | | |
| North/ 101/101 | | 05424-05425 | 7/28/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05440-05441 | 7/6/2010 | | Several Collector Shoes (Log Book) | 5.5 | 40.81 | | only 1 |
| North/ 101/101 | | 05472-05473 | 5/4/2010 | | 2 T/M Brushes | 1.75 | 19.2 | | |
| North/ 101/101 | | 05476-05477 | 4/27/2010 | | 3 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05480-05481 | 4/20/2010 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05488-05489 | 4/6/2010 | | 4 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05496-05497 | 3/23/2010 | | 2 Collector Shoes, 1 Overhead Light ($6.50 each) | [redacted] | [redacted] | 88.12 | |
| North/ 101/101 | | 05512-05513 | 2/23/2010 | | 4 Collector Shoes, And 1 Sub-Assembly | 2.5 | 226.99 | 226.99 | |
| North/ 101/101 | | 05516-05517 | 2/16/2010 | | 2 Collector Shoes, And 1 Sub-Assembly | 2.25 | 145.37 | 145.37 | |
| North/ 101/101 | | 05520-05521 | 2/9/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05528-05529 | 1/26/2010 | | 5 Collector Shoes | [redacted] | [redacted] | 204.05 | |
| North/ 101/101 | | 05536-05537 | 1/12/2010 | | 2 Collector Shoes and Sub-Assemblies | 2.5 | 209.12 | 209.12 | |
| North/ 101/101 | | 05079-05080 | 12/29/2009 | | 1 Collector Shoe | 1.75 | 40.81 | | |
| North/ 101/101 | | 05083-05084 | 12/22/2009 | | 2 Collector Shoes and 1 Holder Sub-Assembly | 2.25 | 145.37 | | |
| North/ 101/101 | | 05091-05092 | 12/8/2009 | | 1 Collector Shoe and 1 Collector Shunt | [redacted] | [redacted] | 70.67 | |

25.5 $1,625.09

[redacted] 23.75

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 101/101 | | 05095-05096 | 12/1/2009 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05098-05099 | 11/24/2009 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05107-05108 | 11/10/2009 | | 2 T/M Brushes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05119-05120 | 10/20/2009 | | 1 Collector Shoe, 1 Holder Sub-assembly, 1 Collector Shunt | 2 | 134.42 | 134.42 | |
| North/ 101/101 | | 05131-05132 | 9/29/2009 | | 3 Collector Shoes, 3 Holder Sub-Assemblies | 2.5 | 313.68 | 313.68 | |
| North/ 101/101 | | 05139-05140 | 9/15/2009 | | 1 Collector Shoe, 1 Holder Sub-assembly | 2 | 104.56 | 104.56 | |
| North/ 101/101 | | 05147-05148 | 9/1/2009 | | 3 Collector Shoes, 3 Holder Sub-Assemblies | 2.5 | 313.68 | | |
| North/ 101/101 | | 05151-05152 | 8/25/2009 | | 5 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05155-05156 | 8/18/2009 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/ 101/101 | | 05159-05160 | 8/11/2009 | | 4 Collector Shoes, 4 Holder Sub-assemblies | 3 | 418.24 | 418.24 | |
| North/ 101/101 | | 05163-05164 | 8/4/2009 | | 1 Guide Spindle Assembly | [redacted] | | | |
| North/ 101/101 | | 05167-05168 | 7/28/2009 | | 1 Collector Shoe, 1 Holder Sub-Assembly | 2 | 104.56 | | |
| North/ 101/101 | | 05175-05176 | 7/14/2009 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05183-05184 | 7/1/2009 | | 2 Graphic Lamps, 1 Collector Shunt | [redacted] | [redacted] | 44.36 | |
| North/ 101/101 | | 05187-05188 | 6/23/2009 | | 1 Collector Shoe, 1 Guide Spindle | [redacted] | [redacted] | | |
| North/ 101/101 | | 05191-05192 | 6/16/2009 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05195-05196 | 6/9/2009 | | 1 Collector Shoe, 2 Holder Sub-Assemblies | 2.25 | 168.31 | 168.31 | |
| North/ 101/101 | | 05199-05200 | 6/2/2009 | | 2 Collector Shoes | 2 | 81.62 | | |
| North/ 101/101 | | 05203-05204 | 5/26/2009 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05215-05216 | 5/5/2009 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| North/ 101/101 | | 05219-05220 | 4/21/2009 | | 1 Shunt | [redacted] | [redacted] | | |
| North/ 101/101 | | 05231-05232 | 3/31/2009 | | 3 Shunts | [redacted] | [redacted] | 89.58 | |
| North/ 101/101 | | 05235-05236 | 3/24/2009 | | 5 Shunts, 2 Collector Shoes | [redacted] | [redacted] | 230.92 | |
| North/ 101/101 | | 05259-05260 | 1/27/2009 | | 3 Collector Shoes | [redacted] | [redacted] | | |

15.25 $1,230.12

[redacted] 16.75

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 652 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 101/101 | | 05263-05264 | 1/20/2009 | | 4 Collector Shoes, 8 T/M Brushes, 1 Overhead Lamp | [redacted] | [redacted] | 246.54 | |
| North/ 101/101 | | 05271-05272 | 1/6/2009 | | 1 Tail Light | [redacted] | [redacted] | | |
| North/ 201/201 | | 03068-03069 | 4/18/2012 | | 2 T/M Brushes | [redacted] | [redacted] | | |
| North/ 201/201 | | 03088-03089 | 3/14/2012 | | 8 T/M Brushes | [redacted] | [redacted] | | |
| North/ 201/201 | | 03094-03095 | 3/6/2012 | | 2 Collector Shoes, 14 T/M Brushes | [redacted] | [redacted] | 216.02 | |
| North/ 201/201 | | 03118-03119 | 1/24/2012 | | 1 Graphic Lamp | [redacted] | [redacted] | | |
| North/ 201/201 | | 02873-02874 | 12/28/2011 | | 8 T/M Brushes | [redacted] | [redacted] | | |
| North/ 201/201 | | 02897-02898 | 11/17/2011 | | 1 Collector Shoe, 8 T/M Brushes | [redacted] | [redacted] | 117.61 | |
| North/ 201/201 | | 02935-02936 | 9/13/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| North/201/201 | | 02911-02912 | 10/25/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05551-05552 | 8/23/2011 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05555-05556 | 8/17/2011 | | 2 T/M Brushes and 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05559-05560 | 8/9/2011 | | 1 T/M Brush and 4 Collector Shoes | [redacted] | [redacted] | 172.84 | |
| South/ 101/101 | | 05571-05572 | 7/19/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05573-05574 | 7/17/2011 | | 15 T/M Brushes | [redacted] | [redacted] | 144 | |
| South/ 101/101 | | 05579-05580 | 7/5/2011 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05581-05582 | 6/29/2011 | | 1 Collector Shoe and 4 T/M Brushes | [redacted] | [redacted] | 79.21 | |
| South/ 101/101 | | 05595-05596 | 6/7/2011 | | 1 Collector Shoe and 1 T/M Brush | [redacted] | [redacted] | | |
| South/ 101/101 | | 05603-05604 | 5/24/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05605-05606 | 5/18/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05613-05614 | 5/4/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05629-05630 | 4/6/2011 | | 3 T/M Brushes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05643-05644 | 3/15/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05645-05646 | 3/9/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05651-05652 | 3/1/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05667-05668 | 2/1/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |

16.25 $2,176.75

[redacted] 43

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 101/101 | | 05673-05674 | 1/18/2011 | | 1 Collector Shoe | [redacted] | [redacted] | | |
| South/ 101/101 | | 05675-05676 | 1/12/2011 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05683-05684 | 1/4/2011 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05282-05283 | 12/21/2010 | | 2 Collector shoes, 1 shunt | [redacted] | [redacted] | 111.48 | |
| South/ 101/101 | | 05296-05297 | 11/24/2010 | | 1 Collector Shoe, 8 Brushes | [redacted] | [redacted] | 117.61 | |
| South/ 101/101 | | 05302-05303 | 11/16/2010 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| South/ 101/101 | | 05318-05319 | 10/19/2010 | | 1 T/M Brush | [redacted] | 9.6 | | |
| South/ 101/101 | | 05328-05329 | 9/29/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05342-05343 | 9/7/2010 | | 4 T/M Brushes | [redacted] | 38.4 | | |
| South/ 101/101 | | 05408-05409 | 8/25/2010 | | Collector Shoes, T/M Brushes | [redacted] | [redacted] | 1 each | |
| South/ 101/101 | | 05418-05419 | 8/10/2010 | | 4 T/M Brushes | [redacted] | 38.4 | | |
| South/ 101/101 | | 05426-05427 | 7/27/2010 | | 3 Collector Shoes, 4 T/M Brushes | [redacted] | [redacted] | 160.83 | |
| South/ 101/101 | | 05428-05429 | 7/21/2010 | | 3 Collector Shoes | [redacted] | 122.48 | | |
| South/ 101/101 | | 05432-05433 | 7/10/2010 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| South/ 101/101 | | 05438-05439 | 7/7/2010 | | 8 T/M Brushes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05434-05435 | 6/27/2010 | | 4 Collector Shoes, 8 T/M Brushes | [redacted] | [redacted] | 240.04 | |
| South/ 101/101 | | 05470-05471 | 5/8/2010 | | 8 T/M Brushes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05482-05483 | 4/17/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05486-05487 | 4/10/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05492-05493 | 3/27/2010 | | 3 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05498-05499 | 3/20/2010 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| South/ 101/101 | | 05502-05503 | 3/13/2010 | | 1 Collector Shoe, 8 T/M Brushes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05506-05507 | 3/6/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05510-05511 | 2/27/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05518-05519 | 2/13/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05522-05523 | 2/6/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05526-05527 | 1/30/2010 | | 2 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05530-05531 | 1/23/2010 | | 4 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05538-05539 | 1/9/2010 | | 1 Collector Shoe | [redacted] | 40.81 | | |
| South/ 101/101 | | 05542-05543 | 1/2/2010 | | 1 Collector Shoe | [redacted] | 40.81 | | |

17 $2,547.95

[redacted] 475

costs nothing?

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 562 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 101/101 | | 05081-05082 | 12/26/2009 | | 4 Collector Shoes | [redacted] | [redacted] | | |
| South/ 101/101 | | 05087-05088 | 12/15/2009 | | 2 Collector Shoes | 2 | 81.62 | | |
| South/ 101/101 | | 05089-05090 | 12/12/2009 | | 4 Collector Shoes | 2.5 | 163.24 | | |
| South/ 101/101 | | 05093-05094 | 12/5/2009 | | 2 Collector Shoes | 2 | 81.62 | | |
| South/ 101/101 | | 05101-05102 | 11/21/2009 | | Brushes C8 | | 76.8 | | |
| South/ 101/101 | | 05109-05110 | 11/7/2009 | | 8 T/M Brushes | 2.25 | 76.8 | | |
| South/ 101/101 | | 05113-05114 | 10/31/2009 | | 1 Collector Shoe | 1.75 | 40.81 | | |
| South/ 101/101 | | 05117-05118 | 10/24/2009 | | 2 Collector Shoes | 2 | 81.62 | | |
| South/ 101/101 | | 05129-05130 | 10/3/2009 | | 1 Collector Shoe | 1.75 | 40.81 | | |
| South/ 101/101 | | 05157-05158 | 8/15/2009 | | 3 Collector Shoes, 1 Guide Tire | [redacted] | [redacted] | | |
| South/ 101/101 | | 05161-05162 | 8/8/2009 | | 5 Collector Shoes, 1 Service Brake Chamber ($4.53 ea) | 2.5 | 208.58 | 208.58 | |
| South/ 101/101 | | 05223-05224 | 4/14/2009 | | 8 Shunts | 3.5 | 238.88 | 238.88 | |
| South/ 101/101 | | 05237-05238 | 3/21/2009 | | 3 Collector Shoes | 2.25 | 122.48 | | |
| South/ 101/101 | | 05253-05254 | 2/19/2009 | | 4 Collector Shoes | 2.5 | 163.24 | | |
| South/ 101/101 | | 05255-05256 | 2/11/2009 | | Some Collector Shoes | | 40.81 | 1 only | |
| South/ 101/101 | | 05257-05258 | 1/31/2009 | | 1 Collector Shoe, 8 T/M Brushes | 2.5 | 117.61 | | |
| South/ 101/101 | | 05269-05270 | 1/10/2009 | | 3 Collector Shoes | 2.25 | 122.43 | | |
| South/ 201/201 | | 03058-03059 | 5/8/2012 | | 2 Collector Shoes | 2 | 81.62 | | |
| South/ 201/201 | | 03064-03065 | 4/25/2012 | | 2 Collector Shoes, 1 T/M Brush | 2.25 | 91.22 | 91.22 | |
| South/ 201/201 | | 03090-03091 | 3/13/2012 | | 1 Collector Shoe | 1.75 | 40.81 | | |
| South/ 201/201 | | 03106-03107 | 2/14/2012 | | 1 Collector Shoe | 1.75 | 40.81 | | |
| South/ 201/201 | | 03116-03117 | 1/25/2012 | | 6 Body Rivets | 2 | | | |
| South/ 201/201 | | 02877-02878 | 12/21/2011 | | 1 Collector Tree Assembly | 2.5 | | | |
| South/ 201/201 | | 02923-02924 | 10/4/2011 | | 1 End Compartment Door Limit Switch | 1.75 | 8.13 | | |
| South/ 201/201 | | 02927-02928 | 9/28/2011 | | 1 T/M Lead Terminal and New Heat Shrink Wrap | 2.5 | 20 | | |
| South/ 201/201 | | 02931-02932 | 9/20/2011 | | 1 Collector Interconnecting Wire | 1.75 | | | |
| South/ 201/201 | | 02933-02934 | 9/14/2011 | | 4 T/M Brushes | 2 | 38.4 | | |
| South/201/ 201 | | 02915-02916 | 10/18/2011 | | 1 Graphic Lamp | 1.75 | 7.25 | | |

21.25 $ 2,199.41

[redacted] 36.25

| Data From Maintenance Records Of Work Performed By the Technicians On The D System Tram Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | North & South logs show 260 collector shoes above is only for 227 the. Difference of: 33. | | | 1346.73 | 1346.73 | |
| | | | | | Totals | 343 | 15118.47 | | |

$9,921.45

SUB TOT: 115.25 (33.6%)

[redacted] SUB TOT: 195.75

COMPREHENSIVE SUB-TOT: 311 (90.6%)

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lane/ PM/ Task | Document File | Page Numbers | Date | Work Order | Parts | Man/Hours | Parts Cost | | Comments |
| North/ 60/ 300 | N-60 (60).PDF | 03863-03864 | 12/16/2011 | 111000312 | 5 LS-6 Switches, 1 Pressure Wave Switch, 2 Door Caps | 3.5 | 405.6 | 405.6 | |
| North/ 60/ 300 | N-60 (60).PDF | 03869-03870 | 6/11/2011 | 111000142 | 3 Contact Edge Rollers, 2 Pressure Wave Switches, 1 LS-6 Switch | 2.25 | 300 | w/o rollers | |
| North/ 60/ 300 | N-60 (60).PDF | 03873-03874 | 2/22/2011 | 111000041 | 4 Pressure Wave Switches, 1 LS-6 Switch | 2.5 | 561 | 561 | |
| North/ 60/ 300 | N-60 (60).PDF | 03877-03878 | 10/24/2010 | 101000234 | 2 LS-6 Switches | [redacted] | | | |
| North/ 60/ 300 | N-60 (60).PDF | 03883-03884 | 5/3/2010 | 101000100 | 3 Contact Edge Rollers, 1 Pressure Wave Switch, 3 Door Caps | 4.25 | 250.65 | 250.65 | |
| North/ 60/ 300 | N-60 (60).PDF | 03885-03886 | 3/8/2010 | 101000046 | 1 Slide Channel Bearing, 1 Slide Channel, 2 Contact Edge Rollers, 1 Pressure Wave Switch | 2.25 | 130.5 | | |
| North/ 60/ 300 | N-60 (60).PDF | 03893-03894 | 7/13/2009 | 91000142 | 1 Pressure Wave Switch, Tie, Wrap Edge Contact Roller Wires | 2.25 | 130.5 | | |
| North/ 60/ 300 | N-60 (60).PDF | 03903-03904 | 8/26/2008 | 81000179 | 1 Door Cap, 2 Safety Edge Molding Assemblies, 2 LS-6 Switches | 4 | 595.55 | 595.55 | |
| North/ 61/ 61 | N-61 (60).PDF | 04003-04005 | 7/25/2012 | 121000242 | Resistor Module RB+1, Resistor Module RB+2, Resistor Module RB-1, Resistor Module RB-2 | [redacted] | | | Adjusted terminals to remove a short circuit |
| North/ 61/ 61 | N-61 (60).PDF | 04006-04008 | 5/28/2012 | 121000162 | 1 Brake Switch Aux Contact Block | [redacted] | | | |
| North/ 61/ 61 | N-61 (60).PDF | 04042-04044 | 6/4/2010 | 101000129 | 1 Set of contacts | 1 | 300.05 | 300.05 | 1. Contactor ABC, 2. Wire Harness for Contactors PRC, AMC and the Brake Motor Operator |

4 $78

[redacted] 1

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 862 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 61/ 61 | N-61 (60).PDF | 04045-04047 | 4/16/2010 | 101000086 | 1 Varistor | [redacted] | [redacted] | | Contactor PRC |
| North/ 61/ 61 | N-61 (60).PDF | 04048-04050 | 3/9/2010 | 101000027 | 1 PRC Contactor, 1 RH Breake Switch Sweeper Arm and Contact Block | 2 | 1302.5 | | |
| North/ 61/ 61 | N-61 (60).PDF | 04072-04074 | 10/27/2008 | 81000232 | 1PRC MOV Varistor | [redacted] | [redacted] | | |
| North/ 61/ 61 | N-61 (60).PDF | 04078-04080 | 6/24/2008 | 81000153 | [redacted] | [redacted] | [redacted] | | 2. Rebuilt 2 PRC Contactors |
| North/ 62/ 62 | N-62 (60).PDF | 04236-04239 | 1/10/2012 | 12100008 | 1 Axle Breather Tube | 0.5 | 146.63 | | Damaged |
| North/ 62/ 62 | N-62 (60).PDF | 04240-04242 | 11/11/2011 | 111000277 | 1 Air Compressor Shroud | 1 | 60 | | Cracked Mounting Attachments |
| North/ 62/ 62 | N-62 (60).PDF | 04243-04245 | 9/14/2011 | 111000215 | 1 Guide Tire | [redacted] | | | |
| North/ 62/ 62 | N-62 (60).PDF | 04261-04263 | 1/12/2011 | 111000009 | 1. 1 Shock Bolt, 2. 1 Pinion Seal | 3 | 60.77 | 60.77 | 1. Broken, 2. Excessive Leak |
| North/ 62/ 62 | Hardcopy | | 8/2/2010 | 101000160 | CCTV Trainline Cable | [redacted] | | | Repaired |
| North/ 62/ 62 | N-62 (60).PDF | 04287-04289 | 3/23/2010 | 101000065 | 1 FSE Package, 1 Service Brake Chamber, Diaphragm | [redacted] | [redacted] | | Air Leaks |
| North/ 62/ 62 | Hardcopy | | 11/29/2009 | 910000243 | Guide Way Brake Rate Footage Markings | [redacted] | | | Painted (required for conducting preventive maint) |
| North/ 62/ 62 | N-62 (60).PDF | 04317-04321 | 3/27/2009 | 91000073 | 1. 1 Guide Spindle, 2. Brake Adjust Brackets | [redacted] | | | |
| North/ 301/301 | Hardcopy | | | 121000129 | | | | | |
| North/ 301/301 | Hardcopy | | 4/4/2012 | 121000094 | 3 T/M Brushes | [redacted] | [redacted] | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 3/6/2012 | 121000060 | T/M Brushes | [redacted] | [redacted] | | See Log Book |
| North/ 301/301 | Hardcopy | | 12/7/2011 | 111000291 | 11 T/M Brushes | [redacted] | [redacted] | | Replaced for Wear |

16 $158.37

[redacted] 3.25

WHY SUCH DIFFERENCE?
1.75 → 1.25

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 301/301 | Hardcopy | | 10/6/2011 | 111000228 | 1 T/M Brush | 1.75 | 9.6 | | Replaced due to chipping |
| North/ 301/301 | Hardcopy | | 6/5/2011 | 111000126 | 15 T/M Brushes | [redacted] | 144 | 144 | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 2/7/2011 | 111000025 | 2 T/M Brushes | 1.75 | 19.5 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 12/8/2010 | 101000266 | 6 T/M Brushes | [redacted] | 57.6 | 57.6 | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 9/10/2010 | 101000197 | 3 T/M Brushes | 2 | 28.8 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 8/6/2010 | 101000172 | T/M Brushes | 0.25 | 9.6 | | See Log Book |
| North/ 301/301 | Hardcopy | | 6/12/2010 | 101000130 | T/M Brushes | 0.25 | 9.6 | | See Log Book |
| North/ 301/301 | Hardcopy | | 4/12/2010 | 101000078 | 10 T/M Brushes | 3.25 | 96 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 3/17/2010 | 101000055 | 3 T/M Brushes | 2 | 28.8 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 2/15/2010 | 1010000031 | 10 T/M Brushes | 3.25 | 96 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 12/14/2009 | 91000257 | 1 T/M Brush | 1.75 | 9.6 | | Replaced for Wear |
| North/ 301/301 | Hardcopy | | 10/13/2009 | 910002212 | 20 T/M Brushes | 4.75 | 192 | | Replaced for Wear |
| North/ 301/301 | N-301 (30).PDF | 04688-04689 | 4/15/2009 | 91000084 | 40 T/M Brushes | 8.25 | 384 | 384 | Replaced for Wear |
| North/ 301/301 | N-301 (30).PDF | 04708-04709 | 5/27/2008 | 81000128 | 2 T/M Brushes | 1.75 | 19.2 | | Replaced for Wear |
| North/ 311/ 311 | N-311 (30).PDF | 04620-04621 | 8/8/2011 | 111000175 | 2 Line Swicth Contacts | 2 | 2.3 | | Melted |
| North/ 311/ 311 | N-311 (30).PDF | 04636-04637 | 12/8/2010 | 101000270 | Aux Contacts | 2 | | | Replaced |

15.5 $1,107.1

[redacted] 26

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| North/ 311/ 311 | N-311 (30).PDF | 04638-04639 | 11/15/2010 | 101000243 | 2 Main Line Switch Contacts, 1 Aux Contact arm, 1 Aux Contact Block | 3 | 2.8 | | Replaced |
| North/ 311/ 311 | N-311 (30).PDF | 04640-04641 | 10/14/2010 | 101000222 | 1 Aux Contact Arm, 1 Aux Contact Block | 2.5 | | | Replaced |
| North/ 311/ 311 | N-311 (30).PDF | 04642-04643 | 9/10/2010 | 101000201 | 1 Aux Contact Arm | 2 | | | Replaced for Poor Resistance |
| North/ 311/ 311 | N-311 (30).PDF | 04644-04645 | 8/18/2010 | 101000178 | 3 Aux Contact Arms | 3 | | | Replaced for Poor Resistance |
| North/ 311/ 311 | N-311 (30).PDF | 04654-04655 | 3/21/2010 | 101000058 | 2 Line Swicth Contacts, 1 Aux Contact Arm, 1 Aux Contact Block | 3 | 2.8 | | Replaced |
| North/ 311/ 311 | N-311 (30).PDF | 04656-04657 | 2/15/2010 | 101000028 | 1 Aux Contact, Arm, 1 Aux Contact Block | 2.5 | | | Replaced for Poor Resistance |
| North/ 311/ 311 | N-311 (30).PDF | 04658-04659 | 1/18/2010 | 101000002 | 1 Aux Contact Block | 2 | | | Replaced for Poor Resistance |
| North/ 311/ 311 | N-311 (30).PDF | 04670-04671 | 7/21/2009 | 91000148 | 2 Aux Contact Blocks | 2.5 | | | Replaced for Poor Resistance |
| North/ 311/ 311 | N-311 (30).PDF | 04728-04729 | 6/10/2008 | 81000137 | Main Line Sw contacts C7 | 3 | 2.8 | | |
| North/ 311/ 311 | N-311 (30).PDF | 04730-04731 | 5/5/2008 | 81000116 | Right Line Sw Aux Cont/Block | 2.5 | | | |
| North/ 506/506 | N-506 (360).PDF | 04847-04848 | 1/6/2012 | 121000318 | c6 is5, c7 is1 limit sw (39 each) | 4 | 78 | | |
| North/ 506/506 | N-506 (360).PDF | 04849-04850 | 1/5/2011 | 111000001 | 1 LS1 Switch | 1.75 | 39 | | |
| South/ 60/300 | 50.PDF | 03416-03417 | 6/18/2008 | 81000145 | 2 LS Switches | 4 | 78 | | |
| South/ 60/300 | 50.PDF | 03414-03415 | 10/22/2008 | 81000225 | 4 LS Switches | 2 | 156 | | |
| South/ 60/300 | 50.PDF | 03418-03419 | 12/29/2008 | 81000260 | 2 LS Switches, 1 Door Cap (40.05 ea) | 2.5 | 118.05 | 118.05 | |

30.25 $477.45

10.5

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 60/300 | 50.PDF | 03420-03421 | 4/14/2009 | 91000085 | 2 LS Switches | [redacted] | | | |
| South/ 60/300 | 50.PDF | 03422-03423 | 12/16/2009 | 91000255 | (190.5 ea) 3 Pressure Wave Switches | 2 | 391.5 | 391.5 | |
| South/ 60/300 | 50.PDF | 03434-03435 | 4/14/2010 | 101000080 | 2 LS Switches, 1 Pressure Wave Switch | 2.25 | 208.5 | 208.5 | |
| South/ 60/300 | 50.PDF | 03436-03437 | 6/8/2010 | 101000128 | (15.94 ea) 2 Anti-Rattle Springs | [redacted] | 31.88 | 31.88 | |
| South/ 60/300 | 50.PDF | 03438-03439 | 8/9/2010 | 101000173 | 3 LS Switches | [redacted] | 117 | 117 | |
| South/ 60/300 | 50.PDF | 03412-03413 | 12/6/2010 | 101000262 | 2 LS Switches, 1 Door Pin, 1 Contact Edge Roller | [redacted] | 78 | switches only | |
| South/ 60/300 | 50.PDF | 03410-03411 | 4/10/2011 | 111000070 | 1 LS Switch | [redacted] | 39 | | |
| South/ 60/300 | 50.PDF | 03424-03425 | 8/3/2011 | 111000177 | 5 LS Switches, 1 Pressure Wave Switch | 3 | 325.5 | 325.5 | |
| South/ 60/300 | 50.PDF | 03426-03427 | 12/6/2011 | 111000292 | 1 LS Switch, 1 Pressure Wave Switch | 2 | 169.5 | 169.5 | |
| South/ 60/300 | 50.PDF | 03430-03431 | 2/3/2012 | 121000024 | 2 LS Switches | [redacted] | 78 | | |
| South/ 60/300 | 50.PDF | 03432-03433 | 4/2/2012 | 121000096 | 1 Door Cap, 2 Contact Edge Rollers, 1 Wave Switch, 1 LS Switch | 2.5 | 209.55 | 209.55 | |
| South/ 60/300 | 50.PDF | 03428-03429 | 6/1/2012 | 121000156 | 1 LS Switch | [redacted] | 39 | | |
| South/ 61/61 | 51.PDF | 03440-03442 | 12/9/2008 | 81000235 | 2 (Sets) Main Line Switch Contacts | [redacted] | 5.6 | | |
| South/ 61/61 | 51.PDF | 03446-03448 | 3/2/2009 | 91000044 | 1 Varistor | [redacted] | 3.28 | | |
| South/ 61/61 | 51.PDF | 03461-03463 | 11/15/2009 | 91000234 | 1 PRC Wire Terminal Lug | [redacted] | | | |
| South/ 61/61 | 51.PDF | 03458-03460 | 3/16/2010 | 101000056 | 1 Vehicle Battery | 2 | 259.84 | | |

11.5 $469.76

[redacted] 8.75

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 562 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 61/61 | 51.PDF | 03455-03457 | 9/13/2010 | 101000198 | 2 BS/LS Aux Contact Arms, 2 BS/LS Aux Contact Blocks | [redacted] | [redacted] | | |
| South/ 61/61 | 51.PDF | 03452-03454 | 11/10/2010 | 101000240 | 1 Reverser Aux Contact | 2 | 50 | | |
| South/ 61/61 | 51.PDF | 03443-03445 | 1/7/2011 | 101000289 | 1 PRC Main Contact | 1.75 | 497.5 | | |
| South/ 61/61 | 51.PDF | 03449-03451 | 1/10/2012 | 111000324 | 1 AMC Conactor | 2 | 123.4 | | |
| South/ 61/61 | S-61 (60).PDF | 06358-06360 | 3/7/2012 | 121000062 | 1 PRCC Relay, 1 PRCCA Relay, 1 1PRC Contactor Coil | 2.25 | 1302.5 | | |
| South/ 62/62 | 62.PDF | 03464-03467 | 4/13/2012 | 121000116 | 1 Steering Shock, 1 Swaybar Bushing | [redacted] | 21.03 | 21.03 | |
| South/ 62/62 | 62.PDF | 03468-03470 | 10/20/2011 | 111000251 | 3 Guide Tires (82.91ea) | 3 | 248.73 | 82.91 | |
| South/ 62/62 | 62.PDF | 03471-03473 | 8/23/2011 | 111000188 | 1 Swaybar Strap Bolt | [redacted] | | | |
| South/ 62/62 | 62.PDF | 03474-03476 | 2/21/2011 | 111000036 | 1 Swaybar Bushing | [redacted] | [redacted] | | |
| South/ 62/62 | 62.PDF | 03479-03481 | 12/20/2010 | 101000275 | (48.958a) 1 Pinion Seal, 2 Swaybar Bushings | [redacted] | [redacted] | 55.21 | |
| South/ 62/62 | 62.PDF | 03489-03491 | 11/7/2008 | 81000236 | 2 Main Running Tires, 1 Swaybar Clamp | 5 | 645.35 | | |
| South/ 62/62 | S-62 (60).PDF | 06545-06547 | 2/20/2012 | 121000048 | 1 Main Running Tire | 3 | 322.5 | | |
| South/ 301/301 | PMS0220.LST | 619 | 4/24/2012 | 121000123 | 4 T/M Brushes | [redacted] | [redacted] | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 614 | 3/26/2012 | 121000088 | 10 T/M Brushes | [redacted] | [redacted] | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 605 | 1/23/2012 | 121000016 | 3 T/M Brushes | [redacted] | [redacted] | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 601 | 12/26/2011 | 111000313 | 1 T/M Brush | [redacted] | [redacted] | | |

16.25 $252.17

[redacted] 9.75

02677

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 301/301 | PMS0220.LST | 593 | 10/21/2011 | 111000252 | 2 T/M Brushes | [redacted] | 19.2 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 589 | 9/23/2011 | 111000223 | 2 T/M Brushes | [redacted] | 19.2 | | |
| South/ 301/301 | PMS0220.LST | 578 | 6/28/2011 | 111000141 | 5 T/M Brushes | [redacted] | 48 | | |
| South/ 301/301 | PMS0220.LST | 571 | 4/28/2011 | 111000092 | 4 T/M Brushes | [redacted] | 38.4 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 575 | 5/24/2011 | 111000118 | 4 T/M Brushes | [redacted] | 38.4 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 567 | 3/30/2011 | 111000065 | 5 T/M Brushes | [redacted] | 48 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 564 | 2/25/2011 | 110000038 | 3 T/M Brush | [redacted] | 28.8 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 561 | 1/16/2011 | 111000015 | 2 T/M Brushes | [redacted] | 19.2 | | Parts verified in T/M Logbook |
| South/ 301/301 | PMS0220.LST | 513 | 11/11/2009 | 91000223 | 8 T/M Brushes | [redacted] | [redacted] | | Parts verified in T/M Logbook |
| South/ 301/301 | S-311 (30).PDF | 06965-06966 | 12/24/2008 | 81000262 | 2 T/M Brushes | [redacted] | 19.2 | | |
| South/ 301/301 | S-311 (30).PDF | 06969-06970 | 10/15/2008 | 81000227 | 2 T/M Brushes | [redacted] | 19.2 | | |
| South/ 301/301 | S-311 (30).PDF | 06975-06976 | 7/20/2008 | 81000168 | 2 T/M Brushes | [redacted] | 19.2 | | |
| South/ 301/301 | S-311 (30).PDF | | | | | | | | |
| South/ 311/311 | S-311 (30).PDF | , | | | | | | | |
| South/ 311/311 | S-311 (30).PDF | 06892-06893 | 9/15/2011 | 111000203 | 2 Main Line Switch Contacts | [redacted] | 2.8 | | Replaced |
| South/ 311/311 | S-311 (30).PDF | 06898-06899 | 6/12/2011 | 111000128 | 1 Aux Contact Sweeper Arm | [redacted] | | | Replaced |

23.5 $396.4

[redacted] 2.75

| Data From Maintenance Records Of Work Performed By the Technicians On The Tram Systems Under CBE 552 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| South/ 311/311 | S-311 (30).PDF | 06914-06916 | 10/17/2010 | 101000220 | 3 Aux Contact Sweeper Arms, 1 Aux Contact Block, 2 Main Contacts | 4 | | | Replaced |
| South/ 311/311 | S-311 (30).PDF | 06917-06918 | 9/11/2010 | 101000199 | 2 Aux Contact Sweeper Arms | 2.5 | | | Replaced |
| South/ 311/311 | S-311 (30).PDF | 06919-06920 | 8/5/2010 | 101000174 | 1 Aux Contact Sweeper Arm, 1 Aux Contact Block | 2.5 | | | Replaced |
| South/ 311/311 | S-311 (30).PDF | 06923-06924 | 6/9/2010 | 101000132 | 1 Aux Contact Sweeper Arm | 2 | | | |
| South/ 311/311 | S-311 (30).PDF | 06931-06932 | 2/14/2010 | 101000026 | 2 Main Line Switch Contacts | 2 | 2.8 | | |
| South/ 311/311 | S-311 (30).PDF | 06991-06992 | 11/5/2008 | 81000237 | 2 Main Line Switch Contacts | 2 | 2.8 | | |
| South/ 311/311 | S-311 (30).PDF | 06995-06996 | 9/1/2008 | 81000203 | 2 Main Line Switch Contacts | 2 | 2.8 | | |
| South/ 506/506 | S-506 (360).PDF | 07112-07113 | 2/7/2012 | 121000025 | 3 Operator Arm Bearings, 1 Door Cap, 1 Anti- Rattle Spring | 4.75 | 545.76 | 545.76 | 4 LS Switches, 1 Elevator Switch |
| South/ 506/506 | S-506 (360).PDF | 07116-07117 | 2/12/2010 | 101000023 | 2 Anti-Rattle Springs, Numerous LS6 Switches | 2.5 | 148.88 | 148.88 | |
| East/ 60/300 | E-60 (60).PDF | 03505-03506 | 10/21/2012 | 121000331 | 1 Pressure Wave Switch, 3 Contact Edge Rollers | 2.5 | 130.5 | | |
| East/ 60/300 | E-60 (60).PDF | 03509-03510 | 6/17/2012 | 121000178 | 1 E-Handle Pull Cable, 1 Door Bump Bracket, 1 Wave Switch | 2.5 | 53.55 | | no wave switch in place? |
| East/ 60/300 | E-60 (60).PDF | 03513-03514 | 2/20/2012 | 121000046 | 2 Contact Edge Rollers, 1 Wave Switch | 2.25 | 130.5 | | |
| East/ 60/300 | E-60 (60).PDF | 03515-03516 | 12/20/2011 | 111000308 | 8 Gull Wing Security Straps | 5.5 | | | |
| East/ 60/300 | E-60 (60).PDF | 03517-03518 | 10/26/2011 | 111000249 | 1 LS Switch, 1 Pressure Wave Switch | 2 | 169.5 | 169.5 | |
| East/ 60/300 | E-60 (60).PDF | 03519-035120 | 8/24/2011 | 111000187 | 1 LS Switch | 1.75 | 39 | | |
| East/ 60/300 | E-60 (60).PDF | 03523-03524 | 4/25/2011 | 111000091 | 2 LS Switches | 2 | 78 | | |

Different?

24.25 + 5

2 $125.4

**IN THE SUPREME COURT OF THE STATE OF NEVADA**

BOMBARDIER TRANSPORTATION (HOLDINGS) USA INC.,

Appellant,

v.

NEVADA LABOR COMMISSIONER; THE INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS; and CLARK COUNTY,

Respondents.

**Case No. 71101**

Electronically Filed
Nov 06 2017 03:49 p.m.
Elizabeth A. Brown
Clerk of Supreme Court

# APPELLANT BOMBARDIER TRANSPORTATION (HOLDINGS) USA INC.'S APPENDIX

## VOLUME 11

## ER2491-ER2740

**JACKSON LEWIS P.C.**
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Las Vegas, Nevada 89169
(702) 921-2460

*Attorneys for Appellant*

| DOCUMENT NAME | DATE | PAGE NO. |
|---|---|---|
| Amended Scheduling Order | January 14, 2013 | 0091–0093 |
| Bombardier Transportation (Holdings) USA, Exhibit 1 | | 1929–1974 |
| Bombardier Transportation (Holdings) USA, Exhibit 2 | | 1975–1981 |
| Bombardier Transportation (Holdings) USA, Exhibit 3 | | 1982–1988 |
| Bombardier Transportation (Holdings) USA, Exhibit 4 | | 1989–1990 |
| Bombardier Transportation (Holdings) USA, Exhibit 5 | | 1991–1992 |
| Bombardier Transportation (Holdings) USA, Exhibit 7 | | 1993–2055 |
| Bombardier Transportation (Holdings) USA, Exhibit 8 | | 2056–2109 |
| Bombardier Transportation (Holdings) USA, Exhibit 9 | | 2110–2166 |
| Bombardier Transportation (Holdings) USA, Exhibit 10 | | 2167–2226 |
| Bombardier Transportation (Holdings) USA, Exhibit 11 | | 2227–2230 |
| Bombardier Transportation (Holdings) USA, Exhibit 12 | | 2231–2240 |
| Bombardier Transportation (Holdings) USA, Exhibit 13 | | 2241–2246 |
| Bombardier Transportation (Holdings) USA, Exhibit 14 | | 2247–2249 |

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|---|---|---|
| Bombardier Transportation (Holdings) USA, Exhibit 15 | | 2250–2253 |
| Bombardier Transportation (Holdings) USA, Exhibit 16 | | 2254–2461 |
| Bombardier Transportation (Holdings) USA, Exhibit 17 | | 2462–2467 |
| Bombardier Transportation (Holdings) USA, Exhibit 18 | | 2468–2516 |
| Bombardier Transportation (Holdings) USA, Exhibit 21 | | 2517–2561 |
| Bombardier Transportation (Holdings) USA, Exhibit 22 | | 2562–2570 |
| Bombardier Transportation (Holdings) USA, Exhibit 23 | | 2571–2580 |
| Bombardier Transportation (Holdings) USA, Exhibit 24 | | 2581–2583 |
| Bombardier Transportation (Holdings) USA, Exhibit 25 | | 2584 |
| Bombardier Transportation (Holdings) USA, Exhibit 26 | | 2585–2598 |
| Bombardier Transportation (Holdings) USA, Exhibit 27 | | 2599–2602 |
| Bombardier Transportation (Holdings) USA, Exhibit 28 | | 2603–2606 |
| Bombardier Transportation (Holdings) USA, Exhibit 29 | | 2607–2620 |
| Bombardier Transportation (Holdings) USA, Exhibit 30 | | 2621–2625 |

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|---|---|---|
| Bombardier Transportation (Holdings) USA, Exhibit 31 | | 2626–2808 |
| Bombardier Transportation (Holdings) USA, Exhibit 32 | | 2809 |
| Bombardier Transportation (Holdings) USA, Inc.'s Motion for Summary Judgment | April 8, 2013 | 0094–0418 |
| Bombardier Transportation (Holdings) USA, Inc. Post-Hearing Brief | December 13, 2013 | 1406–1467 |
| Bombardier Transportation (Holdings) USA, Inc. Pre-Hearing Brief, List of Witnesses and List of Exhibits | June 3, 2013 | 0841–1294 |
| Bombardier Transportation (Holdings) USA, Inc. Reply in Support of Motion for Summary Judgment | April 24, 2013 | 0675–0765 |
| Bombardier Transportation (Holdings) USA, Inc. Supplement to Unopposed Motion to Seal | June 17, 2013 | 1311–1319 |
| Bombardier Transportation (Holdings) USA, Inc. Unopposed Motion to Seal | June 17, 2013 | 1295–1310 |
| Clark County Department of Aviation Exhibit 1 | | 2810 |
| Clark County Department of Aviation Exhibit 2 | | 2811 |
| Clark County Department of Aviation Exhibit 3 | | 2812–2814 |
| Clark County Department of Aviation Exhibit 4 | | 2815–2817 |
| Clark County Department of Aviation Exhibit 5 | | 2818–2822 |

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| Clark County Department of Aviation Exhibit 13 | | 2823–299 |
| Clark County Department of Aviation Exhibit 14 | | 3000–3026 |
| Clark County Department of Aviation Exhibit 16 | | 3027–3030 |
| Clark County Department of Aviation Exhibit 17 | | 3031 |
| Clark County Department of Aviation Exhibit 18 | | 3032–3034 |
| Clark County Department of Aviation Exhibit 19 | | 3035–3041 |
| Clark County Department of Aviation Exhibit 20 | | 3042–3044 |
| Clark County Department of Aviation Exhibit 20A | | 3045–3046 |
| Clark County Department of Aviation Exhibit 20B | | 3047–3050 |
| Clark County Department of Aviation Exhibit 22 | | 3051–3115 |
| Clark County Department of Aviation Exhibit 23 | | 3116–3134 |
| Clark County Department of Aviation Exhibit 25 | | 3135–3208 |
| Clark County Department of Aviation Exhibit 26 | | 3209–3286 |
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| Clark County Department of Aviation Exhibit 30 | | 3344–3391 |
| Clark County Department of Aviation Exhibit 32 | | 3392–3453 |
| Clark County Department of Aviation Exhibit 33 | | 3454–3456 |
| Clark County Department of Aviation Exhibit 34 | | 3457–3459 |
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| Clark County Department of Aviation Exhibit 43 | | 3527–3532 |
| Clark County Department of Aviation Exhibit 44 | | 3533–3534 |

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| Clark County Department of Aviation Exhibit 141 | | 3535–3539 |
| Clark County Department of Aviation List of Documents | | 0837–0840 |
| Clark County Department of Aviation Pre-Hearing Brief | | 0800–0832 |
| Clark County Department of Aviation Post-Hearing Brief | | 1320–1365 |
| Clark County Department of Aviation Response to Motion for Summary Judgment | | 0419–0549 |
| Clark County Department of Aviation Revised Determination | | 0018–0036 |
| Clark County Department of Aviation Witness List | | 0833–0836 |
| Determination of Clark County Department of Aviation | | 0003–0005 |
| Final Order | March 6, 2014 | 3939–3952 |
| Hearing Transcript (Volume 1) | June 25, 2013 | 1468–1555 |
| Hearing Transcript (Volume 2) | June 26, 2013 | 1556–1660 |
| Hearing Transcript (Volume 3) | June 27, 2013 | 1661–1774 |
| Hearing Transcript (Volume 4) | June 28, 2013 | 1775–1810 |
| Hearing Transcript (Volume 5) | September 9, 2013 | 1811–1884 |
| Hearing Transcript (Volume 6) | September 10, 2013 | 1885–1928 |
| Interim Order | June 7, 2011 | 0009–0017 |
| International Union of Elevator Constructors Exhibit 1 | | 3540–3722 |

| | | |
|---|---|---|
| International Union of Elevator Constructors Exhibit 2 | | 3723–3725 |
| International Union of Elevator Constructors Exhibit 3 | | 3726–3727 |
| International Union of Elevator Constructors Exhibit 4 | | 3728–3751 |
| International Union of Elevator Constructors Exhibit 5 | | 3752–3753 |
| International Union of Elevator Constructors Exhibit 7 | | 3754–3760 |
| International Union of Elevator Constructors Exhibit 8 | | 3761–3770 |
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| International Union of Elevator Constructors Exhibit 21 | | 3839–3840 |
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| International Union of Elevator Constructors Exhibit 23 | | 3844 |
| International Union of Elevator Constructors Exhibit 24 | | 3845–3846 |
| International Union of Elevator Constructors Exhibit 25 | | 3847–3860 |
| International Union of Elevator Constructors Exhibit 27 | | 3861–3870 |
| International Union of Elevator Constructors Exhibit 28 | | 3871–3938 |
| International Union of Elevator Constructors Objection to Revised Determination | | 0040–0044 |
| International Union of Elevator Constructors Opposition to Motion for Summary Judgment | April 16, 2013 | 0550–0674 |
| International Union of Elevator Constructors Post-Hearing Brief | December 11, 2013 | 1366–1405 |
| International Union of Elevator Constructors Pre-Hearing Conference Memorandum | June 18, 2012 | 0068–0075 |
| International Union of Elevator Constructors Pre-Trial Brief | April 19, 2013 | 0766–0794 |
| International Union of Elevator Constructors Prevailing Wage Complaint | October 9, 2009 | 0001–0002 |
| Notice of Entry of Order | August 10, 2011 | 0045–0054 |
| Notice of Pre-Hearing Conference | May 17, 2012 | 0037–0039 |
| Order Denying Motion for Summary Judgment | June 3, 2013 | 0795–0799 |
| Order on International Union of Elevator Constructors' Petition for Reconsideration | May 18, 2012 | 0055–0067 |

| | | |
|---|---|---|
| Revised Determination of the Clark County Department of Aviation | March 30, 2010 | 0006–0008 |
| Scheduling Order | June 27, 2012 | 0076–0080 |
| Stipulated Protective Order, signed by the Labor Commissioner | November 7, 2012 | 0081–0090 |
| Summary of Legislation History of 1981 | | 3953–4005 |

| Cognitive KSAs | Importance |
|---|---|
| **40. Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. | 1 2 3 4 |
| **41. Quality Control Analysis** — Conducting tests and inspections of products, services, or processes to evaluate quality or performance. | 1 2 3 4 |
| **42. Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. | 1 2 3 4 |
| **43. Installation** — Installing equipment, machines, wiring, or programs to meet specifications. | 1 2 3 4 |
| **ABILITIES**<br><br>**44. Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem. | 1 2 3 4 |
| **45. Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense. | 1 2 3 4 |

| | |
|---|---|
| **46. Arm-Hand Steadiness** — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position. | 1 2 3 4 |
| **47. Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences. | 1 2 3 4 |

| | |
|---|---|
| **48. Oral Expression** — The ability to communicate information and ideas in speaking so others will understand. | 1 2 3 4 |
| **49. Finger Dexterity** — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects. | 1 2 3 4 |
| **50. Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events). | 1 2 3 4 |

| | |
|---|---|
| **51. Manual Dexterity** — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects. | 1 2 3 4 |
| **52. Near Vision** — The ability to see details at close range (within a few feet of the observer). | 1 2 3 4 |
| **53. Control Precision** — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions. | 1 2 3 4 |

**International Union of Elevator Contractors**

**McCarran Airport**

| Matthew McCullough | Interview Questions |
|---|---|

***Background***

1. What is your current job title? Senior Technician
2. How long have you been in your current position?
   8 years
3. What previous positions have you had that are related to your current position? How long did you hold each of those positions?
   Aircraft Electrical & Environmental Systems Journeyman – 8 years

***Shifts and Assignments***

4. What shifts do you usually work? In what ways does your work differ from day to day?
   I was recently assigned to mid shift. Some days we must work with/around contractors, other days is maintenance all night.
5. How does work differ from person to person? Are there different assignments?
   Out of our 24 technicians, we all share in the workload. New hires are treated as apprentices and are carefully watched by the more experienced of our group. As a senior tech, I do assign the work for a night but are typically involved in all of the work.

***Training***

6. How long does it usually take people to learn this job?
   To reach a level to handle the work by yourself, 6 months to a year although I am still learning after 8 years.
7. What training is required to do this job?
   Extensive mechanical, electrical, pneumatic, computer, network, radio communication, troubleshooting with schematics/diagrams/prints/drawings, Air conditioning, parts repairs, work with the public, windows excel/access,

*Equipment Used*

8. What tools do you use regularly?

Regularly use wrenches, sockets, ratchets, air tools, torque wrenches, multimeters, palm pilot, chart recorder, oscope, motor profiler, RF meter, ~~lift tables~~, ~~forklifts~~, ~~Sky track~~, ~~ladders~~, screwdrivers, hammers, dial gauges/micrometers, drills & bits, heat guns wire crimpers/strippers, temperature probes, force meters.

9. What equipment/machines do you use regularly?

Lift tables, forklifts, shop trucks, ladders, hydraulic jacks, vises, shop vacuums, motor lifting devices

*Other*

10. What safety risks exist in your job?

Forklift risks, falling hazards, electrical shock, communication errors, exposure to chemicals/byproducts from train,

11. In what physical locations do you work?

I work in and around the public areas, inside the vehicles, under the vehicles & inside station door headers.

a. What tasks would you perform at each of these locations?

Inside the vehicle I would perform maint on the vehicle radio, vehicle DVR, the vehicle ATP/ATC computer, morning point leader & touchscreen diagnostic terminal. Under the vehicles I perform inspections and repairs of all systems (electrical, mechanical & pneumatic). In the station lobbies I perform wayside door work.

b. What are the working conditions (space, temperature) in each of these locations?

Inside the vehicles with A/C off, the temperature is uncomfortable but tolerable. Space inside the car is rarely an issue. The under side of the vehicle - a very confined with hazards that rarely exist elsewhere. The temperature is borderline unbearable in the summer.

**What ratings am I going to complete?**

This survey consists of two parts. In Part I, you will be asked to rate Worker Behaviors or Tasks. Specifically, you will be asked to rate each Work Behavior or Task on four different scales. The scales are:

**1. Frequency**

***How frequently do you perform this task?***

0 = Never

1 = Less than once a month

2 = At least once a month

3 = At least once a week

4 = At least once a day

5 = At least once an hour

## 2. Importance

***How important is this worker behavior to successful completion of the Ingredient Handler Job?***

1 = **Not Important** – The incumbent *can definitely* perform the job effectively without this Work Behavior.

2 = **Somewhat Important** – The incumbent *can probably* perform the job without the Work Behavior. There is only a *minor problem* if the incumbent cannot perform this Work Behavior effectively (e.g., running low on ingredients causing momentary slow down of line).

3 = **Important** – It is *unlikely* that an incumbent can perform the job effectively unless the Ingredient Handler can perform the Work Behavior. There will be a *problem* if the incumbent cannot perform this Work Behavior (e.g., waste or loss of product).

4 = **Very Important** - The incumbent *definitely cannot* perform the job effectively if he/she cannot perform the Work Behavior. If the incumbent does not perform this Work Behavior, there could be *serious problems* (e.g., product recall).

**PART I**

| WORKER BEHAVIORS/TASKS | Frequency | Importance |
|---|---|---|
| 1. Assemble, install, repair, and maintain people moving equipment using hand and power tools, and testing devices | 0 1 2 3 4 (5) | 1 2 3 (4) |
| 2. Test newly installed equipment to ensure that it meets specifications | 0 1 2 (3) 4 5 | 1 2 3 (4) |
| 3. Locate malfunctions in brakes, motors, switches, and signal and | 0 1 2 3 (4) 5 | 1 2 3 (4) |

| WORKER BEHAVIORS/TASKS | Frequency | Importance |
|---|---|---|
| control systems, using test equipment. | | |
| 4. Check that safety regulations and building codes are met, and complete service reports verifying conformance to standards. | 0 1 2 3 4 5 | 1 2 3 4 |
| 5. Connect electrical wiring to control panels and electric motors. | 0 1 2 3 4 5 | 1 2 3 4 |
| 6. Adjust safety controls, counterweights, door mechanisms, and components such as valves, ratchets, seals, and brake linings. | 0 1 2 3 4 5 | 1 2 3 4 |
| 7. Read and interpret blueprints to determine the layout of system components, frameworks, and foundations, and to select installation equipment. | 0 1 2 3 4 5 | 1 2 3 4 |
| 8. Inspect wiring connections, control panel hookups, door installations, and alignments and clearances of cars and hoistways to ensure that equipment will operate properly. | 0 1 2 3 4 5 | 1 2 3 4 |
| 9. Disassemble defective units, and repair or replace parts such as locks, gears, cables, and electric wiring. | 0 1 2 3 4 5 | 1 2 3 4 |

02497



ER2497

In Part II, you will be asked to rate importance of various Knowledges, Skills, and Abilities (KSAs) required to perform the job.

## 1. Importance

***How important is this KSA to successful performance?***

1 = **Not Important** – An incumbent *can definitely* perform the job effectively without this KSA.

2 = **Somewhat Important** – An incumbent *can probably* perform the job without the KSA but may make errors that result in *minor problems* (e.g., running low on ingredients causing momentary slow down of line).

3 = **Important** – It is *unlikely* that incumbent can perform the job effectively without this KSA. If an incumbent does not have it, he/she may make errors that result in *problems* (e.g., waste or loss of product).

4 = **Very Important** - An incumbent *definitely cannot* perform the job effectively without this KSA. An incumbent lacking this KSA may make errors that cause *serious problems* (e.g., product recall).

| Physical Abilities | Importance | | | |
|---|---|---|---|---|
| 1. **Balancing** | 1 | 2 | 3 | 4 |
| 2. **Bending** | 1 | 2 | 3 | 4 |
| 3. **Carrying** | 1 | 2 | 3 | 4 |
| 4. **Climbing/Descending Stairs** | 1 | 2 | 3 | 4 |
| 5. **Control Precision** – The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions. | 1 | 2 | 3 | 4 |
| 6. **Crouching** | 1 | 2 | 3 | 4 |
| 7. **Depth Perception** – The ability to judge which of several objects is closer or father away from the observer, or to judge the distance between an object and the observer. | 1 | 2 | 3 | 4 |
| 8. **Dynamic Strength** – The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue (e.g., repetitious lifting of a barbell). | 1 | 2 | 3 | 4 |
| 9. **Explosive Strength** – The ability to use short bursts of muscle force to propel oneself, or to throw an object (e.g., a cop kicking down a door, or a boxer throwing a punch). | 1 | 2 | 3 | 4 |
| 10. **Extent Flexibility** – The ability to bend, stretch, twist, or reach out with the body, arms, and/or legs. | 1 | 2 | 3 | 4 |
| 11. **Manual Dexterity** – The ability to quickly make coordinated movements of one hand, a hand together with the arm, or two hands to grasp, manipulate, or assemble objects. | 1 | 2 | 3 | 4 |

| Physical Abilities | Importance | | | |
|---|---|---|---|---|
| 12. **Multilimb Coordination** – The ability to coordinate movements of two or more limbs together (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the body is in motion. | 1 | 2 | 3 | 4 |
| 13. **Near Vision** – The ability to see details of objects at a close range (within a few feet of the observer). | 1 | 2 | 3 | 4 |
| 14. **Peripheral Vision** – The ability to see objects or movement of objects to one's side when the eyes are focused forward. | 1 | 2 | 3 | 4 |
| 15. **Pulling** | 1 | 2 | 3 | 4 |
| 16. **Pushing** | 1 | 2 | 3 | 4 |
| 17. **Reaching Overhead** | 1 | 2 | 3 | 4 |
| 18. **Speed of Limb Movement** – The ability to quickly move the arms and legs. | 1 | 2 | 3 | 4 |
| 19. **Stamina** – The ability to exert oneself physically over long periods of time without getting winded or out of breath. | 1 | 2 | 3 | 4 |
| 20. **Standing** | 1 | 2 | 3 | 4 |
| 21. **Static Strength** – The ability to exert maximum muscle force to lift, push, pull, or carry objects (e.g., lifting bags of cement onto a truck, or lifting and carrying a heavy box). | 1 | 2 | 3 | 4 |
| 22. **Trunk Strength** – The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing. | 1 | 2 | 3 | 4 |

| Physical Abilities | Importance | | | |
|---|---|---|---|---|
| 23. Twisting | 1 | 2 | 3 | 4 |
| 24. Walking | 1 | 2 | 3 | 4 |

| Cognitive KSAs | Importance | | | |
|---|---|---|---|---|
| 25. Knowledge of machines and tools, including their designs, uses, repair, and maintenance. | 1 | 2 | 3 | 4 |
| 26. Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction. | 1 | 2 | 3 | 4 |
| 27. Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions. | 1 | 2 | 3 | 4 |
| 28. Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.. | 1 | 2 | 3 | 4 |
| 29. Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming. | 1 | 2 | 3 | 4 |
| 30. Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services. | 1 | 2 | 3 | 4 |

| Cognitive KSAs | Importance | | | |
|---|---|---|---|---|
| 31. Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes. | 1 | 2 | 3 | 4 |
| 32. Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.. | 1 | 2 | 3 | 4 |
| 33. Knowledge of arithmetic, algebra, geometry and their applications. | 1 | 2 | 3 | 4 |
| **SKILLS**<br>**34 Repairing** — Repairing machines or systems using the needed tools. | 1 | 2 | 3 | 4 |
| **35. Troubleshooting** — Determining causes of operating errors and deciding what to do about it. | 1 | 2 | 3 | 4 |
| **36. Equipment Maintenance** — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed. | 1 | 2 | 3 | 4 |
| **37. Equipment Selection** — Determining the kind of tools and equipment needed to do a job. | 1 | 2 | 3 | 4 |
| **38. Operation Monitoring** — Watching gauges, dials, or other indicators to make sure a machine is working properly. | 1 | 2 | 3 | 4 |
| **39 Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times. | 1 | 2 | 3 | 4 |

| Cognitive KSAs | Importance | | | |
|---|---|---|---|---|
| **40. Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. | 1 | 2 | 3 | 4 |
| **41. Quality Control Analysis** — Conducting tests and inspections of products, services, or processes to evaluate quality or performance. | 1 | 2 | 3 | 4 |
| **42. Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. | 1 | 2 | 3 | 4 |
| **43. Installation** — Installing equipment, machines, wiring, or programs to meet specifications. | 1 | 2 | 3 | 4 |
| **ABILITIES** | | | | |
| **44. Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem. | 1 | 2 | 3 | 4 |
| **45. Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense. | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
| **46. Arm-Hand Steadiness** — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position. | 1 | 2 | 3 | 4 |
| **47. Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences. | 1 | 2 | 3 | 4 |

| | |
|---|---|
| **48. Oral Expression** — The ability to communicate information and ideas in speaking so others will understand. | 1 2 3 4 |
| **49. Finger Dexterity** — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects. | 1 2 3 4 |
| **50. Inductive Reasoning** — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events). | 1 2 3 4 |

| | |
|---|---|
| **51. Manual Dexterity** — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects. | 1 2 3 4 |
| **52. Near Vision** — The ability to see details at close range (within a few feet of the observer). | 1 2 3 4 |
| **53. Control Precision** — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions. | 1 2 3 4 |

ER2505

02505

International Union of Elevator Contractors

McCarran Airport

Dan Sarboss

Interview Questions

*Background*

1. What is your current job title? ATS Tech I
2. How long have you been in your current position? 4 months
3. What previous positions have you had that are related to your current position? How long did you hold each of those positions?
   Elevator Constructor. 21 years.

*Shifts and Assignments*

4. What shifts do you usually work? In what ways does your work differ from day to day?
   Days 10-8:30
5. How does work differ from person to person? Are there different assignments?
   Days differ from nights.
   Days is train monitoring and recovery.

*Training*

6. How long does it usually take people to learn this job?
   4 years
7. What training is required to do this job? Mechanical (automotive), electrical (industrial and low voltage). Electronics, computer, communications.

*Equipment Used*

8. What tools do you use regularly?
Radio, computer, hand tools.

9. What equipment/machines do you use regularly?
Computers, industrial tools.

*Other*

10. What safety risks exist in your job?
High voltage electricity. Close proximity to running trains. Mechanical. pinch and crush hazards.

11. In what physical locations do you work? BATS service area, 2. train terminals, 3. train quideways, 4. ATC control rooms, 5. Airport Control center.

a. What tasks would you perform at each of these locations?
1. monitoring, equipment maintenance.
2. train troubleshooting, customer relations.
3. train recovery, equipment maintenance.
4. monitoring, equipment maint, testing.
5. equipment maint.

b. What are the working conditions (space, temperature) in each of these locations?
1. Partially enclosed, outside temps.
2. Indoors, crowds
3. Outside, Hazardous
4. Inside industrial enclosure.



02506

ER2506

**What ratings am I going to complete?**

This survey consists of two parts. In Part I, you will be asked to rate Worker Behaviors or Tasks. Specifically, you will be asked to rate each Work Behavior or Task on four different scales. The scales are:

**1. Frequency**

***How frequently do you perform this task?***

0 = Never

1 = Less than once a month

2 = At least once a month

3 = At least once a week

4 = At least once a day

5 = At least once an hour

## 2. Importance

*How important is this worker behavior to successful completion of the Ingredient Handler job?*

1 = **Not Important** – The Incumbent *can definitely* perform the job effectively without this Work Behavior.

2 = **Somewhat Important** – The Incumbent *can probably* perform the job without the Work Behavior. There is only a *minor problem* if the incumbent cannot perform this Work Behavior effectively (e.g., running low on ingredients causing momentary slow down of line).

3 = **Important** – It is *unlikely* that an Incumbent can perform the job effectively unless the Ingredient Handler can perform the Work Behavior. There will be a *problem* if the Incumbent cannot perform this Work Behavior (e.g., waste or loss of product).

4 = **Very Important** - The incumbent *definitely cannot* perform the job effectively if he/she cannot perform the Work Behavior. If the Incumbent does not perform this Work Behavior, there could be *serious problems* (e.g., product recall).

**PART I**

| WORKER BEHAVIORS/TASKS | Frequency | Importance |
|---|---|---|
| 1. Assemble, Install, repair, and maintain people moving equipment using hand and power tools, and testing devices | 0 1 2 3 4 5 | 1 2 3 4 |
| 2. Test newly installed equipment to ensure that it meets specifications | 0 1 2 3 4 5 | 1 2 3 4 |
| 3. Locate malfunctions in brakes, motors, switches, and signal and | 0 1 2 3 4 5 | 1 2 3 4 |



02508

ER2508

| WORKER BEHAVIORS/TASKS | Frequency | Importance |
|---|---|---|
| control systems, using test equipment. | | |
| 4. Check that safety regulations and building codes are met, and complete service reports verifying conformance to standards. | 0 1 2 3 4 5 | 1 2 3 4 |
| 5. Connect electrical wiring to control panels and electric motors. | 0 1 2 3 4 5 | 1 2 3 4 |
| 6. Adjust safety controls, counterweights, door mechanisms, and components such as valves, ratchets, seals, and brake linings. | 0 1 2 3 4 5 | 1 2 3 4 |
| 7. Read and interpret blueprints to determine the layout of system components, frameworks, and foundations, and to select installation equipment. | 0 1 2 3 4 5 | 1 2 3 4 |
| 8. Inspect wiring connections, control panel hookups, door installations, and alignments and clearances of cars and hoistways to ensure that equipment will operate properly. | 0 1 2 3 4 5 | 1 2 3 4 |
| 9. Disassemble defective units, and repair or replace parts such as locks, gears, cables, and electric wiring. | 0 1 2 3 4 5 | 1 2 3 4 |



02509

ER2509

In Part II, you will be asked to rate importance of various Knowledges, Skills, and Abilities (KSAs) required to perform the job.

## 1. Importance

***How important is this KSA to successful performance?***

1 = **Not Important** – An incumbent *can definitely* perform the job effectively without this KSA.

2 = **Somewhat Important** – An incumbent *can probably* perform the job without the KSA but may make errors that result in *minor problems* (e.g., running low on ingredients causing momentary slow down of line).

3 = **Important** – It is *unlikely* that incumbent can perform the job effectively without this KSA. If an incumbent does not have it, he/she may make errors that result in *problems* (e.g., waste or loss of product).

4 = **Very Important** – An incumbent *definitely cannot* perform the job effectively without this KSA. An incumbent lacking this KSA may make errors that cause *serious problems* (e.g., product recall).

| Physical Abilities | Importance |
|---|---|
| 1. **Balancing** | 1 2 3 4 |
| 2. **Bending** | 1 2 3 4 |
| 3. **Carrying** | 1 2 3 4 |
| 4. **Climbing/Descending Stairs** | 1 2 3 4 |
| 5. **Control Precision** – The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions. | 1 2 3 4 |
| 6. **Crouching** | 1 2 3 4 |
| 7. **Depth Perception** – The ability to judge which of several objects is closer or father away from the observer, or to judge the distance between an object and the observer. | 1 2 3 4 |
| 8. **Dynamic Strength** – The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue (e.g., repetitious lifting of a barbell). | 1 2 3 4 |
| 9. **Explosive Strength** – The ability to use short bursts of muscle force to propel oneself, or to throw an object (e.g., a cop kicking down a door, or a boxer throwing a punch). | 1 2 3 4 |
| 10. **Extent Flexibility** – The ability to bend, stretch, twist, or reach out with the body, arms, and/or legs. | 1 2 3 4 |
| 11. **Manual Dexterity** – The ability to quickly make coordinated movements of one hand, a hand together with the arm, or two hands to grasp, manipulate, or assemble objects. | 1 2 3 4 |

| Physical Abilities | Importance |
|---|---|
| 12. **Multilimb Coordination** – The ability to coordinate movements of two or more limbs together (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the body is in motion. | 1 2 3 4 |
| 13. **Near Vision** – The ability to see details of objects at a close range (within a few feet of the observer). | 1 2 3 4 |
| 14. **Peripheral Vision** – The ability to see objects or movement of objects to one's side when the eyes are focused forward. | 1 2 3 4 |
| 15. **Pulling** | 1 2 3 4 |
| 16. **Pushing** | 1 2 3 4 |
| 17. **Reaching Overhead** | 1 2 3 4 |
| 18. **Speed of Limb Movement** – The ability to quickly move the arms and legs. | 1 2 3 4 |
| 19. **Stamina** – The ability to exert oneself physically over long periods of time without getting winded or out of breath. | 1 2 3 4 |
| 20. **Standing** | 1 2 3 4 |
| 21. **Static Strength** – The ability to exert maximum muscle force to lift, push, pull, or carry objects (e.g., lifting bags of cement onto a truck, or lifting and carrying a heavy box). | 1 2 3 4 |
| 22. **Trunk Strength** – The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing. | 1 2 3 4 |

| Physical Abilities | Importance |
|---|---|
| 23. Twisting | 1 2 3 4 |
| 24. Walking | 1 2 3 4 |

| Cognitive KSAs | Importance |
|---|---|
| 25. Knowledge of machines and tools, including their designs, uses, repair, and maintenance. | 1 2 3 4 |
| 26. Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction. | 1 2 3 4 |
| 27. Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions. | 1 2 3 4 |
| 28. Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.. | 1 2 3 4 |
| 29. Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming. | 1 2 3 4 |
| 30. Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services. | 1 2 3 4 |

| Cognitive KSAs | Importance |
|---|---|
| 31. Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes. | 1 2 3 4 |
| 32. Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.. | 1 2 3 4 |
| 33. Knowledge of arithmetic, algebra, geometry and their applications. | 1 2 3 4 |
| **SKILLS**<br>**34 Repairing** — Repairing machines or systems using the needed tools. | 1 2 3 4 |
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| **36. Equipment Maintenance** — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed. | 1 2 3 4 |
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| Cognitive KSAs | Importance | | | |
|---|---|---|---|---|
| **40. Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. | 1 | 2 | 3 | 4 |
| **41. Quality Control Analysis** — Conducting tests and inspections of products, services, or processes to evaluate quality or performance. | 1 | 2 | 3 | 4 |
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| **43. Installation** — Installing equipment, machines, wiring, or programs to meet specifications. | 1 | 2 | 3 | 4 |
| **ABILITIES**<br>**44. Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem. | 1 | 2 | 3 | 4 |
| **45. Deductive Reasoning** — The ability to apply general rules to specific problems to produce answers that make sense. | 1 | 2 | 3 | 4 |

| | | | | |
|---|---|---|---|---|
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| **47. Oral Comprehension** — The ability to listen to and understand information and ideas presented through spoken words and sentences. | 1 | 2 | 3 | 4 |

| | |
|---|---|
| **48. Oral Expression** — The ability to communicate information and ideas in speaking so others will understand. | 1 2 3 4 |
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| | |
|---|---|
| **51. Manual Dexterity** — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects. | 1 2 3 4 |
| **52. Near Vision** — The ability to see details at close range (within a few feet of the observer). | 1 2 3 4 |
| **53. Control Precision** — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions. | 1 2 3 4 |

Exhibit No. Bx 21
Witness A. Moss
Date 6/26/13

KWD CCR# 711

# EXHIBIT 21

EXHIBIT 21

# AGREEMENT

BETWEEN

THE COUNTY OF CLARK
STATE OF NEVADA

AND

IUEC LOCAL 18
INTERNATIONAL UNION
OF
ELEVATOR CONSTRUCTORS

JANUARY 19, 2013 – JUNE 30, 2014

02518

**CLARK COUNTY COMMISSIONERS**
STEVE SISOLAK, Chair
LARRY BROWN, Vice Chair
SUSAN BRAGER
TOM COLLINS
CHRIS GIUNCHIGLIANI
MARY BETH SCOW
LAWRENCE WEEKLY

**COUNTY MANAGER**
DONALD G. BURNETTE

**ASSISTANT COUNTY MANAGERS**
JEFF WELLS
RANDY TARR
EDWARD FINGER

**DEPARTMENT OF AVIATION**
RANDY WALKER DIRECTOR

**INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS ASSOCIATION OFFICIALS**
GLENN ISHIKAWA, President
BRIAN KRAFT, Vice President
BASIL JOHNSON, Secretary
JAY LUCERO, Warden
MARIO VICCHIULLO JR, Financial Secretary
JOHN HOLZER, Treasurer

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## ARTICLE 1
## RECOGNITION

1. The County hereby recognizes the Union as the sole and exclusive collective bargaining representative of County employees assigned to the classifications listed in Appendix A who are eligible to be represented by the Union except as limited by Section 2 of this Article. Any proposed additions or deletions to this list of classifications shall be negotiated by the parties to this Agreement prior to any formal action by the County. Both parties recognize that the Union retains its right to appeal under the provisions of NRS 288.170.

2. County employees who are excluded from the bargaining unit are as follows:

   a. Those employees certified to another bargaining unit under the provisions of NRS Chapter 288.

   b. Administrative employees as defined in NRS Chapter 288.

   c. Confidential employees as defined in NRS Chapter 288.

   d. Supervisory employees as defined in NRS Chapter 288.

   e. Employees exempted in accordance with NRS 245.216.

   f. Probationary employees.

2. Probationary Employees: An employee shall serve a minimum probationary period of 520 hours and a maximum of 1,040 hours worked, not including overtime hours.

## ARTICLE 2
## GENERAL SAVINGS CLAUSE

1. In the event that any provision of this Agreement shall be rendered invalid by applicable legislation or be declared invalid by any court or regulatory agency, such action shall not invalidate the entire Agreement, it being the expressed intention of the parties hereto that all other provisions not rendered invalid shall remain in full force and effect. The parties agree to attempt to cure such invalid provisions by negotiations and to submit the matter to arbitration if such negotiations are unsuccessful.

## ARTICLE 3
## WAGES

1. Wage Rate Adjustments: There shall be no adjustments to the pay schedules in Appendix B during the term of this agreement except for adjustments required by Article 20 of this agreement, except that either party may request, in writing, a cost-of-living reopener for fiscal year 2013-2014 if made in writing prior to February 28, 2013.

2. Employees may receive an initial hourly rate above the entry hourly rate Technician I with the written approval of the County Manager based on prior relevant experience.

3. Step Increases: Persons hired into a Technician I position will be placed at the initial entry rate shown in Appendix B. At the end of the first six months of employment, the employee will be moved to Step 1 shown in the same appendix. At the end of the second six months of employment, the employee will be moved to Step 2 shown in the same appendix. At the end of the third six months of employment, the employee will be moved to Step 3 shown in the same appendix. Exceptions may be made as described in Section 2 of this article.

4. Technician II: Employees who are promoted to Technician II will be placed at the wage rate of the Technician II position as shown in Appendix B.

5. Senior: Employees who are promoted to the Senior position will be placed at the wage rate of the Senior position as shown in Appendix B.

6. No employee shall have a higher hourly rate than the hourly rates listed in Appendix B.

7. All pay increases in this Article will be effective the first day of the pay period following the increase trigger date.

## ARTICLE 4
## HOURS OF WORK - OVERTIME – SCHEDULES

1. Work Day and Work Week:

   a. The parties agree that the employee's normal workday shall be no less than eight (8) hours and no more than ten (10) hours, excluding a one-half (1/2) hour unpaid meal period. Employees shall be granted an unpaid one-half (1/2) hour meal period normally at mid-shift between the fourth and sixth hours. Employees scheduled on ten (10) hour shifts are guaranteed three (3)

consecutive days off in the scheduled workweek. Employees scheduled on less than ten (10) hour shifts are guaranteed two (2) consecutive days off in the scheduled workweek.

i. If the employee is required by a supervisor or manager or designee to work through his/her unpaid meal period or the employee is unable to take his/her assigned meal period (within 30 minutes of the assigned time) due to workloads or emergency situations, the County shall compensate the employee, including any shift differential, for missing the assigned meal period, and the employee shall still be authorized to take a one-half hour unpaid lunch period, if the employee so chooses.

ii. Should an employee be on his/her assigned meal break and is called back to work due to an emergency situation, the employee shall receive 30 minutes of compensation, including any shift differential, for being called back to work during the lunch period and upon completion of the emergency situation, the employee shall be allowed to finish the remainder of the assigned unpaid lunch period, if the employee so chooses.

b. In the event the employee is assigned to a work group which is required to cover a 24-hour a day, seven (7) days a week continuous operation, and there is only one employee on the assigned shift, then the employee shall continue to receive a one-half hour paid lunch and the employee is not eligible to leave the premises during this meal period. If there are two (2) or more employees assigned to the shift and they are unable to take their assigned meal break due to an emergency situation, the employee shall notify his/her supervisor of the situation, so that the time worked may be authorized. Once the situation that precluded the employee from taking his/her assigned meal period has been rectified, the employee shall be authorized to take a 30-minute unpaid meal break, if the employee so chooses.

c. A workweek shall normally consist of 40 hours.

2. Overtime:

a. All work performed in excess of 40 worked hours per week shall be paid for at the rate of time and one-half (1 1/2) the employee's regular straight-time rate of pay, including shift differential, if applicable.

b. The County agrees to distribute overtime as fair and equitably as possible among employees who are qualified to perform satisfactorily the work involved.

c. A record of all overtime assignments shall be maintained. A report of overtime assignments will be made available to the Union upon request.

d. Management has the right to require overtime based on operational necessity.

3. Schedules:

a. The County may establish and work a single shift or multiple shift system for any portion of the work covered by this Agreement.

b. The Union will be furnished with a copy of the shift schedules in effect at the time of signing this Agreement and the County will provide the Union with a copy of changes to the shift starting times at least 48 hours prior to the effective change.

c. In cases of routine changes in shifts and days off, the County will give the employee seven (7) days advance notice of such changes.

d. The County reserves the right to appoint employees to specific job assignments. However, to the extent the job assignment results in a new shift, the County shall post the shift for bid first on the Union bulletin board for seventy-two hours. The bid shall identify the classification needed for the assignment. The County shall make the determination of which employee, who bids on the shift, is the most qualified to fill the assignment. In the event that two or more employees are equally qualified to fill the assignment, then the more senior of the qualified employees shall be placed into the assignment.

4. Shift and Differentials:

a. Shift differential is defined as the premium to be paid to an employee above their regular straight time hourly rate for all work performed between the hours of 6:30 p.m. to 8:00 a.m.

i. Regular full time and part time employees shall receive shift differential based on the following rates:

1. Employees assigned to work between the hours of 6:30 p.m. and 8:00 a.m. shall receive a shift premium of 4% of the regularly hourly rate of pay.

ii. If an employee's shift requires the employee to work between 6:30 p.m. and 8:00 a.m. the employee shall receive the shift differential for all hours worked between 6:30 p.m. and 8:00 a.m. (Example: An employee works Monday, 2:30 p.m. until 1:00 a.m. the employee shall receive 4 hours at the regular rate of pay plus 6 hours at the regular rate of pay plus the applicable shift differential.)

iii. If an employee is required to work beyond his or her regular shift, between 6:30 p.m. and 8:00 a.m. the employee shall receive the hourly rate (which may be at the overtime rate if they cause the employee to exceed 40 worked hours per week) plus shift differential for all hours between 6:30 p.m. and 8:00 a.m. (Example: An employee works Monday 8:00 a.m. until 8:30 p.m. the employee shall receive 10 hours at the regular rate of pay plus 2 hours at 1.5 times the regular rate of pay, if such hours cause the employee to exceed 40 worked hours per week, plus shift differential. Shift differential will be applied to hours of work prior to the overtime rate being applied to both wage types.)

5. Reporting Pay: When an employee reports for duty on a regular shift, he or she shall be guaranteed a full shift of work and pay for that day unless work is not available as defined in Section 7 below. If called in before his or her regular starting time, the employee shall, nevertheless, be allowed to complete his or her regular shift for that day unless work is not available as defined in Section 7 below.

6. Call-Back Provision: When an employee is called back to the facility, as approved by a supervisor, at a time outside of, and unconnected with, his/her normal scheduled hours of work to perform unscheduled work, he/she shall be guaranteed a minimum of three (3) hours work plus any applicable shift differential. Section 7 below does not apply to the Call-Back Provision.

7. Limitation on Daily and Weekly Guarantee: The weekly and daily guarantees set forth herein shall not apply when work is not available due to the unavailability of work due to emergency situations beyond the control of the County which create a condition whereby the employee cannot perform his/her normal duties.

## ARTICLE 5
## ACTING HIGHER CLASSIFICATION PAY

1. An employee who is requested by a supervisor or manager and agrees, either verbally or in writing, on a temporary basis, to perform the full duties and responsibilities of a higher classification for more than five (5) full work shift(s) shall be paid as indicated in Section 2 below. A bargaining unit employee cannot assign another bargaining unit employee to perform higher classification work, unless that employee is acting in the capacity of a supervisor pursuant to this Article.

2. An eligible employee will receive four percent (4%) above their regular hourly rate or the minimum rate of the higher classification's salary range, whichever is greater, for all hours worked in the higher classification, including any applicable shift differential.

3. When a supervisor and an eligible employee agree that the employee shall perform the full duties and responsibilities of the higher classification the supervisor shall complete the personnel action form and submit it to payroll for payment. Acting pay for periods of up to 30 calendar days requires the written approval of the Department Head or designee and may not exceed 30 calendar days without the approval of the County Manager.

4. Should an employee be asked and accepts the assignment to act as a supervisor, he/she retains all rights under this collective bargaining agreement during the acting assignment.

## ARTICLE 6
## HOLIDAYS

1. Recognized Holidays: The following shall be recognized as holidays for purposes of this Agreement:

| | |
|---|---|
| a. January 1 | New Year's Day |
| b. Third Monday | January Martin Luther King's Birthday |
| c. Third Monday | February President's Day |
| d. Last Monday | May Memorial Day |
| e. July 4 | Independence Day |
| f. First Monday | September Labor Day |
| g. Last Friday of October | Nevada Day |
| h. November 11 | Veterans' Day |
| i. Fourth Thursday | November Thanksgiving Day |
| j. Day After Thanksgiving | Family Day |
| k. December 25 | Christmas Day |

And all other days that the County is required by state law to observe as a legal holiday.

2. Compensation:

a. An eligible employee shall be paid an amount equal to the employee's normal work shift, at his/her regular straight time rate for the above holidays that he/she does not work. If required to work a holiday, he/she shall be paid, in addition to holiday pay, a rate equal to one and one-half times (1 1/2) his/her regular hourly rate, including appropriate shift differential.

b. Those employees who fail to work the last scheduled work day preceding a holiday or first scheduled work day following a holiday, unless the employee receives prior supervisor approval or is hospitalized or is suffering from a bona fide injury or illness, shall not receive payment for the un-worked holiday or in those cases where the employee is scheduled and works the holiday but does not work the last scheduled work day preceding or first scheduled work day following the holiday shall be paid for the worked holiday at the regular straight time rate of pay.

c. Except in cases of bona fide illness or injury, an employee who is scheduled to work on a recognized holiday and who fails to do so, shall receive no pay for the holiday. At the request of the County, the employee shall produce satisfactory evidence that an absence was, in fact, due to bona fide illness or injury. The County reserves the right to request a physician's statement with diagnosis to qualify as a bona fide illness or injury.

d. If a recognized holiday falls during an employee's approved leave period, the employee shall receive holiday pay for the holiday and will not be charged for a day of leave for the holiday.

## ARTICLE 7
## VACATION AND SICK LEAVE

**Vacation Leave:**

1. Accrual of Vacation Leave:

a. Eligible employees hired and working in a full-time permanent basis will earn vacation leave based on the months of service with the County at the following rates based on each pay period:

| Months of service | Hours Per Pay period accrued |
|---|---|
| 0 - 24 | 3.08 / 80 hours worked |
| 25 - 96 | 4.62 / 80 hours worked |
| 97 – 180 | 5.54 / 80 hours worked |
| 181 and over | 6.15 / 80 hours worked |

b. Vacation leave may not be accumulated to exceed 240 hours at the beginning of any calendar year. Prior to the end of the calendar year, employees with more than 240 hours of vacation will be given the option of taking the amount of vacation leave necessary to reduce the accrued vacation leave below 240 hours. If this is not operationally possible and the employee has taken at least 80 hours of vacation leave, 40 hours of which must have been consecutive hours of vacation leave (or inclusive of one or more holidays) during the calendar year, then the employee will be eligible to sell back the amount of vacation leave needed to reduce the number of hours in the vacation leave bank to 240 hours as of January 1 of each year.

2. Vacation Leave Usage: An employee is not entitled to take accumulated vacation leave or receive payment therefore, until he/she has successfully completed six (6) months of employment with the County and has successfully completed his/her probationary period.

3. Scheduling of Vacation Leave: Insofar as possible, vacations will be granted at times most desired by the employee, with 12 months of the year open for selection, but the final right of allotment of vacation periods is reserved to the County in order to ensure the orderly operation of the establishment.

   Subject to the above understanding, the following procedure shall be adhered to in scheduling vacations for employees covered by this Agreement:

   a. As soon after June 1 of each year as practicable, but in no event later than June 30, employees shall be given an opportunity to state their first and second preference for vacation periods for the new fiscal year.

   b. Where two (2) or more employees select the same vacation period, the conflict, shall be resolved by the supervisor concerned in favor of the employee with the greatest seniority.

c. In recognition of the inconvenience caused employees by last minute changes in vacation scheduled, it is agreed that except for emergencies of a serious nature, no changes shall be made within 30 days of the date an employee is scheduled to go on vacation.

d. Vacation periods may be split by mutual agreement in weekly segments, but the choice of deferred dates in such circumstances will be subordinate to the preference of employees taking a full vacation.

e. Employees may be granted additional vacation time without pay provided that it is mutually agreed upon between management and the employee.

f. Those employees who fail to work the last scheduled work day preceding a scheduled vacation or the first scheduled work day following a vacation, unless the employee receives prior supervisor approval or is hospitalized or is suffering from a bona fide injury or illness, will not receive payment for the un-worked day before or after the vacation. To use sick leave days for the date in question, the employee shall be required to produce satisfactory evidence that an absence was, in fact, due to bona fide illness or injury.

4. Payment for annual leave: Upon separation from service for any cause, an employee shall be paid a lump sum payment for any unused or accumulated vacation leave earned through the last day worked, not to exceed 240 hours, if this is earlier than the last day of the pay period, the vacation leave shall be prorated. Payment for unused vacation leave will be at the employee's base hourly rate on the last day worked prior to separation.

5. Death of an employee: upon the death of an eligible employee of the County, a lump sum payment for unused accrued vacation leave will be made to the employee's beneficiaries or estate.

<u>Sick Leave:</u>

**Section 1 - Use of Sick Leave**

1. Paid sick leave may be used by employees who:

   a. Are incapacitated to perform job duties because of illness or injury.

   b. Are prevented by public health requirements from being at work.

   c. Need to absent themselves from work for bereavement as outlined

in Article 8 of this Agreement.

d. Are required to absent themselves from work upon incapacitating illness or injury in the immediate family to personally care for that family member.

e. Need to be absent from work when receiving medical or dental treatment or examination.

f. Need to be absent when incapacitated to perform job duties because of pregnancy or childbirth.

g. Need to be absent to care for newborn children.

2. Upon approval of the department director or designee, sick leave may be granted for other reasons when the department director or designee believes the use of sick leave will have a beneficial effect on an employee's morale and welfare.

3. No County employee shall be entitled to sick leave while absent from duty because of disability arising from an injury purposely self-inflicted or caused by willful or grossly negligent misconduct.

4. Employees shall be subject to the following requirements for the use and payment of sick leave:

a. Employees who become ill prior to the start of the workday shall call in as required by their departmental work rules at the beginning of their shift.

b. Employees shall fill out and sign a sick leave form stating the reason for the use of sick leave immediately upon their return to work or stating the need to schedule sick leave for purposes of a medical or dental appointment.

c. Sick leave forms shall be turned in to the employees' department head or other designated authority for approval.

d. Any employee who reports absent at the start of a shift because of illness or injury who recovers sufficiently during the course of the shift to report to work is required to do so. In such a situation, the employee involved shall only be charged for actual sick leave used to the nearest one-fourth (1/4) of an hour. At all times during a sick leave use period, employees shall be at their place of residence, a medical facility, or a doctor's office or shall notify their department head or designee of their whereabouts. The County shall not

contact the employee at home once the employee provides the department with his/her location during the course of the illness, unless such contact is necessary in order to obtain information from the employee that is essential to the operational needs of the department.

e. An employee may request the use of annual leave or leave without pay be granted in lieu of sick leave. Vacation leave shall be approved in accordance with department policy and the approval provisions of the vacation section of this article. Leave without pay shall be approved in accordance with department policy and the approval provisions of Article 8. The practice of advancing sick leave shall not be permitted.

f. Upon written request from the department director or his/her designee, a certificate of illness from a state licensed health care provider in an appropriate discipline may be required when there is substantiated reason to believe that sick leave benefits are being abused. Additional documentation may be required depending on the seriousness of the medical or dental problem.

g. If an employee's fitness for duty is questioned by the department head or designee, the employee may be required to submit a certificate of fitness.

h. Any medical or dental reports or examinations that the County requires of the employee beyond those normally provided to the employee by the employee's usual medical or dental provider shall be paid for by the County.

**Section 2 - Sick Leave Accrual and Payment**

1. Eligible permanent employees working on a full-time basis shall earn sick leave at the rate of 3.7 hours for each pay period. Eligible permanent employees working half-time or more (at least 40 hours per pay period) shall earn such leave on a prorated basis. There will be no limit on sick leave accumulation.

2. Employees shall be paid their current straight-time hourly rate for each hour of sick leave used.

3. If a permanent employee separates from the service of the County after three (3) consecutive years of employment, the employee shall receive payment for one-half (½) of his/her sick leave accumulation. Payment for unused sick leave will be at the employee's base hourly rate on the last day worked prior to separation. If a non-probationary employee is laid off

from the service of the County with less than three (3) years of consecutive employment, the employee shall receive payment for one half (½) of his/her sick leave accumulation.

4. Sick leave hours do not count as hours worked for the purpose of computing hours worked under Article 4.

## ARTICLE 8
## MISCELLANEOUS LEAVES

1. Military leave: Any permanent full time employee who is a member of the organized U.S. Army, Navy, Air Force, Coast Guard, Nevada National Guard or Marine Reserves shall continue to receive pay and any benefits required by NRS 281.145 and the Uniformed Services Employment and Re-employment Rights Act of 1994.

2. Jury/Court Duty:

   a. An employee who appears in court on behalf of the County, for any purpose that causes a loss of regularly scheduled work shall receive regular pay plus any applicable shift differential for the time lost. Time spent in court on behalf of the County shall be considered as time worked for the purpose of calculating overtime.

   b. If an employee is required to report to court on behalf of the County on a day that would normally be a day off, the employee is entitled to compensation from the County at the applicable rate including shift differential and will be counted as hours worked for the purposes of computing overtime.

   c. An employee who is summoned for jury duty that causes a loss of regularly scheduled work shall receive his/her regular pay for the time lost.

   d. An employee summoned for jury duty must show evidence of the summons to the supervisor upon receipt.

   e. If the employee is not selected for jury duty or is released, he/she shall return to duty if released during scheduled work hours, if two (2) or more hours remain on the shift, unless returning would conflict with Section 2.g. of this Article.

   f. If an employee is selected to serve on a jury, the employee will be required to report his/her status to supervisor on a daily basis.

g. In accordance with NRS 6.190, employees will not be required to work:

i. Within 8 hours before the time at which the employee is to appear for jury duty; or

ii. If the employee's service has lasted for four (4) hours or more on the day of his or her appearance for jury duty, including the employee's time going to and returning from the place where court is held, between 5 p.m. on the day of appearance for jury duty and 3 a.m. the following day.

h. Compensation applies only to the regularly scheduled hours of work, and no benefit shall be paid for time spent as a juror during which the employee was not regularly scheduled to work.

i. The regular straight time rate of pay shall apply for the time spent on jury duty and will not be counted as hours worked for the purposes of computing overtime.

j. The employee shall endorse the fee received for jury duty and deliver to his/her supervisor. Only upon receipt of the jury fee shall the County pay the employee for the time lost from work.

k. No civil case shall be covered by this Article in which the employee has an interest.

3. Leave Without Pay:

a. Upon written application to the department head, a permanent status employee may, in the County's sole discretion, be granted a leave of absence without pay for a period not to exceed (30) calendar days, without prejudice to his or her status, but no leave accruals shall occur during any such period. Without approval of the department head and the Clark County Human Resources Director, leave without pay may not be granted until all accumulated vacation leave is used. Leave without pay must be taken continuously, and not intermittently. Additional blocks of leave without pay may be approved, but any combined period exceeding 90 days must be approved by the County Manager.

4. Bereavement Leave:

a. An employee shall be granted a leave of absence of to three (3) days for the purpose of bereavement and to attend the funeral of a member of the employee's immediate family, as defined by the

FMLA. Employees may use vacation or sick hours for authorized bereavement leave periods.

## ARTICLE 9
## SENIORITY

1. Seniority: The County and the Union recognize the principle of seniority which for the purpose of this Agreement shall be interpreted to mean that:

   An employee having the longest continuous time of service within each classification shall have preference for retaining and regaining employment in case of curtailment or expansion of operation, provided such employee has the ability to perform the work involved satisfactorily.

2. Calculation of Continuous Service:

   a. There will be no deduction for any time lost which does not constitute a break in continuous service.

   b. A break in continuous service will occur in the following instances:

      i. Voluntary termination or resignation.

      ii. Discharge or any other permanent separation.

      iii. Absence exceeding any period of authorized leave.

      iv. Any period of layoff as defined by Article 10 of this Agreement.

   c. Assignment of Shifts and Days Off:

      The County agrees to give preference to the requests of senior employees, as defined in Section 1 of this Article, when assigning shifts and days off provided the senior employee is qualified to perform the work involved on the shift.

## ARTICLE 10
## LAYOFF- RECALL

1. Layoff is defined as any involuntary separation wherein management eliminates a position without prejudice to the incumbent.

2. The determination of the number of positions, and classifications to be affected by a layoff is a management right. The County and the Union agree that the layoff of personnel as it pertains to employees covered under this Agreement shall be prescribed below. If layoffs occur, the County shall meet and confer with the Union to discuss the impact of the layoffs on the bargaining unit.

3. Layoff Procedure

   a. If it is determined that layoffs are necessary, employees will be laid off in the following order:

      i. Temporary employees; then,

      ii. Probationary employees; then,

      iii. Employees in the targeted classifications based on seniority date with the least senior employee being laid off first and so on until the number of layoffs needed have occurred.

   b. Separation due to layoff shall require the giving of at least fourteen (14) calendar days advanced written notice to the employee, or payment in lieu of notice, of an equivalent amount of the employee's base salary, by the County.

4. Recall Procedures

   a. Any permanent status employee laid off under this Article shall, based on seniority, have his/her name placed on an appropriate County recall list(s) for a period of two (2) years. Previous employees shall be notified by certified mail, return receipt requested, at their last known address and shall, within ten (10) calendar days of receipt, respond affirmatively, by certified mail or in person, that they are accepting the officer of recall. Failure to respond in a timely manner will mean that the person has refused the offer of recall and the person will be removed from the recall list(s). An employee must be available to work within two (2) weeks of acceptance of the offer.

   b. When positions become available in a classification in the department, personnel who have been laid off or reduced in grade in that classification from that department shall be recalled at the Department Heads determination in inverse order of layoff. The order of recall shall be:

i. Former employees who held a position in the same class.

ii. Former employees who held a position in the same series as long as the position is at the same or lower level than the position they previously held.

iii. If there are no applications from the recall list, the department will fill the vacancy from an open or promotional eligibility list. In the event that a classification has only had a change in title, employees on the old recall lists(s) shall be placed on the new respective lists(s).

c. Upon recall after layoff, the time that the person was on layoff shall be counted as a break in service.

d. Upon an employee's return from a recall to his/her title held at layoff an employee's pay will resume at the same pay rate at the time of separation; minus any applicable contractually mandated salary decreases. Additionally, the pay will not exceed the top of the range.

## ARTICLE 11
## UNION REPRESENTATIVES AND SHOP STEWARDS

1. Union Representatives: Duly authorized representatives of the Union shall be permitted to enter the County facilities for the purpose of administering this Agreement subject to any applicable Department of Aviation and/or state or federal regulations and the following conditions:

   a. Such representatives shall notify the Supervisor or its designee at the time of such visit.

   b. Such visits shall not be conducted if the visit interferes with Airport security, or other critical operations.

   c. Representatives' access rights shall be subject to those Airport rules which are applicable to other non-employees.

2. Shop Steward:

   a. The Union may select from among the employees, Shop Stewards whose function in addition to his/her normal work shall be to report to the Business Representative of the union grievances or alleged infractions of this Agreement. The Union agrees to notify the

County in writing of the employees selected to serve as Shop Stewards.

b. The Union may designate one (1) Shop Steward and one (1) alternate Shop Steward.

c. The County recognizes the need to release the Shop Steward from work to resolve work related issues. So as not to disturb the workflow, the shop steward will be required to obtain approval for release time. The request must be made to the immediate supervisor. Release time will be granted if operational needs permit. Such time will be with pay for all regularly scheduled hours and shall not count towards overtime.

d. If the County determines that the Shop Steward is abusing his/her privilege, the County may discipline the Shop Steward in accordance with this Agreement and the Airport's rules and regulations.

e. Union Bank Hours: Each fiscal year, the union shall be authorized no more than 40 hours to be used by the Union to release the Shop Steward or the alternate Shop Steward to attend conferences, legislative sessions, and conventions. The Union must provide the County a written request, a minimum of 14 calendar days, prior to the event to be attended. The County shall not be responsible for compensating the employee during this release time, nor shall the employee accrue benefits during the absence. Attendance at these events shall not be considered hours worked for the purposes of computing overtime, nor shall attendance at these events be considered a break in service. Unused bank hours shall not accumulate from year to year.

## ARTICLE 12
## MANAGEMENT RIGHTS

1. Rights to Manage: The County expressly reserves all rights to manage the business including all matters not covered by this Agreement, as well as, but not limited to, the right to direct its employees; hire, promote, assign, retain, suspend, demote, discharge or take disciplinary action against any employee for just cause; relieve any employee from duty because of lack of work or for any other legitimate reason; maintain the effect of its governed operations; determine the methods, means and personnel by which its operations are to be conducted; take whatever action may be necessary to carry out its responsibility in situations of emergencies are reserved to the County.

Rules: The County may establish and enforce reasonable Rules, Regulations and Procedures applicable to employees provided that such rules, regulations and procedures do not conflict with the provisions of this Agreement. It will be the responsibility of the County to furnish a copy of such rules to the employee and to the Union, upon request.

## ARTICLE 13
## DISCIPLINE AND DISCHARGE

1. Cause for Discharge. No employee, after having completed his/her probationary period, may be demoted or terminated without just cause. Prior to any discharge for reasons other than:

   a. Dishonesty

   b. Gross incompetence

   c. Willful misconduct

   d. Possession of firearms or other weapons while on duty, on County premises or in County vehicles.

   An employee will be progressively disciplined for minor violations to allow a reasonable opportunity to correct the deficiency. Progressive Discipline will include a written oral warning, written reprimand, final written warning and termination, except that more severe discipline may be imposed in the event of major violation of established rules, regulations or policies.

2. Written Oral Warnings. Written Oral Warnings are not subject to the grievance and arbitration provisions of Article 14.

3. Pre-termination Hearing. An employee recommended for termination shall receive written notification of such recommendation. A pre-termination hearing or pre-suspension hearing shall be held by the Director of Aviation or designee no sooner than three (3) working days of the effective date of such action but within five (5) working days after receipt of the notification unless extended by the Director of Aviation or designee.

## ARTICLE 14
## GRIEVANCE AND ARBITRATION PROCEDURE

1. Definition: For purposes of this Agreement, a grievance is defined as a dispute between the UNION, on behalf of an employee(s) and the

COUNTY involving the meaning, interpretation, application or enforcement of this Agreement.

2. Any matters for which the NERC or the County's Office of Diversity has jurisdiction will be handled through a separate procedure, identified in Article 22.

3. Time Limit for Filing Grievance. Grievances shall be filed within ten (10) business days of the date the grievant or the union knew, or reasonably should have known, of the event giving rise to the grievance.

4. Documentation of Grievance. A grievance must be reduced to writing and submitted by the UNION to the Director's Office of the Department of Aviation. The written grievance must include: 1) a list of the article(s) allegedly violated, 2) a statement of the facts causing the alleged violation(s) and 3) the remedy(s) to resolve the grievance. At the time it submits a grievance to the COUNTY, the UNION shall furnish the COUNTY with copies of any written statements, reports or documents relied on by the UNION to support the grievance. The UNION is the only party with the authority to advance a grievance to arbitration.

5. Procedure for Adjusting Grievances. Both the UNION and the COUNTY agree that it is in the parties' best interest to resolve disputes at the lowest level. Prior to the submission of a formal grievance, the ATS Manager, the potential grievant, and/or UNION representative(s) may attempt to resolve any questions, problems, or misunderstandings that have arisen. However, a written grievance must still be submitted within ten (10) business days of the date the grievant knew, or reasonably should have known, of the event giving rise to the grievance. For the purpose of attempting to resolve grievances prior to arbitration, the parties, at any meeting prior to the Step One meeting, (the Step Two meeting if no Step One meeting is held) or at the meeting, shall make full disclosure to each other of facts and evidence then known to them which bear on the grievance. Any grievance relating to a termination shall advance directly to Step Two. All other grievances shall be resolved exclusively in the following manner:

   a. Step One: An informal fact-finding meeting will be held within ten (10) business days of the submission of the written grievance. The meeting shall involve the grievant; UNION representative(s); COUNTY representative(s), who shall be employed in the Department of Aviation Employee Services Division; and the Department Director or his designee.

      i. The grievant, the UNION representative(s) and the COUNTY representative(s) may bring witnesses who can present

relevant facts concerning the situation precipitating the grievance. The response to the grievance shall be made in writing within ten (10) business days of the conclusion of the meeting and delivered to the UNION via email or fax, with a copy sent via certified mail.

b. When a grievance remains unresolved after the meeting described in subparagraph 5.a., above, and the UNION wishes to proceed to the Step Two Meeting, the UNION must make a written appeal via email or fax, with a copy sent via certified mail, to the COUNTY Director of Human Resources for a Step Two Meeting within ten (10) business days from the date of the response to the Step One Meeting.

   i. The Step Two Meeting will be held within ten (10) business days of the submission of the request. The meeting shall involve the grievant; UNION representative(s), COUNTY representative(s), who shall be employed in the Department of Aviation Employee Services Division; and the Clark County Director of Human Resources or designee.

   ii. The grievant, the UNION representative(s) and the COUNTY representative(s) may bring witnesses who can present relevant facts concerning the situation precipitating the grievance.

   iii. The response to the grievance shall be made in writing within ten (10) business days of the conclusion of the meeting and delivered to the UNION via email or fax, with a copy sent via certified mail.

c. Arbitration. When a grievance remains unresolved after the meeting described in subparagraph 5.b.i., above, and the UNION wishes to proceed to arbitration, the UNION must make a written appeal to the COUNTY for arbitration within five (5) business days from the date of the response to the grievance. The UNION and COUNTY shall request a panel of seven (7) arbitrators who are members of the National Academy of Arbitrators from the Federal Mediation and Conciliation Services.

   i. The parties shall make alternate strikes from the FMCS panel and the dispute will be submitted to the final arbitrator remaining. The party who shall strike first shall be decided by coin-toss.

ii. The arbitrator shall endeavor to issue a decision within thirty (30) days of the close of the hearing or filing of briefs.

iii. The arbitrator shall have no authority, jurisdiction or power to amend, modify, nullify or add to the provisions of this Agreement. The arbitrator shall have no authority to award back pay unless the Union has affimatively proven that the grievant took all reasonable steps to mitigate his or her damages.

iv. No evidence shall be introduced as to the withdrawal of a proposal during collective bargaining.

v. Arbitrations shall be limited to a single grievance for a single issue, unless the COUNTY and UNION mutually agree to the contrary.

vi. The award of the arbitrator shall be final and binding upon the COUNTY, the UNION, and the employee(s) involved, unless the provisions of section iii have not been followed.

vii. Except in discharge cases the fees and expenses of the arbitrator and court reporter shall be shared equally by the COUNTY and the UNION. In discharge cases the fees and expenses of the arbitrator and court reporter shall be paid by the party losing the arbitration.

6. Time Limits. The time limits and other provisions set forth in this Article cannot be extended or waived unless mutually agreed in writing, and failure on the part of the UNION to comply with the time periods set out above shall result in the grievance being considered waived and abandoned.

   If the COUNTY fails to respond within the time limitations outlined herein, the grievance will automatically advance to the next step of the grievance and arbitration process.

7. Security. Suspensions and terminations related to violations of the Airport Security plan which result in the temporary or permanent loss of the employee' Airport/TSA security badge are not grievable and therefore not covered under the provisions of this Article.

## ARTICLE 15
## UNIFORMS AND TOOLS

1. Uniforms:

a. The County will provide clean uniforms daily for the employees and the laundry of the uniforms provided shall be at no cost to the employee.

b. The employee must return all uniforms provided by the County at the time of termination. The County shall deduct from the final payroll check the cost of any uniform not returned to the County.

2. Tools: The County will provide all tools.

## ARTICLE 16
## BULLETIN BOARDS

1. The County shall provide an adequate bulletin board for use by the Union to enable employees in the bargaining unit to see notices posted.

2. All notices appearing on the Union's bulletin board shall be posted by the Union Steward or his/her alternate Union Steward. Union notices relating to the following matters may be posted without receiving the County's prior approval.

   a. Union recreational and social affairs

   b. Notice of Union meetings

   c. Union officer appointments

   d. Notice of Union Elections

   e. Results of Union Elections

   f. Publications, rulings or policies of the Union

3. All other notices of any kind must receive prior approval of the Director of Aviation or designee. No material may be posted on bulletin boards at any time which contain the following:

   a. Personal attacks upon any employee.

   b. Scandalous, scurrilous or derogatory attacks upon Aviation or County administration.

   c. Attacks on any other employee organization; or

d. Political materials.

## ARTICLE 17
## GROUP INSURANCE

1. To be eligible for group insurance, an employee must occupy a permanent budgeted position and work at least 20 hours per week and meet the necessary qualifying periods associated with the insurance program. The County will then be responsible for the prorated share of the premium based on hours worked as a percentage of 40 hours per week. Any employee who is on an authorized leave without pay status over 30 consecutive calendar days will be responsible as of the 31st day for reimbursing the County for the employee's insurance premium, the total dependent coverage insurance premium, total basic life insurance premium and the total long-term disability insurance premium from that day forward. If the leave without pay status does not coincide with the premium payments, then any such premiums shall be prorated.

2. Insurance Premiums: The County will pay 90 percent (90%) of the employees and dependents premiums for County-sponsored health insurance programs, subject to the pro-ration in the previous section.

## ARTICLE 18
## LIFE INSURANCE

1. The County shall maintain a basic life insurance program for employees covered by this agreement providing a death benefit of $20,000.

## ARTICLE 19
## LONG TERM DISABILITY INSURANCE

1. The County will provide long term disability insurance to employees who occupy a permanent budgeted position and work at least 20 hours per week. Employees must meet the qualifying requirements associated with the plan.

2. Insurance Premiums: The County will maintain long-term disability benefits at their current policy level for employees covered under this agreement through the duration of this agreement.

## ARTICLE 20
## RETIREMENT CONTRIBUTIONS

1. The County will pay the employee's portion of the retirement contribution under the County pay contribution plan in the manner provided for by NRS Chapter 286. Any increases in the percentage rate of the retirement contribution will result in a corresponding decrease to each employee's base pay equal to one half (1/2) of the increase. Any decrease in the percentage rate of the retirement contribution will result in a corresponding increase to each employee's base pay equal to one half (1/2) of the decrease. Any such increase in pay will be effective from the date the decrease in the percentage rate of the retirement contribution becomes effective.

2. The term "retirement contribution" does not include any payment for the purchase of previous credit service on behalf of any employee.

## ARTICLE 21
## EMPLOYEE DEDUCTIONS

1. Dues: The County will check-off and remit Union monthly dues and PAC contributions and initiation fees of bargaining unit employees who have executed and furnished to the County a payroll deduction authorization in the form of Exhibit 1, attached to this Agreement, by this reference is made a part hereof.

2. Changes: The Union will certify to the County in writing the current rate of membership dues. The Union will notify the County of any change in the rate of membership dues 30 days prior to the effective date of such change.

3. Indemnification: The Union shall indemnify and hold the County harmless against any and all claims, demands, suits and other forms of liability that shall arise out of or by reason of action taken or not taken by the County at the request of the Union under the terms of this Article.

## ARTICLE 22
## EQUAL OPPORTUNITY/DISCRIMINATION CLAUSE

1. The County and the Union shall each apply the provisions of this agreement equally to all employees in the bargaining unit without discrimination as to race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or because of political or personal reasons or affiliations. In addition, the Union and the

County encourage affirmative action in recruitment, hiring, training, and the treatment of employees in compliance with the County's affirmative action plan. Matters for which the Nevada Equal Rights Commission (NERC) and/or the Equal Employment Opportunity Commission (EEOC) have jurisdiction will not be addressed through the grievance process.

2. Allegations of discrimination must be identified before Step 1 of the grievance process so that a timely investigation may be conducted.

3. In the investigation of a complaint the Office of Diversity (OOD) of Clark County will use either the formal or informal process outlined in the Affirmative Action Plan, based on the nature of the complaint.

## ARTICLE 23
## SAFETY

1. The County Safety: The County will comply with all safety standards prescribed by all applicable federal, state and local regulations insofar as such standards are applicable to the employees covered by this Agreement and will not require an employee to work under hazardous conditions without providing such safeguards as are consistent with well established safety practices.

2. Employee Safety: Employees are required to comply with all safety policies and practices established by the County from time to time and to cooperate with the County in the enforcement of safety measures.

## ARTICLE 24
## ANTI-STRIKE/NO LOCKOUT CLAUSE

The Union agrees not to strike, not to endorse, support, assist or encourage in any way any individual employee or group of employees to participate in any strike against the County. The County agrees that it will not lock out employees covered under this agreement.

## ARTICLE 25
## Tuition Reimbursement

1. Intent: It is the intent of the Union and the County to ensure that eligible staff members participate in ongoing in-service education and other training and educational opportunities that will increase the employee's knowledge and skills related to the work being performed. This Article is designed to provide the employee with opportunities for continuing

education that will increase the employees' job related knowledge, skills and competencies.

2. State of Nevada University System: Course work offered by the State of Nevada University system (this includes the Community College system and the University of Nevada, Las Vegas system), or other post secondary educational institutions as may be authorized by the County are eligible for reimbursement.

   a. Payment for Courses:

      i. States of Nevada University System courses are paid pursuant to the tuition reimbursement program sponsored by the County. The employee is required to pay for the course and will be reimbursed providing a grade of "C" or better is earned for undergraduate level courses or a grade of "B" or better is earned for graduate level courses. The County shall not reimburse the employee for any "fees" or books.

      ii. Third party skills seminars are paid pursuant to the County's training and travel policy.

## ARTICLE 26
## Bargaining Unit Work

1. The County shall use its employees for all work involved in the job classifications or work areas covered by this Agreement except as specified below:

   a. Day-to-day maintenance and repair work within the County, as to which practice it has been to have such work performed by employees within the bargaining unit, will not be:1) assigned to other County bargaining units, nor 2) contracted to outside contractors or vendors in such a manner as to result in loss of bargaining unit hours.

   b. New construction, including major installations and renovations may be contracted out without prior consultation or consent of the Union provided it does not directly result in, the layoff or reduction of bargaining unit hours.

## ARTICLE 27
## LABOR MANAGEMENT COMMITTEE

1. The ATS Shop Labor/Management Committee shall be composed of six (6) members, three (3) representatives of the Union including at least one unit employee and three (3) members, representing management. Union committee members shall be appointed by the Union and management committee members shall be appointed by the County. Members of the committee shall serve at the pleasure of the appointing party.

2. The ATS Shop Labor/Management Committee shall have no authority to:

   a. Make any decisions binding the parties; or

   b. Determine disposition of any grievances(s).

3. All issues discussed within the purview of this committee will be limited to issues within the ATS Shop. The committee may not address issues beyond the scope of the ATS Shop.

4. To facilitate the adjustment of work schedules, the committee will notify all members and their immediate supervisors of the dates and times of committee meetings immediately upon the parties reaching mutual agreement as to the date of any such meeting.

5. Union committee members employed by the County shall not lose pay for time spent in any meetings authorized by the provisions of this Article. Time spent in any meeting authorized by the provisions of this Article shall be counted as time worked for the purpose of computing overtime only if the time spent falls within the employee's regularly scheduled work hours.

## ARTICLE 28
## TERM-TERMINATION-RENEWAL

Term of Agreement: This Agreement shall become effective on January 19, 2013, and shall continue in full force and effect until June 30, 2014, and from year to year thereafter unless either party hereto shall notify the other in writing by certified mail in accordance with the provisions of NRS 288 of a desire to terminate, modify, or amend this agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representative on this 30th day of January, 2013.

| For the County: | For the Union: |
|---|---|
| Edward M. Finger<br>Clark County | William Stanley<br>IUEC |

## Appendix A - CLASSIFICATIONS

This collective bargaining agreement covers the following classifications of bargaining unit workers:

1. Airport Senior Automated Transit System Technician
2. Airport Automated Transit System Technician II
3. Airport Automated Transit System Technician I

## Appendix B - WAGE SCHEDULES

| Classification | |
|---|---|
| Airport Automated Transit System Technician I Entry Rate | $18.50 / hour |
| Airport Automated Transit System Technician I Step 1 | $20.00/ hour |
| Airport Automated Transit System Technician I Step 2 | $21.75 / hour |
| Airport Automated Transit System Technician I Step 3 | $23.50 / hour |
| Airport Automated Transit System Technician II Rate | $30.20 / hour |
| Senior Airport Automated Transit System Technician Rate | $32.65 / hour |

## Appendix C - DEPARTMENT OF AVIATION ATS LEAVE AND ATTENDANCE POLICY

1. POLICY STATEMENT AND PURPOSE

   a. The Department of Aviation is dedicated to providing safe, efficient and convenient service to the traveling public. Work involving the Automated Transit System is time-sensitive and critical to the Mission and Vision of the Department of Aviation. Therefore, it is vital that employees plan their leave and report for work on a regular and timely basis.

   b. All requests for leave must be pre-approved in writing by a supervisor, except for leave for bona fide illness or injury of the employee or immediate family member, or bereavement for an immediate family member. Immediate family member, for the

purpose of this policy, shall be consistent with the Family Medical Leave Act.

c. Requests for leave of one (1) shift or less shall be submitted in writing by the employee to his/her supervisor for approval no less than 24 hours prior to the leave.

d. Requests for leave of more than one (1) shift and up to four (4) shifts, shall be submitted in writing by the employee to his/her supervisor for approval no less than 7 days prior to the leave date.

e. Requests for leave of more than four (4) shifts shall be submitted in writing by the employee to his/ supervisor for approval no less than 14 days prior to the leave date.

2. ABSENTEEISM

a. Attendance is an essential function of every job. Excessive absenteeism and chronic tardiness place an unfair burden on co-workers and make it difficult to maintain excellent service.

b. The following guidelines are designed to insure fairness and equity in dealing with absenteeism and lateness problems. Absences occurring with less than 24 hour notice will trigger this policy. If an employee is unable to report to work, a minimum of two hours' notice is required.

c. Consideration will be given to circumstances surrounding an employee's absence. For example, approved absences due to bereavement, military obligation, jury duty, FMLA or work related injuries will not be recorded as an absence for purposes of point assignments under this policy (provided proper notice has been given where able).

d. Point Assignments:

| | |
|---|---|
| i. Missed Punch | 0.5 |
| ii. Tardy up to one-half hour | 1.0 |
| iii. Tardy over one-half hour | 2.0 |
| iv. Calls Control Center before start of shift to report off | 2.0 |
| v. Calls Control Center after start of shift to report off | 3.0 |

vi. Does not call or report for work during scheduled day 4.0

e. Employees shall have points reduced at one point for perfect attendance each 30 day rolling period.

f. Consecutive absences (call offs) due to illness/injury (only) will be recorded as "one occurrence." Employees are still required to call the control center at least two hours before the scheduled shift start time every day they will be absent. Failure to do so will report in point assignment.

g. Patterned attendance problems will result in the employee being placed on a certificate of illness requirement for six months.

h. Absences of 3 days or more will require a doctor's note with return to work authorization.

i. Action to be taken:

| | |
|---|---|
| i. 5.0 points | Written Oral Warning |
| ii. 7.0 points | Written Reprimand |
| iii. 9.0 points | Final Written Warning |
| iv. 12.0 points | Termination (scheduled for hearing) |

**Appendix D**
**Clark County's Substance Abuse Policy**

POLICY ON DRUG AND ALCOHOL FREE WORKPLACE

It is the policy of Clark County to foster and provide a drug and alcohol free workplace for all employees. A drug and alcohol free workplace protects the safety of the public as well as the County's valuable workforce.
While the County will be supportive of those who seek help voluntarily, the County will be equally firm in identifying and disciplining those who continue to be substance abusers and do not seek help.

1. Guiding Principles:

There are four (4) guiding principles underlying the adoption of this policy. They are:

a. Education - The County and Union believe that education and

training of all employees in the effects and treatment of substance abuse will contribute to a safer and more efficient workplace for everyone.

b. Deterrence - The County and Union are committed to eliminating the effects of substance abuse in the workplace. All employees are prohibited from using, possessing, buying or selling drugs or alcohol in the workplace, and are prohibited from reporting to work or being subject to work (specifically on standby or on break) with prohibited drugs active in their systems or while under the influence of alcohol.

c. Enforcement - The substance abuse policy will be strictly enforced. Violations of the policy or procedures will be cause for discipline, up to and including termination of employment.

d. Treatment - The County and Union are committed to helping employees with admitted substance abuse problems overcome those problems, and encourage voluntary rehabilitation options.

2. Policy Purposes:

The purposes of the substance abuse policy are:

a. To implement a fair and balanced approach to eliminating substance abuse and its effects on the job;

b. To protect the public and employees; and

c. To provide a strong incentive for voluntary rehabilitation and return to work.

3. Rules:

The County and Union have formulated clear rules and penalties to ensure compliance with the substance abuse policy. The primary rules are:

**ALCOHOL**

a. The consumption of an alcoholic beverage by an employee on duty will result in immediate termination. The possession of an open alcoholic beverage by an employee on duty shall be cause for termination. The only exception to disciplinary action for the possession of an open alcoholic beverage while on duty is when the handling of an open alcoholic beverage is incidental to the

employee's assigned duties.

b. An employee will also be subject to termination when the consumption of alcoholic beverages is at a time proximate to his/her work time, has an adverse effect on his/her work performance, causes impairment while on duty or on standby, or creates a risk of harm to self, others, or County or private property.

c. If an employee who is required to drive as part of his/her assigned duties has his/her driver's license suspended, revoked, temporarily or permanently, due to a substance related offense, the employee must notify his/her supervisor of these circumstances when next reporting to duty. Failure to do so shall be cause for disciplinary action up to and including termination.

d. The felony conviction of an employee as a result of alcohol while off County premises and not on duty shall be cause for disciplinary action up to and including termination.

**DRUGS**

a. The unlawful manufacture, distribution, dispensation, possession, or use of an illegal drug or controlled substance by an employee in the work place or during work hours is prohibited. Employees in violation of this policy will be terminated

b. The use of any drug which negatively affects performance or the ability of an employee to work in a safe manner may be cause for discipline where the employee knew or should have known that the drug would adversely diminish his/her capabilities to perform the job. For the purpose of this policy, the term "drug" shall include but not be limited to sedatives (i.e. valium, downers), stimulants (i.e. speed, uppers), hallucinogens (i.e. LSD), cocaine, crack, cannabinoids (i.e. marijuana), opiates, phencyclidine (PCP), and volatile solvents (inhalants).

c. Whenever an employee is prescribed a drug by a licensed health care provider or uses an over-the-counter medication, which may negatively affect his/her performance or ability to perform in a safe manner, the employee shall notify his/her supervisor. An employee who fails to notify his/her supervisor may be subject to disciplinary action up to and including termination when the use of drugs by that employee contributes to an accident or incident that results in property damage or injury to a person. Supervisors shall ensure that employees are not placed in capacities that may jeopardize the safety of others.

d. The possession or use of illegal drugs while off County premises and while not on duty may be cause for discipline up to and including termination, where such conduct can be shown to have a direct and material adverse effect on the County's interests, including public image.

e. If an employee who is required to drive as part of his/her assigned duties has his/her driver's license suspended, revoked temporarily or permanently, due to a substance related offense, the employee must notify his/her supervisor of these circumstances when next reporting to duty. Failure to do so shall be cause for disciplinary action up to and including termination.

f. The felony conviction for the possession or being under the influence of illegal drugs while off County premises and while not on duty shall be cause for disciplinary action up to and including termination.

g. The conviction of an employee for the sale or possession with intent to sell illegal drugs is cause for immediate termination.

h. Employees must notify their immediate supervisor o f any personal criminal drug statute conviction for a violation no later than five (5) days after such conviction. Failure to notify the immediate supervisor shall result in disciplinary action.

**DRUG AND ALCOHOL TESTING**

The County may require an individual to submit to a drug and alcohol test under the following circumstances.

1. Reasonable Cause:

   An employee will be required to undergo immediate drug and alcohol testing in accordance with the following procedures if there is reasonable cause that the employee is under the influence of a drug and/or alcohol. Reasonable cause that an employee is under the influence of a drug and/or alcohol will be based on specific facts and/or reasonable inferences derived from those facts. Examples of circumstances, although not inclusive, which constitute a basis for determining reasonable cause are specified on the "Observation/ Incident Report" included as part of this policy.

2. Post-Accident:

   An employee involved in an accident while on duty may be required to

undergo a drug and alcohol test when there is:

a. Property damage that exceeds $500, and/or

b. Personal injury

3. Testing Procedures for Reasonable Cause and Post-Accident:

a. Any supervisor evaluating an employee for reasonable cause shall complete the Clark County "Observation/ Incident Report". The Observation/Incident Report shall be sent to the appropriate department head and the Employee Services division of the Department of Aviation. Supervisors and managers will not be permitted to use this policy as a vehicle to harass employees. Supervisors and managers shall be subject to the disciplinary process up to and including termination if they engage in harassing behavior towards employees.

b. If the employee is an eligible member of a bargaining unit, the first supervisor advises him/her of his/her right to have a Union representative prior to testing and allow the same thirty (30) minutes for a Union representative to appear. If mitigating circumstances warrant, the supervisor may wait up to a maximum of one (1) hour for a Union representative.

c. If determined that reasonable cause exists, the employee shall be relieved of duty and transported to a drug testing specimen collection site for a drug and alcohol screening. A 9 panel rapid drug screen and a breath alcohol test will be conducted. If the test is negative, the employee will be transported back to work immediately. If the test is positive, a secondary blood and urine test will be performed. Once the test sample is collected, arrangements will be made to have the employee transported home. The sample will be tested and confirmed and chain of custody maintained by a Substance Abuse Mental Health Services Administration (SAMHSA) certified laboratory facility. A sufficient amount of a sample will be taken so that, at an employee's request and expense, an alternative SAMHSA testing facility may be used to test the same sample; chain of custody will be maintained between testing facilities. A positive GC/MS (gas chromatography and mass spectrometry) blood test for a controlled substance provides an absolute presumption that an employee is under the influence of the identified substance. An employee who is incapacitated to the point that he/she cannot provide a sample at the time of the incident shall later provide the necessary authorization for releasing hospital or medical reports that would

indicate whether or not the employee was under the influence of a drug and/or alcohol.

d. If secondary testing is required advise the employee that he/she will remain on paid status until the test sample is collected. After the sample is collected the employee will be placed on unpaid leave until the County receives the test results. If the test is negative, the County will make the employee whole.

e. The results will be delivered by e-mail or carrier to the Employee Services Division of the Department of Aviation who will then immediately notify and make a copy of the report available to the employee. The employee's department head or designee will be notified whether the test results are positive or negative. A drug test will be considered positive if the confirmation cutoff levels established by the SAMHSA are exceeded. An alcohol test will be considered positive if the blood alcohol content is .04 percent or greater, or the limit specified in NRS 484.0 135 or other applicable law if less.

f. Refusal to submit to a drug and alcohol test or to provide the necessary authorization for releasing hospital or medical reports that would indicate whether or not the employee was under the influence of a drug and/or alcohol shall be considered a positive test result and the employee will be subject to termination

DISCIPLINARY PROCEDURES FOR A POSITIVE DRUG AND/OR ALCOHOL TEST

1. A positive drug and/or alcohol test requested as a result of an accident which causes injury to a person or property damage will be cause for disciplinary action in accordance with Section 3 below.

2. A test resulting in a positive outcome for a legal drug will result in the following actions:

   a. The employee may be disciplined for the performance or behavior that established reasonable cause to test the employee.

   b. The employee will provide, within twenty-four (24) hours of request, a bona fide verification of a valid, current prescription for the drug identified. The prescription must be in the employee's name. If the employee does not provide acceptable verification of a valid prescription, or if the prescription is not in the employee's name, or if the employee has not previously notified his/her supervisor, the

employee will be subject to disciplinary action in accordance with Section 3 below.

c. Before the employee may return to work, the employee must provide the department head with a certificate of fitness/return-to-duty form from the prescribing physician/state certified health care provider. The certificate of fitness must be a signed statement indicating whether or not an employee is medically able to perform regularly assigned job duties without restriction or limitation. If the employee is restricted from performing regularly assigned duties, the certificate must also identify the employee's restrictions.

3. A test resulting in a positive screen for alcohol, an illegal substance or the abuse and/or misuse of a legal drug or controlled substance will result termination.

With the exception of the laboratory testing facility, the Employee Services division of the Department of Aviation the tested individual, and the Risk Management Division for workers' compensation incidents, the medical record shall not be released to anyone without express written authorization of the tested individual unless ordered by means of proper legal procedure and appropriate legal authority, such as court ordered subpoena, or in connection with a disciplinary proceeding.

To ensure the confidentiality of employees' medical records, laboratory reports, test results, and Observation/ Incident Reports shall not appear in an employee's personnel file. Information of this nature will be contained in a separate confidential medical record that will be securely kept under the control of Employee Services Division of the Department of Aviation.

TRAINING

Training is an essential element in assuring the effectiveness of the drug and alcohol free workplace program. Supervisors and employees must be kept informed of not only the policy and procedures of this drug and alcohol program but of the programs available to them, which promote wellness and safety. Supervisor training will be made available; individual consultation by the employee Assistance staff will be available upon request.

1. Supervisor Training:

Topics include:

a. Developing working knowledge of drug and alcohol policy and drug testing procedures.

b. Developing working knowledge of impact of substance abuse in the workplace.

c. Developing working knowledge on identification of possible impaired employees through symptom recognition and job performance standards.

d. Developing skill in application of procedures to effectively approach and appropriately handle questionable behavior with employees.

e. Becoming knowledgeable in available resources and procedures for referral such as the Employee Assistance Program.

f. Learning the critical issues regarding confidentiality and employee rights.

2. Employee Awareness Training:

Topics include:

a. The drug and alcohol policy and drug testing procedures.

b. Impact of drugs and alcohol in workplace.

c. Available resources for assistance including the Employee Assistance Program.

d. Effects, signs and symptoms of alcohol and the drugs tested for.

e. Confidentiality and its application in the drug and alcohol policy.

OTHER LAWS, STATUTES OR REGULATIONS

Clark County is committed to providing reasonable accommodation to those employees whose drug and/or alcohol problem qualifies them under the Americans with Disabilities Act.

The provisions of any applicable law, statute, regulation or ordinance (i.e. The Omnibus Transportation and Employee Testing Act of 1991 and the Federal Highway Administration and Department of Transportation rules of February 1994) shall control in the event of any conflict with the provisions of this policy.

DEFINITIONS

DRUG AND ALCHOL TEST: For the purposes of this policy, drug and alcohol test means a test for the detection of at least the following: alcohol,

amphetamines, barbiturates, cocaine, propoxyphene, benzodiazepines, cannabinoids, methadone, opiates, and phencyclidine (PCP).
FIRST SUPERVISOR: A supervisor from any department, who has been through the Supervisor Training Program specified in this policy, who first observes different or abnormal behavior of an employee.
ILLEGAL DRUGS: Any drug (a) which is not legally obtainable; or (b) which is legally obtainable but has not been legally obtained. The term includes prescribed drugs not legally obtained and prescribed drugs not being used for prescribed purposes.
LEGAL DRUG: Prescribed drugs and over-the-counter drugs, which have been legally obtained and are being used for the purpose for which they were prescribed or manufactured.
ON DUTY: Assigned work hours excluding paid and unpaid leaves.
SAMHSA: Substance Abuse Mental Health Services Administration.
SUBSTANCE ABUSE: The misuse or illicit use of alcohol and/or drugs including controlled substances.

## APPENDIX E
## Clark County's Substance Abuse Program
## Observation/Incident Report

Reasonable Cause _____ Post-Accident _____ (check one)

Date of Report _____ Time of Day _____

Name of Observed Employee _____

Location of Observation _____

Observer _____ _____
Name Signature

_____ _____ _____
Position Supervisor Other

**Reasonable Cause Testing:**
Reasonable cause for testing is a belief that an employee is under the influence of a drug and/or alcohol based on specific facts and/or reasonable inferences derived from those facts. An observing supervisor shall describe and document the following:

- Specific observations concerning the appearance, behavior, speech or performance of the employee; and/or
- Violation of safety rule or other unsafe work incident which, after investigation, leads the supervisor(s) to believe that drug and/or alcohol use may be a contributing factor; and/or
- Other physical, circumstantial or immediate indicators of drug and/or

alcohol use.

**Post-Accident Testing:**
An employee involved in an accident while on duty may be required to undergo a drug and alcohol test when there is property damage that exceeds $500, and/or personal injury. An observing supervisor shall describe and document the following:

- Description of accident
- Resulting personal injury; and/or
- Resulting property damage.

REASONABLE CAUSE INDICATORS OR ACCIDENT SUMMARY:

_____
_____
_____
_____

Associated with reasonable cause indicators and/or accidents are a variety of "warning signs" which usually appear on the job. **Check the symptom or symptoms you have observed in the employee.**

_____ Drowsiness
_____ Constricted/dilated pupils
_____ Euphoria (elevated mood)
_____ Extreme mood changes
_____ Poor time/distance perception
_____ Exaggerated sense of ability
_____ Poor hand/eye coordination
_____ Excessive irritability
_____ Rapid or slow breathing
_____ Stares off into space
_____ Drunken behavior with or without odor of alcohol
_____ Watery, glassy, red eyes
_____ Hallucinations
_____ Relaxed inhibitions
_____ Disoriented behavior
_____ Slurred speech
_____ Excessively talkative
_____ Wanders aimlessly
_____ Depression
_____ Rapid speech
_____ Staggering walk
_____ Violent behavior
_____ Other _____

ACTIONS TAKEN:

_____
_____
_____
_____

COMMENTS BY EMPLOYEE:

_____
_____
_____
_____

CONTINUATION FROM FIRST PAGE IF NECESSARY:

_____

_____

_____

_____

TESTING PROCEDURES CHECKLIST:

_____ Complete & send Observation/Incident Report (Appendix D, Section 3 (a))
_____ Advise employee of right to Union representation (Section 3 (b))
_____ Advise employee of leave procedures (Section 3 (d))
_____ Advise employee of refusal to test policy (Section 3 (f))
_____ Transport employee to collection site and make arrangements for transporting the employee home (Section 3 (c))

cc: Department Head
Employee Services Division of the Department Of Aviation

**LETTER OF AGREEMENT**
**BETWEEN**
**THE INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS LOCAL 18**
**AFL-CIO**
**AND**
**CLARK COUNTY, NEVADA**

LABOR/MANAGEMENT COMMITTEE

The parties will meet monthly, or less frequently as determined by the parties, on mutually agreed dates and times and shall be for the purposes of discussing the criteria which will be used to determine advancement from Tech I to Tech 2, and discussing how to best deliver training to the unit employees. The committee shall exercise best efforts to produce a joint recommendation on promotional criteria within three (3) months of ratification, at which time any disagreement shall be resolved by a mutually-agreeable neutral (unless such deadline is mutually waived). The neutral shall have no authority to interfere with management assessment of individuals' abilities but will solely resolve any disputes about what the skills criteria will be and/or extent of employees' access to acquiring the required skills.

Mr. Ed Finger, Assistant County Manager
Clark County, Nevada
500 S. Grand Central Parkway
Las Vegas, NV 89155

Dear Mr. Finger,

This will confirm the understanding reached during our recent negotiations concerning the seniority of the bargain unit employees. The following ranked list shall be used in determining the seniority of the bargaining unit employees for the sole purposes of shift bidding, vacation bidding, and layoff order as of August 10, 2012.

| LAST NAME | FIRST NAME | Seniority Order |
|---|---|---|
| ESTRADA | DANIEL | 1 |
| DEFIERO | KENNETH | 2 |
| MCCLAIN | VERNON | 3 |
| VALENTINE | RICKY | 4 |
| THOMAS | PETER | 5 |
| BANAS | NICK | 6 |
| URBINA | AARON | 7 |
| RASMUSSEN | CRAIG | 8 |
| SMITH | WILL | 9 |
| FAME | AARON | 10 |
| HOFFRICHTER | SCOTT | 11 |
| FUJIMOTO | WARREN | 12 |
| SAFBOM | DAN | 13 |
| MC DANIEL | CARL | 14 |
| CRISTOBAL | ALLEN | 15 |
| UBTZ | BRYAN | 16 |
| GRITES | NEIL | 17 |
| MAIER | BILL | 18 |
| FRANS | AARON | 19 |
| LABOY | WILBUR | 20 |
| MALDONADO | HECTOR | 21 |

Sincerely Yours,

William H. Stanley

Agreed: _____
Ed Finger, Clark County

Exhibit No. Rx 22
Witness R. Walker
Date 6/26/13

KWD CCR# 711

# EXHIBIT 22

EXHIBIT 22

McCARRAN CAREERS

# Airport ATS Supervisor

Class Code: N24325

Bargaining Unit: Supervisory

CLARK COUNTY DEPARTMENT OF AVIATION
Revision Date: May 23, 2011

**SALARY RANGE**

$25.06 - $38.86 Hourly
$2,004.80 - $3,108.80 Biweekly
$4,343.73 - $6,735.73 Monthly
$52,124.80 - $80,828.80 Annually

**JOB SUMMARY/CLASS CHARACTERISTICS:**

**Plans, supervises, directs, reviews and evaluates the work of various craft and support staff performing electrical and mechanical, electro-mechanical and pneumatic modification, maintenance and repair of the Airport's Automated Transit Systems (ATS).**

**EXAMPLES OF DUTIES:**

Plans, schedules, assigns, supervises, reviews and evaluates the work of skilled and semi-skilled staff in performing maintenance and repair work related to an Automated Transit Systems. Recommends selection of staff; trains staff in work procedures; administers discipline as required and provides input into the unit's budget. Maintains staff work schedule including employee leaves and overtime. Assists in developing and implementing goals, objectives, policies, procedures, work standards, trains staff on ATS related systems, subsystems, technical aspects and safety. Coordinates the planning, development and implementation of recovery, repair and preventative maintenance procedures to maintain all airport ATS systems. Oversees the technical aspects of the airport ATS systems operation to ensure it operates as efficiently as possible. Evaluates and identifies root-causes for system faults and provides detailed reports. Plans, supervises, and coordinates multiple craft operational and maintenance activities in such areas as mechanical, electro-mechanical, electrical, electronic, pneumatic, and other related functions in ATS maintenance. Performs skilled craft work in designated area of expertise, troubleshoots maintenance problems, and provides technical advice to assigned staff. Estimates equipment, materials and staff required to perform assigned work; requisitions supplies and equipment, and maintains an inventory of regularly used materials. Prepares, issues, prioritizes, and tracks ATS and equipment maintenance and repair work orders; maintains accurate records of work performed. Interprets blueprints, drawings, specifications, manuals, schematics and related documentation. Inspects completed and in progress work and ensures quality and conformance to specifications of both County crews and contract staff. Utilizes an automated maintenance management system (Maximo) to record and document all unit work performed, including job setup and assignment. Prepares a variety of written correspondence, and periodic and special reports regarding work performed. Ensures that staff follows all safety procedures and that public safety and security procedures are followed. Responds to and resolves County staff and customer concerns regarding automated tram operation.

Bombardier 000114

**QUALIFICATIONS:**
Knowledge of: Extensive knowledge in transit vehicle and wayside systems and subsystems; principles and practices of employee supervision, including selection, work planning, organization, performance review and evaluation, and employee training and discipline; principles, methods and materials used in the repair and maintenance of the airports ATS systems; operation and maintenance of a variety of hand and power and shop tools, and test equipment used in the trade; computer applications related to the work; applicable laws, codes and regulations; safe work methods and safety regulations pertaining to the work; record keeping principles and practices; correct business English, including spelling, grammar and punctuation; basic budgetary principles and terminology.

Skill in: Planning, organizing, supervising, reviewing and evaluating the work of others; training others in policies and procedures related to the work; assisting in supervising a complex preventative and corrective ATS maintenance program; safely operating, adjusting and performing preventive maintenance and minor repair to power tools and equipment related to the work; estimating necessary materials, parts and equipment to complete assignments; maintaining accurate records of work performed; preparing clear and concise reports, correspondence and other written materials; reading and interpreting manuals, specifications, drawings and schematics; using initiative and independent judgment within established procedural guidelines; contributing effectively to the accomplishment of team or work unit goals, objectives and activities; speaking English effectively to communicate in person or over the telephone; establishing and maintaining effective working relationships with those contacted in the course of the work.

**PHYSICAL DEMANDS:**

Mobility to work in a typical office, shop or related maintenance setting, including operating typical trade equipment, hand and power tools and standard office equipment, and to drive a motor vehicle to various work sites; vision to read printed materials and computer screen; color vision and depth perception; hearing and speech to communicate in person or over a radio or telephone. Accommodation may be made for some of these physical demands for otherwise qualified individuals who require and request such accommodation.

**REQUIREMENTS:**
**Equivalent to graduation from high school, and ten years of full-time mechanical, electromechanical, electronic and pneumatic experience with a minimum of five years on an automated transit system including two years lead or supervisory experience. Equivalent to an Associate's degree (A.S.) in a related electrical, mechanical or technical discipline is preferred.**

Licensing and Certification: Must possess a valid Class C Nevada driver's license at time of hire.

Residency Requirement: Permanent employees must maintain a principal place of residency within the boundaries of Clark County and provide proof of compliance with Nevada motor vehicle registration and drivers' license laws within 90 days of employment.

Background Check: Employment with the Department of Aviation is contingent upon completion of an education/experience background investigation, a fingerprint-based criminal history record check processed by the FBI, and upon the ability to be granted a security badge as mandated by the Transportation Security Administration. Note: all prospective hires must present two original government issued ID's upon acceptance of job

Bombardier 000115

offer. Examples of acceptable ID's include a Passport, Driver's License or DMV issued ID, birth certificate, Social Security card, Voter Registration card, school issued ID with picture, etc.

**NOTE:**
This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbent(s) may be expected to perform job-related duties other than those contained in this document and may be required to have specific job-related knowledge and skills.

McCARRAN CAREERS

# Airport ATS Technician I/II

Class Code: N24329

Bargaining Unit: General

CLARK COUNTY DEPARTMENT OF AVIATION
Revision Date: May 23, 2011

**SALARY RANGE**

$17.08 - $26.44 Hourly
$1,366.40 - $2,115.20 Biweekly
$2,960.53 - $4,582.93 Monthly
$35,526.40 - $54,995.20 Annually

**JOB SUMMARY/CLASS CHARACTERISTICS:**

**Performs semi-skilled and skilled work in the maintenance and repair of the Airport's Automated Transit Systems (ATS).**

**EXAMPLES OF DUTIES:**

Performs unskilled and semi-skilled electrical, mechanical, electro-mechanical and pneumatic work in the operation, maintenance and repair of the airport's automated transit systems. Tests, documents and maintains logs and records related to the operations and maintenance of the ATS systems. Troubleshoots complex ATS system and subsystem components to identify problems or failures and implements repairs. Conducts pre-defined inspections on the ATS systems and subsystems to ensure they operate in accordance with design. Maintains and services a variety of test equipment and hand and power tools; keeps inventory of frequently used supplies and hardware; conducts periodic inventory audits. Maintains records of work performed and materials used. Estimates materials, tools and equipment needed for work assignments. Loads and unloads trucks, picks up and delivers materials and equipment, cleans and maintains tools and equipment, and maintains work areas in a clean and orderly condition. Operates and adjusts a variety of hand and power tools and equipment common to maintenance and repair activities. Conducts safety and technical training on ATS related systems and subsystems as assigned; troubleshoots problems and repairs as required. May operate light equipment and drive a truck as assigned. Observes safe work methods and uses safety equipment; attends safety training, technical training and meetings. Utilizes an automated maintenance management system (Maximo) to record and document work performed. Carries out assignments in a non-disruptive manner in areas receiving heavy public use; responds to questions and comments from the public. Cleans trash and other debris from tram guideways, tunnels, stations and maintenance areas.

**QUALIFICATIONS:**

Knowledge of: Airport ATS Technician I: Electronic, mechanical, electro-mechanical and pneumatic systems, subsystems and components related to automated transit systems; use and minor maintenance of commonly used hand, power and general maintenance tools and equipment; safe work methods and safety regulations pertaining to the work; basic record keeping practices.

Bombardier 000117

Airport ATS Technician II: Transit vehicle and wayside systems and subsystems; and methods and materials used, and techniques for operating, maintaining and repairing automated transit systems.

Skill in: Airport ATS Technician I: Safely using and maintaining hand and power tools related to the work; reading and interpreting plans, maps, drawings, schematics, manuals and instructions; understanding and following oral and written directions; preparing basic records and reports of work performed; working without close supervision in standard work situations; contributing effectively to the accomplishments of team or work unit goals, objectives and activities.

Airport ATS Technician II: Performing general ATS maintenance work, individually or as a member of a crew/team; diagnosing electronic and mechanical failures; using initiative and independent judgment within established procedural guidelines.

**PHYSICAL DEMANDS:**

Mobility to work in a typical shop or related maintenance setting, including operating typical trade equipment, hand and power tools and standard office equipment, and to drive a motor vehicle to various work sites; stamina to stand, sit, walk, balance, stoop, kneel, crouch, crawl and climb and to work in confined or awkward spaces for an extended period of time; strength to lift and maneuver materials and equipment weighing up to 100 pounds with proper equipment; vision to read printed materials and a computer screen; color vision and depth perception; hearing and speech to communicate in person or over a radio or telephone. Accommodation may be made for some of these physical demands for otherwise qualified individuals who require and request such accommodation.

**REQUIREMENTS:**

**Airport ATS Technician I: Equivalent to graduation from high school and six (6) years of mechanical, electro-mechanical, electronic and pneumatic experience. An apprenticeship in any of these areas will substitute on a year to year basis for experience.**

**Airport ATS Technician II: In addition to the above, two (2) years of maintenance and repair experience, in the area of automated transit systems.**

Licensing and Certification: Must possess a valid Class C Nevada driver's license at time of hire.

Residency Requirement: Permanent employees must maintain a principal place of residency within the boundaries of Clark County and provide proof of compliance with Nevada motor vehicle registration and drivers' license laws within 90 days of employment.

Background Check: Employment with the Department of Aviation is contingent upon completion of an education/experience background investigation, a fingerprint-based criminal history record check processed by the FBI, and upon the ability to be granted a security badge as mandated by the Transportation Security Administration. Note: all prospective hires must present two original government issued ID's upon acceptance of job offer. Examples of acceptable ID's include a Passport, Driver's License or DMV issued ID, birth certificate, Social Security card, Voter Registration card, school issued ID with picture, etc.

NOTE:

This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbent(s) may be expected to perform job-related duties other than those contained in this document and may be required to have specific job-related knowledge and skills.

McCARRAN CAREERS

# Airport ATS Technician II

Class Code: N24328

Bargaining Unit: General

CLARK COUNTY DEPARTMENT OF AVIATION
Revision Date: May 23, 2011

**SALARY RANGE**

$18.42 - $28.55 Hourly
$1,473.84 - $2,284.00 Biweekly
$3,193.32 - $4,948.67 Monthly
$38,319.84 - $59,384.00 Annually

**JOB SUMMARY/CLASS CHARACTERISTICS:**

**Performs semi-skilled and skilled work in the maintenance and repair of the Airport's Automated Transit Systems (ATS).**

**EXAMPLES OF DUTIES:**

Performs unskilled and semi-skilled electrical, mechanical, electro-mechanical and pneumatic work in the operation, maintenance and repair of the airport's automated transit systems. Tests, documents and maintains logs and records related to the operations and maintenance of the ATS systems. Troubleshoots complex ATS system and subsystem components to identify problems or failures and implements repairs. Conducts pre-defined inspections on the ATS systems and subsystems to ensure they operate in accordance with design. Maintains and services a variety of test equipment and hand and power tools; keeps inventory of frequently used supplies and hardware; conducts periodic inventory audits. Maintains records of work performed and materials used. Estimates materials, tools and equipment needed for work assignments. Loads and unloads trucks, picks up and delivers materials and equipment, cleans and maintains tools and equipment, and maintains work areas in a clean and orderly condition. Operates and adjusts a variety of hand and power tools and equipment common to maintenance and repair activities. Conducts safety and technical training on ATS related systems and subsystems as assigned; troubleshoots problems and repairs as required. May operate light equipment and drive a truck as assigned. Observes safe work methods and uses safety equipment; attends safety training, technical training and meetings. Utilizes an automated maintenance management system (Maximo) to record and document work performed. Carries out assignments in a non-disruptive manner in areas receiving heavy public use; responds to questions and comments from the public. Cleans trash and other debris from tram guideways, tunnels, stations and maintenance areas.

**QUALIFICATIONS:**

Knowledge of: Transit vehicle and wayside systems and subsystems; and methods and materials used, and techniques for operating, maintaining and repairing automated transit systems.

Skill in: Performing general ATS maintenance work, individually or as a member of a crew/team; diagnosing electronic and mechanical failures; using initiative and independent judgment within established procedural guidelines.

Bombardier 000120

**PHYSICAL DEMANDS:**

Mobility to work in a typical shop or related maintenance setting, including operating typical trade equipment, hand and power tools and standard office equipment, and to drive a motor vehicle to various work sites; stamina to stand, sit, walk, balance, stoop, kneel, crouch, crawl and climb and to work in confined or awkward spaces for an extended period of time; strength to lift and maneuver materials and equipment weighting up to 100 pounds with proper equipment; vision to read printed materials and a computer screen; color vision and depth perception; hearing and speech to communicate in person or over a radio or telephone. Accommodation may be made for some of these physical demands for otherwise qualified individuals who require and request such accommodation.

**REQUIREMENTS:**

**Equivalent to graduation from high school and six (6) years of mechanical, electro -mechanical, electronic and pneumatic experience. An apprenticeship in any of these areas will substitute on a year to year basis for experience. Two (2) years of maintenance and repair experience, in the area of automated transit systems.**

Licensing and Certification: Must possess a valid Class C Nevada driver's license at time of hire.

Residency Requirement: Permanent employees must maintain a principal place of residency within the boundaries of Clark County and provide proof of compliance with Nevada motor vehicle registration and drivers' license laws within 90 days of employment.

Background Check: Employment with the Department of Aviation is contingent upon completion of an education/experience background investigation, a fingerprint-based criminal history record check processed by the FBI, and upon the ability to be granted a security badge as mandated by the Transportation Security Administration. Note: all prospective hires must present two original government issued ID's upon acceptance of job offer. Examples of acceptable ID's include a Passport, Driver's License or DMV issued ID, birth certificate, Social Security card, Voter Registration card, school issued ID with picture, etc.

**NOTE:**

This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbent(s) may be expected to perform job-related duties other than those contained in this document and may be required to have specific job-related knowledge and skills.

Bombardier 000121

Exhibit No. Bx23
Witness K. Murphy
Date 6/27/13

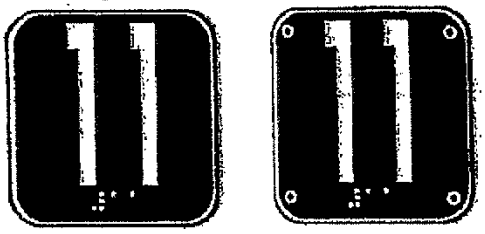
KWD CCR# 711

# EXHIBIT 23

EXHIBIT 23

02571

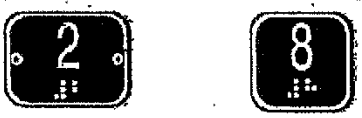
# A.D.A. COMPLIANCE JAMB PLATES



2-3/4" x 2-3/4" with 2" character, grade 2 Braille beneath character, contrasting black background, letters & Braille raised .030. Available with mounting holes or self-adhesive backing.

NICKEL PLATED $5.50 EACH
GOLD PLATED $8.50 EACH

# A.D.A. COMPLIANCE CAR PANEL PLATES



1-5/8" x 1-1/4" with holes — 1-3/8" x 1-1/4" with adhesive

5/8" characters, raised .030 grade 2 Braille beneath characters, contrasting black background.

NICKEL PLATED $3.25 EACH
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Exhibit No. 2
Witness Murphy
Date 12/11/12
KWD CCR# 711

# HORIZONTAL ELEVATORS

by Lawrence Fabian

## ECOPLAN SEEKS BOLD "ACCESS" PARTNERS

Tackling head-on the growing nightmare of urban and suburban congestion and pollution, EcoPlan of Paris has launched a high-level public/private research effort with six pioneering projects under way and several publications in hand. "Public policy should not maximize movement or mobility," states EcoPlan's Eric Britton. "It should maximize individuals' access to needed services. And this has vastly different implications for urban transport policy." Access is a multi-client study to explore and implement these implications.

Two Access pilot projects have started in California (a walk-oriented new town concept and a new city master plan). Two are in Spain (a phased metro program and a detailed implementation plan), one in the Virgin Islands and the sixth in Adelaide, Australia.

EcoPlan seeks progressive, innovative partners who want to take a long view, focus on the needs of citizens in their daily lives and appreciate the systemic complexity of contemporary cities. For more information, contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122.

## OTIS' MULTI-GENERATIONAL PROGRAM

Spurred by strong Japanese interest in automated people movers (APMs) with linear induction-powered vehicles such as built for Duke University, Otis engineers are broadening their horizontal commitments. Their previous focus on back-and-forth shuttles arose from cable's inherent limitations. A new Shuttle Systems Division has been given new resources as an autonomous unit now headed by David Perl. Kris Balch, who oversaw Shuttle activities for many years, will stay within the Engineering Division and work closely with the APM program.

Japanese executives are emboldened by successful opening of two Otis shuttles at Narita Airport and anticipate growing interest in short-range APMs by their government. Several last May visited the Duke system, operating at a private hospital since 1980, and participated in a three-day workshop with high-level U.S. Otis staff to take a long-term view that defines developmental stages and the evolution of APM hardware, software and service capabilities. A linear induction motor (LIM) testing program outside Tokyo is envisioned.

Cable-drawn APMs can be very economical for small installations not requiring high speeds and many stations. Self-propelled vehicles enhance speed and system size. Unique among APM concepts is Otis' lateral docking capability. This is not feasible in cable versions. With air flotation, the Otis APM can move at 90-degree angles, right or left. With side-loading bays off a station guideway, station capacities increase dramatically.

David Perl brings experience with the customer side of Otis' elevator operations in North America to the APM division. He now reports to Otis' President Jean-Pierre van Rooy. Unlike previously reported, Bruno Grob is head of European and Transcontinental Operations.

Continued overleaf



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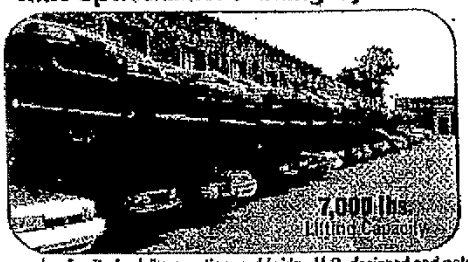

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# HORIZONTAL ELEVATORS

Continued from overleaf

## LAS COLINAS RESOLVES AVAILABLE

An Automated People Mover (APM) Task Force to publicize transportation and development advantages of electronically smart transit was formed at the "APM Prospects in the 1990s" panel discussion and forum organized after the American Society of Civil Engineers (ASCE) Conference in Texas last March by Trans21 and supported by Parsons-Brinckerhoff. A four-page summary of recommendations has been prepared and is available free from Trans21. It can be used to promote hardware-neutral APM interest to public and private officials and the general public.

Also available is a full transcript of the 90-minute discussion. The panel consisted of Ingmar Andreasson of Gothenburg, Sweden; Lawrence Fabian of Boston, Massachusetts; Bernard Scherrer of Paris, France; Lee Rogers of Washington, D.C.; and George Swede of Los Angeles, California.

About 90 people attended the event and many joined the lively, thought-provoking discussion. To obtain the "APM Prospects in the 1990s" transcript, send US $15 to Trans21, P.O Box 249, Fields Corner Station, Boston, MA 02122.

## THE FIRST THREE YEARS OF LAON'S POMA 2000

A report by local officials in the medieval town of Laon two hours north of Paris describes the debugging process that its Pomagalski-supplied automated people mover (APM) has undergone. Opened in 1989, it has become an integral part of daily life. It carries almost 900,000 passengers each year between the lower part of town and the attractive historic city high on a plateau.

Laon's bus ridership has increased 17%. Most bus routes feed the APM. Counting APM ridership separately gives Laon the highest per capita figure in its class size in all of France. Vandalism has been negligible, although fare evasion is somewhat of a problem.

The lower terminus of the three-station shuttle station was integrated with a new underground parking garage. Usage has failed to develop. Paris consultants had predicted almost 700 daily parkers, but it has never exceeded 20. Car traffic up to the plateau has increased 5% from 1987 to 1991, just a hair under the national average. Parking and traffic problems continue in the historic district, but more people have access to it via the "Poma 2000."

The APM provides about 200,000 vehicle-kms of service each year at a cost of US $1.2 million — about US $6/veh-km. There is some uncertainty about future costs because of aging of the hardware. Local officials have created a committee to encourage other cities to consider a Poma installation.

## CHICAGO LAUNCHES $40-MILLION RAYTHEON PRT

With a quiver in his voice and a chill up and down his spine, Chicago Regional Transit Authority (RTA) Chairman Gayle Franzen counted the 10-1 vote to move forward on its personal rapid transit (PRT) program with Raytheon/Taxi 2000. Calling it "pivotal" for public transport, Franzen fully recognized the risk in his experiment. Yet, in the void of Washington attention to transit R&D, Chicago feels obliged to explore new technologies.

The RTA selected Raytheon over Intamin. It committed in principal US $18 million, with Raytheon saying it will add

Continued overleaf



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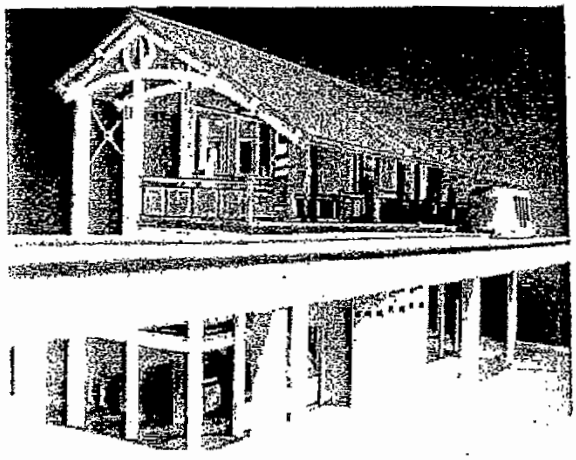
# HORIZONTAL ELEVATORS

Continued from overleaf

US $20 million of its own to build and manage a 1-km (.6-mile), one-station PRT track outside Boston. This will assess an engineering concept aimed at personalized, direct-to-station, taxi-like service over a lightweight network. Raytheon and Swiss-owned Intamin performed cost engineering studies of PRT concepts for the RTA for US $1.5 million each.



In 1995 or 1996 a decision will be made whether to build a 4-km (2.5-mile), eight-station, 50-vehicle PRT for Rosemont, estimated to cost US $42.3 million. Rosemont lies at the gateway to O'Hare Airport and is home to more hotel rooms and meeting facilities than residences. The impact of this program will extend far beyond Chicago and Rosemont. It made the front page of the *Boston Globe* and is being closely watched by PRT enthusiasts and skeptics around the world.

**Swedish PRT Study Enters New Phase**

The Swedish Transport Research Board (TRB) is funding studies of the socio-economic and visual effects of a PRT already analyzed for the small city of Gavle (population 76,000). This US $60,000 effort will include planning models and architectural studies as well as analysis of time saving and reduced pollution. Ingmar Andreasson, whose initial analysis concluded that capacity was not a problem with assumed 1.6-second headways, will now define a workable first phase from the 93-station, 120-km (75-mile) network.

Andreasson is pioneering new concepts for high-speed sections and "point-synchronous" controls to overcome problems of synchronous and asynchronous concepts. He is also involved in a US $2-million study for Gothenburg; a 700-km (435-mile), 674-station network is envisioned! Officials are leaning away from a proposed heavier APM ring toward enhancing the city's extensive light rail lines with PRT.

**And Elsewhere**

Environmental and engineering studies of the SeaTac PRT have been delayed. Local and Seattle regional officials had applied for federal air quality management funds through the Federal Highway Administration. The Federal Transit Administration (FTA) recognized this as a transit project and demanded they restart the process with Seattle's transit agency. A nearby Boeing plant is also exploring a PRT connector to a planned commuter rail station.

Cobb County in Georgia, and Fresno and Irvine in California, are considering PRT as possible modes in their futures. There is a pocket of PRT planning outside Amsterdam Airport, but no known interest at present exists in England, France, Germany or Japan.

## AND MORE THEME PARKS

Despite EuroDisney's financial problems, new theme parks continue to be proposed around the U.S. and elsewhere in the world. Many will include automated people movers (APMs) for viewing, fun and logistics, such as to serve remote parking. Plans may not be detailed enough or public enough to reveal.

*Outside Atlanta, Georgia:* "Gone with the Wind" will be the theme of a 250-ha (620-acre) park in one of three counties vying for this project proposed by Georgia Holding Inc.

*Cape Cod's Dreamworld:* "Virtual reality" attractions would dominate New England's largest theme park, if proponents talking with investors and local officials in the towns of Plymouth and Bourne on the edge of Cape Cod succeed.

*Las Vegas, Nevada:* MGM and Bally's have announced a US $15-million, 1.6-km (1-mile) "monorail" that AEG-Von Roll might supply. Is it real or is it publicity? Developers hope it could be extended from the airport all the way downtown as public transport.

*New Jersey:* Controversial developer Donald Trump and others are proposing a US $50-million amusement complex and US $18-million "monorail" ride away from the Meadowlands sports complex.

*Reno, Nevada:* Circus-Circus has launched a US $230-million themed casino resort in downtown Reno. An APM element is not likely.

*Tokyo, Japan:* Video game maker Namco last year opened Wonder Eggs park devoted to their games. A string of such parks is planned across Asia: Osaka next year, Singapore the next.

*Universal Studios:* MCA expects to build a sequel to its Hollywood and Florida parks in Europe or Japan, perhaps Osaka. A US $80-million "entertainment zone" is also being built at a marine complex near that city. ❑

*Lawrence Fabian is an internationally-known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the subcommittee on Activity Center Circulation of the Transportation Research Board and is vice-chairman of the APM Committee of the ASCE. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the APM Industry Guide and other APM-oriented material. Contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122; tel: (617) 825-2318, fax: 617-482-7417.*

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# HORIZONTAL ELEVATORS

by Lawrence Fabian

## AFFORDABLE TRANSIT SERVICE

The regional bus operator of Uppsala, Sweden, a university city, has completed an 800-m stretch of track; preliminary APM testing has begun. It is working with local companies to develop its own controls which have PRT-like capabilities. A 30-passenger vehicle is being run. So far, a budget of almost US $2 million for a 30-month program is in place. Their main focus is to create premium transit service at an affordable price.

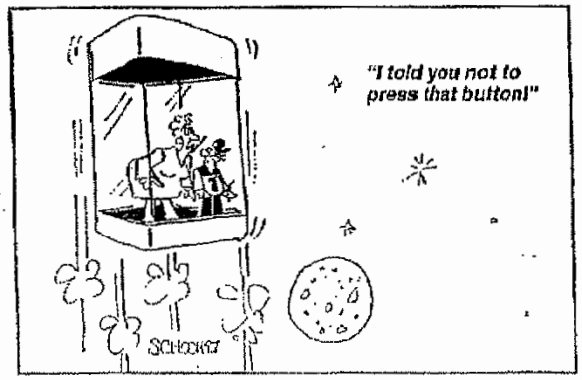
*An early APM vision for Uppsala included a slightly subterranean station in the central area of this Swedish university city. Sketch courtesy of AB Uppsalabuss*

## TORONTO SEARCHES FOR AN APM-LAND VALUE FORMULA

In 1991, a "royal" commission was formed to study potential improvements to the waterfront of Toronto, Ontario. Chaired by a former mayor, it published an exciting vision that disappeared during an economic recession. A trust, however, was formed. With Bombardier input, it managed to examine the feasibility of a 5-km "monorail" connection.

To the east of downtown Toronto, a streetcar has been put into service. The commission also has been looking to the west. One possibility is to extend the trolley. What are the other options? What are the best funding strategies? Consultants IBI were hired to sort out these issues. Preliminary cost estimates have been obtained from Bombardier and Adtranz.

With strong private support, this vision may go forward. Can an acceptable formula for sharing the costs and benefits of an APM be devised? The next step for the Toronto Waterfront would be a more detailed cost/benefit study.




## DIVERSIFYING US $6 BILLION PIPELINE

Trans21's annual compilation of APM projects shows signs of heightened levels of activity, especially for smaller installations. In 1996, the number of active projects jumped to 44, up from 36 at the end of 1995. The dollar total rose only slightly from US $5.9 billion to US $6 billion (systems cost only).

Even more remarkable is the spread to countries without previous APM experience. Today, APM implementations can be found in China, Malaysia, Italy, Switzerland, Finland and Portugal. It can truly be said that APMs have become a global phenomenon.

The greatest growth comes from those projects categorized as institutional – APMs being built to serve more than a single property, but not by the mass-transit operator of that area. There are now 16 institutional projects (plus three test tracks) compared to 10 (plus two test tracks) in 1995.

### New Institutional Arrangements

Institutional APMs are found in resort areas, theme parks, casino complexes, universities and special development districts. Many new financing and public-private arrangements that take advantage of high levels of APM service are to be found in such settings. This is the forefront of APM development.

The tiny Mystic Center project outside Boston, where a US $3 million shuttle is a linchpin to an innovative Park + Ride scheme, is a very promising example. A public-sector promise to lease parking spaces allows a private entity to build a garage. The government needn't front the money or float bonds, and the private owner gains better transit access for office development.

Other large-scale examples are the Copenhagen Orestad line and the JFK International Airport access projects, considered institutional because they are not being implemented by mass-transit agencies. If they are excluded, the average cost of an institutional APM is US $22 million.

### Architectural and Transit Projects

The average cost of an APM of architectural scale – one wholly within a single property – is US $33 million. Almost all are in airports. Requirements to carry substantial flows of passengers, often around the clock, with high reliability increase the costs.

As might be expected, even higher costs are to be found in fully automated mass-transit projects. The average transit-scaled APM is almost US $350 million. Especially when these are built underground, the addition of civil engineering work raises total costs to the billion-dollar project level, which is not uncommon in the world of mass transit.

## TRANSIT-ORIENTED DEVELOPMENT

Coordinating land-use development with transportation is not new; it is at the heart of traditional city-planning theory and practice. In the U.S., accommodating the sprawling effects of freeways and cars and the isolation of U.S. mass-transit planning have worked against transit-oriented development. Most of our cities are pedestrian and transit unfriendly.

In reaction, there is growing interest in the more compact, sidewalk-oriented neighborhoods of the past – a movement which has been dubbed neotraditionalism. One of the best known proponents is California-based Peter Calthorpe.

### Searching for What We Had

Last fall, two separate, but related, mini-conferences were held in Boston, Massachusetts on this topic. The first was organized by the Conservation Law Foundation and entitled "Building Livable Communities Through Transportation." The conference drew an overflow crowd.

In mid-November, Boston's Metropolitan Area Planning Council (MAPC) held a workshop on "Transit-Oriented Development

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# HORIZONTAL *Continued*

(TOD)." It, too, was oversubscribed. Boston already knows what TOD is. Experts and advocates across the country use slides of Boston as examples; however, much is gone. The real question is how to overcome forces against TOD and regain what was lost.

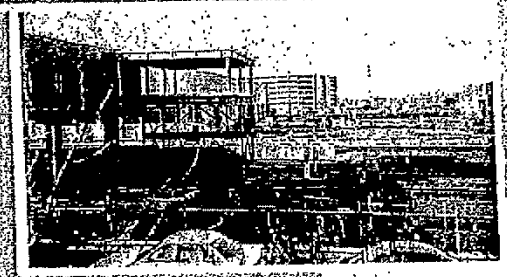
MAPC invited Peter Calthorpe as keynote speaker. While not delving into the quantitative issues of densities and parking demand, he argued convincingly for packing density around light-rail stations. He is open to APMs, saying, "There are possibilities for new technologies."

**Resource Guidebook Available**

California's Local Government Commission (LGC) has produced a guidebook on TOD. It is full of examples, background information and reference material with contact numbers. The 77-page document can be purchased for US $20. For ordering information, contact LGC at phone: (916) 448-1198, or fax: (916) 448-8246. ❑

## Mystic Center Progress Report #1

In ELEVATOR WORLD's December 1996 issue, in the "Horizontal Elevators" column, it was reported that Otis Elevator Company signed a US $3 million contract to develop an extension on the Massachusetts Bay Transportation Authority's (MBTA) Orange Line. As reported, the project provides a new, lighter line of APMs — the Otis Shuttle — linking a newly constructed parking garage and office complex with Wellington Station. The goal of the Mystic Center is to provide an effective alternative to driving into downtown Boston during Central Artery construction. The center will assist in alleviating some of the commuter congestion on Interstate 95's northern corridor. Our Boston correspondent, Larry Fabian, was present at the groundbreaking ceremony, and some photos from his visit accompany this update. Fabian will monitor the construction of this APM project, furnishing photos and descriptions of the development. ELEVATOR WORLD will periodically publish these updates, as they come in from Fabian.



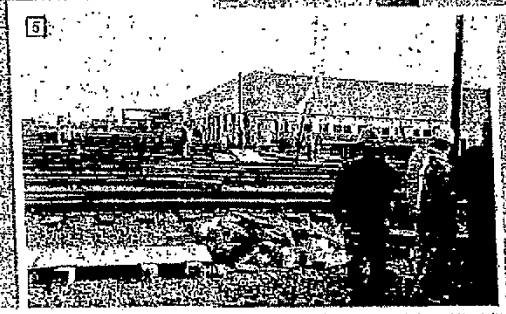


*Photo One — Mystic Center is named after the Mystic River, which passes north of Boston and Cambridge. It is a scene of sprawl in the suburb of Medford. Photo Two — The parking garage can be seen in the background, with the MBTA terminus skeleton kissing the rapid transit station in the foreground. Photo Three — In May of 1996, ground was broken. Massachusetts Governor Weld (at left), the mayor of Medford (at right) and developer (middle) discuss the synergy to be created. Photo Four — Otis Project Manager Frank Bares stands before the parking garage, 900 feet from the MBTA station that the APM will link to. The station will be at the third level of parking, served by two elevators, with room for a third. Photo Five — Footings for the APM columns have to be carefully spaced between rail track, on their way to the shuttle terminus at the MBTA rail station.*

*Lawrence Fabian is an internationally known expert in advanced transit technologies, particularly automated people movers (APMs). He chairs the subcommittee on Activity Center Circulation of the Transportation Research Board and is a member of both the APM Committee of the ASCE and the APA Transportation Planning Division. Fabian also publishes a bimonthly newsletter, a biweekly faxed advisory service, the APM Industry Guide and other APM-oriented material. Contact Trans21, P.O. Box 249, Fields Corner Station, Boston, MA 02122; phone: (617) 825-2318, fax: 617-482-7417.*

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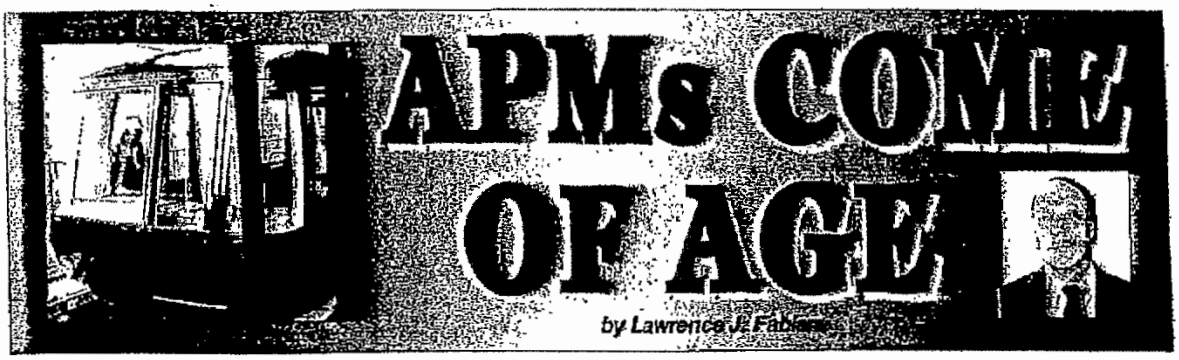


# APMs COME OF AGE

by Lawrence J. Fabian

Sometimes we move up; sometimes we move over. Today's building complexes extend beyond tolerable walking distances and can benefit from an interesting new menu of people-moving options. Include parking and transit access, and the possibilities of using automated people movers (APMs) become even more interesting.

As the power of microchips, logic controls and computers has crept into almost every facet of modern-day life, it is not surprising that elevators have become more intelligent. It doesn't take a rocket scientist to flip an elevator over on its side to expedite horizontal movements.

Horizontal elevators, horizontalators, shuttles, people movers, automated people movers – APMs; call them what you may. Several brands of driverless APM systems exist that run spiffy vehicles inside buildings and out over guideways between. Such guideways are light and quiet compared to the Chicago El. They may dramatically change the way "Edge City" inhabitants around the world go about their business.

Heavier, more expensive APMs cost $30-70 million per kilometer, putting them out of range of all but flamboyant Dallas developers and capacity-constrained world airports having good cash-flow situations.

Lighter versions of APMs carry fewer people. Even lighter versions have been designed specifically to link distances of only a few kilometers, even less. A three-kilometer (two-mile) loop with three or four stations is not uncommon. In fact, French transport researchers have created a new term for them – *hectometrique*. The term "hectometric" means of, or pertaining to, one-hundred meters (325 feet) or so, perhaps three, or even five hundred. In such settings, it makes economic sense to have vehicles as passive as possible. System costs can be as low as $5-10 million per kilometer. Some inventors claim that $1-2 million should be enough.

**Where Does an APM Make Sense?**

Where, beyond downtown, high-rise buildings, do elevators exist? Where twenty or so elevator groups are in close proximity but beyond reasonable walking distance, an APM makes sense. Imagine a large medical or educational complex. It needs to expand and has no adjacent space. The only nearby sites are badly needed parking lots and garages. Displacing them would be poking into a hornet's nest of institutional politics. This is not an uncommon dilemma for institutional planners.

About 20 years ago, planners at Duke University Hospital in Durham, North Carolina devised a remote expansion with a horizontal elevator integrating the new with the old facility. This avoided the need to duplicate many services in the new facility, and also created a link with a remote parking garage. The APM at Duke, supplied by a division of Otis Elevator Co., has been carrying staff, patients, visitors and hospital supplies since 1980.

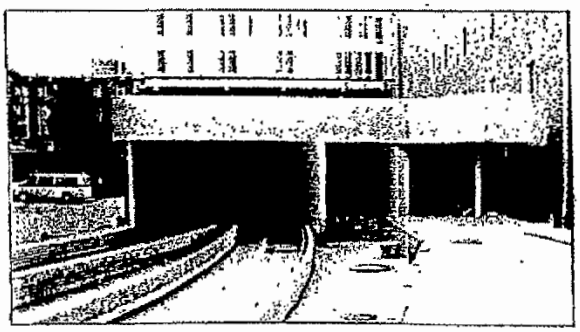
Large universities may have an even greater need for horizontal mobility. For example, Ohio State University (OSU) in Columbus, Ohio has over 50,000 students, a staff of over 10,000 and a massive parking nightmare. OSU has vast acreage on one side of a river, while on the other side along High Street, a congested, parking-starved concentration of academic facilities at its main precinct suffocates. But make

Continued >

**Number of Operating APMs by Setting**
**Fall 1994**

| | |
|---|---|
| URBAN MASS TRANSIT | 18 |
| Line-haul in major corridor | 8 |
| Feeder to line-haul | 8 |
| Local circulation | 2 |
| AIRPORTS | 20 |
| Terminal-to-terminal | 15 |
| Terminal-to-parking, transit, hotel, etc. | 5 |
| LEISURE SETTINGS | 22 |
| Private theme parks | 7 |
| Zoos | 6 |
| Fairgrounds | 1 |
| Casino complexes | 6 |
| Other | 2 |
| INSTITUTIONAL | 18 |
| Special public/private entities | 6 |
| Universities | 2 |
| Shopping malls | 3 |
| Hospitals | 2 |
| Other | 5 |

Source: Transit



*Gentle curves grace the APM guideway as it approaches the Duke University Hospital in Durham, North Carolina. It carries patients, staff, visitors and supplies to a new facility and remote parking.*

expansion sites on the far side more desirable to jealous academics and grumbling students? Planners are looking at a "monorail-type" solution to integrate the two river banks and link to a light rail line that the city of Columbus has proposed.

APMs have found a solid and growing niche in the world of airports, with 15 systems already operational. The APMs connect sprawled airport terminals and allow space for huge aircraft to maneuver on runways. Several more airport projects are underway, with dozens more in the planning stages.

Air travel grows about 6% a year worldwide, creating pressure to enlarge existing airports. Some areas must create new facilities, such as the recently opened airport (with an APM) outside Denver (see ELEVATOR WORLD's July 1994 issue). It is no exaggeration to say APMs have revolutionized the manner in which airport planners work. Attention is now turning to adjacent, off-airport development and regional ground access.

Expansion is often a problem in office complexes and retail malls. Compaq Computer's world headquarters for administration, manufacturing and distribution are located at a huge corporate campus outside Houston, Texas. The corporate philosophy places great value on its high-tech employees, facilitating the cross-fertilization of their creative intellects. With major expansion imminent, it is considering a sophisticated APM.

"Edge Cities" are growing on the periphery of our metropolitan areas. These are the brave, new worlds of urban life. Typically, a few major office and retail developments emerge around a major intersection of interstate highways, often near an airport. Then, more office centers are added, and perhaps, an apartment complex or two. Soon, this interstate interchange has all the makings of a city: a high population density, traffic congestion and parking problems. But it doesn't look like what is traditionally recognized as a city. There is no urban culture and no way to travel from A to B without jumping in a car and weaving through ramps and intersections, ultimately walking through a large parking lot.

"Edge City" Expert Joel Garreaux feels the challenge of the 1990s is to diversify the mix of activities in these suburban nodes, facilitating the way people move around, bumping into old friends and making new ones along the way. APMs can enliven the sometimes sterile plains of the "Edge City," making life in the 21st century a bit more meaningful. To say this will translate into high real-estate values for the trailblazers would not be misleading.

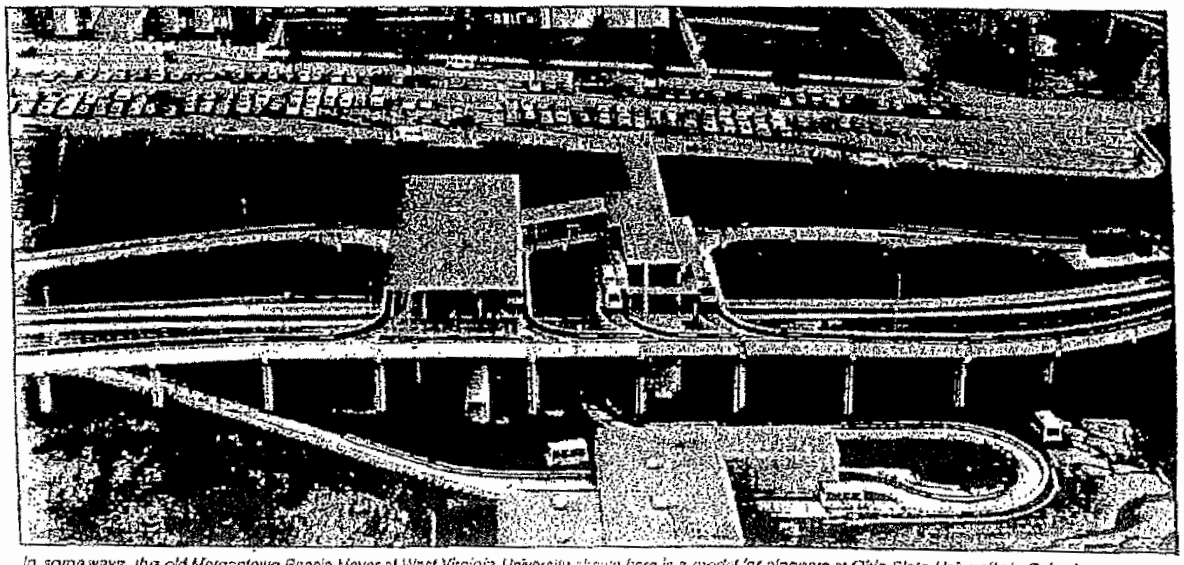
The other place where APMs can fit in is where an owner or developer seeks to combine transportation with an experience. Does a commercial complex have interesting vistas that would draw extra visitors? Are there narrative messages, such as the history of the areas, which can be conveyed to visitors? Is a special identity for a mall or office park desired? An APM might satisfy enough of these desires to make its installation worthwhile. APMs have already found niches in zoos, world expos and flower shows.

Are people looking to be entertained or thrilled as they ride along in an APM? A recent spate of projects has emerged in casinos. Las Vegas, alone, hosts five systems, plus another two at the airport and at Whiskey Pete's on the California state line. In addition to transportation, can passengers be sold telephone or computer time? Want to advertise what's available at the next station? This may attract more passengers and help pay the cost of the APM.

**When a Moving Walk? When an APM?**

The desire to provide a means of transportation over short distances is not new. Public and private organizations have been operating shuttle buses in thousands of locations for decades. The problem: operating costs are fairly high, and the level of service fairly low. Light-duty vans can cost upward of US $50,000. Heavy-duty buses are closer to US $200,000 each. The ride is often uncomfortable, and buses contribute to air pollution. Battery-powered vans are even more expensive, and recharging is awkward and time-consuming.

Bus or van shuttle services are limited by the availability and cost of drivers. To passengers, waiting five minutes can seem like fifteen, especially when they only seek to go a kilometer or so. The layout and congestion of the roadways to be traversed also have a major impact on the quality of service. If a thousand people want to travel over the course of an hour, at least 30



*In some ways, the old Morgantown People Mover at West Virginia University shown here is a model for planners at Ohio State University in Columbus to connect their congested main campus to remote expansion and parking sites.*

"runs" have to be made. This increases operating costs dramatically. Service is also slowed as individuals climb in and out of vehicles. Vans get in each other's way. Higher volumes require for another kind of people-moving solution.

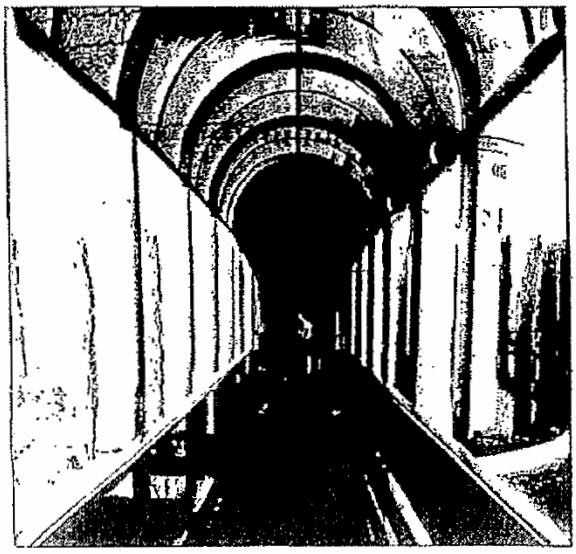
In some cases, high passenger volumes over fairly short distances may be better served by moving walkways. These continuous people-conveyors are horizontal versions of escalators, and generally, walkways move at not more than five kilometers

*Even at its best, bus shuttles offer a modest level of service. When demand surpasses 1,000 passenger/hour, an APM may be a cost-effective alternative.*

per hour (three mph) – about the speed at which most people walk. Individuals walking on moving walks can double their travel speed. Practically, a moving walkway should not extend more than one hundred meters. Longer distances can be served by stringing units together along a corridor.

Some moving walks use rubber belts. More expensive units (about 50% higher) use metal "pallets". The unit's cost depends on length. A pallet-version of about 50 m (165 ft) comes out to about US $6,000/m (US $1,800/ft). A larger installation of about 150 m (500 ft) would cost about US $4000/m (US $1200/ft).

Technology is not the major barrier to higher speeds, rather, the safety of individuals stepping on and off the moving walkway. Several attempts have been made to create walkways that accelerate. None has yielded a system that shows promise at



*Moving walks assist pedestrians but are limited in length and speed.*

reasonable cost. Some work in this area continues, but it is unrealistic to expect that moving walks could ever go much beyond 15 km/hr (10 mph), at any cost. Heavy maintenance for an accelerating-type would be a factor.

When neither shuttle buses nor moving walks satisfy the need to move thousands of persons per hour over a distance of a few hundred meters, an APM should be considered. The formal definition of an APM is a passenger transport system in

*The German H-Bahn uses vehicles suspended from the guideway rather than running atop. A similar system has operated at Dortmund University for years.*

which relatively small vehicles run over exclusive guideways with enough electronic intelligence that neither the vehicles nor the stations require attendants. Some mistakenly use the term "monorail" interchangeably with APM. However, the emphasis should be on the electronic smarts rather than aspects of the vehicle/guideway interface.

Various technologies are used for propulsion and suspension. In some systems, vehicles run atop guideways, while in others, cabins are suspended from guideways. Although guideways can be built underground, or – in special circumstances – at grade, they are generally designed to be elevated. Guideways and stations can be integrated into buildings. Vehicle sizes and configurations vary by system, and can be further tailored to specific needs.

There are three basic types of APMs: hectometrics, light guideway and personal rapid transit. The already-described "hecto" is a short-distance back-and-forth shuttle, or perhaps, a slightly longer line with three or four stations. A hecto is really best applied, though, as a modest back-and-forth shuttle with moderate curvature. Often, a single lane enhanced by a short, two-way section in the middle is sufficient and less costly.

With such reduced demands for operations, a hecto can use greatly simplified technology. Major economies can be gained by removing the motor (and its weight) from the vehicles, putting it at one end of the installation and driving a cable attached to vehicles, similar to elevator and gondola technology. Wayside propulsion also removes the need to furnish electric power over the length of the guideway. Power for lighting and HVAC can be supplied by batteries that recharge during station stops.

Light APMs are capable of serving longer distances with multiple stations. A string of stations along a corridor with generous curves and gradients of a dozen kilometers, or even longer (5-15 miles), is possible. Double-guideways for two-way operation are common, but variations exist. One four-station APM with only one lane operates in Austria. One-way loops are preferable and more economical.

Essentially, light guideway systems are an electronically smarter and down-scaled version of trolleys and subways, which public transport specialists call "light" and "heavy-rail"

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transit. Several destination areas are linked into a line-haul corridor. Thousands of passengers are transported (some would say herded) to their station of choice. Of course, they have to stop at every station along the way and rub elbows with scores of strangers.

The slow and non-private service of guideway systems can be avoided with the third type of APM. Personal rapid transit -- or PRT for short -- aims at taxi-like service over an entire network of guideways. The key is in arranging stations off the main guideway so that stopped vehicles do not block traffic flow. To passengers, this means their vehicle needn't stop at stations along the way to their destination, or be confined to a single corridor in the network. PRT vehicles can be programmed directly to any station in the entire system. Planners can link any number of destinations without concern to string them into a linear corridor.

**What Are Your Transportation Needs?**

Needs depend upon the circulation patterns in and around the building complex being dealt with. What distances can employees and visitors be expected to walk comfortably? What are their travel needs? What centers definitely need to be served, and where are the best access locations? How to estimate the numbers to use an APM, or one of its alternatives, if a decision is made to install one?

In discussions with APM suppliers, it is easy to move too quickly into design decisions based upon their hardware characteristics. A trend among APM planning consultants is to shift specification writing to performance characteristics. The single, most-important performance variable is capacity. What is the maximum number of people to be transported in a peak hour past a certain point? If it is only 250, an APM is unlikely to be justifiable. Is it 1,000 or 4,000? The number will make a tremendous difference as to whether or not a given supplier can satisfy the needs.

How steady or bunched will the passenger flow be? Surges of several hundred people are common, as when jumbo jets unload at airports, or trains at stations. In such cases, it makes sense to specify capacity in smaller time intervals. For example, a specification might read, "Capable of carrying 1,200 people in 12 minutes," instead of merely providing an hourly figure. In other applications, there will be steadier passenger flows, and specifying an hourly capacity will be sufficient.

Travel needs should be specified in detail. Average wait and travel times address the desired frequency and speed of service. Comfort is covered by specifying maximum allowable acceleration, deceleration, jerk and sway rates. Other items deal with the degree of heating, air conditioning and lighting desired in the vehicles. How much passenger seating should be available?

Measures of service quality should be clearly defined. What levels of service degradation and failure are tolerable? Marathon theoretical debates (and tough legal battles) have been fought over how to calculate "system availability". Alternative measures of "dependability" and "reliability" exist. Measures of "Mean Time Between Failures" and "Mean Time to Restore Service" add to the confusion!

APMs have been quite successful at attaining extremely high levels of service. They are quietly and regularly available for service. Specifications typically call for 99% availability. There may be more problems in defining than in attaining the specified measurement.

**What Standards and Information Apply?**

New technology and the APM industry are still evolving. Few standards are written specifically for APMs. The National Fire Protection Association (NFPA) ruffled many feathers in the APM community a few years ago by extending standards for rail transit to APMs. Major design complications arose with the requirements of a three-hour fire safety wall between station areas and adjacent buildings. NFPA 130 also requires a constantly present, dedicated person at the APM's control post. Most APM professionals believe this excessive for smaller, simpler systems.

To investigate the feasibility and desirability of setting APM standards, a group of APM professionals launched a study in 1988, are now a formally functioning part of the American Society of Civil Engineers (ASCE) and have published draft standards for APM controls. Others dealing with guideways, stations, vehicles, propulsion and braking, measures of reliability and operating environments will follow, and they have reviewed Australian standards that were published in 1991. It is fair to say that this book is far from closed, and some suppliers and other professionals worry that a premature rush to standardization will stifle innovation.

Las Vegas's Clark County has what seems to be the most developed APM safety codes. These carefully define the procedures that operators must follow in the event of system failure or an accident, which officials should be notified and how soon, and what must be done before the "amusement-and-transportation ride" can re-open to the public.

*This APM was one of three quickly installed and now operating in Las Vegas. Visitors glide between two of the casino/entertainment complexes, requiring local officials to enact standards for reporting accidents and safe re-opening.*

Many questions must be answered before an APM can economically and safely become part of any building complex's future. Several sources of information on APM planning exist:

- *Characteristics of Urban Transportation Systems*, published by the U.S. Department of Transportation, Federal Transit Administration, Report DOT-T-93-07, revised September 1992.
- *American Society of Civil Engineers*, proceedings of a series of conferences: APMs-I (1985), APMs-II (1989), APMs-III (1991) and APMs-IV (1993). Available from ASCE, New York.
- *Proceedings of the International Symposium on Technological Innovation in Guided Transports*, 1993. Available from INRETS in Lille, France.
- *A Planner's Guide to APMs*, 1994. Available from Trans21, P.O. Box 249, Fields Corner Station, Boston MA 02122.; phone (617) 825-2318; fax: 617-482-7417.

*Lawrence J. Fabian is director of Trans21, an information clearinghouse on international APM developments, located in Boston, Massachusetts. He has over 25 years of urban planning experience and publishes a newsletter on APM developments.*

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Author Lawrence J. Fabian will be on hand in one of the "Meet the Author" rooms at the National Association of Elevator Contractors' World Elevator Expo '95 on October 6-11, 1995 in Boston. He will make a few short remarks concerning his paper, updating if appropriate. Thereafter -- for 30 minutes -- he will answer questions from the attendees, or guide discussion of the subject. Copies of this paper will be available prior to the gathering. **02580** *Editor*

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Witness K. Murphy
Date 6/27/13

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# EXHIBIT 24

EXHIBIT 24

Exhibit No. 3
Witness Murphy
Date 12/11/12
KWD CCR# 711

# APM Standard ASCE 21

by Lawrence L. Smith, PE

The American Society of Civil Engineers (ASCE) Automated People Movers (APM) Standards Committee met in Dallas on January 18-19 and resolved to further its commitment to alert elevator-industry allies regarding safety concerns and the APM Standard ASCE 21. There appears to be misunderstandings of the APM standard within parts of the elevator and APM communities, and how the standard conflicts with the intent of the so-called "Model Elevator Code" (MEC) as promulgated by the Elevator Industry Work Preservation Fund (EIWPF). The EIWPF MEC calls for elevator contractors and inspectors to take over jurisdiction of design, construction, operation, inspection, maintenance, alteration and repair of APMs, and that conflicts with the requirements of ASCE 21, which establishes a minimum set of requirements necessary to achieve an acceptable level of safety and performance for an APM system.

ASCE 21 was created by a consensus process including balloting by a balanced standards committee made up of ASCE members and nonmembers, balloting by the membership of the ASCE as a whole and balloting by the public. The ASCE has requested that the EIWPF simply remove the pasted-in addition of APMs, and the traditional MEC would remain a viable elevator safety code for states.

ELEVATOR WORLD is well known for promoting safety and has a commanding reach in the elevator industry; therefore, the ASCE would appreciate the publication of the following letter which has been sent to state professional engineering boards and APM regulatory agencies in the U.S. This can help draw attention to the issue and stimulate a dialogue within the industries to prevent any misuse or misunderstanding of ASCE 21, and ASME A17.1 and A17.3.

*Lawrence L. Smith is secretary for ASCE's APM Standards Committee.*

I am including herein the complete position letter. This was developed after corresponding with the managing director of Codes and Standards for ASME regarding ASME QEI-1, and careful analysis of provisions of ASCE 21 and the EIWPF's MEC.

***Letter to Professional Boards & Regulatory Agencies***
*December 6, 2006*

*Subject: Issues Related to Design, Construction and Inspections of Automated People Mover Systems.*

*Many states utilize American Society of Mechanical Engineers (ASME) A17.1, the* ***Safety Code for Elevators and Escalators*** *and ASME A17.3, the* ***Safety Code for Existing Elevators and Escalators*** *as their primary, if not total, regulatory requirement for such equipment. As a result of the ongoing careful attention rendered by the professionals on the A17 Standards Committee, these safety codes have achieved an exceptional level of acceptance and are highly regarded by designers, manufacturers, users and regulators.*

*In the past few years, the "Elevator Industry Work Preservation Fund Serving the International Union of Elevator Constructors" has been advocating the states, with considerable success, to adopt supplemental elevator safety regulations using, as a basis, a "Model Elevator Code" (MEC) developed by this group. This MEC draws extensively on the various ASME codes pertaining to elevator/escalator safety, including ASME QEI-1,* ***Standard for the Qualification of Elevator Inspectors.*** *To the extent that such activity reinforces the safety theme of the ASME codes, the various groups involved in promoting and implementing the MEC should be commended.*

*However, the MEC covers not only elevators, escalators and moving walkways, but also Automated People Movers (APMs). With regard to safety and performance requirements for APMs, the MEC cites ASCE 21, Automated People Mover Standards, which has been developed under our organization's aegis. The Automated People Movers Standard committee of the American Society of Civil Engineers (ASCE) certainly has no concern with the MEC promoting adoption of our APM standard by the various states. However, a review of the language contained in the MEC does disclose a serious safety concern in that construction, inspection and maintenance aspects of "automated people movers" have been lumped in with the requirements for elevators,*



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*escalators, and other related equipment covered by the aforementioned ASME codes. Quoting from the MEC,* ***"It shall be the responsibility of the owner of all conveyances to have a licensed Elevator Contractor, as described herein this chapter, insure that the required tests are performed at intervals in compliance with the ASME A17.1, ASME A18.1 and ASCE 21."*** *Nowhere in the ASME A17, ASME A18 or ASME QEI-1 Codes is there any suggestion of addressing any equipment other than elevators, escalators, platform and stairway chair lifts, dumbwaiters, material lifts and moving walks, yet the MEC states (through inclusion) that only a QEI, certified within the ASME QEI-1 parameters, shall be allowed to inspect Automated People Mover Systems during their design, construction, operation, inspection, testing, maintenance, alteration and repair.*

*An individual who has achieved QEI status most likely has skills which could be helpful in becoming an APM inspector, but the implication that elevators and APMs are technologically the same is seriously flawed. To cite simply one or two key differences, APMs can be free running, with headway and switching safety issues not of concern to elevators or escalators. Also, APMs can operate in trains which generate buffing loads and coupling/uncoupling safety issues.* ***These related but vastly different conveyances require technology specific safety standards.*** *We view the extension of the use of the ASME QEI process to APMs as a gross misuse/abuse of professional standards which poses safety concerns for virtually any APM system and will conflict with inspection, maintenance and testing requirements presently being developed by the ASCE APM Standards Committee.*

*We have transmitted these concerns to the ASME. William Berger, ASME managing director, Technical Codes & Standards has concurred in a letter of August 3, 2005 (copy attached) ". . .that the ASME QEI-1 Standard for the Qualification of Elevator Inspectors is not intended to apply to inspectors who are conducting inspections of equipment that are covered under the scope of the ASCE 21 Standard on Automated People Movers."*

*The standards developed by our committee ". . . establish the minimum set of requirements necessary to achieve an acceptable level of safety and performance for an APM system." (ASCE 21, Foreword). Because of our mutual responsibility for the safe operation of APM systems we are providing you with the above information to guide in any deliberations with regard to incorporating the MEC into any proposed state legislation.*

*Jonathan C. Esslinger, P.E.*
*Director, Transportation & Development Institute of ASCE*



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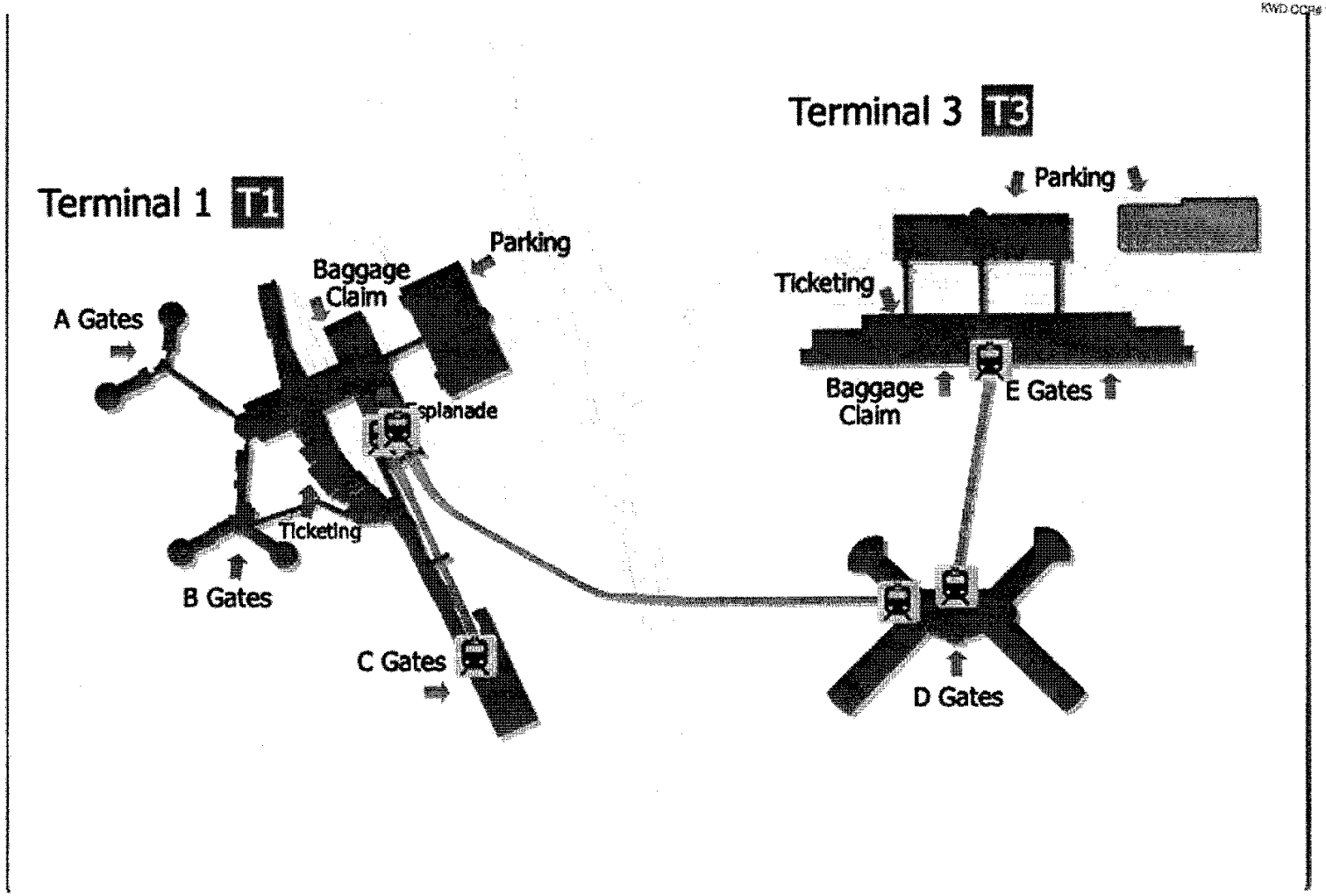


Exhibit No. B x 26
Witness R. Ryan
Date 10/20/16
KWD CCR# 711

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B-26

**Work Instruction**
**P.M. 305 (C, D and T3 Systems)**
**Guide Spindle / Tire Inspection**

Exhibit No. Bx 26
Witness R. Ryan
Date 6/25/13

KWD CCR# 711

**1.0 Safety Requirements**

1.1 Lockout / Tagout (SOP # 100)
1.2 Safety glasses
1.3 Bump cap

**2.0 Tools / Materials**

2.1 ½" drive ratchet
2.2 ½" drive 1-7/16 " socket
2.3 Side cutter
2.4 Bottle jack
2.5 Grease cap removal tool
2.6 Grease cap installer
2.7 Guide tire gauge
2.8 Dial Indicator
2.9 Permatex
2.10 Cotter pin (P/N 3A63290H31)

**3.0 Instruction**

| WARNING |
|---|
| **Remove rail power prior to performing any maintenance under the vehicle.** |

3.1 Check Spindle / Tire Endplay

3.1.1 Position the bottlejack between the side of the running surface and the safety disc to jack the bogie over so that the tire on the opposite side becomes free of the guide beam.

3.1.2 Position the dial indicator in the center of the safety disc and measure the endplay. Grip the tire with both hands and try to move it in an up and down motion.

3.1.3 If endplay is found to be greater than .009 inches, the following adjustments will be necessary:

3.1.3.1 Remove the grease cap and pull cotter pin. Throw away cotter pin **(never reuse cotter pins).**

3.1.3.2 Tighten the castle nut ¼ of a turn and replace cotter pin.

3.1.3.3 Recheck endplay.

3.1.3.4 Gently install the grease cap.

3.2 Inspect Guide Tire

| NOTE |
|---|
| **If any of the following conditions result in changing of a tire, replace only the bad one.** |

3.2.1 While tire is still free to turn, rotate and listen for bearing noise and any vibration occurring. If noise and or vibration are detected, contact the shift leader.

3.2.2 Check the outer guide tire diameter, using the aluminum guide tire gauge. Ensure that the minimum diameter is greater than 15.625 inches by placing it over the tire in a cross pattern. The gauge should not slide over the tire.

3.2.3 Check tires for cracks, cuts, pits and any unusual wear.

3.3 Visually inspect the guide tire rims for any cracks. Replace guide tire, if needed.

3.4 Inspect Guide Spindle Shafts And Hardware

3.4.1 Check the guide shaft for any unusual condition.

3.4.2 Check that all associated hardware is intact and safety wire is in place around rim bolts and shaft mounting bolts.

3.5 Inspect Heat Dots

3.5.1 Verify both heat dots are not black. Replace spindle if both are black.

3.5.2 Check for excessive grease leakage from upper seal and around the grease cap. Replace heat dot if grease has compromised detection capability.

3.6 Repeat above steps for each guide spindle on the train.

## 4.0 Reference

4.1 McCarran International Airport ATS C-Gates, D-Gates, Terminal 3 Vehicle Equipment Manual

4.2 Field Service Bulletin #123

## 5.0 Quality

5.1 Lead tech to verify all measurements, changed parts, and all adjustments made are within specifications.

5.2 Ensure all parts and tools are clear of I-beam and running surface prior to returning train to revenue service.

**Work Instruction**
**P.M. 500 (D System)**
**Replace Guide Spindle**

## 1.0 Safety Requirements

1.1 Lockout / Tagout (SOP # 100)
1.2 Safety glasses
1.3 Bump cap
1.4 Gloves, Leather Palm

## 2.0 Tools / Materials

2.1 ¾" drive impact wrench
2.2 ¾" drive 1-1/8" impact socket
2.3 ¾" drive torque wrench
2.4 Wire cutters
2.5 Safety wire pliers
2.6 Bottle jacks (2)
2.7 Jack stands (2)
2.8 Lift table
2.9 Wood blocks, 4"x 4" (2)
2.10 Red tags
2.11 Shop rags
2.12 Safety Wire (Type 302/304, 0.320 dia.)

## 3.0 Instructions

| NOTE |
|---|
| **Before starting the installation of any rebuilt spindles, you must ensure the proper paperwork has been produced and signed for each spindle. Installer must ensure sufficient grease, cotter pin present, washer installed and permatex seal on end cap. Make sure all initials and dates are correct.** |

3.1 Before powering down vehicles, position train so spindles can be removed using the lift table.

| WARNING |
|---|
| **Remove rail power prior to performing any maintenance under the vehicle.** |

3.2 Cut safety wire from all spindle bolts and discard.
3.3 Position lift table with 4x4 blocks under the guide spindle to be removed. Raise table until blocks just touch guide tire.
3.4 Using impact wrench and socket, remove mounting bolts while holding spindle. When free from bogie mount, lower table and replace with new or rebuilt spindle (ensure key is returned to its proper position).

| NOTE |
|---|
| **The car body end may need to be raised to access the top spindle mounting bolts, nearest the brake package.** |

3.5 Attach a red tag to removed spindle indicating date, car, position, and initials.
3.6 Torque spindle mounting bolts to 250 ft/lbs.
3.7 Safety wire mounting bolts according to company standards.
3.8 Follow steps 3.3 through 3.7 for all eight (8) spindles.

3.9 Ensure all paperwork is filed properly in "Guide Spindle Rebuild Log".

## 4.0 References

4.1 McCarran International Airport ATS C-Gates, D-Gates, Terminal 3 Vehicle Equipment Manual.
4.2 Work Instruction 305.
4.3 Field Service Bulletin #123.

## 5.0 Quality

5.1 Lead tech to verify all replacement parts are correctly mounted and safety wired properly.
5.2 Ensure all tools and materials are clear of guideway and running surface, prior to returning train to revenue service.

**Work Instruction**
**P.M. 601 (C and T3 Systems)**
**Replace Guide Spindle**

## 1.0 Safety Requirements

1.1 Lockout / Tagout (SOP # 100)
1.2 Safety glasses
1.3 Bump cap
1.4 Gloves, Leather Palm

## 2.0 Tools / Materials

2.1 ¾" drive impact wrench
2.2 ¾" drive 1-1/8" impact socket
2.3 ¾" drive torque wrench
2.4 Wire cutters
2.5 Safety wire pliers
2.6 Bottle jacks (2)
2.7 Jack stands (2)
2.8 Lift table
2.9 Wood blocks, 4"x 4" (2)
2.10 Red tags
2.11 Shop rags
2.12 Safety Wire (Type 302/304, 0.320 dia.)

## 3.0 Instructions

| NOTE |
|---|
| **Before starting the installation of any rebuilt spindles, you must ensure the proper paperwork has been produced and signed for each spindle. Installer must ensure sufficient grease, cotter pin present, washer installed and permatex seal on end cap. Make sure all initials and dates are correct.** |

3.1 Before powering down vehicles, position train so spindles can be removed using the lift table.

| WARNING |
|---|
| **Remove rail power prior to performing any maintenance under the vehicle.** |

3.2 Cut safety wire from all spindle bolts and discard.
3.3 Position lift table with 4x4 blocks under the guide spindle to be removed. Raise table until blocks just touch guide tire.
3.4 Using impact wrench and socket, remove mounting bolts while holding spindle. When free from bogie mount, lower table and replace with new or rebuilt spindle (ensure key is returned to its proper position).

| NOTE |
|---|
| **The car body end may need to be raised to access the top spindle mounting bolts, nearest the brake package.** |

3.5 Attach a red tag to removed spindle indicating date, car, position, and initials.
3.6 Torque spindle mounting bolts to 250 ft/lbs.
3.7 Safety wire mounting bolts according to company standards.
3.8 Follow steps 3.3 through 3.7 for all eight (8) spindles.

3.9 Ensure all paperwork is filed properly in "Guide Spindle Rebuild Log".

## 4.0 References

4.1 McCarran International Airport ATS C-Gates, D-Gates, Terminal 3 Vehicle Equipment Manual.
4.2 Work Instruction 305.
4.3 Field Service Bulletin #123.

## 5.0 Quality

5.1 Lead tech to verify all replacement parts are correctly mounted and safety wired properly.
5.2 Ensure all tools and materials are clear of guideway and running surface, prior to returning train to revenue service.

**Rebuild Instruction**
**R.I. 116**
**Guide Spindle Assembly**

**1.0 Safety Requirements**

1.1 Eye Protection
1.2 Gloves, Long Sleeve Vinyl
1.3 Gloves Leather palm

**2.0 Tools / Materials**

2.1 Cap removal pliers
2.2 Wire cutters
2.3 Impact wrench
2.4 ¾" impact socket
2.5 ½" drive ratchet
2.6 1-7/16" socket
2.7 1/2 drive torque wrench
2.8 Hammer
2.9 Pliers
2.10 Screwdriver-Flat
2.11 Grease Gun
2.12 Long brass drift punch
2.13 Pry-bar
2.14 Bearing cup driver set
2.15 Endplay micrometer
2.16 Shop Rages
2.17 Paper Towels
2.18 Hydraulic Press
2.19 Bearing Packer
2.20 Spindle Jig
2.21 Digital vernier micrometer
2.22 Crescent wrench
2.23 Lower Bearing Driver (1C44423H01)
2.24 Upper Bearing cup Driver (1C44422H01)
2.25 Outer Grease Seal Driver (1C44424H01)
2.26 Dust Shield (2539B87H01)
2.27 Dust Shield Driver (1C44418G01)
2.28 Inner Grease Seal (404P547H04)
2.29 Outer Grease Seal (404P546H07)
2.30 Lower Bearing Cup (P/N 404P546H03)
2.31 Lower Bearing Cone (P/N 404P546H04)
2.32 Upper Bearing Cup (P/N 404P546H01)
2.33 Upper Bearing Cone (P/N 404P546H02)
2.34 Upper Grease Seal (P/N 404P547H07)
2.35 Heat Sensitive Labels (404P352H32)
2.36 Sealant
2.37 Degreasing Solvent
2.38 Cotter Pin (P/N 3A63290H31)

**3.0 Instructions**

3.1 Disassembly

3.1.1 Support spindle #9 in jig or stand. Cut safety wire and remove. Remove the 5 bolts #6 that hold the wheel #2 to the wheel hub and safety disk #8. Shown on pages 3, 4 and 5.

3.1.2 Remove grease cap #19 from the safety disc assembly #8. Shown on pages 6 and 7.

3.1.3 Remove and discard cotter pin #21 from castle nut #5 Inspect castle nut threads. Remove large washer #22 and keyed washer #23 from guide axle #9 (guide spindle). Replace any pieces that show signs of wear. (deep scoring or pitting) shown on page 8.

3.1.4 Remove safety disc #31 from Guide axle shaft #9. (guide spindle) shown on page 9.

3.1.5 Remove dust shield #10 from guide axle shaft #9.(spindle) Wipe off grease from guide axle #9. Then clean in solvent tank. Clean and inspect dust shield #10. If the dust shield is bent or loose on guide axle, replace. Shown on pages 10 and 11.

3.1.6 Remove and discard lower bearing from wheel hub #8 shown on page 12.

3.1.7 Turn hub #8 over to the safety disc #31 and remove and discard large outer seal #16. Use a pry-bar to pry the seal out. Shown on page 13.

3.1.8 Remove and discard large upper bearing #13 from wheel and safety disc. Shown on page 14.

3.1.9 Wipe out as much grease as possible from wheel hub. Shown page 14.

3.1.10 Use a large brass drift punch to remove outer grease seal#16 and the upper cup bearing race #12 Then flip the hub over and remove the lower cup bearing race #14. Discard races. Shown on pages 15 and 16.

3.1.11 Clean remaining grease from hub #8 and safety disc #31 before putting them in the solvent tank. Remove heat-sensitive labels from the hub at this time. Shown on page 17.

3.1.12 Visually inspect guide axle shaft (spindle) machined surfaces for signs of scoring, surface damage and localized wear caused by inner bearing cones. Shown on page 18.

3.1.13 Measure with digital vernier micrometer, the spindle shaft bearing journals and check outside diameter dimensions according to the appropriate guide spindle drawing 1502F63. Shown on page 19.

**Note: Measure each journal at two locations 90 degrees apart. One measurement is made parallel with the spindle shaft-mounting flange and other is made perpendicular to the spindle-mounting flange.**

3.1.14 In the event the spindle shaft bearing journal measurements are undersized, it will have to be resurfaced to the journal specs. Red tag, Shown on page 19.

3.1.15 If spindle measurements are bad, use a new spindle to replace it. Be sure to ID the new spindle with the next available number in rebuild logbook. DO NOT reuse number of bad spindle. Shown on page 20.

3.1.16 Torque hub to disk to 120 ft. lbs. and mark bolts. Shown 21

3.2 Assembly

3.2.1 Pack upper #13 and lower #15 bearings with Pyroplex grease. Shown on pages 23 and 24.

3.2.2 FIGURE 1-2 Press or drive lower bearing cup #14 into hub #8. Use bearing cup driver (1c44425H01). Once cup is installed use a .002 feeler gauge to make sure the cup is installed all the way. You should not be able to slide the feeler gauge in behind the bearing cup. Shown on page 25.

3.2.3 FIGURE 1-3 Press or drive inner grease seal #17 into hub #8 on the opposite side using the seal driver (1C44425H01). Once the seal is installed use a .002 feeler gauge to make sure the seal is installed all the way. You should not be able to slide the feeler gauge in behind the seal. Shown on pages 26 and 27.

3.2.4 FUGURE 1-4 Press or drive upper bearing cup #12 into hub #8. Use bearing cup drive (1C44422H01). Once bearing cup is installed use a .002 feeler gauge to make sure the bearing cup is installed all the way. You should not be able to slide the gauge in behind the cup. Shown on page 28.

3.2.5 Once all bearing cups and the inner grease seal are installed, hand pack the hub cavity ½ full with grease. Shown on page 29.

3.2.6 FIGURE 1-6 Place grease packed upper cone bearing #13 into hub #8 and press in outer seal #16. Use outer grease seal drive (1C44424H01). Shown on pages 30, 31 and 32.

3.2.7 Place spindle #9 in jig and install the hub shield #10 onto the spindle. Wipe a thin layer of grease onto the spindle .shown on pages 33 and 34.

3.2.8 Carefully place hub #8 and safety disc # 31 onto spindle #9. Making sure the upper cone bearing #13 is seated all the way down on the spindle. Shown on page 35.

3.2.9 Insert lower bearing #15 onto the spindle #9 and push down until bearing seats in bearing cup #14. Shown on page 36.

3.2.10 Install keyed washer #23against lower bearing #15. Shown on page 37.

3.2.11 Install large flat washer #22 over keyed washer #23. Shown on page 38

3.2.12 Install castle nut #5 and torque to 100 ft-lbs while rotating hub and safety disc. You may hear a popping sound. This is the bearing seating in the cup bearing #14. Shown on page 39.

3.2.13 Loosen castle nut #5 one full turn and re-torque to 50 ft-lbs. While rotating hub and safety disc. Shown on page 39

3.2.14 Loosen castle nut #5, 1/4 turn and install cotter pin. But do not bend cotter pin ends. You may need to adjust castle nut to adjust endplay to spec. Shown on page 40.

3.2.15 Figure 1-10 Install endplay tool so that the dial indicator plunger is resting flat on the machined end of the guide spindle #9. Shown on page 41.

3.2.16 To check bearing end play set indicator dial to zero, grip the edges of the safety disc with both hands approx. 180 degrees apart and push on the disc. Write down the amount of end play, then pull on the safety disc and write down the amount of end play. Add up the two amounts , the total amount of the end play should be between .001 an ,007 inch range. If it is under.001 or over .007 on an inch you will have to adjust the castle nut #5 and reinsert the cotter pin #21 and recheck the end play again. Shown on page 42.

3.2.17 If the end play is in tolerance, bend cotter pin #21 ends around castle nut. Shown page 43.

3.2.18 Fill dust cap #19, 3/4 full with (Pyroplex) grease. Use the grease cap drive (1c44419H01) or a rubber mallet and tap onto end of spindle. Do not Permatex cap until installation inspection on train. Shown on page 45.

3.2.19 Use degreasing solvent and clean any grease that may be on the hub, in order to install heat-sensitive labels. Shown on page 46.

3.2.20 FIGURE 1-13 Apply two heat sensitive labels approx 180 degrees apart (opposite sides) peel back, and place on hub. Apply a piece of 3M scotch tape over the labels, to help hold labels on hub. Shown on page 46.

3.2.21 Install Guide Tire#1 and install mounting bolts #6 and safety-wire mounting bolts. Shown on page 47 and 48.

3.2.22 Sign appropriate inspection forms and file into "Storeroom" folder, green tag spindle and place into storeroom.

## 4.0 Reference

4.1 Guide Wheel Rebuild Assembly For 1502F63 Design

4.2 Drawing 1602F63G06/17

4.3 Drawing 1502F63

4.4 Drawing 6D55567

4.5 Figure 1-5 pack bearing cone with grease packer

4.6 Figure 1-2 Lower bearing cup into wheel hub and safety disc assembly
4.7 Figure 1-3 Install inner grease seal into wheel hub & safety disc assembly

4.8 Figure 1-4 Press upper bearing cup into wheel hub & safety disc assembly

4.9 Figure 1-6 Install outer grease seal into wheel hub & safety disc assembly

4.10 Figure 1-10 End-play measuring tool assembly into guide wheel hub.

4.11 Figure 1-13 Heat sensitive label Installion.

4.12 Rebuild procedure

4.13 Assembly Procedure

**5.0** Quality
None.

**Rebuild Instruction**
**R.I. 117**
**Guide Tire**

## 1.0 Safety Requirements

1.1 Eye protection
1.2 Hearing protection
1.3 Gloves

## 2.0 Tools / Materials

2.1 3/8" drive 12-point 7/16" impact socket
2.2 3/8" drive 12-point 1/2" impact socket
2.3 3/8" drive impact wrench
2.4 3/8" drive breaker bar
2.5 Pry bar
2.6 Hydraulic press (20 ton) and accessories
2.7 Rim-half jig (P/N 5D74672H01)
2.8 Bolt (P/N 404P631H02)
2.9 Washer (P/N 70500CT00Y)
2.10 Lock washer, x-duty (P/N 70510DL10Q)
2.11 Locknut (P/N 404P458H02)
2.12 Guide tire (P/N 5574C31H01)
2.13 Solid rim halves (P/N 8840D17H01)
2.14 Windex
2.15 Torque-Seal (P/N 404P547H46)

## 3.0 Instructions

3.1 Disassembly

3.1.1 Mount tire in vise – place jaws about halfway between the rim and the end of the tire.
3.1.2 Remove the (10) bolts, washers, lock washers and locknuts holding the rim halves together.
3.1.3 Carefully pry each rim half out of the tire.
3.1.4 Clean and inspect each rim half. Pay particular attention to the ten bolt-hole areas for cracks radiating from the holes and other rim deformities.

3.2 Reassembly

3.2.1 Adjust the bottom support of the press by counting down to the third hole from the top of the press frame. Lower or raise the bottom support of the press to the third hole and insert both pins through the supports holes and frame holes. This will give you the right height.
3.2.2 Center the guide tire under hydraulic press piston.
3.2.3 Position rim-half as level and close to center of tire.
3.2.4 Place both steel plates over rim-half. This will be used to distribute the pressure evenly on the rim-half.
3.2.5 When piston makes contact with plate, lightly spray Windex around area where the rim-half and tire make contact. The Windex will act as a lubricant to help keep the rim-half from tilting and ease into the tire.
3.2.6 Slowly and squarely press rim-half into the tire until it is seated fully. Reposition tire, rim-half and plate if necessary.
3.2.7 When rim-half is fully seated, release pressure on hydraulic press; remove plates and tire/rim-half assembly.

3.2.8 Put rim-half jig on press support. Flip tire/rim-half assembly over so the tire and rim-half faces down on jig.
3.2.9 Align second rim-half mounting bolt holes over rim-half jig studs. Ensure the large drain holes are lined up on both halves.
3.2.10 Place both steel plates squarely on top of rim-half and press hydraulic press piston down until it makes contact with the plate.
3.2.11 Lightly spray Windex around area where the rim-half and tire make contact.
3.2.12 Slowly and squarely drive rim-half down until it seats.
3.2.13 Release piston pressure and carefully remove guide tire assembly and jig from the press.
3.2.14 Quickly insert bolts and screw nuts on in at least two spots to keep the rim-halves from parting too far to install the remaining hardware.
3.2.15 Place assembly in vise. Use just enough pressure on the rubber tire to keep it in place and not damage the tire's side or unnecessarily distort the tire near the rim.
3.2.16 Install hardware in remaining rim-half bolt holes. It is important to tighten each bolt a little bit in a star fashion to prevent undue stress on rim-half bolt holes.
3.2.17 When the rim halves are together, torque each bolt/nut to 55 ft-lbs, in a star pattern.
3.2.18 Place guide tire assembly on a hub-disk assembly to ensure that the rim will seat properly without binding.
3.2.19 Apply torque seal across each bolt end and locknut.

**4.0 Reference**
Drawing 8840D17

**5.0 Quality**
None

Day shift only
Night shift only
Either shift

| PM TASK NUMBER | PM TASK NAME |
|---|---|
| 100 | Day Shift Daily Inspection |
| 103 | Night Shift Daily Inspection |
| 200 | Central, Communication, Wayside and Facilities Inspection |
| 201 | Weekday 7-Day Vehicle Inspection |
| 202 | Nights 7-Day Vehicle Inspection |
| 203 | Reboot RATC, Stratus Servers, CIC Computers |
| 300 | Vehicle Door Inspection- 60 |
| 301 | Traction Motor Inspection (30-Day) |
| 302 | Motor Box Inspection - 61 |
| 303 | Auxiliary Control Box Inspection - 61 |
| 304 | Handback Switch - 61 |
| 305 | Guide Spindle / Tire Inspection - 62 |
| 306 | Friction Brake Inspection - 62 |
| 307 | Tow Bar Inspection / Trainline Plugs - 62 |
| 308 | Bogie Inspection - 62 |
| 309 | Lubricate Under Car Components - 62 |
| 310 | Air Compressor Inspection - 62 |
| 311 | Brake & Line Switch Operation & Inspection "D" System (30-Day) |
| 401 | Clean End Equipment Compartments |
| 500 | Replace Guide Spindles, "D" System |
| 501 | Vehicle Ground Fault Check |
| 504 | Replace Relays: ZSR, PBR, LSR, LS1 & LS2 |
| 505 | Lube: Air Compressor Motor, Pinion & Main Pivot Bearing & Condenser Motor |

Exhibit No. Bx 21
Witness N. Smith
Date 10/25/13
KWD CCR# 711

| | |
|---|---|
| 506 | Vehicle Door Cleaning / Operator Inspection |
| 507 | Vehicle Battery Conductance |
| 510 | Yearly Track Inspection |
| 513 | Clean A/C Evaporators & Condensers / Check Contactors (Pre-Season) |
| 600 | Replace Relays: PRCC (15-Month) |
| 601 | Replace Guide Spindles, "C" System (24-Month) |
| 602 | Replace FSE & QRV, Pressure Switch Inspection (18-Month) |
| 603 | Replace Traction Motor, "D" System (2½-Year) |
| 605 | Replace Differential Oil, "D" System (24-Month) |
| 606 | Emergency Brake Rates (Chart Recording) (2½-Year) |
| 800 | Replace Differential Oil, "C" System |
| 801 | Replace Relays: BIR & AVR |
| 802 | Replace Reverser Cylinder Assembly |
| 900 | Replace Traction Motor, "C" System (5-Year) |
| 901 | Draft Gear Replacement, "D" System (5-Year) |
| 902 | Draft Gear Replacement, "C" System (7-Year) |
| 1000 | Test Equipment Calibration |
| 1001 | Emergency Generator Test, "C & D" Systems |
| 1002 | Shop Regulators & Shop Air Compressor Inspection (60-Day) |
| 1003 | ORS Computer / Comm Controller Cradle Inspection (30-Day) |
| 1004 | RATC Cabinet Voltage Checks (30-Day) |
| 1005 | Computer Air Flow and Filter Checks (30-Day) |
| 1006 | Station Interface Cabinet (SIC) Voltage Checks (30-Day) |
| 1102 | Track Inspection |
| 1103 | UPS Inspection, "C" System |
| 1104 | UPS Inspection, "D" System |
| 1105 | ORS Console Inspection |
| 1200 | Station Door Inspection / Cleaning "C & D" System |
| 1201 | Wayside Cabinet Inspection / Cleaning "C & D" System |
| 1203 | Test Equipment Inspection / Ladder Inspection |

| | |
|---|---|
| 1300 | Station Emergency Door Operation & Inspection |
| 1301 | Station Graphics, Audio & CCTV Inspection |
| 1302 | Tool / Equipment Inspection |
| 1303 | Emergency Pushbutton Guideway Power Removal Check |
| 1400 | Replace AR-2's |
| 1401 | Wayside Vital Relay Replacement, "C" System (7-Year) |
| 1402 | Wayside Vital Relay Replacement, "D" System (7-Year) |
| 1403 | Wayside Vital Relay Replacement, "Region ATC" (4-Year) |
| 2000 | Central Control System Checks, "C & D" Systems |
| 2001 | Unscheduled Door Opening: Vehicle, Station, & Emergency Exit |

## Vehicle Inspection / Maintenance (Daily)

| | |
|---|---|
| 100 | Day Shift Daily Inspection |
| 103 | Night Shift Daily Inspection |

## Vehicle / Wayside Inspection / Maintenance (7-Day)

| | |
|---|---|
| 200 | Central, Communication, Wayside and Facilities Inspection |
| 201 | Weekday 7-Day Vehicle Inspection |
| 202 | Nights 7-Day Vehicle Inspection |
| 203 | Reboot RATC, Stratus Servers, CIC Computers |

## Vehicle Inspection / Maintenance (30 & 60 Day)

| | |
|---|---|
| 300 | Vehicle Door Inspection- 60 |
| 301 | Traction Motor Inspection (30-Day) |
| 302 | Motor Box Inspection - 61 |
| 303 | Auxiliary Control Box Inspection - 61 |
| 304 | Handback Switch - 61 |
| 305 | Guide Spindle / Tire Inspection - 62 |
| 306 | Friction Brake Inspection - 62 |
| 307 | Tow Bar Inspection / Trainline Plugs - 62 |
| 308 | Bogie Inspection - 62 |
| 309 | Lubricate Under Car Components - 62 |
| 310 | Air Compressor Inspection - 62 |
| 311 | Brake & Line Switch Operation & Inspection "D" System (30-Day) |

## Vehicle Inspection / Maintenance (90 to 180 Day)

| | |
|---|---|
| 401 | Clean End Equipment Compartments |

## Vehicle & Wayside Inspection (365-Day / Yearly)

| | |
|---|---|
| 500 | Replace Guide Spindles, "D" System |
| 501 | Vehicle Ground Fault Check |
| 504 | Replace Relays: ZSR, PBR, LSR, LS1 & LS2 |

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Exhibit No. Bx 38
Witness H. Smith
Date 6/20/13

KWD CCR# 711

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B28

# Time tracking – "Indirect Charge" Codes

| Order | Description | |
|---|---|---|
| 9200000740 | FMLA US01 | US01 |
| 9200000771 | Short-term disability US01 | US01 |
| 9200000769 | Disciplinary US01 | US01 |
| 9200000767 | Illness US01 | US01 |
| 9200000765 | Vacation US01 | US01 |
| 9200000763 | Holiday US01 | US01 |
| 9200000761 | Training US01 | US01 |
| 9200000783 | Military Duty US01 | US01 |
| 9200000781 | Jury Duty US01 | US01 |
| 9200000779 | Bereavement / Funeral US01 | US01 |
| 9200000760 | Workman's Comp US01 | US01 |
| 9200000774 | Travel Time US01 | US01 |
| 9200000777 | Other non-productive US01 | US01 |

Use 9200000777 for Meetings and any other indirect activities not covered on the next page



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# Time Tracking – Direct Charge Codes – 1 of 2

| Project | WBS |
|---|---|
| 243/252335400/ A1310 | 01.03.00.10 Management Tasks (Supervisor/Manager) |
| 243/252335400/ A1321 | 01.03.00.21 Human Resources Tasks |
| 243/252335400/ A1322 | 01.03.00.22. Finance Tasks |
| 243/252335400/ A1323 | 01.03.00.23. Other Admin Tasks (SDC Coordinator) |
| 243/252335400/ A1330 | 01.03.00.30. QA / Health & Safety Tasks |
| 243/252335400/ A1340 | 01.03.00.40 Training |
| 243/252335400/ A1350 | 01.03.00.50. Marketing & PR Tasks |
| 243/252335400/ A1360 | 01.03.00.60. Engineering Tasks |
| 243/252335400/ A1370 | 01.03.00.70. Material Management Tasks |
| 243/252335400/ A1390 | 01.03.00.90. Stations Operations Labor |
| 243/252335400/ A1391 | 01.03.00.91. Vehicle Operations Labor (Daily Inspection) |
| 243/252335400/ A1392 | 01.03.00.92. Drivers - Vehicle Operations Labor |
| 243/252335400/ A1393 | 01.03.00.93. Conductors - Vehicle Operations Labor |
| 243/252335400/ A1394 | 01.03.00.94. Attendants - Vehicle Operations Labor |
| 243/252335400/ A1395 | 01.03.00.95. Central Control Operations Labor |

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# Time Tracking – Direct Charge Codes – 2 of 2

| | |
|---|---|
| 243/252335400/ 200X | 02.00.00.09 Wayside Preventive Maint.Tasks |
| 243/252335400/ 200Y | 02.00.00.10 Wayside Corrective Maint.Tasks |
| 243/252335400/ 200Z | 02.00.00.11 Wayside Heavy Maint./Overhaul Tasks **(Rebuilds)** |
| 243/252335400/ 300X | 03.00.00.09 Vehicle Preventive Maint. Tasks |
| 243/252335400/ 300Y | 03.00.00.10 Vehicle Corrective Maint. Tasks |
| 243/252335400/ 300Z | 03.00.00.11 Vehicle Heavy Maint. / Overhaul Tasks **(Rebuilds)** |
| 243/252335400/ 400X | 04.00.00.09 Comms Preventive Maint.Tasks |
| 243/252335400/ 400Y | 04.00.00.10 Comms Corrective Maint.Task |
| 243/252335400/ 400Z | 04.00.00.11 Comms Heavy Maint/ Overhaul Task **(Rebuilds)** |
| 243/252335400/ 500X | 05.00.00.09 Fare Coll.Preventive Maint.Tasks |
| 243/252335400/ 500Y | 05.00.00.10 Fare Coll.Corrective Maint. Tasks |
| 243/252335400/ 500Z | 05.00.00.11 Fare Coll.Heavy Maint. / Overhaul Tasks |
| 243/252335400/ 600X | 06.00.00.09 PS&D Preventive Maint.Tasks **(Official BT word is PDS)** |
| 243/252335400/ 600Y | 06.00.00.10 PS&D Corrective Maint. Tasks |
| 243/252335400/ 600Z | 06.00.00.11 PS&D Heavy Maint./Overhaul Tasks |
| 243/252335400/ 700X | 07.00.00.09 Civil Preventive Maint.Tasks |
| 243/252335400/ 700Y | 07.00.00.10 Civil Corrective Maint. Tasks |
| 243/252335400/ 700Z | 07.00.00.11 Civil Heavy Maint./Overhaul Tasks |
| 243/252335400/ 800X | 08.00.00.09 Platf.Doors Preventive Maint.Tasks |
| 243/252335400/ 800Y | 08.00.00.10 Platf.Doors Corrective Maint. Tasks |
| 243/252335400/ 800Z | 08.00.00.11 Platf.Doors Heavy Maint./Overhaul Tasks |
| 243/252335400/ 900X | 09.00.00.09 Track Preventive Maint.Tasks |
| 243/252335400/ 900Y | 09.00.00.10 Track Corrective Maint. Tasks |
| 243/252335400/ 900Z | 09.00.00.11 Track Heavy Maint./Overhaul Tasks |
| 243/252335400/ AA | 10.00.00.00 Maintenance of OMSF Equipment & Tools Tasks |

B29

**Redacted**

Exhibit No. B29
Witness M. Smith
Date 6/26/13

KWD CCR# 711

**From:** ralph.decostro@us.transport.bombardier.com
**Sent:** Wednesday, January 19, 2011 7:07 AM
**To:** melvin.smith@us.transport.bombardier.com;

roy.ryan@us.transport.bombardier.com; stephen.stowe@us.transport.bombardier.com; matt.fasbender@us.transport.bombardier.com; matthew.fernandez@us.transport.bombardier.com

**Cc:**
**Subject:** Fw: Working Time Code Changes
**Attachments:** Charge codes.ppt

FYI

Please consider the environment before you print / Antes de imprimir, piense en el medio ambiente
----- Forwarded by Ralph DeCostro/US/Transport/Bombardier on 01/19/2011 10:07 AM -----

To "William H. Stanley" <luecorg@cox.net>
cc "Connors, Eugene K." <EConnors@ReedSmith.com>, "Moss, Gary C. (LV)" <MossG@jacksonlewis.com>, "Trimmer, Paul (LV)" <TrimmerP@jacksonlewis.com>
Subject Re: Working Time Code Changes Link

**Ralph DeCostro**
01/19/2011 10:06 AM
Phone: +1.412.655.6641
Dept.: Human Resources

Bill,

Further to my note below, attached is a copy of the presentation Melvin Smith will provide to employees today. This presentation hopefully clears up for the Techs the definitions involved and shows examples of the charge codes. Again, please let me know if any questions or concerns.

Ralph

Please consider the environment before you print / Antes de imprimir, piense en el medio ambiente

To "William H. Stanley" <luecorg@cox.net>
cc "Connors, Eugene K." <EConnors@ReedSmith.com>, "Moss, Gary C. (LV)" <MossG@jacksonlewis.com>, "Trimmer, Paul (LV)" <TrimmerP@jacksonlewis.com>
Subject Working Time Code Changes

**Ralph DeCostro**
01/18/2011 08:59 PM
Phone: +1.412.655.6641
Dept.: Human Resources

Bill,

Your attorney's note to ours concerning the categorization of work by LAS employees has been referred to me.

Let me clear up any misunderstandings relative to the charge codes used to describe the work done. Ho[illegible] this



02607

ER2607

Redacted

message has crossed paths with an update to you from the Techs that all codes are in use and that this delay had nothing to do with any intent or effort to alter the way time or work recorded.

Bombardier Transportation is in the process of changing software packages from prior programs to SAP as a world-wide endeavor to enable our locations to use and "speak" the same language. To provide a learning curve, this transition began at the end of December, with SAP going live on 1/1. During the US implementation at the site on 1/3, Melvin Smith simply had the employees hold off on using the new SAP charge codes for what turned out to be a week until he and the site coordinator could become more familiar with the new terminology and pass on any needed clarification to avoid time and work recording mistakes. This training occurred on 1/7, and the entire staff received training on the new charge codes at the 1/12 All Employee Meeting.

This "change" is no change at all and that we are continuing to record the same work as before but in different words that mirror the terminology in other locations.

To make sure that everyone fully understands the new terminology, we will conduct refresher training on 1/19.

If you have further questions, please email or call me.

Ralph

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Thank you.

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Merci.

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Thank you.

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Merci.

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