



Electrical Analysis Report

4/29/2008

Representative: Marc Faloutico

Organization: Front Range Fire Apparatus, Ltd

Bid #: 1132 Impel Rescue

| PRIDE # | Description | Type* | Minimum Load | Intermittent Load | Additional Load |
|---------|---|-------|--------------|-------------------|-----------------|
| 0001220 | Engine Brake, Jacobs | | | 0.42 | |
| 0001244 | High Idle w/Electronic Engine, Custom | | | 1.20 | |
| 0002189 | Mirrors, Velvac, 2010, West Coast Style, heated, remote | | | | 8.00 |
| 0002526 | Light, Engine Compt, All Custom Chassis | | | 1.60 | |
| 0002636 | Pyrometer, engine exhaust | | | | 0.08 |
| 0004961 | Lights, Work, HDR Rear(Not Required) | | | | |
| 0005910 | Alarm, Back-up Warning, ECCO SA917-PM2 | | | 0.50 | |
| 0006063 | Control, Air Horn, Horn Ring, PS Foot Sw | | | 0.83 | |
| 0006133 | Siren, Code 3 3692 100W or 200W | | | 12.60 | 1.40 |
| 0006825 | Reel, Elect Cable, Hannay, 1600, (3) Wire | | | 36.00 | |
| 0009429 | Electric Power Only, Portable Winch | | | 4.00 | |
| 0010670 | ABS Wabco Brake System, Single rear axle | | | 6.00 | |
| 0012001 | Chains, Insta-Chain automatic tire, Custom | | | 1.50 | |
| 0016080 | Siren, Federal Q2B | | | 100.00 | |
| 0016995 | Reel, Hyd, 150' Cap., .25" Dual Hose | | | 72.00 | |
| 0033709 | Radio, Panasonic w/CD | | | | 4.00 |
| 0039204 | Lights, Backup, Whelen 600, Halogen | | | 5.47 | |
| 0040511 | Lights, Side Scene, Whelen 600 Halogen | | | | 16.00 |
| 0067248 | Lights, Rear Scene, Whelen 600 Halogen | | | | 8.00 |
| 0073339 | Light & Buzzer, Do not move apparatus, Custom, Whelen 500 LED | | | 0.55 | |
| 0074506 | No Switch (74505) Required, HDR-NW | | | | 0.08 |
| 0078133 | Lights, Rear, Whelen Super 600 LED, pair | | | 1.00 | 1.00 |
| 0079166 | Batteries, (4) Exide Grp 31, 950 CCA each, Threaded Stud | | | 3.00 | |
| 0122465 | Cab Lift, Elec/Hyd, Imp/Vel | | | 180.00 | |
| 0122520 | Heater/defroster, Imp/Vel | | | | 12.10 |
| 0508437 | Lights, Dome, Weldon, Incandescent, Two (2) Lights, Dual Light an | | | 1.80 | 1.80 |
| 0509905 | Wiper control, 2-speed w/ 5 speed intermittent, Impel/Velocity | | | 2.10 | 8.40 |
| 0509981 | Lights, Dome CC, (2) Weldon, Incandescent, Red/Clear, MUX only | | | 3.92 | |
| 0063286 | Lightbar, Whelen, Freedom, FN**QLED, 4-R LED, 2-C LED, 2-RC L | LM | 13.80 | | |
| 0000793 | Air Dryer, Bendix, AD-IP | NFPA | 4.70 | | |
| 0002624 | No Chassis Engine Gauges @ Pump Panel | NFPA | 0.30 | | |
| 0002758 | Amp Draw, NFPA Radio Allowance | NFPA | 5.00 | | |
| 0009245 | Left Forward Compt, 36" & 36" Lap, NWI | NFPA | 3.60 | 7.20 | 3.60 |
| 0018710 | Left Over Wheel Compt, 57", Lap Lift Up, NWI | NFPA | 0.90 | 1.80 | 0.90 |
| 0018731 | Left Rear Compt, 48" Lap, NWI | NFPA | 0.90 | 1.80 | 0.90 |
| 0018795 | Right Forward Compt, 36" & 36", Lap, NWI | NFPA | 3.60 | 7.20 | 3.60 |
| 0018802 | Right Over Wheel Compt, 57" Lap Lift Up, NWI | NFPA | 0.90 | 1.80 | 0.90 |
| 0018823 | Right Rear Compt, 48" Lap, NWI | NFPA | 0.90 | 1.80 | 0.90 |
| 0035650 | No Water Level Gauge Req'd | NFPA | 1.23 | | |
| 0039828 | Lights, Tail, Whelen 60R00XRR LED Stop/Tail, 60A00TAR Amber, | NFPA | 0.25 | | 0.50 |
| 0042145 | Rear Compt, 90" Ht., Roll, 48" Side Compt, NWI, Gortite | NFPA | 3.60 | 7.20 | 3.60 |
| 0057366 | Light, Rear Zone Upper, Whelen RB6T Beacon | NFPA | 10.00 | | |
| 0057865 | Lights, Perimeter Scene Cab Exits, Truck-Lite, Model 60 | NFPA | 5.76 | | |
| 0076753 | Light, Side Zone Lower, Whelen Super 600 LED, Over 25 Foot Gap, | NFPA | 2.28 | | |
| 0076758 | Lights, Rear Zone Lower, Whelen Super 600 LED | NFPA | 0.25 | | |
| 0092582 | Load Manager/Sequencer, MUX | NFPA | 0.56 | 0.56 | |
| 0199062 | Cab, Impel, 70" w/10" Raised Roof | NFPA | 17.58 | | 12.30 |
| 0508912 | Engine, Cummins ISL 425 hp, 1200 Torque, Imp/Vel, 2007 | NFPA | 1.00 | | |
| 0509640 | Cab Instruments, Black Gauges w/ Black Bezels, Impel | NFPA | 1.26 | | |
| 0509649 | Lights, Cab and Crew Cab Access Steps, Ri-Tar, LED w/Bezel, 1 Lig | NFPA | 1.00 | | |
| 0510120 | Trans, Allison Gen IV 3000 EVS P, Imp/Vel | NFPA | 2.00 | 2.00 | |
| 0511122 | Lights, Perimeter scene, Rear Step Area, (2) lights, Model 60 | NFPA | 2.88 | | |
| 0511224 | Lighting, FMVSS, Cab, Ri-Tar LED Clearance/ID, Impel/Velocity | NFPA | 3.20 | | |

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



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|---------------------|---|-------|--------------|-------------------|-----------------|
| 0511440 | Lights, Step (2), Ri-Tar Model M27HW2 LED, HDR-NW | NFPA | 0.50 | | |
| 0511567 | Lights, Identification/Clearance, Rear, Truck-Lite 15050R and Ri-Ta | NFPA | 1.75 | | |
| 0519380 | Light, Front Zone, Whelen Super 600 LED, 2pr, VEL/IMP | NFPA | 0.80 | | 0.80 |
| 0521285 | Light, Directional/Marker, Intermediate Light, Truck-Lite Model 601 | NFPA | 0.25 | 0.25 | |
| 0037591 | Alternator, 320 amp, Leece-Neville 4890JB, Sgl Sys | S | | | |
| Load Totals: | | | 90.75 | 466.10 | 88.86 |

Note: Minimum Continuous Load is in "Blocking Right of Way" mode. (Reference NFPA 1901, 9-3.2)

Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference NFPA 1901, 9-15b)

Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items.

Alternator Output at Idle: 168.00

Alternator Output at Governed Speed: 282.00

| Minimum Continuous Load | |
|-------------------------|--------|
| Supply: | 168.00 |
| Demand: | 90.75 |
| Variance: | 77.25 |

| NFPA Zone Lighting | |
|--------------------|-------|
| Demand: | 27.13 |

| Total Connected Load | |
|----------------------|--------|
| Supply: | 282.00 |
| Demand: | 179.61 |
| Variance: | 102.39 |

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply