



**Aviation  
Ground  
Equipment Corp.**

**6000 Series  
Diesel**

## Model 6021



## Diesel Power Cart (USAF SPEC) 72 kW/90 kVA – 400 Hz, 28 VDC, 270 VDC

The 400 Hz, 28 VDC, & 270 VDC Diesel Power Cart (DPC) is a four wheeled, manually propelled vehicle designed for flight deck conditions as well as land based theaters. The cart features an integrated power frequency converter allowing for up to three modes of operation: 400 Hz Output, 28 VDC Output & 270 VDC Output.

### Standard Features:

- AC Output: 115/200 VAC, 400 Hz, 90 kVA @0.8 PF (72 kW), Meets MIL-STD-704F
- AC Output: 230/400 VAC, 400 Hz, 90 kVA @0.8 PF (72 kW), Meets MIL-STD-704F
- DC Output: 28 VDC, 600 A Continuous, 2000 A Peak, Meets MIL-STD-704F
- DC Output: 270 VDC Main, 72 kW, Meets LMCO F-35 Requirements
- DC Output: 270 VDC Auxiliary, 4.05 KW, Meets LMCO F-35 Requirements
- Auxiliary Output: 115 VAC, 400 Hz, Three Phase, 260 Amp, Receptacle
- Convenience Output: 115 VAC, 400 Hz, Single Phase, 30 Amp, Receptacle
- Convenience Output: 230 VAC, 400 Hz, Three Phase, 10 Amp, Receptacle
- Smart Control User Interface
- Built-In Test Diagnostics (BIT) with Fault Recording
- Rugged Four-Wheeled Trailer, Hand Brake System, SAE AS 8090, Type II, Group C



### Aviation Ground Equipment Corp.

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## Specifications

### Engine

- Cummins QSB 4.5 Turbocharged 4-stroke, inline 4 cylinder common rail fuel system
- Full Cummins application approval
- 12 VDC battery system
- ECM Electronic governor system
- Lubricity Filter allows engine to operate on aviation fuels
- Intake manifold pre-heater (grid heater)

### Generator

- Continuous rating: 72 kW, 3 phase, 4 wire, 400 Hz
- Two bearing generator offers long life and reliability
- Class H insulation
- Premium insulation system

### 400 Hz. Output - 115/200 – (230/400 VAC)

- Meets or Exceeds MIL-STD-704F
- Ratings: 72 kW (90 kVA @ 0.8 PF)
- Overloads: 125% - 5 minutes
- Meets all Military and Commercial Requirements for No-Brake Power Transfer (NBPT)
- Voltage Regulation: <±1% up to rated load
- THD (Total Harmonic Distortion): < 3%
- IHD (Individual Harmonic Content): < 2%
- Transient Performance Meets and Exceeds MIL-STD-704F
- Output Voltage Adjustment Range: ±15%
- Phase Voltage Displacement with Balanced Load: <2%
- Phase Voltage Balance (with 10% Unbalanced Load on a Single Phase): < 3 volts
- Line Drop Compensation: automatic up to 8% (user adjustable)

### 28 VDC Output

- Meets or Exceeds MIL-STD-704F
- 28.5 VDC Transformer-Rectifier
- Ratings: 600 amps continuous  
2000 amps starting current
- Overloads: 125% - 5 minutes  
150% - 5 seconds
- Fully Adjustable Current Limiting
- Voltage Regulation: <±1% up to rated load

### 270 VDC Main Output

- Meets or Exceeds F-35 (JSF) Specifications as recognized by LMCO
- Meets or Exceeds MIL-STD-704F
- Ratings: 72 kW (continuous)
- Overloads: 125% - 5 minutes  
200% - 5 seconds
- Fully Adjustable Current Limiting
- Integrated Unit-Cable Interlock

### Environmental

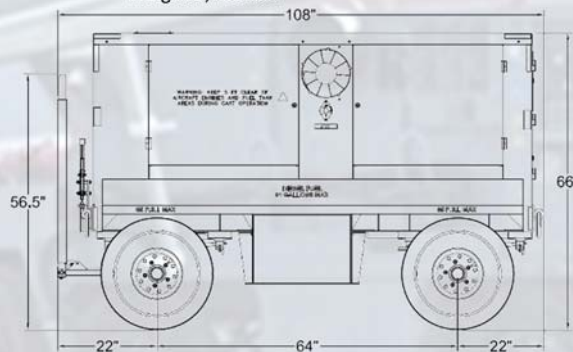
- Temperature, MIL-STD-810F Method 501.4, 502.4 Operating -40°F to +125°F (-40°C to +52°C); Non-Operating -60°F to +160°F (-51°C to +71°C)
- Humidity, MIL-STD-810F, Method 507.4
- Salt Fog, MIL-STD-810F, Method 509.3
- Blowing Rain, MIL-STD-810F, Method 506.4
- Blowing Sand, MIL-STD-810F, Method 510.4
- Wind, MIL-STD-810F, Method 506.10
- Vibration, MIL-STD-167-1
- Rail Impact, MIL-STD-810F 516.5
- Air Transportability
- Tie Down, MIL-T-81259B

### Military & Commercial Standards

- MIL-STD-704F
- MIL-STD-461E
- MIL-STD-167-1
- MIL-STD-810F
- MIL-STD-209
- MIL-STD-889
- MIL-STD-1472
- F-35 (JSF) (LMCO Approved)

### Dimensions & Weight

- Dimensions 66" H X 66" W X 108" L (Tow bar Stowed)
- Weight 5,450 lbs.



### E3, Emissions & Susceptibility

- MIL-STD-461F
  - Conducted Susceptibility, CS101, CS114, CS115 & CS116
  - Radiated Susceptibility, RS101 & RS103
  - Conductive Emissions, CE102
  - Radiated Emissions, RE102

### Maintenance

- Mean Time to Repair <120 minutes

### Protection

- Engine: Air Cleaner Restriction, High Coolant Temp, Low Oil Pressure, Low Fuel Warning, Low Coolant
- Generator: Over/Under Frequency, Overload, Over/Under Voltage
- AC Output: Over/Under Voltage, Over/Under Frequency, Overload
- DC Outputs: Over/Under Voltage, Overload, Short Circuit
- Internal: Contactors Stuck (Open/Closed), Internal Power Supply Voltage, Converter Fail

### Controls / Indicators

- Smart Control User Interface
- Sealed, tactile feedback membrane panel
- Integrated Built-In Test (BIT)
- Front Control Panel
  - Fault Code Display with Indicators
  - Adjustable Brightness Indicator Lamps with ON/OFF
  - LED Display Input/Output
    - Voltage
    - Amperage
    - Frequency
  - Cable Interlock Status Indicators
  - Line Drop Comp, User Adjustable
  - Output Voltage, User Adjustable
  - Emergency Stop Switch
- Elapsed Time Hour Meter

Specifications subject to change without notice

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