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Self-Propelled Diesel-Electric Hi-Brd™ Patent Pending



DESCRIPTION

The Start Pac® Hi-Brd™ offers the latest technology in 28.5VDC GPUs.

Powered by a Yanmar/Isuzu industrial engine, this self propelled GPU can provide up to 300 amps of continuous power. In addition, the built-in battery bank will start any electrically started turbine or piston engine.

This GPU is controlled by an advanced computer system that automatically senses battery voltage. When the battery voltage is below a predefined voltage, the unit will automatically start itself to recharge the batteries and then shut itself down.

For ease of handling on ramps, this GPU self-propels to maneuver forward or backward and is speed-controlled by the operator. For longer distances, the Start Pac® Hi-Brd™ can be towed with a tug or vehicle if desired. Start Pac® GPUs have heavy-duty frames and cabinets and include automotive-type steering and brakes. This diesel electric hybrid GPU is designed with five removable doors for easy access. The Yanmar engine and generator are designed to run trouble-free for thousands of hours with normal servicing and maintenance.

SPECIFICATIONS

Structure

- Heavy duty welded steel frame
- Removable doors for easy maintenance access
- Durable powder coat finish in high-visibility yellow
- Environmentally Friendly low VOC powder coating
- Overall Dimensions:
 - L 72" x W 48" W x H 56" / L 183cm x W 122cm x H 142cm
 - 1600 Lbs.
 - 25' 4/0 power cable
 - 12-gallon diesel tank

Performance

- Diesel-powered 28.5VDC GPU
- 300 Amps at 28.5VDC continuous
- Can be operated in temperatures ranging from -25 F to 120 F (-31 C to 50 C)
- Fuel consumption: 1 ½ gal. – 2 gal. per hour
- Batteries:
 - 140 Amp Hours at 10 amp rate
 - 3500 peak amps

FEATURES

- Automatic soft start
- 140 Amp hour recombinant, sealed, non-hazardous, maintenance-free batteries for starting
- Emergency DC power disconnect
- Powered by a Yanmar/Isuzu 3-cylinder diesel engine – 21.5 horsepower. Meets EPA Tier 4 and EU Stage 111A exhaust emissions regulations.
- Full application approval by Yanmar/Isuzu.
- Digitally monitored engine features:
 - Low oil pressure shutdown
 - High water temperature shutdown
 - High speed limiting
 - Glow plugs for cold weather starting
 - Voltmeter
 - Ammeter
 - Battery Charge Level: (In automatic mode) Enables unit to start and shutdown automatically to keep the on board batteries charged
- Automotive-type steering and wheels
- Self-propelled forward and backward motion
- Speed controlled
- Can be towed
- Emergency brake

Options

- Built-in 2000W inverter to provide 110VAC power for servicing equipment such as vacuum cleaners, electric tools, and trouble lights.

INSTRUCTIONS

1. Check fuel and oil levels before every use.
2. Follow the startup procedure listed on the back of the unit
3. Set the Hi-Brd in “Automatic” mode after startup is complete
4. Plug power plug (3-pin connector) into aircraft.
5. CAUTION: Make sure that the aircraft systems are shut down.
6. When finished charging or powering up aircraft systems, disconnect the GPU from the aircraft. The GPU will run until the batteries are fully charged and will automatically shut down.
7. For maximum life, the batteries should be kept charged to 100% when not in use.
8. Follow service instructions in the Yanmar/Isuzu engine owner’s manual.

For technical assistance, contact Jim Wurth, chief engineer, directly at (928) 231-4536 or at jim@startpac.com.

WHY

1. With an ever-increasing demand for fuel coupled with rising fuel prices, the Patent Pending Start Pac® Hi-Brd™ consumes less fuel than traditional GPUs or gas electric hybrid GPU products which reduces emissions. The color coating is low VOC (volatile organic compounds) rated and can be customized if desired.
2. Since most aircraft will rarely ever require or use more than 300 amperes continuous, the combination of batteries and the engine in the Start Pac® Hi-Brd™ will be able to perform at the same level and meet the same specifications as older traditional GPUs that use engines four times as large. In addition, these older units can weigh up to 1500 lbs more, produce a greater volume of environment-damaging emissions, be more financially burdensome to operate and twice as expensive to purchase.
3. With more than 300 amperes continuous readily available, the Start Pac® Hi-Brd™ portable power pack can easily power up on-board aircraft systems, including especially high-draw items such as air conditioning. With the combination of continuous power and the powerful battery bank, the Start Pac® Hi-Brd™ can easily start any turbine engine.
4. The Start Pac® Hi-Brd™ always gives soft starts because the batteries are providing the majority of the power. Since our batteries are recombinant, non-hazardous rated, dry, sealed-cell, lead-acid, they are safe to ship via ground or air freight to anywhere in the world.
5. Since the Start Pac® Hi-Brd™ uses a battery bank, should the user run out of fuel, there is power available, for a short time, until the engine can be restarted.
6. The Start Pac® Hi-Brd offers a unique self-propelled feature, making it easy to transport and maneuver for short and long distances.
7. Due to the innovative hybrid technology utilized in the Start Pac® Hi-Brd™, this cutting-edge GPU is smaller, lighter, and much less expensive than older, traditional GPUs.

All Start Pac™ products come with a 1-year warranty on workmanship and materials. Batteries are cycle-dependent and therefore are not covered under this warranty.

Please handle this unit in a responsible manner. Start Pac™ is not responsible for damages caused by misuse or neglect.