



OVERALL DIMENSIONS AND WEIGHT:

Height: 86 Inches

Length: 149 Inches

Width: 84 Inches

Weight (Dry): 10,620 Lbs.

The Essex Electro Engineers, Inc., Model No. C634 Ground Power Unit, is intended for use in supplying 312 KVA, 0.8 power factor, 115/200 volt, 3 phase, 400 hertz, electrical power for starting and servicing aircraft.

The Ground Power Unit basically consists of a diesel engine driving a 400 cycle, brushless generator. The generator will supply 400 cycle power for servicing aircraft. All the necessary electrical controls and instruments are furnished on a control panel. The diesel engine and generator, along with all the necessary components are enclosed within a sheet metal enclosure for operation in inclement environments. The entire unit is mounted on a four-wheel, steerable trailer.

The engine is a heavy duty, electronically controlled, diesel engine. Each engine is equipped with an oil cooler, full flow oil filter, fuel oil strainer and fuel oil filter, an air cleaner, a fan, radiator and a starting motor. The engine comes equipped with a cold weather starting aide for temperatures as low as -25°F (unaided) and -40°F (aided - 120 VAC heater). The engine is can operate on a variety of diesel and aircraft fuels from DF-1 to JP-8. The

engine enclosure has all necessary panels and doors to provide for proper ease of maintenance and/or repair.

The generator is a synchronous alternating current generator of the brushless revolving-field type of single bearing construction. Generator excitation current is supplied from a direct connected, brushless rotating D.C. exciter. Eyebolts installed in the generator frame enable the complete generator to be lifted with a conventional overhead hoist for repairs and/or overhaul. A heavy steel wrapper cover of drip-proof construction encloses the frame assembly.

The Voltage Regulator is an automatic, solid-state type Voltage Regulator. The Voltage Regulator output is controlled by a switching transistor which is phase angle fired. An integrated circuit voltage sensing circuit controls the relative on-off cycle of the switching transistor to control total rotating exciter field current.

The governor system consists of an electronic control module that controls the amount of fuel sent to the electronic fuel injectors.



Various safety controls are provided to protect the Power Unit from adverse conditions. A fault system is provided which contains a solid state Generator Fault Detector and an Engine Speed and Fault Detector.

All operating controls and instrumentation necessary for proper operation of the Ground Power Unit are located on the control panel.

Illumination lighting is furnished on the control panel for night operation. Reflectors are furnished on the trailer.

The trailer is a four-wheel, steerable type with a tow bar. The trailer has a spring leaf suspension system with pneumatic type tires.

TECHNICAL DESCRIPTION:

GENERATOR DESCRIPTION 250KW/312KVA, 400 Hz continuous load at 0.8 power factor, at rated voltage, @ 125°F
236KW/295KVA, 400 Hz continuous load at 0.8 power factor, at rated voltage, @ 140°F

ENGINE:

Prime Mover..... Cummins QSX 15, Tier III
Horsepower..... 500 HP @ 2000 RPM

AC OUTPUT VOLTAGE..... Three phase, four wire, 115 volts line-to-neutral and 200 volts line-to-line (115/200 volts).

OUTPUT CABLES Four output aircraft style cables, 60 feet long each, with an MS24486 plug

OUTPUT RECEPTACLES Two output receptacles, MS90362-2

ENVIRONMENTAL OPERATING EXTREMES:

Temperature -40°F to 140°F
Altitude..... Sea Level to 8,000 Ft.

Approved by the U.S. Air Force for the Following Platforms:

- E-3
- E-4
- E-8
- EC-130
- RC-135

