WAR DEPARTMENT

TECHNICAL MANUAL

POWER UNITS PE-95-G AND PE-95-H

September 3, 1943

NOTE

All parts of Power Units PE-95-G and PE-95-H are interchangeable except the following:

Ref. No.	Name and Description	PE-95-G Part No.	PE-95-H Part No.
130	Crankshaft Bearing—Front—Upper	637724	637007
131	Crankshaft Bearing—Front—Lower	637725	637008
132	Crankshaft Bearing—Center—Upper	639237	638730
133	Crankshaft Bearing—Center—Lower	639238	638731
134	Crankshaft Bearing—Rear—Upper	639239	638732
135	Crankshaft Bearing—Rear—Lower	639240	638733
138	Crankshaft	637733	638121
156	Connecting Rod Bearing	116534	639862

Parts listed in column PE-95-G may be used only on Power Unit PE-95-G.
Parts listed in column PE-95-H may be used only on Power Unit PE-95-H.

TECHNICAL MANUAL
No. 11—904-H

WAR DEPARTMENT
WASHINGTON, SEPTEMBER 3, 1943

POWER UNIT PE-95-G AND PE-95-H

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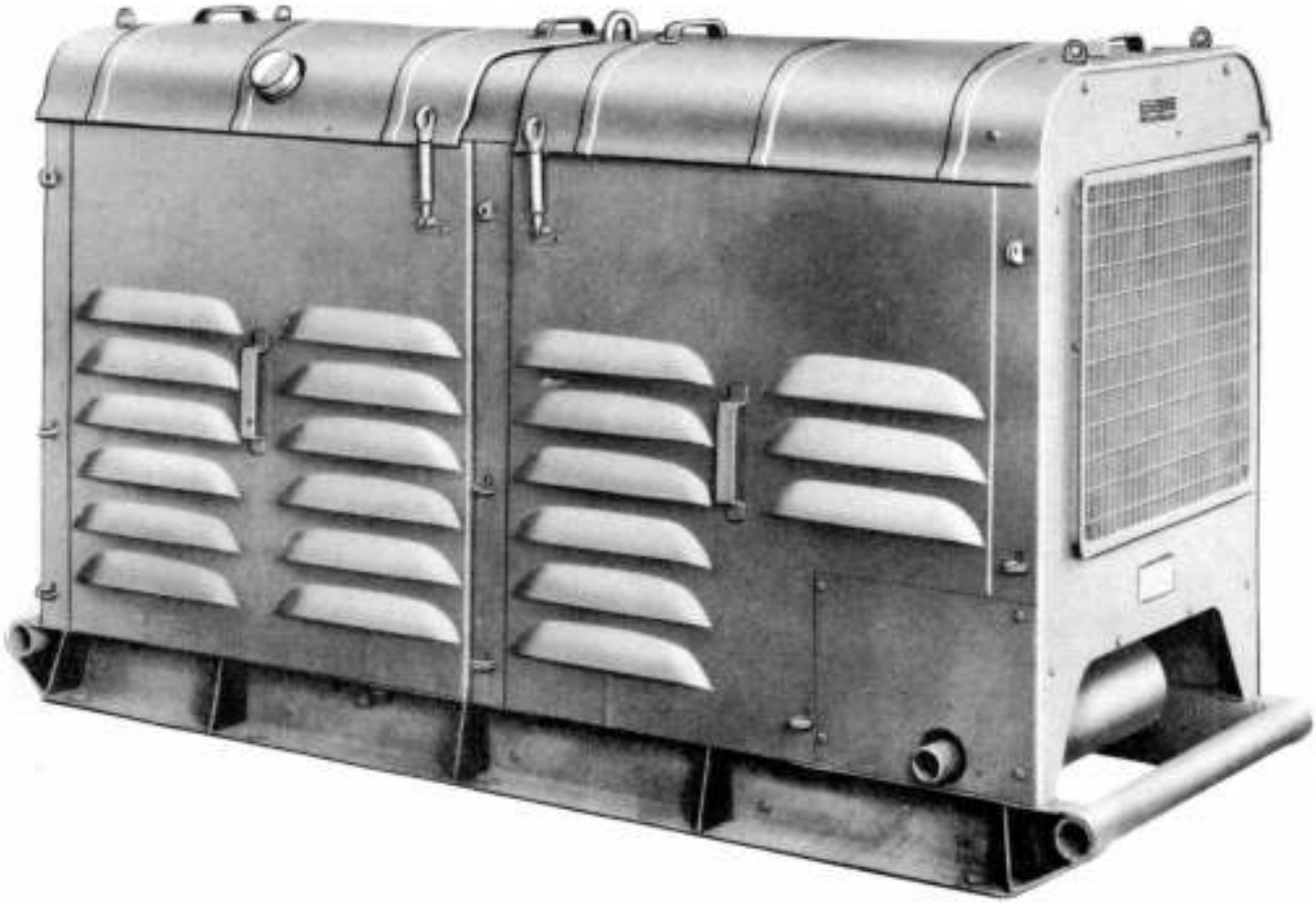
DESTRUCTION NOTICE

If capture of this equipment is imminent, destroy it by any or all of the following means, beyond any possibility of salvage, recognition or duplication:

1. Radio, Telephone and Telegraph equipment shall be thoroughly smashed with a sledge, axe, bar or other heavy object.
2. All wires, cables and internal wiring shall be slashed, cut or ripped out.
3. Castings such as engines and generators and teletypewriter parts shall be smashed with a sledge, axe or other heavy object.
4. All books, documents, wire and smashed equipment containing combustible parts shall be piled up, saturated with gasoline and burned.
5. Hand grenades or TNT may be used provided destruction of all parts of the equipment is thorough and complete.
6. Time permitting, smashed and burned equipment shall be buried or thrown into a stream.

SAFETY NOTICE

1. **DO NOT ATTEMPT ADJUSTMENTS OR CHANGES ON WIRING WHILE POWER UNIT PE-95-G IS IN OPERATION. THIS UNIT GENERATES HIGH VOLTAGE, SO THAT SEVERE AND POSSIBLY FATAL SHOCKS MAY BE ENCOUNTERED ESPECIALLY WHEN POWER UNIT IS OPERATING ON WET OR DAMP GROUND. ALWAYS DISCONNECT THE BATTERY BEFORE WORKING ON THE UNIT.**
2. **SUFFICIENT AND PROPER VENTILATION MUST BE PROVIDED, IF THE POWER UNIT IS OPERATED IN A CONFINED SPACE. EXHAUST GASES PRODUCED ARE POISONOUS, AND EXCESSIVE INHALATIONS MAY RESULT IN SEVERE SICKNESS OR DEATH.**
3. **DO NOT SERVICE WITH GASOLINE WHILE POWER UNIT IS RUNNING OR IF A RADIO TRANSMITTER IS OPERATING IN CLOSE PROXIMITY TO POWER UNIT. AVOID SPILLING GASOLINE ON A HOT ENGINE.**
4. **OPERATOR SHOULD OBSERVE EVERY STANDARD SAFETY REGULATION WHILE OPERATING THIS POWER UNIT.**



POWER UNIT PE-95-G AND PE-95-H

SECTION I
DESCRIPTION

1. General.—

a. Description.—Power Unit PE-95-G, (Figs. 1 and 2), is a complete electric generating plant. It consists of an engine and a generator with the necessary accessories and controls, all mounted in a metal housing with a skid base.

b. Output Rating.—Power Unit PE-95-G supplies single-phase, 60-cycle, alternating-current at either 120 volts or 240 volts. The rated capacity is 10 K.W. at unity power factor and 12.5 K.V.A. at 80% power factor.

c. Purpose.—Power Unit PE-95-G is used to furnish electricity to operate radios, signal systems, lights, motors, heating units and other appliances where power line service from a large power station is not available, or upon failure of such power line service.

2. List of Components.—

Quantity	Signal Corps Stock Number	Article	Width	Length	Height	Weight in Lbs.
1		Power Unit PE-95-G	28¼"	67½"	38½"	1556
1		Engine with accessories	22½"	27"	30½"	380
1		Generator with adapter ring.	19"	29¾"	19½"	640
1		Radiator assembly	8½"	20"	23½"	35
2		Battery	7"	10⅜"	8"	50
1		Fuel tank	12"	25¾"	19¾"	20
1		Control panel assembly	5½"	20"	16½"	25
1		Housing and skid base	28¼"	67½"	38½"	307

3. Engine.—

a. Design.—The engine (Fig. 5) is of the 4-cylinder, 4-cycle, L-head, water cooled, automotive type. It furnishes the power which drives the main generator to which it is direct-connected. It also drives certain necessary accessory equipment. It is designed to operate on regular gasoline of 70 to 80 octane.

b. Rating.—The engine is rated 35 horsepower at normal operating speed of 1800 r.p.m. The speed is controlled by a fly-weight mechanical governor which is driven by a V-belt from a pulley on the crankshaft.

c. Cooling system.—The water cooling system includes an automotive type radiator, fan and pump. The fan is mounted on the extended pump shaft and both fan and pump are driven by a V-belt from a pulley on the engine crankshaft. Cooling air is discharged forward through the radiator. A thermostat in the water outlet elbow at the top of the cylinder head controls water circulation.

d. Oiling System.—Main, connecting rod and camshaft bearings are lubricated by oil pressure supplied by a gear type oil pump. Other internal parts are spray lubricated. An oil filter is mounted on the left side of the engine. A bayonet type oil level gauge is mounted in the oil filler tube.

e. Fuel System.—The fuel supply system includes a 10½ gallon fuel tank mounted over the generator, a diaphragm type fuel pump, a downdraft type carburetor fitted with a combination oil-type air cleaner and silencer, and an automatic electric choke. A fuel filter screen, glass sediment bowl and shut-off valve are mounted under the fuel tank. A valve permits connecting an auxiliary fuel tank, if desired.

f. Ignition System.—A battery ignition system is used. An ignition unit is mounted on the left side of the engine, driven by a gear on the camshaft. This unit includes the breaker mechanism, condenser and high-tension distributor. A governor in the lower part of the distributor case advances the timing of the spark as the engine speed increases. The ignition coil is mounted near the distributor. Suppressors on the spark plug cables and on the center cable of the distributor reduce radio interference.