

OPERATOR AND ORGANIZATIONAL

MAINTENANCE MANUAL

GENERATOR SET, DIESEL ENGINE:

PRECISE POWER; 100 KW, AC

120/208V, 240/416V, 3 PHASE

60 CYCLE, AT 1800 RPM

**83.3 KW, 120/208V, 240/416V
3 PHASE 50 CYCLE AT 1500 RPM**

SKID MOUNTED

(DETROIT DIESEL, GENERAL MOTORS

MODEL 6910A) FSN 6115-798-3444

This copy is a reprint which includes current pages from Changes 1 through 4.

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Operator and Organizational Maintenance Manual
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240/416V, 3 PHASE, 60 CYCLE, AT 1800 RPM, 83.3 KW, 120/208V,
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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions are published for the use of the personnel to whom the General Motors Models 6910 and 6910A Generator Sets are issued. This manual contains information on the operation and organizational maintenance of the equipment. This manual also provides a description of the main units and their functions in relationship to other components.

b. Appendix I contains a standard list of all publications applicable to this manual. Appendix II contains the maintenance allocation chart. Appendix III contains the basic issue items authorized for use of the operator of this equipment. The organizational maintenance repair parts and special tool lists are contained in TM 5-6115-293-20P.

c. The numbers placed in parentheses on the illustrations used within this manual indicate quantity.

d. Report all deficiencies as specified in AR 700-38. Submit recommendations for changes, additions, or deletions to the Commanding General, U.S. Army Engineer Maintenance Center, Corps of Engineers, ATTN: EMCDM, P. O. Box 119, Columbus 16, Ohio. Direct communication is authorized.

2. Record and Report Forms

For record and report forms applicable to the first and second echelons of maintenance, refer to TM 5-505.

Section II. DESCRIPTION AND DATA

3. Description

a. *General.* The General Motors Generator Sets Models 6910 and 6910A (figs. 1 and 2) are self-contained, skid-mounted, canopy-covered, winterized, portable units. They are powered by a six-cylinder diesel engine (fig. 2) that is directly coupled to the main generator (fig. 1). The generator control panel (fig. 1), the engine control panel (fig. 1), and the winterization control panels (fig. 1) contain the controls and instruments necessary for single or parallel operation and remote control. Doors and panels are provided for easy access to all components.

b. *Engine.* The General Motors Corporation series 6-71 diesel engine (fig. 2), is a 425 cubic inch displacement engine, which is governed at a speed of 1,800 rpm (revolutions per minute) at 60 cycles; 1,500 rpm for 50 cycles.

c. *Main Generator.* The Delco Products Main Generator Model 1-4676 (fig. 1), is driven directly from the engine flywheel. It is a 3-phase, 50/60cycle, 100 KW (kilowatt) unit. The generator has 12 stator leads which can be connected at the conversion block (fig. 2) for 120 single phase and 208 or 240/416-volts, 3-phase, 4-wire operation. The full load rating is 100 kw at 60 cycles or 83.3 kw at 50 cycles.

4. Identification

The generator set has two identification plates, the data on these plates can be found in the tabulated data section of the technical manual (para. 6).

5. Differences in Models

This manual covers the General Motors Generator Set Models 6910 -and 6910A. The differences existing in the two models are that Generator Set Model 6910 utilizes a Model 5548842 main generator regulator, and a Model 5548841 exciter assembly. Generator Set Model 6910A is equipped with a Model 5551983 main generator regulator, and a Model 5550468 exciter assembly.

6. Tabulated Data

a. General.

Manufacturer.....	General Motors Corp.
Model.....	6910 and 6910A
Type.....	Skid mounted, diesel driven

b. Engine.

Manufacturer.....	Detroit Diesel Division of General Motors Corp.
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Type.....	Diesel
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Model..... 6910 and 6910A
 Series 6-71
 Cooling Liquid
 Number of cylinders 6
 Cycle..... 2
 Bore..... 4.25 in. (inch)
 Stroke 5 in.
 Piston displacement 425 cu in. (cubic inch)
 Compression ration 17 to 1
 Firing order 1-5-3-6-2-4
 Crankshaft rotation Counterclockwise
 (view from generator end).
 Governor speed 1,500 and 1,800 rpm

c. *Generator.*
 Manufacturer..... Delco-Remy Division of General
 Motors Corp.
 Model..... 1-4676
 Phase..... 1 and 3
 Type..... Ac (alternating current) 50/60 cycle
 Voltage (4 wire) .. 120 single phase and 208 or 240/416
 3 phase
 Voltage (3 wire) 120/240

d. *Air Cleaner.*
 Manufacturer..... Donaldson Company
 Type..... Oil bath
 Number 2

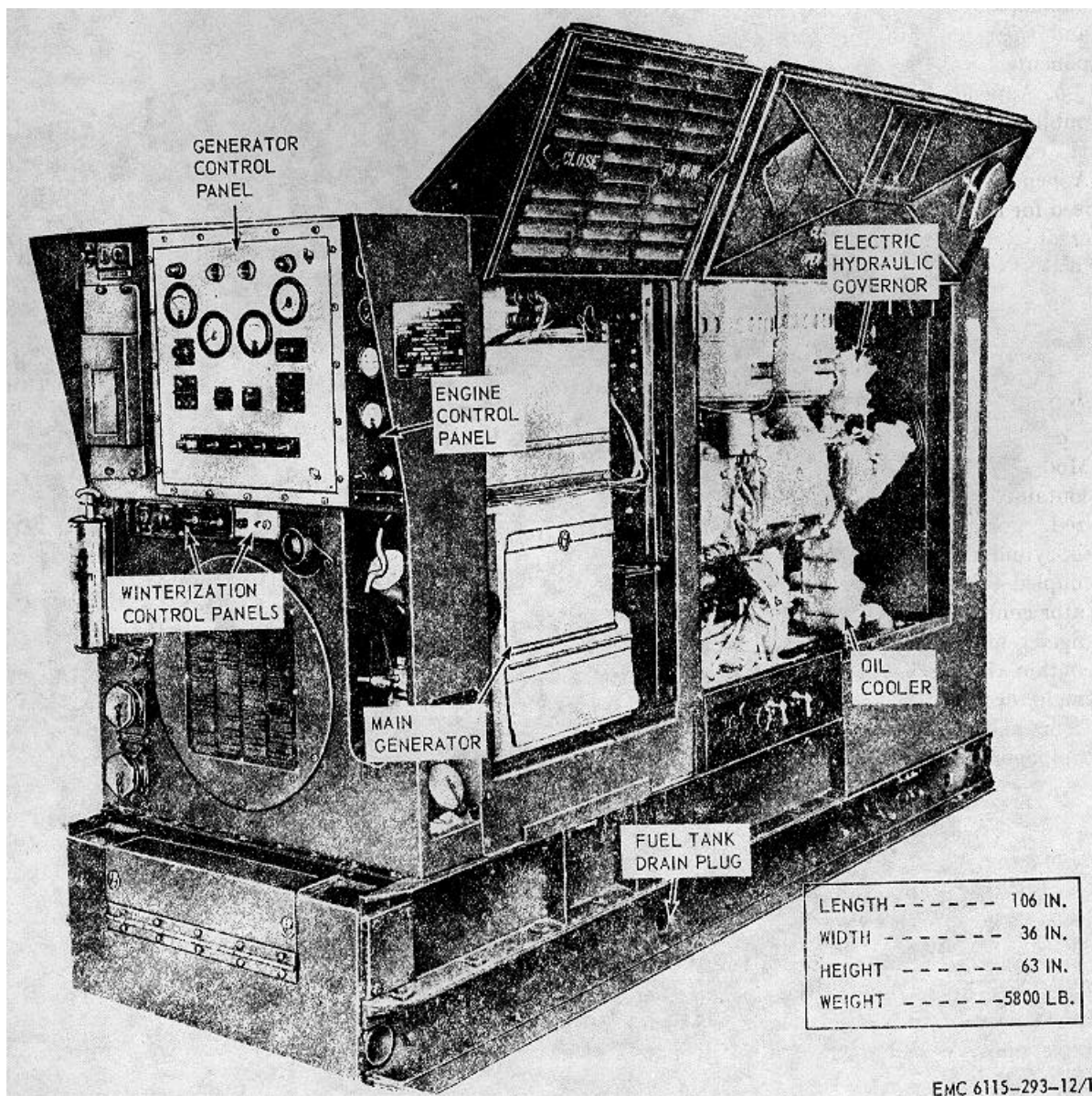


Figure 1. Generator set, right rear, three-quarter view, with shipping dimensions.

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