

TM 5-3431-205-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**OPERATOR, ORGANIZATIONAL, DIRECT AND
GENERAL SUPPORT AND DEPOT MAINTENANCE
MANUAL**

**WELDING MACHINE, ARC
GENERATOR, GASOLINE ENGINE
DRIVEN, 300 AMP, DC**

(LIBBY MODEL LE 300) FSN 3431-810-9696

(LIBBY MODEL LEW-300) FSN 3431-991-2961

(LIBBY MODEL LEB-300) FSN 3431-072-0327



**HEADQUARTERS, DEPARTMENT OF THE ARMY
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HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON, D. C., 29 July 1968

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 WELDING MACHINE, ARC: GENERATOR: GASOLINE ENGINE DRIVEN;
 300 AMP, DC; (LIBBY MODEL LE 300) FSN 3431-810-9696, (LIBBY
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CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom the Arc Welding Machine, Models LE 300, LEW 300, and LEB 300 is issued. Chapters 1 through 4 provide information on the operation, preventive maintenance services, and organizational maintenance of the equipment, accessories, components, and attachments. Chapter 5 provides information for direct, general support, and depot maintenance. Also included are descriptions of main units and their functions in relationship to other components.

b. Appendix A contains a list of publications applicable to this manual. Appendix B contains the list of basic issue items and maintenance and operating supplies authorized the operator of this equipment, Appendix C contains the maintenance allocation chart.

c. Numbers in parentheses on the illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

1-2. Forms and Records

a. DA Forms and records used for equipment maintenance will be only those prescribed in TM 38-750.

b. Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to: Commanding General, U.S. Army Mobility Equipment Command, ATTN : AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

1-3. Description

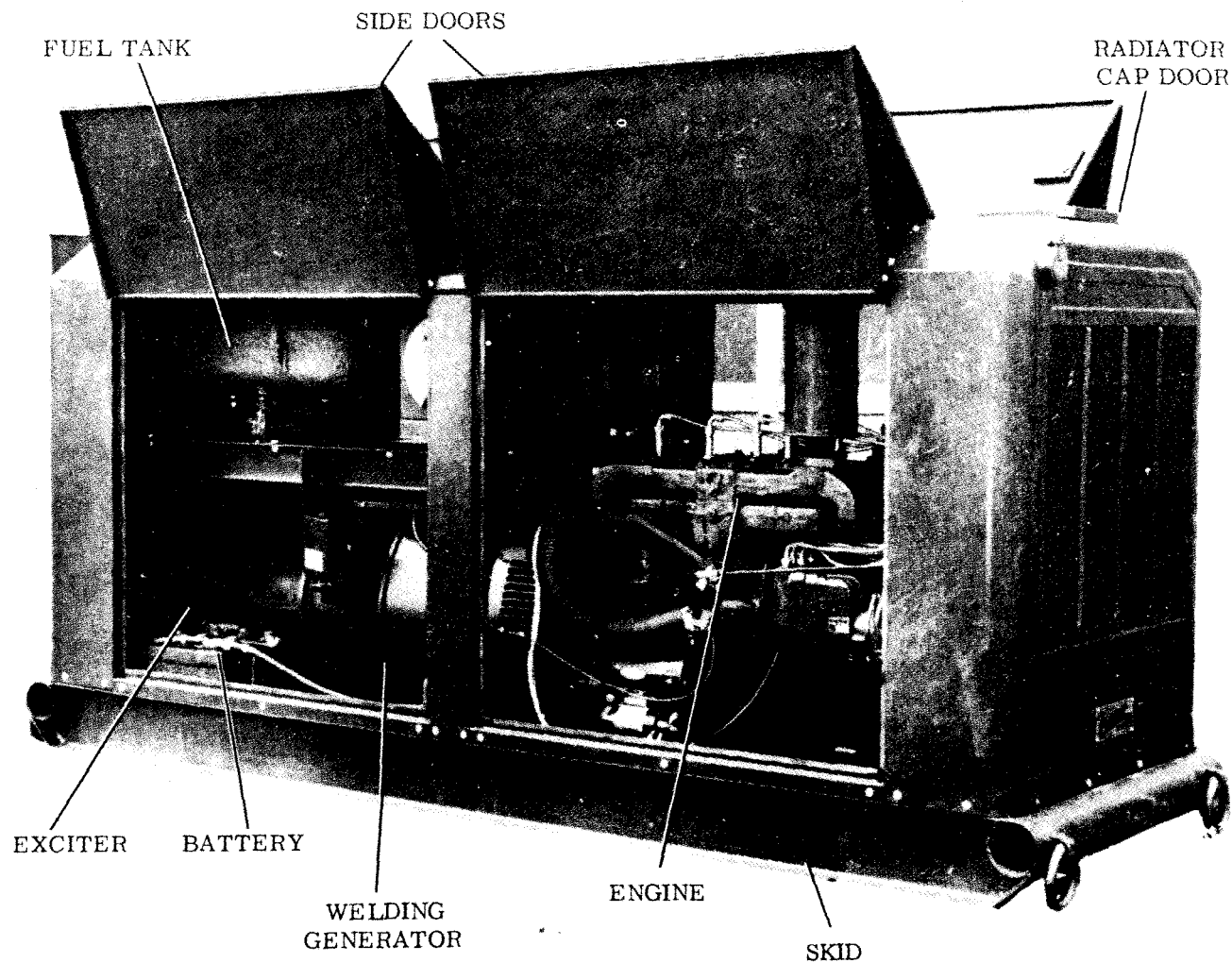
a. *General.* The welding Machine (figs. 1-1, 1-2, and 1-3), models LE 300, LEW 300, and LEB 300 respectively, is a self-contained, skid-mounted, enclosed unit and is equipped with the necessary controls, instruments and accessories for operation. All accessories are readily accessible through hinged panels. The unit is equipped with two towing eyes on each end of the skid for towing, or lifting. The unit may also be used as a 3-kilowatt auxiliary generator.

b. *Engine.* The engine (fig. 1-1) is a six-cylinder, water-cooled, gasoline engine, has full-pressure lubrication and is designed to operate at 1400 revolutions per minute under

load. (Model LEB 300 operates at 1800 revolutions per minute), The direction of engine rotation is counterclockwise when viewed from flywheel end of engine.

c. *Generator.* The welding generator (fig. 1-1) is a compound-wound, dc generator rated at 300 amperes at 40 volts but capable of a range of 60 to 375 amperes while operating at a 60 percent duty cycle. (Model LEB 300 dc generator is rated at 300 amperes at 32 volts). The open-circuit voltage with full excitation is 70 to 80 volts. The generator is provided with interpole windings and is fan cooled. The rotor is connected to the engine flywheel through a fixed coupling.

d. *Exciter.* The exciter (fig. 1-1) is a heavy-



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1 right front
 Figure 1-1. Welding machine, three-quarter view (Model LF 300).