This copy is a reprint which includes current pages from Change 1.
OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL, INCLUDING REPAIR PARTS
AND SPECIAL TOOLS LIST

WELDING MACHINE, ARC: GENERAL AND INERT GAS SHIELDED,
TRANSFORMER-RECTIFIER TYPE, AC AND DC; 300 AMPERE
RATING AT 60% DUTY CYCLE (HARNISCHFEGER MODEL DAR-300HFSG)
FSN 3431-984-3401 (HARNISCHFEGER MODEL 2100H2007)
FSN 3431-926-3746

Current as of 10 April 1969
CHAPTER 6
REPAIR INSTRUCTIONS

Section I. Control panel, range and polarity selector switches, rheostats and relay panel assembly

II. Rectifiers, capacitors and resistors

III. Reactors, control relays, and relay panel terminal board

IV. Current transformer and shunt

V. Remote output control rheostat assembly and foot switch assembly

VI. High frequency induction coil, high frequency transformer, control transformer, and main transformer assembly

VII. Wire leads

VIII. Welding machine frame

APPENDIX A
REFERENCES

B. BASIC ISSUE ITEMS LIST

C. MAINTENANCE ALLOCATION CHART

D. ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. Introduction

II. Prescribed Load Allowance

III. Repair Parts for Organizational Maintenance

Group 22. Body, Chassis, or Hull and Accessory Items

2210 Data plates

44. Welding
4405 Frame support, housing, carrier, etc.

4406 Ventilating, cooling system

4407 Control panels, housing, cubicles

4408 Connecting devices

4409 Protective devices, electrical

4410 Switching, timing, and speed control

4411 Resistor components

4412 Transformer components

General Use Standardized Parts

9501 Bulk material

Section VI. Special Tools, Test and Support Equipment For DS and GS Maintenance Not Applicable

VII. Federal Stock Number and Reference Number Index
CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for the use of the personnel to whom the Harnischfeger Model DAR-300HFSG and Model 2100H2007 Welding Machine is issued through 4, 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 and general support maintenance. Also included are descriptions of main units and their functions in relation to other components.

b. Numbers in parentheses on illustrations indicate quantity.

1-2. Forms and Records

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

b. The direct reporting of errors, omissions, and recommendations for improving this equipment publication by the individual user is authorized and encouraged. DA Form 2028 (Recommended Changes to Publications) will be used for reporting these improvements. This form may be completed using pencil, pen, or typewriter. DA Form 2028 will be completed by the individual using the manual and forwarded direct to Commanding General, U.S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo, 63120.

Section II. DESCRIPTION AND DATA

1-3. Description

a. The Harnischfeger Model DAR-300HFSG, rectifier type AC/DC arc welding machine (fig. 1-1 and 1-3) is operated from an external power source of 208, 230, or 460 volt alternating current, and by 50 or 60 cycle single phase connections. This welder provides an electrical controlled current output for use in either shielded inert gas welding or metallic arc welding. The entire control section is located in a panel at the front of the welding machine. The welding machine can be operated by means of a remote off-on foot switch and remote output control rheostat. A range switch permits the selection of one of four desired current ranges. A soft switch permits feathering-in when the arc is started. The welding machine is equipped with a timer for spot welding and a post-purge timer for inert gas welding. The control panel includes an ac ammeter and a dc ammeter for measuring current output and an ac voltmeter and a dc voltmeter for measuring arc voltage.

b. The Model 2100H2007 (fig. 1-2) welding machine is furnished with a combination foot switch and output control. A pre-purge timer is furnished for inert gas welding.

1-4 Identification and Tabulated Data

a. Identification. The welding machine has two major identification plates. The information contained on these plates is listed below.

(1) Corps of Engineers plate.
Nomenclature -------- Welding Machine:
Arc 300 AMP
Make ______________ Harnischfeger
Model No. __________ DAR-300HFSG
Height ______________ 41¼ in. (inches)
Width _____________ 28 in.
Length _____________ 36 in.
Weight _____________ 790 lbs.
Contract No. __________ DA-11-184-AMC-256 (T)

(2) Manufacturer's Identification and Data Plate, Model DAR-300HFSG.
Input:
Primary volts _______ 208/230/460
Figure 1-1. Arc welding machine right-front, three-quarter view with shipping dimensions, Model DAR-300HFSG.