

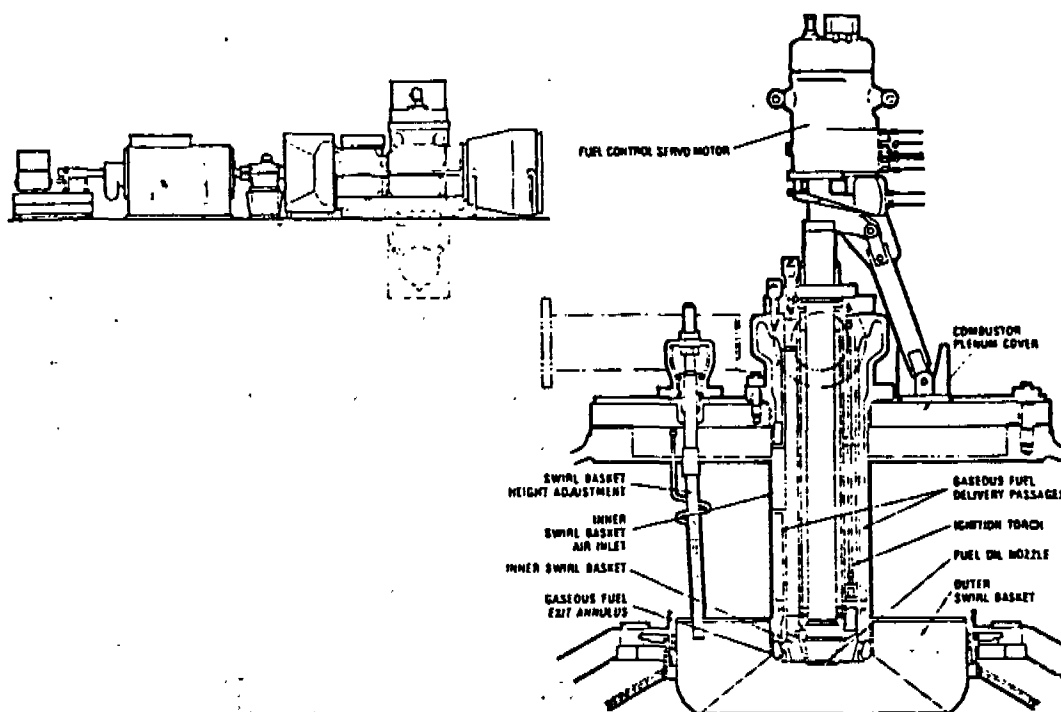


TABLE OF CONTENTS

Introduction	1
Components	1
Installation	2
Operation	
Ignition	2
Gas Fuel	2
Liquid Fuel	2
Maintenance	
Burner Assembly	2
Disassembly	2
Inspection	3
Reassembly	3
Liquid Fuel Nozzle	3
Disassembly	4
Inspection	5
Reassembly	5

LIST OF ILLUSTRATIONS/DRAWINGS

Liquid Fuel Nozzle, Figure 1	3
Fuel Nozzle Maintenance, Figure 2	4
Dual Fuel Burner Assembly, 608856	5
Dual Fuel Burner Subassembly, 608887	6
Burner Basic Equipment, 608857	7
Fuel Supply Complete, 601500	8
Fuel Supply Assembly, 601502	9
Servomotor, 600735	10
Ignition Torch Assembly, 600887	11

INTRODUCTION

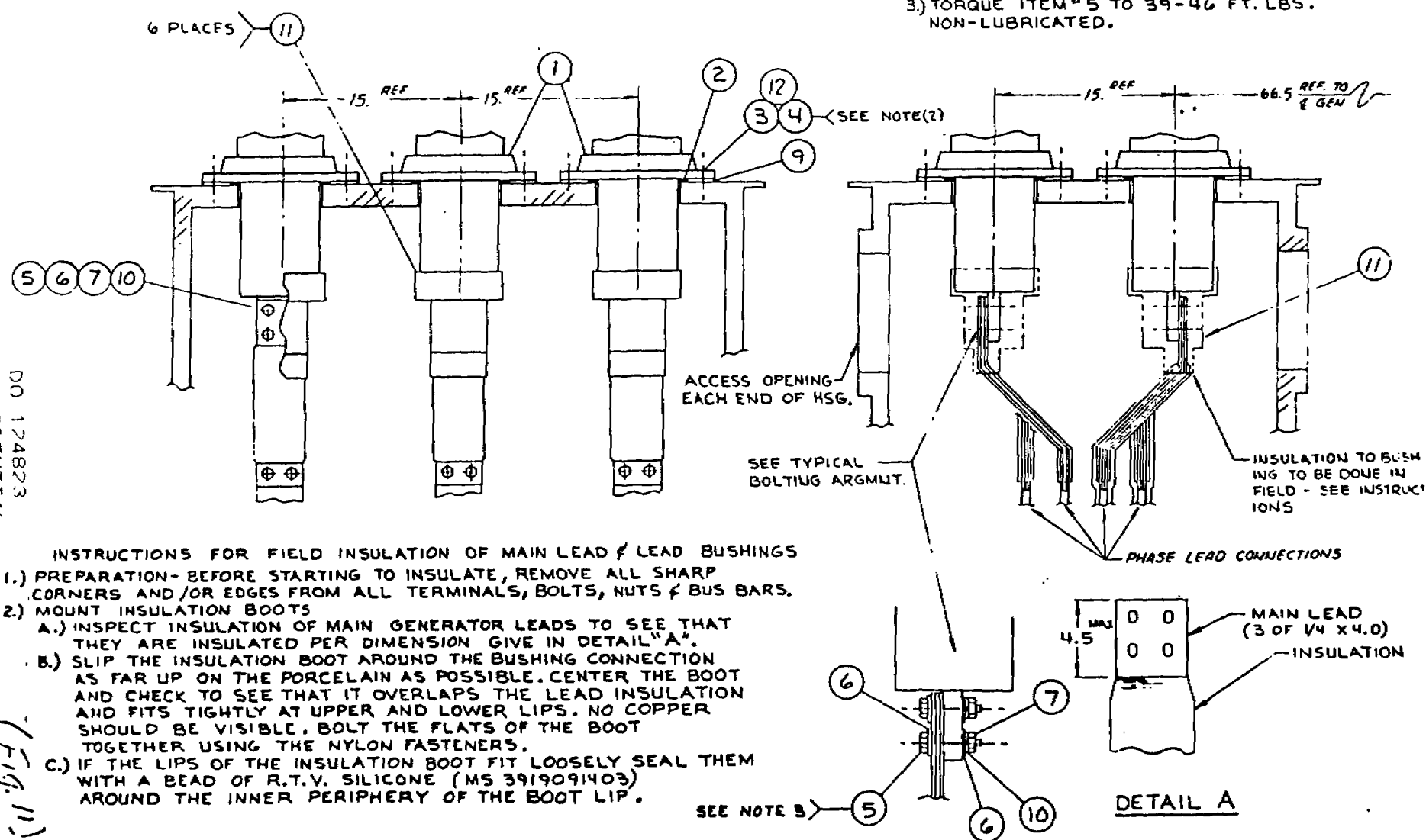
The dual fuel burner furnished with your combustor has the capability to burn either liquid fuel oil or natural gas. It is located at the top of the combustion chamber and receives the gas or oil from one of the fuel systems described in Volume II. The fuel(s) is then mixed with the primary air and ignited to provide the hot gas to the turbine section of the thermal block.

COMPONENTS

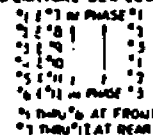
The dual fuel burner assembly consists of three major subassemblies, each with the components identified below:

A. Burner Subassembly

- Inner casing which houses the liquid fuel nozzle and serves as the inner wall of the cavity used to provide primary air for the pilot flame.
- Outer casing which is of a double-walled construction to allow the main gas flow to travel between its two walls. This component also forms the outer wall of the pilot flame primary air cavity. Four slots through the two walls provide the entrance for this primary air.
- Inner and outer rings which mount on the outer casing and provide the exit annulus for gas fuel.
- Inner swirl basket which imparts a downward helical movement to the primary air being used for the pilot flame.

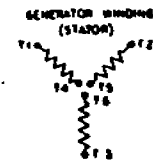


TEMPERATURE DET. LOCATION

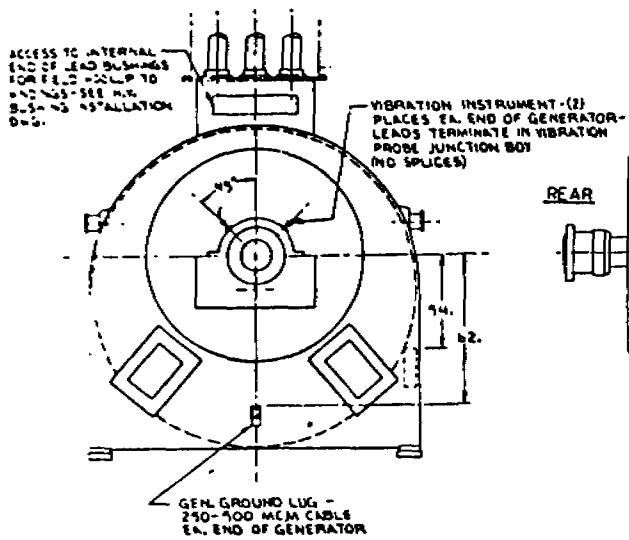
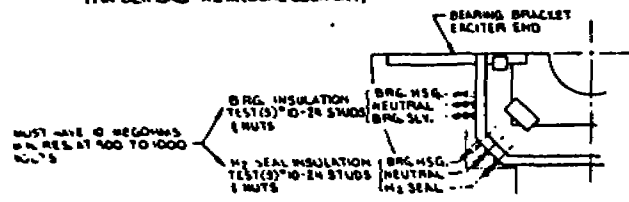


THERMOCOUPLE LOCATION

- *13 IN GEN. WARM GAS TO COOLER L.M.-FRONT
- *14 IN GEN. COOL GAS FROM COOLER L.M.-FRONT
- *15 IN GEN. COOL GAS FROM COOLER L.M.-FRONT
- *16 IN GEN. COOL GAS FROM COOLER R.M.-FRONT
- *17 IN GEN. WARM GAS TO COOLER R.M.-FRONT
- *18 IN EXCITER WARM AIR TO COOLER
- *19 IN GEN. BRG.-FRONT (DUAL ELEMENT)
- *20 IN GEN. BRG.-FRONT (DUAL ELEMENT)
- *21 IN GEN. BRG.-REAR (DUAL ELEMENT)
- *22 IN GEN. BRG.-REAR (DUAL ELEMENT)



CW SHAFT ROTATION
FACING EXC. END OF
GENERATOR -
PHASE SEQUENCE 1-2-3



GENERATOR LEAD COMPARTMENT BY E.M. CONTROL DIV. (FIELD MOUNTED)

GENERATOR

REAR

ACCESSORY JUNCTION BOX - SEE E.M. CONTROL DIV. OUTLINE DIAGRAM

EXCITER SPACE HEATER JUNCTION BOX (WIRED SEPARATELY FROM MAIN BOX)
VIBRATION PROBE DRIVER

STATOR TEMP. DETECTOR
7 THRU 12
MICHEL ELEMENT
120 OHMS @ 0°C

GEN. GAS (E.C. AIR) THERMOCOUPLES
13 THRU 18
COPPER CONSTANTAN (1)

GEN. BEARING THERMOCOUPLES
19, 20, 21, 22
COPPER CONSTANTAN (1)
(2) DUAL ELEMENT TC PER BRG.

GROUND DETECTION SYSTEM
UNIT 'B' RECEIVER

GENERATOR ACCESSORY JUNCTION BOX
(SEE CONTROL DIVISION EXTERNAL CONN. DIAGRAM)

THERMOSTAT GEN. HOT GAS

ENCLOSED GEN. STATOR TEMP. DETECTOR (GAS THERMOCOUPLE PLATE - SEE RTD & TC WIRING DIAGRAM)

(3) TERM. STUD BRG. INSUL. TEST

FRONT

EXCITER TEMP. BOX
EXCITER ENCLOSURE

EXCITER FIELD

EXCITER HEATER
1 PH - 120 V - 550 W

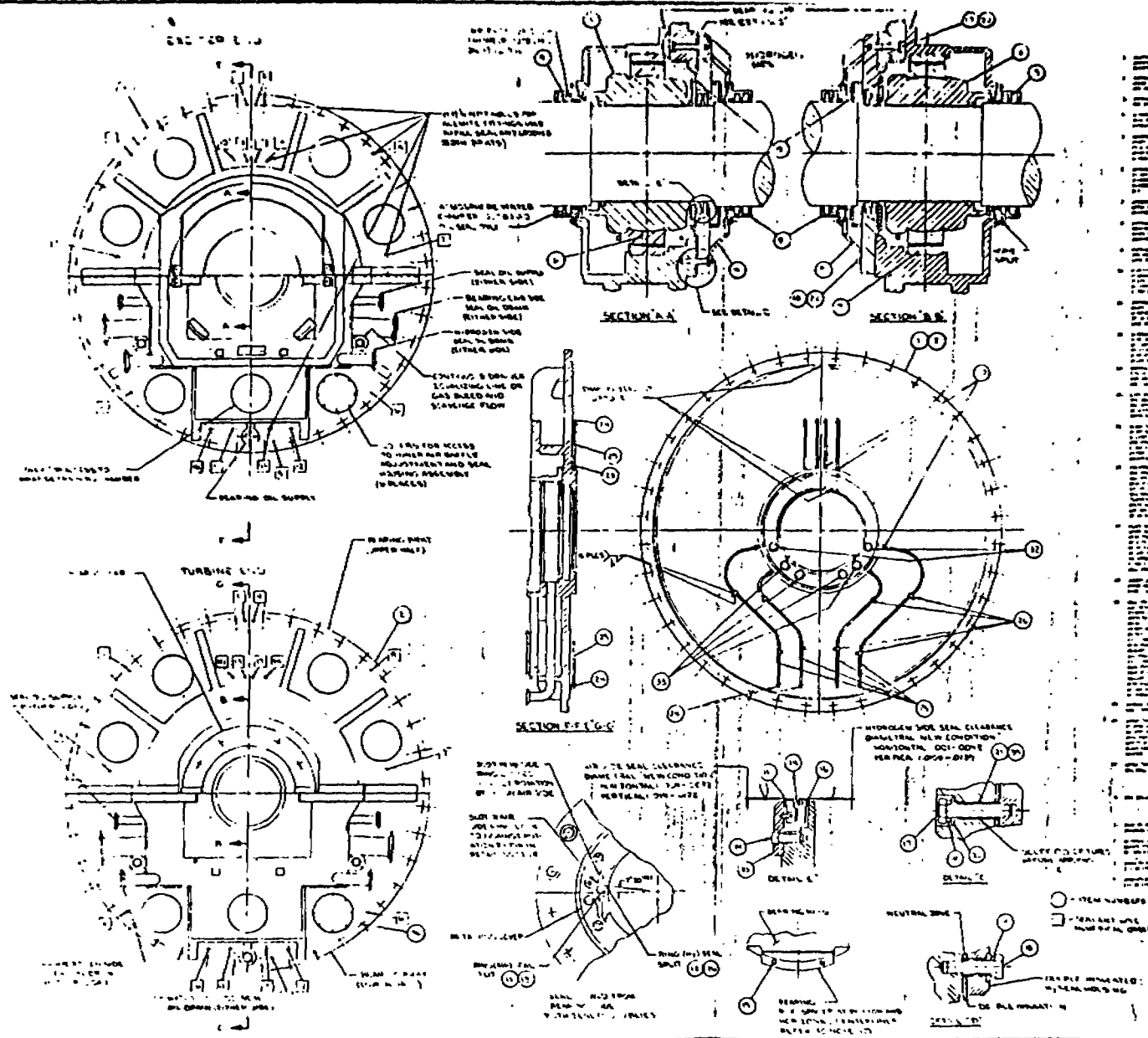
STROBE POWER TRANSFORMER
1 PH - 60 HZ - 100 V - 55 W

THERMISTOR
GEN. COOLER WATER INLET

8" ID TUBE - 2A TND.

GROUND DETECTION SYSTEM, UNIT 'B' (RECEIVER)

(Fig. 10)



(Fig. 9)



REVISIONS

JOB NO. -

CHARGE NO.

SUBJECT COMPLETE POWER TRAIN

AUTH. NO.

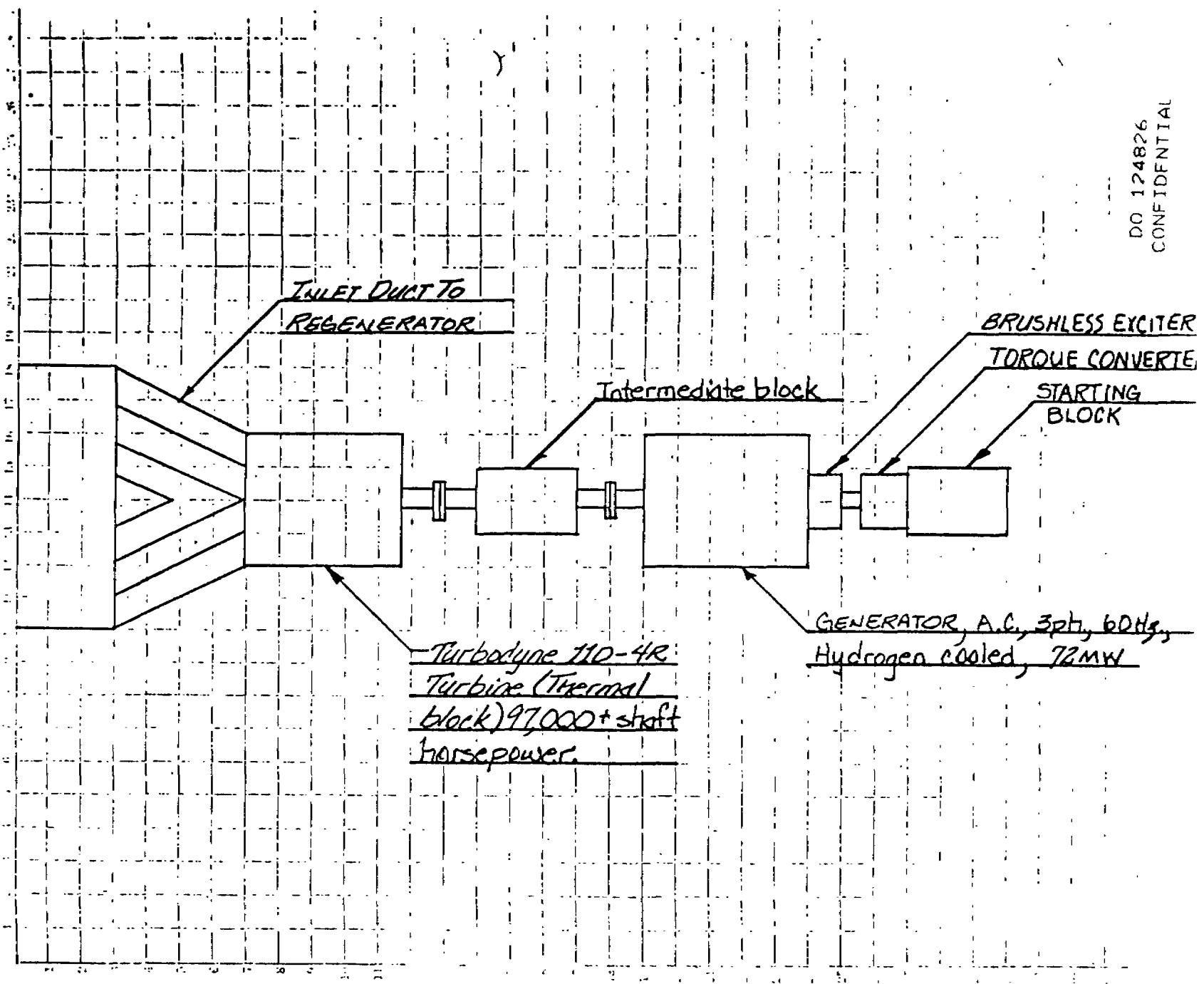
FILE NO.

BY A.L. Spork

DATE Fig 8

CHECKED BY

SHEET OF



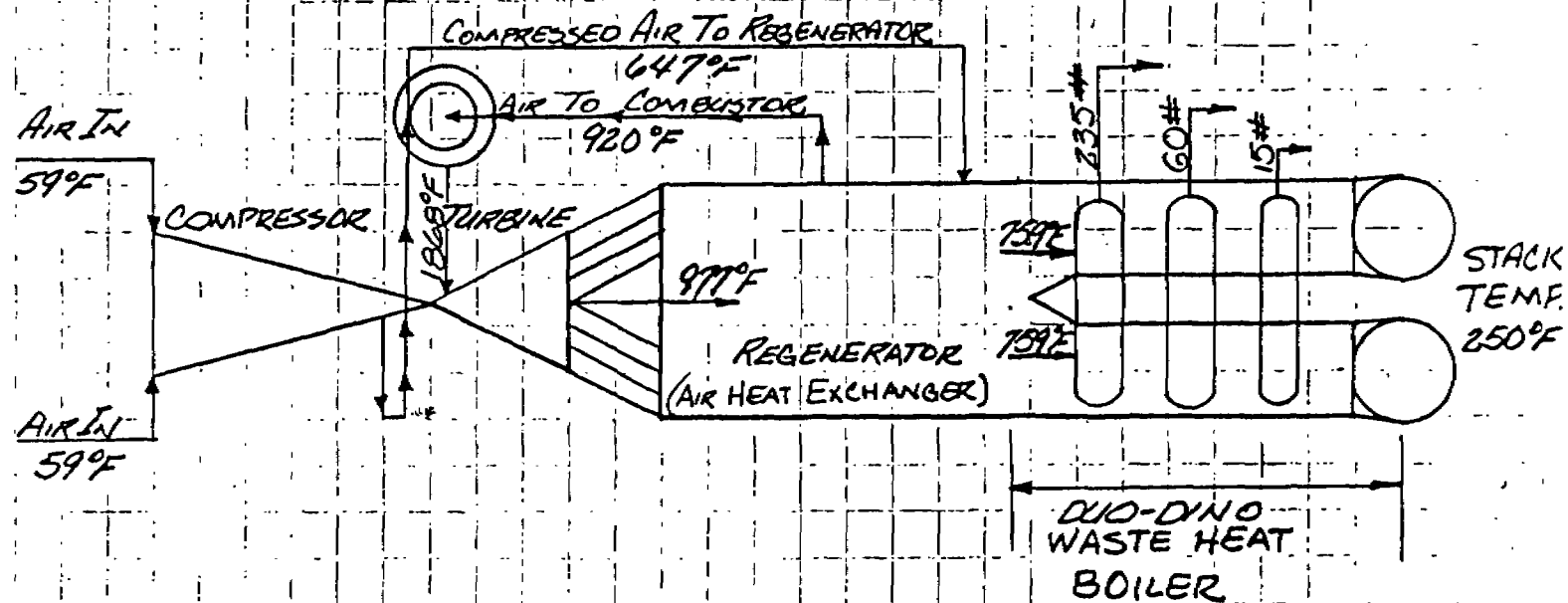
DO 124826
CONFIDENTIAL

1

Power II - Power flow one line diagram

BY *A.L. Sorker*
DATE *4/12/78*
FILED *FEB 2*

OF
SHEET



DO 124828
CONFIDENTIAL