

THIS FILE IS MADE AVAILABLE THROUGH THE DECLASSIFICATION EFFORTS AND RESEARCH OF:

# THE BLACK VAULT

THE BLACK VAULT IS THE LARGEST ONLINE FREEDOM OF INFORMATION ACT / GOVERNMENT RECORD CLEARING HOUSE IN THE WORLD. THE RESEARCH EFFORTS HERE ARE RESPONSIBLE FOR THE DECLASSIFICATION OF THOUSANDS OF DOCUMENTS THROUGHOUT THE U.S. GOVERNMENT, AND ALL CAN BE DOWNLOADED BY VISITING:

[HTTP://WWW.BLACKVAULT.COM](http://www.blackvault.com)

YOU ARE ENCOURAGED TO FORWARD THIS DOCUMENT TO YOUR FRIENDS, BUT PLEASE KEEP THIS IDENTIFYING IMAGE AT THE TOP OF THE .PDF SO OTHERS CAN DOWNLOAD MORE!

UNCLASSIFIED

AD NUMBER
AD052997
CLASSIFICATION CHANGES
TO
unclassified
FROM
confidential
AUTHORITY
31 Aug 1966, DoDD 5200.10

THIS PAGE IS UNCLASSIFIED

UNCLASSIFIED

AD NUMBER
AD052997
CLASSIFICATION CHANGES
TO
confidential
FROM
secret
AUTHORITY
31 Aug 1957, DoDD 5200.10

THIS PAGE IS UNCLASSIFIED

**UNCLASSIFIED**

AD 52997

*Reproduced  
by the*

ARMED SERVICES TECHNICAL INFORMATION AGENCY  
ARLINGTON HALL STATION  
ARLINGTON 12, VIRGINIA



DECLASSIFIED  
DOD DIR 5200.9

**UNCLASSIFIED**

**UNCLASSIFIED**

AD 52997

Armed Services Technical Information Agency

Reproduced by  
DOCUMENT SERVICE CENTER  
KNOTT BUILDING, DAYTON, 2 OHIO

Because of our limited supply, you are requested to  
RETURN THIS COPY WHEN IT HAS SERVED YOUR PURPOSE  
so that it may be made available to other requesters.  
Your cooperation will be appreciated.

NOTICE: WHEN GOVERNMENT OR OTHER DRAWINGS, SPECIFICATIONS OR OTHER DATA  
ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED  
GOVERNMENT PROCUREMENT OPERATION, THE U. S. GOVERNMENT THEREBY INCURS  
NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE  
GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE  
SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY  
IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER  
PERSON OR CORPORATION OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE  
USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

**UNCLASSIFIED**

UNCLASSIFIED



*U* *EC*  
*power*

PD  
52 997

THE BUREAU OF INVESTIGATION  
U.S. DEPARTMENT OF JUSTICE

RECORDED & INDEXED  
SERIALIZED & FILED  
FBI - MEMPHIS

518 + 205

*SECRET*

UNCLASSIFIED

[Faint, mostly illegible text in a large rectangular box]

NOTICE: THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE  
NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING  
OF THE ESPIONAGE LAWS, TITLE 18, U.S.C., SECTIONS 793 and 794.  
THE TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN  
ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW.



UNCLASSIFIED



REPORT F7A-36-125  
DATE 4 August 1954

MODEL

TITLE

F7A-36-125

DESCRIPTION OF PARASITE SYSTEM  
UTILIZING CONVAIR B-36 CARRIER

SUBMITTED UNDER

CONTRACT AF 33(038) - 19968  
CCH NO. 1024-13

The Security Classification of this Report shall be the same as that of the original data from which it was prepared. It is the responsibility of the user to determine the classification of the data to be used in any reproduction of this report.

PREPARED BY: W. C. Klogka

GROUP: PRELIMINARY DESIGN  
AND PERFORMANCE

CHECKED BY: H. P. ...

REFERENCE:

APPROVED BY: R. E. ...

L. G. ...  
for R. J. ...

C. ...

NO. OF PAGES

NO. OF DIAGRAMS

THIS REPORT CONSISTS OF \_\_\_\_\_ PAGES

REVISIONS DATE NO. OF PAGES

NO.	DATE	BY	CHANGE	PAGES AFFECTED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE 1  
MODEL NO. F7A-36-125  
DATE 4 AUGUST 1954

CONFIDENTIAL

TABLE OF CONTENTS

Subject	Page
Table of Contents	1
Introduction	3
<b>SECTION I - DESCRIPTION OF PARASITE SYSTEM</b>	
General Description	4
Launching and Retrieving the Parasite	5
Description of the B-36 Carrier	7
Parasite Clearance Problems Relative to Carrier	12
Parasite Clearance Problems Relative to Traps	14
Parasite Latches and Release Systems	15
Loading	18
Appendix to Section I	86
<b>SECTION II - PERFORMANCE DATA</b>	
Performance Data	20
Typical Missions	21
Take-off Distance	26
Performance Summaries	29
Climb Performance	38
Long Range Cruise	42
Landing Height	51
Landing Distance	54
Lift and Drag	56

UNCLASSIFIED  
CONFIDENTIAL

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

FORM 3  
REPORT NO. FWA-28-100  
MODEL  
DATE 4 AUGUST 1951

CONFIDENTIAL

TABLE OF CONTENTS (continued)

Subject	Page
Equivalent Weight Data for Stripped Airplanes	62
Sample Mission Calculations	64
SECTION III - WEIGHT AND BALANCE DATA	
B-36B Carrier	75
RB-36D Carrier	77
B-36H Carrier	79
RB-36H Carrier	81
Fuel	83
Oil	83
Fluid Injection	84
Trapass Mechanism	84
RF-84F Parasite	84
REFERENCES	85

UNCLASSIFIED  
CONFIDENTIAL

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

REPORT NO. FWA-28-100  
MODEL  
DATE 4 AUGUST 1951

CONFIDENTIAL

INTRODUCTION

This document presents a complete description of a basic parasite system utilizing the Convaif B-36 type aircraft as the carrier.

The information contained herein is sufficient for a preliminary evaluation of the basic stowage problem, basic aerial operation, and estimated performance for any proposed parasite aircraft. However, dependent upon the proposed parasite mission, the following items should be considered also in any evaluation:

1. Servicing of parasite from the carrier in flight.
  - a. Refueling
  - b. Replacing camera magazines, etc.
2. High Altitude operation and equipment.
3. Communications equipment.
4. Rendezvous equipment.
5. Night lighting.
6. Special Monitoring Circuits.

UNCLASSIFIED  
CONFIDENTIAL

UNCLASSIFIED  
CONFIDENTIAL

Republic of the Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE  
REPORT NO. 7-1-30-125  
NO. 1  
DATE 1 August

CONFIDENTIAL

### SECTION 7

#### DESCRIPTION OF B-36 CARRIER, TRAPEZE FURNITURE AND PARASITE LATCHES

##### GENERAL DESCRIPTION

The composite aircraft (See Plate 1, p.A-0) consists of a B-36 type aircraft equipped as a carrier, with a parasite airplane suspended by a trapeze installed in the B-36 bomb bay.

The trapeze is designed to support, launch, and retrieve the parasite during flight, and provides parasite support during carrier take-off and landing. It consists primarily of a trapeze actuating cylinder, drag brace, boom, snubber and suspension boom. The suspension boom supports the parasite at three points-- at the nose and on each side of the fuselage (See Plate 2, p.A-2). The nose attachment is an open fork receiver lying in a horizontal plane which is engaged by the parasite vertical nose latching fork. The aft boom latches are engaged from below by the pins on the parasite fuselage.

UNCLASSIFIED  
CONFIDENTIAL

UNCLASSIFIED  
CONFIDENTIAL

Republic of the Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE  
REPORT NO. 7-1-30-125  
NO. 2  
DATE August 1944

CONFIDENTIAL

##### LAUNCHING AND RETRIEVING THE PARASITE

With the parasite pilot in the cockpit, and the lock-bay doors around the parasite open (See Plate 6, p.A-6) the trapeze is extended from CRUISE POSITION to EXTENDED POSITION. At the EXTENDED POSITION the parasite engine is started, and when all checks are made, the parasite pilot signals the trapeze operator to lower the parasite to LAUNCH POSITION. This is done by pivoting the boom about the main lock yoke by means of the positioner jack, and simultaneously releasing the boom aft latches (See Plate 2, p.A-2). Thus, the parasite is suspended and is held taut by the forward latch only at the LAUNCH POSITION. When ready, the parasite pilot actuates the probe release switch (See Plate 5, p.A-5), thereby releasing the parasite from the carrier.

When the parasite is to be retrieved, the trapeze operator extends the trapeze to the RETRIEVING POSITION (same as LAUNCH POSITION), while the parasite approaches the carrier from below and behind. When the parasite nose probe fork is lined up with the boom probe receiver, the parasite is accelerated gradually to obtain a differential closing speed of one to two mph IAS, and engages. The force resulting from the engagement is sufficient to operate the parasite nose probe latch automatically. Once the parasite is securely latched and stabilized, the

UNCLASSIFIED  
CONFIDENTIAL

5280  
5280  
10560  
3600

UNCLASSIFIED

ANALYST: \_\_\_\_\_  
PREPARED BY: \_\_\_\_\_ Consolidated Vultee Aircraft Corporation PAGE: 6  
CHECKED BY: \_\_\_\_\_ FORT WORTH DESIGN REPORT NO. FW-36-324  
REVISED BY: \_\_\_\_\_ FORT WORTH, TEXAS MODEL: \_\_\_\_\_  
DATE: 1 August 1954

~~CONFIDENTIAL~~

#### LAUNCHING AND RETRIEVING THE PARASITE (Continued)

troop operator retracts the boom to the EXTENDED POSITION. In this position, the troop operator directs the parasite pilot to use right or left rudder to align the parasite aft latch with the boom latches. When the latches are aligned, the parasite wing flaps are lowered until the parasite aligns enough to engage the two aft latches on the boom. The trapeze and attached parasite are then retracted into the bomb bay to the COLLECT POSITION to permit the pilot to leave the parasite.

For emergency retrieval of the weapon parasite, the carrier pilot or troop operator actuates a switch which discharges an air bottle in the boom aft latch (See Plate 1 p. A-9), and simultaneously engages a switch which frees the probe receiver from the boom.

For parasite normal and emergency release system, see paragraph on Parasite Latches and Release Systems.

#### NOTE

A profile to be investigated in the design study of the proposed parasite will be that of the parasite and trapeze in flight. Experience with the present parasite system indicates that dynamic loads (due to gusts, etc.) can be controllably controlled by the parasite pilot.

~~CONFIDENTIAL~~

UNCLASSIFIED

UNCLASSIFIED

ANALYST: \_\_\_\_\_  
PREPARED BY: \_\_\_\_\_ Consolidated Vultee Aircraft Corporation PAGE: 7  
CHECKED BY: \_\_\_\_\_ FORT WORTH DESIGN REPORT NO. FW-36-324  
REVISED BY: \_\_\_\_\_ FORT WORTH, TEXAS MODEL: \_\_\_\_\_  
DATE: 1 August 1954

#### MODIFICATION OF B-36 CARRIER

The B-36 and RB-36 are structurally identical for purposes of this report. The major difference in the two models is that the B-36 Bomb Bay No. 1 (Bbls. 5.0 to 6.0) and Bomb Bay No. 4 (Bbls. 8.0 to 9.0) were converted to a Carrier Compartment and Radar Equipment Bay, respectively, for the RB-36 configuration. Further modification of the RB-36 to a parasite carrier added a troop operator's station in the Carrier Compartment, and located the Radar Equipment Bay to an area aft of Bbl. 10.0.

The basic major structural modifications and additions to a standard B-36 or RB-36 aircraft required for installation of a launcher and retrieving system consist of the following:

1. Removal of the lower portion of bulkhead 7.0 to permit parasite storage in bomb bay. (See FWP 5925, p. A-4 and FWP 21004, p. A-5).
2. Revise lower portion of bulkhead 8.0 to make provisions for troop operator's station.
3. On RB-36, the radar systems are relocated to lower fuselage surface aft of bulkhead 10.0.
4. Installation of fixed exterior between bulkheads 8.0 and 9.0 containing a slot to receive the vertical tail of a parasite (See Plate 6, p. A-20).

UNCLASSIFIED

UNCLASSIFIED

 PREPARED BY:  
 CHECKED BY:  
 REVISED BY:

**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

 PROJ. NO. 6  
 DRAWING NO. 12-10-57  
 MOD. NO. 1  
 DATE: 8 AUGUST 1956

**DESCRIPTION OF B-36 CARRIER (Continued)**

5. Bomb bay doors in the parasite area are replaced with doors and fairings which fair around the parasite in the CRUISE POSITION and close up the opening left by the parasite when away from the carrier (See Plate 6, p. 420).
6. On B-36, a trapeze operator's station must be installed in Bay No. 1 and means for parasite pilot to enter B-36 crew area must be provided.

**POWER PLANT**
**B-36 Carrier:**

No. and Model:	(6) RB360-41 or (6) RB360-53*
Manufacturer:	Pratt and Whitney
Engine Spec. No.:	A-7063-E
Supercharger:	Gear Driven Single Stage, Single Speed
Turbo-Supercharger (No. and Type):	(2) EH-1 Turbos
Turbo Manufacturer:	General Electric
Red. Gear Ratio:	0.375
Prop. Manufacturer:	Curtiss Wright
Blade Design No.:	1129-1706-24
Prop. Type:	Constant Speed, Full Feathering, Reversible
No. Blades/Prop. Dia.:	3/19"
Augmentations:	Water/alcohol
	plus
No. and Model:	(4) J47-OB-19

- \* - 41 Engine is used on the B-36D and RB-36D  
 - 53 Engine is used on the B-36H and RB-36H

UNCLASSIFIED

 PREPARED BY:  
 CHECKED BY:  
 REVISED BY:

**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

 PROJ. NO. 6  
 DRAWING NO. 12-10-57  
 MOD. NO. 1  
 DATE: 8 AUGUST 1956

**POWER PLANT (CONT'D)**
**B-36 Carrier (Cont'd)**

Manufacturer:	General Electric
Engine Spec. No.:	E-589
Type:	Axial Flow Turbojet
Length:	34 1/2"
Diameter:	39"
Tail Pipes:	Flare Area
Weight (dry):	3475 lb.

**PROP.**

Spec.	MIL-P-5572
Grade	115/145

**FLUID INJECTION**

TYPE	Location	No. of Tanks	Gallons
Water/alcohol	Engine Nozzles	6	50
	<b>OIL</b>		
	Recip.		200
Capacity (Gal.)	10,000		52
Spec.	MIL-D-6082		MIL-D-6081
Grade	D-1120W-1100		3010

**ENGINE RATINGS**

(Manufacturer's Guaranteed Ratings)

		B-360-41 Engine			
	RPM	RPM	ALT.	Time (Mins.)	
Take-off:	3500	2700	S.L.	5	
	3050	2700	S.L.	5	



UNCLASSIFIED

 ANALYST \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 REVISED BY \_\_\_\_\_

CONVAIR

 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

 PART I  
 REPORT NO. 724-10-173  
 MODEL \_\_\_\_\_  
 DATE 4 August 1950
H160-41 Engine Rating Cont'd

	HP	HP	ALT.	Time (Min.)
Military:	3500	2700	Up to 34,100**	30
	3250	2700	Up to 34,100**	30
Normal:	2650	2550	Up to 39,400**	Continuous

 \* Not  
 \*\* Turbosupercharger limitation
H160-51 Engine

	HP	HP	ALT.	Time (Min.)
Take-off	3800	2800	S.L.	5
	3500	2800	S.L.	5
Military	3800	2800	Up to 35,000**	30
	3500	2800	Up to 35,000**	30
Normal	2800	2600	Up to 39,000**	Continuous

 \* Not  
 \*\* Turbosupercharger Limitations
H17-2B-19

	S.L. Static Thrust-lb.	HP	Time Min.
Naval & Military	5200	7950	10
Normal	4730	7630	Continuous

Dimensions

Wings	
Area	4772 sq. ft.
Span	230.0 ft.
A.R.	11.00
Inclination (root):	3°
(tip):	1°

UNCLASSIFIED

 ANALYST \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 REVISED BY \_\_\_\_\_

CONVAIR

 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

 PART II  
 REPORT NO. 724-10-173  
 MODEL \_\_\_\_\_  
 DATE 4 August 1950
Dimensions (Cont'd)

Dihedral	2°
Sweepback (L.H.):	15°5'39"
Length:	162.1 ft.
Height:	44.3 ft.
Tread:	44.0 ft.
Prop. Ground Clearance:	53.5 in.
Surface Areas:	
Wing	7927 sq. ft.
Nacelles	2003 sq. ft.
Fuselage	5103 sq. ft.
Empennage	3590 sq. ft.
Jet Nacelles with strut per nacelle (2)	800 sq. ft.
	19,423

UNCLASSIFIED



~~CONFIDENTIAL~~

PARASITE CLEARANCE PROBLEMS RELATIVE TO CARRIER

Major clearance points to the B-36 which should be investigated for stowage of a proposed parasite are shown on Dwg. FV5410001, p.A-6, and Dwg. FV5410002, p.A-7. These points are:

1. Wing Box Section

The parasite canopy must clear the lower contour of the wing box sufficiently for the canopy to be opened to allow the parasite pilot entry to the parasite in the CRUISE POSITION. Further, the closed canopy must clear the wing box lower contour when the parasite is in the TAKE-OFF and LANDING POSITION.

2. Main Landing Gear Retracting Arm

The parasite must be lowered to the EXTENDED POSITION to allow the carrier main landing gear to be retracted or extended. In the EXTENDED POSITION, the wings of the parasite must clear the landing gear arm.

3. Propeller Arm

For some proposed parasites of a delta or extreme swept wing configuration, the propeller arm might interfere with the wing in the STORED POSITION.

4. Inboard Flap Travel

For a proposed parasite with twin vertical tail surfaces, an interference could exist between the vertical tails and the flap.

~~CONFIDENTIAL~~

UNCLASSIFIED

UNCLASSIFIED

~~CONFIDENTIAL~~

PARASITE CLEARANCE PROBLEMS RELATIVE TO CARRIER (Continued)

5. Ground Clearance

The most extreme landing attitude of the B-36 is shown on FV5410001, p.A-6, and all portions of the parasite should clear this ground line when the boom and parasite are in the TAKE-OFF and LANDING POSITION.

6. Louvers Clearance

Drawing FV5411001, p.A-6, shows a section of the location. The louver location and dimensions are essentially constant along the entire length of the bomb-bay on both the B-36 and B-36 airplanes. The bomb-bay length available for parasite stowage is from Yhd. 3.0 to 9.0 for B-36, and from Yhd. 6.0 to 9.0 for B-35.

~~CONFIDENTIAL~~

ED

UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
REVIEWED BY \_\_\_\_\_

Classified Value Aircraft Corporation PAGE 16  
REPORT NO. F2A-36-325  
FORT WORTH DIVISION  
FORT WORTH, TEXAS  
MODEL \_\_\_\_\_  
DATE: 8 August 1954

~~CONFIDENTIAL~~

PARASITE LATCHES AND RELEASE SYSTEMS (Continued)

valve which directs hydraulic pressure from the parasite's utility system for the selected operation in all positions except DOWN EXTEND. When the lever is placed in DOWN EXTEND a separate cable is rolled to open a valve for automatic extension of the probe and pin. Pneumatic pressure for this operation is obtained from the parasite's landing gear emergency air bottle. A locking mechanism which is actuated by a button (1, Plate 5, p. AM) is located adjacent to the lever and prevents inadvertent lever movement downward from EXTEND. In addition, a guard (3, Plate 5, p. AM) must be held down to permit lever movement to DOWN EXTEND. The EXTEND position extends the probe and pin which are then mechanically locked. The lever should be in this position when the parasite is fully engaged. After a normal release of the parasite, the lock button is depressed and the lever is moved directly to RETRACT for probe and pin retraction.

NOTE

When the probe is retracted, a lift switch on the probe mechanism prevents inadvertent latch operation precluding damage to the latch and the surrounding structure.

~~CONFIDENTIAL~~

UNCLASSIFIED

UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
REVIEWED BY \_\_\_\_\_

Classified Value Aircraft Corporation PAGE 17  
REPORT NO. F2A-36-325  
FORT WORTH DIVISION  
FORT WORTH, TEXAS  
MODEL \_\_\_\_\_  
DATE: 8 August 1954

~~CONFIDENTIAL~~

PARASITE LATCHES AND RELEASE SYSTEMS (Continued)

Just prior to retrieving, the lever must be returned to EXTEND. If the probe and pins fail to extend, the lever guard can be held down and the lever moved into DOWN EXTEND.

NOTE

When the lever is placed in DOWN EXTEND, a mechanical lock prevents any subsequent lever operation for the remainder of the flight. Before the next flight, the lever must be unlocked and returned to EXTEND by maintenance personnel.

If the aft latches fail to release when the tripping operator's aft latch release switch is actuated, the probe and pin control lever can be moved to PIN RETRACT to retract the aft latch pins. If the probe latch does not retract in response to the probe release switch, the lever can be moved to LATCH RELEASE to retract the latch.

~~CONFIDENTIAL~~

UNCLASSIFIED

UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_ Consolidated Vultee Aircraft Corporation PAGE 14  
 CHECKED BY \_\_\_\_\_ FORT WORTH DIVISION REPORT NO. FV-125  
 REVISED BY \_\_\_\_\_ FORT WORTH, TEXAS MODEL \_\_\_\_\_  
 DATE: 6 August 1954

CONFIDENTIAL

#### PARASITE CLEARANCE PROBLEMS RELATIVE TO TRAPSE

It is realized that the existing trapse mechanism would be unsatisfactory for some proposed parasites. However, other proposed parasites may be of such size and shape that changes to the existing mechanism would be negligible. Therefore, a complete description of the present trapse mechanism is contained herein so changes may be held to a minimum.

The major clearance points to the trapse mechanism which should be investigated for a proposed parasite are shown in this report on the following drawings:

- 30L25200 Dht. 2 & 3, p. A-7 Trapse Mechanism Installation
- FV410003, p. A-10 - Layout - Clearance Dimensions for Trapse and Parasite
- 30M4102, p. A-11 - Geometry - W/SWP Trapse Mechanism
- FV410005, p. A-12 - Layout - Enlarged portion of 30M4102, Trapse Geometry.

From these drawings, a preliminary estimate may be made relative to changes required in the trapse mechanism, the proposed parasite, or to both, to make them compatible.

CONFIDENTIAL

UNCLASSIFIED

UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_ Consolidated Vultee Aircraft Corporation PAGE 15  
 CHECKED BY \_\_\_\_\_ FORT WORTH DIVISION REPORT NO. FV-125  
 REVISED BY \_\_\_\_\_ FORT WORTH, TEXAS MODEL \_\_\_\_\_  
 DATE: 6 August 1954

CONFIDENTIAL

#### PARASITE LATCHES AND RELEASE SYSTEM

Drawings 43743503, p. A-4 43743506, p. A-4 and 43743522, p. A-15 completely describe the probe fork latch on the nose of the parasite. Drawing 43743518, p. A-7 show the hydraulic rear support pins and mechanism. Plate No. 4, p. A-7 presents the parasite hydraulic system in schematic form. Plate No. 5, p. A-7 illustrates the release controls in the parasite cockpit.

The normal release control in the parasite cockpit is the probe release switch mounted on the parasite throttle control lever (see 4, Plate 5, p. A-7). When the switch is depressed, a solenoid valve is actuated to release hydraulic pressure for probe latch retraction. When the switch is released the latch adjusts for re-engagement.

For normal and emergency retraction of the aft latch pins and the parasite probe, the probe and pin control lever is used. A complete description of the probe and pin control lever (see Plate 5, p. A-7) and details of its operation follows:

This lever (2, Plate 5, p. A-7) is located at the left side of the parasite pilot's pedestal just below the instrument panel. The lever has five distinct positions identifiable from top to bottom as follows: DOWN LATCHED, EXTENDED, PIN RETRACT, LATCH REL., and RETRACT. The lever is cable-connected to a directional

CONFIDENTIAL

UNCLASSIFIED

UNCLASSIFIED

APPROVED BY \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_

Consolidated Vehicle Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE 10  
REPORT NO. P21-34-125  
MODEL \_\_\_\_\_  
DATE 5 August 1954

LOADING

The loading procedure will vary with the individual parasite, but a general description of the most recent loading procedure is presented for information only.

The carrier is towed onto ramps which are 55" high. Further elevation is obtained by pressurizing the main gear oleo to fully extended position. This procedure elevates the carrier to the position shown on Plate 7, p. A-21.

The parasite, resting on its normal landing gears, is towed into position under the B-36. A small dolly containing a hydraulic jack is attached to the parasite nose gear, and the parasite nose is lifted to a position where the probe lines up with the boom probe.

The fighter is towed forward until the nose probe is engaged. The dolly is then removed from the parasite nose gear, and the boom is lowered by stowing the trapeze main jack until the aft latches are engaged.

When all latches are securely engaged, the parasite landing gear is retracted and the parasite itself is retracted to the TAKE-OFF POSITION.

UNCLASSIFIED

UNCLASSIFIED

APPROVED BY \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_

Consolidated Vehicle Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE 10  
REPORT NO. P21-34-125  
MODEL \_\_\_\_\_  
DATE 5 August 1954

LOADING (Continued)

For previous parasites which are not adaptable to the above loading procedure, loading pits may be considered as an alternate method.

It is to be noted that a pit is required for the trapeze hydraulic system bleeding procedure. This pit is 30 ft. long, 8 ft. wide, and 10 ft. deep to allow complete extension of the trapeze (minus parasite) for ground testing.

UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE 23  
REPORT NO. 721-36-183  
WORK ORDER NO. 22  
DATE 8/7/1948

## SECTION II

### Performance Data

The performance data presented herein are of sufficient detail that an evaluation of performance for B-36 carrier-parasite configuration can be made. Data are presented for the standard B-360, RB-360, B-36H and RB-36H carrier airplanes.

In addition to carrier alone,  $\Delta C_D = 0$ , performance data are presented for drag increases of  $\Delta C_D = .0030$  and  $\Delta C_D = .0060$  to cover any inherent drag rise due to a composite configuration. All data presented are for launching and retrieving the parasite at 25,000 feet altitude. Data are also included for the consideration of stripped carriers.

Sample calculations are presented for three missions and they are in conformance with the descriptions of typical missions and Mil-G-5011A rules.

Weights data for all airplanes are presented in section III.

UNCLASSIFIED

UNCLASSIFIED

ANALYSED BY \_\_\_\_\_ Consolidated Vultee Aircraft Corporation PAGE 24  
CHECKED BY \_\_\_\_\_ FORT WORTH DIVISION REPORT NO. 721-36-183  
REVIEWED BY \_\_\_\_\_ FORT WORTH, TEXAS WORK ORDER NO. 22  
DATE 8/7/1948

### TYPICAL MISSIONS

#### BASIC MISSION

##### RAFFALE

Warm-up, take-off and climb on course at normal rated power to 5,000 feet. Cruise at low range speeds and altitudes to a point where climb is made to 25,000 feet. Following one minute for warm-up of parasite turbojet engine, launch parasite letter at 25,000 feet in area of launch, cruise at long range speeds during parasite mission plus 1 1/2 minutes for rendezvous and retrieve of parasite. Descend to within altitude lane range flight path and cruise back to base. Range free allowances include 10 minutes of normal power fuel consumption for reciprocating engines plus 5 minutes of normal power jet engine fuel consumption for warm-up and take-off plus letter time at power for long range cruise at 25,000 feet for reciprocating engine only plus 5% of initial fuel and fuel for 30 minutes cruise at sea level for landing and reserves.

#### Parasite Bomb

One minute maximum power warm-up and immediate launch at 25,000 feet, climb on course to within altitude lane range flight path and descend to sea level. Cruise at normal power 50 nautical miles to target, drop bomb, conduct 2 minutes of cruise action over target and 50 nautical miles run-out at normal power. Climb at normal power to within altitude lane range flight path and

~~SECRET~~



UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
REVISED BY \_\_\_\_\_  
Generalized Values Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS  
PAGE 25  
SERIAL NO. 171-3-11  
MODEL  
DATE 6 JANUARY 1954

parasite and descent to optimum altitude flight path.

Parasite Bomber

One minute maximum power warm-up and immediate launch at 25,000 feet, cruise at long range speeds and altitudes to a point 50 nautical miles from target. Descend to sea level, conduct 50 nautical mile run-in to target, drop bomb, conduct 2 minutes of evasive action over target and 50 nautical miles run-out at normal power. Climb at maximum power to optimum altitude long range flight path and cruise at long range speeds to post-strike base and land. Range free allowance includes one minute maximum power warm-up immediately prior to launch, plus 5% of initial fuel load, plus fuel for 20 minutes cruise at sea level for reserve.

Parasite High Altitude Reconnaissance

One minute maximum power warm-up and immediate launch at 25,000 feet, cruise at long range speeds and altitudes to a point 50 nautical miles from target. Cruise at this altitude (combat altitude) 50 nautical miles to target, conduct 2 minutes evasive action and cruise out 50 nautical miles at normal power. Climb at maximum power to optimum altitude long range flight path and cruise at long range speeds to post-strike base and land. Range free allowance includes one minute maximum power warm-up immediately prior to launch, plus 5% of initial fuel plus fuel for 20 minutes cruise at sea level for reserve.

Parasite Low Altitude Reconnaissance

One minute maximum power warm-up and immediate launch at

CLASSIFIED

UNCLASSIFIED

ANALYSIS \_\_\_\_\_  
PREPARED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
REVISED BY \_\_\_\_\_  
Generalized Values Aircraft Corporation  
FORT WORTH DIVISION  
FORT WORTH, TEXAS  
PAGE 26  
SERIAL NO. 171-3-11  
MODEL  
DATE 6 JANUARY 1954

25,000 feet, cruise at long range speeds and altitudes to a point 50 nautical miles from target. Descend to sea level, conduct 50 nautical mile run-in to target, conduct 2 minutes of evasive action over target and 50 nautical mile run-out at normal power. Climb at maximum power to optimum altitude long range flight path and cruise at long range speeds to post-strike base and land. Range free allowance includes one minute maximum power warm-up immediately prior to launch, plus 5% of initial fuel load, plus fuel for 20 minutes cruise at sea level for reserve.

BASIC RANGE

Carrier

Same as basic radius mission except that carrier does not loiter and begins cruise back to base immediately after launch of parasite and descent to optimum flight path.

Parasite Bomber

One minute maximum power warm-up and immediate launch at 25,000 feet, climb on course to optimum altitude for cruise at long range speed. Cruise to target, drop bomb and land. Range free allowance includes one minute maximum power warm-up immediately prior to launch, plus 5% of initial fuel plus fuel for 20 minutes cruise at sea level.

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

ANALYSIS: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

Consolidated Vultee Aircraft Corporation  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

PAGE: 22  
 REPORT NO. F7A-36-325  
 MODEL \_\_\_\_\_  
 DATE: 4 August 1944

~~XXXXXXXXXX~~  
 cruise at long range speeds to rendezvous point and descend to 25,000 feet to be retrieved. Range free allowances include one minute maximum power warm-up immediately prior to launch plus 5% of initial fuel plus fuel for 30 minutes cruise at sea level for rendezvous, retrieve and reserve.

#### Parasite High Altitude Reconnaissance

One minute maximum power warm-up and immediate launch at 25,000 feet, cruise at long range speeds and altitudes to a point 50 nautical miles from target. Cruise at this altitude (combat altitude) 50 nautical miles to target, conduct 2 minutes evasive action and cruise out 50 nautical miles at normal power. Climb at maximum power to optimum altitude long range flight path and cruise at long range speeds to rendezvous point and descend to 25,000 feet to be retrieved. Range free allowances include one minute maximum power warm-up immediately prior to launch plus 5% of initial fuel plus fuel for 30 minutes cruise at sea level for rendezvous, retrieve and reserve.

#### Parasite Low Altitude Reconnaissance

One minute maximum power warm-up and immediate launch at 25,000 feet, cruise at long range speeds and altitudes to a point 50 nautical miles from target. Descend to sea level, conduct 50 nautical mile run-in to target, 2 minutes of evasive action over target and 50 nautical miles run-out at normal power. Climb at maximum power to optimum altitude low range flight path and cruise at long range speeds to rendezvous point and descend to 25,000 feet to be retrieved. Range free allowances include one

UNCLASSIFIED

ANALYSIS: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

Consolidated Vultee Aircraft Corporation  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

PAGE: 23  
 REPORT NO. F7A-36-3  
 MODEL \_\_\_\_\_  
 DATE: 4 August 1944

~~XXXXXXXXXX~~  
 minute maximum power warm-up immediately prior to launch, plus 5% of initial fuel, plus fuel for 30 minutes cruise at sea level for rendezvous, retrieve and reserve.

#### Ferry Range Mission

The ferry range mission is conducted with a composite airplane and consists of warm-up, take-off and climb to 5,000 feet at normal rated power, cruise to landing base at optimum altitude for long range. Range free allowances include 10 minutes of reciprocating engine normal power fuel consumption, plus 5 minutes of jet engine normal power fuel consumption for warm-up and take-off, plus 5% of initial fuel, plus fuel for 30 minutes cruise at sea level for landing and reserve.

#### Advanced Base Pick-Up Mission

Any of the above outlined missions may be operated as an advanced base pick-up mission. The carrier takes off separately at some gross weight so that after retrieve of the parasite the combined gross weight does not exceed 170,000 pounds. An additional allowance of 15 minutes is made for hook-up. The parasite takes off separately and climbs at maximum power to 5,000 feet. It is refueled after retrieve to full launch weight.

#### Post-Mission

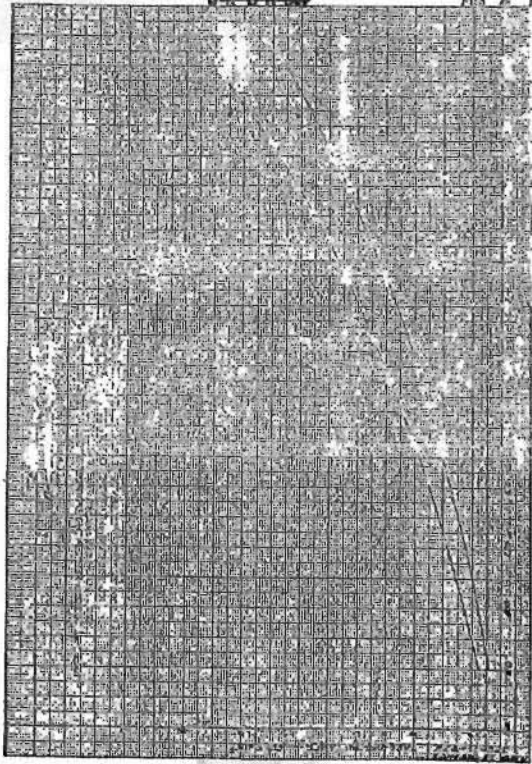
##### Carrier

Same as basic radius mission except that carrier does not loiter and begins cruise back to base immediately after launch of

~~XXXXXXXXXX~~

UNCLASSIFIED

PAGE 25  
FIG. 8



UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

PAGE 13  
CONVAIR NO. 118-16-375  
MODEL  
DATE: 4 AUGUST 1958

Performance Summary

Altitude performance summaries are presented from Figure 3 through Figure 10. Airspeed and climb corrections due to drag are tabulated on each chart. For a stripped carrier increase airspeed equivalent to a  $\Delta C_D$  decrease of .0013.

UNCLASSIFIED

UNCLASSIFIED

**CONVAIR**

PORT WORTH DIVISION  
PORT WORTH, TEXAS

FIG. 26  
REPORT NO. FPA-36-324  
NOV. 1954  
DATE 6 August 1954

Take-off Distance

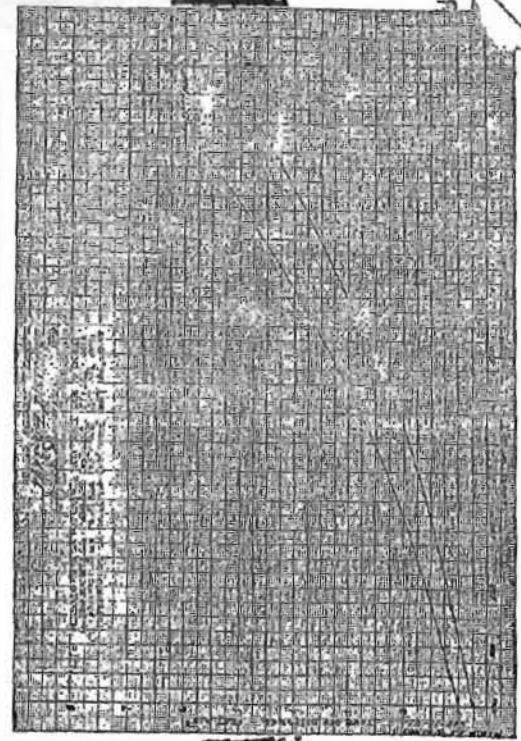
Take-off distance curves, Figures 17 and 25, are presented for the B-36D and B-36H parasite carrier airplanes. These same curves may be used for the RB-36D and RB-36H airplanes, respectively, since the take-off distance increase due to the slightly greater drag of the RB-36 airplanes is negligible. An added drag increment of  $\Delta C_D = .0060$  to the standard airplanes increases the take-off distances by only 3%.

Take-off distances determined from these curves for stripped parasite carrier versions will be conservative.

Fuel used for warm-up, taxi, and take-off for the B and RB-36D Carriers is 3550 pounds. For the B and RB-36H Carriers it is 4200 pounds.

UNCLASSIFIED

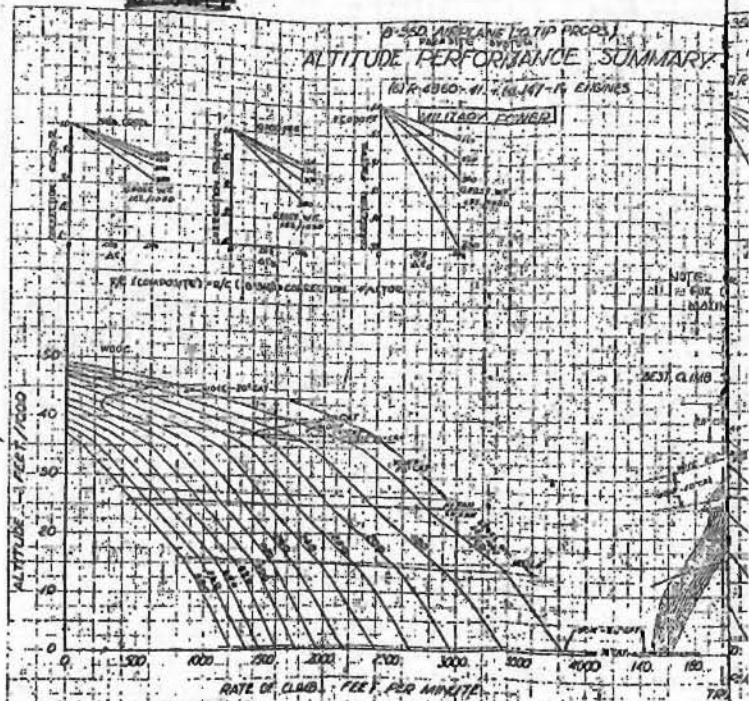
UNCLASSIFIED



UNCLASSIFIED



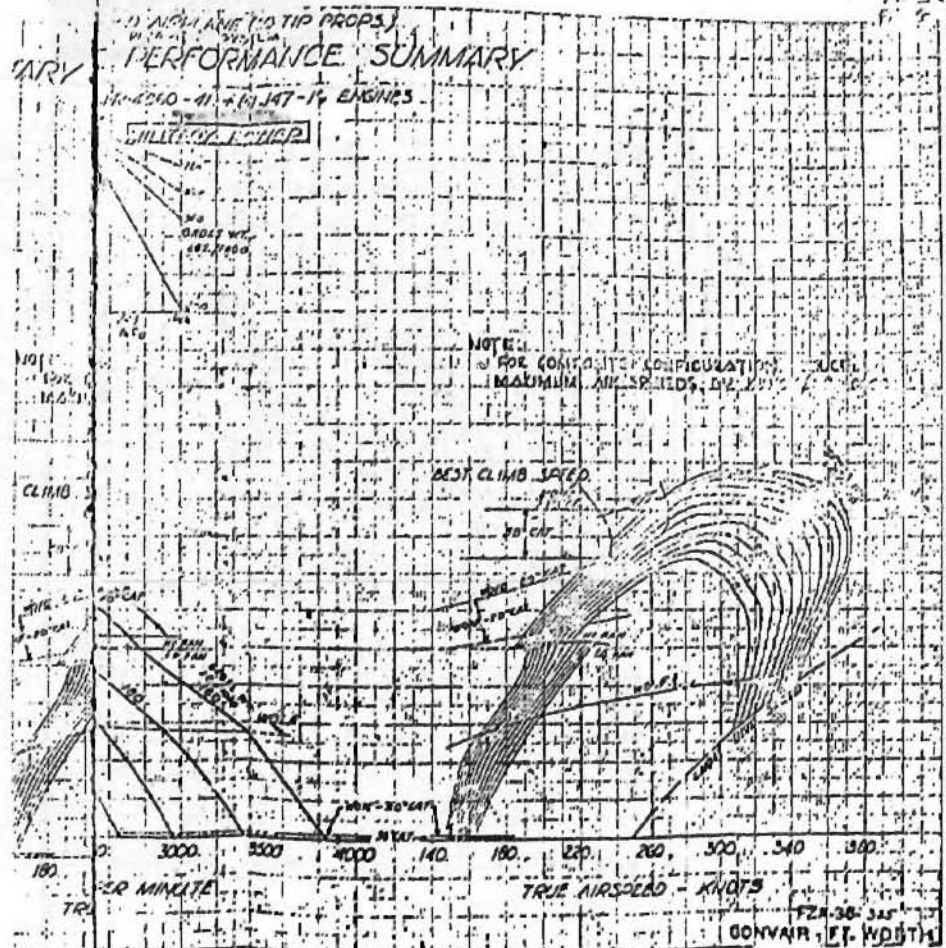
UNCLASSIFIED



~~SECRET~~

UNCLASSIFIED

UNCLASSIFIED

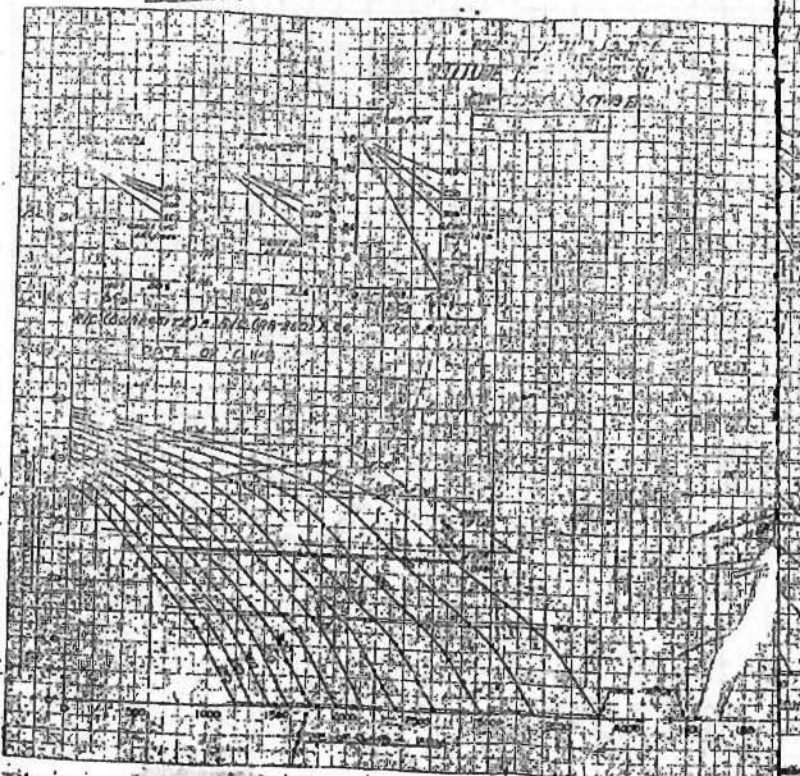


~~SECRET~~

UNCLASSIFIED



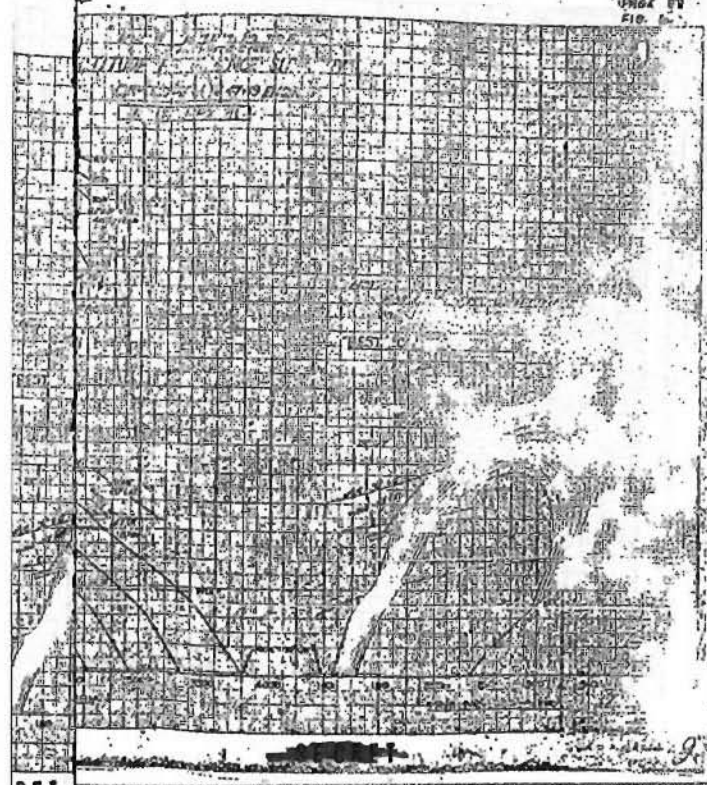
UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

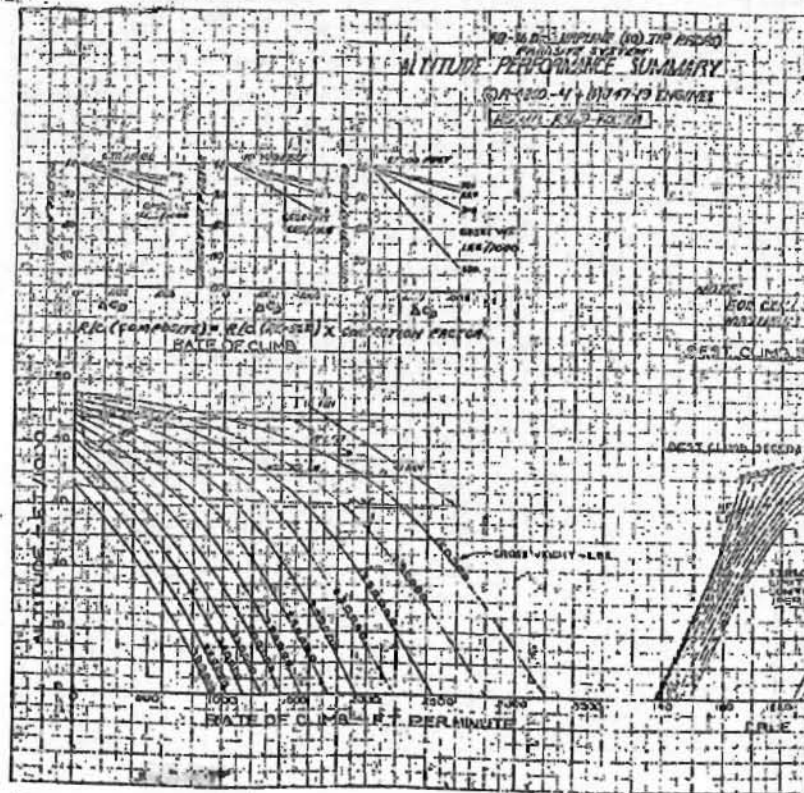
UNITED STATES  
FIG. 2



REI



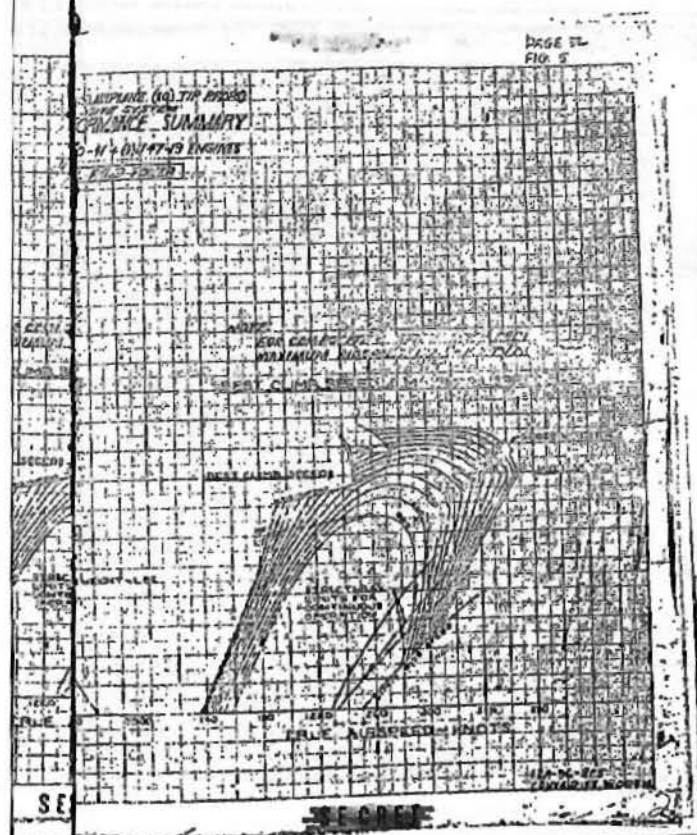
UNCLASSIFIED



SE

UNCLASSIFIED

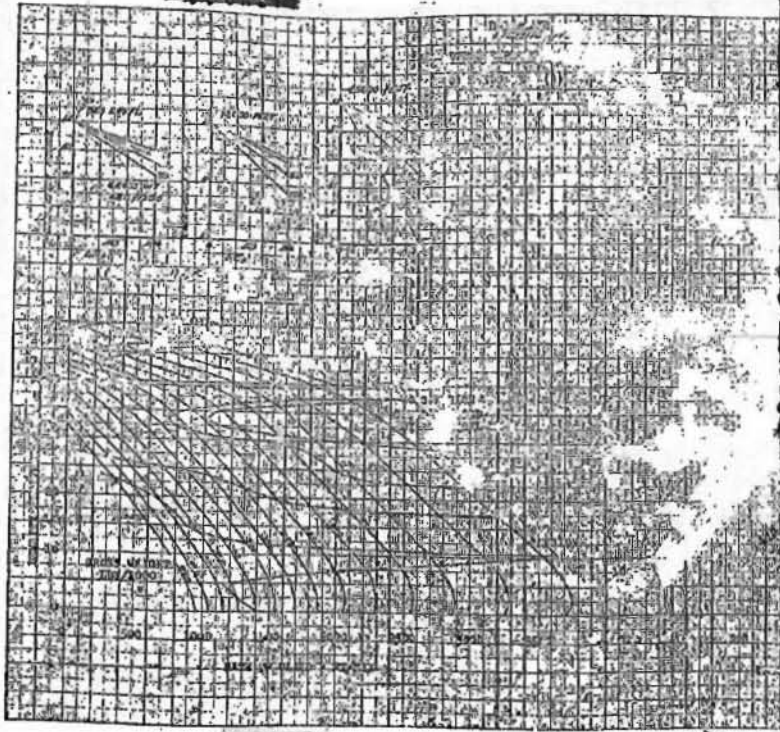
UNCLASSIFIED



SE

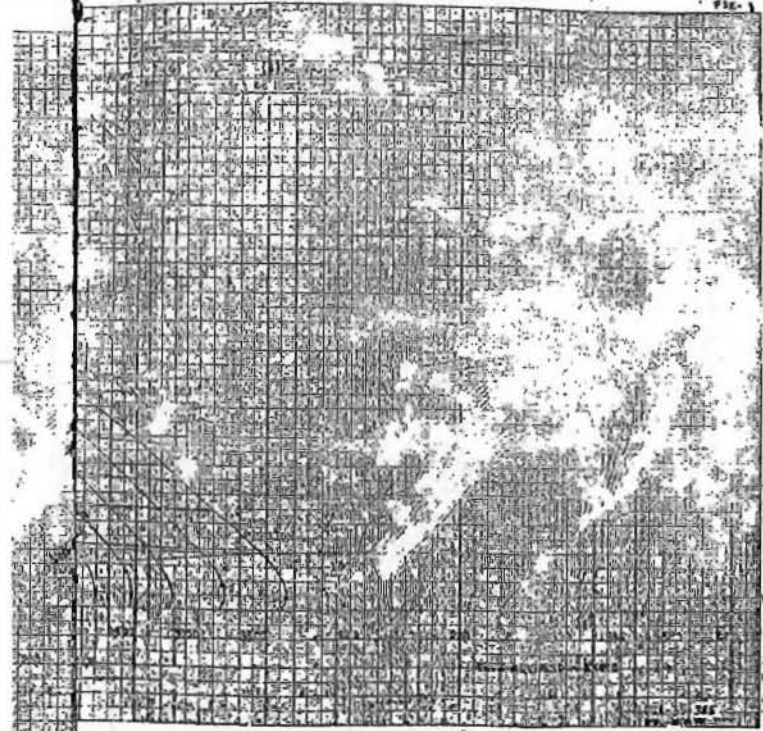
UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

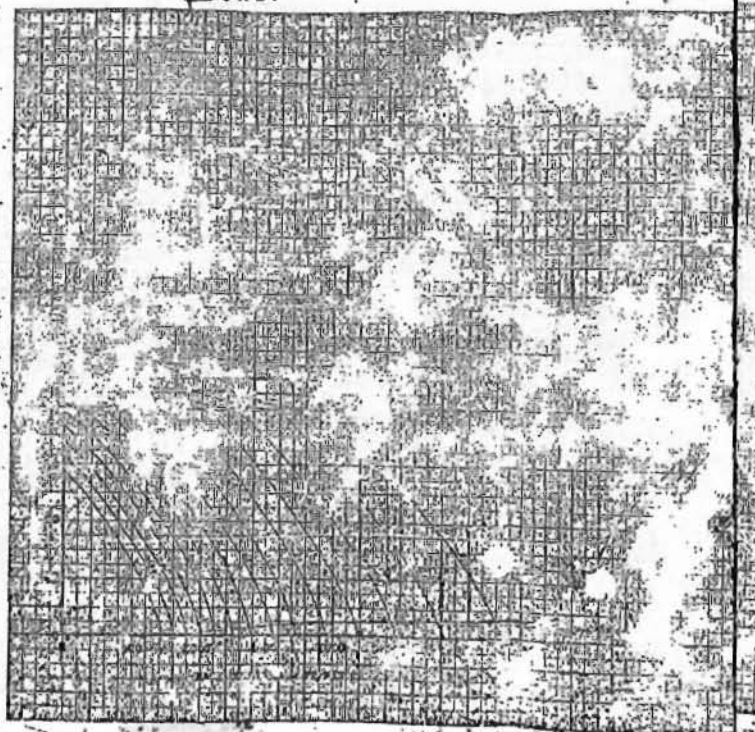
UNCLASSIFIED



ECR

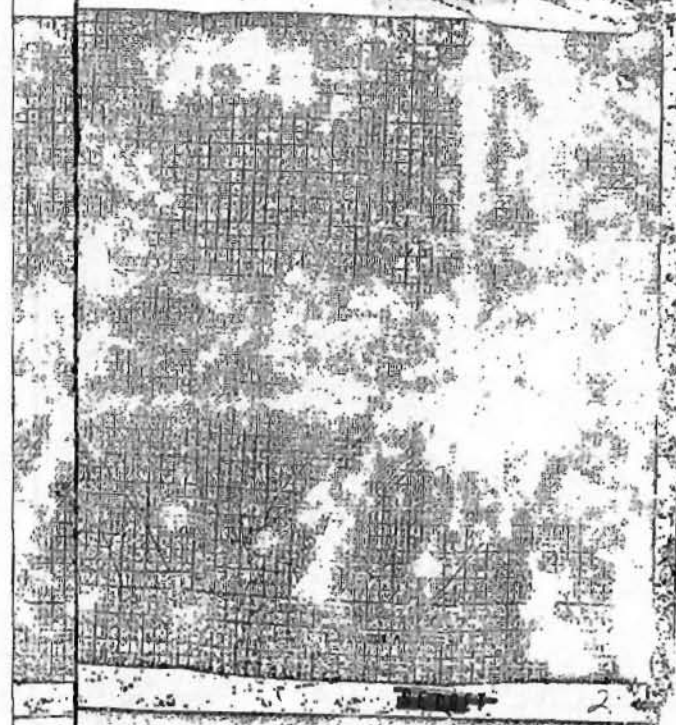
UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

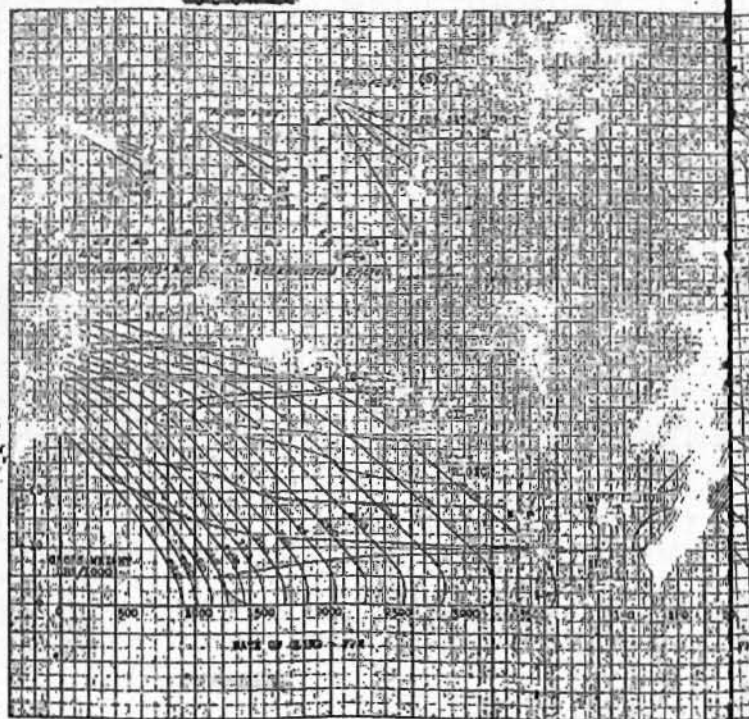
UNCLASSIFIED



UNCLASSIFIED

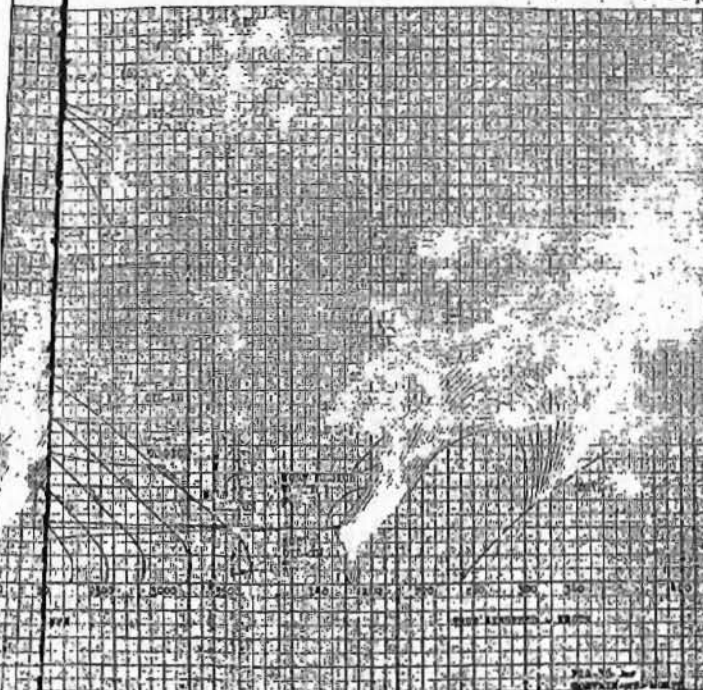


UNCLASSIFIED



CLASSIFIED

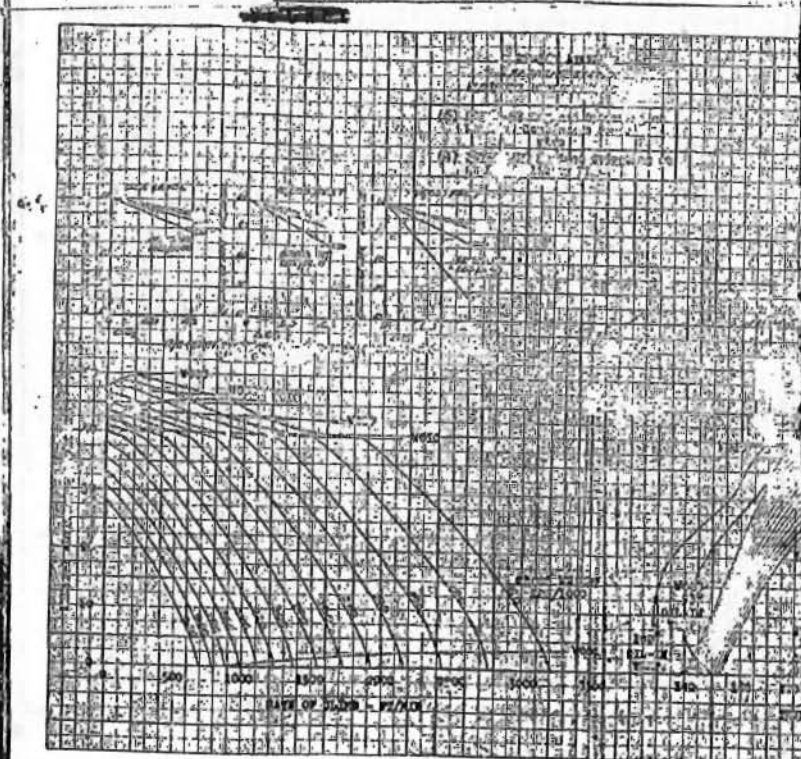
UNCLASSIFIED



ECR

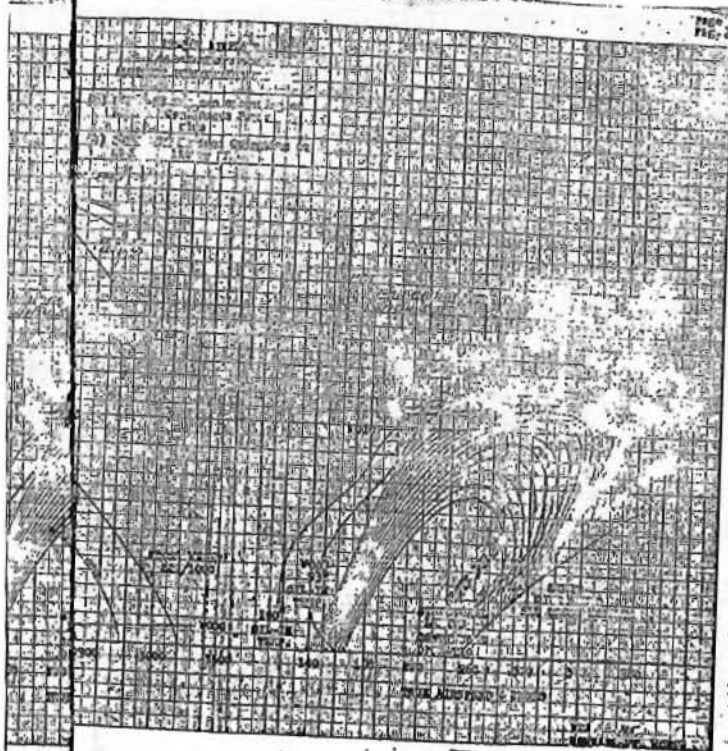
UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

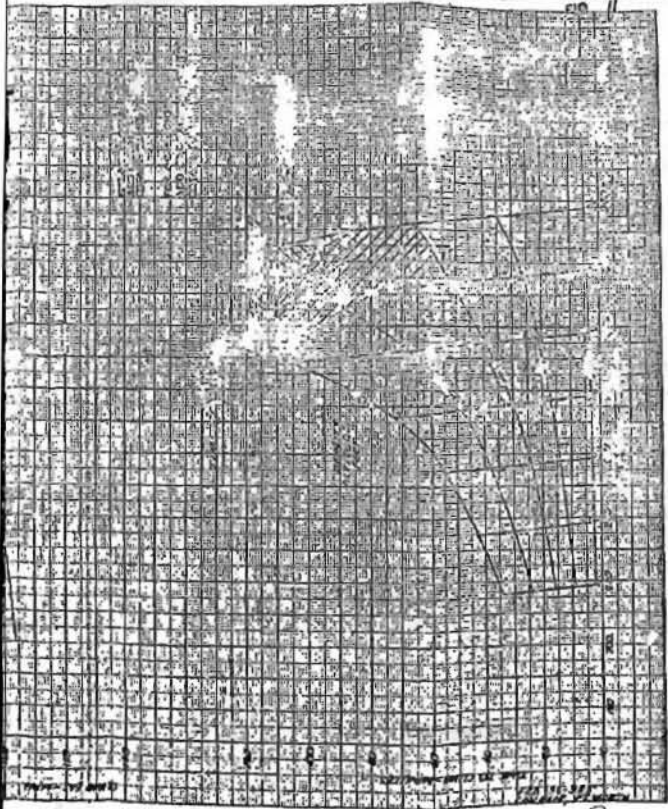


2

UNCLASSIFIED

UNCLASSIFIED

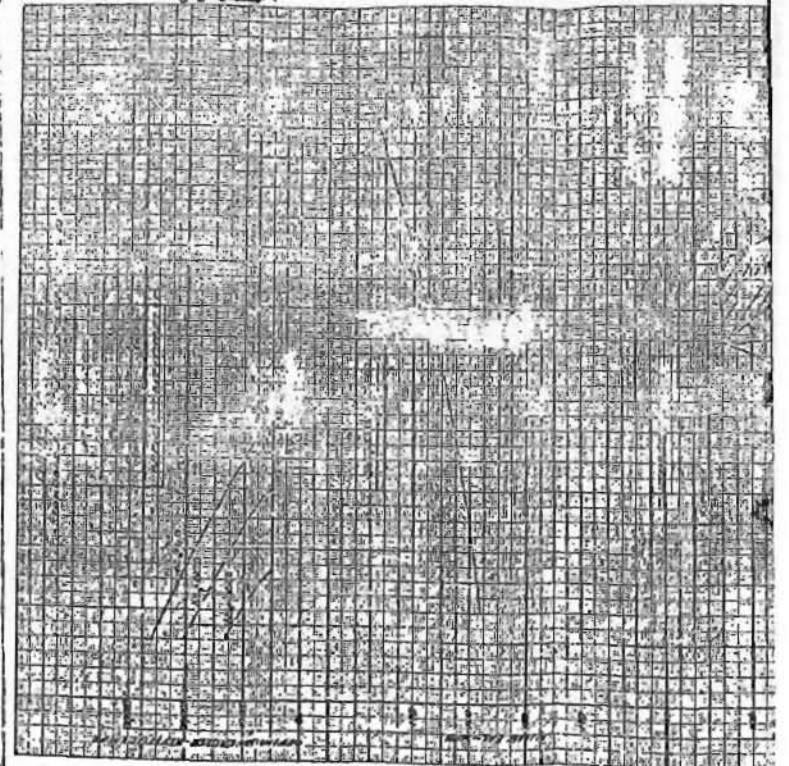
AGE 39



2

UNCLASSIFIED

UNCLASSIFIED



1

UNCLASSIFIED



UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

FORM NO. 10-1-54  
REV. 8 AUGUST 1954

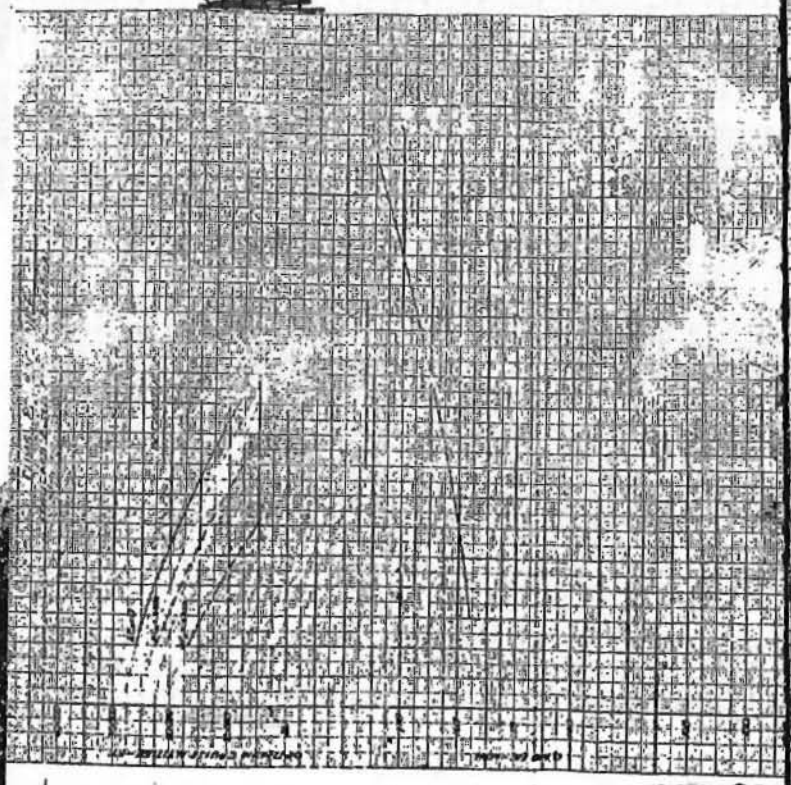
Climb Control Data

Climb control data are presented in Figures 39, 40, and 41. Climb from sea level to 5000 feet on each chart is at maximum continuous power. Climb from 5000 feet to altitude is at long range climb. The kinetic energy correction has been incorporated in the development of the charts. Rate of climb corrections due to drag increase are presented on each chart as an equivalent weight correction. For drag changes other than those presented, the correction can be obtained by interpolation.

Using the standard climb charts for stripped airplane climb performance, reduce stripped airplane gross weight by 4000 pounds.

UNCLASSIFIED

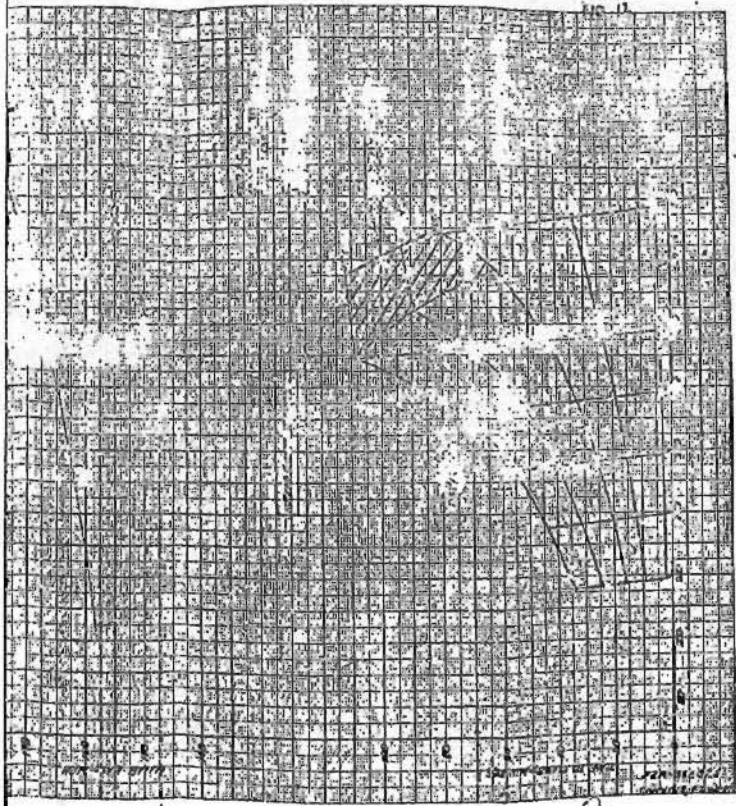
UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

PAGE 40  
FIG. 12



SECRET

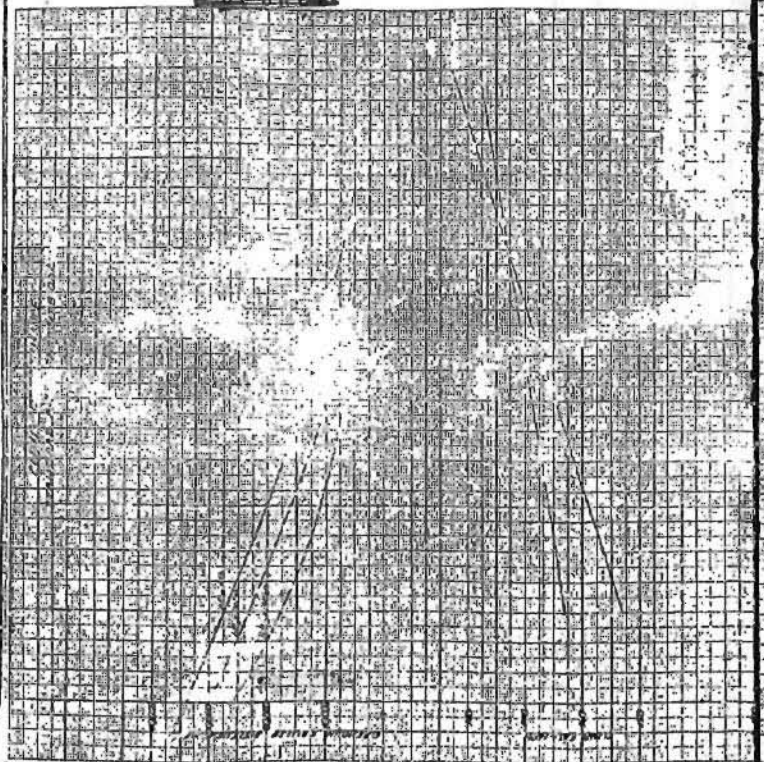
2

UNCLASSIFIED

UNCLASSIFIED

SECRET

SECRET

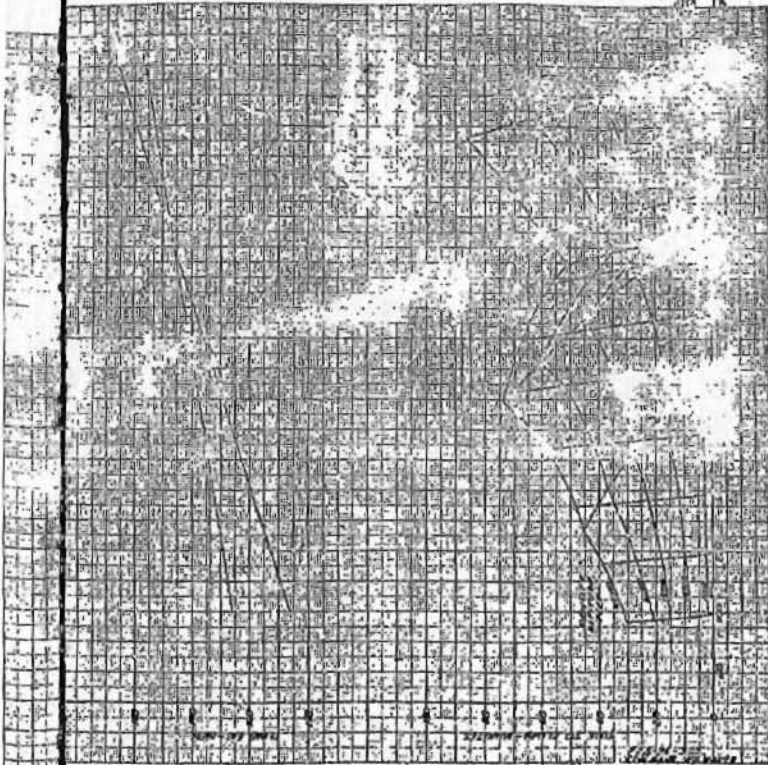


1

UNCLASSIFIED

UNCLASSIFIED

PAGE 41  
OF 43



UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

SECURITY INFORMATION

FORM NO. 34A-3-52  
REV. 1-1-52  
EPL 1, EDITION 1952

D

Long Range Cruise

Basic long range operating data at optimum altitude and 25,000 feet are presented from Figure 16 through Figure 21.

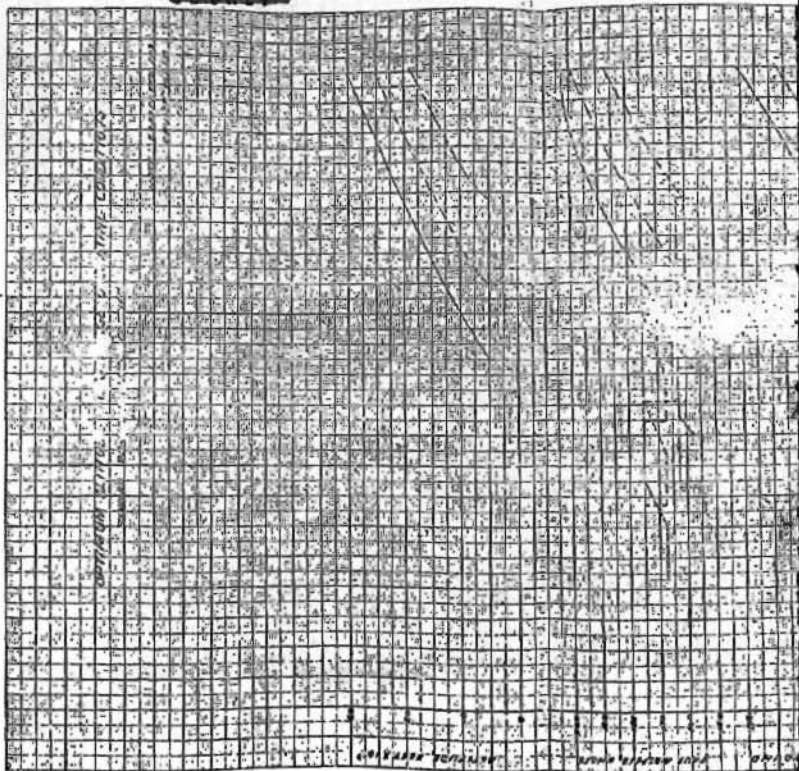
Corrections of range performance for stripped carriers can be obtained by the equivalent weight relationships shown on page 42.

C

UNCLASSIFIED

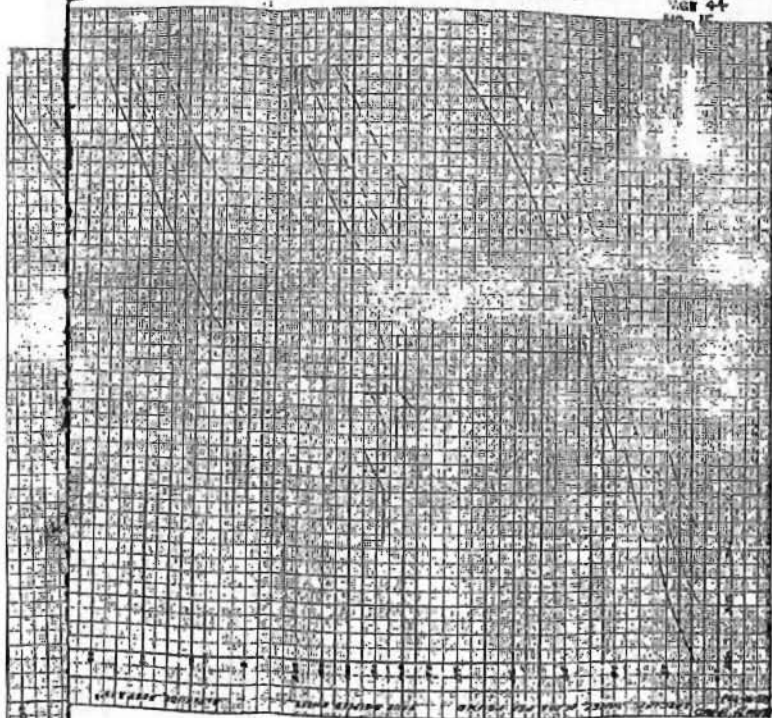


UNCLASSIFIED



UNCLASSIFIED

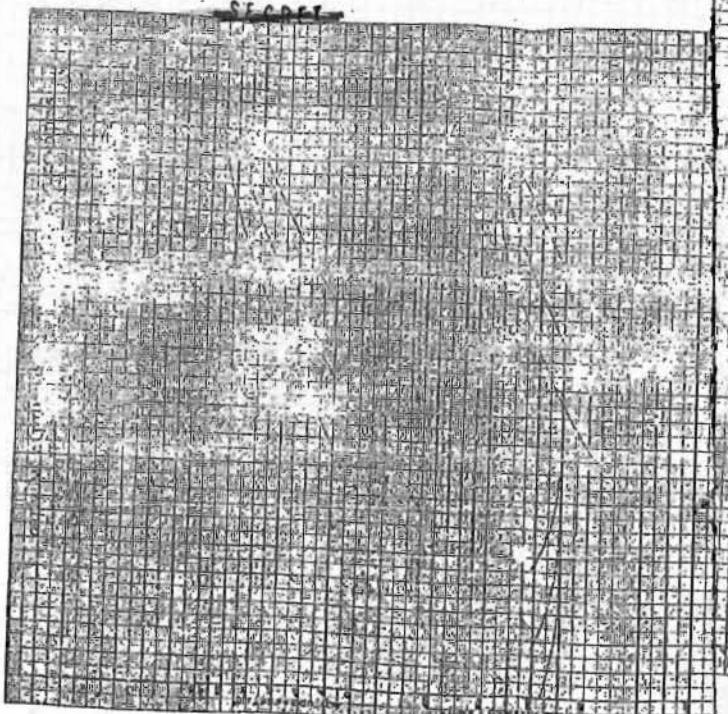
UNCLASSIFIED



UNCLASSIFIED



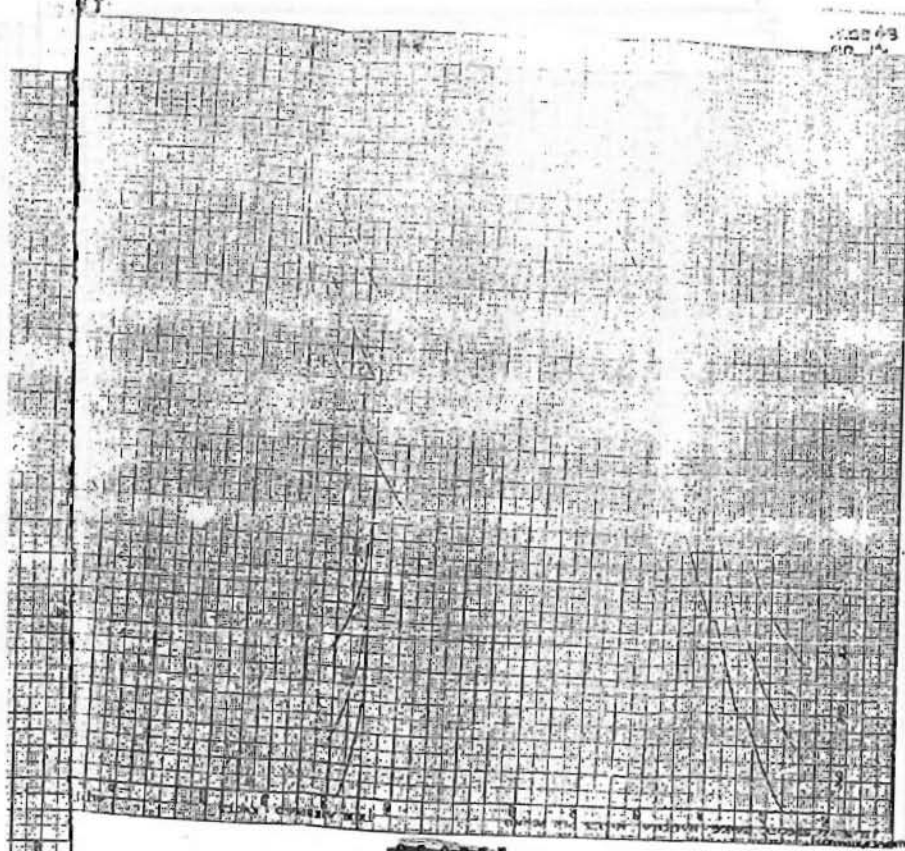
UNCLASSIFIED



~~SECRET~~

UNCLASSIFIED

UNCLASSIFIED



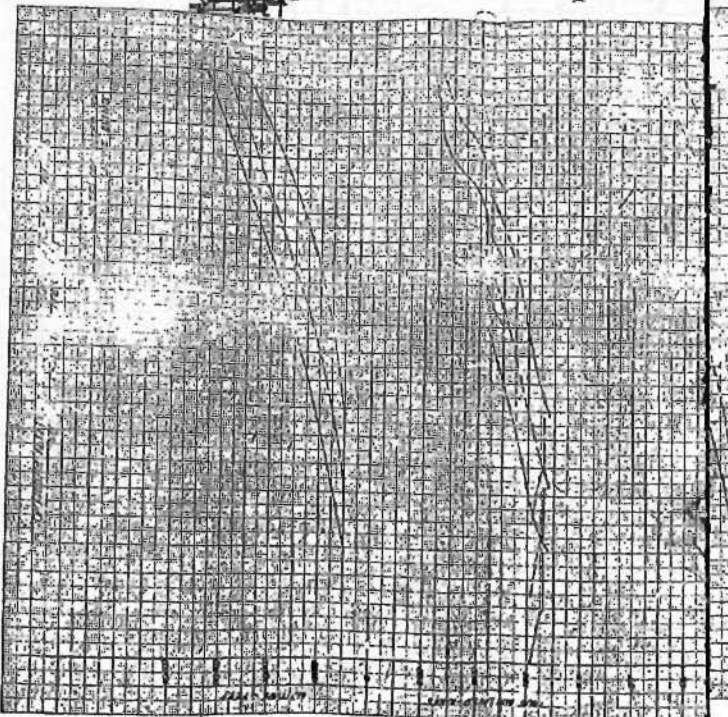
~~SECRET~~

2

ET

UNCLASSIFIED

UNCLASSIFIED

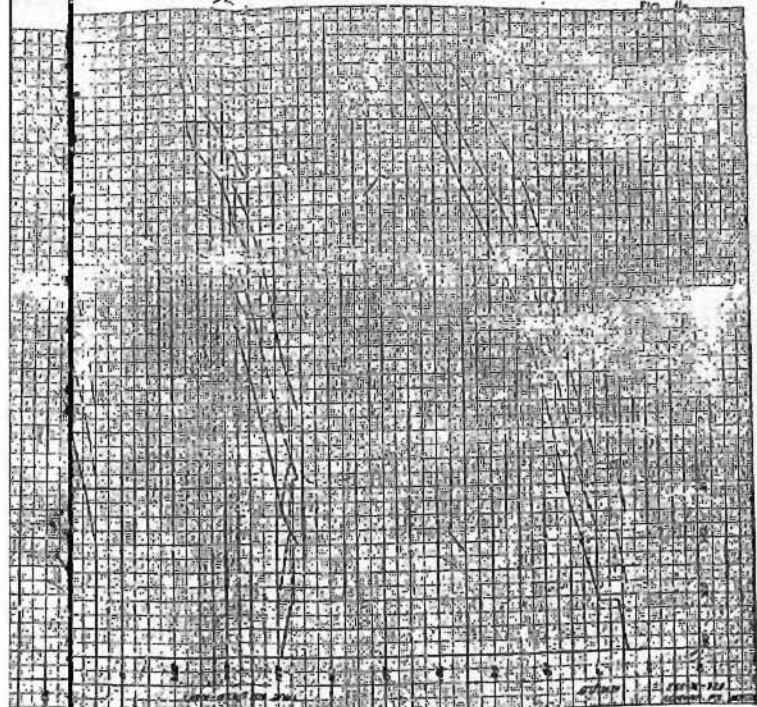


MS. ST. LOUIS, MISSOURI

~~SECRET~~

UNCLASSIFIED

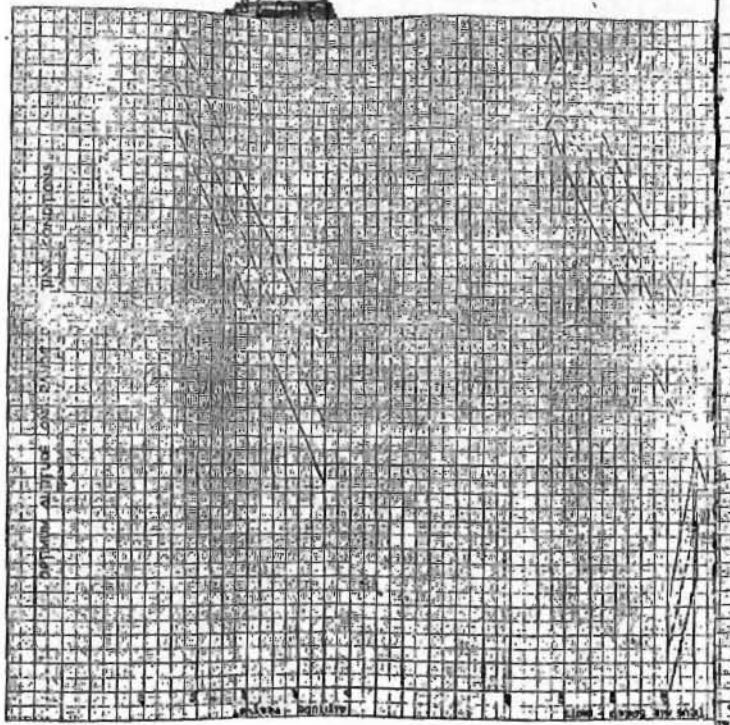
PAGE 45  
FIG. 11



~~SECRET~~

2

UNCLASSIFIED

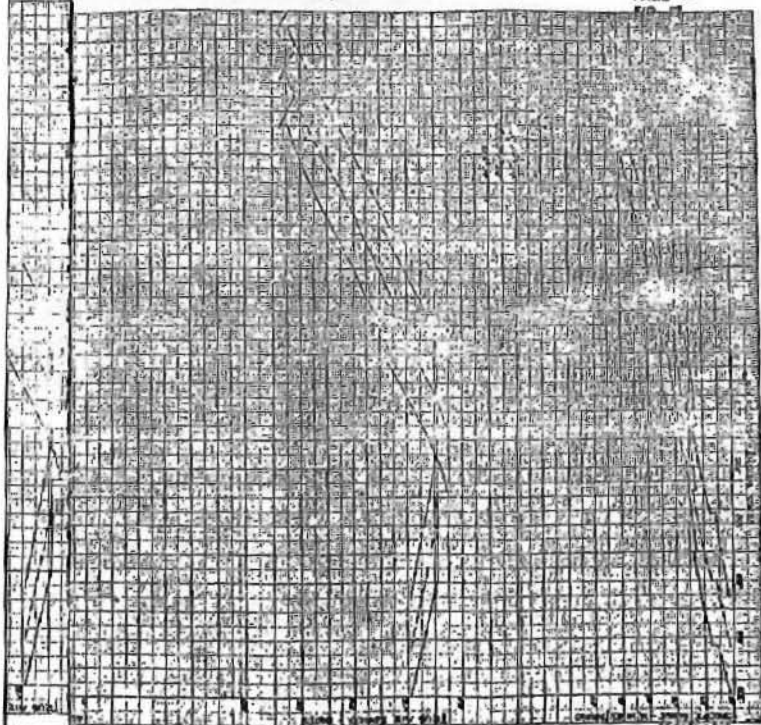


NOT TO SCALE

UNCLASSIFIED

UNCLASSIFIED

PAGE 06



START

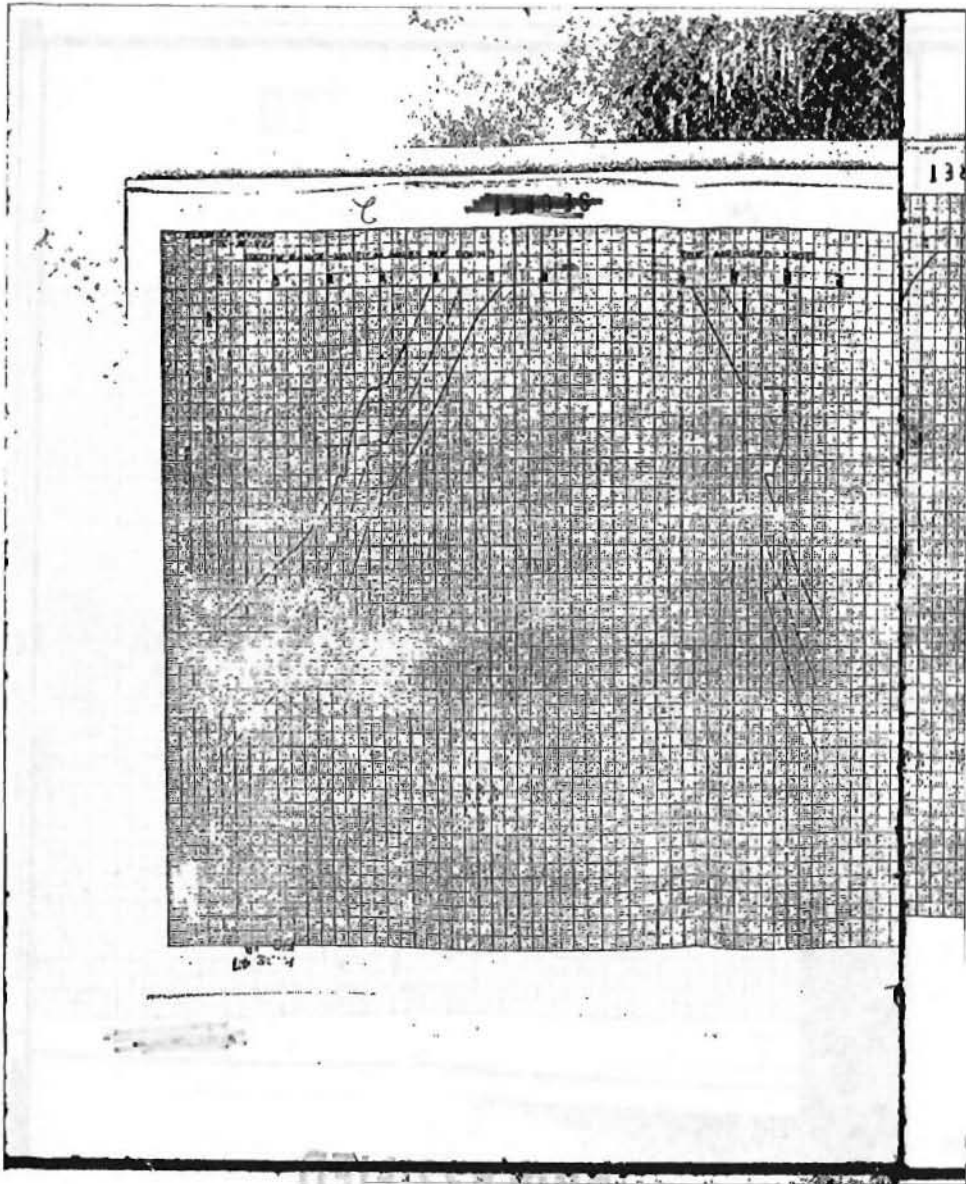
2

End of Page

UNCLASSIFIED



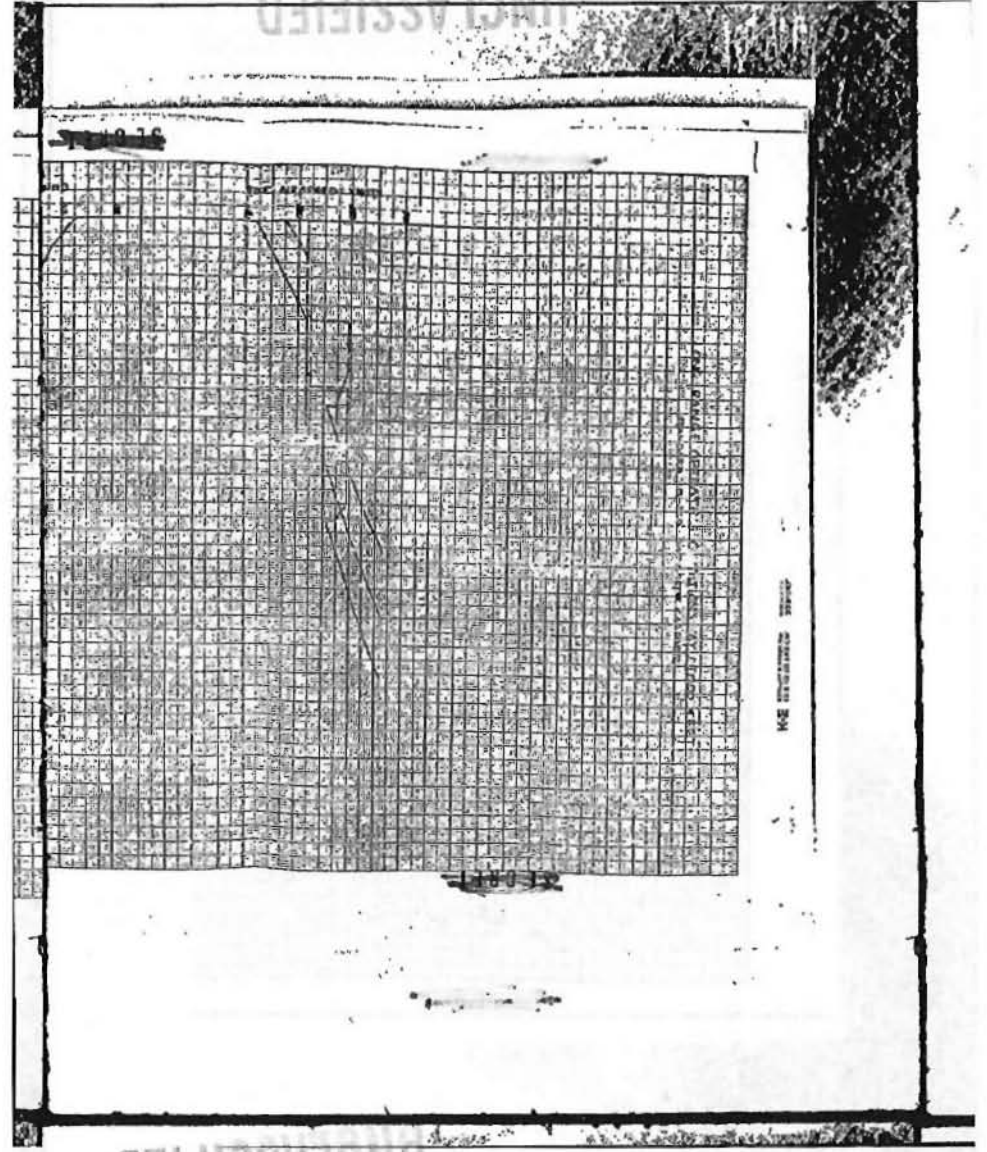
UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

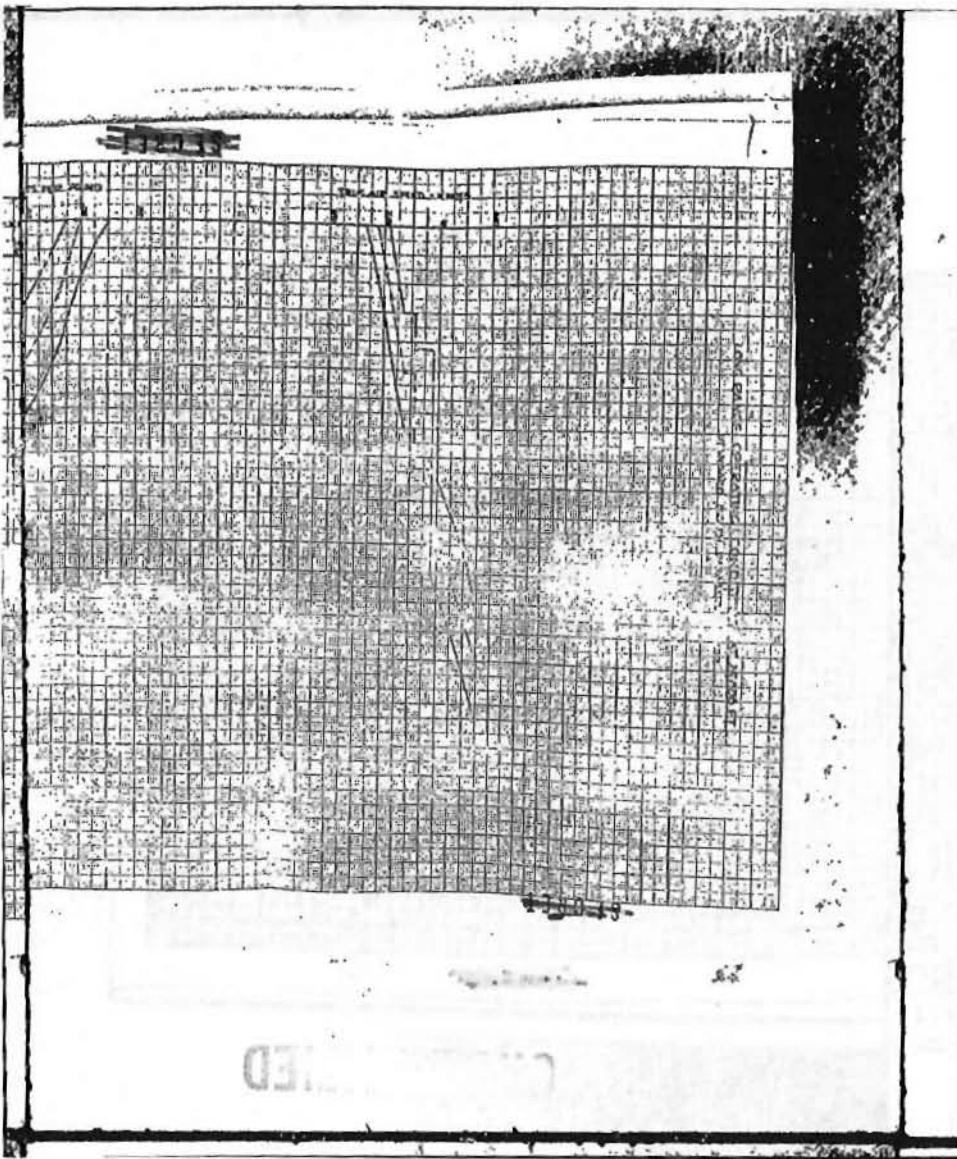
UNCLASSIFIED



UNCLASSIFIED

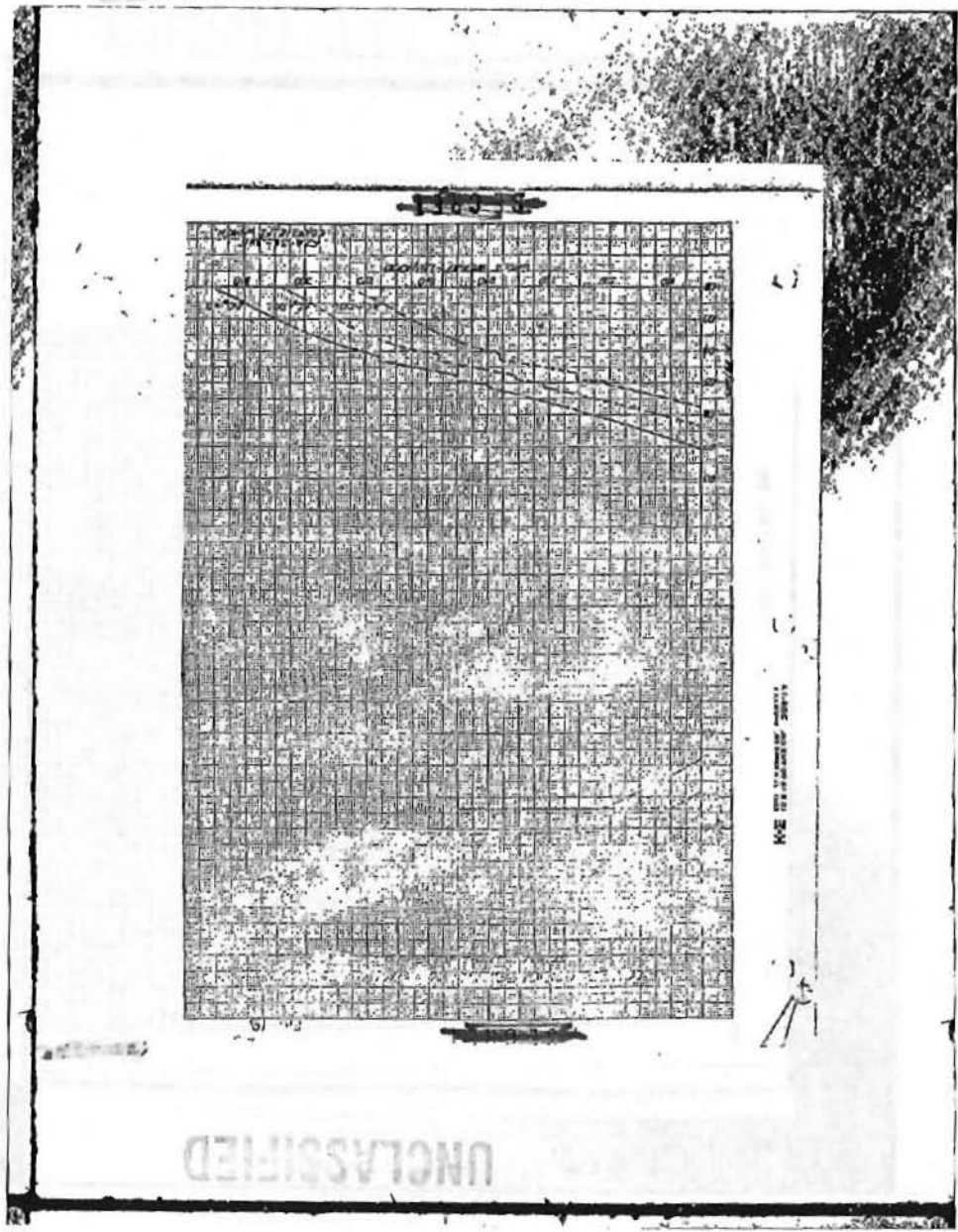


UNCLASSIFIED



UNCLASSIFIED

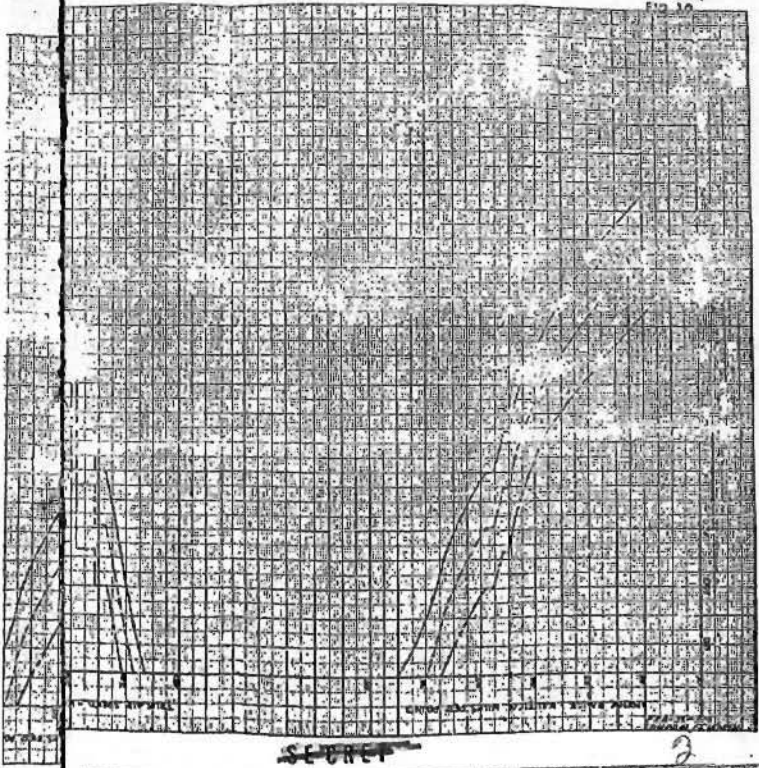
UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

PAGE 41  
FIG. 10

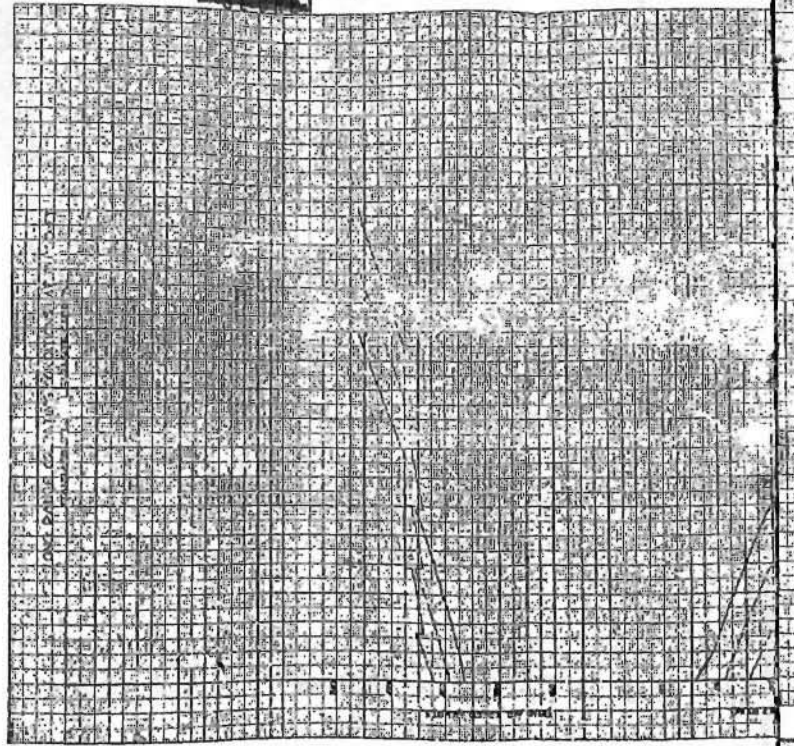


~~SECRET~~

2

UNCLASSIFIED

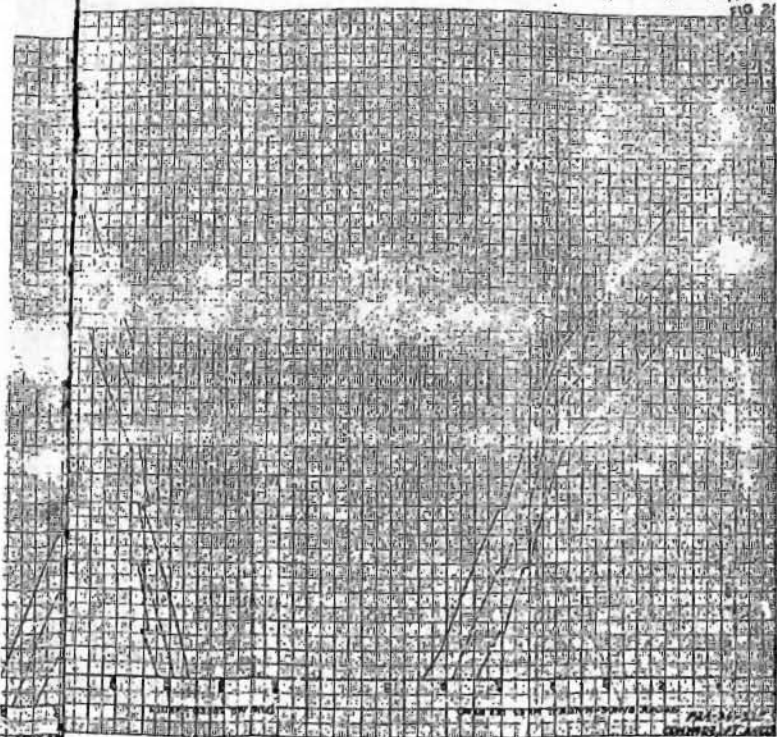
UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

PLATE  
FIG. 2



2

UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

REV. 11-20-54  
REV. 1-20-55

Landing Weight

Landing weight of the parasite carrier airplane is the sum of the dry take-off weight (without parasite), + parasite retrieval weight (if the carrier lands with the parasite), + reserve fuel, + ABE fluid consumed weight.

Reserve fuel (for missions where take-off is made with parasite) = .05 [Initial take-off weight - dry take-off weight - parasite launch weight] + fuel allowance for 1/4 hour cruise at sea level.

Reserve fuel (for missions where parasite is picked up after take-off) =

.05 [Initial take-off weight - dry take-off weight - fuel weight transferred to parasite] + fuel allowance for 1/4 hour cruise at sea level.

Figures 11 and 12 are to be used to obtain the fuel consumed weight for a 1/4 hour cruise at sea level. These charts are presented for the B-36D and B-36H airplanes, but may also be used for the RB-36D and RB-36H airplanes, respectively.

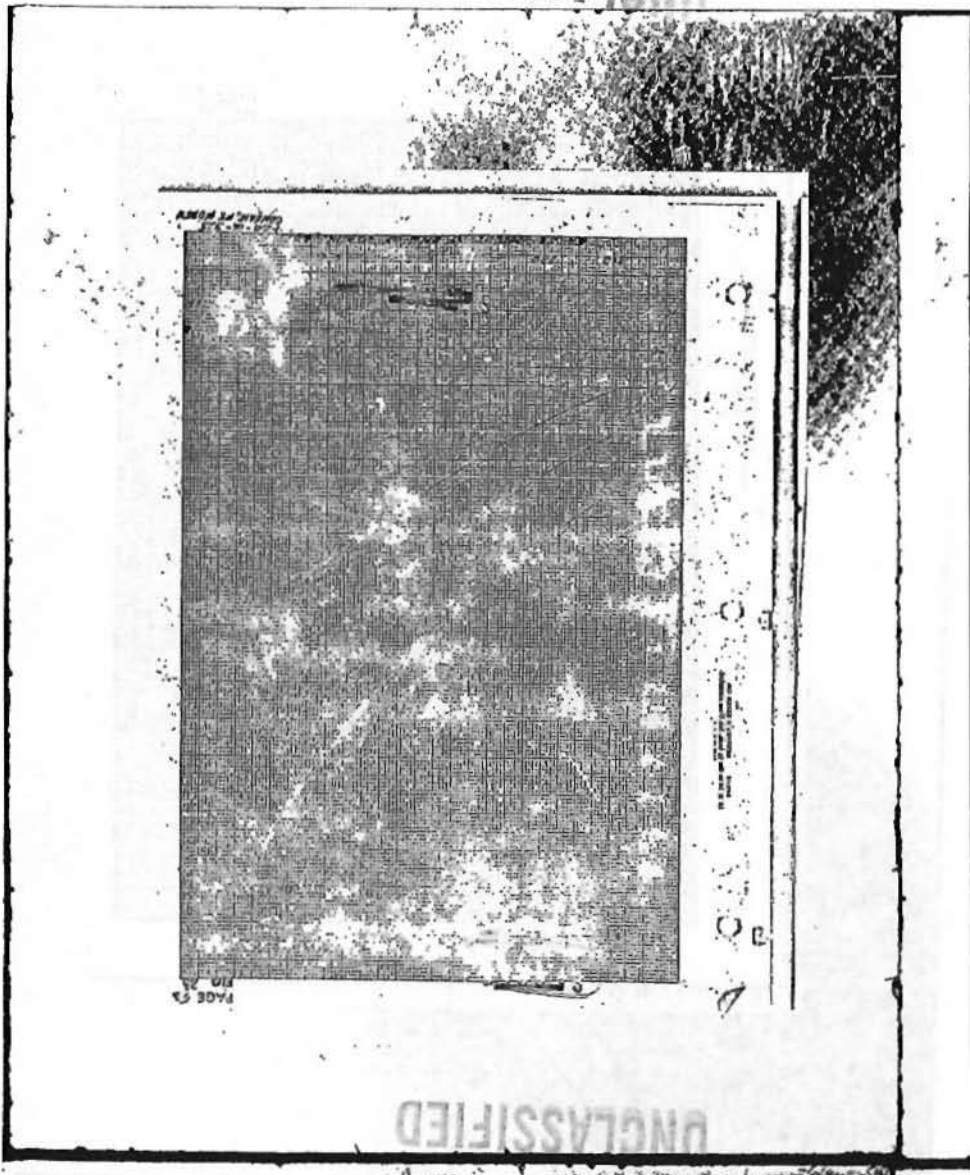
To enter the charts, calculate the landing weight of the airplane without considering the fuel consumed in a 1/4 hour cruise at sea level. Read the fuel consumed value for the calculated landing weight and add it to this weight to obtain the true landing weight.

~~SECRET~~

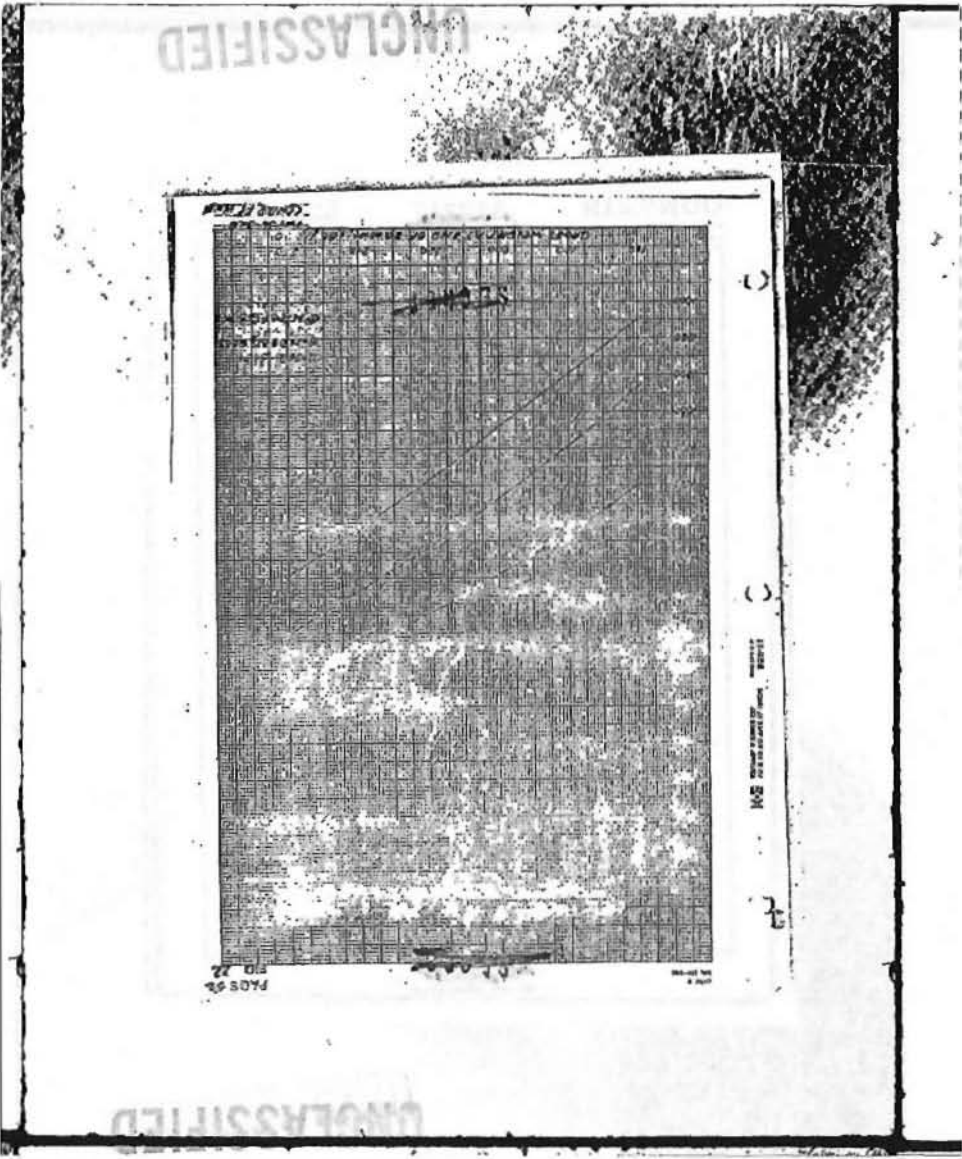
UNCLASSIFIED



UNCLASSIFIED



UNCLASSIFIED

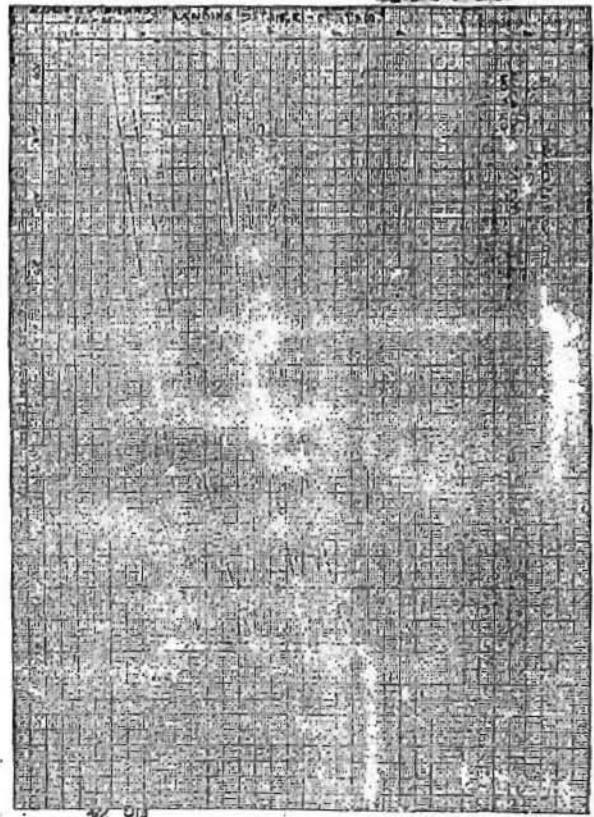




UNCLASSIFIED

UNCLASSIFIED

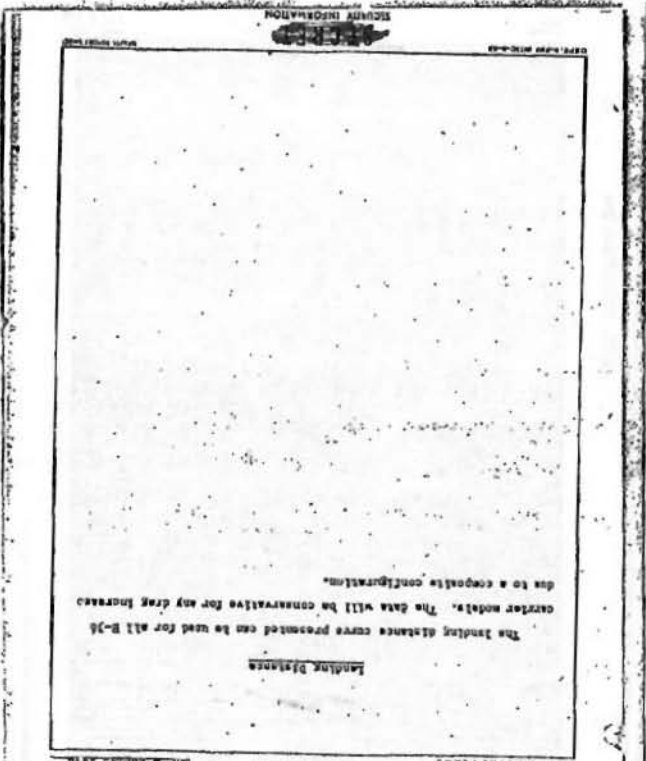
**SECRET**



PAGE 55  
FIG. 24

UNCLASSIFIED

**SECRET**



The landing distance curve presented can be used for all B-26  
carrier models. The data will be conservative for any dry, increased  
due to a composite configuration.

Landing Distance

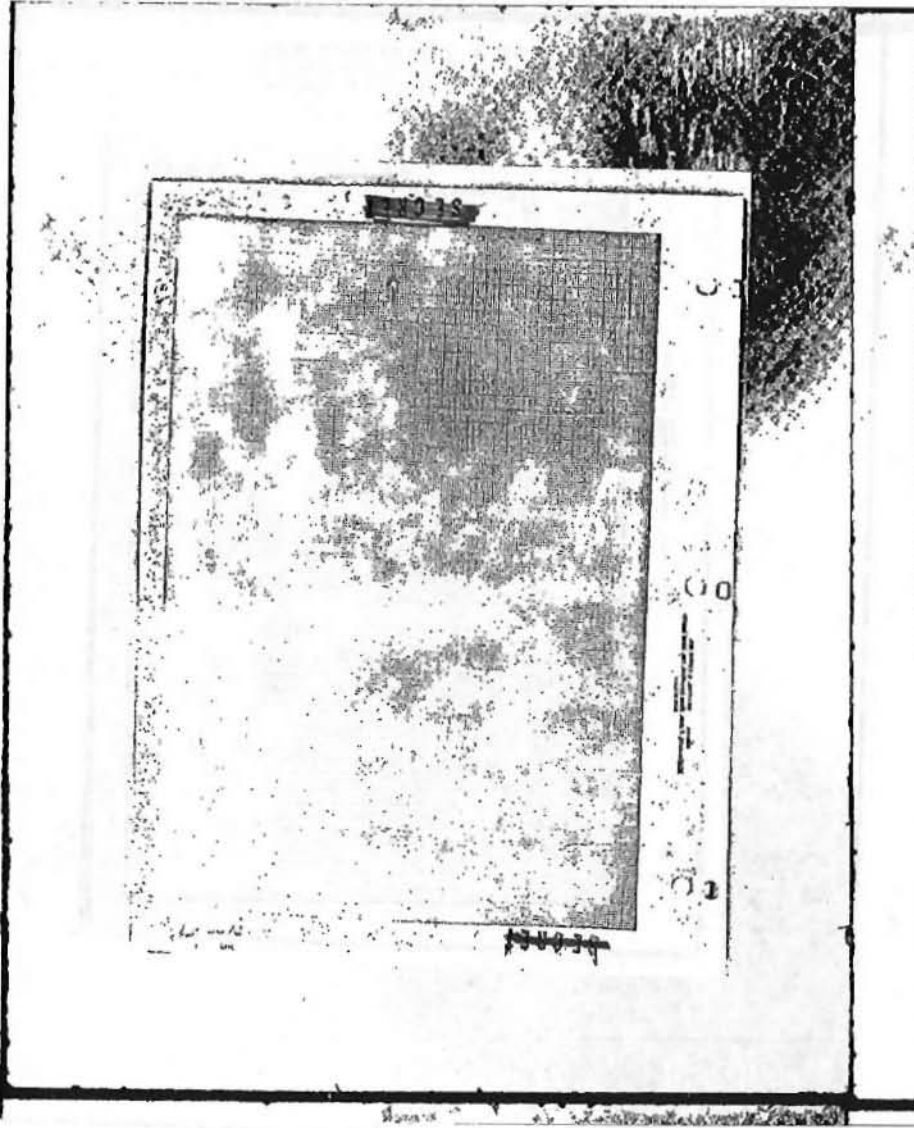
REV. 1-1954  
WORK NO. 211-16-125  
MAY 4 1954

**SECRET**

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

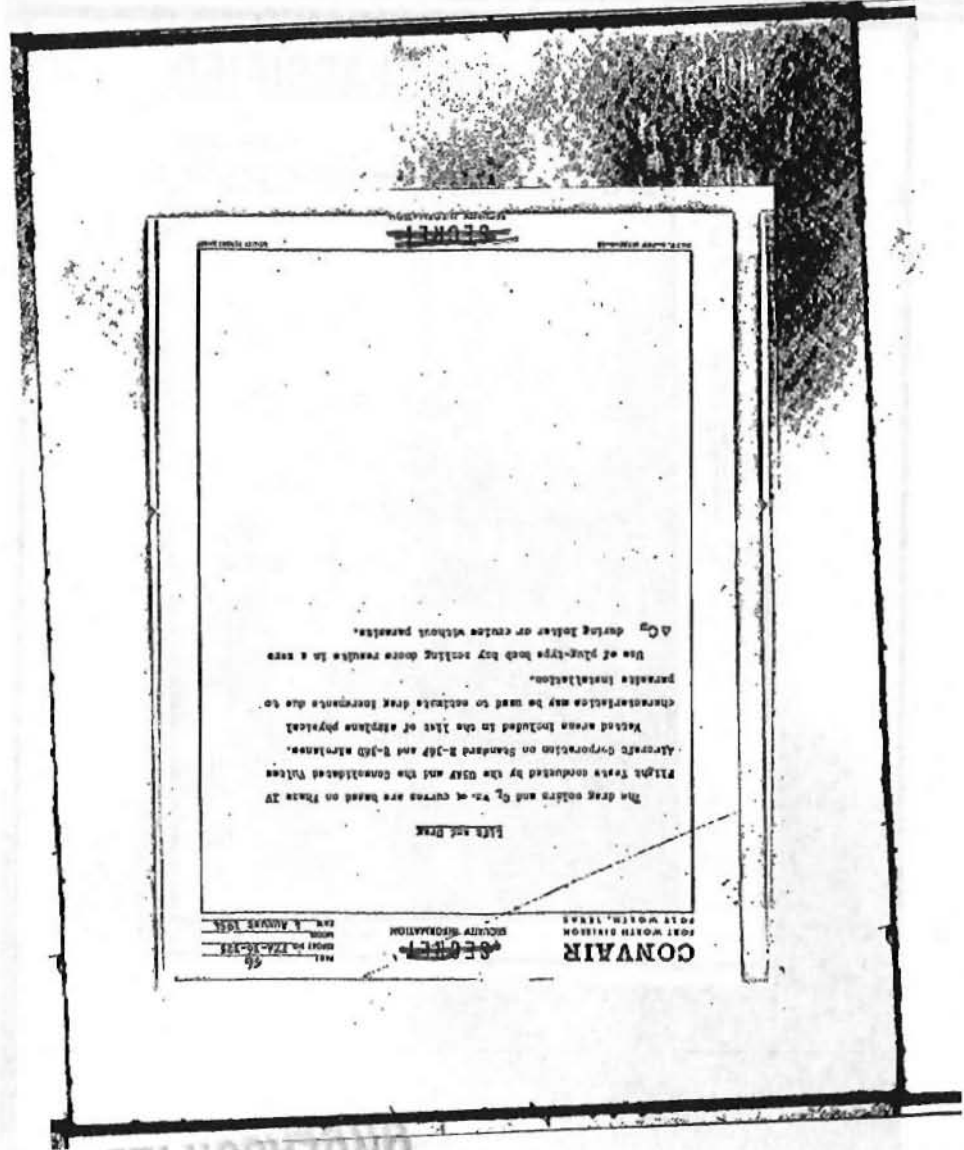
UNCLASSIFIED

UNCLASSIFIED



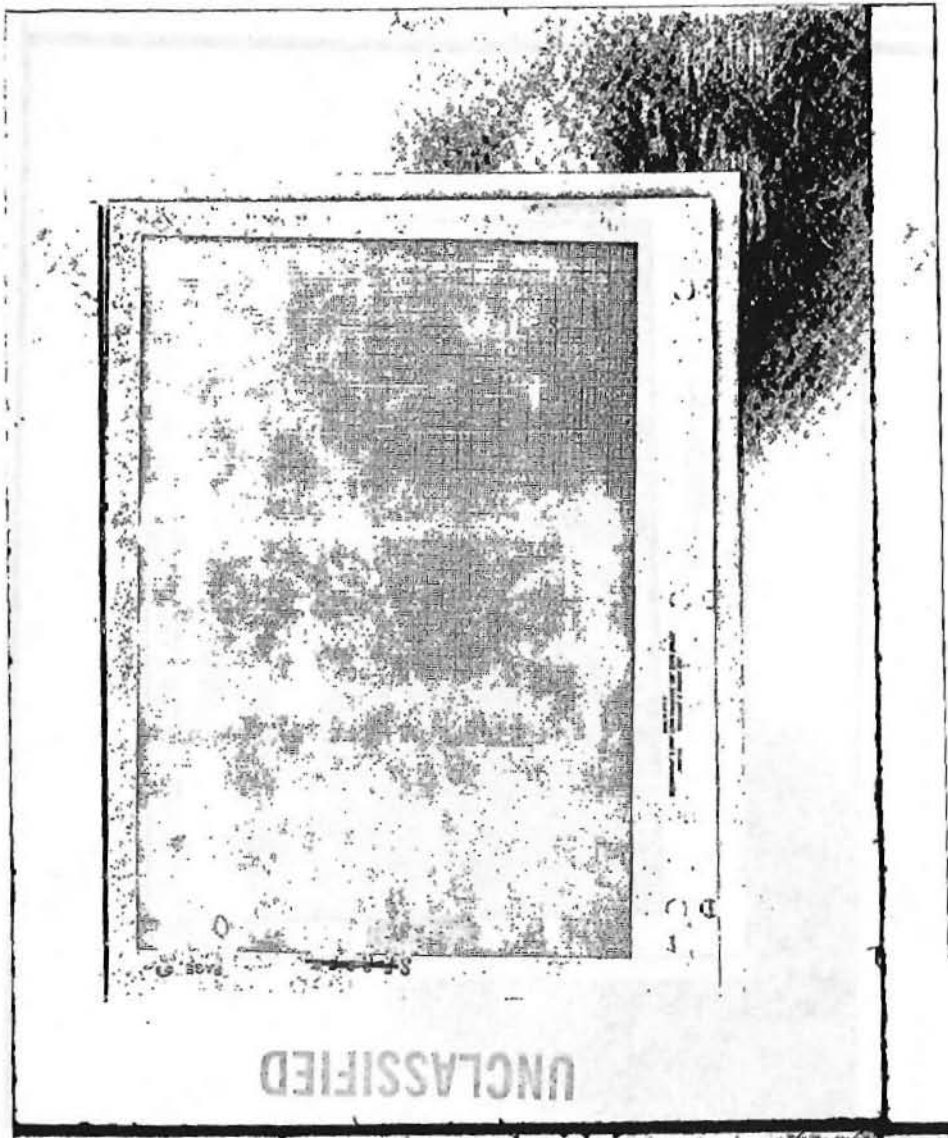
UNCLASSIFIED

UNCLASSIFIED



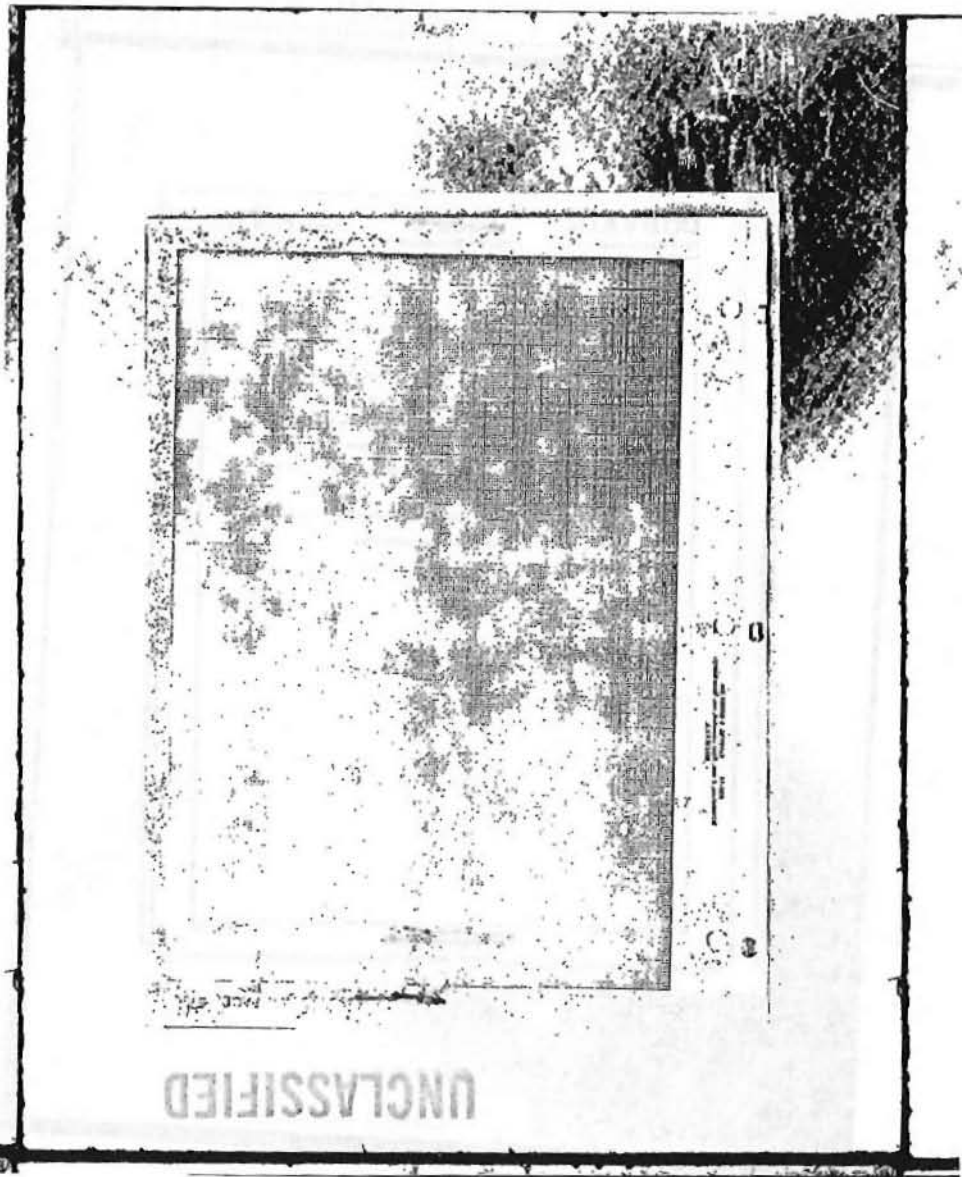
UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~

FORM 1-57  
REPORT NO. 100-1000  
REV. 8 August 1956

#### Equivalent Weight Corrections

The following drag corrections can be applied to the Standard B-36 airplane drag polars to obtain the stripped airplane drag polars.

B-36D and RB-36D

$$\Delta C_D = -.00047 - .000865 C_L^2$$

B-36H and RB-36H

$$\Delta C_D = -.0006 - .0011 C_L^2$$

The equations for the stripped airplane drag polars are:

B-36D  $C_D = .0213 + .0310 C_L^2$

RB-36D  $C_D = .0221 + .0310 C_L^2$

B-36H  $C_D = .0214 + .0310 C_L^2$

RB-36H  $C_D = .0222 + .0310 C_L^2$

Equivalent weight correction curves can be used to convert the basic performance data of the Standard B-36 Carriers to performance data for stripped B-36 Carriers. These equivalent weight corrections can be obtained from the following relationships:

$$C_D = C_{D_0} + K C_L^2; D = C_D \frac{\rho}{2} S V^2$$

$$THP = \frac{D V}{\eta}; G.W. = C_L \frac{\rho}{2} S V^2$$

For standard airplanes

$$(1) THP_1 = (C_{D_0} + K_1 C_{L_1}^2) \frac{\rho}{2} S V_1^3$$

~~SECRET~~

UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~

FORM 1-57  
REPORT NO. 100-1000  
REV. 8 August 1956

For a drag change

$$\Delta C_D = \Delta C_{D_0} + \Delta K C_L^2$$

Then

$$(1) THP_2 = [C_{D_0} + K_1 C_{L_1}^2 + (\Delta C_{D_0} + \Delta K C_L^2)] \frac{\rho}{2} S V_2^3$$

Let  $K_1 = \Delta K = K_2$

For stripped airplanes

$$(1) THP_2 = [C_{D_0} + K_2 C_{L_2}^2 + \Delta C_{D_0}] \frac{\rho}{2} S V_2^3$$

Let  $THP_1 = THP_2$  and  $V_1 = V_2$

$$\text{Then } [C_{D_0} + K_1 C_{L_1}^2] \frac{\rho}{2} S V_1^3 = [C_{D_0} + K_2 C_{L_2}^2 + \Delta C_{D_0}] \frac{\rho}{2} S V_2^3$$

$$C_{D_0} + K_1 C_{L_1}^2 = C_{D_0} + K_2 C_{L_2}^2 + \Delta C_{D_0}$$

$$K_1 C_{L_1}^2 - K_2 C_{L_2}^2 = \Delta C_{D_0}$$

Div

$$C_L = C_L \frac{\rho}{2} S V^3 \text{ or } C_L^3 = C_L^2 \left( \frac{\rho}{2} S V^3 \right)$$

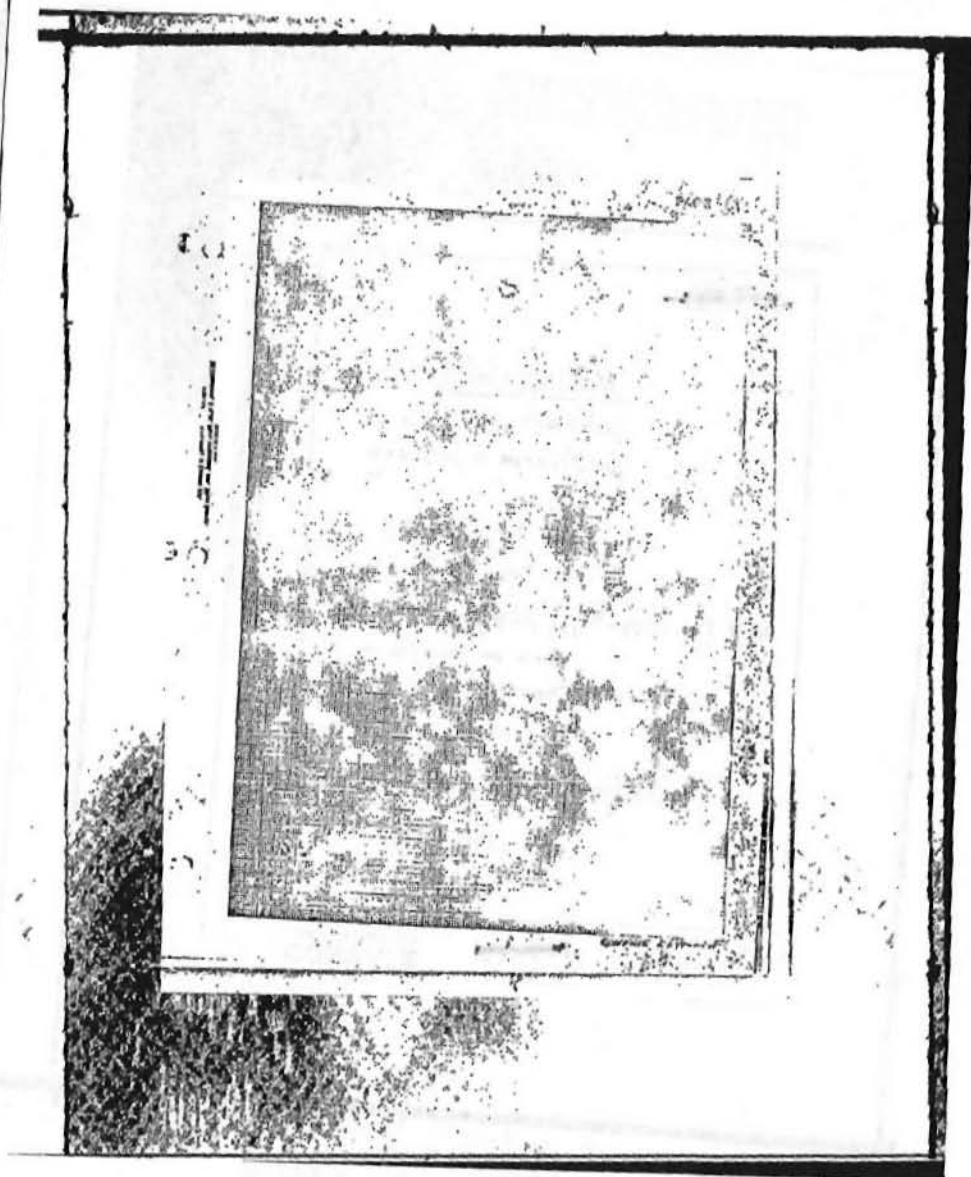
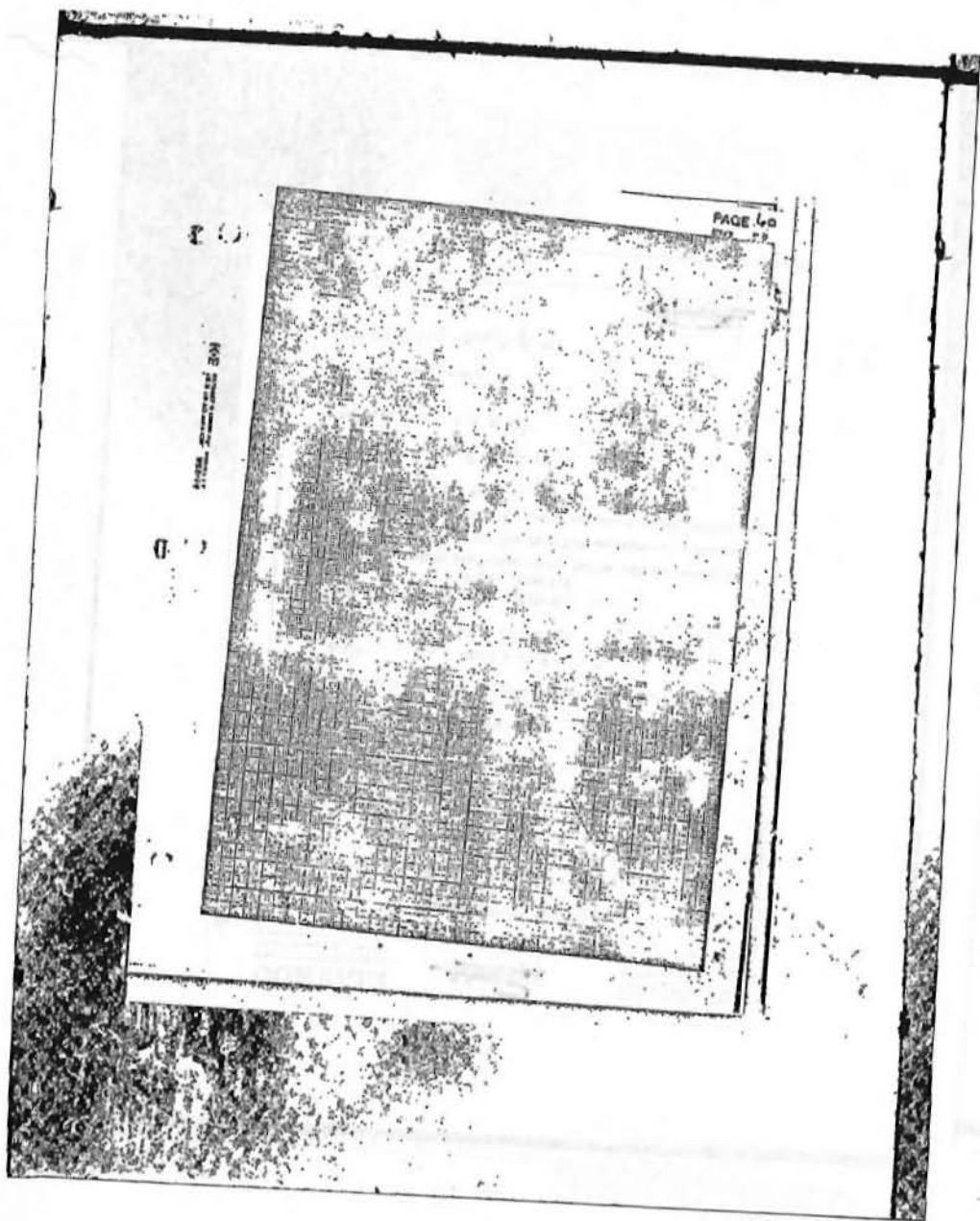
$$K_1 C_{L_1}^2 - K_2 C_{L_2}^2 = \Delta C_{D_0} \left( \frac{\rho}{2} S V^3 \right)^2$$

$$C_{L_1} = \sqrt{\frac{K_2 C_{L_2}^2 + \Delta C_{D_0}}{K_1}} \left( \frac{\rho}{2} S V^3 \right)^{1/2}$$

~~SECRET~~

UNCLASSIFIED





UNCLASSIFIED

**CONVAIR**  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~  
SECURITY INFORMATION

64  
REPORT NO. F2A-36-315  
MOOD  
DATE: 6 August 1934

**SAMPLE MISSIONS**

Basic Radius Mission

Standard RB-36D carrier airplane

370,000 pounds take-off gross weight (composite)

40,000 pounds parasite launch weight

20,000 pounds parasite retrieve weight

$\Delta C_D = .0030$  added drag to RB-36D in composite configuration

Parasite mission time = 1 hour

All fuel consumptions are calculated 5% conservative

A standard RB-36D carrier is to take-off from its home base carrying a fighter weighing 40,000 pounds. The composite take-off weight is to be 370,000 pounds. The RB-36D composite configuration cruises at optimum altitude to a point, such that maximum radius may be obtained, where a climb is made to 25,000 feet. The parasite is launched immediately after the climb to 25,000 feet is completed and the carrier loiters at long range cruise at the launch altitude until the fighter mission is completed. After retrieving the parasite fighter the composite configuration descends to the optimum altitude flight path and cruises back to the home base.

Following the mission graphically (see Figure 30) the composite take-off gross weight is 370,000 pounds. The 3550 pounds allowance for warm-up, taxi, and take-off reduces the gross weight to 366,450 (A). From Figure 12 the normal rated power climb to optimum altitude is completed at 369,000 pounds gross weight, a time to climb of .10 hour and a range of 23 nautical miles (B). A range and time integration of Figure 15 established B-F for the composite configuration.

~~SECRET~~  
SECURITY INFORMATION

UNCLASSIFIED

UNCLASSIFIED

**CONVAIR**  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~  
SECURITY INFORMATION

64  
REPORT NO. F2A-36-315  
MOOD  
DATE: 6 August 1934

Long range climbs are made from optimum altitude to 25,000 feet at points C, D, and E along B-F. Line G-I is then the locus of points for the end of long range climb from optimum altitude to 25,000 feet for the composite configuration.

Since the parasite is launched immediately upon arrival at 25,000 feet, K-R can be established as the locus of carrier weights after launch by reducing the weights at D, H, and I by 40,000 pounds with no range gain and obtaining the points K, L and M. At the gross weights at points K, L, and M, the fuel consumed in one hour loiter plus 15 minutes for fighter retrieve is subtracted and the new gross weights plotted at points O, P, and Q, respectively. O-Q is then the locus of points for the end of loiter. A locus of points after retrieve, S-U, is then found by adding 20,000 pounds for the fighter retriever weight to the points O, P and Q to obtain the points S, T, and U.

Before the total mission radius can be established it is necessary to determine the landing gross weight and intercept from this weight along the flight path to intersect S-U.

Landing gross weight is calculated as follows:

Dry take-off	169,721 pounds
ADI fluid used	- 7,300 "
Reserve fuel	6,666 "
Parasite retrieve weight	20,000 "
Landing weight	189,087 "

~~SECRET~~  
SECURITY INFORMATION

UNCLASSIFIED

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~  
SECURITY INFORMATION

DATE 66  
REPORT NO. FWA-36-328  
HOWL  
GOLLA August 1954

Reserve fuel is calculated as 5% of the total fuel consumed which is the difference between the take-off gross weight (370,000 pounds) and the sum of the dry take-off gross weight and the parasite launch weight, (169,721 + 40,000 = 209,721 pounds). Then .05 (370,000 - 209,721) = 7,014 pounds.

From the landing gross weight of 216,065 pounds (a), a range and time integration for the composite configuration ( $\Delta C_D = .0030$ ) of figure 10 establishes X - W.

The intersection of X-W with H-U establishes the total mission radius at point Y as 2100 nautical miles, and since no range is gained from the time of parasite launch to parasite retrieve, the points J, K, and B are determined respectively on the end of climb line G-I, the launch line K-M, and the loiter line G-G. Using the gross weight at the end of climb to 25,000 feet (J), the beginning of climb from the optimum flight path may be determined from Figure 12. Subsequently the corresponding points on the time integration line may be determined.

#### Post Strike Mission

The calculations for the post strike mission (shown in dashed lines on the graph) will be very nearly the same as the above; the only difference being in the landing line and the evolution of loiter time.

For the post strike mission the composite configuration has the same take-off weight of 370,000 pounds and flies along the same optimum altitude flight path to a point where a climb is again begun

~~SECRET~~  
SECURITY INFORMATION

UNCLASSIFIED

CONVAIR  
FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~  
SECURITY INFORMATION

DATE 67  
REPORT NO. FWA-36-328  
HOWL  
DATE 1 August 1954

to 25,000 feet. The parasite is launched immediately upon arrival at 25,000 feet and the B-36D returns to its home base alone with no time lost in loiter. The difference in landing weight of these two missions is the 20,000 pounds retrieve weight of the fighter. For the post strike mission the landing weight is 196,065 pounds.

Following the mission graphically, the climb to 5,000 feet and cruise at optimum altitude is again made along A-B-F in Figure 9c. Line G-I is again the end of climb line and K-M is again the launch line. Starting at the landing weight of 196,065 pounds an integration is again made along the flight path to intersect X-W. This integration must be for the B-36D alone.

The intersection of X-W with K-M establishes the total mission radius at point Y' as 2335 nautical miles. Other points on the mission may be determined in the same manner as previously.

~~SECRET~~  
SECURITY INFORMATION

UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

PAGE 49  
FIG. 37

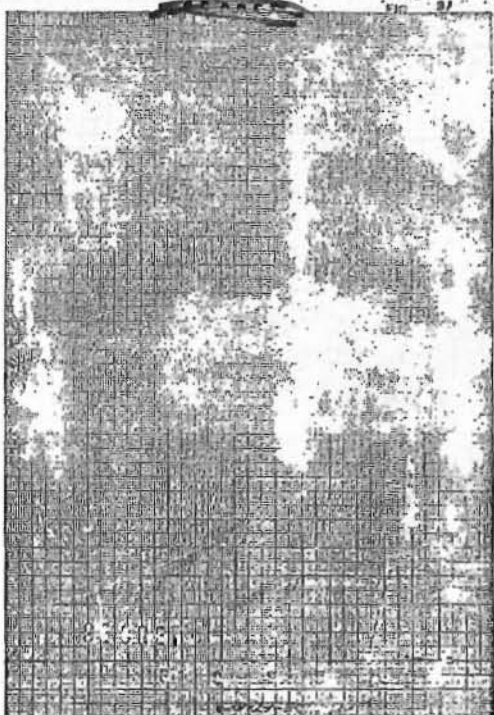


FIG. 37-38  
CONVAIR, FT. WORTH

MARK AIRCRAFT DIV

UNCLASSIFIED

CONVAIR

FORT WORTH DIVISION  
FORT WORTH, TEXAS

~~SECRET~~  
SECURITY INFORMATION

PAGE 70  
REPORT NO. YFA-36-385  
MODEL  
DATE 4 August 1954

Advance Base Pick-Up Mission

- Standard RB-36D airplane,
- 370,000 pounds take-off gross weight,
- 35,000 pounds parasite pick-up weight,
- 40,000 pounds parasite launch weight,
- 20,000 pounds parasite retrieve weight,
- $C_D = .0030$  (added drag to a standard RB-36D  
for a composite configuration),
- 1 hour parasite fighter mission time,
- All fuel consumption calculated 5% conservative

A standard carrier RB-36D is to take off from its home base at a gross weight of 370,000 pounds. After the initial climb to optimum altitude the carrier cruises to the advance base to pick up the parasite fighter. After parasite pick-up the composite configuration flies at optimum altitude and starts a long range climb so as to reach 25,000 feet at the parasite launch site. Before launching the parasite fighter it is refueled to its original take-off gross weight. The parasite is launched immediately after the climb to 25,000 feet is completed, and the carrier loiters at long range cruise at the launch altitude until the fighter mission is completed. After retrieving the parasite fighter the composite configuration descends to the optimum altitude flight path and cruises back to the fighter pick-up base. The fighter is released above the advance base at its retrieve weight, and the carrier returns to its home base.

DEPT. OF DEFENSE

~~SECRET~~  
SECURITY INFORMATION

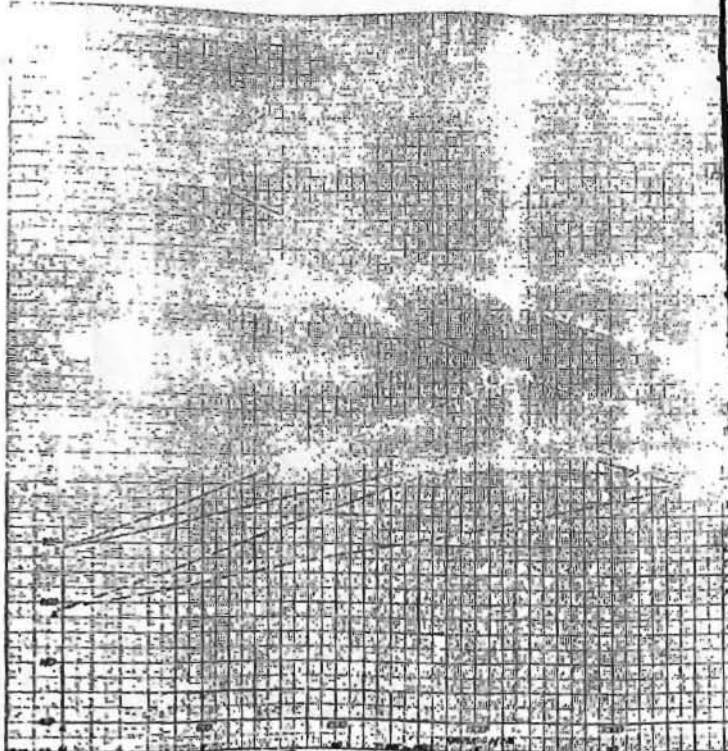
MARK REPORT SHEET

UNCLASSIFIED

UNCLASSIFIED



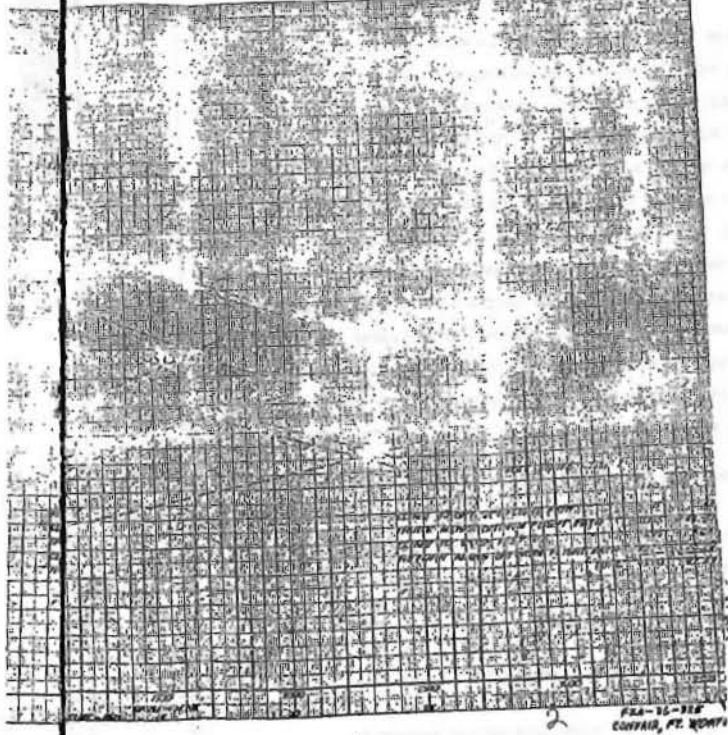
UNCLASSIFIED



~~SECRET~~

UNCLASSIFIED

PAGE  
010



2  
PWA-16-118  
CONTRACT, FT. MONTE

UNCLASSIFIED

Before the total mission radius can be established it is necessary to determine the landing gross weight and work backwards along the flight path to intercept the line 3-D.

The landing gross weight is computed of the following weights:

Dry take-off = 189,721 pounds  
 Fuel used = 10,222 pounds  
 Fuel reserve = 10,222 pounds  
 Total carrier landing weight = 199,750 pounds

From the landing gross weight of 199,750 pounds (2) a range and time integration for the carrier airplane (40,000) of 100,000 feet is obtained. Since the retrieved parasite has to be based above the hour base the point X can be determined as a 10,000 point increment above line 2-V at the same range as indicated by 0-U.

The lines X-V and X-W are a time and range integration of the composite configuration (from Figure 17).

The intersection of X-V with 2-V establishes the total mission radius at point V as 271 nautical miles and since no range is gained from the time of parasite launch to parasite retrieval the points M, P, and S are determined on the end of line X-V, the launch line X-0, and the latter line 0-M, respectively.

Using the gross weight at end of climb to 25,000 feet (N), the beginning of climb from the optimum altitude flight path may be determined as (2) from Figure 18. Subsequently, the corresponding points on the time integration line may be determined.

CONVAIR  
 PORT WORTH DIVISION  
 SECURITY INFORMATION  
 3 AUGUST 1954  
 72

UNCLASSIFIED

UNCLASSIFIED

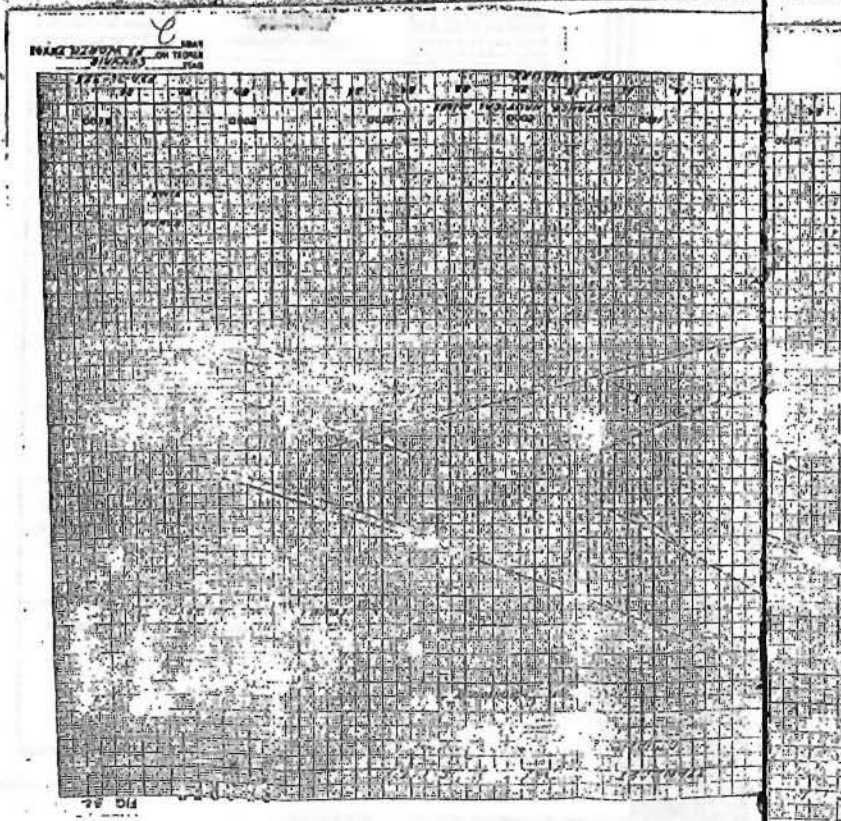
Following the mission graphically (Figure 24) the carrier total take-off gross weight is 370,000 pounds (A). The 2800 pound allowance for warm-up, taxi, and take-off reduces the gross weight to 366,200 pounds (B). From Figure 17, the normal rated power climb to optimum altitude (5,000 feet) is completed at 161,000 pounds gross weight, a time to climb of 10 hr. and a range of 18 nautical miles (C). A range and time integration from Figure 17 establishes the range line 0-D for the carrier. Line X-Y is a total of 25 minutes at optimum altitude range operating conditions above the advance base. Since the composite gross weight cannot exceed 370,000 pounds, the 35,000 pound addition of the parasite has to be made at Q on line X-Y to establish H as 370,000 pounds. This establishes the pick-up base distance of 810 nautical miles away from the carrier initial take-off point. The carrier mission time for this distance is 5 hours. Long range cruise is continued from H to I in a composite configuration. The distance H-X is obtained from an integration of the nautical miles-per-pound versus gross weight curves, labeled as, e.g., 0.0010, Figure 15. Line K-L is a focus of long range climb to 25,000 feet (calculated from Figure 19) from the optimum altitude flight path (H-I) for the composite configuration.

Since the parasite to be launched immediately upon arrival at 25,000 feet, the focus of cruise gross weight versus range may be established as line M-O (a 40,000 pound loss in gross weight with no range gain). A 2 hour take-off plus 25 minutes for fighter retrieval time at long range operating conditions at 25,000 feet establishes the focus of carrier gross weight versus range represented by line 0-M. A fighter parasite weight of 20,000 pounds added to line 0-M establishes the composite configuration weight after retrieval as line 0-P.

CONVAIR  
 PORT WORTH DIVISION  
 SECURITY INFORMATION  
 3 AUGUST 1954  
 71

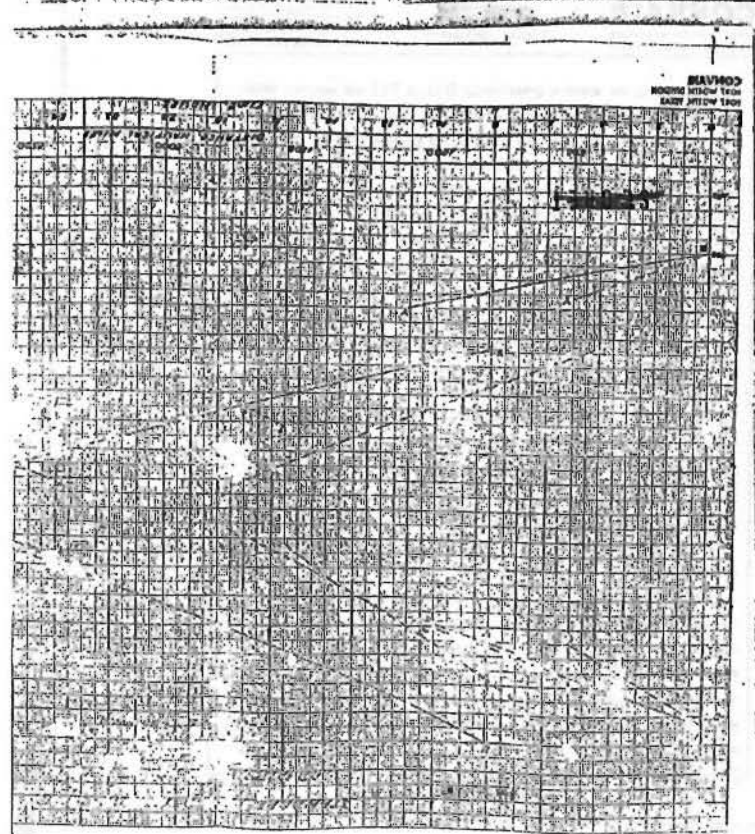
UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED



UNCLASSIFIED

UNCLASSIFIED

APPROVED BY \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 REVISION BY \_\_\_\_\_

**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

PAGE 741  
 REPORT NO. 274-36-375  
 MODEL \_\_\_\_\_  
 DATE 8 August 1958

**CONFIDENTIAL****SECTION III****WEIGHT & BALANCE DATA**

This section contains weights and C. G. Stations (relative to Carrier) for the four models of the B-36 which are considered in this report for carrier performance. All models have identical fuel and oil capacities and tanks, and this information is listed separately.

The BASIC WEIGHT of the airplane as used in this report is defined as the weight of the carrier ready for flight, but not including fuel, injection water, oil, crew, or parasite airplane. Trapped fuel and oil is carried in addition to fuel tank capacities listed.

The weights of the Trapets mechanism and provisions, existing parasite, and bomb bay tank for parasite refueling are also included in this Section.

**CONFIDENTIAL**

UNCLASSIFIED

UNCLASSIFIED

APPROVED BY \_\_\_\_\_  
 PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 REVISION BY \_\_\_\_\_

**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

PAGE 742  
 REPORT NO. 274-36-375  
 MODEL \_\_\_\_\_  
 DATE 8 August 1958

**CONFIDENTIAL****B-36 Carrier**

	Standard	Sta. of C. G.	Stripped	Sta. of C. G.
Weight Empty	161,372 lbs		151,774	
Parasite Provisions	4107	68.9 ft.	4107	68.9 ft.
Landing Gear Modifications for 370,000 LB. Take-off	231		231	
Material Substitution	275		275	
Weight Empty Items not part of Basic	-12		-12	
Weight Empty (Carrier)	166,972	79.03 ft.	156,372	78.57 ft.
Trapped Fuel and Oil	1492		1492	
Propeller Rub Oil	102		102	
ADI Fluid	405		405	
Guns	1603	81.42 ft.	234	101.1 ft.
Ammunition	5796	84.79 ft.	756	157.3 ft.
Dry Ice	135			
Food and Water	358		155	
Miscellaneous	208		208	
Bomb Bay Tank	405	89.66 ft.	405	89.66 ft.
BASIC WEIGHT (Carrier)	176,676	77.29 ft.	160,109	79.10 ft.
OIL	4650			

**CONFIDENTIAL**

\*Bomb bay tank carried only on ferry and separate take-off mission

UNCLASSIFIED



UNCLASSIFIED

PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_  
**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

Form 76  
 REPORT NO. FFA-35-325  
 MODEL \_\_\_\_\_  
 DATE 8 August 1954

## B-360 Airplane (Cont'd)

	Standard	Sta. of C. G.	Stripped	Sta. of C. G.
Crew	2700	71.26	2025	71.26
Fuel Load	185,976		703,216	
MAXIMUM TAKE-OFF WEIGHT	**370,000	72.71 to 79.03 ft.	**370,000	72.71 to 79.03 ft.
MAXIMUM LANDING WEIGHT	***257,500	72.71 to 79.03 ft.	***257,500	72.71 to 79.03 ft.

\*\* Limited by Strength (Wing and Landing Gear), Load Factor = 2.0

\*\*\* Limited by Strength (Landing Gear)

CONFIDENTIAL

FORM 4

UNCLASSIFIED

PREPARED BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_  
**CONVAIR**  
 FORT WORTH DIVISION  
 FORT WORTH, TEXAS

Form 77  
 REPORT NO. FFA-35-325  
 MODEL \_\_\_\_\_  
 DATE 8 August 1954

CONFIDENTIAL

## B-360 Carrier

	Standard	Sta. of C. G.	Stripped	Sta. of C. G.
Weight Empty	161,798		259,105	
Parasite Provisions	4107	66.9 ft.	4107	66.9 ft.
Landing Gear Modification for 370,000 lb. Take-off	231		231	
Material Substitution	233		233	
Weight Empty Items not part of Basic Weight	48		48	
WEIGHT EMPTY (Carrier)	169,341	77.72 ft.	259,649	78.26 ft.
Trapped Fuel and Oil	1492		3192	
Propeller Sub Oil	102		102	
ASE Fluid	405		405	
Oil	2003	82.82 ft.	214	162.1 ft.
Ammunition	5796	81.79 ft.	756	157.3 ft.
Dry Ice	133			
Food and Water	358		358	
Miscellaneous	126		126	
Sub Bay Tank*	405	89.66 ft.	405	89.66 ft.

\*Sub Bay Tank carried only on ferry and separate take-off missions

CONFIDENTIAL

FORM 4

UNCLASSIFIED

UNCLASSIFIED

**CONFIDENTIAL**

Paul M. Carter

Standard	Qty. of	Standard	Qty. of
Weights Buys	168,167	Weights Buys	160,094
Proximate Pro-	4207	Proximate Pro-	4207
Standard	68.9%	Standard	68.9%
Landings Gear	100	Landings Gear	100
Standard	100	Standard	100
Oil	1650	Oil	1650
Standard	1650	Standard	1650
Food Load	181,208	Food Load	181,208
Standard	181,208	Standard	181,208
MAXIMUM TAKE-OFF	22,724,029 lbs.	MAXIMUM TAKE-OFF	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
WEIGHT	22,724,029 lbs.	WEIGHT	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
MAXIMUM LANDING	22,724,029 lbs.	MAXIMUM LANDING	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
HEIGHT	22,724,029 lbs.	HEIGHT	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
Proximate Fuel	1492	Proximate Fuel	1492
Standard	1492	Standard	1492
and Oil	1492	and Oil	1492
Standard	1492	Standard	1492
Proximate	108	Proximate	108
Standard	108	Standard	108
ADIRVAD	405	ADIRVAD	405
Standard	405	Standard	405
Quota	1803	Quota	1803
Standard	1803	Standard	1803
Administration	2906	Administration	2906
Standard	2906	Standard	2906
Dry Ice	225	Dry Ice	225
Standard	225	Standard	225
Crew Comfort	565	Crew Comfort	565
Standard	565	Standard	565
Food & Water	258	Food & Water	258
Standard	258	Standard	258
Miscellaneous	180	Miscellaneous	180
Standard	180	Standard	180
Chart Dispenser	278	Chart Dispenser	278
Standard	278	Standard	278
Boob Bay Tank	405	Boob Bay Tank	405
Standard	405	Standard	405

\* Boob Bay Tank carried only on ferry and separate take-off stations

**CONFIDENTIAL**

Paul M. Carter

Standard	Qty. of	Standard	Qty. of
Weights Buys	168,167	Weights Buys	160,094
Proximate Pro-	4207	Proximate Pro-	4207
Standard	68.9%	Standard	68.9%
Landings Gear	100	Landings Gear	100
Standard	100	Standard	100
Oil	1650	Oil	1650
Standard	1650	Standard	1650
Food Load	181,208	Food Load	181,208
Standard	181,208	Standard	181,208
MAXIMUM TAKE-OFF	22,724,029 lbs.	MAXIMUM TAKE-OFF	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
WEIGHT	22,724,029 lbs.	WEIGHT	22,724,029 lbs.
Standard	22,724,029 lbs.	Standard	22,724,029 lbs.
Proximate Fuel	1492	Proximate Fuel	1492
Standard	1492	Standard	1492
and Oil	1492	and Oil	1492
Standard	1492	Standard	1492
Proximate	108	Proximate	108
Standard	108	Standard	108
ADIRVAD	405	ADIRVAD	405
Standard	405	Standard	405
Quota	1803	Quota	1803
Standard	1803	Standard	1803
Administration	2906	Administration	2906
Standard	2906	Standard	2906
Dry Ice	225	Dry Ice	225
Standard	225	Standard	225
Crew Comfort	565	Crew Comfort	565
Standard	565	Standard	565
Food & Water	258	Food & Water	258
Standard	258	Standard	258
Miscellaneous	180	Miscellaneous	180
Standard	180	Standard	180
Chart Dispenser	278	Chart Dispenser	278
Standard	278	Standard	278
Boob Bay Tank	405	Boob Bay Tank	405
Standard	405	Standard	405

\* Limited by strength (Wind and Landing Gear), Load Factor = 2.0  
\*\* Limited by strength (Landing Gear)

UNCLASSIFIED

CONFIDENTIAL

a Bomb Bay Tank installed only on ferry and appropriate take-off slanting

Item	Weight	Item	Weight	Item	Weight
Hand Bay Tank	405	Hand Bay Tank	405	Hand Bay Tank	405
Chart Display	278	Chart Display	278	Chart Display	278
Miscellaneous	1376	Miscellaneous	1376	Miscellaneous	1376
Crew Comfort	508	Crew Comfort	508	Crew Comfort	508
Food & Water	318	Food & Water	318	Food & Water	318
Dry Tow	235	Dry Tow	235	Dry Tow	235
Ammunition	5796	Ammunition	5796	Ammunition	5796
Guns	1803	Guns	1803	Guns	1803
ADP Units	605	ADP Units	605	ADP Units	605
HPD Oil	102	HPD Oil	102	HPD Oil	102
Popolair	1692	Popolair	1692	Popolair	1692
Tapped Fuel and Oil	1692	Tapped Fuel and Oil	1692	Tapped Fuel and Oil	1692
WEIGHT TOTAL	176,661	WEIGHT TOTAL	176,661	WEIGHT TOTAL	176,661
Weight Empty Tank	-17	Weight Empty Tank	-17	Weight Empty Tank	-17
Weight of Tank	118	Weight of Tank	118	Weight of Tank	118
Miscellaneous	231	Miscellaneous	231	Miscellaneous	231
Take-off	1107	Take-off	1107	Take-off	1107
Weight Total	177,912	Weight Total	177,912	Weight Total	177,912
Weight Empty Tank	150,619	Weight Empty Tank	150,619	Weight Empty Tank	150,619
Weight of Tank	27,293	Weight of Tank	27,293	Weight of Tank	27,293

CONFIDENTIAL

COMNAVIR

UNCLASSIFIED

CONFIDENTIAL

\*\* Limited by Strength (Ving and Loading Chart)  
\*\*\* Limited by Strength (Loading Chart)

Item	Weight	Item	Weight	Item	Weight
WEIGHT	22,716,039.037N	WEIGHT	22,716,039.037N	WEIGHT	22,716,039.037N
PATRON LANDING	22,716,039.037N	PATRON LANDING	22,716,039.037N	PATRON LANDING	22,716,039.037N
PATRON TAKE-OFF	22,716,039.037N	PATRON TAKE-OFF	22,716,039.037N	PATRON TAKE-OFF	22,716,039.037N
Fuel Tank	176,965	Fuel Tank	176,965	Fuel Tank	176,965
CHAFF	1608	CHAFF	1608	CHAFF	1608
OIL	1650	OIL	1650	OIL	1650
Crew (12-9)	2100	Crew (12-9)	2100	Crew (12-9)	2100
BASIC WEIGHT (Crew)	28,639	BASIC WEIGHT (Crew)	28,639	BASIC WEIGHT (Crew)	28,639
Weight	22,716,039.037N	Weight	22,716,039.037N	Weight	22,716,039.037N

CONFIDENTIAL

COMNAVIR

UNCLASSIFIED

UNCLASSIFIED

ANALYST: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVISION BY: \_\_\_\_\_

**CONFIDENTIAL**

CONFIDENTIAL (Cont'd)

	Standard	Sta. of C. G.	Revised	Sta. of C. G.
BASIC WEIGHT (Carrier)	169,509	78.38 ft.	172,708	79.18 ft.
Compass	1390	40.24 ft.	1390	40.24 ft.
Crew (12-9)	2700	57.32 ft.	2025	57.32 ft.
OIL	4650		4650	
Chaff	1403	137.3 ft.	1403	137.5
Fuel Load	170,343		187,781	
MAXIMUM TAKE-OFF WEIGHT	**370,000	72.71to79.03ft.	**370,000	72.71to79.03ft.
MAXIMUM LANDING WEIGHT	***357,500	72.71to79.03ft.	***357,500	72.71to79.03ft.

\*\* Limited by Strength (Wing and Landing Gear)  
 \*\*\* Limited by Strength (Landing Gear)

**CONFIDENTIAL**

FORM 4 28 FEB 52 (REV. 10-1-51)

UNCLASSIFIED

UNCLASSIFIED

ANALYST: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVISION BY: \_\_\_\_\_

**CONFIDENTIAL**

CONFIDENTIAL

B-26D, B-26E, B-26F, and B-26G

SPEC MIL-7-5572  
 GRADE 1S5/1A5

LOCATION	No. of TANKS	GALLONS	Sta. of C. G.
Wing, Outboard	2	4496	70.19 ft.
Wing, Center	2	4146	72.65 ft.
Wing, Inboard	2	6431	69.20 ft.
Center Section, Aft	2	5977	66.72 ft.
Hub Bay (For Fuel)	1	1200	69.66

Note: In flight, fuel in outboard tanks is used last to provide maximum bending relief to wing.

**OIL**

	Grade	Vol
Capacity (Gal.)	1200	52
SPEC.	MIL-O-6082	MIL-O-6081
GRADE	D-1120; W-1100	1010
Sta. of C. G.	71.7 ft.	65.9 ft.

**CONFIDENTIAL**

FORM 4 28 FEB 52 (REV. 10-1-51)

UNCLASSIFIED



UNCLASSIFIED

ANALYST: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

**CONVAIR**

POST WOODS DIVISION  
 POST WOODS, TEXAS

FORM 84  
 AECIC NO. F2A-36-375  
 4000  
 DATE 12-18-1954

**CONFIDENTIAL**FLIGHT CHARACTERISTICSB-36D, B-36E, B-36F, and B-36G

Type:	Water/Alcohol
Location:	Engine Nozzles
No. of Tanks:	6
Gallons (Total):	51
Sta. of C. G.:	87.0 ft.

TRAPEZE MECHANISMB-36D, B-36E, B-36F, and B-36G

<u>Item</u>	<u>Weight</u>	<u>Sta. of C. G.</u>
Trapeze (J6L257(3))	2116 lbs.	68.2 ft.
Total Parasite Provisions including Trapeze, but excluding Bomb Bay Tank	4107 lbs.	68.9 ft.
Bomb Bay Tank (empty)	405 lbs.	89.66 ft.

B-36

Launch Weight	32,550 lbs.
Sta. of C. G. (B-36)	73.3 ft.

**CONFIDENTIAL**

FORM 84 USE PREVIOUS EDITIONS EXCEPT WHERE SHOWN OTHERWISE

UNCLASSIFIED

ANALYST: \_\_\_\_\_  
 PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_

**CONVAIR**

POST WOODS DIVISION  
 POST WOODS, TEXAS

FORM 85  
 AECIC NO. F2A-36-375  
 4000  
 DATE 12-18-1954

REFERENCES

1. Convaire Report No. F2A-36-210, "Actual Performance Estimates for the B-36D Long Range, Heavy Bomber with Six Turbo Supercharged P & W R4360-11 Engines and Four J-47-GB-19 Turbojet Engines," dated 15 July 1952.
2. Convaire Report No. F2A-36-217, "Actual Performance Estimates for the B-36D Long Range, Heavy Bomber with Six Turbo Supercharged P & W R4360-11 Engines and Four J-47-GB-19 Turbojet Engines," dated 30 September 1952.
3. Convaire Report No. F2A-36-079, "The Effects of Weight and Drag Changes on the Performance of the B-36D Airplane," dated 23 November 1952.
4. Convaire Report No. F2A-36-208, "Performance Estimates for the B-36D/B-36E Pylon Parasite System Based on Phase IV Flight Tests of the B-36D Airplane," dated 1 January 1954.
5. Convaire Report No. F2A-36-278, "Performance Estimates for B-36D and B-36E Aircraft Based on Phase IV Flight Tests," dated 15 June 1953.
6. Convaire Report No. F2A-36-279, "Performance Estimates for B-36D and B-36E Aircraft Based on Phase IV Flight Tests," dated 16 September 1953.
7. Convaire Report F2A-36-307 - "Standard Aircraft Characteristics for B-36D/B-36E Pylon Parasite System," dated 1 January 1954.
8. Convaire Report F2A-36-051 - "Statement of Work for Production Pylon Installation in B-36 Airplanes," dated 13 February 1953.
9. T.O. 1B-36(R)D(0)-1 - Flight Handbook  
 1P-81(R)F(0)-1
10. T.O. 1B-36(R)D(0)-2 - Maintenance Handbook

FORM 85 USE PREVIOUS EDITIONS EXCEPT WHERE SHOWN OTHERWISE

UNCLASSIFIED

APPENDIX TO SECTION I

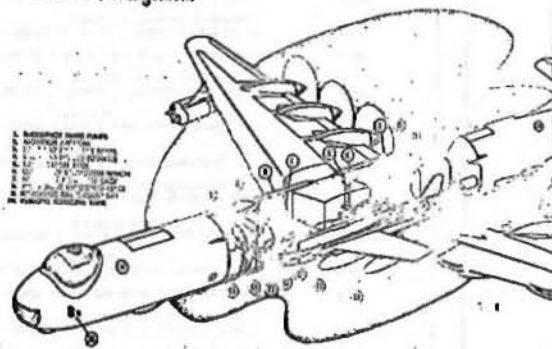
DRAWING NO.	PAGE
Plate 1 - General Arrangement Perspective	A-1
Plate 2 - Trapese Operation Perspective	A-2
FV541004 - General Arrangement - B-36 and HB-36 Aircrafts.	A-3
FV447825 - B-36 Fuselage Structure Diagram	A-4
FV4471094 - HB-36 Fuselage Structure Diagram	A-5
FV541001 - Layout - Clearance Dimensions for B-36 Carrier and Parasite	A-6
FV541002 - Layout - Wing Ordinates and Lower Surface Clearances	A-7
36L25200 - Sht. 2 - Mechanism Instl. - Trapese	A-8
36L25200 - Sht. 3 - Mechanism Instl. - Trapese	A-9
FV541003 - Layout - Clearance Dimensions for Trapese and Parasite	A-10
36M4102 - Geometry - HB-36 Trapese Matholias	A-11
FV541005 - Layout - Enlarged Portion of 36M4102, Trapese Geometry.	A-12
Plate 3 - Carrier's Parasite Jettison System	A-13
43743501 - V-Probe (W-64P)	A-14

APPENDIX TO SECTION I (Continued)

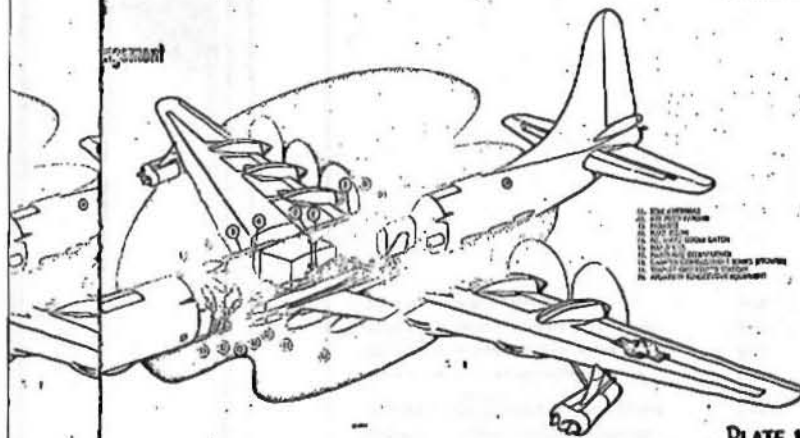
DRAWING NO.	PAGE
43743502 - V-Probe Assy. (W-64P)	A-15
43743506 - V-Probe Installation (W-64P)	A-16
43743518 - Pin Installation - Rear Support (W-64P)	A-17
Plate 4 - Parasite Hydraulic Schematic	A-18
Plate 5 - Parasite Pilot's Release Controls	A-19
Plate 6 - Doors and Fairings (Clean Day)	A-20
Plate 7 - B-36 Loading Position	A-21

UNCLASSIFIED

### General Arrangement



- 1. AIRCRAFT MAIN PARTS
- 2. AIRCRAFT MAIN PARTS
- 3. AIRCRAFT MAIN PARTS
- 4. AIRCRAFT MAIN PARTS
- 5. AIRCRAFT MAIN PARTS
- 6. AIRCRAFT MAIN PARTS
- 7. AIRCRAFT MAIN PARTS
- 8. AIRCRAFT MAIN PARTS
- 9. AIRCRAFT MAIN PARTS
- 10. AIRCRAFT MAIN PARTS
- 11. AIRCRAFT MAIN PARTS
- 12. AIRCRAFT MAIN PARTS
- 13. AIRCRAFT MAIN PARTS
- 14. AIRCRAFT MAIN PARTS
- 15. AIRCRAFT MAIN PARTS
- 16. AIRCRAFT MAIN PARTS
- 17. AIRCRAFT MAIN PARTS
- 18. AIRCRAFT MAIN PARTS
- 19. AIRCRAFT MAIN PARTS
- 20. AIRCRAFT MAIN PARTS



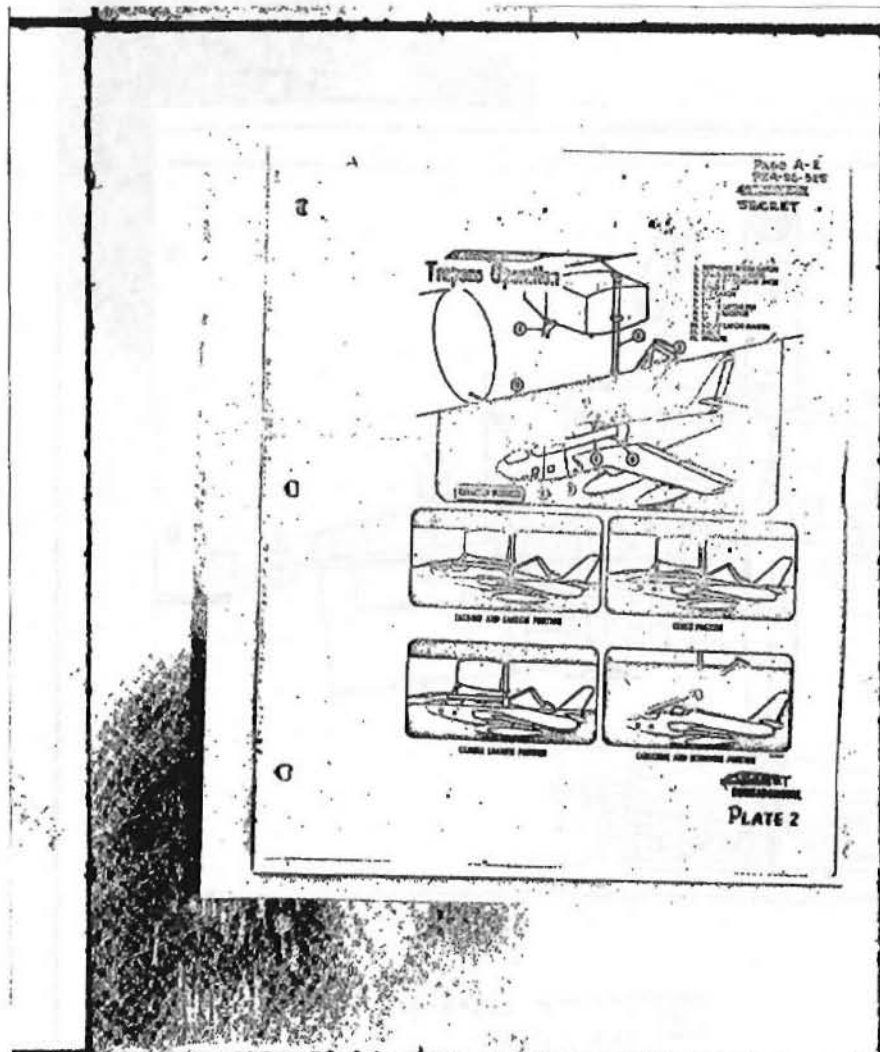
- 1. AIRCRAFT MAIN PARTS
- 2. AIRCRAFT MAIN PARTS
- 3. AIRCRAFT MAIN PARTS
- 4. AIRCRAFT MAIN PARTS
- 5. AIRCRAFT MAIN PARTS
- 6. AIRCRAFT MAIN PARTS
- 7. AIRCRAFT MAIN PARTS
- 8. AIRCRAFT MAIN PARTS
- 9. AIRCRAFT MAIN PARTS
- 10. AIRCRAFT MAIN PARTS
- 11. AIRCRAFT MAIN PARTS
- 12. AIRCRAFT MAIN PARTS
- 13. AIRCRAFT MAIN PARTS
- 14. AIRCRAFT MAIN PARTS
- 15. AIRCRAFT MAIN PARTS
- 16. AIRCRAFT MAIN PARTS
- 17. AIRCRAFT MAIN PARTS
- 18. AIRCRAFT MAIN PARTS
- 19. AIRCRAFT MAIN PARTS
- 20. AIRCRAFT MAIN PARTS

PLATE I

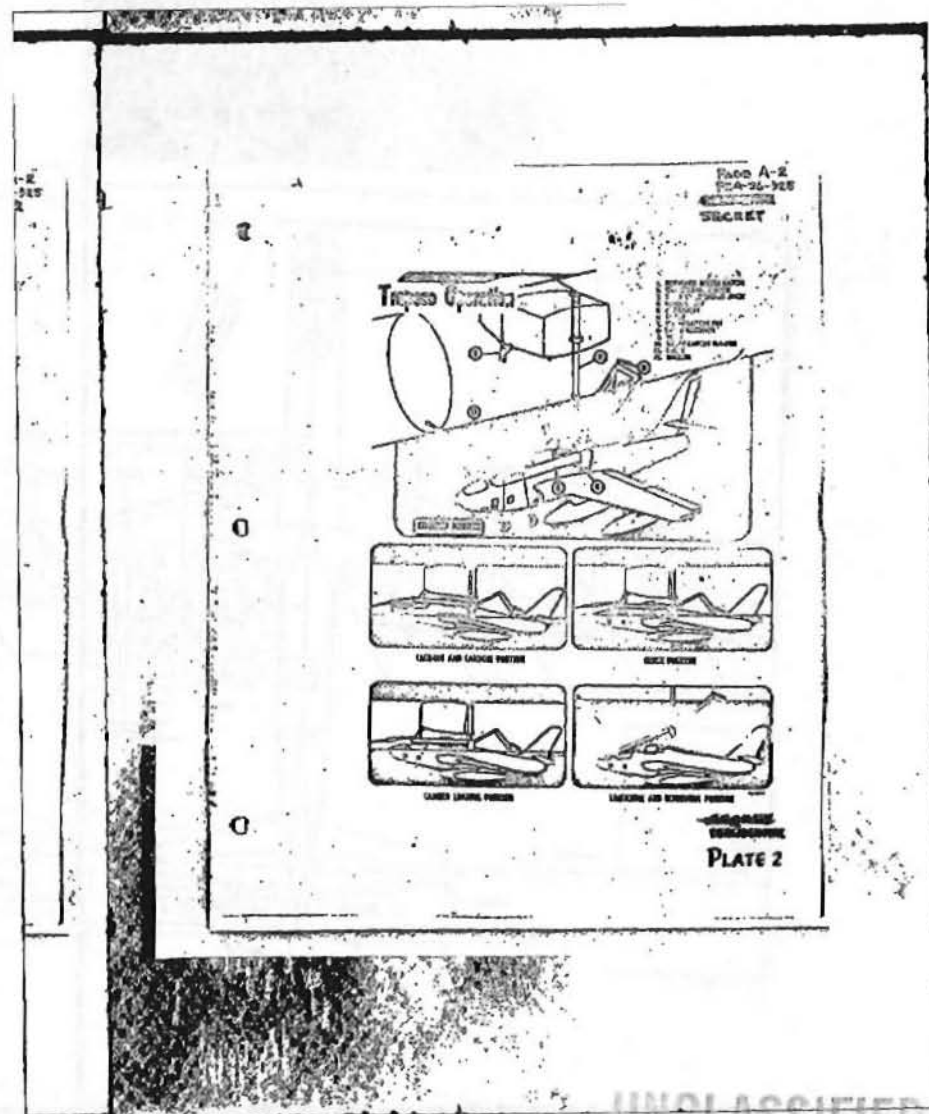
2

UNCLASSIFIED

UNCLASSIFIED



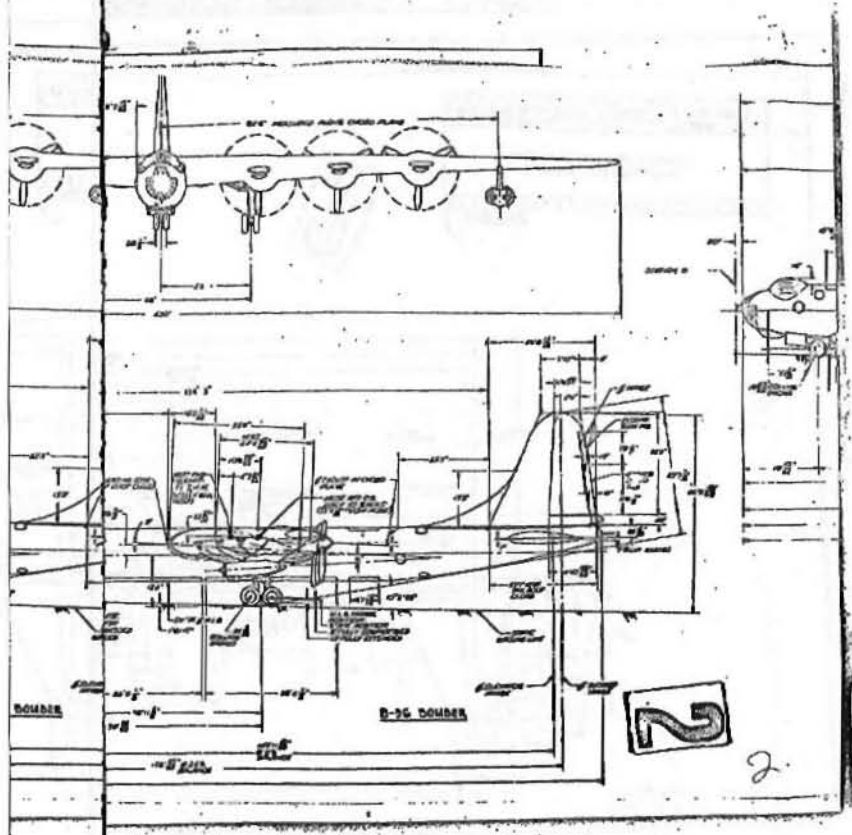
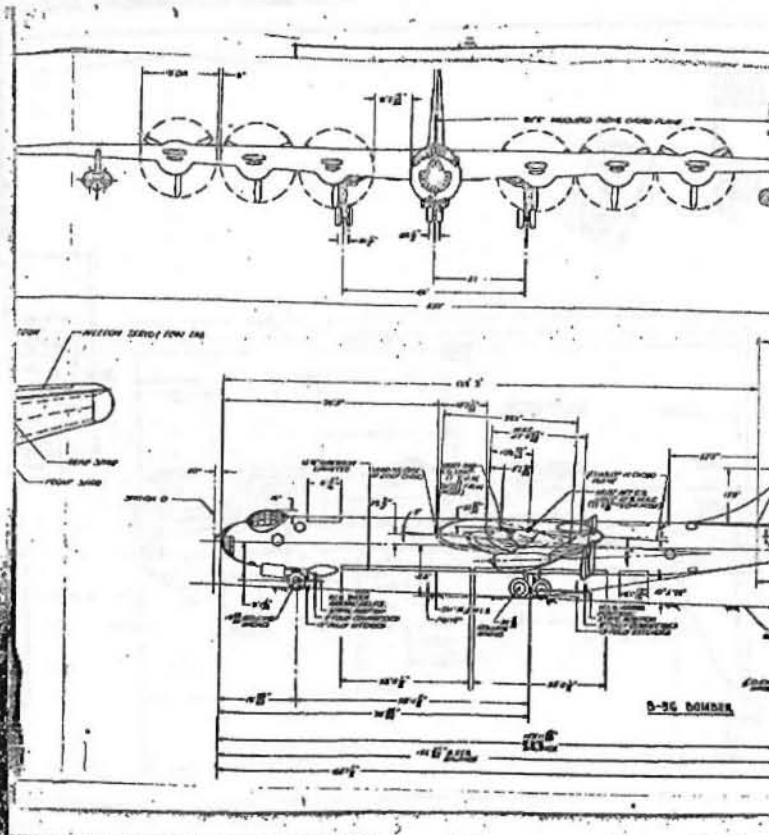
UNCLASSIFIED

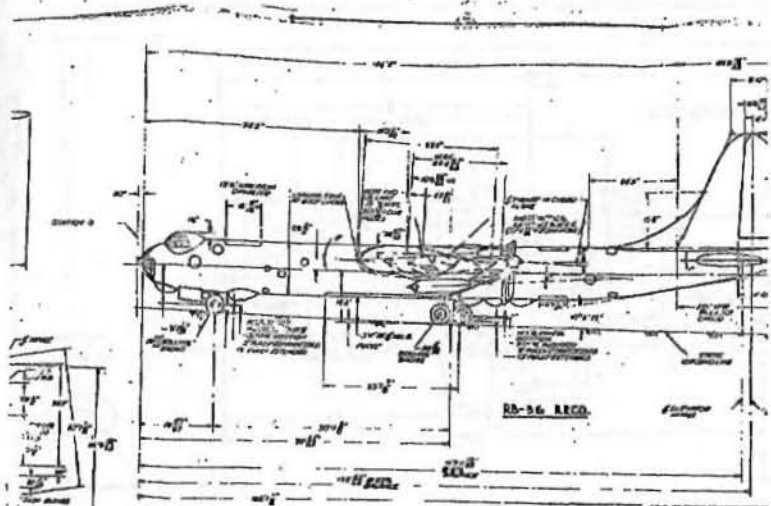


UNCLASSIFIED





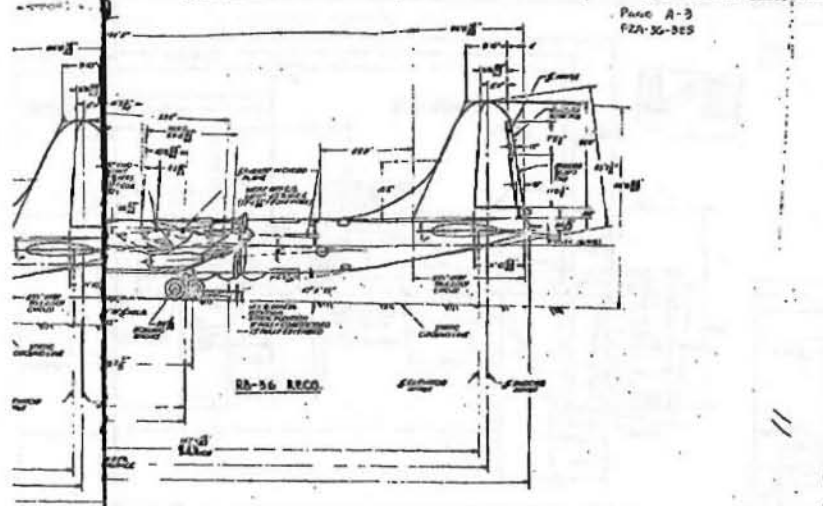




B-26 ARCO

3

Convair  
PACIFIC



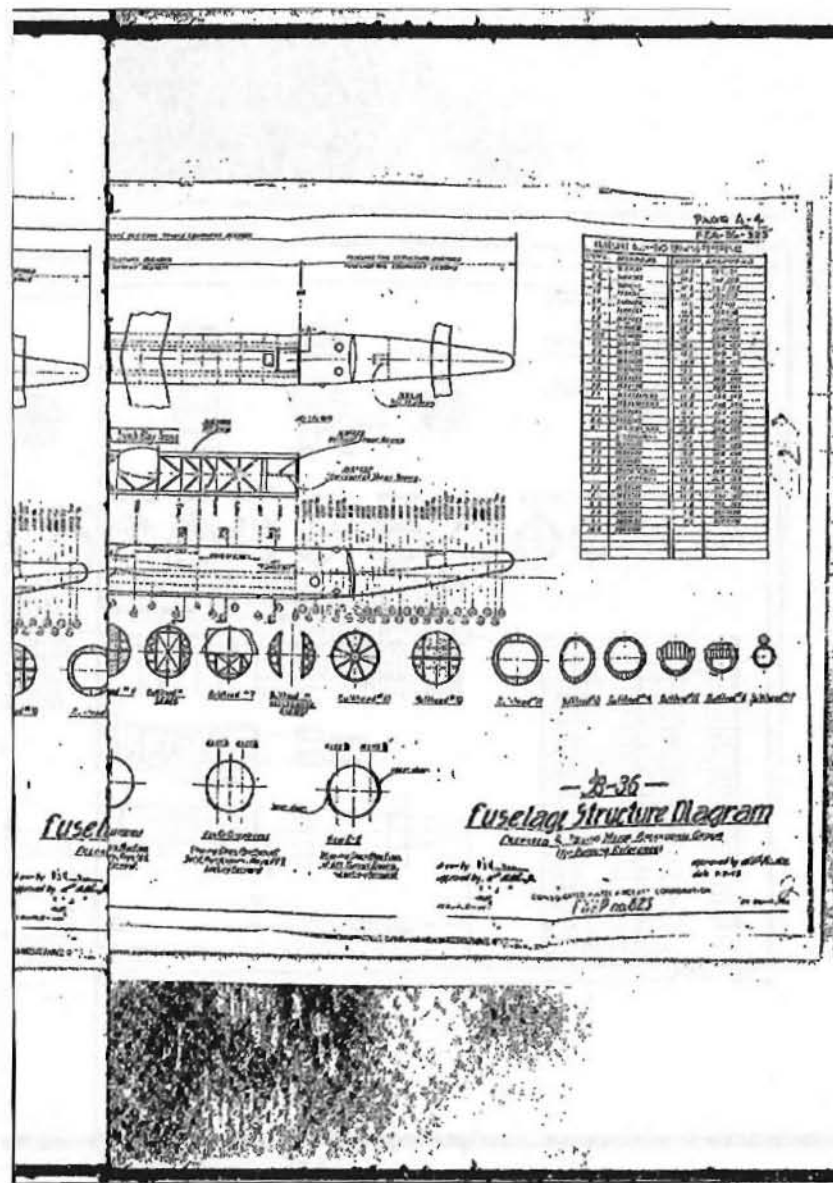
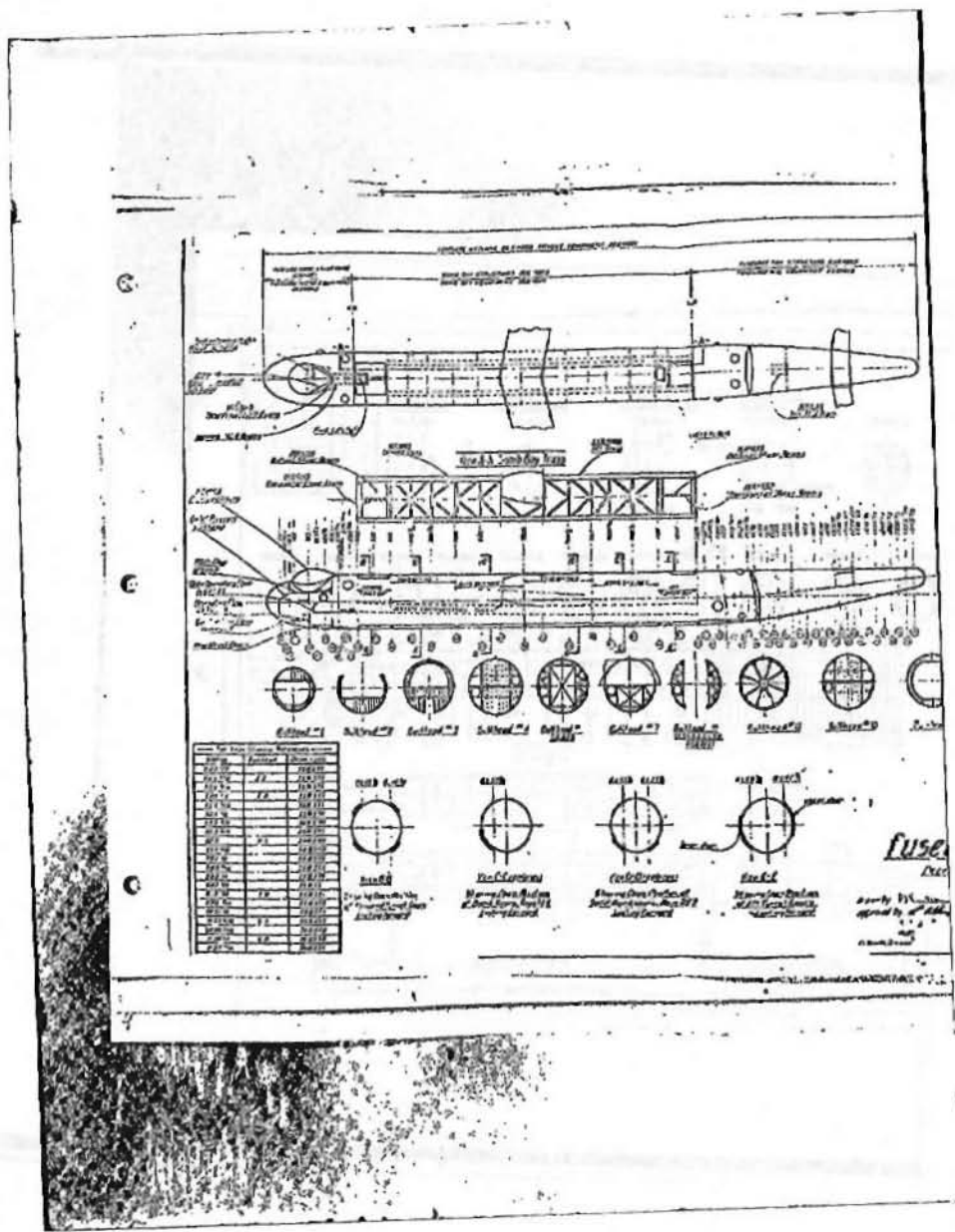
Panel A-3  
PZA-26-305

B-26 ARCO

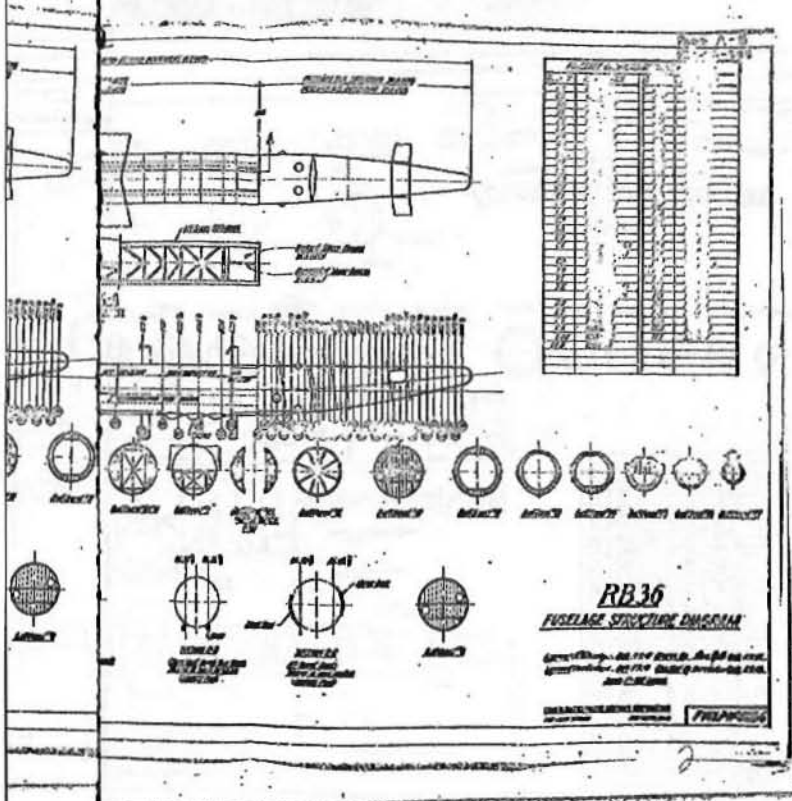
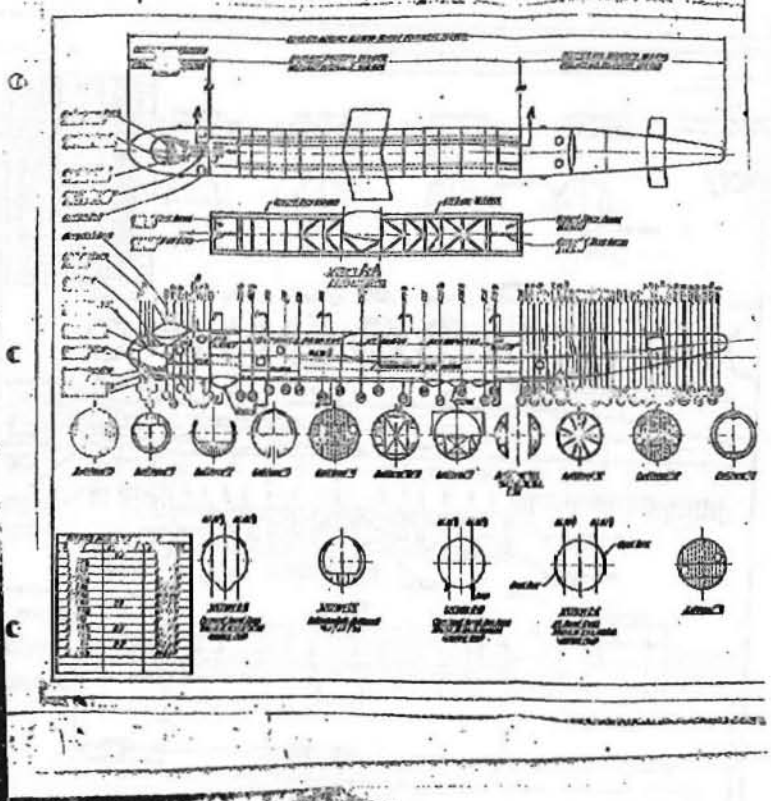
3

Convair  
PACIFIC  
GENERAL ARRANGEMENT  
B-26 & B-26C AIRPLANE  
PWS410004

2



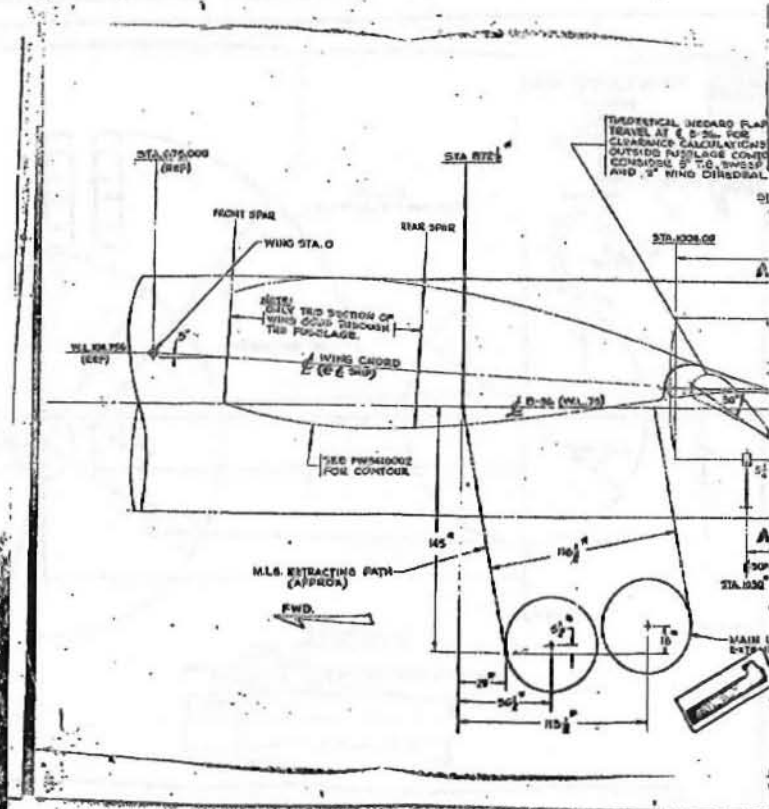




**RB36**  
**FUSELAGE STRUCTURE DIAGRAM**  
 Approved by the Chief of the Bureau of Aeronautics  
 on 11/14/54  
 and the Chief of the  
 Bureau of Naval Weapons  
 on 11/14/54

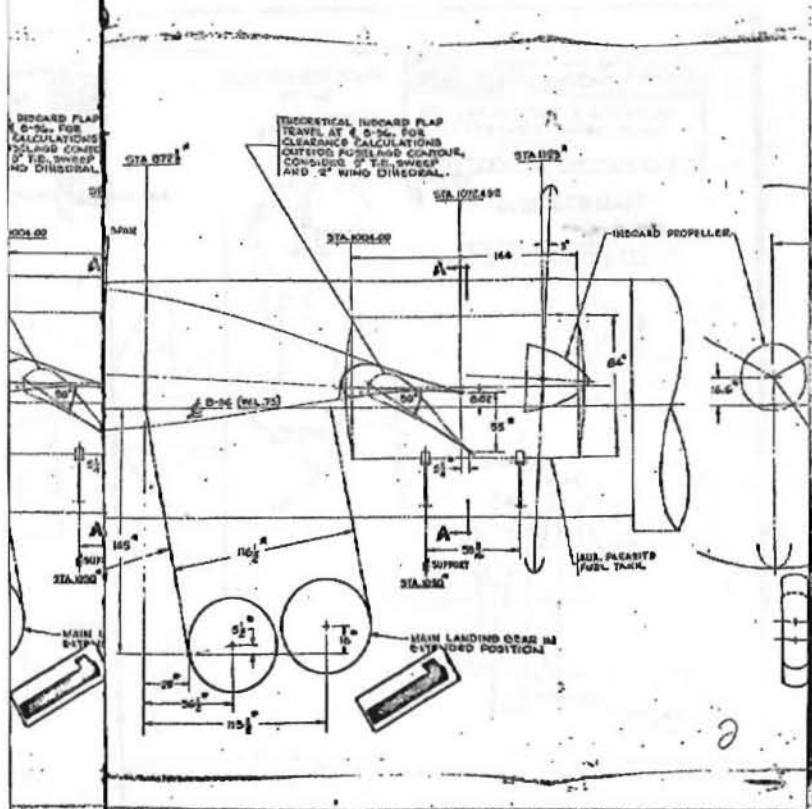
PREPARED BY  
 2

UNCLASSIFIED



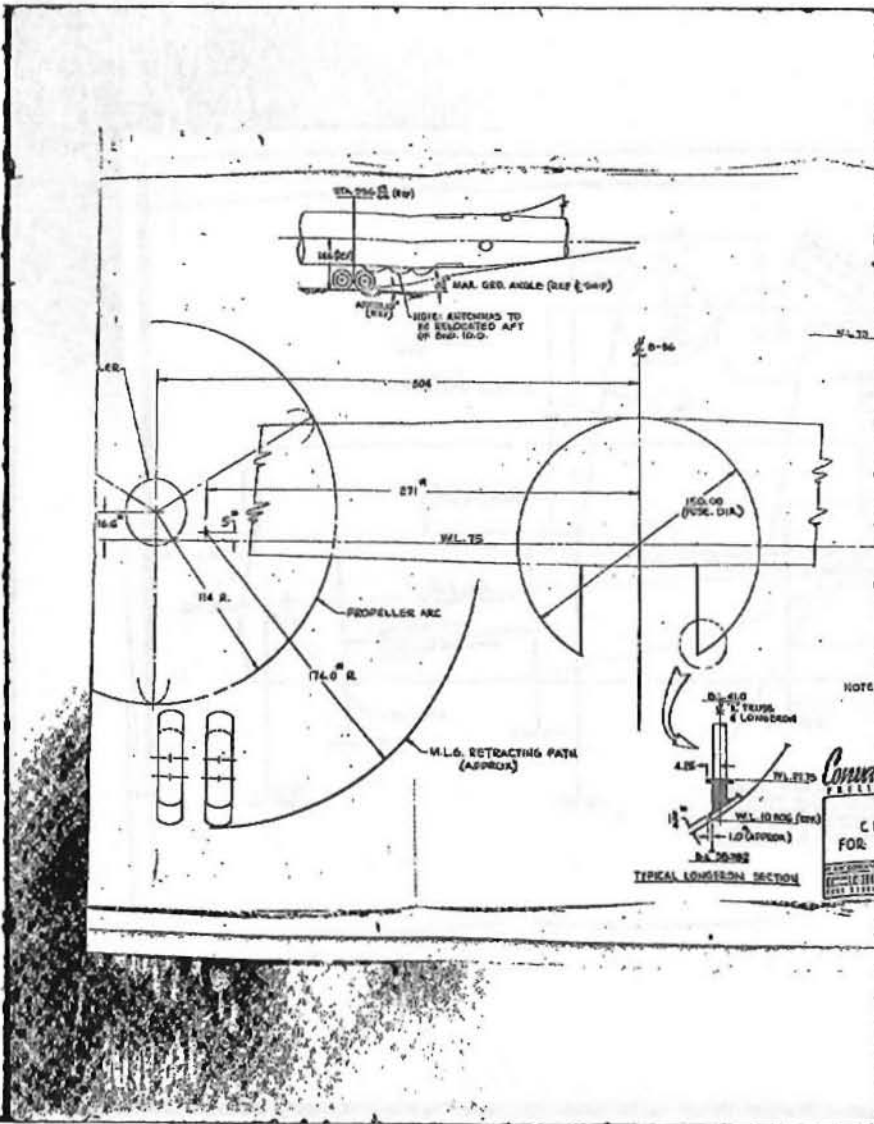
UNCLASSIFIED

UNCLASSIFIED



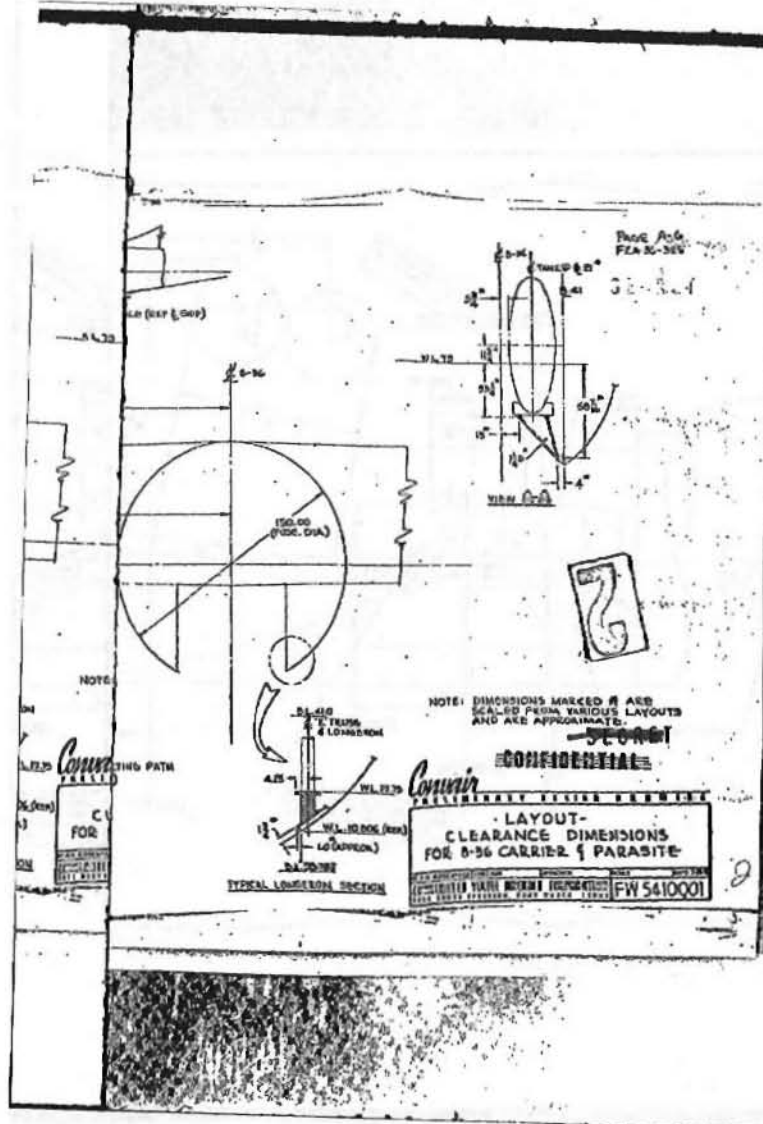
UNCLASSIFIED

UNCLASSIFIED

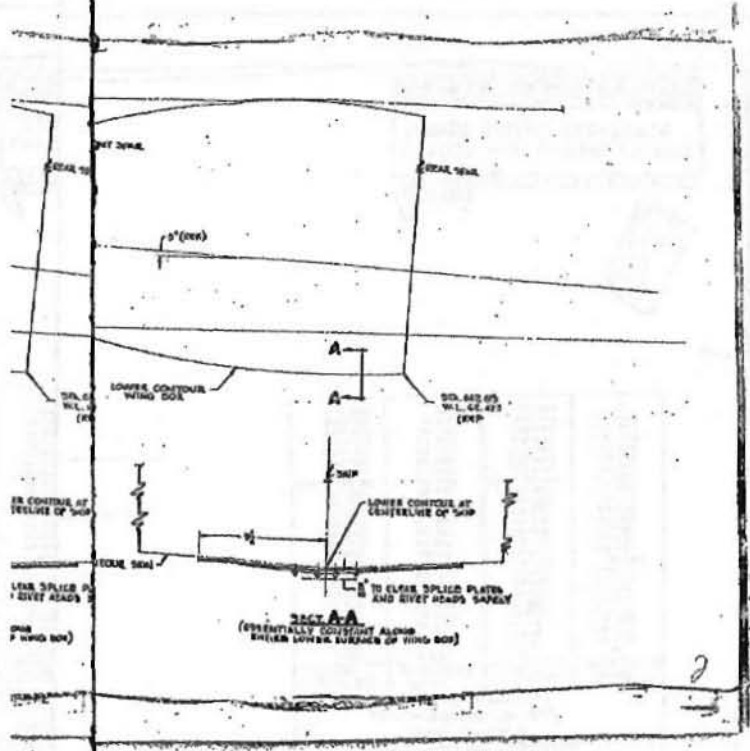
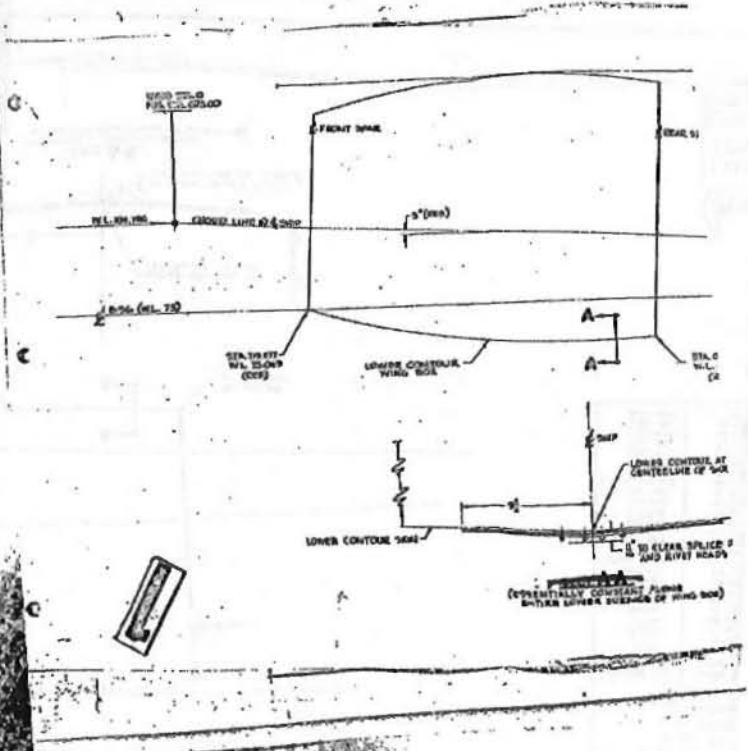


UNCLASSIFIED

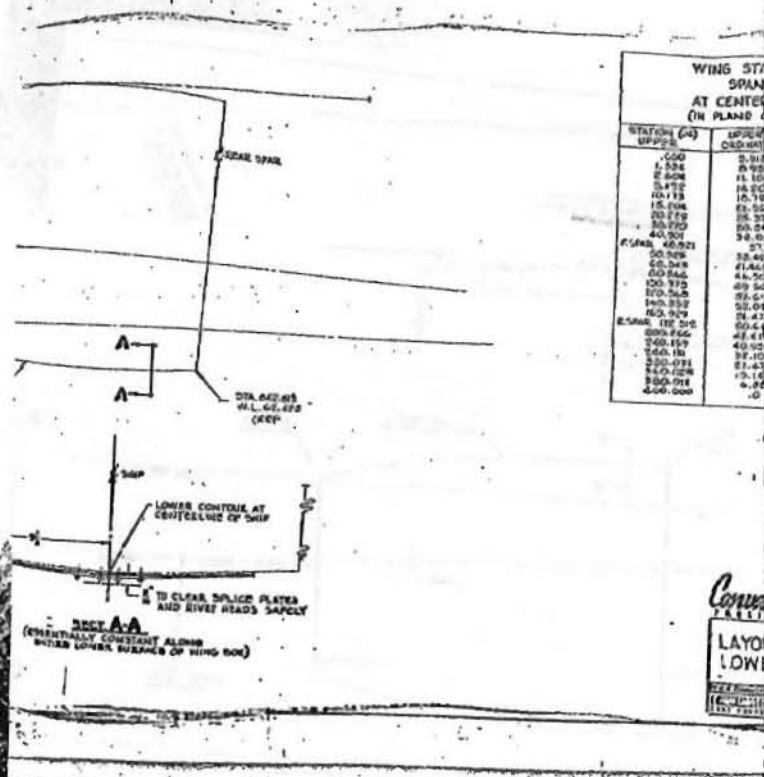
UNCLASSIFIED



UNCLASSIFIED

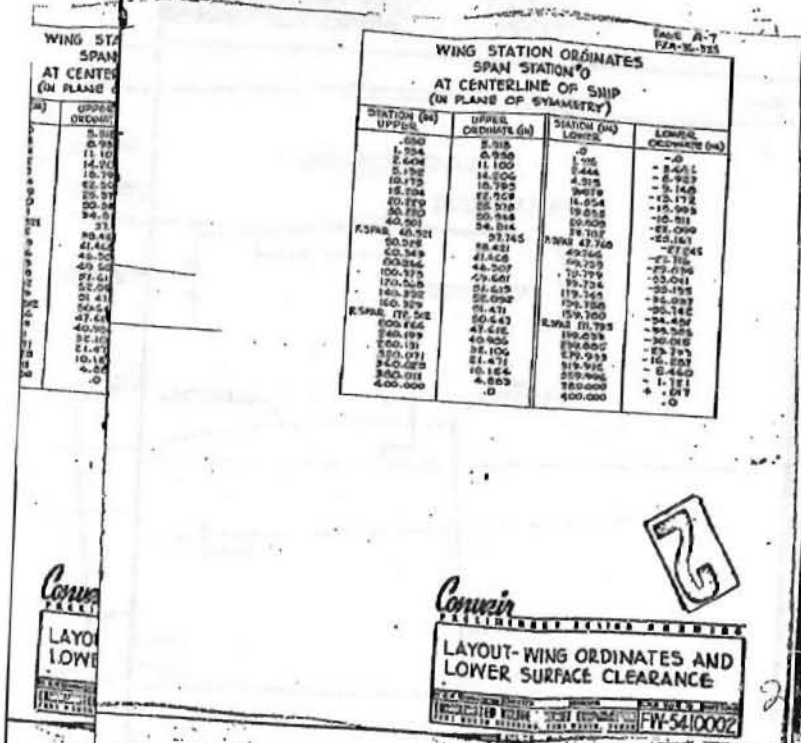






**WING SPAN AT CENTER (IN PLANE OF SYMMETRY)**

STATION (ft)	UPPER ORDNATE (ft)	LOWER ORDNATE (ft)
0.00	0.00	0.00
1.524	0.99	0.00
2.604	11.10	0.00
3.472	14.20	0.00
10.113	18.20	0.00
15.194	23.50	0.00
20.172	28.35	0.00
25.170	30.24	0.00
30.0	30.34	0.00
34.0	34.0	0.00
40.001	37.1	0.00
50.029	32.40	0.00
50.349	21.44	0.00
50.846	4.50	0.00
100.710	49.50	0.00
100.740	95.50	0.00
140.832	50.00	0.00
200.979	26.47	0.00
250.920	50.40	0.00
300.866	47.47	0.00
350.819	40.00	0.00
400.771	32.10	0.00
450.728	23.47	0.00
500.681	15.10	0.00
550.600	0.00	0.00



**WING STATION ORDINATES AT CENTERLINE OF SHIP (IN PLANE OF SYMMETRY)**

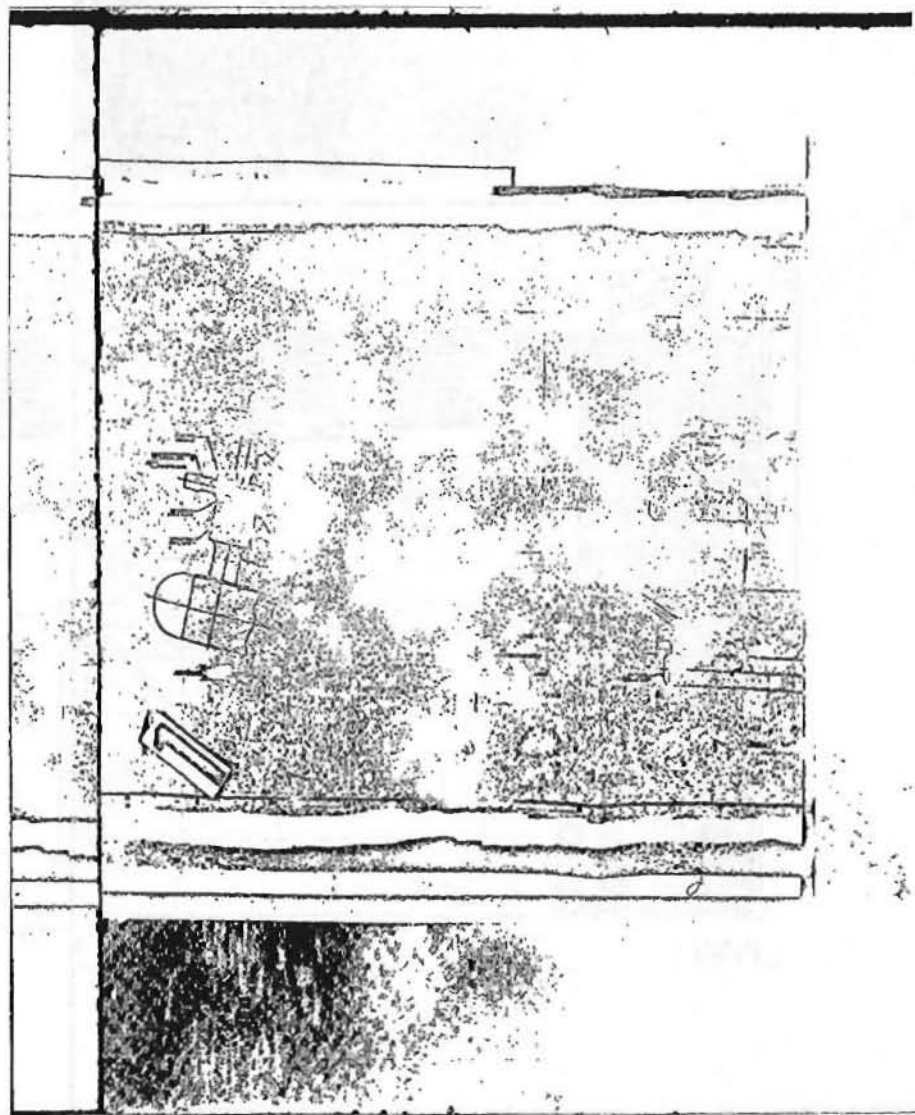
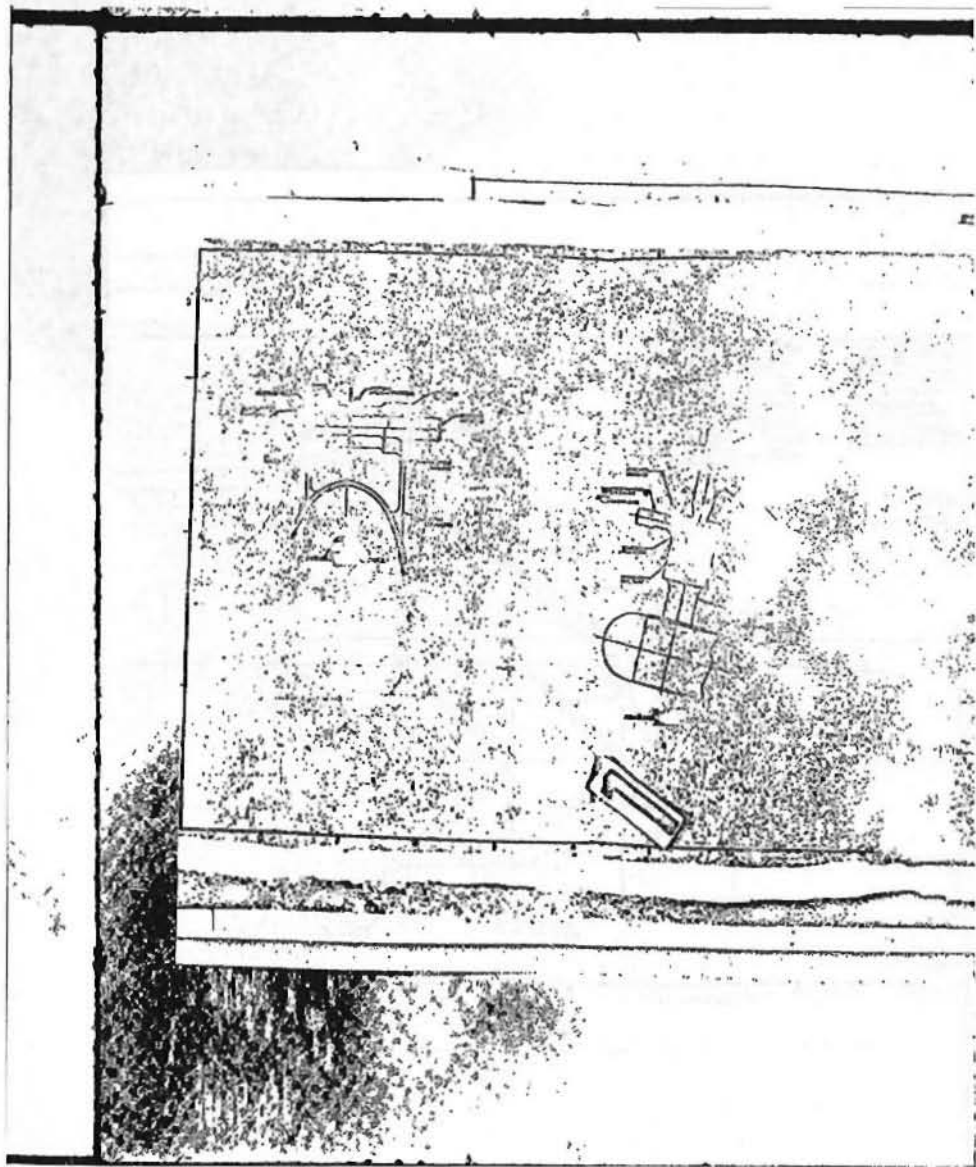
STATION (ft)	UPPER ORDNATE (ft)	LOWER ORDNATE (ft)	LOWER ORDNATE (ft)
0.00	0.00	0.00	0.00
1.524	0.990	0.00	-0.00
2.604	11.100	1.00	-2.441
3.472	14.200	2.444	-2.937
10.113	18.200	4.318	-3.140
15.194	23.500	5.619	-3.172
20.172	28.350	6.854	-3.003
25.170	30.240	8.018	-2.611
30.0	30.340	9.117	-2.000
34.0	34.000	10.144	-1.211
40.001	37.100	11.100	-0.279
50.029	32.400	12.000	0.000
50.349	21.440	12.800	0.000
50.846	4.500	13.500	0.000
100.710	49.500	14.200	0.000
100.740	95.500	14.800	0.000
140.832	50.000	15.300	0.000
200.979	26.470	15.700	0.000
250.920	50.400	16.000	0.000
300.866	47.470	16.200	0.000
350.819	40.000	16.300	0.000
400.771	32.100	16.300	0.000
450.728	23.470	16.200	0.000
500.681	15.100	16.000	0.000
550.600	0.000	15.700	0.000

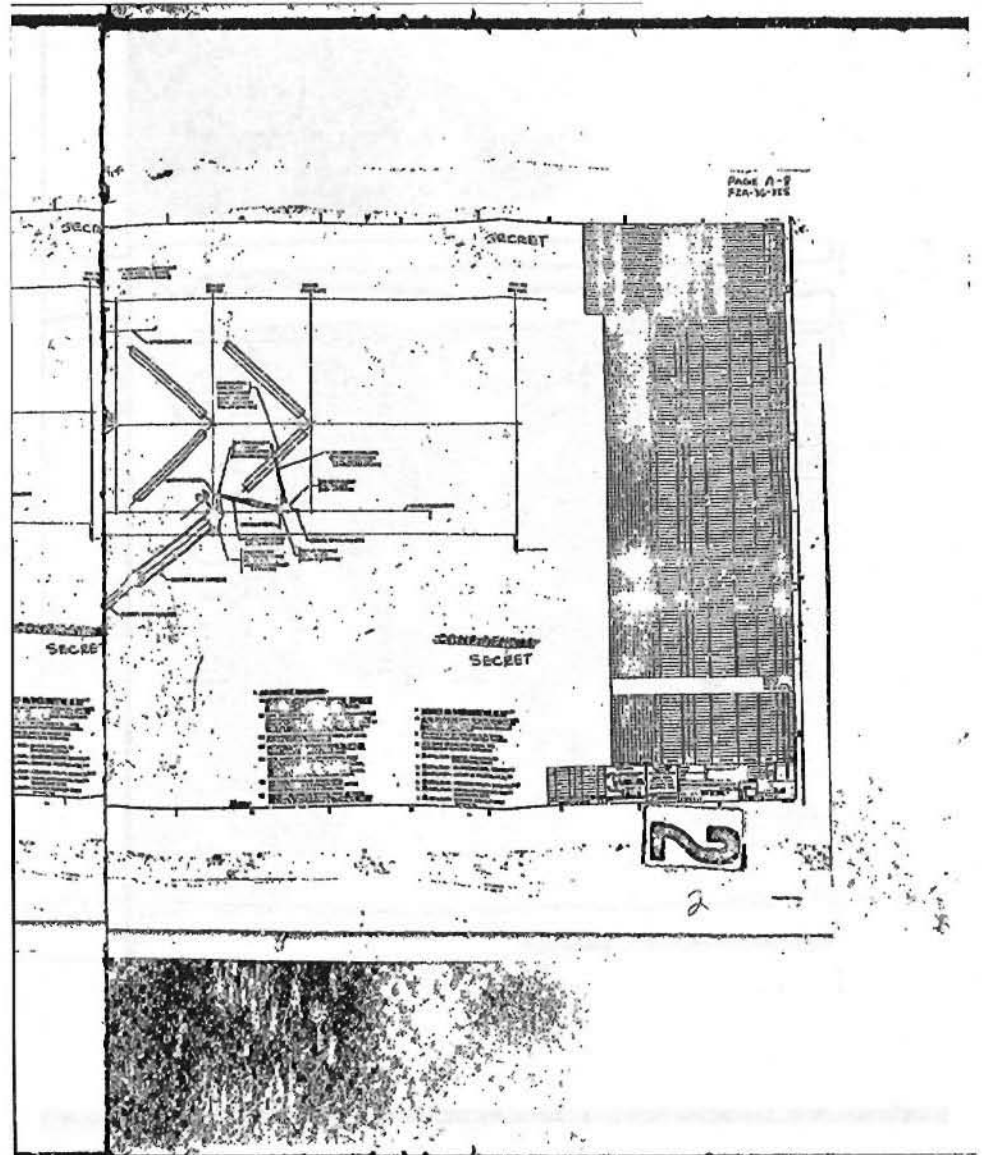
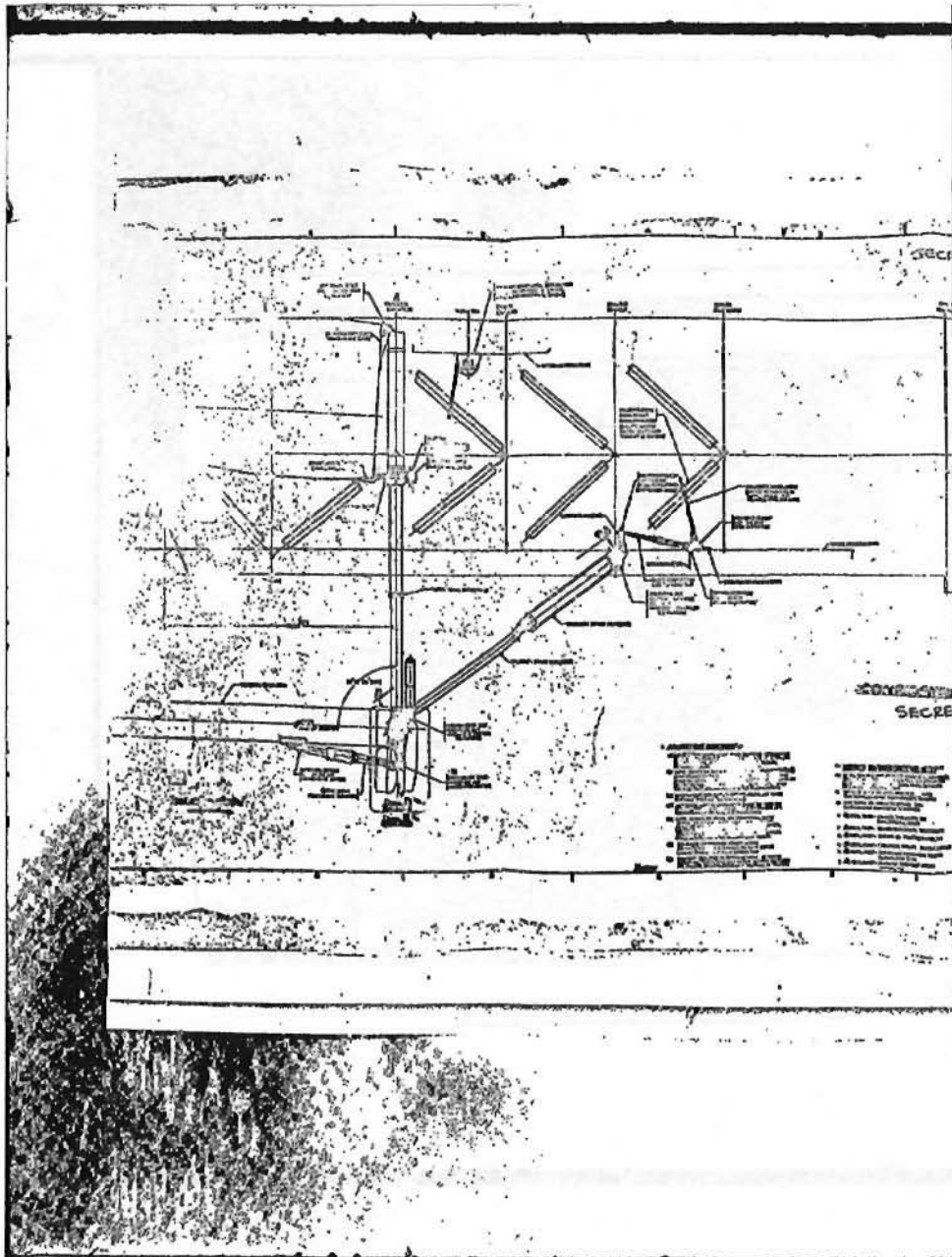
**Convair**

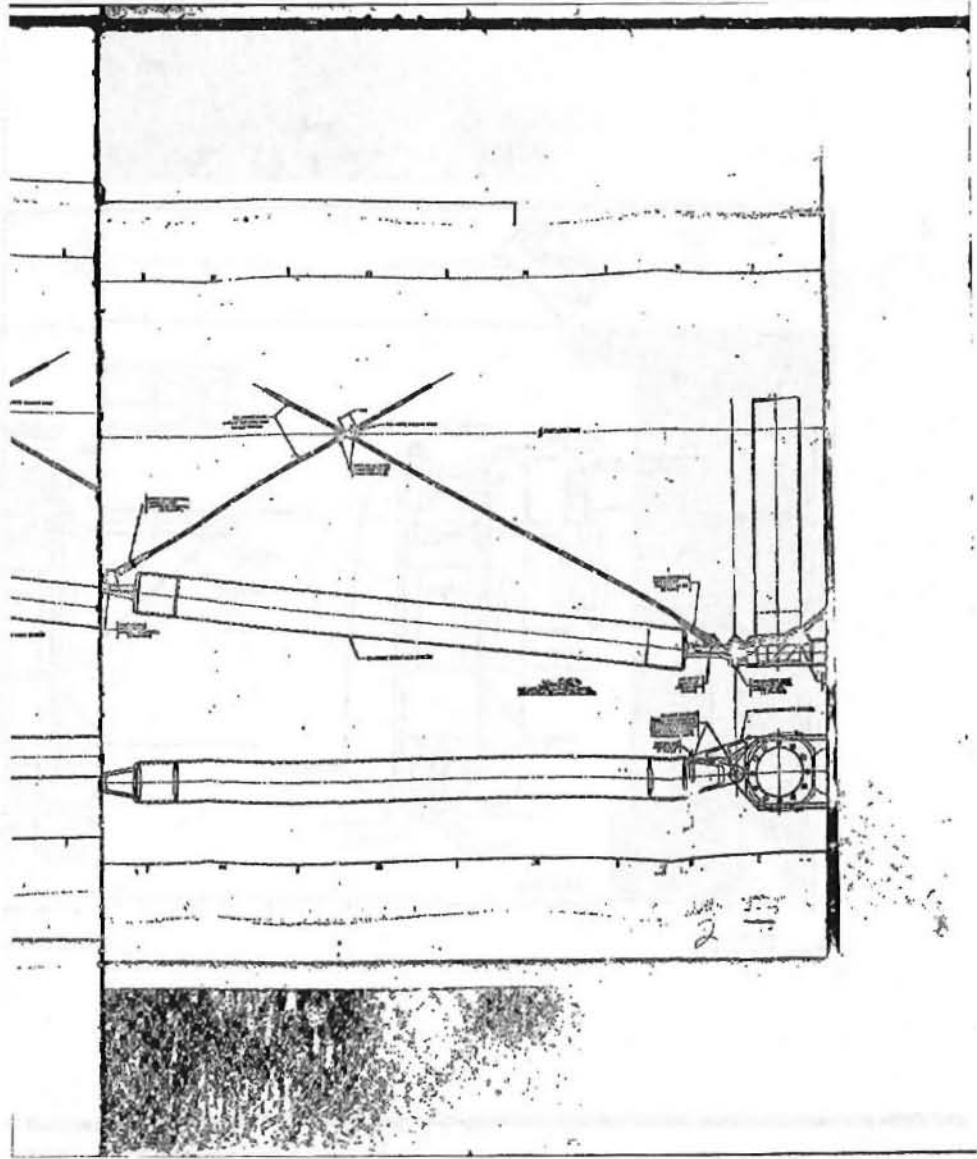
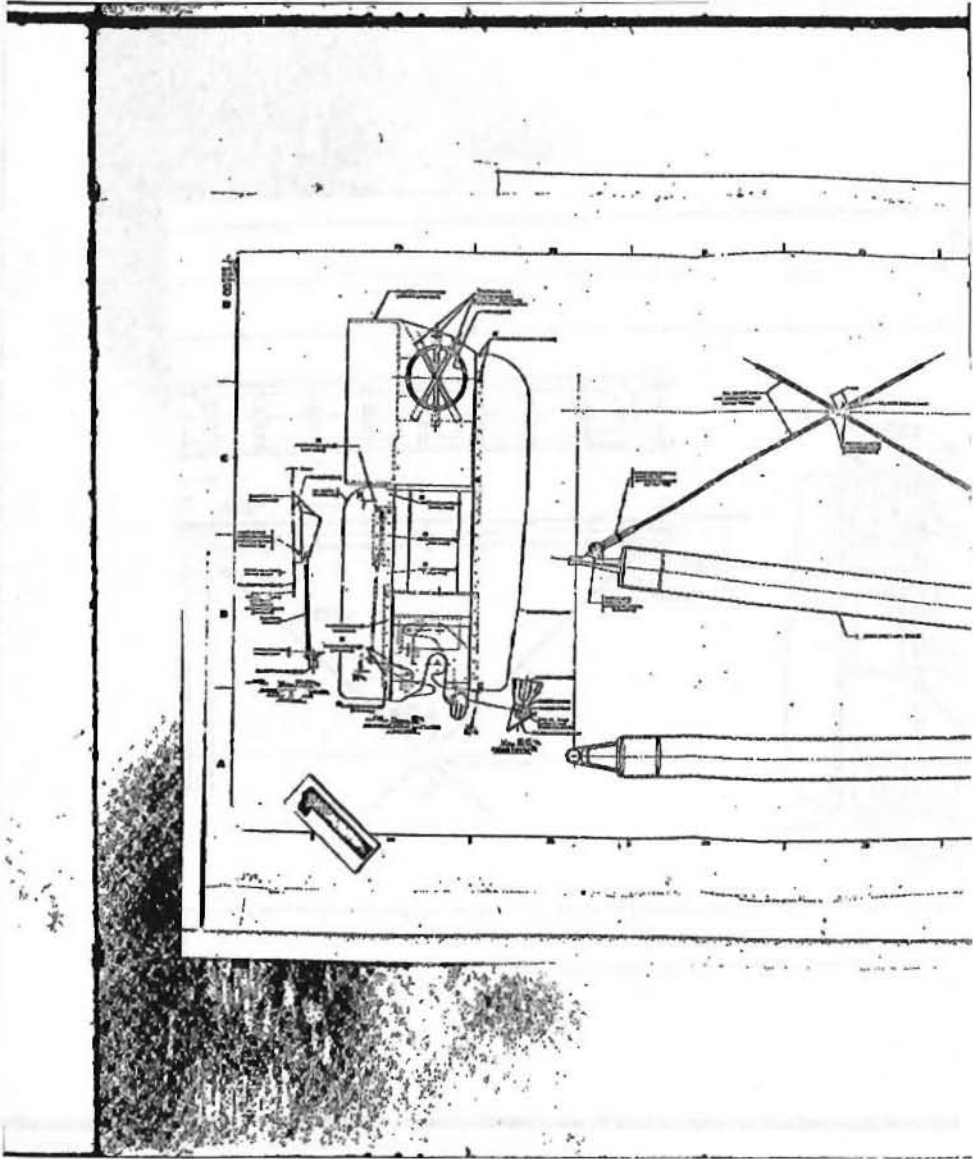
LAYOUT LOWER

**LAYOUT-WING ORDINATES AND LOWER SURFACE CLEARANCE**

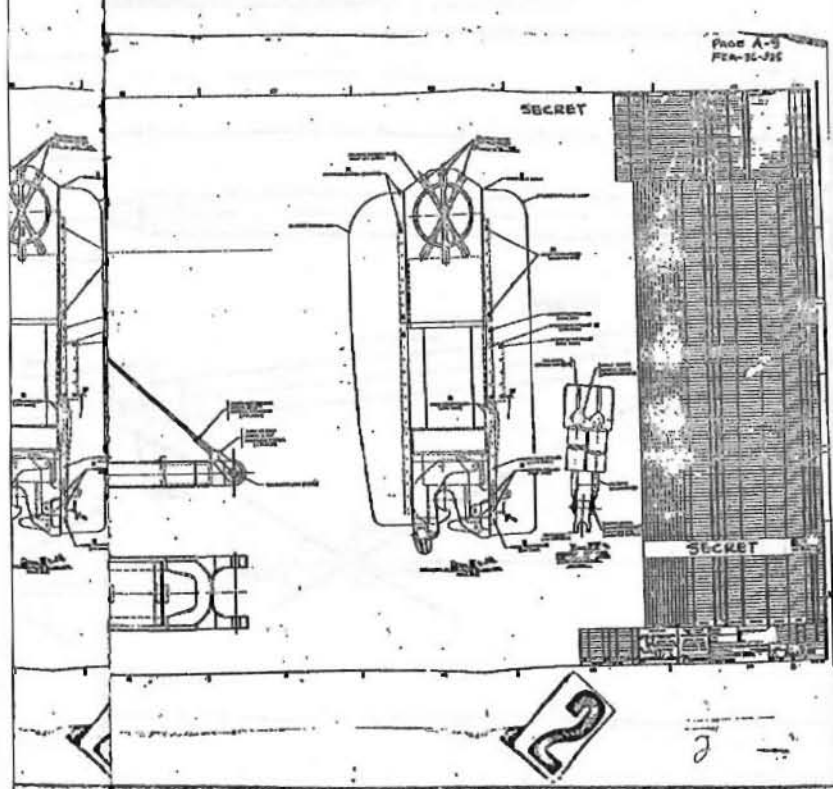
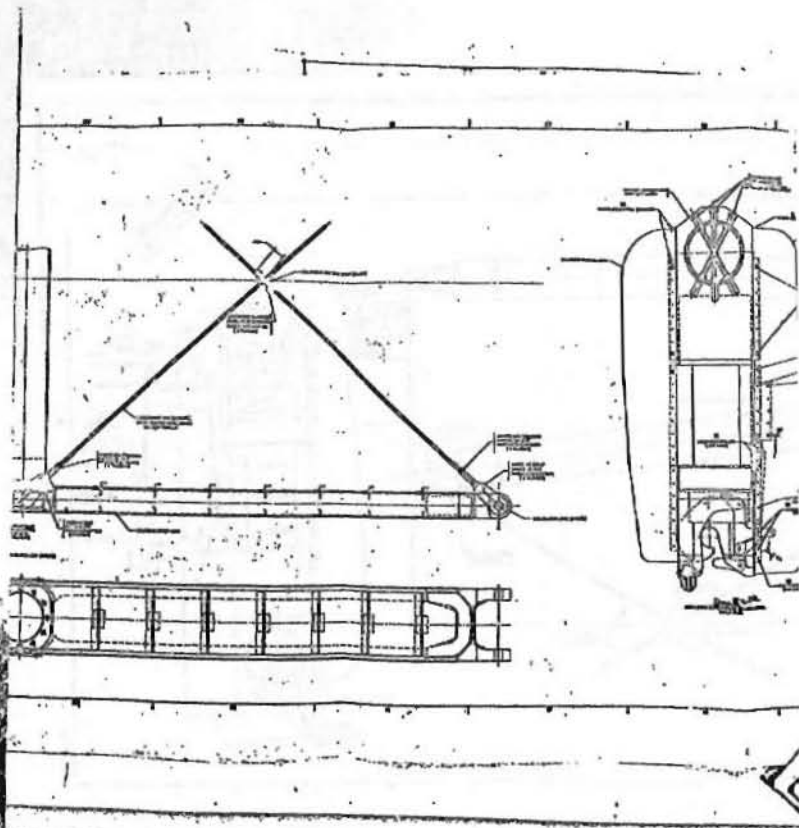
FW-5410002



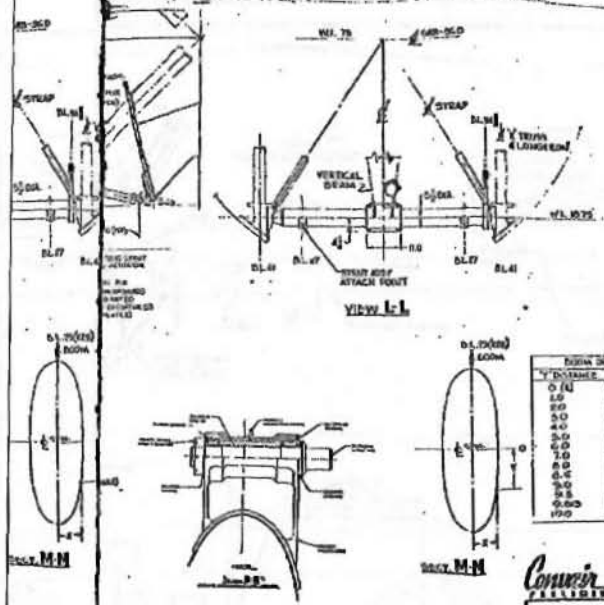
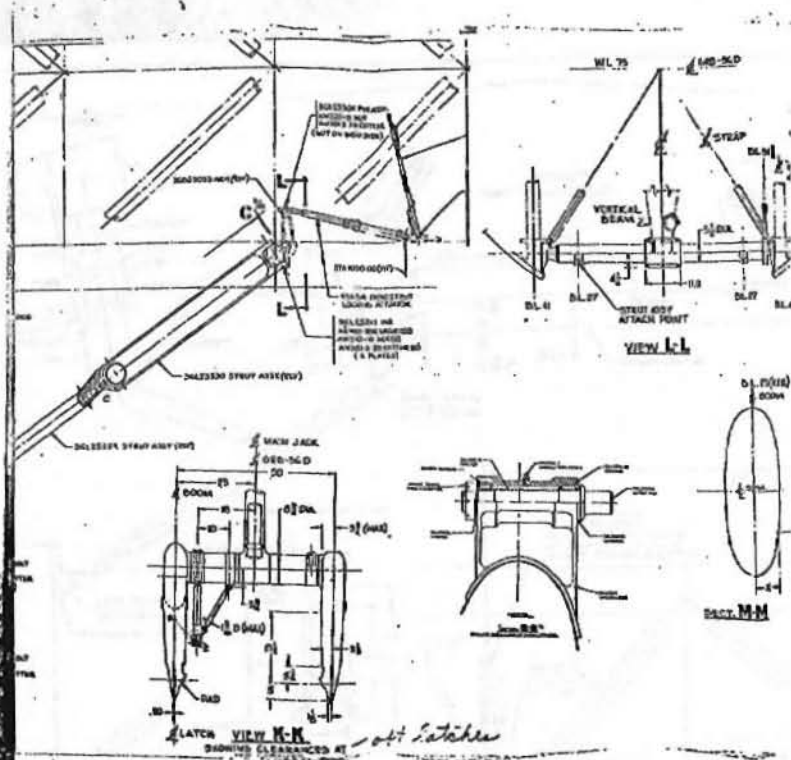












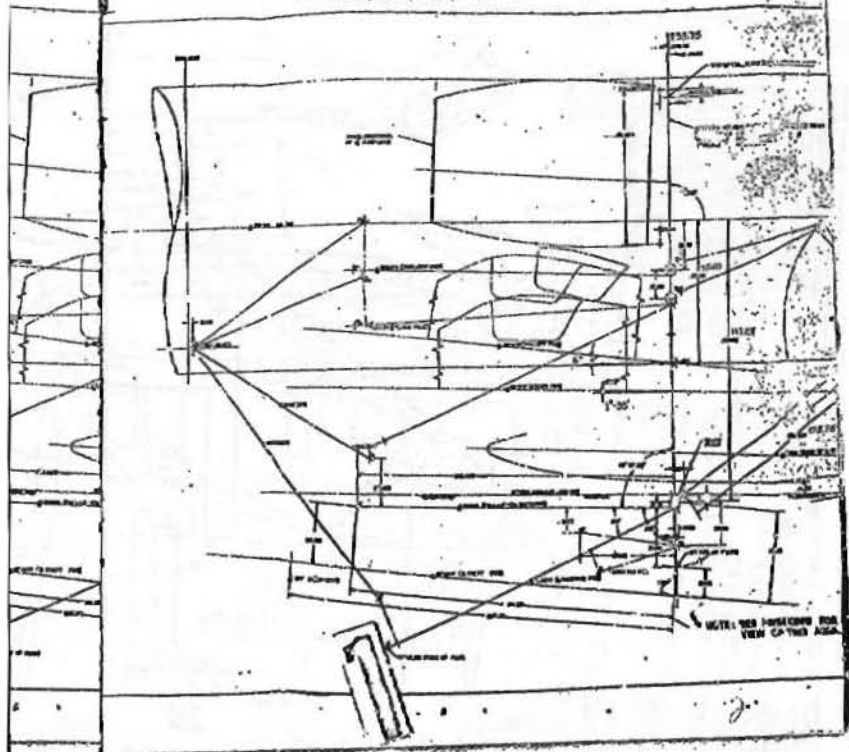
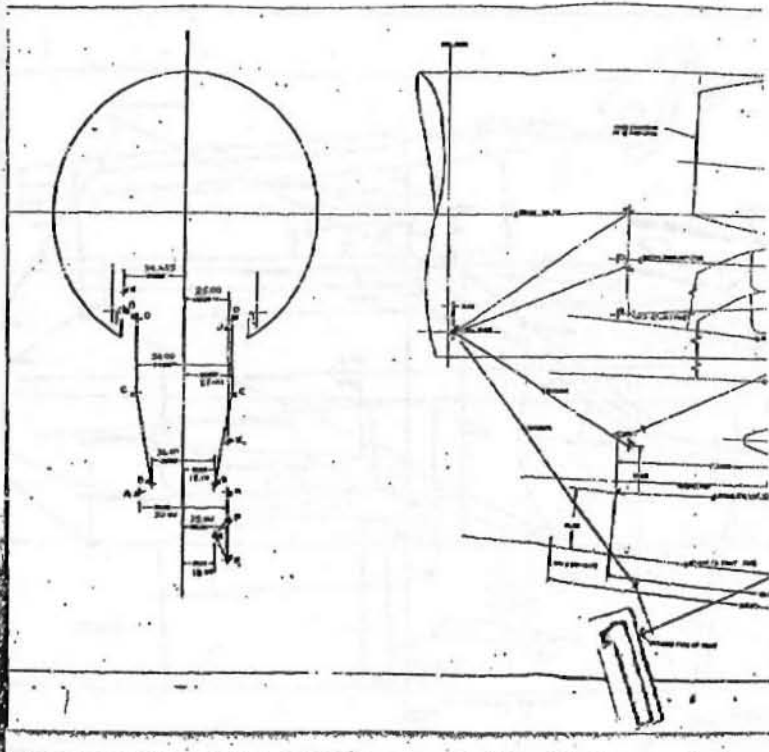
Page A-10  
PDA 36-216

BOOM DIMENSIONS	
BOOM DIAMETER	BOOM LENGTH
0 (N)	4.000
1.0	4.000
2.0	4.000
3.0	4.000
4.0	4.000
5.0	4.000
6.0	4.000
7.0	4.000
8.0	4.000
9.0	4.000
10.0	4.000
11.0	4.000
12.0	4.000
13.0	4.000
14.0	4.000
15.0	4.000
16.0	4.000
17.0	4.000
18.0	4.000
19.0	4.000
20.0	4.000

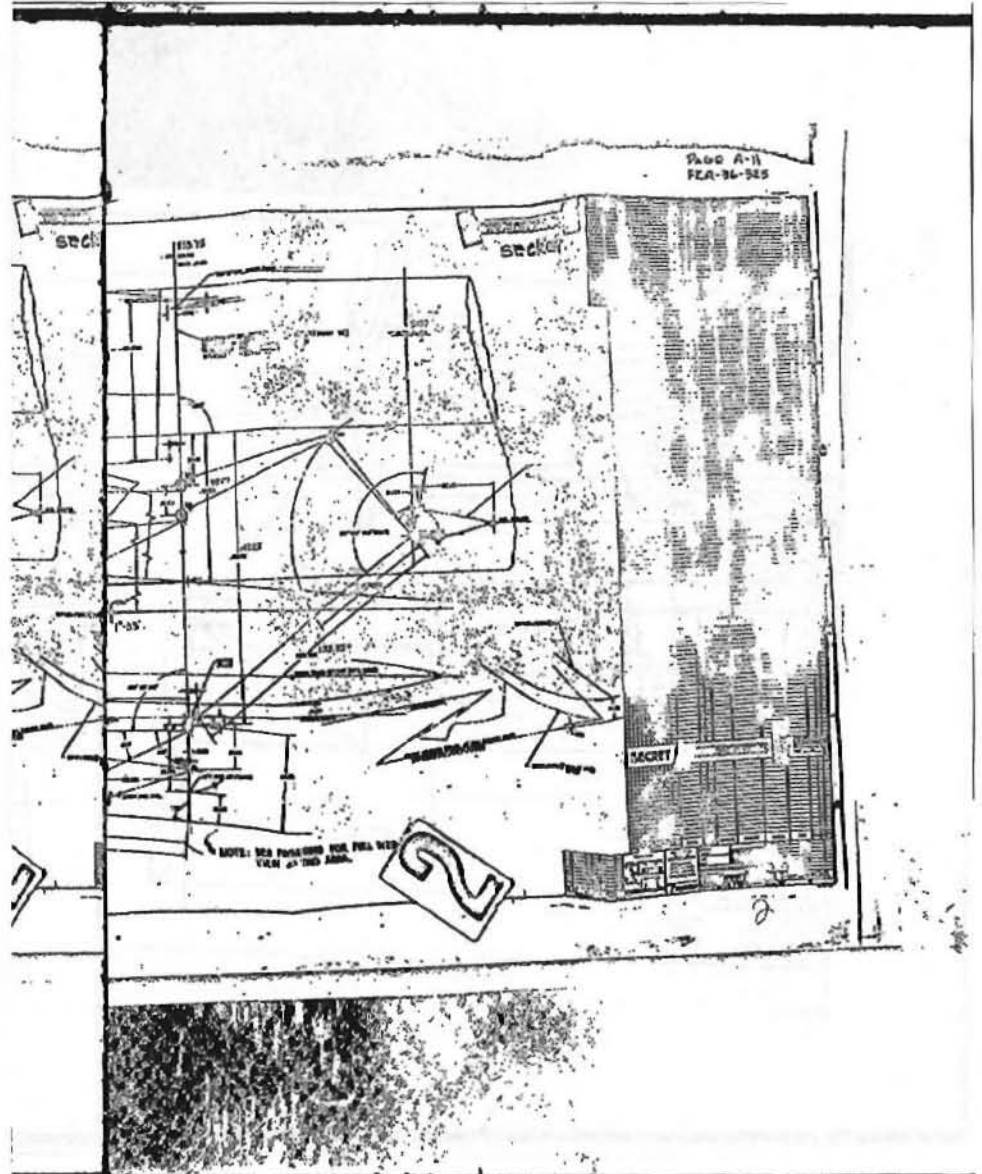
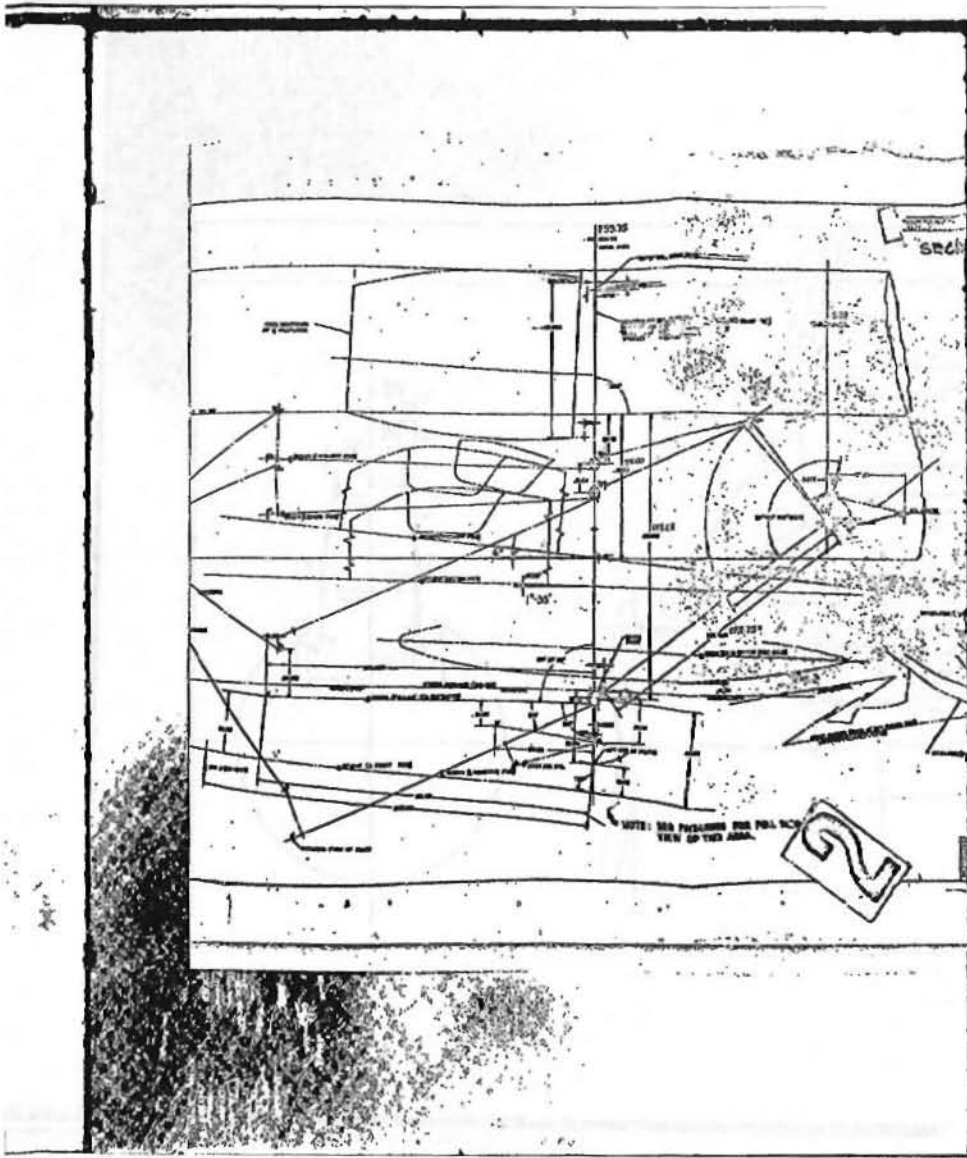
2

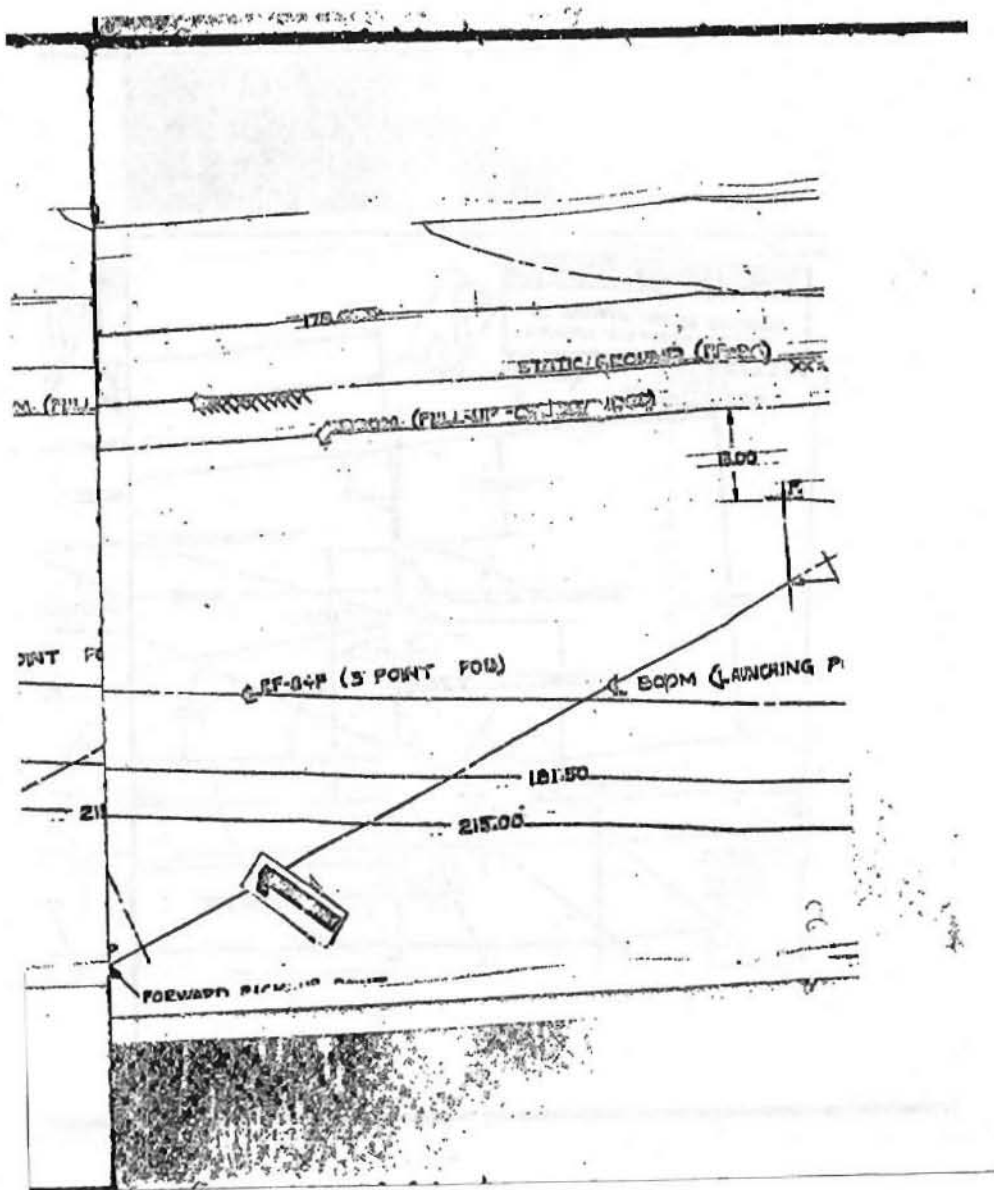
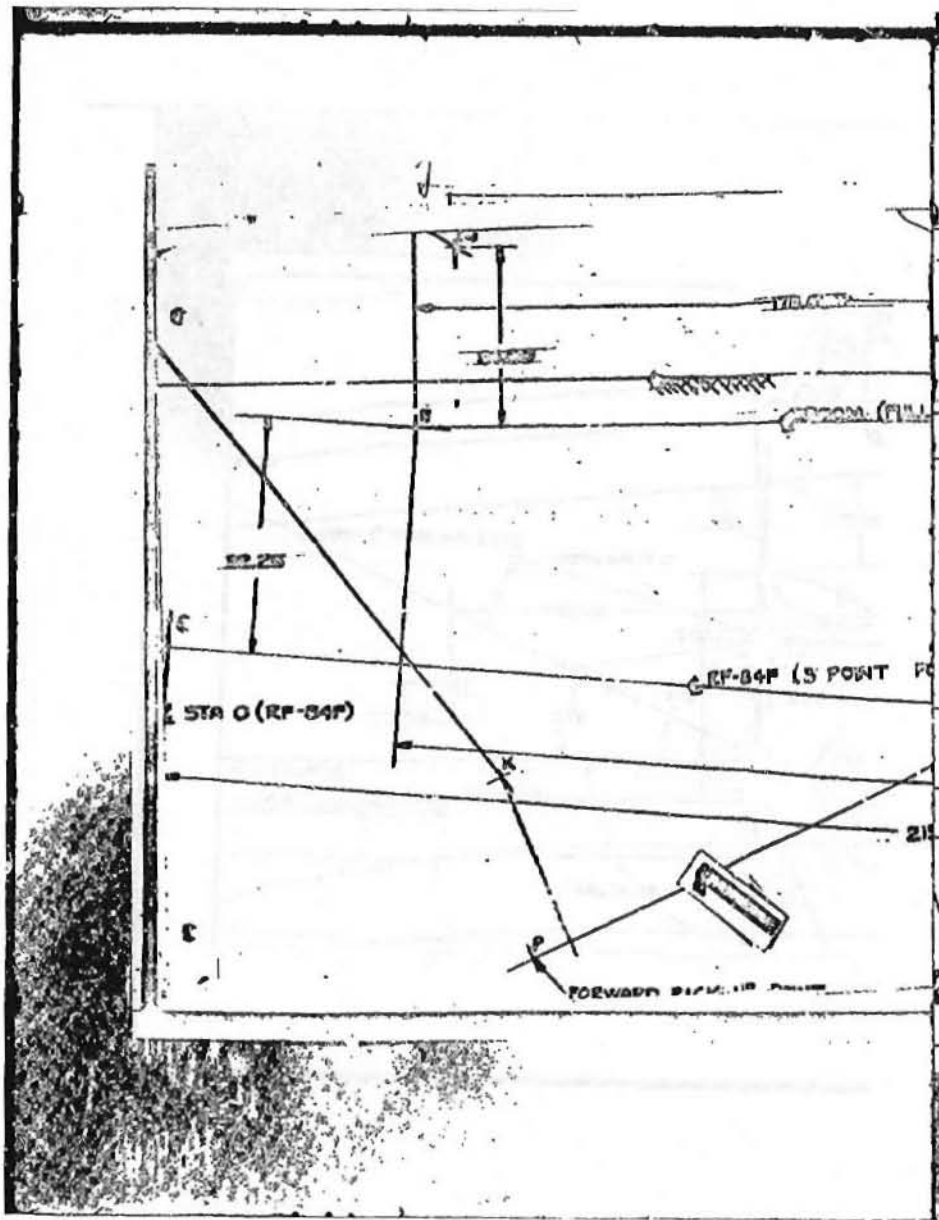
CONFIDENTIAL  
 LAYOUT-CLEARANCE DIMENSIONS  
 FOR TRAPEZOID & PARASITE  
 FW5410003

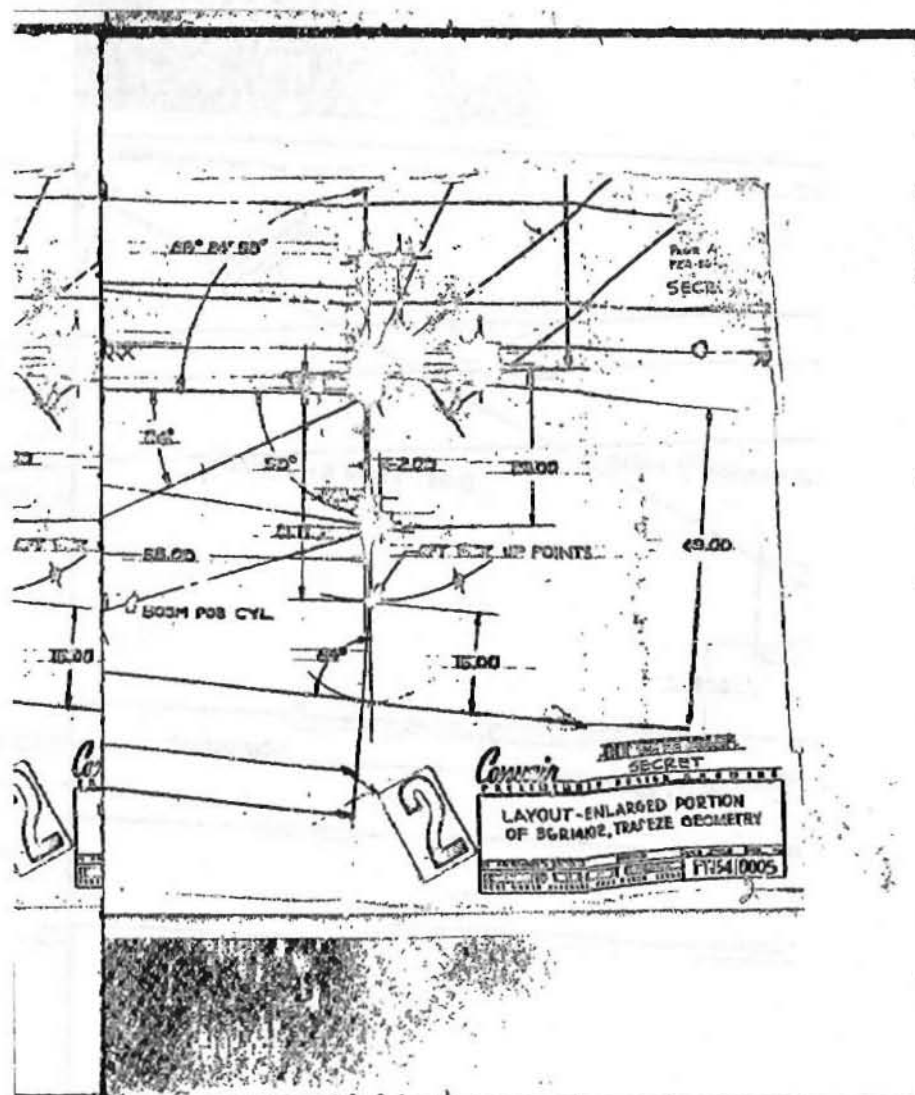
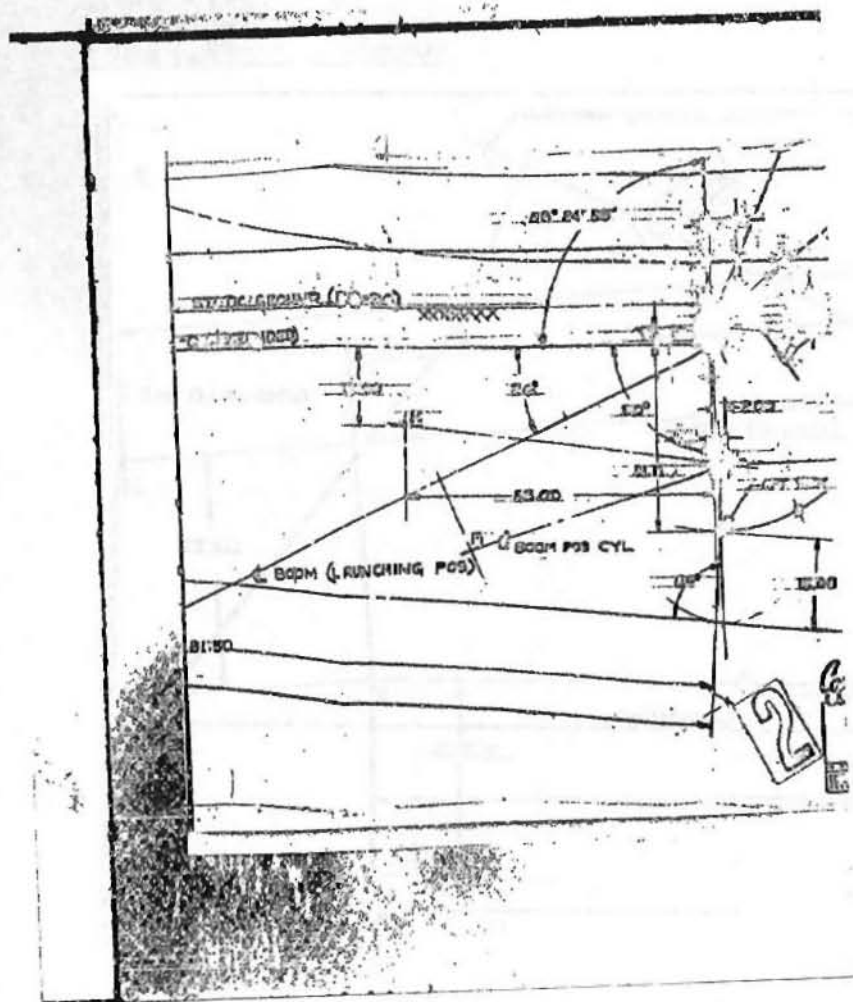
at Latches









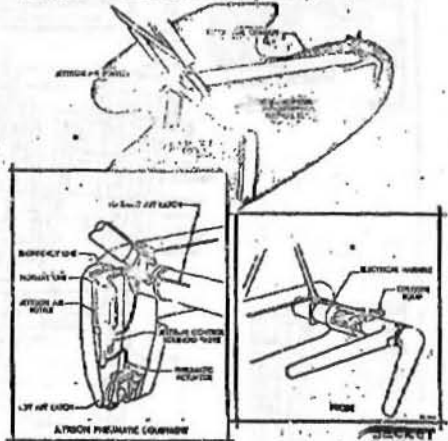


UNCLASSIFIED

Form A-13  
FZA-13-125

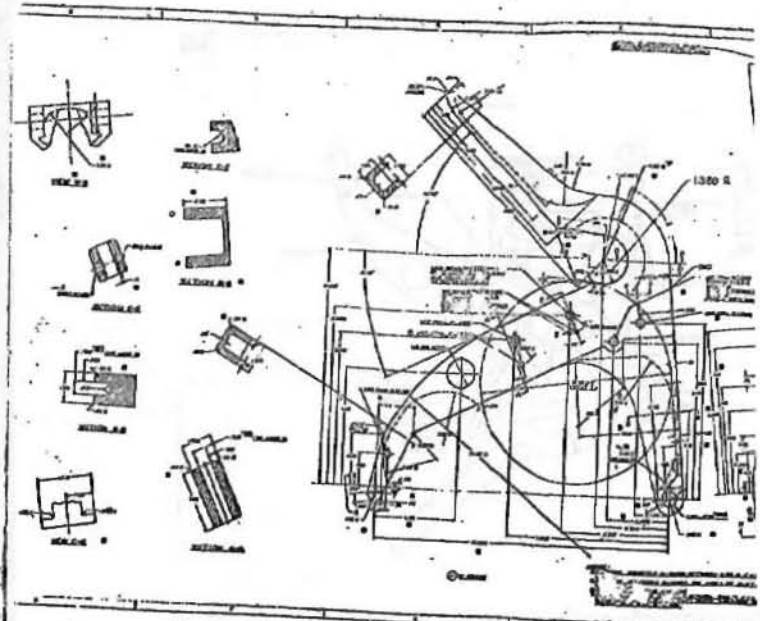
SECRET

### Conner's Parachute Jettison System



SECRET  
CONFIDENTIAL  
PLATE 3

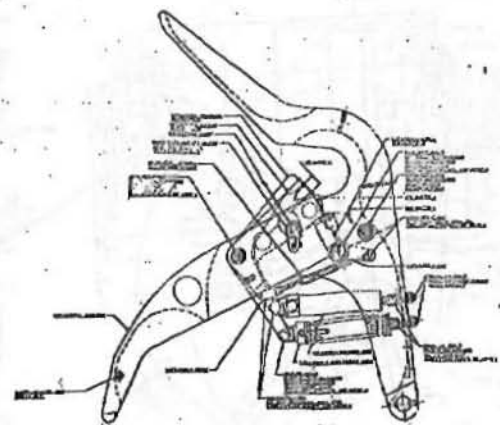
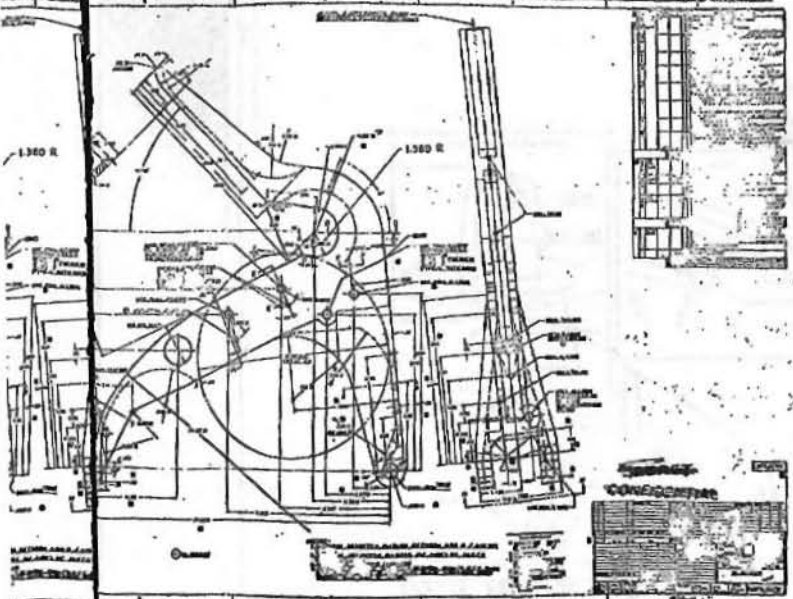
UNCLASSIFIED





UNCLASSIFIED

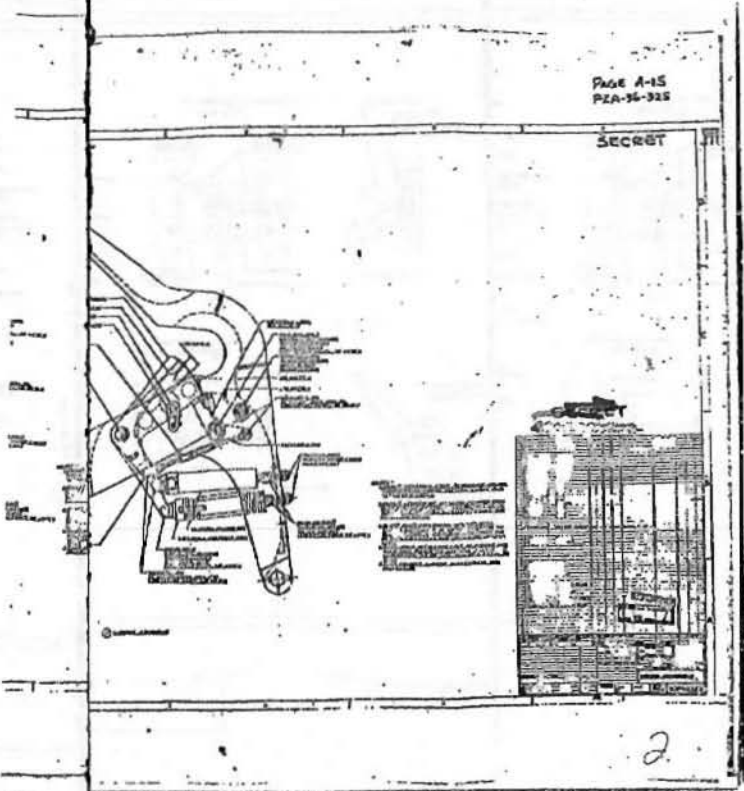
PAGE A-14  
F24-26-215  
SECRET



UNCLASSIFIED

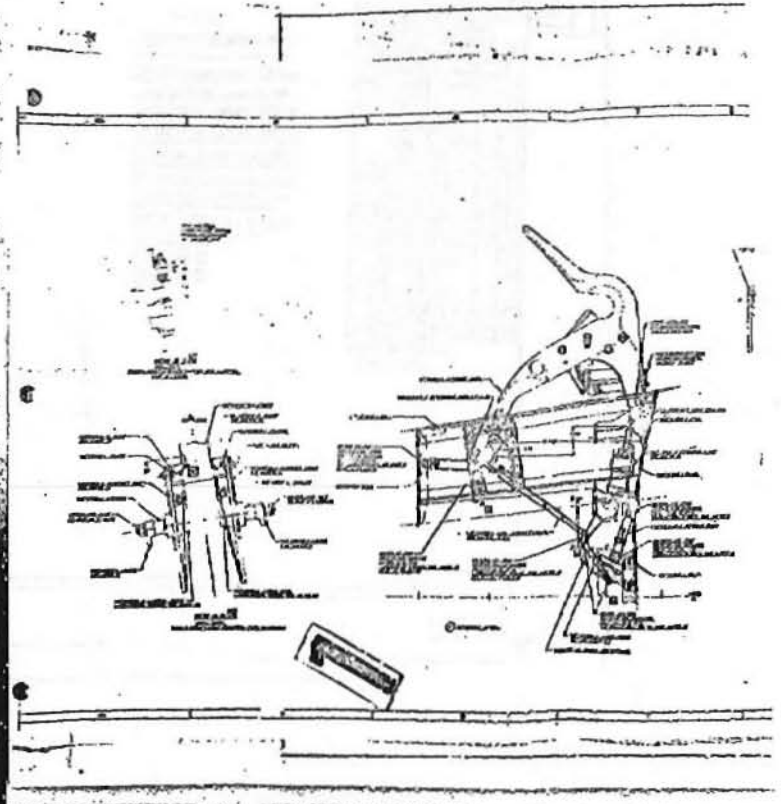
PAGE A-15  
PZA-96-325

SECRET

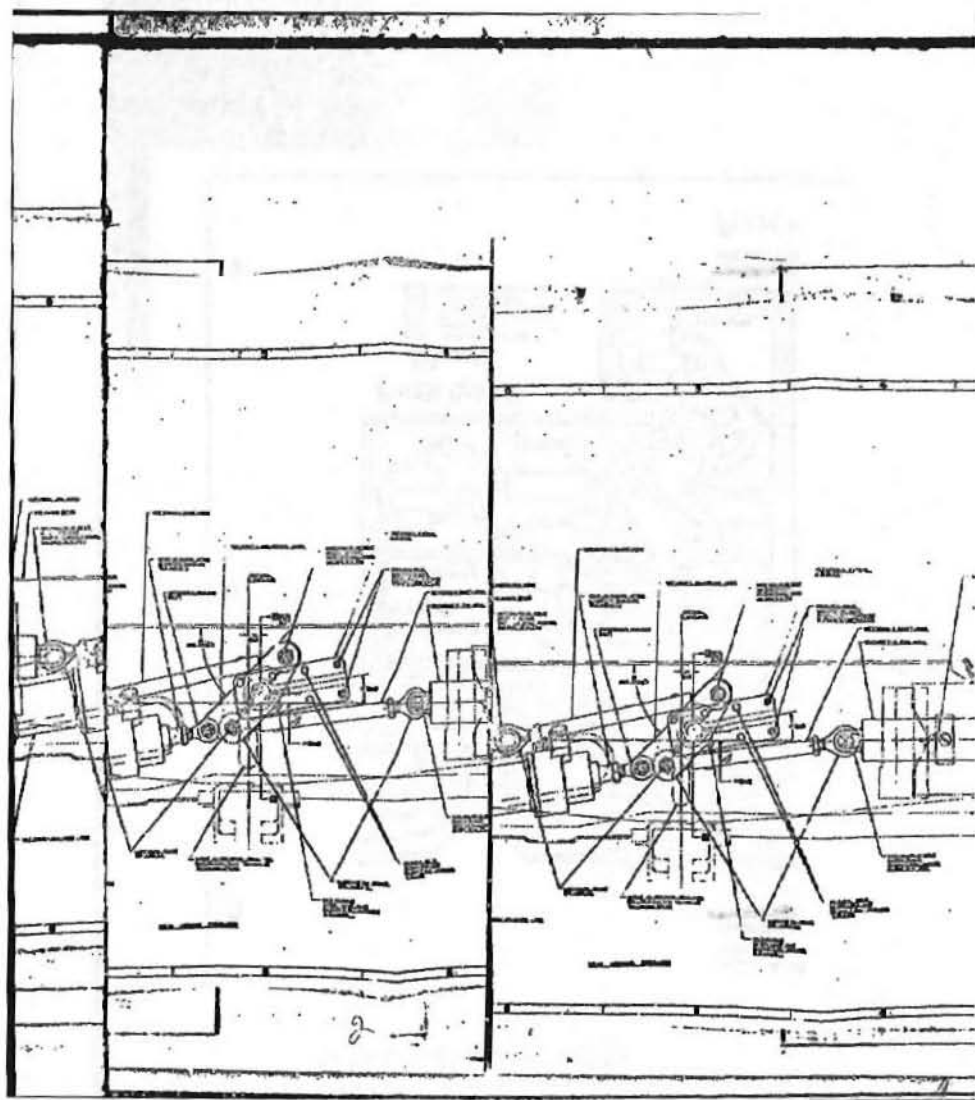
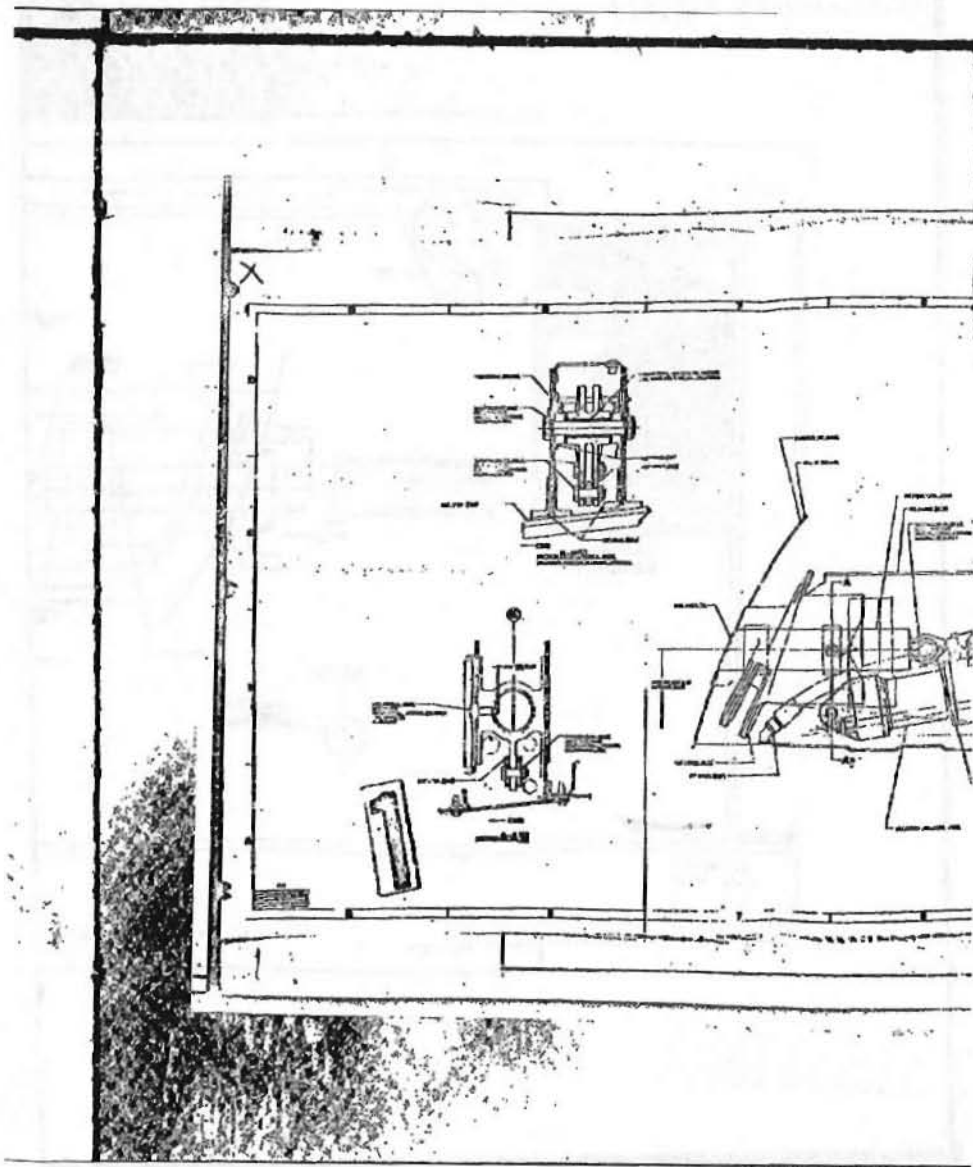


2

UNCLASSIFIED









UNCLASSIFIED

PAGE A-11  
FZA-3L-325

SECRET

WT-37

2

UNCLASSIFIED

UNCLASSIFIED

PAGE A-12  
FZA-3L-325

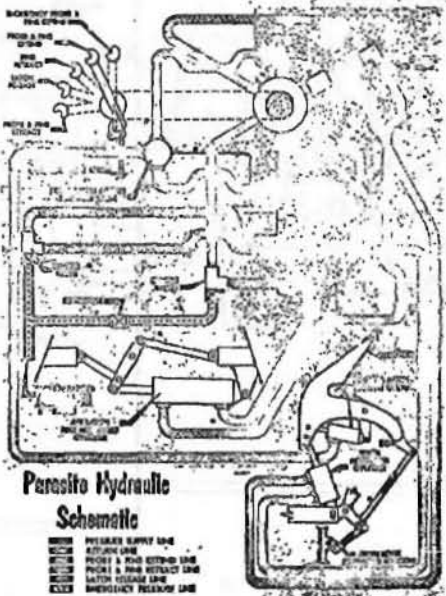


PLATE 4



UNCLASSIFIED

UNCLASSIFIED

Page A-20  
FEA-56-018

**Fittings**  
(cont)

- ITEM 10  
2000 1/2" BORE FLANGE, 20000  
PSI, 1500 LB. WEIGHT
- ITEM 11  
2000 1/2" BORE 2" I.D. 1/2" O.D.  
FLANGE 2" BORE 20000  
PSI
- ITEM 12  
2000 1/2" BORE 2" I.D. 1/2" O.D.  
FLANGE 2" BORE 20000  
PSI
- ITEM 13  
2000 1/2" BORE 2" I.D. 1/2" O.D.  
FLANGE 2" BORE 20000  
PSI

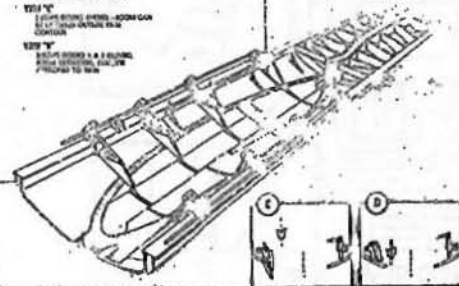


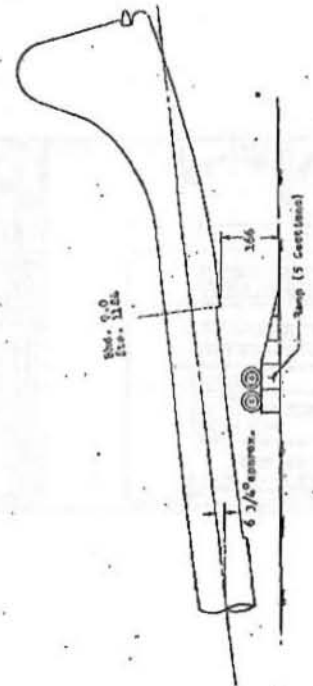
PLATE 6

2

UNCLASSIFIED

PREPARED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 REVISED BY: \_\_\_\_\_

PORT WORTH SERVICE  
 PORT WORTH TEXAS 6-1  
 MODEL: \_\_\_\_\_  
 DATE: \_\_\_\_\_



2-20 20000 PSI FITTING

PLATE 7

UNCLASSIFIED

---

## **DISCLAIMER NOTICE**

**THIS DOCUMENT IS BEST QUALITY  
PRACTICABLE. THE COPY FURNISHED  
TO DTIC CONTAINED A SIGNIFICANT  
NUMBER OF PAGES WHICH DO NOT  
REPRODUCE LEGIBLY.**

/



STUŽBOVNICE TERENÁ  
MUSÍTE SE BEŽNĚ VYKLIČIT DO POU  
TO DNE ČINĚTE VYKLIČENÍ  
VYKLIČENÍ AŽ DO ČASU PŘEKONÁNÍ  
AŽ DO ČASU, AŽ DO ČASU

DISCUSSIONS