

WEIGHT AND BALANCE
MANUAL

WEIGHT & BALANCE MANUAL

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PREFACE

This manual has been prepared to assist those persons responsible for proper load and fuel planning, actual loading of aircraft, cargo tiedown, and preparation of the weight & balance manifest for Cargo C-47 aircraft. It also contains the weighing records of Company operated Cargo C-47 aircraft. It is divided into three chapters and indexed for easy reference. To ensure maximum effectiveness, the manual will be revised from time to time. Manual holders must ensure that all revisions are entered in the manual as soon as revised and that appropriate notation is made in the Log of Revisions.

The three chapters are:

1. GENERAL
2. BASIC DATA
3. INSTRUCTIONS

NOTE: THE CARGO C-47 WEIGHT & BALANCE
MANUAL IS A SUPPLEMENT OF THE
C-47 AIRCRAFT FLIGHT MANUAL.

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* Refer to same subject under PART A

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LOG OF REVISION

(Refer to REVISION SUMMARY
RECORD of this Flight Manual)

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WEIGHT & BALANCE MANUAL - DISTRIBUTION LIST

(Since the Cargo C-47 Weight & Balance Manual is an integral supplement of the C-47 Flight Manual, the distribution of the Cargo C-47 Weight & Balance Manual will be according to the distribution list of the C-47 Flight Manual.)

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TERMS AND DEFINITIONS

Terms and definitions listed below are extracted from the GLOSSARY OF STANDARD WEIGHT TERMINOLOGY FOR COMMERCIAL AIRCRAFT (developed by the American Society of Aeronautical Weight Engineers and approved by the IATA Technical Committee as Engineering Guidance Material for distribution to IATA Member Airlines. - Revised September 1964).

1. Actual Zero Fuel Weight (AZFW)

The "Actual Zero Fuel Weight" of an aircraft is the "Operational Empty Weight" plus "Payload". It must never exceed the "Maximum Design Zero Fuel Weight".

2. Basic Empty Weight (BEW)

"Basic Empty Weight" is the "Delivery Empty Weight" plus or minus the net weight of "Standard Item Variations".

3. Delivery Empty Weight (DEW)

"Delivery Empty Weight" is the "Manufacturer's Empty Weight" plus the "Standard Items".

4. Drainable Unusable Fuel

"Drainable Unusable Fuel" is the "Unusable Fuel" minus that portion of the "Trapped Fuel" which is unusable.

5. Estimated Normal Payload (ENP)

The "Estimated Normal Payload" of an aircraft is a specific payload selected by an operator for statistical and other related purposes and consists of the total weight of passengers, according to the seating configuration and at the passenger unit weights allowable, and/or the overall placarded cargo and baggage compartment weight capacities at densities experienced by that operator. It must never exceed the "Maximum Payload" or the "Weight Limited Payload".

6. Fleet Empty Weight (FEW)

"Fleet Empty Weight" is an average "Basic Empty Weight" which may be used for a fleet or group of aircraft of the same model and configuration. The weight of any fleet member cannot vary more than the tolerance established by the applicable governmental regulations.

7. Guaranteed Weight

"Guaranteed Weight" must be a clearly defined weight which the manufacturer guarantees to meet subject to certain tolerances and adjustments. The weight and tolerances are derived through mutual agreement of the manufacturer and the customer.

Note: This term is not regularly used by the Company.

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8. Manufacturer's Empty Weight (MEW)

The "Manufacturer's Empty Weight" is the weight of the structure, power-plant, furnishings, systems and other items of equipment that are considered an integral part of a particular aircraft configuration. It is essentially a "dry" weight, including only those fluids which are contained in a closed system (such as hydraulic fluid).

9. Maximum Design Flight Weight (MFW)

"Maximum Design Flight Weight" is the maximum weight for flight as limited by aircraft strength and other airworthiness requirements. "Flaps up" condition will be inferred unless otherwise stated.

Note: This term is not regularly used by the Company.

10. Maximum Design Fuel Transfer Weight (MFTW)

"Maximum Design Fuel Transfer Weight" is the maximum weight for initiating fuel transfer between any tanks which, if performed at a greater weight, will cause a critical structural condition.

Note: This term is not regularly used by the Company.

11. Maximum Design Landing Weight (MLW)

The "Maximum Design Landing Weight" is the maximum landing weight at which the aircraft will not exceed governmental or other structural limitations.

12. Maximum Design Take-Off Weight (MTOW)

The "Maximum Design Take-off Weight" of an aircraft is the maximum weight authorized by applicable governmental regulations for the take-off condition of a dispatch loaded aircraft and it excludes the weight of taxi and run-up fuel. This is the maximum aircraft weight at brake release or start of take-off run.

Note: The following is a Company term and definition:

Maximum Take-Off Weight This Flight

The "Maximum Take-Off Weight This Flight" of an aircraft is the maximum weight authorized for the take-off condition of a dispatch loaded aircraft when the limitations (if applicable) imposed by the:

- a. Operational Take-Off Weight
- b. Maximum Design Landing Weight

have been computed for the particular flight. The over-riding limitation shall apply. The Maximum Take-Off Weight This Flight must never exceed the Maximum Design Take-Off Weight.

13. Maximum Design Taxi Weight (MTW)

"Maximum Design Taxi Weight" is the maximum weight allowed for ground manoeu-

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ver per applicable governmental regulations. This weight includes the weight of taxi and run-up fuel.

14. Maximum Design Zero Fuel Weight (MZFW)

The "Maximum Design Zero Fuel Weight" is the maximum weight of an aircraft less the weight of all usable fuel and other consumable propulsive agents in particular sections of the aircraft that are limited structurally by this condition. This is a weight at which the subsequent addition of fuel and other consumable propulsive agents (as limited by other design gross weights) will not exceed the aircraft design strength. When restrictions and variations of this weight are specified, proper provisions for loading and usage of consumable propulsive agents are made by the operator so that governmental or other structural limitations are not exceeded.

15. Maximum Payload

"Maximum Payload" is determined by subtracting the appropriate "Operational Empty Weight" from the "Maximum Design Zero Fuel Weight".

Note: The following are Company terms and definitions:

a. Maximum Structural Payload

The "Maximum Structural Payload" is determined by subtracting the appropriate "Operational Empty Weight" from the "Maximum Design Zero Fuel Weight".

b. Maximum Operational Payload

The "Maximum Operational Payload" is determined by subtracting the appropriate "Operational Empty Weight" and take-off fuel from the "Maximum Take-Off Weight This Flight".

c. Maximum Payload This Flight

The "Maximum Payload This Flight" is the "Maximum Structural Payload" or the "Maximum Operational Payload" whichever is less.

16. Operational Empty Weight (OEW)

"Operational Empty Weight" is the "Basic Empty Weight" or "Fleet Empty Weight" plus the "Operational Items".

17. Operational Items

"Operational Items are those items of personnel, equipment, and supplies that are necessary on a particular operation unless already included in the "Basic Empty Weight". These items may vary for a particular aircraft configuration according to the operator's allowances for the service intended. These items include:

- (a) Manuals, navigational equipment, cockpit crew, and their baggage
- (b) Cabin crew and their baggage

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- (c) Removable cabin, meal, and liquor service equipment
- (d) Food and beverage, including liquor
- (e) Usable fluids other than those designated as useful load
- (f) Emergency equipment
- (g) Cargo handling system, cargo containers, and/or cargo tiedown equipment if used.

18. Operational Landing Weight (OLW)

The "Operational Landing Weight" of an aircraft is the maximum weight authorized for the landing of an aircraft when this weight is subject to a varying degree of airport limitations. It must never exceed the "Maximum Design Landing Weight".

19. Operational Take-off Weight (OTOW)

The "Operational Take-off Weight" of an aircraft is the maximum weight authorized for the take-off condition of a dispatch loaded aircraft when this weight is subject to a varying degree of departure and destination airport limitations and by enroute conditions. It excludes the weight of taxi and run-up fuel, unless otherwise stipulated. This is the aircraft weight at brake release or start of take-off run. It must never exceed the "Maximum Design Take-off Weight".

20. Payload (P/L)

The "Payload" is the weight of passengers, passenger baggage and/or cargo. It consists of revenue and nonrevenue load.

Note: "Payload" also includes mail (incorporated in the cargo weight) and x-crew assigned passenger seat(s) and their baggage.

21. Space Limited Payload (SLP)

The "Space Limited Payload" is the maximum payload available for passengers, passenger baggage and/or cargo when restricted by seating and/or volumetric limitations of the cabin, cargo, and baggage compartments. It must never exceed the "Maximum Payload".

22. Standard Items

"Standard Items" are those of equipment or system fluids that are not considered an integral part of a particular aircraft configuration not included in "Manufacturer's Empty Weight" but do not vary for aircraft of the same type. These items include:

- (a) Unusable fuel, unusable oil, and unusable engine injection fluid
- (b) Unusable drinking and washing water

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- (c) Lavatory water and/or chemical
- (d) Basic emergency equipment, fire extinguishers, pyrotechnics, etc.
- (e) Buffet, bar and/or galley structure
- (f) Electronic equipment required by the operator.

23. Standard Item Variations (SIV)

"Standard Item Variations" are those items which the operators choose to add to, omit from, or change in the "Standard Items" to suit the operator's own convenience.

24. Trapped Fuel

"Trapped Fuel" is the undrainable fuel remaining when the aircraft is defueled in a specified attitude by the normal means and procedures specified for draining the tanks.

25. Unusable Fuel

"Unusable fuel" is the fuel remaining after a fuel runout test has been completed per applicable governmental regulations. It includes "Drainable Unusable Fuel" and that portion of "Trapped Fuel" which is unusable.

26. Usable Engine Injection Fluid

"Usable Engine Injection Fluid" is all engine injection fluid carried for a particular operation less unusable engine injection fluid.

27. Usable Fuel

"Usable Fuel" is all fuel carried for a particular operation less "Unusable Fuel".

28. Useful Load

"Useful Load" is the difference between the applicable "Operational Take-Off Weight" and the "Operational Empty Weight". It includes "Payload", "Usable Fuel", and other usable fluids not included in the "Operational Items".

29. Weight Limited Payload (WLP)

The "Weight Limited Payload" of an aircraft is that weight remaining after the sum of the "Operational Empty Weight" and the weight of minimum fuel required is deducted from the "Operational Take-Off Weight". "Weight Limited Payload" plus "Operational Empty Weight" must never exceed the "Maximum Design Zero Fuel Weight". "Weight Limited Payload" may also, in special cases, result from structural limitations imposed by passenger occupancy and seating configuration as these will affect the placarded cargo compartment weight capacities.

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ADDENDUM

Military terms and definitions are somewhat at variance with the IATA terms and definitions, therefore, a list of military terms and definitions and their correlation with IATA terms is reproduced below:

MILITARY TERMS AND DEFINITIONS

<u>TERM</u>	<u>DEFINITION</u>	<u>REFERENCE</u>	<u>EQUIVALENT IATA TERM</u>
1. Weight Empty	Weight Empty is the weight of the aircraft structure plus power plant, instruments, control system, communicating system, armament provisions, (including gunfire protection, and turrets), furnishings, anti-icing equipment, auxiliary power plant, anchor and towing arresting, and flotation gears.	T.O. 1-1B-50 Sec. II, Page 2-1	Manufacturer's Empty Weight (MEW)
2. Useful Load	Useful Load is the difference between Weight Empty and Gross Weight and includes fuel, oil, crew, passengers, cargo, ordnance, and other material necessarily carried.	T.O. 1-1B-50 Sec. II, Page 2-1	Useful Load
3. Basic Weight	The Basic Weight of an aircraft includes all fixed operating equipment and trapped fuel and oil to which it is only necessary to add the variable or expendable load items for the various missions.	T.O. 1-1B-40 Sec. II, Page 2-1	Basic Empty Weight (BEW)
4. Operating Weight	The Operating Weight of an aircraft is the Basic Weight plus those variable items which remain substantially constant for the type missions. These items include oil, crew, crew's baggage, steward's equipment, emergency and extra equipment that may be required.	T.O. 1-1B-40 Sec. II, Page 2-1	Operational Empty Weight (OEW)

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<u>TERM</u>	<u>DEFINITION</u>	<u>REFERENCE</u>	<u>EQUIVALENT IATA TERM</u>
5. Gross Weight	The Gross Weight is the total weight of an aircraft and its contents.	T.O. 1-1B-40 Sec. II, Page 2-2	- -
6. Take-Off Gross Weight	The Take-off Gross Weight is the Operating Weight plus the variable and expendable load items which vary with the mission. These items include fuel, water injection fluid, JATO or RATO, cargo, passengers, ammunition, bombs, rockets, and external auxiliary fuel tanks if to be disposed of during flight.	T.O. 1-1B-40 Sec. II, Page 2-2	Operational Take-off Weight (OTOW)
7. Landing Gross Weight	The Landing Gross Weight is the Take-off Gross Weight minus the expended load items.	T.O. 1-1B-40 Sec. II, Page 2-2	Operational Landing Weight (OLW)

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BASIC EMPTY WEIGHT - STANDARD ITEMS

"Standard Items" are those of equipment or system fluids that are not considered an integral part of a particular aircraft configuration not included in "Manufacturer's Empty Weight" but do not vary for aircraft of the same type. These items include:

- (a) Unusable fuel, unusable oil and unusable engine injection fluid
- (b) Unusable drinking and washing water
- (c) Lavatory water and/or chemical
- (d) Basic emergency equipment, fire extinguishers, pyrotechnics, etc.
- (e) Buffet, bar and/or galley structure
- (f) Electronic equipment required by the operator

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MAXIMUM TAKE-OFF WEIGHT THIS FLIGHT COMPUTATIONS

A. Definition

The "Maximum Take-off Weight This Flight" of an aircraft is the maximum weight authorized for the take-off condition of a dispatch loaded aircraft when the limitations (if applicable) imposed by the:

- a. Operational Take-off Weight
- b. Maximum Design Landing Weight

have been computed for the particular flight. The over-riding limitation shall apply. The "Maximum Take-off Weight This Flight" must never exceed the "Maximum Design Take-off Weight".

B. Computations

1. Operational Take-off Weight Limitation

a. Operational Take-off Weight

The "Operational Take-off Weight" of an aircraft is the maximum weight authorized for the take-off condition of a dispatch loaded aircraft when this weight is subject to a varying degree of departure and destination airport limitations and by enroute conditions. It excludes the weight of taxi and run-up fuel, unless otherwise stipulated. This is the aircraft weight at brake release or start of take-off run. It must never exceed the "Maximum Design Take-off Weight".

b. Operational Landing Weight

The "Operational Landing Weight" of an aircraft is the maximum weight authorized for the landing of an aircraft when this weight is subject to a varying degree of airport limitations. It must never exceed the "Maximum Design Landing Weight".

After the Estimated Fuel Consumed Enroute weight has been established, apply the formula:

$$\text{Operational Landing Weight} + \text{Estimated Fuel Consumed Enroute} = \text{Maximum Take-off Weight This Flight (OLW limitation)}$$

c. Operational Take-off Weight and Operational Landing Weight Limitations

- i. Effective Runway Length/Heading
- ii. Runway Gradient
- iii. Wind Direction/Velocity
- iv. Field Elevation/Temperature
- v. Other Limitations/Conditions, e.g.,

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- (a) Terrain in proximity of field and enroute
- (b) Runway conditions, i.e., waterlogged, soft, poor brake action, etc.
- (c) Obstruction off end of runway, i.e., floating crane, etc.
- (d) Etc.

d. Operational Limitations Computations

Refer to aircraft Operations Manuals (and handbooks) for graphs, tables and associated data for computation of operational limitations.

2. Maximum Design Landing Weight Limitation

After the Estimated Fuel Consumed Enroute weight has been established, apply the formula:

$$\text{Maximum Design Landing Weight} + \text{Estimated Fuel Consumed Enroute} = \text{Maximum Take-off Weight This Flight (MLW limitation)}$$

C. Procedures

1. When the Maximum Take-off Weight This Flight is less than the Maximum Design Take-off Weight, check (✓) the over-riding limitation on the Weight & Balance Manifest.
2. If the Operational Take-off Weight Limitation is the over-riding limitation, check (✓) and fill in particulars.

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MAXIMUM PAYLOAD COMPUTATION

A. Definition

The Maximum Payload This Flight is the Maximum Structural Payload or the Maximum Operational Payload whichever is less.

B. Computation

For Cargo C-47 aircraft, the Maximum Structural Payload computation does not apply, therefore the Maximum Payload This Flight will be the Maximum Operational Payload according to the following computation:

$$\begin{array}{rcl} \text{Maximum Take-Off} & - & \text{Operational Empty Wt.} = \text{Maximum Operational} \\ \text{Wt. This Flight} & & \text{plus Flight Fuel Wt.} & \text{Payload} \end{array}$$

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WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	B-817	19256	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	To conform to SAWE terms and definitions following items deducted from the previous BEW condition and regarded as Operational Items:				
	a. Captain and First Officer		340	73	-24,820
	b. Engine Oil		405	184.6	-74,763
	c. First Aid Kit		6	85	- 510
	d. SEA Crew Equipment		60	73	- 4,380

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar 1969	18,456	241.3	4,453,214	12.2	19.8
REVISED RECORD	11 Mar 1970	17,645	246.5	4,348,741	16.0	30.7

WEIGHT ENGINEER Y. C. Le	SUP VR. WEIGHT & BALANCE Y. C. Le for	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT H. S. Lui
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WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47B	B-879	34325	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Periodical weighing				

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	21 Apr. 1970	17,791	243.3	4,328,827	13.7	24.8
REVISED RECORD	2 Jul. 1970	17,840	240.0	4,281,455	11.3	18.8

WEIGHT ENGINEER	SUPVR., WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT
G. H. Wu	H. W. Tsai		H. S. Lui

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WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	B-933	13817	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Periodic weighing				

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	2 Jun. 1970	17,455	245.8	4,289,935	15.5	29.8
REVISED RECORD	4 Aug. 1971	17,805	246.4	4,386,940	15.9	30.3

WEIGHT ENGINEER G. H. Wu	SUPVR., WEIGHT & BALANCE H. W. Tsai	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT H. S. Lui
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AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	43-15559	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Aircraft reweighed on 19 Mar. 1969 (Cargo configuration) NOTE: Data shown is based on the reestablishment of the weight and balance of cargo configuration with adjustment of cabin interior bench type troop seats installation. (Refer page 2 for detail.)				

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	17,655	243.9	4,305,400	14.1	
REVISED RECORD	19 Mar. 1969 (see note)	17,751	244.8	4,344,925	14.8	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	18,466	238.8	4,409,873	10.4	15.1
REVISED RECORD	19 Mar. 1969	18,562	239.7	4,449,398	11.1	16.6

COMPUTED BY: Y. C. Le/H. W. Tsai WEIGHT ENGINEER APPROVED: H. S. Lui for MANAGER, ENGINEERING

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 ENGINEERING DEPARTMENT FILE

REMARKS:

WHENEVER THERE IS VARIETY IN BASIC EMPTY WEIGHT/INDEX, THEN THIS REPORT SHOULD BE GOVERNED FIRST.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.1.4/R1
PAGE: 4
EFFECTIVE: 19 Mar. 1969

CONVERSION OF CARGO VERSION TO PAX (B) CONFIGURATION

<u>Item Added</u>	<u>Weight (LB)</u>	<u>Arm (IN.)</u>	<u>Moment (IN.-LB)</u>
1. 10 each Double Seats (Type Burns ID-2H RH per EA-C47-25-80)	420	360	151,200
2. 8 each Single Seats (Type Burns 9121-1 LH per EA-C47-25-80)	168	326.2	54,852
3. Sick bag holder removed - 14 ea	- 6	350	- 2,100
Total	582	350.4	203,952

Total index change: + 5.08

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.4/R1
 PAGE: 5
 EFFECTIVE: 19 Mar. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	43-15559	Passenger		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Aircraft reweighed on 19 Mar. 1969 (Cargo Configuration) <u>NOTE:</u> Data shown is based on the reestablishment of the weight and balance of cargo configuration with adjustment of cabin interior passenger plush seats installation. (Refer to page 4 for detail.)				

MANUFACTURER'S EMPTY CONDITION (INCLUDES ITEMS AS CHECKED ✓ ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	18,001	246.5	4,436,629	16.0	
REVISED RECORD	19 Mar. 1969 (see note)	18,091	247.3	4,474,054	16.6	

BASIC EMPTY CONDITION (INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	18,812	241.4	4,541,102	12.3	19.2
REVISED RECORD	19 Mar. 1969	18,902	242.2	4,578,527	12.9	20.5

COMPUTED BY Y. C. Le/H. W. Tsai	WEIGHT ENGINEER	APPROVED H. S. Lui for	MANAGER, ENGINEERING
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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.5/R4
 PAGE: 1

EFFECTIVE: 27 Jun. 1971

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	559	43-15559	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	EA-C47-25-91 R1 Shoulder Harness & Inertia Reel: (a) 2 seat belts removed (b) 2 inertia reels, shoulder harnesses, lap belts and fittings etc. installed.		2	70	-140
		11		80	+880

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	1 Dec 1970	17,746	243.2	4,315,171	13.6	24.7
REVISED RECORD	27 Jun 1971	17,755	243.1	4,315,911	13.5	24.5

WEIGHT ENGINEER K. Y. TSENG	SUPVR., WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT H. S. LUI
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 ENGINEERING DESIGN DEPARTMENT FILE

REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.6/R2
 PAGE: 1
 EFFECTIVE: 23 Jan. 1970

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A		43-16083	Passenger/Cargo		11% MAC	25% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM NO.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	EA-C47-34-5 "ATC Transponder Instln., Light Weight"				
	a. Transponder K-75R with tray	6		26	+ 156
	b. Control Unit KFS-575 with rack	1.1		50	+ 55
	c. Circuit Breaker KA-28 & Cable	2.5		75	+ 188
2.	To conform to SAWE terms and definitions following items deducted from previous BEW condition and regarded as Operational Items:				
	a. Captain and First Officer		340	73	-24,820
	b. Oil		405	184.6	-74,763
	c. First Aid Kit		6	85	- 510
	d. SEA Crew Equipment		60	73	- 4,380

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	18,515	237.1	4,390,037	9.2	11.9
REVISED RECORD	23 Jan. 1970	17,714	242.0	4,285,963	12.7	22.6

WEIGHT ENGINEER: G. H. Wu
 SUPVR. WEIGHT & BALANCE: H. W. Tsai
 APPROVED: H. S. Lui
 MANAGER, ENGINEERING DESIGN DEPARTMENT

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REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.6/R3
 PAGE: 1
 EFFECTIVE: 29 Apr. 1972

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A		43-16083	PAX/CGO		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	Relocation of inverter:				
	a. Inverter removed from forward cabin		33	166	- 5,478
	b. Inverter installed at tail compartment	33		573.5	+18,926

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	23 Jan. 1970	17,714	242.0	4,285,963	12.7	22.6
REVISED RECORD	29 Apr. 1972	17,695	239.1	4,231,042	10.6	17.5

WEIGHT ENGINEER ~~SUPV. WEIGHT & BALANCE~~ APPROVED MANAGER, ENGINEERING DESIGN DEPARTMENT

K. Y. Tseng

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REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.7/R5
 PAGE: 1

EFFECTIVE: 25 Jun. 1971

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	147	43-16147A	Pax/Cgo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	EA-C47-25-91 Rev. 1 "Shoulder Harness and Inertia Reel"	9			+ 740
2.	Replacement of portable fire extinguisher Type A-20 with Type 4TB at Station 175	5.7			+ 998
3.	Replacement of portable CO ₂ fire extinguisher Type 2TB with Type 4TB at Station 179.5		1.2		- 215

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED V IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	25 Nov. 1970	17,789	246.5	4,384,475	16.0	29.5
REVISED RECORD	25 Jun. 1971	17,803	246.4	4,385,998	15.9	30.3

WEIGHT ENGINEER	SUP VR. WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT
H. W. Tsai		H. S. Lui	

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FORM 0080410 (SEP 69)

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.7/R1
 PAGE: 3
 EFFECTIVE: 9 Apr. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	43-16147	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	<p>NOTE:</p> <ol style="list-style-type: none"> 1. New passenger/cargo configuration is provided in addition to passenger configuration and cargo configuration to meet actual operations use. 2. Data shown is based on the reestablishment of the weight and balance of cargo configuration with adjustment of cabin interior bench type troop seats installation. (Refer to page 2 for detail.) 				

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD						
REVISED RECORD	9 Apr. 1969 (see note)	18,022	246.3	4,439,446	15.9	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD						
REVISED RECORD	9 Apr. 1969	18,833	241.3	4,543,919	12.2	18.9

COMPUTED BY Y. C. Le/H. W. Tsai	WEIGHT ENGINEER	APPROVED H. S. Lui for	MANAGER, ENGINEERING
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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.1.7/R1
PAGE: 4
EFFECTIVE: 11 Mar. 1969

CONVERSION OF CARGO VERSION TO PAX (B) CONFIGURATION

<u>Item Added</u>	<u>Weight (LB)</u>	<u>Arm (IN.)</u>	<u>Moment (IN.-LB)</u>
1. 10 each Double Seats (Type Burns ID-2H RH per EA-C47-25-80)	420	360	151,200
2..8 each Single Seats (Type Burns 9121-1 LH per EA-C47-25-80)	168	326.2	54,852
3. Sick bag holder removed - 14 ea	- 6	350	- 2,100
Total	582	350.4	203,952

Total index change: + 5.08

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.1.7/R1
PAGE: 5

EFFECTIVE: 11 Mar. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	43-16147	Passenger		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	Sick bag holder removed (14 ea) NOTE: Data shown is based on the reestablishment of the weight and balance of cargo configuration with adjustment of cabin interior passenger plush seats installation. (Refer to page 4 for detail.)		6	350	-2,100

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	11 Mar. 1969	18,368	248.8	4,570,675	17.7	
REVISED RECORD	9 Apr. 1969	18,362	248.8	4,568,575	17.7	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	11 Mar. 1969	19,179	243.8	4,675,148	14.0	23.0
REVISED RECORD	9 Apr. 1969 (see note)	19,173	243.7	4,673,048	14.0	22.9

COMPUTED BY: Y. C. Le/H. W. Tsai WEIGHT ENGINEER APPROVED: H. S. Lui for MANAGER, ENGINEERING

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ENGINEERING DEPARTMENT FILE

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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.7/R6
 PAGE: 1
 EFFECTIVE: 29 Apr. 1972

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	147	43-16147	PAX/CGO		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM NO.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	Navigator's table removed		15	134	-2,010
2.	EA-GEN-25-17 "Flight Manual Holder"	0.9		82	+ 74
3.	EA-C47-24-14 "Replacement of Delco-Remy Type O-1, P/N 1106711, Generator with Type P-1, P/N 1106710 Generator"	34		157	+5,338
4.	EA-C47-25-89 "Cargo Net at Navigator's Compartment"	23		147	+3,382

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED V IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	25 Jun. 1971	17,803	246.4	4,385,998	15.9	30.3
REVISED RECORD	29 Apr. 1972	17,846	246.1	4,392,782	15.7	29.7

WEIGHT ENGINEER	SUPVR. WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT
G. H. Wu	H. W. Tsai		H. S. Lui

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REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.1.8/R2
PAGE: 1

EFFECTIVE: 28 Mar. 1970

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C. G. LIMIT	FORWARD	AFT
C-47A		43-48084	Passenger/Cargo			11% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1	Removal of propeller slinger rings (Ref. EA-874 R.4)		5.5	103	- 567
2	To conform to SAWE terms and definitions following items deducted from the previous BEW condition and regarded as Operational Items:				
	a. Captain and First Officer		340	73	-24,820
	b. Engine Oil		405	184.6	-74,763
	c. First Aid Kit		6	85	- 510
	d. SEA Crew Equipment		60	73	- 4,380
3	EA-C47-34-6 "ATC Transponder Instln. - light weight"				
	a. Receiver - Transmitter KT-75R with tray	6		535.4	+ 3,212
	b. Control KFS-575 with rack	1.1		58.5	+ 64
	c. Antenna KA-28, circuit breaker & cable	4		297.7	+ 1,191

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	11 Mar. 1969	18,216	238.2	4,339,781	10.0	14.6
REVISED RECORD	28 Mar. 1970	17,411	243.	4,239,208	13.8	25.9

WEIGHT ENGINEER: Y. C. Le SUPVR. WEIGHT & BALANCE: Y. C. Le for APPROVED: H. S. Lui MANAGER, ENGINEERING DESIGN DEPARTMENT

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REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.9/R3
 PAGE: 1
 EFFECTIVE: 25 Jun. 1971

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	994	45-994	Pax/Cgo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	EA-C47-25-91 Rev. 1 "Shoulder Harness and Inertia Reel."	9			+ 740
2.	Replacement of fire extinguisher Type A-20 with CO ₂	5.7			+ 998

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	11 Apr. 1971	17,904	246.1	4,406,427	15.7	29.6
REVISED RECORD	25 Jun. 1971	17,919	246.0	4,408,165	15.6	29.4

WEIGHT ENGINEER G. H. Wu	SUPVR., WEIGHT & BALANCE H. W. Tsai	APPROVED H. S. Lui	MANAGER, ENGINEERING DESIGN DEPARTMENT
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REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.9/R5
 PAGE: 1
 EFFECTIVE: 20 May 1972

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	45-994		PAX/CGO		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	Navigator's table removed		15	134	-2,010
2.	Navigator's seat with belt removed		22	156	-3,432
3.	Cushion, seat and back removed		10	156	-1,560
4.	EA-C47-25-89 "Cargo Net at Navigator's Compartment" - C/W	23		147	+3,382

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	28 Apr. 1972	17,877	245.0	4,379,438	14.9	27.6
REVISED RECORD	20 May 1972	17,853	245.1	4,375,818	15.0	27.9

WEIGHT ENGINEER	SUPVR. WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT
G. H. Wu	H. W. Tsai		for H. W. Tsai

DISTRIBUTION:
 MANAGER, OPERATIONS PROGRAMMING
 DEPARTMENT VIA DFOD
 STATION OPERATIONS MANAGER
 AIRCRAFT WEIGHT AND BALANCE MANUAL
 ENGINEERING DESIGN DEPARTMENT FILE

REMARKS:

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.1.9/R1
 PAGE: 3
 EFFECTIVE: 12 Mar. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	45-994	Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
1.	EA-C47-25-77 - C/W	2		86	+ 172
2.	Installation of thermos flask brackets (EA-997)	4		538	+2,152
3.	Following standard items removed from MEW condition and considered as non-standard items:				
	<u>ITEM</u> <u>WT.</u> <u>MOM.</u>				
	A. Emerg. Radio XMTR - 40 - 22,000				
	B. Flight Kit - 40 - 4,680				
	C. Crew Baggage - 60 - 8,880				
4.	SEA crew equip. (60 lb @ arm 73) considered as a standard item in BEW condition.				

MANUFACTURER'S EMPTY CONDITION (INCLUDES ITEMS AS CHECKED ✓ ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	20 May 1968	17,721	245.1	4,344,056	15.0	
REVISED RECORD	12 Mar. 1969	17,727	245.2	4,346,380	15.1	

BASIC EMPTY CONDITION (INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	20 May 1968	18,612	240.7	4,479,709	11.8	18.3
REVISED RECORD	12 Mar. 1969	18,538	240.1	4,450,853	11.4	17.4

COMPUTED BY: W. Shih/H. W. Tsai WEIGHT ENGINEER APPROVED: H. S. Lui for MANAGER, ENGINEERING

DISTRIBUTION: REMARKS:
 MANAGER, OPERATIONS PROGRAMMING DEPARTMENT VIA DFOD
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 AIRCRAFT WEIGHT AND BALANCE MANUAL
 ENGINEERING DEPARTMENT FILE
 WHENEVER THERE IS VARIETY IN BASIC EMPTY WEIGHT/INDEX THEN THIS REPORT SHOULD BE GOVERNED FIRST.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.1.9
PAGE: 5

EFFECTIVE: 20 May 1968

TECHNICAL SERVICES WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47D	45-994	Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LBS)		STATION (INCHES)	MOMENT (INCH-POUNDS)
		+	-		
1.	Removal of Nylon Troop Seat (LH)		70	303.5	-21,245
2.	Removal of Nylon Troop Seat (RH)		59	314	-18,526
3.	Removal of Troop Seat Support (LH)		12	303.5	- 3,642
4.	Removal of Troop Seat Support (RH)		14	314	- 4,396
Remarks: Basic wt & mom for Cargo configuration based on Pax/Cgo configuration minus Nylon Troop Seat & Support in Cabin as shown above					

MANUFACTURER'S EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED BELOW)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD						
REVISED RECORD	20 May 1968	17,721	245.1	4,344,056	15.0	

ITEM	DETAILS	ITEM	DETAILS
Crew Seat	4 (incl. pilot's co-pilot's navigator's and extra crew seat)	Misc	Fire Extinguishers (2 A-20, & 1 CO ₂) Crash Axe Main Cgo Door Entrance Step Wash Water Tank Wash Water Basin Toilet Control Surface Locks (5) 93 lb at Sta. 637
Hyd Fluid	Full	Permanent Ballast	
Radio Set	HF-1: ART-13, XMTR AR-144, RCVR HF-2: RTA-1B VHF: ARC-1-20, XMTR 618M-1A, RCVR UHF/DF: ARC-27, XMTR ARA-25, RCVR ADF-1 & 2: ARN-7		

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED ON REVERSE SIDE)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD						
REVISED RECORD	20 May 1968	18,612	240.7	4,479,709	11.8	18.3

DISTRIBUTION:	COMPUTED BY	APPROVED
AIRCRAFT MGR, AIRCRAFT SCHEDULING VIA DFO ENGINEERING FILE	Y. C. Le/H. W. Tsai (signed) WEIGHT ENGINEER	T. C. Koo (signed) MANAGER, ENGINEERING

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

SECTION: A-2.1.9

PAGE: 6

EFFECTIVE: 20 May 1967

BASIC EMPTY CONDITION - STANDARD ITEMS

ITEM	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH. POUNDS)
Captain	170	73	12,410
First Officer	170	73	12,410
Oil - 54 gal	405	184.6	74,763
First Aid Kit	6	85	510
Emergency Radio Transmitter	40	550	22,000
Flight Kit	40	117	4,680
Crew Baggage	60	148	8,880
TOTAL	891		135,653

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.2
PAGE: 1
EFFECTIVE: 1 Jan. 1968

GENERAL SPECIFICATION

Wing Span	95 ft
Length	64 ft 5½ in.
Height	16 ft 11-1/8 in.
Horizontal Tail Span	26 ft 8 in.
Wing Area (with Ailerons)	988.9 sq. ft.
Gross Weight, Max.	See Notes below
Landing Weight, Max.	See Notes below
Center of Gravity (Aft of Datum) (Gear Extended)	
Fwd Limit	239.6 in. (11% MAC)
Aft Limit	263.1 in. (28% MAC)
Datum	192.5 in fwd. of leading edge of center section wing
Oil Capacity	58 U.S. Gal (one tank in each nacelle)
Oil Specification	
For Engine	MIL-L-6082B Grade 1100
Fuel Capacity (Usable)	804 U.S. Gal (4 Tanks in cs Wing)
Fuel Specification	91 min. grade aviation gasolines

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.3
PAGE: 1
EFFECTIVE: 1 Jan. 1968

DESIGN LIMITATIONS & LOADING LIMITATIONS

A. Design Limitations

1. Maximum Design Take Off Weight - 28,000 lbs.
2. Maximum Design Landing Weight - 26,000 lbs.
3. C.G. Range: (Landing gear extended)

Fwd Limit - 11%
Aft Limit - 28%

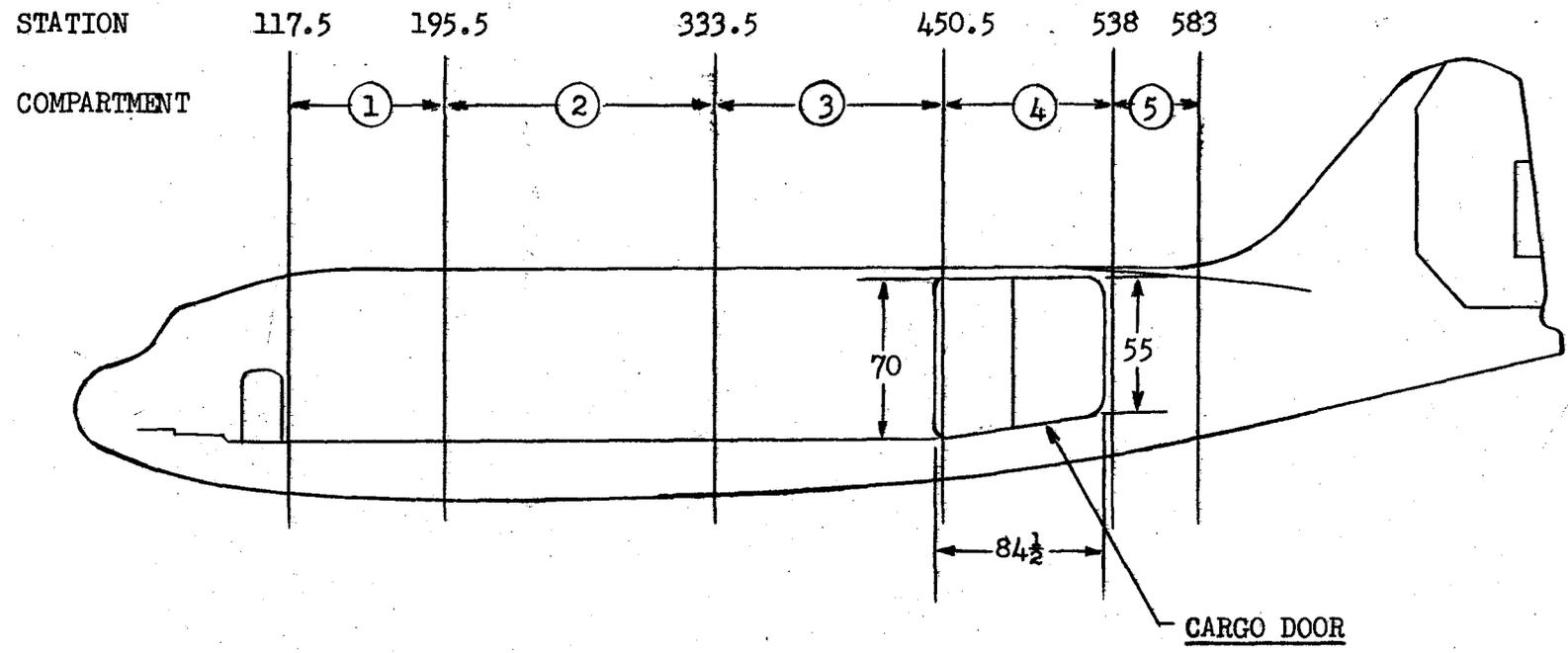
B. Load Limitations

1. Compartment Structural Limitations

<u>Compartment</u>	<u>Structural Limitations (lbs)</u>	<u>Maximum Unit/Floor Loading (lbs/sq.ft.)</u>
1	1,850	66
2	4,240	66
3	3,600	66
4	1,300	66

2. If cargo is to be carried in the passenger cabin (with passengers), conditions of part 121, section 121.285 shall be complied with:
 - a. The cargo shall be carried forward of the foremost seated passengers.
 - b. The cargo shall be loaded in accordance with the following requirements:
 - (1) It shall be properly secured by means of safety belts or other tiedowns having sufficient strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions;
 - (2) It shall be packed or covered in manner to avoid possible injury to passengers;
 - (3) It shall not impose any load on seats or the floor structure which exceeds the structural load limitation for components;
 - (4) It shall not be located in a position which restricts the access to or use of any required emergency or regular exit, or the use of the aisle in the passenger compartment; and
 - (5) It shall not be located in the position which obscures any passengers view of the "Seat Belt" or "No Smoking" sign, nor shall any required exit sign be blocked from view, unless an auxiliary sign or other approved means for proper notification of such passenger is provided.

G-47 FLOOR LOADING AND CARGO CAPACITY DATA



COMPARTMENT	CABIN				
	1	2	3	4	5
COMPT. VOLUME-CUBIC FT.	239	424	360	242	--
AVG. CARGO DENSITY PCF	7.7	10	10	5.4	--
MAX. CAPACITY LBS.	1,850	4,240	3,600	1,300	No cargo permitted
MAX. FLOOR LOAD PSF	50	50	50	50	--

NOTE: † COMPUTED * FROM MANUAL

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.4
 PAGE: 1
 EFFECTIVE: 1 Jan. 1968

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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CARGO C-47 MASTER EQUIPMENT LIST

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 2
 EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
A	PROPELLER AND PROPELLER ACCESSORIES (Except De-Icing Equipment)		
A-1	2 Propeller-Hamilton Standard Hubs, 23E50, blades 6477-A	446	109.5
A-2	Propeller Control		
	a. Constant speed propeller control Hamilton Std. 4G8 (double capacity)	19	118.5
	b. Propeller feathering controls, switches, fittings, tubings, wiring & conducts	14	152.5
	c. 2 feathering oil pumps & brackets	48	171.5
B	ENGINES AND ENGINE ACCESSORIES - FUEL AND OIL SYSTEMS		
B-1	2 P & W Twin Wasps R-1830-92	Std	140
B-2	2 Oil radiators, 11" dia., and scoops, etc	111	169.5
B-3	2 Starters - Type JH-3R (24V) and brackets	72	154.5
B-4	Residual fuel and oil in drained system (oil 32 lbs, fuel 19 lbs) (S)	51	175.5
C	LANDING GEAR		
C-1	2 Main wheel and brake assemblies - 17.00-16 Bendix B-3 wheels and duo-servo brakes	263	220.5

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 3
 EFFECTIVE: 1 Jan. 1971

ITEM NO.	ACFT NO.	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
A									
A-1		✓	✓	✓	✓	✓	✓	✓	✓
A-2									
a.		✓	✓	✓	✓	✓	✓	✓	✓
b.		✓	✓	✓	✓	✓	✓	✓	✓
c.		✓	✓	✓	✓	✓	✓	✓	✓
B									
B-1		✓	✓	✓	✓	✓	✓	✓	✓
B-2		✓	✓	✓	✓	✓	✓	✓	✓
B-3		✓	✓	✓	✓	✓	✓	✓	✓
B-4		✓	✓	✓	✓	✓	✓	✓	✓
C									
C-1		✓	✓	✓	✓	✓	✓	✓	✓

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 4
 EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
C-2	2 Main wheel tires - 17.00-16, 10-ply H.D. (treaded)	257	220.5
C-3	2 Main wheel tubes - 17.00-16 plain	38	220.5
C-4	Tail wheel - 9.00-6	9	648
C-5	Tail wheel tire - 9.00-6, 8-ply (treaded)	24	648
C-6	9.00-6 Tail wheel tire tube, cactus-proof	4	648
C-7	4 Bendix main gear shock struts	228	220.5
C-8	Tail gear oleo strut	23	641.5
D ELECTRICAL EQUIPMENT			
D-1	2, 100-amp. generators Type O-1 or 2, 200-amp. generators Type P-1	64 98	154 154
D-2	2, 88-amp. batteries	155	127.5
E DE-ICER EQUIPMENT (PROPELLERS, WING AND WIND-SHIELD)			

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 5/R1

EFFECTIVE: 20 May 1972

Item NO.	ACFT NO.							
	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
C-2	✓	✓	✓	✓	✓	✓	✓	✓
C-3	✓	✓	✓	✓	✓	✓	✓	✓
C-4	✓	✓	✓	✓	✓	✓	✓	✓
C-5	✓	✓	✓	✓	✓	✓	✓	✓
C-6	✓	✓	✓	✓	✓	✓	✓	✓
C-7	✓	✓	✓	✓	✓	✓	✓	✓
C-8	✓	✓	✓	✓	✓	✓	✓	✓
D								
D-1	✓ ○	✓ ○	✓ ○	✓ ○	✓ ○	✓ ○	✓ ○	✓ ○
D-2	✓	✓	✓	✓	✓	✓	✓	✓

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 6/R1
 EFFECTIVE: 29 Apr. 1972

Item No.	Description	Weight	Arm
F	INTERIOR EQUIPMENT		
	Crew Compartment (Nose to Sta. 177.5)		
F-1	Control unit, autopilot (Jack and Heintz)	16	34
F-2	Autopilot installation (Jack and Heintz)	70	60
F-3	Windshield wiper installation	8	46
F-4	Cushions, seat and back, pilot & copilot	22	71
F-5	Seat complete, pilot & copilot	64	73
F-6	Lap belts, pilot and copilot	1.8	73
F-7	Inertia reels and shoulder harnesses, pilot & copilot	6.5	80
F-8	Ditching rope (S)	2.5	88
F-9	Extra crew seat	7.5	101.5
F-10	Table, leg and support, navigator's (S)	15	134
F-11	Navigator's seat with safety belt (S)	22	156
F-12	Cushion, seat and back, navigator's (use with Item No. F-11) (S)	10	156
F-13	a. Trash can, forward (applicable to A/C B-933)(S)	4.5	146.5
	b. Trash can, forward (applicable to A/C B-879)(S)	8	157.5
F-14	Cargo net (S)	8.5	164
F-15	Drinking water tank (S)	7	169
F-16	Air conditioner, RH (applicable to A/C B-879 and B-933) (S)	90	167.5
F-17	Air conditioner, LH (applicable to A/C B-879 and B-933) (S)	90	171.5

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 7/R3
 EFFECTIVE: 20 May 1972

ITEM NO.	ACFT NO.	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
F									
F-1		✓	✓	✓	✓	✓	✓	✓	✓
F-2		✓	✓	✓	✓	✓	✓	✓	✓
F-3		✓	✓	✓	✓	✓	✓	✓	✓
F-4		✓	✓	✓	✓	✓	✓	✓	✓
F-5		✓	✓	✓	✓	✓	✓	✓	✓
F-6		✓	✓	✓	✓	✓	✓	✓	✓
F-7		0	✓	✓	✓	0	✓	0	✓
F-8		0	✓	✓	✓	✓	✓	✓	✓
F-9		✓	✓	✓	✓	✓	✓	✓	✓
F-10		✓	0	0	0	0	0	✓	0
F-11		0	0	0	0	0	0	0	0
F-12		0	0	0	0	0	0	0	0
F-13a.		0	0	✓	0	0	0	0	0
b.		0	✓	0	0	0	0	0	0
F-14		0	0	0	✓	0	✓	0	✓
F-15		0	0	0	✓	0	✓	0	0
F-16		0	✓	✓	0	0	0	0	0
F-17		0	✓	✓	0	0	0	0	0

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5R1
 PAGE: 8
 EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
F-18	a. Thermos flask bracket (2) (applicable to A/C B-933) (S)	2	146.5
	b. Thermos flask bracket (4) (applicable to A/C B-879) (S)	4	159
F-19	a. Fire extinguisher, CO ₂ (applicable to A/C B-879 and B-933) (S)	12.5	120
	b. Fire extinguisher, CO ₂ (S)	12.5	175
	c. Fire extinguisher, Type A-20 (S)	6.8	88
	d. Fire extinguisher, Type A-20 (S)	6.8	175
F-20	a. Fire axe (applicable to A/C B-879 & B-933) or (S)	3	118
	b. Fire axe (S)	3	177
Main Cabin (Sta. 177.5 to Sta. 538)			
F-21	Fire extinguisher, Type A-20 (S)	6.8	179.5
F-22	Troop seats with safety belts (applicable to Passenger/Cargo configuration) (S)		
	a. Troop metal bench and belts, 1 each 5-man and 2 each 4-man, LH side	79.4	303.5
	b. Troop metal bench and belts, 2 each 5-man and 1 each 4-man, RH side	85.3	314
	c. Troop nylon seat and belts, 1 each 4-man and 3 each 3-man, LH side	70	303.5
	d. Troop nylon seat and belts, 2 each 4-man and 2 each 3-man, RH side	59	314
F-23	Static cable	3.5	360
F-24	Fire extinguisher, CO ₂ (S)	12.5	502

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 9
 EFFECTIVE: 1 Jan. 1971

ACFT NO. ITEM NO.	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
F-18 a.	0	0	✓	0	0	0	0	0
b.	0	✓	0	0	0	0	0	0
F-19 a.	0	✓	✓	0	0	0	0	0
b.	0	0	0	✓	0	0	✓	0
c.	✓	0	0	0	0	0	0	0
d.	0	0	0	0	✓	✓	0	✓
F-20 a.	0	✓	✓	0	0	0	0	0
b.	✓	0	0	✓	✓	✓	✓	✓
F-21	✓	0	0	✓	✓	✓	✓	✓
F-22								
a.	0	0	0	0	✓	0	0	0
b.	0	0	0	0	✓	0	0	0
c.	✓	✓	✓	✓	0	✓	✓	✓
d.	✓	✓	✓	✓	0	✓	✓	✓
F-23	✓	✓	✓	✓	✓	✓	0	✓
F-24	✓	✓	✓	✓	✓	✓	✓	✓

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 10
 EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
F-25	Thermos flask bracket (4) (S)	4	535.5
F-26	Fire extinguisher, Type A-20 (S)	6.8	536.5
F-27	Step, main cargo door (stowed) (S)	11	470 or 535
	Lavatory (Sta. 538 to Sta. 583)		
F-28	Wash basin and support (S)	12	547 or 574
F-29	Toilet assy (incl. 1.0-gal toilet water) (S)	21	548 or 573
F-30	Wash water tank (S)		
	a. 5-gal capacity	7	577
	b. 4.25-gal capacity (alternate)	6	577
F-31	Dispenser, hand towel (S)	1	541 or 558
F-32	Dispenser, toilet paper (S)	0.5	541 or 560 or 582
	Tail (Sta. 583 and aft)		
F-33	Wash water tank (S)		
	a. 5-gal capacity	7	589
	b. 4.25-gal capacity (alternate)	6	589
	c. 2-gal capacity (applicable to A/C B-933)	4	615
F-34	Permanent ballast (1b)		637
M	MISCELLANEOUS		
M-1	Auxiliary hydraulic fluid tank	7	110

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 11/R3
 EFFECTIVE: 28 Apr. 1972

ACFT NO.	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
F-25	✓	✓	✓	0	0	✓	0	✓
F-26	0	✓	0	0	0	0	0	0
F-27	0	0	0	0	0	0	0	✓
	✓	✓	✓	✓	✓	✓	✓	0
F-28	✓ 0	0 ✓	0 ✓	✓ 0	✓ 0	✓ 0	✓ 0	✓ 0
F-29	✓	✓	✓	✓	✓	✓	✓	✓
F-30								
a.	0	0	0	0	0	0	0	0
b.	0	0	0	✓	✓	✓	0	✓
F-31	0	0	0	✓	0	✓	0	✓
	0	0	✓	0	0	0	0	0
F-32	0	0	0	0	0	0	0	0
	0	✓	✓	✓	✓	0	0	0
	0	0	0	0	0	0	0	0
F-33								
a.	✓	0	0	0	0	0	0	0
b.	0	✓	0	0	0	0	0	0
c.	0	0	✓	0	0	0	0	0
F-34	30	120	0	0	0	0	95	0
M								
M-1	✓	0	0	0	0	0	0	0

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/RL
 PAGE: 12

EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
M-2	Auxiliary hydraulic fluid - 6½ gal	45.7	110
M-3	Control surface locks (stowed) (S)	13.5	360
R	RADIO EQUIPMENT		
	HF-1 Communication system		
R-1	Transmitter T-47A/ART-13	66	144
R-2	Dynamotor DY-17/ART-13	28	124 or 133
R-3	Receiver AR-144	33	144
R-4	Transceiver T-22-RA (Alternate)	15	122.5
R-5	Antenna coupler AC-22-RA (use with item No. R-4)	6.2	143.5
	HF-2 Communication system (S)		
R-6	Transceiver RTA-1B	68.5	129
R-7	Transceiver T-22-RA (Alternate)	15	131.5
R-8	Transceiver T-10-R (Alternate)	12	131.5
R-9	Antenna coupler AC-22-RA or CU-2200 (use with item No. R-7)	6.2	118.5
R-10	Antenna matching unit AC-10 (use with item No. R-8)	5	118.5
	VHF Communication system		
R-11	Transceiver 618M-1A	19	125
R-12	Transceiver RT-18/ARC-1	47	106.5 or 124

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 13/R1
 EFFECTIVE: 25 Jun. 1971

Item No.	ACFT No.								
	B-817	B-879	B-933	43-15559	43-16083	43-16117A	43-48084	45-994	
M-2	✓	✓	○	○	○	○	○	○	
M-3	○	○	○	○	○	○	○	○	
R									
R-1	✓	✓	○	○	○	○	○	○	
R-2	○	○	○	○	○	○	○	○	
R-3	✓	✓	○	○	○	○	○	○	
R-4	○	○	○	○	○	○	○	○	
R-5	○	○	○	○	○	○	○	○	
R-6	✓	✓	○	○	○	○	○	○	
R-7	○	○	○	○	○	○	○	○	
R-8	○	○	○	○	○	○	○	○	
R-9	○	○	○	○	○	○	○	○	
R-10	○	○	○	○	○	○	○	○	
R-11	○	○	○	○	○	○	○	○	
R-12	○	○	○	○	○	○	○	○	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 14
 EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
R-13	Receiver-Transmitter RT-11A (Alternate)	14	130
R-14	Dynaverter DV-15A (use with Item No. R-13)	4	125
	UHF UHF/DF Communication system (S)		
R-15	Transceiver RT-178/ARC-27	64	124 or 594
R-16	Amplifier AM-608/ARA-25	5	587.5
	Marker Beacon (S)		
R-17	Receiver BC-1333	2.5	133
R-18	Receiver R-33A (Alternate)	3.5	140
	ADF-1 Radio Compass system		
R-19	Receiver R-5A/ARN-7	48	125.5
	ADF-2 Radio Compass System (S)		
R-20	Receiver R-5A/ARN-7	48	130
R-21	Receiver R-101/ARN-6 (Alternate)	34.8	124
	Visual-Omni-Range Navigation System (S)		
R-22	Receiver R-541/ARN-14	30	134.5
R-23	Receiver 51R3 (alternate)	29.5	144
R-24	Dynamotor DY-66/ARN-14 (use with Item No. R-22)	16	134.5 or 140.6

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 15

EFFECTIVE: 1 Jan. 1971

ITEM NO.	D-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
R-13	0	0	0	0	0	0	0	0
R-14	0	0	0	0	0	0	0	0
R-15	0 ✓	0 0	0 ✓	0 ✓	0 ✓	0 ✓	0 ✓	0 ✓
R-16	✓	0	0	0	0	✓	0	✓
R-17	0	0	0	✓	✓	0	✓	0
R-18	0	✓	0	0	0	0	0	0
R-19	✓	✓	✓	✓	✓	✓	✓	✓
R-20	✓	✓	✓	✓	✓	✓	✓	✓
R-21	0	0	0	0	0	0	0	0
R-22	0	✓	✓	✓	✓	0	✓	0
R-23	0	0	0	0	0	0	0	0
R-24	0 0	0 ✓	0 ✓	0 ✓	0 ✓	0 0	0 ✓	0 0

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.5/R1
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EFFECTIVE: 1 Jan. 1971

Item No.	Description	Weight	Arm
R-25	Power supply 416N-6 (Alternate) (use with Item R-23)	4.8	134.5
	Glide slope system (S)		
R-26	Receiver R-322A/ARN-18	13	122 or 133 or 145.4
	ATC transponder (S)		
R-27	Receiver-transmitter KT-75R	6	535.4
	Long range navigation system (S)		
R-28	a. Receiver - indicator R-65/APN-9 (Opnl Item)	36	103.5
	b. Mount MT-203/APN	2.3	103.5

Legend: (S) denotes Standard Item.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.5/R1
 PAGE: 17/R1
 EFFECTIVE: 1 Jun. 1971

ITEM NO.	B-817	B-879	B-933	43-15559	43-16083	43-16147A	43-48084	45-994
R-25	0	0	0	0	0	0	0	0
R-26	0	0	0	∟	0	0	0	0
	0	0	0	0	∟	0	∟	0
R-27	0	∟	∟	∟	∟	∟	∟	∟
R-28 a.	0	0	0	0	0	0	0	0
b.	∟	∟	0	0	0	0	0	0

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.1
 PAGE: 1
 EFFECTIVE: 27 Feb. 1968

AIRCRAFT WEIGHING FORM

Date Weighed 18 Dec. 1967 Model C-47A Serial No. _____ Reg. No. B-817
 Place Weighed Air Asia, Tainan, Taiwan Weight Engineer Y. C. Le

Reaction	Scale Reading	Tare	Net Weight	Arm	Moment
Left Main	8,459	0	8,459	X	X
Right Main	8,459	0	8,459		
Sub-total (Both Main)	16,918	0	16,918	220.4	3,728,727
Nose or tail	1,199	0	1,199	583.8	699,976
Total (As weighed)	18,117	0	18,117	244.5	4,428,703

Description	Net Weight	Arm	Moment	Index
Total (As weighed)	18,117	244.5	4,428,703	X
Oil in aircraft 54 Gals.	- 405	184.6	- 74,763	
Total of items weighed but not part of basic weight*	- 5		- 1,102	
Total of basic items not in aircraft when weighed*	+ 35		+ 13,073	
Basic Aircraft	17,742	246.1	4,365,911	

C. G. in percent MAC _____ %

* See page over for details

C. G. in inches from ref. datum 246.1

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.6.1
PAGE: 2
EFFECTIVE: 29 Feb. 1968

BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED

	<u>WT.</u>	<u>ARM</u>	<u>MOMENT</u>
Thermos Flasks (4)	18	535.5	9,639
Hyd. Fluid (Aux) - 2.2 gal	17	202	3,434
Total	<u>35</u>		<u>13,073</u>

ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT

	<u>WT.</u>	<u>ARM</u>	<u>MOMENT</u>
Restrainer Rope - MLG	5	220.4	1,102
Total	<u>- 5</u>		<u>- 1,102</u>

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.6.2/R2
PAGE: 1

EFFECTIVE: 9 Oct. 1970

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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.3/R1
 PAGE: 1
 EFFECTIVE: 2 Jul. 1970

AIRCRAFT WEIGHING FORM

DATE WEIGHED 2 July 1970	MODEL C-47B	SERIAL NUMBER 34325	REGISTRATION NUMBER B-879		
PLACE WEIGHED Air Asia, TNN, TWN		WEIGHT ENGINEER W. Shih			
REACTION	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN	8,761	+ 6	8,767		
RIGHT MAIN	9,002	+ 1	9,003		
SUB-TOTAL (BOTH MAIN)	17,763	+ 7	17,770	219.25	3,896,073
NOSE OR TAIL	1,054.5	0	1,054.5	583.8	615,617
TOTAL (AS WEIGHED)	18,817.5	+ 7	18,824.5	239.7	4,511,690
DESCRIPTION	NET WEIGHT	ARM	MOMENT	INDEX	
TOTAL (AS WEIGHED)	18,824.5	239.7	4,511,690		
OIL IN AIRCRAFT 55 GAL	- 412.5	184.6	- 76,148		
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	- 675		- 183,922		
TOTAL OF BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	+ 102.5		+ 29,835		
BASIC AIRCRAFT	17,840	240.0	4,281,455		
C.G. IN PERCENT MAC	11.3	%	C.G. IN INCHES FROM REFERENCE DATUM	240.0	
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT		
(See page over for detail)					
Total	675		183,922		
BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT		
1. 1 ea. 4-man & 2 ea. 3-man Nylon Troop Seats W/Belts, LH & RH Side	91	276.7	25,180		
2. 1 ea. 3-man Nylon Troop Seat W/Belts, LH Side	11.5	404.8	4,655		
Total	102.5		29,835		

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.3/R1
 PAGE: 2

EFFECTIVE: 2 Jul. 1970

OVERAGE ITEMS

<u>ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT</u>	<u>WT(LB)</u>	<u>ARM(IN.)</u>	<u>MOM.(IN-LB)</u>	<u>INDEX CHANGE</u>
Floor Carpet	32	264.5	8,464	+0.01
Removable Bulkhead (Sta. 351.1)	103	351.1	36,163	+0.91
Table, Forward	21	221	4,641	-0.09
Table, Aft	21	306	6,426	+0.09
1st Row, Modified Double Seat, P/N A3-80-318	64	193.8	12,403	-0.44
1st Row, Modified Single Seat, P/N A3-80-319	40	208.9	8,356	-0.22
2nd Row, Modified Double Seat	64	248.2	15,885	-0.10
2nd Row, Modified Single Seat	40	241.9	9,676	-0.08
3rd Row, Modified Double Seat	64	277.8	17,779	+0.09
3rd Row, Modified Single Seat	40	275.9	11,036	+0.05
4th Row, Modified Double Seat	64	334.2	21,389	+0.46
4th Row, Modified Single Seat	40	310.9	12,436	+0.19
Window Curtain (16)	8	264.5	2,116	Negligible
Seat Track Cover	8	264.3	2,114	Negligible
Loran R-65/APN-9	36	103.5	3,726	-0.57
Fire Extinguisher, CO ₂ , Model 2TA	7	348	2,436	+0.06
4-man Nylon Troop Seat/w/Belts, LH Side	22.5	394.5	8,876	+0.30
TOTAL	<u>675</u>		<u>183,922</u>	<u>+0.66</u>

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.4/R2
 PAGE: 1
 EFFECTIVE: 1 Dec. 1970

AIRCRAFT WEIGHING FORM

DATE WEIGHED 1 Dec. 1970		MODEL C-47A	SERIAL NUMBER 43-15559	REGISTRATION NUMBER 559	
PLACE WEIGHED Air Asia, TNN, TWN			WEIGHT ENGINEER G. H. Wu		
REACTION	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN	8,430	- 2	8,428		
RIGHT MAIN	8,590	+ 2	8,592		
SUB-TOTAL (BOTH MAIN)	17,020	0	17,020	219.8	3,740,996
NOSE OR TAIL	1,204	0	1,204	583.8	702,895
TOTAL (AS WEIGHED)	18,224	0	18,224	243.8	4,443,891
DESCRIPTION	NET WEIGHT	ARM	MOMENT	INDEX	
TOTAL (AS WEIGHED)	18,224	243.8	4,443,891		
OIL IN AIRCRAFT 51 GAL	- 382.5	184.6	- 70,610		
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	- 104		- 59,504		
TOTAL OF BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	+ 8.5		+ 1,394		
BASIC AIRCRAFT	17,746	243.2	4,315,171	24.7	
C.G. IN PERCENT MAC	13.6	%	C.G. IN INCHES FROM REFERENCE DATUM	243.2"	
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT		WEIGHT	ARM	MOMENT	
Ballast		102	579	59,058	
Restraining Rope (2), Shock Strut, MLG		2	223	446	
Total		104		59,504	
BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED		WEIGHT	ARM	MOMENT	
Cargo Net		8.5	164	1,394	
Total		8.5		1,394	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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EFFECTIVE: 1 Mar. 1969

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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.6/R1
 PAGE: 1
 EFFECTIVE: 29 Mar. 1972

AIRCRAFT WEIGHING FORM

DATE WEIGHED 29 Mar. 1972	MODEL C-47A	SERIAL NUMBER 43-16083	REGISTRATION NUMBER
PLACE WEIGHED Saigon		WEIGHT ENGINEER K. Y. Tseng	

REACTION	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN	8,550	0	8,550		
RIGHT MAIN	8,660	0	8,660		
SUB-TOTAL (BOTH MAIN)			17,210	219.08	3,770,367
NOSE OR TAIL	915	0	915	583.8	534,177
TOTAL (AS WEIGHED)			18,125		4,304,544

DESCRIPTION	NET WEIGHT	ARM	MOMENT	INDEX
TOTAL (AS WEIGHED)	18,125		4,304,544	
OIL IN AIRCRAFT GAL	- 405	184.6	- 74,763	
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	- 36		- 18,072	
TOTAL OF BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	+ 11		5,885	
BASIC AIRCRAFT	17,695	238.4	4,217,594	

C.G. IN PERCENT MAC	C.G. IN INCHES FROM REFERENCE DATUM
---------------------	-------------------------------------

ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT
Airborne wheel chocks	36	502	18,072

BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT
Step-Main cargo door	11	535	5,885

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.7/R1
 PAGE: 1
 EFFECTIVE: 28 Aug. 1970

AIRCRAFT WEIGHING FORM

DATE WEIGHED 28 Aug. 1970	MODEL C-47	SERIAL NUMBER 43-16147	REGISTRATION NUMBER 147		
PLACE WEIGHED Air Asia, TNN, TWN		WEIGHT ENGINEER GH Wu			
REACTION	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN					
RIGHT MAIN					
SUB-TOTAL (BOTH MAIN)	16,736	-3	16,733	219.5	3,672,894
NOSE OR TAIL	1,240	+8	1,248	583.8	728,582
TOTAL (AS WEIGHED)	17,976	+5	17,981	244.8	4,401,476
DESCRIPTION	NET WEIGHT	ARM	MOMENT	INDEX	
TOTAL (AS WEIGHED)	17,981	244.8	4,401,476		
OIL IN AIRCRAFT 47 GAL.	- 352.5	184.6	- 65,072		
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	- 14		- 3,073		
TOTAL OF BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	+ 261.2		+ 78,158		
BASIC AIRCRAFT	17,876	246.8	4,411,489	30.9	
C. G. IN PERCENT MAC	16.2 %	C. G. IN INCHES FROM REFERENCE DATUM	246.8		
ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT		
Nose wheel restraining chain (2)	14	219.5	3,073		
Total	14		3,073		
BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT		
1. Supports, Troop Bench, LH side	37.5	303.5	11,381		
2. Supports, Troop Bench, RH side	40	314	12,560		
3. Troop Benches & Belts (1 each 5-man, and 2 each 4-man), L.H. side	79.4	303.5	24,098		
4. Troop Benches & Belts (2 each 5-man and 1 each 4-man), R.H. side	85.3	314	26,784		
5. Residual Fuel	19	175.5	3,335		
Total	261.2		78,158		

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.6.8
 PAGE: 1
 EFFECTIVE: 11 Jul. 1968

AIRCRAFT WEIGHING FORM

Date Weighed 11 Jul. 1968 Model C-47A Serial No. 43-48084 Reg. No. _____

Place Weighed Air Asia, Tainan, Taiwan Weight Engineer Y. C. Le

Reaction	Scale Reading	Tare	Net Weight	Arm	Moment
Left Main	8,360	0	8,360	X	X
Right Main	8,360	0	8,360		
Sub-total (Both Main)	16,720	0	16,720	219.1	3,663,352
Nose or tail	1,116	+ 1	1,117	583.8	652,105
Total (As weighed)	17,836	+ 1	17,837	241.9	4,315,457

Description	Net Weight	Arm	Moment	Index
Total (As weighed)	17,837	241.9	4,315,457	X
Oil in aircraft 58 Gals.	- 435	184.6	- 80,301	
Total of items weighed but not part of basic weight				
Total of basic items not in aircraft when weighed				
Basic Aircraft	17,402	243.4	4,235,156	

C. G. in percent MAC 13.8 %

C. G. in inches from ref. datum 243.4

Weight and Balance Historical Change Record

WEIGHT & BALANCE MANUAL

Aircraft Model		C-47A		Registration No.		B-817				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Index
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
23 Sep 61	Aircraft was actually weighed at Air Asia							17,922	4,301,497	
30 Oct 63	Aircraft reweighed							18,005	4,325,120	
10 May 64	30 lbs. ballast installed	30	637	19,110				18,035	4,344,230	
26 Jan 66	Basic data as weighed at Air Asia							17,695	4,282,181	
5 Jul 66	EA-C47-25-1 "Std of cargo tie-down fitting" - C/W (Old EA-1003)	22	350	7,700	10	350	3,500			
7 Jul 66	Basic data as computed at Air Asia							17,707	4,286,381	
9 Nov 66	EA-997 - C/W									
"	(1) Bracket	4	538	2,152						
"	(2) Flasks (Net wt.)	22	538	11,836						
"	EA-1104 "Instl. of main fuel tank dip stick" - C/W	0.5	95	48						
14 Mar 67	EA-C47-33-1 "Instl. of handing light glare" - C/W by UTE STATION	2	204	408						
29 Mar 67	EA-C47-23-1 "Replacement of VHF AN/ARC-3 with 618M-1A - C/W by SAIGON STATION									
"	Equipment removed:									
"	(1) RT-18/ARC-1 receiver transmitter				47	123.5	5,805			
"	(2) MT-230/ARC mounting				4.8	123.5	593			
"	(3) Control box C-45/ARC-1				1	61	61			
"	Equipment installed:									
"	(1) Transceiver 618M-1A	19	123.5	2,347						
"	(2) Shockmount 390Y-2	1.7	123.5	210						
"	(3) Frequency selector 313N-4	1	61	61						

AOPT. TYPE: CARGO C-47
 SECTION: A-2.7.1
 PAGE: 1
 EFFECTIVE: 27 Feb. 1968

POP 5-224

Operations

Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		B-817				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
20 May 67	Removal of storage box in radio compt				25	135	3,375			
"	Removal of hot jug rack				5	135	2,100			
15 Aug 67	EA-C47-25-73 "Removal of radio operator's									
"	(1) Seat and safety belt				4	164	656			
"	(2) Table				16	163	2,771			
7 Oct 67	EA- "Instl. of UHF AN/ARC-27									
"	& UHF direction finder AN/ARA-25									
"	(a) UHF									
"	(1) Transmitter receiver	64	594	38,016						
"	RT-178/ARC-27									
"	(2) Mounting MT-822/ARC-27	4	594	2,376						
"	(3) Control C-1904/ARC-27	3	67.5	203						
"	(4) Antenna AT-256/ARC-27	2.1	210	441						
"	(5) Cable	5	538	2,690						
"	(b) UHF DF									
"	(1) Amplifier AM-608/ARA-25	5.4	587.5	3,173						
"	(2) Mounting MT-1043/ARA-25	1	587.5	587.5						
"	(3) Relay RE-120/ARA-20	1	584	584						
"	(4) Antenna AS-578/ARA-25	17.5	248.5	4,349						
"	(5) Antenna mts fixture	10	248.5	259						
"	(6) Junction box	3	592.5	596						
"	(7) Indicator ID-91B/ARN-6	2.5	40	100						
"	(8) Cable	5	538	2,690						
"	(9) Shelf	5	538	2,690						
"	(10) Radio rack	3.5	598	2,093						
"	Basic data as computed at Air Asia							17,786	4,348,930	244.5
18 Dec 67	EA-C47-25-74 "Instl. of log book holder"									
	-C/W	4.5	82	3,691						

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.7.1
 PAGE: 2
 EFFECTIVE: 27 Feb. 1968

Operations

Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		B-817				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
18 Dec 67	Removal of receiver/transmitter RT-1/ APN-2 - PCW				34	108	3,672			
"	Removal of indicator BC-929 - PCW (date unk)				26	95	2,470			
"	Removal of control box C-3 - PCW (date unk)				1.3	85	111			
"	Basic data as computed at Air Asia							17,730	4,346,368	245.2
"	Basic data as weighed at Air Asia							17,742	4,365,911	246.1
5 Mar 68	EA-C47-25-75 R.2 "Repl. of existing pilot & copilot's seat back cushion core with light wt. moltoprene f m sheet" - C/W				6.6	71	469			
17 May 68	EA-C47-34=4 "Removal of distance measuring equipment type AN/APN-2" - C/W									
	1. Mt FT-416				2.5	108	270			
	2. Mt FT-409				2.5	95	238			
	3. Mt FT-406				0.5	85	111			
	4. Antenna AT-1/APN-2				1	20	20			
	5. Antenna AT-2/APN-2				9.5	62	589			
	6. Cable & connectors				20	100	2,000			
"	EA-874 R.2 "Removal of propeller de-icer tank and pump" - PCW (date unk) (no entry on previous record but wt. change included in previous weighing)									
12 Mar 69	LORAN R-65/APN-9 removed				36	106.5	3,834			

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.7.1
PAGE: 3/R1
EFFECTIVE: 12 Mar. 1969

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Operations

Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		B-817				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment <u>1000</u>	
		Weight	Arm	Moment <u>1000</u>	Weight	Arm	Moment <u>1000</u>			
12 Mar 69	4 ea. thermos flasks removed				18	535.5	9,639			
"	Basic data as calculated at Air Asia							17,645	4,348,741	246.5

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: A-2.7.1
 PAGE: 4
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Operations

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: A-2.7.2/R1
PAGE: 1

EFFECTIVE: 9 Oct. 1970

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		B-829				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
14 May 68	EA-C47-25-75 R.2 "Repl of existing pilot & copilot's seat back cushion cores with light wt. moltoprene foam cores" - C/W				6.6	71	469			
"	Instl of fire extinguisher, type A-20 (EA-C47-25-79 R.1)	7	179	1,253						
"	EA-C47-34-4 "Removal of distance measuring equipment type AN/APN-2" - C/W									
	1. Mt FT - 416				2.5	108	270			
	2. Mt FT - 409				2.5	95	238			
	3. Mt FT - 406				0.5	85	43			
	4. Antenna AT-1/APN-2				1	20	20			
	5. Antenna AT-2/APN-2				9.5	62	589			
	6. Cable & connectors				20	100	2,000			
18 May 68	Basic data as computed at Air Asia							17,528	4,245,375	242.2
30 Jul 68	EA-C47-21-2 "Instl of cabin ventilation air inlet & exhaust" - C/W									
	1. Airscoop instl	10	188	1,880						
	2. Venturi instl	4	526	2,104						
"	EA-C47-25-77 "Instl of emergency escape rope" - C/W	2	86	172						
"	EA-573 R.2 "Mod of instrument panel & cockpit lite system" - C/W	3	50.5	152						
"	Basic data as computed at Air Asia							17,547	4,249,683	242.2
"	Basic data as weighed at Air Asia							17,569	4,290,543	244.2

WEIGHT & BALANCE MANUAL

ACFT TYPE: CARGO C-47

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EFFECTIVE: 30 Jul. 1968

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		B-829				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
12 Mar 69	LORAN R-65/APN-9 removed				36	106.5	3,834			
"	4 ea thermos flasks removed				18	535.5	9,639			
"	Basic data as calculated at Air Asia							17,515	4,277,070	244.2
30 Jan 70	ATC Transponder Instln. - light wt. - C/W (Ref. EA-C47-34-6)									
	a. Receiver/Transmitter KT-75R with tray	6	535.4	3,212						
	b. Control Unit KFS-575 with rack	1.1	58.5	64						
	c. Antenna KA-28, Circuit breaker & cable	4	297.7	1,191						
"	Basic data as calculated at Air Asia							17,526	4,281,537	244.3
6 Jun 70	Basic data as weighed at Air Asia							17,332	4,272,612	246.5

WEIGHT & BALANCE MANUAL

ACFT TYPE: CARGO C-47
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 EFFECTIVE: 6 Jun. 1970

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Weight and Balance Historical Change Record

WEIGHT & BALANCE MANUAL

Aircraft Model		C-47 "DC-3"		Registration No.		B-879				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
12 Oct 64	Basic weight as weighed at Air Asia							17,554	4,217,912	
17 Dec 64	Radio operator stool	20	170	3,400						
9 Feb 65	EA-557 "Alternate anchor point in rear cabin for static cable" - C/W	3	510	1,530						
	Stowage box	20	160	3,200						
								17,597	4,226,042	
24 Jun 65	EA-1002 "Instl of additional simple pax seat track" - C/W	28	327	9,156				17,625	4,235,198	
23 Nov 65	EA-984 "Installation of heating system" - C/W	50	222	11,100						
"	EA-1003 "Std of cargo tie down fitting" - C/W	12	350	4,200				17,687	4,250,498	
"	Replaced with company std toilet (original 5 lb total 10 lb)	5	548	2,740				17,692	4,253,238	240.4
21 Sep 66	Basic data as weighed at Air Asia (after stand of Wt/Bal report)							17,592	4,319,079	245.5
21 Dec 66	EA-C47-33-1 "Instl of landing light glare" - C/W	2	204	408						
"	EA-1104 "Instl of fuel dipstick" - C/W	0.5	95	48						
20 May 67	Removal of storage box (hold item W/S)				25	135	3,375			
"	Removal of hot jug rack (hold item W/S)				5	420	2,100			
22 Jul 67	EA-C47-25-73 "Removal of radio operator's chair & safety belt"				16	163	2,771			
"	EA-C47-25-73 "Removal of radio operator's desk"				4	164	656			

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Weight and Balance Historical Change Record

Aircraft Model		C-47 "DC-3"		Registration No.		B-879				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
22 Jul 67	EA-C47-21-2 "Instl of cabin air ventilation" - C/W	4.3		1,902						
11 Oct 67	EA-C47-26-12 "Repl of agent used in fire extinguishing system" - C/W				3	195	585			
31 Dec 67	EA-C47-22-2 "Instl of type A-3A autopilot system" - C/W									
	(1) Control gyro and mounts	27	35	945						
	(2) Servo unit, pulley and cable	18	105	1,890						
	(3) Lines, bracket, and hardwares	20	60	1,200						
	(4) Fluid	15	105	1,575						
"	Basic data as computed at Air Asia							17,626	4,317,560	245.0
30 Mar 68	Change of permanent ballast from 140 lb to 90 lb				50	637	31,850			
"	EA-C47-73-4 "Removal of oil dilution system" - C/W				4	77	308			
"	EA-C47-38-1 "Relocation of aft fuselage wash water tank" - C/W	1	583	583						
"	Std of fire extinguisher per EA-C47-25-79 R.1" - C/W	7	179.5	1,257						
"	EA-C47-25-75 "Replacement of existing pilot and copilot's seat cushions cores with light wt. motoprene foam" - C/W				13.2	71	937			
"	Basic data as calculated at Air Asia							17,567	4,286,305	244.0
28 Sep 68	Removal of nylon troop seat & support (RH & LH)				155		47,809			
"	Instl of seat track (EA-C47-25-69)	22	264.5	5,819						
"	Instl of removable bulkhead (Sta. 351.1)	101	351.1	35,461						

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47 "DC-3"		Registration No.		B-879				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
28 Sep 68	Instl of sound proofing (Sta. 177.5 to 351.5) (EA-C47-25-71)	69	2645	18,251						
"	Instl of tables (EA-C47-25-69)									
	(1) Table, Cabin, Fwd.	21	2205	4,631						
	(2) Table, Cabin, Aft	21	3085	6,479						
"	Instl of passenger seat: (EA-C47-25-86)									
	(1) First row double Burns seat with safety belt	44	1955	8,602						
	(2) Second row double Burns seat with safety belt	44	2455	10,802						
	(3) Third row double Burns seat with safety belt	44	2835	12,474						
	(4) Fourth row double Burns seat with safety belt	44	3335	14,674						
	(5) First row single seat w/safety belt	28	2065	5,782						
	(6) Second row single seat with safety belt	28	2405	6,734						
	(7) Third row single seat w/safety belt	28	2745	7,684						
	(8) Fourth row single seat with safety belt	28	3085	8,638						
"	Instl of trash can & support (EA-C47-25-72)	17.5	533	9,328						
"	Relocation of crash axe	3	118	354	3	177	531			
"	Instl of air conditioners (EA-C47-21-3)									
	(1) R. H. side	90	1675	15,075						
	(2) L. H. side	90	1715	15,435						
"	Instl of fire extinguisher, CO ₂ (EA-C47-26-11)	11	120	1,320						
"	Instl of window curtain (26) (EA-C47-25-71)	14	3037	4,252						
"	Instl of floor carpet (EA-C47-25071)	32	2645	8,464						
"	EA-C47-25-77 "Instl of emergency, escape Rope" --- C/W	2	86	172						

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ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47 "DC-3"		Registration No.		B-879				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment -1000-	Arm
		Weight	Arm	Moment -1000-	Weight	Arm	Moment -1000-			
28 Sep 68	EA-C47-21-4 "Instl of air duct and air valve" -- C/W	22	245	5,390						
"	EA-C47-33-7 "Instl of cabin light" - C/W	2	456	912						
"	EA-C47-21-5 "Instl of cabin air temperature indicating system" -- C/W	2	136	272						
"	EA-573 R2 "Mod of instrument panel and cockpit lighting system" -- C/W	3	505	152						
"	Instl of VOR system (EA-C47-23-12)									
	(1) Receiver R-540/ARN-14	29.5	1444	4,260						
	(2) Shockmount MT-1611/ARN-14	2.2	1444	318						
	(3) DC power supply DY-66/ARN-14	16	140	2,240						
	(4) Mounting MT-628/ARN-14	3	140	420						
	(5) Control unit C-760 A/A	1	70	70						
	(6) Antenna A-138	3.6	91	328						
"	Instl of glide slope (EA-C47-23-12)									
	(1) Receiver R-322/ARN-18	13	1444	1,877						
	(2) Mounting MT-691/ARN-18	1.9	1444	274						
	(3) Indicator ID-249/ARN	1	83	83						
"	Instl of marker beacon (EA-C47-23-12)									
	(1) Receiver R-33A	3.5	140	490						
	(2) Mounting M-41A	1.4	140	196						
	(3) Antenna	1	100	100						
"	Instl of radio rack	2	142	284						
"	Instl of additional 30 lb ballast at Sta. 637 (total 120 lb)	30	637	19,110						
"	Basic data as calculated at Air Asia (VIP compartment configuration)						18,332	4,475,172	244.1	
"	Basic data as weighted at Air Asia (VIP compartment configuration)						18,332	4,467,623	243.7	
"	basic data as calculated (Pax/Cgo config)						17,960	4,366,980	243.2	

WEIGHT & BALANCE MANUAL

ACFT. TYPE:	CARGO C-47
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Weight and Balance Historical Change Record

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Aircraft Model		C-47B		Registration No.		B-879 (S/N 34325)				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment	Arm
		Weight	Arm	Moment	Weight	Arm	Moment			
10 Nov 68	EA-997 "Instl of thermos flasks brackets" - C/W	4	538	2,152						
Unk	EA-046 R.1 "Repl of hand wobble pumps with elec. fuel booster pumps and removal of cross feed system" - PCW (Wt. change included in previous weighing - record for reference purpose only)									
Unk	EA-C47-24-14 "Replacement of Delco-Remy type O-1, P/N 1106711, Generator with type P-1, P/N 1106710 Generator" - C/W (28 Sep. '68) (Wt. affected included in previous weighing) (Post-entered for record purpose only)									
Unk	EA-C47-21-2 "Instl of cabin ventilation air inlet and exhaust" - C/W (28 Sep. '68) (Wt. affected included in previous weighing) (Post-entered for record purpose only)									
Unk	EA-1002 R.1 "Instl of additional single passenger seat track" - decompied with (28 Sep. '68) (Entered for record purpose only - wt. included in previous weighing)									
Unk	EA-C47-25-83 "Instl of additional cargo tie-down ring" - decompied with on 28 Sep. '68 (Entered for record purpose only - not affected in previous weighing)									

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47B		Registration No.		B-879 (S/N 34325)		
Date	Description	Weight change			Empty weight			
		Added		Removed		Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight			
Unk	LORAN R-65/APN-9 removed from MEW condition and considered as non-standard item			36	1065	3,834		
12 Mar 69	Basic data as calculated at Air Asia (VIP config.)						18,300	4,465,941 244.0
"	Basic data as calculated at Air Asia (Passenger/cargo config.)						17,928	4,365,298 243.5
	EA-373 "Toilet Assy Modification" - PCW (date unk) (entered for record purpose only, weight affected incl. previous weighing).							
21 Apr 69	EA-874 R.3 "Removal of propeller deicer system" - C/W			9.5	92.2	876		
				1.5	147	221		
6 Jun 69	Following items deducted from MEW condition considered as configuration items							
	1. Floor carpet			32	264.5	8,464		
	2. Removable bulkhead (sta. 351.1)			103	351.1	36,163		
	3. Table, cabin - Fwd.			21	220.5	4,631		
	Table, cabin - Aft.			21	308.5	6,479		
	4. First row double Burns seat W/belts			64	195.5	12,675		
	5. Second row double Burns seat W/belts			64	245.5	15,712		
	Third row double Burns seat W/belts			64	283.5	18,144		
	Fourth row double Burns seat W/belts			64	333.5	21,344		
	First row single seat W/belts			40	206.5	8,260		
	Second row single seat W/belts			40	240.5	9,620		
	Third row single seat W/belts			40	274.5	10,980		
	Fourth row single seat W/belts			40	308.5	12,340		

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47B		Registration No.		B-879				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment -1000-	Arm
		Weight	Arm	Moment -1000-	Weight	Arm	Moment -1000-			
6 Jun 69	5. Trash can, rear 6. Window curtain (16) 7. Seat track covers 8. First extinguisher, CO ₂				16	533	8,528			
"	Basic data as calculated at Air Asia							17,654	4,284,908	242.7
5 Oct 69	EA-615 R.1 "Schwein Vacuum Regulator Deletion." - C/W a. Removal b. Restrictor Instln.	0.5	22	11	1.5	50	75			
16 Feb 70	EA-C47-34-6 "ATC Transponder Instln - light weight" - C/W a. Receiver-Transmitter KT-75R with tray b. Control Unit KFS-575 with rack c. Antenna KA-28, circuit breaker & cable.	6	535.4	3,212						
		1.1	58.5	64						
		4	297.7	1,191						
"	EA-C47-23-12 R.1 "VOR/ILS instln and VHF-1 & ILS Replacement" - C/W I Equipment removed: 1. Receiver - Transmitter RT-11A & Mount M-31A 2. Dynaverter DV-15A and Mount M-32A 3. Control C-67B				14	130	1,820			
					4	125	500			
					1.5	50	75			

WEIGHT & BALANCE MANUAL

AOFT TYPE: CARGO C-47
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Operations

Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-879				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	<u>Moment</u> <u>1000</u>	Arm
		Weight	Arm	<u>Moment</u> <u>1000</u>	Weight	Arm	<u>Moment</u> <u>1000</u>			
16 Feb 70	II Equipment installed: 1. Transceiver 618M-1A 2. Shockmount 390Y-2 3. Control 313N-4	19	130	2,470						
16 Feb 70	Following troop seats & belt regarded as basic item required for either Passenger/Cargo Configuration or VIP configuration: 1. 1 ea. 3-man, LH side 2. 1 ea. 4-man, RH side	11.5	408.7	4,700						
16 Feb 70	Basic data as calculated for Passenger/Cargo Configuration (including additional 2 ea. 4-man and 4 ea. 3-man troop seats & belts) Basic data as calculated for VIP configuration (Refer to Passenger/Cargo configuration to VIP configuration conversion table for items added and removed).	(91)	-	(24,601)			17,791	4,328,309	243.3	
21 Apr 70	Correction of following cabin troop seats (with belts) arrangement for Pass/Cgo. configuration: 1. Removed: 1 ea. 3-man, LH side (between sta. 378.5 & sta. 438.9)	(544)		(156,352)			18,335	4,484,661	244.6	
					11.5	408.7	4,700			

Operations

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-879				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
21 Apr 70	Removed: 1 ea. 4-man, RH side (between sta. 378.5 & sta. 452.7) 2 ea. 4-man & 4 ea. 3-man LH & RH side (between sta. 177.5 & sta. 375.5) 2. Added: 1 ea. 3-man, LH side (between sta. 385.125 & sta. 424.75) 1 ea. 4-man, RH side (between sta. 385 & sta. 445.125) 1 ea. 4-man & 2 ea. 3-man, LH side (between sta. 187.75 & sta. 366) 1 ea. 4-man & 2 ea. 3-man, RH side (between sta. 187.75 & sta. 366)									
"	Basic data as calculated at Air Asia (for Pass/Cgo configuration)							17,791	4,328,827	243.3
"	Basic data as calculated at Air Asia (for VIP configuration)							18,346	4,489,821	244.7
2 Jul 70	EA-C47-25-91 "Shoulder Harness and Inertia Reel." C/W	9		740						
"	Basic Data as weighed at Air Asia (for Pass/Cgo configuration)							17,840	4,281,455	240.0
"	Basic Data as weighed at Air Asia (for VIP configuration)							18,395	4,441,214	241.4

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model C-47 Registration No. B-879 (S/N 34325)

Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment <u>±000</u>
		Weight	Arm	Moment <u>±000</u>	Weight	Arm	Moment <u>±000</u>			
31 Jan 71	EA-C47-25-91 Rev.1 "Shoulder Harness and Inertia Reel" C/W (Ref. Msg PLNG BKK 310200 A71)	9		740						
26 Apr 71	EA-C47-21-3 Rev. 2 Part I, B "Air Conditioner for VIP Comp't Configuration" C/W 1. Air Conditioner modification - left hand 2. Air Conditioner modification - right hand	1.3	171.5	223						
		1.3	167.5	218						
		0.9	82	74						
15 Dec 71	EA-GEN-25-17 "Flight Manual Holder"									
Unk	Fire Extinguisher, A-20 removed				6.8	536.5	3,648			
5 Mar 72	Basic data as weighed at Air Asia (for Passenger/Cargo Configuration)							17,956	242.3	4,350,137
5 Mar 72	Basic data as weighed at Air Asia (for VIP configuration)							18,523	243.7	4,513,342
23 Mar 72	The following items removed from BEW condition (reference to Msg. CMECH BKK 230420 C72.) 1. Inverter, MG149F 2. Mounting, MT-203/APN 3. Auxiliary hydraulic tank, incl. hydraulic fluid.				26.5	121.2	3,212			
					2.7	103.5	279			
					53.1	110	5,841			
24 Mar 72	Basic data calculated at Air Asia (for Passenger/Cargo Configuration)							17,874	242.9	4,340,805
"	Basic data as calculated at Air Asia (for VIP Configuration)							18,441	244.2	4,504,010

WEIGHT & BALANCE MANUAL

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Weight and Balance Historical Change Record

FORM 224

Aircraft Model		C-47A		Registration No.		43-15559				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
3 Jan 64	Basic A/C as weighed at AMARILL AFB TEX.						18,130	4,509.1	248.7	
26 Oct 65	Bulkhead & door assy	35		15.7			18,165	4,524.8	249.1	
"	Fire Extinguisher CO ₂				12	6.0	18,153	4,518.8	248.9	
"	Basic weight & moment as weighed at AMARILL AFB TEXAS						18,722	4,686.1	250.3	
4 Jun 66	Control Unit Autopilot (J and H)	16	34	0.5						
"	Technical Orders				8	70	0.6			
"	Cushions, seat and back (2)	19	71	1.3						
"	Control Unit, Oxygen (2)				10	80	0.8			
"	Alcohol Prop anti-icer (4.2 gal)				28	81	2.3			
"	Instruction Books				17	132	2.2			
"	Pistol pyrotechnie				3	110	0.3			
"	Receiver R-77/ARC-3				20	125	2.5			
"	R-5/ARN-7	48	125	6.0						
"	RT-18/ARC-1	48	125	6.0						
"	AR-144	33	143	4.7						
"	Chair and safety belt, Radio operator				17	163	2.8			
"	Receiver Radio compass				46	170	7.8			
"	Bottles and oxygen under floor (10)				111	382	42.4			
"	Miscellaneous box				50	506	25.3			
"	Invertor (2)				70	560	39.2			
"	Invertor (1)	35	560	19.6						
"	Air scoop carburator, Ram	20	153	3.1						
"	Rings, engine cowl flap adapter (2)				8	153	1.2			
"	Filter for Non-ram (2)				12	187	2.2			
"	Shoes wing D.F. De-icing (4)				73	253	18.5			
"	Shoes tail De-icing (3)				25	668	16.7			
"	EA-044 C/W	1.5	441	0.1						
"	EA-046 R.1 PCW	4	195	0.8						
"	EA-874 R.2 C/W				8	82	0.7			
"	EA-1104 C/W	0.4	95	0.04						

WEIGHT & BALANCE MANUAL

ACFE. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

WEIGHT & BALANCE MANUAL

Aircraft Model		C-47A		Registration No.		43-15559				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
6 Jun 66	Basic data as computed (chart "A" check No. 2 column)							18,441	4,563.3	247.5
"	Basic data as actually weighed at Air Asia on 6 June 66 (chart "A" check No. 2 column)							17,630	4,330.7	245.6
14 Aug 66	Carpet, floor (Sta. 49.5-177.5)				12	118	1.4			
15 Aug 66	EA-1003 C/W				10	350	3.5			
"	EA-014 R.1 C/W	22	350	7.7						
"	EA-078 R.2 C/W	7.5	360	2.7						
"	EA-084 - C/W	2.5	1174	0.3						
"	EA-144 R.2 C/W	1	258.5	0.3						
"	EA-1103 C/W (EA not published yet)	63	167	10.5						
"	EA-389 C/W) Reweighing is req'd after	10	102	1.0						
16 Aug 66	EA-947 C/W) accomplishment of the EAs.									
17 Aug 66	Basic data as weighed at Air Asia on check column 3 chart A							17,491	4,233.5	242.0
20 May 67	Removal of storage box (hold item w/s)				25	135	3.4			
"	Removal of hot jug rack (hold item w/s)				5	420	2.1			
24 Jul 67	EA-C47-25-73 "Removal of radio operator's chair & safety belt - C/W				16	163	2.8			
"	EA-C47-25-73 "Removal of radio operator's desk - C/W				4	164	0.7			
"	EA-C47-33-1 "Inst of landing light glare shields" - C/W	2	204	0.4						
14 Oct 67	EA-447 R.2 "Mod of Generator & Starter Leads for Firewall Quick Disconnection" - C/W	5	177	0.9						

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		559		Basic Empty Weight Cond.		
Date	Description	Weight Change						Weight	Moment 1000	Arm
		Added			Removed					
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
14 Oct 67	EA-C47-26-12 "Repl of agent used in fire extinguishing system" - C/W				3	195	0.6			
"	Basic data as computed at Air Asia							17,445	4,225.2	242.2
27 Dec 67	EA-C47-25-74 "Instl of log book holder" - C/W	4.5	82	0.4						
"	Instl of seat track	6	335	2.0						
30 Jun 68	Relocation of fire extinguisher				13	536.5	7.0			
"	EA-C47-25-79 R1 fire extinguisher stowage	13	174	2.3						
"	EA-C47-25-82 "Instl of plywood flooring" - PCW (entered for record purpose only wt. affected incl. in previous weighing)									
"	Basic data as computed at Air Asia							17,456	4,222.9	241.9
"	Basic data as weighed at Air Asia							17,655	4,305.4	243.9
Unk	EA-874 R.3 "Removal of propeller de-icer system" - PCW (entered for record purpose only wt. affected incl. in previous weighing)									
19 Mar 69	Basic data as weighed at Air Asia							17,751	4,344.9	244.8

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ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model. C-47A		Registration No. 559								
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
14 Jun 69	EA-C47-25-89 "Cargo Net at Navigator Compartment" - C/W, Wt/Bal affected as follows: (1) Cargo net installed (2) Reinf. of partition & seat track installation	8.5	147	1.3						
		14.5	147	2.1						
14 Feb 70	ATC Transponder Instln. - light wt. - C/W (EA-C47-34-6) (1) Receiver/Transmitter KT-75R with tray (2) Control Unit KFS-575 with rack, Antenna KA-28, circuit breaker & cable	6	5354	3.2						
		4	2977	1.2						
9 Nov 70	1. Support, troop bench L. H. side				37.5	303.5	11.4			
"	2. Support, troop bench R. H. side				40	314	12.6			
"	3. Troop bench and belts, 1 each 5-man and 2 each 4 man L. H. side				79.4	303.5	24.1			
"	4. Troop bench and belts 2 each 5-man and 1 each 4 man R. H. side				85.3	314	26.8			
"	5. Support, troop nylon seat, L. H. side	12	3035	3.6						

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Weight and Balance Historical Change Record

Aircraft Model **C-47A** Registration No. **43-15559**

Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment 1000
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
9 Nov 70	6. Support, troop nylon seat, RH side	14	314	4.4						
"	7. Troop nylon seat and belts LH side	70	303.5	21.3						
"	8. Troop nylon seat and belts RH side	59	314	18.5						
"	Basic data as calculated at Air Asia						17,698	244.4	4,325.8	
1 Dec 70	Basic data as weighed at Air Asia						17,746	243.2	4,315.2	
27 Jun 71	EA-C47-25-91 Rev.1 "Shoulder Harness and Inertia Reel" - C/W									
	1. 2 seat belts removed				2	70	0.1			
	2. 2 inertia reels, shoulder harnesses, lap belts and fittings etc. installed	11	80	0.9						
"	Basic data as calculated at AAM SGN (Passenger/Cargo Configuration)						17,755	243.1	4,316.0	

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.			43-15949			
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
15 Apr 57	Transmitter T-67/ARC-3	21	124	2.6						
"	Receiver, R-66/ARC-3	21	124	2.6						
"	Junction box, J-68/ARC-3	16	124	2.0						
"	Transceiver, RT-178/ARC-27	71	124	8.8						
"	Indicator master flux gate compass AN5752-2	6	124	0.7						
"	Receiver, R-5A/ARN-7	48	125	6.0						
"	Amplifier, C-1 compass	13	131	1.7						
"	Amplifier flux gate compass 12003-1	12	131	1.6						
"	Receiver, R-268/ARN-5	14	133	1.9						
"	Receiver, R-540/ARN-14	34	133	4.5						
"	Dynamotor, DY-66/ARN-14	16	133	2.1						
"	Receiver, BC-1333	4	133	0.5						
"	Transmitter, T-47/ART-13	63	144	9.1						
"	Receiver, BC-348	36	145	5.2						
"	Dynamotor, AN3514-1	31	161	5.0						
"	Antenna, AT-172/ARN-14	6	91	0.6						
"	Antenna loop LP-21	10	150	1.5						
"	Antenna, AT-256/ARN	2	165	0.3						
"	Antenna, blade sense	4	268	1.1						
"	Gyro caging CM-5	2	280	0.6						
"	Transmitter, C-1 compass	7	294	2.1						
"	Antenna, AN104/VHF	3	387	1.2						
"	Transmitter RT-82/APX-6	39	590	23.0						
"	Basic wt & mom as calculated at Randolph AFB, Tex.						18,423	4,533.0	246.1	
"	Basic wt & mom as weighed at Randolph AFB, Tex.						18,066	4,404.6	243.8	
29 Jul 57	Basic wt & mom as weighed at PAC Chino, Calif.						17,571	4,324.5	246.1	
27 Jun 58	Receiver, liaison, BC-348				36	163	5.9			

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Weight and Balance Historical Change Record

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Aircraft Model		C-47A		Registration No.		43-15949				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
27 Jun 58	Transmitter, AN3514-1				62	163	10.1			
8 Aug 59	Dynamotor, DY-17A/ART-13				28	133	3.7			
"	Basic wt & mom as calculated							17,445	4,304.8	246.8
"	Basic wt & mom as weighed at Stead AFB Nevada							17,755	4,416.8	248.8
4 Nov 60	Ladder				13	89	1.2			
"	Alcohol - previous TCTO change									
"	Sheilds				6	119	0.7			
"	Foot stool - engineer's	5	120	0.6						
"	Shelf - previous omitted	-		-						
"	Dynamotor (See DD-365C entry, dated 8 Aug 59)									
"	Pyrotechnic pistol & shells	8	175	0.4						
"	Navigator's seat	15	156	2.3						
"	Driftmeter B-5	2	170	0.3						
"	Instruction books	17	172	2.9						
"	Portable oxygen bottles (3 - additional)	15	281	4.2						
"	T.O. list not available to enter TCTOs (wt change total +43)									
"	Basic wt & mom as calculated							17,798	4,427.0	248.7
"	Basic wt & mom as weighed at Kelly AFB Tex.							18,065	4,402.0	243.7
10 May 61	Control, C-626/ARA-20 (T.O. K-1-558)	9	122	1.1						
19 May 61	Basic wt & mom as recalculated at SAFB, Tex.							18,074	4,403.1	243.6
18 Jan 62	T.O. 1C-1-532 P/C/W 26 Oct 60 incl.:									
"	Generator, Type O-1				60		9.6			
"	Wiring generator				19		5.6			

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-15949				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
18 Jan 62	Resistors, regulator, lights & F.T.C.				12		1.5			
"	Generators Type P-1A	88		14.6						
"	Inverters AN3514-1	70		39.9						
"	Inverter compt	21		11.8						
"	"J" box & structure, relays & F.T.C.	7		1.0						
"	Panel power sys. "J" box	9		1.0						
"	Wiring harnesses	78		14.9						
"	Misc	13		1.2						
"	T.O. 1C-47-503 P/C/W 18 Apr 60									
"	Basic wt & mom as calculated at SAFB, Tex.							18,074	4,403.1	243.6
16 Nov 62	Keyer K-65/ARA-26 (item previously removed)				5	122	0.6			
"	Basic wt & mom as weighed at SAFB, Tex.							18,075	4,502.5	249.1
10 Nov 64	Cylinder oxygen portable (6 ea)				30	177.5	5.3			
"	Bottles & oxygen				111	382	42.4			
"	Bottles & oxygen				102	483	49.3			
"	Basic wt & mom as weighed at SAFB, Tex.							17,771	4,360.3	245.4
16 Jun 66	Control units, oxygen				10	80	0.8			
"	Alcohol pop, anti-icer (4.2 gal)				28	81	2.3			
"	Control, C-404A/A				2	60	0.1			
"	Control, C-1158/APX-6				3	60	0.2			
"	Foot stool, nav's or engr's (stowed)				5	120	0.6			
"	Indicator, APN-2	26	133	3.5						
"	Table, leg & supports, nav				32	134	4.3			
"	Indicator, DD-251/ARN				2	114	0.2			
"	Transmitter T-67/ARC-3				21	124	2.6			
"	Receiver, R-66/ARC-3				21	124	2.6			
"	Junction box, J-68/ARC-3				16	124	2.0			
"	R-5/ARN-7	48	125	6.0						
"	Control, C-411A/A									

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-15949				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
16 Jun 66	RT-18/ARC-1	48	125	6.0						
"	AR-144	33	143	4.7						
"	Racks, command, FT-220 & FT-226	6	143	0.9						
"	Transmitter, liaison BC-375	50	143	7.2						
"	Navigator's seat				15	156	2.3			
"	Driftmeter, type B-5				2	170	0.3			
"	Transmitter AN/ART-13	62	163	10.1						
"	Instruction books				17	172	2.9			
"	Cylinder, oxygen portable type A-6 (6)				30	1775	5.3			
"	Release, manual parapack				1	445	0.4			
"	Fire extinguisher TB-4				13	512	7.0			
"	Box cargo tie-down				100	510	51.0			
"	Water tank installation, wash basin				6	577	3.5			
"	Control surface locks & container (stowed)				9	580	5.2			
"	Cargo tie-down				75	570	42.8			
"	Air scoop, carb, ram	20	153	3.1						
"	Air scoop, carb, non-ram & filter prov (Alt.)				88	171	15.0			
"	Filter, carb, air, non-ram scoop (2) (Alt.)				22	188	4.1			
"	Exhaust heat exchanger & tail pipe with flame dampener prov. (Alt.)				77	191	14.7			
"	Shoes, wing D.F. de-icing (4)				73	253	18.5			
"	Shoes, tail, de-icing (3)				25	668	16.7			
"	Alcohol, R/H wing fillet				66	320	21.1			
"	EA-044 R.1 "Installation of first aid kit stowage" - C/W	0.5	87	0.4						
"	EA-874 R.2 "Removal of prop de-icer tank and pump" - C/W				8	82	0.7			
"	EA-1104 "Installation of main fuel dip stick" - C/W	0.5	95	-						
"	Basic wt & mom as weighed at Air Asia							17,398	4,253.2	244.5

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-15949				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
17 Jun 66	Safety belts, passenger seat (27 ea)	26	309	8.1						
"	Basic wt & mom as calculated at Air Asia TNN						17,424	4,261.3	244.6	
1 Oct 66	EA-084 "Engine section fire prevention modifications" - C/W	63	167	10.5						
4 Oct 66	EA-014 R.1 "Control locks & gear pin compt" - C/W	7.5	360	2.7						
"	EA-078 R.2 "Installation of position light flashing sys." - C/W	1	2585	0.3						
		2.5	1174	0.3						
5 Oct 66	EA-144 R.2 "Installation of extra crew seat" - C/W	10	102	1.0						
"	EA-389 R.2 "Plywood flooring on C-47 aircraft" - C/W									Reweighting req'd
"	EA-947 R.1 "Standardization of power-plant & firewalls" - C/W									Reweighting req'd
7 Oct 66	EA-C47-25-1 "Standardization of cargo tie-down fitting" - C/W	22	350	7.7	10	350	3.5			
"	Basic wt & mom as weighed at Air Asia						17,388	4,204.7	241.8	
31 Jan 67	EA-C47-33-1 "Installation of landing light glare shield" - C/W	2	204	0.4						
20 May 67	Removal of storage box (hold item on work sheet)									25
"	Removal of hot jug rack (hold item on work sheet)									135
"	EA-C47-25-73 "Removal of radio operator's seat & safety belt" - C/W									5
"	EA-C47-25-73 "Removal of radio operator's desk" - C/W									420
										16
										163
										4
										164
										0.7

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-15949				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
19 Nov 67	EA-447 R.2 "Modification of generator & starter leads for firewall quick disconnection" - C/W	5	177	0.9						
"	EA-C47-26-12 "Replacement of agent used in fire extinguishing system" - C/W				3	195	0.6			
"	Basic wt & mom as calculated at Air Asia TNN							17,342	4,196.5	242.0
29 Apr 68	EA-C47-25-75 R.1 "Replacement of existing pilot's & copilot's seat cushion core with light moltoprene foam sheet" - C/W (seat back cushions only)				6.6	71	0.5			
"	EA-C47-25-79 R.1 "Standardization of fire extinguisher stowage location" - C/W	12.5	180	2.3	8	89	0.7			
8 Oct 68	Basic data as calculated at Air Asia							17,340	4,197.6	242.1
"	Basic data as weighed at Air Asia							17,547	4,241.5	241.7

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-16083				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	<u>Moment</u> 1000	Arm
		Weight	Arm	<u>Moment</u> 1000	Weight	Arm	<u>Moment</u> 1000			
30 Sep 63	Basic data as weighed at Amarillo AFB, Texas							18,515	4,567,956	746.7
4 Jun 66	Control C-679/APX-6				3	60	180			
"	Indicator ID-310/ARN				3.5	41	144			
"	Antenna AS-133/APX				2	82	164			
"	Control unit radio C-1514/A				5	60	300			
"	Indicator MN58-CAT	1.25	40	50						
"	Control unit C-4/ARN-7 (2 ea.)	3.5	70	245						
"	Indicator ID-251/ARN				2	114	228			
"	Amplifier AM-26/AIC				9	122	1,098			
"	Transmitter T-67/ARC-3				21	124	2,604			
"	Receiver R-77/ARC-3				21	124	2,604			
"	Junction box J-68/ARC-3				16	124	1,984			
"	Amplifier C-1 compass				13	131	1,703			
"	Receiver R-443B/ARN-5				14	133	1,862			
"	Radio compass unit R-101 (LT)				35	124	4,340			
"	Mount, MT-273/ARN				6	124	744			
"	Radio compass R-5/ARN-7 (2 ea.)	52	124	6,448						

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-16083				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
4 Jun 66	VHF transceiver AN/ARC-1	48	124	5,952						
"	Dynamoter, AN-3514-1				31	161	4,991			
"	Receiver/Transmitter RT-220/ARN-21				45	143	6,435			
"	Mount, MT-926/ARN-21				6	143.5	861			
"	Indicator ID-307/ARN				3.5	143.5	502			
"	HF transceiver T-10-RA	10	146	1,460						
"	Antenna coupler CU-1000	6	148	888						
"	G tile cabinet	10	160	1,600						
"	Transmitter RT-279/APX				39	590	23,010			
"	EA-084 - C/W	63	167	10,521						
"	EA-874 - C/W				8	82	656			
"	EA-014 - C/W	7.5	360	2,700						
"	EA-947 - C/W (Weigh A/C after mod.)									
"	EA-389 - C/W (A/C to be weighed upon completion of service)									
"	EA-1104 - C/W	0.4	95	38						
6 Jun 66	Basic data as calculated at Air Asia							18,434	4,543,448	246.5

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WEIGHT AND BALANCE HISTORICAL CHANGE RECORD

FOP-227

Aircraft Model		C-47A		Registration No.		43-16083				
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment <u>-1000</u>
		Weight	Arm	Moment <u>-1000</u>	Weight	Arm	Moment <u>-1000</u>			
6 Jun 66	Basic data as weighed at Air Asia							17,526	246.3	4,315,527
23 Jan 67	EA-C47-33-1 "Instl. of landing light glare shields" - C/W	2	204	408						
4 Sep 67	EA-C47-25-73 "Removal of radio operator's chair & desk" - C/W (1) Chair & safety belt (2) Desk				16	163	2,771			
					4	164	656			
8 Nov 67	EA-C47-26-12 "Repl. of agent used in fire extinguishing system" - C/W				3	195	585			
11 May 68	EA-C47-25-75 R. 2 "Repl. of existing pilot's & co-pilot's seat cushion core with light weight moltoprene foam cores" (seat back cushions - C/W)				6.6	71	469			
12 May 68	Basic data as weighed at Air Asia							17,702	242.1	4,285,392
17 Aug 68	EA-C47-25-77 "Instln. of emergency escape rope" - C/W	2	86	172						
12 Mar 69	Basic data as calculated at Air Asia							17,704	242.1	4,285,564
23 Jan 70	EA-C47-34-5 "ATC TRANSPONDER INSTALLATION, Light Weight" - C/W KT-75R R/T unit with tray 047-1744-01 KFS-575 Control with rack 047-1801-01 KA-28 Circuit Breaker & Cable	6	26	156						
		1.1	50	55						
		2.5	75	188						
23 Jan 70	Basic data as calculated at Air Asia							17,714	242.0	4,285,963

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WEIGHT AND BALANCE HISTORICAL CHANGE RECORD

Aircraft Model C-47A Registration No. 43-16083

Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment ±000
		Weight	Arm	Moment ±000	Weight	Arm	Moment ±000			
15 Mar 72	EA-C47-25-19 Rev. 2 "Fire Extinguisher Stowage" - C/W	12.5	175	2,188	6.8	175	1,190			
29 Mar 72	Basic weight & moment as weighed at Air America, Saigon							17,695	238.4	4,217,594
29 Apr 72	Relocation of Inverter from Fwd Radio Compt. to Lavatory Compt.	33	573.5	18,926	33	166	5,478			
"	Basic weight & moment as calculated at Air America, Saigon							17,695	239.1	4,231,042

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.			147			
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	<u>Moment</u> 1000	Arm
		Weight	Arm	<u>Moment</u> 1000	Weight	Arm	<u>Moment</u> 1000			
17 Jun 68	Removal of distance measuring equipment AN/APN-2 (EA-C47-34-4) - C/W									
	1. MT FT-146				2.5	108			270	
	2. MT FT-409				2.5	95			938	
	3. MT FT-406				0.5	85			111	
	4. Antenna AT-1/APN-2				1	20			20	
	5. Antenna AT-2/APN-2				9.5	62			589	
	6. Control Box C-3				1.3	85			111	
	7. Cable & Connectors				20	100			2,000	
"	Relocation of ladder				-	-			585	
"	Removal of sick bag holder				6	350			2,100	
9 Sep 68	Basic data as calculated at Air Asia (cargo configuration)							17,691	4,309,164	243.6
"	Basic data as weighed at Air Asia (cargo configuration)							17,798	4,374,262	245.8
"	Basic Wt. & Mom. as brought from Weight & Balance Report (passenger configuration)							18,386	4,580,314	249.1
11 Mar 69	4 ea. thermos flasks removed				18	535.5			9,639	
"	Basic data as calculated at Air Asia (passenger configuration)							18,368	4,570,675	248.8
"	Basic data as calculated at Air Asia (cargo configuration)							17,780	4,364,623	245.5

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		147				
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	<u>Moment</u> <u>1000</u>	Arm
		Weight	Arm	<u>Moment</u> <u>1000</u>	Weight	Arm	<u>Moment</u> <u>1000</u>			
9 Apr 69	Basic data as calculated at Air Asia							18,022	4,439,446	246.3
12 Aug 69	EA-573 Rev. 2 "Mod. of instrument panel and cockpit lighting system" - C/W	3	50.5	152						
15 Feb 70	Basic data as calculated at Air Asia							18,025	4,439,598	246.3
10 Mar 70	EA-C47-34-6 "ATC Transponder Instln - light weight" - C/W									
	a. Receiver - Transmitter KT-75R with tray	6	535.4	3,212						
	b. Control KFS-575 with rack	1.1	58.5	64						
	c. Antenna KA-28, circuit breaker & cable	4	297.7	1,191						
"	Basic data as calculated at Air Asia							18,036	4,444,065	246.4
17 May 70	EA-C47-23-2 R1 "Repl of VHF AN/ARC-3 with 618M-1A" - C/W									
	Receiver R-77/ARC-3				20.5	125	2,562.5			
	Mounting MT-237/ARC-3				1.6	125	200.0			
	X'mtr T-67/ARC-3				21.0	125	2,625.0			
	Mounting MT-238/ARC-3				1.8	125	225.0			
	Junction Box J68/ARC-3				19.9	125	2,487.5			
	Mounting MT-236/ARC-3				1.2	125	150.0			
	Control C-404 A/A				1	58	58.0			
	X'ceivr 618M-1A	19	125	2,375						
	Shock mount 390Y-2	1.7	125	212.5						
	Frequency Selector 313N-4	1	50	50						
	Cable	2	87.5	175						

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Weight and Balance Historical Change Record

Aircraft Model.		C-47D		Registration No.		43-16147		Basic Empty Weight Cond.		
Date	Description	Weight Change						Weight	Arm	Moment 1000
		Added			Removed					
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
17 May 70	Basic data as calculated at SGN and double checked by Wt. Engr. at TNN on 29 May 70							17,993	246.7	4,438,570
28 Aug 70	Basic data as weighed at Air Asia							17,876	246.8	4,411,489
21 Nov 70	(1) Supports, troop bench LH side				37.5	303.5	11,381			
	(2) Supports, troop bench RH side				40	314	12,560			
	(3) Troop bench and belts 1 each 5-man and 2 each 4-man, LH side				79.4	303.5	24,098			
	(4) Troop bench and belts 2 each 5-man and 1 each 4-man RH side				65.3	314	26,784			
	(5) Supports, nylon troop seat, LH side	12	303.5	3,642						
	(6) Supports, nylon troop seat, RH side	14	314	4,396						
	(7) Nylon troop seats and belts LH side	70	303.5	21,245						
	(8) Nylon troop seats and belts RH side	59	314	18,526						
21 Nov 70	Basic data as calculated at Air Asia							17,789	246.5	4,384,475
Unk	Replacement of portable fire extinguisher Type A-20 with Type 4TB at Sta. 175	12.5	157	2,188	6.8	175	1,190			
Unk	Replacement of portable CO ₂ fire extinguisher Type 2TB with Type 4TB at Sta. 179.5	6.8	179.5	1,221	8	179.5	1,436			
18 Jun 71	EA-C47-25-91 Rev.1 "Shoulder Harness and Inertia Reel"	9		740						
25 Jun 71	Basic data as calculated at Air Asia							17,803	246.4	4,385,998

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-48084				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
29 Apr 55	Basic wt & mom as weighed at SBAMA							18,632	4,778.8	256.5
13 Jul 56	Basic wt & mom as weighed at Pacific Airmotive Corporation, Chine, Calif. (UHF Mod per IC-1-38 accomplished)							18,295	4,494.1	245.7
16 Aug 56	Basic wt & mom as weighed							19,473	4,486.4	230.4
14 Aug 57	Basic wt & mom as weighed at SBAMA							18,866	4,690.9	248.6
18 Sep 58	Passenger seat, single - removed				26	10.7				
"	Transmitter, liaison T-47/ART-13				66	6.9				
"	Basic wt & mom as calculated at SBAMA							18,774	4,670.3	248.8
"	Basic wt & mom as weighed at SBAMA							18,816	4,737.9	251.8
10 Feb 59	Received, liaison BC-348				36	5.4				
"	Basic wt & mom as calculated							18,780	4,732.5	252.0
1 Sep 59	Basic wt & mom as weighed at SBAMA							18,906	4,785.2	253.1
17 Mar 60	Keyer, KY-65/ARA-26				4	120	0.5	18,902	4,784.7	253.1
20 Sep 60	Lamp, inter aircraft signal				6		0.5			
"	Hot cup & mount	7		0.4						
"	Fan, cooling, Delco				5		0.9			
"	Technical orders (Est wt)	15		2.6						
"	Bottle, portable oxygen	3		0.5						
"	Bunk & mattress	65		36.3						
"	Coffee bar	90		37.8						
"	Basic wt & mom as calculated at SBAMA							19,071	4,851.4	254.4
"	Basic wt & mom as weighed at SBAMA							19,289	4,899.1	254.0

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-48084				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
10 Oct 61	Aircraft "G" file				8		0.7			
"	Navigator's foot stool	5		1.6						
"	Dynamotor DY-17/ART-13A				25		3.3			
"	Control channel selector, C-626/ARC-27				9		1.2			
"	Junction box C-166/AIC-3				3		0.4			
"	Filter F-21/ARA-9				1		0.1			
"	Receiver, liaison BC-348	36		5.4						
"	Control panel keyer C-790/ARA-26				1		0.2			
"	Drift meter type B-5				4		0.6			
"	Seat, single passenger				26		9.7			
"	Seat, double passenger				52		19.4			
"	Seat, single passenger				26		10.7			
"	Container, trash	10		5.3						
"	Wash basin & support				6		3.3			
"	Water tank installation, wash basin				6		3.5			
"	Basic wt & mom as calculated at SBAMA							19,173	4,857.3	253.3
"	Basic wt & mom as weighed at SBAMA							19,324	4,918.6	254.5
"	Ballast				150	560	84.0			
"	Basic wt & mom as calculated at SBAMA							19,174	4,834.6	252.1
15 Oct 62	Basic wt & mom as weighed							19,041	4,840.0	254.2
14 Oct 63	Basic wt & mom as weighed							19,091	4,853.6	254.2
"	Basic wt & mom as brought forward							19,091	4,853.6	254.2
11 Jun 66	EA-044 first aid kit provision - C/W	1.5	441	0.7						
"	EA-046 R.1 Replacement of hand wobble pumps with electric fuel booster pumps and removal of cross feed system - P/C/W									
"	Part A	4	197	0.8						
"	Part B				12	195	2.3			
"	EA-078 R.2 instln of position light flashing system - C/W	2.5	117.4	0.3						
		1.0	25.5	0.3						

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-48084				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
11 Jul 66	EA-874 R.2 removal of propeller deicer tank and pump - C/W				8	82	0.7			
"	EA-014 R.2 control lock and gear pin comp't - C/W	7.5	360	2.7						
"	EA-1104 instln of main fuel tank dipstick	0.5	95	0.1						
"	VHF control panel C-404A				2	68	0.1			
"	Radio power selector panel P-214A/20W				4	68	0.3			
"	ADF control panel C-411A				7	68	0.5			
"	Control unit, oxygen (2)				10	80	0.8			
"	Alcohol, prop anti-icer (4.2 gal)				28	81	2.3			
"	Box, aircraft "G" file				10	86	0.9			
"	Bottle, portable oxygen (1)				3	130	0.4			
"	Indicator, course ID-250/ARN				3	125	0.4			
"	Transmitter, VHF T-67/ARC-3				23	130	3.0			
"	Receiver, VHF R-77/ARC-3				21	130	2.7			
"	Power jet box, VHF T-68/ARC-3				8	130	1.0			
"	Control radio indicator ID-251/ARN				2	130	0.3			
"	Dehydrator A674776.1				2	136	0.3			
"	Receiver, radio compass R-5/ARN-7	47	130	6.1						
"	Transceiver, VHF RT-18/ARC-1	48	130	6.2						
"	Receiver BC-348				36	150	5.4			
"	Filter, F-21/ARA-9				3	150	0.5			
"	Receiver AR-144	54	150	8.1						
"	Fire extinguisher, CO ₂ type 47B				10	536	5.4			
"	Switch box SA-26/U				1	538	0.5			
"	Air scoop carb. non ram & filter prov.(2)				88	171	15.0			
"	Shoes, wing deicing (4)				73	253	18.5			
"	Shoes, tail deicing (3)				25	668	16.7			
"	Skyfelt living, main cargo comp't				96	325	31.2			
"	Loop antenna, ADF LP21	11	166	1.8						
"	Basic wt & mom as calculated at Air Asia							18,793	4,771.5	253.9
"	Basic wt & mom as weighed at Air Asia							17,340	4,215.6	243.1

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-48084					
Date	Description	Weight change						Empty weight			
		Added			Removed			Weight	Moment 1000	Arm	
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000				
28 Aug 66	EA-084 engine section fire prevention modification - C/W	63	167	10.5							
"	EA-144 R.2 installation of extra crew seat - C/W	10	102	1.0							
"	EA-1003 standardization of cargo tie-down fittings - C/W	22	350	7.7	10	350	3.5				
"	EA-947 standardization of power plant and firewalls - C/W	(Reweighting Req'd)									
29 Aug 66	Basic wt & mom as weighed at Air Asia							17,179	4,120.3	239.9	
"	Basic wt & mom as brought forward							17,179	4,120.3	239.9	
27 Oct 66	Installation of permanent ballast in tail section	95	637	60.5							
"	Basic wt & mom as calculated at Air Asia							17,274	4,180.8	242.0	
20 May 67	Removal of storage box in radio comp't				25	135	3.4				
"	Removal of hot jug rack				5	535	2.7				
"	EA-C47-25-73 removal of radio operator's chair and safety belt - C/W				16	163	2.8				
"	EA-C47-25-73 removal of radio operator's desk - C/W				4	164	0.7				
23 Aug 67	EA-447 R.1 firewall quick disconnect mod - C/W	5	177	0.9							
"	Replacement of pilot's and copilot's seat back cushions (EA-C47-25-75 R.2)				6.6	71	0.5				
"	EA-C47-26-12 replacement of agent used in fire extinguishing system - C/W				3	195	0.6				
"	EA-C47-25-79 R.1 relocation of A-20 fire extinguisher - C/W	7	180	1.3	7	36.5	3.8				
11 Jul 68	EA-C47-25-77 instln of emergency escape rope - C/W	2	86	0.2							

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Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		43-48084				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
11 Aug 68	Basic wt. & mom. as calculated at Air Asia							17,221	4,168.7	242.1
"	Basic wt. & mom. as weighed at Air Asia							17,402	4,235.2	243.4
24 Dec 68	EA-573 R.2 "Mod of instrument panel and cockpit lighting system" - C/W	3	50.5	0.2						
11 Mar 69	Basic data as calculated at Air Asia							17,405	4,235.3	243.3
31 Dec 69	Removal of propeller slinger rings (EA-874 R.4)				5.5	103	0.6			
24 Feb 70	Basic Wt. & Mom. as calculated at Air Asia							17,400	4,234.7	243.4
28 Mar 70	EA-C47-34-6 "ATC Transponder Instln. - light weight"									
	a. Receiver-Transmitter KT-75R with tray	6	535.4	3.2						
	b. Control KFS-575 with rack	1.1	58.5	0.1						
	c. Antenna KA-28, circuit breaker & cable	4	297.7	1.2						
"	Basic Wt. & Mom. as calculated at Air Asia							17,411	4,239.2	243.5

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		45-994				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
29 Jun 61	Basic weight as computed							18,549	4,636,922	
5 Jul 62	Basic weight & mon were actually weighed at Air Asia							18,229	4,377,311	
"	Wash basin & support removed				6	547	3,282			
"	Wash water tank removed				6	577	3,462	18,217	4,370,567	
21 Nov 63	60 lbs ballast installed	60	637	38,220						
"	EA-874 - C/W				8	82	656	18,269	4,408,131	
17 Mar 64	Basic data as actually weighed at Air Asia							18,203	4,375,903	
8 Jul 64	35 lbs ballast added	35	637	22,295				18,238	4,398,198	
21 Apr 66	Basic data as weighed at Air Asia, on check column #1							18,328	4,427,929	241.6
31 Oct 66	EA-1104 "Instl. of main fuel tank dipstick" - C/W	0.5	95	48						
"	EA-C47-25-1 "Std. of cargo tie-down fitting" - C/W (Old EA-1003)	22	350	7,700	10	350	3,500			
6 Feb 67	EA-C47-33-1 "Instl. of handing light glare" - C/W	2	204	408						
"	EA-C47-23-1 "Replacement of VHF AN/ARC-3 with 618M-1A" - C/W									
"	Equipment removed:									
"	(1) RT-18/ARC-1 receiver transmitter				47	123.5	5,805			
"	(2) MT-230/ARC mounting				4.8	123.5	593			
"	(3) Control box C-45/ARC-1				1	61	61			
"	Equipment installed:									
"	(1) Transceiver 618M-1A	19	123.5	2,347						

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		45-994				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment ±000	Arm
		Weight	Arm	Moment ±000	Weight	Arm	Moment ±000			
6 Feb 67	(2) Shockmount 390Y-2	1.7	123.5	210						
"	(3) Frequency selector 313N-4	1	61	61						
20 May 67	Removal of storage box (Hold item on W/S)				25	135	3,375			
"	Removal of hot jug rack (" " " ")				5		2,100			
10 Jul 67	EA-C47-21-2 "Instl. of cabin ventilation compliance kit" - C/W	4.3		1,902						
"	EA-C47-25-73 "Removal of radio operator's chair & safety belt and removal of radio operator's desk				16	163	2,771			
					4	164	656			
19 Sep 67	Oil - 54 gal. removed (Transfer to standard items)				405	184.6	74,763			
"	Following items transfer from standard items:									
"	(1) Fire extinguisher (Type A-20)	7	87	609						
"	(2) Axe	3	176	528						
"	(3) Fire extinguisher (CF ₃ Br)	5	120	600						
"	(4) Fire extinguisher	13	496	6,448						
"	(5) Fire extinguisher (Type A-20)	7	538	3,766						
"	(6) Ladder	9	535	4,815						
"	Basic data as computed at Air Asia							17,905	4,363,747	243.7
27 Nov 67	EA-C47-26-12 "Repl. of agent used in fire extinguishing system" - C/W				3	195	585			
"	EA-C47-25-74 "Instl of Log Book Holder" - C/W	4.5	82	369						

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		45-994				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
18 Feb 68	EA-C47-25-75 R.2 "Repl. of existing pilot & co-pilot's seat back cushion core with light wt. moltoprene foam sheet" - C/W	6.6	71	469						
"	Removal of receiver/transmitter RT-1/APN-2 - PCW (dated unk)				34	108	3,672			
"	Removal of indicator BC-929 - PCW (dated unk)				26	95	2,470			
"	Basic data as computed at Air Asia							17,853	4,357,858	244.1
"	Basic data as weighed at Air Asia							17,917	4,397,920	245.5
20 May 68	EA-C47-34-4 "Removal of distance measuring equipment type AN/APN-2" - C/W									
	1. MT FT = 416				2.5	108	270			
	2. MT FT = 409				2.5	95	238			
	3. Control box C-3/APN-2				1.5	85	111			
	4. MT FT = 406				0.5	85	43			
	5. Antenna AT-1/APN-2				1	20	20			
	6. Antenna AT-2/APN-2				9.5	62	589			
	7. Cable & connectors				20	100	2,000			
"	Removal of fire extinguisher, type CF ₃ Br (EA-C47-25-79 R.12)				5.8	120	696			
"	Relocation of fire extinguisher, type A-20 (EA-C47-25-79 R.1)	7	179	1,253						

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.		45-994				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
20 May 68	EA-C47-25-80 "78 passenger/cargo convertible configuration" - C/W 1. Instln. of seat track only 2. Removal of sick bag holder 3. Relocation of ladder stowage 4. Instln. of life raft tie-down provision	6	338	2,028	6	350	2,100			
		9	470	4,230	9	535	4,815			
		2	536	1,072						
"	Basic data as computed at Air Asia (For pax/cgo configuration) Note: Cargo configuration and passenger configuration refer to Wt/Bal Report for detail.							17,876	4,391,865	245.7
"	Basic wt. & mom. as brought from Wt/Bal Report (cargo config.)							17,721	4,344,056	245.1
"	Basic wt. & mom. as brought from Wt/Bal Report (passenger config.)							18,309	4,550,108	248.5
8 Aug 68	EA-C47-25-77 "Instln. of emergency escape rope" - C/W	2	86	172						
8 Nov 68	EA-997 "Instln. of thermos flask bracket" - C/W	4	538	2,152						
12 Mar 69	Basic data as calculated at Air Asia (passenger/cargo config.)							17,882	4,392,037	245.7
"	Basic data as calculated at Air Asia (cargo config.)							17,727	4,346,380	245.2
"	Basic data as calculated at Air Asia (passenger config.)							18,315	4,532,432	248.6

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Weight and Balance Historical Change Record

Aircraft Model		C-47D		Registration No.			45-994			
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment <u>1000</u>
		Weight	Arm	Moment <u>1000</u>	Weight	Arm	Moment <u>1000</u>			
Unk	EA-C47-25-82 "Installation of Plywood Flooring" - PCW (Entered for record purpose only) (Wt. affected incl. previous weighing)									
"	EA-874 R.3 "Removal of Propeller Deicer System" - PCW (entered for record purpose only) (Wt. affected incl. previous weighing)									
16 Feb 70	Basic data as calculated at Air Asia. as follows: 1. For Passenger/Cargo Configuration 2. For Cargo Configuration 3. For Passenger Configuration									
							17,882	245.7	4,394,189	
							17,727	245.2	4,346,380	
							18,315	248.6	4,552,432	
11 Apr 70	EA-C47-34-6 "ATC Transponder - light weight" - C/W a. Receiver - Transmitter KT-75R with tray b. Control KFS-575 with rack c. Antenna KA-28, incuit breaker & cable									
		6	535.4	3,212						
		1.1	58.5	64						
		4	297.7	1,191						
"	Removal of propeller slinger rings (EA-874 R.4)				4	116.5	466			
"	Replacement of fire extinguisher Type CO ₂ with type A-20	6.8	175	1,190	12.5	175	2,188			
"	Basic Data as calculated at Air Asia						17,883	245.9	4,397,192	
"	Basic Data as weighed at Air Asia						17,904	246.1	4,406,427	

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Weight and Balance Historical Change Record

Aircraft Model.		C-47D		Registration No.		45-994				
Date	Description	Weight Change						Basic Empty Weight Cond.		
		Added			Removed			Weight	Arm	Moment 1000
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
Unk	Replacement of fire extinguisher Type A-20 with CO ₂	12.5	175	2,188	6.8	175	1,190			
25 Jun 71	EA-C47-25-91 Rev. 1 "Shoulder Harness and Inertia Reel." - C/W	9	-	740						
25 Jun 71	Basic data as calculated at Air Asia for Passenger/Cargo Configuration							17,919	246.0	4,408,165

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WEIGHT & BALANCE MANUAL

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CARGO C-47 WEIGHT & BALANCE DATA

A. STANDARD CONFIGURATIONS

1. Passenger/Cargo Configuration - 27 Nylon or Metal Seats
2. Air-Drop Configuration - 27 Nylon or Metal Seats plus Roller Conveyor Tracks Installation
3. Passenger Configuration - 27 Burns or Rumbold seats

B. STANDARD CONFIGURATION OPERATIONAL EMPTY CONDITION - OPERATIONAL ITEMS

Standard Configuration	Maximum Cabin Seats	Operational Empty Weight includes Operational Items						
		Removable Passenger Seats	Crew	Standard Nacelle Oil	SEA Crew Equipment	First Kit	Wheel Chocks	Special Operational Items
Pax/Cgo	27	Nil	2 (Capt, F/O -340 lbs	27 gals each Nacelle 54 gals- 405 lbs	Parachute, Survival Kit/Vest, Pilot Flight Kit, etc. 60 lbs	6 lbs	36 lbs	Nil
Air-Drop	27	Nil	Same as above	Same as above	Same as above	Same as above	Same as above	Roller Con- veyor Tracks Installation
Pax	27 [∅]	9D + 9S Burns or Rumbold	Same as above	Same as above	Same as above	Same as above	Same as above	Nil

∅ 27 nylon seats folded against side-walls, not useable in passenger configuration.

NOTE: Current Operational Empty Weight and Operational Empty Weight Index for the 3 standard configurations are listed in Section 2.9 the Operational Empty Weight/Operational Empty Weight Index Table.

C. NON-STANDARD CONFIGURATIONS

Occasionally non-standard configurations are required. The duty dispatcher shall compute the Operational Empty Weight and Operational Empty Weight Index for a non-standard configuration by adding/subtracting Operational Items weights/index changes to/from the current Operational Empty Weight/Operational Empty Weight Index of the standard configuration which is nearest to the non-standard configuration required.

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D. NON-STANDARD CONFIGURATIONS - OPERATIONAL ITEMS WEIGHTS/INDEX CHANGES

Operational Item	Weight (lbs)	Location	Index Change When Item	
			Added	Removed
4 Man Nylon Seat	18	Comp 1	Negligible	Negligible
		Comp 2	-0.05	+0.05
3 Man Nylon Seat	12	Comp 2	Negligible	Negligible
		Comp 3	+0.15	-0.15
Burns Double Seat (1D-2H)	42	Comp 2	Negligible	Negligible
		Comp 3	+0.55	-0.55
		Comp 4	+0.95	-0.95
Burns Single Seat (9121-1)	21	Comp 2	Negligible	Negligible
		Comp 3	+0.25	-0.25
Modified Rumbold Double Seat	56	Comp 2	Negligible	Negligible
		Comp 3	+0.70	-0.70
		Comp 4	+1.30	-1.30
Modified Rumbold Single Seat	34	Comp 2	Negligible	Negligible
		Comp 3	+0.45	-0.45
Roller Conveyor Tracks Installation	323	Comp 1 - 4	+2.5	-2.5
LORAN (APN-9)	36	Cockpit	-0.6	+0.6
Wash Water	5 gal	Tail Section (Rear)	+1.4	-1.4
	4 $\frac{1}{4}$ gal		+1.1	-1.1
X-Crew (incl. baggage)	200	Cockpit	-3.6	+3.6
AFS (incl. baggage)	200	Comp 3	+3.7	-3.7
AFD (incl. baggage)	180	Comp 3	+3.3	-3.3
Male F/A (incl. bagg.)	180	Comp 3	+3.3	-3.3
Thermos Flasks (4)	18	Comp 4	+0.5	-0.5

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E. OPERATIONAL EMPTY WEIGHT - OPERATIONAL ITEMS

1. Variable Emergency Equipment - Life Raft(s) and Life Vest(s)

Item.	Weight (lbs)	Location	Index Change
25 Man Life Raft	150	Tail Section (Rear)	+ 4.5
20 Man Life Raft	130	"	+ 3.8
15 Man Life Raft	100	"	+ 3.0
AD-4 Life Vest	2	Associated with Crew/passenger seat	Negligible
Emergency Radio AN/CRT-3	37	Tail Section (Rear)	+ 0.25
Emergency Radio RESCU/1	5	Tail Section (Rear)	Negligible

2. Passenger Comfort & Service/Commissary Items

Category	Item	Weight (lbs)	Location	Index Change
Passenger Comfort Items	Blanket	3	Associated with passenger seat	Negligible
	Pillow/Pillow Case	1	Associated with passenger seat	Negligible
Passenger Service/Commissary Items	Food/Beverage Items and Serving Equipment	As Required	Comp. 4	+ 0.25 for each 10 lbs added

3. Extra Equipment (if not already included in the Basic Empty Weight)

Item, weight and location will depend on the requirement. The item, weight and location shall be inserted in the Distribution Data section of the Cargo C-47 Weight & Balance Manifest and the weight and balance change involved computed as a Payload item.

F. CARGO C-47 ROLLER CONVEYOR/TROOP SEATS/PLUSH SEATS/FOLDABLE LIGHT WEIGHT NYLON SEATS CONFIGURATION TABLE

The following table serves as a quick reference for installation of Roller Conveyor, Troop Seats or Plush Seats on Company or Bailed Cargo C-47 aircraft.

Aircraft No.	Roller Conveyor Installation	Troop Seats (Metal or Nylon)	Plush (VIP) Seats	Maximum Seating
B-817	Yes	27	-	27
B-879	"	27	4D & 4S	27
B-933	"	27	4D & 4S	27
43-15559	"	27	9D & 9S	27
43-16083	"	27	-	27
43-16147A	"	27	9D & 9S	27
43-48084	"	27	-	27
45-994	"	27	9D & 9S	27

CARGO C-47 OPERATIONAL EMPTY WEIGHT/STARTING INDEX TABLE

A. OPERATIONAL ITEMS LIST

1. PASSENGER/CARGO CONFIGURATION OPERATIONAL ITEMS LIST

<u>Operational Item</u>	<u>Weight (lbs)</u>	<u>Index Change</u>
a. Captain & First Officer	340	-6.5
b. Standard Nacelle Oil - 54 gal	405	-3.2
c. SEA Crew Equipment	60	-1.1
d. First Aid Kit	6	-0.1
e. Wheel Chocks	36	+1.0

Total Operational Items Weight
Total Index Change

B-817	B-879	B-933	6555T-C7	6809T-C7	7191T-C7	7808T-C7	766-994
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
847	847	847	847	847	847	847	847
-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9

2. AIR DROP CONFIGURATION OPERATIONAL ITEMS LIST

a. Captain & First Officer	340	-6.5
b. Standard Nacelle Oil - 54 gal	405	-3.2
c. SEA Crew Equipment	60	-1.1
d. First Aid Kit	6	-0.1
e. Wheel Chocks	36	+1.0
f. Roller Conveyor Tracks	323	+2.5

Total Operational Items Weight
Total Index Change

✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
1170	1170	1170	1170	1170	1170	1170	1170
-7.4	-7.4	-7.4	-7.4	-7.4	-7.4	-7.4	-7.4

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3. PASSENGER CONFIGURATION OPERATIONAL ITEMS LIST

<u>Operational Item</u>	<u>Weight (lbs)</u>	<u>Index Change</u>
a. Captain & First Officer	340	-6.5
b. Standard Nacelle Oil - 54 gal	405	-3.2
c. SEA Crew Equipment	60	-1.1
d. First Aid Kit	6	-0.1
e. Wheel Chocks	36	+1.0
f. 10 Double & 9 Single Burns Seats	609	+5.9

Total Operational Items Weight

Total Index Change

B-817	B-879	B-933	43-15559	43-16083	43-16147	43-48084	45-994
			✓		✓		✓
			✓		✓		✓
			✓		✓		✓
			✓		✓		✓
			✓		✓		✓
			✓		✓		✓
			1456		1456		1456
			-4.0		-4.0		-4.0

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Aircraft No. & Type	Config.	Type & No. of Seats	Basic Empty Weight/Index	Opnl Items Wt./Index Change	Opnl Empty Weight/Index
B-817 Cargo C-47A	Pax/Cgo	Cockpit 4 Cabin 27 Nylon	17,645/30.7	+847/-9.9	18,492/20.8
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,815/23.3
B-879 Cargo C-47B	Pax/Cgo	Cockpit 3 Cabin 27 Nylon	17,874/23.9	+847/-9.9	18,721/14.0
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,044/16.5
	VIP	Cockpit 3 Cabin 4D & 4S Burns 8 Nylon	18,441/25.1	+847/-9.9	19,288/15.2
B-933 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Nylon	17,576/25.6	+847/-9.9	18,423/15.7
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,746/18.2
	VIP	Cockpit 3 Cabin 4D & 4S Burns 8 Nylon	18,005/26.9	+847/-9.9	18,852/17.0
43-15559 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Nylon	17,755/24.5	+847/-9.9	18,602/14.6
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,925/17.1
	Pax	Cockpit 3 Cabin 9D & 9S Burns (27 Nylon not usable)	Same as above	+1,414/-5.4	19,169/19.1

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Aircraft No. & Type	Config.	Type & No. of Seats	Basic Empty Weight/Index	Opnl Items Wt./Index Change	Opnl Empty Weight/Index
43-16083 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Metal	17,695/17.5	+847/-9.9	18,542/7.6
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,865/10.1
43-16147A Cargo C-47D	Pax/Cgo	Cockpit 3 Cabin 27 Nylon	17,846/29.7	+847/-9.9	18,693/19.8
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,016/22.3
	Pax	Cockpit 3 Cabin 9D & 9S Burns (27 Nylon not usable)	Same as above	+1,414/-5.4	19,260/24.3
43-48084 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Metal	17,411/25.9	+847/-9.9	18,258/16.0
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,581/18.6
45-994 Cargo C-47D	Pax/Cgo	Cockpit 4 Cabin 27 Nylon	17,863/27.9	+847/-9.9	18,710/18.0
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,033/20.5
	Pax	Cockpit 4 Cabin 9D & 9S Modified Rumbold (27 Nylon not usable)	Same as above	+1,640/-3.6	19,493/24.3

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Aircraft No. & Type	Config.	Type & No. of Seats	Basic Empty Weight/Index	Opnl Items Wt./Index Change	Opnl Empty Weight/Index
B-879 Cargo C-47B	Pax/Cgo	<u>Cockpit</u> 3 <u>Cabin</u> 27 Nylon	17,840/24.8	+847/-9.9	18,687/8.9
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,010/11.4
	VIP	<u>Cockpit</u> 3 <u>Cabin</u> 4D & 4S Burns 8 Nylon	18,395/20.1	+847/-9.9	19,242/10.2
B-933 Cargo C-47A	Pax/Cgo	<u>Cockpit</u> 3 <u>Cabin</u> 27 Nylon	17,455/29.8	+847/-9.9	18,302/19.9
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,625/22.4
	VIP	<u>Cockpit</u> 3 <u>Cabin</u> 4D & 4S Burns 8 Nylon	17,872/31.0	+847/-9.9	18,719/21.1
43-15559 Cargo C-47A	Pax/Cgo	<u>Cockpit</u> 3 <u>Cabin</u> 27 Bench	17,785/27.3	+847/-9.9	18,632/17.4
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,955/19.9
	Pax (B)	<u>Cockpit</u> 3 <u>Cabin</u> 10D & 8S Burns	17,543/26.2*	+1,650/-0.4	19,193/25.8
	Cargo	<u>Cockpit</u> 3	18,978/21.4	+847/-9.9	18,390/16.3

*BEW/index reduced due to removal of troop seats 242 lbs index change -1.1

If nil F/A, wash water, then OEW/index

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Aircraft No. & Type	Config.	Type & No. of Seats	Basic Empty Weight/Index	Opnl Items Wt./Index Change	Opnl Empty Weight/Index
43-16083 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Bench	17,714/22.6	+847/-9.9	18,561/12.7
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,884/15.2
43-16147 Cargo C-47D	Pax/Cgo	Cockpit 3 Cabin 27 Metal	17,876/30.9	+847/-9.9	18,723/21.0
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,046/23.5
	Pax (B)	Cockpit 3 Cabin 10D & 8S Burns	17,634/29.8*	+1,657/-0.1	19,291/29.7
	Cargo	Cockpit 3	Same as above* *BEW/index reduced due to removal of troop seats 242 lbs index change -1.1 If nil F/A, wash water, the OEW/index 19,069/25.0	+847/-9.9	18,481/19.9
43-48084 Cargo C-47A	Pax/Cgo	Cockpit 3 Cabin 27 Metal	17,411/25.9	+847/-9.9	18,258/16.0
	Air Drop	Same as above	Same as above	+1,170/-7.4	18,581/18.6
45-994 Cargo C-47D	Pax/Cgo	Cockpit 4 Cabin 27 Nylon	17,904/29.6	+847/-9.9	18,751/19.7
	Air Drop	Same as above	Same as above	+1,170/-7.4	19,074/22.2
	Pax (B)	Cockpit 4 Cabin 10D & 8S Burns	17,749/28.9*	+1,650/-0.4	19,399/28.5
	Cargo	Cockpit 4	Same as above* *BEW/index reduced due to removal of troop seats 155 lbs index change -0.7 If nil F/A, wash water, the OEW/index 19,184/24.1	+847/-9.9	18,596/19.0

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A/C No. & Type	Basic Empty Wt./Index	Basic Empty Weight Includes Standard Items				Basic Empty Weight Excludes Standard Items		
		No. of Crew	Type & No. of Seats	Boots/Alcohol	Special Items	Special Items	Wt.	Index Change
<u>43-15559 (Cargo C-47A)</u>								
Cargo Config. (Nil pax seats) - 50 lbs removable ballast should be installed at station 575 for flight with only standard items.								
	18329 15.5	2 (Capt, F/O)	Cockpit 3	No	Same items as B-817 Pax/Cgo Config.	LORAN (APN-9) Wash Water (4½ gals) X-crew in Cockpit (incl. baggage) Male F/A (incl. baggage) - Rear Cabin (Comp. 3)	36 35 200 180	-0.6 +1.1 -3.6 +3.3

Pax/Cgo Config. (27 pax seats - Nil F/A seat*)								
	18562 16.6	2 (Capt, F/O)	Cockpit 3 Cabin 27 Bench	No	Same as above	Same as above		

Air-Drop Config. (27 pax seats - Nil F/A seat* - Roller Conveyor Tracks Installation)								
	18885 20.0	2 (Capt, F/O)	Cockpit 3 Cabin 27 Bench	No	Same items as above & Roller Conveyor Tracks	Same as above & Air Freight Specialist (with parachute) - Rear Cabin (Comp. 3) Air Freight Dispatcher (with parachute) - Rear Cabin (Comp. 3)	200 180	+3.7 +3.3

Pax Config. (B) (28 pax seats - Nil F/A seat*)								
	19117 24.9	3 (Capt, F/O, Male F/A)	Cockpit 3 Cabin 10D & 8S Burns	No	Same items as B-817 Pax/Cgo Config. & Wash Water	LORAN (APN-9) X-crew in Cockpit (incl. baggage)	36 200	-0.6 -3.6
(If nil F/A, Wash Water, then BEW/Index 18902/20.5)								
* F/A occupies 1 pax seat in Rear Cabin (Comp. 3).								

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A/C No. & Type	Basic Empty Wt./Index	Basic Empty Weight Includes Standard Items				Basic Empty Weight Excludes Standard Items		
		No. of Crew	Type & No. of Seats	Boots/Alcohol	Special Items	Special Items	Wt.	Index Change
43-16083 (Cargo C-47A) - 100 lbs removable ballast should be installed at Sta. 575 for flight with only standard items.								
Pax/Cgo Config.	(27 pax seats - Nil F/A seat*)							
18515	2	Cockpit	No	Same items as B-817 Pax/Cgo Config.	LORAN (APN-9)	36	-0.6	
11.9	(Capt. F/O)	3 Cabin			Wash Water (4 1/2 gals)	35	+1.1	
		27 Bench			FRO or X-crew in FRO seat (incl. baggage)	200	-2.3	
					Male F/A (incl. baggage) - Rear Cabin (Comp. 3)	180	+3.3	

Air-Drop Config.	(27 pax seats - Nil F/A seat* - Roller Conveyor Tracks Installation)							
18838	2	Same as above	No	Same items as B-817 Air-Drop Config.	Same items as B-817 Air-Drop Config.			
15.3	(Capt. F/O)							

43-16117 (Cargo C-47D)								
Pax/Cgo Config.	(27 pax seats - nil F/A seat*)							
18833	2	Cockpit	No	Same item as B-817 Pax/Cgo Config.	Same items as 43-15559 Pax/Cgo Config.			
18.9	(Capt. F/O)	3 Cabin			Wash Water (5 gals)	42	+1.3	
		27						

Pax Config.	(B) (28 pax seats - Nil F/A seat*)							
19395	3	Cockpit	No	Same items as 43-15559 Pax Config.	Same items as 43-15559 Pax Config.			
27.5	(Capt. F/O, Male F/A)	3 Cabin	NOTE: 1. Mid Cabin (Comp. 2) - 4 Double & 4 Single Seats					
	(If nil F/A, Wash Water, then BEW/Index 19173/22.9)	10D & 8B Burns	2. Rear Cabin (Comp. 3) - 4 Double & 4 Single Seats					
			3. Tail Section (Comp. 4) - 2 Double Seats					

Cargo Config.	(Nil pax seat)							
18591	2	Cockpit	No	Same items as 43-15559 Cgo Config.	Same items as 43-15559 Cgo Config.			
17.8	(Capt. F/O)	3			Wash Water (5 gals)	42	+1.3	

Air-Drop Config.	(Nil pax seat - Roller Conveyor Tracks Installation)							
18914	2	Cockpit	No	Same items as 43-15559 Air-Drop Config.	Same items as 43-15559 Air-Drop Config.			
21.3	(Capt. F/O)	3						

* F/A occupies 1 pax seat in Rear Cabin (Comp. 3).

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A/C No. & Type	Basic Empty Wt./ Index	Basic Empty Weight Includes Standard Items				Basic Empty Weight Excludes Standard Items		
		No. of Crew	Type & No. of Seats	Boots/ Alco-hol	Special Items	Special Items	Wt.	Index Change
<u>43-48084 (Cargo C-47A)</u> - 95 lbs fixed ballast installed at Sta. 637. 40 lbs removable ballast installed at Sta. 575 for flight with only standard items.								
<u>Pax/Cgo Config. (27 pax seats - Nil F/A seat*)</u>								
	18216 14.6	2 (Capt F/O)	Cockpit 4 <u>Cabin</u> 27 Metal	No	Same items as B-817 Pax/Cgo Config.	LORAN (APN-9) FRO or X-crew in FRO seat (incl. baggage) X-crew in Cockpit (incl. baggage) Male F/A (incl. Baggage) - Rear Cabin (Comp. 3)	36 200 200 180	-0.6 -2.3 -3.6 +3.3

<u>Air-Drop Config. (27 pax seats - Nil F/A seat* - Roller Conveyor Tracks Installation)</u>								
	18539 18.0	2 (Capt F/O)	Same as above	No	Same items as B-817 Air-Drop Config.	Same as above and Air Freight Specialist (with parachute) - Rear Cabin (Comp. 3) Air Freight Dispatcher (with parachute) - Rear Cabin (Comp. 3)	200 180	+3.7 +3.3

*F/A occupies 1 pax seat in Rear Cabin (Comp. 3).

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		No. of Crew	Type & No. of Seats	Boots/Alcohol	Special Items	Special Items	Wt.	Index Change
<u>45-994 (Cargo C-47D) - 93 lbs fixed ballast installed at Sta. 637.</u>								
<u>Pax Config. (B) (28 pax seat - Nil F/A seat*)</u>								
	19341 26.9	3 (Capt, F/O, Male F/A)	Cockpit 4 Cabin 10D & 8S Burns	No	Same items as B-817 Pax/Cgo Config. & Wash Water (4 1/4 gals)	Same items as 43-15559 Pax Config.		
(If nil F/A, Wash Water, then BEW/Index 19126/22.5)								

<u>Pax/Cgo Config. (27 pax seats - Nil F/A seat*)</u>								
	18693 18.1	2 (Capt, F/O)	Cockpit 4 Cabin 27 Nylon	No	Same as B-817 Pax/Cgo Config.	Same as 43-15559 Pax/Cgo Config.		

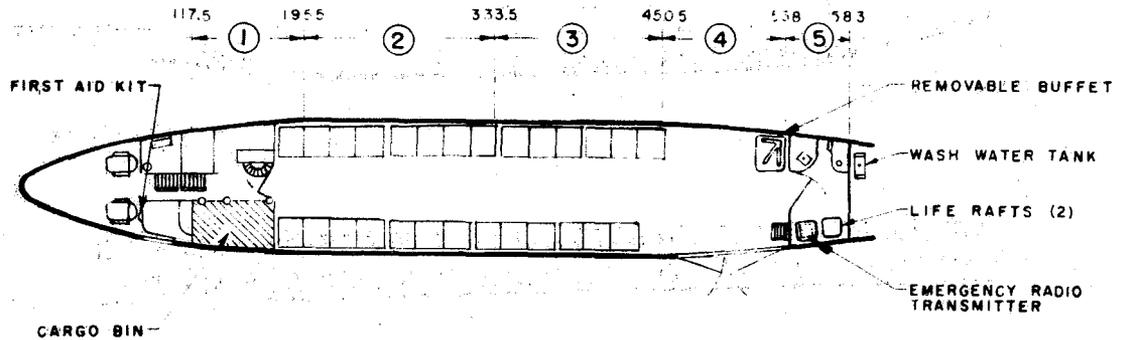
<u>Cargo Config. (Nil pax seats)</u>								
	18538 17.4	2 (Capt, F/O)	Cockpit 4	No	Same as above	Same as above		

<u>Air-Drop Config. (27 pax seats - Nil F/A seat* - Roller Conveyor Tracks Installation)</u>								
	19016 21.5	2 (Capt, F/O)	Cockpit 4 Cabin 27 Nylon	No	Same as above & Roller Conveyor Tracks	Same items as 43-15559 Air-Drop Config.		
* F/A occupies 1 pax seat in Rear Cabin (Comp. 3).								

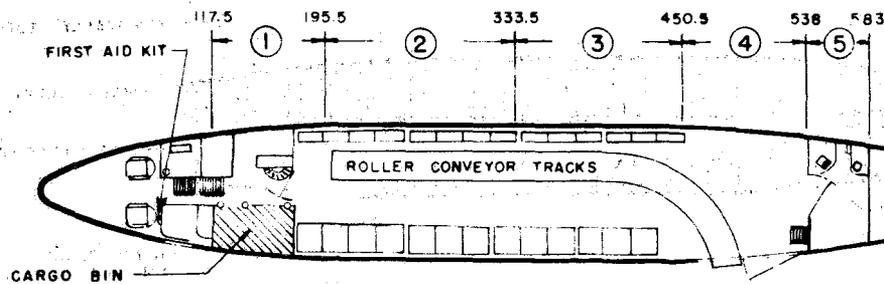
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CARGO C-47 SEATING CONFIGURATION CHARTS



PAX/CGO CONFIGURATION - 27 NYLON OR CANVAS SEATS



AIR-DROP CONFIGURATION

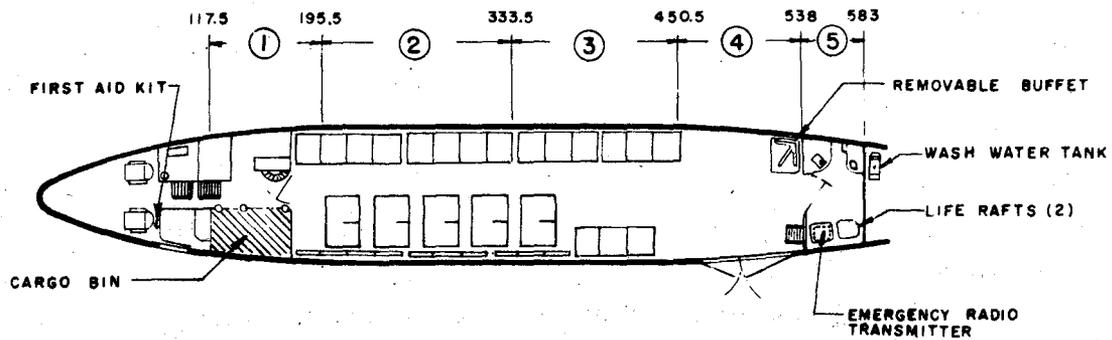
WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

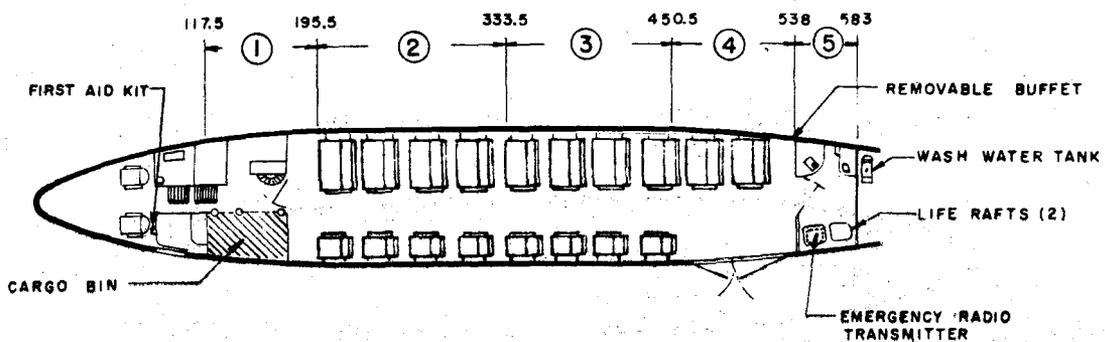
SECTION: A - 2.10

PAGE: 2

EFFECTIVE: 14 Mar. 1968



PASSENGER CONFIGURATION (A) - 27 SEATS (17 NYLON OR CANVAS SEATS & 5 DOUBLE WARREN MCARTHUR SEATS)



PASSENGER CONFIGURATION (B) - 28 SEATS (10 DOUBLE & 8 SINGLE BURN SEATS)

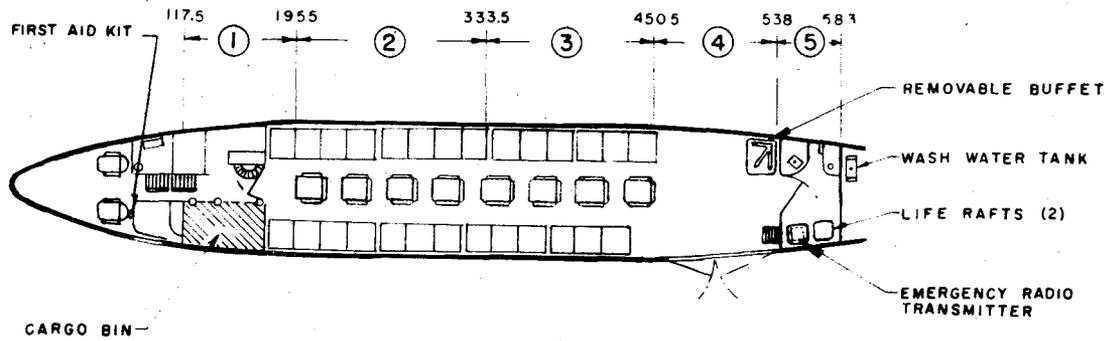
WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

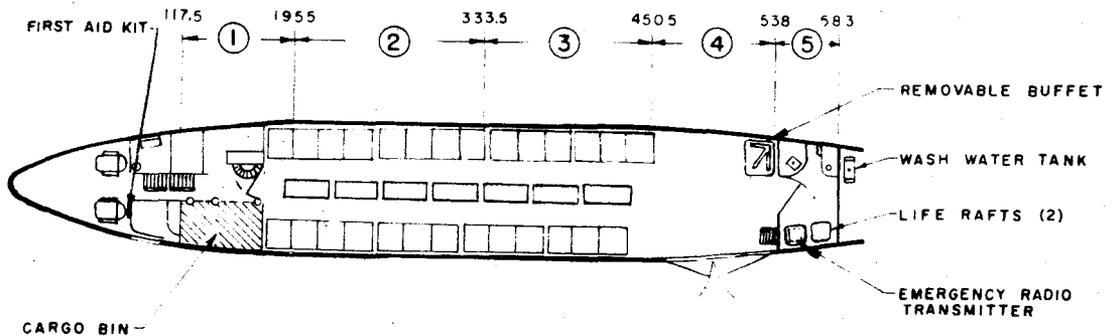
SECTION: A - 2.10

PAGE: 3

EFFECTIVE: 14 Mar. 1968



HI-DENSITY PASSENGER CONFIGURATION (A) - 35 SEATS
(27 NYLON OR CANVAS SEATS & 8 SINGLE PLUSH SEATS)

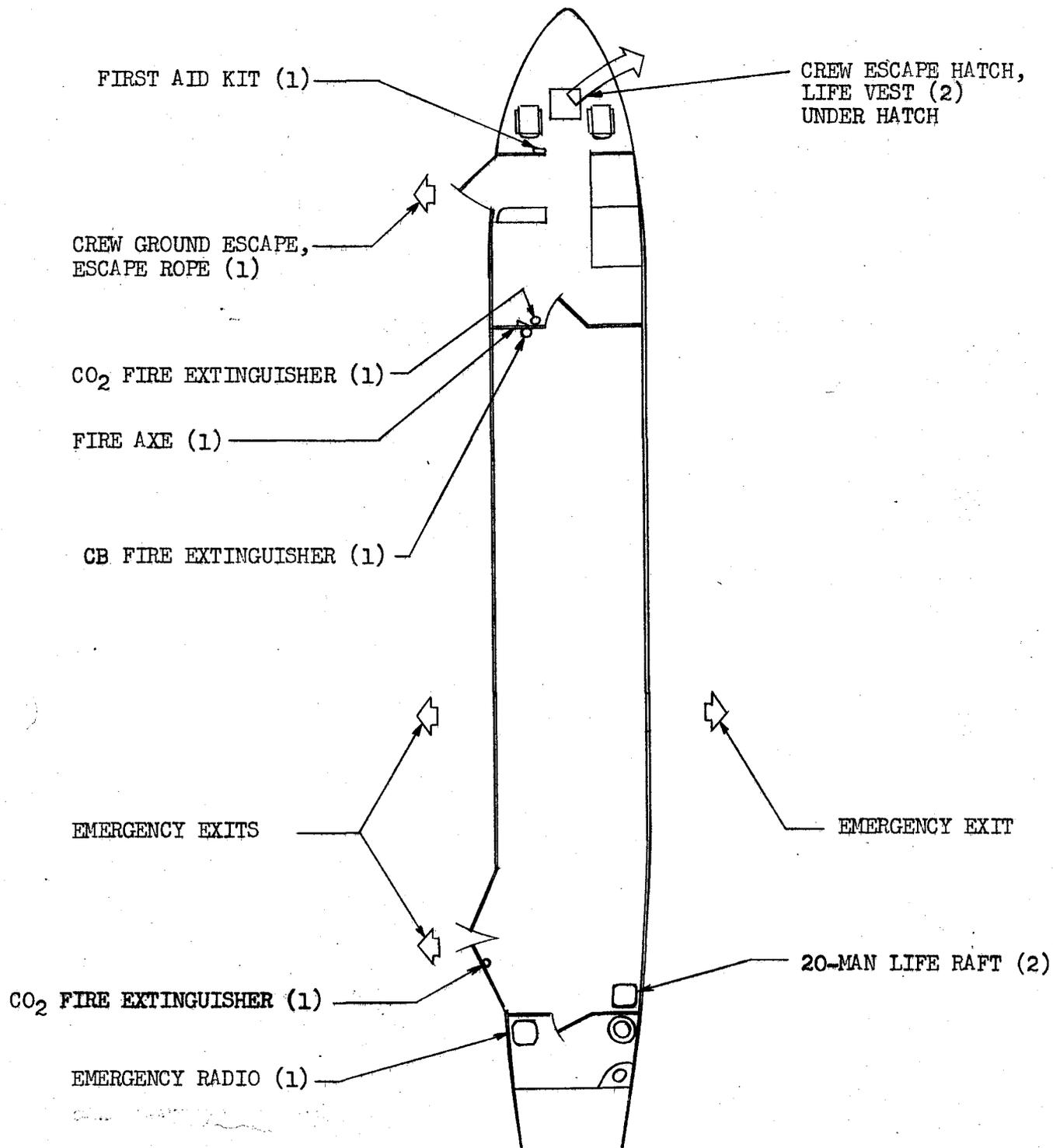


HI-DENSITY PASSENGER CONFIGURATION (B) - 41 SEATS (27 NYLON OR
CANVAS SEATS & 7 DOUBLE FOLDABLE LIGHT WEIGHT NYLON SEATS)

WEIGHT & BALANCE MANUAL

CARGO C-47
ACFT. TYPE: A-2.11
SECTION: 1
PAGE: 4 Sep. 1968
EFFECTIVE:

CARGO C-47 EMERGENCY EQUIPMENT CHART



WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.1/R3
 PAGE: 1
 EFFECTIVE: 2 Jul. 1970

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47B	B-879	34325	VIP		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Periodical weighing				

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	21 Apr. 1970	18,346	244.7	4,488,821	14.5	26.2
REVISED RECORD	2 Jul. 1970	18,395	241.4	4,441,214	12.3	20.1

WEIGHT ENGINEER: G. H. Wu SUPVR., WEIGHT & BALANCE: H. W. Tsai APPROVED: H. S. Lui
 MANAGER, ENGINEERING DESIGN DEPARTMENT

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REMARKS:
 Refer page 2 for details of conversion of Passenger/Cargo Configuration to VIP configuration.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.1/R3
 PAGE: 2
 EFFECTIVE: 2 Jul. 1970

CONVERSION OF
PASSENGER/CARGO CONFIGURATION
 TO
VIP CONFIGURATION

<u>ITEM ADDED/REMOVED/RELOCATED</u>	<u>WT(LB)</u>	<u>ARM(IN.)</u>	<u>MOM. (IN-LB)</u>	<u>INDEX CHANGE</u>
Items added:				
1. Floor Carpet	32	264.5	8,464	+ 0.01
2. Removable Bulkhead (Sta. 351.1)	103	351.1	36,163	+ 0.91
3. Table, Forward	21	221	4,641	- 0.09
4. Table, Aft	21	306	6,426	+ 0.09
5. 1st Row, Modified Double Seat, P/N A3-80-318	64	193.8	12,403	- 0.44
6. 1st Row, Modified Single Seat, P/N A3-80-319	40	208.9	8,356	- 0.22
7. 2nd Row, Modified Double Seat	64	248.2	15,885	- 0.10
8. 2nd Row, Modified Single Seat	40	241.9	9,676	- 0.08
9. 3rd Row, Modified Double Seat	64	277.8	17,779	+ 0.09
10. 3rd Row, Modified Single Seat	40	275.9	11,036	+ 0.05
11. 4th Row, Modified Double Seat	64	334.2	21,389	+ 0.46
12. 4th Row, Modified Single Seat	40	310.9	12,436	+ 0.19
13. Window Curtain (16)	8	264.5	2,116	Negligible
14. Seat Track Cover	8	264.3	2,114	Negligible
15. Trash Can, Rear	16	533	8,528	+ 0.43
16. Fire Extinguisher, CO ₂	9.5	348	3,306	+ 0.08
17. Troop Seat & Belts, 1 ea 4-man, LH	22.5	394.5	8,876	+ 0.30
Items removed:				
1. Troop Seats & Belts, 1 ea. 4-man and 2 ea. 3-man, LH side	-45.5	276.7	-12,590	- 0.06
2. Troop Seats & Belts, 1 ea. 4-man and 2 ea. 3-man, RH side	-45.5	276.7	-12,590	- 0.06
3. Troop Seat & Belts, 1 ea. 3-man, LH	-11.5	404.8	- 4,655	- 0.16
<u>OVERALL WT. MOM., & INDEX CHANGE</u>	<u>+555</u>		<u>+159,759</u>	<u>+ 1.40</u>

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.1
 PAGE: 3
 EFFECTIVE: 27 Sep. 1968

Aircraft Number: B-879

CONVERSION OF VIP COMPARTMENT CONFIGURATION TO STANDARD CARGO CONFIGURATION

The following check list is applicable to the conversion of VIP Compartment configuration to standard Cargo configuration:

<u>ITEM</u>	<u>WEIGHT (LB)</u>	<u>ARM (IN.)</u>	<u>MOMENT (IN.-LB)</u>	<u>INDEX CHANGE</u>	
ITEM REMOVED	Floor Carpet	- 32	264.5	- 8,464	- 0.01
	Removable Bulkhead (Sta. 351.1)	-103	351.1	-36,163	- 0.91
	Table, Forward	- 21	220.5	- 4,631	+ 0.09
	Table, Aft	- 21	308.5	- 6,479	- 0.10
	1st Row, Double Burns Seat	- 44	195.5	- 8,602	+ 0.30
	1st Row, Single Seat	- 28	206.5	- 5,782	+ 0.16
	2nd Row, Double Burns Seat	- 44	245.5	-10,802	+ 0.08
	2nd Row, Single Seat	- 28	240.5	- 6,734	+ 0.06
	3rd Row, Double Burns Seat	- 44	283.5	-12,474	- 0.09
	3rd Row, Single Seat	- 28	274.5	- 7,686	- 0.03
	4th Row, Double Burns Seat	- 44	333.5	-14,674	- 0.31
	4th Row, Single Seat	- 28	308.5	- 8,638	- 0.13
	Window Curtain (26)	- 14	303.7	- 4,252	- 0.06
	Seat Track Cover	- 7	264.5	- 1,852	Negl.
	ITEM ADDED	1st Row, 3-man Nylon Troop Seat (LH & RH)	+ 24	207.8	+ 4,987
2nd Row, 3-man Nylon Troop Seat (LH & RH)		+ 24	267.3	+ 6,415	+ 0.01
3rd Row, 4-man Nylon Troop Seat (LH & RH)		+ 36	337.4	+12,146	+ 0.27
4th Row, 3-man Nylon Troop Seat (LH)		+ 12	408.7	+ 4,904	+ 0.18
4th Row, 4-man Nylon Troop Seat (RH)		+ 18	415.6	+ 7,481	+ 0.28.
Relocation of CO ₂ Fire Extinguisher (9.5 lbs) from Sta. 179 to Sta. 249.6	- -	- -	+ 657	- 0.09	
<u>NET CHANGE</u>	<u>- 372</u>		<u>- 100,643</u>	<u>- 0.43</u>	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.2/R3
 PAGE: 1
 EFFECTIVE: 4 Aug. 1971

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	REGISTRATION NO.	SERIAL NO.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47A	B-933	13817	VIP		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Periodic weighing				

BASIC EMPTY WEIGHT CONDITION

(INCLUDES STANDARD ITEMS AS CHECKED ✓ IN THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	2 Jun. 1970	17,872	246.9	4,412,863	16.3	31.0
REVISED RECORD	4 Aug. 1971	18,234	247.5	4,513,475	16.7	31.6

WEIGHT ENGINEER	SUPVR., WEIGHT & BALANCE	APPROVED	MANAGER, ENGINEERING DESIGN DEPARTMENT
G. H. Wu	H. W. Tsai		H. S. Lui

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REMARKS:

Refer to the attached sheet for details of conversion of Passenger/Cargo Configuration to VIP Configuration.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.2/R3
 PAGE: 2
 EFFECTIVE: 4 Aug. 1971

CONVERSION OF
PASSENGER/CARGO CONFIGURATION
TO
VIP CONFIGURATION

ITEMS ADDED/REMOVED	WEIGHT (LB)	ARM (IN.)	MOMENT (IN-LB)	INDEX CHANGE
ITEMS ADDED :				
1. Floor Carpet	32	264.5	8,464	+ 0.01
2. Removable Bulkhead	103	351.1	36,163	+ 0.91
3. Forward Table RH Side	21	220.5	4,631	- 0.09
4. Aftward Table RH Side	21	308.5	6,479	+ 0.10
5. 1st Row Modified Double Burns 1D2H Seat, Facing Aft, RH Side	44	195.5	8,602	- 0.30
6. 1st Row Modified Single Burns 1D1C Seat, Facing Aft, LH Side	28	190.5	5,334	- 0.20
7. 2nd Row Modified Double Burns 1D2H Seat, Facing Fwd, RH Side	44	245.5	10,802	- 0.08
8. 2nd Row Modified Single Burns 1D1C Seat, Facing Fwd, LH Side	28	250.5	7,014	- 0.04
9. 3rd Row Modified Double Burns 1D2H Seat, Facing Aft, RH Side	44	283.5	12,474	+ 0.09
10. 3rd Row Modified Single Burns 1D1C Seat, Facing Fwd, LH Side	28	287.5	8,050	+ 0.07
11. 4th Row Modified Double Burns 1D2H Seat, Facing Fwd, RH Side	44	333.5	14,674	+ 0.31
12. 4th Row Modified Single Burns 1D1C Seat, Facing Fwd, LH Side	28	322.5	9,030	+ 0.17
13. Window Curtains (16)	8	264.5	2,116	Negl.
14. Seat Track Covers	8	264.3	2,114	Negl.
15. Trash Can, Aft	16	533	8,528	+ 0.43
16. Passenger Seat & Belts, 4-Man Side Facing, LH Side	22.5	410.9	9,245	+ 0.33
17. Foldable Table LH Side	12	220.8	2,650	- 0.05
ITEMS REMOVED:				
1. Passenger Seats & Belts, 1, 4-Man & 2, 3-Man, Side Facing, LH Side	-45.5	276.7	-12,590	- 0.06
2. Passenger Seats & Belts, 1, 4-Man & 2, 3-Man, Side Facing, RH Side	-45.5	276.7	-12,590	- 0.06
3. Passenger Seat & Belts, 1, 3-Man, Side Facing, LH Side	-11.5	404.8	- 4,655	- 0.16
OVERALL WEIGHT, MOMENT & INDEX CHANGE	+ 429		+126,535	+ 1.38

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.2/R1
 PAGE: 3
 EFFECTIVE: 1 June 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
C-47	B-933 (S/N 13817)	Passenger/Cargo		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	<p>Aircraft due weighing after No. 4D service on 31 May 1969.</p> <p>* Data shown is aircraft empty weight condition (from Aircraft Weighing Form or Wt/Bal Historical Change Record) plus configuration items (refer to Configuration Items list on P. 4).</p> <p>† Data shown is Manufacture Empty Weight Condition plus standard items (refer to Section 2.3).</p>				

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ✓ ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	18 Dec. 1967	17,484	243.4	4,254,984		
REVISED * RECORD	1 June 1969	17,423	245.8	4,283,060	15.5	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	18 Dec. 1967	18,391	239.2	4,399,767	17.0*	16.1
REVISED † RECORD	1 June 1969	18,234	240.6	4,387,533	11.7	19.0

COMPUTED BY	WEIGHT ENGINEER	APPROVED	MANAGER, ENGINEERING
Y. C. Le/H. W. Tsai		H. S. Lui for	

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REMARKS:

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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.1.2/R1
PAGE: 4
EFFECTIVE: 1 June 1969

CONFIGURATION ITEM - PASSENGER/CARGO CONFIGURATION

<u>ITEM</u>	<u>WEIGHT (LB)</u>	<u>ARM (IN.)</u>	<u>MOMENT (IN.-LB)</u>	<u>INDEX CHANGE</u>
1 ea, 4-man (@ 22.5 lb) and 3 ea, 3-man (@ 11.5 lb/ea) Nylon Troop Seat, LH side	57	303.5	17,300	+ 0.23
2 ea, 4-man and 2 ea, 3-man Nylon Troop Seat, RH side	68	314	21,352	+ 0.35
<hr/>				
Total	125		38,652	+ 0.58

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.1.3/R1
PAGE: 1

EFFECTIVE: 12 Mar. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G.	FORWARD	AFT
HC-47D	45-0883	Passenger	LIMIT	11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)												
		+	-														
1.	Following standard items removed from BEW condition in the previous report:																
	<table border="0"> <tr> <td style="text-align: center;"><u>ITEM</u></td> <td style="text-align: center;"><u>WT.</u></td> <td style="text-align: center;"><u>MOM.</u></td> </tr> <tr> <td>A. Emerg. Radio XMTR</td> <td style="text-align: center;">- 40</td> <td style="text-align: center;">- 22,000</td> </tr> <tr> <td>B. Flight Kit</td> <td style="text-align: center;">- 40</td> <td style="text-align: center;">- 4,680</td> </tr> <tr> <td>C. Crew Baggage</td> <td style="text-align: center;">- 60</td> <td style="text-align: center;">- 8,880</td> </tr> </table>	<u>ITEM</u>	<u>WT.</u>	<u>MOM.</u>	A. Emerg. Radio XMTR	- 40	- 22,000	B. Flight Kit	- 40	- 4,680	C. Crew Baggage	- 60	- 8,880				
<u>ITEM</u>	<u>WT.</u>	<u>MOM.</u>															
A. Emerg. Radio XMTR	- 40	- 22,000															
B. Flight Kit	- 40	- 4,680															
C. Crew Baggage	- 60	- 8,880															
2.	SEA crew equipment (total 60 lb @ arm 73) considered as an additional standard item in BEW condition.																

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ✓ ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	6 Dec. 1968	19,711	251.8	4,963,763	19.9	
REVISED RECORD	12 Mar. 1969	19,711	251.8	4,963,763	19.9	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	6 Dec. 1968	20,603	247.6	5,101,993	16.8	28.1
REVISED RECORD	12 Mar. 1969	20,522	247.0	5,068,236	16.4	27.0

COMPUTED BY W. Shih/H. W. Tsai	WEIGHT ENGINEER	APPROVED H. S. Lui for	MANAGER, ENGINEERING
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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.1.3/R2
 PAGE: 1
 EFFECTIVE: 17 Sep. 1969

WEIGHT AND BALANCE REPORT

AIRCRAFT TYPE	AIRCRAFT No.	CONFIGURATION	C.G. LIMIT	FORWARD	AFT
HC-47D	45-0883	Passenger		11% MAC	28% MAC

THIS IS TO ADVISE THAT THE FOLLOWING CHANGES AFFECTING WEIGHT AND BALANCE OF THIS AIRCRAFT HAVE BEEN COMPLETED. THE WEIGHT AND BALANCE REPORT HAS BEEN REVISED ACCORDINGLY AS TABULATED HEREON.

ITEM No.	DESCRIPTION OF WORK COMPLETED	WEIGHT CHANGE (LB)		ARM (INCHES)	MOMENT (IN-LB)
		+	-		
	Due weighing				

MANUFACTURER'S EMPTY CONDITION

(INCLUDES ITEMS AS CHECKED ON THE MASTER EQUIPMENT LIST)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	19,711	251.8	4,963,763	19.9	
REVISED RECORD	17 Sep. 1969	19,671	252.1	4,958,255	20.1	

BASIC EMPTY CONDITION

(INCLUDES STANDARD ITEMS LISTED IN THE WEIGHT AND BALANCE MANUAL)

	EFFECTIVE DATE	WEIGHT (POUNDS)	ARM (INCHES)	MOMENT (INCH-POUNDS)	% MAC	INDEX
PREVIOUS RECORD	12 Mar. 1969	20,522	247.0	5,068,236	16.4	27.0
REVISED RECORD	17 Sep. 1969	20,482	247.2	5,062,728	16.5	27.4

COMPUTED BY: W Shih/H. W. Tsai WEIGHT ENGINEER APPROVED: H. S. Lui MANAGER, ENGINEERING

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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.5.2/RL
PAGE: 1

EFFECTIVE: 17 Sep. 1969

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
A	PILOT (Noses to 86 in.)			
A- 1	Control Unit, Autopilot (J and H)	16	34	
A- 2	Windshield Wiper Installation	8	46	
A- 3	Soundproofing (at Sta. 40 - 86)	19	57	
A- 4	Autopilot Installation (J and H)	70	60	
A- 5	Jackboxes and Filters, Interphone (2)	5	70	
A- 6	Cushions, Seat and Back (2)	19	71	
A- 7	Seat Complete and Belts, Pilots (2)	78	73	
A- 8	Alcohol, Prop. Anti-Icer (4.2 gals)	28	81	
A- 9	Control Unit, Oxygen	10	80	
B	BAGGAGE (86 in. to 136.5 in.)			
B- 1	Fire Extinguisher, Hang	7	88	
B- 2	Antenna Tuner 180L-3 & MT-350D-3	14	91.5	
B- 3	Oil, Hydraulic System (5.8 gal)	46	119	
B- 4	Carpets, Floor (Sta. 49.5 - 177.5)	12	118	
B- 5	Antenna AT-172/ARN-14	7	101	
B- 6	Cutout, Reverse Current AN3025-1 (2)	5	112	
B- 7	Regulator, Voltage 17R21 (2)	6	114	
B- 8	Power Relay AN3320-1	0.25	117.4	
B- 9	Control Unit C-626/ARC-27 & MT	10	122	
B-10	Receiver-Transmitter RT-294B/ARC-44	14	122	
B-11	Receiver RT-178/ARC-27	74	123	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

SECTION: B-2.5.2/R1

PAGE: 2

EFFECTIVE: 17 Sep. 1969

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
B-12	Mounting, MT-822/ARC-27	3	123	
B-13	Radio Compass Unit R-101/ARN-6 (RT)	35	123	
B-14	Mount MT-273/ARN-6 (RT)	5	123	
B-15	Receiver VHF R-77/ARC-3	21	124	
B-16	Mount MT-237/ARC-3	1	124	
B-17	Radio Compass Unit R-101/ARN-6 (LT)	35	124	
B-18	Mount MT-273/ARN-6 (LT)	6	124	
B-19	Transmitter VHF T67/ARC-3	22	124	
B-20	Mounting MT-238/ARC-3	2	124	
B-21	Dynamotor DY107/AR	6	127	
B-22	Mounting MT1627/AR	1	127	
B-23	Amplifier, Fluxgate AN5753-1	12	130	
B-24	Amplifier C-1	12	130	
B-25	Mounting C-1	2	130	
B-26	Receiver-Indicator R-65/APN-9	35	130	
B-27	Mounting MT-203/APN	2	130	
B-28	Dynamotor DY-66/ARN-14	16	133	
B-29	Mounting MT628/ARN-14	3	133	
B-30	Receiver BC-1333 & MT	4	133	
B-31	Receiver R-540/ARN-14	30	133	
B-32	Mounting MT627/ARN-14	3	133	
B-33	R-322/ARN-18	10	133	
B-34	Table, Leg and Supports, Navigation	15	134	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.5.2/R1
PAGE: 3

EFFECTIVE: 17 Sep. 1969

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
B-35	Blower, Windshield Defroster, Electric	7	136	
B-36	Amplifier AM608/ARA-25 & MT	6	136	
B-37	Indicator, Fluxgate Master	7	116	
C	RADIO (136.5 in. to 177.5 in.)			
C- 1	Soundproofing (Sta. 86 to 177.5)	29	141	
C- 2	Transceiver 618T-2 & MT 390T-1	57	144	
C- 3	Loop Assy AS-313A/ARN-6 (Bott)	15	149	
C- 4	Antenna Cover CW-141/ARN (Bott)	2	149	
C- 5	Chair, Navigator's	37	156	
C- 6	Cushion Seat & Back & Head Rest	8	156	
C- 7	Loop Assy AS-313A/ARN-6 (Top)	15	162	
C- 8	Antenna Cover CW-141/ARN (Top)	2	162	
C- 9	Driftmeter AN5763-40	24	163	
C-10	Control C-1514/A (2)	5	148	
C-11	Light, Inter-Aircraft, Signal	6	157	
C-12	Transmitter 17L-7	14	145	
C-13	Receiver 51X-2B	10.5	141	
C-14	Mount 390E-2	2	143	
D	MAIN CABIN (177.5 in. to 538 in.)			
D- 1	Portable Oxygen Bottles, Type A-6 (2)	10	181.5	
D- 2	3-Man Nylon Troop Seat & Safety Belts	12	208.5	
D- 3	Flush Type Double Seat W/Belts & Cushion	64.5	203	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

SECTION: B-2.5.2/R1

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EFFECTIVE: 17 Sep. 1969

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
D- 4	Antenna AT-256/ARC-27	2	227	
D- 5	Antenna, Blade ARN-6	6	268	
D- 6	Metal Seat and Cushion, 1-Man	40.5	281.5	
D- 7	3-Man Nylon Troop Seat & Safety Belts	12	264.5	
D- 8	3-Man Nylon Troop Seat & Safety Belts	12	323	
D- 9	3-Man Nylon Troop Seat & Safety Belts	12	381.5	
D-10	Flush Type Double Seat W/Belts & Cushion	60.5	343	
D-11	3-Man Nylon Seat & Safety Belts	12	422	
D-12	4-Man Nylon Troop Seat & Safety Belts	22	451.5	
D-13	5 Bottle & Oxygen (Under floor)	102	483	
D-14	Step Main Cargo Door (stowed)	9	535	
D-15	Antenna AS-578/ARA-25	3	385	
D-16	Soundproofing (Sta. 177.5 to 538)		358	
D-17	Fire Extinguisher, Type A-20	7	493	
D-18	Fire Extinguisher, CO ₂	11	493	
D-19	Antenna AS-133/APX	2	535	
D-20	Crash Axe	3	465	
D-21	Antenna 37R-2	2	303.5	
F	LAVATORY (538 in. to 583 in.)			
F- 1	Toilet Assy	5	548	
F- 2	Control Surface Locks (stowed)	13	550	
F- 3	Inverter (2)		549.5	

WEIGHT & BALANCE MANUAL

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EFFECTIVE: 17 Sep. 1969

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
F- 4	Inverter (3)		574.5	
F- 5	AM-291/APN-22	18	570.5	
F- 6	MT-803/APN-22	2	570.5	
M	MISCELLANEOUS ITEMS			
M- 1	Batteries, 88 Ampere Hour (2)	164	127	
M- 2	Keyer KY-95A/ARA-25 & MT	10	632.5	
M- 3	RT-279A/APX	40	637.5	
M- 4	Filters, Carb. Air, Ram Type Scoop (2)	22	137	
M- 5	Air Scoop, Carb. Ram and Filter Prov.	49	147	
M- 6	Air Scoop, Carb. Ram	20	153	
M- 7	Mounts, Engine, Welded (2)	93	160	
M- 8	Exhaust Heat Exchange and Tail Pipe	73	191	
M- 9	Flare Tube Installation (2)	11	595	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.5.2
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EFFECTIVE: 6 Dec. 1968

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
A	PILOT (Nose to 86 in.)			
A- 1	Control Unit, Autopilot (J and H)	16	34	✓
A- 2	Windshield Wiper Installation	8	46	✓
A- 3	Soundproofing (at Sta. 40 - 86)	19	57	✓
A- 4	Autopilot Installation (J and H)	70	60	✓
A- 5	Jackboxes and Filters, Interphone (2)	5	70	✓
A- 6	Cushions, Seat and Back (2)	19	71	✓
A- 7	Seat Complete and Belts, Pilots (2)	78	73	✓
A- 8	Alcohol, Prop. Anti-Icer (4.2 gals)	28	81	○
A- 9	Control Unit, Oxygen	10	80	✓
B	BAGGAGE (86 in. to 136.5 in.)			
B- 1	Fire Extinguisher, Hand	7	88	✓
B- 2	Antenna Tuner 180L-3		91.5	✓
B- 3	Oil, Hydraulic System (5.8 gal)	46	119	✓
B- 4	Carpets, Floor (Sta. 49.5 - 177.5)	12	118	✓
B- 5	Antenna AT-172/ARN-14	7	101	✓
B- 6	Cutout, Reverse Current AN3025-1 (2)	5	112	✓
B- 7	Regulator, Voltage 17R21 (2)	6	114	✓
B- 8	Keyer KY-65/ARA-26 & MT-796/U	5	120	○
B- 9	Amplifier AML42/AIC & MT556/AIC	3	120	○
B-10	Control Unit C-626/ARC-27 & MT	10	122	✓
B-11	Receiver-Transmitter RT-294B/ARC-44		122	✓

WEIGHT & BALANCE MANUAL

CARGO C-47
 ACFT. TYPE: B-2.5.2
 SECTION: 2
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 EFFECTIVE: 6 Dec. 1968

Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
B-12	Receiver RT-178/ARC-27	74	123	✓
B-13	Mounting, MT-822/ARC-27	3	123	✓
B-14	Radio Compass Unit R-101/ARN-6 (RT)	35	123	✓
B-15	Mount MT-273/ARN-6 (RT)	5	123	✓
B-16	Receiver VHF R-77/ARC-3	21	124	○
B-17	Mount MT-237/ARC-3	1	124	✓
B-18	Radio Compass Unit R-101/ARN-6 (LT)	35	124	✓
B-19	Mount MT-273/ARN-6 (LT)	6	124	○
B-20	Transmitter VHF T67/ARC-3	22	124	✓
B-21	Mounting MT-238/ARC-3	2	124	✓
B-22	Dynamotor Junction Box J68/ARC-3	19	124	○
B-23	Mounting MT236/ARC-3	1	124	○
B-24	Amplifier, Fluxgate AN5753-1	12	130	✓
B-25	Amplifier C-1	12	130	✓
B-26	Mounting C-1	2	130	✓
B-27	Receiver-Indicator R-65/APN-9	35	130	○
B-28	MT-203/APN	2	130	○
B-29	Dynamotor DY-66/ARN-14	16	133	✓
B-30	Mounting MT628/ARN-14	3	133	✓
B-31	Receiver BC-1333 & MT	4	133	✓
B-32	Amplifier AML42/AIC & MT 556/AIC	3	133	○
B-33	Receiver R-540/ARN-14	30	133	✓
B-34	Mounting MT627/ARN-14	3	133	✓

WEIGHT & BALANCE MANUAL

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Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
B-35	R-322/ARN-18	10	133	✓
B-36	Table, Leg and Supports, Navigation	15	134	✓
B-37	Blower, Windshield Defroster, Electric	7	136	✓
B-38	Amplifier AM608/ARA-25 & MT	6	136	✓
B-39	Dynamotor DY-107B/AR			
B-40	Pyrotechnic Pistol	2	112	○
B-41	Indicator, Fluxgate Master	7	116	✓
B-42	Radio Receiver R-443/ARN-5D	13	133	○
C	RADIO (136.5 in. to 177.5 in.)			
C- 1	Soundproofing (Sta. 86 to 177.5)	29	141	✓
C- 2	Mounting Base MT-283/ART-13	5	143	○
C- 3	Loop Assy AS-313A/ARN-6 (Bott)	15	149	✓
C- 4	Antenna Cover CW-141/ARN (Bott)	2	149	✓
C- 5	Chair, Navigator's	37	156	✓
C- 6	Cushion Seat. & Back & Head Rest	8	156	✓
C- 7	Loop Assy AS-313A/ARN-6 (Top)	15	162	✓
C- 8	Antenna Cover CW-141/ARN (Top)	2	162	✓
C -9	Driftmeter AN5763-40	24	163	✓
C-10	Control C-1514/A (2)	5	148	✓
C-11	Light, Inter-Aircraft, Signal	6	157	✓
C-12	Chair and Safety Belt Operator	17	163	○

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Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	AArm	Check
D	MAIN CABIN (177.5 in. to 538 in.)			
D-1	Portable Oxygen Bottles, Type A-6 (2)	10	181.5	✓
D-2	3-Man Canvas Seat	26	208.5	✓
D-3	Plush Type Double Seat W/Belts & Cushion	64.5	203	✓
D-4	Antenna AT-256/ARC-27	2	227	✓
D-5	Antenna, Blade ARN-6	6	268	✓
D-6	Metal Seat and Cushion	40.5	281.5	✓
D-7	3-Man Nylon Troop Seat & Safety Belts	12	264.5	✓
D-8	3-Man Nylon Troop Seat & Safety Belts	12	323	✓
D-9	3-Man Nylon Troop Seat & Safety Belts	12	381.5	✓
D-10	Plush Type Double Seat W/Belts & Cushion	60.5	343	✓
D-11	3-Man Nylon Seat & Safety Belts	12	422	✓
D-12	4-Man Nylon Troop Seat & Safety Belts	22	451.5	✓
D-13	5 Bottle & Oxygen (under floor)	102	483	✓
D-14	Step Main Cargo Door (stowed)	9	535	✓
D-15	Antenna AS-578/ARA-25	3	385	○
D-16	Soundproofing (Sta. 177.5 to 538)		358	✓
D-17	Fire Extinguisher, Type A-20	7	493	✓
D-18	Fire Extinguisher, CO ₂	11	493	✓
D-19	Antenna AS-133/APX	2	535	✓
D-20	Crash Axe	3	465	✓

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Master Equipment List

A/C No. 45-0883

Item No.	Description	Weight	Arm	Check
F	LAVATORY (538 in. to 583 in.)			
F- 1	Toilet Assy	5	548	✓
F- 2	Control Surface Locks (stowed)	9	550	✓
F- 3	Inverter (2)		549.5	✓
F- 4	Inverter (3)		574.5	✓
F- 5	AM-291/APN-22		570.5	○
F- 6	MT-803/APN-22		570.5	○
M	MISCELLANEOUS ITEMS			
M- 1	Batteries, 88 Ampere Hour (2)	164	127	✓
M- 2	Keyer KY-95A/ARA-25 & MT	10	632.5	✓
M- 3	RT-279A/APX	40	637.5	✓
M- 4	Filters, Carb. Air, Ram Type Scoop (2)	22	137	✓
M- 5	Air Scoop, Carb. Ram and Filter Prov.	49	147	✓
M- 6	Air Scoop, Carb. Ram	20	153	✓
M- 7	Mounts, Engine, Welded (2)	93	160	✓
M- 8	Exhaust Heat Exchange and Tail Pipe	73	191	✓
M- 9	Flare Tube Installation (2)	11	595	✓

WEIGHT & BALANCE MANUAL

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EFFECTIVE:	2 Jul. 1970

B-879 AIRCRAFT WEIGHING FORM

(Refer Section A-2.6.3)

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.6.2/R2
PAGE: 1

EFFECTIVE: 4 Aug. 1971

AIRCRAFT WEIGHING FORM

DATE WEIGHED: 4 Aug. 1971 MODEL: C-47A SERIAL NUMBER: 13817 REGISTRATION NUMBER: B-933

PLACE WEIGHED: Air Asia, TNN, TWN WEIGHT ENGINEER: HW Tsai & LC Kuo

REACTION	SCALE READING	TARE	NET WEIGHT	ARM	MOMENT
LEFT MAIN					
RIGHT MAIN					
SUB-TOTAL (BOTH MAIN)	17,370	+ 3.5	17,373.5	219.8	3,818.695
NOSE OR TAIL	1,333	- 7.5	1,325.5	583.8	773.827
TOTAL (AS WEIGHED)	18,703	- 4	18,699	245.6	4,592.522

DESCRIPTION	NET WEIGHT	ARM	MOMENT	INDEX
TOTAL (AS WEIGHED)	18,699	245.6	4,592,522	
OIL IN AIRCRAFT 57 GAL.	- 427.5	184.6	- 78,917	
TOTAL OF ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	- 573		- 158,012	
TOTAL OF BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	+ 106.7		+ 31,347	
BASIC AIRCRAFT	17,805	246.4	4,386,940	30.3
C.G. IN PERCENT MAC	15.9 %	C.G. IN INCHES FROM REFERENCE DATUM		246.4

ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT	ARM	MOMENT
(See reverse side for details)			
Total	573		158,012

BASIC ITEMS NOT IN AIRCRAFT WHEN WEIGHED	WEIGHT	ARM	MOMENT
1. Passenger Seats and Belts, 1, 4-Man & 2, 3-Man, Side Facing LH Side	45.5	276.7	12,590
2. Passenger Seats & Belts, 1, 4-Man & 2, 3-Man, Side Facing, RH Side	45.5	276.7	12,590
3. Passenger Seat & Belts, 1, 3-Man, Side Facing, LH Side	11.5	404.8	4,655
4. Control Locks, Tail Surface	4.2	360	1,512
TOTAL	106.7		31,347

WEIGHT & BALANCE MANUAL

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EFFECTIVE: 4 Aug. 1971

ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT	WEIGHT (LB)	ARM (IN)	MOMENT (IN-LB)
1. Floor Carpet	32	264.5	8,464
2. Removable Bulkhead	103	351.1	36,163
3. Forward Table RH Side	21	220.5	4,631
4. Aftward Table RH Side	21	308.5	6,479
5. First Row Modified Double Burns 1D2H Seat, Facing Aft, RH Side	44	195.5	8,602
6. First Row Modified Single Burns 1D1C Seat, Facing Aft, LH Side	28	190.5	5,334
7. Second Row Modified Double Burns 1D2H Seat, Facing Fwd, RH Side	44	245.5	10,802
8. Second Row Modified Single Burns 1D1C Seat, Facing Fwd, LH Side	28	250.5	7,014
9. Third Row Modified Double Burns 1D2H Seat, Facing Aft, RH Side	44	283.5	12,474
10. Third Row Modified Single Burns 1D1C Seat, Facing Forward, LH Side	28	287.5	8,050
11. Fourth Row Modified Double Burns 1D2H Seat, Facing Fwd, RH Side	44	333.5	14,674
12. Fourth Row Modified Single Burns 1D1C Seat, Facing Fwd, LH Side	28	322.5	9,030
13. Window Curtains (16)	8	264.5	2,116
14. Seat Track Covers	8	264.3	2,114
15. Table, LH Side	12	220.8	2,650
16. Passenger Seat and Belts, 4-Man, Side Facing, LH Side	22.5	410.9	9,245
17. MLG Restraining Rope	1.5	219.8	330
18. Wash Water	16	615	9,840
19. Water (rain)	40		-
TOTAL :	573		158,012

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.6.3/R1
PAGE: 1

EFFECTIVE: 17 Sep. 1969

AIRCRAFT WEIGHING FORM

Date Weighed 17 Sep. 1969 Model HC-47D Serial No. 45-0883 Ref. No. _____

Place Weighed Air Asia, Tainan, Taiwan Weight Engineer K. W. Lin (civ)

Reaction	Scale Reading	Tare	Net Weight	Arm	Moment
Left Main					
Right Main					
Sub-total (Both Main)	18,421	- 5	18,416	219.75	4,046,916
Nose or tail	1,692	0	1,692	583.8	987,790
Total (As weighed)	20,113	- 5	20,108	250.4	5,034,706

Description	Net Weight	Arm	Moment	Index
Total (As Weighed)	20,108	250.4	5,034,706	
Oil in aircraft 58 Gals.	- 435	184.6	- 80,301	
Total of items weighed but not part of basic weight *	- 15	220	- 3,300	
Total of basic items not in aircraft when weighed *	+ 13	550	+ 7,150	
Basic Aircraft	19,671	252.1	4,958,255	4,958.3

C. G. in percent MAC _____ %

* See page over for detail.

C. G. in inches from ref. datum 252.1

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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ITEMS WEIGHED BUT NOT PART OF BASIC WEIGHT

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
LG Restrainer	15	220	3,300

BASIC ITEMS NOT IN AIRPLANE WHEN WEIGHED

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
Control Surface Locks	13	550	7,150

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.7.1
PAGE: 1
EFFECTIVE: 26 Sep. 1968

B-879 WEIGHT & BALANCE HISTORICAL CHANGE RECORD

(Refer Section A-2.7.3)

Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Index
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
20 Dec 61	Basic data as weighed at Air Asia							20,376	5,087,245	
21 May 62	KEAPSIT picnic jug with bracket	10.5	420	4,410				20,387	5,091,655	
6 Jun 64	Basic data as weighed at Air Asia							18,792	4,638,440	
"	EA-984 instln. of heating sys. - C/W	50	220	11,100						
15 Jun 66	Basic data as calculated							18,842	4,649,540	
"	Basic data as weighed at Air Asia							18,934	4,785,463	
26 May 67	Double burns seat - 1st Row (L & R)				108	172.5	18,630			
"	" - 2nd Row (")				108	211.5	22,842			
"	" - 3rd Row (")				108	250.5	27,054			
"	" - 4th Row (")				108	289.5	31,266			
"	" - 5th Row (")				108	328.5	35,478			
"	" - 6th Row (")				108	406.5	43,902			
"	Navigator's seat (with cushions & belt)				36	156	5,616			
"	Blower, windshield defroster, electric				9	103	927			
"	Hatrack assy				86	304	26,144			
"	Cover, cabin hot air outlet duct				3	326	978			
"	Rod, window curtain				5	304	1,520			
"	Frame, cabin window				10	304	3,040			
"	Soundproofing (Sta. 177.5 to 538)				90	355	31,950			
"	Speaker (4)				5	325	1,625			
"	Panel, cabin wall				106	314	33,284			
"	Reading light, passenger, main cabin(24)				9	304	2,736			
"	Duct, cabin hot air				110	314	34,540			
"	Structural weight, soundproofing & cabin wall				115	387	44,505			
"	Buffet				24	456	10,944			
"	Bulkhead				63	524	33,012			
"	Toilet assy				142	503	71,426			
"	Cargo access step door				100	465.5	46,550			

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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 PAGE: 1
 EFFECTIVE: 27 Feb. 1968

Operations

Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Index
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
26 May 67	Signal pistol & flare				4	87	348			
"	Windshield anti-icing sys. (incl. tank, pump, line assy. & support)				10	95	950			
"	Prop. anti-icing sys. (incl. tank, pump, line assy. & support)				11	83	913			
"	Windshield defrost blower bracket and hose assys				9	103	927			
"	Bulkhead (Sta. 177.5)				57	177.5	10,118			
"	Cowl flap control valve				6	63	378			
"	Valves, fuel, oil & hyd. shut-off (both LH & RH engine firewall)				20	177.5	3,550			
"	Crossfeed valves (LH & RH)				10	203.5	2,035			
"	Inverter rack				14	136.5	1,911			
"	Radio rack				5	136.5	683			
"	Table, navigator				9	136.5	1,229			
"	Buffet control panel & elec. fan				9	429.5	3,866			
"	Cargo flooring removed				401	345.2	138,425			
"	Removal of radio equipments:									
"	(1) ART-13				65	146	9,490			
"	(2) AR-144				54	146	7,884			
"	(3) APN-70				68	136	9,248			
"	(4) ARN-5				14	134	1,876			
"	(5) Rta-1B				76	128	9,728			
"	(6) MN-53B				14	134	1,876			
"	(7) APN-22				22	593	13,046			
"	(8) APX-6				39	594	23,166			
"	(9) PA sys. amplifier				5	115	575			
15 Jun 67	Inverter removed				6	144	864			
"	Inverter, (2) removed				88	136.5	12,012			
22 Jun 67	Chair, radio operator's, removed				12	163	1,956			

Operations

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Index
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
26 May 67	EA-047-25-1 "Std. of cargo tie-down fittings" - C/W									
"	(1) Fitting installed	22	350	7,700						
"	(2) Ring deleted (not applicable)									
"	EA-997 "Instl. of Thermos Flasks" - C/W									
"	(1) Bracket	4	538	2,152						
"	(2) Flask (net wt.)	22	538	11,836						
"	EA-947 Rev.1 "Std. of powerplant and firewalls"									
"	EA-723 "Removable flag holder instl." - C/W									
"	EA-605 Rev.1 "Removal of engine hand cranking system" - C/W				10	381	3,810			
"	EA-044 Rev.1 "Instl. of 1st aid kit stowage" - C/W	7	87	609						
"	EA-557 "Alternate anchor point in rear cabin for static cable" - C/W	3	510	1,530						
"	EA-084 Rev.2 "Engine section fire prevention mod." - C/W	63	167	10,521						
"	EA-014 Rev.1 "Control lock & gear pin comp't" - C/W	7.5	360	2,700						
"	EA-C47-33-1 "Instl. of landing light glare shields" - C/W	2	204	408						
"	Instln of main cargo door	25	460.5	11,513						
"	Instln of bulkhead (Sta. 538)	23	538	12,374						
"	Instln of side wall panel (LH & RH)	7	561	3,927						
"	Instln of inverter rack & emergency radio rack	15	570	8,550						
"	EA-C47-25-68 "Instln of light wt. toilet"	24.5	551	13,500						
"	EA-C47-35-1 "Instln of portable oxygen cylinder" - C/W									
"	(1) Portable oxygen bottle type A-4	6	90	540						

(Reweighed after mod.)

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.7.2
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Operations

Weight and Balance Historical Change Record

WEIGHT & BALANCE MANUAL

Aircraft Model		C-47		Registration No.		B933				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Index
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
26 May 67	(2) Portable oxygen bottle type A-6 (with oxygen mask)	12	174	2,088						
"	Instln of wash water tank	4	586	2,344						
"	Instln of dispenser, hand towel	1.5	582	873						
"	Instln of dispenser, toilet paper	1	562	562						
"	Instln of mirror	3	539	1,617						
"	Instln of cargo flooring (Sta. 177.5 to sta. 538)	410	355.8	145,878						
"	EA-650 "Removal of engine section ass'y" C/W <u>REWEIGHED REQ'D AFTER MODIFICATION</u>									
"	EA-C47-28-8 "Relocation of fuel strainer" C/W <u>EA NOT PUBLISHED YET</u>									
"	EA-C47-21-2 "Instln of cabin ventilation" C/W <u>EA NOT PUBLISHED YET</u>									
16 Jun 67	Instln of 2 inverter (Type MGL49F)	48	575	27,600						
"	Instln of seat track	22	264.5	5,819						
19 Jun 67	Instln of removable bulkhead (Sta.351.1)	101	351.1	35,461						
"	Instln of soundproofing (Sta.177.5-351.5)	69	264.5	18,251						
20 Jun 67	Instln of tables:									
"	(1) Table, cabin, fwd	21	220.5	4,631						
"	(2) Table, cabin, aft	21	308.5	6,479						
21 Jun 67	Instln of radio equipments:									
"	(1) RT-18/ARC-1 with mount	52	124.5	6,474						
"	(2) R-5/ARC-7 with mount (2)	98	125.5	12,299						
"	(3) 618M-1A with mount	20.7	133.5	2,763						
"	(4) T-22-RA with mount (2)	37	127.5	4,718						

Operations

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.				B-933		
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
22 Jun 67	Instln. of passenger seats:									
	(1) 1st row double burns seat w/safety belt	44	195.5	8,602						
	(2) 2nd " "	44	245.5	10,802						
	(3) 3rd " "	44	283.5	12,474						
	(4) 4th " "	44	333.5	14,674						
	(5) 1st row single seat w/safety belt	28	206.5	5,782						
	(6) 2nd " "	28	240.5	6,734						
	(7) 3rd " "	28	274.5	7,684						
	(8) 4th " "	28	308.5	8,638						
23 Jun 67	Instln. of trash can & support	17.5	533	9,328						
"	Instln. of air-conditioners									
	(1) RH side	81	167	13,527						
	(2) LH side	81	172.5	13,892						
"	Instln. of crash axe	3	118	354						
"	Instln. of fire extinguisher, CO ₂	11	120	1,320						
"	Removal of portable oxygen cylinder:									
	(1) Portable oxygen bottle, type A-4				6	90	540			
	(2) Portable oxygen bottle, type A-6 (with mask)				12	174	2,088			
24 Jun 67	Instln of window curtain (26)	14	303.7	4,252						
"	Basic data as weighed at Air Asia, (VIP comp't configuration)							17,730	4,339,717	244.8
"	Basic data as weighed at Air Asia, (Standard cargo configuration)							17,397	4,248,733	244.2

WEIGHT & BALANCE MANUAL

A/CFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight change						Empty weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
27 Jun 67	Floor carpet installed per EA-C47-25-71 (Req'd for VIP config. only)	32	264.5	8,464						
18 Dec 67	EA-C47-25-74 "Instln. of log book holder" - C/W	4.5	82	369						
"	EA-C47-22-2 "Instln. of type A-3A auto-pilot system" - C/W									
	(1) Control gyro and mounts	27	35	945						
	(2) Servo unit, pulley and cable	18	105	1,890						
	(3) Lines, bracket, and hardwares	20	60	1,200						
	(4) Fluid	15	105	1,575						
"	EA-C47-21-5 "Instl of cabin air temp. indicating system" - C/W	2	136	272						
"	Basic data as computed at Air Asia (Standard cargo configuration)						17,484	4,254,984	243.4	
"	Basic wt. & mom. as brought from Wt/Bal Report (VIP config.)						17,849	4,354,432	244.0	
"	Instln. of 2 ea. additional thermos flask brackets (work accomplished at Regional Station - date unk)	3	154	462						
"	Instln. of trash can (work accomplished at Regional Station - date unk)	6	154	924						
"	EA-C47-73-4 "Removal of oil dilution system" - PCW (entered for record purpose only)									

WEIGHT & BALANCE MANUAL

ACFT TYPE: CARGO C-47
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POP 5-224

Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
24 Jun 68	EA-C47-25-75 R.2 "Repl. of existing pilot's and co-pilot's seat back cushion core with light wt. moltoprene foam sheet" - C/W				6.6	71	469			
"	EA-C47-25-77 "Instln. of emergency escape rope" - C/W	2	86	172						
12 Mar 69	4 ea. thermos flasks removed				18	536	9,684			
"	Basic data as calculated at Air Asia (passenger/cargo config.)							17,470	4,246,389	243.1
"	Basic data as calculated at Air Asia (VIP config.)							17,835	4,345,837	243.7
"	Following EAs PCW (Weight change included in previous weighing - entered for record purpose only)									
"	EA-874 R.3 "Removal of propeller deicer system"									
"	EA-084 R.2 "Engine section fire prevention modifications"									
1 Jun 69	Following items deducted from MEW condition considered as configuration items:									
	a. Removable bulkhead (sta. 351.1)				103	351.1	36,163			
	b. Table, cabin - Fwd				21	220.5	4,631			
	Table, cabin - Aft				21	308.5	6,479			

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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Weight and Balance Historical Change Record

Aircraft Model		C-47		Registration No.		B-933				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
1 Jun 69	c. 1st row double Burns seat W/belts 2nd row double Burns seat W/belts 3rd row double Burns seat W/belts 4th row double Burns seat W/belts 1st row single seat W/belts 2nd row single seat W/belts 3rd row single seat W/belts 4th row single seat W/belts d. Trash can, rear e. Window curtains (16) f. Seat track covers g. Floor carpet				44	195.5	8,602			
					44	245.5	10,802			
					44	283.5	12,474			
					44	333.5	14,674			
					28	206.5	5,782			
					28	240.5	6,734			
					28	274.5	7,684			
					28	308.5	8,638			
					16	53.3	8,528			
					8	264.5	2,116			
					8	264.3	2,114			
					32	264.5	8,464			
"	Basic data as calculated at Air Asia							17,338	4,201,952	242.4
"	Basic data as weighed at Air Asia							17,298	4,244,408	245.4
23 Jun 70	Following troop seats and belts regarded as basic items required for either pax/cargo configuration or VIP configuration.									
	a. 1 ea 3-man LH side	11.5	408.7	4,700						
	b. 1 ea 4-man RH side	22.5	415.6	9,351						
"	Basic data as calculated for pax/cargo configuration (Including additional 2 each 4-man and 4 ea 3-man troop seats and belts)	91		24,601				17,423	4,283,060	245.8
"	Basic data as calculated for VIP configuration (Ref. to pax/cargo configuration to VIP configuration conversion table for items added & removed).	406		120,466				17,829	4,403,526	247.0

Operations

WEIGHT & BALANCE MANUAL

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 EFFECTIVE: 25 Feb. 1970

FOP 5-224

Weight and Balance Historical Change Record

Aircraft Model		C-47A		Registration No.		B-933 (S/N 13817)		Basic Empty Weight Cond.		
Date	Description	Weight Change						Weight	Arm	Moment 1000
		Added			Removed					
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
21 Apr. 70	EA-C47-34-6 "ATC Transponder Instln. - light weight" - C/W on 30 Mar. 1970 at BKK (post entered)									
	a. Rec.-Trans. KT-75R with tray	6	535	3,212						
	b. Control KFS-575 with rack	1.1	58	64						
	c. Antenna KA-28, circuit breaker & cable	4	298	1,191						
1 Jun. 70	EA-116 "Instl. of Additional CO ₂ Fire Extinguisher Bottle - Engine System" - C/W	21	90	1,890						
"	Basic Data as calculated at Air Asia (for Pax/Cargo configuration)							17,455	245.8	4,289,935
"	Basic Data as calculated at Air Asia (for VIP configuration)							17,872	246.9	4,412,863
30 May 71	EA-C47-25-69 Rev.2 "Plush Type Seat, Removable and Foldable Tables, and Removable Compartment Partition Wall" Part IV - C/W (For VIP Configuration only)									
	1. Installation of provision	1	222.5	223						
	2. Table	12	222.5	2,670						
10 Jun. 71	Basic data as calculated at Air Asia									
	1. Passenger/Cargo Configuration							17,455	245.8	4,289,935
	2. VIP Configuration							17,885	246.9	4,416,260
4 Aug. 71	Basic data as weighed at Air Asia									
	1. Passenger/Cargo Configuration							17,805	246.4	4,386,940
	2. VIP Configuration							18,234	247.5	4,513,475

Operations

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.7.2
 PAGE: 9/R1
 EFFECTIVE: 4 Aug. 1971

Weight and Balance Historical Change Record

Aircraft Model

HC-47D

Registration No.

45-0883

Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
13 May 67	Basic data as weighed at Air Asia on check column 1 Chart A							20,033	5,088.7	254.0
3 Nov 67	Relocation of following items:									
"	(1) Flush Type Double Seat	64.5	203	13.1	64.5	220	14.2			
"	(2) Flush Type Double Seat	60.5	343	20.8	60.5	324	19.6			
"	Removal of following equipment:									
"	(1) Metal Seat and Cushion				40.5	352.5	14.3			
"	(2) Radio Rack				12	315	3.8			
"	(3) Driftmeter				17	297	5.1			
"	Installation of following equipment:									
"	(1) 3-Man Nylon Troop Seat and Safety Belts	12	264.5	3.2						
"	(2) 3-Man Nylon Troop Seat and Safety Belts	12	323	3.9						
"	(3) 3-Man Nylon Troop Seat and Safety Belts	12	381.5	4.6						
"	(4) 4-Man Nylon Troop Seat and Safety Belts	22	251.5	9.9						
"	Basic data as computed at Air Asia							20,022	5,087.2	254.1
4 Nov 67	Basic data as actually weighed at Air Asia after major damage repair & cabin mod							19,741	4,966.6	251.6
"	Reference PLNG/BKK DTD 11 Nov. 1968 and note to STS/BKK on 4 Nov. 1968 following radio modification has been complied with on acft									
"	1. Removed:									
	a. Transmitter T-67/ARC-3				22	124	2.7			
	b. Receiver R-77/ARC-3				21	124	2.6			
	c. Power Function Box J-68/ARC-3 & MT				19.9	124	2.5			
	d. Control Unit C-404/ARC-3				0.9	49	0.04			

WEIGHT & BALANCE MANUAL

ACFT TYPE: CARGO C-47
SECTION: B-2.7.3
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Weight and Balance Historical Change Record

Aircraft Model		HC-47D		Registration No.		45-0883				
Date	Description	Weight Change						Empty Weight		
		Added			Removed			Weight	Moment 1000	Arm
		Weight	Arm	Moment 1000	Weight	Arm	Moment 1000			
4 Nov 68	2. Added: a. Transmitter 17L-7 b. Receiver 51X-2B c. Control Unit 614U-6 d. Antenna 37R-2 e. Shockmount 390E-2 f. Power Relay AN 3320-1 g. Wiring Harness (approx)	14 10.5 1.7 2 2.8 0.25 3	146.5 146.5 49.3 303.5 146.5 117.4 100	2.1 1.5 0.8 0.6 0.4 0.03 0.3						
6 Dec 68	Basic Wt & Mom as calculated chart "A" check column 4 at Air Asia						19,711	4,964.5	251.9	
12 May 69	Basic Wt & Mom as computed at Air Asia - No change.									
17 Sep 69	Transceiver 618T-2 & Mt390T-1 Amplifier AM-291/APN-22	57 18	144 570.5	8.2 10.3						
"	Basic Wt & Mom as calculated at Air Asia:						19,786	4,983.0	251.8	
"	Basic Wt & Mom as weighed at Air Asia						19,671	4,958.3	252.1	

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: B-2.7.3
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WEIGHT & BALANCE MANUAL

ACFT. TYPE:

CARGO C-47

SECTION:

B-2.10.1/R2

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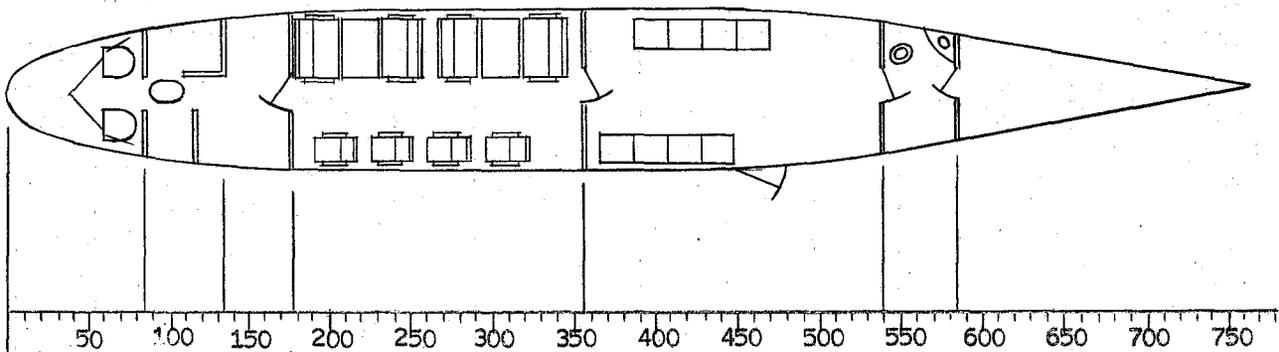
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EFFECTIVE:

15 Jun. 1971

SEMI-PLUSH C-47 - B-879

VIP CONFIGURATION SEATING CHART



REFERENCE
DATUM LINE

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.10.1/R2
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PASSENGER TABLE

(VIP Configuration - B-879)

Passenger occupied on passenger seat in VIP compartment										
Row	Arm	1 Passenger Per Row		2 Passengers Per Row (RH only)		2 Passengers Per Row (1 RH & 1 LH)		3 Passengers Per Row		
		Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	
1	RH	197.5	170	-1.12	340	-2.23	340	-2.12	510	-3.23
	LH	204.5	170	-1.00	X					
2	RH	243.5	170	-0.33	340	-0.67	340	-0.75	510	-1.09
	LH	238.5	170	-0.42	X					
3	RH	281.5	170	+0.31	340	+0.63	340	+0.47	510	+0.63
	LH	272.5	170	+0.16	X					
4	RH	331.5	170	+1.16	340	+2.33	340	+1.90	510	+2.64
	LH	306.5	170	+0.74	X					

Passenger occupied on troop seat in rear cabin										
Row	Arm	1 Passenger		2 Passengers		3 Passengers		4 Passengers		
		Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	
	RH	414.9	170	+2.58	340	+5.16	510	+7.74	680	+10.32
	LH	394.5	170	+2.23	340	+4.47	510	+6.70	680	+8.94

WEIGHT & BALANCE MANUAL

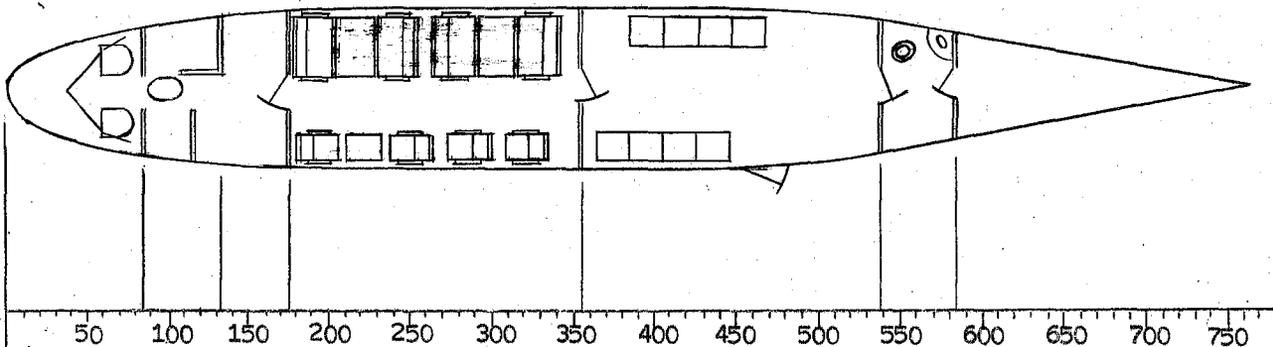
AORL TYPE: CARGO C-47

SECTION: B-2.10.2/RL

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EFFECTIVE: 15 Jun. 1971

SEMI-PLUSH C-47 - B-933
VIP CONFIGURATION SEATING CHART



REFERENCE
DATUM LINE

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
 SECTION: B-2.10.2/RL
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 EFFECTIVE: 15 Jun. 1971

PASSENGER TABLE

(VIP Configuration - B-933)

Passenger occupied on passenger seat in VIP compartment										
Row	Arm	1 Passenger Per Row		2 Passengers Per Row (RH only)		2 Passengers Per Row (1 RH & 1 LH)		3 Passengers Per Row		
		Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	
1	RH	197.5	170	-1.12	340	-2.23	340	-2.29	510	-3.43
	LH	192.5	170	-1.2	X					
2	RH	243.5	170	-0.33	340	-0.67	340	-0.58	510	-0.92
	LH	248.5	170	-0.25	X					
3	RH	281.5	170	+0.31	340	+0.63	340	+0.64	510	+0.96
	LH	282.5	170	+0.33	X					
4	RH	331.5	170	+1.16	340	+2.33	340	+2.07	510	+3.23
	LH	316.5	170	+0.91	X					

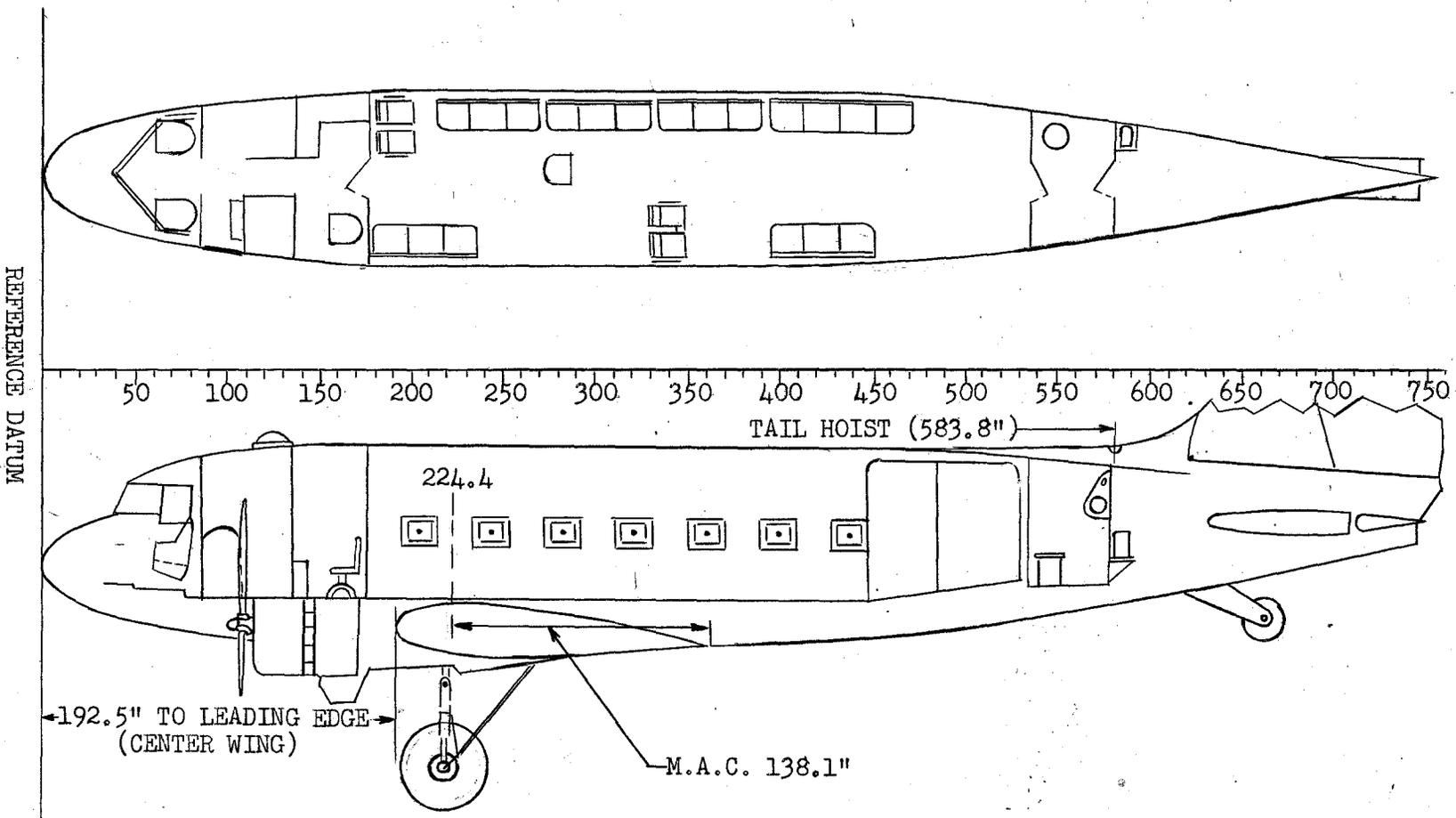
Passenger occupied on troop seat in rear cabin										
Row	Arm	1 Passenger		2 Passengers		3 Passengers		4 Passengers		
		Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	Wt.	Index Change	
	RH	414.9	170	+2.58	340	+5.16	510	+7.74	680	+10.32
	LH	394.5	170	+2.23	340	+4.47	510	+6.70	680	+8.94

WEIGHT & BALANCE MANUAL

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HC-47D 45-0883 AIRPLANE DIAGRAM



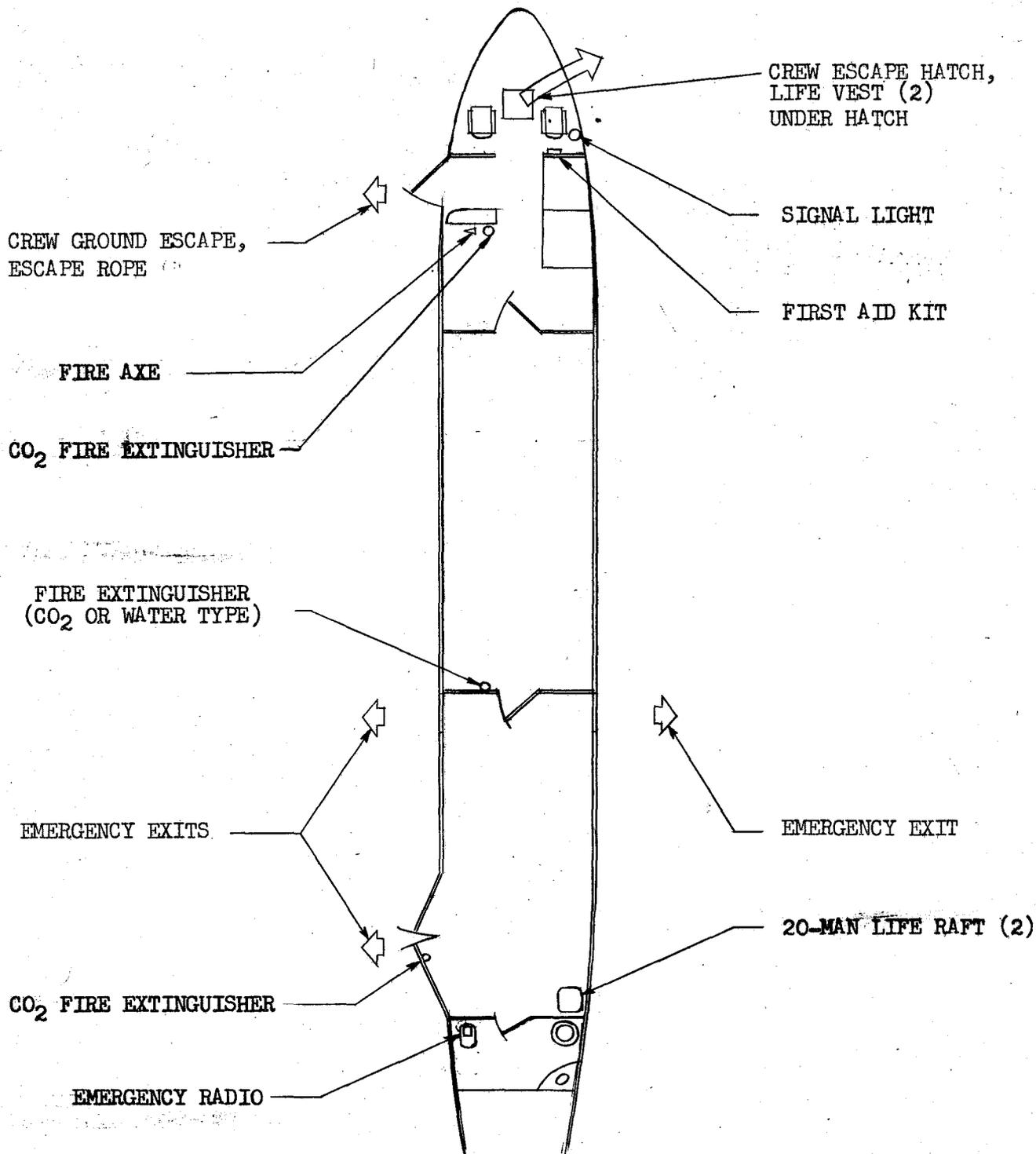
WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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VIP CONFIGURATION EMERGENCY EQUIPMENT CHART

(B-879 & B-933)



NOTE: PASSENGERS' LIFE VESTS STOWED ON BACKS OF PASSENGERS' SEATS.

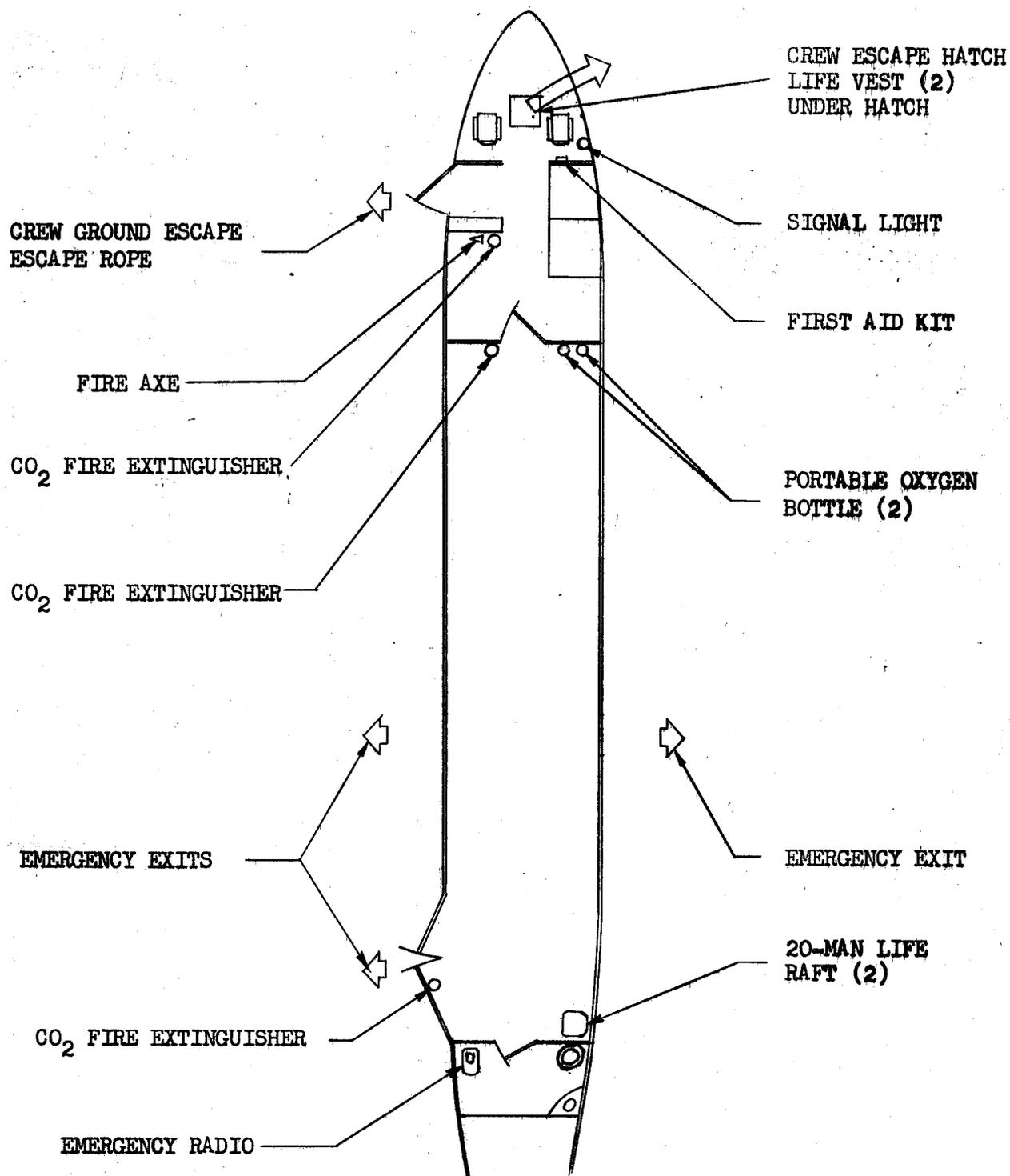
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ACFT. TYPE: CARGO C-47
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EMERGENCY EQUIPMENT CHART

45-883



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WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

SECTION: 3.1/R2

PAGE: 1

EFFECTIVE: 1 Sep. 1970

AIRCRAFT WEIGHT & BALANCE DOCUMENTATION REQUIREMENTS

Cargo C-47 weight and balance documentation requirements are established as follows:

WEIGHT & BALANCE MANIFEST

Description: A form designed for rapid computation of the weight and balance of large aircraft.

Purpose: The completed Weight & Balance Manifest illustrates graphically that the aircraft is within weight and balance limits.

Employment: The duty Dispatcher (or Captain) shall complete the Weight & Balance Manifest for each flight sector.

Responsibility:

a. Stations where FOD personnel are assigned

The duty Dispatcher is responsible to complete two manifests, the original for issue to the Captain and the carbon copy for station file. Both copies shall be signed by the duty Dispatcher and Captain. The duty Dispatcher is also responsible to issue sufficient blank manifests to the Captain to cover subsequent flight sectors where FOD personnel are not stationed.

b. Stations where FOD personnel are not assigned

The Captain is responsible to complete prior departure one signed manifest for each flight sector which shall be attached to the aircraft flight documents clip board and turned in at the first station where FOD personnel are assigned. At stations with Handling Agents, a signed duplicate shall be passed to the Handling Agent for mailing to the principal operations base. At stations with Handling Agents qualified to complete manifests, the Handling Agent shall complete original and duplicate but the Captain shall sign only after he has checked the completed manifest for errors and omissions.

- NOTE:
1. On certain flights the customer may request a signed copy of the aircraft Weight & Balance Manifest. In these cases an extra carbon copy shall be made and submitted to the customer concerned.
 2. Airport officials of certain airports may request a signed copy of the aircraft Weight & Balance Manifest. At these airports, an extra carbon copy shall be made.
 3. Completed Weight & Balance Manifests shall be filed in chronological order for a period of six (6) months at each station where FOD personnel (or Operations Representatives) are assigned.
 4. Operations Managers (and Chief Pilots concerned) shall frequently spot check completed Weight & Balance Manifests for errors and omissions. Corrective action shall be promptly taken when deficiencies are discovered.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
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3. PAYLOAD DISTRIBUTION PLANNING SHEET

Description: A form designed for rapid planning of distribution of payload on aircraft categories:

- a. Jet Aircraft
- b. Large Aircraft

Purpose: The Payload Distribution Planning Sheet is the medium whereby data required for completion of the Weight & Balance Manifest is transmitted from Traffic to Flight Operations.

Employment: Services Agents/Loadmasters and Dispatchers shall complete Payload Distribution Planning Sheets.

Responsibility: Although the Payload Distribution Planning Sheet is not a mandatory form for aircraft weight & balance calculations, it serves the useful purpose of facilitating and expediting completion of an accurate Weight & Balance Manifest as well as providing documentary evidence of correlation between Traffic and Flight Operations to inhibit errors and omissions especially at major stations where the exigency of high frequency of flights demands an orderly, systematic and expeditious process; therefore, at stations staffed with Traffic and Flight Operations personnel, the duty Services Agent/Loadmaster and duty Dispatcher shall be responsible to complete the Payload Distribution Planning Sheet in conformance with general principles listed below:

- a. Services Agents/Loadmasters and Dispatchers shall comply with Standard Fuel Loads & Payloads procedures contained in Chapter 5 of Flight Operations Manual.
- b. Services Agents/Loadmasters shall adhere to passengers and baggage/cargo distribution procedures for specific aircraft.
- c. Services Agents shall use Company established average body weights for passengers as follows:

	<u>International Flights</u>		<u>Domestic Flights</u>	
	<u>Summer Season</u>	<u>Winter Season</u>	<u>Summer Season</u>	<u>Winter Season</u>
Adult (12 years & over)	160	165	150	155
Child (2 years/under 12 years)	80	80	75	75
Infant (under 2 years)	0	0	0	0

Asked or actual body weights shall be used only when required to conform with specific regulations or accommodate maximum number of light-weight passengers.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47

SECTION: 3.1

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- d. Dispatchers shall use average body weights of x-crew as follows:

Cockpit crew - 170 lbs.

Male F/A - 150 lbs.

Female F/A - 130 lbs.

- e. Loadmasters shall use actual weights of passenger baggage and cargo (including mail).
- f. Dispatchers shall use standard baggage weights of 30 lbs. for each male and 20 lbs. for each female x-crew member. Actual weights of x-crew (and flight crew) baggage shall be used when their baggage exceeds standard allowance.
- g. The Payload Distribution Planning Sheet (original plus one carbon copy) shall normally be completed by the duty Services Agent/Loadmaster and the original sent to the duty Dispatcher at least 30 minutes before scheduled ETD to enable him to complete the Weight & Balance Manifest in sufficient time before scheduled departure. If at this time, all passengers have not checked in as yet, the Planning Sheet shall be completed on whatever data is available at the time. The Services Agent/Loadmaster shall use the "Remarks" section to advise the Dispatcher of the status of passengers not checked in as yet.

The Dispatcher shall complete the Weight & Balance Manifest on receipt of the Planning Sheet and shall use the Weight & Balance Correction section for the outstanding passengers as soon as the Passenger Manifest is closed by the Services Agent and the Dispatcher advised of the additional passenger/baggage weights and locations by means of a supplementary Planning Sheet.

Data may be relayed by telephone but in all cases this data must be supported by a Planning Sheet or supplementary Planning Sheet. The Planning Sheet must be supplied to the Dispatcher before aircraft departure. The supplementary Planning Sheet must be supplied within one hour after aircraft departure.

- NOTE:
1. Seat Checks (allocating specific seats for passengers) are issued only on international schedule flights.
 2. Operations Managers will frequently spot check completed Planning Sheets for errors and omissions. Deficiencies shall be promptly reported to DFOD for corrective action.
 3. At stations not staffed with Traffic and Flight Operations personnel, the Planning Sheet need not be employed but personnel completing the Weight & Balance Manifest must comply with policies for distribution of passengers, baggage, cargo, etc., as outlined in Planning Sheet procedures to achieve suitable weight & balance conditions.

WEIGHT & BALANCE MANUAL

ACFT. TYPE: CARGO C-47
SECTION: 3.2
PAGE: 1
EFFECTIVE: 1 Jan. 1968

PREPARATION & HANDLING OF CARGO C-47 WEIGHT & BALANCE MANIFEST

The Company designed Cargo C-47 Weight & Balance Manifest consists of 8 main sections:

1. NON-STANDARD OPERATIONAL EMPTY WEIGHT COMPUTATION
2. FLIGHT DATA
3. WEIGHT DATA
4. DISTRIBUTION DATA
5. BALANCE DATA
6. LIMITS
7. BALANCE COMPUTATION
8. WEIGHT & BALANCE CORRECTION

Procedures covering the employment of the Cargo C-47 Weight & Balance Manifest are illustrated by attached example of a completed manifest.

Section 1. Non-standard Operational Empty Weight Computation

Most of Cargo C-47 flights in SEA operations do not carry life rafts/vests or passenger comfort & service/commissary items; however, the duty dispatcher shall incorporate the weights/index changes of these items, if required, in the Operational Empty Weight/Operational Empty Weight Index according to procedures outlined in Serial No. 2.8.

A. Basic Empty Weight

- a. Insert number of passenger seats installed and number of crew assigned based on Traffic and Operations requirements.
- b. Refer to Serial No. 2.9 for current basic empty weight/basic empty weight index.

The basic empty weight/basic empty weight index of B-817 as of 1 Jan. 1968 for Pax/Cgo Config. (25 canvas seats and 2 crew - Capt., F/O) is:

<u>Basic Empty Weight (lbs)</u>	<u>Basic Empty Weight Index</u>
18,720	18.4

Since one x-crew assigned in cockpit, the basic empty weight/index for Pax/Cgo Config. (25 canvas seats and 3 crew - Capt., F/O, x-crew) is:

<u>Basic Empty Weight (lbs)</u>	<u>Basic Empty Weight Index</u>
18,720	18.4
+ 200	- 3.6
<u>18,920</u>	<u>14.8</u>

B. Emergency Equipment

Insert the number of life rafts and life vests assigned and the total weight of these items. Refer to Serial No. 2.8 for individual weights/index changes. As shown on the attached example, one 20-man life raft and 15 life vests are assigned to this flight, the weights/index changes are as follows:

WEIGHT & BALANCE MANUAL

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EFFECTIVE: 1 Jan. 1968

	<u>Weight</u>	<u>Index Change</u>
1 20-man Life Raft	130	+3.8
20 Life Vests	<u>30</u>	<u>Negligible</u>
	160 lbs.	+3.8

Note: Other items of emergency equipment such as emergency radio transmitter, first aid kit(s), etc., are included in the basic empty weight since these items are permanently assigned.

C. Passenger Comfort & Service/Commissary Items

Insert the total weight of these items. Refer to Serial No. 2.8 for individual weights/index changes. As shown on attached example, 20 lbs. service/Commissary items are assigned, the index change is +0.5.

D. Extra Equipment

Insert the total weight of extra equipment such as additional seats, etc. Refer to Serial No. 2.8 for individual weights/index changes.

E. Operational Empty Weight

The sum of items A, B, C and D.

Section 2. FLIGHT DATA

Insertion of date, Flt. No., A/C No. and routing are self-explanatory.

Section 3. WEIGHT DATA

1. Operational Empty Weight

- Insert number of passenger seats installed and number of crew assigned based on Traffic and Operations requirements.
- If life rafts/vests and/or passenger comfort & service/commissary items are not required, the basic empty weight/basic empty weight index will be employed as operational empty weight/operational empty weight index.
- For the infrequent occasions when life rafts/vests and/or passenger comfort & service/commissary items are required, the Non-standard Operational Empty Weight Computation shall be practised.

2. Flight Fuel

- Flight Fuel (U.S. gallons) x Fuel Density = Weight of fuel on take-off
- Flight fuel must NOT include the 10 gallons required for C-47 aircraft taxi-out and run-up.

3. Operational Empty Weight plus Flight Fuel

The sum of items 1 and 2.

WEIGHT & BALANCE MANUAL

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Section 4. DISTRIBUTION DATA

A. Passengers/X-crew

a. Company established average body weight (lbs) - Passengers:

	<u>International Flights</u>		<u>Domestic Flights</u>	
	<u>Summer Season</u>	<u>Winter Season</u>	<u>Summer Season</u>	<u>Winter Season</u>
Adult (12 years & over)	160	165	150	155
Child (2 years/under 12 years)	80	80	75	75
Infant (under 2 years)	0	0	0	0

- Note: 1. Average body weights of passengers shall normally be used.
2. Actual or "asked" weights of passengers shall be used when necessary.
3. Total number of passengers includes children and infants.

b. Company established average body weight (lbs) - X-crew:

Cockpit crew - 170 lbs.
Male F/A - 150 lbs.
Female F/A - 130 lbs.

B. Baggage/Cargo

a. Actual weights of passenger baggage and cargo (including mail) shall be used.

b. Standard baggage weights of x-crew (and flight crew) shall normally be used:

Cockpit crew - 30 lbs. (Fwd Cabin)
Male F/A - 30 lbs. (Rear Cabin)
Female F/A - 20 lbs. (Rear Cabin)

c. Actual weights of x-crew (and flight crew) baggage shall be used when their baggage exceeds standard allowance.

4. Payload

Add the total weights in each compartment to obtain this figure which must not exceed the figure established for Maximum Payload this Flight (Item 11).

NOTE: Items to be air-dropped shall be indicated by inserting "A/D" against the total weight of the items.

Section 5. BALANCE DATA

5. Take-off Weight

The sum of items 3 and 4. This figure must not exceed the figure established for Maximum Take-off Weight this Flight (Item 10).

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6. Take-off C.G. % MAC

After the balance computation is completed, insert the figure obtained which must be well within the established limits shown on the C.G. % MAC scale.

7. Estimated Fuel Consumed Enroute

After the estimated flight time has been computed on the flight plan, refer to the appropriate fuel consumption chart and insert the figure obtained.

8. Estimated Landing Weight at Destination

Subtract the Estimated Fuel Consumed Enroute (Item 7) from the Take-off Weight (Item 5) to obtain this figure which must not exceed the Maximum Design Landing Weight (Item 12).

Section 6. LIMITS

9. Maximum Design Take-off Weight

The Maximum Design Take-off Weight of Company operated C-47 aircraft is 28,000 lbs.

10. Maximum Take-off Weight this Flight

- a. Refer to Serial No. 1.8
- b. The Maximum Take-off Weight this Flight must not exceed the Maximum Design Take-off Weight (Item 9).

11. Maximum Payload this Flight

- a. Subtract the Operational Empty Weight plus Flight Fuel (Item 3) from the Maximum Take-off Weight this Flight (Item 10) to obtain this figure.
- b. Refer to Serial No. 1.9

12. Maximum Design Landing Weight

The Maximum Design Landing Weight of Company operated C-47 aircraft is 26,000 lbs.

Section 7. BALANCE COMPUTATION

A. Fuel Scale

Insert the quantity of fuel in each tank and obtain the index change graduations from the respective scale.

B. Cabin and Belly Compartments

Balance changes as shown on the attached example are self-explanatory.

C. Scale of C.G. % MAC

As shown on the attached example the Take-off C.G. % MAC at Take-off Weight of 26,099 lbs. is 20.4.

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Section 8. WEIGHT & BALANCE CORRECTION

A. Weight & Balance Correction box

As shown on the attached example, one passenger was added in the Rear Cabin (Compartment 3) thus making the Corrected Take-off Weight 26,264 lbs and the Corrected Take-off C.G. % MAC 21.0.

B. Balance Correction lines

As shown on the attached example, the dotted pencil line was moved to the right the equivalent of 1.65 graduations of the Rear Cabin (Compartment 3) scale then dropped vertically to the C.G. % MAC scale.

WEIGHT & BALANCE MANIFEST

DATE: 1 Jan. 1968 CONT./FLT. NO: VN23

A/C NO: B817 FROM: SGN TO: BKK

NON-STANDARD OPERATIONAL EMPTY WEIGHT COMPUTATION				INDEX	COMPUT.
I. BASIC EMPTY WT. (25 PAX SEATS 3 CREW [†])	1	8	9	20	+ 1 4 8
II. EMERGENCY EQUIPMENT (ERT: 1 L/R 15 L/V)				160	3 8
III. PAX. COMFORT & SERVICE / COMMISSARY ITEMS				20	5
IV. EXTRA EQUIPMENT ()					
V. OPERATIONAL EMPTY WEIGHT (I + II + III + IV)	1	9	1	00	1 9 1

(FILL IN ONLY WHEN NON-STANDARD OPERATIONAL EMPTY WEIGHT REQUIRED)

CONFIG: PAX/CGO AIR-DROP PAX HI-DENSITY PAX

WEIGHT DATA

1. OPNL. EMPTY WT. (25 PAX SEATS 3 CREW [†])	1	9	1	0	0
2. FLIGHT FUEL 470 GALS @ 5.7 LBS/GAL.	2	6	7	9	
3. OPNL. EMPTY WT. PLUS FLIGHT FUEL (1 + 2)	2	1	7	7	9

DISTRIBUTION DATA

COMP.	CONFIGURATION		PASSENGERS / X-CREW ^{††}					BAGG/CGO WEIGHT	TOTAL EACH	WT. COMP.
	PAX/CGO	PAX	ADULT	CH	IN.	X-C	BODY WEIGHT			
FWD CABIN	CGO BIN 2 SEATS	CGO BIN 1 SEAT						5	0	0
MID CABIN	14/18 SEATS	15 SEATS						2	5	0
REAR CABIN	11/15 SEATS	11 SEATS	6	2	1	1		1	3	2

TAIL SECT. (FWD) AIR-DROP CGO ONLY

4. PAYLOAD (INCL. 9 PAX 1 X-CREW^{††}) 4 3 2 0

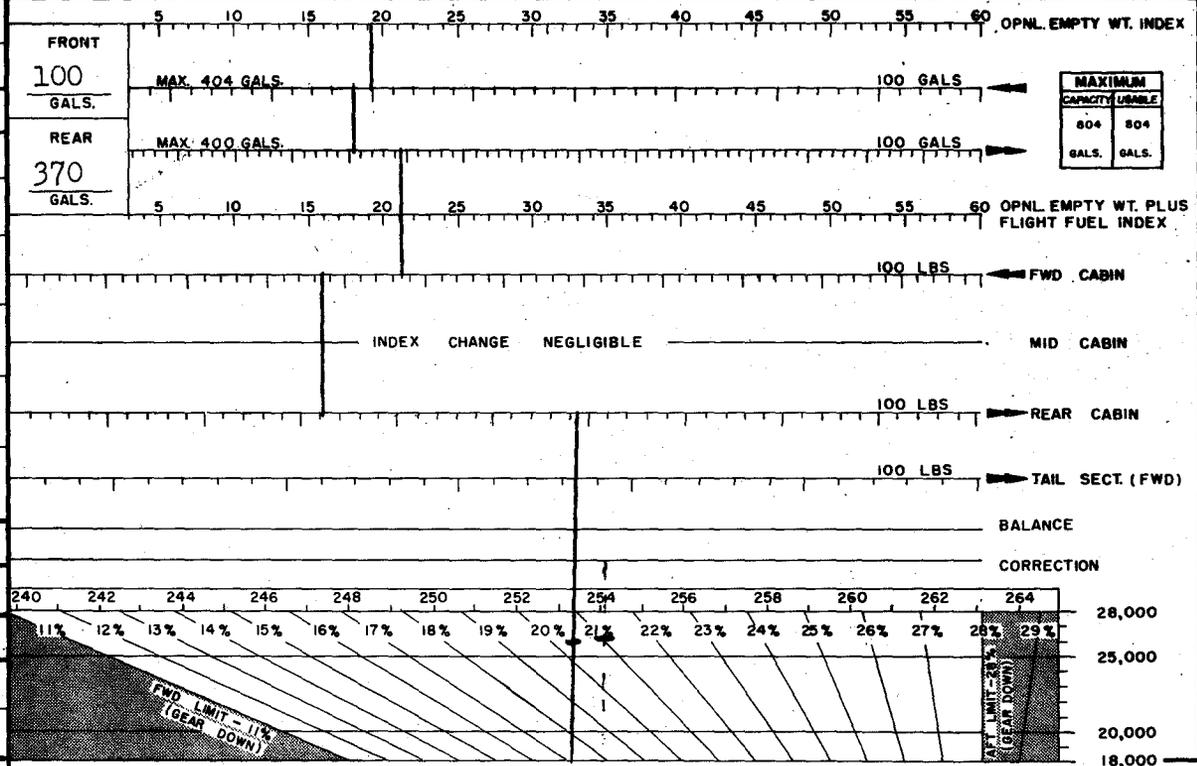
BALANCE DATA

5. TAKE-OFF WEIGHT (3 + 4)	2	6	0	9	9
6. TAKE-OFF C.G. 20.4 % MAC					
7. ESTIMATED FUEL CONSUMED ENROUTE (LBS)	1	7	6	8	
8. ESTIMATED LANDING WT. AT DESTINATION (5 - 7)	2	4	3	3	1

LIMITS

9. MAXIMUM DESIGN TAKE-OFF WEIGHT	2	8	0	0	0
10. MAXIMUM TAKE-OFF WEIGHT THIS FLIGHT*	2	7	7	6	8
11. MAXIMUM PAYLOAD THIS FLIGHT (10 - 3)	5	9	8	9	
12. MAXIMUM DESIGN LANDING WEIGHT	2	6	0	0	0

INDEX: 19.1 BALANCE COMPUTATION



- * 1. OPERATIONAL TAKE-OFF WEIGHT LIMITATION-DEPARTURE DESTINATION
 AIRPORT LIMITATIONS OR ENROUTE CONDITIONS
 A. R/W NO. _____ EFF. LENGTH _____ GRADIENT _____ %
 B. WIND DIRECTION / VELOCITY _____ KTS
 C. FIELD ELEVATION / TEMPERATURE _____
 D. OTHER LIMITATIONS OR CONDITIONS _____
2. MAXIMUM DESIGN LANDING WEIGHT LIMITATION

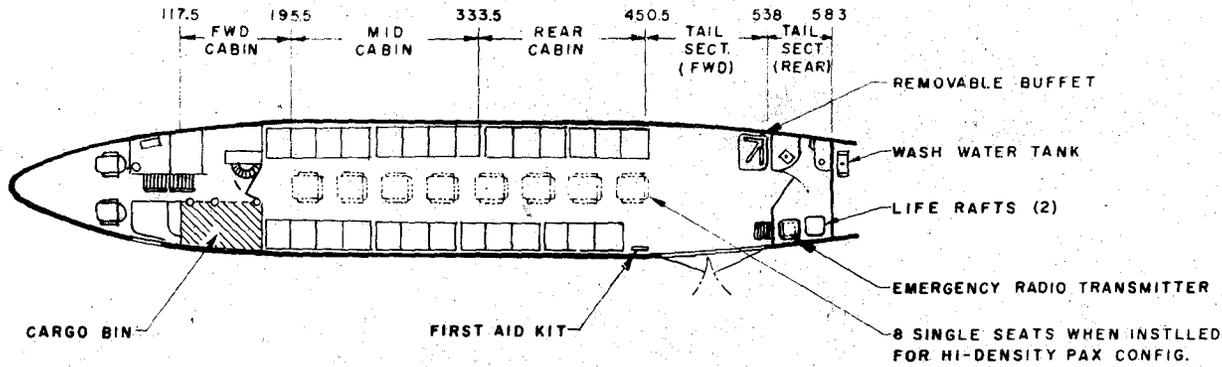
WEIGHT & BALANCE CORRECTION			
COMP.	ITEM	+ OR	WEIGHT
3	PAX	+	1 6 5
CORRECTED TAKE-OFF WEIGHT			2 6 2 6 4
CORRECTED TAKE-OFF C.G.			21.0 % MAC

† INCLUDING X-CREW ASSIGNED CREW SEAT
 †† X-CREW ASSIGNED PASSENGER SEAT

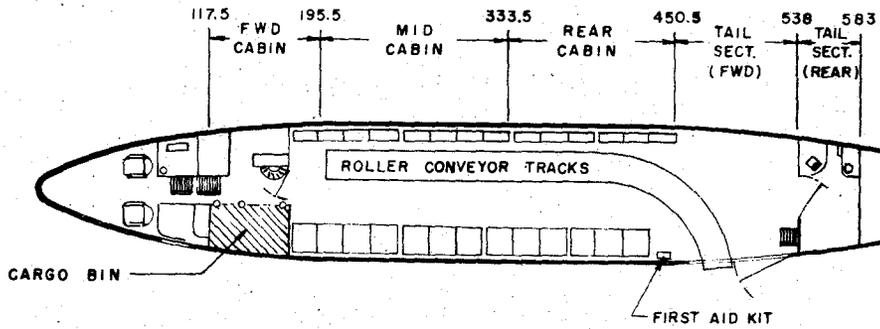
ALL WEIGHTS IN LBS

(THE OVER-RIDING LIMITATION SHALL APPLY WHEN MAX. T/O WT. THIS FLT. LESS THAN MAX. DESIGN T/O WT.)

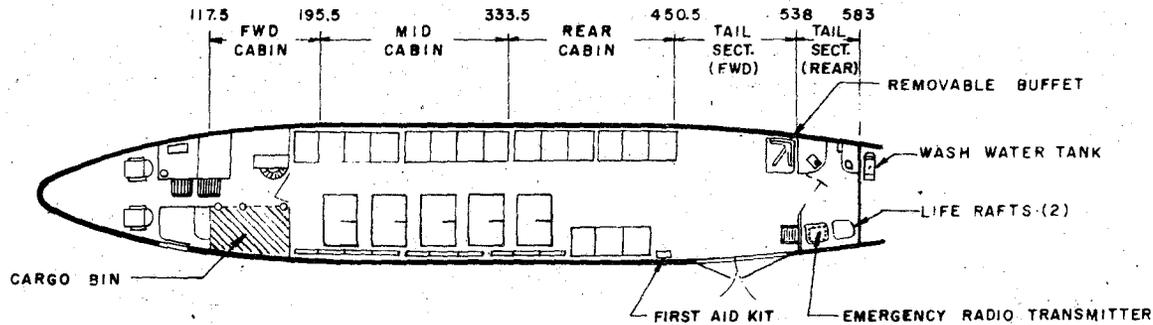
DISPATCHER _____ CAPTAIN _____



PAX/CGO CONFIGURATION - 27 CANVAS SEATS



AIR-DROP CONFIGURATION



PASSENGER CONFIGURATION - 17 CANVAS SEATS & 5 DOUBLE SEATS

COMPARTMENT STRUCTURAL LIMITATIONS

COMPARTMENT	STRUCTURAL LIMITATION (LBS)	MAX. UNIT FLOOR LOADING (LBS/SQ. FT.)
FWD CABIN	1,850	66
MID CABIN	4,240	66
REAR CABIN	3,600	66
TAIL SECT. (FWD)	1,300	66

