

BOEING JET FLEET STATISTICS
as of 30 June 1986

AIRPLANE TYPE	ACTIVE AIRPLANES	CUMULATIVE FLIGHT HOURS	AVERAGE DAILY UTE	HIGH UTE - 12 MONTH AVG ²	DEPARTURE RELIABILITY ¹
707	480	33,447,031	1.6	7.7	94.51
727	1772	59,690,098	6.3	9.9	97.63
737	1214	23,389,585	6.7	12.4	98.43 (-100,-200) 99.01 (-300)
747	630	19,615,149	9.4	14.8	97.34
757	101	440,515	7.8	11.8	97.90
767	142	972,719	8.4	11.6	98.18

NOTES:

1. Cancellations, aborts, or delays 15 minutes due to aircraft system or component.
2. Surge utilization rates over 16 hours per day have been sustained.

DATA ACQUIRED BY
C. K. YUK
MARCH APR 87

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Source: Boeing Jet Fleet Statistics, June 1986 and Boeing R&M Engineering Group

COMMERCIAL DERIVATIVES

o PERFORMANCE CHARACTERISTICS, CONFIGURATION DEFINITION AND WEIGHT LIMITATIONS FOR THE 707/747/757 AND 767 IN THIS BRIEFING REPRESENT A PARTICULAR VERSION OF THAT MODEL.

o OPTIONS ARE AVAILABLE ON EACH MODEL TO SUIT VARIOUS MILITARY MISSION REQUIREMENTS.

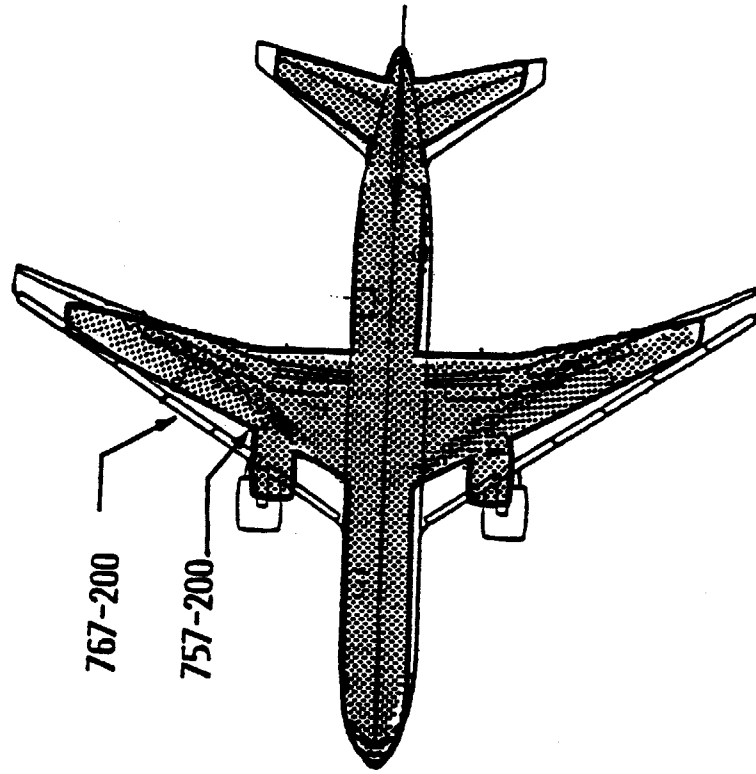
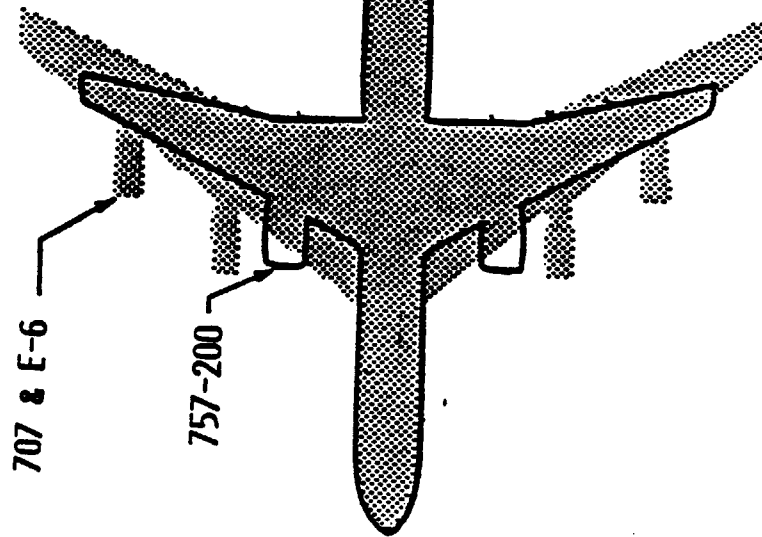
o TYPICAL OPTIONS:

MAXIMUM TAKEOFF GROSS WEIGHT AND MAXIMUM PAYLOAD
FUEL CAPACITY

ENGINE MANUFACTURER AND ENGINE THRUST
CARGO FLOOR AND CARGO DOOR
ELECTRICAL GENERATOR POWER
ENVIRONMENTAL CONTROL SYSTEM
AIRCRAFT AVIONICS

SIZE COMPARISON

707/E-6/757/767

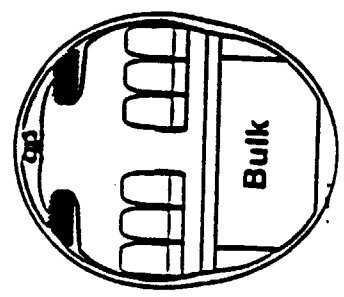


	WING SPAN	LENGTH	CABIN WIDTH
707 & E-6	142'5"	152'11"	139.3"
757-200	124'6"	155'3"	138.8"
767-200	156'1"	159'2"	184"

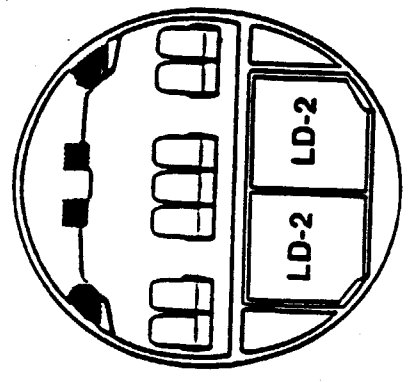
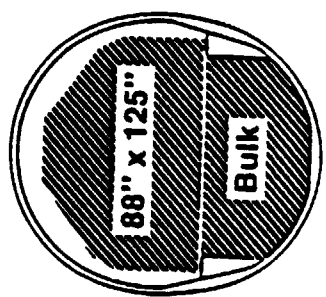
Fuselage Cross Section Comparison

Passenger/Cargo Configurations

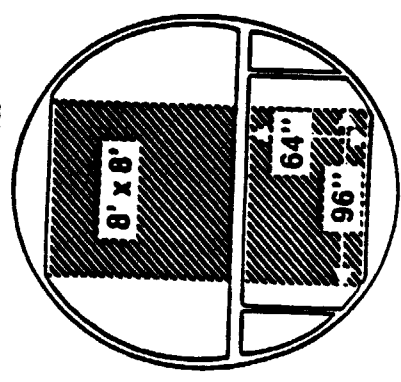
PRODUCT
DEVELOPMENT
STUDY



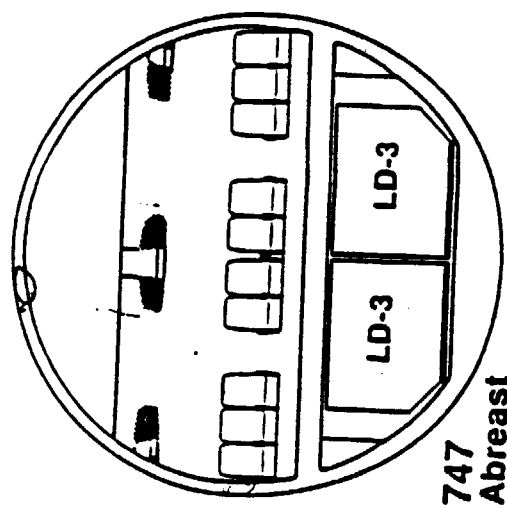
757
707/727/737
4/6 Abreast
148 in. Dia



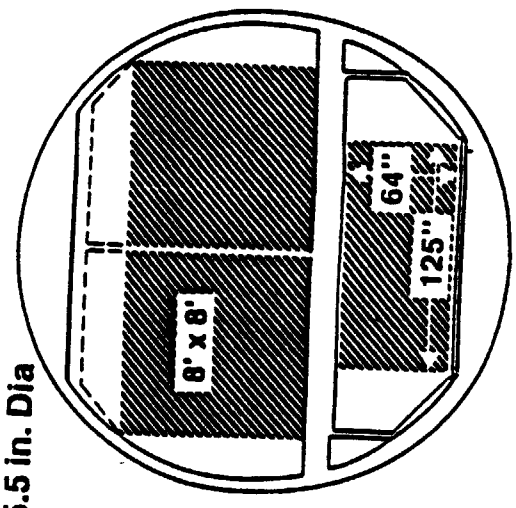
767
6/7/8 Abreast
198 in. Dia



Study



747
9/10 Abreast
255.5 in. Dia



WEIGHT AND ENGINE SUMMARY

<u>MODEL</u>	<u>707-320C</u>	<u>E-6</u>	<u>757-200</u>	<u>767-200</u>	<u>747SP</u>	<u>747-200</u>	<u>747-400</u>
2.5g DESIGN WEIGHTS ~ KIPS							
MAX TAXI	336K	342K	251K	381K	699K	803K	803K
MAX ZERO FUEL	230K	230K	184K	253K	390K	526.5K	535K
MAX PAYLOAD	96.7K	90.3K	70.5K	101.1K	117K	216.1K	219.4K
ENGINES	JT3D -7A	CFM56 -2-A2	PW2037	PW4000	JT9D -7J	JT9D -7R462	PW4000
RATED THRUST LB/ENG	18,000	24,000	38,200	56,000	50,000	54,750	56,000

Floor Space Comparison

Model	Main (1) Cabin (FT ²)	+	Lower Lobes (FT ²)	+	Upper Deck (FT ²)	=	Total (1) Floor Area (FT ²)	Ratio to 707
707-320C	1114	+	580	+	N/A	=	1694	1.00
E6	1114	+	425	+	N/A	=	1539	.91
757-200	1250	+	292	+	N/A	=	1542	.91
767-200	1589	+	555	+	N/A	=	2144	1.26
747SP	2545	+	991	+	457(1)	=	3993	2.36
747-200	3515	+	1514	+	457(1)	=	5486	3.24

N/A NOT APPLICABLE
(1) DOES NOT INCLUDE FLIGHT DECK

Volume Comparison

Model	Main (1) Cabin (FT3)	+	Lower Lobes (FT3)	+	Upper Deck (FT3)	=	Total (1) Volume (FT3)	Ratio to 707
707-320C	7,812	+	2,073	+	N/A	=	9,885	1.00
E6	7,812	+	1,494	+	N/A	=	9,306	.94
757-200	8,135	+	1,790	+	N/A	=	9,925	1.04
767-200	12,998	+	3,949	+	N/A	=	16,947	1.71
747SP	20,240	+	4,970	+	2,200 (1)	=	27,410	2.77
747-200	27,654	+	7,500	+	2,200 (1)	=	37,354	3.78

(1) DOES NOT INCLUDE FLIGHT DECK
N/A NOT APPLICABLE

Assumptions

- **Normal Systems/Equipment**
 - **Generators**
 - **Hydraulic system**
 - **APU**
 - **Avionics**
 - **Cooling**
 - **Military sidewalls, ceilings and lighting**
 - **Insulation**
 - **Drag levels (no big external bumps)**
- **Not Included**
 - **Military avionics**
 - **EMP hardening**
 - **Liquid oxygen system**
 - **Payload includes modification and system weights**
- **Deletions**
 - **Passenger accommodations (seats, galleys, lavatories, etc.)**
 - **Lower lobe cargo handling equipment**
- **Additions**
 - **Aerial refueling provisions**
 - **Extra fuel tanks for 2.25g performance**
- **MIL-C-5011A performance rules**

Takeoff Field Length

Model	2.5g Maximum Ramp Weight ~LB	Distance to 50' with All Engines Operating ~FT	Critical Field Length ~FT
707-320C	336,000	8,500	8,000
E6	342,000	7,600	7,100
757-200	251,000	7,000	7,650
767-200	381,000	6,700	7,350
747SP	699,000	7,400	6,900
747-200	803,000	8,500	8,000

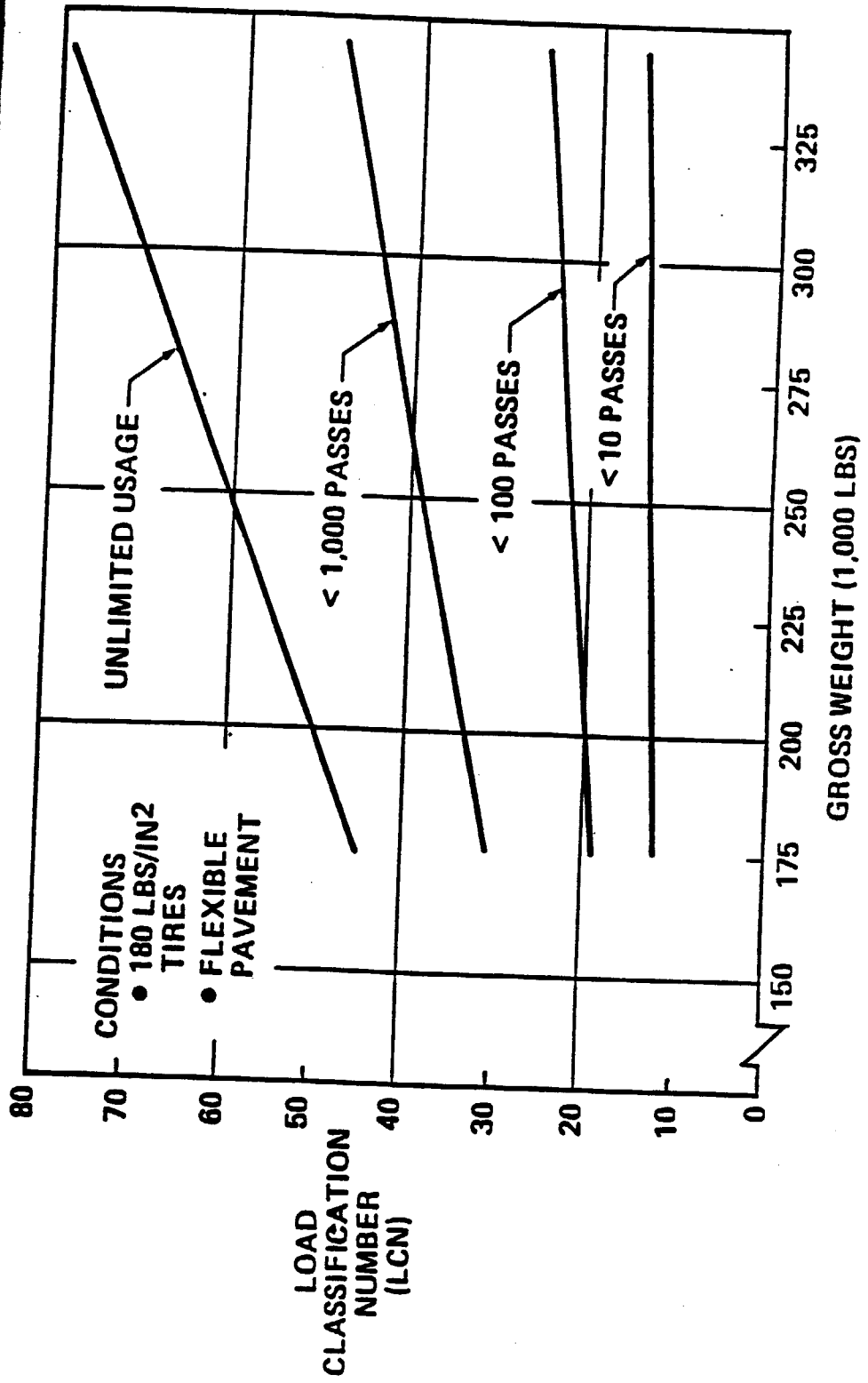
NOTE: DRY, HARD, SURFACED RUNWAY AT SL/59°

Landing Field Length

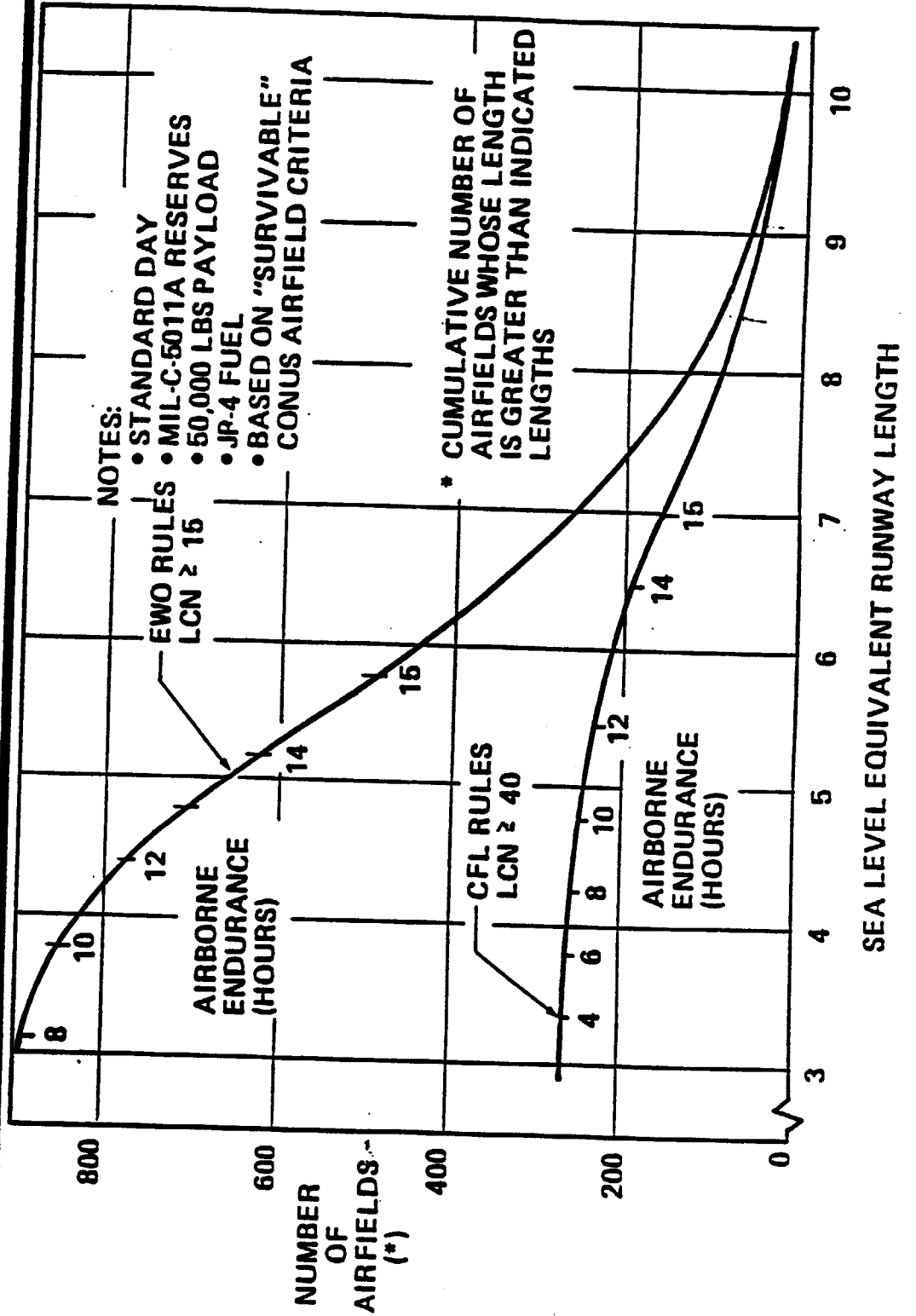
Model	Typical Mission Landing Weight ~LB	Distance to Clear 50' and Stop ~FT
707-320C	171,600	3,300
E6	184,300	3,500
757-200	147,700	2,750
767-200	203,000	2,780
747SP	329,000	2,800
747-200	369,000	2,900

**NOTE: DRY, HARD SURFACED RUNWAY AT SL/59°F
NO REVERSE THRUST (FORWARD IDLE)
LANDING WEIGHT = OEW + RESERVE FUEL
+ 23,000 LB PAYLOAD**

E-6 LCN Vs. Gross Weight and Usage



E-6 "Survivable" CONUS Airfields



**Performance Comparison with 50,000 lb. Payload (1)
2.5G Takeoff Gross Weight or Basic Fuel Capacity
(Whichever is More Limiting)**

Model	Zero Radius Time on Station (HR)	1000NM Radius Time on Station (HR)	Deployment Range (N MI)	Taxi Weight (LB)	Critical Field Length (FT) @ S.L.S.
707-320C	11.0	6.5	4870	336,000(2)	8,000
E6	13.9	9.1	5,780	342,000(2)	7,150
757-200	10.8	5.9	4,420	251,000(2)	7,650
767-200	17.4	12.3	6,880	358,225(3)	6,530
747SP	16.2	11.7	7,170	650,334(3)	5,760
747-200	17.0	12.4	7,370	711,303(3)	5,860

(1) MIL-C-5011A RULES/CLEAN AIRCRAFT
(2) 2.5 G TAKEOFF GROSS WEIGHT
(3) FUEL CAPACITY LIMITED

**Performance Comparison with 50,000 lb. Payload (1)(2)
2.25G Takeoff Gross Weight**

Model	Zero Radius Time on Station (HR)	1000NM Radius Time on Station (HR)	Deployment Range (NMI)	Taxi Weight (LB)	Critical Field Length @ S.L.S. (FT)
707-320C	12.0	7.5	5,300	360,000	9,300
E6	15.2	10.4	6,304	366,000	8,500
757-200	12.2	7.3	5,000	268,600	8,400
767-200	20.4	15.3	8,050	408,000	8,830
747 SP	18.0	13.6	8,194	749,000	8,112
747-200	19.7	15.3	8,816	859,000	9,600

(1) MIL-C-5011A RULES/CLEAN AIRCRAFT

(2) PERFORMANCE LIMITED TO 2.25G. BODY FUEL TANKS ADDED AS REQUIRED.

Electrical Load Analysis Including APU Generators

Model	Standard Engine Generators ~KVA	Standard APU Generators ~KVA	Inflight Total Electrical Power ~KVA	Inflight Aircraft Loads & Losses ~KVA	Inflight Net Available Power ~KVA
707-320C	4 x 30	-	120	70	50
E6	8 x 75	1 x 60 (Ground only)	600	120	480
757-200	2 x 90	1 x 90	270	90	180
767-200	2 x 90	1 x 90	270	100	170
747SP	4 x 60	1 x 90	330	125	205
747-200	4 x 60	2 x 90	420	134	286
747-400	4 x 90	2 x 90	540	146	394
E-4B	8 x 150	2 x 90	1380	230	1150