

Maximum permissible air bleed extractions of total engine air flow:	<u>JT4A-9, -10</u>	<u>JT4A-11, -12</u>
High pressure compressor		
From idle to maximum continuous	5.5%	5.5%
Takeoff	1.5%	1.5%
Low pressure compressor		
From idle to maximum continuous	2.00%	2.00%
Takeoff	1.65%	1.65%
Maximum permissible mechanical extraction	150 hp.	150 hp.

Thrust Setting:

The appropriate thrust setting curve, (EPR or P_{t7}), in the Airplane Flight Manual must be used for control of engine thrust.

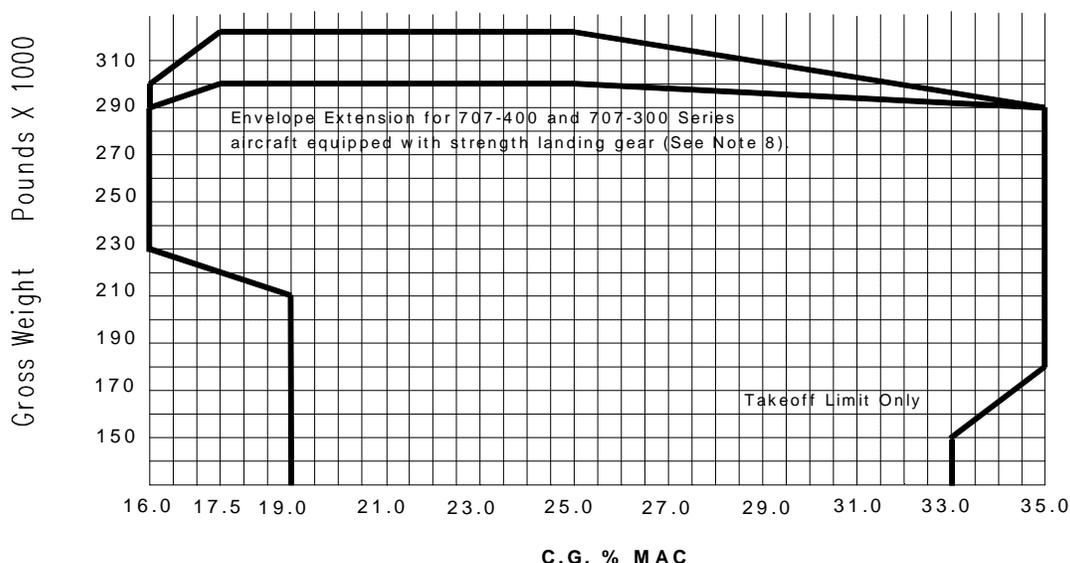
Airspeed limits (AIS)	Vmo (Maximum Operating)	<u>MPH</u>	<u>KTS</u>	
	at Sea Level	390	339	
	at 5,000 ft.	396	344	
	at 10,000 ft.	404	351	
	at 15,000 ft.	413	359	
	at 20,000 ft.	425	369	
	at 24,900 ft.	435	378	
	Mmo (Maximum Operating)			
	at 25,000 ft. and above	(M = 0.887)		
	Va (Maneuvering)	<u>MPH</u>	<u>KTS</u>	
	at sea level	287	249	
	at 20,000 ft.	299	260	
	at 37,700 ft.	331	287	
	Straight line variation between points shown.			
	Ma (Maneuvering)			
	at 37,700 ft. and above	(M - 0.887)		
	Vfe (Flaps Extended)	<u>MPH</u>	<u>KTS</u>	
	(Flaps not to be	10°	265	230
	extended above	20°	252	218
	20,000 ft.)	30°	238	207
		50°	209	181
	Vlo (Landing Gear Operating)			
	at sea level to 30,000 ft.	310	269	
	at 30,000 ft. to 35,000 ft.	322	280	
	Mlo (Landing Gear Operating)			
	at 35,000 ft. and above	(M = 0.825)		
	Vle (Landing Gear Extended)			
	at sea level to 30,000 ft.	367	319	
	Mle (Landing Gear Extended)			
	at 30,000 ft. and above	(M = 0.825)		
	Vdco (Dump Chute Operation)			
	at sea level to 42,000 ft.	275	239	
	Vdce (Dump Chute Extended)			
	at sea level to 36,000	316	274	
	Mdce (Dump Chute Extended)			
	at 36,000 ft. and above	(M = 0.825)		

Vmca (Air Minimum Control Speed)			
(Sea Level + 15°C)			
	<u>MPH</u>	<u>KTS</u>	
JT4A-11, -12 T.O. Thrust	135	117	
JT4A-9, -10 T.O. Thrust	132	115	
JT4A-11, -12 Limited Thrust	132	115	

Mmcg (Ground Minimum Control Speed)			
(Sea Level + 15°C)			
	<u>MPH</u>	<u>KTS</u>	
JT4A-11, -12 T.O. Thrust	131	114	
JT4A-9, -10 T.O. Thrust	128	111	
JT4A-11, -12 Limited Thrust	128	111	

C.G. range (Landing Gear Extended) The nose gear retraction moment is 22,500 in.lb. and moves C.G. forward. The main gear retracts parallel to the wing reference axis; hence, has no effect on the airplane longitudinal C.G.

707-300 and 707-400 C.G. Diagram



Maximum weights	<u>-300 Series with Restricted Landing Gear (See NOTE 8)</u>	<u>-300 & -400 Series with Heavy Gear</u>	<u>-300 & -400 with Heavy Gear & 7 Cell Center Tank</u>
Maximum ramp weight	302,000 lb.	316,000 lb.	316,000 lb.
Maximum flight weight with 30° flaps	301,000 lb.	311,000 lb.*	316,000 lb.**
Maximum flight weight flaps up	300,000 lb.	310,000 lb.	310,000 lb.* 316,000 lb.**
Maximum flight weight at which the outboard auxiliary fuel tanks can be empty	275,000 lb.	275,000 lb.	275,000 lb.
Maximum landing weight	198,500 lb.	207,500 lb.	207,500 lb.
Maximum zero fuel weight	190,000 lb.	190,000 lb.	190,000 lb.

* Basic fuel management
** Alternate fuel management

Minimum crew For any flight, 3 persons (Pilot, Copilot, Flight Engineer). When in the mixed passenger/cargo configuration one flight attendant is required in the passenger compartment.

Maximum passengers 179 limited by emergency exit requirements. Approved for 189 passengers if equipped with four (4) inflatable escape chutes installed in accordance with FAA approved type design data. (Review case no. 5 dated July 17, 1963.)

Maximum baggage	<u>Compt.</u>	Body <u>Station</u>	Maximum	Maximum	Capacity <u>lb.</u>	Moment Arm <u>inches</u>
			Load <u>lb./in.</u>	Concentration <u>p.s.f.</u>		
	Fwd. Belly	400-600B + 18	48	150	14300	+ 389
	Aft Belly	960-1060	50	150	7000	+1030
	Aft Belly	1060-1200	35	150	4900	+1170
	Aft Belly	1200-1300	20	150	2000	+1290

Fuel capacity (See NOTE 1(c) for information relative to unusable fuel; NOTE 1(e) for required fuel usage procedure; NOTE 1(f) for undumpable fuel.)

The maximum fuel capacity listed below must not be exceeded. For numbers in parentheses, see NOTE 16. For other fuel C.G. locations with partially filled tanks, see appropriate Boeing Weight and Balance Manuals listed under NOTE 14.

<u>Tank</u>	<u>Nominal Capacity</u>	<u>Maximum Capacity</u>	<u>Moment Arm</u> Inches
	Usable fuel in tank U.S. Gal. per Tank	(See NOTE 17) Pounds/Tank	
No. 1 & No. 4 Reserve	439	3,029	1101.7
No. 1 & No. 4 Main	2,307 (2,323)	15,918 (16,029)	933.4 (934.6)
No. 2 or No. 3 Main	4,065 (4,069)	28,049 (28,076)	788.4 (788.4)
7-Cell Center	10,193	70,332	706.9
4-Cell Center (707-300 Series and 707-437 only; See NOTE 13)	7,640	52,716	728.6
TOTAL 7-Cell center	23,815 (23,855)	164,324 (164,600)	
TOTAL 4-Cell center	21,262	146,984	

Whenever fuel is loaded into the center section fuel tank, drain the sump of water prior to flight.

Maximum permissible turbine outlet gas temperatures:	
Takeoff (5 min.)	(675°C) 1247°F
Maximum continuous	(600°C) 1112°F
Starting maximum gas temperature	(675°C) 1247°F
Maximum with reverse thrust selection	(675°C) 1247°F

Maximum permissible oil inlet temperature (105°C) 221°F

Maximum permissible air bleed delivery for engine and aircraft services at sea level conditions as percent of no bleed low pressure compressor mass flow:

Takeoff rpm	
High pressure compressor bleed	5.6%
Low pressure compressor bleed	1.1%
Maximum continuous rpm	
High pressure compressor bleed	5.8%

Airspeed limits

707-400 series aircraft Vmo Airspeed Limits are identical to those listed in the applicable section Part I of this Data Sheet except the 707-436 and 707-465 Vmo limit at 23,300 feet is 430 mph (375 kts) and the Mmo limit is .852 at 23,300 feet and above.

707-400 series aircraft, Va, Ma, Vfe, Vlo, Mlo, Vle, Mle, Dump Chute Extended and Dump Chute Operation Airspeed Limits are identical to those listed in the applicable section, PART I, of this Data Sheet.

Vmca (Air Minimum Control Speed) (Sea Level and 15°C)	<u>MPH</u>	<u>KTS</u>
	139	121
Vmcg (Ground Minimum Control Speed)	145	126

C.G. range
(Landing gear extended)

The 707-400 series aircraft C.G. Range and Landing gear retraction moment are shown in applicable Section, PART I, of this Data Sheet.

Maximum weights

707-400 series aircraft Maximum Weights are shown in the applicable section, PART I, of this Data Sheet.

Minimum crew

For any flight, 3 persons (pilot, copilot, flight engineer)

Maximum passengers

179 limited by emergency exit requirements. Approved 189 passengers if equipped with four (4) inflatable escape chutes installed in accordance with FAA approved type design data.

Maximum baggage

707-400 series aircraft Maximum Baggage is identical to that shown in the applicable section, PART I, of this Data Sheet.

Fuel capacity

707-400 series aircraft Fuel Capacity is shown in the applicable Section, PART I, of this Data Sheet.

Engine limits

	JT3D-1; <u>-1MC6: -1MC7</u>	<u>JT3D-3</u>	<u>JT3D-3B</u>	<u>JT3D-7</u>
Takeoff static net thrust (Std. day), lb., at sea level, dry (5 minutes)	17,000	18,000	18,000	19,000
Take off wet (2 1/2 minutes)	17,000	18,000	18,000	19,000
Maximum continuous static thrust (Std. day), lb., at sea level	14,500	16,400	16,400	17,200
Maximum permissible engine rotors operating speeds:				
Low pressure compressor (N ₁), r.p.m.	6,800	6,800	6,850	6,850
High pressure compressor (N ₂), r.p.m.	10,200	10,250	10,250	10,250

Maximum EPR values shown in the airplane flight manual shall not be exceeded.

Maximum permissible turbine outlet gas temperatures:

	JT3D-1; <u>-1MC6: -1MC7</u>	<u>JT3D-3: -3B</u>	<u>JT3D-7</u>
Takeoff (5 minutes)	(530°C) 986°F	(555°C) 1031°F	(575°C) 1067°F
Maximum continuous	(460°C) 860°F	(490°C) 914°F	(510°C) 950°F
Maximum for acceleration (2 minutes)	(530°C) 986°F	(555°C) 1031°F	(575°C) 1067°F
Starting	(450°C) 842°F	(450°C) 842°F	(450°C) 842°F

Maximum permissible air bleed extractions of total
engine air flow: Typical

High pressure compressor	
From idle to maximum continuous	5.5%
At takeoff	2.0%
Low pressure compressor	
From idle to maximum continuous	2.0%
At takeoff	2.2%

Maximum permissible oil inlet temperature: Typical

Continuous operation	(132°C)	270°F
Ten minutes operation	(143°C)	290°F

Airspeed limits (IAS)

Vmo (Maximum Operating)	<u>MPH</u>	<u>KTS</u>
at sea level	432	375
at 10,000 ft.	439	381
at 15,000 ft.	443	385
at 20,000 ft.	449	390
at 23,000 ft.	454	394

Mmo (Maximum Operating)

at 23,000 ft. and above (M = 0.887)

Va (Maneuvering)

	<u>MPH</u>	<u>KTS</u>
at sea level	311	270
at 10,000 ft.	319	277
at 20,000 ft.	329	286
at 30,000 ft.	346	300
at 35,000 ft.	356	309

Straight line variation between points shown

Ma (Maneuvering)

at 35,000 ft. and above (M = 0.887)

Vfe (Flaps Extended)	<u>Maximum Flap Deflection</u>	<u>MPH</u>	<u>KT</u>	<u>MPH*</u>	<u>KT</u>
(Flaps not to be extended above 20,000 ft.)	14°	260	226	242	210
	17°	257	223	242	210
	25°	248	215	242	210
	50°	225	195	225	195

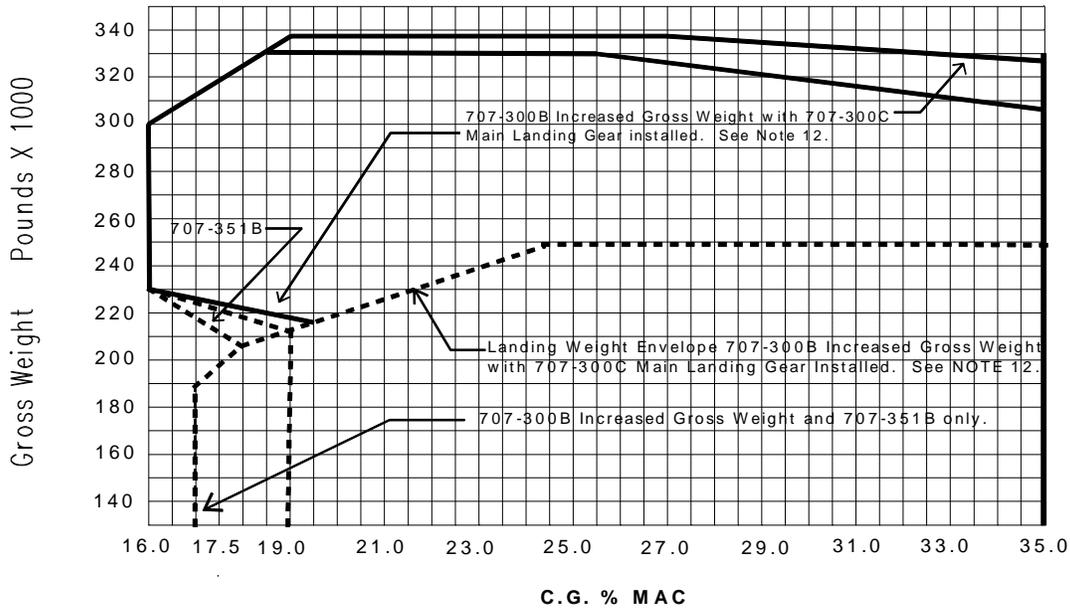
*Aircraft without Boeing Service Bulletin No. 1826 installed

Vlo (Landing Gear Operation)		<u>MPH</u>	<u>KTS</u>
at sea level to 30,000 ft.		311	270
at 30,000 ft. and above		322	280
Mlo at 34,400 ft. and above		(M - 0.830)	
Vle (Landing Gear Extended)		369	320
Mle (Landing Gear Extended)		(M - 0.830)	
Vdco (Dump Chute Operation)		276	240
Mdco (Dump Chute Operation)		(M = 0.830)	
Vdce (Dump Chute Extended)		317	275
Mdce (Dump Chute Extended)		(M = 0.830)	
Landing Light Extended			
at sea level to 25,000 ft.		441	383
at 25,000 ft. and above		(M = 0.887)	

Vmca (Air Minimum Control Speed)			
(Sea level + 15°C)			
JT3D-3, -3B AND -3B extended temperature		133	116
JT3D-38 Extended temperature and improved cowls		135	117.5
JT3D-7		139	121
Vmcg (Ground Minimum Control Speed)			
(Sea level = 15°C)			
JT3D-3		133	116
JT3D-3B, -3B extended temperature and -7		139	121
JT3D-3B Extended temperature and improved cowls		143	124

C.G. range The nose gear retraction moment is 22,500 in.lb. and moves C.G. forward. The main gear retracts parallel to the wing reference axis; hence, has no effect on the airplane longitudinal C.G.

707-300B C.G. Diagram



Maximum weights (For spare engine carry, see NOTE 18)

	Basic Aircraft	Increased Gross Weight Aircraft	Increased Gross Weight Aircraft (See NOTE 12)
Maximum Taxi (Ramp) weight (lb)	328,000	328,000	336,000
*Maximum flight weight (lb)			
Flaps Down	327,000	328,000	335,000
Flaps Up	318,000	326,000	326,000
	(322,000)	(328,000)	(331,000)
With outboard reserve tanks empty	280,000	285,000	285,000
Maximum landing weight (lb.)	207,000	207,000	247,000
Structural design zero fuel	190,000	195,000	195,000

See NOTE 1(e) for necessary fuel management for flaps up flight at weights shown in parenthesis.

*At sea level to 11,500 ft., maximum flight weight must be reduced at altitudes above 11,500 ft. at the rate of 1000 lb. per 3500 ft.

Minimum crew For any flight, 3 persons (Pilot, Copilot, Flight Engineer)

Maximum passengers 179 limited by emergency exit requirements. Approved for 189 if equipped with four (4) inflatable escape chutes installed in accordance with FAA approved type design data.

Maximum baggage 707-300B Series aircraft maximum baggage is identical to that shown in the applicable section Part I of this Data Sheet.

For Model 707-351B Main Deck Cargo Compartment Limitations, see Weight and Balance Document D6-10949.1.

Fuel capacity See NOTE 1(c) for information relative to unusable fuel; NOTE 1(e) for required fuel usage procedure; NOTE 1(f) for undumpable fuel.

The maximum fuel capacity listed below must not be exceeded. For other fuel C.G. locations with partially filled tanks, see appropriate Boeing Weight and Balance Manuals listed under NOTE 14.

<u>NOMINAL CAPACITY</u>	<u>MAX. CAPACITY</u>	<u>MOMENT</u>	<u>ARM</u>
<u>TANK</u>	Usable fuel in tank U.S. Gallons <u>Per Tank</u>	(7.1 lb/gal) Pounds <u>Per Tank</u>	<u>Inches</u>
No. 1 or No. 4 Reserve	439	3,117	1,101.7
No. 1 or No. 4 Main	2,323	16,493	934.6
No. 2 or No. 3 Main	4,069	28,890	788.4
7-Cell Center	10,193	72,370	728.6
Total	23,855	169,370	

Whenever fuel is loaded into the center section fuel tank, drain the sump of water prior to flight.

Oil Tank capacity The system oil capacities are given in the appropriate Weight and Balance Control Manuals listed under NOTE 14.

<u>Engine Oil</u>	<u>Location</u>	<u>Volume</u>	<u>Moment Arm</u>
<u>Tank No.</u>		<u>Gal.</u>	<u>(In.)</u>
1	Outboard Port	6.0 gal.	866.9
2	Inboard Port	6.0 gal.	684.1
3	Inboard Starboard	6.1 gal.	684.1
4	Outboard Starboard	6.1 gal.	866.9

Required equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. The appropriate Weight and Balance Manuals in NOTE 14 contain lists of all required equipment as well as optional equipment installations approved by the FAA.

IV - Model 707-100C Series (Transport Aircraft), approved April 30, 1963

<u>Model</u>	<u>Serial Nos.</u>
707-307C	19997-20000
707-309C	20261, 20262
707-311C	19789
707-320C	20008, 20275, 20487, 20488
707-321C	18579, 18580, 18591, 18714-18718, 18765-18767, 18790, 18824-18826, 19267-19274, 19367-19373, 19375, 19377, 19379, 20016-20018
707-323C	18689-18692, 18938-18940, 19235-19237, 19380-19384, 19515-19519, 19581-19589, 19574-19577, 20087-20089
707-324C	18886-18887, 19177, 19178, 19350-19353, 19869-19871
707-327C	19104-19108, 19440, 19529-19531
707-328C	18881, 19292, 19521, 19522-19524, 19916, 19917
707-329C	18890, 19162, 19211, 19990, 20198-20200
707-330C	18932, 18937, 19317, 20123, 20124, 20395
707-331C	18711-18713, 18756, 18757, 19213-19214, 19435, 19566, 19567, 20068, 20069
707-336C	18924, 18925, 19498, 19843, 20474, 20475, 20517
707-337C	19248, 19988
707-338C	18808-18810, 18953-18955, 19293-19297, 19621-19630
707-340C	19284-19286, 19866
707-341C	19320, 19321-19322
707-344C	19705, 19706, 20110, 20230, 20283
707-345C	19840-19842
707-347C	19963-19967, 20315-20319
707-348C	18737, 18880, 19001, 19410
707-349C	18975, 18976, 19354, 19355
707-351C	18746-18748, 18888, 18889, 18921, 18922, 18964, 19034, 19163, 19164, 19168, 19209-19211, 19263, 19412, 19434, 19443, 19631, 19632, 19773- 19777
707-355C	19417, 19664, 19986
707-358C	20127, 20301

707-360C	19736, 19820
707-365C	19416, 19590
707-366C	19844, 19845, 20341, 20342, 20760-20763, 20919, 20920
707-368C	19809, 19810, 21081, 21103, 21104, 21261, 21367, 21368
707-369C	20084-20086, 20546, 20547
707-370C	20889-20891
707-372C	20076, 20077
707-373C	18582, 18583, 18707, 18709, 18738, 18991, 19179, 19441, 19442, 19715, 19716
707-379C	19821, 19822
707-384C	18948-18950, 19760
707-385C	19000, 19433, 20522
707-386C	20287, 20288, 20741, 21396
707-387C	19961, 19962
707-396C	20043
707-399C	19415, 19767
707-3B4C	20224, 20225, 20259, 20260
707-3D3C	20494, 20495
707-3F5C	20514, 20515
707-3F9C	20474, 20669, 21428
707-3H7C	20629
707-3J6C	20718-20723
707-3J8C	20897, 20898
707-3J9C	20830-20835, 21123-21129, 21475
707-3K1C	20803-20805, 21651
707-3L5C	21228
707-3L6C	21096
707-3M1C	21092
707-3P1C	21334

Engines: See Applicable Section in Part III of This Data Sheet.

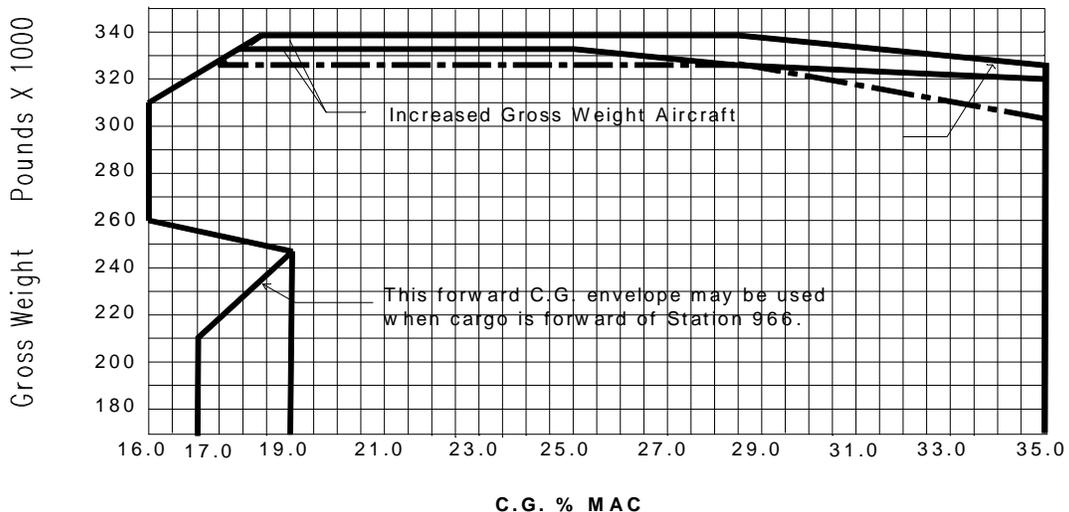
Fuel: See Applicable Section in Part III of This Data Sheet.

Engine limits See Applicable Section in Part III of This Data Sheet.

Airspeed limits See Applicable Section in Part III of This Data Sheet.

C.G. range (Landing gear extended) The nose gear retraction moment is 23,800 in./lb. and moves the C.G. forward. The main gear retracts parallel to the wing reference axis and has no effect on the airplane longitudinal C.G.

707-300C C.G. Diagram



Cargo loaded on the main cargo deck may result in an asymmetrically loaded airplane; that is, more weight may be on the right hand side than on the left hand side of the airplane or vice versa. The asymmetrical moment (resulting from an off-loaded airplane) must not exceed 864,000 inch lbs.

Maximum weights See NOTE 1(e) for necessary fuel management for flight with flaps up at weights shown in parentheses. For spare engine carry, see NOTE 18.

	<u>Basic Aircraft</u>	<u>Increased Gross Weight Aircraft</u>	<u>Model 707-338C (See NOTE 15)</u>
Maximum Taxi Weight (lb)			
Passenger Configuration	328,000	336,000	336,000
Other Configurations	328,000	332,000	334,000
*Maximum flight weight (lb)			
Flaps Down	327,000	332,000 335,000 (Pax Config)	334,000
Flaps Up			
Passenger Configuration	322,000	326,000 (331,600)	325,000 (331,000)
Other Configurations	322,000	325,000 (330,000)	325,000 (331,000)
Maximum Weight at which Outboard Auxiliary tank can be empty (lb.)	280,000	285,000	285,000
Maximum Landing Weight (lb.)	247,500	247,500	247,500
Zero Fuel Weight (lb.)	230,000	230,000 220,000 (Pax Config)	230,000 220,000 (Pax Config)

*At sea level to 11,500 ft., maximum flight weight must be reduced at altitudes above 11,500 ft. at the rate of 1000 lb. per 5000 ft.

Minimum crew For any flight, three persons (Pilot, Copilot, Flight Engineer).

Maximum passengers 195 limited by emergency exit requirements. 219 if compliance with FAR 25.2 is shown. See Note 19.

Maximum baggage	For all passenger configuration: See applicable section in Part I of this Data Sheet. For cargo or split passenger/cargo configurations: See the appropriate Weight and Balance Manuals listed under NOTE 14.
Maximum cargo	For cargo restrictions, see the appropriate Weight and Balance Control Manuals, listed under NOTE 14.
Fuel capacity	For maximum capacity fuel weights and other fuel data, see applicable section in Part III of this Data Sheet. For fuel C.G. locations with partially filled tanks, see the appropriate Weight and Balance Manuals listed under NOTE 14.
Oil capacity	For oil capacities and related moment arms, see the applicable section in Part III of this Data Sheet. The system oil capacities are given in the appropriate Weight and Balance Control Documents listed under NOTE 14.
Required equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. The appropriate Weight and Balance Manuals listed under NOTE 14 contain a list of all the required equipment as well as optional equipment installations approved by the FAA.

Data Pertinent to All Models

Datum	All stations noted in the data sheet are Body Stations unless identified specifically as moment arms. Drawing 69-10819, defines Body Stations and moment arms. For weight and balance purposes, datum is 30 in. aft of nose (moment arm 0). Horizontal distance of datum to average wing jack point is 799.05 in.
MAC	272.3 (L.E. of MAC is Body Station 763.0).
Leveling means	A plumb-bob attachment and leveling provision scale are provided in left wheel well.
Maximum operating altitude	42,000 ft.
Other operating limitations	The aircraft must be operated in accordance with the FAA approved Airplane Flight Manual.
Control surface movements	To insure proper operation of the airplane, the movement of the various control surfaces must be carefully controlled by proper rigging of the flight control systems. The airplane must, therefore, be rigged in accordance with the following FAA approved data:

<u>Surfaces</u>	<u>Installation Dwg.</u>
Aileron and Spoiler	50-8701
Aileron Trim	50-8705
Inboard Aileron Balance Panel Tolerances	50-73133
Outboard Aileron Balance Panel Tolerances	50-73134
Speed Brakes (Spoilers)	50-8716
Elevator	50-8702
Elevator Balance Panel Tolerances	65-6088
Stabilizer Trim	50-8704
Rudder	50-8703
Rudder Trim	50-8706
Rudder Balance Panel Tolerances	65-14035
Wing Flap	50-8707

Service information Boeing Report D6-2962, "Structural Repair Manual," is FAA approved. Service Bulletins and other service information, when FAA approved, will carry a statement to that effect.

Certification basis CAR 4b dated December 1953, Amendments 4b-1, 4b-2 and 4b-3 thereto; the Special Conditions and the provisions amendments listed in Attachment A of CAA letter to Boeing dated October 30, 1957; and the provisions of Item 2 of Special Civil Air Regulation No. SR-422B.
Type Certificate No. 4A26 issued July 15, 1959.
Date of Application for Type Certificate May 15, 1956.

Compliance with the following optional requirements has been established:

Exemptions:	<u>Model No.</u>	<u>Exemption No.</u>
	707-300C	246
	707-300C	269
	All Models	279
	707-300C	420
	707-354C	584
Ditching Provisions	- 4b.361 (See NOTE 11)	
Ice Protection Provisions	- 4b.640	

Production basis Production Certificate No. 700

NOTE 1. Weight, Balance, Fuel Loading and Usage Data

- (a) A current weight and balance report, including list of equipment considered as part of the certificated empty weight, and loading instructions must be in each aircraft at the time of original certification and at all times thereafter except in the case of operators having an approved weight control system.
- (b) The airplane must be loaded so the C.G. is within the specified limits at all times with the effects of fuel use and movement of crew and passengers from their assigned positions being considered.
- (c) The "drainable unusable fuel" is that amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined in CAR 4b.416. This drainable unusable fuel does not include the "tank trapped fuel" or "line unusable fuel", which is the unusable fuel retrained in the fuel feed and fuel dump lines. The "total unusable fuel" and line unusable fuel must be included in the airplane empty weight or be suitably accounted for in the airplane weight and balance report. The total amount of unusable fuel (in gallons) is as follows:

	<u>No. 1 & 4 Res. Tank</u>	<u>No. 1 & 4 Main Tank</u>	<u>No. 2 & 3 Main Tank</u>	<u>Center Wing</u>		<u>Fuel Line</u>	<u>Airplane Total</u>	
				<u>4-cell</u>	<u>7-cell</u>		<u>4-cell</u>	<u>7-cell</u>
Tank Trapped Fuel	1.31	1.77	2.84	6.67	10.50	--	12.59	16.42
Drainable Unusable Fuel	0.16	10.14	9.26	17.49	17.49	--	37.05	37.05
Total Unusable Fuel	1.47	11.91	12.10	24.16	27.99	10.72	60.36	64.19

- (d) "System oil" is defined as that amount of oil required to fill the oil system and tanks to the tank outlets to the engines. System oil and all hydraulic fluid must be included in the airplane empty weight or be suitably accounted for in the airplane weight and balance report. See appropriate Being document listed under NOTE 14.
- (e) Fuel capacity and usage procedures are dictated by structural design. To preserve favorable wing bending moments, the following shall apply:

FUEL LOADING LIMITATIONS

For 707-300/-400 Series

1. Load main tanks 1, 2, 3, and 4 equally.
2. If main tanks 1 and 4 are full and additional fuel is required, continue to load main tanks 2 and 3 to required fuel quantity.
3. If main tanks 1, 2, 3, and 4 are full and additional fuel is required, load outboard reserve tanks.

NOTE: For fuel loading flexibility, outboard reserve fuel may be carried when main tanks are less than full; however, outboard reserve tanks and main tanks must always be full when center wing fuel is loaded in excess of any included in maximum zero fuel weight.

4. If all main and outboard reserve tanks are full and additional fuel is required, load center wing tank to required fuel quantity.

NOTE: Center wing tank fuel may be substituted for payload in any quantity up to the maximum allowable payload or to the center wing tank capacity, whichever is lower.

NOTE: Tanks selected for flight may be loaded simultaneously.

NOTE: For 707-321 aircraft

If partial loading of the reserve tanks is not desired, reserve tanks may be full and main tanks 2 and 3 off-loaded by no more than 4,800 lb. total.

For 707-300B and 707-300C Series

Load inboard main, outboard main and reserve tanks so that the resulting fuel load is symmetrical. Interpolate between steps for intermediate fuel loads.

STEP	TOTAL FUEL LOAD GALLONS	MAIN TANKS 1 & 4 TOTAL GALLONS	MAIN TANKS 2 & 3 TOTAL GALLONS	RESERVE TANKS 1 & 4 TOTAL GALLONS	CENTER TANK GALLONS
1	6,090	3,045	3,045		
2	7,846	3,045	3,923	878	
3	13,662	4,646	8,138	878	
4	23,855	4,646	8,138	878	10,193

NOTE: Center tank fuel may be substituted for payload in any quantity up to the maximum allowable payload (maximum zero fuel weight less airplane basic operating weight) providing the difference in effect on balance is also accounted for.

NOTE: Tanks selected for flight may be loaded simultaneously.

FUEL USABLE LIMITATIONS

For 707-300/-400 Series

1. All center section fuel in excess of any included in the zero fuel weight must be used before the transfer of outboard reserve fuel.
2. Airplane gross weight must not exceed 275,000 pounds if the outboard reserve tanks are empty.
3. Outboard reserve fuel must be transferred before landing.
4. Use tank-to-engine combination during all takeoffs and landings except as noted under Minimum Fuel Go-Around Procedure. (See Airplane Flight Manual)

5. When center tank fuel is required for flight, it must be used after a minimum of 12,000 lbs. and before a maximum of 17,000 lbs. (total) of main tank fuel has been expended for takeoff and climb to altitude.
6. When taxiing is conducted at gross weights in excess of 312,000 lbs., fuel must be drawn from the center section tanks only.
7. Fuel Reserve must be retained in main tanks only.

For 707-300B Series (Excluding Increased G.W.Aircraft)

1. Airplane Gross Weight must be below 283,000 pounds before the transfer of outboard reserve fuel can be initiated.
2. Airplane Gross Weight must not exceed 280,000 pounds with outboard reserve tanks empty.
3. Basic Fuel Management
 - (a) Use main tanks to respective engines for taxi, takeoff and landing, except for a minimum fuel go-around in which case all boost pumps should be on and all manifold valves open.
 - (b) Center tank fuel in excess of any included in the zero fuel weight must be used after a minimum of 12,000 lbs. up to a maximum of 17,000 lbs. (total) of main tank fuel has been expended for takeoff and climb to altitude.
4. Alternate Fuel Management (Must be used at Flaps Up Flight Wt. above 318,000 lbs.)
 - (a) Use fuel from inboard main tanks and center section tank for taxi, takeoff and flight until a minimum of 12,000 lbs. to a maximum of 16,000 lbs. of fuel is burned off.
 - (b) Revert to main tank to respective engine fuel usage until a minimum of 12,000 lbs. up to a maximum of 17,000 lbs. (total) of equal main tank fuel is used before center tank fuel is to be used to feed all four engines.

For 707-300C Series (Excluding Increased G.W. Aircraft)

1. Airplane Gross weight must be below 283,000 lbs. before transfer of outboard reserve tank fuel can be initiated.
2. Airplane Gross weight must not exceed 280,000 lbs. when outboard reserve tanks are empty. Also, the fuel quantity in each outboard reserve tank plus the adjacent main tank must not be less than 12,500 lbs. at flight gross weights above 280,000 lbs.
3. When center tank fuel is required for flight, it must be used after a maximum of 17,000 lbs. (total) of main tank fuel has been expended for takeoff, climb and cruise.
4. Do not initiate transfer of reserve tank fuel until the fuel quantity in each outboard main tank is less than 12,000 lbs., and the airplane flight gross weight is less than 283,000 lbs.
5. Use tank-to-engine combinations during all takeoffs and landings except as noted under minimum fuel go-around procedure (See Airplane Flight Manual).

For 707-300B and 707-300C Increased Gross Weight Series

1. Airplane gross weight must be below 288,000 lbs. before transfer of outboard reserve tank fuel can be initiated.
2. Airplane gross weight must not exceed 285,000 lbs. when outboard reserve tanks are empty. Also, the fuel quantity in each outboard reserve tank plus the adjacent main tank must not be less than 12,500 lbs. at flight gross weights above 285,000 lbs.
3. Do not initiate transfer of reserve tank fuel until the fuel quantity in each outboard main tank is less than 12,000 lbs., and the airplane flight gross weight is less than 288,000 lbs.
4. When center tank fuel is less than 20,000 pounds and is required for flight, it must be used after a maximum of 17,000 lbs. (total) of main tank fuel has been expended for takeoff, climb, and cruise.

5. Basic Fuel Management

- (a) Taxi, takeoff, climb, and cruise using fuel from main tanks to respective engines.
- (b) Center tank fuel in excess of any included in Zero fuel weight must be used after a minimum of 12,000 lbs. up to a maximum of 17,000 lbs. of main tank fuel has been consumed.

6. Alternate Fuel Management (Must be used at Flaps up Flight Weights above 326,000 lbs. for passenger configurations and at weights above 325,000 lbs. for other configurations.

- (a) Taxi, takeoff, climb, and cruise using fuel from inboard tanks and center section tank.
- (b) After a minimum of 12,000 lbs. of inboard tank and center section tank fuel has been consumed, set up direct tank to engine feed or center tank to all four engines. If main tank fuel is used, consume a maximum of 17,000 lbs. of main tank fuel, then use center section tank fuel to feed all four engines.

(f) FUEL DUMPING

<u>Tanks</u>	<u>Undumpable Fuel</u>
2 outboard main tanks	1234 Gal.
2 inboard main tanks	1120 Gal.
Center wing tank	<u>250 Gal.</u>
TOTAL	2604 Gal.

NOTE 2. The following placards must be installed in view of the flight crew:

(a) Main Panel

<u>Landing Gear</u> (Limit Speed - IAS)			
<u>707-300 and -400 Series</u>		<u>707-300B and -300C Series</u>	
Operating 269 knots - .83M		270 knots - .83M	
Extended 319 knots - .83M		320 knots - .83M	
<u>Flaps</u> (Limit Speed - IAS)			
<u>707-300 and -400 Series</u>	<u>707-300B Series</u>	<u>707-300C Series</u> <u>Without S.B. 1826</u>	
10° - 230 knots	14° - 226 knots	14° - 226 knots	14° - 210 knots
20° - 218 knots	17° - 223 knots	25° - 215 knots	17° - 210 knots
30° - 207 knots	25° - 215 knots	50° - 195 knots	25° - 210 knots
50° - 181 knots	50° - 195 knots		50° - 195 knots

(b) Engineer's Panel

Fuel Dump Switches

Indicated Airspeed and Position Limits

1. 707-300 or 707-400 Series

Extending or Retracting Chutes *
239 knots maximum (Flaps Up)

Dumping Fuel *
274 knots maximum (Flaps 0 - 30°)

2. 707-300B and 707-300C Series

Extending or Retracting Chutes *
240 knots maximum (Flaps up)

Dumping Fuel *
275 knots maximum (Flaps up)

* Refer to Section I of Flight Manual for Special Operating Procedures.

NOTE 3. Life-Limited Parts
The following parts are life-limited as shown below:

<u>Part No.</u>	<u>Part</u>	<u>Allowable No. of Flights</u>
5-86047 or 65-38056	Horizontal Stabilizer Pivot Fitting	200,000
5-89537	Elev. Aft Quadrant Assy.	200,000
5-98343	Quadrant support	200,000

NOTE 4. (707-300B/300C Series Aircraft) (Establish a procedure to insure that the engines will accelerate from idle to takeoff thrust within eight seconds.)

NOTE 5. Replacement brake lining for 707-300C Series must meet Boeing Specification No. D10-60818, and for 707-300/-400/-300B Series, Boeing Specification No. D10-3379.

NOTE 6. Whenever fuel is loaded into the center section fuel tanks, drain the sump of water prior to flight.

NOTE 7. The airplane design vertical load factors exceed the minimum requirements of TSO C-39 for certain passenger seat locations. Replacement passenger seats must be evaluated for compliance with CAR 4b.358(c).

NOTE 8. (707-300 Series Aircraft only). For operation at gross weights in excess of 302,000 pounds, the heavier gear described by Boeing Company Drawing No. 67-71080, sheets 1 and 2 (DCN "A"), "Kit Main Landing Gear Installation, Section 61," must be installed. Boeing Service Bulletin No. 136(R-1) describes the installation of this gear.

NOTE 9. (a) For 707-300 Series Aircraft:

This series aircraft may intermix the following engines in the combinations and with the appropriate limitations noted in the FAA Approved Airplane Flight Manual:

Pratt and Whitney JT4A-9, -10, -11, and -12.

(b) For 707-300B and -300C Series Aircraft:

These series may intermix the following engines in the combinations and with appropriate limitations noted in the FAA Approved Airplane Flight Manual:

Pratt and Whitney JT3D-1, -1MC6, -MC7, -3, -3B, and -7

NOTE 10. (a) JP-1, JP-4 and JP-5 fuels conforming to P&WA Specification No. 522 and later revisions may be used separately or mixed in any proportions without adversely affecting the engine operation or power output. No fuel control adjustment is required when switching fuel types.

(b) Phillips anti-icing fuel additive PFA-55MB may be used if concentration delivered to airplane does not exceed 0.1% by volume. No fuel system anti-icing credit is allowed.

NOTE 11. All 707-300C Aircraft in Cargo-passenger configurations of:

4 Cargo Pallets and more than 140 passengers

5 Cargo Pallets and more than 70 passengers

6 or more Cargo Pallets and more than 0 passengers

must have the provisions of Boeing Service Bulletin 2045A installed in order to be in accordance with approved type design data.

NOTE 12. 707-300B and 707-300C Series Aircraft delivered after February 1964, have the structural capability of being

operated at the increased gross weights noted in their respective sections of this Data Sheet. The following 707-300B aircraft had 707-300C Main Landing Gears installed at the factory and are limited at the higher values:

707-312B S/N 19737 and Subsequent	707-351B S/N 19633 and Subsequent
707-321B S/N 18832 and Subsequent	707-359B S/N 19741 and Subsequent
707-330B S/N 18923 and Subsequent	707-382B S/N 18961 and Subsequent
707-331B S/N 19224 and Subsequent	707-384B S/N 20035 and Subsequent
707-337B S/N 18873 and Subsequent	707-387B S/N 19238 and Subsequent

The following 707-300B aircraft are eligible for increased gross weight operation subsequent to accomplishment of Service Bulletin 2185 "Replacement of 707-300B Main Landing Gear with 707-300C Main Landing Gear," or modification per Service Bulletin 3065.

707-300B S/N 18462, 18463, and 18819
 707-323B S/N 20170-20179
 707-337B S/N 18708
 707-344B S/N 18891, 19133
 707-353B S/N 18461
 707-351B S/N 18584, 18585, 18693

NOTE 13. Installation of three additional center fuel tank cells per Boeing Service Bulletins 138, 1605, 1880, and 2874 will increase the fuel capacity as follows:

<u>Applicable Model</u>	<u>7 Cell Center Tank Usable Fuel in U.S. Gallons</u>	<u>Tank Capacity lb.</u>	<u>Total Fuel Capacity lb.</u>
707-321	10,023	69,159	163,151
707-328	10,023	69,159	163,151
707-329	10,193	70,332	164,324
707-331	10,193	70,332	164,324
707-437	10,023	69,159	163,151

NOTE 14. Information regarding Baggage and Cargo Loading, Fuel C.G. locations with partially filled tanks, system oil capacities, and the required equipment list, are contained in each Model Weight and Balance Manual. The Manuals for each Model are Boeing Document Numbers as follows:

<u>707-300/-400 Series Aircraft</u>		<u>707-300B Series Aircraft</u>		<u>707-300C Series Aircraft</u>	
<u>Model</u>	<u>Document</u>	<u>Model</u>	<u>Document</u>	<u>Model</u>	<u>Document</u>
707-321	D6-1852	707-321B	D6-10949.6	707-3110	D6-14083.35
707-328	D6-3598	707-328B	D6-10949.4	707-321C	D6-14083.6
707-329	D6-3912	707-330B	D6-10949.3	707-321C	D6-14083.6
707-331	D6-3590	707-331B	D6-10949.5	707-323C	D6-14083.1
707-344	D6-5399	707-337B	D6-10949.2	707-324C	D6-14083.8
707-430	D6-5059	707-344B	D6-10949.7	707-327C	D6-14083.16
707-436	D6-3689	707-351B	D6-10949.1	707-328C	D6-14083.11
707-437	D6-5060	707-353B	D6-10949.13	707-329C	D6-14083.10
707-441	D6-5219	707-358B	D6-10949.8	707-330C	D6-14083.13
707-458	D6-7238	707-359B	D6-10949.12	707-331C	D6-14083.4
707-465	D6-8072	707-382B	D6-10949.9	707-336C	D6-14083.14
		707-387B	D6-10949.10	707-337C	D6-14083.25
				707-338C	D6-14083.9
				707-340C	D6-14083.19
				707-341C	D6-14083.20
				707-344C	D6-14083.31
				707-345C	D6-14083.33
				707-347C	D6-14083.21
				707-348C	D6-14083.2
				707-349C	D6-14083.15

707-300C Series Aircraft	
<u>Model</u>	<u>Document</u>
707-351C	D6-14083.3
707-355C	D6-14083.27
707-360C	D6-14083.28
707-365C	D6-14083.29
707-365C	D6-14083.23
707-366C	D6-14083.26
707-368C	D6-14083.32
707-378C	D6-14083.5
707-373C	D6-14083.7
707-379C	D6-14083.34
707-384C	D6-14083.17
707-385C	D6-14083.24
707-385C	D6-14083.18
707-399C	D6-14083.22

- NOTE 15. The maximum weights for the Model 707-338C differ from the other 707-300C increased gross weight models due to the upper deck cargo compartment, which is limited to the left hand forward side only.
- NOTE 16. Number in parentheses are applicable only after Boeing Service Bulletins 1732 (R-1) dated May 3, 1963, have been incorporated.
- NOTE 17. Use 6.9 lb./gal. for -300 only. For the rest of the series -300, use 7.1 lb./gal.
- NOTE 18. 707-300, -400, -300 B/C, AND -300 B/C Advanced: For Engine Ferry Design Gross Weights, add 500 lbs. to landing weights.
- NOTE 19. (707-300C Series Aircraft only) The passenger capacity of airplanes not in compliance with FAR 25.2 may be limited to 189 by FAR 121.310 if automatically deployed and erected escape slides are not installed at the station 990 exit.

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