

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

4A25																												
Revision 39																												
MCDONNELL DOUGLAS																												
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TYPE CERTIFICATE DATA SHEET NO. 4A25

This data sheet which is a part of Type Certificate No. 4A25 prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder McDonnell Douglas Corporation
Long Beach, California 90846

The following table defines how specific airplane models are identified in the applicability of airworthiness directives (AD):

Airplane Model	Applicability of ADs Prior to March 1, 2002	Applicability of ADs as of March 1, 2002
1. DC-8	DC-8-10 through DC-8-40 series airplanes; OR DC-8-11 series airplanes, DC-8-12 series airplanes, DC-8-21 series airplanes, DC-8-31 series airplanes, DC-8-32 series airplanes, DC-8-33 series airplanes, DC-8-41 series airplanes, DC-8-42 series airplanes, and DC-8-43 series airplanes.	DC-8-11 airplanes, DC-8-12 airplanes, DC-8-21 airplanes, DC-8-31 airplanes, DC-8-32 airplanes, DC-8-33 airplanes, DC-8-41 airplanes, DC-8-42 airplanes, and DC-8-43 airplanes.
2. DC-8, Series 50	DC-8-50 series airplanes; OR DC-8-51 series airplanes, DC-8-52 series airplanes, DC-8-53 series airplanes, and DC-8-55 series airplanes.	DC-8-51 airplanes, DC-8-52 airplanes, DC-8-53 airplanes, and DC-8-55 airplanes.

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Airplane Model	Applicability of ADs Prior to March 1, 2002	Applicability of ADs as of March 1, 2002
3. DC-8F	DC-8F series airplanes; OR DC-8F-54 series airplanes, and DC-8F-55 series airplanes.	DC-8F-54 airplanes, and DC-8F-55 airplanes.
4. DC-8, Series 60	DC-8-60 series airplanes; OR DC-8-61 series airplanes, DC-8-62 series airplanes, and DC-8-63 series airplanes.	DC-8-61 airplanes, DC-8-62 airplanes, and DC-8-63 airplanes.
5. DC-8, Series 60F	DC-8-61F, DC-8-62F, and DC-8-63F series airplanes.	DC-8-61F airplanes, DC-8-62F airplanes, and DC-8-63F airplanes.
6. DC-8, Series 70	DC-8 series 70; OR DC-8-70 series airplanes; OR DC-8-71 series airplanes, DC-8-72 series airplanes, and DC-8-73 series airplanes.	DC-8-71 airplanes, DC-8-72 airplanes, and DC-8-73 airplanes.
7. DC-8, Series 70F	DC-8-71F series airplanes, DC-8-72F series airplanes, and DC-8-73F series airplanes.	DC-8-71F airplanes, DC-8-72F airplanes, and DC-8-73F airplanes.

NOTE: In ADs prior to March 1, 2002, "Model DC-8 series airplanes," as listed in the applicability of the AD, may have affected those models listed in rows one through seven above. Also, with respect to ADs issued prior to March 1, 2002, the information provided in the table is very general and should not be the only information utilized to determine the applicability of ADs to specific airplane models. The ADs contain separate applicability statements that rely heavily on service bulletins for determination of the applicability.

I - Model DC-8-11 (Transport Aircraft), Approved August 31, 1959. (See NOTE 8 for conversion to DC-8-12 and NOTE 11 for subsequent conversion to DC-8-21 or DC-8-51)

NOTE: The DC-8-11 aircraft (S/N listed below) have been converted to DC-8-12 and subsequently to DC-8-21 or DC-8-51. At such time as additional Model DC-8-11 aircraft may be presented for an Airworthiness Certificate, appropriate limitations will be included in this Type Certificate Data Sheet.

Serial Numbers Eligible 45280 thru 45289, 45408 thru 45413, 45588 thru 45593

II - Model DC-8-21 (Transport Aircraft), Approved January 19, 1960. (See NOTE 11(e) for conversion from DC-8-12)

Engines 4 Pratt and Whitney Turbojet JT4A-3, JT4A-5, JT4A-9, JT4A-10, JT4A-11, or JT4A-12
(See NOTE 6 regarding intermixing of engines)

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016
(PWA Specification 522). (See NOTE 14)

Engine Limits See Section III, Model DC-8-32, for JT4A-9 and JT4A-10 engines; Section VIII, Model
DC-8-33, for JT4A-11 and JT4A-12 engines.

JT4A-3 and JT4A-5

Static Thrust (Std. Day) S.L.

Takeoff (5 min.) (Dry) 15,800 lbs.

Maximum Continuous 12,500 lbs.

Engine Limits

Maximum permissible engine rotor operating speeds:		
N ₁ (Low Compressor)	6,950 r.p.m.	
N ₂ (High Compressor)	9,050 r.p.m.	
Maximum permissible gas temperatures turbine outlet:		
Takeoff (5 min.)	607°C	1125°F
Maximum Continuous	500°C	932°F
Maximum Acceleration (2 min.)	607°C	1125°F
Starting (Ground)	450°C	842°F
Starting (Air)	475°C	887°F
Oil Inlet	121°C	250°F

Airspeed Limits (IAS)

(See NOTE 10 for calibration)		
2 Segment Airspeed Indicator		
V _{MO} (Maximum Operating - S.L.)	340K	
V _{MO} (Maximum Operating - 22,800 ft.)	378K	
M _{MO} (Maximum Operating - 22,800 ft.)	378K*	(M = 0.85)
M _{MO} (Maximum Operating - 40,000 ft.)	270K*	(M = 0.88)
M _{MO} (Maximum Operating - 40,000 ft. to 42,000 ft.)**		(M = 0.88)
3 Segment Airspeed Indicator		
V _{MO} (Maximum Operating - S.L.)	340K	
V _{MO} (Maximum Operating - 22,400 ft.)	377K	
M _{MO} (Maximum Operating - 22,400 ft.)	377K*	(M = 0.844)
M _{MO} (Maximum Operating - 29,300 ft.)	342K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)	258K*	(M = 0.88)
V _A (Maneuvering - S.L.)	235K*	
V _A (Maneuvering - 35,000 ft.)	269K*	
V _A (Maneuvering - above 35,000 ft.)		(M = 0.79)

* Straight line variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	210K	M = 0.42
(Flaps Down 26 to 50°)	182K	M = 0.37

	<u>Up to 32,000 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	<u>V_{MO}/M_{MO}</u>	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or M = 0.75 (whichever is the lesser)	

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual

Maximum Weights	Taxi and Ramp (4)	278,000 lbs.
	Start of Takeoff (4)	276,000 lbs.
	Airborne (4)	275,500 lbs.
	Zero Fuel (1) (2)	167,500 lbs.
	Landing (3)	199,500 lbs.

- (1) All weight in airplane above this weight must be fuel.
- (2) S/N's 45422-45427, 45429-45431 and 45433-45437 are eligible for maximum zero fuel weight of 173,500 lbs.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (4) See NOTE 16 regarding increased weights.

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft	lbs./in.	
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,350	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 35 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 70.5 lbs. ea. (+685.0) and (+814.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+823.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45278, 45291-45300, 45391-45393, 45422-45427, 45429-45431, 45433-45437, 45594-45597, and DC-8-12 S/N 45279-45283, 45289, 45304-45306, 45588-45593 when converted (See NOTE 11(e)).

III - Model DC-8-32 (Transport Aircraft), Approved February 1, 1960, (See NOTE 11 for conversion to DC-8-33)

Engines 4 Pratt and Whitney Turbojet JT4A-3, JT4A-5, JT4A-9, JT4A10, JT4A-11, or JT4A-12
(See NOTE 6 regarding intermixing of engines)

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016
(PWA Specification 522). (See NOTE 14)

Engine Limits See Section II, Model DC-8-21, for JT4A-3 and JT4A-5 engines; Section VIII, Model DC-8-33, for JT4A-11 and JT4A-12 engines.

JT4A-9 and JT4A-10

Static Thrust (Std. Day) S.L.

Takeoff (5 min.) (Dry) 16,800 lbs.

Maximum Continuous 13,500 lbs.

Maximum permissible engine rotor operating speeds:

N₁ (Low Compressor) 7,060 r.p.m.

N₂ (High Compressor) 9,135 r.p.m.

Maximum permissible gas temperatures - turbine outlet:

Takeoff	635°C	1175°F
Maximum Continuous	516°C	960°F
Maximum Acceleration (2 min.)	635°C	1175°F
Starting (Ground)	450°C	892°F
Starting (Air)	475°C	887°F
Oil Inlet	121°C	250°F

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	340K	
V _{MO} (Maximum Operating - 23,000 ft.)	374K	
M _{MO} (Maximum Operating - 23,000 ft.)	374K*	(M = 0.847)
M _{MO} (Maximum Operating - 40,000 ft.)		(M = 0.88)
M _{MO} (Maximum Operating - 40,000 ft. to 42,000 ft.)**		(M = 0.88)

3 Segment Airspeed Indicator

V _{MO} (Maximum Operating - S.L.)	340K	
V _{MO} (Maximum Operating - 23,000 ft.)	374K	
M _{MO} (Maximum Operating - 23,000 ft.)	374K*	(M = 0.847)
M _{MO} (Maximum Operating - 29,300 ft.)	342K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	258K*	(M = 0.88)
V _A (Maneuvering - S.L.)	235K*	
V _A (Maneuvering - 35,000 ft.)	269K*	
V _A (Maneuvering - above 35,000 ft.)		(M = 0.79)

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	210K	M = 0.42
(Flaps Down 26 to 50°)	182K	M = 0.37
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or	M = 0.75
	(whichever is the lesser)	

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp	312,000 lbs.
	Start of Takeoff	310,000 lbs.
	Airborne	309,000 lbs.
	Zero Fuel	
	(With JT4A-5, JT4A-10 Engines installed) (1)	175,900 lbs.
	(With JT4A-3, JT4A-9 or JT4A-11 Engines installed) (1)	176,500 lbs.
	(With JT4A-12, Engines installed) (1) (2)	175,700 lbs.
Landing (3) (4)	202,000 lbs.	

- (1) All weight in airplane above this weight must be fuel.
- (2) When leading edge tanks are installed on aircraft incorporating JT4A-12 engines, the zero fuel weight may be increased 500 lbs.
- (3) Fuel dump valves required for operating in excess of maximum landing weight. See NOTE 1(f).
- (4) 207,000 lbs. when intercostal installation on longeron 31 is installed in accordance with DC-8 Service Bulletin No. 53-26, or its production equivalent

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

Compartment	Station	Capacity lbs.	Maximum Loading		C.G.
			lbs/sq. ft	lbs./in.	
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,350	120	44.4	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 70.5 lbs. ea. (+685.0) and (+823.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45256-45269, 45376-45382, 45384-45390, 45416, 45418, 45419, 45421, 45526, 45567, 45569, 45602, 45603, 45605, 45606. (DC-8-32 S/N 45420, See NOTE 11(b); and S/N 45417, 45568, 45604, See NOTE 11(d)).

IV - Model DC-8-41 (Transport Aircraft). Approved March 23, 1960

Engines 4 Rolls Royce Turbojet Conway Mark 509

Fuel Commercial Aircraft Turbine Fuel conforming to:
British DERD 2482, 2486, 2494
American JP-1 (U.S. MIL-F-5616)
JP-4 (U.S. MIL-F-5624C)
Canadian 3-CP-23D, 3-CP-22B

Engine Limits Static Thrust (Std. Day) S.L.
Takeoff (5 min.) (Dry) 17,500 lbs.
Maximum Continuous 14,625 lbs.

Engine Limits (cont'd)	<p>Maximum allowable thrust for below Std. inlet air temperatures at sea level for 5 minutes at takeoff 20,000 lbs.</p> <p>Maximum permissible engine rotor operating speeds: N₁ (Low Compressor) 7,335 r.p.m. N₂ (High Compressor) 10,060 r.p.m.</p> <p>Maximum permissible gas Temperatures - turbine outlet: Takeoff 675°C 1247°F Maximum continuous 600°C 1112°F Maximum Acceleration (2 min.) 675°C 1247°F Starting (Momentary) 675°C 1247°F Ground Operation (10 sec.) 700°C 1292°F</p> <p>Maximum permissible oil inlet Temperature: Starting -55°C to +105°C -67°F to +221°F Other Operations -20°C to +105°C -4°F to +221°F (For transient conditions Not to exceed 15 min.): +120°C +248°F</p> <p>Maximum permissible air bleed extraction of total engine airflow:</p> <p>Under all conditions air bleed may be used for aircraft and engine services up to the maximum delivery permitted by the engine air bleed parts, provided that the r.p.m. or turbine gas temperature operating limitations are not exceeded.</p>																					
Airspeed Limits	See Section III, DC-8-32																					
C.G. Range	See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.																					
Maximum Weights	<table border="0"> <tr> <td>Taxi and Ramp</td> <td>302,000 lbs.</td> </tr> <tr> <td>Start of Takeoff</td> <td>300,000 lbs.</td> </tr> <tr> <td>Airborne</td> <td>299,500 lbs.</td> </tr> <tr> <td>Zero Fuel (1)</td> <td>173,200 lbs.</td> </tr> <tr> <td>Landing (2)</td> <td>207,000 lbs.</td> </tr> </table> <p>(1) All weight in airplane above this weight must be fuel. (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).</p>	Taxi and Ramp	302,000 lbs.	Start of Takeoff	300,000 lbs.	Airborne	299,500 lbs.	Zero Fuel (1)	173,200 lbs.	Landing (2)	207,000 lbs.											
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Minimum Crew	For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)																					
Maximum Passengers	(See NOTES 4 and 7)																					
Maximum Baggage	<table border="1"> <thead> <tr> <th rowspan="2">Compartment</th> <th rowspan="2">Station</th> <th>Capacity</th> <th colspan="2">Maximum Loading</th> <th rowspan="2">C.G.</th> </tr> <tr> <th>lbs.</th> <th>lbs/sq. ft.</th> <th>lbs./in.</th> </tr> </thead> <tbody> <tr> <td>Fwd. Belly</td> <td>310-640</td> <td>10,350</td> <td>120</td> <td>48.3</td> <td>+ 479 in.</td> </tr> <tr> <td>Aft Belly</td> <td>980-1337</td> <td>10,500</td> <td>120</td> <td>44.2</td> <td>+1148 in.</td> </tr> </tbody> </table>	Compartment	Station	Capacity	Maximum Loading		C.G.	lbs.	lbs/sq. ft.	lbs./in.	Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.	Aft Belly	980-1337	10,500	120	44.2	+1148 in.
Compartment	Station			Capacity	Maximum Loading			C.G.														
		lbs.	lbs/sq. ft.	lbs./in.																		
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.																	
Aft Belly	980-1337	10,500	120	44.2	+1148 in.																	

Above values are satisfactory for a maximum of six abreast seating and a minimum of 35 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.
Oil Capacity	Inbd. and Outbd. Engines 18.5 lbs. ea. (+701.0) and (+839.0) Constant Speed Drives 7.2 lbs. ea. (+684.0) and (+812.0) See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.
Serial Numbers Eligible	45442 thru 45445.

V - Model DC-8-31 (Transport Aircraft), Approved March 30, 1960

Engines	4 Pratt and Whitney Turbojet JT4A-3, JT4A-5, JT4A-9, JT4A-10, JT4A-11, or JT4A-12 (See NOTE 6 regarding intermixing of engines)
Fuel	Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)
Engine Limits	See Section II, Model DC-8-21, for P&W JT4A-3 and JT4A-5 engines; Section III, Model DC-8-32, for JT4A-9 and JT4A-10 engines; Section VIII, Model DC-8-33, for JT4A-11 and JT4A-12 engines.
Airspeed Limits	See Section III, DC-8-32.
C.G. Range	See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.
Maximum Weights	Taxi and Ramp 302,000 lbs. Start of Takeoff 300,000 lbs. Airborne 299,500 lbs. Zero Fuel (1) 173,200 lbs. Landing (2) 207,000 lbs. (1) All weight in airplane above this weight must be fuel. (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
Minimum Crew	For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)
Maximum Passengers	(See NOTES 4 and 7)
Maximum Baggage	

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft.	lbs./in.	
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.
Oil Capacity	Inbd. and Outbd. Engines 70.5 lbs. ea. (+685.0) and (+823.0) Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0) See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45274-45277

VI - Model DC-8-42 (Transport Aircraft), Approved April 26, 1960 (See NOTE 11 for conversion to DC-8-43)

Engines 4 Rolls Royce Conway Mark 509 Turbojet

Fuel Commercial Aircraft Turbine Fuel conforming to:
 British DERD 2482, 2486, 2494
 American JP-1 (U.S. MIL-F-5616)
 JP-4 (U.S. MIL-F-5624C)
 Canadian 3-CP-23D, 3-CP-22B

Engine Limits See Section IV, DC-8-41.

Airspeed Limits See Section III, DC-8-32.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp	312,000 lbs.
	Start of Takeoff	310,000 lbs.
	Airborne	309,000 lbs.
	Zero Fuel (1)	174,600 lbs.
	Landing (2) (3)	202,000 lbs.

- (1) All weight in airplane above this weight must be fuel.
- (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (3) 207,000 lbs. when intercostal installation on longeron 31 is installed in accordance with DC-8 Service Bulletin No. 53-26 or its production equivalent.

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 18.5 lbs. ea. (+701.0) and (+839.0)
 Constant Speed Drives 7.2 lbs. ea. (+674.0) and (+812.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers 45565. 45566. 45598-45601, and 45609.

VII - Model DC-8-12 (Transport Aircraft, Approved July 1, 1960, (See NOTE 8 for conversion from DC-8-11; See NOTE 11 for conversion to DC-8-21 or DC-8-51)

NOTE: The DC-8-12 aircraft (S/N listed below) have been converted to DC-8-21 or DC-8-51. At such time as additional Model DC-8-12 aircraft may be presented for an Airworthiness Certificate, appropriate limitations will be included in this Type Certificate Data Sheet.

Serial Numbers Eligible 45279, 45304-45306 and DC-8-11 converted (See NOTE 8).

VIII - Model DC-8-33 (Transport Aircraft), Approved November 28, 1960. (See NOTE 11 for conversion from DC-8-32)

Engines 4 Pratt and Whitney Turbojet JT4A-3, JT4A-5, JT4A-9, JT4A-10, JT4A-11, or JT4A-12 (See NOTE 6 regarding intermixing of engines).

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits See Section II, Model DC-8-21, for JT4A-3 and JT4A-5 engines; Section III, Model DC-8-32, for JT4A-9 and JT4A-10 engines.

JT4A-11 and JT4A-12

Static Thrust (Std. Day) S.L.

Takeoff (5 min.) (Dry)	17,500 lbs.
Maximum Continuous	14,900 lbs.

Maximum permissible engine rotor operating speeds:

N ₁ (Low Compressor)	7,160 r.p.m.
N ₂ (High Compressor)	9,355 r.p.m.

Maximum permissible gas temperatures - turbine outlet:

Takeoff	655°C	1211°F
Maximum continuous	560°C	1040°F
Maximum Acceleration (2 min.)	655°C	1211°F
Starting (Ground)	450°C	842°F
Starting (Air)	475°C	887°F
Oil Inlet	121°C	250°F

Airspeed Limits See Section III, DC-8-32.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp	318,000 lbs.
	Start of Takeoff	315,000 lbs.
	Airborne	314,000 lbs.
	Zero Fuel	
	(with JT4A-12 engines) (1) (2)	178,200 lbs.
	(with JT4A-5 or JT4A-10 engines) (1)	178,400 lbs.
	(with JT4A-3, JT4A-9 or JT4A-11 engines) (1)	179,000 lbs.
	Landing (3)	207,000 lbs.

- (1) All weight in airplane above this weight must be fuel.
- (2) When leading edge tanks are installed on aircraft incorporating JT4A-12 engines, the zero fuel weight may be increased 500 lbs.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 70.5 lbs. ea. (+685.0) and (+823.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45253-45255, 45270-45272, 45570, 45626, 45627, and DC-8-32 converted (See NOTE 11).

IX - Model DC-8-43 (Transport Aircraft), Approved February 1, 1961 (See NOTE 11 for conversion from DC-8-42)

Engines 4 Rolls Royce Conway Mark 509 Turbojet

Fuel Commercial Aircraft Turbine Fuel conforming to:
British DERD 2482, 2486, 2494
American JP-1 (U.S. MIL-F-5616)
JP-4 (U.S. MIL-F-5624C)
Canadian 3-CP-23D, 3-CP-22B

Engine Limits See Section IV, DC-8-41.

Airspeed Limits See Section III, DC-8-32.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

Taxi and Ramp	318,000 lbs.
Start of Takeoff	315,000 lbs.
Airborne	314,000 lbs.
Zero Fuel (1)	178,200 lbs.
Landing (2)	207,000 lbs.

(1) All weight in airplane above this weight must be fuel.

(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines 18.5 lbs. ea. (+701.0) and (+839.0)
Constant Speed Drives 7.2 lbs. ea. (+674.0) and (+812.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

45611, 45612, 45620-45625, 45636, 45638, 45660, 45661, 45665, 45666, 45755 and DC-8-42 converted (See NOTE 11).

X - Model DC-8-52 (Transport Aircraft), Approved April 28, 1961

Engines

4 Pratt and Whitney Turbofan JT3D-1, JT3D-3, or JT3D-3B. (See NOTE 6 regarding intermixing of engines).

Fuel

Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits

See Section XI, Model DC-8-53, for JT3D-3 and JT3D-3B engines.

JT3D-1

Static Thrust (Std. Day) S.L.

Takeoff (5 min.) (Dry)	17,000 lbs.
Maximum Continuous	14,500 lbs.

Maximum permissible engine rotor operating speeds:

N ₁ (Low Compressor)	6,800 r.p.m.
N ₂ (High Compressor)	10,200 r.p.m.

Maximum permissible gas temperatures - turbine outlet:

Takeoff (5 min.)	530°C	985°F
Maximum continuous	460°C	860°F
Maximum Acceleration (2 min.)	530°C	985°F
Starting (Momentary)	450°C	842°F

Oil Inlet Temperatures

For Continuous Operation	132°C	270°F
For 15 min. time limit	143°C	290°F

Airspeed Limits

See Section III, DC-8-32.

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp (1) (6) (7)	302,000 lbs.
	Start of Takeoff (2) (6) (7)	300,000 lbs.
	Airborne (2) (7)	299,500 lbs.
	Zero Fuel (3) (4) (7)	173,500 lbs.
	Landing (5) (7)	207,000 lbs.
	(1) 307,000 lbs. for S/N's 45301, 45303, 45618, 45619, 45657-45659, 45750, 45752, 45932, and 45985	
	(2) 305,000 lbs. for S/N's 45301, 45303, 45618, 45619, 45657-45659, 45750, 45752, 45932, and 45985	
	(3) 183,500 lbs. for S/N's 45301, 45303, 45618, 45619, 45657-45659, 45693, 45694, 45750, 45752, 45756-45759, 45850-45853 and 45985	
	(4) All weight in the airplane above this weight must be fuel.	
	(5) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).	
	(6) To be eligible for the higher operating weights, main landing gear rated at 310,000 lbs. or higher must be installed; and airplanes S/N 45618 and 45619 must incorporate Structural Rework Item No. U-1 on Drawing No. 5764606-509.	
	(7) S/N's 45302, 45693, 45694, 45756-45759, and 45850-45853, when equipped with nose landing gear P/N's 5715354-5001 or -5005, and main landing gear P/N's 5654404-5503 or 5504 or 5778316-5529 or -5530, are restricted to operation at the following maximum weights: Taxi and Ramp - 278,000 lbs., Start of Takeoff - 276,000 lbs., Airborne - 275,000 lbs., Zero Fuel - 167,000 lbs., and Landing - 199,500 lbs.	

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft.	lbs./in.	
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 75.0 lbs. ea. (+660.0) and (+804.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45301-45303, 45617-45619, 45657-45659, 45693, 45694, 45750-45752, 45756-45759, 45814, 45850-45853, 45985.

XI - Model DC-8-53 (Transport Aircraft), Approved April 28, 1961

Engines 4 Pratt and Whitney Turbofan JT3D-1, JT3D-3, or JT3D-3B (See NOTE 6 regarding intermixing of engines.)

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits

See Section X, Model DC-8-52, for JT3D-1.

JT3D-3 and JT3D-3B

Static Thrust (Std. Day) S.L. (1)

Takeoff (5 min.) (Dry)	18,000 lbs.
Maximum Continuous	16,400 lbs.

Maximum permissible engine rotor operating speeds:

N ₁ (Low Compressor) (2)	6,800 r.p.m.
N ₂ (High Compressor)	10,250 r.p.m.

Maximum permissible gas temperatures - turbine outlet:

Takeoff (5 min.)	555°C	1031°F
Maximum continuous	490°C	914°F
Maximum Acceleration (2 min.)	555°C	1031°F
Starting (Momentary)	450°C	842°F

Oil Inlet Temperatures

For Continuous Operation	132°C	270°F
For 15 min. time limit	143°C	290°F

- (1) Takeoff static thrust rating for JT3D-3B extended to 84° day S.L. instead of Std. Day S. L.
- (2) N₁ compressor maximum rotor speed for JT3D-3B engines is 6850 r.p.m.

Airspeed Limits

See Section III, DC-8-32.

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

Taxi and Ramp	318,000 lbs.
Start of Takeoff	315,000 lbs.
Airborne	314,000 lbs.
Zero Fuel	
(with JT3D-1 engines) (1)	178,400 lbs.
(with JT3D-3 or -3B engines installed) (1) (2)	179,000 lbs.
Landing (3)	207,000 lbs.

- (1) All weight in the airplane above this weight must be fuel.
- (2) For airplane S/Ns 45417, 45656, 45809, 45933, 45934, 45937, and 45962, the maximum zero fuel weight is 183,500 lbs.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew

For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers

(See NOTES 4 and 7)

Maximum Baggage

		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.
Oil Capacity	Inbd. and Outbd. Engines 75.0 lbs. ea. (+666.0) and (+804.0) Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0) See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.
Serial Numbers Eligible	45383, 45607, 45608, 45613, 45616, 45629, 45632, 45647, 45651, 45656, 45662, 45664, 45670, 45671, 45680, 45681, 45809, 45933, 45934, 45962, 46514, DC-8-32 S/N 45420 (See NOTE 11(b)) and 45417, 45568 and 45604 (See NOTE 11(d)).
<u>XII - Model DC-8-51 (Transport Aircraft), Approved October 10, 1961; (See NOTE 11 for conversion from DC-8-12)</u>	
Engines	4 Pratt and Whitney Turbofan JT3D-1, JT3D-3 or JT3D-3B (See NOTE 6 regarding intermixing of engines)
Fuel	Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)
Engine Limits	See Section X, DC-8-52, for JT3D-1 or Section XI, DC-8-53, for JT3D-3 and JT3D-3B engines.
Airspeed Limits	See Section II, DC-8-21.
C.G. Range	See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.
Maximum Weights	Taxi and Ramp (3) 278,000 lbs. Start of Takeoff (3) 276,000 lbs. Airborne (3) 275,000 lbs. Zero Fuel (1) (2) (with JT3D-1 engines installed) (1) (2) (3) 167,200 lbs. (with JT3D-3 or -3B engines installed) (1) (2) (3) 167,500 lbs. Landing (4) 199,500 lbs. (1) All weight in airplane above this weight must be fuel. (2) (a) S/N 45252 is eligible for Maximum Zero Fuel Weight of 171,500 lbs. (b) S/N 45633, 45652, 45685, 45760, 45855, 45878, and 45935 are eligible for Maximum Zero Fuel Weight of 173,500 lbs. (c) S/N 45638, 435624, 45635, 45642, 45644, 45648, and 45807 are eligible for Maximum Zero Fuel Weight of 176,500 lbs. when modified per Service Bulletin No. 53-69.
Maximum Weights (cont'd)	(4) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f). (5) S/N 45628, 45634, 45635, 45642, and 45644 are eligible for a Maximum Landing Weight of 207,000 lbs.
Minimum Crew	For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)
Maximum Passengers	(See NOTES 4 and 7)

Maximum Baggage

		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs./sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,500	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines 75.0 lbs. ea. (+666.0) and (+804.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

45252, 45628, 45633-45635, 45641-45646, 45648-45650, 45652, 45672, 45673, 45685, 45687-45690, 45760, 45806, 45807, 45808, 45815, 45855, 45877, 45878, 45935 and DC-8-12 S/N 45284-45288, 45408-45413 when converted. (See NOTE 11(c)).

XIII - Model DC-8F-54 (Transport Aircraft), Approved January 29, 1963; Model DC-8F-55 (Transport Aircraft),
Approved June 19, 1964

Engines

4 Pratt and Whitney Turbofan JT3D-1, JT3D-3 or JT3D-3B. (See NOTE 6 regarding intermixing of engines)

Fuel

Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits

See Section X, DC-8-52, for JT3D-1 or Section XI, DC-8-53, for JT3D-3 and JT3D-3B engines.

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

	Max. Zero Fuel Wt. 190,000 lbs. or less ***	Max. Zero Fuel Wt. Above 190,000 lbs.
V _{MO} (Maximum Operating - S.L.)	340K	340K
V _{MO} (Maximum Operating - 10,000 ft.)	352K	352K*
M _{MO} (Maximum Operating - 23,000 ft.)	374K* (M = 0.85)	-----
M _{MO} (Maximum Operating - 27,000 ft.)	-----	352K*
M _{MO} (Maximum Operating - 29,300 ft.)	342K* (M = 0.88)	
M _{MO} (Maximum Operating - 42,000 ft.)	258K* (M = 0.88)	
V _A (Maneuvering - S.L.)	235K*	
V _A (Maneuvering - 35,000 ft.)	269K*	
V _A (Maneuvering - above 35,000 ft.)	(M = 0.79)	

* Straight line variation between values shown.

** See data under "Maximum Operating Altitude."
(For buffet envelope, refer to Airplane Flight Manual)

*** Not applicable to airplanes converted to DC-8F-54 per Douglas Dwgs. 3633831, 5633831 & 5633600 or DC-8F-54 and DC-8F-55 per Douglas Dwg. 7633870.

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	210K	M = 0.42
(Flaps Down 26 to 50°)	198K	M = 0.40
(Flaps Down 26 to 50°) *	182K	M = 0.37
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extended)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or M = 0.75 (whichever is the lesser)	

* For airplanes converted to DC-8F-54 per Douglas Dwgs. 3633831 & 5633600

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

	DC-8F-54 or DC-8F-55 <u>with JT3D-1 engines</u>	DC-8F-55 with JT3D-3 <u>or JT3D-3B engines</u>
Taxi and Ramp	318,000 lbs	328,000 lbs
Start of Takeoff	315,000 lbs.	325,000 lbs.
Airborne	<u>314,000 lbs.</u>	<u>324,000 lbs.</u>
Zero Fuel (1) (2) (4)	190,000 lbs. or 224,000 lbs.	
Landing (3) (4)	240,000 lbs.	

- (1) All weight in the airplane above this weight must be fuel.
- (2) See Airspeed Limits for appropriate speeds.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (4) Airplanes converted to DC-8F-54 per Douglas Dwgs. 3633831 and 5633600 limited to 203,000 lbs. ZFW & 217,000 lbs. landing weight.

Minimum Crew

For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers

(See NOTES 4 and 7)

Maximum Baggage

All Passenger Operation (1) (2)					
		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1178 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing when operating as a passenger airplane. For additional information concerning loading limitations when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).

- (1) Model DC-8F-54, S/N 45675 thru 45677, delivered with cargo provisions only.
- (2) Exemption No. 243 applicable to all DC-8F aircraft when operated as cargo carriers only. (See Certification Basis)

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity	Inbd. and Outbd. Engines 75.0 lbs. ea. (+666.0) and (+804.0) Constant Speed Drives 7.5 lbs. ea. (+676.0) and (+814.0)
	See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.
Serial Numbers Eligible	DC-8F-54: 45610, 45637, 45640, 45655, 45663, 45667-45669, 45674-45677, 45679, 45682, 45684, 45686, 45768, 45769, 45800-45802, 45860, 45861, 45879, 45880, 45881, 45884-45886, 45932, 46009-46012 DC-8F-55: 45678, 45683, 45691, 45692, 45754, 45762, 45763, 45764, 45767, 45803-45805, 45816-45821, 45824, 45856-45859, 45862, 45882, 45883, 45965.

XIV - Model DC-8-55 (Transport Aircraft), Approved April 25, 1965

Engines	4 Pratt and Whitney Turbofan JT3D-1, JT3D-3 or JT3D-3B (See NOTE 6 for intermixing of engines).
Fuel	Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)
Engine Limits	See Section X, DC-8-52, for JT3D-1 or Section XI, DC-8-53, for JT3D-3 and JT3D-3B engines.
Airspeed Limits (IAS)	

V _{MO} (Maximum Operating - S.L.)	340K	
V _{MO} (Maximum Operating - 10,000 ft.)	352K	
M _{MO} (Maximum Operating - 23,000 ft.)	374K*	(M = 0.847)
M _{MO} (Maximum Operating - 29,300 ft.)	342K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	258K*	(M = 0.88)
V _A (Maneuvering - S.L.)	235K*	
V _A (Maneuvering - 35,000 ft.)	269K*	
V _A (Maneuvering - above 35,000 ft.)		(M = 0.79)

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	210K	M = 0.42
(Flaps Down 26 to 50°)	198K	M = 0.40
	<u>Up to 32,000 ft.</u>	<u>Above 32,000 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	<u>230K</u>	<u>M = 0.65</u>
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or	M = 0.75
	(whichever is the lesser)	

C.G. Range	See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.
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Maximum Weights	<u>JT3D-3 and JT3D-3B</u>	<u>JT3D-1</u>
Taxi and Ramp	328,000 lbs	318,000 lbs
Start of Takeoff	325,000 lbs.	315,000 lbs.
Airborne	<u>324,000 lbs.</u>	<u>314,000 lbs.</u>
Zero Fuel (1)	190,000 lbs.	
Landing (2)	217,000 lbs.	

(1) All weight in the airplane above this weight must be fuel.
(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers (See NOTES 4 and 7)

Maximum Baggage

All Passenger Operation (1) (2)					
		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs/sq. ft.	lbs./in.	C.G.
Fwd. Belly	310-640	10,350	120	48.3	+ 479 in.
Aft Belly	980-1337	10,500	120	44.2	+1148 in.

Above values are satisfactory for a maximum of six abreast seating and a minimum of 34 inch seat spacing. (See NOTE 1(a)).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity Inbd. and Outbd. Engines 75.0 lbs. ea. (+666.0) and (+804.0)
Constant Speed Drives 17.5 lbs. ea. (+676.0) and (+814.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45753, 45765, 45766, 45854, 45916

XV - Model DC-8-61 (Transport Aircraft) Approved September 1, 1966

Engines 4 Pratt and Whitney Turbofan JT3D-1, JT3D-3 or JT3D-3B (See NOTE 6 regarding intermixing of engines).

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits See Section X, DC-8-52, for JT3D-1 or Section XI, DC-8-53, for JT3D-3 and JT3D-3B engines.

Airspeed Limits (IAS) (See NOTE 10 for calibration)

V _{MO} (Maximum Operating – S.L.)	339K	
V _{MO} (Maximum Operating – 10,000 ft.)	352K	
M _{MO} (Maximum Operating – 23,000 ft.)	373K*	(M = 0.847)
M _{MO} (Maximum Operating – 29,300 ft.)	341K*	(M = 0.88)
M _{MO} (Maximum Operating – 42,000 ft.)**	255K*	(M = 0.88)

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

 V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight line variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V_{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	220K	M = 0.44
(Flaps Down 26 to 50°)	206K	M = 0.41
	<u>Up to 32,000 ft.</u>	<u>Above 32,000 ft.</u>
V_{LO} (Landing Gear Operation)	230K	M = 0.65
V_{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V_{MO}/M_{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. (whichever is the lesser)	M = 0.75

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

	<u>JT3D-3 and JT3D-3B</u>	<u>JT3D-1</u>
Taxi and Ramp	328,000 lbs	318,000 lbs
Start of Takeoff	325,000 lbs.	315,000 lbs.
Airborne	<u>324,000 lbs.</u>	<u>314,000 lbs.</u>
Zero Fuel (1)	224,000 lbs.	
Landing (2)	240,000 lbs.	

(1) All weight in the airplanes above this weight must be fuel.

(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew

For all flights: Pilot, copilot, and flight engineer. (See NOTE 4)

Maximum Passengers

269 (See NOTE 4)

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft.	lbs./in.	
Fwd. Belly	73-440	12,000	120	32.7	253.7 in.
	440-637	9,614	120	48.8	538.3 in.
	73-637	19,350 (1)			
Aft Belly	983-1320	16,466	120	48.8	1149.3 in.
	1320-1537	5,577	120	25.7	1422.8 in.
	983-1537	18,150 (1)			
Fuselage Floor	65-1622	50,135 (2)	75	32.2	

Maximum Baggage (cont'd)

Aircraft with Basket Loading System					
Fwd. Belly	118-503	13,420 (3)	NA	NA	310.5 in.
	511-637	5,300 (4)	120	48.8	580.8 in.
Aft. Belly	998-1383	13,420 (3)	NA	NA	1190.5 in.
	1393-1537	4,115 (4)	120	25.7	1469.2 in.

- (1) Combined maximum load for the compartment.
- (2) Capacity based on six abreast seating at 32 inch seat spacing.
- (3) Eleven baskets with 1100 lbs. of cargo in each basket.
- (4) Bulk loading.

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines	75.0 lbs. ea.	(Douglas Tank)	(+666.0) and (+804.0)
	40.0 lbs. ea.	(P&W Tank)	(+666.0) and (+804.0)
Constant Speed Drives	9.4 lbs. ea.		(+683.0) and (+823.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

45810-45813, 45848, 45849, 45887-45894, 45907, 45908, 45912-45915, 45940-45947, 45963, 45964, 45970-45983, 45992-45998, 46014-46018, 46029-46032, 46037-46040, 46048, 46055, 46056, 46064-46066, 46072, 46099, 46127, 46128, 46157-46160

XVI - Model DC-8-62 (Transport Aircraft) Approved April 27, 1967

Engines

4 Pratt and Whitney Turbofan JT3D-3B, JT3D-7 (See NOTE 6 regarding intermixing of engines).

Fuel

Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits

See Section XI, DC-8-53, for JT3D-3B or Section XVIII, DC-8-63, for JT3D-7 engines.

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V_{MO} (Maximum Operating - S.L.)	338K	
V_{MO} (Maximum Operating - 10,000 ft.)	351K	
M_{MO} (Maximum Operating - 23,000 ft.)	373K*	(M = 0.847)
M_{MO} (Maximum Operating - 29,300 ft.)	340K*	(M = 0.88)
M_{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V_{FE} (Flaps Down 0 to 12°)	230K	M = 0.46
(Flaps Down 13 to 23°)	220K	M = 0.44
(Flaps Down 24 to 50°)	206K	M = 0.41

See Section XV, DC-8-61, for remaining airspeed limits.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

Taxi and Ramp	338,000 lbs	353,000 lbs
Start of Takeoff	335,000 lbs. (3)	350,000 lbs. (3)
Airborne	<u>334,000 lbs.</u>	<u>349,000 lbs.</u>
Zero Fuel (1)	195,000 lbs.	
Landing (2)	240,000 lbs.	

- (1) All weight in the airplane above this weight must be fuel.
- (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (3) See Airplane Flight Manual for Serial Numbers Eligible.

Maximum Passengers

214 if the aircraft has three Type I and two Type III exits on each side of the fuselage (See NOTE 4).

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft.	lbs./in.	
Fwd. Belly	273-420	4,807	120	32.7	348.3 in.
	420-637	9,852	120	45.4	528.6 in.
	273-637	12,000 (1)			
Aft Belly	983-1200	9,526	120	43.9	1086.7 in.
	1200-1377	5,522	120	31.2	1286.8 in.
	983-1377	12,225 (1)			
Fuselage Floor	227-1440	38,816 (2)	75	32.0	

- (1) Combined maximum load for the compartment.
- (2) Capacity based on six abreast seating at 32 inch seat spacing.

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines	40.0 lbs. ea.	(P&W Tank)	(+627.80) and (+765.8)
Constant Speed Drives	9.4 lbs. ea.		(+644.8) and (+784.8)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

335,000 lbs. Start of Takeoff Weight

45823, 45895, 45896, 45899, 45905, 45906, 45911, 45917-45921, 45925, 45953-45956, 45987, 46023, 46024, 46028, 46057, 46077, 46102, 46105, 46107, 46131, 46134

350,000 lbs. Start of Takeoff Weight

45909, 45910, 45986, 46026, 46027, 46067-46071, 46081, 46082, 46084, 46085, 46098, 46110, 46111, 46132, 46142, 46152, 46153, 46161

XVII - Model DC-8-61F (Transport Aircraft) Approved June 11, 1967

Engines	4 Pratt and Whitney Turbofan JT3D-1, JT3D-3 or JT3D-3B (See NOTE 6 regarding intermixing of engines).
Fuel	Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)
Engine Limits	See Section X, DC-8-52, for JT3D-1 or Section XI, DC-8-53, for JT3D-3 and JT3D-3B engines.
Airspeed Limits (IAS)	(See NOTE 10 for calibration)

V_{MO} (Maximum Operating - S.L.)	339K	
V_{MO} (Maximum Operating - 11,400 ft.)	352K	
M_{MO} (Maximum Operating - 23,000 ft.)	373K	(M = 0.847)
M_{MO} (Maximum Operating - 29,300 ft.)	341K*	(M = 0.88)
M_{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V_{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	220K	M = 0.44
(Flaps Down 26 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V_{LO} (Landing Gear Operation)	230K	M = 0.65
V_{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V_{MO}/M_{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or	M = 0.75
	(whichever is the lesser)	

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

	<u>JT3D-3 and JT3D-3B</u>	<u>JT3D-1</u>
Taxi and Ramp	331,000 lbs	318,000 lbs
Start of Takeoff	328,000 lbs.	315,000 lbs.
Airborne	<u>327,000 lbs.</u>	<u>314,000 lbs.</u>
Zero Fuel (1)	234,000 lbs.	
Landing (2)	258,000 lbs.	

(1) All weight in the airplane above this weight must be fuel.

(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew For all flights: Pilot, copilot, and flight engineer See NOTE 4)

Maximum Passengers 269 (See NOTE 4)

Maximum Baggage For all-passenger operation see Section XV, DC-8-61, for baggage limitations for aircraft without the basket loading system. For additional information concerning loading limitations when operating as a passenger airplane as well as when operating as a cargo or combination passenger/cargo airplane, See NOTE 1(a).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines	75.0 lbs. ea.	(Douglas Tank)	(+666.0) and (+804.0)
	40.0 lbs. ea.	(P&W Tank)	(+666.0) and (+804.0)
Constant Speed Drives	9.4 lbs. ea.		(+683.0) and (+823.0)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible 45897, 45898, 45900, 45902, 45938, 45939, 45948-45950, 45952

XVIII - Model DC-8-63 (Transport Aircraft) Approved June 29, 1967

Engines 4 Pratt and Whitney Turbofan JT3D-3B, JT3D-7 (See NOTE 6 regarding intermixing of engines).

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits See Section XI, DC-8-53, for JT3D-3B engines.

JT3D-7

Static Thrust (S.L.)

Takeoff (5 min. up to 84°F)	19,000 lbs.
Maximum Continuous (Std. Day)	17,200 lbs.

Maximum permissible engine rotor operating speeds:

N ₁ (Low Compressor)	6,850 r.p.m.
N ₂ (High Compressor)	10,300 r.p.m.

Engine Limits
(Cont'd)

Maximum permissible temperatures:

Turbine outlet gas temperatures

Takeoff (5 min.)	575°C	1067°F
Maximum Continuous	510°C	950°F
Maximum Acceleration (2 min.)	575°C	1067°F
Starting (Momentary)	450°C	842°F

Oil Inlet Temperatures

For Continuous Operation	132°C	270°F
For 15 min. time limit	143°C	290°F

Engine component temperatures are specified in the pertinent PWA Installation and Operating Manual No. 550.

Airspeed Limits See Section XV, DC-8-61 for remaining airspeed limitations .
See Section XVI for DC-8-62 for maximum flaps extended airspeed.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp	358,000 lbs
	Start of Takeoff (1)	355,000 lbs.
	Airborne	354,000 lbs.
	Zero Fuel (2)	230,000 lbs.
	Landing (3) (4)	258,000 lbs.

- (1) See C.G. Range for appropriate limitations.
- (2) All weight in the airplane above this weight must be fuel.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (4) 275,000 lbs. for S/N 46058, 46074, 46093, 46096, 46097; 262,000 lbs. for S/N 46095.

Minimum Crew For all flights; Pilot, copilot, and flight engineer (See NOTE 4).

Maximum Passengers 269 (See NOTE 4)

Maximum Baggage	Compartment	Station	Capacity	Maximum Loading		C.G.
			lbs.	lbs/sq. ft.	lbs./in.	
	Fwd. Belly	73-440	12,000	120	32.7	253.7 in.
		440-637	9,614	120	48.8	538.3 in.
		73-637	19,350 (1)			
	Aft Belly	983-1320	16,446	120	48.8	1149.3 in.
		1320-1537	5,577	120	25.7	1422.8 in.
		983-1537	18,150 (1)			
	Fuselage Floor	65-1622	49,824 (2)	75	32.0	

- (1) Combined maximum load for the compartment.
- (2) Capacity based on six abreast seating as 32 inch seat spacing.

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines 40.0 lbs. ea. (P&W Tank) (+627.8) and (+765.8)
 Constant Speed Drives 9.4 lbs. ea. (+644.8) and (+784.8)

See NOTE 1(c) for System Oil. Oil weight based on 7.7 lbs./gal.

Serial Numbers Eligible 45901, 45903, 45923, 45924, 45926-45931, 45999, 46000, 46019, 46034-46036, 46041, 46042, 46054, 46058, 46063, 46074, 46075, 46079, 46080, 46092, 46093, 46095-46097, 46115, 46116, 46121, 46122, 46136, 46141, 46155, 46163

XIX - Model DC-8-62F (Transport Aircraft) Approved October 23, 1967

Engines 4 Pratt and Whitney Turbofan JT3D-3B, JT3D-7 (See NOTE 6 regarding intermixing of engines).

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits See Section XI, DC-8-53, for JT3D-3B or Section XVIII, DC-8-63, for JT3D-7 engines.

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

	Max. Zero Fuel Wt. 195,000 lbs. or less	Max. Zero Fuel Wt. Above 195,000 lbs.
V _{MO} (Maximum Operating - S.L.)	338K	338K
V _{MO} (Maximum Operating - 10,000 ft.)	351K	351K*
M _{MO} (Maximum Operating - 23,000 ft.)	373K (M = 0.847)	-----
M _{MO} (Maximum Operating - 27,000 ft.)	-----	351K*
M _{MO} (Maximum Operating - 29,300 ft.)	340K* (M = 0.88)	
M _{MO} (Maximum Operating - 42,000 ft.)**	255K* (M = 0.88)	
V _A (Maneuvering)	See FAA Approved Airplane Flight Manual	

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

See Section XV, DC-8-61, for remaining airspeed limits.

See Section XVI for DC-8-62 for maximum flaps extended airspeed.

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

Taxi and Ramp	338,000 lbs	353,000 lbs
Start or Takeoff	335,000 lbs.	350,000 lbs.
Airborne	334,000 lbs	349,000 lbs
Zero Fuel (1) (2)	195,000 lbs. or 230,000 lbs.	
Landing (3)	250,000 lbs.	
(1) All weight in the airplane above this weight must be fuel.		
(2) See Airspeed Limits for appropriate speeds.		
(3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).		
(4) See Serial Numbers Eligible.		

Minimum Crew

For all flights: Pilot, copilot, and flight engineer. (See NOTE 4).

Maximum Passengers

214 (See NOTE 4)

Maximum Baggage

ALL PASSENGER OPERATION					
Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs./sq. ft.	lbs./in.	
Fwd. Belly	273-420	4,807	120	32.7	+348.3 in.
	420-637	9,852	120	45.4	+528.6 in.
	273-637	12,000 (1)			
Aft Belly	983-1200	9,526	120	43.9	+1086.7 in.
	1200-1377	5,522	120	31.2	+1286.8 in.
	983-1377	12,225 (1)			
Fuselage	227-1440	38,816 (2)	75	32.0	

(1) Combined maximum load for the compartment.

(2) Capacity based on six abreast seating at 32 inch seat spacing.

For all-cargo operation, the airspeed limits for a maximum zero fuel weight of 195,000 lbs. or less may be used if the zero fuel weight does not exceed 195,000 lbs., the appropriate C.G. limits are observed, and the cargo weight on each pallet or in each zone does not exceed 85% of the maximum permitted weight.

Maximum Baggage (cont'd) For additional information concerning loading limitations when operating as a passenger airplane as well as when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines	40.0 lbs. ea.	(P&W Tank)	(+627.8) and (+765.8)
Constant Speed Drives	9.4 lbs. ea.		(+644.8) and (+784.8)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

335,000 lbs. Start of Takeoff Weight

45904, 45922, 45984, 46013, 46022, 46043, 46078, 46129, 46130, 46139, 46150,

350,000 lbs. Start of Takeoff Weight

45960, 45961, 46148, 46154, 46162

XX - Model DC-8-63F (Transport Aircraft) Approved June 7, 1968

Engines 4 Pratt and Whitney Turbofan JT3D-3B, JT3D-7 (See NOTE 6 regarding intermixing of engines).

Fuel Commercial Aircraft Turbine Fuel conforming to P&WA Service Bulletin No. 2016 (PWA Specification 522). (See NOTE 14)

Engine Limits See Section XI, DC-8-53, for JT3D-3B Engine and Section XVIII, DC-8-63, for JT3D-7 engines.

Airspeed Limits (IAS) (See NOTE 10 for calibration)

	Max. Zero Fuel Wt. 190,000 lbs. or less	Max. Zero Fuel Wt. Above 190,000 lbs.	
V_{MO} (Maximum Operating - S.L.)	339K	339K	
V_{MO} (Maximum Operating - 10,000 ft.)	351K	352K*	
M_{MO} (Maximum Operating - 23,000 ft.)	373K	-----	(M = 0.847)
M_{MO} (Maximum Operating - 27,000 ft.)	-----	352K*	(M=0.88)
M_{MO} (Maximum Operating - 29,300 ft.)	342K*		(M = 0.88)
M_{MO} (Maximum Operating - 42,000 ft.)**	258K*		(M = 0.88)
V_A (Maneuvering)	See FAA Approved Airplane Flight Manual		

* Straight line variation between values shown.

** See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

See Section XV, DC-8-61, for remaining airspeed limits.

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights	Taxi and Ramp	358,000 lbs.
	Start of Takeoff (1)	355,000 lbs.
	Airborne	354,000 lbs.
	Zero Fuel (1)(2)(4)	230,000 lbs., 248,000 lbs., or 261,000 lbs.
	Landing (3)(4)	275,000 lbs.*
	(1) See Airspeed Limits and C.G. Range for appropriate limitations.	
	(2) All weight in the airplane above this weight must be fuel.	
	(3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).	
	(4) Airplanes converted to DC-8-63F per Douglas Dwg. 7633870 are limited to 245,000 lbs. ZFW.	
	*275,000 lbs. maximum landing weight applies from sea level up to 2000 ft. airport altitude.	
	*271,000 lbs. maximum landing weight applies from 2000 ft. airport altitude up to 5500 ft. airport altitude.	
	*266,000 lbs. maximum landing weight applies from above 5500 ft. airport altitude up to 8500 ft. pressure altitude.	
Minimum Crew	For all flights: Pilot, copilot, and flight engineer.	
Maximum Passengers	269 (See NOTE 4)	
Maximum Baggage	For all-passenger operation see Section XVIII, DC-8-63.	
	For all-cargo operation, the airspeed limits for a maximum zero fuel weight of 230,000 lbs. or less may be used if the zero fuel weight does not exceed 230,000 lbs., the appropriate C.G. limits are observed and the cargo weight on each pallet or in each zone does not exceed 85% of the maximum permitted weight.	
	For additional information concerning loading limitations when operating as a passenger airplane as well as when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).	
Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.	
Oil Capacity	Inbd. and Outbd. Engines	40.0 lbs. ea. (+627.8) and (+765.8)
	Constant Speed Drives	9.4 lbs. ea. (+644.8) and (+784.8)
	See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.	
Serial Numbers Eligible	<u>For conversion to DC-8-63F per Douglas Aircraft Drawing 7633870.</u> 46113, 46126	
Serial Numbers Eligible	45936, 45966-45969, 45988-45991, 46001-46004, 46006-46008, 46020, 46021, 46033, 46044-46047, 46049-46053, 46059-46062, 46073, 46076, 46086-46091, 46094, 46100, 46101, 46103, 46104, 46106, 46108, 46109, 46112, 46113, 46117, 46123-46125, 46,126, 46133, 46135, 46137, 46140, 46143-46147, 46149, 46151	

XXI-Model DC-8-71 (Transport Aircraft) Approved April 13, 1982

Engines	4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C5 (CFM56-2-C1 and CFM56-2-C5 intermixed, see Note 24)	
Fuel	See Note 18	
Oil	See Note 19	
Engine Limits	Static Thrust Sea Level	CFM56-2-C1 or CFM56-2-C5
	Takeoff (5 min. flat rated to 86°F)	22,000 lbs.
	Maximum Continuous (flat rated to 77°F)	21,300 lbs.

Maximum permissible engine rotor operating speeds

N ₁ (Low Compressor)	5280 RPM (102%)
N ₂ (High Compressor)	15183 RPM (105%)

Maximum permissible engine temperature

Turbine exhaust gas temperatures at turbine outlet

CONDITION	TIME	EGT LIMIT
Starting (ground and in-flight)	(Continuous)	725°C
	(30 seconds)	750°C
	(10 seconds)	800°C
Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*
	(5 minutes)	870°C or 905°C*

*After incorporation of DAC S/Bs 77-26 and 77-28

Maximum Fuel Pressure	50 psig
Minimum Fuel Pressure + 5 psi	True Vapor Pressure

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54° (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature	135°C 120-135°C (precautionary)
Minimum Oil Temperature (takeoff)	5°C
Minimum Oil Pressure	13 psig

Airspeed Limits (IAS) (See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	339K	
V _{MO} (Maximum Operating - 11,400 ft.)	352K	
M _{MO} (Maximum Operating - 27,000 ft.)	352K	(M = 0.863)
M _{MO} (Maximum Operating - 29,300 ft.)	341K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

Airspeed Limits (IAS) (cont'd) (See NOTE 10 for calibration)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	220K	M = 0.44
(Flaps Down 26 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max or (whichever is the lesser)	M = 0.75

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weight

	<u>CFM56-2-C1</u>
Taxi and Ramp	328,000 lbs.
Start of Takeoff	325,000 lbs.
Airborne	324,000 lbs.
Zero Fuel (1)	225,000 lbs.

- (1) All weight in the airplane above this weight must be fuel.
- (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew

For all flights: Pilot, copilot, and flight engineer (See NOTE 4).

Maximum Passengers

269 (See NOTE 4)

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs./sq. ft.	lbs./in.	
Fwd. Belly	73-440	12,000	120	32.7	253.7 in.
	440-637	9,614	120	48.8	538.3 in.
	73-637	19,350 (1)			
Aft Belly	983-1320	16,446	120	48.8	1149.3 in.
	1320-1537	5,577	120	25.7	1422.8 in.
	983-1537	18,150 (1)			
Fuselage Floor	65-1622	50,135 (2)	75	32.2	
<u>Aircraft with Basket Loading System</u>					
Fwd. Belly	118-503	13,420 (3)	NA	NA	310.5 in.
	511-637	5,300 (4)	120	48.8	580.8 in.
Aft Belly	998-1383	13,420 (3)	NA	NA	1190.5 in.
	1393-1537	4,115 (4)	120	25.7	1469.2 in.

- (1) Combined maximum load for the compartment.
- (2) Capacity based on six abreast seating as 32 inch seat spacing.
- (3) Eleven baskets with 1100 lbs. of cargo in each basket.
- (4) Bulk loading.

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines 38.5 lbs. ea. (CFMI Tank) (+680.6) and (+819.2)
 Constant Speed Drives 9.4 lbs. ea. (+661.6) and (+800.2)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

For Conversion to DC-8-71 per Douglas Aircraft Drawing 7757375.

45848, 45887-45894, 45908, 45912-45913, 45940, 45942, 45943, 45963, 45964, 45972,
 45980-45982, 45992, 46015, 46017, 46031, 46032, 46037, 46038, 46127, 46128, 46157-
 46160.

XXII-Model DC-8-71F (Transport Aircraft) Approved April 13, 1982

Engines

4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C5
 (CFM56-2-C1 and CFM56-2-C5 intermixed, see Note 24)

Fuel

See Note 18

Oil

See Note 19

Engine Limits

Static Thrust Sea Level CFM56-2-C1 or CFM56-2-C5
 Takeoff (5 min. flat rated to 86°F) 22,000 lbs.
 Maximum Continuous (flat rated to 77°F) 21,300 lbs.

Maximum permissible engine rotor operating speeds

N₁ (Low Compressor) 5280 RPM (102%)
 N₂ (High Compressor) 15183 RPM (105%)

Maximum permissible engine temperature

Turbine exhaust gas temperatures at turbine outlet

CONDITION	TIME	EGT LIMIT
Starting (ground and in-flight)	(Continuous)	725°C
	(30 seconds)	750°C
	(10 seconds)	800°C
Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*
	(5 minutes)	870°C or 905°C*

*After incorporation of DAC S/Bs 77-26 and 77-28.

Maximum Fuel Pressure 50 psig

Minimum Fuel Pressure True Vapor Pressure
 + 5 psi

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54° (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature 135°C
 120-135°C
 (precautionary)

Engine Limits (cont'd)	Minimum Oil Temperature (takeoff)	5°C	
	Minimum Oil Pressure	13 psig	
Airspeed Limits (IAS)	(See NOTE 10 for calibration)		
	V _{MO} (Maximum Operating - S.L.)	339K	
	V _{MO} (Maximum Operating - 11,400 ft.)	352K	
	M _{MO} (Maximum Operating - 27,000 ft.)	352K	(M = 0.863)
	M _{MO} (Maximum Operating - 29,300 ft.)	341K*	(M = 0.88)
	M _{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 15°)	230K	M = 0.46
(Flaps Down 16 to 25°)	220K	M = 0.44
(Flaps Down 26 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max. or (whichever is the lesser)	M = 0.75

C.G. Range See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weight

	<u>CFM56-2-C1</u>
Taxi and Ramp	331,000 lbs.
Start of Takeoff	328,000 lbs.
Airborne	327,000 lbs.
Zero Fuel (1)	245,000 lbs.
Landing (2)	250,000 lbs.*

(1) All weight in the airplane above this weight must be fuel.

(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

*251,100 lbs. maximum landing weight applies at 35° flaps from sea level up to 2000 ft. airport altitude.

*253,500 lbs. maximum landing weight applies at 35° flaps from above 2000 ft. airport altitude up to 3000 ft. airport altitude.

*258,000 lbs. maximum landing weight applies at 50° flaps from sea level up to 3000 ft. airport altitude. For zero wind and headwind components only.

FSN's 45914, 45915, 45944, 46014, 46018, 46029, 46030, 46048, 46055, 46056, 46072 are approved for cargo application only.

Minimum Crew

For all flights: Pilot, copilot, and flight engineer (See NOTE 4).

Maximum Passengers

269 (See NOTE 4)

Maximum Baggage	For all-passenger operation see Section I, DC-8-61, for baggage limitations for aircraft without the basket loading system. For additional information concerning loading limitations when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).								
Fuel Capacity	See NOTE 1 (c) for system fuel; NOTE 1 (d) for unusable fuel; NOTE 1 (e) for fuel loading and usage procedures; NOTE 1 (f) for undumpable fuel; and NOTE 1 (g) for fuel tank capacities.								
Oil Capacity	<table border="0"> <tr> <td>Inbd. and Outbd. Engines</td> <td>38.5 lbs. ea.</td> <td>(CFMI Tank)</td> <td>(+680.6) and (+819.2)</td> </tr> <tr> <td>Constant Speed Drives</td> <td>9.4 lbs. ea.</td> <td></td> <td>(+661.6) and (+800.2)</td> </tr> </table> <p>See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.</p>	Inbd. and Outbd. Engines	38.5 lbs. ea.	(CFMI Tank)	(+680.6) and (+819.2)	Constant Speed Drives	9.4 lbs. ea.		(+661.6) and (+800.2)
Inbd. and Outbd. Engines	38.5 lbs. ea.	(CFMI Tank)	(+680.6) and (+819.2)						
Constant Speed Drives	9.4 lbs. ea.		(+661.6) and (+800.2)						
Serial Numbers Eligible	<p><u>For Conversion to DC-8-71F per Douglas Aircraft Drawing 7633870.</u></p> <p>45907, 45914, 45915, 45944, 45979, 46014, 46018, 46029, 46030, 46048, 46055, 46056, 46072</p> <p><u>For Conversion to DC-8-71F per Douglas Aircraft Drawing 7757375.</u></p> <p>45897, 45898, 45900, 45902, 45938, 45939, 45948-45950, 45952</p> <p><u>For Conversion to DC-8-71F per Douglas Aircraft Drawing SP08010001, Rev. A. (See Note 26)</u></p> <p>45810-45813, 45849, 45941, 45945-45947, 45970, 45971, 45973-45978, 45983, 45993-45998, 46039, 46040, 46064-46066, 46099</p>								

XXIII-Model DC-8-73 (Transport Aircraft) Approved June 23, 1982

Engines	4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C5 (CFM56-2-C1 and CFM56-2-C5 intermixed, see Note 24)																																								
Fuel	See Note 18																																								
Oil	See Note 19																																								
Engine Limits	<table border="0"> <tr> <td>Static Thrust Sea Level</td> <td colspan="2">CFM56-2-C1 or CFM56-2-C5</td> </tr> <tr> <td>Takeoff (5 min. flat rated to 86°F)</td> <td colspan="2">22,000 lbs.</td> </tr> <tr> <td>Maximum Continuous (flat rated to 77°F)</td> <td colspan="2">21,300 lbs.</td> </tr> <tr> <td colspan="3">Maximum permissible engine rotor operating speeds</td> </tr> <tr> <td>N₁ (Low Compressor)</td> <td colspan="2">5280 RPM (102%)</td> </tr> <tr> <td>N₂ (High Compressor)</td> <td colspan="2">15183 RPM (105%)</td> </tr> <tr> <td colspan="3">Maximum permissible engine temperature</td> </tr> <tr> <td colspan="3">Turbine exhaust gas temperatures at turbine outlet</td> </tr> <tr> <td>CONDITION</td> <td>TIME</td> <td>EGT LIMIT</td> </tr> <tr> <td rowspan="3">Starting (ground and in-flight)</td> <td>(Continuous)</td> <td>725°C</td> </tr> <tr> <td>(30 seconds)</td> <td>750°C</td> </tr> <tr> <td>(10 seconds)</td> <td>800°C</td> </tr> <tr> <td rowspan="2">Maximum Continuous Takeoff</td> <td>(Continuous)</td> <td>835°C or 870°C*</td> </tr> <tr> <td>(5 minutes)</td> <td>870°C or 905°C*</td> </tr> </table>		Static Thrust Sea Level	CFM56-2-C1 or CFM56-2-C5		Takeoff (5 min. flat rated to 86°F)	22,000 lbs.		Maximum Continuous (flat rated to 77°F)	21,300 lbs.		Maximum permissible engine rotor operating speeds			N ₁ (Low Compressor)	5280 RPM (102%)		N ₂ (High Compressor)	15183 RPM (105%)		Maximum permissible engine temperature			Turbine exhaust gas temperatures at turbine outlet			CONDITION	TIME	EGT LIMIT	Starting (ground and in-flight)	(Continuous)	725°C	(30 seconds)	750°C	(10 seconds)	800°C	Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*	(5 minutes)	870°C or 905°C*
Static Thrust Sea Level	CFM56-2-C1 or CFM56-2-C5																																								
Takeoff (5 min. flat rated to 86°F)	22,000 lbs.																																								
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CONDITION	TIME	EGT LIMIT																																							
Starting (ground and in-flight)	(Continuous)	725°C																																							
	(30 seconds)	750°C																																							
	(10 seconds)	800°C																																							
Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*																																							
	(5 minutes)	870°C or 905°C*																																							

*After incorporation of DAC S/Bs 77-26 and 77-28.

Engine Limits (cont'd)

Maximum Fuel Pressure 50 psig

Minimum Fuel Pressure + 5 psi True Vapor Pressure

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54° (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature 135°C
120-135°C
(precautionary)

Minimum Oil Temperature (takeoff) 5°C

Minimum Oil Pressure 13 psig

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	339K	
V _{MO} (Maximum Operating - 10,400 ft.)	352K	
M _{MO} (Maximum Operating - 27,000 ft.)	352K	(M = 0.863)
M _{MO} (Maximum Operating - 29,300 ft.)	341K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 12°)	230K	M = 0.46
(Flaps Down 13 to 23°)	220K	M = 0.44
(Flaps Down 24 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max or (whichever is the lesser)	M = 0.75

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weight

	<u>CFM56-2-C1</u>
Taxi and Ramp	358,000 lbs.
Start of Takeoff	355,000 lbs.
Airborne	354,000 lbs.
Zero Fuel (1)	230,000 lbs.
Landing (2)	258,000 lbs.

(1) All weight in the airplane above this weight must be fuel.

(2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).

Minimum Crew For all flights: Pilot, copilot, and flight engineer (See NOTE 4).

Maximum Passengers 269 (See NOTE 4)

Maximum Baggage

Compartment	Station	Capacity	Maximum Loading		C.G.
		lbs.	lbs/sq. ft.	lbs./in.	
Fwd. Belly	73-440	12,000	120	32.7	253.7 in.
	440-637	9,614	120	48.8	538.3 in.
	73-637	19,350 (1)			
Aft Belly	983-1320	16,446	120	48.8	1149.3 in.
	1320-1537	5,577	120	25.7	1422.8 in.
	983-1537	18,150 (1)			
Fuselage Floor	65-1622	49,824 (2)	75	32.0	

(1) Combined maximum load for the compartment.

(2) Capacity based on six abreast seating at 32 inch seat spacing.

Fuel Capacity See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines 38.5 lbs. ea. (CFMI Tank) (+680.6) and (+819.2)
Constant Speed Drives 9.4 lbs. ea. (+661.6) and (+800.2)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers Eligible

For Conversion to DC-8-73 per Douglas Aircraft Drawing 7757375.
45901, 45903, 45923, 45924, 45926-45931, 45999, 46000, 46034-46036, 46041, 46042, 46054, 46058, 46063, 46075, 46079, 46092, 46093, 46095-46097, 46113, 46115, 46116, 46121, 46122, 46126, 46136, 46141, 46155.

XXIV - Model DC-8-73F (Transport Aircraft) Approved June 23, 1982

Engines 4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C5
(CFM56-2-C1 and CFM56-2-C5 intermixed, see Note 24)

Fuel See Note 18

Oil See Note 19

Engine Limits Static Thrust Sea Level CFM56-2-C1 or CFM56-2-C5
Takeoff (5 min. flat rated to 86°F) 22,000 lbs.
Maximum Continuous (flat rated to 77°F) 21,300 lbs.

Maximum permissible engine rotor operating speeds

N₁ (Low Compressor) 5280 RPM (102%)
N₂ (High Compressor) 15183 RPM (105%)

Maximum permissible engine temperature

Turbine exhaust gas temperatures at turbine outlet

CONDITION	TIME	EGT LIMIT
Starting (ground and in-flight)	(Continuous)	725°C
	(30 seconds)	750°C
	(10 seconds)	800°C
Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*
	(5 minutes)	870°C or 905°C*

*After incorporation of DAC S/Bs 77-26 and 77-28

Engine Limits (Cont'd)

Maximum Fuel Pressure	50 psig
Minimum Fuel Pressure + 5 psi	True Vapor Pressure

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54° (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature	135°C 120-135°C (precautionary)
Minimum Oil Temperature (takeoff)	5°C
Minimum Oil Pressure	13 psig

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	339K	
V _{MO} (Maximum Operating - 10,400 ft.)	352K	
M _{MO} (Maximum Operating - 27,000 ft.)	352K	(M = 0.863)
M _{MO} (Maximum Operating - 29,300 ft.)	341K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	255K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 12°)	230K	M = 0.46
(Flaps Down 13 to 23°)	220K	M = 0.44
(Flaps Down 24 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - 260K Max or (whichever is the lesser)	M = 0.75

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weight		<u>CFM56-2-C1</u>
	Taxi and Ramp	358,000 lbs.
	Start of Takeoff (1)	355,000 lbs.
	Airborne	354,600 lbs.
	Zero Fuel (1)(2)	245000 lbs.
		253,000 lbs.
		262,000 lbs.
	Landing (3)	275,000 lbs.*
	(1) See Airspeed Limits and C.G. Range for appropriate limitations	
	(2) All weight in the airplane above this weight must be fuel.	
	(3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).	
	*275,000 lbs. maximum landing weight applies from sea level up to 2000 ft. airport altitude.	
	*266,000 lbs. maximum landing weight applies from above 5500 ft. airport altitude up to 8500 ft. pressure altitude.	
Minimum Crew	For all flights: Pilot, copilot, and flight engineer (See NOTE 4).	
Maximum Passengers	269 (See NOTE 4)	
Maximum Baggage	For all-passenger operation see Section XXIII, DC-8-73.	
	For all-cargo operation, the airspeed limits for a maximum zero fuel weight of 230,000 lbs. or less may be used if the zero fuel weight does not exceed 230,000 lbs., the appropriate C.G. limits are observed and the cargo weight on each pallet or in each zone does not exceed 85% of the maximum permitted weight.	
	For additional information concerning loading limitations when operating as a passenger airplane as well as when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).	
Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities	
Oil Capacity	Inbd. and Outbd. Engines	38.5 lbs. ea. (CFMI Tank) (+680.6) and (+819.2)
	Constant Speed Drives	9.4 lbs. ea. (+661.6) and (+800.2)
	See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.	
Serial Numbers Eligible	<u>For Conversion to DC-8-73F per Douglas Aircraft Drawing 7633870.</u> 46019, 46074, 46080	
	<u>For Conversion to DC-8-73F per Douglas Aircraft Drawing 7757375.</u> 45936, 45966-45969, 45988-45991, 46001-46004, 46006-46008, 46020, 46021, 46033, 46044-46047, 46049-46053, 46059-46062, 46073, 46076, 46086-46091, 46094, 46100, 46101, 46103, 46104, 46106, 46108, 46109, 46112, 46117, 46123-46125, 46133, 46135, 46137, 46140, 46143-46147, 46149, 46151.	
<u>XXV-Model DC-8-72 (Transport Aircraft) Approved September 17, 1982</u>		
Engines	4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C3 or CFM56-2-C5 or CFM56-2-C6 (For intermix, see Note 24)	
Fuel	See Note 18	
Oil	See Note 19	

Engine Limits

CFM56-2-C1 or CFM56-2-C3 or CFM56-2-C5 or CFM56-2-C6 (For intermix, see Note 24)

Static Thrust Sea Level rated

Takeoff (5 min. flat rated to 86°F)	22,000 lbs.
Maximum Continuous (flat rated to 77°F)	21,300 lbs.

Maximum permissible engine rotor operating speeds

N ₁ (Low Compressor)	5280 RPM (102%)
N ₂ (High Compressor)	15183 RPM (105%)

Maximum permissible engine temperature

Turbine exhaust gas temperatures at turbine outlet

CONDITION	TIME	EGT LIMIT
Starting (ground and in-flight)	(Continuous)	725°C
	(30 seconds)	750°C
	(10 seconds)	800°C
Maximum Continuous Takeoff	(Continuous)	835°C or 870°C*
	(5 minutes)	870°C or 905°C*

*After incorporation of DAC S/Bs 77-26 and 77-28.

Maximum Fuel Pressure 50 psig

Minimum Fuel Pressure True Vapor Pressure
+ 5 psi

Engine Limits

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54°C (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature 135°C
120-135°C
(precautionary)

Minimum Oil Temperature (takeoff) 5°C

Minimum Oil Pressure 13 psig

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	338K	
V _{MO} (Maximum Operating - 10,400 ft.)	351K	
M _{MO} (Maximum Operating - 27,137 ft.)	351K	(M = 0.863)
M _{MO} (Maximum Operating - 29,677 ft.)	340K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	258K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 12°)	230K	M = 0.46
(Flaps Down 13 to 23°)	220K	M = 0.44
(Flaps Down 24 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - Max. 260K or M = 0.75 (whichever is the lesser)	

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

	<u>CFM56-2-C1</u>	
Taxi and Ramp	338,000 lbs	353,000 lbs
Start or Takeoff	335,000 lbs. (3)	350,000 lbs. (3)
Airborne	<u>334,600 lbs.</u>	<u>349,600 lbs.</u>
Zero Fuel (1)	196,000 lbs.	
Landing (3) (4)	240,000 lbs.	

- (1) All weight in the airplane above this weight must be fuel.
- (2) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (3) See Serial Numbers Eligible.

Minimum Crew

For all flights: Pilot, copilot, and flight engineer. (See NOTE 4).

Maximum Passengers

189 (See NOTE 4)

Maximum Baggage

ALL PASSENGER OPERATION					
		Capacity	Maximum Loading		
Compartment	Station	lbs.	lbs./sq. ft.	lbs./in.	C.G.
Fwd. Belly	273-420	4,807	120	32.7	+348.3 in.
	420-637	9,852	120	45.4	+528.6 in.
	273-637	12,000 (1)			
Aft Belly	983-1200	9,526	120	43.9	+1086.7 in.
	1200-1377	5,522	120	31.2	+1286.8 in.
	983-1377	12,225 (1)			
Fuselage Floor	227-1440	38,816 (2)	75	32.0	

- (1) Combined maximum load for the compartment.
- (2) Capacity based on six abreast seating as 32 inch seat spacing.

Fuel Capacity

See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.

Oil Capacity

Inbd. and Outbd. Engines	38.5 lbs. ea.	(CFMI Tank)	(+680.6) and (+819.2)
Constant Speed Drives	9.4 lbs. ea.		(+661.6) and (+800.2)

See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.

Serial Numbers. Eligible

For Conversion to DC-8-72 per Douglas Aircraft Drawing 7757375.335,000 lbs. Start of Takeoff Weight

45823, 45895, 45896, 45899, 45905, 45906, 45911, 45917-45921, 45925, 45953-45956, 45987, 46023, 46024, 46028, 46057, 46077, 46102, 46105, 46107, 46131, 46134

350,000 lbs. Start of Takeoff Weight

45909, 45910, 45986, 46026, 46027, 46067-46071, 46081, 46082, 46084, 46085, 46090, 46110, 46111, 46132, 46142, 46152, 46153, 46161

S/N 46084 airplane is restricted to operations at the maximum weight limits shown below:

Ramp taxi	365,500 Lbs.
Start of Takeoff	362,500 Lbs.
Airborne	361,500 Lbs.
Landing	245,000 Lbs.
Zero Fuel	(Unchanged, Remains at 196,000 Lbs.)

XXVI - Model DC-8-72F (Transport Aircraft) Approved September 17, 1982

Engines	4 CFM International Turbofan CFM56-2-C1 or CFM56-2-C3 or CFM56-2-C5 or CFM56-2-C6 (For intermix, see Note 24)	
Fuel	See Note 18	
Oil	See Note 19	
Engine Limits	CFM56-2-C1 or CFM56-2-C3 or CFM56-2-C5 or CFM56-2-C6 (For intermix, see Note 24)	
	Static Thrust Sea Level	
	Takeoff (5 min. flat rated to 86°F)	22,000 lbs.
	CFM56-2-C3 and CFM56-2-C6 engines are flat rated to 106°F	
	Maximum Continuous (flat rated to 77°F)	21,300 lbs.
	Maximum permissible engine rotor operating speeds	
	N ₁ (Low Compressor)	5280 RPM (102%)
	N ₂ (High Compressor)	15183 RPM (105%)
	Maximum permissible engine temperature	
	Turbine exhaust gas temperatures at turbine outlet	
	CONDITION	EGT LIMIT
	Starting (ground and in-flight)	(Continuous) 725°C
		(30 seconds) 750°C
		(10 seconds) 800°C
	Maximum Continuous Takeoff	(Continuous) 835°C or 870°C*
		(5 minutes) 870°C or 905°C*
	Maximum Fuel Pressure	50 psig
	Minimum Fuel Pressure	True Vapor Pressure
	+ 5 psi	

*After incorporation of DAC S/Bs 77-26 and 77-28.

Engine Limits

Fuel Temperature Limits

The temperature of the fuel provided to the inlet of the engine fuel pump shall be from a minimum of -54°C (-65°F) or a maximum viscosity of 12 centistokes, whichever is limiting for starting, and from -54°C (-65°F) or fuel freeze point, whichever is limiting for operation, up to a maximum of 54°C (+130°F). See CFM56 Installation Manual.

Maximum Oil Temperature	135°C 120-135°C (precautionary)
Minimum Oil Temperature (takeoff)	5°C
Minimum Oil Pressure	13 psig

Airspeed Limits (IAS)

(See NOTE 10 for calibration)

V _{MO} (Maximum Operating - S.L.)	338K	
V _{MO} (Maximum Operating - 10,000 ft.)	351K	
M _{MO} (Maximum Operating - 27,137 ft.)	351K	(M = 0.863)
M _{MO} (Maximum Operating - 29,677 ft.)	340K*	(M = 0.88)
M _{MO} (Maximum Operating - 42,000 ft.)**	258K*	(M = 0.88)

V_A (Maneuvering) See FAA Approved Airplane Flight Manual

*Straight Line Variation between values shown.

**See data under "Maximum Operating Altitude."

(For buffet envelope, refer to Airplane Flight Manual)

	<u>Up to 15,000 ft.</u>	<u>Above 15,000 ft.</u>
V _{FE} (Flaps Down 0 to 12°)	230K	M = 0.46
(Flaps Down 13 to 23°)	220K	M = 0.44
(Flaps Down 24 to 50°)	206K	M = 0.41
	<u>Up to 32,300 ft.</u>	<u>Above 32,300 ft.</u>
V _{LO} (Landing Gear Operation)	230K	M = 0.65
V _{LE} (Landing Gear Extended)	230K	M = 0.65
V (Landing Light Extension)	V _{MO} /M _{MO}	
V (Fuel Dump Extension and Operation)	167K Min. - Max. 260K or M = 0.75 (whichever is the lesser)	

C.G. Range

See the appropriate FAA Approved Airplane Flight Manual and Weight and Balance Manual.

Maximum Weights

	<u>CFM56-2-C1</u>	
Taxi and Ramp	338,000 lbs	353,000 lbs
Start or Takeoff (1)	335,000 lbs. (4)	350,000 lbs. (4)
Airborne	<u>334,000 lbs.</u>	<u>349,600 lbs.</u>
Zero Fuel (1) (2)	195,000 lbs. or 231,000 lbs	
Landing (3)	250,000 lbs.	

- (1) See Airspeed Limits and C.G. Range for appropriate limitations.
- (2) All weight in the airplane above this weight must be fuel.
- (3) Fuel dump valves required for operation in excess of maximum landing weight. See NOTE 1(f).
- (4) See Serial Numbers Eligible.

Minimum Crew	For all flights: Pilot, copilot, and flight engineer (See NOTE 4).
Maximum Passengers	201 (See NOTE 4)
Maximum Baggage	For all-passenger operation see Section XXV, DC-8-72. For all-cargo operation, the airspeed limits for a maximum zero fuel weight of 195,000 lbs. or less may be used if the zero fuel weight does not exceed 195,000 lbs., the appropriate C.G. limits are observed and the cargo weight on each pallet or in each zone does not exceed 85% of the maximum permitted weight. For additional information concerning loading limitations when operating as a passenger airplane as well as when operating as a cargo or combination passenger/cargo airplane, see NOTE 1(a).
Fuel Capacity	See NOTE 1(c) for system fuel; NOTE 1(d) for unusable fuel; NOTE 1(e) for fuel loading and usage procedures; NOTE 1(f) for undumpable fuel; and NOTE 1(g) for fuel tank capacities.
Oil Capacity	Inbd. and Outbd. Engines 38.5 lbs. ea. (CFMI Tank) (+680.6) and (+819.2) Constant Speed Drives 9.4 lbs. ea. (+661.6) and (+800.2) See NOTE 1(c) for System Oil. Oil weight based upon 7.7 lbs./gal.
Serial Numbers Eligible	<u>For Conversion to DC-8-72F per Douglas Aircraft Drawing 7757375</u> <u>335,000 lbs. Start of Takeoff Weight</u> 45904, 45922, 45984, 46013, 46022, 46043, 46078, 46129, 46130, 46139, 46150 <u>350,000 lbs. Start of Takeoff Weight</u> 45960, 45961, 46148, 46154, 46162
Data Pertinent to All Models (except as indicated)	
Maximum Operating Altitude	42,000 ft. When over 40,000 ft., three (3) cabin turbocompressors (if installed) must be on and operating. When operating over 25,000 feet, two (2) air cycle machines (if installed) must be on and operating. The Mach indicator must be marked per Douglas Service Bulletin No. 34-23, unless Service Bulletin No. 34-29 has been accomplished.
Other Operating Limitations	See Approved Airplane Flight Manual.
Datum	40 in. fwd. of nose (Station O) (All DC-8s except as noted); 200 in. aft of nose (Station O) (DC-8-61, DC-8-61F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-73, DC-8-73F); Aircraft nose (Station O) (DC-8-62, DC-8-62F, DC-8-72, DC-8-72F)
MAC	266 in. (L.E. of MAC +798.8 in.) Standard Wing, 275.9 in. (L.E. of MAC +789.7 in.) DC-8 with wing with 4 percent L.E. extension, DC-8F, DC-8-61, DC-8-61F, DC-8-71, and DC-8-71F. 272.75 in. (L.E. of MAC +795.8 in.) DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F.
Leveling Means	Brackets installed in the nose wheel well at Fuselage Station 141 on DC-8 and DC-8F; at Fuselage Station -99 on DC-8-61, DC-8-61F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-73 and DC-8-73F; at Fuselage Station 101 on DC-8-62, DC-8-62F, DC-8-72 and DC-8-72F. Brackets installed on the main gear wheel well at Fuselage Station +980 on all models.

Control Surfaces 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 airplanes must therefore be rigged in accordance with Douglas Drawing 3706751, "Instruction Flight Control System Rigging"; "K" change, or later on DC-8; "W" change, or later on DC-8F; "AD" change, or later on DC-8-61, DC-8-61F, DC-8-71 and DC-8-71F; "AF" change, or later on DC-8-62, DC-8-62F, DC-8-72, and DC-8-72F; and "AE" change or later on DC-8-63, DC-8-63F, DC-8-73 and DC-8-73F.
Fatigue Life Limits	(See NOTE 3)
Certification Basis	<p>CAR 4b dated December 31, 1953, Amendments 4b-1, 4b-2, 4b-3, 4b-4, 4b-5, Items 5, 7, 11, 14, 16, 17, 18, 20, 21, 22, 23, 25, 27, 28, 31, 32, 34, 35, 38, and 39 or 4b-6, 4b-7, Item 18 of 4b-8, 4b-9 and Items 4 and 24 of 4b-11, 4b-14,* the special conditions contained in Attachment "A" of FAA letter to Douglas dated October 22, 1957, and the special conditions contained in Attachment "A" of FAA letter to Douglas dated July 5, 1966;* the provisions of SR-422B, and the following exemptions:</p> <p style="padding-left: 40px;">No. 220 CAR 4b.362 "Emergency Exit/Passenger Ratios" (Model DC-8, Except DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F)</p> <p style="padding-left: 40px;">No. 221 CAR 4b.362 "Emergency Exit/Passenger Ratios" (Model DC-8F, Except DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F)</p> <p style="padding-left: 40px;">No. 243 CAR 4b.383 "Hand Fire Extinguisher" (Model DC-8F Except DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F)</p> <p style="padding-left: 40px;">No. 248 CAR 4b.362 "Emergency Exit/Passenger Ratios" (Model DC-8F, Except DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F)</p> <p style="padding-left: 40px;">*Amendment 4b-14 and Attachment "A" of FAA letter to Douglas dated July 5, 1966, apply only to DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F.</p>
Certification Basis	<p>The following additional regulations are applicable to DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F only:</p> <p style="padding-left: 40px;">Amendment 4b-8 Items 15, 20, & 23, effective May 17, 1958; Amendment 4b-11 Items 25, 35, & 36 effective October 1, 1959; Amendment 4b-12 Items 33, 65, 66, 68, 69, 71, 97, & 98 effective May 3, 1962; FAR Part 25.571 (d) Amdt. 25-45 effective December 1, 1978, Sonic Fatigue Strength; FAR 25.901 (c) Amdt. 40 effective May 2, 1977 Engine Installation, Single Failure; FAR Part 25.903 (a), (b), (d) and (e) Amdt. 25-40 effective May 2, 1977, Engine Provisions; FAR Part 25.1529 Amdt. 25-21 effective February 5, 1970, Maintenance Manual Provisions; SFAR No. 27 thru Amdt. 27-4 effective January 1, 1978; FAR Part 36 thru Amendment 36-10 effective July 31, 1978.</p> <p>Type Certificate No. 4A25 issued August 31, 1959. Date of Application for Type Certificate October 18, 1955.</p> <p><u>Compliance with the following optional requirements has been established:</u></p> <p style="padding-left: 40px;"><u>Ditching Provisions 4b.361</u> <u>Ice Protection Provisions 4b.640</u></p>
Production Basis	Production Certificate No. 27

Required Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Required equipment that was installed as well as optional equipment installations approved by the FAA are contained in the following.

DC-8	DACO Report SM-23454, "Master Equipment List"
DC-8F	DACO Report LB-31064, "Master Equipment List"
*DC-8F Cargo	DACO Report MDC-V0069, Chapter 2, "Weight and Balance Manual"
DC-8-61	DACO Report LB-33016, Chapter 2, "Weight and Balance Manual"
DC-8-61F	DACO Report LB-33018, Chapter 2, "Weight and Balance Manual"
DC-8-62	DACO Report LB-33020, Chapter 2, "Weight and Balance Manual"
DC-8-62F	DACO Report LB-33022, Chapter 2, "Weight and Balance Manual"
DC-8-63	DACO Report LB-33024, Chapter 2, "Weight and Balance Manual"
DC-8-63F	DACO Report LB-33026, Chapter 2, "Weight and Balance Manual" or MDC-V0247
DC-8-71	DACO Report LB-33016, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-V0292
DC-8-71F	DACO Report LB-33018, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-V0292 or MDC-K0539**
DC-8-72	DACO Report LB-33020, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-0293
DC-8-72F	DACO Report LB-33022, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-V0293
DC-8-73	DACO Report LB-33024, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-V0294
DC-8-73F	DACO Report LB-33026, Chapter 2, "Weight and Balance Manual" and Supplemental MDC-V0294

* For airplanes converted to DC-8 Cargo per Douglas Dwgs. 3633831 and 5633600, or 7633870.

**Report MDC-K0539 is applicable to the manufactured -61 passenger model airplane re-engined to a -71 model and modified to a freighter, -71F.

Service Information

Douglas Model DC-8 Structural Repair Manual is FAA approved. All Douglas Service Bulletins and other service information, when FAA approved, will carry statement to that effect.

NOTE 1

- (a) Current weight and balance report including list of equipment included in certificated empty weight, and loading instruction 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. The following Douglas Aircraft Company Reports contain loading information for each airplane and interior arrangement configuration as delivered. This report contains or refers to, information relative to location of all passenger and crew member seats; locations and capacity of all cargo and baggage compartments; buffets, storage spaces and coat rooms; location and capacity of lounges and lavatories; and the required placards in the passenger compartment.

NOTE 1 (cont'd)

Model DC-8	No. SM-22871 "Loading Chart and Actual Weight and Balance"
Model DC-8F	No. LB-31063 "Loading Chart and Actual Weight and Balance"
*Model DC-8F Cargo	No. MDC V0069, "DC-8 F Cargo Weight and Balance Manual"
Model DC-8-61	No. LB-33016 "DC-8-61 Weight and Balance Manual"
Model DC-8-61F	No. LB-33018 "DC-8-61F Weight and Balance Manual"
Model DC-8-62	No. LB-33020 "DC-8-62 Weight and Balance Manual"
Model DC-8-62F	No. LB-33022 "DC-8-62F Weight and Balance Manual"
Model DC-8-63	No. LB-33024 "DC-8-63 Weight and Balance Manual"
Model DC-8-63F	No. LB-33026 "DC-8-63F Weight and Balance Manual" or MDC-V0247
DC-8-71	DACO Report LB-33016, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0292
DC-8-71F	DACO Report LB-33018, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0292 or MDC-K0539**
DC-8-72	DACO Report LB-33020, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0293
DC-8-72F	DACO Report LB-33022, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0293
DC-8-73	DACO Report LB-33024, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0294
DC-8-73F	DACO Report LB-33026, Chapter 2, "Weight and Balance Manual" and Supplement MDC-V0294

*For airplanes converted to DC-8F Cargo Per Douglas Dwgs. 3633831 and 5633600 or 7633870.

**Report MDC-K0539 is applicable to the manufactured -61 passenger model airplane re-engined to a -71 model and modified to a freighter, -71F.

- (b) The airplane must be loaded so that the C.G. is within the specified limits at all times, considering fuel and water loading and usage, gear retraction, ejector extension, and movement of crew and passengers from their assigned positions. In the case of the DC-8F, DC-8-61F, -62F, -63F, -71F, -72F and -73F, the lateral loading limits contained in the pertinent weight and balance documents listed above should not be exceeded.
- (c) The weight of system fuel and oil, as defined below, and hydraulic fluid, all of which must be included in the airplane empty weight, is listed in Douglas Master Equipment List, Report No. SM-23454 (DC-8), LB-31064 (DC-8F), Chapter 2 of Report MDC-V0069 (DC-8F Cargo), Chapter 2 of Report LB-33016 (DC-8-61), Chapter 2 of Report LB-33018 (DC-8-61F), Chapter 2 of Report LB-33020 (DC-8-62), Chapter 2 of Report LB-33022 (DC-8-62F), Chapter 2 of Report LB-33024 (DC-8-63), Chapter 2 of Report LB-33026 or MDC-V0247 (DC-8-63F), and in the Weight Check List of Part 2 of Report Supplements MDC-V0292 or MDC-K0539 (DC-8-71/-71F), MDC-V0293 (DC-8-72/-72F), and MDC-V0294 (DC-8-73/73F).

System Fuel: The weight of all fuel required to fill all lines and tanks up to the zero fuel point of the fuel gages in the most critical flight attitude. This includes the usable tank fuel as defined by CAR 4b.416. [The DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F, have 121 lbs. (Based on 7.1 lbs./gal. fuel) of usable fuel in the cross feed manifold that is not part of the system fuel and must be included in the total usable fuel to obtain correct weight and C.G. for takeoff. (See FAA Approved AFM for approved procedures).]

NOTE 1 (Cont'd)

NOTE: That part of the preceeding paragraph indicated in [] is not applicable if the center fuel tank sump heater and scavenge system is deactivated per Boeing Service Bulletin DC8-28A089.

System Oil: The weight of oil remaining in the engine, constant speed drive, lines and tanks after subtracting the oil in the tanks which is above the standpipe (zero gage) levels. The engine oil tank capacities shown elsewhere in this data sheet include only the usable oil for which the tanks must be placarded.

- (d) The "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 and may be obtained by taking the differences between the "Total" and "Usable" tank capacities shown under "Fuel Capacity." This "Unusable" fuel is included in System Fuel as indicated in 1(c) above and need not be accounted for separately.
- (e) Fuel capacities shown in (g) below as well as fuel loading and usage procedures are dictated by structural design and to maintain airplane C.G. within approved limits. Fuel must be loaded symmetrically about airplane centerline and in accordance with the following procedures and used as described below unless alternate procedures are approved and incorporated in the FAA Approved Airplane Flight Manual. The fuel system contains automatic transfer and quantity control features which will permit main tank-to-engine utilization of all fuel without manual control. The performance of the automatic fuel system must be monitored during flight, however, and if the automatic feature malfunctions, the tank quantities must be monitored manually. During engine-out conditions, symmetrical fuel distribution must be maintained by cross feed or transfer of fuel to the tanks being used.

8, 9, and 10 Tank Fuel Systems

(except 163,960 lb. and 172,234 lb., 8 Tank Fuel Systems)

Fuel Loading

- (1) Fill the main tanks equally, until each main tank contains 7,000 lb. of fuel.
- (2) Fill the inboard main tanks and the outboard alternate tanks equally until the outboard alternate tanks are full.
- (3) Fill the inboard main tanks and the outboard main tanks equally until the inboard main tanks are full.
- (4) Fill the inboard alternate tanks and the outboard main tanks in equal increment until full.

NOTE: A loading of 3500 lb. in each inboard alternate will assure priming of the inboard alternate boost pumps. The quantities in the inboard main tanks may be reduced during fuel loading to provide the required total capacity. (Normal fuel loading should be restored after engine start by use of the normal transfer system).

9 and 10 Tank Fuel System

- (5) Fill the center wing auxiliary tank.

10 Tank Fuel System

- (6) Fill the forward auxiliary tank.

NOTE 1 (Cont'd)

NOTE: The fuel loading specified should only be used to determine the quantity of fuel to be contained in each tank upon the completion of fueling. All tanks may be filled simultaneously and need only be monitored during completion of fueling to assure that final fuel quantities conform to the required fuel loading.

Fuel Management

Engines should normally be supplied from their corresponding main fuel tanks.

Except during takeoff, first the auxiliary tanks (if installed) and then the alternate tanks should be used to maintain the main tanks at the required fuel levels. The main tanks should be restored to the required fuel levels as soon as possible after takeoff.

9 and 10 Tank Fuel Systems

- (1) Any time fuel is contained in the center wing auxiliary tank, the fuel quantity indicator selector for the inboard main tanks must be set 1,000 lbs. below the fuel quantity indicator dial reading after the No. 2 and No. 3 main tanks have been filled. This is done by first setting the indicator selection to 3,000 lbs. below the indicator dial reading and then advancing the selector clockwise to 1,000 lbs. below the indicator dial reading. (Failure to follow this procedure may result in some fuel spillage through the vents.)

10 Tank Fuel System

- (2) (a) Use fuel from the main tanks while transferring fuel from the center wing auxiliary tank and the forward auxiliary tank into the main tanks until the auxiliary tanks are empty. (Forward auxiliary tank fuel may be used any time prior to the completion of fuel usage from the center wing auxiliary tank.)

9 Tank Fuel System

- (b) Use fuel from the main tanks while transferring fuel from the center wing auxiliary tank into the main tanks until the auxiliary tank is empty.

NOTE: When the center wing auxiliary tank fuel level reaches 2500 - 3100 lbs., fuel transfer into the outboard main tanks may be terminated (this will assist in balancing the remaining fuel between the four engine fuel tank systems), and the fuel quantity indicator selector for the inboard main tanks may be moved past the full calibration on the indicator.

8, 9, and 10 Tank Fuel Systems

- (3) Use fuel equally from the outboard main tanks and the inboard main tanks while transferring fuel from the inboard alternate tanks into the inboard main tanks until the inboard alternate tanks are empty.

NOTE: When using fuel from the center wing auxiliary tank or the inboard alternate tanks, regardless of density, do not exceed a fuel loading of 18,380 lbs. in the inboard main tanks. Due to variable attitude and fuel density, it may be necessary to monitor the system or set the fuel quantity indicator selector to assure tank quantities do not exceed 18,380 lbs.

- (4) Use fuel equally from the inboard main tanks and the outboard main tanks until each outboard main tank contains 7,000 lbs. of fuel.

NOTE: With more than 7,500 lbs. of fuel in each of the outboard main tanks, the outboard alternate tanks must be kept full.

NOTE 1 (Cont'd)

- (5) Use fuel equally from the inboard main tanks and the outboard main tanks while transferring fuel from the outboard alternate tanks into the outboard main tanks until the outboard alternate tanks are empty.

NOTE: When using fuel from the outboard alternate tanks, regardless of density, do not exceed a fuel loading of 7,500 lbs. in the outboard main tanks. Due to variable attitude and fuel density, it may be necessary to monitor the system or set the fuel quantity indicator selector to assure tank quantities do not exceed 7,500 lbs. The quantity may be as low as 5,200 lbs.

- (6) Use fuel equally from the inboard main tanks and the outboard main tanks.

NOTE: Unbalance between fuel systems (Models DC-8F-54, DC-8-55 and DC-8F-55) is permissible below 40,000 lbs. fuel load provided the unbalance across the airplane centerline does not exceed 2,000 lbs.

163,960 lb. and 172,234 lb. 8 Tank Fuel Systems

Fuel Loading

NOTE: The fuel loading specified should only be used to determine the quantity of fuel to be contained in each tank upon the completion of fueling. All tanks may be filled simultaneously and need only be monitored during completion of fueling to assure that final fuel quantities conform to the required fuel loading.

- (1) Fill the main tanks equally, until each tank contains 7,000 lbs. of fuel (3,000 for 172,234 lb. 8 Tank Fuel System).
- (2) Fill the inboard main tanks and the outboard alternate tanks equally until the outboard alternate tanks are full.
- (3) Fill the inboard main tanks and the outboard main tanks equally until the inboard main tanks are full.
- (4) Fill the outboard main tanks until full.
- (5) Fill the center wing auxiliary tank until full.
- (6) Fill the forward auxiliary tank until full.

Fuel Management

Engines should normally be supplied from their corresponding main fuel tanks. During takeoff, do not transfer fuel. At all other times, transfer fuel first from the auxiliary tanks, then from the alternate tanks, to maintain the main tanks at the required fuel levels to start of takeoff and as soon as possible after takeoff.

- (1) Use fuel from the main tanks while transferring fuel from the center wing auxiliary tank and the forward auxiliary tank into the main tanks until the auxiliary tanks are empty. (Forward auxiliary tank fuel may be used any time prior to the completion of fuel usage from the center wing auxiliary tank.)

NOTE: (163,960 lb. 8 Tank Fuel System): When using fuel from the center wing auxiliary tank, regardless of density, do not exceed a fuel loading of 31,616 lbs. in the inboard tanks. Due to a variable attitude and fuel density, it may be necessary to monitor the system or set the fuel quantity indicator selector to assure tank quantities do not exceed 31,616 lbs.

NOTE 1 (Cont'd)

NOTE: (172,234 lb. 8 Tank Fuel System): When the center wing auxiliary tank fuel level reaches 1500 - 2100 lb., fuel transfer into the outboard main tanks may be terminated, thus balancing the remaining fuel between the four engine fuel tank systems.

- (2) Use fuel equally from the inboard main tanks and the outboard main tanks until each outboard main tank contains 7,000 lbs. of fuel (3000 for 172,234 lb. 8 Tank Fuel System).

NOTE: (163,960 lb. 8 Tank Fuel System): With more than 7500 lbs. of fuel in each of the outboard main tanks, the outboard alternate tanks must be kept full.

NOTE: (172,234 lb. 8 Tank Fuel System). Any time there is more than 5000 lbs. of fuel in each of the outboard main tanks, the outboard alternate tanks must be kept full. Any time the total fuel load is more than 32,700 lbs. the outboard alternate tanks must be properly controlled to prevent the alternate low level lights from flashing.

- (3) Use fuel equally from the inboard main tanks and the outboard main tanks while transferring fuel from the outboard alternate tanks into the outboard main tanks until the outboard alternate tanks are empty.

NOTE: (163,960 lb. 8 Tank Fuel System): When using fuel from the outboard alternate tanks, regardless of density, do not exceed a fuel loading of 7,500 lbs. in the outboard main tanks. Due to variable attitude and fuel density, it may be necessary to monitor the system or set the fuel quantity indicator selector to assure tank quantities do not exceed 7,500 lbs.

NOTE: (172,234 lb. 8 Tank Fuel System): During this usage, the fuel quantity in No. 1 and No. 4 main tanks will normally be maintained at 2,600 to 3,600 lbs. by the intermediate level control. Due to variable attitude and fuel density, this will vary; therefore, the system must be monitored to assure that the quantity does not exceed 5,000 lbs., nor is it desirable that it be permitted to fall below 2,500 lbs.

- (4) Use fuel equally from the inboard main tanks and the outboard main tanks.

NOTE: Unbalance between fuel systems is permissible below 40,000 lbs. fuel load provided:

- (1) Unbalance across the airplane centerline does not exceed 2,000 lbs.
- (2) Limitations noted for minimum fuel in outboard alternate tanks are observed.
- (3) Inboard system does not exceed outboard system by more than 2,000 lbs.

- (f) Fuel Dump. Fuel dump valves must be installed for operation of the airplane in excess of the maximum landing weight. Refer to FAA Approved Airplane Flight Manual for limitations to be observed during fuel dumping. The total undumpable fuel must be included in the landing weight and the amount of usable fuel remaining in the fuel tanks after dumping is as follows:

NOTE 1 (Cont'd)

		DC-8 (1) (2)	DC-8F-55 (2) S/N 45819, 45820	DC-8-62, DC-8-62F, (3) DC-8-63, DC-8-63F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F
Outboard Tanks (#1 and #4 Main)	2710 lbs. ea.	2710 lbs. ea.		2830 lbs. ea.
Inboard Tanks (#2 and #3 Main)	4115 lbs. ea.	3881 lbs. ea.		3980 lbs. ea.
Outbd. Alt. Tank (#1 and #4 Alt.)	70 lbs. ea.	70 lbs. ea.		73 lbs. ea.
Inbd. Alt. Tank (#2 and #3 Alt.)	535 lbs. ea.	---		---
C.W. Auxiliary	8620 lbs. ea.	8620 lbs. ea.		9158 lbs. ea.
Fwd. Auxiliary (Leading Edge)	0 lbs.	0 lbs.		0 lbs.

- (1) All DC-8 series except as indicated.
- (2) Fuel weight based on 6.8 lbs./gal. fuel.
- (3) Fuel Weight based on 7.1 lbs./gal. fuel.

Fuel Tank Capacities (pounds)

Weights Shown must not be exceeded

	#1 & #4 Main (lbs. ea.)	#2 & #3 Main (lbs. ea.)	#1 & #4 Alt. (lbs. ea.)	#2 & #3 Alt. (lbs. ea.)	Ctr. Wing Aux. (lbs.)	Fwd Aux. L.E. (lbs.)
<u>118,950 lb. 8 Tank Fuel System (6)</u>						
DC-8-11 (Std. L.E., S/N 45280-45289, 45408-45413, 45588-45593) DC-8-12 (Std. L.E., S/N 45279)						
Total Usable Arm	20072 20035 + 914.0	17672 17605 + 785.2	9300 9285 + 1031.0	12578 12550 + 842.0	---	---
<u>119,360 lb. 8 Tank Fuel System (6)</u>						
DC-8-12 (Std. L.E., S/N 45304-45306) DC-8-21 (Std. L.E., S/N 45278, 45291-45300, 45391-45393, 45422-45427, 45429-45431, 45433-45437, 45594-45597) DC-8-21 (Std. L.E. Converted DC-8-12 per NOTE 11, S/N 45279-45283, 45289, 45304-45306, 45588-45593)						
Total Usable Arm	20277 20240 + 915.8	17672 17605 + 785.2	9300 9285 + 1031.0	12578 12550 + 842.0	---	---
<u>121,740 lb. 8 Tank Fuel System (6)</u>						
DC-8-51 (Std. L.E., S/N 45252, 45645, 45646, 45649, 45650, 45672, 45673, 45687- 45690, 45807, 45808, 45877) DC-8-51 (Ext. L.E., S/N 45628, 45633-45635, 45641-45644, 45648, 45652, 45760, 45806) DC-8-51 (Std. L.E., converted DC-8-21 per NOTE 11, S/N 45284-45288, 45408-45413, 45815) DC-8F-54 (Ext. L.E., S/N 45675-45677, 45801, 45803) DC-8-61 (Ext. L.E., S/N 45908, 45940, 45981) DC-8-61F (Ext. L.E., S/N 45940) DC-8-71F (Ext. L.E., S/N 45810-45813, 45849, 45941, 45945-45947, 45970-45971, 45973-45978, 45993-45998)						
Total Usable Arm	20277 20240 + 915.8	17672 17605 + 785.2	10491 10475 + 1045.8	12578 12550 + 842.0	---	---

NOTE 1 (Cont'd)

<u>149,669 lb. 9 Tank Fuel System (6)</u>						
DC-8-32 (Std. L.E., S/N 45256-45258, 45376, 45377, 45384, 45385, 45416) (5)						
Total Usable Arm	20277	17672	10360	12578	28243	---
	20240	17605	10345	12550	28189 (3)	---
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	---
<u>149,790 lb. 9 Tank Fuel System (6)</u>						
DC-8-32 (Std. L.E., S/N 45259-45263, 45378, 45379, 45386, 45387, 45418, 45419, 45567, 45569, 45602, 45603) (5)						
DC-8-42 (Std. L.E., S/N 45598-45600) (5)						
Total Usable Arm	20277	17672	10360	12578	28376	---
	20240	17605	10345	12550	28310	(1) (2)
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	---
<u>149,830 lb. 9 Tank Fuel System (6)</u>						
DC-8-31 (Std. L.E., S/N 45274)						
DC-8-41 (Std. L.E., S/N 45444, 45445)						
Total Usable Arm	20277	17672	10445	12578	28243	---
	20240	17605	10430 (4)	12550	28310	(1)
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	---

Fuel Tank Capacities (pounds)

Weights Shown must not be exceeded

	#1 & #4 Main (lbs. ea.)	#2 & #3 Main (lbs. ea.)	#1 & #4 Alt. (lbs. ea.)	#2 & #3 Alt. (lbs. ea.)	Ctr. Wing Aux. (lbs.)	Fwd Aux. L.E. (lbs.)
<u>149,960 lb. 9 Tank Fuel System (6)</u>						
DC-8-31 (Std. L.E., S/N 45275, 45276)						
Total Usable Arm	20277	17672	10445	12578	28375	---
	20240	17605	10475 (4)	12550	28310	(1)
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	---
<u>150,050 lb. 9 Tank Fuel System (6)</u>						
DC-8-31 (Std. L.E., S/N 45277)						
DC-8-32 (Std. L.E., S/N 45264, 45265, 45380, 45388, 45389, 45526) (5)						
DC-8-41 (Std. L.E., S/N 45442, 45443)						
DC-8-51 (Std. L.E., S/N 45685, 45855, 45878, 45935)						
DC-8-52 (Std. L.E., S/N 45301-45303, 45617-45619) (5)						
DC-8-52 (Ext. L.E., S/N 45693, 45694, 45750-45752, 45756-45759, 45850-45853, 45985)						
DC-8-53 (Std. L.E., S/N 45383, 45613, 45614, 45616) (5)						
DC-8F-54 (Ext. L.E., S/N 45880, 45881, 45884-45886, 45932, 46009-46012, 45800, 45802) (8)						
DC-8-61 (Ext. L.E., S/N 46031, 46032, 46157, 46159)						
DC-8-71 (Ext. L.E., S/N 46099)						
Total Usable Arm	20277	17672	10491	12578	28375	---
	20240	17605	10475	12550	28310	(1) (2)
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	---
<u>156,705 lbs. 10 Tank Fuel System (6)</u>						
DC-8-32 (Std. L.E., S/N 45266-45269, 45381, 45382, 45390, 45421, 45605, 45606) (5)						
DC-8-33 (Std. L.E., S/N 45253-45255, 45270-45272, 45570, 45626, 45627) (5)						
DC-8-42 (Std. L.E., S/N 45565, 45566, 45601, 45609) (5)						
DC-8-43 (Std. L.E., S/N 45611, 45612, 45620-45622, 45624, 45625, 456438) (5)						
DC-8F-54 (Std. L.E., S/N 45610)						
Total Usable Arm	20277	17672	10491	12578	28375	6655
	20240	17605	10475	12550	28310	6655
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	+ 700.0

NOTE 1 (Cont'd)

<u>159,065 lb. 10 Tank Fuel System (6)</u>						
DC-8-43 (Ext. L.E., S/N 45623, 45630, 45636, 45660, 45661, 45665, 45666, 45755)						
DC-8-52 (Ext. L.E., S/N 45657-45659, 45814)						
DC-8-53 (Ext. L.E., S/N 45417, 45420, 45568, 45604, 45607, 45608, 45629, 45632, 45647, 45651, 45656, 45662, 45664, 45670, 45671, 45680, 45681, 45809, 45933, 45934, 45937, 45962)						
DC-8F-54 (Ext. L.E., S/N 45637, 45640, 45655, 45663, 45667-45669, 45674-45677, 45679, 45682, 45684, 45686, 45768, 45860, 45861, 45879)						
DC-8F-55 (Ext. L.E., S/N 45678, 45683, 45691, 45692, 45754, 45762, 45763, 45764, 45767, 45803-45805, 45816-45818, 45821, 45824, 45856-45859, 458762, 45882, 45883, 45965)						
DC-8-55 (Ext. L.E., S/N 45743, 45765, 45766, 45854, 45916)						
DC-8-61/ (Ext. L.E., S/N 45848, 45887, 45888, 45890-45894, 45912, 45913, 45942, 45943, 45963, 45964, 45980, 45992, 71 46015-45017 46037-45038)						
DC-8-71F (Ext. L.E., S/N 45897-45898, 45900, 45902, 45907, 45914-45915, 45938-45939, 45944, 45948-45950, 45952, 45979, 45983, 46014, 46018, 46029-46030, 46039-46040, 46048, 46055-46056, 46064-46066, 46072)						
Total Usable Arm	20277	17672	10491	12578	28375	9017
	20240	17605	10475	12550	28310	9015
	+ 915.8	+ 785.2	+ 1045.8	+ 842.0	+ 767.3	+ 697.5

Fuel Tank Capacities (pounds)

Weights Shown must not be exceeded

	#1 & #4 Main (lbs. ea.)	#2 & #3 Main (lbs. ea.)	#1 & #4 Alt. (lbs. ea.)	#2 & #3 Alt. (lbs. ea.)	Ctr. Wing Aux. (lbs.)	Fwd Aux. L.E. (lbs.)
<u>163,960 lb. 8 Tank Fuel System (6)</u>						
DC-8F-55 (Ext. L.E., S/N 45819, 45820)						
Total Usable Arm	20277	30352	10491	---	28375	13680
	20240	30285	10475	---	28310	13650
	+ 915.8	+ 808.0	+ 1045.8	---	+ 767.3	+ 697.5
<u>172,234 lb. 8 Tank Fuel System (7)</u>						
DC-8-62/ (Ext. L.E., S/N 45823, 45895, 45896, 45899, 45905, 45906, 45909-45911, 45917-45921, 45925, 72 45953-45956, 45986, 45987, 46023, 46024, 46026-46028, 46057, 46067-46071, 46077, 46081, 46082, 46084, 46085, 46098, 46102, 46105, 46107, 46110, 46111, 46131, 46132, 46134, 46142, 46152, 46153, 46161)						
DC-8-62F/ (Ext. L.E., S/N 45904, 45922, 45984, 45960, 45961, 46013, 46022, 46043, 46078, 46129, 46130, 46139, 72F 46148, 46150, 46154, 46162)						
DC-8-63/ (Ext. L.E., S/N 45901, 45903, 45923, 45924, 45926-45931, 45999, 46000, 46019, 46033-46036, 46041, 73 46042, 46054, 46058, 46063, 46074-46076, 46079, 46080, 46092, 46093, 46095-46097, 46100, 46113, 46115, 46116, 46121-46126, 46136, 46141, 46155, 46163)						
DC-8-63F/ (Ext. L.E., S/N 45936, 45966-45969, 45988-45991, 46001-46004, 46006- 46008, 46020, 46021, 73F 46044-46047, 46049-46053, 46059-46062, 46073, 46086-46091, 46094, 46101, 46103, 46104, 46106, 46108, 46109, 46112, 46117, 46133, 46135, 46137, 46140, 46143-46147, 46149, 46151)						
Total Usable Arm	20903	31693	11675	---	29745	14284
	20864	31623	11650	---	29708 (9)	14252
	+ 915.5	+ 807.9	+ 1052.4	---	+ 768.3	+ 703.1

NOTE 1 (Cont'd)

Footnotes:

- (1) Fwd. Aux. (L.E.) fuel tank may be installed per DC-8 Service Bulletins 27-71, 28-37, and 28-42 on the following aircraft:
DC-8-31 S/N 45274-45277
DC-8-32 S/N 45256-45261, 45376-45378, 45384-45389, 45416, 45526, 45567, 45568, 45602
DC-8-41 S/N 45442-45445
- (2) Fwd. Aux. (L.E.) fuel tank may be delivered inoperative and may be activated when modified per DC-8 Service Bulletin 28-37 on the following aircraft:
DC-8-32 S/N 45262-45265, 45379, 45380, 45418, 45419, 45569, 45603
DC-8-42 S/N 45599, 45600
- (3) Usable capacity of Ctr. Wing Aux. tank may be increased to 28,319 lbs. when DC-8 Service Bulletin 28-20 is accomplished.
- (4) Usable capacity of #1 and #4 Alt. tank may be increased to 10,475 lbs. when DC-8 Service Bulletin 28-30 is accomplished.
- (5) The 4 percent extended leading edge may be installed on the following aircraft:
DC-8-32 (S/N 45384-45390, 45416, 45526, 45567-45569)
DC-8-33 (S/N 45570, 45627)
DC-8-42 (S/N 45598-45601)
DC-8-43 (S/N 45620-45622, 45624, 45625)
DC-8-52 (S/N 45301-45303)
DC-8-53 (S/N 45383, 45613, 45614, 45616)
Installation must be made in accordance with DC-8 Service Bulletins 57-20, Rev. No. 3, dated July 9, 1962, or 57-29, Rev. No. 1, dated June 27, 1962, as appropriate.
- (6) Fuel weight based on 6.8 lbs./gal. fuel.
- (7) Fuel weight based on 7.1 lbs./gal. fuel.
- (8) After modification per Douglas Drawing SP08280001.
- (9) Usable center wing auxiliary tank quantity is 29559 lbs. when center fuel tank sump heater and scavenge system is deactivated per Boeing Service Bulletin DC8-28A089.

NOTE 2

Reserved.

NOTE 3

Replacement of Flap System Components.

- (a) The following flap system parts must be replaced after each 23,600 landings.**

Flap Link Support Assembly

	DC-8-53* and Prior	DC-8F and DC-8-55	DC-8-61, DC-8-61F, DC-8-62 DC-8-62F, DC-8-63, DC-8-63F DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, DC-8-73F
Sta. X _w = 97,906	5614372-1 and -501; 7760086-1, -2, -513, -514	5614372-1 and -501; 7760086-1, -2, -513, -514	5614372-1 and -501; 7760086-1 -2, -513, -514
Sta. X _F = 219,498	5614374-501, -502, -503 and -504; 7760086-501, -502, -515, -516	5614374-501, -502, -503 and -504; 7760086-501, -502 -515, -516	5614374-501, -502, -503 and -504; 7760086-501, -502, -515, -516
Sta. X _F = 339,723	5614376-1, -2, -501, -502, -505, -506; 7760086-503, -504, -509, -510, -517, -518	5614376-503, -504, -507, and -508; 7760086-505, -506, -519, -520	5614376-503, -504, -507 and -508; 7760086-505, -506, -519, 520

NOTE 3 (Cont'd)

* Includes airplanes converted to DC-8F-54 per Douglas Dwgs. 3633831 and 5633600 or 7633870.

** Flap link support assemblies may be operated for 28,600 landings by complying with the provisions of DC-8 Service Bulletin 27-260.

- (b) The following DC-8 flap system parts, except DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F must be replaced at the landings, or hours time in service, whichever occurs first, as specified in Airworthiness Directive 64-15-03.

Flaps Cylinder Rod End Bearings and Bolts

Sta. X _W = 97.906	4648686-501, -503, 2645104
Sta. X _W = 219.498	4648686-501, -503, 2645104
Sta. X _W = 339.723	2645104

- (c) The following DC-8 flap system parts, except DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F, must be reworked and/or replaced at the landings, or hours time in service, whichever occurs first, as specified in Airworthiness Directive 64-15-03.

Flap Actuating Links

Sta. X _W = 97.906	3648269
Sta. X _W = 219.498	3648268
Sta. X _W = 339.723	3648270

NOTE 4

All replacement seats (crew, passenger and lounge), although they may comply with TSO-C39, must also be demonstrated to comply with CAR 4b.358(c). Other installations, such as berths, buffets, compartments, or items of mass which could create a hazard to the safety of passengers and crew must also be demonstrated to meet the same requirements.

NOTE 5

New or retread nose wheel tires must not exceed 91 lbs. in weight or exceed 17 in.-oz. of static unbalance. New and retread main wheel tires must not exceed 196 lbs. in weight or exceed 23 in.-oz. of static unbalance except new and retread main wheel tires of DC-8-62, -62F, -63, -63F, -72, -72F, 73, and -73F must not exceed 215 lbs. weight.

NOTE 6

When intermixing engines, except for CFM-56 powered airplanes, the following must be accomplished:

- All engines must be trimmed to the rating of the lowest powered engine used.
- The maximum thrust must be limited to the maximum thrust associated with the lowest powered engines used.
- The maximum zero fuel weight must be limited to the maximum zero fuel weight associated with the lowest powered engine used and the corresponding C.G. limits.

For CFM56 powered airplanes See NOTE 21.

NOTE: Additional limitations, procedures, or performance information concerning intermixing of engines may be found in an appendix to the pertinent FAA Approved Airplane Flight Manual.

NOTE 7

- (a) To assure that required overwing emergency exits will meet the pertinent CAR, the Interior Arrangement Drawing prepared by the manufacturer for each operator and approved by the Aircraft Engineering Division, refers to the appropriate drawing for locating seats. This drawing defines the minimum dimensions for locating the rear locking pins in relation to the center line of the overwing emergency exits for each of the approved seat models called out on the interior arrangement. Douglas DC-8 Service Bulletin No. 52-21 outlines modifications required to Douglas manufactured seats located adjacent to the required exits. Douglas Drawing 5777041, "FAA Approved DC-8F Type I Emergency Exit Seat Clearance," prescribes minimum dimensions for locating seats at the Type I exits at Station 1164 on the Model DC-8F-54 and DC-8F-55.
- (b) When the aft overwing exits are not required (see table below), they may be completely or partially blocked. If completely blocked (do not comply with (a) above, all identification as an exit must be removed from both the inside and the outside. They may be partially blocked by moving the seats adjacent to the forward side of the exit to the rear so that the seat protrudes into the exit opening with the seat back in the normal upright position. The 17-1/16 inch dimension from the exit center line to the rear seat leg locking pin, which is shown on Douglas Dwg. 5769196, may be reduced by a maximum of four inches when Double Deluxe seats are installed or by a maximum of five inches when tourist seats are installed. When partially blocked as indicated above, the exit markings on the outside of the fuselage must be removed.

Maximum Passenger Capacity

(c)

Emergency Exits Required on Each Side of Fuselage			Inflatable Slides Installed at Type I Exits (3)	
Type I	Type III	Type IV	No	Yes
Model DC-8 (except DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F)				
2	1	See Note 7(b)	139	149
2	2 (1)	---	159	169
2	2 (1)	---	179	189
Model DC-8F (except DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71F, DC-8-72F, DC-8-73F)				
1	---	---	28	33 (5)
2	---	---	88	93 (4) (5)
1	2 (2)	---	112	117
2	1	---	139	144 (4)
3	1	---	178	183 (4)
2	2 (2)	---	179	189
3	2 (2)	---	---	214 (6)

Footnotes:

- (1) Aft overwing exit must comply with all requirements of a Type III exit except for step-down distance on outside per Exemption No. 220 (See Certification Basis).
- (2) External step must be installed at aft overwing exit on either side of the fuselage in accordance with Douglas DC-8 Service Bulletin 52-11.
- (3) Installation per FAA Approved Type Design Data.
- (4) Inflatable slides at rear Type I doors only.
- (5) Per Exemption No. 221 (See Certification Basis).
- (6) Per Exemption No. 248 (See Certification Basis).

- NOTE 8 Model DC-8-11 becomes Model DC-8-12 when wing leading edge slots, extended wing tips and associated changes are incorporated. The modification must be accomplished in accordance with Douglas Service Bulletin 27-32 revised July 1, 1960, "Flight Controls - Wing Leading Edge Slots and Slot Controls," and Service Bulletin 27-70, "Flight Controls - DC-8 Service Bulletin Cooperating Reference Chart," Reissue No. 2, dated December 13, 1960. The airplane nameplate must be modified to add the new Model designation (DC-8-12) and the date of conversion. FAA Approved Airplane Flight Manual for the Model DC-8-11 must be replaced by the approved for the Model DC-8-12.
- NOTE 9 (a) Ferry permits may be issued to DC-8 series airplanes listed below upon which one engine is inoperative under the following conditions.
- (1) Operation of the particular model airplane shall be in accordance with the pertinent limitations contained in the applicable section of the FAA approved Airplane Flight Manual and existing instructions.
 - (2) Except when limited by runway length specified by the FAA approved Airplane Flight Manual, the maximum taxi, start of takeoff and airborne weight is:
 - (i) 215,000 lbs. Model DC-8-11 and Model DC-8-12.
 - (ii) 240,000 lbs. Model DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-43, DC-8-51, DC-8-52, DC-8-53, DC-8F-54, DC-8F-55, DC-8-55, DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F
- NOTE 10 (a) Maximum allowable airspeed indicators for the Model DC-8 must be calibrated to Douglas Drawing 7714343. Two segment indicators must comply with Table II or Table III depending on the maximum allowable airspeeds for a particular airplane. Three segment indicators must comply with Table IV or Table V depending upon the pertinent airplane airspeed limitations. For the Model DC-8F-54 the maximum allowable airspeed indicators must be calibrated to Douglas Drawing 7775744, Section 4. The indicators must comply with Table II and Table III.
- (b) The Model DC-8 overspeed warning sensors must be calibrated to Douglas Drawing 7643840. Table II specified the allowable for the two-element sensor (P/N 6261) as well as the three-element sensor (P/N 7000). For the Model DC-8F-54, the overspeed warning sensors must be calibrated to Douglas Drawing 7775646. Table I and Table II specify allowable tolerances for the passenger and cargo setting.
- NOTE 11 When aircraft are converted in accordance with the information contained below, the nameplate must be modified to add the new model designation and the date of conversion. The aircraft must be operated in accordance with the appropriate FAA approved Airplane Flight Manual for the new model.
- (a) Model DC-8-32 aircraft can be converted to Model DC-8-33, and Model DC-8-42 can be converted to Model DC-8-43 by complying with the provisions of DC-8 Service Bulletin 51-3, Revision No. 2, dated December 30, 1960, or later. These aircraft may be further modified in accordance with DC-8 Service Bulletin No. 103-1 to permit an increase in the ramp and taxi weight to 318,000 lb.
 - (b) S/N 45420 originally delivered as DC-8-32 with standard wing and inoperative forward auxiliary fuel tank, was subsequently modified and redelivered by Douglas Aircraft Company as DC-8-53 with extended L.E. and operative forward auxiliary fuel tank.

NOTE 11 (Cont'd)

- (c) DC-8-12 S/N's 45284 through 45288 and 45408 through 45413 become Model DC-8-51's when JT3C-6 engines are replaced by JT3D engines, and associated changes are incorporated in accordance with Douglas Drawing 7777253, new or subsequent, "Service Rework - United Air Lines JT3C-6 to JT3D-3 Engines" for S/N 45284 through 45288, or Douglas Drawing 7777254, new or subsequent, "Service Rework -Delta Air Lines JT3C-6 to JT3D-1 Engines" for S/N 45408 through 45413.
- (d) The following Model DC-8-32 airplanes were modified to Model DC-8-53. Modification includes extended L.E., L.E. fuel tanks and increased capacity of No. 1 and No. 4 alternate tanks.

<u>Serial Numbers</u>	<u>Douglas Drawing No.</u>
45417	No. 7778389
45568, 45604	No. 7753419

- (e) The following Model DC-8-12 airplanes become Model DC-8-21 airplanes when the JT3C-6 engines are replaced with JT4A engines and other associated changes are incorporated.

<u>Serial Numbers</u>	<u>Douglas Drawing No.</u>
45279, 45280, 45589, 45590, 45592, 45593	No. 7753451
45281-45283, 45588, 45591	No. 7778390
45289	No. 7757658
45304-45306	No. 7889747

- (f) Model DC-8-43 aircraft can be converted to Model DC-8F-54 (cargo only) aircraft by complying with the provisions of Douglas Drawings 3633831 and 5633600. Model DC-8-43 and DC-8-53 aircraft can be converted to Model DC-8F-54 (cargo only) and Model DC-8-55 can be converted to DC-8F-55 (cargo only) by complying with the provisions of Douglas Drawing 7633870.

NOTE 12

Deleted.

NOTE 13

(Applies to Models DC-8-51, DC-8-52 and DC-8-53 aircraft). Whenever aircraft of foreign registry are returned to the United States for certification, Shurlock P/N SL 68-1414 barrel nuts installed on JT3D engine forward mount to pylon attachment bolts must be replaced with ESNA P/N LH 2577-144 or Shurlock P/N SL1896-14 barrel nuts or FAA approved equivalent prior to issuance of an airworthiness certificate. See A.S.B. 71-29 for aircraft effectivity.

NOTE 14

- (a) JP-1, JP-4, JP-5, and JP-8 fuels conforming to P&WA Service Bulletin No. 2016 (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 changing fuel types.
- (b) Philips PFA-55MB or anti-icing additive to Specifications MIL-I-27686E may be used if concentration delivered to airplane does not exceed 0.1 percent by volume. No fuel system anti-icing credit is allowed.
- (c) DuPont DCI-4A corrosion inhibitor fuel additive may be used if concentration delivered to airplane does not exceed 8 lb/100bbl (23mg/1) of turbine fuel.

- NOTE 15 When foreign registered DC-8 aircraft bearing Serial Number 45253 and 45271 are returned to the United States, the horizontal stabilizer trim motor control valve must be modified in accordance with Douglas DC-8 Service Sketch No. 647 or Douglas DC-8 Service Bulletin 29-62, or FAA approved equivalent, prior to airworthiness certification.
- NOTE 16 All DC-8-21 and DC-8-51 airplanes are eligible for maximum taxi and ramp weight of 288,000 lbs., start of takeoff weight of 286,000 lbs., and airborne weight of 285,500 lbs., provided main and nose landing gear rated at 300,000 lbs. or greater gross weight are installed in accordance with the appropriate Douglas drawings. Appropriate revisions must also be included in the pertinent FAA approved Airplane Flight Manual.
- NOTE 17 When foreign registered DC-8F-54 airplanes bearing S/N 45667 and 45684 are returned to the United States, the DC-8-60 Series type horizontal stabilizer drive unit installed in accordance with DC-8 Service Bulletin 27-257 must be replaced with standard DC-8F-54 drive unit.
- NOTE 18 Approved Fuel Grades for CFM-56-2-C1 Engines:
- Fuel grades conforming to : MIL-T-5624 (JP-4, JP-5), MIL-T-83133 (JP-8 or U.S. DOD approved NATO equivalents), ASTM D1655 (Jet A, Jet A1, Jet B) and in accordance to GE Specification D50TF2. Primary fuel is Jet A, with other fuels listed being acceptable alternates. No fuel control adjustment is required when changing from primary to alternate fuels. Use of aviation gasoline is not authorized. Consult GE Specification D50TF2 for additive usage. The additives may be used in combination.
- NOTE 19 The following oils are eligible for the CFM56-2-C1 engine: Synthetic type conforming to G.E. Specification D50TF1, classes A or B. G.E. Service Bulletin 79-1 lists approved brand oils.
- NOTE 20 CFM56-2-C1 engines assembled in USA (S/N 692XXX) or France (S/N 693XXX) are authorized for installation on the Model DC-8-71/71F, 72/72F, or 73/73F airplanes.
- Engine Type Certificates Numbers E2GL and E21EU pertain to CFM International SA engines produced in this country by General Electric and in France by SNECMA, respectively. As noted on Data Sheets E2GL and E21EU engines of the same model produced in either location are identical and fully interchangeable. Refer to CFMI Service Bulletin (CFM56) 72-1 for definition of the suffix "-C1" added to the basic model designation.
- NOTE 21 Tracking/Replacement of Aft Engine Mount/Components: CFM56-2C Powered Airplanes
- The DC-8-70 series CFM56-2C Aft Engine Mount/Components are life limited. This mount assembly and/or its components must be tracked and replaced every 30,000 landings in accordance with McDonnell Douglas Corporation Report No. MDC-K4323, Revision A, dated October 14, 1992.
- NOTE 22 Upon completion of the modification from DC-8-61, DC-8-61F, DC-8-62, DC-8-62F, DC-8-63, DC-8-63F to DC-8-71, DC-8-71F, DC-8-72, DC-8-72F, DC-8-73, and DC-8-73F, respectively, in accordance with Douglas Aircraft Drawing 7757375, a data plate must be installed adjacent to the existing data plate in accordance with Douglas Drawing No. 3803868.
- NOTE 23 Each aircraft modified to a DC-8-71/71F, 72/72F, or 73/73F, must have an applicable FAA approved flight manual appendix.

NOTE 24

Engine Intermix: DC-8 Series 71/71F, 72/72F, 73/73F aircraft with CFM56-2-C1, -C3, -C5 and -C6 Engines

Engine installation intermix configuration may be utilized in accordance with DAC Report No. J2778, DC-8-70 Maintenance Manual Chapter 71, "Engine Intermix", and applicable appendices of the FAA approved Airplane Flight Manual.

NOTE 25

Cargo Conversion of Noted FSN's into DC-8-71F

DC-8-71 airplanes factory serial number 45914, 45915, 45944, 46014, 46018, 46029, 46030, 46048, 46055, 46056, and 46072 are eligible to be identified as a DC-8-71F aircraft when modified in accordance with Douglas Aircraft Drawing 7633870. A data plate must be installed adjacent to the existing data plate in accordance with Douglas Aircraft Drawing 5804421. Appropriate FAA approved airplane flight manual pages must be obtained from the manufacturer for the new model.

NOTE 26

Cargo Conversion of Noted FSN's Into DC-8-71F

DC-8-71 airplanes factory serial numbers 45810-45813, 45849, 45941, 45945-45947, 45970, 45971, 45973-45978, 45983, 45993-45998, 46039, 46040, 46064-46066, 46099 are eligible to be identified as a DC-8-71F aircraft when modified in accordance with Douglas Aircraft Drawing SP08010001, Rev. A. A data plate must be installed adjacent to the existing data plate in accordance with Douglas Aircraft Drawing 5804421. Appropriate FAA approved airplane flight manual pages must be obtained from the manufacturer for the new model.

NOTE 27

Life Limited Parts and Airworthiness Limitations

DC-8 non-structural components which are life limited or subject to airworthiness limitations are listed in FAA approved Report MDC-02K9030, "DC-8 Special Compliance Items Report."

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