

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A-817
Revision 22

FOKKER
F27 Mark 100
F27 Mark 200
F27 Mark 300
F27 Mark 400
F27 Mark 500
F27 Mark 600
F27 Mark 700
F27 Mark 050

June 26, 2017

TYPE CERTIFICATE DATA SHEET NO. A-817

This data sheet which is a part of Type Certificate No. A-817 prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder FOKKER SERVICES B.V.
P.O. Box 1357
2130 EL, Hoofddorp
THE NETHERLANDS

I. Model F27 Mark 100, approved October 29, 1957, Mark 200, 300, 400, 600, and 700 approved May 25, 1965.

F27 Mark 200 same as F-27 Mark 100 except for engine installation.

F27 Mark 300 same as F-27 Mark 100 except for large forward cargo door and all-metal cargo floor in cabin.

F27 Mark 400 same as F-27 Mark 200 except for large forward cargo door and all-metal cargo floor in cabin.

F27 Mark 600 same as F-27 Mark 200 except for large forward cargo door.

F27 Mark 700 same as F-27 Mark 100 except for large forward cargo door.

Engines. F27 Mark 100, 300, and 700: 2 Rolls Royce Dart 511 or Dart 511-7E or Dart 514-7.
Reduction gearing 0.086:1
F27 Mark 200, 400, and 600: 2 Rolls Royce Dart 528-7E, Dart 532-7,
Dart 532-7R, Dart 535-7R, Dart 551-7R or Dart 552-7R, (See Note 3(b)).
Reduction gearing 0.093:1

Engine Limits. Static Sea Level Ratings at ISA

	Shaft Horsepower (shp.)	Jet Thrust (lb.)	Engine Speed (rpm)	Max. Permissible JPT/TGT (°C)
<u>Dart 511</u>				
Wet Takeoff (5 min.)	1570	365	14,500	595
Dry Takeoff	1535	355	14,500	580
Max. Continuous	1535	355	14,500	580
Starting (Momentary)	----	---	-----	640
<u>Dart 511-7E</u>				
Wet Takeoff (5 min.)	1570	365	14,500	595
Dry Takeoff	1535	355	14,500	595
Max. Continuous	1535	355	14,500	625
Starting (Momentary)	----	---	-----	640

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Engine Limits (cont'd)

	Shaft Horsepower (shp.)	Jet Thrust (lb.)	Engine Speed (rpm)	Max. Permissible JPT/TGT (°C)
<u>Dart 514-7</u>				
Wet Takeoff (5 min.)	1670	385	14,500	600
Dry Takeoff	1535	355	14,500	595
Max. Continuous	1535	355	14,500	650
Starting (Momentary)	----	---	-----	640
<u>Dart 528-7E</u>				
Wet Takeoff (5 min.)	1870	495	15,000	860
Dry Takeoff	1835	485	15,000	810
Max. Continuous	1835	485	15,000	850
Starting (Momentary)	----	---	-----	930
<u>Dart 532-7</u>				
Wet Takeoff (5 min.)	1990	520	15,000	860
Dry Takeoff	1835	485	15,000	810
Max. Continuous	1835	485	15,000	850
Starting (Momentary)	----	---	-----	930
<u>Dart 532-7R</u>				
Wet Takeoff (5 min.)	2080	520	15,000	905
Dry Takeoff	1835	485	15,000	810
Max. Continuous	1835	485	15,000	885
Starting (Momentary)	----	---	-----	930
<u>Dart 535-7R</u>				
Wet Takeoff (5 min.)	2080	520	15,000	920
Dry Takeoff	1835	485	15,000	810
Max. Continuous	2030	495	15,000	920
Starting (Momentary)	----	---	-----	930
<u>Dart 551-7R</u>				
Wet Takeoff (5 min.)	2136	457	15,000	940
Dry Takeoff	2164	455	15,000	910
Max. Continuous	2164	455	15,000	930
Starting (Momentary)	----	---	-----	930
<u>Dart 552-7R</u>				
Wet Takeoff (5 min.)	2180	511	15,000	930
Dry Takeoff	2167	508	15,000	900
Max. Continuous	2167	508	15,000	920
Starting (Momentary)	----	---	-----	930

NOTE: Dart 511/511-7E/514 temperatures are expressed in JPT, Dart 7 (520, 530 and 550 Series) in TGT.

Oil Inlet Temperature	Dart 511, 511-7E, 528-7E	Dart 532-7R	
	514-7	532-7	535-7R 551-7R 552-7R
Maximum	110°C	120°C	120°C
Minimum for starting	-30°C	-30°C	-30°C
Minimum for opening-up	-15°C	-15°C	-15°C
<u>Dart 514-7</u>			
Minimum for WET Take-off	40°C	40°C	50°C

Propeller and Propeller Limits.

Dart 511, 511-7E, 514-7: 2 Rotol Model (c) R 175/4-30-4/13E, with 4 RA.25899 blades each.

Diameter 12.0 ft. (nominal)

Minimum allowable for repairs 11'9.75". No further reduction permitted.

Pitch setting at .7 radius

Ground fine pitch	0°
Flight fine pitch	+20°48'
Feathered	+83°

R.P.M. limit (max. 20 sec.) 17,000

Avoid all continuous operation below 7,000 r.p.m.

Dart 528-7E, 532-7, 532-7R, 535-7R:

2 Dowty Rotol Model (c) R193/4-30-4/50 or 4/61 with 4 RA.25907 blades each
or 4/63 with 4 RA.660208304 blades each or 4/65 with 4 RA.601023450 blades each.

Diameter 11.5 ft. (nominal)

Minimum allowable for repairs 11'4.35"

Pitch setting at .7 radius

Ground fine pitch	0°
Flight fine pitch	20°
Cruise pitch	32°
Feathered	87°

R.P.M. limit (max. 20 sec.) 17,000

Avoid all continuous operation below 7,000 r.p.m.

Dart 551-7R, 552-7R:

2 Dowty Rotol Model (c) R193/4-30-4/65 with 4 RA.601023450 blades each.

Diameter 11.5 ft (nominal)

Minimum allowable for repairs 11'4.35"

Pitch setting at 0.7 radius

Ground fine pitch	0°
Flight fine pitch	20°
Cruise pitch	32°
Feathered	87°

R.P.M. limit (max. 20 sec.) 17,000

Avoid all continuous operation below 7,000 rpm.

For the 551-7R engine all continuous operation between 13,000 and 13,400 rpm. should be avoided.

C.G. Range.

	Weight (lb)	FWD		AFT	
		% M.A.C.	Sta. (in.)	% M.A.C.	Sta. (in.)
Takeoff and Landing (gear down)	31,300 and below	20.0	(360.28)	38.0	(378.52)
	35,700	25.0	(365.35)	38.0	(378.52)
	37,500	25.6	(365.95)	38.0	(378.52)
	39,500	26.2	(366.57)	38.0	(378.52)
	40,500	26.5	(366.87)	38.0	(378.52)
	42,000	27.0	(367.37)	38.0	(378.52)
	43,500	27.3	(367.68)	38.0	(378.52)
	45,000	27.7	(368.03)	38.0	(378.52)
Enroute (gear up)	31,300 and below	18.7	(358.95)	40.7	(381.26)
	35,700	23.7	(364.03)	40.7	(381.26)
	37,500	24.3	(364.64)	40.7	(381.26)
	39,500	24.9	(365.24)	40.7	(381.26)
	40,500	25.2	(365.55)	40.7	(381.26)
	42,000	25.7	(366.05)	40.7	(381.26)
	43,500	26.0	(366.36)	40.7	(381.26)
	45,000	26.4	(366.76)	40.7	(381.26)

The forward c.g. limit for weights between points shown shall be interpolated linearly except when modified in accordance with approved Fokker F27 Service Bulletin B-159 or in accordance with approved Fokker F27 Service Bulletin 51-30. The forward c.g. limit for weights between 31,300 lbs and 37,500 lbs, and between 31,300 lbs and 39,500 lbs, shall be interpreted linearly.

Gear retraction moment is + 30,000 in. lb.

Datum.

The fuselage datum (Station Zero) is: for Mk 100, 200, 600 and 700 aircraft:
228.5 in. forward of the front leveling pin.
For Mk 300 and 400 aircraft:
268.5 in. forward of the front leveling pin.

M.A.C.

101.38 in. (L.E. of M.A.C. + 340.0 in.)

Maximum Weights.

Takeoff: 35,700 lb.	
37,500 lb.	When modified in accordance with approved Fokker F27 Service Bulletin D-16 and D-17.
39,000 lb.	For Mk 100, 300 and 700 aircraft equipped with Dart 511 and 511-7E engines, when modified in accordance with approved Fokker F27 Service Bulletin D-16, D-17 and D-40.
40,500 lb.	For Mk 100, 300 and 700 aircraft equipped with Dart 514-7 engines and modified in accordance with approved Fokker F27 Service Bulletins D-16, D-17, D-40 and D-64.
42,000 lb.	For Mk 200, 400 and 600 aircraft when modified in accordance with approved Fokker F27 Service Bulletins D-16, D-17 and D-41.
43,500 lb.	For Mk 200, 400 and 600 aircraft equipped with Dart 532-7 engines and modified in accordance with approved Fokker F27 Service Bulletins B-158 and D-71.
45,000 lb.	For Mk 200, 400 and 600 aircraft equipped with Dart 532-7, 532-7R and 535-7R, 551-7R and 552-7R engines and modified in accordance with approved Fokker F27 Service Bulletin 51-26.

Maximum Weights (Cont'd).

Landing:	34,000 lb.	
	37,500 lb.	When modified in accordance with approved Fokker F27 Service Bulletins D-16 and D-17.
	40,000 lb.	When modified in accordance with approved Fokker F27 Service Bulletins D-16, D-17 and, D-41 (Mk 200, 400 and 600) or D-40 plus D-64 (Mk 100, 300 and 700), D-65 and B-148.
	41,000 lb.	For the Mk 200, 400 and 600 aircraft when modified in accordance with approved Fokker F27 Service Bulletin 54-32.
	43,500 lb.	For Mk 400 and 600 aircraft when modified in accordance with approved Fokker F27 Service Bulletins 51-31.

Zero Fuel, Oil and Water/Methanol:

	32,400 lb.	
	34,900 lb.	For Mk 100, 300 and 700 aircraft with original small fuel tanks when modified in accordance with approved Fokker F27 Service Bulletins D-16 and D-17.
	35,200 lb.	For Mk 100, 300 and 700 aircraft with enlarged fuel tanks when modified in accordance with approved Fokker F27 Service Bulletins D-16 and D-17.
	35,700 lb.	For Mk 200, 400 and 600 aircraft, when modified in accordance with approved Fokker F27 Service Bulletins D-16 and D-17.
	37,500 lb.	For Mk 100, 300, 700, 200, 400, and 600 aircraft, when modified in accordance with approved Fokker F27 Service Bulletin B-159.
	39,500 lb.	For Mk 200, 400 and 600 aircraft, when modified in accordance with approved Fokker F27 Service Bulletin 51-30.

Maximum Baggage.

	Compartment	Station (in.)	Capacity (lb.)	Max. Floor Loadng (Lb./ft ²)	C.G. (in.)
Mk. 100, 200, Mk. 600, 700, without Mallison floors	Forward	161-230	2,620	135	199.1
	(20" gangway)	161-263	4,000	135	217.6
	Aft.	647-691	1,120	100	669.3
Mk. 300, 400	(no gangway)	161-304	15,980	100	406.4
Mk. 600 & 700		304-446		140	
with Mallison floors		446-691			

Maximum Passengers.

48 (CAR 4b-362(c)) (see NOTE 4 regarding approved interior arrangements).

II. Model F27 Mark 500 approved 21 May 1970.

F27 Mark 500 same as Mark 200 or Mark 600 except for stretched fuselage.

Engines.2 Rolls Royce Dart 532-7, 532-7R, 535-7R, 551-7R or 552-7R.
Reduction gearing 0.093:1

Engine Limits.Static Sea Level at ISA

	Shaft Horsepower (shp.)	Jet Thrust (lb.)	Engine Speed (rpm)	Max. Permissible JPT/TGT (°C)
<u>Dart 532-7</u>				
Wet Takeoff (5 min.)	1990	520	15,000	835
Dry Takeoff	1835	485	15,000	795
Max. Continuous	1835	485	15,000	835
Starting (Momentary)	----	---	-----	930
<u>Dart 532-7R</u>				
Wet Takeoff (5 min.)	2080	520	15,000	905
Dry Takeoff	1835	485	15,000	810
Max. Continuous	1835	485	15,000	885
Starting (Momentary)	----	---	-----	930
<u>Dart 535-7R</u>				
Wet Takeoff (5 min.)	2080	520	15,000	920
Dry Takeoff	1835	485	15,000	810
Max. Continuous	2030	495	15,000	920
Starting (Momentary)	----	---	-----	930
<u>Dart 551-7R</u>				
Wet Takeoff (5 min.)	2136	457	15,000	940
Dry Takeoff	2164	455	15,000	910
Max. Continuous	2164	455	15,000	930
Starting (Momentary)	----	---	-----	930
<u>Dart 552-7R</u>				
Wet Takeoff (5 min.)	2180	511	15,000	930
Dry Takeoff	2167	508	15,000	900
Max. Continuous	2167	508	15,000	920
Starting (Momentary)	----	---	-----	930
Oil Inlet Temperature	<u>Dart 532-7</u>		<u>Dart 532-7R, 535-7R, 551-7R, 552-7R</u>	
Maximum	120° C		120° C	
Minimum for starting	-30° C		-30° C	
Minimum for opening up	-15° C		-15° C	
Minimum for WET takeoff	40° C		50° C	

Propeller and Propeller Limits.

DART 532-7, DART 532-7R and DART 535-7R:

2 Dowty Rotol Model (c) R193/4/30-4/50
 or 4/61 with 4 RA.25907 blades each
 or 4/63 with 4RA660208304
 or 4/65 with 4RA601023450 blades each.

Diameter 11.5 ft. (nominal)

Minimum allowable for repairs 11'4.35".

Pitch settings at .7 radius

Ground fine pitch 0°
 Flight fine pitch 20°
 Cruise pitch 32°
 Feathered 87°

R.P.M. Limit (max. 20 sec.) 17,000

Avoid all continuous operation below 7,000 r.p.m.

Propeller and Propeller Limits. (cont'd)

DART 551-7R, 552-7R:

2 Dowty Rotol Model (c) R193/4-30-4/65 with
4 RA.601023450 blades each.

Diameter 11.5 ft. (nominal)
Minimum allowable for repairs 11'4.35"

Pitch setting at 0.7 radius

Ground fine pitch 0°
Flight fine pitch 20°
Cruise pitch 32°
Feathered 87°

R.P.M. limit (max. 20 sec.) 17,000
Avoid all continuous operation below 7,000 r.p.m.

For the 551-7R engine all continuous operation between 13,000 and 13,400 rpm. should be avoided.

C.G. Range.

	Weight (lb)	FWD		AFT	
		% M.A.C.	Sta. (in.)	% M.A.C.	Sta. (in.)
Takeoff and Landing (gear down)	31,000	20.0	395.68		
	and below				
	38,500	25.9	401.64	38.0	431.92
	41,000	26.5	402.47		
	43,500	27.2	402.88		
Enroute (gear up)	45,000	27.5	403.31		
	45,900	27.7	403.48	35.0	410.88
	31,000	18.7	394.36		
	and below				
	38,500	24.6	400.34	40.7	416.66
	41,000	25.4	401.15		
	43,500	25.8	401.56		
	45,000	26.2	402.00		

Linear variation of forward C.G. limit between points shown except when modified in accordance with RLD/CAA-NL-approved Fokker F27 Service Bulletin 51-25; linear variation between 31,300 lb. and 39,500 lb. Gear retraction moment change: +30,000 in.lb.

Datum.

Fuselage datum (Station Zero): 340.4 in. forward of front leveling pin for versions with enlarged cargo door; 269.4 in. for versions with small cargo door.

M.A.C.

101.38 in. (L.E. of M.A.C. + 375.4 in.)

Maximum Weights.

Takeoff: 43,500 lb.
 45,000 lb. When modified in accordance with approved Fokker F27 Service Bulletin 53-89.
 45,900 lb. When modified in accordance with approved Fokker F27 Service Bulletin 51-35.
 Landing: 41,000 lb.
 42,000 lb. When modified in accordance with approved Fokker F27 Service Bulletin 51-25.
 43,500 lb. When modified in accordance with approved Fokker F27 Service Bulletin 51-32.

Maximum Weights (Cont'd).

Zero Fuel, Oil and Water/Methanol:

38,500 lb.

39,500 lb.

40,200 lb.

When modified in accordance with approved Fokker F27 Service Bulletin 51-25.

When modified in accordance with approved Fokker F27 Service Bulletin 51-35.

Maximum Passengers.

59 (CAR 4B.362(c)) (See NOTE 4 regarding approved interior arrangements).

Maximum Baggage.

Compartment	Station (in.)	Capacity (lb.)	Maximum Floor Loading (lb/ft ²)	C.G. (in.)
Forward	161-230	2,620	135	199.1
(20" gangway)	161-263	3,400	135	217.6
Aft	647-691	1,120	100	728.4

III. Model F27 Mark 050 approved February 8, 1989.

The F27 Mark 050 same as Mark 500 except for the installation of two new technology Pratt & Whitney Canada PW125B engines, Dowty Rotol (c) R 352/6-123F/1 composite 6-bladed propellers, state of the art systems and cockpit instrumentation, electronic engine and propeller controls, increased use of composite structure, four type I doors i.l.o. two type I doors and two type IV exists, double the number of windows, switch from pneumatic systems to hydraulic systems, an electronic flight instrument system (EFIS) and integrated warning system.

Engine.

Two (2) Pratt and Whitney PW125B turboprop engines.

Reduction gearing 0.060: 1. (Ref. U.S. T.C. No. E20NE)

Fuel Specification.

Eligible engine fuels and additives are listed in the approved Airplane Flight Manual.

Oil Specification.

Eligible engine oils as listed in the approved Airplane Flight Manual.

(Engine and gearbox)

Engine and Propeller Limits

CONDITION	TIME	TORQUE (%)	ITT (deg C)	RPM (%)		
				NH	NL	NP
MAX TO	5 min.	102	800	102	103	100
MAX TO*	5 min.	96	800	102	103	106
NORMAL TO	5 min.	92	765	102	103	100
MAX CONT	unl	87.5	800	102	103	100
MAX CONT*	unl	82.5	800	102	103	106
MIN GND IDLE	-	-	-	66	-	60
STARTING	5 sec	-	950	-	-	-
	20 sec	-	840	-	-	-
TRANSIENT	15 sec	-	-	-	-	115
	20 sec	115	840	102	103	-
	5 min	105	-	-	-	-

* Operation on overspeed governor

<u>Propeller.</u>	o Type no.	2 Dowty Rotol propellers, Model: (c) R352/6-123-F/1 or (c) R352/6-123-F/2 (Ref. U.S. TC No. P16NE).
	o Diameter	3.65 m (144 inch).
	o No. of blades	6 - clock wise rotation (viewed from rear of propeller).
	o Spinner type	(c) SB 20/6/1.
	o Blades	Composite glass and carbon reinforced plastic construction, polyurethane coated and fitted with nickel leading edge sheets for erosion protection and, with electric de-icing overshoe.
	o Pitch Settings (Nominal)	Pitch setting at .7 radius. Feathered pitch +82.6° Flight fine pitch +15° Low pitch (pure beta) +10° Ground fine pitch -2° Max reverse pitch -17°
		To avoid high propeller stresses, stabilized ground operation in the propeller rpm of 65 percent to 90 percent NP is not permitted with the airplane static. Excluded from this limitation is the use of reverse during ground maneuvering in engine EC operating mode.

APU (Optional). Sundstrand, SPS T62T-46-C1 (ground use only).

Airspeed Limits. All speeds mentioned in this section are indicated airspeeds (IAS)

V_{mo} Maximum operation list speed.

Up to 21,000 ft altitude : 224 kts.

Above 21,000 ft altitude : V_{mo} decreases linearly to 206 kts at 25,000 ft altitude.

V_A Maximum design maneuvering speed : 175 kts.

Full application of rudder and aileron controls, as well as maneuver that involve angle of attack near the stall, should be confined to speeds below V_A.

V_{RA} Rough air speed : 165 kts.

V_{FE} Maximum flap extend speed :

Flap Position

5	: 180 kts
10	: 180 "
15	: 180 "
20	: 160 "
25	: 160 "
35	: 140 "

V_{LO} = V_{LE} Maximum Landing gear extended and operating speed : 170 kts.

C.G. Range.

	WEIGHT		FWD		AFT	
	(lb)	(kg)	% MAC	Sta (in)	% MAC	Sta (in)
gear down	45900	20820	25.5	401.25	38.0	413.92
	45590	20680	-	-	40.0	415.95
	37480	17000	-	-	40.0	415.95
	31970	14500	-	-	38.0	413.92
	31000	14200	20.0	395.68	38.0	413.92
		and lower				
gear up	45900	20820	24.4	400.14	40.7	416.66
	31310	14200	18.9	394.56	40.7	416.66
		and lower				

The C. G. limits for weights between the given figures shall be interpolated linearly.

Gear retraction moment change: 243.4 kgm (21129.3 inch pounds).

When modified in accordance with Fokker Modification ECR 78547:

Weight		Landing Gear Extended		Landing Gear Retracted	
		Forward	Aft	Forward	Aft
lb	kg	(% MAC)	(% MAC)	(% MAC)	(% MAC)
45,900	20.820	25.5	40.0	24.0	43.2
42,900	19.500	-	40.0	19.8	43.2
37,480	17.000	-	40.0	-	43.2
31,970	14.500	-	38.0	-	-
31,300	14.200	20.0	38.0	13.0	-
27,118	12.300	20.0	38.0	13.0	41.2
and lower					

The C of G limits for weights between the given figures shall be interpolated linearly.
Gear retraction moment change: 243.4 kgm (21129.3 inch pounds).

When modified in accordance with Fokker Modifications ECR 78547 and 50203:

Weight		Landing Gear Extended		Landing Gear Retracted	
		Forward	Aft	Forward	Aft
lb	kg	(% MAC)	(% MAC)	(% MAC)	(% MAC)
45,900	20.820	25.5	40.0	24.0	43.2
43,500	19.730	24.6	40.0	-	43.2
42,990	19.500	-	40.0	19.8	43.2
41,000	18.600	20.7	40.0	-	43.2
39,680	18.000	-	40.0	16.0	43.2
37,480	17.000	17.0	40.0	-	43.2
33,290	15.100	14.0	-	-	-
31,970	14.500	14.0	38.0	-	-
30,865	14.000	14.0	38.0	10.0	-
27,118	12.300	14.0	38.0	10.0	41.2
and lower					

For C of G limits for weights between the given figures shall be interpolated linearly.
Gear retraction moment change: 243.4 kgm (21129.3 inch pounds).

Datum. The datum referred to is defined as the Fuselage Datum (Station Zero), which is 7535 mm (296.7 inch) forward of the front leveling pin.

M.A.C. The Mean Aerodynamic Chord is 2575 mm (101.38 inch) aft of datum.

Leveling Means. Leveling holes are provided to accommodate leveling equipment. They are located on the left hand side of the fuselage.

Maximum Weights.

Maximum Taxi Weight : 20,865 kg (45,000 lbs)
Maximum Take-off Weight : 20,820 kg (45,900 lbs)
Maximum Landing Weight : 19,730 kg (43,500 lbs)
Maximum Zero Fuel Weight : 18,600 kg (41,000 lbs)

Maximum Passengers. 62 (See note 4(c) regarding approved interior arrangement).

Maximum Baggage.

Compartment	Station (in.)	Capacity (lb)	C.G. (in.)
forw. RH	179.1 - 242.3	1157	210.7
	179.1 - 264.8	1642	222.0
aft.	689.0 - aft press bulkhead	2205 (inc. max galley weight)	719.3*

* Freight only, based on 1598 lb freight.

Note: As the cargo holds configuration is dependent on customer requirements reference is made to the report "basic weight and balance information," specific to each separate aeroplane.

Fuel Capacity.

Total 5136 Liter (1357 U.S. Gallon) of usable fuel in two wing tanks of 2518 Liter (665 U.S. Gallon) each and in two collector tanks of 50 Liter (13 U.S. Gallon) each. See NOTE 1 for data on system fuel and oil.

Oil Capacity.
(exl. oil cooling
system)

See FAA engine TC Data Sheet No. E20NE

	<u>Liter</u>	<u>U.S. Gallon</u>
Usable	8.0	2.0
Total	19.3	5.72

Control Surface Movements

Elevator	Up 25°	Down 22°
Elevator trim tab	Up 19°	Down 27°
Rudder	Left 20°	Right 20°
Rudder trim tab	Left 17°	Right 17°
Aileron (with spring tab neutral)	Up 33°	Right 22°
Aileron spring tabs	Up 13°	Down 13°
Aileron balance tabs	19° tab t.e. down	11° tab t.e. up
Aileron trim tab (right outer tab)	17°	Down 17°

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by RLD or CAA-NL. Any such documents are accepted by the FAA and are considered FAA approved.

- Safe Life Items (SLI), Airworthiness Limitation Items (ALI) and Certification Maintenance Requirements (CMR) , all approved, as referenced in Section 06, Appendix 1 of the MRB document
- Structural Repair Manual
- MRB document
- Maintenance Planning Document
- Service Bulletins
- Airworthiness Recommendations Catalog (ARC)

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement RLD, CAA/NL, or EASA Approved are accepted by the FAA and are considered "FAA Approved."

Additionally, Fokker Services as a DOA holder has been given authorization by the EASA to approve Service Bulletins (SB) that are not associated with Airworthiness Directives. Accordingly, Service Bulletins and repair instructions which contain a statement "The technical content of this document is approved under the authority of DOA ref. EASA.21J.059" are considered EASA approved and are therefore accepted by the FAA and are considered FAA approved.

For approvals made before September 28, 2003 the statement “The technical information contained in this document has been approved under the authority of JAA Design Organization Approval no. RLD.JA.001” may have been used and are also considered FAA approved.

DATA PERTINENT TO ALL MODELS F27 Mark 100, 200, 300, 400, 500, 600 and 700.

<u>Fuel.</u>	Eligible engine fuels and additives are listed in Rolls Royce Operating Instructions, Document F-Da6-FoF or F-Da7-FoF.
<u>Fuel Capacity.</u>	972 U.S. gal. (total) of usable fuel in two wing tanks of 472.5 U.S. gal. each and in two collector tanks of 13.4 U.S. gal. each. 1357 U.S. gal. (total) of usable fuel in two wing tanks of 665 U.S. gal. each and two collector tanks of 13.4 U.S. gal. each, when modified in accordance with F27 Modification Bulletin 2. See NOTE 1 (b) for unusable fuel. For aircraft equipped with inboard fuel tanks: 605 U.S. gal. (total) of usable fuel in two inboard tanks.
<u>Water/Methanol Capacity.</u>	Water/Methanol Mixture: Rolls-Royce Specification AEP-1-W/M latest issue. 80 U.S. Gal. (total) in two nacelle tanks of 40 gal. each.
<u>Oil (Engine and Gearbox).</u>	Eligible engine oils are listed in Rolls Royce Operating Instructions, Document F-Da6-Fof or F-Da7-FoF.
<u>Oil Capacity.</u>	8 U.S. Gal. (total) in two engine tanks of 4 gal. each. (See NOTE 1 (b) for system oil).
<u>Airspeed Limits.</u>	

			(IAS)	Knots (IAS)
V _{NE}	(Never Exceed)	0-20,000 ft.	254	259
		20,000-25,000 ft.	234	238
V _{MO}	(Max. Operation)	0-20,000 ft.	223	238
		above 20,000 ft.	MO decreases 4.5 ft. per 1,000 ft.	
		25,000 ft.	204.5	204
V _A	(Maneuvering)	MTOW 42,000	166	169
		MTOW 43,500	169	172
		MTOW 45,000	172	175
		MTOW 45,900	174	176
V _{FE}	(Flap extended)	0 - 16.5°	138	140
		16.5° - 40.0°	125	126
V _{FE}	(Flap extended), when modified in accordance with RLD/CAA-NL-approved Fokker F27 Service Bulletin B182.	0 - 40.0°	144	145
V _{FE}	(Flap extended), when modified in accordance with RLD/CAA-NL-approved Fokker F27 Service Bulletin 11-4:	0 - 16.5°	177	180
		16.5° - 26.5°	157	160
		26.5° - 40.5°	144	145
V _{LO}	(Landing gear operation)		168	170
V _{LE}	(Landing gear extended)		168	170
V _{MC}	(Minimum control) with 16°5 takeoff flaps at S.L. Stand Cond.	RR Dart Mk 528-7E	78	78
		RR Dart Mk 532-/535- engines	80	80
		RR Dart Mk 551-7R/552-7R	81	81
		Maximum airspeed for extending retractable type landing lights	168	170

Leveling Means.

Pins for installing leveling instrument are located on the left hand side of the fuselage.

Control Surface Movements.

Elevator	Up	25 ⁰	Down	22 ⁰
Elevator Trim Tab (Left)	Up	22.5 ⁰	Down	22.5 ⁰
Rudder	Right	20 ⁰	Left	20 ⁰
Rudder Balance Tab	Right	3 ⁰	Left	3 ⁰
Rudder Trim Tab	Right	10 ⁰	Left	10 ⁰
Aileron (with spring tab neutral)	Up	33 ⁰	Down	22 ⁰
Aileron Spring Tabs (inner tabs)	Up	13 ⁰	Down	13 ⁰
Aileron Balance Tabs (outer tabs)	Up	11 ⁰	Down	16.5 ⁰
Aileron Trim Tab (right outer tab)	Up	15 ⁰	Down	15 ⁰

Service Information.

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by RLD or CAA-NL. Any such documents are accepted by the FAA and are considered FAA approved:

- (a) Maintenance Manual
- (b) Overhaul Manual
- (c) Structural Repair Manual
- (d) Structural Inspection Program (SIP) Document
- (e) Airworthiness Recommendations Catalog (ARC)
- (f) Corrosion Control Program (CCP) Document
- (g) Service Bulletins
- (g) Inspection Guide, Maintenance Schedule, Maintenance Data or Customer Maintenance Program as applicable to the specific aircraft serial number, as published and specified by the TC-Holder (ref. Service Letter 330).

Service bulletins, repair instructions (letters, drawings, specifications, forms used for transmitting repair descriptions, etc.), structural repair manuals, airplane flight manuals, vendor manuals, and overhaul and maintenance manuals that are published in the English language and indicate applicability to the U.S. approved type designs included in this Type Certificate and that include a statement RLD, CAA/NL, or EASA Approved are accepted by the FAA and are considered “FAA Approved.”

Additionally, Fokker Services as a DOA holder has been given authorization by the EASA to approve Service Bulletins (SB) that are not associated with Airworthiness Directives. Accordingly, Service Bulletins and repair instructions which contain a statement “The technical content of this document is approved under the authority of DOA ref. EASA.21J.059” are considered EASA approved and are therefore accepted by the FAA and are considered FAA approved.

For approvals made before September 28, 2003 the statement “The technical information contained in this document has been approved under the authority of JAA Design Organization Approval no. RLD.JA.001” may have been used and are also considered FAA approved.

DATA PERTINENT TO ALL MODELSCertification Basis for Models F27 Mark 100, 200, 300, 400, 500, 600 and 700

CAR 10, dated March 1955, CAA (Import) Type Certificate no. 817 issued 19 October 1957, for Fokker F27 Friendship. Original Type Certificate superseded and replaced by FAA Type Certificate no. 817 dated 25 May 1965 to re-identify basic F27 as F27 Mark 100 and add F27 Marks 200, 300, 400, 600 and 700. Type Certificate no. 817 issued 25 May 1965 superseded and replaced by FAA Type Certificate no. 817, dated 21 May 1970 to add F27 Mark 500. Date of application for Type Certificate; 9 November 1954.

Type approval basis for all Marks, certified by Netherlands Government Rijksluchtvaartdienst (RLD/CAA-NL) is: U.S. CAR Part 4b effective 31 December 1953, including Amendment 4b-1, Amendment 46-2 items 1 and 48, Amendment 46-3 items 21 through 33 and 39, Amendment 4b-7, Amendment 4b-8 Items 9, 21 and 22, SR-422B effective 9 July 1959, Section 4T.110 through 4T.123 and 4T.743, and SR 450A effective 31 August 1962 including Amendments 1 and 2, and with the Special Conditions notified to the Government of the Netherlands by Government of the United States of America. Compliance has been shown with FAR Part 25, Amendments 25-15, 25-17 and 25-20 for the F27 Mark 500.

Compliance has been shown with the following optional requirements: Ice Protection CAR 4b.640.

In addition compliance has been shown with:

- FAR Part 25, Amendments 25-15, 25-17 and 25-20 for the F27 Mark 200 and 600, Serial Nos. 10446 and up, with the incorporation of approved Fokker Service Bulletin 25-27.
- FAR 25.1001 Amendment 25-18 for F27 airplanes equipped with Dart 528-7E, 532-7, 532-7R, 535-7R, 551-7R and 552-7R engines.
- FAR 25 Section 812(e) as amended by Amendment 25-46, according to approved Fokker F27 Service Bulletin 33-28.
- FAR 25 Section 785(g) and (h) as amended by Amendment 25-51, according to approved Fokker F27 Service Bulletins 25-49, 25-50, 25-51, 25-54 and 25-56.
- FAR 25 Amendments 25-22 and 25-24 if third attitude instrument SFENA type 705-15V9, or type 705-15V10 is installed.

Compliance has been shown with FAR 36

- Amendment 36-1 for:

RR Dart 532-7 Mk's All	MTOW 45,000 lbs
	MLW 42,000 lbs or 43,500 lbs

RR Dart 532-7R Mk's All	MTOW 45,000 lbs
	MLW 42,000 lbs

RR Dart 535-7R Mk's All	MTOW 45,000 lbs
	MLW 42,000 lbs

- Up to and including Amendment 36-7 for:

RR Dart 532-7R Mk's All	MTOW 45,000 lbs
	MLW 43,500 lbs

RR Dart 535-7R Mk's All	MTOW 45,000 lbs
	MLW 43,500 lbs

- Up to and including Amendment 36-12:

When modified in accordance with Fokker Service Bulletin F27/71-28:

RR Dart 532-7R Mk's All	MTOW 45,000 lbs
535-7R	MLW 41,000, 42,000 or 43,500 lbs.
551-7R	
552-7R	

RR Dart 532-7R Mk's All	MTOW 45,900 lbs
535-7R	MLW 41,000 or 43,500 lbs
551-7R	
552-7R	

Based on 14 CFR § 21.29(a) for new import TCs, (or § 21.101(g) for changes to TCs), applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections. 14 CFR part 26 is **not** applicable to the Mk 100.

Exemption No. 9804 has been issued for the Fokker F27 Mk 200 through 700 to the requirements of 14 CFR Part 26 Sections 26.11, 26.43, 26.45 and 26.49.

This exemption grants relief to Fokker Services B.V., from having to meet the requirements of § 26.11 for development of EWIS ICA and of §§ 26.43, 26.45, and 26.49 for development of damage tolerance data for repairs and alterations. See NOTE (6)

“CAA-NL (formerly RLD) originally type certificated this aircraft under its type certificate Number A22F. The FAA validated this product under U.S. Type Certificate Number A-817. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of CAA-NL.”

Certification Basis for Model F27 Mark 050

1. Part 25 of the FAR dated February 1, 1965, as amended by Amendments 25-1 through 25-56, 25-58, 25-29, 25-60, §25.904 as amended by Amendment 25-62 except for the following paragraphs which will be certified to earlier amendments as noted:

§25.109 25.631 25.671(c)(3) 25.701(d)	25-41 Not applicable, §25.631 added to Amendment 25-23 25-22 25-22
25.1309	25-22 All systems comply with §25.1309 as amended by Amendment 25-56 except for the following which comply with Amendment 25-22: - Communication Systems - Flight Control Systems - Fuel and Fuel Shut-Off System - Stall Warning System
25.571(e)(2)	Not applicable, 25.571(e)(2) added at Amendment 25-45
25.1305(e)(3)	Not applicable, 25.1305(e)(3) added at Amendment 25-23
2. Part 36 as amended by Amendment 36-16.
3. SFAR 27 as amended by Amendment 27-6.
4. Special Conditions No. 25-ANM-11 issued for the Automatic Takeoff Power Control System (ATPCS), i.e., §25.904 as amended by Amendment 25-62.
5. Special Conditions No. 25-ANM-13 issued on October 19, 1987, for Lightning Protection Requirements for Electronic Devices/Engine and Prop Controls.
6. Findings of Equivalent Safety.

§25.729(e)(2) 25.807(d) 25.1416(c)	Landing Gear Warning System Throttles Ditching Emergency Exits Pneumatic De-Icer System Indication
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7. Exemptions: None
8. Certification with the ditching provisions of FAR 25.801 has not been requested by Fokker Aircraft, BV. If extended overwater operation is to be approved, compliance with FAR 25.801 must be demonstrated.
9. Compliance with the optional requirements of FAR 25.1419, Icing Protection has been established. In addition it has been shown that:
 - a) The optional APU complies with FAR 25 Amdt. 25-56.
 - b) The aircraft complies with FAR 25.791(d) and (c) as amended by Amdt. 25-72.
10. Based on § 21.17(a) for new TCs, or § 21.101(g) for changes to TCs, applicable provisions of part 26 are included in the certification basis. For any future part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

Based on 14 CFR § 21.29(a) for new import TCs, (or § 21.101(g) for changes to TCs), applicable provisions of 14 CFR part 26 are included in the certification basis. For any future 14 CFR part 26 amendments, the holder of this TC must demonstrate compliance with the applicable sections.

“CAA-NL (formerly RLD) originally type certificated this aircraft under its type certificate Number T-050-87. The FAA validated this product under U.S. Type Certificate Number A-817. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of CAA-NL.”

Maximum Operating Altitude. 25,000 ft.

Minimum Flight Crew. 2 (pilot and co-pilot)

Serial Nos. Eligible. The Netherlands Certificate of Airworthiness endorsed as noted under Import Requirements must be submitted for each individual aircraft for which application for certification is made.

Import Requirements. The FAA can issue a U.S. Airworthiness Certificate based on an NAA Export Certificate of Airworthiness (Export C of A) signed by a representative of the CAA-NL on behalf of the European Community. The Export C of A should contain the following statement: “The aircraft covered by this certificate, has been examined, tested, and found to comply with the Fokker Type Design approved under U.S. Type Certificate No. A-817 and to be in a condition for safe operation.”

In order for the FAA to determine that a Fokker F27 Mark 050 aircraft is in a condition for safe operation under the provisions of 14 CFR 21.183, the FAA certifying inspector or other authorized person must contact the Manager, International Branch, ANM-116, FAA Transport Airplane Directorate; 1601 Lind Avenue Southwest; Renton, Washington 98055; telephone (425) 227-1263; fax (425) 227-1149, prior to issuance of the U.S. airworthiness certificate to obtain the FAA Required Airworthiness Action List (RAAL) for the F27 Mark 050. After the first airplane is imported to the U.S. the RAAL will be finalized and published in the TCDS.

When the TCDS is amended to include the RAAL, a notice will be published in the Federal Register, to inform the public of this amendment.

The RAAL contains a list of type design modifications and inspections that have been determined by the European Aviation Safety Agency (EASA), which is the state of design authority for the Fokker F27 Mark 050, to be required to correct unsafe conditions discovered on the original type design of the F27 Mark 050. EASA has issued Airworthiness Directives that require the accomplishment of these modifications and inspections to correct the identified unsafe conditions, and has advised the FAA of this mandatory continuing airworthiness information (MCAI). Based on this MCAI the FAA has determined that the airworthiness actions identified in the EASA ADs listed in Model F27 Mark 050 RAAL are required in the interest of safety and are necessary for this airplane to be in a condition for safe operation.

Prior to issuance of a Standard Airworthiness Certificate on any Fokker F27 Mark 050 model aircraft, all airworthiness actions listed in the Model F27 Mark 050 RAAL must be accomplished in accordance with the compliance times listed in each MCAI, except as noted in the RAAL. The MCAI listed in the RAAL are airworthiness limitations in addition to those listed in note 3 of this TCDS, and must be included in the operator’s airplane maintenance or inspection program. All inspections or modifications, required by the EASA MCAI, that have surpassed the initial compliance time, must be accomplished prior to issuance of the Standard Airworthiness Certificate.

Any deviation from the requirements of the MCAIs, listed in the RAAL, must be approved by the Manager, International Branch, ANM-116, FAA Transport Airplane Directorate.

A Notice of Policy Statement announcing the FAA’s policy with respect to foreign MCAI, when no aircraft of the affected design are currently registered in the U.S. was published in the Federal Register on May 1, 1998, docket 98-11648. Additional guidance is contained in FAA advisory Circular 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported into the United States.

Equipment. The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification.

The approved Airplane Flight Manual version issued for the applicable airplane serial number.

NOTES.

- NOTE 1.
- (a) Current weight and balance report, including list of equipment included in the certificated empty weight, interior arrangement and loading instructions must be provided for each aircraft at the time of original certification.
 - (b) For F27 Marks 100 thru 700, System Fuel which must be included in the empty weight, is the amount of fuel required to fill both system, including the cross-feed, up to the level of the booster pump inlets in collector tanks unusable but drainable fuel in the main tanks (6.5 U.S. gal. total). The total amount of "System fuel" is 9.95 U.S. gal. For aircraft equipped with inboard fuel tanks the following amount of fuel must be added to the "System Fuel" mentioned above:
0.79 U.S. gal. trapped fuel plus 11.9 U.S. gal. unusable but drainable fuel in the inboard tanks. Therefore, for aircraft equipped with inboard fuel tanks the total amount of "System Fuel" is 22.64 U.S. gal.

Systems oil is that amount of oil normally trapped in the propellers plus the amount normally trapped in the engines after oil drainage. The amount of system oil is as follows:

2.4 U.S. gal. (total) contained in engines
2.0 U.S. gal. (total) contained in propellers
 - (c) For the F27 Mark 050 System Fuel, which must be included in the empty weight, is the amount of fuel required to fill both systems including the crossfeed, up to the level of the booster pump inlets in the collector tanks (20.2 liters, 5.34 U.S. gal.) plus the trapped fuel in the main tanks (24.0 liters, 6.34 U.S. gal.).
The total amount of "System Fuel" is 44.2 liters, 11.68 U.S. gal.).
- NOTE 2.
- For F27 Mark 100 through 700 the following placard must be displayed in the location indicated: On the lavatory door leading to a floor level exit: "During take-off and landing this door must be open".
- For Fokker F27 Mark 050, airplane operation must be in accordance with the approved AFM. All placards required in either the approved AFM or the Certification Basis must be installed in the airplane.
- NOTE 3.
- (a) Eligibility for Alternate Engine Installation:
F27 Mark 100, 300, and 700 (basic with Dart 511 engines) are eligible for the:

Dart 511-7E Installation only when modified in accordance with approved Fokker F27 Service Bulletin N5.

and for the
Dart 514-7 installation when further modified in accordance with approved Fokker F27 Service Bulletin E23, N21 and H29.

F27 Mark 200, 400 and 600 are eligible for the:
Dart 528-7E installation only when modified in accordance with approved Fokker F27 Service Bulletin N11.

and for the
Dart 532-7 Installation when further modified in accordance with approved Fokker F27 Service Bulletin E29 and 1129.

and for the
Dart 532-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-23.

and for the
Dart 535-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-30.

and for the

Dart 551-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-34.

F27 Mark 500 (basic with Dart 532-7 engine) is eligible for the: Dart 532-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-23,

and for the

Dart 552-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-30,

and for the

Dart 551-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-34,

and for the

Dart 552-7R installation when further modified in accordance with approved Fokker F27 Service Bulletin 71-42.

(b) The RR Dart 528 engine is no longer in service and was deleted from TCDS E-297 on September 9, 1980.

(c) F27 Mk050 (basic with PW125B engine) is eligible for the PW127B installation.

NOTE 4.

(a) For the F27 Mark 100 thru 700 approved interior lay-out and maximum passenger capacity reference Fokker Drawing 27.1-9000.

(b) All replacement seats (crew, passenger, lounge), although they may comply with TSO C39, must also be demonstrated to comply with FAR 25.785 and FAR 25.561. 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.

(c) For the F27 Mark 050 approved interior lay-out and maximum passenger capacity reference Fokker Drawing F9004-000.

NOTE 5.

For the F27 Mark 050 systems and powerplant certification maintenance requirements are included in the approved Chapter 05-10 of the Maintenance Manual. Any changes to these requirements must be shown to meet FAR 25 and must be approved by EASA and FAA.

NOTE 6

This exemption does not grant relief from the related operational requirements. Should a person choose to operate one of the airplane models covered by this exemption under 14 CFR Part 121 or 129 beyond the operational compliance deadlines as stated in § 121.1111 or § 129.111 (EWIS ICA) or in § 121.1109(c) or § 129.109(b) (damage tolerance data for repairs and alterations), that person will be required to comply with those operational requirements.

..... END.....