TCDS No.: EASA.A.037 Fokker F28 Page 1 of 39 03 September 2018

Issue: 07



# **EASA**

# **TYPE-CERTIFICATE DATA SHEET**

No. EASA.A.037

for **FOKKER F28** 

# **Type Certificate Holder:**

Fokker Services B.V.

Hoeksteen 40 2132 MS Hoofddorp The Netherlands

# **Airworthiness Category: Large Aeroplanes**

For models: F28 Mark 1000

F28 Mark 1000C

F28 Mark 0100 F28 Mark 0070

F28 Mark 2000 F28 Mark 3000 F28 Mark 3000C F28 Mark 3000R F28 Mark 3000RC F28 Mark 4000

TCDS No.: EASA.A.037 Fokker F28 Page 2 of 39

Issue: 07 03 September 2018

Intentionally left blank

Page 3 of 39

# **TABLE OF CONTENTS**

SEC	TION 1 - GENERAL (ALL MODELS)	4
SEC	TION 2 – F28 "FELLOWSHIP" SERIES	5
I.	Model F28 Mark 1000, 1000C	5
II.	Model F28 Mark 2000	
III.	Model F28 Mark 3000, 3000C	
IV.	·	
٧.	Model F28 Mark 4000	
VI.	Data Pertinent to Mark 1000, 1000C, 2000, 3000, 3000C, 3000R, 3000RC and 4000	16
SEC	TION 3 – "FOKKER 100" AND "FOKKER 70" SERIES	22
I. M	lodel F28 Mark 0100	22
II. N	Nodel F28 Mark 0070	26
III. [	Data pertinent to Mark 0100 and 0070	30
SEC	TION 4: ADMINISTRATIVE	38
I. Ad	cronyms and Abbreviations	38
	ype Certificate Holder Record	
III. C	Change Record	39

TCDS No.: EASA.A.037 Fokker F28 Page 4 of 39

03 September 2018

Issue: 07

## **SECTION 1 - GENERAL (ALL MODELS)**

1. Data Sheet No: A.037

2. Airworthiness Category: Large Aeroplanes

3. Performance Category: A

4. Certifying Authority: EASA

5. Type Certificate Holder: Fokker Services B.V.

Hoeksteen 40

2132 MS Hoofddorp THE NETHERLANDS

6. Manufacturer: Fokker Aircraft

7. ETOPS: Not applicable.

#### **NOTES**

• The content of this TCDS is based on the following documents previously issued and approved by the CAA-NL:

TCDS No.:	Issue: Issue date:		Models:
A23F	9	June 5, 1996	F28 Mark 1000 through 4000
T-100-87 5 November		November 21, 1996	F28 Mark 0100/0070

- Documents referred to as "approved" in this TCDS were approved by the competent Airworthiness Authority at the time of the approval, to the exclusion of approvals issued by Fokker Services B.V. under the authority of its Design Organization "on behalf of" the competent Airworthiness Authority. This competent Airworthiness Authority might be RLD, CAA-NL, or EASA.
- CAA-NL / RLD TC No's A23F and T-100-87 remain valid references for models certified before September 28, 2003.

TCDS No.: EASA.A.037 Fokker F28 Page 5 of 39

03 September 2018

Issue: 07

#### **SECTION 2 – F28 "FELLOWSHIP" SERIES**

## I. Model F28 Mark 1000, 1000C

F28 Mark 1000 (Transport Aircraft), approved February 24, 1969. F28 Mark 1000C (Transport Aircraft), approved January 29, 1975.

The letter "C" added to the Mark-number indicates aircraft equipped with a Main Deck Large Cargo Door.

#### 1. Engines

2 Rolls-Royce Two-shaft Bypass Jet Engines RB 183 Mk. 555-15.

When modified in accordance with approved Fokker F28 Service Bulletin No. 71-9: RB 183 Mk 555-15N (see Section VI - NOTE 6 regarding intermixing of engines).

When modified in accordance with approved Fokker F28 Service Bulletin No. 71-12: RB 183 Mk 555-15P (see Section VI - NOTE 6 regarding intermixing of engines).

#### 2. Engine Limitations

	RB 183 Mk 555			
	15/15N 15P/15H			
Static thrust at sea level:				
- take-off (5 min)*	9,850 lbs	9,900 lbs		
- max. continuous	9,470 lbs	9,520 lbs		

<sup>\*</sup> In the event of an engine failure 10 minutes for the remaining engine.

For other engine limitations refer to the approved Flight Handbook for the applicable aircraft serial number.

## 3. APU Type

Garrett AiResearch GTCP 36-4 (a).

#### 4. APU Limitations

Refer to the approved Flight Handbook for the applicable aircraft serial number.

#### 5. C.G. Range

Refer to the approved Flight Handbook for the applicable aircraft serial number.

#### 6. Maximum Weights

Take-off	56,700 lb (25,720 kg)
Landing	54,000 lb (24,500 kg)
Zero-fuel	46,650 lb (21,160 kg)

TCDS No.: EASA.A.037 Fokker F28 Page 6 of 39

Issue: 07 03 September 2018

When modified in accordance with approved Fokker F28 Service Bulletin No. 57-1:

Take-off	62,000 lb (28,120 kg)
Landing	54,000 lb (24,500 kg)
Zero-fuel	47,900 lb (21,730 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 55-4:

Take-off	63,000 lb (28,580 kg)
Landing	54,000 lb (24,500 kg)
Zero-fuel	47,900 lb (21,730 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 57-9:

Take-off	63,000 lb (28,580 kg)
Landing	54,000 lb (24,500 kg)
Zero-fuel	49,900 lb (22,640 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-5:

Take-off	65,000 lb (29,490 kg)
Landing	59,000 lb (26,770 kg)
Zero-fuel	54,500 lb (24,720 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-23:

Take-off	66,500 lb (30,164 kg)
Landing	59,000 lb (26,770 kg)
Zero-fuel	54,500 lb (24,720 kg)

## 7. Maximum Passengers

70 (see Chapter VI - NOTE 3A).

## 8. Fuel Capacity

Maximum usable fuel in liters.

TANKS	PRESSURE F	UELING	OVERWING FUELING
WING TANK	9640	)	9740
CENTER WING TANK	Mark 1000	3300	
IF INSTALLED	Mark 1000C	3100 *	

<sup>\*</sup> See Chapter VI - NOTE 5

TCDS No.: EASA.A.037 Fokker F28 Page 7 of 39

Issue: 07 03 September 2018

## 9. Maximum Baggage

Compartment	Station (in.)		Capacity	Max. Floor	C.G. Location (in.)
	from	to	Cu/Ft.	Loading	
Forward Belly	165.4	369.7	241.0	75 lb/sq.ft and	267.6
Aft belly	525.4	666.7	136.0	250 lb/sq.ft.	594.1
Rear cabin Baggage				75 lb/sq.ft and	
compartment	632.5	671.9	80.0	450 lb/sq.ft.	656.1

Forward Belly Compartment			Aft. Belly Compartment		
Max. Structural Comp. 1		1118	Max. Structural	Comp. 4	810
Capacity in lb.	Comp. 2	1394	Capacity in lb.	Comp. 5	1230
	Comp. 3	1103			
	Total	3615		Total	2040

Rear Cabin Compartment			
Max. Structural 1065			
Capacity in lb.			

# 10. Serial Numbers Eligible

## Mark 1000

11003, 11004, 11006, 11008 up to and including 11017, 11019, 11021, 11022, 11023, 11025 up to and including 11052, 11054 up to and including 11061, 11063 up to and including 11073, 11075, 11078, 11079, 11082 up to and including 11089, 11094 up to and including 11098, 11100, 11101, 11103 up to and including 11107, 11991, 11992.

#### Mark 1000C

11018, 11020, 11024, 11074, 11076, 11099, 11102.

TCDS No.: EASA.A.037 Fokker F28 Page 8 of 39

Issue: 07 03 September 2018

#### II. Model F28 Mark 2000

F28 Mark 2000 (Transport Aircraft), approved August 30, 1972.

The Mark 2000 is basically a Mark 1000, with a fuselage stretch of 57 inch in front of and 30 inch aft of the wing.

#### 1. Engines

2 Rolls-Royce Two-shaft Bypass Jet Engines RB 183 Mk. 555-15.

When modified in accordance with approved Fokker F28 Service Bulletin No. 71-9. RB 183 Mk 555-15N (see Section VI - NOTE 6 regarding intermixing of engines).

#### 2. Engine Limitations

Same as for Mark 1000 – refer to Chapter I.

#### 3. APU Type

Same as for Mark 1000 - refer to Chapter I.

#### 4. APU Limitations

Same as for Mark 1000 – refer to Chapter I.

#### 5. C.G. Range

Refer to the approved Flight Handbook for the applicable aircraft serial number.

## 6. Maximum Weights

Take-off 65,000 lb (29,490 kg) Landing 59,000 lb (26,770 kg) Zero-fuel 54,500 lb (24,720 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-16. (external noise certification excluded):

Landing 62,000 lb (28,120 kg)

#### 7. Maximum Passengers

79 (see Chapter VI - NOTE 3A, 3B).

#### 8. Fuel Capacity

Same as for Mark 1000 - refer to Chapter I.

TCDS No.: EASA.A.037 Fokker F28 Page 9 of 39

Issue: 07 03 September 2018

# 9. Maximum Baggage

Compartment	Station (in.)		Capacity	Max. Floor	C.G. Location (in.)
	from	to	Cu/Ft.	Loading	
Forward belly	165.4	426.7	308.0	75 lb/sq.ft. and 250 lb/ft.	295.9
Aft belly	582.4	753.7	171.3	75 lb/sq.ft. or 250 lb/ft.	665.1
Rear Cabin Baggage compt.	719.5	758.9	80.0	75 lb/sq.ft. and 450 lb/ft.	743.1

Forward Bell	y Compartme	nt	Aft. Belly (	Compartmen	t
Max. Structural	Comp. 1	1118	Max. Structural	Comp. 5	1340
Capacity in lb.	Comp. 2	1394	Capacity in lb.	Comp. 6	1230
	Comp. 3	1394			
	Comp. 4	714			
	Total	4620		Total	2570

Rear Cabin Compartment			
Max. Structural			
Capacity in lb.			

# 10. Serial Numbers Eligible

 $11053,\,11062,\,11077,\,11080,\,11081,\,11090,\,11091,\,11108,\,11109,\,11110.$ 

TCDS No.: EASA.A.037 Fokker F28 Page 10 of 39

Issue: 07 03 September 2018

#### III. Model F28 Mark 3000, 3000C

F28 Mark 3000 (Transport Aircraft), approved July 19, 1978. F28 Mark 3000C (Transport Aircraft), approved April 5, 1979.

The Mark 3000 is basically a Mark 1000, with a wing span extension of 60 inch.

The letter "C" added to the Mark-number indicates aircraft equipped with a Main Deck Large Cargo Door.

## 1. Engines

2 Rolls-Royce Two-shaft Bypass Jet engines RB 183 Mk 555-15H.

The RB 183 Mk 555-15H is an up-rated version of the -15 engine, and is flat rated up to 29.50C (-15 up to 22.50C).

The engine is equipped with intake silencing panels and a 5-lobe silenced nozzle.

When modified in accordance with approved Fokker F28 Service Bulletin No. 71-8.

RB 183 Mk 555-15P.

(see Chapter VI - NOTE 6 regarding intermixing of engines).

#### 2. Engine Limitations

Same as for Mark 1000 – refer to Chapter I.

#### 3. APU Type

Same as for Mark 1000 - refer to Chapter I.

#### 4. APU Limitations

Same as for Mark 1000 - refer to Chapter I.

#### 5. C.G. Range

Refer to the approved Flight Handbook for the applicable aircraft serial number.

#### 6. Maximum Weights

Take-off 71,000 lb (32,205 kg) Landing 64,000 lb (29,030 kg) Zero-fuel 56,000 lb (25,400 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-15:

Take-off 73,000 lb (33,112 kg)

## 7. Maximum Passengers

70 (see Chapter VI – NOTE 3A).

TCDS No.: EASA.A.037 Fokker F28 Page 11 of 39

Issue: 07 03 September 2018

# 8. Maximum Baggage

Same as for Mark 1000 – refer to Chapter I.

# 9. Fuel Capacity

Same as for Mark 1000 – refer to Chapter I.

# 10. Serial Numbers Eligible

11125, 11136, 11137, 11143, 11145, 11147, 11150, 11151, 11153, 11162, 11163, 11165.

TCDS No.: EASA.A.037 Fokker F28 Page 12 of 39

Issue: 07 03 September 2018

#### IV. Model F28 Mark 3000R, 3000RC

F28 Mark 3000R (Transport Aircraft), approved July 7, 1977. F28 Mark 3000RC (Transport Aircraft), approved May 5, 1978.

The Mark 3000R is basically a Mark 3000, operating according Mark 1000 performance. The letter "C" added to the Mark-number indicates aircraft equipped with a Main Deck Large Cargo Door.

## 1. Engines

2 Rolls-Royce Two-shaft Bypass Jet Engines RB 183 Mk 555-15.

When modified in accordance with approved Fokker F28 Service Bulletin No. 71-9. RB 183 Mk 555-15N (see Chapter VI - NOTE 6 regarding intermixing of engines).

## 2. Engine Limitations

Same as for Mark 1000 - refer to Chapter I.

#### 3. APU Type

Same as for Mark 1000 - refer to Chapter I.

#### 4. APU Limitations

Same as for Mark 1000 - refer to Chapter I.

#### 5. C.G. Range

Refer to the approved Flight Handbook for the applicable aircraft serial number.

NOTE: To avoid a load sheet for the Mark 3000R, which differs form that used for the Mark 1000 aircraft, which would lead to cases of abuse and incorrect loading, the centre of gravity limitations are expressed in percentage of the main aerodynamic chord of the wing, without tip extension e.g. the Mark 1000 wing.

#### 6. Maximum Weights

Take-off 65,000 lb (29,490 kg) Landing 59,000 lb (26,770 kg) Zero-fuel 54,500 lb (24,720 kg)

#### 7. Maximum Passengers

70 (see Chapter VI - NOTE 3A).

# 8. Maximum Baggage

Same as for Mark 1000 - refer to Chapter I.

#### 9. Fuel Capacity

TCDS No.: EASA.A.037 Fokker F28 Page 13 of 39

Issue: 07 03 September 2018

Same as for Mark 1000 – refer to Chapter I.

# 10. Serial Numbers Eligible

Mark 3000R: 11113, 11117, 11119, 11129, 11131.

Mark 3000RC: 11132, 11134.

TCDS No.: EASA.A.037 Fokker F28 Page 14 of 39

Issue: 07 03 September 2018

## V. Model F28 Mark 4000

F28 Mark 4000 (Transport Aircraft), approved December 13, 1976.

The Mark 4000 is basically a Mark 2000 aircraft equipped with two overwing emergency exits on both sides and with a wing span extension of 60 inch.

## 1. Engines

2 Rolls-Royce Two-shaft Bypass Jet Engines RB 183 Mk. 555-15H When modified in accordance with approved Fokker F28 Service Bulletin No. 71-8. RB 183 Mk 555-15P (see Chapter VI - NOTE 6 regarding intermixing of engines).

#### 2. Engine Limitations

Same as for Mark 1000 – refer to Chapter I.

#### 3. APU Type

Same as for Mark 1000 - refer to Chapter I.

#### 4. APU Limitations

Same as for Mark 1000 – refer to Chapter I.

#### 5. C.G. Range

Refer to the approved Flight Handbook for the applicable aircraft serial number.

#### 6. Maximum Weights\*

Take-off 71,000 lb (32,205 kg) Landing 64,000 lb (29,030 kg) Zero-fuel 57,500 lb (26,082 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-15:

Take-off 73,000 lb (33,112 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-17:

Landing 65,800 lb (29,846 kg)

When modified in accordance with approved Fokker F28 Service Bulletin No. 51-18:

Landing 69.500 lb (31,525 kg) Zero-fuel 62,000 lb (28,120 kg)

#### 7. Maximum Passengers\*

TCDS No.: EASA.A.037 Fokker F28 Page 15 of 39

03 September 2018

Issue: 07

85 (see Chapter VI - NOTE 3A, 3B).

#### 8. Maximum Baggage

Same as for Mark 2000 – refer to Chapter II.

#### 9. Fuel Capacity

Same as for Mark 1000 – refer to Chapter I.

#### 10. Serial Numbers Eligible

11092\* and 11093\*

11111, 11112, 11114, 11115, 11116, 11118, 11120, 11121, 11122, 11123, 11124, 11126, 11127, 11128, 11130, 11133, 11135, 11138, 11139, 11140, 11141, 11142, 11144, 11146, 11148, 11149, 11152, 11154 up to and including 11161, 11164, 11166 up to and including 11241.

Take-off 73,000 lb (33,112 kg) Landing 69,500 lb (31,525 kg) Zero-fuel 62,000 lb (28,120 kg)

Serial numbers 11092 and 11093 are equipped with two type III overwing emergency exit one on each side of the fuselage instead of two on each side. Therefore, the maximum number of passengers is limited to 79.

<sup>\*</sup> Serial numbers 11092 and 11093 have the following Max. Weights:

TCDS No.: EASA.A.037 Fokker F28 Page 16 of 39

03 September 2018

Issue: 07

VI. Data Pertinent to Mark 1000, 1000C, 2000, 3000, 3000C, 3000R, 3000RC and 4000

#### 1. Type Certificate Application Date

Information on the date on which application for Type Certification was originally submitted is not available. For reference a realistic artificial application date has been established: December 21, 1967.

#### 2. Airspeed Limits

Refer to the approved Flight Handbook for the applicable aircraft serial number.

## 3. Hydraulic Fluid Specification

Skydrol 500 B, 500 B-4, LD-4, HyJet IV.

#### 4. Fuel Specification

Eligible engine fuels are listed in Rolls-Royce Operating Instructions, Document No F-Sp2-F, Specifications.

## 5. Engine Oil Specification

Eligible engine oils are listed in Rolls-Royce Operating Instructions, Document No. F-Sp2-F, Specifications.

## 6. CSD Type

Sundstrand 20 AGD - 02.

## 7. CSD Oil Specification

The approved types of oil are:

Esso Turbo Oil 15 Enco Turbo Oil 15

Esso Turbo Oil TJ-15 Enco Turbo Oil TJ-15

Texaco SATO 15 Texaco SATO 5180

Aero Shell Turbine Oil 390

Sinclair Turbo S Oil 15

Esso Turbo Oil 5251 \*

Enco Turbo Oil 5251 \*

TCDS No.: EASA.A.037 Fokker F28 Page 17 of 39 03 September 2018

Issue: 07

Esso Turbo Oil 2380 \* Enco Turbo Oil 2380 \*

Mobil Jet Oil II \*

Stauffer Jet II \*

Castrol 205 \*

\*Type II oils.

Total amount 4 ltr.

#### 8. Minimum Crew

Two pilots.

#### 9. Levelling Means

- Two levelling pins mounted on the right hand side in the nose wheel bay at station 2434 and at station 3462.
- The forward end of each sea trail (station 4875).
- Two brackets mounted behind the rear pressure bulkhead at station 18024 on the Mark 1000, 3000 and 3000R and at station 20234 on the Mark 2000 and 4000.
- For optical levelling two red marked protruding rivets are mounted on both sides of the fuselage on the outer skin: one at station 4960 and at station 14350 on the Mark 1000, 3000, and 3000R, one at station 4960 and one at station 16560 on the Mark 2000 and 4000.

#### 10. Maximum Operating Altitude

- 25,000 ft
- 30,000 ft aircraft provided with optional required change W-0062 or when modified with approved Fokker F28 Service Bulletin No. 21-12.
- 35,000 ft aircraft provided with optional required change W-0061 or when modified with approved Fokker F28 Service Bulletin No. 21-16.

NOTE: For structural reasons Service Bulletin No. 21-16 cannot be carried out on aircraft serial numbers 11001 up to and including 11015 and 11991, 11992.

#### 11. Other Operating Limitations

The aircraft must be operated in accordance with the approved parts of the F28 Flight Handbook.

#### 12. Certification Basis

The Netherlands Code for Airworthiness of Transport Category Aircraft implies:

- CAR 4b, dated September 1962, Amendment 4b-1 through 4b-16 inclusive.
- RLD Special Conditions for F28 aircraft as specified in Part II of the Airworthiness Requirements for Type Certification of Fokker F28 aircraft, dated March 1967.

TCDS No.: EASA.A.037 Fokker F28 Page 18 of 39

Issue: 07 03 September 2018

- FAR 25.473, 25.479 through 25.485, 25.1001.

- Special retro-active requirements of FAR 25 Amendment 25-15, 17 and 20 (Paras 25.2 (a), (b), (c) and (d)).

In addition compliance with the following optional requirements has been established:

- Special conditions notified in FAA letter P/11/30 to the RLD Kingdom of the Netherlands, dated November 30, 1967.

- FAR 25, Amendment 25-1 through 25-14, 25-16, 25-18, 25-19, 25-21 and 25-22

25-24 if SFENA horizon 705-15-V4 has been installed

25-25, 25-28 through 25-31 25-32 paras, 803 (e)(1), (

25-32 paras, 803 (e)(1), (e)(2), 811(d)(1 through 3)

812 (a), (c), (d) and (e), (f)(1), (g)(1) and (2)

813 (c)

25-33, 25-34

25-35 if engine vibration monitoring system is installed

25-37

25-42 para 703 if Take-off warning system has been installed

- FAR 25, Powerplant requirements, applicable to the APU installation, including amendment 25-1 through 25-21.
- FAR 36, Amendment 36-1

Mark 1000 (-15 engines, MLW 59.000 lb (26,770 kg))

(-15N/-15P engines, MTOW 65.000 lb (29,490 kg))

Mark 2000 (-15/-15P engines, MTOW 65.000 lb (29,490 kg))

#### Amendment 36-4

Mark 4000 (-15 H engines, MTOW 71.000 lb (32,205 kg), MLW 64.000 lb (29,030 kg))

#### Amendment 36-8

Mark 3000 (-15H engines)

Mark 4000 (-15H engines, MLW 65.800 lb (29,846 kg))

#### Amendment 36-12

Mark 4000 (-15P engines)

- ICAO Annex 16 change 2, first (1) edition

Mark 1000 (-15 engines, MLW 59.000 lb (26,770 kg))

Mark 2000 (-15 engines, MTOW 65.000 lb (29,490 kg))

Third edition

Mark 3000 (-15H engines)

Mark 4000 (-15H/-15P engines)

- Ice Protection Provisions Car 4b.640 (FAR 25.1419).
- CRI H-01 Enhanced Airworthiness Programme for Aeroplane Systems ICA on EWIS

TCDS No.: EASA.A.037 Fokker F28 Page 19 of 39

Issue: 07 03 September 2018

- CRI D-10 On Ground Wing Leading Edge Heading System (only applicable when Service Bulletin F28/30-31 is installed).

- CRI F-23 Non-rechargeable Lithium Battery Installations (applicable for new installations)

#### Exemption from:

Car 4b.334 (e)(4) -Landing gear warning system for aircraft serial numbers 11003 up to and including 11020, 11991 and 11992.

#### 13. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (See certification basis) must be installed in the aircraft for certification.

The following additional equipment is required:

- Stick shaker pre-stall warning Fokker drawing No. A 40265
- Audible stall warning Fokker drawing No. A40265
- Approved parts of the Fokker F28 Flight Handbook, issued for the applicable aircraft serial number.
- The current weight and balance report (See NOTES 1A, 1B, 1C and 1D).

#### 14. Notes

#### NOTE 1A

Current weight and balance report, including list of equipment included in the certified empty weight, interior arrangement and loading instruction must be provided for each aircraft at the time of original certification.

The aircraft must be loaded so that the C.G. is within specified limits at all times, considering fuel loading and usage, gear retraction, and movement of crew and passengers from their assigned positions.

#### NOTE 1B

Engine system oil is the total engine oil less the quantity drainable from the tank, which is 29 lb and must be included in the aircraft empty weight.

#### NOTE 1C

The undrainable unusable fuel is that amount of fuel after drainage in accordance with the procedures described in the F28 Flight Handbook.

The total amount is: 76.8 lb for Mark 1000, 1000C, 3000R, 3000RC and 3000

79.0 lb for Mark 2000 and 4000.

The drainable unusable fuel in the aircraft is 60.3 lb for Mark 1000, 1000C, 2000, 3000, 3000R, 3000RC and 4000.

The highest level of the unusable fuel is the level prescribed by the critical flight conditions as defined in FAR 25.959 below which there is no fuel available to the engines.

TCDS No.: EASA.A.037 Fokker F28 Page 20 of 39

Issue: 07 03 September 2018

The weight of the aircraft total unusable fuel is:

137.1 lb for Mark 1000, 1000C, 3000, 3000R and 3000RC

139.3 lb for Mark 2000 and 4000,

and must be included in the aircraft empty weight.

#### NOTE 1D

When a center wing tank is installed the total amount undrainable unusable fuel is:

113.1 lb for Mark 1000, 1000C, 3000, 3000R and 3000RC.

115.3 lb for Mark 2000 and 4000.

and the total amount drainable unusable fuel is:

108.0 lb for Mark 1000, 1000C, 2000, 3000, 3000R, 3000RC and 4000.

The total amount unusable fuel is:

221.1 lb for Mark 1000, 1000C, 3000, 3000R and 3000RC.

223.4 lb for Mark 2000 and 4000.

This weight must be included in the aircraft empty weight.

#### NOTE 2

Information essential to the proper maintenance of the aircraft is given in the Fokker F28 Maintenance Manual and Overhaul Manual. Inspection items related to fatigue and the current retirement times for fatigue critical components are given for all existing versions of the Fokker F28 in the approved Fokker F28 Structural Integrity Program (Doc. 28438).

Inspection items and service life limits for engine parts are listed in Rolls-Royce NTO No. 50 Spey Maintenance Manual Chapter 5 and Roll-Royce SB SP. 70-1.

#### NOTE 3

- A For the approved interior lay-out and maximum passenger capacity refer to the applicable sheet of Fokker Drawing A-85001 or, A-85002 Cabin Layout. This drawing defines the location of seats, location of armrests, seatback recline etc., in relation to the overwing emergency exits. For Mark 1000, 3000 and 3000R with 70 passengers refer to F28 Service Bulletin No. 25-96.
- B Maximum passenger capacity is limited to 79 with one type I and one type III exit installed per side. With an additional type III exit installed per side, maximum passenger capacity may be increased to 85.

## NOTE 4

All placards required in Fokker drawing A-85060, A-68098, A-68100 and A-68061, must be installed in the appropriate locations.

TCDS No.: EASA.A.037 Fokker F28 Page 21 of 39

Issue: 07 03 September 2018

## NOTE 5

For configurations with a large cargo door, letter "C" will be added to the Mark Number. See for details and specifications "F28 Cargo Loading Manual".

## NOTE 6

Combinations of engines which can be intermixed and their applicable limitations are covered in the approved parts of the F28 Flight Handbook.

TCDS No.: EASA.A.037 Fokker F28 Page 22 of 39

Issue: 07 03 September 2018

#### SECTION 3 - "FOKKER 100" AND "FOKKER 70" SERIES

#### I. Model F28 Mark 0100

F28 Mark 0100, application for Type Certificate on March 25, 1983; approved November 20, 1987

The F28 Mark 0100 (based on the F28 Mark 4000) has two Rolls-Royce Tay high by-pass ratio engines with thrust reversers; extensive use of composites; increased fuselage length by 18.83 feet with plugs forward and aft of the wing; increased wing span by 9.8 feet; increased wing chord and improved aerodynamics with extended leading and trailing edges; increased horizontal stabilizer span by 4.6 feet; new flaps, larger ailerons, strengthened landing gear with new wheels and brakes; increased passenger count from 85 to 109 in the basic version; increased maximum weights; advanced digital electronic flight deck with integrated flight management system; autopilot/flight director, including CAT III autoland capability, and thrust management system; electronic flight instrument displays and full ARINC avionics.

Fuel capacity, max operating speed and maximum operating altitude remain the same.

## 1. Engine

Two (2) Rolls Royce two shaft high bypass ratio Jet Engines with thrust reversers: Tay 620-15, or TAY 650-15.

Note: Tay 650-15/10 and Tay 620-15/20 engines are the approved configuration specific build standards of Tay 650-15 and Tay 620-15 engines respectively

#### 2. Approved Fuel and Oil

For the eligible engine fuels and oil specifications refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

#### 3. Fuel Capacity

Usable fuel tank quantity (standard bag tank configuration) and auxiliary fuel tank system (if installed)

	Wing tanks	Center tank	Aux tank	Total
			(if installed)	(without/with aux tank)
Liters	9680	3140	4700	12820/17520
US gallons	2557	830	1242	3387/4629
IMP gallons	2130	691	1034	2821/3855

Usable fuel tank quantity (Integral Center Wing Tank configuration, which is standard from a/c s/n 11442 and up)

	Wing tanks	Center tank	Total
Liters	9640	3725	13365
US gallons	2547	984	3531
IMP gallons	2121	819	2940

TCDS No.: EASA.A.037 Fokker F28 Page 23 of 39

Issue: 07 03 September 2018

## 4. Engine Limitations

	RR Tay 620-15	RR Tay 650-15
Static thrust at sea level:		
- take-off (5 min)*	6,161 daN	6,717 daN
- max. continuous	5,994 daN	6,228 daN

<sup>\*</sup> In the event of an engine failure 10 minutes for the remaining engine.

For other engine limitations refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

## 5. APU type

Garret GTCP 36-150(R) or GTCP 36-150 (RR).

## 6. APU limits

Refer to the approved Airplane Flight Manual.

#### 7. APU Fuels

Eligible APU fuels are listed in the approved Airplane Flight Manual for the applicable aircraft serial number.

## 8. Airspeed Limits

Refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

## 9. Maximum operating pressure altitude

35 000 ft.

## 10. Maximum Weights

Max. Taxi weight:	41,225 kg (90,875 lbs)
Max. Take-off weight:	40,995 kg (90,375 lbs)
Max. Landing weight:	39,915 kg (88,000 lbs)
Max. Zero Fuel weight:	36,740 kg (81,000 lbs)

or

Max. Taxi weight:	42,230 kg (93,100 lbs)
Max. Take-off weight:	41,995 kg (92,590 lbs)
Max. Landing weight:	39,915 kg (88,000 lbs)
Max. Zero Fuel weight:	36,740 kg (81,000 lbs)

or

Max. Taxi weight:	43,320 kg (95,500 lbs)
Max. Take-off weight:	43,090 kg (95,000 lbs)
Max. Landing weight:	38,780 kg (85,500 lbs)

TCDS No.: EASA.A.037 Fokker F28 Page 24 of 39

Issue: 07 03 September 2018

Max. Zero Fuel weight: 35,835 kg (79,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-001 or 100-51-016:

 Max. Taxi weight:
 44,680 kg (98,500 lbs)

 Max. Take-off weight:
 44,450 kg (98,000 lbs)

 Max. Landing weight:
 39,915 kg (88,000 lbs)

 Max. Zero Fuel weight:
 36,740 kg (81,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-010:

 Max. Taxi weight:
 46,040 kg (101,500 lbs)

 Max. Take-off weight:
 45,810 kg (101,000 lbs)

 Max. Landing weight:
 39,915 kg (88,000 lbs)

 Max. Zero Fuel weight:
 36,740 kg (81,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-012:

 Max. Taxi weight:
 44,225 kg (97,500 lbs)

 Max. Take-off weight:
 43,995 kg (97,000 lbs)

 Max. Landing weight:
 39,915 kg (88,000 lbs)

 Max. Zero Fuel weight:
 36,740 kg (81,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-017:

 Max. Taxi weight:
 44,680 kg (98,500 lbs)

 Max. Take-off weight:
 44,450 kg (98,000 lbs)

 Max. Landing weight:
 39,915 kg (88,000 lbs)

 Max. Zero Fuel weight:
 37,420 kg (82,500 lbs)

Remark: For aircraft in service the Maximum Weights may only be altered on basis of an approved Service Bulletin.

#### 11. C.G. Range

Refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

#### 12. Levelling Means

Two levelling pins are installed on RH side of the nose gear bay for checking the longitudinal level of the aircraft.

Two brackets are installed near the aft wall of the APU compartment for checking the lateral level of the aircraft.

#### 13. Minimum Flight Crew

2 (Pilot and Co-pilot).

## 14. Maximum Passenger Seating Capacity

See Chapter III - NOTE 4a and 4d.

TCDS No.: EASA.A.037 Fokker F28 Page 25 of 39

Issue: 07 03 September 2018

# 15. Maximum baggage

Refer to the appropriate document "Basic Weight and Balance Information".

# 16. Serial Numbers Eligible

11244 thru 11507, 11509, 11511 through 11520, 11522, 11523 and 11527.

TCDS No.: EASA.A.037 Fokker F28 Page 26 of 39

Issue: 07 03 September 2018

## II. Model F28 Mark 0070

F28 Mark 0070, application for Type Certificate on February 3, 1992; approved 14 October 1994

The F28 Mark 0070 model is derived from the F28 Mark 0100 and differs only in the fuselage length being reduced by 4.623 meters (182 inches).

## 1. Engine

Two (2) Rolls Royce two shaft high bypass ratio Jet Engines with thrust reversers: Tay 620-15.

## 2. Approved Fuel & Oil

For the eligible engine fuels and oil specifications refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

## 3. Fuel Capacity

Usable fuel tank quantity (standard two tank configuration)

	Wing tanks	
Liters	9640	
US gallons	2547	
IMP gallons	2121	

Usable fuel tank quantity (with optional Integral Centre Wing Tank)

	Wing tanks	Center tank	Total
Liters	9640	3725	13365
US gallons	2547	984	3531
IMP gallons	2121	819	2940

# 4. Engine Limitations

See Mark 0100.

## 5. APU Type

Garret GTCP 36-150 (RR).

#### 6. APU Limits

Same as Mark 0100.

## 7. APU Fuels

Eligible APU fuels are listed in the approved Airplane Flight Manual for the applicable aircraft serial number.

TCDS No.: EASA.A.037 Fokker F28 Page 27 of 39

Issue: 07 03 September 2018

#### 8. Airspeed Limits

Refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

#### 9. Maximum operating pressure altitude

35 000 ft.

#### 10. Maximum Weights

Max. Taxi weight:	36,965 kg (81,500 lbs)
Max. Take-off weight:	36,740 kg (81,000 lbs)
Max. Landing weight:	34,020 kg (75,000 lbs)
Max. Zero Fuel weight:	31,975 kg (70,500 lbs)

or

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,995 kg (83,760 lbs)

 Max. Landing weight:
 34,020 kg (75,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

or

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,995 kg (83,760 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-011:

 Max. Taxi weight:
 41,960 kg (92,500 lbs)

 Max. Take-off weight:
 41,730 kg (92,000 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 33,565 kg (74,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-013:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 38,100 kg (84,000 lbs)

 Max. Landing weight:
 35,830 kg (79,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-014:

 Max. Taxi weight:
 40,140 kg (88,500 lbs)

 Max. Take-off weight:
 39,915 kg (88,000 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 33,565 kg (74,000 lbs)

TCDS No.: EASA.A.037 Fokker F28 Page 28 of 39

Issue: 07 03 September 2018

When modified in accordance with approved Service Bulletin SBF100-51-015:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 38,100 kg (84,000 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-019:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,995 kg (83,760 lbs)

 Max. Landing weight:
 34,020 kg (75,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-020:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,995 kg (83,760 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 32,655 kg (72,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-022:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,400 kg (82,450 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 33,565 kg (74,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-023:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 37,000 kg (81,572 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 33,565 kg (74,000 lbs)

When modified in accordance with approved Service Bulletin SBF100-51-024:

 Max. Taxi weight:
 38,325 kg (84,500 lbs)

 Max. Take-off weight:
 36,740 kg (81,000 lbs)

 Max. Landing weight:
 36,740 kg (81,000 lbs)

 Max. Zero Fuel weight:
 33,565 kg (74,000 lbs)

Remark: For aircraft in service the Maximum Weights may only be altered on basis of an approved Service Bulletin.

#### 11. C.G. Range

Refer to the approved Airplane Flight Manual for the applicable aircraft serial number.

#### 12. Levelling Means

TCDS No.: EASA.A.037 Fokker F28 Page 29 of 39

Issue: 07 03 September 2018

Two levelling pins are installed on RH side of the nose gear bay for checking the longitudinal level of the aircraft.

Two brackets are installed near the aft wall of the APU compartment for checking the lateral level of the aircraft.

## 13. Minimum Flight Crew

2 (Pilot and Co-pilot).

## 14. Maximum Passenger Seating Capacity

See Chapter III - NOTE 4a and 4b.

## 15. Maximum Baggage

Refer to the appropriate document "Basic Weight and Balance Information".

## 16. Serial Numbers Eligible

11521 - 11528 - 11529 - 11532 - 11536 thru 11541 - 11543 - 11545 - 11547 - 11549 - 11551 - 11553 through 11583, 11585.

TCDS No.: EASA.A.037 Fokker F28 Page 30 of 39

Issue: 07 03 September 2018

## III. Data pertinent to Mark 0100 and 0070

#### 1. Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification.

The approved Airplane Flight Manual issued for the Applicable aircraft serial number.

#### 2. Certification Basis for Model F28 Mark 0100

As detailed in IP G-1 the Certification Basis for the Model F28 Mark 0100 is established as follows:

1 JAR 25 Change 9, dated 30 November 1982, Amendment 83/1 to JAR Change 9 as far as adopting FAR Part 25 Amendment 25-54 and Amendment 86/1 to JAR 25 Change 11, dated 16 June 1986, as far as adopting FAR Part 25 Amendments 25-58, 25-59 and 25-60 except for the following JAR 25 paragraphs for which compliance has been shown with FAR Part 25 with the Amendments as noted:

25.109 Amdt 25-41 25.775(d) Amdt 25-56 (cockpit windows only)

Exemptions: none.

Special Conditions were issued for

- Lightning strike protection from indirect effects in relation to JAR 25.1309(a)(c)(d)(g)
- Thrust reverser loads
- Static ground loads conditions in relation to JAR 25X 519(b)(2)
- Anti-collision light system in relation to JAR 25.1401(b)
- Operation without normal electrical power in relation to JAR 25 ACJ 25.1351(d)
- 2 ICAO Annex 16, Volume I, chapter 3 Amendment 5
- 3 ICAO Annex 16, Volume II
- 4 FAR Part 121 Amendment 121-185
- 5 JAR AWO change 1, dated 27th November 1985 and NPA 25F-160 to JAR 25 and the interpretations laid down in RLD Issue Paper G-5.
- 6 RLD certification criteria for Electronic displays laid down in RLD document LI/LW/85-059 incorporated in Issue Paper E-3.
- 7 Compliance with the optional Ice Protection Requirements as stated in JAR 25.1419 Change 9 has been established.
- 8 Smoke and toxicity requirements as specified in Issue Paper G13.
  From s/n 11390 onwards changed into heat release and smoke requirements as introduced with JAR 25.853 Change 13.

TCDS No.: EASA.A.037 Fokker F28 Page 31 of 39

Issue: 07 03 September 2018

Changes compliant with JAR 25.853 Change 13 including Amendments 90/1, 91/1 and 93/1 or a higher amendment level may be installed on all aircraft serial numbers.

9 Compliance with JAR 25.783 Change 10 has been shown for all doors except the pax door with integral stair.

In addition compliance has been shown with:

- a) FAR 25.791(d) & (d) as amended by Amdt. 25-72.
- b) JAR 25.783 Change 10 for the pax. door with integral stair when modified in acc. with approved Service Bulletin SBF100-52-044 (standard incorporated from s/n 11442 onwards) and approved Service Bulletin SBF100-53-080 (standard incorporated in a/c s/n 11461, 11462, 11470, 11472, 11473, 11496, 11497, 11500, 11503, 11505, 11509, 11511, 11516 and 11518).
- 10 JAR 25 (at Change 13 including Amdt 93/1) paragraph 561, 783(j), 785(a), 785(b), 785(d), 785(h), 785(j), 785(k), 787, 789, 791(a), 791(b) (including FAR 25.791(e) as amended by Amdt. 25-72), 793, 807(d), 809(b)(2), 810(c), 811(a), 811(b), 811(c), 811(d), 811(e)(intro), 811(e)(1), 811(e)(2) (at Change 14, including FAR 25.811(e)(2) as amended by Amdt. 25-79), 811(e)(4), 811(g), 812(b)(1), 812(e), 813, 815, 817 and 851(a)(1) for F28 Mark 0100 a/c equipped with the jetline interior (a/c s/n 11487, 11492 thru 11495, 11497, 11503 and 11509 or modified in accordance with ECR 95533 or ECR 96149).

For the F28 Mark 0100 a/c s/n 11487, 11492 thru 11495, 11497, 11503 and 11509 the cabin safety related items in the interior, including the cabin lay-out, comply with the cabin safety standards and interpretations according to the certification basis as contained in Fokker report FS-28-68.

- 11 CRI H-01 Enhanced Airworthiness Programme for Aeroplane Systems ICA on EWIS.
- 12 For aircraft with an Auxiliary Fuel Tank System according to ECR015347/FS-N606 installed compliance has been demonstrated with CRI C-12: Fuel Tank Crashworthiness.
- 13 For aircraft with an Auxiliary Fuel Tank System according to ECR015347/FS-N606 installed compliance has been demonstrated with CRI E-06: Flammability Risk Reduction Auxiliary Fuel Tank System.
- 14 For aircraft with an GPS-WAAS system according to Service Bulletin SBF100-34-103 installed compliance has been demonstrated with CRI F-20: Installation of GPS-WAAS.
- For aircraft equipped with a reinforced security cockpit door according to Service Bulletin SBF100-52-070 compliance has been demonstrated with CRI D-14: Reinforced Security Cockpit Door.
- 16. For aircraft equipped for operation at high elevation airfields according to Service Bulletin SBF100-21-079 compliance has been demonstrated with CRI D-15: Operation at High Elevation Airfields.
- 17 Compliance has been demonstrated to the following optional requirement: Ditching, FAR § 25.801.
- 18 Compliance has been demonstrated with CRI D-10: On Ground Wing Leading Edge Heating System.
- 19 CRI F-23 Non-rechargeable Lithium Battery Installations (applicable for new installations)

TCDS No.: EASA.A.037 Fokker F28 Page 32 of 39

Issue: 07 03 September 2018

#### 3. Certification Basis for Model F28 Mark 0070

As detailed in CRI A-1 the Certification Basis for the Model F28 Mark 0070 is established as follows:

Based on the differences between the F28 Mark 0070 and the F28 Mark 0100 and taking into account the criteria given in JAA Information Leaflet no. 18, RLD accepts that the F28 Mark 0070 can be considered as a "non-significant major change". This position is contained in RLD letter LI/LW/92.1537 dated February 26, 1992.

Consequently the F28 Mark 0100 certification basis is applicable to the F28 Mark 0070 plus those JAR 25 requirements effective on February 3, 1992 which are directly related to components or areas affected by the change.

Fokker also has to consider those JAA NPA's which are being regarded as safety critical based on general experience.

#### 1 Mandatory Airworthiness Requirements

JAR 25 Change 9, dated 30 November 1982, Amendment 83/1 to JAR Change 9 as far as adopting FAR Part 25 Amendment 25-54 and Amendment 86/1 to JAR 25 Change 11, dated 16 June 1986, as far as adopting FAR Part 25 Amendments 25-58, 25-59 and 25-60 except for the following JAR 25 paragraphs for which compliance has been shown with FAR Part 25 with the Amendments as noted:

FAR 25.775(d) Amdt. 25-56 (cockpit window only) (CRI C-7).

The following paragraphs of JAR 25 Change 13 and Orange Paper 90/1 and 91/1 are applicable to components and area's affected by the change.

Performance JAR 25.101 through JAR 25.125, JAR 25.1587 and JAR 25X1591 as amended

by Special Conditions based on NPA 25.B, D, G-2.44.

Flight Handling JAR 25.143 through JAR 25X261.

Airplane Flight Manual JAR 25.1581 through JAR 25X1591 as amended by Special

Condition based on NPA 25B, D, G-244.

In the following airworthiness requirements and environmental requirements apply:

- JAR AWO Change 1 for autoland operations in low visibility Conditions and Category 2 and Category 3 approaches.
- JAR E Change 7 for engine certification.
- JAR APU Change 2 for APU certification.
- ICAO Annex 16 Volume I, Chapter III Aircraft Noise, third edition 1993.
- ICAO Annex 16 Volume II, Aircraft Engine emissions revised 1988.

## 2 "Elect to Comply" Airworthiness Requirements

Fokker Aircraft B.V. elects to comply with the following JAR 25 paragraphs as per JAR 25 Change 13 including Amendment 90/1, 91/1 and 93/1 (Orange Papers):

JAR 25.020, 021, 023, 025, 027, 029, 031, 365(e), (f) and (g) (for flight deck internal door, all 3 sub paragraphs), 561 (for passenger-, flightdeck- and cargo compartments and the engine mounting), 772, 783, 785, 787, 789, 791 (including FAR 25.791(e) as amended by Amdt. 25-72), 793, 803, 807, 809, 810,

TCDS No.: EASA.A.037 Fokker F28 Page 33 of 39

Issue: 07 03 September 2018

811 (JAR/FAR § 25.811(e)(2) as amended by Change 14 resp. Amdt. 25-79), 812, 813, 815, 817, 851, 853, 854, 855 (CRI D-8), 857 & 869(a).

For the F28 Mark 0070 the cabin safety related items in the interior, including the cabin lay-out, comply with the cabin safety standards and interpretations according to the certification basis as contained in Fokker report FS-28-57.

NPA 25B-215 Stall and Stall warning Speeds and Manoeuvre Capability (CRI B-7).

NPA 25D-162 Landing Gear Warning (also partly equivalent Safety Finding) (CRI D-4).

JAR 25.305(d), 341, 351(b) Gust Requirements (CRI C-8).

FAR 25.801 Ditching

Passengers seats are dynamically tested in accordance with JAR 25.562(b), (c)(4), (c)(7) and (c)(8) at Change 13 (not applicable to floor structure and seat tracks).

- 3 Special Conditions due to Novel or Unusual Design Features
  - JAR 25.201 thru 25.207 Ch. 13 & NPA 25B-154 Stick Pusher System (ref. CRI B-6).
  - NPA 25.1309(a)(c)(d)(g) Lightning Strike Protection Indirect Effects (ref. CRI F-6).
  - JAR 25.1301, 25.1309, RTCA Do 178A / EUROCAE ED 12 A Software Certification (ref. CRI F-9).
  - JAR 25 sections, FAA AC's, 25.4 and 90-45a FMS Certification requirements LNAV (ref. CRI F-12).
  - JAR 25 Ch. 9 JAR AWO Ch. 1 Certification Basis AFCAS (also partly General Experience) (ref. CRI F- 13)
  - LI/LW/85.059 Display Systems (ref. CRI F-11).
  - For aircraft equipped for steep approach and landing operation in accordance with ECR96701 or Service Bulletin SBF100-22-053 compliance has been demonstrated with CRI B-09: Steep Approach and Landing Operation.
  - Compliance has been demonstrated with CRI D-10: On Ground Wing Leading Edge Heating System.
  - CRI F-23 Non-rechargeable Lithium Battery Installations (applicable for new installations)
- 4 Special Conditions Related to General Experience
  - NPA 25B, D, G-244 Accelerate Stop Distance (ref. CRI B-4).
  - JAR 25.365(e) Ch. 9 Pressurized Cabin Loads (ref. CRI C-1).
  - JAR 25.305(d) Ch. 9 Continuous Turbulence, Lateral (ref. CRI C-2).
  - JAR 25.783, NPA 25D-218 rev. 2 Fuselage Doors, Hatches and Exits (ref. CRI D-2).
  - JAR 25.735 / NPA 25B, D, G-244 Braking Performance (ref. CRI B-8 and CRI D-3).
  - JAR 25.729(e) Flap Handle Gates (ref. CRI D-5).
  - JAR 25.1091, 25.1093 Ch. 13 Powerplant Ice Protection (ref. CRI E-4).
  - JAR 25.1431 Protection from External High Intensity Radiated Fields (ref. CRI F-1).
  - JAR 25.1351(d) Operation without Normal Electrical Power (ref. CRI F-5).
  - JAR 25 Ch. 9/JAR AWO Ch. 1 Certification Basis AFCAS (also partly Novel Features (ref. CRI F-13).
  - Enhanced Airworthiness Programme for Aeroplane Systems ICA on EWIS (ref CRI H-01).
  - For aircraft equipped with a reinforced security cockpit door according to Service Bulletin SBF100-52-070 compliance has been demonstrated with CRI D-14: Reinforced Security Cockpit Door.
- 5 Equivalent Safety Findings
  - JAR 25.777(e) Location Flap Control Handle (ref. CRI B-1).

TCDS No.: EASA.A.037 Fokker F28 Page 34 of 39

Issue: 07 03 September 2018

- JAR 25.777(g) Flap Control Knob Shape (ref. CRI B-2).
- JAR 25X519(b)(2) Static Ground Load Conditions (ref. CRI C-5).
- JAR 25.333, 335, 479, 729 Stallings Speeds (ref. CRI C-6).
- JAR 25.729(e) Landing Gear Warning (also partly Elect to comply) (ref. CRI D-4).
- JAR 25.807(d)(1) (at Ch. 13 incl. Amdt 93/1) Maximum Certified Passenger Seating Capacity (MCPSC) (ref. CRI D-9).
- JAR 25.855(c), 25.857(d)(1), 25.857(d)(5) Fire Protection requirements for cargo or baggage compartments (ref. CRI D-8).
- JAR 25.1141(e), 25.863(b)(5), Powerplant Controls (ref. CRI E-1).
- JAR 25A.1459(a) APU Parameters on MFDS (ref. CRI E-2).
- JAR 25.1351(b)(5) Generating Systems (ref. CRI F-2).
- JAR 25.1401(f) Anti Collision Light System (ref. CRI F-8).
- JAR 25.1307(g) Ignition Switches (ref. CRI F-15).

#### 6 Acceptable Means of Compliance

- JAR 25.1419 Flight in Icing conditions (ref. CRI B-3).
- JAR 25.125(a)(9), 1587(b) Landing Field Length Factors (ref. CRI B-5).
- JAR 25.571, 1529 Damage Tolerance Inspections for PSE's with high crack free lives (ref. CRI C-4).
- JAR 25.841(b)(3) Cabin Pressurization control system (ref. CRI D-6).
- JAR 25.901(c), 933(a) Thrust Reverser System (ref. CRI E-3).
- JAR 25.145(a)(5) Flight Data Recorder (ref. CRI F-3).
- JAR 25.1457(d)(2) Cockpit Voice Recorder (CVR) (ref. CRI F-4).
- JAR 25.X899 Lightning Discharge Protection (ref. CRI F-7).
- Certification Maintenance Requirements (CMR) (ref. CRI G-1).
- JAR 25.1301, 1309 Modified Menasco MLG (CRI F-14).
- Compliance has been demonstrated with CRI F-17: Flight Management Computer System VNAV
- For aircraft with an GPS-WAAS system according to Service Bulletin SBF100-34-103 installed compliance has been demonstrated with CRI F-20: Installation of GPS-WAAS.
- For aircraft with a Wireless Local Area Network (WLAN) system installed compliance has been demonstrated with CRI F-21: Wireless Local Area Network.

#### 4. Operational Suitability Requirements and Data for Model F28 Mark 0070 and 0100

a. Master Minimum Equipment List (MMEL)

The applicable requirements for MMEL are defined in CRI A-MMEL issue 3.

The MMEL approved following the catch-up process using the above requirements is:

"EASA Master Minimum Equipment List, Fokker 70/Fokker 100, Revision Jul 15, 2016", Fokker Services B.V. Engineering Report N°. MMEL-FOKKER100-EASA, issue 1,

or later EASA approved revision.

b. Flight Crew Data (FCD)

Not applicable.

c. Cabin Crew Data (CCD)

Not applicable.

TCDS No.: EASA.A.037 Fokker F28 Page 35 of 39

Issue: 07 03 September 2018

d. Simulator Data (SIMD)

Not applicable.

e. Maintenance Certifying Staff Data (MCSD)

Not applicable.

#### 5. 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. Unusable Fuel

The highest level of the unusable fuel is the level prescribed by the critical flight conditions as defined in JAR 25.959 and must be included in the aircraft empty weight.

Mark 0100 For aircraft with the standard fuel systems (incl. center wing bag tanks):

Unusable drainable: 50.1 ltr (13.2 US Gal)
Unusable undrainable: 59.3 ltr (15.7 US Gal)
Total: 109.4 ltr (28.9 US Gal)

For aircraft with the optional integral center wing tank:

Unusable drainable: 45.1 ltr (11.9 US Gal)
Unusable undrainable: 49.3 ltr (13.0 US Gal)
Total: 94.4 ltr (24.9 US Gal)

For aircraft with the standard fuel systems (incl. center wing bag tanks) and auxiliary fuel tank system:

Unusable drainable: 51.1 ltr (13.5 US Gal)
Unusable undrainable: 89.3 ltr (23.6 US Gal)
Total: 140.4 ltr (37.1 US Gal)

Mark 0070 For aircraft with the standard fuel system:

Unusable drainable: 44.1 ltr (11.7 US Gal)
Unusable undrainable: 41.6 ltr (11.0 US Gal)
Total: 85.7 ltr (22.6 US Gal)

For aircraft with the optional integral centerwing tank:

Unusable drainable: 45.1 ltr (11.7 US Gal)
Unusable undrainable: 46.3 ltr (12.2 US Gal)
Total: 91.4 ltr (24.2 US Gal)

TCDS No.: EASA.A.037 Fokker F28 Page 36 of 39

Issue: 07

NOTE: 2

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 in accordance with the applicable Fokker drawings as follows:

03 September 2018

Mark 0100

Interior placards: drawings D93200 thru D93399Exterior placards: drawings D85500 thru D85699

Cockpit placards: T.N. F28-61-037

Mark 0070

Interior placards: D932\*\*-(\*)
Exterior placards: D855\*\*-(\*)
Cockpit placards T.N. F28-61-037

NOTE: 3

In order to meet the certification requirements for continued airworthiness of the aircraft, certain maintenance requirements are classified as MANDATORY and identified as indicated:

- Certification Maintenance Requirements (CMRs): report SE-473.
- Airworthiness Limitation Items (ALIs) and Safe Life Items (SLIs): report SE-623
- Fuel Airworthiness Limitation Items (ALIs) and Critical Deisgn Configuration Control Limitations (CDCCLs): report SE-672.

All three reports SE-473, SE-623 and SE-672 are referred to in the Maintenance Review Board (MRB) document, Section 06, Appendix 1 "Airworthiness Limitations' and together constitute the Airworthiness Limitations Section.

The life limited components must be replaced as indicated in the above mentioned documents and revisions thereto. The inspections must be conducted in accordance with the above mentioned documents and revisions thereto.

- Applicable Airworthiness Directives issued by RLD / CAA-NL / EASA.

Further information essential to the proper maintenance of the aircraft is provided in:

- Maintenance Manual (MM);
- Maintenance Planning Document (MPD);
- Maintenance Review Board (MRB) document approved;
- Structural Repair Manual (SRM) approved;
- Service Bulletins (approved);
- Service Letters (SL);
- Special Instructions (SI) approved.

NOTE: 4

Mark 0100/0070

a. For the standard F28 Mark 0100 interior configuration the maximum number of passenger seating capacity demonstrated for emergency evacuation is 109. For the configuration with the additional left hand rear S/E door it is 122. For the approved interior lay-out refer to Fokker drawings D85001 thru D85157, TCDS No.: EASA.A.037 Fokker F28 Page 37 of 39 03 September 2018

Issue: 07

W85031, W85032 and W98251 as applicable for each aircraft when delivered.

Mark 0070

b. For the F28 Mark 0070 the maximum number of passenger seating capacity demonstrated for emergency evacuation is 85. For the approved interior lay-out refer to Fokker drawings D85060 thru D85157 as applicable for each aircraft when delivered.

(Reserved) c.

Mark 0100

d. For a maximum passenger seating configuration of 100 passengers, compliance with the evacuation requirements of JAR 25.803 has been demonstrated with two cabin attendants. For a maximum passenger seating configuration of 109 or 122 passengers (see Note 4a. above), compliance with the evacuation requirements of JAR 25.803 has been demonstrated with three cabin attendants.

TCDS No.: EASA.A.037 Fokker F28 Page 38 of 39

Issue: 07 03 September 2018

# **SECTION 4: ADMINISTRATIVE**

# I. Acronyms and Abbreviations

AC	Advisory Circular		
AFM	Airplane Flight Manual		
ALI	Airworthiness Limitation Item		
APU	Auxiliary Power Unit		
AWO	All Weather Operations		
CDCCL	Critical Design Configuration Control Limitation		
CG	Center of Gravity		
CMR	Certification Maintenance Requirement		
CRI	Certification Review Item		
EASA	European Aviation Safety Agency		
EWIS	Electrical Wiring Interconnection System		
FAA	Federal Aviation Administration		
FAR	Federal Aviation Regulation		
ICA	Instruction for Continuous Airworthiness		
ICAO	International Civil Aviation Organization		
JAA	Joint Aviation Authorities		
JAR	Joint Aviation Requirements		
MCPSC	Maximum Certified Passenger Seating Capacity		
MLG	Main Landing Gear		
MLW	Maximum Landing Weight		
MM	Maintenance Manual		
MPD	Maintenance Planning Document		
MRB	Maintenance Review Board		
MTOW	Maximum Take-Off Weight		
NPA	Notice for Proposed Amendment		
PSE	Principal Structural Element		
SB	Service Bulletin		
SI	Special Instruction		
SL	Service Letter		
SRM	Structural Repair Manual		
TCDS	Type Certificate Data Sheet		

# **II. Type Certificate Holder Record**

Fokker Services B.V. Hoeksteen 40 2132 MS Hoofddorp The Netherlands

# **III. Change Record**

Issue	Date	Changes
Issue 01	20 May 2005	Original issue (see Note in Section 1)
Issue 02	20 May 2005	Corrected paragraph numbering (editorial).
Issue 03	19 April 2011	Several corrections. Added recently issued CRIs, including reference to ICA for EWIS. Clarified number of cabin attendants present at evacuation demonstrations for Mark 0100. Clarified revision level of JAR 25.853 used for Marks 0100 and 0070.
Issue 04	22 August 2013	Change of address of the TC holder; Addition of CRI on WLAN for the F28 Mark 0070; Editorial corrections to the lead-in paragraphs of the Certification Basis of the F28 Mark 0100 & 0070.
Issue 05	30 September 2014	Change Note 2 in section 1 – General.  Addition of approved weight configurations in Section 3,  Chapters I & II, paragraph 10, for F28 Mark 0070 and Mark 0100.  Change Note 3 in Section 3 Chapter III.
Issue 06	15 July 2016	Add paragraph 4 of Section 3 Chapter III: Operational Suitability Requirements and Data for Model F28 Mark 0070 and 0100. Editorial change in paragraph 12 of Section 2 Chapter VI: Certification Basis.
Issue 07	03 September 2018	Converted to new template.  Added explicit reference to the Issue Paper IP G-1 (at page 30) and Certification Review Item CRI A-1 (at page 32), establishing the certification basis for the F28 Mk 0100 and F27 Mk 0070 respectively.  Added recently issued CRI F-23 Non-rechargeable Lithium Battery Installations.