



**Havarikommisjonen**  
Accident Investigation Board Denmark

**Bulletin 2023-339**



**Accident to N44WN (Daher TBM 900) in Narsarsuaq (BGBW) on 17-6-2023.**

**ISSUED OCTOBER 2023**

# INTRODUCTION

This bulletin reflects the opinion of the Danish Accident Investigation Board regarding the circumstances of the occurrence and its causes and consequences.

In accordance with the provisions of EU Regulation 996/2010, the Danish Air Navigation Act and pursuant to Annex 13 of the International Civil Aviation Convention, the safety investigation is of an exclusively technical and operational nature, and its objective is not the assignment of blame or liability.

The safety investigation was carried out without having necessarily used legal evidence procedures and with no other basic aim than preventing future accidents and serious incidents.

Consequently, any use of this bulletin for purposes other than preventing future accidents and serious incidents may lead to erroneous or misleading interpretations.

A reprint with source reference may be published without specific permission.

# CONTENTS

<b>GENERAL .....</b>	<b>5</b>
<b>SYNOPSIS .....</b>	<b>6</b>
<b>FACTUAL INFORMATION .....</b>	<b>7</b>
History of flight.....	7
Injuries to persons .....	8
Damage to aircraft.....	8
Other damage .....	11
Personal information .....	11
License and medical certificate.....	11
Flying experience.....	11
Aerodrome familiarity .....	11
Pilot fatigue.....	11
Aircraft information .....	11
General information.....	11
Mass and balance .....	11
Pilot's Operating Handbook (POH) (extraxt) .....	13
Meteorological information.....	13
Terminal Aerodrome Forecast (TAF).....	13
Aviation Routine Weather Report (METAR).....	13
Communication .....	13
Aerodrome information.....	14
General information.....	14
Aeronautical Information Publication (AIP) Greenland.....	14
Available aeronautical navigation charts .....	14
Non-published aerodrome declared distances.....	14
Aerodrome fence.....	14
Accident site.....	15
Operational safety investigation.....	15
<b>ANALYSIS.....</b>	<b>16</b>
General .....	16
Take-off on runway 06 .....	16
Situational awareness.....	16
Take-off on runway 06.....	16

Threat and error management .....	17
<b>CONCLUSIONS.....</b>	<b>18</b>
Summary .....	18
<b>APPENDIX 1 .....</b>	<b>19</b>
<b>APPENDIX 2 .....</b>	<b>22</b>
<b>APPENDIX 3 .....</b>	<b>25</b>
<b>APPENDIX 4 .....</b>	<b>26</b>
<b>APPENDIX 5 .....</b>	<b>27</b>
<b>APPENDIX 6 .....</b>	<b>28</b>
<b>APPENDIX 7 .....</b>	<b>29</b>
<b>APPENDIX 8 .....</b>	<b>30</b>
<b>APPENDIX 9 .....</b>	<b>31</b>

**GENERAL**

State file number:	2023-339
UTC date:	17-6-2023
UTC time:	18:26
Occurrence class:	Accident
Location:	Narsarsuaq (BGBW)
Injury level:	None
Aircraft registration:	N44WN
Aircraft make/model:	Daher TBM 900
Current flight rules:	Instrument Flight Rules (IFR)
Operation type:	Private
Flight phase:	Take off
Aircraft category:	Fixed wing
Last departure point:	BGBW
Planned destination:	Reykjavik (BIRK)
Aircraft damage:	Substantial
Engine make/model:	1 x Pratt and Whitney PT6A-66D

**SYNOPSIS****Notification**

All time references in this bulletin are Coordinated Universal Time (UTC).

The Safety Investigation Authority of Iceland (RNSA) notified the Aviation Unit of the Danish Accident Investigation Board (AIB) of the accident on 19-6-2023 at 12:00 hours (hrs).

The AIB notified the Danish Civil Aviation and Railway Authority (DCARA), the US National Transportation Safety Board (NTSB), the French Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (BEA), the European Aviation Safety Agency (EASA), and the Directorate-General for Mobility and Transport (DG MOVE) on 19-6-2023 at 20:16 hrs.

The AIB notified the International Civil Aviation Organisation (ICAO) on 23-6-2023 at 05:47 hrs.

**Summary**

Deviations from Standard Operating Procedures (SOP) combined with tailwind prolonged the ground roll distance and led to an overrun into an area with gravel and rocks causing substantial damages to the aircraft.

The accident occurred in daylight and under Visual Meteorological Conditions (VMC).

## FACTUAL INFORMATION

### History of flight

The accident occurred during a private IFR flight from Narsarsuaq (BGBW) to Reykjavik (BIRK).

At the time of the accident, two Aerodrome Flight Information Service (AFIS) operators were on duty in the AFIS tower.

Shortly before engine start, the AFIS operator informed the pilot that runway 06 was in use. However, the pilot could expect runway 24 for departure.

The reported wind was 260° magnetic 9 knots (kt), and the QNH was 1016 Hectopascal (hPa).

The pilot read back the information about runway 24 for departure and the QNH.

Upon a short talk on the radio about when to expect an Air Traffic Control clearance, the pilot reported ready for departure.

The AFIS operator reported, “There is no reported traffic runway 24. The wind 270 magnetic 9 kt.”

Furthermore, the AFIS operator informed about inbound traffic from the north “Estimating NA (Non-directional radio Beacon (359 kilohertz) near BGBW) at time 18:54 will be descending out of flight level 270”, and “A Diamond (the AIB removed the aircraft registration) on the apron here will be starting up shortly towards Reykjavik as well climbing flight level 150.”

The pilot read back, “Taxiing to runway departing 24 from Alpha.”

It was the perception of the pilot that the traffic situation in the area required a departure from runway 06 and initiated a rolling take-off on runway 06.

The AFIS operators observed the aircraft entering the runway via taxiway Alpha and making a right turn. The AFIS operators expected the pilot to backtrack in order to line up on runway 24. However, at first, they considered the taxi speed on the runway to be high, but then suddenly and to their surprise the aircraft accelerated.

During the ground roll shortly before aircraft rotation, the pilot perceived an object “maybe a log” on the runway. The pilot immediately rotated and heard a “bump”. At that point, it was the opinion of the pilot that one of the main wheel tires collided with the object.

The AFIS operators observed the aircraft rotating, descending below the elevation of the runway, and then disappearing from their line of sight. When initiating the first step for an emergency alert, they observed the aircraft in a climbing turn.

Upon collision with the object, the pilot focussed on maintaining control and damage evaluation. To the pilot, there were no damages to the aircraft, and the pilot decided to continue the flight toward BIRK.

The AFIS operator asked the pilot, if everything was okay. The pilot confirmed.

The flight uneventfully continued toward BIRK.

Upon landing in BIRK, aerodrome ground personnel observed fuel spots on a taxiway and traced the source to be N44WN.

**Injuries to persons**

<i>Injuries</i>	<i>Crew</i>	<i>Passengers</i>	<i>Others</i>
Fatal			
Serious			
None	1		

**Damage to aircraft**

The accident led to substantial damages to the left hand wing structure.

- The left hand wing inboard lower skin had multiple areas of deformation between ribs N1-N8 (damages no. 1, 2, 3, and 4).
- The left hand wing rib N5 forward and aft sections were deformed (damage no. 8).
- The forward section of rib N5 was damaged from skin deformation at damage no. 4 and had sheared rivets heads causing a fuel leakage.
- The left hand wing inboard leading edge spar had deformations (damages no. 5, 6, and 7).

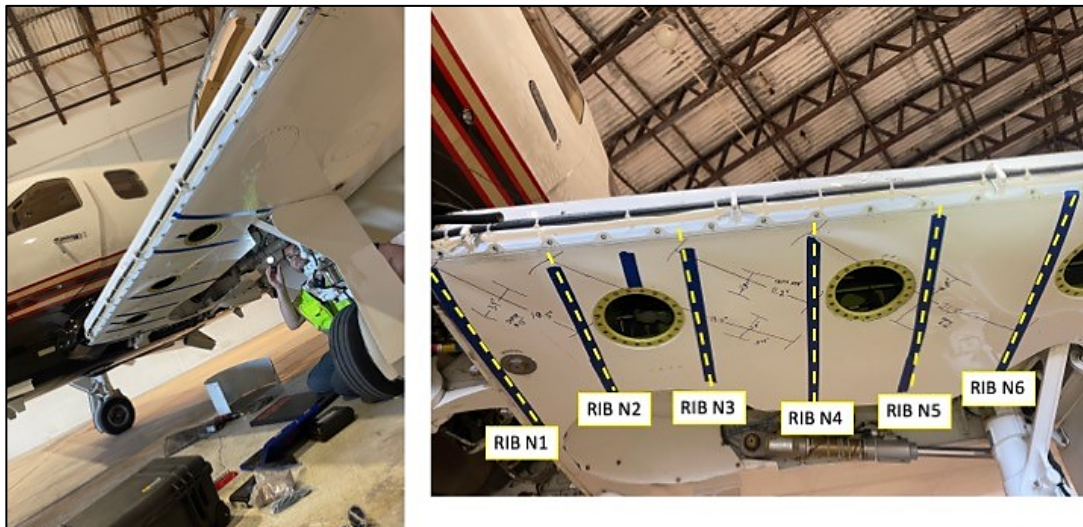


Figure 1. Damages to the left hand wing structure.



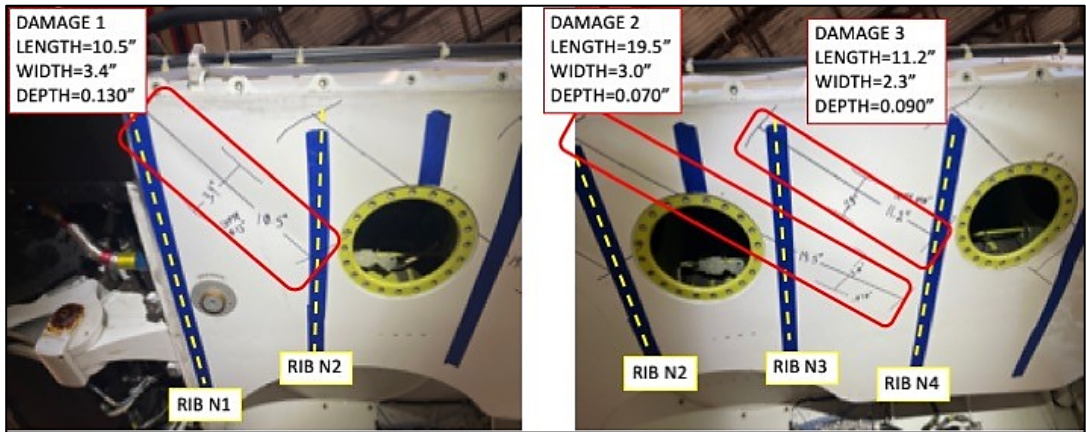


Figure 2. Damages to the left hand wing structure.

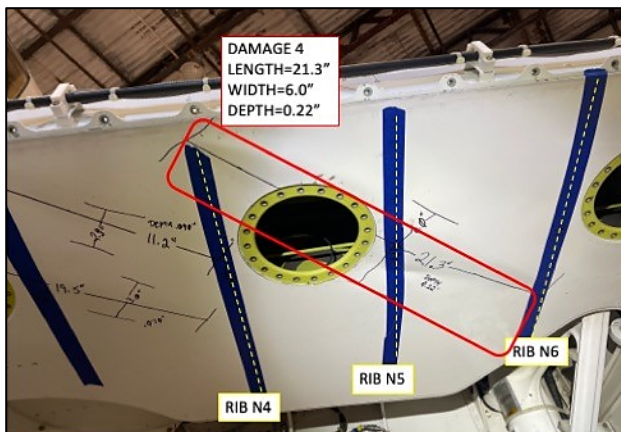


Figure 3. Damages to the left hand wing structure.

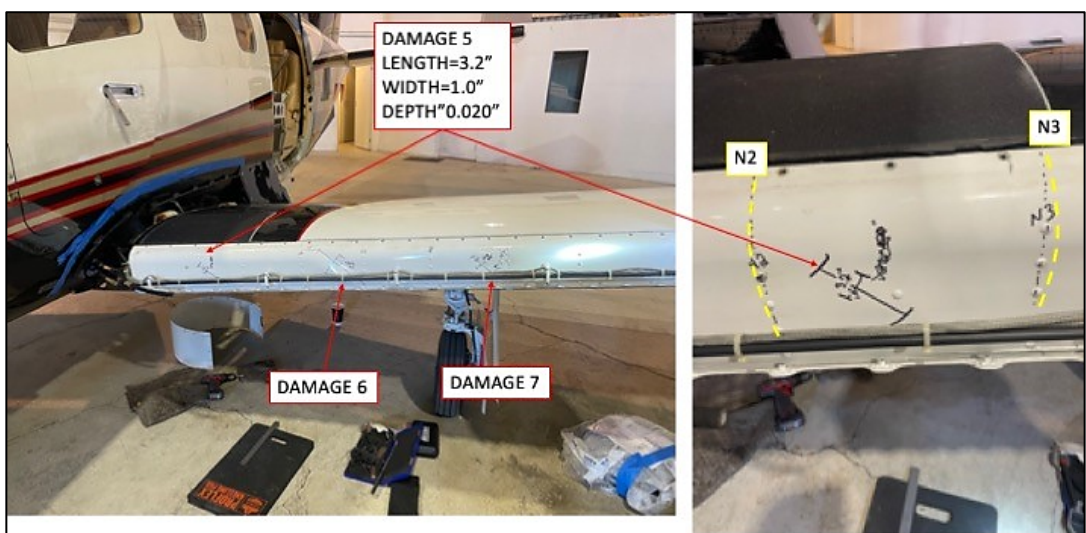


Figure 4. Damages to the left hand wing structure.

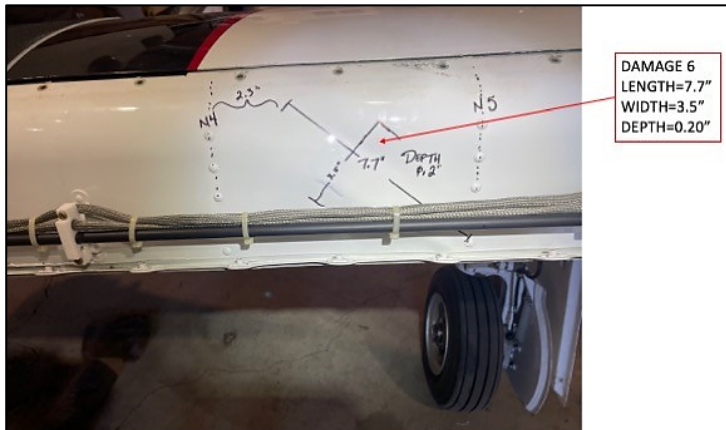


Figure 5. Damages to the left hand wing structure.

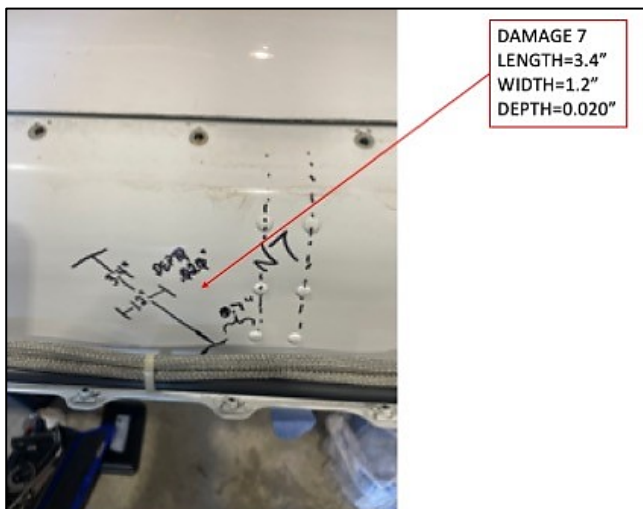


Figure 6. Damages to the left hand wing structure.



Figure 7. Damages to the left hand wing structure.

**Other damage**

None.

**Personal information**

The pilot did not provide all AIB requested pilot documentation.

License and medical certificate

The pilot – male, 57 years – was the holder of an US Private Pilot License PPL (A), an instrument rating, and a TBM type rating (pilot information).

Flying experience

	Last 24 hours	Last 90 days	Total
All types	-	-	5800
This type	-	-	3000
Landings this type	-	-	-

Aerodrome familiarity

For the pilot, it was the twenty-first Atlantic crossing. For Atlantic crossings, the pilot, almost every time, made a fuel stop in BGBW (except for bad weather conditions in BGBW).

For that reason, the pilot felt quite familiar with the surroundings of and the runway system in BGBW.

Pilot fatigue

Before the flight, the pilot felt at ease and well rested.

**Aircraft information**General information

Manufacturer:	Daher Aerospace
Type:	TBM 900
Serial number:	1,064
Latest annual inspection:	19-5-2023
Engine manufacturer:	Pratt and Whitney
Engine type:	PT6A-66D
Propeller manufacturer:	Hartzell
Propeller type:	HC-E5N-3C/NC8834K
Maximum take-off mass (MTOM):	7,394 pounds (lbs)/3,354 kilos (kg)
Fuel on board at take-off:	292 US gallons (USG) (usable)
Technical status before the accident:	The pilot experienced no technical deficiencies

Mass and balance

The AIB made a theoretical mass and balance calculation based on:

- The latest aircraft weighing report issued on 5-3-2021
- pilot supplied information about onboard fuel
- an AIB estimate of pilot mass

- an AIB estimate of masses of pilot informed onboard baggage (survival equipment)
- one USG of jet fuel equals 6.7 lbs.

<u>Description</u>	<u>Masses (lbs)</u>	<u>Arm (in)</u>	<u>Moment (lbs/in)</u>
Empty mass	4,760.6	187.62	893,183.77
Front seats	187.00	178.50	33,379.50
Inter. seats	55.00	224.80	12,364.00
Rear bench/net	55.00	267.10	14,690.50
Baggage forward	0.00	128.00	0.00
Baggage aft	0.00	303.00	0.00
Zero fuel mass	5,057.60	188.55	953,617.77
Fuel	1,956.40	189.90	371,520.36
Taxi fuel	- 36.00	189.90	-6,836.40
Take-off mass	6,978.00	188.92	1,318,301.73

Factual information

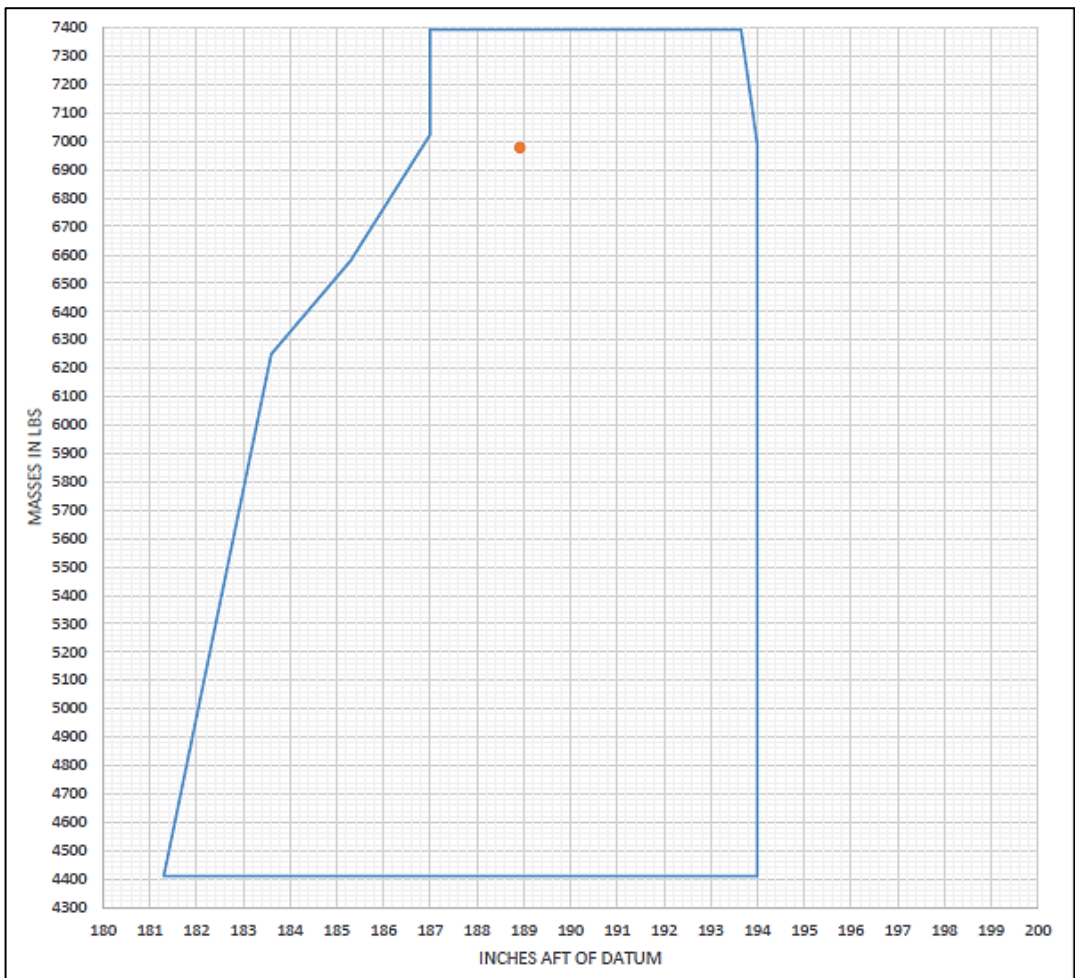


Figure 8. Mass and balance chart.

### Pilot's Operating Handbook (POH) (extract)

From the aircraft manufacturer, the AIB obtained a POH valid for N44WN.

Approval Number: EASA.21J.013 20068 T/N-DOA.

Date: March 16, 2020.

#### a. General (section 1).

Three view drawing (extract)

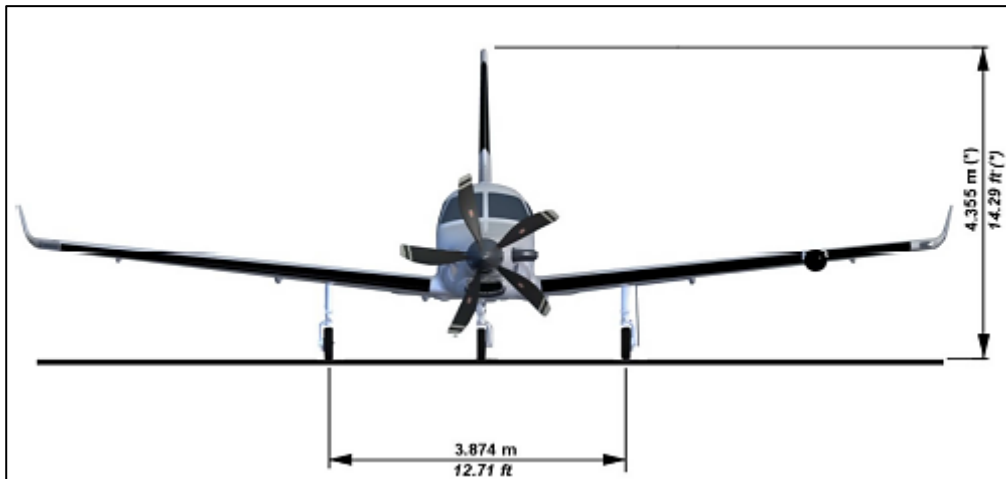


Figure 9. Three view drawing of the aircraft.

#### b. Normal procedures (section 4).

Short take-off – [see appendix 1](#).

#### c. Performance (section 5).

Take-off distances (extract) – [see appendix 2](#).

### **Meteorological information**

#### Terminal Aerodrome Forecast (TAF)

TAF BGBW 171415Z 1715/1723 25006KT 9999 FEW040 SCT200=

TAF BGBW 171705Z 1718/1723 23006KT 9999 FEW050 SCT200=

TAF BGBW 172029Z NIL=

#### Aviation Routine Weather Report (METAR)

METAR BGBW 171750Z 24010KT 9999 FEW055 15/04 Q1016=

METAR BGBW 171850Z 24010KT 210V270 9999 FEW060 16/04 Q1016=

### **Communication**

The pilot was in radio contact with Narsarsuaq AFIS (119.100 Megahertz).

The AIB obtained the relevant AFIS voice recording. The quality of the voice recording was not optimum, however it was useful to the AIB safety investigation.

## Aerodrome information

### General information

Aerodrome Reference Point:	61 09 38.59N 045 25 32.43W
Elevation:	112 feet (ft)
Runway directions:	06 (040.3° GEO/061.3° MAG) 24 (220.3° GEO/241.3° MAG)
Runway dimensions	1830 meter (m) x 45 m
Runway surface:	Concrete

### Aeronautical Information Publication (AIP) Greenland

Extracts for BGBW.

- a. ICAO aerodrome chart – [see appendix 3](#).
- b. Characteristics and declared distances – [see appendix 4](#).

### Available aeronautical navigation charts

For the flights to and from BGBW, the pilot used aeronautical navigation charts published by a private aeronautical information provider.

Aerodrome chart for BGBW – [see appendix 5](#).

### Non-published aerodrome declared distances

[See appendix 6](#).

### Aerodrome fence

Beyond the runway end to runway 06 and below the elevation of the runway, a surrounding aerodrome fence crossed the area, perpendicularly to the runway direction,



Figure 10. Aerodrome fence beyond the runway end to runway 06.

[See appendix 7](#).

Note. The blue marking represents the aerodrome fence.

### Accident site

Upon notification to the AIB, the AIB requested an inspection of the area between the runway system and the aerodrome fence and an inspection of the area in direct vicinity and just outside the aerodrome fence.

This inspection revealed main wheel tracks 81 m northeast of the threshold lights to runway 24.

The main wheel tracks area consisted of gravel, rocks, and low vegetation.

[See appendix 7.](#)

Note. The red circle represents the position of the accident site.

Measurements of the main wheel tracks – [see appendix 8.](#)

The main wheel tracks (a distance of 3.90 m between the main wheels) were consistent with the POH presented distance between the main wheels (3.874 m).

### Operational safety investigation

#### a. Runway inspection in BGBW.

Immediately upon the occurrence, aerodrome ground personnel made a runway inspection.

The runway inspection did not reveal any Foreign Object Debris (FOD) neither on nor near the runway.

Furthermore, the threshold lights to runway 24 and the aerodrome fence had no damages.

#### b. Pilot calculations of ground roll and take-off distances.

Based on previous flights from BGBW, the pilot had experience with departures on runway 06 from position Alpha and previously made computerized take-off performance calculations. However, for this departure on runway 06, the pilot did not make any take-off performance calculations.

#### c. AIB performance calculations of ground roll and take-off distances.

Conditions:

- Short take-off procedure.
- POH take-off performance data.
- Linear interpolation and rounding of numeric values to nearest higher value.
- Take-off mass of 6,978 lbs.
- Outside temperature +15° Celsius (BGBW).
- QNH at sea level 1016 hPa (BGBW).
- Aerodrome elevation 112 ft (BGBW).
- 1 hPa equals 30 ft.
- At the time of the accident, Pressure Altitude (PA) equalled 22 ft, but for these performance calculations, the AIB set the PA to 0 ft.
- Flap setting take-off.
- Wind in BGBW at departure 270° magnetic 9 kt.
- Hard, dry, and level runway.

[See appendix 9.](#)

## ANALYSIS

### General

The aircraft technical status had no influence on the sequence of events.

The mass and balance was within prescribed manufacturer limitations.

Before the flight, the pilot felt at ease and well rested. To the AIB, fatigue had no influence on the sequence of events.

The pilot was an experienced TBM 900 pilot and had flying experience with operations to and from BGBW.

### Take-off on runway 06

#### Situational awareness

Radio communication between Narsarsuaq AFIS and the pilot combined with the actual wind conditions stipulated a take-off on runway 24.

To the pilot, the perceived traffic situation in the area required a take-off on runway 06, and the pilot made a rolling take-off from position Alpha.

The AIB does not consider the traffic situation in the area neither to be threatening nor conflicting for a take-off on runway 24.

Taking into consideration the radio communication versus the actual sequence of events, two independent scenarios might have happened:

1. The pilot mixed up runway directions and associated Take-off Run Available (TORA)/Take-off Distance Available (TODA).
2. The pilot perceived traffic situation mentally blocked the potential risks of a short take-off in tailwind, a rolling versus a static take-off, and no take-off performance calculations.

Beyond the threshold to runway 24, the surface with chevron markings and subsequent gravel, rocks, and low vegetation might have provoked a visual illusion of a longer available runway distance.

This illusion likely supported pilot perception and belief that the aircraft throughout the ground roll sequence was within the runway system and collided with “a log” on the runway.

#### Take-off on runway 06

There were no published aerodrome intersection take-off positions. For that reason, no published aerodrome declared distances were available for positions Alpha and Bravo.

The non-published aerodrome declared distance from position Alpha to the runway end of runway 06 was 530 m. The calculated required ground roll distance for the actual take-off on runway 06 in an 8 kt tailwind was 559 m.

To the AIB, the projection of pilot previous flying experiences in BGBW and previously computerized take-off performance calculations for runway 06 onto the actual take-off from position Alpha likely induced complacency and was a latent flight safety risk.

Deviations from SOP (including take-off performance calculations and short take-off procedure) combined with tailwind prolonged the ground roll distance and led to an



overrun into an area with gravel and rocks 611 m northeast of position Alpha causing substantial damages to the aircraft.

The AIB questions the decision-making process on continuing the flight, because any ground collision might cause non-observable damages to the aircraft leading to later and potentially irreversible impact.

Threat and error management

Latent threats most likely reduced the decision-making competence of the pilot and unknowingly provoked a decision on taking off under marginal conditions.

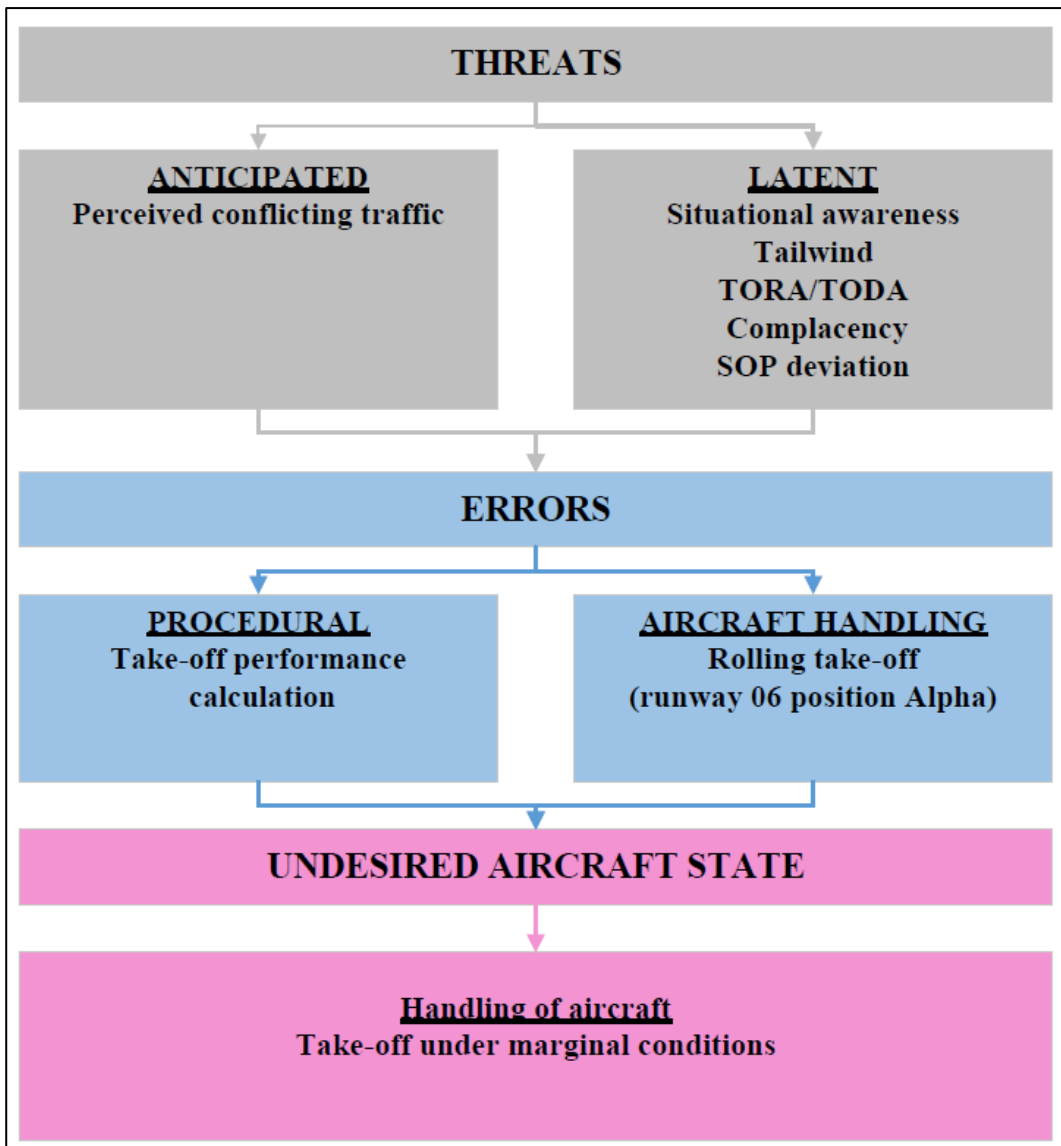


Figure 11. Threat and error management.

## CONCLUSIONS


### Summary

Deviations from SOP combined with tailwind prolonged the ground roll distance and led to an overrun into an area with gravel and rocks causing substantial damages to the aircraft.

APPENDIX 1

[Return to POH](#)

Appendix 1



**TBM**  
*900*

Pilot's Operating Handbook

Section 4  
Normal procedures  
*EASA Approved*

Short takeoff
1/3

*When lined up, on brakes :*

▲ **CAUTION** ▲

If heavy precipitation, turn IGNITION and INERT SEP switches to ON.  
If icing conditions are foreseen, refer to chapter 4.5, paragraph Flight into known icing conditions.

▲

- 1 - ADI / HSI / headings ..... Check
- 2 - Horizon ..... Check attitude ≈ + 2°
 

● NOTE ●

Horizon has been set so as to indicate a 2° nose up attitude, when airplane center of gravity is at a middle average.

●
- 3 - HSI - Heading - Stand-by compass ..... Check
 

● NOTE ●

The indication of the stand-by compass is disturbed when windshield deice systems are activated.

●
- 4 - OFF/TAXI/LDG switch ..... LDG
- 5 - Engine instruments ..... Check  
ITT in green sector
- 6 - CAS display ..... Check  
All messages OFF, except **IGNITION** and **INERT SEP ON**, if used
- 7 - Apply brakes and increase power.
- 8 - PROP RPM ..... Check green sector
- 9 - TRQ ..... 100 %

*Continue ►*

[Return to POH](#)

Appendix 1

Section 4  
Normal procedures  
EASA Approved

**TBM**  
**900**  
Pilot's Operating Handbook

Short takeoff
2/3

► *Continuing*

10 - Brakes ..... Release

• NOTE •

On short runway, maximum torque will be applied before brakes release.

•

11 - Rotation airspeed

*Weight < 6579 lbs (2984 kg) :*

12 - Attitude ..... 15° Up

*Weight > 6579 lbs (2984 kg) :*

13 - Attitude ..... 12.5° Up

*When vertical speed is positive :*

14 - Brakes ..... Apply Briefly

15 - LANDING GEAR lever ..... UP  
Airspeed < 150 KIAS

• NOTE •

During the sequence :

- The amber caution light flashes. It indicates that the landing gear pump is running. It goes off when the 3 landing gears are up locked. GEAR UNSAFE red warning light ON and **GEAR UNSAFE** indicate an anomaly (refer to chapter 3.7 Emergency procedures).
- It is possible that the 3 landing gear position green indicator lights flash unevenly then go off at the end of the sequence.

•

16 - GEAR UNSAFE red warning light  
and **GEAR UNSAFE** ..... Check OFF  
At the end of the sequence

*Continue ►*

[Return to POH](#)

Appendix 1

<b>TBM</b> <i>900</i> Pilot's Operating Handbook	Section 4 Normal procedures <i>EASA Approved</i>
Short takeoff <span style="float: right;">3/3</span>	
▶ <i>Continuing</i>	
<i>In case of initial climb at Vx :</i>	
<b>▲ WARNING ▲</b>	
<b>It is recommended not to retract FLAPS to UP before 500 ft AGL.</b>	
▲	
17 - Airspeed .....	100 KIAS
<i>When airspeed above 115 KIAS :</i>	
18 - FLAPS lever .....	UP
<i>End of procedure.</i>	

**APPENDIX 2**[Return to POH](#)

**TBM**  
**900**

Pilot's Operating Handbook

**5.9 - Takeoff distances**

The following tables give the takeoff distances for several weight configurations. All common information applicable to tables (pages 5.9.2 to 5.9.4) are listed below.

Associated conditions :

- Landing gear DN and flaps TO
- TRQ = 100 %
- BLEED switch on AUTO
- Hard, dry and level runway

In table headings :

- GR = Ground roll (in ft)
- D<sub>50</sub> = Takeoff distance (clear to 50 ft) (in ft)

● NOTE ●

Between ISA + 30°C and ISA + 37°C, it may be necessary to cut-off the BLEED in order to set TRQ = 100 % during takeoff while respecting the engine limitations. In this case, reduce power after takeoff to set the BLEED switch to AUTO.

In SL ISA conditions, nominal N<sub>p</sub> is of 1985 RPM.

●

Corrections :

- In case of wind, apply the following corrections :
  - Reduce total distances by 10 % every 10 kts of headwind
  - Increase total distances by 30 % every 10 kts of tail wind
- Other runway surfaces :
 

Takeoff distances given in the tables are for takeoff from hard, dry and level runway. Other runway surfaces require the following correction factors.


Increase distances by :

  - 7 % on hard grass
  - 10 % on short grass
  - 15 % on wet runway
  - 25 % on high grass
  - 30 % on slippery runway

Section 5  
Performance  
*EASA Approved*

[Return to POH](#)

Appendix 2



**Pilot's Operating Handbook**

**Weight : 6579 lbs (2984 kg)**

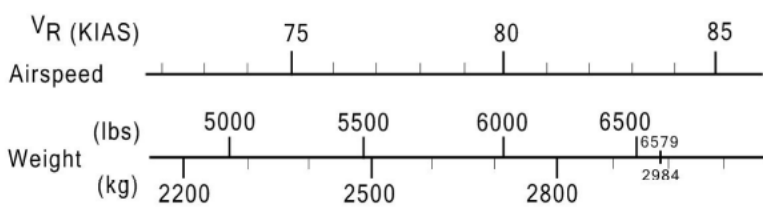
Associated condition :

- 15° of attitude after rotation
- Rotation speed choice (V<sub>R</sub>)

Section 5  
Performance  
EASA Approved

14010000AAAJMA8000



Weight : 6579 lbs (2984 kg) At 50 ft = 94 KIAS - 108 MPH IAS								
Pressure altitude ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1020	1470	1115	1600	1185	1680	1245	1765
2000	1115	1595	1220	1730	1285	1820	1355	1915
4000	1215	1725	1325	1875	1400	1975	1475	2075
6000	1320	1865	1445	2030	1545	2160	1645	2305
8000	1435	2020	1600	2240	1715	2400	1850	2570
Pressure altitude ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1310	1855	1375	1940	1440	2030	1490	2090
2000	1425	2010	1500	2110	1595	2235	1660	2320
4000	1580	2205	1675	2345	1790	2485	1865	2590
6000	1755	2455	1880	2615	2005	2780	2095	2895
8000	1980	2745	2115	2925	2275	3110	2380	3245

Figure 5.9.2 - Takeoff distances - 6579 lbs (2984 kg)


▲ CAUTION ▲

Refer to page 5.9.1 for notes and correction factors.

▲

[Return to POH](#)

Section 5  
Performance  
EASA Approved

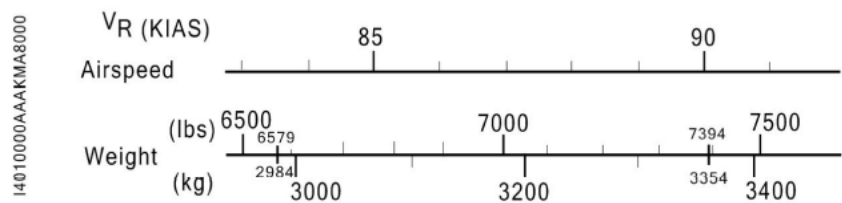


Pilot's Operating Handbook

**Weight : 7394 lbs (3354 kg)**

Associated condition :

- 12°5 of attitude after rotation
- Rotation speed choice (V<sub>R</sub>)



Weight : 7394 lbs (3354 kg) At 50 ft = 99 KIAS - 114 MPH IAS								
Pressure altitude ft	ISA - 35°C		ISA - 20°C		ISA - 10°C		ISA	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1440	2020	1560	2175	1645	2275	1725	2380
2000	1555	2170	1690	2335	1770	2445	1860	2560
4000	1685	2325	1820	2505	1910	2630	2045	2785
6000	1810	2500	1970	2710	2130	2930	2290	3135
8000	1960	2695	2220	3045	2410	3265	2590	3490
Pressure altitude ft	ISA + 10°C		ISA + 20°C		ISA + 30°C		ISA + 37°C	
	GR	D50	GR	D50	GR	D50	GR	D50
0	1800	2485	1880	2595	1965	2705	2060	2810
2000	1945	2675	2080	2865	2215	3040	2325	3160
4000	2185	3000	2355	3200	2500	3385	2610	3520
6000	2470	3340	2640	3550	2810	3765	2935	3915
8000	2775	3720	2965	3950	3180	4185	3315	4350

Figure 5.9.3 - Takeoff distances - 7394 lbs (3354 kg)

▲ CAUTION ▲

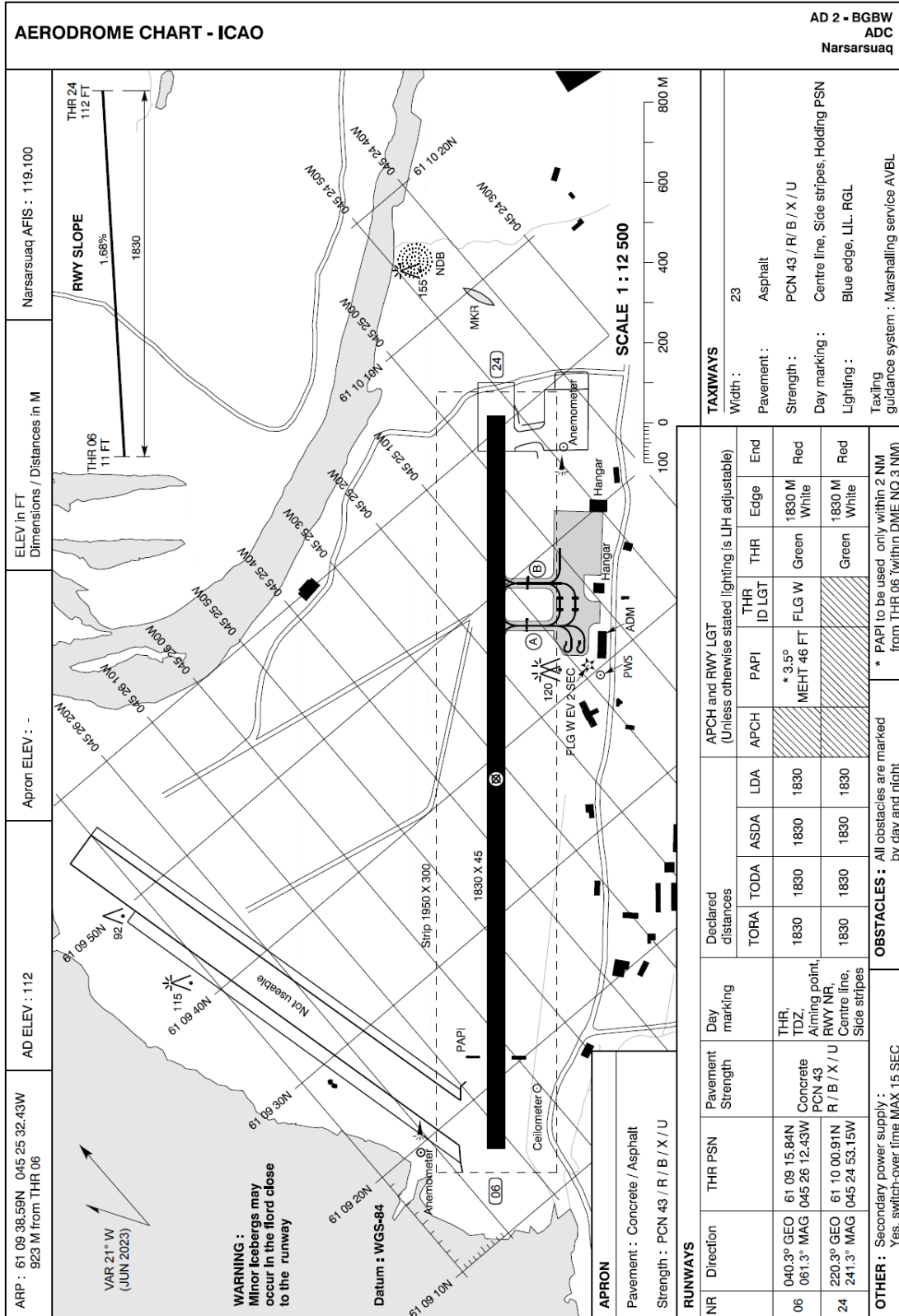
Refer to page 5.9.1 for notes and correction factors.

▲



APPENDIX 3

[Return to AIP Greenland](#)



## APPENDIX 4

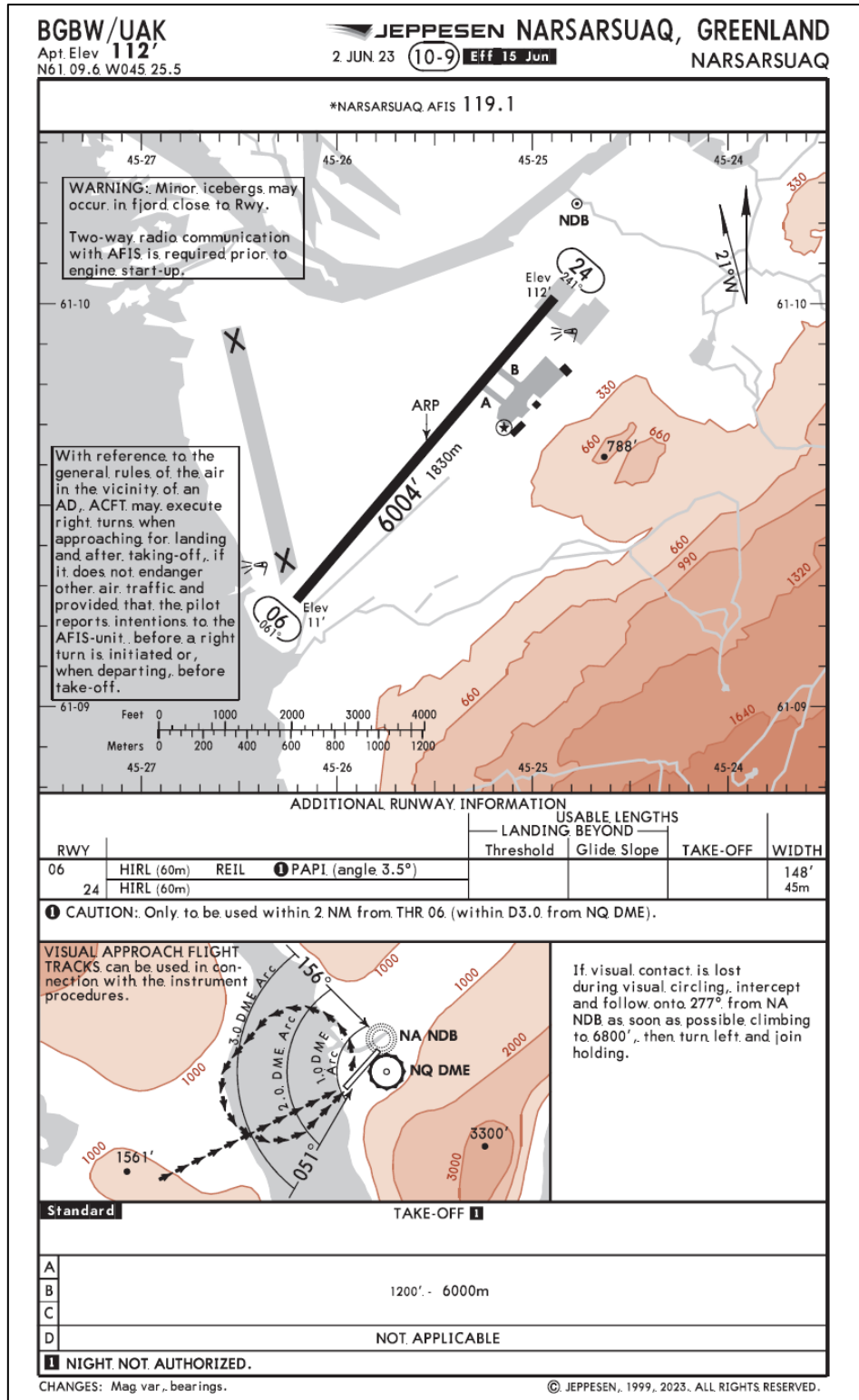
[Return to AIP Greenland](#)

12. Runway Physical Characteristics/Baners fysiske data						
RWY	Direction	RWY dimensions	Strength (PCN) surface of RWY and SWY (SFC friction calibration NR)	THR PSN	THR ELEV/ Highest ELEV of TDZ of precision APCH RWY	
06	040.3° GEO 061.3° MAG	1830x45 M	PCN 43/R/B/X/U Concrete	61 09 15.84N 045 26 12.43W	11 FT	
24	220.3° GEO 241.3° MAG	1830x45 M	PCN 43/R/B/X/U Concrete	61 10 00.91N 045 24 53.15W	112 FT	
RWY	RWY - SWY slope	SWY dimensions	CWY dimensions	Strip dimensions	Obstacle-free zone	
06	+ 1.68%	-	-	1950x300 M	-	
24	- 1.68%	-	-	1950x300 M	-	
Remarks/Bemærkninger: Runway Classification/Bane klassifikation						
		RWY NR	RUNWAY CODE	TYPE		
		06	4D	NONP		
		24	4D	NINST		
13. Declared Distances/Operative banelængder						
RWY	TORA	TODA	ASDA	LDA		
06	1830 M	1830 M	1830 M	1830 M		
24	1830 M	1830 M	1830 M	1830 M		

APPENDIX 5

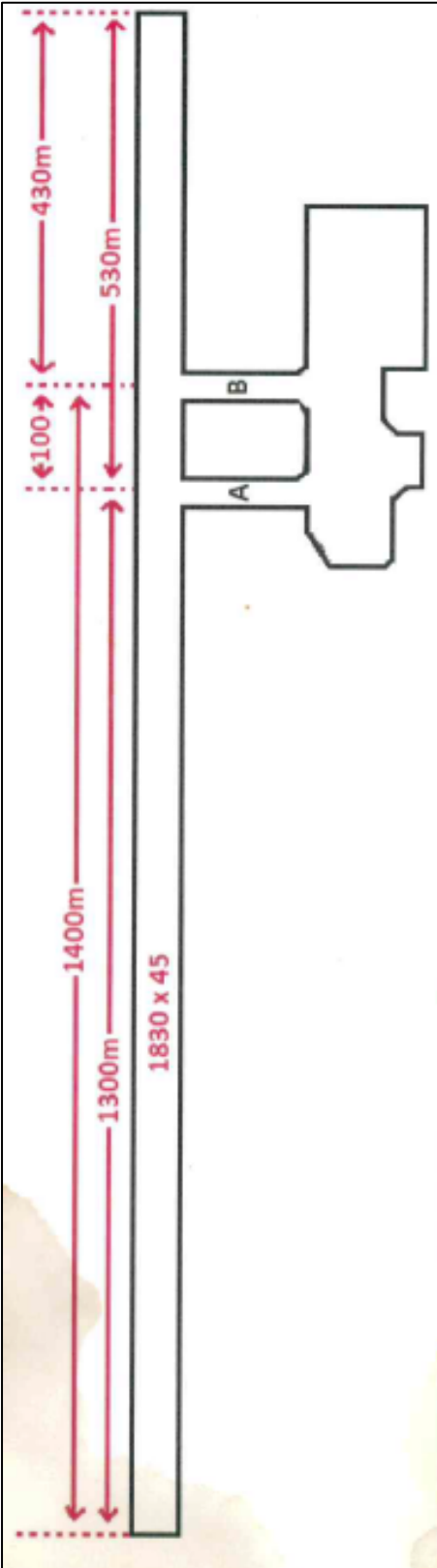
[Return to available aeronautical navigation charts](#)

Appendix 5



APPENDIX 6

[Return to non-published aerodrome declared distances](#)



**APPENDIX 7**

[Return to aerodrome fence](#) [Return to accident site](#)

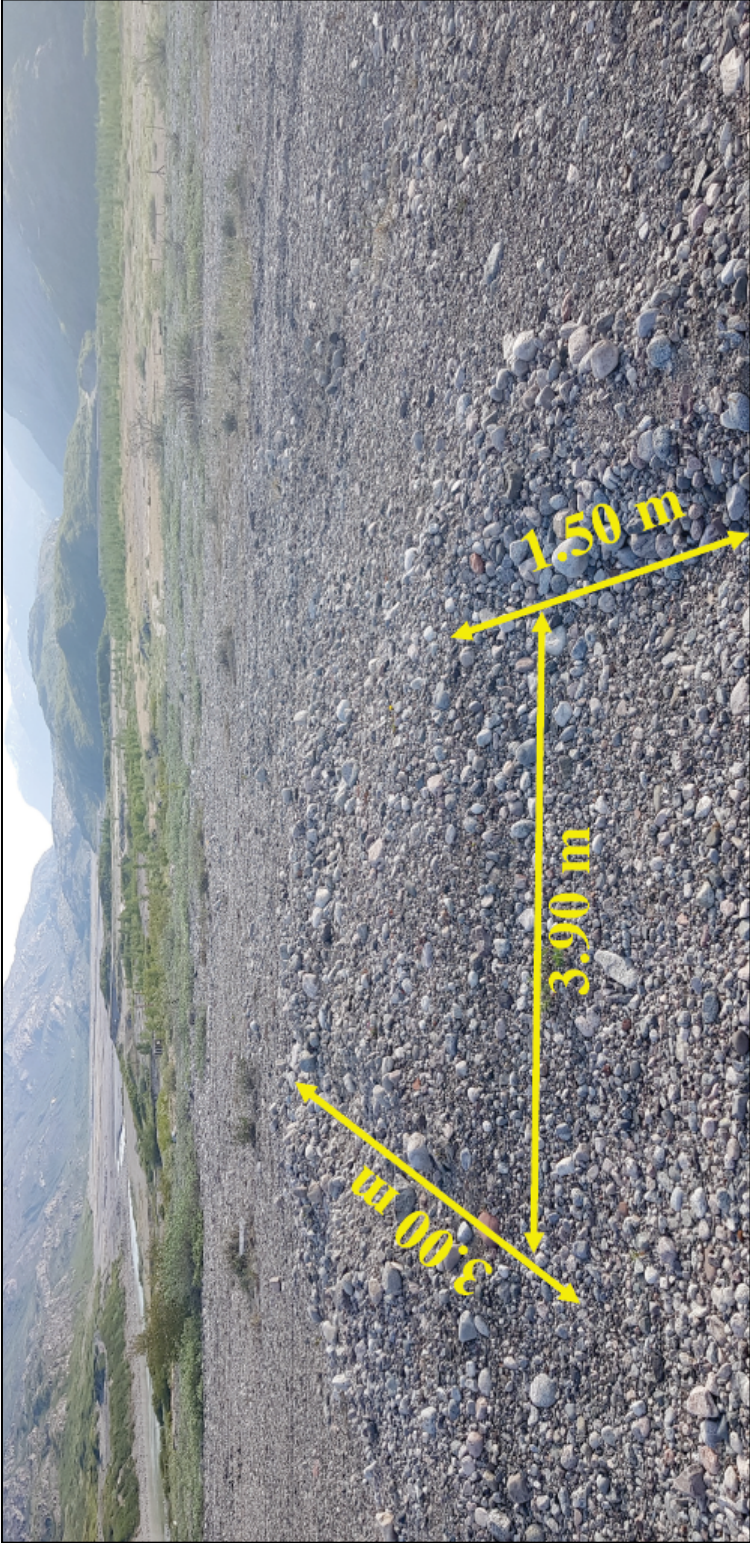
Note. The below figure is not to scale.



**APPENDIX 8**

[Return to accident site](#)

Note. The below figure is not to scale.



**APPENDIX 9**

[Return to operational safety investigation](#)

Takeoff performance data

Mass (lbs)	Pressure Altitude (PA)	+15°C			
		Ground roll	Ground roll (corrected)	Total to clear 50 ft obstacle	Total to clear 50 ft obstacle (corrected)
		ft	ft	ft	ft
6,579	0	1,245		1,765	
<b>6,978</b>	0		<b>1,480 (451 m)</b>		<b>2,066 (630 m)</b>
7,394	0	1,725		2,380	

Appendix 9

[Return to operational safety investigation](#)

Wind correction

In case of wind, apply the following corrections:

- Reduce total distances by 10 % every 10 kts of headwind.
- Increase total distances by 30 % every 10 kts of tail wind.

Headwind speed (or tailwind) = wind speed × cos (α)

Wind correction (270° magnetic/9 kt) for takeoff on runway 06 (061.3° MAG).

Tailwind = 9 kt x cos 151.3° = 8 kt (24% increase).

Tailwind (8 kt)	Distances	
	Ground roll	Total to clear 50 ft obstacle
	m	m
	451 + 108 <b>559</b>	630 + 151 <b>781</b>