Serious Incident

Aircraft Type and Registration:	De Havilland Aircraft of Canada Limited DHC-8, 9H-LWB
No & Type of Engines:	2 Pratt & Whitney Canada PW150A turboprop engines
Year of Manufacture:	2010 (Serial no: 4332)
Date & Time (UTC):	23 April 2024 at 1740 hrs
Location:	Runway 27, Guernsey Airport
Type of Flight:	Commercial Air transport (Passenger)
Persons on Board:	Crew - 5 Passengers - 63
Injuries:	Crew - None Passengers - None
Nature of Damage:	None
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	56 years
Commander's Flying Experience:	8,472 hours (of which 241 were on type) Last 90 days - 110 hours Last 28 days - 45 hours
Information Source:	AAIB Field Investigation

Synopsis

On a flight returning to Guernsey from London Gatwick the Commander tried to execute a gentle touchdown, the aircraft floated and touched down about two-thirds down the runway length, it then overran the end of the runway at slow speed. There were no injuries to the passengers or crew and the aircraft was undamaged. The flight was being operated under a Wet Lease agreement and following the Serious Incident both the Lessee and the Lessor made changes to their safety management systems. Two safety actions were implemented after the event; one to enhance the Lessee's initial understanding of how flights under Wet Lease contracts were being operated, and the other was the implementation by the Channel Islands Director of Civil Aviation of an Augmented Review of Foreign Carrier Permit (FCP) Applications for Wet Lease operations in the Channel Islands. One Safety Recommendation resulted from the investigation regarding the location of emergency checklists in the DHC-8 Quick Reference Handbook.

History of the flight

The crew reported for duty at 1050 hrs UTC at Guernsey Airport to operate four sectors. They worked for a foreign charter airline which was flying under contract to a local airline. The crew comprised a commander, who was undertaking line training of the co-pilot, a first officer who had only recently joined the company. A further first officer occupied the jump seat acting as a safety pilot. In the cabin were the cabin manager and another member

of cabin crew. A representative of the contracting operator was also onboard but was flying as a passenger, rather than as part of the crew.

The first two sectors were to East Midlands Airport and return. The co-pilot was the handling pilot on the outbound flight with the commander flying the return leg. The commander reported that this was due to the short runway at Guernsey. Both flights went without incident.

The aircraft then operated to Gatwick, with the co-pilot acting as handling pilot. After an uneventful flight, the aircraft took off for the return flight to Guernsey at 1709 hrs UTC. Again, the commander flew the return leg due, he stated, to the short runway at Guernsey. After a short cruise at FL180 the aircraft commenced a descent for an approach to Runway 27 at Guernsey. After handover to Guernsey Approach ATC, the crew requested an extended route in order to lose sufficient height for the approach. In response, ATC gave the crew extended radar vectors before then clearing them for an ILS approach to Runway 27.

The crew configured the aircraft for landing with Flaps 35 and a VREF of 118 kt. The commander reported he flew the approach at about 124 kt to take account of the small headwind and any inaccuracies in manually setting the power. He stated the aircraft was stable when it descended through 1,000 ft AAL, in accordance with the operator's standard operating procedures. At about 250 ft radio altitude, with the runway clearly in sight, the commander disconnected the autopilot to manually fly the rest of the approach and landing.

The commander stated he would normally aim to touchdown on Runway 27 at the touchdown markers abeam Taxiway B (Figure 1). He stated that on this occasion he flew across the runway threshold at about 50 ft, as intended, and then flared the aircraft to try and achieve gentle touchdown. This resulted in the aircraft floating down the runway for an extended period, compounded by the runway gently sloping away from the aircraft. The commander stated that a combination of the aircraft pitch and runway slope meant he was unaware of how far down the runway the aircraft had travelled. Both the co-pilot and safety pilot reported they had also not realised how far the aircraft had travelled and did not consider they needed to warn the commander or call for a go-around. When the aircraft did finally touch down, it was about two-thirds of the way down the runway.

On touchdown the commander stated he applied 'normal' braking, being confident this would be sufficient. He did not routinely use reverse pitch unless he thought it necessary and did not do so for this landing. On passing the turnoff for Taxiway C, however, he realised the end of the runway was fast approaching and, although the aircraft was slowing, he judged it would not stop before the runway end. The commander stated he therefore applied 'full' brakes, but still without applying reverse pitch on the propellers as he still thought this unnecessary to stop the aircraft in time. He could hear the anti-skid working and the aircraft started to deviate to the right. He reported he used the steering tiller to steer the aircraft back towards the centreline and the aircraft then departed the end of the runway at low speed. The aircraft continued to the left and came to a halt about 30 m beyond the end of the runway.

The commander kept the engines running and about 10 seconds later applied some power to attempt to taxi back to the runway. The aircraft however did not move, and ATC instructed the crew to remain in position. The airport fire services then arrived and contacted the crew using a discrete frequency. The commander was advised there were no signs of fire and was asked if he was able to taxi back to the runway. Despite the previous unsuccessful attempt to taxi off the grass, the commander asked ATC whether he would be able to move and was told to wait while enquiries were made. ATC then came back instructing the commander he should shut down the engines. In response, the commander shutdown the engines by selecting the propeller condition levers to the fuel shutoff position, but without further reference to either the normal or emergency shutdown checklists. The aircraft had by then been off the runway for just over six minutes.

As the aircraft's APU was unserviceable the aircraft was left on battery power only. A bus was then arranged to collect the passengers, but the only airport bus was unserviceable and a replacement had to be found in the local town. This arrived about 45 minutes later to transport the passengers back to the terminal. The aircraft was then towed to the apron.

There were no injuries among either the passengers or crew.

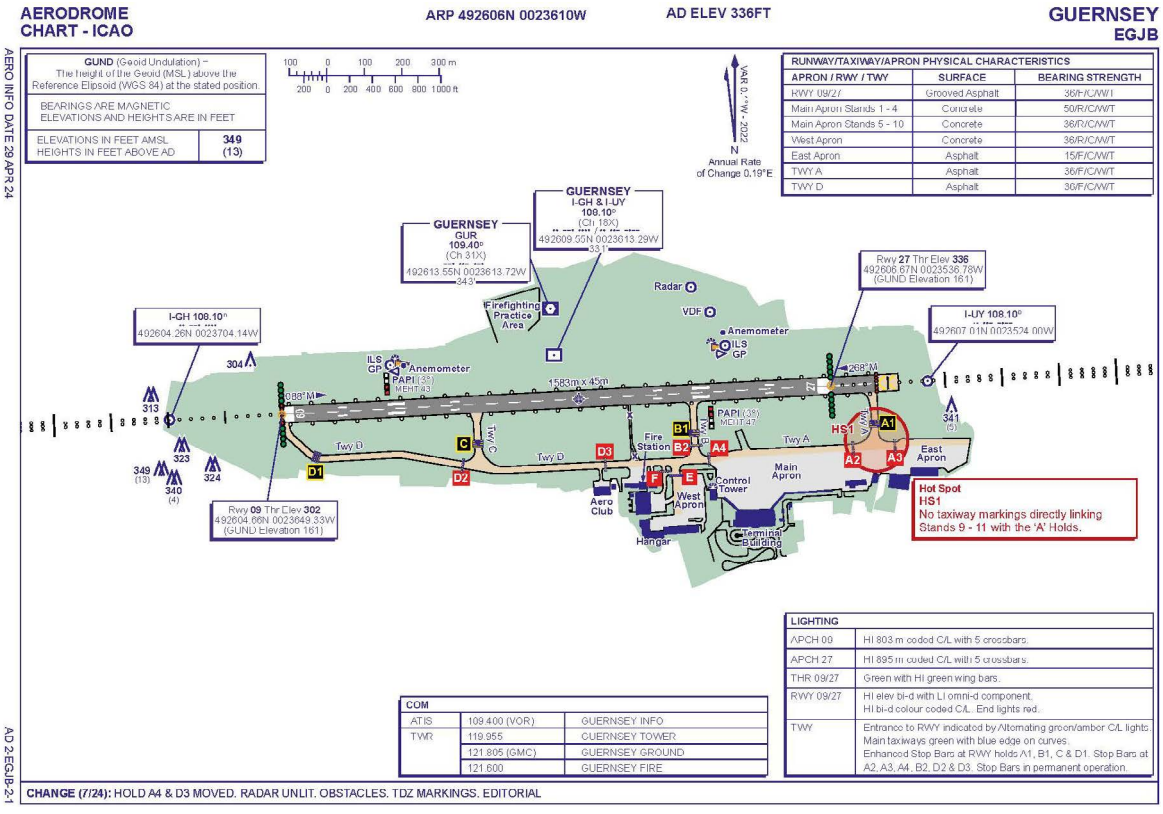


Figure 1

Guernsey Airport AIP Aerodrome Chart

Accident site

The aircraft stopped approximately 30 m from the end of the runway in the grassed area (Figure 2), the main landing gear (MLG) had ploughed a deep furrow in the grass, and the nose gear right wheel had accumulated a thick layer of soil. There were tyre markings on the runway showing the aircraft veering to the right towards the end of the runway. The tyre markings had the characteristic intermittent skid pattern showing where the Anti-Skid system was functioning. Other than disruption of the grassed area there was no other damage to the airfield surfaces or equipment.

Figure 2

Location of aircraft (image used with permission)

Recorded information

Flight recorders

9H-LWB was fitted with a solid-state CVR of 2 hours duration and a solid-state FDR of 25 hours duration. Salient FDR data for the incident landing is plotted below in Figure 3.

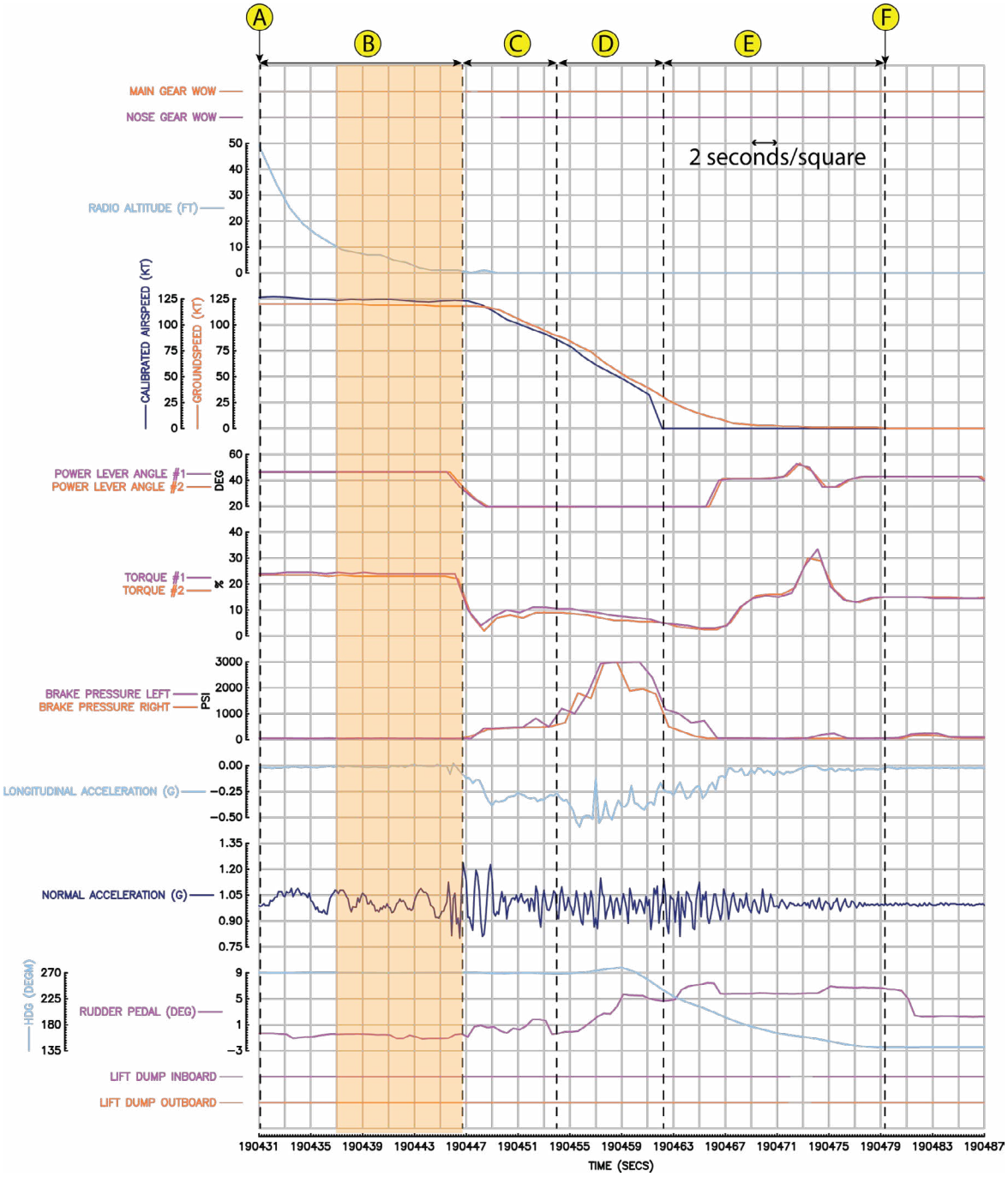


Figure 3

FDR data of the landing

This shows that 9H-LWB passed over the runway threshold at a height of 50 ft and with an airspeed of 124 kt, point A on Figure 3. Region B on Figure 3 shows 9H-LWB's descent from 50 ft to main landing gear touchdown and, the shaded region, represents the time that 9H-LWB was below 10 ft but hadn't yet touched down. During this 10 second period, with a ground speed of 120 kt, equivalent to 62 m/s, 9H-LWB would have consumed 620 m of the available landing distance (1,463 m). Region C shows that after a small bounce on the main landing gear manual braking was applied, using 500 psi out of 3,000 psi that was

available, the power levers were reduced to the DISC position[1] and the nose gear touched down. The recorded latitude and longitude at the point when the nose gear touched down placed 9H-LWB just after Taxiway C, approximately 520 m from the end of the runway. Region D shows initially symmetric braking, followed by an increased application of left rudder and then asymmetric braking to counter the deviation to the right, that is seen in the heading and, finally the application of maximum braking pressure of 3,000 psi, which was maintained for 3 seconds. Region E covers the period where 9H-LWB left the paved runway, at approximately 25 kt ground speed, until it came to a stop, at point F. During this period, an attempt was made to taxi the aircraft back onto a paved surface, which is seen in the data by use of increased levels of engine power.

Closed-circuit television (CCTV) recordings

Several CCTV recordings were reviewed from Guernsey Airport that showed 9H-LWB's approach and landing. These show 9H-LWB crossing the threshold for Runway 27 at what appeared a normal height, then flying level along the runway for about 10 seconds, prior to touching down in the vicinity of Taxiway C. A review of the CCTV for other landings made by 9H-LWB in the preceding weeks, identified other instances, where the aircraft had touched down beyond the touchdown zone.

Operator's Flight Data Monitoring (FDM) events

At the time of this Serious Incident, the operator had an FDM system in place. The operator supplied a spreadsheet, covering April 2024, that contained several alerts for 9H-LWB's operation into Guernsey. Eight of these alerts related to the use of minimal braking at touchdown, triggered from the recorded longitudinal 'g' parameter, representing deceleration, being low, and seven alerts were for excessive speed at touchdown, triggered from the aircraft's airspeed. One of the alerts for minimal braking at touchdown related to this Serious Incident and, the FDM system categorised this event of medium severity, whereas all the other minimal braking at touchdown events were of low severity. As the excessive speed at touchdown alert was triggered from airspeed and, not groundspeed, a few of these were likely spurious due to gusty wind conditions, three of the alerts occurred in benign conditions with airspeeds at touchdown of 140 kt being recorded.

Aircraft information

The DHC-8-402 is a turboprop powered regional airliner. The series 400 is capable of carrying up to 78 passengers. The aircraft is powered by two Pratt and Whitney Canada PW150 engines. The DHC-8 series aircraft were developed from the DHC-7 which was an aircraft designed and used for short field operations. The DHC-8 was optimised for improved cruise performance and lower operating costs. While suitable for operating from regional scale infrastructure it does not have the same short take-off and landing (STOL) performance as its predecessor.

Footnote

[1] Setting the propellers to DISC moves the propellor blades to a very fine pitch which causes a negative angle of attack and results in an aerodynamic braking force.

Aircraft examination

A visual inspection of the aircraft was conducted. There was no damage to the aircraft structure or engines. All the tyres had accumulated soil from the excursion through the grass. The right MLG inner tyre had patches where the canvas plies were visible and the outboard tyre had sustained a cut to the tread. The left MLG outboard tyre had sustained cuts into the tread. There was a differential in wear between the left and right MLG tyres although the aircraft manufacturer advised that the anti-skid braking system unit would be capable of managing the differential of wear observed. A photo taken of the right MLG tyres a couple of flights before the flight on which the Serious Incident occurred showed the reinforcing plies starting to be visible in the tread area. The aircraft Aircraft Maintenance Manual (AMM)[2] allows up to eight landings after the reinforcing plies become visible in the tread area.

Inspection of the brake units found movement on one of the stators on the right MLG outboard brake unit. The aircraft batteries had run out of charge and once power was eventually restored to the aircraft, interrogation of the aircraft flight system indicated one past system fault with the Anti-Skid Control Unit (ASCU). Although the crew was not aware of any annunciation or alerts associated with this system during the flight on which the Serious Incident occurred.

Aircraft Quick Reference Handbook (QRH)

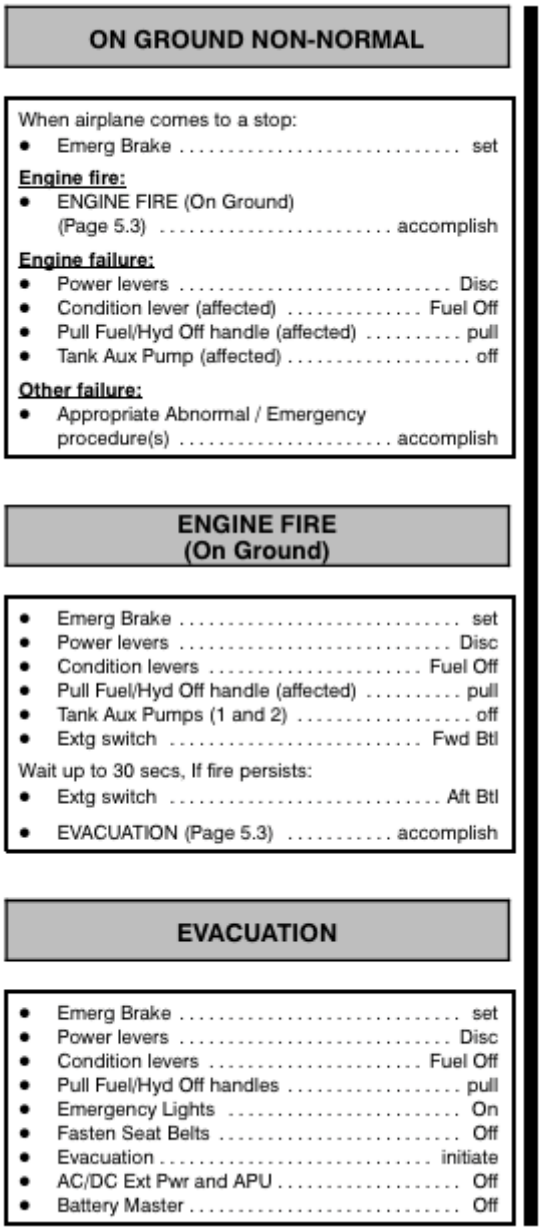
The aircraft carried a copy of the manufacturer's QRH. This included checklists entitled '*on ground non-normal*' and '*evacuation*' (Figure 4). It was noted during the investigation that these checklists were not signposted in the QRH index but were included under Section 5, marked in the index as '*Engines, APU, Propellers*' (Figure 5). Without specific knowledge of where the emergency shutdown and evacuation checks appeared, there was nothing to assist locating them.

The AAIB raised this with the manufacturer, but they did not consider it an issue. They stated that the QRH was not a certified document and operators were free to document normal, abnormal and emergency procedures as they chose. They also stated that the use of the document relied on training to be able to locate checklists. They believed that the layout and location of checklists was sufficient, having been reviewed on multiple occasions with flight crews over the last 24 years through their Flight Operations Steering Committee meetings. They considered that if operators believed this was a problem, it would have been addressed already.

A major operator of the DHC-8 subsequently contacted by the AAIB had adapted the manufacturer's QRH, including the incorporation of a separate section which appeared at the top of the index, entitled 'Immediate Actions'. The 'on ground non-normal' and 'evacuation' appeared in this section.

Footnote

[2] Q400 AMM 76, TASK 32−41−00−210−801 Visual Inspection of the Main and Nose Tires.



ON GROUND NON-NORMAL

When airplane comes to a stop:
- Emerg Brake ..... set

Engine fire:
- ENGINE FIRE (On Ground) (Page 5.3) ..... accomplish

Engine failure:
- Power levers ..... Disc
- Condition lever (affected) ..... Fuel Off
- Pull Fuel/Hyd Off handle (affected) ..... pull
- Tank Aux Pump (affected) ..... off

Other failure:
- Appropriate Abnormal / Emergency procedure(s) ..... accomplish

ENGINE FIRE (On Ground)

- Emerg Brake ..... set
- Power levers ..... Disc
- Condition levers ..... Fuel Off
- Pull Fuel/Hyd Off handle (affected) ..... pull
- Tank Aux Pumps (1 and 2) ..... off
- Extg switch ..... Fwd Btl

Wait up to 30 secs, If fire persists:
- Extg switch ..... Aft Btl
- EVACUATION (Page 5.3) ..... accomplish

EVACUATION

- Emerg Brake ..... set
- Power levers ..... Disc
- Condition levers ..... Fuel Off
- Pull Fuel/Hyd Off handles ..... pull
- Emergency Lights ..... On
- Fasten Seat Belts ..... Off
- Evacuation ..... initiate
- AC/DC Ext Pwr and APU ..... Off
- Battery Master ..... Off

Figure 4

On Ground Non-Normal and Evacuation QRH Checklists

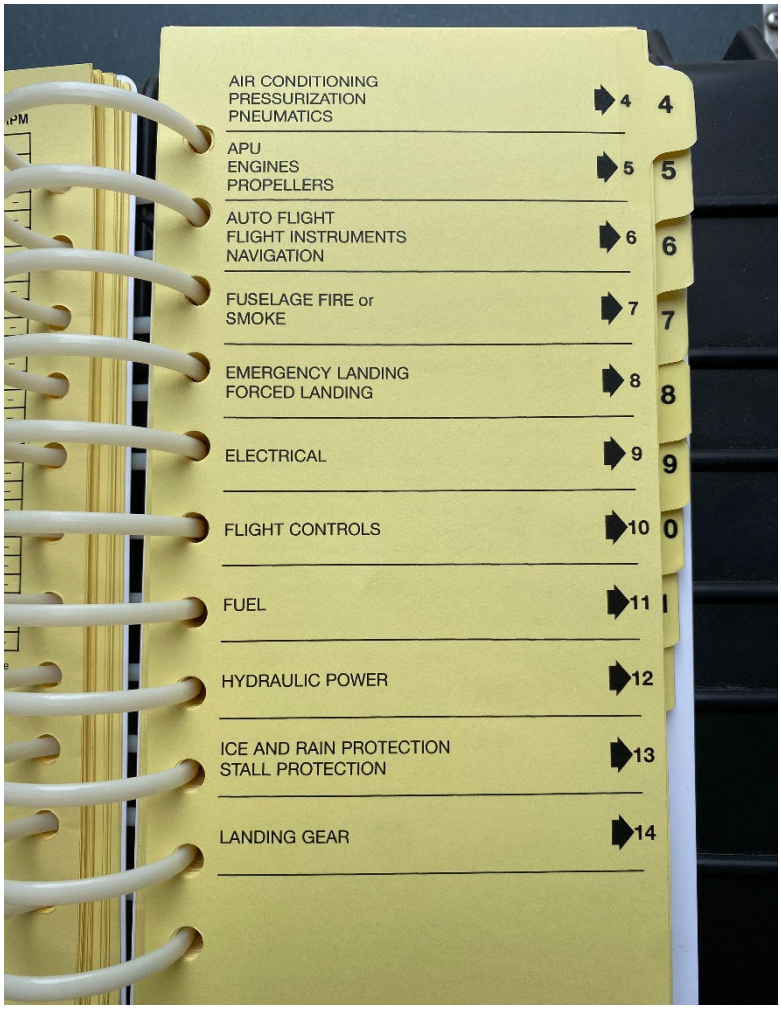


Figure 5
QRH Index

Aircraft performance

The unfactored landing distance required was calculated using the DHC-8-400 QRH onboard the aircraft at the time of this incident. Using the calculated landing weight of approximately 27 tonnes, and considering the 5 kt headwind and 1% downslope of the runway, the distance required was approximately 750 m. This figure was based on a VREF speed of 118 kt and does not take into account the additional increment of 6 kt used by the crew, which would have increased the distance required.

Meteorology

The ATIS at 1720 hrs reported a westerly wind of 6 kt, visibility of 10 km with 1/8-2/8 cloud at 1,300 ft and scattered cloud at 1,600 ft.

Airfield information

Guernsey Airport has a single asphalt runway orientated 09/27 which is 1,583 m long and 45 m wide. The runway slopes down 1% from the Runway 27 threshold. The threshold to

Runway 27 is displaced by 120 m, with a landing distance available of 1,463 m. There was a 150 m wide grass clearway extending 216 m beyond the end of Runway 27.

There were three sets of runway touchdown markings for both runways. For Runway 27, the first set of marks started 140 m from the threshold, the second (and main markings) started 300 m and the third set of markings started 420 m from the threshold.

Personnel

Commander

The commander had commenced his flying career in the military in 1987, before gaining a CPL in 1993 and an ATPL in 2001. He had flown for several companies on a variety of types, including about 2,100 hours as both a commander and co-pilot on the ATR 42 and ATR 72. He joined the operator of 9H-LWB in 2012 and was one of the senior managers within the company.

The commander commenced training on the DHC-8 in May 2023, completing his type rating in June 2023. He operated on charter flights in Italy and, after gaining 100 hours on type, became a line training instructor. The commander had been based in Guernsey since the start of the charter contract there on 2 April 2024.

The commander stated that he chose to always land the aircraft himself at Guernsey, due to the short length of the runway. He estimated he had flown 23 landings at Guernsey since his arrival on the island at the start of April.

Co-pilot

The co-pilot had joined the operator in November 2023 as a First Officer straight after having gained his CPL. He had about 290 total flying hours and had started line training in March since when he had accumulated 38 hours on type.

Safety pilot

The safety pilot was a First Officer who had joined the operator in September 2023, straight from gaining his CPL. He had completed his line training with the operator in February 2024 and had a total of about 415 flying hours, of which about 180 hours were on the DHC-8.

Organisational information

The operator

At the time of the serious incident, the operator operated two DHC-8 aircraft using five crews with one co-pilot additionally in training. It sub-contracted type rating training on the DHC-8 to another operator, which in turn used sub-contracted instructors to conduct the training. Line training was conducted in-house by the operator's own line training pilots. Co-pilots required a minimum of 40 sectors of line training. A safety pilot occupied the jump seat on all line training flights. This allowed them to swap with the pilot being trained should the need arise and provided an additional level of oversight of the flight deck operation.

The operator had three crews in Guernsey as part of the contract, with the First Officer under-going line training in addition.

Tests and research

Anti Skid Control Unit (ASCU)

The ASCU was removed from the aircraft and sent to the manufacturer for further testing. The results of this testing showed that the NVM data indicated there were no faults present in the last 15 flight cycles, including the overrun event. Because there was no anti-skid fail discrete or annunciation of a Crew Alerting System message to the crew, a plausible cause for the ASCU error message displayed on the aircraft interface may have been a power interruption. While there were no power issues during the flight or landing, this may also correlate with problems applying power to the aircraft after the event because the batteries were flat.

Brake unit

The brake unit with the broken stator was taken to the manufacturer for further examination. When disassembled it was found that stator No S1 had lost all its locating lugs (Figure 6) and was free to rotate around the brake torque tube.

Figure 6

Comparison of stators S2 and S1 showing lug wear on S1

The locating lugs which are made of carbon had been filed away by the splines on the torque tube. This occurred because the torque tube had suffered severe corrosion causing the surface to be rough, effectively acting as a file on the carbon locating lugs. The torque tube was sent for a metallurgical examination to understand what had caused the corrosion. The examination confirmed that at some point in its overhaul history the torque tube nickel

alloy surface had been incorrectly treated with a high temperature resistant coating such as paint. This was evidenced by the presence of aluminium on the surface of the torque tube and in the corrosion pits. The manufacturer concluded that this would have an approximate 25% reduction in braking performance on this individual brake unit, but that this effect would be compensated for by the Anti-Skid system. Analysis of braking distance performance showed that the increase in braking distance between the fully working brake system and the worst case of a seized brake calliper for a wet runway is an additional 13 metres of braking distance. The AMM[3] for the aircraft calls for a visual inspection of the brake unit for signs of wear, damage and cleanliness, but does not require a physical check for stator movement of brake units during tyre/wheel changes. The thickness of brakes is monitored during operation and these will be removed for repair and overhaul as required and also checked as part of the aircraft base maintenance cycle. It was not possible to determine if the stator had become completely detached prior to the flight on which the serious incident occurred.

Other information

Regulatory framework

UK CAA Wet lease regulations and guidance

'A 'wet lease agreement' is where an air carrier (the Lessor) provides an aircraft, complete with crew, maintenance and insurance (ACMI) to another airline (the Lessee). The aircraft is operated under the AOC of the Lessor (the party from which the aircraft is leased)'[4]. The Lessor manages the risks associated with the flight, but the contracting operator (the Lessee) must have the wet lease agreement approved by the CAA. To obtain approval, the Lessee must demonstrate to the CAA that:

- The Lessor has a valid AOC.
- The aircraft has a standard Certificate of Airworthiness.
- The safety standards of the Lessor with regards to continuing airworthiness and air operations are equivalent to the applicable regulatory requirements.[5]

The regulations for contracted activities in general (UK Reg (EU) 965/2012 (Air Operations) and ORO.GEN.205 Contracted activities) require that aviation safety hazards associated with the contracted services are considered by the contracting operator's management system. Safety related activities should be included in the contractor operator's safety management system and compliance monitoring programme and the contracting operator should ensure that the contracted operator '*commands the resources and competence to undertake the task.*'

Footnote

[3] 400 AMM[76]. TR32-621, TASK 32−41−01−400−801 Installation of the Main Wheel and Tire Assembly

[4] Civil Aviation Authority (2015), Aircraft leasing – New UK policy and process for wet leasing-in from a community operator. https://www.caa.co.uk/media/ppwjj0ig/advance-information-notice-wet-leasing-in-policy-and-process-when-using-community-operators-from-1-april-2015.pdf [accessed 7 March 2025]

[5] UK Reg (EU) No 1321/2014 Continuing Airworthiness and UK Reg (EU) 965/2012 Air Operations [accessed 9 January 2026].

Guernsey Air Navigation Regulations

In addition any aircraft not registered in the United Kingdom and its territories and dependencies is required[6] under Guernsey Air Navigation Regulations to apply for a Foreign Carrier Permit (FCP) to enable it to arrive and depart from Channel Islands Airports.

Oversight and Assurance

There are a number of different organisations who have a role in undertaking oversight and assurance of the airlines involved in this serious incident. These are primarily the respective regulators for the operators (UK CAA, Maltese NAA and EASA) and the Channel Islands, Director of Civil Aviation (CIDCA). Additionally, the safety departments of the operators conduct their own assurance checks. The investigation examined relevant aspects of this oversight and assurance chain, by conducting interviews and reviewing documentation and observed the following:

The contracting operator (The Lessee)

The requirement to contract the ACMI was driven by operational challenges primarily due to delays in aircraft deliveries and unforeseen maintenance issues as the operator transitioned from a mixed fleet of aircraft to an ATR fleet. Limited fleet availability meant there was a time imperative to provide capacity. This particular ACMI was required after the proposed provider of an alternative longer-term ACMI withdrew at short notice.

This was not the first occasion on which the operator had been required to undertake a wet lease contract, although historically this was undertaken on an infrequent basis.

The operator's activities were compliant with regulation, and they undertook the required due diligence activities to fulfil their responsibilities to assure the safety of the ACMI operation. This included visits to the Lessor and examination of findings from previous audits and safety reports. There was a change of the Lessee's Safety Manager during the period in which the ACMI contract was being let.

As part of the ACMI, FDM-generated safety information was agreed to be exchanged, but the Lessee received no FDM-generated safety information from the Lessor that indicated long landings at Guernsey Airport prior to the serious incident.

Safety Action

Whilst not a regulatory requirement, post the Serious Incident the Lessee introduced the following safety action to enhance their assurance of ACMI operations:

> On commencement of any new wet lease operation, it is required that a flight deck observation of the ACMI crew will be undertaken by one of the Lessee's Training Captains.

Footnote

[6] Section 1(1) of The Air Navigation (Bailiwick of Guernsey) (Foreign Aircraft Operations) Regulations, 2019.

From the evidence observed, the contracting operator had a safety conscious and 'safe to challenge' culture. All levels of the organisation up to the Accountable Manager had good knowledge of the various operational options to maintain operational continuity and there was no evidence of any doubts about the safety of the ACMI operation.

The contracted operator (The Lessor)

The Lessor had 25 years of experience providing ACMI operations and had been operating the DHC-8 since 2021.

The Lessor assessed that the management of change process they undertook was compliant and sufficient but that it was time pressured. They considered that the collaboration with the Lessee was positive but that in hindsight there could have been more operational collaboration. Once the ACMI was in place the Lessor felt the relationship was positive but reactive in nature, ie discussions took place in response to occurrences rather than pre-planned, but they also acknowledged that in their experience this was not necessarily unusual.

Post the serious incident an error was identified in the Lessor's FDM data after a change of FDM provider detected a latitude/longitude position error. The Lessee stated it was difficult to view corrected FDM data to establish if this would have revealed the presence of any previous long landings at Guernsey Airport.

The Lessor stated that they have now started to increase liaison between their flight operations and training departments. For example, looking at the specific area of operation for the ACMI with the operators who are already working there.

The Lessor's internal investigation determined that "human factors and human error" contributed to the runway excursion. They assessed that the serious incident was caused by the commander trying to make a gentle landing and misreading the perspective of the runway due to the runway slope and not realising that the aircraft was going so long. Due to the lack of experience of the other pilots on board (trainee and safety pilot), they did not inform the commander of the need to go around. Following this event the Lessee advised that they no longer allow training on ACMI flights.

UK CAA and CIDCA

As an operator based in the Channel Islands but listed on the UK G-Register the Lessee is regulated by the UK CAA. Whilst the Channel Islands Director of Civil Aviation (CIDCA) has limited regulatory powers over this or any other G-Registered operator, the CIDCA does have the power to conduct sample checks of aircraft being operated under Foreign Carrier Permits (eg the ACMI aircraft). Whilst conducting such sample checks would have been unlikely to prevent this serious incident, since this event the CIDCA has introduced additional procedures to allow enhanced audits of aircraft being used by a Foreign Operator flying into the Channel Islands.

Safety Action

The Channel Islands Director of Civil Aviation took the following safety action:

> The CIDCA procedure OCDA 801 for the issue of Foreign Carrier Permits has been amended to introduce an Augmented Review of FCP Applications for ACMI operations in the Channel Islands being operated at higher frequency or for an extended duration.

Currently the CAA and CIDCA will share important safety information as required regarding Civil Air Operations in the Channel Islands. Measures are being undertaken to expand this sharing of safety information through the establishment of a memorandum of understanding between the CAA and CIDCA.

Analysis

Operations

Both the available flight data and CCTV demonstrated the aircraft 'floating' down the runway for an extended period of time before touching down. The aircraft was flown below 10 feet above the runway surface for some 10 seconds without reducing below VAPP, during which time it consumed nearly half of the landing distance available. The reason given for this was the commander, as handling pilot, wanting a gentle touchdown.

All three pilots occupying the flightdeck stated that the runway slope had contributed to a lack of visual perspective, meaning that none of them was aware how far down the runway the aircraft had travelled by the time it did finally touchdown. They would, however, have been aware of the prolonged period of time the aircraft had been over the runway, in excess of what should have been considered normal. Equally, all three would have known the relatively short landing distance available, not least because this was the reason given for the commander choosing to be the handling pilot. Under the circumstances, having overshot the touchdown zone on a relatively short runway a go-around would have been expected.

The lack of experience of both the co-pilot and safety pilot, and the seniority gradient existing between them and one of the company's senior managers, would have made their ability to both identify and communicate any concerns to the commander challenging.

Having touched down, the runway remaining was considerably shorter than planned but, judging he had sufficient runway ahead, the commander delayed applying full braking and did not make use of reverse propeller pitch to slow the aircraft. This proved inadequate to stop the aircraft in the remaining distance, although the aircraft left the runway at relatively low speed. There was still, however, the potential for damage to have been caused, without the crew's knowledge. This, and the potential to cause damage in trying to taxi back to the runway, should have resulted in a quick decision to shut the aircraft down whilst awaiting assistance. Instead, it was some six minutes before the engines were shut down, and then only after two attempts to taxi the aircraft back onto the runway. Despite an apparent lack of urgency to shut the engines down, when this was done it was without adherence to any normal or emergency checklist, leaving potential for items to be missed.

The investigation highlighted the difficulty of finding the appropriate emergency shutdown checklist in the manufacturer's QRH. It is accepted that the crew did not attempt to find the checklist and so, in this instance, it is unlikely that this contributed to their failure to use them. It is, however, considered that in other circumstances the difficulty in identifying the emergency shutdown and evacuation checklist may have a significant outcome. The manufacturer is of the view that there is not an issue based on many years of operation and that it is for operators to develop and train on the use of the normal and abnormal emergency procedures. The operators will base their QRH on that provided by the manufacturer and are unlikely to deviate. However, at least one major operator has taken it upon themselves to make the checklist more easily identifiable and accessible.

As a result, the following safety recommendation is made:

Safety Recommendation 2026-006

It is recommended that De Havilland Aircraft of Canada Limited reviews the location and indexing of the 'on ground non-normal' and 'evacuation' checklists in the DHC-8 Quick Reference Handbook and makes appropriate changes to improve their ease of access during an emergency.

Organisational factors

An imperative to generate capacity through ACMI contracts was due to a lack of aircraft availability primarily caused by unforeseen problems in the transition from a mixed aircraft fleet to a predominately ATR fleet. This particular ACMI contract was required at short notice after a long-planned alternative fell through unexpectedly.

The short notice nature of the ACMI meant that the change management process for both the Lessee and Lessor, whilst compliant, was time pressured. But there was no evidence that required safety activities or due diligence were compromised prior to the letting of the contract.

Once the contract was established the relationship between the parties appears to have been positive although reactive in nature. For example, agreements on the provision of FDM data were in place but no information containing any safety triggers had been provided to the Lessee by the Lessor prior to the serious incident.

Whilst the Lessor identified problems after the event with the FDM data, analysis of the data provided to the investigation showed there were some triggers for minimal braking and excessive speed at touchdown indicated in the data available to the Lessor prior to the incident flight. The braking triggers were of low severity and some of the airspeed triggers may have been spurious due to wind conditions. However, the investigation considered that a more proactive approach to exploiting the FDM data available may have provided indications to the Lessee and Lessor of how the ACMI flights were being flown in the early stages of the contract. Particularly as CCTV footage identified instances prior to the runway excursion where the aircraft had landed beyond the touchdown zone.

Post the serious incident both the Lessee and the Lessor identified and made changes to their safety management systems. These were primarily aimed at improving operational collaboration in ACMI scenarios, eg observational flight check rides and improved liaison between the operational training and flight crews of the contracting parties.

Engineering

No technical reason could be established to explain why the aircraft veered to the right under braking. The differential in tyre wear between the left and right MLG was assessed by the aircraft design authority as being within the capabilities of the Anti-skid system to manage and performance modelling showed that the single broken stator in one brake unit would have a minimal effect on braking performance.

Regulatory

The ACMI activity was conducted in accordance with regulation and this was not considered a factor in this serious incident. However, during the investigation it was agreed by the UK CAA and CIDCA that enhancements to the current sharing of safety information should be expedited and this resulted in an agreement to generate a formal MoU on safety information exchange between the respective regulators.

Conclusion

The runway excursion occurred because the Commander, while trying to perform a gentle landing, touched down a considerable distance beyond the landing zone with insufficient runway left to arrest the aircraft using normal braking. The application of full braking force was too late to prevent a low-speed departure from the runway. More proactive exploitation of FDM data may have detected how the flights were being conducted in the early stages of the contract as there was evidence available of previous landings beyond the touchdown zone. In response to the serious incident both the Lessee and the Lessor identified and made changes to their safety management systems.

Safety Recommendations

Safety Recommendation 2026-006

It is recommended that De Havilland Aircraft of Canada Limited reviews the location and indexing of the ‘on ground non-normal’ and ‘evacuation’ checklists in the DHC-8 Quick Reference Handbook and makes appropriate changes to improve their ease of access during an emergency.

Safety Actions

Channel Islands Director of Civil Aviation

The CIDCA procedure OCDA 801 for the issue of Foreign Carrier Permits has been amended to introduce an Augmented Review of FCP Applications for ACMI operations in the Channel Islands being operated at higher frequency or for an extended duration.

Lessee

On commencement of any new wet lease operation, it is required that a flight deck observation of the ACMI crew will be undertaken by one of the Lessee's Training Captains.

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