

AIRPROX REPORT No 2012103

Date/Time: 9 Jul 2012 1314Z

Position: 5200N 00243W
(3nm S Hereford)

Airspace: Lon FIR (Class: G)

Reporting Ac Reported Ac

Type: Gazelle Titan Mustang

Operator: HQ AAC Civ Pte

Alt/FL: 3300ft ↑1800ft↑
(RPS NR) (QFE)

Weather: VMC CLBC VMC CLBC

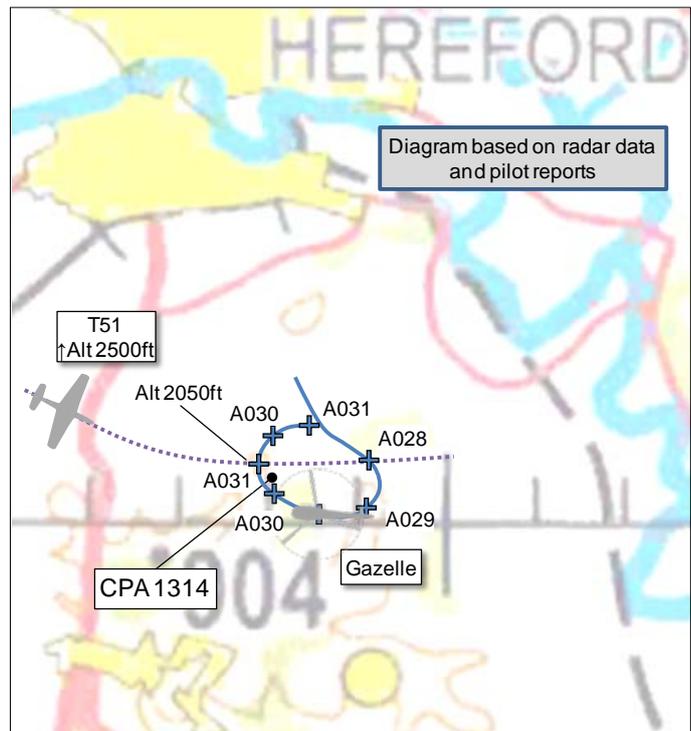
Visibility: 10km >20nm

Reported Separation:

300ft V 1500ft V1800ft H

Recorded Separation:

NK



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE GAZELLE PILOT reports established in the high hover at altitude 3300ft [RPS NR], 2nm NE of Hereford in a grey/green coloured helicopter with navigation lights and white strobes on. He was operating under VFR with a BS from London Information [124.750MHz], with a discrete squawk and Modes 3/A and C selected on. Mode S and an ACAS are not fitted. While in VMC, adjacent to cloud layers, heading 310° at 5kt, he saw a silver, low-wing, single-engine piston ac emerging from the cloud base in his 2 o'clock position, estimated at 200ft H and approximately 200-300ft V below him. He identified the ac as a P51 Mustang.

[UKAB Note(1): The subject ac was a Titan T51D Mustang, a ¾ scale homebuilt replica of the P51D Mustang long-range fighter].

He manoeuvred behind the Titan Mustang and saw it depart in his 10 o'clock position to the NW of Hereford at the same altitude. He heard the Titan pilot transmit on the London Information frequency that he was "close to the Gazelle" but he did not think the pilot was in receipt of a service at the time. The Gazelle pilot declared an Airprox to London Information and was given a phone number for the Swanwick Supervisors Office, whom he called after landing.

He assessed the risk of collision as 'Medium'.

THE TITAN MUSTANG PILOT reports carrying out a test flight of his homebuilt ac under VFR. He stated that it was one of many such flights during the development and test phase of his ac, and therefore that the details of the incident flight were from memory. The silver and olive drab coloured ac was not fitted with any external lights. The SSR transponder was 'normally on' with Modes 3/A and C. The ac is not fitted with Mode S or an ACAS. After departing from his home strip, 8.5nm WNW of Hereford, he took up a SE'ly heading and started a slow climb, at 120mph, to an intended altitude of 2500ft. He was not in receipt of an ATS but was 'monitoring' London Information [124.750MHz]. Passing altitude 1000ft in the climb he saw a Gazelle helicopter at a range of 3-4 miles, in the stationary hover approximately 4nm SW of Hereford. He stated that the Gazelle appeared to be just under the cloud base at a height in excess of 3000ft.

Because the Gazelle was stationary, and given the excellent view from its cockpit, he felt there was absolutely no danger [of collision]. He continued the climb and passed in front of the Gazelle at an altitude of approximately 1800ft. In the same period the horizontal separation went from 3 miles to approximately 1800ft, with a similar vertical separation.

About 15-20mins later he heard a call to London Information talking about a 'close call with a Mustang'. Although the reporting pilot said he had 'just managed to get behind the Mustang' he had difficulty believing that it was connected to the incident described, which had seemed to be a 'non-event' in his opinion.

He assessed there was no risk of collision.

THE LACC FISO reports that a Gazelle helicopter was under a BS from London Information when he and another unknown ac talked to each other over the RT. Shortly thereafter the Gazelle pilot requested to file an Airprox. The FISO passed a Swanwick telephone number and spoke to the pilot later that day. The pilot reported that he was hovering at 3200ft over Hereford town at 1318 when he noticed a silver P51 Mustang ac with yellow wing tips heading towards him. The Gazelle pilot positioned his ac to go behind the Mustang; he believed the Mustang was heading SE to NW and that the estimated miss distance was 200ft. The Gazelle pilot reported the Wx as cloudy with showers. The FISO believed the Mustang pilot was not in receipt of a BS with London Information but that he was maintaining a 'listening watch'. He also stated that London Information was busy dealing with departures from the Fairford Airshow.

ATSI states that an Airprox was reported by the pilot of a Gazelle helicopter when a Titan Mustang (T51) flew in proximity to him at approximately 3300ft in the vicinity of Hereford. The Gazelle pilot was in the hover at 3300ft on an operational flight and in receipt of a BS from London Information [124.750MHz], transponding Mode 3/A with a discrete squawk. The T51 was on a VFR development and test flight, operating from a home strip and monitoring London Information [124.750MHz].

ATSI had access to both pilot reports, including the T51 pilot's round-robin [planned] flight path diagram, recorded area radar and recording of the London Information frequency. Note: London Information provides a service without the aid of radar.

The Wx at Gloucestershire A/D, 20nm ESE of the Airprox location, was as follows:
METAR EGBJ 091320Z 21007KT 180V250 9999 FEW020 SCT034 18/12 Q1011=

Both pilots reported operating in VMC.

The Gazelle pilot called London Information at 1249 and a BS was established. He subsequently reported operating on RPS, although no pressure setting was given on the RTF. There was no further exchange between the Gazelle pilot and FISO until the Airprox was reported on the RTF at 1326.

The T51 pilot departed his home strip in a SE'ly direction, following a course which would take him midway between two known areas of intense aerial activity. The flight of the T51 was not recorded on area radar. The T51 pilot's Airprox report indicates that the ac was being flown at 1800ft on the QFE; its likely altitude, calculated from the available information, was approximately 2050ft. The elevation in the vicinity of the home strip being used is approximately 250ft.

The Gazelle pilot had been executing a RH turn of radius 0.2nm at a Mode C reported level of FL032 for about one minute when (at 1314:00) he made a short unintelligible transmission, followed by an unverified exchange between the Gazelle pilot and an unknown other pilot:

"[Gazelle C/S] Roger saw it at last minute going approximately two to three hundred feet er in my 1 o'clock."

"Er roger just confirm your er that was for the mustang?"

“Roger sir yer I turned away from you at the last minute er you just er came out I was just working a hole in the cloud.”

At 1314:02 the Gazelle was orientated such that it was facing E. The Gazelle pilot continued the turn during the exchange, its level increasing to FL035 before descending again to FL032. At that time the Gazelle was 3nm S of Hereford (not 2nm NE as reported by the pilot).

The theoretical base of area radar coverage at the Airprox position is approximately FL020. The T51 pilot reported that his SSR transponder was ‘normally on’ but the ac was not seen on the radar recording. However, a transponding ac at the reported level in this location may not be detectable by the available area radar coverage.

ATSI reviewed the available meteorological pressure data and calculated the altitude of the Gazelle as being 3140ft (QNH 1011hPa). Therefore, the evidence presented indicates around 1000ft V distance between the two ac. However, the Gazelle pilot indicates ‘working a hole in the cloud’ and therefore it may be likely that, given the poor horizontal visual references, perception of vertical distance may have been reduced. The Gazelle pilot was unaware of the T51 ac’s presence prior to its first being sighted and both of these factors may have influenced the Gazelle pilot’s estimation of the vertical distance between the two ac.

The Gazelle pilot was in a R turn when he saw the T51 which, from RTF, he saw in his 1 o’clock position and which continued away in an E’y direction.

The Airprox was reported when the Gazelle pilot, in the process of executing a RH turn through E, observed a T51 ac appear in his 1 o’clock position. The Gazelle pilot was unaware of the presence of the T51 prior to it being observed.

HQ JHC comments that the Gazelle was being were operated in accordance with Current Military Regulations and the Air Navigation Order 2009. The aircraft was being flown single pilot, carrying out a high workload task requiring the maintenance of a high hover with few references. The selection of a BS from ATC was appropriate for the task. Additionally given the theoretical radar coverage base as being FL020, little chance of timely TI from ATC would have been gained from having a TS. JHC HQ concurs with the likely reported vertical distance being smaller than actual due to the high workload and poor likely horizontal visual references from the Gazelle cockpit. Despite this it is disappointing that the T51, although maintaining a listening watch on London info (124.750MHz), having seen the Gazelle did not check in or use a blind call to alert the other aircraft of his position and intentions to pass underneath whilst climbing.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board initially considered Human Factors concerning the Gazelle pilot’s workload, visual cues and late visual acquisition of the Titan Mustang. The Mil Helicopter Member observed that the Gazelle is a difficult helicopter in which to maintain a high hover and that the pilot’s workload would have been increased further as he was likely instructing a crewman in his duties. Some Members opined that the difference in reported miss-distances may have been due to differing physiological factors experienced by each of the pilots; the combination of potentially poor horizontal range information and late visual acquisition may have lead the Gazelle pilot to underestimate the separation range. A civilian helicopter Member highlighted apparent discrepancies in the various reports concerning the orientation of the Gazelle and pointed out that at low airspeeds the airframe orientation was not necessarily directly related to the ground track direction obtained from radar recording. He opined that in this case, despite the ground track information obtained from radar, the

Gazelle pilot would likely have been holding a constant heading into wind until he saw the Titan Mustang and rudder turned behind it.

Several Members commented on the requirements of the RoA, specifically Rule 8 (Avoiding Aerial Collisions), para 4, 'An aircraft which is obliged by this Section to give way to another aircraft shall avoid passing over or under the other aircraft, or crossing ahead of it, unless passing well clear of it.' Despite the fact that the Titan Mustang pilot passed under the Gazelle, all Members agreed that he had seen the Gazelle at range and had passed well clear, approximately 1000ft below. The CAA Fit Ops Advisor also reiterated the requirements of the RoA Rule 28 (Flight Outside Controlled Airspace), para 2, under which pilots are required to remain 1500m H and 1000ft V clear of cloud, in flight visibility of at least 5km, if above 3000ft amsl.

The subject of RT utilisation was also discussed with some Members opining that the Titan Mustang pilot would have been better advised to make an information call of his intentions when he saw the Gazelle or that the Gazelle pilot could have given periodic position calls, notwithstanding his high workload. Other Members disagreed and were of the opinion that multiple transmissions on an Information frequency by all pilots using it would render it unusable. However, Members agreed that both pilots were operating correctly under VFR in Class G airspace, that they had both seen each other and that the Titan Mustang pilot passed sufficiently clear of the Gazelle, albeit surprising the Gazelle pilot in the process.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Gazelle pilot was concerned by the apparent proximity of the Titan Mustang.

Degree of Risk: E.