

AIRPROX REPORT No 2012051

Date/Time: 20 April 2012 0936Z

Position: 5722N 00420W
(15nm SSW Inverness
Airport - elev 31ft)

Airspace: Scot FIR (Class: G)

Reporter: Inverness APR

1st Ac 2nd Ac

Type: Airbus A319 Tornado GR4

Operator: CAT HQ Air (Ops)

Alt/FL: 3700ft 3000ft↑
QNH RPS (982hPa)

Weather: VMC CLAC VMC CLAC

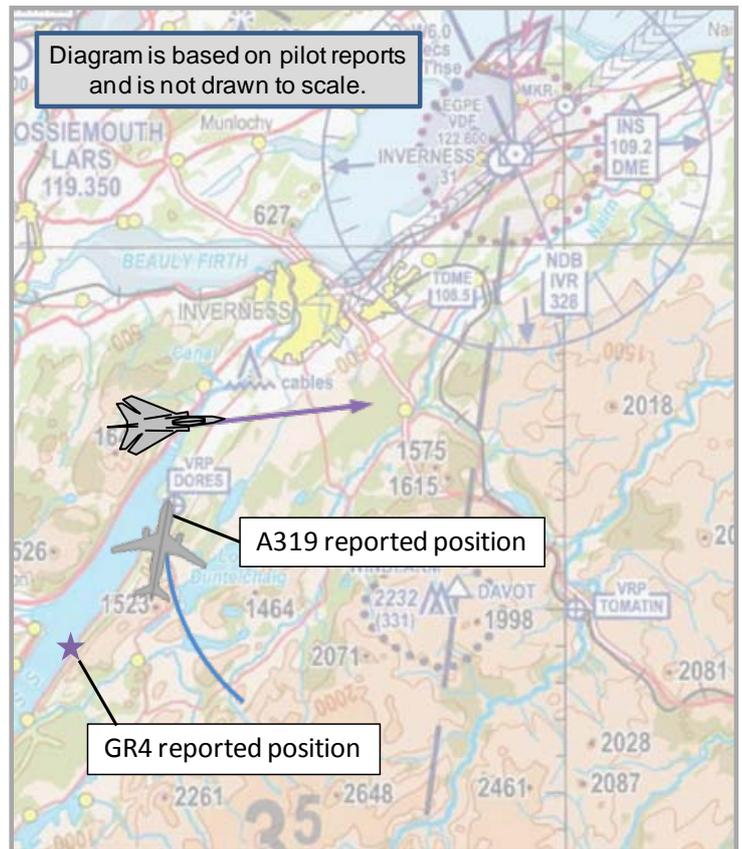
Visibility: NR 20km

Reported Separation:

0ft V/1nm H NK

Recorded Separation:

NK



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

INVERNESS APR reports that the Airbus was being vectored for the ILS RW05 and was on R base at an alt of 3700ft.

As the ac was turned onto a closing heading the pilot reported that he was visual with a fast jet and therefore, did not take the turn in order to remain clear of it. A 7001 squawk then appeared on Radar but with no Mode C indication. By not taking the turn onto the ILS the A319 was increasing its separation from the pop up traffic. The A319 was turned L, further away from the unknown traffic and changed to a LH pattern for the ILS.

When later talking to the A319 pilot on the ground, he reported that he had a contact on TCAS to his L and 3000ft below. The ac then pulled up in front of him, carried on climbing and accelerated away; he was visual with the ac throughout and did not receive a TCAS RA.

The Inverness METAR was:

METAR EGPE 200920Z 05004KT 020V090 9999 FEW003 SCT008 BKN018

THE AIRBUS A319 PILOT reports flying a scheduled passenger flight inbound to Inverness under IFR, squawking as directed with Modes C and S and in receipt of a DS from them. While closing with the localiser, heading 010° at 200kt, in and out of cloud but initially IMC, they saw a target on the TCAS screen. As they popped out of cloud into VMC they saw visually a grey/green Tornado ac and simultaneously received a TCAS 'traffic traffic' call.

They took no avoiding action as the Tornado accelerated past them very quickly and only a 'traffic' warning was given by TCAS.

The APR Controller only saw the ac on his radar screen after they pointed it out to him and they were told that the ac was displaying a transponder code that did not require them to contact Inverness as it was in Class G airspace.

After they landed, the Capt spoke with Inverness TWR who liaised with the Radar Controller. The Capt also consulted his company and all agreed that an ASR would be filed.

THE TORNADO GR4 PILOT reports that he was flying as a singleton conducting TFR training at 250ft MSD running from S to N in the Great Glen (LFA14). They were squawking 7001 with Modes C and S listening out on Lossie APP but had not established comms with them. The cloud base was 1200ft amsl (about 300-400ft agl either side of the Great Glen) with broken layers up to 3000ft at which height the weather was clear above. At 0936 while 24nm SW of Inverness Airfield, the TFR was disengaged and a climb of 8-10° nose-up at 320kt was commenced maintaining a track of 035° to clear the terrain and IMC and remain in Class G airspace well clear of ADR N560D. The HP elected not to call Inverness Radar as it would have been impossible to remain VMC below cloud and have line-of-sight comms with them, but instead elected to freecall Lossiemouth Approach in the climb in order to receive a service before crossing N560D. Contact was made with Lossiemouth APP as they passed through 3500ft and once level at 8000ft in VMC they turned onto an Easterly track to cross N560D with Lossiemouth APP.

They were informed on the ground, via Lossiemouth ATC, that Inverness ATC were filing an MOR against the Tornado for passing within 1nm of an A319 – as the A319, having left N560D into Class G airspace, was positioning for the ILS Localiser at 3700ft for RW05 at Inverness.

BM SAFETY MANAGEMENT reports that this Airprox occurred between an A319 operating IFR in receipt of a DS from Inverness APP and a Tornado GR4 operating VFR. Given the relatively low altitude of the Airprox event, it was not displayed on the NATS radar replay; however, Inverness ATC kindly provided BM SM with photographs taken from their radar recording and a short timeline of events from their perspective. This timeline showed that the Airprox occurred at approximately 0935:45 as the GR4 climbed out from low level.

Analysis of the Lossiemouth APP RT transcript showed that the timings were accurate and the GR4 pilot first contacted APP at 0935:52; consequently, LOS ATC was unable to influence the event.

ATSI reports that an Airprox was reported 15nm SW of Inverness Airport when an A319 and a Tornado GR4 came into conflict at 3700ft.

The A319 was operating an IFR flight from Luton to Inverness and was in receipt of a DS from Inverness Radar.

CAA ATSI had access to RT recordings of Inverness Radar, Inverness and area radar recordings and written reports from both pilots and the Inverness Radar controller.

The Inverness METARs are provided for 0920 and 0950 UTC:

EGPE 200920Z 05004KT 020V090 9999 FEW003 SCT008 BKN018 08/07 Q0992=
EGPE 200950Z 04006KT 9999 SCT006 BKN016 08/07 Q0992=

At 0928:30 the A319 contacted Inverness Radar at FL130, a DS was agreed and the pilot was instructed to descend to FL080. The Inverness Radar controller subsequently gave descent and heading instructions to the A319 pilot to position the ac on right base for the ILS approach to RW05.

At 0935:30, as the A319 was level at alt 3700ft and the controller instructed the pilot to turn R onto 020° in order to close the localiser from the R. The pilot replied that a Tornado had passed in front of them at a range of about a mile.

At 0935:36 a 'pop-up' contact squawking 7001 with no Mode C could be seen on the radar just to the west of the position symbol of the A319, crossing left to right.

At 0935:50, the controller instructed the A319 to turn left heading 360° to increase the separation against the 7001 traffic. There was no height information from the 7001 squawk displayed on radar until the traffic was 2nm E of the A319 and tracking away from it, when the Mode C displayed FL087.

The A319 was subsequently re-vectored for the ILS and landed without further incident.

As both aircraft were in Class G airspace the pilots of both aircraft were ultimately responsible for collision avoidance.

The A319 was in receipt of a DS but as there was no indication of the presence of the Tornado on radar until after the A319 reported seeing it, the Inverness Radar controller was unable to take any action that would have assisted in the prevention of the Airprox.

[UKAB Note (1): The recording of the Prestwick combined shows the A319 squawking 6164, S of Inverness in the descent, until it disappears below radar cover at 0934:05 as it descends through FL055 with FL037 SFL displayed on the Mode S. The Tornado is first seen at 0936:13 squawking 7001 but initially with no Mode C.]

[UKAB Note(2): The controller reports that he spoke with the A319 captain after landing, who stated that he had had a TCAS contact to the L and 3000ft below him. The contact then pulled up in front of him. The A319 captain also states in his Airprox report that the crew were IMC when they first saw the TCAS contact but on entering VMC, saw the Tornado crossing from L to R in a rapid climb and received a 'Traffic, Traffic' call from TCAS.]

HQ AIR (OPS) comments that a combination of weather conditions conspired to create a conflict between an RAF Lossiemouth-based ac recovering to base from low-level in the highlands, and traffic on the approach to RW05 at Inverness. In this case, the Tornado crew were obliged to climb out of low-level and ensured they did so on a north-easterly heading to remain well to the west of ADR N560D, remaining in Class G airspace, clearing IMC as quickly as possible, and obtaining a radar service as quickly as possible. The mandatory requirement for IFF at low-level ensured that the Tornado was detected as quickly as practicable by Inverness and the A319 pilots. Whilst crews are encouraged to obtain a radar service before entering IMC, this is not always possible in light of the local terrain, and remaining below Safety Altitude in poor weather conditions is not an option.

The Station Commander at RAF Lossiemouth has reviewed their local procedures in light of this and another similar incident and has ensured that crews are reminded of airmanship issues regarding operations near other airfields and has mandated additional Flying Order Book restrictions on crews operating in the vicinity of the Inverness approach lanes. These are in addition to extant procedures, over and above those required, regarding the under-flight or transit of ADR N560D and W6D in the vicinity of Inverness. He also noted that continued liaison with the airport operators takes place.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

An Air Cmd pilot Member advised the Board that this Airprox had prompted a review of the procedures and orders to RAF Lossiemouth aircrews to ensure deconfliction with Inverness traffic and ac on the Advisory Route N560D. The BM SM Adviser stated that specified areas had been established within which RAF Lossiemouth crews were required to make initial contact with the Inverness radar controller. The Civ controller Board Members agreed that initial contact with

Inverness Approach would have been a more appropriate course of action for the Tornado crew. Although the crew believed they would be unable to contact Inverness before climbing through a cloud layer and elected to call Lossiemouth for a service before crossing the Advisory route, they climbed from low altitude in a position where avoiding Inverness traffic was the priority. Moreover, Inverness would have been able to provide a service while they crossed N560D. Pilot Members agreed but also opined that since the Tornado had to climb through IMC, and so could not visually acquire potentially conflicting traffic, they pulled up too close to Inverness. An earlier climb and provision of radar service from Inverness would have resulted in the incident being avoided.

Prior to CPA, the A319 crew had situational awareness of the conflicting traffic from their TCAS display, such that when they entered VMC they were able to visually acquire the Tornado. However, the Tornado crew were unaware of the proximity of the A319 until after they had landed. The distance at CPA was given as 'about 1nm' over the RT and reported on the Airprox form as 2nm by the A319 pilot, both 'on the nose'. Extrapolation of the radar replay tracks, after 0934:05 for the A319 and before 0936:13 for the Tornado gives an estimated CPA in range of 1.25nm. It is not possible to verify the vertical separation at the CPA due to the lack of Mode C readout on recorded radar from the Tornado. Notwithstanding the lack of awareness of the position of the A319 by the Tornado crew, The Board assessed that the Airbus crew were alerted to the presence of the Tornado by TCAS and that the GR4 passed at a distance great enough such that there was no appreciable risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The GR4 climbed out of low level through a cloud layer and into conflict with the A319.

Degree of Risk: C.