AIRPROX REPORT No 2011057

Date/Time:	4 Jun 2011 1035Z (Saturday)	
Position:	5545N 00213W (10nm S of ST ABBS VOR)	
Airspace:	Scottish FIR	(*Class:* C)
	Reporting Ac	*Reported Ac*
Type:	BE9L	F-15E x2
Operator:	Civ Exec	Foreign Mil
Alt/FL:	FL230	FL210↑
Weather:	VMC CLAC	NR
Visibility:	50km	NR

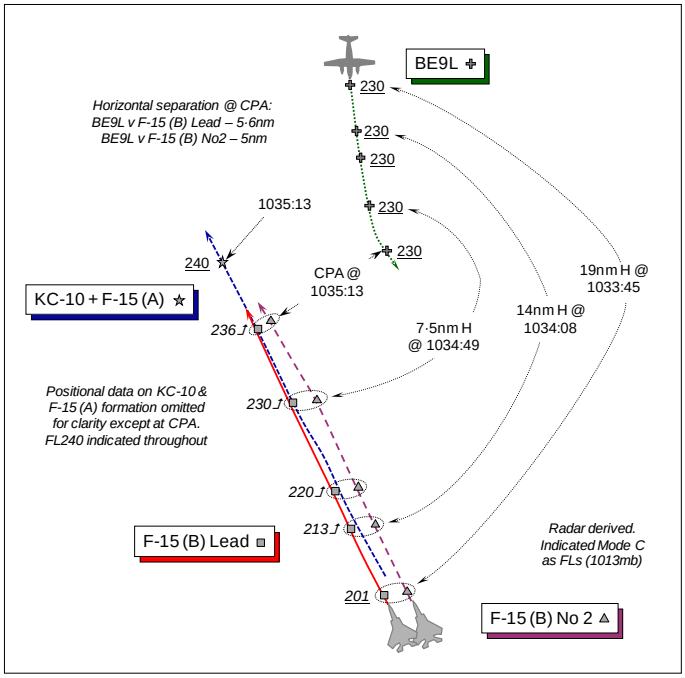
Reported Separation:

1000ft V/5nm H NR

Recorded Separation:

BE9L v F-15 (B) Lead: 600ft V/5·6nm H

BE9L v F-15 (B) No2: N/K V/5nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE BEECH BE90L (BE9L) PILOT reports he was in transit from Wick to Oxford/Kidlington IFR and in receipt of a RCS from Scottish CONTROL. The assigned squawk was selected; Mode S and TCAS are fitted. The ac is coloured silver and blue; the HISLs were on.

Approaching a position 50nm S of Wick, heading 175° on track for TILNI at 270kt, maintaining a level cruise at FL230, the controller passed TI about a tanker and escort, advising that they were 1000ft below his level and co-ordinated against his ac. About 1min later he became visual with the grey KC-10 tanker and military fast-jets 5nm away; ATC then called 'avoiding action, turn left immediately 50°', with which he complied. The controller advised that 2 military jets had climbed and were levelling at FL232. No TCAS RA was received. Subsequently, he was recleared direct to TILNI. He assessed the Risk as 'low'.

THE LEADER OF F-15E (B) FLIGHT [F-15 (B)] provided a narrative stating he was the lead pilot of a flight of 2 F-15E ac supporting the deployment of a formation of 6 F-15Es (F-15 (A) formation) to Pacific Air Command (PACOM). The KC-10 tanker launched from Mildenhall for the transatlantic flight plan and his F-15 (B) flight launched at the same time from Lakenheath with F-15 (A) formation. They all proceeded N on the notified routeing as they joined. The KC-10, F-15 (A) formation and his F-15 (B) flight were all MARSA [Military Accepts Responsibility for Separation of Aircraft]. His two-ship F-15 (B) flight was 2nm behind the 6-ship F-15 (A) formation as the latter flew up to and joined with the tanker for refuelling operations. The KC-10 crew worked many of the radio communications for the package as they were the lead ac. At no time did F-15 (B) flight ever fly above the levels the formation had been cleared to; the KC-10 being higher than F-15 (A) formation, which was higher than his F-15 (B) flight that was trailing the formation.

Unaware of flying through any altitude/level restrictions provided by ATC, their flight path was cleared visually and with their onboard radar, deconflicting from F-15 (A) formation with whom they were visual. They contacted all ATC agencies in sequence with the KC-10 and F-15 (A) formation, abiding by all ATC instructions as they understood them. He had asked the other flight members and no one recalls hearing any instructions or deconfliction warnings provided by ATC for a level-off at FL210. The only issue that he was aware of that caused discussion with ATC was when the No5 of F-15 (A)

formation had to return to Lakenheath because of an ac malfunction. The pilot of No5 turned onto a reverse routeing as he contacted ATC for a separate clearance as a single ship. At this point, ATC issued some instructions regarding other traffic in the area.

SCOTTISH AREA CENTRE PRESTWICK TAY SECTOR CONTROLLER (TAY SC) reports that the BE9L crew had been warned about military traffic that had been co-ordinated against him that would pass by in 5 min. The pilot had reported visual contact with multiple ac before the incident. He had initiated co-ordination with ScATCC (Mil) as the BE9L was inside CAS but 'off-route' under a RCS. The initial co-ordination agreement was against military traffic at FL240, but then a further request from ScATCC (Mil) was made for co-ordination against F-15 (B) flight. As the agreement was getting complicated he agreed that the BE9L would maintain FL230 and that ScATCC (Mil) could take 1000ft separation on Mode C, above or below the BE9L with F-15 (B) flight, until the subject ac had passed.

A handover of the TAY Sector had commenced just before the incident and it was the relief controller that noticed that F-15 (B) flight had climbed into conflict with the BE9L.

Because of the close proximity of the military formation it was difficult to read the SSR data block level information. The BE9L crew was given a 'standard' avoiding action turn to the L until all the ac had passed.

THE ScATCC (MIL) CONTROLLER reports he was the ATCO-on-watch, working 7 separate units consisting of a tanker and chicks proceeding northbound on a Coronet East task, a formation of 3 F-15s in the Vale of York [F-15 (C) formation], as well several civil ac. The lead Coronet ac was a KC-10 with F-15 (A) formation followed by 2 further F-15 ac – F-15 (B) flight – as a separate element in a 10nm trail attempting to join. Passing Newcastle, the KC-10 and F-15 (A) formation were level at FL240 with the trailing F-15 (B) flight level at FL200. TAY SC was working the BE9L level at FL230 and co-ordination was agreed that he could maintain 1000ft vertical separation with his Coronet formation ac on Mode C, above or below TAY's BE9L. F-15 (B) flight leader then requested a climb to FL240 to rendezvous with the Coronet formation; he was instructed to climb to FL210 initially, to maintain the co-ordination agreement against the civil BE9L. The controller then received complicated multiple requests from several speaking units [elements of F-15 (C) formation], whereupon he observed F-15 (B) flight had climbed through their assigned level of FL210. At this point F-15 (B) flight and the BE9L were separated laterally by about 5·7nm, diverging and 500ft vertically above the BE9L. He immediately informed the duty ATCO i/c of what had occurred.

THE ScATCC (MIL) ATCO I/C reports he was informed by the ATCO-on-watch that F-15 (B) flight had climbed above their assigned level, breaking the co-ordination agreement with the SAC TAY SC. Approaching the SAC Civil Watch Manager who was aware of the incident, they immediately reviewed the radar replay to ensure that minimum separation was not lost during the occurrence. The recording shows that at no point was the minimum prescribed horizontal separation of 5nm eroded. He was aware that the controller was working particularly hard throughout the period, with multiple fast-jet ac and GAT in a quite complex air picture. Earlier, he had refused traffic as the Unit was working to maximum capacity.

UKAB Note (1): AUS issued an ALTRV (altitude reservation) for Coronet East 095/4 (11-05-0556) – a refuelling task - which was transmitted to ScATCC (Mil) on 2 Jun. The message granted Non-Deviating Status (NDS) above FL245 to the KC-10 tanker and F-15 (A) formation from specified co-ordinates within the Scottish UIR from FL240-260 inclusive. MARSA applied within all Coronet East ac. Furthermore it was emphasised that 'ACFT MUST OBTAIN ATC CLEARANCE PRIOR TO ANY ALTITUDE CHANGES…'.

BM SAFETY MANAGEMENT reports that this Airprox occurred 45nm NW of Newcastle between a pair of F15s - F-15 (B) flight - part of a Coronet East Atlantic transit in receipt of a RCS from ScATCC (Mil), with the BE9L en-route to Oxford in receipt of a RCS from ScACC TAY Sector.

The Airprox occurred at the weekend when ScATCC (Mil) operate with a reduced watch of 3 controllers, including 1 who undertakes the Distress and Diversion (D & D North) role. The ScATCC (Mil) controller's workload and task difficulty was assessed as 'high' with 4 speaking units comprising: the Coronet East mixed formation at FL240, comprising a KC-10 and F-15 (A) Formation with F-15 (B) flight in trail at FL200 closing the Coronet; a formation of 3xF15s - F-15 (C) formation - conducting general handling in Class G airspace 17nm SE of Newcastle and an un-related civil ac joining the en-route structure at NEW at FL240. The Coronet formation was NOTAM'd as being in receipt of Non-Deviating Status above FL245; however, neither the ScATCC (Mil) nor LATCC (Mil) controllers were aware of the Coronet formation until approximately 2 hours prior to the incident. The Unit's investigation established that the Unit received the Coronet ALTRV notification message, but could not establish why it had not been highlighted to the personnel on shift on the morning of the incident. At the time of the incident, the ScATCC (Mil) controller had been on console for 35 mins and was controlling all ac being worked by the Unit. Moreover, the 4 speaking units were being controlled on 3 separate frequencies, although from the transcript none appear to have been cross-coupled. Consequently, throughout the incident sequence, the transcript is confused with numerous simultaneous transmissions. The Unit's guidance on task load - the number of speaking units under an ATS – rather than workload, which is a function of task load, task complexity, time scale for task completion and the individual's psycho physiological state, is that controllers should not work more than 3 speaking units concurrently. There are occasions when controllers can work more or less traffic, dependent upon the situation. For example a fourth ac that was a relatively un-complicated transit, or working less traffic when presented with a more complex situation.

At 1033:00, the unrelated civil ac joining at NEW was transferred to ScACC as GAT. At this point the Coronet formation was 47nm NW of NEW and F-15 (C) formation was 20nm SE of NEW. At 1033:11, F-15 (B) flight lead stated to the ScATCC (Mil) controller his intention to join the Coronet, "*ScATCC (Mil)* [F-15 (B) flight C/S] *on victor, let me just clarify…*[C/S No2] *is 5 miles in trail and will be joining with* [KC10 C/S]. The controller replied *"negative, you are coordinated with civil traffic north of you by 20 miles maintaining flight level 2 hundred (sic)*". However, the BE9L was actually coordinated maintaining FL230. Immediately following this transmission about the coordinated traffic from the ScATCC (Mil) controller, F-15 (B) flight leader requested a climb to FL210: "*ScATCC (Mil)* [F-15 (B) flight C/S] *copy, we are MARSA* [KC10 & F-15 (A) *formation C/Ss] and if able we would like to climb to 2-1-0, this is for a trans Atlantic passing* [sic] *we need to do when refuelling"*. At 1033:45 the controller instructed, "[F-15 (B) flight C/S] *roger, climb FL210"*; this instruction was not acknowledged by F-15 (B) flight leader, although the radar replay shows that the flight entered a relatively slow climb at 1033:52. There are no other transmissions on the RT transcript that might have obscured the flight leader's acknowledgement of this instruction, or that might have precluded the ScATCC (Mil) controller challenging F-15 (B) flight leader over his lack of an acknowledgement.

At the time of the occurrence the regulation within JSP 552 relating to the conduct of formation join-ups, including MARSA was at para 235.165. This regulation has been carried across to MAA RA 3011 and MMATM Chapter 11 Paras 43 to 49. JSP 552 235.165.5a states that when conducting formation join-ups in VMC, the formation leader is responsible for MARSA from the point when the joining ac is cleared to climb visually and join the formation. As the lead pilot of F-15 (B) flight stated that they 'cleared their flight path visually,' the join was completed in VMC. Moreover, based upon the regulation contained within JSP 552 235.165 and the fact that the ac were in Class C airspace, MARSA did not apply between F15 (B) flight and the Coronet as they were both separate elements.

The F-15 (B) flight leader pilot reported that:

> 'At no time did F-15 (B) flight ever fly above the levels the formation had been cleared to…no [flight Member] recalls hearing any instructions or deconfliction warnings provided by ATC for a level-off at FL210.'

At 1034:04, F-15 (C) formation commenced a lengthy RT exchange with the ScATCC (Mil) controller, stating their intention to split into 2 speaking units; one unit transiting S to the Wash ATA and one remaining in place 20nm SE of NEW. At this point, F-15 (C) formation was 79nm S of the Coronet formation. This prompted the controller to request that F-15 (C) formation change to an en-route

frequency due to a, *"lot of…military traffic proceeding north-west bound"*, a clear reference to the Coronet. This conversation between the ScATCC (Mil) controller and F-15 (C) formation finished at 1035:05; during this period, at 1034:08, F-15 (B) flight climbed through FL213. At the point that the 'level-bust' occurs, the BE9L is 14·7nm NNE of F-15 (B) flight level at FL230.

The ScATCC (Mil) ATCO i/c stated that as the ScATCC (Mil) controller became busy, he took up position next to the controller in a PLANNER role. During the incident sequence, the ATCO i/c was monitoring traffic as it approached the ScATCC (Mil) area of responsibility in an effort to manage the Unit's traffic flow and was taking the landline calls into the unit.

At 1035:03, the avoiding action turn issued by TAY SC to the BE9L becomes apparent on the radar replay with 6nm lateral separation shown and F-15 (B) flight climbing through FL234. The CPA occurred 10sec later at 1035:13, [5·6nm lateral separation is evident against the leader with 600ft of vertical separation indicated on Mode C and 5nm lateral separation shown against the No2]. Just afterwards at 1035:24, the ScATCC (Mil) controller asked F-15 (B) flight leader to, *"confirm your altitude"* which suggests that this is the point when the controller realised that the level-bust had taken place.

It is clear that F-15 (B) flight climbed above their assigned level of FL210, thereby breaking the coordination agreement between ScATCC (Mil) and ScACC TAY SC. Although the instruction to climb to FL210 was clear, F-15 (B) flight leader did not acknowledge this instruction. Moreover, it has not been possible to determine whether the flight leader mis-heard the instruction or whether they suffered a cognitive failure, where their desire to join the Coronet formation intruded on their response execution such that they omitted to level-off at FL210.

Routinely, it would be reasonable to expect the ScATCC (Mil) controller to detect the level-bust, which occurred about 45sec prior to TAY SC issuing the avoiding action turn. The ScATCC (Mil) controller received no read back of the climb instruction from F-15 (B) flight leader, but having passed that instruction under a RCS, the controller could reasonably have assumed that the flight leader would follow that instruction. Nevertheless, controllers are required to receive read backs of level instructions and the fact that this was not challenged by the controller can be considered to be a causal factor in this occurrence. Unfortunately, the ScATCC (Mil) controller's attention was diverted by a lengthy RT exchange with F-15 (C) formation some 79nm SE of the Coronet group.

Whilst the geographic dispersion of the traffic and the task load faced by the ScATCC (Mil) controller was within their capacity and the bounds of the Unit's task-load guidance, the workload generated by the disparate tasks and their timing, divided the controller's attention such that he was unable to continuously monitor F-15 (B) flight. Although 'good practice' might suggest that controllers should be alive to the potential for a benign situation to quickly become complex, there is a degree of hindsight bias associated with this view and, moreover, it defies the basic human instinct to attempt to continue to manage a situation. Whilst the ScATCC (Mil) control team on duty were notified of the Coronet later than might be considered ideal, this cannot be considered causal nor contributory to the occurrence, given that the overall taskload was within the team's capacity. Furthermore, the Unit's task load at the time of the occurrence meant that the ScATCC (Mil) ATCO i/c, having not taken an active role in terms of controlling, was unable to directly monitor events on the controller's frequencies, thereby removing an additional ATM-related safety barrier.

It has not been possible to assess whether the understanding of USAF crews of UK formation join-up procedures and the impact of USAF tanker procedures, specifically the boom operator's actions, affected the outcome of this occurrence.

Subsequent to the investigation of this Airprox HQ 1 Gp BM SM requested that OC ScATCC (Mil) review the Unit's task-load orders to ensure that they provide appropriate guidance for ATM personnel. This review has been concluded and OC ScATCC (Mil) is content that the Unit's task-load orders are fit for purpose. The Unit considers the problem lay with the application of those orders by the controlling staff on duty. Consequently, all Unit personnel have been re-briefed with respect to their responsibilities for managing the Unit's traffic loading outside core operating hours.

ATSI reports that the BE9L crew called the TAY Sector at 1011:40. The flight was maintaining FL230, 15nm NW of Aberdeen, and was instructed to route direct to TILNI. At 1023 the ScATCC (Mil) controller called the TAY Sector requesting co-ordination on a formation C/S KC-10 [with F-15 (A) formation] against other GAT. The formation was climbing through FL193, 47nm S of Newcastle. All the ac within the formation were at the same level and within 1nm of each other. The Mode S SFL on one of the formation was reporting FL240.

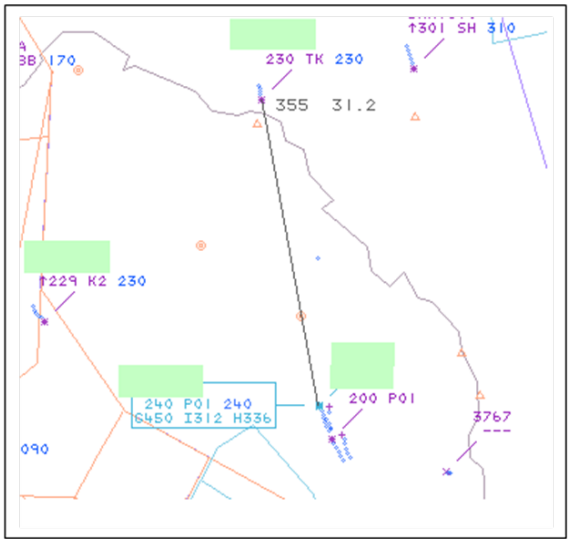
CAP493 Manual of Air Traffic Service Part 1, Section 1 Chapter 4 paragraph 15 states:

> 'Formations are to be considered as a single unit for separation/deconfliction purposes provided that the formation remains within the parameters shown [*below*]:
>
> Class C Airspace: 1nm laterally and longitudinally and at the same level; …'

Some 11nm S of this formation was another formation pair - F-15 (B) flight. Within this pair, flying parallel tracks, the westerly ac was transponding and reporting Mode C of FL174, climbing. During the co-ordination at 1023, the ScATCC (Mil) Controller did not mention F-15 (B) flight to the S.

At 1026:20 the TAY controller called Scottish Military for further co-ordination on the first formation - KC-10 and F-15 (A) formation. The TAY controller identified the BE9L to the ScATCC (Mil) controller. The BE9L was 17nm NW of NEXUS and the KC-10 and F-15 (A) formation was 90nm S of NEXUS. The KC-10 and F-15 (A) formation was activating high-level STCA on the TAY controller's situation display. A third formation, 21nm SE of the first formation, was also activating high-level STCA on the situation display. The formation pair (F-15 (B) flight) was not activating any alerts and one of the pair was not transponding. Therefore this pair displayed normally on the TAY controller's display.

The TAY SC requested, "*Co-ordination against the* [BE9L C/S] *then, not above 2 3 and you're not below 2 4 is that correct?"* The Scottish Military controller read back the co-ordination request and the conversation ended with the TAY SC stating, "*that's co-ordinated*". At 1028:40, TAY SC passed TI to the BE9L pilots, "*traffic information about 4 or 5 minutes you may see … an American fighter and a D C 10 they'll be a thousand feet above you*." The KC-10 and F-15 (A) formation was now overhead Newcastle and 75nm ahead of the BE9L. The formation was now maintaining FL240. The BE9L crew asked if the traffic would be on the aircraft's left-hand side, to which the controller replied, "*no … they're in your 12 o'clock at the moment…its reciprocal*". Scottish (Mil) telephoned the TAY Sector at 1032:29 and requested the TAY SC identify another two F-15s, "[F-15 (B) flight C/S] *southeast of the* [KC-10 and F-15 (A) formation C/S]". F-15 (B) flight had now decreased its distance behind the KC-10 and F-15 (A) formation to 3.4nm. The BE9L was 31nm N of the KC-10 and F-15 (A) formation.



(PC MRT 1032:27)

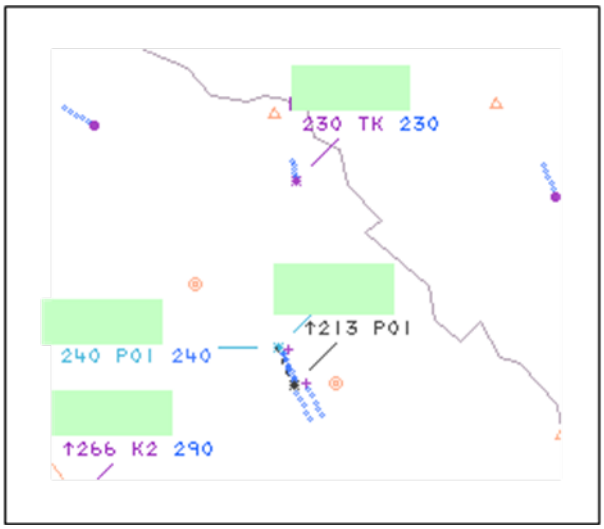
The TAY controller identified F-15 (B) flight and the ScATCC (Mil) controller stated, *"they're not above flight level 200 against your* [BE9L C/S]*…*". The TAY controller replied, "[BE9L C/S] *will stay at flight level 2-3-0 you can go 1 thousand feet below or 1 thousand feet above*". The conversation was then terminated by the ScATCC (Mil) controller, "*Brilliant thank you very much*".

MATS Part 1 Section 1 Chapter 10 paragraph 3 states:

'3.1 When requesting co-ordination, a controller shall: …

propose a course of action upon which agreement is requested and obtain a clear decision on that proposal. To ensure clarity and avoid misunderstandings, before terminating the call, parties shall explicitly state the action required of their aircraft to achieve the agreed course of action … A response that does not reaffirm the details of the agreement, such as "Roger", is not acceptable.'

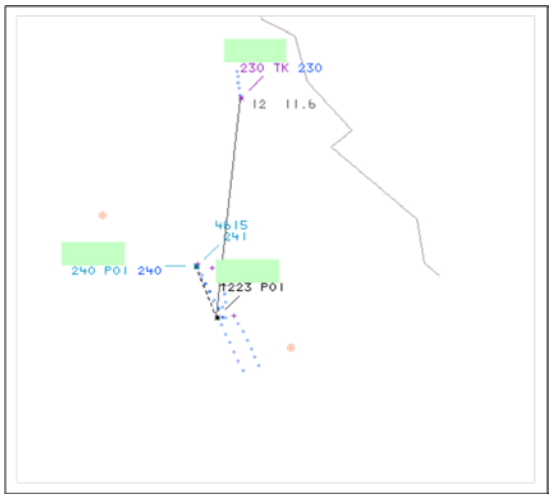
At 1033:52 the Mode C of F-15 (B) flight leader indicated that the transponding ac had commenced a climb from FL200 and was now passing FL203; at 1034:08 it was indicating Mode C of FL213, climbing, STCA then activated between F-15 (B) flight and the KC-10 and F-15 (A) formation ahead.



(PC MRT 1034:10)

At 1034:15 the BE9L reported, "*visual with that group of traffic now*". TAY SC replied, "*That's correct there's some below you and some above you they're all co-ordinated against you and you're just maintaining flight level 2-3-0*". The KC-10 and F-15 (A) formation was maintaining FL240 in the BE9L's 1 o'clock range 11nm on a track to pass down the BE9L's right-hand side. F-15 (B) flight was 2.9nm behind the first formation and was now climbing through FL216.

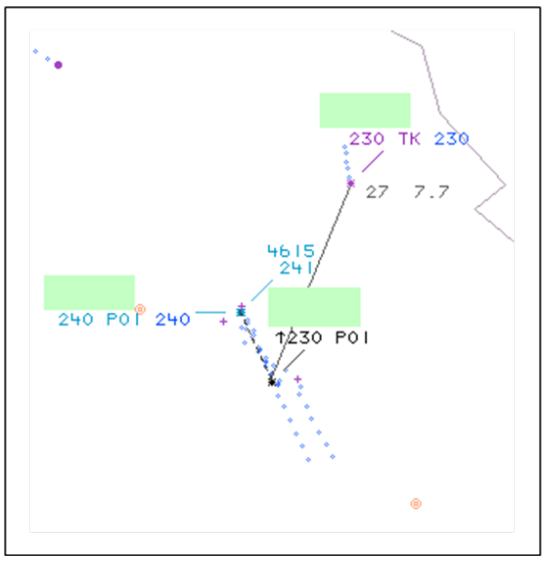
At 1034:25 the Mode C of F-15 (B) flight indicated that they were still climbing and passing through FL223. They were in the BE9L's 1 o'clock range 11.6nm on a track to pass down the BE9L's right-hand side.



(PC MRT 1034:25)

At 1034:35, TAY SC instructed the BE9L pilot, "[C/S] *sorry avoiding action turn left immediately 50 degrees";* this was read back by the BE9L pilot. TAY SC informed the BE9L pilot that, "*one of those tracks he's now just climbing through your level*." The second formation's Mode C was now indicating FL225.

At 1034:49, F-15 (B) flight leader's Mode C indicated the ac were at the same level as the BE9L, still in the BE9L's 1 o'clock, range 7.7nm. The aircraft were about 45nm N of Newcastle at FL230 in Class C controlled airspace.



(PC MRT 1034:49)

At 1034:51 the TAY controller updated the traffic information to the BE9L, to which the BE9L pilot replied, "*okay … we got two visual ????? at the back of the pack that look a bit higher."*

Minimum separation between F-15 (B) flight and the BE9L occurred at 1035:13 with 5nm between the nearest aircraft and 600ft indicated against the leader's Mode C. Subsequently, F-15 (B) flight levelled at FL239 behind the leading formation. At 1035:39, TAY SC informed the BE9L pilot that his ac was now clear of the traffic and instructed the flight to resume its own navigation.

The BE9L was southbound maintaining FL230. The KC-10 and F-15 (A) formation was maintaining FL240 followed by F-15 (B) flight climbing through FL230. Separation was maintained between the BE9L and nearest aircraft of F-15 (B) flight: minimum distance was 5nm and 600ft, where 5nm or 1000ft was required.

The co-ordination undertaken between the TAY SC and ScATCC (Mil) with respect to F-15 (B) flight was not completed with an explicit statement of the action required. TAY SC offered a co-ordination

solution of "[BE9L C/S] *will stay at flight level 2-3-0 you can go 1 thousand feet below or 1 thousand feet above*". The TAY SC had no indication therefore of the exact instruction which may have been relayed to the F-15 (B) flight pilots.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilot of the BE9L and the leader of F-15 (B) Flight, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and the appropriate ATC authorities, together with comment from the relevant Command.

There were some significant subsidiary issues within this occurrence. However, it was evident to the Board that the BE9L crew's part in this Airprox was restricted to compliance with TAY SC's avoiding action. These instructions ensured that the stipulated horizontal separation was maintained against F-15 (B) flight as they climbed up toward the KC10 and F-15 (A) 'combine'.

The HQ 3AF Advisor reaffirmed F-15 (B) flight leader's belief that his flight had not been instructed to level-off at FL210. However, he acknowledged that the BM Safety Management report had revealed that the lead pilot was mistaken. This climb was contrary to the co-ordination agreements struck between the ScATCC (Mil) controller and TAY SC which, if complied with, would have ensured a minimum of 1000ft vertical separation between the KC-10 and F-15 (A) combine above the BE9L, maintaining a level cruise at FL240 and 1000ft on Mode C against F-15 (B) flight. These agreements ensured that the ScATCC (Mil) controller had the necessary tactical flexibility to manoeuvre the ac under his control safely and had resulted in TI being passed to F-15 (B) flight about the BE9L when it was 20nm away. However, the ScATCC (Mil) controller erroneously reported that the BE9L was at FL200 – the same level as F15 (B) flight at that point. Members understood why the leader of F-15 (B) flight would have been keen to climb above traffic reported to be flying at the same level, the BE9L, which he may have perceived as an impediment to his eventual join with the KC-10 and F-15 (A) combine. His request to climb to FL210 seemed to indicate an understandable degree of urgency to climb clear above the BE9L's reported level. He would have perceived that there was then no other traffic to delay his join with the KC10 and F-15 (A) formation cruising at FL240, hence his comment "....*we are MARSA* [with KC10 & F-15 (A) *formation C/Ss] and if able we would like to climb to 2-1-0...".* Whilst noting that the ALTRV message only included reference to the KC10 & F-15 (A) formation, not F-15 (B) flight, the latter were in effect the 'airborne spares' for F-15 (A) formation. In Class C CAS under a RCS and co-ordinated against the BE9L, the Board recognised that MARSA could only ever be stipulated between military ac involved in the Coronet East tanker trail. With F-15 (B) flight below the levels of the stipulated ALTRV, the mandatory instructions of the ScATCC (Mil) controller held sway, so the controller would have seen no reason at that stage not to accede to F-15 (B) leader's request to climb his flight 1000ft to FL210. The controller's immediate reply at 1033:45, "[F-15 (B) flight C/S] *roger, climb FL210"* was clear and unambiguous. However, the RT transcript revealed that there was no response from F-15 (B) flight and the controller did not challenge the absence of a read-back. This was a salutary lesson a pilot Member observed; if pursued at the time this would have forestalled the occurrence. In the event the subsequent climb revealed that the leader believed, incorrectly, that his flight had been permitted to climb to join with the KC10 and F-15 (A) combine at FL240. The Board was briefed that the controller was under significant pressure at this stage and it was evident that he was very busy indeed controlling this complex scenario, with a wide split, necessitating a diverse scan over a large displayed range on his radar. Members noted it was at this point that his attention was critically diverted by the activities of F-15 (C) formation to the SE and did not spot F-15 (B) flight's excursion above their assigned level. Controller Members opined that the use of the three frequencies simultaneously by the one controller was not good practice, albeit indicative of the Unit's limited control capacity at the time, since RT transmissions could easily be missed. This level of military activity was unusual on a Saturday morning and the issue of the controller's workload had already been addressed by the Unit as reported by BM Safety Management. As it was F-15 (B) flight had already climbed through FL210 by the time the ScATCC (Mil) controller realised what had occurred. Nonetheless, F-15 (B) flight's climb through FL213 occurred when the BE9L was 14nm away and if he had spotted it at the time it could have been

countered. The Board concluded that that this Airprox had been caused when F-15 (B) flight climbed above its cleared level.

One Member perceived that because stipulated separation had been maintained this event was so benign that it was misleading to consider it as an Airprox; it should not be classified as an Airprox event simply because avoiding action had been issued. However, this was a solitary view; other Members agreed that this was not a risk-bearing Airprox, but contended that normal procedures had not been complied with and therefore it should be categorised accordingly. Controller Members opined that whilst avoiding action is not a normal occurrence in CAS, the BE9L crew had complied promptly with TAY SC's avoiding action L turn ensuring separation of 5nm was maintained. Moreover, the BE9L crew had sighted the military jets. These factors convinced the overwhelming majority of the Members that no Risk of a collision had existed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: F-15 (B) flight climbed above its cleared level.

Degree of Risk: C.