

10SAB10

23 November 2009

New “end around” taxi procedure at Atlanta Hartsfield (KATL)

In September, the US Federal Aviation Administration (FAA) instituted a new taxi route for aircraft arriving on the southern runway complex aimed at reducing incursion risk. At KATL, departures are generally carried out on the “inboard” runways, 08R/26L on the northern side and 09L/27R on the southern. Meanwhile, the majority of arrivals take place on runways 08L/26R to the north and 09R/27L to the south. In addition, runway 10/28 is used for both arriving and departing traffic. This means that large numbers of aircraft are required to cross the departure runways en-route to and from the terminal complex. These crossings were naturally identified as incursion hotspots. The construction of taxiway Victor an “end around” taxiway on the north side in 2007 removed the requirement for arrivals on runway 08L/26R to cross 08R/26L and as a result dramatically reduced the runway incursion risk. Meanwhile, on the southern complex aircraft arriving on 09R and 10 or departing on 10 were routed to cross 09L/27R via taxiways Dixie, Juliet or November where departing aircraft on 09L would be at a high energy state in their takeoff roll. Clearly, this has remained a significant incursion hotspot.

In an effort to recreate the improvement in runway safety seen on the northern complex on the southern side without the attendant cost of constructing an end around taxiway for 09L/27R, the FAA has introduced a procedure which will see aircraft departing on runway 09L starting take off rolls from the M2 intersection unless there is an operational requirement to use the full length. Take off from M2 gives 3,338m of runway compared with 3,624m for the full length. This is to allow arriving aircraft to route to the Terminal complex behind departing aircraft via Papa. The FAA estimates that this procedure will reduce crossings of 09L/27R by an average 650 per day.

Prior to instigating the procedure, the FAA carried out a risk assessment to identify potential hazards. Two possible problems emerged; the danger of debris damaging or penetrating the fuselage of aircraft on Papa and the effect of jet blast on passing smaller aircraft. According to the FAA these threats are reduced or mitigated, in the first case by the low incidence of FOD in the runway environment and in the second by using manufacturer data which shows that the effects of efflux on aircraft passing on Papa is minimal. In an attempt to further reduce risk crossings of 09L at Papa while aircraft of 757 size or larger are departing will be restricted to aircraft with a MTOW of greater than 12,500lbs. It should be noted that the jet blast study was carried out with the 767-400 as the baseline departing aircraft for efflux modelling however there is no restriction on the size of aircraft that may use the procedure.

What to expect

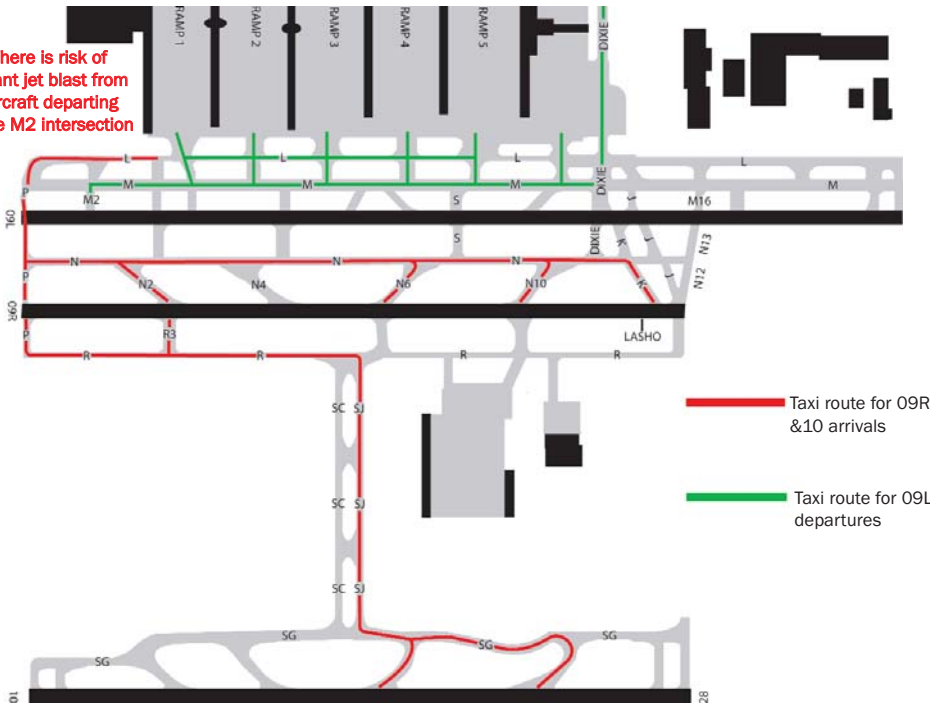
RWY 09L Departures:

When easterly departures are in operation Atlanta ATIS will include the message: “Runway 9L departures, expect intersection departure from Taxiway Mike 2, remaining distance is 10950 feet.” This is so that crews can plan their takeoff performance accordingly and if necessary request a full length departure. Crews should expect to taxi to M2 via Mike. (See Fig 1). If you will require full length for departure you should advise ATC on first contact. If you do require full length you may be held at M2 to allow arriving traffic to clear the Papa/Mike intersection.

RWY 10 Departures:

Aircraft departing on runway 10 should expect to taxi via Lima and Mike to cross 09L/27R and 09R/27L on Juliet or via Mike 16 and November 12 & 13 before continuing on Romeo and Sierra-Juliet *Note: Land And Hold Short Operations (LAHSO) are used for arrivals on 09R. IFALPA is opposed to LAHSO since they elevate collision risks between landing and taxiing aircraft. Furthermore, it should also be noted that this routing still brings into play the hotspots on Juliet and November (See fig 2).*

NOTE: There is risk of significant jet blast from large aircraft departing from the M2 intersection of 09L...



RWY 09R Arrivals:
 All aircraft will be routed via November to cross 09L/27R on Papa. Aircraft may be held short at 09L/Papa intersection for aircraft that require the full length of 09L for departure. Note: Arriving aircraft bound for Concourse E may be routed to cross 09L/27R via Sierra or Dixie. This brings into play elevated incursion hazards associated with runway crossings at high energy points.

RWY 10 Arrivals:
 All aircraft will be routed to cross 09L/27R via Papa. Pilots can expect to be held short of 09R/27L for aircraft landing on 09R. Once clearance is received to cross 09R you are also cleared to cross 09L unless otherwise instructed. You should expect to change frequency and contact or monitor ground on 121.75 once you have crossed 09L.

Problems with the procedure

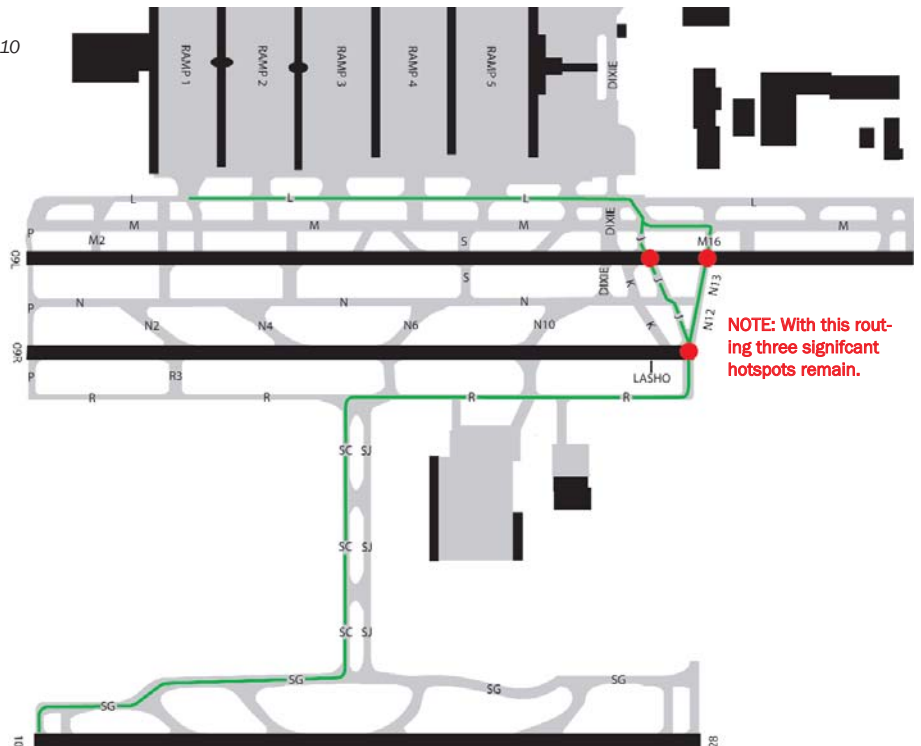
While this procedure will undoubtedly reduce the number of runway crossings (the FAA estimate 650 per day) which is to be applauded since it does much to reduce incursion risk there remain a number of issues with the new procedure which merit re-examination.

Aircraft departing on runway 10/28 are still required to cross 09L/27R at a point where departing traffic is at high energy.

Aircraft arriving on runway 10 will be cleared to cross 09L without specific clearance. This is of particular concern since runways 09L and 09R are controlled on separate frequencies. IFALPA policy is that no runway (active or inactive) should be crossed without specific clearance.

Aircraft landing on runway 09R and taxiing to Concourse E may be instructed to cross 09L via Sierra or Dixie rather than using the “end around” procedure. This means runway crossings at high energy points.

Fig 2: Taxi route for Rwy 10 departures



NOTE: With this routing three significant hotspots remain.

The data for the effect of jet blast does not take into account the potential impact of efflux from the largest aircraft using the M2 departure procedure. While there are restrictions in place for aircraft under 12,500lbs MTOW it may be that this limit is not high enough given the potential for jet blast in the region of 85MPH.

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