ENG720

Posted on 19.04.2023 by Phil Young

Category: Engineering

Report Title Lack of stand capacity resulting in aircraft repositioning

Initial Report

At [Airport] stand allocation constraints require the movement of aircraft from stands adjacent to the terminal to remote stands to facilitate a smooth operation. These capacity constraints regularly require the movement of 30 plus aircraft at some point during the night. The usual challenges faced by engineers and mechanics to achieve the workload with the typical late arrivals and early departure that typifies summer operations is exacerbated by these movements. Whilst everybody at [Airport] has their part to play to achieve the airport's smooth running, and I appreciate that the movements play a vital part in this, I would like to highlight the issues that this can cause on the line as an engineer.

This morning [Registration] landed at 0450, it was not on the pre-published tow-list that is sent ahead of time. As a consequence, we started a work-pack around 0500, with the intention to finish at 0700 when the shift ends. Our workload consisted of some routine tasks, a crew oxygen bottle change, and two small inbound defects. Our work was definitely achievable with the number of engineers assigned and the time available, so we began straight away. With the oxygen bottle removed, and CB's pulled in the flight deck, at around 0530, the [Handling Agent] tow-team arrived and informed us that they had to tow this aircraft. I spoke with the team leader and informed him that we were midway through maintenance and would be around 45 minutes, I asked if it would be possible to return in an hour when we were done. The tow-team said they would speak to the airport and advise if this was possible. Unfortunately, after the phone call the tow-team informed us that the airport required that stand immediately and that the aircraft had to be made towable immediately. The tow-team went onboard, fitted MLG locks and removed the airbridge without consultation and stood in position with the tug at the nose gear right next to us whilst we hurriedly fitted the new bottle. This action compounded the pressure we felt to complete maintenance quickly, and we opted to leave the O2 bottle secured with unions connected, but to leak-check, test and complete paperwork after the tow had been completed. We could not get onboard to test as the airbridge had already been removed.

This situation was far from ideal, as I am acutely aware that being pressurised to complete a job quickly coupled with the distraction of the aircraft being towed with maintenance incomplete makes maintenance errors more likely but it was my preferred option. The alternative was to have a

visit from airside operations with a reprimand for rendering the stand unusable without first notifying the airport and with the threat of having my airside pass being taken away (which in the past invariably happens to engineers who insist that they finish maintenance before the aircraft is towed). This is equally distracting and I did not want such a confrontation to happen. I therefore stopped midway through maintenance to facilitate the capacity request tow.

Whilst I appreciate the airport are under pressure to run a smooth operation, and that aircraft moves need to happen to facilitate that, the scale of the movements required due to capacity constraints (some aircraft even being towed twice in one night), coupled with the short downtime and poor relationship between engineers and airside operations adds to the likelihood of maintenance errors. I appreciate everyone is just trying to do their jobs the best they can, and I do understand that it must be frustrating if engineers are preventing aircraft movements happening when the airport would like, but ultimately safety must come before smooth operations. I personally do not think asking to be left undistracted for an hour to complete maintenance to be an unreasonable request.

I know that these issues have been escalated to management level and discussed between [Operator] and [Airport Ops]. Unfortunately, I believe there is a bit of a disagreement, and the position of [Airport Ops] to be very unhelpful. In their view engineers should not be disabling any aircraft by doing maintenance before they are towed. Unfortunately, this does not work for engineers, because the tow-lists are provisional, may not include all the required tows, and times are very unreliable. I cannot justify waiting for a tow that could be in a few hours before commencing my work, aircraft downtime is too limited. The aircraft I reported was not on the tow-list, and as such there was no easy way of knowing if and when the aircraft would require a tow. I am aware that some of my colleagues have started maintenance on an aircraft, returned to the office to pick up tooling and a bite to eat and returned to find a different aircraft on stand. Had they not been so observant it is quite feasible they could continue work on the wrong aircraft.

Comment

It’s a fine balance between the prioritisation of stand use versus maintenance activities, and there are undesirable consequences from both disrupted maintenance activities and stands backing up for aircraft landing. We are all very aware of the hazards involved with interruptions to the continuity of work in progress, and the prospect of returning to a stand and not realising a different registration had replaced your task aircraft could unleash a catalogue of perilous safety issues for both aircraft.

The operator carried out a comprehensive internal investigation and met with (and conference-called) both the Airport and Handling Agents who were also proactive and sympathetic to the problems reported and the dangers of interruptions to aircraft maintenance. It is disappointing that the operator’s Safety Management System had not identified this problem previously, and perhaps

there is a case for mitigation within Maintenance Planning. Improved communications will hopefully correct this situation, and continued reporting by engineering staff will hopefully assist the operator in ensuring this issue will improve.

It is all too easy to commence a shift and enter into battle with any party that stands in one's way but if this becomes commonplace then the big picture of Human Factors issues can fall by the wayside; an interruption that could have been mitigated against becomes a stressor increasing the chances of further error. Ultimately, the solution revolves around planning and communication between teams. This can be made more difficult depending on how many agencies are involved in an activity and so effective communications at the seams between organisations needs to be consciously addressed as part of task planning and execution in such situations.