

Handlers Caught in the Headlights

It may seem odd to start an aviation safety article with a motoring analogy but for those of us who drive, it is a situation most of us would have experienced. We have all at some point uttered the odd choice word to describe our 'disappointment' when an oncoming driver has not dipped their headlights as they pass. Why? Because we feel this is an inconsiderate act that temporarily compromises our vision and therefore, our personal safety.



Background

In a previous GHOST article, we spoke about the misuse of anti-collision lights during the departure phase and the potential for safety margins to be reduced. Feedback from GHOST members suggests many airlines have revised flight deck procedures and checklists, in addition to ground staff complying with best practice and walking away from the footprint of the aircraft when anti-collision lights are inappropriately switched on. However, the latter positive action may have resulted in an unintended consequence...

There have recently been numerous reports that flight crew have been using the landing, runway turn off and/or taxi lights to attract the attention of their ground handlers. For example:

- While sitting in the tug, ready for the pushback, the flight deck flashed the nose gear lights several times. This was directly into XXX's eyes causing, preventing him from continuing his duties. He was unable to come to work the following day and has been advised to seek medical advice.
- Supervisor and Ramp Agent were connecting the towbar to the aircraft and were flashed by the aircraft landing light three times, while performing their duty. They both claim they have issues with their eyes and have headaches.
- Agent was removing the nose wheel chocks when he was flashed with the main beam lights on the nose wheel by the flight deck. Agent contacted the flight deck to complain and explained that they shouldn't be doing that. The captain was in a rush.

- While servicing the outbound XXX, the captain flashed his nose gear lights whilst XXX was plugging in his headset, temporarily blinding him. When challenged via the headset and asked why he flashed his lights, the captain's response was: "We are going to miss our slot".

The last example reveals the most significant influence for this behaviour. Everyone who works on the frontline (ground crew, flight crew, cabin crew etc.) is working under pressure. As departure time approaches, this pressure builds on the flight crews, who are often waiting only for their ground handlers to complete final actions/preparations for departure.



In many locations the electronic clock (Ramp Information Display Systems - RIDS) will be prominent in the crew's vision. Whilst informative, it is a reminder that time is counting down to their assigned slot. A slot gives the crew a 'Calculated Time of Take Off' (CTOT). Normally, the aircraft should take-off within 15 minutes of the time stated in its flight plan but, if a slot is necessary, this window reduces to within five minutes before or ten minutes after the CTOT. If the aircraft can't achieve this take-off time, the crew must reapply for a slot, which could cause a significant delay.

At this phase of the operation, means of communication are limited and, with the aforementioned pressures ever present, the lines between performance and safety sometimes become blurred.

Consequences

The latest generation aircraft use LED lights which are technically safer than the older Halogen versions. However, studies have revealed that exposure to an intense and powerful (LED) light is 'photo-toxic' and can lead to irreversible loss of retinal cells and diminished sharpness of vision.

Sudden exposure to bright light, especially at night, can render staff temporarily blind, it is disorientating, and can cause permanent damage because of proximity to the light source.

In addition to the normal risk associated with the pushback activity itself, temporary disorientation or loss of vision in and around numerous trip hazards, operational ground support equipment, and potentially even running engines, is extremely dangerous. In addition to nausea, light exposure can cause:



- Flash blindness (a temporary loss of vision produced when retinal light-sensitive pigments are bleached by light more intense than that to which the retina is physiologically adapted at that

moment), is a visual impairment that may last for a few seconds to a few minutes. The bright light overwhelms the eye and a bright spot or spots may be seen for many minutes.

- Permanent damage can result in various ongoing complaints, including blurred vision, 'burn patches' on eyes, headaches and depression, all of which often extend beyond the working environment and have an impact on everyday life.

The dangers and distractions arising from dazzle incidents are well known. Laser attacks against aircraft were an increasing problem that eventually resulted in the Misuse of Lasers (Vehicles) Act 2018, which made such attacks an indictable offence and dazzling pilots of aircraft in flight with any form of light is still an offence under the Air Navigation Order (2019).

In the three year period from 2017 - 2020, one GHSP recorded ten incidents related to the incorrect operation of aircraft lights. (It's worth noting that in these cases, the three-year statute of limitation has not yet expired and it is still possible that claims will be pursued by the injured parties). Of the incidents referred to above, the GHSP received two formal claims which are currently reserved at £103,000. In both cases, the claims made against the GHSP, as the claimant's direct employers, allege that an unsafe system of work and an unsafe place of work was provided. These allegations are equally likely to be made against the airlines, as all organisations involved have a legal duty to ensure staff are safe from injury while at work.

As a side note, their insurers advised they were aware of a number of flashing light claims brought against a major airline. Insurers decided to defend the claims and take the cases to trial on the basis that the injuries sustained were minimal. The cases were heard at a County Court and the trial judge found in favour of all the claimants. Although there was evidence of exaggeration by some of the claimants regarding their symptoms, the trial judge ordered insurers to pay up to £1,000 in respect of each claimant. In more severe eye injuries, as shown by the reserves on the live claims above, the damages associated with long term absence from work, can be substantially more.



GHOST understands that at least one airline encourages (within their operations manual) the use of landing and/or turn-off lights to attract the attention their ground handlers.

For the reasons detailed in this article, flight crew are implored to use other means of communication such as radio, interphone, hand signalling, ground horn, etc.

An example of an appropriate operations manual entry is: "Landing or turn-off lights must not be switched on at any time if the crew suspects that the tug is attached to the aircraft or if any person is believed to be in close proximity to the lights, even during daylight, as they can cause severe discomfort and temporary visual impairment".

Summary

The inappropriate use of aircraft lighting as a means of signalling to ground handling staff can cause dazzle, possible eye injury, distraction and disorientation, and hence presents a significant threat to the safety of staff during an activity which is itself risk-bearing. In the interests of best practice for reducing this risk, GHOST and the UKFSC recommend that stakeholders consider the following actions:

Aircraft Operators:

- Conduct a review of your operations manual, to see if the aforementioned issue exists, with a view to amendment.
- Through training and monitoring, ensure that flight crews do not inappropriately use these lights whilst ground crews are conducting final pre-departure preparations.
- Introduce new or promote existing procedures that require flight crews to establish communication with the ground crews, using alternative methods.

Ground Handling Agents:

- Through training and monitoring, ensure that ground crews walk away from aircraft when taxi lights have been inappropriately used and do not continue with pre-departure preparations, until medical advice has been sought.
- Introduce new or promote existing procedures that require ground crews to establish communication with flight crews, when they intend to be away from the headset, to conduct duties such as the pre-departure safety walk-round.
- Ensure that all related incidents are formally reported.

For any related comments, feedback or information please contact GHOST@caa.co.uk