
MACCARES BULLETIN

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MACCARES bulletin is published by the Accident Prevention and Investigation Group (APIG) by using the de-identified information collected from MACCARES. It includes de-identified MACCARES report abstracts and suggestions to the relevant entities. It serves as a platform for sharing aviation safety information in the community, so that the relevant entities can learn from the experience and plan for improvement.

In this issue of MACCARES Bulletin, four cases have been abstracted and shared below.

Duty time of flight crew members

➔ The flight was from [Destination A] to Macau. Passengers were boarded the aircraft on time and then waited in the cabin for almost 7 hours until the aircraft departed. The flight arrived at Macau airport about three hours later. The reporter mentioned that the same aircraft flew from Macau to [Destination A] in the same day earlier in that morning. The reporter expressed concern in relation to the fact that the pilots were on active duty for at least 16 hours in that case.

Part VII of the Air Navigation Regulation of Macau and Aeronautical Circular AC/OPS/013R00 address the Fatigue of Crew. If a pilot is suffering or is likely to suffer from fatigue, he/she is not fit for duty and shall not fly. The operator must not cause or allow that pilot to fly.

It has always been a complex and challenging task to determine an individual's cognitive ability and physical fitness for both operators and flight crews. As demonstrated in substantial fatigue research, people are not good at determining their actual level of fatigue. It was mentioned in the Civil Aviation Advisory Publication CAAP 48-1(1) published by Civil Aviation Safety Authority of Australia (2015) that using both objective and subjective data to determine an overall alertness level would assist flight crews in making decisions about whether they are operationally fit for work. It was suggested when determining fitness for duty, the following factors should be considered:

- perceived alertness – how alert are you feeling?
- prior sleep – have you had adequate sleep?
- duty timing – what time does the duty occur?
- duty risk – what level of operational risk is associated with the duty?

APIG suggests...

AACM:

- Provide information or guidelines to operators and pilots on subjective alertness measurement.



Airline:

- Consider the factors mentioned above to determine an overall alertness level in making decisions about whether the flight crew is operationally fit for work in addition to the flight duty time limits.
- Establish and maintain an effective fatigue occurrence reporting system. Such system should be on voluntary and confidential bases. Operator should regularly analysis these reports and take necessary actions.
- Include fatigue investigation in every occurrence investigation.
- Provide feedback to flight crews about decisions or actions taken based on fatigue reports/fatigue investigation and lesson learned.

Pilot:

- Consider the factors mentioned above when determining fitness for duty, especially when being requested by operator to extend a Flight Duty Period.
- Proactively report and provide information of events possibly related to fatigue to the AACM or operator.
- Cooperate with operator by providing record of sleep history in case of fatigue investigation.

Rubber build-ups on runway

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- ➔ The reporter expressed that there were rubber deposits on Runway 34 centerline markings. The centerline markings were no longer visible, noticeably in the touchdown zone.
 - ➔ The reporter requested that the rubber deposits to be removed from the runway centerline markings.
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In accordance with paragraph 8.3 of Aeronautical Circular AC/GEN/009R01, Safety Alert 2015-01 was issued to relevant entities to address this safety concern.

After receiving the safety alert, the reinforcement checking and assessment of the reported situation have been performed by relevant entities. After the assessment, maintenance planning action for rubber deposit removal was triggered. In order to reduce the response time for runway rubber removal, the aerodrome operator will acquire the necessary equipment to perform the rubber deposit removal task.

APIG suggests...

Aerodrome operator:

- Implement maintenance planning action for rubber deposit removal and centerline marking repaint.
- Strengthen safety awareness on daily runway inspections, pay attention to runway safety condition and report unsafe situations actively to relevant departments for repair or to conduct more detail test and assessment.



AACM:

- Keep monitoring the implementation process of the maintenance planning action for rubber deposit removal.

Pilot:

- Report safety concern or event related to runway condition to the AACM or aerodrome operator so the relevant entities can make timely response.

Aircraft pushback blue procedure

- The reporter was the pilot of a flight departing from Macau International Airport. He was told by ATC his flight was cleared to pushback from Gate B2 to RWY 34 using blue procedure. The reporter then repeated ATC's instruction of pushback using blue procedure to ground staff. The aircraft was towed facing north. Then ATC told the reporter the aircraft was facing the wrong direction. It should be facing south instead of north. The reporter told the ground staff that ATC said the aircraft should face south instead of north. The ground staff asked "why?".
- The reporter suggested rewriting the blue procedure in the Macao Aeronautical Information Publication (AIP) to specify that the aircraft should be pushed facing north when RWY 34 was used. He also commented ATC should talk on the radio in a professional manner.

Paragraph 8.3 of Part 3 of the Macao AIP addresses the colour-coded aircraft pushback procedure.

APIG suggests...

Ground-handling agency

- Ensure pushback operators are familiar with the colour-coded aircraft pushback procedures.
- Provide initial and recurrent training to pushback operators regarding the colour-coded aircraft pushback procedures.

Airline

- Ensure pilots are familiar with the colour-coded aircraft pushback procedures.

ATC/aerodrome operator

- Collect information of events related to push-back procedures, review the current colour-coded aircraft pushback procedures in AIP and amend if necessary.

AACM

- Strengthen safety oversight on ground operations.
- Review the training program for pushback operators to ensure colour-coded aircraft pushback procedures are addressed properly.



Injured cabin crew member

- A cabin crew was on duty of a flight from Macau to [Destination A]. He got injured after arrived in [Destination A]. On the next day, he continued his duty on another flight from [Destination A] to Macau. That cabin crew member took sick leave after that flight showing that his injury was serious.
- The reporter concerned that cabin crew member was not suitable for duty concerning his medical condition. In case of emergency, he would not be able to evacuate passengers quickly and efficiently. He would not be able to organize evacuation of other cabin crew in cooperation with flight crews.
- Reporter suggested:
 - The airline should have dispatched another senior cabin crew member for substitution on that flight to ensure flight safety.
 - Although that senior cabin crew member has his/her own concerns, the airline should not ignore its safety responsibility.

It was not mentioned in the report whether the operator or pilot-in-command was aware of the condition of the injured cabin crew.

APIG suggests...

Cabin crew member

- When his/her physical condition is not fit and could affect his/her ability to conduct or coordinate cabin safety and emergency procedures, report to the operator and pilot-in-command as soon as possible.

Airline

- If having been informed that a cabin crew member's physical or medical condition is not fit, do not assign him/her the duties specified in the Operations Manual. Paragraph 4(a)(3) of Aeronautical Circular no. AC/OPS/016R00 requires an operator shall ensure that each cabin crew member remains medically fit to discharge the duties specified in the Operations Manual.

Reference

Civil Aviation Safety Authority. (2015). Fatigue Management for Flight Crew Members (CAAP 48-1(1)). Retrieved from https://www.casa.gov.au/sites/g/files/net351/f/assets/main/download/caaps/ops/48_1.pdf