

DIRECTORATE GENERAL OF CIVIL AVIATION



Cultural Perspectives on Flight Operations and the impact of Ramadan fasting on crew performance

Presented for: PACDEFF 2012

OUTLINE

- DGCA's perspectives;
- Operator's perspectives (Garuda Indonesia)



RAMADHAN

- A holy lunar month for Muslims
- Refraining from eating and drinking from sunrise to sunset.
- Over 1 billion people observe this practice
- One of five pillars of Islam



INDONESIAN DEMOGRAPHIC

- Total population: little over 240 mill.
- Moslem: around 85% of the total populaton
- Indonesia is a country with largest moslem population in the world



EFFECT OF FASTING ON CREW PERFORMANCE

- The fasting pilot may show signs of:
 - Decreased alertness
 - Increased fatigue
 - Irritability and impaired mood
 - Impaired memory
 - Decreased work performance



EFFECT OF FASTING

- HDL cholesterol increases and LDL decreases:
 - This is beneficial for cardiovascular disease risk
- Some truly believe that their performance is better while fasting since their faith is sustaining them.



DISPENSATION FROM FASTING

- Fasting is mandatory for the following:
 - faithful, sane, enough age, able, settle moslem.

وَمَنْ كَانَ مَرِيضًا أَوْ عَلَى سَفَرٍ فَعِدَّةٌ مِنْ أَيَّامٍ أُخَرَ يُرِيدُ اللَّهُ بِكُمُ
الْيُسْرَ وَلَا يُرِيدُ بِكُمُ الْعُسْرَ.

“But if any one is ill, or on a journey, the prescribed period (should be made up) by days later. Allah intends every facility for you, and does not want to put to difficulties.” Al-Baqarah: 185



Cont'd

- Further considerations:

- a. Working contract.*

- b. Safety of transportation*

يَا أَيُّهَا الَّذِينَ آمَنُوا أَوْفُوا بِالْعُقُودِ (المائدة 1) –

- *“Faithful follower, you must abide with any contract you made.”*



ABIDING RULING FROM INDONESIAN ULAMA COUNCIL

- Pilot may not fast while on flying duty.
- He / she must made up those on another days, and the operator should facilitate the needs.
- It is forbidden to prohibit moslem for not fasting



DGCA APPROACH FOR FASTING

- CASR 61.53, Operations during Medical Deficiency

No person may act as flight crewmember while he has a medical deficiency that would make him unable to meet the requirements for his current medical certificate.





**DEPARTEMEN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN UDARA**

Jalan Medan Merdeka Barat No. 8
Jakarta 10110
Kotak Pos 1389
Jakarta 10013

Telepon : 3505136 - 3505137

Fax : 3505135 - 3505139
3507144

**EDARAN KESELAMATAN
(SAFETY CIRCULAR)
AU / 5538 / DKUPPU / 3650 / EK / I / 2009**

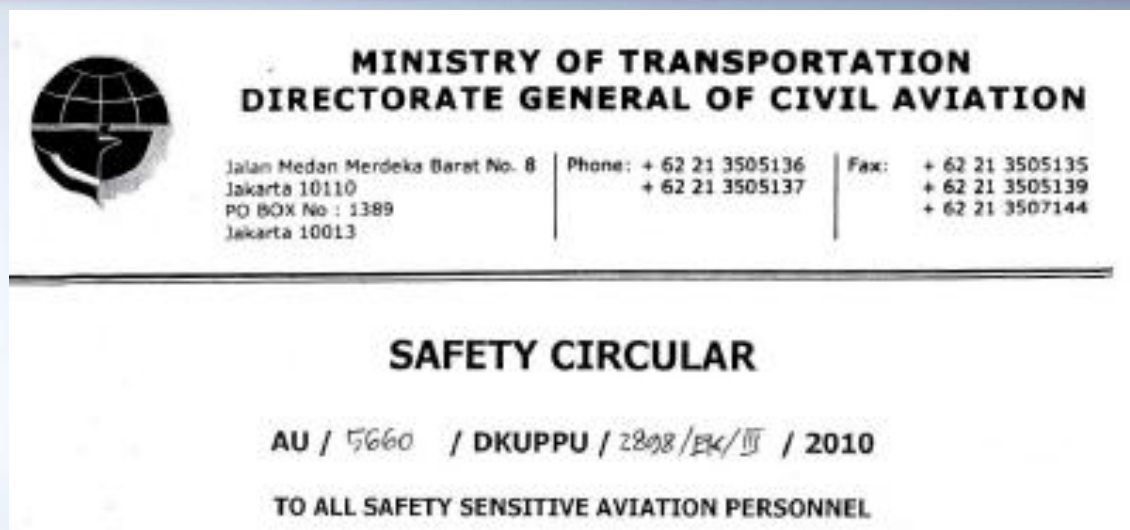
- 2009, issued safety circular regarding fasting.
- Based on advise from Aviation Medical Center.
- Applicable for pilots.



DGCA APPROACH FOR FASTING

- 2010, with CASA under ITSAP programme, conduct workshop on fasting in Jakarta.
- Result of the workshop:
 - Recognized the effect of fasting on human performance;
 - Continue the effort in educating the industry on the subject;
 - Will include not only crew, but all safety sensitive personnel.





- Safety Circular No. 2898 – 2010
- Recommendation:
 - Service providers is required to develop SOP;
 - Service providers are to socialize the content of this Safety Circular
 - DGCA will monitor the implementation



ACCIDENT DURING RAMADHAN

- Covers only Indonesian registered civil aircraft, on all events (accident, serious incident, incident).
- Including helicopters, general aviation, and flight schools.
- 2009 is when DGCA first issued safety circular regarding fasting.



ACCIDENT DURING RAMADHAN

Year	Total events	Ramadhan	Total events
2009	29	22/08 – 20/09	Nil
2010	28	11/08 – 09/09	3
2011	46	01 – 29/08	2
2012 (up to 31 July)	19	20/07 – 18/08	2

Note:
No probable cause associated with fasting





Garuda Indonesia implementation on DGCA Safety Circular about fasting while on duty



DGCA SAFETY CIRCULAR

SAFETY CIRCULAR NO: AU/5660/DKUPPU/2898/EK/III/2010

“TO ALL SAFETY SENSITIVE AVIATION PERSONNEL (SSAP)”

GARUDA INDONESIA

NOTICE NO: 017/10 || Date 06 August 2010

**SUBJECT: *PUASA DALAM TUGAS TERBANG* “FASTING
DURING FLIGHT DUTY”**



GARUDA INDONESIA

NOTICE NO: 020/11 || Date 29 July 2011

SUBJECT: *PELAKSANAAN TUGAS TERBANG DALAM BULAN SUCI RAMADHAN* “THE IMPLEMENTATION OF FLIGHT DUTY DURING HOLY MONTH OF RAMADHAN”

NOTICE NO: 009/112 || Date 19 July 2012

SUBJECT: *TUGAS TERBANG DALAM BULAN SUCI RAMADHAN* “FLIGHT DUTY DURING HOLY MONTH OF RAMADHAN”



NOTICE TO FLIGHT CREW: MAIN POINTS

- To put safety as main priority i.a.w SOP;
- To adhere to DGCA SC regarding fasting and monitor personal conditions while fasting on duty;
- To consider break fasting when detecting a degraded performance that could have negative effect for safety;
- Increase SA and optimizing CRM;
- PiC to include those above during pre-flight briefing.



GARUDA INDONESIA DATA

2010

Total Hazard Reports : 1,970 reports

Total Hazard Reports 11 AUGUST – 10 SEPTEMBER
(CALENDER MONTH OF RAMADHAN) : 194 reports

Total Incidents: 41 incidents

There were 3 Incidents occurred during calendar month of Ramadhan:

- PK-GHW/GA-162 where the landing gear failed to retract after the aircraft took off. The investigation result revealed that landing gear problem was the main contributing factor.
- PK-GCA/GA-052 where aircraft experienced CSD low oil pressure light ON during taxi out at RWY 10 SUB. The investigation result revealed that electrical problem was the main contributing factor.
- PK-GPH/GA-089 where baggage tractor hit the aircraft's conveyor belt. The investigation result revealed that no fasting issue had induced the GSE operator's error.



GARUDA INDONESIA DATA

2011

Total Hazard Reports : 2,175 reports

Total Hazard Reports 1 AUGUST – 29 AUGUST

(CALENDER MONTH OF RAMADHAN) : 144 reports

Total Incidents: 40 incidents

There were 2 Incidents occurred during calendar month of Ramadhan:

- PK-GEH/GA-206 where the aircraft experienced TCAS RA alert during approach RWY 09 JOG. The result of investigation indicated that both pilots and ATC personel did not fasting during the event.
- GA-857 HKG-DPS, the Captain was incapacitated and made en-route diversion to Kota Kinabalu. During interview, Captain admitted that he took breakfast at morning before commencing the duty.



GARUDA INDONESIA DATA

2012

Total Hazard Reports : 1,181 reports

Total Hazard Reports 21 JULY – 18 AUGUST
(CALENDER MONTH OF RAMADHAN) : 22 reports

Total Incidents : 31 incidents

No Incidents occurred during calendar month of
Ramadhan (up to 30 July 2012)



CONCLUSION

- For safety reason, Garuda Indonesia recommend for all flight crews and safety sensitive personnel (SSAP) to consider regarding fasting during duty and aware of the possibility of impaired performance.
- As prevention, Garuda Indonesia continuously issue NOTICE TO FLIGHT CREW so that the flight crew remain alert and recognize of the possible impaired performance when fasting while on duty.
- The results of internal investigation on all incidents occurred during calendar month of Ramadhan indicated that flight crews involved in the incident did not fasting.



FINAL THOUGHTS

- DGCA will continue to 'educate' operators and SSAP regarding fasting during duty.
- Furthermore, DGCA will continue to encourage operators to develop procedures to increase awareness on how to identify degraded performance while on duty.
- The scope of monitoring performance is not limited to Ramadhan fasting, but also to other forms of dietary and behavioural changes that could affect performance.
- DGCA will continue to monitor safety performance level





THANK YOU