



# ICAO Quick Reference Guide (QRG): Periodicity of flight inspection of Radio NAV AIDs

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<b>Alleviation Title</b>	<b>Periodicity of flight inspection of radio navigation aids</b>
<b>Version</b>	1.0
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<b>Relevant Standard(s)</b>	<p>Annex 10, Volume I</p> <p>2.2 Ground and flight testing</p> <p>2.2.1 Radio navigation aids of the types covered by the specifications in Chapter 3 and available for use by aircraft engaged in international air navigation shall be the subject of periodic ground and flight tests.</p> <p>Note.— Guidance on the ground and flight testing of ICAO standard facilities, including the periodicity of the testing, is contained in Attachment C and in the Manual on Testing of Radio Navigation Aids (Doc 8071).</p>
<b>CCRD entry required</b>	No



## Problem Statement

- Flight inspection is generally recognized as an essential service enabling the ATS infrastructure by ensuring reliable performance of the radio navigation aids. Thus, performing regular or near-regular flight inspection of radio navigation aids should normally be possible even during the COVID-19 pandemic. As a result, periodicity of flight inspection should not be affected substantially.
- However, in some cases (e.g. cross-border operations), deviations from the nominal inspection intervals of a navigation aid may occur, even beyond the allowable time window mentioned in Doc 8071, 1.15.15.
- In such cases, the main available alternatives are either an extension of the inspection interval or the temporary removal from service. Since an unnecessary removal from service of a navigation aid can have an immediate impact on safety and efficiency, extension of the inspection interval under appropriate conditions should be preferred where possible, after engineering evaluation and/or ground maintenance reinforcement.



## Applicability

- Inability to comply with normal periodicity, with evidence that all options to maintain periodicity (e.g. appropriate prioritization of inspections) were evaluated and found unacceptable.
- The expiry of flight inspection interval (including the time window) falls within the alleviation period
- Engineering evaluation taking into account the following factors:
  - Proven track record of reliability and stability of operation of the equipment
  - Ground testing/inspection successfully performed
  - Quality of ground maintenance
  - Stable operational environment (including site safeguarding and protection of ILS critical and sensitive areas)
  - Extension is consistent with equipment manufacturer recommendations
  - Verification of the proper functioning of executive monitor shutdown capabilities
- Establishment of an appropriate time limit on the basis of the above evaluation.

## Alleviation summary

- Subject to the applicability conditions above being met, an extension of flight inspection intervals beyond those normally permitted under a State's prescriptive provisions could be granted under controlled and monitored conditions.





## Operational context

- Special considerations apply to the Category III ILS. Because of the particularly demanding requirements, rigorous testing is essential. For that reason, flight inspection of Category III ILS should be prioritized. Should it nevertheless occur that flight inspection intervals for a Category III ILS are significantly exceeded, a potential option would be downgrading of the facility from Category III to Category II or Category I.
- Ground nav aids have an increasingly significant role as backup in case of GNSS radiofrequency interference issues.



## Possible mitigations

- Reinforce ground testing and maintenance
- Additional monitoring
- Review of the engineering evaluation on a regular basis
- Define procedure to deal with the return to standard validity periods, taking into account potential inspection backlog
- Careful examination of any pilot reports identifying potential poor performance of the nav aids
- Implementation of a record for tracking the use of the alleviation instrument
- (See also Doc 8071, 1.15)



## **Alleviations likely to be unacceptable to other States**

- Excessive deviations from nominal performance
- Frequent pilot reports of poor performance



## References

- Manual on Testing of Radio Navigation Aids (Doc 8071), Volume I
- For more information, please consult ICAO website (COVID-19):
  - ICAO QRGs:  
<https://www.icao.int/safety/COVID-19OPS/Pages/QRGs.aspx>
  - Flight inspection periodicity considerations for radio navigation aids during the COVID-19 pandemic and related recovery phase:  
<https://www.icao.int/safety/COVID-19OPS/Pages/ANS.aspx>
  - Appendix: Excerpts from Annex 10, Volume I, Chapter 2 and Doc 8071, Chapter 1 on the Ground and Flight testing provisions:

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