



International Civil Aviation Organization

**The Twenty-First Meeting of the Regional Airspace Safety Monitoring
Advisory Group (RASMAG/21)**

Bangkok, Thailand, 14-17 June 2016

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

PARMO ASSESSMENT OF NON-RVSM APPROVED AIRCRAFT

(Presented by the United States/PARMO)

SUMMARY

This working paper provides an assessment of non-State-approved operators using the Reduced Vertical Separation Minimum (RVSM) airspace overseen by the PARMO in the Pacific and a portion of North East Asia. The assessment process is described and the results for period from December 2015 are presented.

1. INTRODUCTION

1.1 The Pacific Approvals Registry and Monitoring Organization (PARMO), a service provided by the U.S. Federal Aviation Administration's William J. Hughes Technical Center since 2001, serves as the regional monitoring agency (RMA) for the airspace in the Pacific and a portion of North East Asia.

1.2 As part of the duties of a Regional Monitoring Agency (RMA), outlined in ICAO Doc 9937 (Reference 1), the PARMO performs regular checks of the operator compliance with State approval requirements within the Pacific and North East Asia airspace. The purpose of these checks is to identify non-approved operators and aircraft using the RVSM airspace to ensure the safety of the airspace.

1.3 At RMACG/6 it was decided that all RMAs would conduct a traffic scrutiny survey for their region of jurisdiction every December. This effort is being coordinated by the EUR RMA with the purpose of assessing the global impact of non-approved operators using RVSM airspace. (Reference 2) At RMACG/10 the requirement for a December traffic scrutiny survey was amended to allow the traffic scrutiny survey to be performed on any month. (Reference 3)

1.4 This paper describes the process used by the PARMO to identify airframes operating within RVSM airspace, FL290 to FL410, inclusive, without the mandatory approval. This is accomplished through systematic process of matching air traffic movement data and airframe approval records. The results for the period from December 2015 for the RVSM airspace within the Pacific and for a portion of North East Asia airspace are presented.

2. DISCUSSION

2.1 The PARMO requests an annual one-month traffic movement sample in addition to all of the large height deviation reports from the ATS providers in Pacific and North East Asia airspace. The traffic sample data (TSD) for December 2015 for Pacific and North East Asia airspace was received from all of the six FIRs under PARMO responsibility: Auckland (New Zealand), Incheon (Republic of Korea), Tahiti, Nadi (Fiji), Oakland (United States, ZAK) and Anchorage (United States, ZAN).

2.2 Appendix K of ICAO Doc 9937 (Reference 1) contains the sample content and format for collection of sample of traffic movements. In this table the aircraft registration number is listed as optional. Therefore, the registration number is not available in some of the traffic samples. For the operations without a registration number, the operator-aircraft combination is used when matching the traffic data to the approvals.

2.3 The aggregate approvals database containing the approval records provided by the collective RMAs is used to verify the RVSM approval status of the operations identified in the traffic movement data sample. Updates to the aggregate database are provided by most of the RMAs on a monthly basis.

2.4 All civil aircraft operations observed in each of the December 2015 traffic samples were compiled into one master traffic sample, or superset, consisting of approximately 46,000 operations. The superset was compared against the collective approvals database as of 31 January 2016. The registration numbers and operator-aircraft combinations identified in the superset as asserting approval for operations in RVSM airspace (“W” in Field 10 of the ICAO flight plan) were cross-examined with the collective approvals database. Any of these operations for which an RVSM approval was not found was placed on a list for further examination and verification.

2.5 The verification process involves the exploration of systematic reasons for removing entries from the list. These reasons include but are not limited to:

- lags in State notification of approval to the RMA
- lags in updates to the approvals database and the local version of ICAO Doc8585
- mistakes and typographical errors in the original traffic data
- code-sharing and lease arrangements between airlines

2.6 A total of 24 civilian operations from 6 States remain on the list of non-approved operations within RVSM airspace in the Pacific and the portion of North East Asia region under the PARMO responsibility following the initial verification process. These entries consist of 11 operator/aircraft type pairs.

2.7 Table 1 contains the detailed summary of these results, including responsible RMA, State of registry, agency name, ICAO operator code and/or registration number, aircraft type, count of observation in the December 2015 traffic samples and traffic data source. These operations will be further investigated and the appropriate parties will be queried if no additional information is obtained.

2.8 Experience has shown that the primary systematic reason for failure to match operations and approvals is a delay in State notification of the approval status of some operators to the appropriate RMA. Thus, the importance of timely notification by States of operator approval status to RMAs is emphasized by these results.

Table 1. RVSM operations within the PARMO responsibility for which RVSM approvals were not found

RMA	State of Registry	Agency Name	REG#	OPR	Aircraft Type	Count of Operations in December 2015	Data Source (FIR)
EUR RMA	FRANCE	Air Tahiti	FORVC	VTA	AT46	6	TAHITI
CHINA RMA	CHINA	Lucky Air	B7167	LKE	B738	4	ZAK
EUR RMA	FRANCE	Air Tahiti	FORVB	VTA	AT46	4	TAHITI

RMA	State of Registry	Agency Name	REG#	OPR	Aircraft Type	Count of Operations in December 2015	Data Source (FIR)
EUR RMA	FRANCE	Air Tahiti	FORVN	VTA	AT76	2	TAHITI
NAARMO	UNITED STATES	COASTAL RECOVERY LLC	N642SF		PC12	2	ZAN
NAARMO	CANADA		CFIDT		CL60	1	ZAK
NAARMO	CANADA		CGUZP		DHC6	1	ZAK
NAARMO	CANADA		CGZKL		CL60	1	ZAK
NAARMO	UNITED STATES		N703AC		B772	1	ZAK
AAMA	Australia		VHFPO		BE20	1	ZAK
CARSAM MA	Cayman Islands		VPCPT		GLEX	1	ZAK

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note and review the contents of the PARMO traffic scrutiny work presented in this paper, and
- b) provide any relevant updates on the records contained within the results.

References

1. *Doc 9937 - Operating Procedures and Practices for Regional Monitoring Agencies in Relation to the Use of a 300 m (1000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive*, International Civil Aviation Organization, First Edition - 2010.
2. *Summary of Discussions (RMACG/6)*, Cornwall, Canada, 6-10 June 2011: Task #10 “All RMAs conduct traffic scrutiny survey during the same time frame [December] in order to understand the magnitude of the situation.”
3. *Summary of Discussion (RMA CG/10)*, Bangkok, Thailand, 18 - 22 May 2015: Paragraph 3.2.33 “The meeting discussed the need of the fixed month for scrutiny activities as decided at the RMACG/6 meeting and agreed that with the maturity of most of the monitoring programs, and with most of the RMAs performing monthly verification of the approval status, it is not necessary to fix a month for data collection, but it is of crucial importance the exchange of data between the RMAs to guarantee that all have the same correct information on approval status.”

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