



*International Civil Aviation Organization*

**The Thirteenth Meeting of the Regional Airspace Safety Monitoring  
Advisory Group (RASMAG/13)**

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**Agenda Item 3: Reports from Asia/Pacific RMAs and EMAs**

**ASSESSMENT OF NON-STATE-APPROVED OPERATORS USING DOMESTIC  
CHINESE RVSM AIRSPACE**

(Presented by the China RMA)

**SUMMARY**

This information paper presented the assessment of non-RVSM-approved aircraft using Chinese RVSM airspace for the period of December, 2009.

**1. INTRODUCTION**

1.1 According to the RMA Manual, the China RMA performs checks on the operator compliance with RVSM-approval requirements in Chinese RVSM airspace. The purpose of this working paper is to present the result for the assessment of non-RVSM-approval operator using the Chinese RVSM airspace for the period of December, 2009.

**2. DISCUSSION**

2.1. China RMA submitted working paper thirty one (WP31) to the fifth RMA Coordination Meeting (RMA CG/5) which was held in Atlantic City, USA from 3 to 7 May 2010. This paper summarized the assessment of non-RVSM-approved aircraft operating in Chinese RVSM airspace during the period of December, 2009. 52 operations were identified in the traffic sample for which the RVSM approvals database indicated the aircraft is non-RVSM approved but flight plan data indicated that the aircraft had 'W' in field ten. 42 operations for which the RVSM approvals database indicated the RVSM approval for these aircraft expired but the flight plan data indicated that the aircraft had 'W' in field ten were identified. The purpose that China RMA noted about this to the RMACG/5 meeting is that there is a delay in notification of the approval status of some operators and other RMAs may experience similar problems with States reporting approvals. It should also be mentioned that most of the flights were conducted by aircraft from Russian Federation. The detail information is presented in Attachment A of this working paper. The EUR RMA is currently collaborating with Russia in support of RVSM implementation in Nov 17, 2011 in the EURASIA Region and they will provide assistance in resolving the issue of reporting approvals.

2.2. There is an obvious reduction of the number of identified non-state-approved operation in the domestic Chinese RVSM airspace compared to the result reported to RASMAG/12 meeting. The reason is that the China RMA used to only compare the global RVSM approval dataset with the column of ICAO Flight Plan Field 10 information contained in the Traffic Sample Data. However, this column in the Traffic Sample Data is optional, and not available in some records, and those provided by the regions under procedural control status may contain some errors. So this time the China RMA also implemented the December 2009 flight plans data to cross check the 'ICAO

Flight Plan Field 10' column in the Traffic Sample Data. This check can improve the correctness of ICAO Flight Plan Field 10 information and registration number in the Traffic Sample Data. Another reason is that the RVSM approval information from the Middle East RMA has been updated. In the last analysis, the majority of 'non-approved' operations in the domestic Chinese airspace were conducted by the aircraft from the Middle East regions where we did not have the up-to-date approval exchange. This situation has improved this year and all the RVSM approval statuses for the aircraft from the Middle East regions are identified.

2.3. IATA and Hong Kong China had advised the ATM/AIS/SAR/SG/12 meeting that the high number of RVSM non-approved aircraft operating in Chinese airspace is partially because China requires additional RVSM approval from CAAC in addition to the original RVSM approval from their State of Registry/Operators. The approval data for foreign aircraft that China RMA applied to complete the analysis is from the monthly exchanged approval dataset with other RMAs. The China RMA has confirmed with Flight Standard Department of CAAC that all the foreign air transportation carriers should comply with Chinese Civil Aviation Regulations Part 129 (CCAR-129) to obtain operation certification in China and there is no additional RVSM approval in addition to the original RVSM approval from their State of Registry/Operators. For the operation certification for foreign air transportation carriers in China, the current and valid certificate of RVSM airworthiness and registration issued by the State of Registry is accepted by CAAC. It should be noted that some Russian aircraft with metric altimeter shall comply with special requirement to be capable of operating in Chinese RVSM airspace, but the airworthiness and operational approval for these aircraft are issued by the CAA of Russian Federation.

### **3. ACTION BY THE MEETING**

3.1. The meeting is invited to note the results of the airspace safety oversight presented in the attachment to this working paper.

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**Agenda Item 1: Review of Data Exchange Activity and Issues****Assessment of Non-RVSM-Approved Aircraft Using Chinese RVSM Airspace**

(Presented by the China RMA)

**SUMMARY**

This working paper presented the assessment of non-RVSM-approved aircraft using Chinese RVSM airspace for the period of December, 2009.

**1. INTRODUCTION**

1.1 China RVSM Regional Monitoring Agency (China RMA) serves as the regional monitoring agency (RMA) for the domestic Chinese airspace and the airspace of Pyongyang FIR.

1.2 According to the RMA Manual, the China RMA performs checks on the operator compliance with RVSM-approval requirements in Chinese RVSM airspace.

1.3 The purpose of this working paper is to present the result for the assessment of non-RVSM-approval operator using the Chinese RVSM airspace for the period of December, 2009.

**2. DISCUSSION**

2.1. The China RMA requests an annual one-month traffic movement sample from all domestic Area Control Centers. In this report, the Traffic Sample Data (TSD) of the December 2009 was used. **Table 1** contains a summary of the data received by China RMA for each FIR.

<b>FIR Name</b>	<b>FIR Code</b>	<b>Data Collected in ACCs</b>	<b>Collecting Method</b>	<b>Status</b>	<b>Remarks</b>
Beijing	ZBPE	Beijing	Automatic system	Received	Data completed
		Taiyuan	-	-	Included in Beijing ACC
		Hohhot	-	-	Included in Beijing ACC
Shanghai	ZSHA	Shanghai	Automatic system	Received	Data completed
		Qingdao	Automatic system	Received	Data completed
		Jinan	Automatic system	Received	Data completed
		Xiamen	-	-	Included in Shanghai ACC
		Nanchang	-	-	Included in Shanghai ACC
		Hefei	-	-	Included in Shanghai ACC
Guangzhou	ZGZU	Guangzhou	Automatic system	Received	Data completed
		Guilin	Automatic system	Received	Data completed
		Zhanjiang	Automatic system	Received	Data completed

FIR Name	FIR Code	Data Collected in ACCs	Collecting Method	Status	Remarks
		Nanning	Automatic system	Received	Data completed
		Changsha	-	-	Included in Guangzhou ACC
Wuhan	ZHWH	Wuhan	-	-	Included in Guangzhou ACC
		Zhengzhou	Automatic system	Received	Data completed
Shenyang	ZYSH	Shenyang	Automatic system	Received	Data completed
		Dalian	Manual	Received	Data completed
		Harbin	Manual	Received	Data completed
		Hailar	Manual	Received	Data completed
Lanzhou	ZLHW	Lanzhou	Manual	Received	Data completed
		Xian	Automatic system	Received	Data completed
Urumqi	ZWUQ	Urumqi	Manual	Received	Data completed
Kunming	ZPKM	Kunming	-	-	Included in Chengdu ACC
		Chengdu	Automatic system	Received	Data completed
		Lhasa	Manual	Received	Data completed
		Guiyang	-	-	Included in Chengdu ACC
Sanya(Island)	ZJSA	Sanya	Automatic system	Received	Data completed

**Table 1:** Summary of December 2009 Traffic Sample Data Received by the China RMA

2.2. The China RMA implemented the global RVSM approval database to complete the approval status check. **Table 2** contains a dataset summary and their update time used in this check.

RVSM Approval Data Source (RMA/State)	Update Time
AAMA	Jan. 2010
ARMA	Dec. 2009
CARSAMMA	Dec. 2009
Canada	Dec. 2009
China RMA	Feb. 2010
DPR Korea	Apr. 2009
Eurocontrol RMA	Dec. 2009
JAPAN RMA	Jan. 2010
MAAR	Jan. 2010
MID RMA	Feb. 2010
NAT CMA	Jan. 2010
PARMO	Dec. 2009
Russian Federation <sup>1</sup>	Feb. 2010
US MASPS	Jan. 2010

**Table 2:** Summary of RVSM Approval Data Source Received by the China RMA

2.3. The China RMA also made use of the December 2009 flight plan data. These data contained: 1) All the flights conducted in December 2009, of which the departure airport was inside China; 2) 90% of the entire flights (including both the flights from China and to China). The Registration number of aircraft and the corresponding Item 10 information of flight plan were

<sup>1</sup> The approval data for Russian Federation was forwarded by MAAR from one POC in Russia. The RVSM approval statuses for some of the aircraft in China still need clarification.

abstracted by the post-processing program to do the cross-check. In the previous report of assessment of non-approved aircraft which was submitted to RASMAG/12, the global RVSM approval dataset was only compared with the column of ICAO Flight Plan Field 10 information contained in the Traffic Sample Data. However, this column in the Traffic Sample Data is optional, and not available in some records, and those provided by the ACCs under procedural control status may contain some errors. So this time the China RMA also implemented the December 2009 flight plans data to cross-reference the check: the ‘ICAO Flight Plan Field 10’ column in the Traffic Sample Data was firstly corrected with the flight plan. This check can improve the correctness of ICAO Flight Plan Field 10 information and registration number in the Traffic Sample Data.

2.4. Appendix A of this report contains the detailed summary of the analysis. In this analysis, we consider the possibility that some of the operations listed may have been conducted by another operator under a lease arrangement.

2.5. It is good to see that no domestic Chinese aircraft were found in the list of non-RVSM-Approved aircraft using RVSM airspace, but in the preparation of this report, it is fact that there is a delay in notification of the approval status of some operators.

2.6. It should also be mentioned that the RVSM approval status for some Russian aircraft are still under investigation. The Russian RVSM approval dataset that China RMA applied was the kindly forwarded by MAAR in March, 2010. But the RVSM statuses for some aircraft operating in China are still under investigation. The China RMA tried to contact the Russian POC through emails many times but failed. The China RMA considers seeking assistance from the RMA special coordination meeting concerning this matter.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the content of this paper.

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**Appendix A Summary of Assessment of Non-RVSM-Approved Aircraft Using Chinese RVSM Airspace**

Table A1 presents a summary of the operations in the December 2009 China RVSM traffic sample for which RVSM approvals database indicated the aircraft is non-RVSM approved but the flight plan data indicated that the aircraft had ‘W’ in field ten .

OPERATOR	OPERATOR NAME	REGSITRATION NO.	NO. OF OBSERVATONS IN THE SAMPLE
AIC	Air India	VTALL	4
		VTALE	2
ELY	El Al Israel Airlines	4XEAR	6
GAF	German Air Force	1022	1
HVN	Vietnam Airlines	VNA309	9
		VNA301	2
		VNA308	1
KZU	Kuzu Airlines	TCVEL	2
MAS	Malaysia Airlines	9MMKS	12
		9MMLA	5
MNB	MNG Airlines	TCMNV	3
PAL	Philippine Airlines	RPC3227	5

Table A1 Operations in the December 2009 China RVSM traffic sample which Flight plan has ‘W’ in field 10 but found non-approved

Table A2 presents a summary of the operations in the December 2009 China RVSM traffic sample for which RVSM approvals database indicated the RVSM approval for these aircraft expired but the flight plan data indicated that the aircraft had ‘W’ in field ten. It should be mentioned that most of the flights were conducted by aircraft from Russian Federation. The China RMA has not yet completed the investigation into the RVSM operational status for the Russian aircraft.

OPERATOR	OPERATOR NAME	REGSITRATION NO.	NO. OF OBSERVATONS IN THE SAMPLE
AFL	Aeroflot	VPBAX	7
		VPBAY	6
		VPBAZ	6
		VPBAV	2
MAS	Malaysia Airlines	9MMLC	3
SHU	Sakhalinskie Aviatrassy - SAT	RA73005	5
		RA73003	2
SYL	Yakutia Air	VPBFI	2
VLK	Vladivostok Air	VPBRB	8
		RA85710	1

Table A2 Operations in the December 2009 China RVSM traffic sample which Flight plan has ‘W’ in field 10 but RVSM approval was found expired