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Twenty-Seventh Meeting of the Regional Airspace Safety
Monitoring Advisory Group (RASMAG/27)

Video Teleconference, 22 – 25 August 2022

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

CHINA RMA LTHM BURDEN ESTIMATE UPDATE

(Presented by China RMA)

SUMMARY

This paper presents the currently expected monitoring burden for the aircraft registered under China RMA to meet the long-term height monitoring requirement. The data were based on the RVSM approval database by the end of June 2022.

1. INTRODUCTION

1.1. The Long Term Height Monitoring Impact Statement developed by RASMAG was endorsed by APANPIRG/20 in September 2009. In RMACG/17 meeting China RMA provided the burden list to the meeting, and this paper is the update for the data.

2. DISCUSSION

2.1. China RMA started its first monitoring task in 2008 with two sets of EGMUs. And now, China RMA is fulfilling its duty with four sets of EGMU/E²GMU for Chinese airlines. The ADS-B Height Monitoring System (AHMS) has also been providing support for the data collection since 2014. With the use of ADS-B ground-based monitoring system, a majority of aircraft of Chinese operators have received successful monitoring records, which significantly reduced the on-board monitoring burden. At the same time, an increasing number of foreign aircraft could also receive valid monitoring records from the ADS-B monitoring system, which helped to support these fleets to meet long-term height monitoring requirements.

2.2. Based on the RVSM approval database by the end of June 2022, the total number of RVSM approved aircraft was 4202, with a resultant monitoring burden of 689 and a total of 105 aircraft remaining to be monitored, according to minimum monitoring requirements (MMR).

2.3. For the Democratic People's Republic of Korea (DPRK), there is 1 operator with 4 aircraft that needs monitoring. Affected by COVID-19, China RMA can't go to DPRK for on-board height keeping performance to those 4 aircraft. China RMA will continue to coordinate with DPRK and conduct the monitoring as soon as possible.

2.4. For Chinese aircraft, there are 105 aircraft from 40 Chinese operators remaining to be monitored. In these aircrafts, there are 56 B38M aircraft from 12 operators can't be monitored because these aircraft have paused operation. There are 49 aircraft that need on-board monitoring, and we are coordinating with the operators to complete the plan.

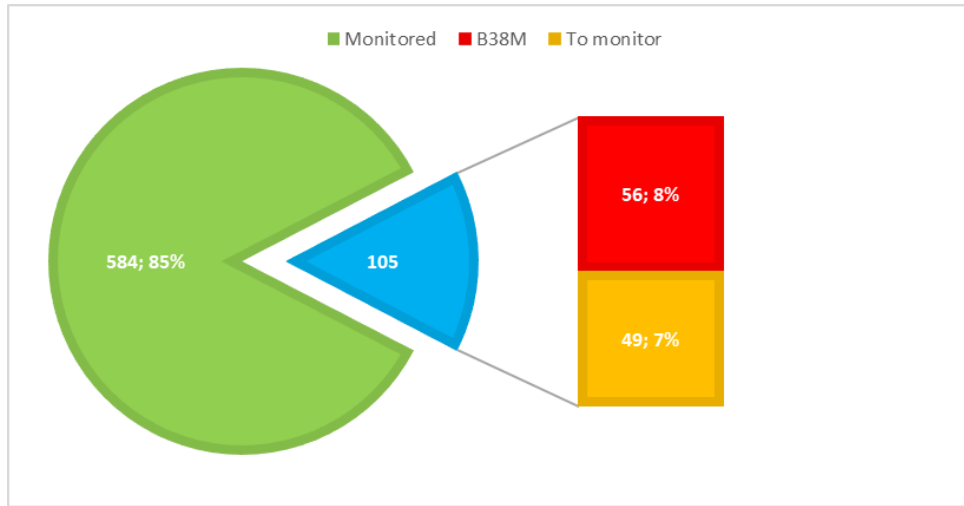


Figure 1: Monitoring Burden Analyzed

2.5. **Appendix A** provides details of the monitoring burden based on the MMR of China RMA.

3. CONCLUSION

3.1. The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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Appendix A: Estimated RVSM Monitoring Burden for Asia/Pacific Region as a result of Long Term Height Monitoring Requirements of Annex 6

China RMA Monitoring Burden (compiled June 2022)

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
BDJ	A320	1	2	2	0
	CL605	1	1	1	1
	FA7X	1	3	2	0
	GLF4	1	5	2	0
	GLF5	1	6	2	0
	GLF6	2	5	3	0
BJN	A320	1	1	1	0
	A320N	2	1	1	0
	B737NX	1	4	2	0
	FA7X	1	1	1	0
	GLF5	1	2	2	1
BNH	GLF5	1	1	1	0
CAO	B744-10	1	3	2	0
	B752	1	4	2	0
	B772	1	8	2	0
CBG	A320	1	6	2	0
	A320N	2	4	3	0
	E170-190	1	11	2	0
CBJ	A320	1	67	2	0
	A320N	2	7	5	0
	A330	1	11	2	0
CBW	CARJ	1	1	1	0
CCA	A320	1	142	2	0
	A320N	2	63	38	0
	A330	1	56	2	0
	A350	2	17	11	0
	AJ27	2	7	5	0
	B38M	2	13	8	8
	B737NX	1	119	2	0
	B744-10	1	2	2	1
	B744-LCF	2	1	1	1
B748	1	7	2	0	

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
	B773	1	28	2	0
	B787	1	14	2	0
CCD	B737NX	1	13	2	0
CCO	B752	1	1	1	1
CDC	A320	1	34	2	0
	A320N	2	27	17	0
	B737CL	1	3	2	2
CDG	B38M	2	7	5	5
	B737NX	1	131	2	0
CES	A320	1	287	2	0
	A320N	2	66	40	0
	A330	1	55	2	0
	A350	2	12	8	0
	B737NX	1	72	2	0
	B773	1	20	2	0
CES-YN	B38M	2	3	2	2
	B737C	1	2	2	0
	B737NX	1	74	2	0
	B787	1	3	2	0
CFI	C56X	1	16	2	0
	C680	1	3	2	2
	GLF4	1	1	1	1
CFZ	C560	1	1	1	1
CGH	A320	1	11	2	0
CGN	B737NX	1	11	2	0
CGZ	A320N	2	7	5	0
	E170-190	1	9	2	0
CHB	A320	1	33	2	0
	A320N	2	5	3	0
CHH	A330	1	30	2	0
	A350	2	2	2	2
	B38M	2	11	7	7
	B737NX	1	138	2	0
	B787	1	34	2	0
CHJ	GLF4	1	1	1	0
CJX	AJ27	2	5	3	0
	B737NX	1	10	2	0

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
CKK	B744-10	1	2	2	0
	B772	1	10	2	0
CNM	B737NX	1	8	2	0
CNW	B737CL	1	1	1	0
	B752	1	1	1	1
CQH	A320	1	80	2	0
	A320N	2	36	22	0
CQN	A320	1	18	2	0
	A320N	2	12	8	0
CSC	A320	1	130	2	0
	A320N	2	28	17	0
	A330	1	16	2	0
	A350	2	4	3	0
CSH	A330	1	1	1	0
	B38M	2	11	7	7
	B737NX	1	75	2	0
	B787	1	7	2	0
CSN	A320	1	310	2	0
	A330	1	41	2	0
	A350	2	12	8	0
	A380	2	3	2	0
	AJ27	2	7	5	1
	B38M	2	17	11	11
	B737NX	1	196	2	0
	B772	1	12	2	0
	B773	1	15	2	0
	B787	1	27	2	0
CSS	B737CL	1	17	2	0
	B744-10	1	2	2	0
	B752	1	37	2	0
	B767	1	14	2	0
CSZ	A320	1	83	2	0
	A320N	2	26	16	0
	A330	1	6	2	0
	B38M	2	5	3	3
	B737NX	1	80	2	0
CTJ	B737C	1	1	1	0

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
	B737CL	1	2	2	0
	B737NX	1	1	1	0
CUA	B737NX	1	53	2	0
CUH	B737NX	1	15	2	0
CXA	B38M	2	10	6	6
	B737C	1	2	2	0
	B737NX	1	140	2	0
	B787	1	12	2	0
CYE	E55P	1	1	1	0
CYN	E55P	1	2	2	0
CYZ	B737CL	1	16	2	0
	B737NX	1	7	2	0
	B752	1	7	2	1
DER	A320	1	1	1	0
	FA7X	1	3	2	0
	G280	2	1	1	1
	GALX	1	1	1	1
	GLF4	1	2	2	0
	GLF5	1	4	2	0
	GLF6	2	3	2	0
DKH	A320	1	65	2	0
	A320N	2	20	12	0
	B787	1	6	2	0
DLC	B737NX	1	1	1	1
DLJ	CL600	1	1	1	0
EPA	B737NX	1	23	2	0
EPB	CL600	1	2	2	0
FJT	E135-145	1	1	1	0
FZA	B38M	2	2	2	2
	B737NX	1	14	2	0
GCR	A320	1	31	2	0
	A320N	2	4	3	0
	A330	1	6	2	0
	E170-190	1	48	2	0
GDC	B737NX	1	3	2	2
HBH	B737NX	1	24	2	0
	E170-190	1	6	2	0

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
HFJ	CL605	1	1	1	0
	G280	2	1	1	0
	GL5T	1	1	1	0
HHG	GLF5	1	2	2	0
HLF	B737CL	1	5	2	0
	B737NX	1	1	1	1
HNJ	GLEX	1	1	1	0
	GLF4	1	1	1	0
HXA	A320	1	11	2	0
	A320N	2	7	5	2
	AJ27	2	3	2	0
	CRJ9	1	38	2	0
HYN	GLF4	1	2	2	0
HYT	B737CL	1	1	1	0
	B752	1	7	2	0
	B767	1	2	2	1
ICU	G280	2	1	1	0
	LJ60	1	1	1	1
IGA-CG	C56X	1	1	1	0
IGA-GW	GLF4	1	1	1	0
JBE	CL605	1	1	1	0
	E135-145	1	3	2	0
	FA7X	1	3	2	0
	G280	2	1	1	0
	GALX	1	1	1	0
	GLF4	1	1	1	0
	GLF5	1	2	2	0
GLF6	2	4	3	1	
JOY	B737NX	1	5	2	0
JSU	CARJ	1	4	2	1
JYH	B38M	2	1	1	1
	B737NX	1	22	2	0
KNA	B38M	2	2	2	2
	B737NX	1	29	2	0
LHA	B737CL	1	6	2	0
	B737NX	1	3	2	0
LKE	A320	1	7	2	0

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
	A320N	2	6	4	0
	A330	1	5	2	0
	B38M	2	3	2	2
	B737NX	1	31	2	0
LLJ	GALX	1	2	2	2
MJC	GLF4	1	1	1	1
	GLF6	2	1	1	0
MZT	CARJ	1	5	2	0
	CL604	1	2	2	0
	G280	2	1	1	0
	GL5T	1	1	1	0
	GL7T	2	1	1	1
	GLEK	1	6	2	0
	GLF6	2	2	2	2
NMG	AJ27	2	4	3	3
NSJ	F2TH	2	1	1	0
	GLF4	1	2	2	0
	GLF5	1	3	2	0
	HDJT	2	1	1	1
OKA	B737NX	1	25	2	0
OTC	A320	1	9	2	0
	A320N	2	6	4	0
OTT	AJ27	2	7	5	0
	BD100	1	1	1	0
	E135-145	1	3	2	0
	G280	2	1	1	0
	GLF5	1	3	2	0
	GLF6	2	1	1	0
QDA	A320	1	14	2	0
	A320N	2	18	11	0
RLH	B737NX	1	22	2	0
SAJ	C56X	1	2	2	1
SNG	A320	1	4	2	0
STJ	C680	1	2	2	2
SZA	CARJ	1	2	2	0
	GALX	1	1	1	0
	GLF4	1	2	2	1

Operator	Aircraft Monitoring Group	MMR Category	Total Approved Airframes	Resultant Monitoring Burden (#Airframes)	Remaining # of Monitoring
	H25B-800	1	1	1	1
TBA	A320	1	34	2	0
	A330	1	5	2	0
TCI	A318	1	1	1	0
	F900	1	1	1	0
	GLEX	1	1	1	1
	GLF4	1	1	1	1
	LJ60	1	1	1	1
TXJ	FA7X	1	1	1	0
	GLF4	1	1	1	1
	GLF5	1	3	2	0
	GLF6	2	1	1	0
UEA	A320	1	39	2	0
	AJ27	2	23	14	0
UNA	A318	1	1	1	0
	CARJ	1	1	1	0
	FA7X	1	6	2	0
	GL5T	1	1	1	0
	GLEX	1	1	1	0
	GLF4	1	2	2	0
	GLF5	1	4	2	0
GLF6	2	4	3	0	
UTP	A300	1	6	2	2
WFH	CL605	1	1	1	0
XAI	CARJ	1	4	2	0
YZR	B737CL	1	7	2	0
	B737NX	1	9	2	0
	B744-10	1	3	2	0
	B744-5	1	1	1	0
	B787	1	2	2	0
Total China			4202	689	105

Responsible State	Operator	Operator Name	Aircraft Monitoring Group	MMR Category (1, 2 or 3)	Total Aircraft Type Count	Resultant Monitoring Burden (# Airframes)	Remaining # of Monitoring
DPRK	KOR	Air Koryo	A148	2	2	2	2
			T204	2	2	2	2
Total DPRK					4	4	4

China RMA Grand Total (China + DPRK)	Total Aircraft Type Count	Resultant Monitoring Burden	Remaining # of Monitoring
	4206	693	109

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