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## Mandatory ACAS/TCAS – Are You Ready?

Airborne Collision Avoidance Systems (ACAS) and Terrain Collision Avoidance Systems (TCAS) are by no means new to our discussions. The systems have been in wide use and acceptance for many years. In point of fact, Canada is well behind the rest of the world in the mandated use of such equipment. On July 1<sup>st</sup> of this year the use of ACAS/TCAS will become a mandatory item on commercial aircraft that previously did not require such.

This change has been under active discussion since at least 2000. The CAR's were amended to include an ACAS rule in July of 2007 giving operators up to 2 years to comply on older aircraft. That compliance date expires this July 1<sup>st</sup>. For those operators hoping for a reprieve or last minute exemption, the simple fact is that July 1<sup>st</sup> is now **the** date and after that, you will be required to have the appropriate ACAS/TCAS modifications installed, approved and functional on your aircraft.

Transport Canada (TC) Advisory Circular RDMIS No: 2487968, issued September 1, 2007 updated the previously issued Commercial and Business Aviation Advisory Circular 0236 Issue 1, dated 2005-07-29— *Regulations for Terrain Awareness Warning System and Airborne Collision Avoidance System*. In this document it states that the TC regulations for ACAS have been developed in recognition of the safety benefits of the equipment, and with the goal of having standards and/or regulations in place that are similar to ICAO and the FAA. Furthermore it states that the TC regulations have been developed as an outcome of a Transportation Safety Board (TSB) recommendation for TC to analyze the benefits of ACAS for commercial passenger carrying aircraft.

Under the new regulations published by TC, ACAS equipment is mandatory and required for aircraft operating under Subparts 702, 703, 704 and 705 of the CARs. Accordingly, TCAS I is the minimum acceptable collision avoidance system for large aircraft (Maximum Certificated Take-off Weight (MCTOW) greater than 12,500 lb/5,700kg) operating under Subpart 703 of the CARs - Air Taxi Operations, Subpart 704 of the CARs - Commuter Operations and Subpart 705, non-turbine - Airline Operations.

TCAS II (SW version 6.04a) and a mode S transponder, is the minimum acceptable collision avoidance system for turbine-powered aircraft operating under Subpart 705 of the CARs, Airline operations, and for turbine-powered aircraft with a MCTOW exceeding 33,000 lb/15,000 kg operating under and Subpart 704 of the CARs. For turbine-powered aircraft with a MCTOW exceeding 33,000 lb/15,000 kg operating under Subpart 702 of the CARs (turbine powered land aircraft only) may operate without an operative ACAS only if it engaged in or configured for fire-fighting, aerial spray application, or survey operations and while operating only in low level airspace.

TCAS II (ACAS II SW version 7.0) and a mode S transponder is the minimum acceptable collision avoidance system for all aircraft, operating under Subparts 702, 703, 704 and 705 of the CARs requiring ACAS equipment, when operations are conducted in Reduced Vertical Separation Minima (RVSM) airspace.

Presented by:



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The following is taken from the TC Advisory Circular and gives a quick summary of ACAS requirements.

Operating Regulation	TCAS I  Equivalent to TSO C-118	TCAS II  TSO C-119 (SW 6.04a or 7.0) & Mode S transponder meeting TSO C-112
Subpart 702 of the CARs	Not required	Required for turbine-powered aeroplanes of MCTOW exceeding 33,000 lb. (Note 1 and 2)
Subpart 703 of the CARs	Minimum Required for aeroplanes of MCTOW exceeding 12,500 lb. (Note 1)	Not Required by applicability of Subpart 703 of the CARs
Subpart 704 of the CARs	Minimum Required for aeroplanes of MCTOW exceeding 12,500 lb. (Note 1)	Required for turbine-powered aeroplanes of MCTOW exceeding 33,000 lb. (Note 1)
Subpart 705 of the CARs	Minimum Required (Note 1)	Required for Turbine powered aeroplanes (Note 1)

**Notes:**

1. TCAS II, SW version 7.0 and Mode S required for RVSM airspace.
2. Not required when engaged in or configured for firefighting, aerial spray application, or survey operations and operates only in low level airspace.

Those operators who will be affected by this should contact us sooner than later in order to get plans and discussions underway as soon as possible. Contact either Barry Aylward or Bill Arsenault. You can reach them by email at [barry@kitcheneraero.com](mailto:barry@kitcheneraero.com) and [bill@midcanadamod.com](mailto:bill@midcanadamod.com) or by telephone at the numbers published below.

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