

CANADIAN OWNERS AND PILOTS ASSOCIATION

The COPA Guide to the Limited Class





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Introduction

Welcome to the fascinating world of ex-military warbirds, Soviet Bloc transports, jet trainers, military liaison aircraft, non-certified sailplanes from other countries and many more unusual types of aircraft that fit into the uniquely Canadian "limited class".

Prior to 2002 TC regulated these types of aircraft primarily through a Maintenance and Manufacturing Policy, MPL 19. Non-certified aircraft that didn't fit into the amateur-built, ultralight or owner-maintenance categories were restricted to operating under a *Flight Permit – Exhibition*, which meant that they could only be flown to, from and at airshows and in preparation for airshows. This meant that they couldn't be operated for personal or recreational use and the rules made owning one of these aircraft quite unattractive.

Several aviation associations, including COPA and CARMA (the Canadian Association of Recreational Military Aircraft), had long asked TC to find a way for private operators to preserve and fly ex-military aircraft and other uncertified aircraft types from around the world. Many Canadians had seen large numbers of these aircraft operated safely in the USA and other countries and wanted to see them operated similarly in Canada. With large numbers of indigenous Canadian military aircraft, such as the Canadair CT114 Tutor, coming up for sale it would be a real shame if there were no class to operate these aircraft in and they all ended up exported from Canada.

Commercial operators were also discussed when the category was being considered. Several Canadian commercial air operators wanted to fly ex-military or non-type certified aircraft in aerial work for uses such as aerial logging or target towing. A new class of aircraft was needed to do this. In 2002 Transport Canada (TC) introduced the Limited Class through an <u>exemption</u> to <u>Appendix F to Airworthiness Manual Chapter 507</u>. The new rules affect ex-military aircraft as well as many other types of factory-produced, but uncertified, aircraft and even accommodate the US Light Sport Aircraft category, although with some requirements in Canada that do not apply in the US.

The rules are now found in <u>CAR Standard 507 Appendix F</u> and the exemption will be cancelled. Aircraft in this new class now operate under a *Special Certificate of Airworthiness – Limited* and the class is referred to as "the limited class".

These new rules have opened the door in Canada for private individuals to own and fly some interesting and, in some cases, historic aircraft. The class permits the ownership and operation of non-certified and ex-military aircraft for recreational and, in some cases, commercial use, provided that the owner can show that they can keep the aircraft maintained properly.

The introduction of the limited class in 2002 heralded a new era in Canadian aviation. Hopefully in time it will bring about the growth of a new industry in Canada to care for and preserve these interesting and often historic aircraft.



Scope of This Guide

This COPA Guide is designed to be an introduction to the limited class, giving an overview of the new rules that govern the class along with some considerations for pilot licensing, insurance and other factors.

This guide has been written for someone thinking about buying an aircraft that will be operated in the class. The guide does not go into the details of how to fly or maintain individual aircraft types. You will have to rely on the documentation, including the maintenance and flight manuals that come with each aircraft, for that information.

This guide will also not tell you how to go about buying a limited class aircraft. For information on that subject have a look at the <u>COPA Guide to Buying an Aircraft</u>.

NOTE

While this guide does discuss the rules for owning and flying a limited class aircraft it is not legislative. Ensure that you read and understand the current CARs regarding limited class aircraft before buying or flying a limited class aircraft. The exemption and Appendix to CAR 507 reprinted in this book for your convenience were current at the date that this edition of the Guide was released.



1990 model Antonov AN-2P "Colt"



New Rules

The exemption to CAR Standard 507 Appendix F eases the restrictions on owning and operating certain non-certified aircraft compared with the previous MPL 19 rules. The new rules also bring Canada closer into line with what other nations, particularly the USA, allow for the private ownership and operation of ex-military aircraft and manufactured "experimental" aircraft but some differences remain. The new rules require some study to make sure that the particular aircraft that you are considering will qualify before you buy it. If there is any doubt, you should contact your regional Transport Canada Maintenance and Manufacturing representative for clarification.

What You Can't Do

The limited class does have its "limitations". It is not the home for every type of aircraft, or a "miscellaneous catch-all category" for aircraft that don't fit in the amateur-built, owner-maintenance or ultralight categories. It is still possible to buy an aircraft that doesn't fit in this or any other category and cannot be flown in Canada.

As with most TC rules the key is "applicability" – what is covered under the rule and what is excluded!

While the limited class rules allow for aircraft of any class, category, weight, size, number and type of engines and number of passenger seats they specifically **exclude**:

- Aircraft that have been issued a type certificate
- An aircraft that has a type certificate issued by a foreign civil aviation authority and is currently in production

Aircraft that have a type certificate in Canada but have a modification on them that is not covered by an STC should be operated in the *restricted* category.

If you intend to register an aircraft in Canada that is foreign type-certified, is still in production and the manufacturer has no intention of pursuing Canadian certification then the aircraft is not eligible for the limited class or any other category in Canada, with the exception of the ultralight category (if it is under 1200 lbs and 39 knot stall speed).

If the aircraft has a foreign type certificate and is out of production it may qualify for the limited class since it is not reasonable to expect a foreign manufacturer to go through Canadian type certification for an out-of-production aircraft.

The limited class is also not an "owner-maintenance" class. Unlike the amateur-built, owner-maintenance and ultralight categories, the maintenance on limited class aircraft must be signed out by an AME or AMO with appropriate credentials. This puts maintenance on limited class aircraft on the same basis as type-certified aircraft. As in the case of certified aircraft, anyone can work on a limited



class aircraft, but the maintenance release must be signed out by an AME or AMO.

The limited class is not a "modification" class either. In most cases major modifications to aircraft in this class are not permitted. More on this will be covered under <u>Maintenance Conditions</u>.



Ex-Yugoslavian Air Force UTVA-66 Liaison Aircraft

Aircraft in the Class

The limited class is currently the home for some interesting and unusual aircraft. Some of the aircraft found in the limited class currently include:

- Antonov AN-2P "Colt" Polish civil transport biplane
- Canadair F-86E Sabre Mk 6 jet fighter
- Vickers Supermarine Spitfire Mark XVI fighter
- Bell OH-58 Kiowa helicopter
- Aero L-29C jet trainer
- Hawker Hurricane Mk XII fighter
- Yak 18 piston-engined Russian trainer
- Brasov IS-32 Lark sailplane
- Schempp-Hirth Discus 2T sailplane
- UTVA-66 piston-engined Yugoslavian liaison airplane
- Aerospatiale CM170 Magister jet trainer
- Rolladen-Schnieder LS-6C sailplane
- Messerschmitt BF109E-4
- Dornier Alpha Jet trainer
- Nanchang CJ6A Chinese military trainer
- Ultramagic H-77 balloon

The category may be of interest to an owner who is looking to fly:

Canadian and foreign ex-military aircraft that were never certified



- Foreign manufactured civil aircraft, particularly sailplanes, that were never certified
- Former Soviet Eastern Bloc civil aircraft that were never certified
- US Light Sport Aircraft.

The majority of aircraft in the limited class at the present are ex-military machines or sailplanes. Many countries allow sailplanes to be manufactured and sold as complete aircraft without being certified. In the country of origin, including the USA, these aircraft were often registered in one or more "experimental" classes. Until the limited class was created in Canada these sailplanes could not be flown in Canada as manufactured uncertified gliders.

One group of aircraft that were not permitted in Canada prior to the limited class were the heavier US-built rigid-wing hang gliders, like the Bright Star (now Aeriane of Belgium) Swift. The US hang glider class permits empty weights of up to 155 lbs, while the Canadian hang glider class limits empty weights to only 45 kg or 99.2 lbs.

Non-amateur-built, manufactured gliders that weighed between 100-155 lbs empty were acceptable in the USA as hang gliders, but had no home in Canada. With the limited class these heavier hang gliders can now be registered and flown in Canada.

Light Sport Aircraft

The logical solution for this large and growing class of aircraft is to permit US LSA aircraft to be registered in Canada on the same basis as they are in the US. To that end, A COPA co-chaired working group that formed at Transport Canada to review recreational aircraft recommended that Canada harmonize with the US, or in other words, permit them in Canada without unique requirements or restrictions.

The working group report is being considered by Transport Canada but until the recommendations are incorporated into regulations, there are three existing aircraft categories into which a LSA can be registered in Canada; Advance Ultra-Light Aircraft (AULA), Amateur-Built or Limited Class category. Each one has its advantages but also some significant limitations.

AULA: The aircraft is limited to 1232 pounds and there is no allowance for floats, as there is with LSAs in the US. The manufacturer must provide documentation to satisfy Transport Canada that the LSA conforms to the Canadian standards for AULA.

Amateur-built: the aircraft has to meet the 51% rule (it cannot be a factory-built aircraft). If the aircraft you are considering for registration in Canada cannot fit into the AULA or amateur-built class, then Limited Class is the only option.



Here are some of the considerations for operating a LSA in the limited class:

- The limited class requires you to remain within the limits established by the manufacturer. For an LSA, it is the ASTM maximum take-off weights of 1320 lbs and 1430 lbs on floats. Special Flight Authority is required from the FAA for Canadian-registered aircraft in the limited class to fly in US airspace.
- An AME or AMO must sign off all maintenance.
- The pilot/owner must hold an appropriate licence to fly the aircraft in Canada, which is at least a pilot permit-recreational or a private pilot licence.
- Each new type and model of LSA must undergo an assessment by Transport Canada to ensure that it is eligible for the limited class (see Getting an Aircraft into the Class).
- Even though an initial assessment of the type and model by Transport Canada has occurred, an assessment performed by an AME on each aircraft is required to evaluate its conformance with the original eligibility assessment.

Once a LSA is registered in a country it cannot be imported or re-imported into the US. A FAQ section concerning Light Sport Aircraft and the options for class of aircraft to which they can be eligible can is at the end of this Guide.

Getting an Aircraft into the Class

Putting an aircraft into the limited class is not difficult but it does involve unavoidable government paperwork. TC has set out four steps that each aircraft must go through before it gets its *Special Certificate of Airworthiness – Limited*.

TC regional Maintenance & Manufacturing inspectors, in conjunction with inspectors from the regional General Aviation Branch, will carry out the evaluation. Transport Canada's General Aviation group is responsible for aircraft registration and pilot qualifications so they need to be involved from the start of the process.

The fours steps are:

- Initial evaluation to determine aircraft eligibility
- <u>Identification of standard operating conditions</u>
- <u>Identification of standard maintenance conditions</u>
- Subjective evaluation of any specific features that may modify the standard conditions

Once the eligibility assessment has been completed and the aircraft is accepted into the limited class, individual aircraft must have an assessment performed by an AME to evaluate its conformance with the original eligibility assessment for that aircraft type.

TC also adds a warning note in the rules that says:



Information note: If the initial evaluation results in an aircraft type being found ineligible, examples of the type will not qualify for a Special C of A – Limited, regardless of their condition or any other factors. Therefore, before making any commitment to purchase a non type-certified aircraft, applicants are strongly advised to contact Transport Canada and obtain confirmation of the aircraft's eligibility.

Initial Evaluation

TC inspectors will investigate the following:

- The aircraft meets the basic legibility of CAR Standard 507 Appendix F. This means that the aircraft **must not be**:
 - An aircraft that has been issued with a type certificate
 - An aircraft which has a type certificate issued by a foreign civil aviation authority and is currently in production
- TC must be satisfied that, subject to appropriate conditions and limitations, the aircraft can be
 maintained in a safe condition and operated without undue risk to its occupants or to other
 persons or property.
- The applicant must show that sufficient applicable information, equipment, and supplies are available to enable the proper maintenance of the aircraft, and that suitably trained and experienced persons (AME or AMO) are available to perform the work and sign off on the work.
- The following documentation must be provided in either English or French:
 - Evidence of the manufacturer and the place and date of manufacture
 - Type and model data, including drawings or other technical data required to perform the conformity inspection
 - Technical records for the airframe, engine and propeller, in sufficient detail to meet the requirements of <u>Division IV of Subpart 605 of the CARs</u>
 - A current Weight and Balance report
 - A flight manual or equivalent document that includes sufficient information to enable the safe operation of the aircraft.

The Aircraft Flight Manual (AFM), Pilot's Operating Handbook (POH), Aircraft Operating Instructions (AOIs) or other similar book is a critical piece of documentation. It has to be available in English or French and not only Chinese, Russian or Czech. There are several aircraft type clubs for aircraft from foreign countries that have translated the original documentation into English. Check with the <u>aircraft type club</u> for the aircraft that you are interested in and see what documentation they have available.

As if to emphasize the importance of these documents TC adds this warning:

Information note: The flight manual or equivalent document must be appropriate and



sufficiently detailed to allow the safe operation of the aircraft. Where necessary, the Minister may require additional procedures or limitations to be included in a supplement to the document. A list of effective pages or equivalent means must be provided to ensure the document is complete and up to date. The document will be directly referenced as a condition of the flight authority, to ensure that all flight operations are conducted in accordance with the procedures and limitations specified therein.

It is pretty obvious that without a book that tells you how to operate the aircraft, TC will not pass the aircraft through the initial evaluation.

If the aircraft does not have a current weight and balance report then this requirement can be addressed by re-weighing the aircraft. In the case of older aircraft that have not been re-weighed in many years this should be accomplished anyway – it is good prudent maintenance.

Operational Evaluation

To figure out what kind of operating conditions the aircraft will need, TC will assign it to one of the following categories:

- Group A consists of gliders, balloons, airships, non-high performance single-engine aeroplanes and multi-engine aircraft that are capable of sustaining flight following the failure of an engine.
- Group B consists of all aircraft not included in Group A.

Information note: "high performance aeroplane" means an aeroplane requiring a minimum crew of one pilot and having a VNE of 250 knots or greater, or a VSO of 80 knots or greater.

From a flying point of view, Group A contains the lower risk aircraft, such as all sailplanes and smaller aircraft such as the UTVA 66. Group B brings in the high-performance aircraft such as T-33s, F-104s and all helicopters and other rotorcraft. It also brings in multi-engined aircraft that cannot sustain flight following the failure of one engine.

Operating Conditions

The Aircraft Operating Group mentioned above determines the standard operating conditions for the aircraft. These conditions will be stated on the aircraft's *Special Certificate of Airworthiness – Limited* and must be adhered to when flying the aircraft.

- Standard operating conditions for group A aircraft are:
 - Aircraft to be operated in accordance with the procedures and limitations specified in the aircraft flight manual or equivalent document
 - Where passengers are authorized, information regarding any seats that are not to be occupied during take-off and landing;
 - Where passengers are authorized, all passengers to be briefed before each flight on:



- The meaning and implications of the Special C of A Limited placard
- Emergency procedures, including the operation of the seats, seat belts, and exit doors;
- o Any other conditions or limitations resulting from Minister's evaluation of the aircraft.
- Standard operating conditions for group B aircraft include:
 - Aircraft to be operated in accordance with the procedures and limitations specified in the aircraft flight manual or equivalent document;
 - Prohibition against take-off and landings on runways where engine-inoperative ferry flights are prohibited.

The runway limitations are not just for when there is one engine inoperative — it is a permanent limitation on these aircraft that is intended to keep them away from built-up areas at low altitude on take-off and landing. <u>Schedule 2 to Appendix D to STD 507</u> lists the prohibited runways. These are currently:

Content last revised: 1996/10/10

Airport	Airport Code	Prohibited Runway
Calgary	CYYC	16
Edmonton Municipal	CYXD	All runways
Kamloops	СҮКА	08
Penticton	CYYF	34
Regina	CYQR	07
Saskatoon	CYXE	14
Vancouver	CYVR	08, 12
Victoria	CYYJ	02, 08, 13, 20, 31
Winnipeg	CYWG	07, 13, 18
Charlottetown	CYYG	21
Fredericton	CYFC	15
Halifax/Shearwater	CYAW	29, 34
Hamilton	СҮНМ	06
London	CYXU	26
Moncton	CYQM	29
Montréal/Dorval	CYUL	All runways
Montréal/ St. Hubert	СҮНИ	24, 28
Ottawa	CYOW	32
Quebec City	CYQB	12
St. Catherine's	CYSN	24
Sydney, N.S.	CYQY	07
Thunder Bay	CYQT	07



Toronto - Pearson International	CYYZ	06 Right, 15
Val d'Or	CYVO	36
Windsor	CYQG	25

- Where passengers are authorized, information regarding any seats that are not to be occupied during take-off and landing
- Where passengers are authorized, all passengers to be briefed before each flight on
 - o The meaning and implications of the Special C of A Limited placard
 - o Emergency procedures, including the operation of the seats, seat belts, and exit doors
- Any other conditions or limitations resulting from Minister's evaluation of the aircraft

Number of Occupants

It should be noted that the limited class is **no longer restricted** to a maximum of four occupants.

Maintenance Evaluation

TC will also assign the aircraft to a group for maintenance requirements, as well. This is a little easy to confuse with the operating requirements, so TC has given these numbers instead of letters.

The possible maintenance groups are:

Group 1 consists of:

- Gliders
- Balloons
- Piston-powered rotorcraft
- Basic training and communication aeroplanes
- Light transports
- Equivalent aircraft types (total horsepower below 1000 BHP).

Group 2 consists of:

- Turbine-powered rotorcraft;
- World War II era aircraft, including
 - Fighters
 - o Medium bombers
 - Transports
- Basic jet trainers
- Advanced piston-powered trainers
- Korean War era aircraft, including first generation jet fighters; and
- Equivalent aircraft types.



Group 3 consists of all aircraft not included in groups 1 or 2.

It can readily be seen that aircraft such as the UTVA 66s and LSAs fit into Group 1, P-51 Mustangs would fit into Group 2 and F-104 Starfighters would fit into Group 3.

Standard Maintenance Conditions

Each aircraft will be given standard maintenance conditions that will be specified on the *Special C of A*—Limited and must be adhered to. These are:

Group 1 aircraft:

- To be specified on the flight authority document, any modifications or repairs that affect any of the following shall invalidate the flight authority:
 - Structural strength
 - Performance
 - Power plant operation
 - Flight characteristics of the aircraft

Group 2 aircraft:

- To be specified on the flight authority document, any modifications or repairs that affect any of the following shall invalidate the flight authority:
 - Structural strength
 - Performance
 - Power plant operation
 - Flight characteristics of the aircraft
- All maintenance releases shall be signed by:
 - An AME who is the holder of an applicable Restricted Certifying Authority (RCA) for the aircraft type, issued in accordance with section 571.11 of the CARs, or
 - The holder of an AME license who has been authorized to sign by the holder of an Approved Maintenance Organization (AMO) pursuant to section 573.02 of the CARS with a rating appropriate to the work performed.

Group 3 aircraft:

- To be specified on the flight authority document, the performance of any modifications or repairs that affect any of the following shall invalidate the flight authority:
 - Structural strength
 - Performance
 - Power plant operation
 - o Flight characteristics of the aircraft



 All maintenance shall be performed and released under the control of an AMO pursuant to section 573.02 of the CARS with a rating appropriate to the work performed.

TC also includes two more warnings that are worthy of careful reading:

TC Information notes:

Except where specifically stated to the contrary, aircraft operating pursuant to a Special C of A are subject to all the same operational and maintenance regulations as aircraft with a C of A issued pursuant to <u>section 507.02 of the CARs</u>. The conditions and limitations specified on a Special C of A are additional to those general requirements.

In the case of group 2 or 3, the applicant acknowledges that, should appropriately qualified persons or organizations no longer be available to perform or certify maintenance, the flight authority may be suspended until suitable replacements can be found.

Essentially the rules for maintaining these aircraft are very similar to certified aircraft. Aircraft in Group 1 (gliders, small airplanes, etc) must be maintained by any AME and any major modifications will invalidate the flight authority, which would then require another TC evaluation and issue of a new flight authority.

Aircraft in Group 2 (turbine helicopters, WWII fighters, etc) also cannot be modified and must be maintained by a holder of an AME with a Restricted Certifying Authority or an AME authorized by an AMO with appropriate qualifications. Modifications would require a TC evaluation and issue of a new flight authority.

Aircraft in Group 3 also cannot be modified and must be maintained by an AMO. Modifications would require a TC evaluation and issue of a new flight authority.

You can expect that when you go through the initial evaluation TC will want to know who will maintain the aircraft and confirm that it is appropriate, so be prepared!

For aircraft in Groups 2 and 3 losing your maintenance organization could be a problem as it may invalidate your Special C of A – Limited, at least until you can identify a new organization to maintain the aircraft. It may be prudent to have a back-up maintenance plan in case your primary maintainer goes out of business.

the key to the maintenance requirements of the limited class is that you have to be able to show TC that the aircraft can be properly maintained.

As stated earlier anyone can perform the work on a limited class aircraft – but someone with the appropriate qualifications must inspect the work and sign the maintenance release when any work is done. Many owners of aircraft in the class do much of their own work under the supervision of an appropriately qualified person, who then signs the maintenance release in the books.



Evaluation of Specific Features

Once the standard operational and maintenance conditions have been established, TC will examine any specific features that could affect the safe operation of the aircraft.

- These specific features could include
 - Unusually complex or simple controls
 - o Instrumentation or equipment
 - Especially demanding or docile handling or performance characteristics
 - The use of unusual fuels, explosive devices or special ground equipment (APUs, etc)
 - Environmental factors (air pollution, noise)
 - The type's operational history, such as a particularly high or low accident rate.

Depending on the outcome of this part of the evaluation TC may decide that the aircraft should be assigned to a higher or lower operational or maintenance classification and this will be indicated on the *Special C of A - Limited*.

In addition to confirming which Group the aircraft type is in, extra conditions or limitations may be imposed, including:

- Specific main operating base and maintenance base
- Specific airports that must be used or cannot be used
- Restricted radius of action for testing and proficiency flying
- Specific runways
- Flying restricted with respect to VFR, IFR, day or night operations
- Minimum runway length based on aircraft performance for take-off and landing, with an allowance (where applicable) for extreme atmospheric variations and inoperative performance enhancing devices such as afterburner, thrust reversers, or drag chutes
- Specific corridors based on climb and descent profiles
- Requirement to advise Control Towers or aerodrome traffic of non-standard circuit patterns, approach speeds and overshoot procedures
- Requirement for a maneuver profile approval prior to participation in air shows, air races, or motion pictures

Other conditions may be appropriate as well and these will be entered on the *Special C of A - Limited* or the aircraft flight manual.

Inspection

Once the paperwork on the aircraft is acceptable, but before the Special C of A – Limited is issued, the



aircraft must be physically inspected.

A qualified AME with appropriate training and experience will normally carry out the inspection. They will be inspecting to make sure that the aircraft conforms to the documentation submitted. In most cases a delegated AME will carry out the inspection, but the Minister always retains the right to have a TC inspector do the inspection.

If the aircraft is ex-military it will be required to have its

- Weapons disabled or removed
- Firing circuits deactivated
- Casing ejection panels sealed
- Rocket/bomb racks, hard points and jettisonnable equipment removed or secured to preclude inadvertent operation

Aircraft with an Inadequate Technical History

Some aircraft just do not come with adequate paperwork to establish such things as the age of components and the maintenance status of the aircraft. In some cases, this may preclude it from being issued a *Special C of A – Limited*.

Where the records are inadequate, in some cases this deficiency can be compensated for by:

- A more extensive inspection to prove the structural integrity of the aircraft
- Non-destructive inspection techniques
- Structural disassembly
- Other in-depth inspection techniques

Where the technical history of the engines, propellers, or other critical components is incomplete or inadequate, those items will undergo a complete overhaul or replacement with units with an acceptable history.

Placards

All Canadian non-certified aircraft are required to carry a placard stating that the aircraft does not meet the standards for certified aircraft.

Currently the placards are the same for Limited Class and Amateur Built and different for the other classes of aircraft (amateur-built, ultralight, owner-maintenance), but this will soon change as all classes will be switching to the same placard as used in the limited class. This is good news as it means that limited class aircraft owners shouldn't have to change their placards in the near future (unlike the others) and passengers can expect the same wording on all non-certified aircraft.



Due to representations made by COPA, owners of aircraft in the limited class have a choice of where to locate the required placards. COPA wanted to ensure that aircraft with historically significant paint schemes were not required to have large disfiguring placards on the outside of the aircraft.

As a result, the placard can either be:

• Displayed so that it is readily legible either from each passenger station

Or

• On the side of the fuselage in a position that is readily legible to persons entering the aircraft, in letters at least 10 mm (3/8 in.) high and of a color contrasting with the background

The placard shall read, in both English and French (it **must** be in both languages):

YOU FLY IN THIS AIRCRAFT AT YOUR OWN RISK.
THIS AIRCRAFT DOES NOT COMPLY WITH
INTERNATIONALLY RECOGNIZED STANDARDS.

VOUS VOLEZ À BORD DE CET AÉRONEF À VOS PROPRES RISQUES.

CET AÉRONEF N'EST PAS CONFORME

AUX NORMES RECONNUES À L'ÉCHELLE INTERNATIONALE.

It should be noted that internally mounted placards do not have to meet any size or colour requirements. They just have to be legible and readable from any passenger seat. This will allow aircraft owners to place them in spaces on the instrument panels or other convenient places.

Insurance

These days getting insurance for aircraft in the limited class, especially warbirds, can be a challenge. Insurance companies are very reluctant to insure ex-military aircraft, particularly for hull coverage, and liability insurance for the heavier aircraft can be hard to get as well. Keep in mind that Transport Canada regulations require at least a minimum amount of liability insurance.

If the aircraft you are considering is valuable enough that you do not feel comfortable flying it without in-flight hull coverage then make this part of your pre-purchase checklist and a "no-go" item if you can't get it from any source. For example, you should be prepared to pay 10-15% of the aircraft's value in hull insurance each year if you are insuring aircraft in the WWII fighter class.

COPA's Silver Wings liability insurance plan will provide third party (PLPD) insurance, passenger liability insurance and not-in-motion hull coverage for aircraft in the limited class provided that they were designed for seven or fewer passenger seats and have a gross take-off weight below 8,000 lbs. Complete details on COPA's insurance can be found on the insurance section of the <u>COPA website</u>.



COPA's aircraft insurance covers flying in airshows, cenotaph fly-bys, or other types of air demonstrations on a non-commercial basis (i.e. no remuneration other than direct operating expenses). It will cover: "(a) flying in an air show under Transport Canada Special Flight Operations Certificate – Special Aviation Event provided that the operations certificate limitations are complied with and no aerobatics are performed; and (b) flying in a ceremonial fly-past, such as Remembrance Day ceremonies or similar event, where no Transport Canada Special Flight Operations Certificate – Special Aviation Event is in effect, provided flight is at a minimum of 1000 feet above ground level and no aerobatics are performed." Formation flying is also permitted provided no aerobatics are performed. Check your own policy for details on what is covered and what isn't.

Insurance can be a "show-stopper" in the limited class, especially when it comes to the larger and heavier ex-military aircraft, so decide what is the minimum insurance coverage is required by regulation and what your level of risk protection you desire and then make sure you get a quote before you commit to purchasing a particular aircraft.

Pressurized Turbine?

So you have your heart set on a really hot airplane – something turbine powered and pressurized, like a Lockheed T-33 Silver Star or Canadair CL-41A Tutor? There are some additional considerations for pressurized, turbine powered aircraft.

The most important factor to consider is that all Canadian pressurized and turbine aircraft, not in commercial or flight training use, that are used to carry passengers are required to operate under <u>CAR</u> 604 Private Operator Passenger Transportation. This means that you will need a Private Operating Certificate (POC). This program is under review by Transport Canada, and will go back to Transport Canada from the Canadian Business Aviation Association in April 1, 2011. Changes to the requirements to hold a POC are in the works so you should check with Transport Canada Standards in Ottawa if you are considering a pressurized, turbine powered aircraft. After April 1, 2011, the requirements should be contained in a revised CAR 604.

The POC program requires you to write and follow a Safety Management System for the operation of the aircraft, have a custom-designed maintenance program that complies with <u>CAR 625 Appendix D</u> (you cannot just adopt CAR 625 Appendix B & C as you can with other private aircraft) and meet minimum training and insurance benchmarks plus several other requirements. This program is under review by Transport Canada, and will go back to Transport Canada from the Canadian Business Aviation Association in April 1, 2011. Changes to the requirements to hold a POC are in the works so you should check with Transport Canada Standards in Ottawa if you are considering a pressurized, turbine powered aircraft. After April 1, 2011, the requirements should be contained in a revised CAR 604.

Private Operator link at Transport Canada

http://www.tc.gc.ca/eng/civilaviation/standards/commerce-business.htm

This is not to say "don't buy a turbine pressurized aircraft", just be aware that there are some extra requirements and costs involved.



Previous requirement (Before April 2011)

Please note that to fall under the requirements of CAR 604 the aircraft must be both turbine powered (jet or turboprop) and pressurized. Aircraft that are pressurized and piston powered (stock Lancair IV-P for instance) are not captured by this rule, nor are turbine, non-pressurized aircraft (Rotorway Jet Exec helicopter).

It is also worth noting that you can modify an aircraft into requiring an operating certificate under CAR 604 by converting the engine to turbine power. For example, if you own a piston powered Lancair IV-P and you convert it to a Walter turbine-engined turboprop, then you suddenly will need a POC under CAR 604 before you carry any passengers in the aircraft.

The POC program requires you to write and follow a Safety Management System for the operation of the aircraft, have a custom-designed maintenance program that complies with <u>CAR 625 Appendix D</u> (you cannot just adopt CAR 625 Appendix B & C as you can with other private aircraft) and meet minimum training and insurance benchmarks plus several other requirements.

Airworthiness Directives

<u>CAR 605.84</u> lists the categories of aircraft that are not required to comply with ADs and excludes only "aircraft operated under a special certificate of airworthiness in the owner-maintenance or amateur-built classification". Limited class aircraft have to comply with ADs.

Some owners may say "so what – when was the last time that anyone issued an AD against an UTVA-66 or a Nancheng CJ6A?" That is true, but components installed on them, such as engines, propellers, alternators or wheels assemblies, may be subject to ADs. You have to check the <u>TC CAWIS</u> system for ADs including the Miscellaneous Equipment AD List under "Advanced Search".

Handheld Fire Extinguishers

Most pilots know that all powered aircraft except ultralights need fire extinguishers. That requirement is outlined in <u>CAR 602.60</u> so this also applies to aircraft in the limited class.

Registration and Markings

Aircraft in the limited class generally are required to meet the same rules for registration and markings as all other aircraft. They are required to have a *Certificate of Registration (C of R)* and carry nationality and registration markings the same as all aircraft.

The CARs do allow an exception for ex-military aircraft (and replicas) to apply for special sizes and locations of markings to preserve their original paint schemes as far as possible. This can be found in CAR 222.05:

222.05 Variance from the Specifications for Marks for Former Military Aircraft and Replicas



The following shall be submitted by the owner, in writing, for an authorization to permit an alternate size, location or colour for the display of marks on former military aircraft or replica military aircraft:

- (A) evidence that establishes that the aircraft retains its military colours and original markings; and
- (B) a suggested alternative size, location or colour for the display of the marks in which the marks would be clearly identifiable.

It is recommended that you read <u>CAR 202</u> and <u>CAR Standard 222</u> very carefully and in their entirety before applying any markings to your aircraft.

Pilot Licences

- All limited class aircraft require a pilot licence and current Transport Canada medical certificate to fly in Canada. Specifically, to fly a Limited class aeroplane you need an aeroplane licence:
 - Private Pilot Licence Aeroplanes
 - Commercial Pilot Licence Aeroplanes
 - Airline Transport Pilot Licence Aeroplanes
 - If the aircraft is single-engined, has four or fewer seats and is non-high performance then it can be flown with a Pilot Permit – Recreational Aeroplanes, provided that only one passenger is carried.
 - If the aircraft is 1200 lbs or less and has a stall speed (V_{SO}) of 39 knots of less then the minimum licence is a Pilot Permit - Ultralight Aeroplanes (although this licence does not allow the carriage of passengers unless you also have the "passenger carrying rating") or fly with another licenced pilot.
 - Note all limited class aeroplanes that are considered "high performance" require a type-rating to fly. See <u>High Performance Ratings</u> below.
- Limited class helicopter you will need a helicopter licence:
 - Private Pilot Licence Helicopters
 - Commercial Pilot Licence Helicopters
 - Airline Transport Pilot Licence Helicopters
- Limited class gyroplane or gyroglider you will need a:
 - Pilot Permit Gyroplanes
- Limited class glider you will need a:
 - Pilot Licence Gliders



- Limited class powered glider you will need a:
 - Pilot Licence Gliders
- Limited class balloon you will need a:
 - Pilot Licence Balloons
- Limited class airship you will need a:
 - Pilot Licence Balloons, with a type endorsement for each airship type

High Performance Rating

A limited class aircraft requires a high performance rating when the aircraft has:

- A V_{NE} of over 250 knots or
- A V_{SO} of more than 80 knots

As explained in <u>CAR 421.40(3)(c)</u> if your aircraft is "high performance" then it is not a showstopper, you will just need a type rating, which includes:

(i) Knowledge

An applicant for an individual aircraft type rating for a high performance aeroplane shall have completed ground training on the aeroplane type.

(ii) Experience

An applicant shall have completed flight training and have acquired a minimum of 200 hours pilot flight time on aeroplanes.

(iii) Skill

Within the 12 months preceding the date of application for the rating, an applicant shall have successfully completed a qualifying flight under the supervision of a Transport Canada Inspector or a qualified person qualified in accordance with CAR 425.21(7)(a)

If the type of aircraft is a single seater with no two-seat trainer available, then TC will accept training on a similar type of aircraft. In that case talk to your local TC Licencing Inspector first to ensure the suitability of the aircraft you are considering for training.

Flying in the USA and other Countries

Limited class aircraft operate in Canada under a Special Certificate of Airworthiness – Limited. This



Special C of A does not meet the ICAO requirements for aircraft airworthiness and therefore it is not automatically accepted outside Canada. If you want to fly your limited class aircraft outside or Canada, particularly to the USA, then some advance planning is required.

The FAA will normally allow Canadian limited class aircraft in the US under certain specified conditions. Unlike Canadian amateur-builts and ultralights you cannot just print a form from the Transport Canada website and use that as permission to enter US airspace.

To fly in the US you will need to apply to an <u>FAA Flight Standards District Office (FSDO)</u> for a Special Flight Authority (SFA). Normally the FSDO will issue you an SFA to operate the aircraft in the USA within a few days. The SFA may contain specific restrictions depending on the type of aircraft and the reason it is being flown to the US. Expect that the SFA may:

- Be for a limited time span
- Be for a limited geographical area or route
- Contain a restriction on flight over built-up areas
- Contain a restriction on classes of airspace
- Contain a restriction on carriage of passengers while in the USA

An SFA is required anytime you fly your limited class aircraft in US airspace, not just when you plan to land in the US. That means that you should apply for an SFA even if you are only transiting through US airspace between points in Canada, for instance when flying directly between Montreal and Fredericton.

If you are planning to fly your limited class aircraft to other countries such as Greenland (Denmark), Iceland, the UK or the Bahamas you should contact the national Civil Aviation Authority for that country to find out what the current requirements are. Allow lots of time for this — it may take six months to a year to arrange to bring a non-certified aircraft to some countries. Many countries will not permit foreign aircraft that do not hold a standard *Certificate of Airworthiness* to operate in their airspace at all.

Aircraft Type Clubs

Aircraft type clubs can provide a wealth of information on specific aircraft types and variants. There are literally hundreds of these clubs around the world providing services to many, if not most, aircraft types that have been produced in any significant numbers. Some limited class aircraft designs have their own type clubs.

Type clubs vary a lot in the services they offer and how they work. Some are simply volunteer clubs run by one enthusiast, using a free web service to provide a website. These often have minimal publications or services. On the other end of the scale some of the largest types clubs have a full-time staff and offer a full range of services.

Here are services that some type clubs offer:



- A magazine to pass type-related information, news and events
- A website, often with type-specific buyers checklists
- Technical question support from aircraft type experts
- Buyers guides
- Conventions and fly-ins
- Type specific classified ads (often on-line)
- Background and aircraft type historical information
- Maintenance tips publications
- Operating tips information
- Maintenance and aircraft systems courses
- Aircraft type conversion training programs
- Type specific insurance (often available in the USA only!)
- Formation flying training
- Scholarships

COPA supports aircraft type clubs – they serve a great need in the aviation world, providing type-specific technical information and support that is not provided by anyone else. Consider joining and supporting the club for the type of aircraft that you buy.

CAR 507 Appendix F

It is important to read the complete rules for the limited class to understand the subtle parts of them. Here are the complete rules, as published on the TC website. They are current as of the date of the edition of this Guide.

EXEMPTION FROM APPENDIX F and SUBSECTION 507.03(5) OF STANDARD 507 — FLIGHT AUTHORITY AND CERTIFICATE OF NOISE COMPLIANCEAND SUBSECTION 507.03(a) OF THE CANADIAN AVIATION REGULATION

Pursuant to subsection 5.9(2) of the *Aeronautics Act*, and after taking into account that the exemption is in the public interest and is not likely to affect aviation safety, I hereby exempt **persons who apply for a special certificate of airworthiness in the limited classification** from compliance with the requirements of Appendix F and subsection 507.03(5) of *Standard 507 - Flight Authority and Certificate of Noise Compliance* made pursuant to paragraph 507.03(a) of the *Canadian Aviation Regulations* (CARs), subject to the condition of this exemption.

Subsection 507.03(a) of the CARs stipulates that where an application for a flight authority is made pursuant to Section 507.06, the Minister shall issue a special certificate of airworthiness in respect of an aircraft that meets the criteria for one of the classifications of a special certificate of airworthiness specified in Standard 507.

Subsection 507.03(5) of the Standard 507 states that a Special Certificate of Airworthiness in the



Limited classification is issued by the Minister for:

- (A) aircraft for which a flight permit (Private) had been issued on or before January 1, 1989;
- (B) aeroplanes of a type which have been accepted for use in the military service and which are approved by the Minister for operations, other than those conducted under CAR Part IV or CAR Part VII, providing the aeroplane has been maintained to standards acceptable to the Minister which afford a level of safety at least equivalent to that provided by the maintenance standards set out in Chapter 571 of this manual and has been subject to evaluation leading to its acceptance by the Minister; or
- (C) any other aircraft, except a rotorcraft, that has been approved by the Minister for operations other than those conducted under CAR Part IV or CAR Part VII.

Appendix F - Standards Respecting Ex-military Aircraft to Standard 507 outlines the criteria for the limited classification.

Purpose

The purpose of this exemption is to exempt **persons who apply for a special certificate of airworthiness in the limited classification** from compliance with the requirements of Appendix F of Standard 507, made pursuant to section 507.03 of the CARs.

Application

This exemption applies to persons who apply for a special certificate of airworthiness in the limited classification.

Condition

This exemption is subject to the following condition:

(A) Persons who apply for a special certificate of airworthiness in the limited classification shall comply with the requirements of Appendix A to this exemption.

Validity

This exemption comes into effect on **August 13, 2010 at 00:01 EDT** until the earliest of the following:

- (A) the date on which an amendment to the appropriate provisions of the *Canadian Aviation Regulations* comes into effect;
- (B) the date on which the condition set out in this exemption is breached; or
- (C) the date on which this exemption is cancelled in writing by the Minister where he or she is of the opinion it is no longer in the public interest, or is likely to affect aviation safety.

Cancellation



The exemption from Appendix F to Standard 507, subsection 507.03(5) of the Flight Authority and Certificate of Noise Compliance Standard and paragraph 507.03(a) of the *Canadian Aviation Regulations*, issued to **persons who apply for a special certificate of airworthiness in the limited classification**, on 17 November 2005 at Ottawa, Ontario, Canada, by the **Director**, **Aircraft Maintenance and Manufacturing**, on behalf of the **Minister of Transport**, is hereby cancelled because it is the opinion of the Minister that it is no longer in the public interest or is likely to affect aviation safety.

Dated at Ottawa Canada this **12th** day of **August 2010**, on behalf of the **Minister of Transport**[original signed by Jacqueline Booth for Don Sherritt)

Don Sherritt

Director, Standards

Civil Aviation

Transport Canada



Appendix A

Part I - Special Certificate of Airworthiness - Limited

- (1) A Special Certificate of Airworthiness [C of A] Limited may be issued in respect of an aircraft that is not:
 - (A) an aircraft in respect of which a type certificate has been issued; or
 - (B) an aircraft in respect of which a type certificate has been issued by a foreign civil aviation authority and that is currently in production:

Information notes:

- i. CAR 101.01 defines "type certificate" as follows:""type certificate" means a document issued by
 - a. the Minister certifying that the type design of an aircraft, aircraft engine, aircraft propeller or aircraft appliance meets the applicable standards for that aeronautical product, as recorded in the type certificate data sheets, and includes a type approval issued before October 10, 1996 under section 214 of the Air Regulations; or
 - b. the foreign airworthiness authority having jurisdiction over the type design of an aeronautical product that is equivalent to a document referred to in paragraph (a) and has been accepted by the Minister for the purpose of issuing a certificate of airworthiness; (certificat de type)"
- ii. Flight Permits Specific Purpose Exhibition, issued prior to June 2001, will be replaced by a Special Certificate of Airworthiness Limited.
- (2) Aircraft operating pursuant to a Special C of A Limited are subject to such operating limitations and additional maintenance requirements as the Minister determines necessary for the safety of the aircraft, its occupants, and other persons or property.
- (3) Aircraft operating pursuant to a Special C of A Limited shall not be modified in a way that affects their structural strength, performance, power plant operation, flight characteristics or environmental characteristics, without the authorization of the Minister; the aircraft flight manual or equivalent document shall not be altered in any way without the authorization of the Minister.

Information note: Any modification of the kind described in paragraph (3) above necessitates a re-evaluation of the aircraft's acceptance for a Special C of A - Limited.

(4) Aircraft operating pursuant to a Special C of A – Limited, that are approved for the carriage of passengers, shall have a placard containing the following statement either displayed so that it is readily legible from each passenger station or on the side of the fuselage:



YOU FLY IN THIS AIRCRAFT AT YOUR OWN RISK. THIS AIRCRAFT DOES NOT COMPLY WITH INTERNATIONALLY RECOGNIZED STANDARDS.

VOUS VOLEZ À BORD DE CET AÉRONEF À VOS PROPRES RISQUES. CET AÉRONEF N'EST PAS CONFORME AUX NORMES RECONNUES À L'ÉCHELLE INTERNATIONALE.

(5) If the placard required in subsection (4) is displayed on the side of the fuselage, it shall be in a position that is readily legible to persons entering the aircraft, in letters at least 10 mm (3/8 in.) high and of a colour contrasting with the background.

Part II - Standards Respecting the Issuance of a Special C of A - Limited

1. General

- 1. Applications for Special C of A Limited will be evaluated in accordance with the procedures outlined in this Part. The evaluation is in four stages :
 - a. initial evaluation to determine aircraft eligibility;
 - b. identification of standard operating conditions;
 - c. identification of standard maintenance conditions; and
 - d. subjective evaluation of any specific features that may modify the standard conditions.

Information note: If the initial evaluation results in an aircraft type being found ineligible, examples of the type will not qualify for a Special C of A – Limited, regardless of their condition or any other factors. Therefore, before making any commitment to purchase a non type-certified aircraft, applicants are strongly advised to contact Transport Canada and obtain confirmation of the aircraft's eligibility.

2. Initial evaluation for eligibility

- 1. The Minister shall be satisfied that the aircraft meets the requirements of paragraph (1) of Part I of this Appendix.
- 2. The Minister shall be satisfied that, subject to appropriate conditions and limitations, the aircraft can be maintained in a safe condition and operated without undue risk to its occupants or to other persons or property.
- 3. The applicant shall show that sufficient applicable information, equipment, and supplies are available to enable the proper maintenance of the aircraft, and that suitably trained and experienced persons are available to perform the work.
- 4. The following documentation must be provided in either English or French:
 - evidence of the manufacturer and the place and date of manufacture;
 - b. type and model data, including drawings or other technical data required to perform the conformity inspection;
 - c. technical records for the airframe, engine and propeller, in sufficient detail to meet the requirements of Division IV of CAR 605;
 - d. a current Weight and Balance report; and



e. a flight manual or equivalent document that includes sufficient information to enable the safe operation of the aircraft.

Information note: The flight manual or equivalent document must be appropriate and sufficiently detailed to allow the safe operation of the aircraft. Where necessary, the Minister may require additional procedures or limitations to be included in a supplement to the document. A list of effective pages or equivalent means must be provided to ensure the document is complete and up to date. The document will be directly referenced as a condition of the flight authority, to ensure that all flight operations are conducted in accordance with the procedures and limitations specified therein.

3. Operational evaluation

- 1. To determine the applicable operating conditions, aircraft shall be initially assessed as being in either Group A or Group B.
- 2. Group A consists of gliders, balloons, airships, non-high performance single-engine aeroplanes and multi-engine aircraft that are capable of sustaining flight following the failure of an engine.
- 3. Group B consists of all aircraft not included in group A.

 Information note: "high performance aeroplane" means an aeroplane requiring a minimum crew of one pilot and having a VNE of 250 knots or greater, or a VSO of 80 knots or greater.

4. Maintenance evaluation

- 1. To determine the applicable maintenance conditions, aircraft shall be initially assessed as being in either Group 1, 2, or 3.
- 2. Group 1 consists of gliders, balloons, piston-powered rotorcraft, basic training and communication aeroplanes, light transports, and equivalent aircraft types (total horsepower below 1000 BHP).
- 3. Group 2 consists of turbine-powered rotorcraft, World War II era aircraft, including fighters, medium bombers and transports, basic jet trainers, advanced piston-powered trainers, Korean War era aircraft, including first generation jet fighters, and equivalent aircraft types.
- 4. Group 3 consists of all aircraft not included in groups 1 or 2.

5. Standard operating conditions

- (1) Standard operating conditions to be specified on the flight authority for group A aircraft include:
 - a. aircraft to be operated in accordance with the procedures and limitations specified in the aircraft flight manual or equivalent document;
 - b. where passengers are authorized, information regarding any seats that are not to be occupied during take-off and landing;
 - c. where passengers are authorized, all passengers to be briefed before each flight on:
 - i. the meaning and implications of the Special C of A Limited placard; and
 - ii. emergency procedures, including the operation of the seats, seat belts, and exit doors; and



- d. any other conditions or limitations resulting from Minister's evaluation of the aircraft.
- (2) Standard operating conditions to be specified on the flight authority for group B aircraft include:
 - a. aircraft to be operated in accordance with the procedures and limitations specified in the aircraft flight manual or equivalent document;
 - b. prohibition against take-off and landings on runways where engine-inoperative ferry flights are not authorised.
 - **Information note**: Schedule 2 to Appendix D to STD 507 lists the prohibited runways.
 - c. where passengers are authorized, information regarding any seats that are not to be occupied during take-off and landing;
 - d. where passengers are authorized, all passengers to be briefed before each flight on:
 - i. the meaning and implications of the Special C of A Limited placard; and
 - ii. emergency procedures, including the operation of the seats, seat belts, and exit doors; and
 - e. any other conditions or limitations resulting from Minister's evaluation of the aircraft;.

6. Standard maintenance conditions

- (1) Standard maintenance conditions to be specified on the flight authority for group 1 aircraft include:
 - a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority.
- (2) Standard maintenance conditions to be specified on the flight authority for group 2 aircraft include:
 - a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority;
 - b. all maintenance releases shall be signed by:
 - i. an Aircraft Maintenance Engineer (AME) who is the holder of an applicable Restricted Certifying Authority (RCA) for the aircraft type, issued in accordance with section 571.11 of the CARs, or
 - ii. the holder of an Aircraft Maintenance Engineer licence who has been authorized to sign by the holder of a maintenance organization approved pursuant to section 573.02 of the CARs with a rating appropriate to the work performed.
- (3) Standard maintenance conditions to be specified on the flight authority for group 3 aircraft include:
 - a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority;
 - b. all maintenance shall be performed and released under the control of a maintenance organization approved pursuant to section 573.02 of the CARs with a rating appropriate to the work performed.
 - i. Except where specifically stated to the contrary, aircraft operating pursuant to a Special C of A are subject to all the same operational and maintenance regulations as aircraft with a C of A issued pursuant to section 507.02 of the CARs. The conditions and limitations specified on a Special C of A are additional to those general requirements.
 - ii. In the case of group 2 or 3, the applicant acknowledges that, should appropriately qualified persons or organizations no longer be available to perform or certify



maintenance, the flight authority may be suspended until suitable replacements can be found.

7. Evaluation of specific features

- (1) Once the standard operational and maintenance conditions have been established, an overall evaluation is to be carried out, paying particular attention to any specific features that could affect the safe operation of the aircraft. Specific features could include:
 - a. either unusually complex or simple controls;
 - b. instrumentation or equipment;
 - c. especially demanding or docile handling or performance characteristics;
 - d. the use of unusual fuels, explosive devices or special ground equipment;
 - e. environmental factors;
 - f. (f) the type's operational history, such as a particularly high or low accident rate.
- (2) Based on this evaluation, the aircraft may be considered as belonging to a higher or lower operational or maintenance group, or the standard operational or maintenance conditions for the aircraft may be amended as necessary.
- (3) Additional conditions or limitations that may apply include, but are not limited to:
 - a. specific main operating base and maintenance base;
 - b. specific airports;
 - c. restricted radius of action for testing and proficiency flying;
 - d. specific runways;
 - e. use restricted with respect to VFR, IFR, Day/night operations;
 - f. minimum runway length based on aircraft performance for take-off and landing, with allowance where applicable for extreme atmospheric variations and inoperative performance enhancing devices such as afterburner, thrust reversers, or drag chutes;
 - g. specific corridors based on climb and descent profiles;
 - h. requirement to advise Control Towers or aerodrome traffic of non-standard circuit patterns, approach speeds and overshoot procedures; and
 - i. requirement for a manoeuvre profile approval prior to participation in air shows, air races, or motion pictures.
- (4) Additional conditions or limitations may be entered directly on the flight authority document; or they may be entered into the flight manual or equivalent document that is referenced on the flight authority document.

8. Aircraft inspection

(1) Following acceptance of the aircraft type, and prior to the issuance of the Special C of A – Limited, the aircraft must be inspected by an AME with appropriate training and experience, for condition and conformity to the data provided in paragraph 2.(4)(b) of Part II of this Appendix, and any deviations noted. In addition, except where otherwise authorized by the Minister, the inspection shall ensure



that, with respect to ex-military aircraft:

- a. weapons are disabled or removed;
- b. firing circuits are deactivated;
- c. casing ejection panels are sealed; and
- d. rocket/bomb racks, hard points and jettisonable equipment are removed or secured to preclude inadvertent operation.

9. Aircraft with inadequate technical history

- (1) Where the evaluation shows the technical history of the aircraft to be incomplete or inadequate, a more extensive inspection shall be required to provide proof of the structural integrity of the aircraft. This could require the use of various non-destructive inspection techniques, structural disassembly, or other in-depth inspection techniques.
- (2) Where the evaluation shows the technical history of the engines, propellers, or other critical components to be incomplete or inadequate, the items concerned shall undergo a complete overhaul or be replaced with units with acceptable history.

Standard maintenance conditions to be specified on the flight authority for group 1 aircraft include:

- a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority.
- (3) Standard maintenance conditions to be specified on the flight authority for group 2 aircraft include:
 - a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority;
 - b. all maintenance releases shall be signed by:
 - an Aircraft Maintenance Engineer (AME) who is the holder of an applicable Restricted Certifying Authority (RCA) for the aircraft type, issued in accordance with section 571.11 of the CARs, or
 - ii. the holder of an Aircraft Maintenance Engineer licence who has been authorized to sign by the holder of a maintenance organization approved pursuant to section 573.02 of the CARs with a rating appropriate to the work performed.
- (4) Standard maintenance conditions to be specified on the flight authority for group 3 aircraft include:
 - a. modifications or repairs that affect the structural strength, performance, power plant operation or flight characteristics of the aircraft shall invalidate this flight authority;
 - b. all maintenance shall be performed and released under the control of a maintenance organization approved pursuant to section 573.02 of the CARs with a rating appropriate to the work performed.

Information notes:

i. Except where specifically stated to the contrary, aircraft operating pursuant to a Special C of A are subject to all the same operational and maintenance regulations as aircraft with a C of A



- issued pursuant to section 507.02 of the CARs. The conditions and limitations specified on a Special C of A are additional to those general requirements.
- ii. In the case of group 2 or 3, the applicant acknowledges that, should appropriately qualified persons or organizations no longer be available to perform or certify maintenance, the flight authority may be suspended until suitable replacements can be found.



FAQs - Light Sport Aircraft in the Limited Class

Q: What are the different categories I can import a LSA to Canada?

A: If they meet the definition of an amateur-built (51% rule) E-LSA (Experimental LSA), they can be brought in as an amateur-built; this class is not weight limited but data must be available to prove that the aircraft can be operated at the chosen weight. They can be brought in as an AULA, including restrictions to 1232 pounds and no additional allowance for floats. They can also be brought in as a Limited Class, with no weight restriction (other than that specified by the manufacturer – LSA are limited to 1320 pounds or 1430 on floats) but with a significant requirement to be maintained by an AME.

Q: In the Limited Class, what group does a LSA fall under for determining operational conditions and for maintenance conditions?

A: LSA fall into Group A for determining operational and Group 1 for maintenance conditions.

Q: What is initially required to meet the Limited Classification?

A: For the first example of a type and model to be operated in Canada, TC regional Maintenance & Manufacturing inspectors, in conjunction with inspectors from the regional General Aviation Branch, will carry out an evaluation.

The four steps are:

Initial evaluation to determine aircraft eligibility
Identification of standard operating conditions
Identification of standard maintenance conditions
Subjective evaluation of any specific features that may modify the standard conditions

Q: What is required for subsequent applications for the same type and model of aircraft?

A: Subsequent applications for the same type and model will not require further evaluation for eligibility however the inspection of the individual aircraft and certification by an AME is a condition for issuance of the Special Certificate of Airworthiness- Limited for each individual aircraft.

Q: Is there a list of eligible LSA that can be imported in the Limited Class?

A: There is no list of aircraft eligible for Limited Class. Contact Transport Canada to determine if your aircraft type and model has already been accepted.



Q: Can the owner perform maintenance on his/her aircraft?

A: Only an AME can sign the maintenance release for maintenance activities performed on an aircraft issued with a SCoA-Limited.

Q: Can I export my aircraft to the US as a LSA?

A: No, once an eligible US LSA is registered in another country it cannot be exported and registered as a LSA in the US.

Q: Can I fly my aircraft to the US and other countries if it is in the Limited Class?

A: The *Special C of A- Limited* does not meet the ICAO requirements for aircraft airworthiness and therefore it is not automatically accepted outside Canada. To fly in the US you will need to apply to an <u>FAA Flight Standards District Office (FSDO)</u> for a Special Flight Authority (SFA).

Q: What licence is required for a LSA in Canada?

A: All limited class aircraft require a current pilot licence or permit to fly in Canada. If the aircraft is non-high performance then it can be flown with a minimum of a Pilot Permit – Recreational Aeroplanes, provided that only one passenger is carried. If the aircraft is 1200 lbs or less and has a stall speed (V_{SO}) of 39 knots of less, then the minimum requirement is a Pilot Permit - Ultralight Aeroplanes (although this licence does not allow the carriage of passengers unless you also have the "passenger carrying rating")

Q: Can I fly my aircraft at night?

A: This will be a condition of the Special Certificate of Airworthiness – Limited so it will have to be evaluated either as part of the initial TC evaluation or a subsequent evaluation.