

MD – RAMinister's Delegates - Recreational Aviation
Représentants du Ministre - Aviation de loisir

Inspection Service

Service d'inspection

**MDRA C20 MANUAL of PROCEDURES for INSPECTION of COMPOSITE AMATEUR-BUILT AIRCRAFT,
INSPECTION AND TECHNICAL INFORMATION RECORD**

BUILDER <input type="checkbox"/> IMPORTER <input type="checkbox"/>		MD-RA REGISTRY NUMBER:	
SURNAME:		GIVEN NAME(S)	
ADDRESS:			
CITY:		PROVINCE:	POSTAL CODE:
HOME TELEPHONE:		FACSIMILE:	
BUSINESS TELEPHONE:		EMAIL:	
REGISTRATION MARKS C-		CERT OF REGISTRATION DATE:	
A/C MAKE:		MODEL:	SERIAL NO.:
PRESSURIZED <input type="checkbox"/>		PISTON ENGINE <input type="checkbox"/>	TURBINE <input type="checkbox"/>
AIRCRAFT EQUIPED WITH AN INTEGRATED DIGITAL INSTRUMENT PANEL, (EFIS, TRANSPONDER,ETC)			YES <input type="checkbox"/> NO <input type="checkbox"/>
MAXIMUM TAKE- OFF WEIGHT _____ Lb <input type="checkbox"/> Kg <input type="checkbox"/>			
OWN DESIGN <input type="checkbox"/>		FROM PLAN <input type="checkbox"/>	
LISTED ON TCA/FAA ELIGIBLE KITS LIST <input type="checkbox"/>		KIT REQUIRING MAJOR PORTION, (51%) INSPECTION <input type="checkbox"/>	
QUICK BUILT KIT <input type="checkbox"/>			
DATE CONSTRUCTION STARTED:		DATE CONSTRUCTION COMPLETED:	
NAME of DESIGNER or SOURCE of PLANS, KIT and/or MATERIALS (ATTACH LIST IF REQUIRED):			
ADDRESS:			
CHANGE OF OWNERSHIP <input type="checkbox"/> OR ADDRESS <input type="checkbox"/>		DATE:	
SURNAME:		GIVEN NAME(S)	
ADDRESS:		CITY:	
PROVINCE:		POSTAL CODE:	TELEPHONE:

RECORD OF INSPECTIONS					
Job number	Type	Inspector Name (Print)	Obs. Sheet No.	Date	Signature

The builder must be present for the inspection

Section 1.0 GENERALITIES

1. Will the builder be incorporating any modifications to the structure which will affect flight, structural integrity of the aircraft, or eligibility for aerobatic waiver? (Y N)
If yes, give details below.

2. Is the builder using professional assistance? (Y N)
If yes, provide:
Contractor Name: _____ Telephone _____

3. What work is subject to assistance? (List below)

(Y) - Indicates compliance with requirements for Amateur Built aircraft contained in the applicable sections of CARs and the exemption from section 549.01 of the Canadian Aviation Regulations and Chapter 549 of the airworthiness manual - airworthiness standards-amateur -built aircraft.

(N) - Indicates non-compliance. State nature of discrepancy under "Notes"

(N/A) - Indicates not applicable.

Section 1.1 COMPLIANCE WITH AMATEUR-BUILT REQUIREMENTS

1. Has the builder filed a Letter of Intent? (Y N)
2. Is an Amateur Built Information Package available? (Y N)
3. Is the builder familiar with the applicable legislation? (Y N)
4. Does the aircraft gross weight comply with the weight specified by the aircraft designer and / or kit supplier? (Y N)
5. Does the aircraft wing loading indicate high performance? (Y N)
6. Will the builder be requesting an Aerobatic Waiver? (Y N)
7. Does the aircraft meet aerobatic design requirements? (Y N)
8. Is the builder familiar with special inspection requirements for composite construction? (Y N)
9. Will the aircraft be built from a kit (Y N)
10. Does the builder have copies of applicable newsletters or other pertinent information from the kit supplier? (Y N)
11. Does the project meet major portion requirements? (Y N)
12. Does the builder have "Acceptable Methods, Techniques and Practices" (AC 4313 1B or latest amendment) (Y N)
13. Has the builder established a project record system? (Y N)
14. Are drawings available? (Y N)
15. Is the shop adequately heated and does it provide the proper environment for the construction of the project? (Y N)

Summary, Compliance With Amateur-Built Requirements:

Has builder been notified of your findings? On site? By Mail?

White Copy of MDRA C21 Inspection Sheet – number _____

Date - _____ Inspector's Signature _____ Print Name _____
yyyy-mm-dd

End of Section 1.1 Use the space below for notes if required

**Section 1.2 SHEAR WEBS INSPECTION,
(Do not use this section for pre-cover inspections)**

1. List parts inspected:

2. What is material quality?

3. Does builder have invoices for materials? (Y N)
4. Has kit of materials been purchased from a recognized dealer and do materials meet designer's specs? (Y N)
5. Has the builder constructed confidence samples and presented them for examination? (Y N)
6. Is the builder fully conversant with procedures and is he following kit instructions? (Y N)
7. Has the builder kept resin samples, labeled for identification, and were they presented for your examination? (Y N)
8. Do shop conditions meet minimum standards? eg-temp, humidity, cleanliness (grease, oil) (Y N)
9. Has accuracy of foam cores been maintained? (Y N)
10. Are shear webs laid up in accordance with designer's instructions? (Y N)
11. Was correct cloth used on shear webs and does resin content appear correct? (eg - dry, or resin rich) (Y N)
12. Was peel ply used effectively on lay-up of shear webs? (Y N)
13. Are there any defects notable in the lay-up? (eg dry areas, voids, blisters, etc.) (Y N)
14. Has builder made any repairs to such areas? If so, are they in accordance with designer's criteria? (Y N)
15. How was cure time controlled?
16. Were jigs used and has spar alignment been maintained? (Y N)

Details:

17. Have flocking and fillers been used per designer's criteria? (Y N)
18. Is shear web inspection complete? (Y N)

SUMMARY, Shear Webs, Inspection:

Re-inspection of following is required: None

Has builder been notified of your findings? On site? By Mail?

Date - _____ Inspector's Signature _____ Print Name _____
 yyyy-mm-dd

End of Section 1.2 Use the space below for notes if required

Section 1.3 PRE-PAINT / PRE- COVER INSPECTION

GENERAL

List parts inspected:

What is material quality?

1. Has the builder constructed confidence samples and presented them for examination? (Y N)
2. Have all shear webs been inspected previously? (Y N)
3. Have all discrepancies from previous shear webs or pre- cover inspections been rectified? (Y N)
4. Do parts conform to drawings with respect to dimensions and material? (Y N)
5. Are all lay-ups done in accordance with designer's instructions? (Y N)
6. Is spar flagging visible and in accordance with design (Y N)
7. Is workmanship to accepted practice? (Y N)
If not, elaborate:
8. How have alignment and symmetry of aircraft been assured? (Y N)
Explain
9. Are trailing edges of surfaces true and straight? (Y N)
10. Do control surfaces mate properly with wing or canard? (Y N)
11. Are surfaces fair and free of large deviation in contour? Are there voids or irregularities? (Y N)
12. Have any repairs been carried out by the builder? (Y N)
If so, do they meet designer's criteria? (Y N)
13. Has all attachment hardware been installed and is the work in accordance with designer's instructions? (Y N)
14. Will large amounts of filler be required to prepare surfaces for paint? (Y N)
15. Is there any evidence of over-sanding of structure with resultant damage to glass-cloth structure? (Y N)
16. Does builder understand the need to adhere to designer's colour preference? (Y N)
(Light basic colours, white, pale blue, etc)?

FUSELAGE (HULL)

1. Are welded parts to accepted practice (Y N)
2. Are all attachment fittings to accepted practice? (Y N)
3. Are all drilled holes properly located, free from elongation and treated for protection from environmental deterioration? (Y N)
4. Is all attachment hardware employed and safely tied? (Y N)
5. Has builder assured alignment and symmetry? (Y N)
6. Is craftsmanship to accepted practice? (Y N)

MAINPLANE (WINGS)

1. Are all drilled holes properly located, free from elongation and are all interiors treated for protection from environmental deterioration? (Y N)
2. Has builder assured symmetry? (Y N)
3. Is craftsmanship to accepted practice? (Y N)
4. Is all attachment hardware employed and safely tied? (Y N)

