MD-RA FORM C20, MANUAL OF PROCEDURES FOR INSPECTION OF AMATEUR-BUILT AIRCRAFT INSPECTION AND TECHNICAL INFORMATION RECORD

BUILDER □ IMPORTER□ INFORMATION		**MD-RA REGISTRY NUMBER:**	
SURNAME:		**GIVEN NAME(S)**	
ADDRESS:		**CITY**	
PROVINCE	**POSTAL CODE**	**TELEPHONE (RESIDENCE)**	
TELEPHONE (OFFICE)	**FACSIMILE**	**EMAIL**	
AIRCRAFT INFORMATION	**C-**	**CERT OF REGISTRATION DATE:**	
MAKE	**MODEL**	**SERIAL NO.**	**DESIGN GROSS WEIGHT _____lb _____kg**
KIT □ Major Portion Eligible □ Turbine □ Pressurized □ Helicopter □ Gyrocopter □			
From Plans and Materials □ Pre manufactured or previously Certified Parts □ (refer to SI 549-001)			
Own design □ Pre manufactured or previously Certified Parts □ (refer to SI 549-001)			
Date Construction Started		**Date Construction Completed**	
Designer or Source of plans, kit and/or materials (attach list if required)		**Name**	
Address:			
CHANGE OF OWNERSHIP □ OR ADDRESS □		**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 at all inspections

(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 aircraft of composite construction? (Y N)

   If yes, complete section 1.5
9. Is the builder familiar with special inspection requirements? (Y N)
10. 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)
11. Will the aircraft be built from a kit (Y N)
12. Does the builder have copies of applicable newsletters or other pertinent information from the kit supplier? (Y N)
13. Does the project meet major portion requirements? (Y N)
14. Will the builder use professional assistance? (Y N)

    If yes, give details below

Contractor Name:_____ Telephone_____

15. What work will be subject to assistance? (List below)
16. Does the builder have "Acceptable Methods, Techniques and Practices" (AC 4313 1B or latest amendment) (Y N)
17. Has the builder established a project record system? (Y N)
18. Are drawings available? (Y N)
19. 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 SUB-ASSEMBLY (EG- BOX SPAR) INSPECTION,
(Do not use this section for pre-cover inspections)

1. List parts inspected:

2. Type of structure and materials:

3. What is material quality?

4. Does builder have invoices for materials? (Y N)
5. Do parts conform to drawings- dimensions, material? (Y N)
6. Are interiors of box sections treated against deterioration? (eg zinc chromate, varnish, etc.) (Y N)
7. Is proper ventilation and drainage provided in all closed sections? (Y N)
8. Is craftsmanship to accepted practice (excess glue, fit, etc_)? (Y N)
9. How were alignment and symmetry assured? (jigs, trammels, etc)
   Explain:
10. What provision has been made to allow testing of weld and glue samples?
    Explain:
11. Have all relevant data been entered in project files? (Y N)

Note: See section 1.5.1 Shear Webs, Box Spars, Inspection, if aircraft structure is composite.

Summary, Sub-Assembly (Eg- Box Spar) 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- COVER INSPECTION

GENERAL

List parts inspected:

Type of structure and materials:

What is material quality?

What provision has been made to allow for testing of glue and/or weld samples?

1. Have all Box Sections been inspected previously? (Y N)
2. Have all discrepancies from previous Box Section or pre- cover inspections been rectified? (Y N)
3. Does builder have invoices for materials? (Y N)
4. Do parts conform to drawings with respect to dimensions and material? (Y N)

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 are all interiors treated for protection from environmental deterioration? (Y N)
4. Is venting and drainage provided and are there any moisture traps evident? (Y N)
5. Are all surfaces protected against environmental deterioration? (Y N)
6. Is all attachment hardware employed and safetied? (Y N)
7. Are rivets, where employed, of proper type (ref dwgs) and suitably installed? (Y N)
8. Is sheet metal fabrication to accepted practice? (Y N)
9. Are fittings fabricated to acceptable practice and do they conform to dwgs? (Y N)
10. Has builder assured alignment and symmetry? (Y N)
11. 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. Are all surfaces protected against environmental deterioration? (Y N)
3. Are all compression members secure and free of bends or other apparent defects? (Y N)
4. Has provision been made against chafing of drag and anti-drag wires? (Y N)
5. Has builder assured symmetry? (Y N)
6. Is craftsmanship to accepted practice? (Y N)
7. Have provisions been made for drainage and ventilation? (Y N)
8. Is all attachment hardware employed and safetied? (Y N)
9. Have all bays been trammeled? (Y N)

CONTROL SURFACES

1. Are all drilled holes properly located and free from elongation (Y N)
2. Are interiors treated for protection against environmental deterioration? (Y N)
3. Are all surfaces protected against environmental deterioration? (Y N)
4. Is craftsmanship to accepted practice? (Y N)
5. Have provisions been made for drainage and ventilation? (Y N)
6. Is all attachment hardware employed and safetied? (Y N)
7. Has builder assured symmetry? (Y N)

UNDERCARRIAGE

1. Type: Wheels ☐ Skis ☐ Floats ☐
2. Is undercarriage complete? (Y N)
3. Is undercarriage installed? (Y N)
4. Are all attachment fittings installed and safetied? (Y N)
5. Is brake plumbing, components, and all attachment hardware employed and safetied? (Y N)
6. Has undercarriage symmetry been assured? (Y N)

SAILPLANE

1. Is tow hook installed? (Y N)
2. Tow hook attachment OK? (Y N)
3. Is tow hook properly located in reference to data? (Y N)

Note: See section 1.5.2 Pre Paint Inspection, if aircraft structure is composite.

SUMMARY, Pre- Cover 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 1.3 Use the space below for notes if required

Place labels in the spaces below. Indicate precise location in the line below, beside component name. All components MUST be identified. If you use a different location, cross out the printed word and insert the location used.

FUSELAGE	VERTICAL STABILIZATOR
RUDDER	HORIZONTAL STABILIZATOR
WING LEFT (Lower if BiPlane)	WING RIGHT(Lower if BiPlane)
For Biplane only	For Biplane only
WING LEFT UPPER	WING RIGHT UPPER
FLAP LEFT	FLAP RIGHT

For Biplane only	For Biplane only
AILERON LEFT UPPER	AILERON RIGHT UPPER
AILERON LEFT	AILERON RIGHT
ELEVATOR LEFT	ELEVATOR RIGHT

Date_____ Inspector's Signature_____ Print Name_____
yyyy-mm-dd

Registration Mark C-_____ Aircraft Model _____Builder _____ File # _____

Section 1.4 FINAL INSPECTION

GENERAL

1. Have all re-inspection and discrepancies noted on previous inspections been rectified? (Y N)
2. Have all cowls, covers, inspection openings, fairings, etc.. been removed to allow access for proper inspection? (Y N)

FUSELAGE (HULL)

1. Are all attachment fittings to accepted practice? (Y N)
2. Is all attachment hardware employed and safetied? (Y N)
3. Are there inspection openings for all critical areas? (Y N)
4. Is ventilation and drainage provided? (Y N)
5. Are acceptable fastening methods (glue, rivets, etc_) employed throughout the structure? (Y N)
6. Are all surfaces protected against environmental deterioration? (Y N)
7. Firewall material and thickness- Correct? Is it sealed? (Y N)

CONTROL SYSTEMS

1. Are all controls secured and safetied? (Y N)
2. Are control stops provided? (Y N)
3. Are pulleys of proper diameter for bends involved, suited to cable size, and provided with cable guards? (Y N)
4. Is cable fabrication to accepted practice? (Y N)
5. Has builder access to "go-no-go" gauge to check nicopress sleeves after squeezing? (Y N)
6. 6. Is all hardware throughout systems installed and safetied? (Y N)
7. Is there full throw of all controls with seats occupied and harness secured? (Y N)
8. Are fairleads incorporated which alter cable direction in excess of 3 (three) degrees? (Y N)

EXITS

1. Can aircraft be rapidly cleared in the event of an emergency? (Y N)
2. Is there provision for emergency external release of canopy or door? (Y N)
3. Is the external emergency canopy/door release placarded? (Y N)

WINDSHIELD AND WINDOWS

1. Are windshield and windows of acceptable materials? (Y N)
2. Are they braced for positive and negative pressure? (Y N)
3. Are they free from distortion to allow proper vision? (Y N)

BAGGAGE COMPARTMENT

1. Are walls and floor to specifications? (Y N)
2. Does weight and balance reflect loading of this compartment? (Y N)
3. Are baggage restraints installed? (Y N)

CABIN / COCKPIT

1. Instrument and gauge installation and range markings ok? (Y N)
2. Are all primary minimum instruments readily visible to pilot at a single viewing? (Y N)

   (No scrolling permitted on glass type displays).

   Note: A standalone magnetic compass is mandatory
3. Is fire extinguisher properly mounted (metal bracket) and is it accessible with harness secured? (Y N)
4. Are the following placards installed,

   Fireproof Aircraft Identification Plate_ (Per **CAR 201.01**) (Y N)

   Aerobatics prohibited (Y N)

   Passengers prohibited (Y N)

   Amateur built warning (Must be Bilingual) (Y N)

   Compass deviation card (Y N)

   Canopy/door release - Exterior and Interior (Y N)
5. Are seat belts to aeronautical standard (TSO) or equivalent? (Y N)
6. Are seat belts anchored to the primary structure? (Y N)
7. Are weight and balance report figures within design specifications? (Y N)
8. Is the fire extinguisher rated for the type of material used in this aircraft? (Y N)

ENGINE INSTALLATION

1. Are all controls secured and safetied, with no excessive play, and no evidence of binding or interference throughout full travel? (Y N)
2. Is oil tank secured and safetied? (Y N)
3. Is crankcase breather line installed including auxiliary vent opening? (Y N)
4. Is ignition harness to accepted practice and in good condition? (Y N)
5. Are magneto, (electronic ignition) wires sound and is the switch grounded directly to the engine? (Y N)
6. Are cabin and carburetor heat muffs and hoses to accepted practice and condition? (Y N)
7. Are cabin heat valves made of fireproof material? (Y N)
8. Is carburetor heat provided to accepted practice and condition? (Y N)

   Note: Carburetor heat mandatory for all Carbs.
9. Is engine mount free from bends and apparent defects and is attachment hardware in safety? (Y N)
10. Is cowl security, condition and methods of attachment to accepted practice? (Y N)
11. Is the engine ground-strapped directly to the airframe? (Y N)

ELECTRICAL SYSTEM

1. Has the builder used specified type and gauge of wire? (Y N)
2. Are grommets used and is wire secured? (Y N)
3. Are fuses or circuit breakers employed? (Y N)
4. Is battery installation to accepted practice and have provisions been made for venting and spill damage_ (Y N)
5. Is structure around battery protected against spillage? (Y N)

PROPELLER

1. Is condition and type to accepted practice? (Y N)
2. Are propeller bolts of correct length and in safety? (Y N)
3. Are propeller bolts torqued to manufacturing spec? (Y N)
4. Has propeller track been checked? (Y N)
5. Is spinner fabrication and installation to accepted practice? (Y N)

GENERAL

1. Is pitot tube secure and clear? (Y N)
2. Are sufficient access openings provided for proper servicing and maintenance? (Y N)
3. Are registration markings properly installed, legal size and of sufficient contrast to background colours? (Ref **Std 222.01**) (Y N)
4. Is an approved first aid kit installed and readily available? **CAR 602.60 (1) (h)** (Y N)
5. Is an approved ELT installed? (except Glider, Balloon, Airship or Gyrocopter) **CAR 605.38 (1)** (Y N)
6. Has control rigging and function been checked? (Y N)
7. Have control movements been checked by builder? (Y N)

NOTE: Builder supplies these data, inspector records them below.

control	Test conditions	Deflection		Test results	
Aileron	Stick neutral	**Right** Deg	**Left** Deg	Both ailerons perfectly neutral	(Y N)
	Stick full right	**Right** Deg	**Left** Deg	R aileron, full up, L aileron, full down	(Y N)
	Stick full left	**Right** Deg	**Left** Deg	R aileron, full down, L aileron, full up	(Y N)
		Deflection			
Elevator	Stick neutral	Deg		Both elevators perfectly neutral	(Y N)
	Stick full forward	**Up** Deg		Both elevators full down	(Y N)
	Stick full aft	**Down** Deg		Both elevators full up	(Y N)
		Deflection			
Rudder	Pedals neutral	Deg		Rudder perfectly neutral	(Y N)
	R pedal full forward	**Right** Deg		Rudder full right	(Y N)
	L pedal full forward	**Left** Deg		Rudder full left	(Y N)
		Deflection			
Flaps	Up position	Deg		Flaps up and aligned with aileron and flap indicator in up position	(Y N)
	Down position	**Down** Deg		Flaps down and flap indicator in down position	(Y N)
Spoilers	Down position			Spoilers completely recessed in wings	(Y N)
	Up position			Spoilers fully and equally deployed	(Y N)
Trim		**Deflection**			
Elevator	Neutral position	Deg		Trim aligned perfectly with elevator and trim indicator in neutral position	(Y N)
	Nose up position	Deg		Trim full down and trim indicator in nose up position	(Y N)
	Nose down position	Deg		Trim full up and trim indicator in nose down position	(Y N)

		Deflection		
Rudder	Neutral position	Deg	Trim aligned perfectly with rudder and trim indicator in neutral position	(Y N)
	Full right position	Deg	Trim full right and trim indicator in left position	(Y N)
	Full left position	Deg	Trim full left and trim indicator in right position	(Y N)
		Deflection		
Aileron	Neutral position	Deg	Trim aligned perfectly with aileron and trim indicator in neutral position	(Y N)
	Right wing up	Deg	Trim full down and trim indicator in left position	(Y N)
	Right wing down	Deg	Trim full up and trim indicator in right position	(Y N)

8. Are all controls and essential equipment easily accessible with harness secured? (Y N)
9. Is cockpit provided with ventilation? (Y N)
10. Seat Strength-Are the seats built to designer's specification? (Y N)

FLIGHT AND ENGINE CONTROLS

1. Are controls placarded for identification and operation? (Y N)
2. Is operation of all controls smooth throughout their full range? (Y N)
3. Are all controls protected from jamming by foreign objects? (Y N)
4. **Is** there full throttle control travel to stop on carb or throttle body? (Y N)
5. No binding or jackknifing of cables during full range of throttle movement. (Y N)
6. No binding or rough operation of Mixture full rich to full lean_ (Y N)
7. Carburetor heat control-full heat, ensure valve is closed and seated. When moved to full cold, ensure valve is fully seated. (Y N)
8. All controls operating in proper direction? (Y N)
9. Fuel Injection- test operation of alternate air supply (Y N)
10. Air Filter - Check for proper installation (Y N)

Air Box: No unsecured hardware in danger of ingestion

Foam Filter: Must have screen to prevent ingestion

ENGINE TESTING

Have builder setup aircraft for an engine run-up.

Explain that you will check for the following during run up:

1. Engine start: Hard ❑ Easy ❑
2. Does oil pressure rise immediately? (Y N)
3. Does engine idle smoothly? (Y N)

Have builder apply power and check the following:

4. Are brakes operative and holding the aircraft in position? (Y N)
5. Are the following readings or operations normal:

Oil temp and pressure ❑

Cyl head temp ❑

Exhaust Gas temp ❑

Cycling of variable pitch prop ❑

Engine/prop vibration ❑

Cycle of Carb heat control ❑

Cycle of Mixture control ❑

Right and left magnetos, (electronic ignition) OFF- Normal RPM drop ❑

Momentary ignition switch OFF- test for no live mag, (electronic ignition) ❑

Have engine brought to idle, then shut off.

6. Shut down normal? (Y N)
7. Are there any oil leaks? (Y N)

FUEL SYSTEM

1. Is selector valve within reach of pilot with harness secured and is it placarded? (Y N)
2. Are fuel lines to accepted practice, correctly installed, and secured against vibration? (Y N)
3. Does fuel tank have a finger screen at the outlet? (Y N)
4. Are all fuel drains located at lowest point in the system with the aircraft at rest? (Y N)
5. Are fuel drains fitted with positive shut off valves? (Y N)
6. Are drain overflows clear of all structures? (Y N)
7. Are the tanks vented? (Y N)
8. Is the gascolator properly located and equipped with a suitable drain? (Y N)
   Note: ensure no points in fuel lines below gascolator.
9. Has fuel flow been checked with minimum fuel and at maximum angle of climb? (Y N)
10. Did Builder record results on MDRA C14- fuel flow report? (Y N)
11. Tank supports? (Y N)
12. Is the tank compartment vented? (Y N)
13. Is fuel gauge installation and operation correct? (Y N)
14. Is the fuel system bonded? (Y N)
15. Is the fuel tank protected against chafing? (Y N)

WING-TAIL SURFACES

1. Is general fabrication to accepted practice? (Y N)
2. Are hinges and brackets sound? (Y N)
3. Is all hardware safetied? (Y N)
4. Are all control surfaces including trim tab free of excessive play? (Y N)
5. Are all pulleys properly sized, employed and complete with cable guards? (Y N)
6. Are all fairleads correctly employed? (No change of direction over 3 degrees) (Y N)
7. Do all controls move freely and clearly through their full range of travel? (Y N)
8. Are all external braces, struts, etc. protected against environmental deterioration both internally and externally? (Y N)
9. Are all strut fittings to accepted practice and are end fittings in safety? (Y N)
10. Are struts free from bends and apparent defects? (Y N)
11. Are wire bracing and end fittings to accepted practice and are end fittings in safety? (Y N)

FABRIC COVER

1. Is general workmanship to accepted practice? (Y N)
2. Are tapes and patches to accepted practice? (Y N)
3. Is rib stitching to accepted practice including spacing? (Y N)

NOTE: Conventional rib stitching may be substituted by a demonstrated equivalent method of fastening.

4. Are dope and finish colours applied to accepted practice? (Y N)
5. Are drain grommets employed and open (Y N)
6. Are there adequate inspection openings provided? (Y N)

LANDING GEAR

1. Are attachment fittings per drawings? (Y N)
2. Is all hardware safetied? (Y N)
3. Are brake system components and lines or cables installed and safetied? (Y N)
4. Are wheels and brakes in good condition? (Y N)
5. Are tires sound with good tread? (Y N)
6. Does retraction system appear adequate for positive control and locking? (Y N)
7. Has a retraction test been accomplished? (Y N)
8. Did the inspector witness the retraction test? (Y N)
9. Emergency release (back up). Is pilot able to operate this control with harness fastened? (Y N)

   For the aircraft on floats
10. Was the installation inspected? (Y N)
11. Is the installation per the drawings? (Y N)
12. Is there a process to drain water from the floats? (Y N)
13. Does the weight and balance record reflect the presence of the installed floats? (Y N)

Note: See section 1.5.3 Final Inspection, if aircraft structure is composite.

SUMMARY, Final Inspection:

1. Check all Serial number labels from pre-cover -verify present and correct. (Y N)
2. Is the inspection complete? (Y N)

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 1.4 Use the space below for notes if required

Section 1.5 COMPOSITE STRUCTURES INSPECTION,

GENERAL

1. Has kit of materials been purchased from a recognized dealer and do materials meet designer's specs? (Y N)
2. Has the builder constructed confidence samples and presented them for examination? (Y N)
3. Is the builder fully conversant with procedures and is he following kit instructions? (Y N)
4. Has the builder kept resin samples, labeled for identification, and were they presented for your examination? (Y N)
5. Do shop conditions meet minimum standards? eg-temp, humidity, cleanliness (grease, oil) (Y N)

Section 1.5.1 SHEAR WEBS, BOX SPARS, INSPECTION

1. Has accuracy of foam cores been maintained? (Y N)
2. Are shear webs laid up in accordance with designer's instructions? (Y N)
3. Was correct cloth used on shear webs and does resin content appear correct? (eg - dry, or resin rich) (Y N)
4. Was peel ply used effectively on lay-up of shear webs? (Y N)
5. Are there any defects notable in the lay-up? (eg dry areas, voids, blisters, etc.) (Y N)
6. Has builder made any repairs to such areas? If so, are they in accordance with designer's criteria? (Y N)
7. How was cure time controlled?
8. Were jigs used and has spar alignment been maintained? (Y N)

Details:

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

SUMMARY, Shear Webs, Box Spars, 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 1.5.1 Use the space below for notes if required

Section 1.5.2 PRE PAINT INSPECTION

1. Were all major sub assemblies available for inspection? (Y N)
   List those NOT inspected:

2. Are all lay-ups done in accordance with designer's instructions? (Y N)
3. Is spar flagging visible and in accordance with design (Y N)
4. Is workmanship to accepted practice? (Y N)
   If not, elaborate:

5. How have alignment and symmetry of aircraft been assured? (Y N)
   Explain

6. Are trailing edges of surfaces true and straight? (Y N)
   Do control surfaces mate properly with wing or canard? (Y N)
7. Are surfaces flair and free of large deviation in contour? Are there voids or irregularities? (Y N)
8. Have any repairs been carried out by the builder? (Y N)
   If so, do they meet designer's criteria? (Y N)
9. Has all attachment hardware been installed an is the work in accordance with designer's instructions? (Y N)
10. Will large amounts of filler be required to prepare surfaces for paint? (Y N)
11. Is there any evidence of over-sanding of structure with resultant damage to glass-cloth structure? (Y N)
12. Does builder understand to need to adhere to designer's colour preference?
    (Light basic colours, white, pale blue, etc)? (Y N)
13. Is pre paint inspection complete? (Y N)

SUMMARY, Pre Paint 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 1.5.2 Use the space below for notes if required

Section 1.5.3 FINAL INSPECTION

1. Has the aircraft been painted in accordance with designer's recommendations? (Y N)
2. Is there any evidence of over-sanding of structure with resultant damage to glass-cloth structure? (Y N)

For Gyrocopters or Helicopters, also complete Section 1.7

SUMMARY, Final 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 1.5.3 Use the space below for notes if required

Section 1.6 GYROPLANES AND HELICOPTERS, PRE-COVER INSPECTION*

The pre-cover inspection may, if applicable, be performed at final inspection.

* *NOTE: All of the checks listed must be inspected in conjunction with the drawing requirement. No deviation should be allowed, without the written authorization from the kit supplier.*

FUSELAGE (KEEL) ASSEMBLY

1. Are all welded parts to accepted practice? (Y N)
2. Are attachment fittings to accepted practice? (Y N)

KEEL AND MAST ASSEMBLY

1. Are all welded parts to accepted practice? (Y N)
2. Are all bolted parts to accepted practice? (Y N)
3. Are all attachment hardware employed and safetied? (Y N)
4. Is all attachment hardware for keel to mast plate assembly to accepted practice? (check with drawing) (Y N)
5. Are all the mast and Rotor Hub assembly to accepted practice? (Y N)
   (check with drawing)
6. Are the pre-rotator assembly parts to accepted practice? (Y N)
7. Has the builder assured symmetry? (Y N)

FLEXIBLE MAST

1. Is the torque bar and link assembly properly installed? (Y N)
   (check with drawing)
2. Are the cheek plates properly installed and the hardware secured to accepted standard? (Y N)
3. Are the pivot points properly installed and secured to accepted standard? (Y N)
4. Are the push/pull control rods properly installed and the hardware secured to accepted standard? (Y N)
   Check all above to drawing conformity

UNDERCARRIAGE

1. Are all main axle shaft assembly parts to accepted practice? (Y N)
2. Are all front gear assembly parts to accepted practice? (Y N)
3. Are main gear assembly parts to accepted standard? (Y N)
4. Are tail wheel assembly parts to accepted practice and properly safetied? (Y N)
5. Are the axle struts assembly parts to accepted practice? (Y N)
6. Has the builder assured symmetry? (Y N)

ROTOR BLADES ASSEMBLY

1. Are all controls secured to accepted practice? (Y N)
2. Are all components for the rotor blades and Hub Assembly and RT sensor assembly properly assembled and secured per drawing requirement? (Y N)

CONTROLS

1. Are all control tube assembly parts to accepted practice? (Y N)
   (Check with drawing)
2. Are all controls for pre-rotor assembly properly attached and secured to accepted practice? (Y N)
   (Check with drawing)
3. Are control stops provided? (Y N)
4. Are all controls secured and safetied? (Y N)
5. Are pulleys of proper diameter for bends involved, suited to cable size and provided with cable guard? (Y N)
6. Is cable fabrication to accepted practice? (Y N)
7. Has builder access to"Go-No-Go" gauge to check nicropress sleeve after squeezing? (Y N)
8. Is all hardware throughout the control system properly installed and safetied? (Y N)
9. Is there full throw of all controls with seats occupied and harness secured? (Y N)
10. Are fairleads incorporated which alter cable direction in excess of 3 degrees? (Y N)
11. Are rudder pedal assembly and brake cylinder properly installed and secured to accepted practice? (Y N)
12. Is rudder assembly properly secured to accepted standard? (Y N)
13. Is horizontal stabilizer properly attached and secured to accepted standard? (Y N)
14. Has the builder assured symmetry? (Y N)

TAIL BOOM AND ROTOR ASSEMBLY

1. Are all holes properly drilled, free from elongation and interiors treated for protection from environmental deterioration? (Y N)
2. Is ventilation and drainage provided and are there any moisture traps evident? (Y N)
3. Are all surfaces protected against environmental deterioration? (Y N)
4. Is all attachment hardware employed and safetied? (Y N)
5. Is sheet metal fabrication to accepted practice? (Y N)
6. Are all rivets, where employed of proper type and suitably installed? (refer to drawing) (Y N)
7. Are fittings fabricated to acceptable standard and do they conform to drawing? (Y N)
8. Has builder ensured alignment and symmetry? (Y N)
9. Is the rotor assembly, applicable fittings and hardware to accepted standard and in conformity with drawing? (Y N)
10. Are the tail rotor drive tube fittings and hardware to drawing requirement? (Y N)
11. Are all joints for the rotor drive properly installed and is all hardware to accepted standard and properly safetied? (Y N)
12. Are the stabilizer plates properly installed and aligned? (see drawing) (Y N)

SUMMARY, Gyroplanes and Helicopters, Pre-Cover 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 1.6 Use the space below for notes if required

Section 1.7 GYROPLANES AND HELICOPTERS, FINAL INSPECTION

This section is mandatory for all gyroplanes and helicopters

GENERAL:

1. Have all snags and discrepancies on previous inspection been rectified? (Y N)
2. Have all cowls, covers, inspection openings, fairings etc been removed to allow access for proper inspection? (Y N)

CABIN COCKPIT

1. Instruments and gauges installation and range markings? (Y N)
2. Are primary instruments readily visible to pilot? (Y N)
3. Is fire extinguisher properly mounted and accessible with harness secured? (Y N)
4. Is rotor brake properly installed and all the hardware secured? (Y N)
5. Are the following placards installed?
   - Stainless steel identification plate: (Y N)
   - Aerobatics prohibited: (Y N)
   - Passengers prohibited: (Y N)
   - Amateur built warning: (Y N)
   - Compass deviation card (Y N)
   - Door release (external & internal): (Y N)
6. Are engine controls free and smooth throughout their ranges? (Y N)
7. Are seat belt to aeronautical standard (T. S.O.) or equivalent? (Y N)
8. Are seat belts anchored to primary structure? (Y N)
9. Is main rotor tachometer installed and the rotor speed limits clearly marked? (Y N)
10. Is the placard clearly visible stating any ballast requirement, correct per Aircraft weight and balance report? (Y N)

KEEL AND MAST ASSEMBLY

1. Are all welded parts to accepted practice? (Y N)
2. Are all bolted parts to accepted practice? (Y N)
3. Are all attached hardware employed and safetied? (Y N)
4. Are all attachment hardware for keel to mast plate assembly to accepted practice? (Y N)
5. Are all mast and Rotor Head assembly to accepted practice? (Y N)
   (Check drawing)
6. Are the pre-rotor assembly parts to accepted practice? (Y N)
7. Has the builder assured symmetry? (Y N)

ROTOR BLADE(S) ASSEMBLY

1. Are all main rotor control assembly(ies) properly installed? (Y N)
   (Check the drawing)
2. Are all components for the rotor blade(s), Rotor Hub, and RT sensor assembly properly assembled and secured? (Ref_ Drawing) (Y N)
3. Are the controls for the above free **and** smooth throughout full range? (Y N)

FLEXIBLE MAST ASSEMBLY

1. Is the torque bar and link assembly properly installed? (Y N)
2. Are the cheek plates properly attached and the hardware secured to accepted standard? (Y N)
3. Are the pilot points properly installed and secured? (Y N)
4. Are the push/pull control rods properly installed and working correctly? (Y N)
   (Get the builder to operate controls). Check the whole assembly to the drawing for conformity

LANDING GEAR

1. Are attachment fittings per drawing? (Y N)
2. Is all hardware safetied? (Y N)
3. Are brake system components and lines installed and safetied? (Y N)
4. Are wheel and brakes in good condition? (Y N)
5. Are tires sound and good tread? (Y N)
6. Is tail wheel properly installed? (Y N)

TAIL BOOM AND ROTOR ASSEMBLY

1. Are the surfaces free from defects? (Y N)
2. Are all the attachments employed and safetied? (Y N)
3. Are all surfaces protected against environmental deterioration? (Y N)
4. Is all attachment hardware employed and safetied? (Y N)
5. Is sheet metal fabrication to accepted practice? (Y N)
6. Are all rivets where employed, of proper type (ref drawing) and suitably installed? (Y N)
7. Are fittings fabricated to acceptable standard and do they conform to drawing? (Y N)
8. Has builder insured alignment and symmetry? (Y N)
9. Is the rotor assembly, applicable fittings and hardware to accepted standard and conform to drawing? (Y N)
10. Is the tail rotor drive tube fittings and hardware to drawing requirement? (Y N)
11. Are all joints for the rotor drive properly installed and is all hardware to accepted standard and properly safetied? (Y N)
12. Are the stabilizer plates properly installed and aligned? (see drawing). (Y N)

SUMMARY, Gyroplanes and Helicopters, Final 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 1.7 Use the space below for notes if required

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Section 1.8 MAJOR PORTION EVALUATION- AMATEUR BUILT AIRCRAFT

Builder Name:	Address:	
Aircraft Make:	Aircraft Model:	
Serial No.:	Parts List Date: **(Commercial Evaluation Only)**	
FUSELAGE	Other	Builder
1. Fabricate special tools or fixtures		
2. Fabricate longitudinal members, Cores, or Shells		
3. Fabricate bulkheads or cross- members		
4. Assemble fuselage basic structure		
5. Fabricate brackets and fittings		
6. Install brackets and fittings		
7. Fabricate flight control system components		
8. Install flight control system components		
9. Fabricate cables, wires and lines.		
10. Install cables, wires and lines		
11. Fabricate fuselage cover or skin		
12. Install fuselage covering or skin		
13 Fabricate windshield, windows, canopy		
14. Install windshield, windows, canopy		
WINGS	Other	Builder
1. Fabricate special tools or fixtures		
2. Fabricate wing spars		
3. Fabricate wing ribs or cores		
4. Fabricate wing leading and trailing edges		
5. Fabricate drag/anti drag truss members.		
6. Fabricate wing brackets and fittings		
7. Fabricate wing tips		
8. Assemble basic wing structures		
9. Install wing leading/trailing edge and tips		
10. Install wing ailerons		
11. Install wing drag/anti drag truss		
12. Fabricate wires, cables and lines		
13. Install cables, wires and lines		
14. Fabricate flight control system components		
15. Install flight control system components		
16. Fabricate wing covering or skin		
17. Install wing covering or skin		
18. Fabricate wing struts /wires		
19. Install and rig wings and struts		
20. Fabricate wing flaps and spoilers		
21. Install wing flaps and spoilers		
AILERONS	Other	Builder
1. Fabricate Aileron Spars		
2. Fabricate Aileron Ribs or cores		
3. Fabricate Aileron Leading and Trailing edge		
4. Fabricate Aileron brackets and fittings		
5. Assemble basic aileron structure		
6. Install leading/trailing edge and tips		
7. Install aileron fittings		

8. Fabricate aileron covering or skin		
9. Install aileron covering or skin		
10. Install and rig wings and struts		
PROPULSION	Other	Builder
1. Fabricate special tools or fixtures		
2. Fabricate engine mount		
3. Fabricate engine cooling system/baffles		
4. Fabricate induction system		
5. Fabricate exhaust system		
6. Fabricate engine controls		
7. Fabricate brackets and fittings		
8. Fabricate cables, wires, and lines		
9. Assemble engine		
10. Install engine and items listed above		
11. Fabricate engine cowling		
12. Install engine cowling		
13. Fabricate propeller		
14. Install propeller		
15. Fabricate fuel tank		
16. Install fuel tank		
17. Fabricate fuel system components		
18. Install fuel system components		
HELICOPTER MAIN ROTOR DRIVE SYSTEMS & CONTROL MECHANISMS	Other	Builder
1. Fabricate special static and dynamic main rotor rigging tools		
2. Fabricate / assemble main rotor drive train		
3. Install main rotor drive train assembly		
4. Fabricate / assemble main rotor shaft and hub assembly		
5. Install main rotor shaft and hub assembly		
6. Align main rotor shaft drive train, shaft and hub assembly		
7. Fabricate main rotor rotating controls		
8. Install main rotor rotating controls		
9. Fabricate main rotor non-rotating controls		
10. Rig main rotor rotating and non-rotating controls		
11. Fabricate main rotor blades		
12. Install main rotor blades on rotor hub.		
13. Statically balance and rig main rotor system		
14. Dynamically track and balance main rotor system		
HELICOPTER TAIL ROTOR DRIVE SYSTEMS AND CONTROL MECHANISMS	Other	Builder
1. Fabricate special static tail rotor rigging tools		
2. Fabricate vertical trim fin		
3. Install vertical trim fin		
4. Fabricate horizontal trim fin.		
5. Install horizontal trim fin		
6 Fabricate tail rotor drive system		
7. Install tail rotor drive system		
8. Fabricate tail cone or frame		
9. Install tail cone or frame		

HELICOPTER TAIL ROTOR DRIVE SYSTEMS AND CONTROL MECHANISMS (Continued)	Other	Builder
10. Rig vertical and horizontal fins.		
11. Fabricate tail rotor shaft and hub assembly.		
12. Install tail rotor shaft and hub assembly.		
13. Fabricate tail rotor rotating and non-rotating controls		
14. Rig tail rotor rotating and non-rotating controls.		
15. Fabricate /Assemble tail rotor blades		
16. Install tail rotor blades		
17. Statically balance and rig tail rotor system		
18. Dynamically track and balance tail rotor system.		
EMPENNAGE		
1. Fabricate special tools or fixtures	Other	Builder
2. Fabricate spars		
3. Fabricate Ribs or cores		
4. Fabricate Leading and Trailing edges		
5. Fabricate tips		
6. Fabricate brackets and fittings.		
7. Assemble empennage structure		
8. Install wing leading /trailing edge and tips		
9. Install fittings		
10. Fabricate Cables, wires, and lines.		
11. Install cables, wires and lines		
12. Fabricate empennage covering or skin		
13. Install empennage covering or skin.		
14. Install and rig empennage.		
CANARD	Other	Builder
1. Fabricate Canard		
2. Assemble Canard		
3. Install and Rig canard.		
LANDING GEAR	Other	Builder
1. Fabricate special tools or fixtures.		
2. Fabricate struts		
3. Fabricate braking systems		
4. Fabricate retraction system		
5. Fabricate cables, wires, and lines.		
6. Assemble wheels, brakes, tires, and landing gear		
7. Install landing gear components above.		

COCKPIT / INTERIOR	Other	Builder
1. Fabricate instrument panel		
2. Install instrument panel and instruments		
3. Fabricate Seats		
4. Install seats.		
5. Fabricate electrical system controls / switches		
6. Install electrical system controls / switches.		
TOTALS	A	B
Enter the numerical scores in the boxes below to arrive at the builder's percentage score.		

	÷		X	100	=	%
(B)		(A+B)			Builder score	

Does this aircraft meet the requirements of Chapter 549? Y ☐ N ☐

Note: Results of the evaluation must be recorded on a separate MDRA form C 21- AMATEUR BUILT AIRCRAFT INSPECTION REPORT

Note: Results of this evaluation are subject to audit to ensure compliance with regulatory requirements. Confirmation of acceptance will be forwarded under separate cover. If the builder deviates from the current plan, the project must be re-evaluated to confirm continued compliance.

End of Section 1.8

Has builder been notified of your findings? On site? ❑ By mail? ❑

Date of Inspection: _____
(yyyy-mm-dd)

Signatures: _____ _____
Inspector Builder

Print Names_____ _____
Inspector Builder

Print Names_____ Date of Review: _____
Peer Reviewer (yyyy-mm-dd)

Signature: _____
Peer Reviewer