



CIVIL AVIATION SAFETY AND SECURITY OVERSIGHT AGENCY

CHECKLIST

CAA: CL-O-AWS046
May 2017

TYPE CERTIFICATE ACCEPTANCE CHECKLIST

INSPECTION RECORD
Name of Type Certificate holder;
Physical Address (Location)
Postal Address
Date of Evaluation
Type and / or Series of Aircraft:
Inspector(s) /
Assessment Code: S = Satisfactory U = Unsatisfactory NC = Not Checked N/A = Not Applicable

SECTION 1 APPLICATION ITEM	Assessment			
	S	U	NC	N/A
1. Application form completed and received				
2. TC and TCDS Received (Verify number, revision status and ensure these are issued by State whose NAA is recognized by Rwanda)				
3. Establish if the applicant has submitted the following documents: a. Brief description of the product b. Three view drawing c. The basic data d. The characteristics and performances e. Master compliance checklist				

4. If a helicopter, note under general comments, the category and performance class.				
Establish categories under which the certificate of airworthiness can be issued;				
Identification of the certification basis Airworthiness Noise Fuel venting Exhaust emissions.				
Review (if any) special conditions by State of Design (SOD) and controversial issues between SOD and TC holder and establish how the issues were resolved.				
Review exemptions granted including equivalent safety findings or Acceptable Means of Compliance established. Check if there are any issues under investigation by NAA/SOD				

REVIEW OF CERTIFICATION PLAN AND COMPLIANCE CHECKLIST. (The Certification Review Team (CRT) may receive an overview of the product certification from the NAA or other competent Authority)				
5. Get to understand NAA overview of the certification process including complications encountered during certification.				
6. Review the SOD Compliance Checklist (CC). (State if all requirements of the airworthiness code were complied with).				
Review exemptions granted (see table below). Review each exemption and determine its impact on safety.				
Establish NAA originating mandatory modifications				
1.1.1 Establish a system/ process for RCAA to receive safety related information from the NAA. Register with the NAA. (Request for registration with SOD for access to continued airworthiness data such as ADs)				
Review of Services Experience (Discussion with TC holder)				
1.2 Review Manufacturer originated design improvements and note down the reasons.				
1.3 Review all SOD originated design improvements and reasons for mandating such improvements.				
1.4 Find out what reports have been submitted by other operators. Review each area of concern and determine impact on safety.				
1.5 For areas where reports have warranted investigation threshold, determine corrective action instituted by the manufacturer.				

1.6	Establish if there are known design related accidents involving the aeronautical product under review.				
1.7	Receive a technical briefing from applicant's specialist regarding unique or unconventional features or intended unconventional use of the product.				
3.0 Review of Certification Records Details of design and construction shall be such as to give reasonable assurance that the helicopter/ aeroplane will function effectively and reliably in the anticipated operating conditions. These shall be based upon practices that experience has proven to be satisfactory or that are substantiated by special tests or by other appropriate investigations or both.					
1.8	Design Records				
1.9	Are there special features of this design that make this model superior?				
1.10	Are the features covered under the applicable airworthiness code?				
1.11	Detail under general comments section, the special features of the design that are outside the parameters of the airworthiness code used?				
1.12	From a sample, determine how material was selected for the sample structure?				
1.13	Does the design concept provide adequate fatigue strength? (Annex 8 PartIV-3.8)				
1.14	Are the following system design features acceptable?				
	1.14.1 Flight and engine Controls and control systems? (Annex 8 Chapter 4)				
	1.14.2 Crew environment – consider layout of controls etc.?				
	1.14.3 Pilot vision?				
	1.14.4 Provision for emergencies?				
	1.14.5 Fire precautions?				
	1.14.6 Emergency landing provisions?				
	1.14.7 Ground handling provisions?				

Crashworthiness Aspects- Crashworthiness shall be taken into account in the design of helicopters, aeroplanes to improve the probability of occupant survival. (Annex 8 Sub Part I page IVB-1-1) Design emergency landing conditions- establish if interiors, furnishings, support structures and safety equipment are designed reasonably to protect occupants under emergency landing conditions. Items to consider shall include;			
1.14.7.1 Dynamic effects			
1.14.7.2 Restraint criteria for items that could cause a hazard			
1.14.7.3 Deformation of the fuselage in the areas of emergency exists			
1.14.7.4 Fuel cell integrity and position			
1.14.7.5 Integrity of electrical systems to avoid sources of ignition in the area of fuel compartments.			
1.14.8 Cabin fire protection- Does the cabin provide fire protection to occupants in the event of airborne system failures or crash situation: Consider the following items			
1.14.8.1 Flammability of interior materials			
1.14.8.2 Fire resistance (aircraft above 3175kg)			
1.14.8.3 Provision of safety features to allow safe evacuation- slides etc			
1.14.8.4 Fire suppression equipment?			
Lighting and Marking- For all Aircraft emergency lighting shall have the following characteristics: (Where Applicable)			
1.14.8.5 Independence from main electrical supply;			
1.14.8.6 Visual indication of emergency exists;			
1.14.8.7 Illumination both inside and outside the Aircraft during evacuation			
Ergonomics- For better human/machine interface, check if the design of the aircraft accounts for ergonomics factors including;			
1.14.8.8 Ease of use and prevention of inadvertent misuse?			
1.14.8.9 Ease of access?			
1.14.8.10 Working environment?			

1.14.8.11	Standardization and commonality?			
1.14.8.12	Ease of maintenance?			
For Performance class 1 or category A helicopters, check if power plant are arranged and installed so that each engine with its associated systems is capable of being controlled and operated independently from the others and so that there is at least one arrangement of the power plant and systems in which any failure, unless the probability of its occurrence is extremely remote, cannot result in a loss of more power than the that resulting from complete failure of the critical engine.				
2	Production Records (sample a particular structure and review the production records)			
2.1	Is the workmanship of acceptable standards?			
2.2	Is there consistence in manufacturing methods (Annex 8 PartIV-4.1.3?			
2.3	Is the helicopter/ aeroplane adequately protected from deterioration or loss of strength in service due to weathering, corrosion, abrasion and other factors such as maintenance? (Annex 8- PartIV-4.1.4)			
2.4	Inspection provision- Is there provision in service examination, part replacement or reconditioning of parts when such attention, periodically or unusual severe operations is necessary?			
2.5	Are the power ratings and all operating conditions and limitations which are intended to govern the operation of propeller/ rotor and power transmission systems declared?			
2.6	Does the parts control system ensure that airworthy components are fitted on all aircraft every time during production?			
2.7	Sample one component and trace it back to where it was manufactured.			
2.8	Sample one part and determine it against IPC.			
3	Substantiating Tests			
3.1	Sample and review tests conducted on moving parts (e.g. Tail rotor, rotor blades, landing gear etc.)			

3.2	Are test results consistent with design expectations?				
3.3	Are the Engine tests results compatible with the airframe?				
3.4	Rotors and rotor drive shall complete satisfactorily such tests as necessary to ensure that they will operate satisfactorily and reliably within the declared ratings, conditions and limitations. Confirm if the following tests were done:				
3.4.1	Operational Tests?-(tests to ensure that strength and vibration characteristics are satisfactory and to demonstrate proper and reliable functioning of pitch changing and control mechanisms. Over speed characteristics shall be demonstrated to be satisfactory for helicopters greater than 3175kg)				
3.4.2	Endurance tests?- tests to ensure sufficient duration at such powers, engine & rotor speeds, and other operating conditions as necessary to demonstrate reliability and durability of the rotor drive systems.				
3.5	Security design concepts.-				
3.6	Least-risk bomb location				
3.7	Protection of flight crew compartment				
Review of Quality Audits					
4.1	Is there a quality assurance system in place?				
4.2	If yes to above does the audit plan cover the following aspects?				
4.2.1	Design aspects?				
4.2.2	Manufacturing aspects?				
4.2.3	Contracted services?				
4.2.4	Product?				
4.3	Were issued raised in audit reports concerning design aspects acquitted satisfactorily? If not, state your observation.				
4.4	Were issued raised in audit reports concerning manufacturing processes acquitted satisfactorily? If not, state your observation.				

4.5	Were issued raised in audit reports concerning contract aspects acquitted satisfactorily? If not, state your observation.				
4.6	Were issued raised in audit reports concerning product acquitted satisfactorily? If not, state your observation.				
4.7	Review these concerns and establish if the concerns are consistent with in service difficulty reports.				
4.8	Discuss with the Safety/ Quality Assurance Person general concerns with the product. Are the concerns manageable?				
4.9	What is the general level of compliance?				
5	Review of AFM				
6.1	Is there a RFM/ AFM in place?				
6.2	Does the RFM/ AFM cover the aircraft ;				
6.2.1	Type and Model				
6.2.2	Serial number				
6.2.3	Revision page				
6.3	Review the contents of the AFM/RFM and determine if RFM/AFM				
6.3.1	Is consistent with TCDS?				
6.3.2	Has a section for normal operations?				
6.3.3	Has a section for abnormal section?				
6.3.4	Has a section for emergency section?				
6.3.5	Describes aircraft systems?				
6.3.6	Provides for aircraft loading (Weight and Balance)? (Annex 8 PartIV 1.2.2. (As Amended)				
6.3.7	Gives crew members adequate information to prepare a flight?				
6.3.8	Provision for restarting engine in flight at altitudes?				
6.4	Ensure if operating limitations and information for the following is included?				
6.4.1	Loading?				

6.4.2	Air speed?			
6.4.3	Power plant and power transmission?			
6.4.4	Rotor limitations?			
6.4.5	Equipment and systems			
6.4.6	Crew limitations?			
6.5	In view of modifications incorporated by the Manufacturer, establish if the RFM / AFM has been revised?			
6.6	During aircraft inspections check if the AFM/ RFM			
6.6.1	Cockpit layout is the same?			
6.6.2	Aircraft placarding is consistent?			
6.6.3	Aircraft operational systems are adequately covered?			
Approved Maintenance Schedule (refer to checklist specific to AMP)				
7.1	Get and review a copy of the MSG report. Note areas that were identified as critical and that would require special maintenance attention.			
7.2	Review and retain a copy of the MPD.			
7.3	Review amendments to MPD. Establish reasons for the amendment.			
7.4	Does the maintenance Program address the following?			
7.4.1	Life limited Components?			
7.4.2	Corrosion control?			
7.4.3	Supplementary Structural Inspection Programs (SSIP)			
7.5	Is there a reliability program provided by the TC holder?			
7.6	Does the Maintenance Program contain methods, procedures and tasks necessary to maintain the aircraft and publication of this information in a			

	format that can be readily adapted for use by an operator?				
7.7	Does the Maintenance Program include guidance on defect diagnosis?				
7.8	Does the MP recommend thresholds and intervals at which maintenance tasks are to be performed?				
7.9	In the approval of the type design, has the SOD specified mandatory maintenance tasks and frequencies? Get a copy.				
Flight Data and Cockpit Voice Recorders- FDR/CVR are intended for installation in all aircraft in accordance with the Civil aviation (Instrument and Equipment) Regulations.					
8.1	Does the FDR continuously record during flight time?				
8.2	Does the FDR container				
	8.2.1 Have a distinctive orange or yellow color?				
	8.2.2 Carry reflective material to facilitate its location?				
	8.2.3 Have a securely attached an automatically activated underwater locating device?				
	8.2.4 Receive its electrical power from a bus that provides the maximum reliability for operation of the FDR without jeopardizing the services to essential or emergency load?				
	8.2.5 There is an aural or visual means for pre-flight checking that FDR is operating correctly.				
8.3	Does the FDR provide parameters required				
8.4	Is the CVR designed so that it will record at least the following?				
	8.4.1 Voice communication transmitted from or received in the aircraft by radio?				
	8.4.2 Aural environment on the flight deck?				
	8.4.3 Voice communication of flight crew members on the flight deck using interphone system?				
	8.4.4 Voice or audio signals identifying navigation or approach aids introduced in the headset or speaker?				
	8.4.5 Voice communication of flight crew members using the PA system, if installed?				
	8.4.6 Digital communications with ATS, unless recorded by FDR?				
	8.4.7 Does the CVR container ...:				
	8.4.8 Have a distinctive orange or yellow color?				
	8.4.9 Carry reflective material to facilitate its location?				
	8.4.10 Have a securely attached an automatically activated underwater locating device?				
	8.4.11 Receive its electrical power from a bus that provides the maximum reliability for operation of				

<p>the FDR without jeopardizing the services to essential or emergency load?</p> <p>8.4.12 There is an aural or visual means for pre-flight checking that FDR is operating correctly.</p> <p>8.4.13 If the CVR has a bulk erasure device, does the installation prevent operation of the device during flight time or crash impact?</p>				
<p>8.5 Is there a read out facility that has the software to accurately convert the recorded values to engineering units and to determine the status of discrete signals?</p>				
Environmental Issues				
<p>9.1 Is there a noise certificate issued by a competent Authority? Get a copy.</p>				
<p>9.2 Are there records relating to the noise certification? Review the records.</p>				
<p>9.3 Is there a system of preventing fuel spillage during startups or shut downs?</p>				
Inspectors Remarks				
Recommendations				
The Type certificate has been evaluated in accordance with the Civil Aviation (Instrument and Equipment) Regulations currently in force and this checklist				
I DO / NOT / RECOMMEND the TC Evaluated to be ACCEPTED.				
Name of Inspector _____ Signature _____				
Date _____				
Manager Airworthiness Remarks and Recommendation				
Remarks:				

I hereby Approval / do not Approve the Type Certificate Evaluated
<i>Signature</i> <i>Manager Airworthiness</i>