



# **OPERATIONAL EVALUATION ABSTRACT REPORT**

## **AIRCRAFT KA-32A11BC (KAMOV, ICAO KA27)**

**BANSKO, BULGARIA, OCTOBER 04<sup>TH</sup> TO 06<sup>TH</sup>, 2011**

**REVISION 1 – DECEMBER 15<sup>TH</sup>, 2011**

Kamov Ka-32A11BC was not operationally evaluated by FAA and EASA but operates in many countries under these authorities' rules.

ANAC has established the Brazilian Aircraft Evaluation Group for the Kamov Ka-32A11BC (BAEG-KA32) to evaluate the operation of this aircraft in Brazil. This Operational Evaluation Report summarizes the results of the evaluations conducted and was elaborated by inspectors that compose the BAEG-KA32 through diverse operational evaluation activities in conjunction with the aircraft manufacturer (Kamov), using information issued by this entity.

## 1. TYPE RATING

Based on the analysis of technical documentations and the technical visit performed in October 2011, the Kamov Ka-32A11BC is considered as a type rating in Brazil. Furthermore, the Brazilian regulations consider all helicopters as type aircraft. BAEG-KA32 recommends the 'KA32' rating issuance, requiring specific skills trainings for its flight.

BAEG-KA32 recommends updating the ANAC's Type Rating Table with the following lines:

MANUFACTURER (1)	AIRCRAFT (2)		RMK (3)	TYPE RATING (4)
	MODEL	NAME		ANAC
XV – Type Rating (Helicopter) – Multi Engine Operation (Turboshaft Engines – Continuation)				
Kamov	Ka-32A11BC			KA32

## 2. TRAINING SPECIFICATION

### a. Prerequisites for the Type Rating Training

#### Pilot

- Minimum of 500 hours of flight experience in helicopter;
- Helicopter flight-time as a pilot in command: 200 hours;
- Twin-engine helicopter flight time: 100 hours; and
- At least, a commercial pilot license.

#### Pilot-Instructor (IN)

- KA32 valid Type rating as PIC;
- Minimum of 500 hours of flight experience in helicopter;
- Helicopter flight-time as a pilot in command: 200 hours;
- Twin-engine helicopter flight time: 100 hours;
- At least, a commercial pilot license (CPL); and
- Hands-on experience as a pilot-instructor: 50 hours.

### b. Initial Training

The Training Program named “Flight Crew Retraining Programs for Helicopter Ka-32 and its Modifications”, 2009, Original, will be renamed as “Pilot Training Program for Helicopter Ka-32 and its Modifications” and has been considered as the baseline for Brazilian Operator's Training Program approval for type rating and instructor course. It was approved by Administration of Air Transport Agency (Rosaviatsia), Ministry of Transport of the Russian Federation.

The length of the training program has been considered very long comparing with the others training courses already evaluated by ANAC.

The following subjects were considered not mandatory and could be taken out of the Brazilian operators training program without decreasing the flight safety level:

- Aeronautical Meteorology (page 25 and 26 of Kamov’s Operational Training Program);
- Normative Documents (page 31 of Kamov’s Operational Training Program);
- Assurance of Aircraft **Safety\*\*** (page 32 of Kamov’s Operational Training Program); and
- Flight Safety Analysis (page 32 of Kamov’s Operational Training Program).

\*\* Although the word “**safety**” has been utilized here, the real meaning is “**security**”.

#### **c. Recurrent Training**

The Aviation Training Center Kamov Joint Stock Company (JSC) will develop a pilot refreshment program for the Ka-32A11BC and submit it to ANAC for approval. The existence of this kind of training program made by the manufacturer is not considered mandatory by BAEG-KA32 according the Brazilian rules.

#### **d. Proficiency check**

The proficiency checks should follow the HPA (High Performance Aircraft) check profile ANAC for helicopter, considering the operational restrictions found during this operational evaluation (cited further) and can use the training program cited above in the item b as guidance at the discretion of the Check Ride Pilot and whereas they are more conservative regarding operational safety.

The helicopter doesn’t have a simulator and the primary training and checking device is the aircraft itself.

The 3<sup>rd</sup> crew seat was considered adequate to observe the pilots’ tasks inside cockpit and in order to perform check rides on aircraft for **RBHA 91** and **RBAC 135** operators.

#### **e. Upgrade Training Program and Second in Command (SIC) Training Program**

There are no upgrade training program (in order to turn a KA32 SIC in a KA32 PIC) or SIC training program. They will be also created by Kamov.

Till the time of submittal of such a program the SIC pilot will be trained under the existing Pilot training program cited in item b with the same pre entry requirements.

#### **f. Training Center**

The BAEG-KA32 recommends that only training courses run by Aviation Training Center Kamov JSC – Russia – be considered for licensing pilots in the Kamov Ka-32A11BC, for a period of at least 24 months after the clearance of the first crew in Brazil. After half of this period, this recommendation will be reevaluated.

After this period, the POI and licensors shall consider that operators with more experience might be able to train its pilots, whereas considering that its Operational Training Programs were approved using the minimum curriculum set forth in this report.

### **3. COMPLIANCE TO RBHA 91 AND RBAC 135**

Kamov submitted, as required by ANAC, the compliance checklists duly completed in accordance with the applicable items of the RBHA 91 and RBAC 135. Although satisfactory, BAEG-KA32 made some remarks on the compliance checklist of the Ka-32A11BC as follows:

- **RBHA 91.189, 91.191, 91.193, 91.205(f) and 91.205(g): restricted only to ILS CAT I precision approaches;**
- **RBAC 135.173, 135.175, 135.183(a), 135.183(c), 135.183(d) and 135.421(a): cannot carry passengers. Only people involved in aerial works are allowed on board and provided that compliant with the Brazilian rules;**
- **RBHA 91.527: cannot perform operations under icing conditions;**

- When operating the aircraft in some specific areas in Brazil a **HF Communication System** installation can be required in accordance with **RBHA 91.511 or RBHA 135.165**;
- **The aircraft only can perform large water extensions** (see RBAC 135.167(e)) and **Off-Shore Operations** if the items **RBAC 135.167(b), 135.167(c) and 135.167(d)** be complied and also if the Brazilian TCDS permit; and
- One **Marine VHF** can be required for **Off-Shore Operations** according **RBAC 135.165(b)(8)**.

#### **4. SPECIAL OPERATIONS**

Special operations and usage of optional equipments were not evaluated. If a Brazilian operator demonstrates interest in operating such special operations or optional equipments he must contact ANAC declaring the intended operations or equipments for evaluation and approval by the Agency. After the conclusion of the process this Operational Evaluation Report must be updated.

##### **Maximum number of passengers**

No passenger is allowed, only people involved in aerial work compliant with the Brazilian rules.

#### **5. OPERATIONAL DOCUMENTS**

##### **a. MMEL**

The MMEL Ka-32A11BC version 324.01 and 324.05 presented for approval by Chief Airworthiness department in June 17<sup>th</sup>, 2009 and approved by Chief designer of the Ka-32 Helicopter, Kamov Company in June 19<sup>th</sup>, 2009 has been accepted from the operational point of view, with no recommendations for change.

This doesn't exclude the necessity of an analysis from the airworthiness superintendence which may require changes.

The BAEG-KA32 recommends the use of this MMEL, considering the modifications which shall be the basis for making the operator's MEL.

##### **b. Aircraft Operations Manual**

No POM was presented to BAEG-KA32. The use of POM as a base for operation in Brazil can be beneficial, but shall be examined in detail by the sector responsible for approving of the operation before the first flight.

#### **6. FLIGHT SIMULATORS**

There is no Flight Simulators available for this helicopter.

#### **7. ANAC INSPECTOR**

One ANAC Check Airman should attend a complete type rating course until February 2012. The ground school must be performed in Aviation Training Center Kamov JSC. The flight sessions in aircraft and the proficiency check can be performed under Brazilian skies with a Kamov Ka-32A11BC instructor/examiner.

This type rating will enable ANAC check pilot to perform pilot evaluations and pilot check rides and will complete the determination of the minimum training required for qualification of type KA32.

Proficiency check exams should be conducted by the ANAC inspector or Examiners Accredited by the Agency.

While the ANAC pilot inspector is not qualified to perform check rides in Ka-32A11BC, the Brazilian operators can be evaluated by an Instructor from Kamov JSC. In order to do that, the Personnel License Management must be contacted ([gpel@anac.gov.br](mailto:gpel@anac.gov.br)) to verify what are the documents needed and inform the correct procedure.

## **8. OPERATIONS IN BRAZIL**

It is not recommended approval of Kamov Ka-32A11BC with Brazilian marks operation, unless orientations of this evaluation report are followed.

**Single pilot** operations are **NOT** permitted.

**Category A** operations are **NOT** permitted.

Only training courses run by Aviation Training Center Kamov JSC - Russia - shall be considered for licensing pilots in the Kamov Ka-32A11BC, for a period of at least 24 months after the clearance of the first crew in Brazil. After half of this period, this recommendation will be reevaluated.

ANAC, Rio de Janeiro, December 15<sup>th</sup>, 2011.

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