



Interstate Aviation Committee Aviation Register

AIRWORTHINESS DIRECTIVE

November 11, 2013

No. 2012-53-05 Revision 1

Applicability: Kamov Ka-32A, Ka-32A11BC and Ka-32AO helicopters

State of Manufacturer - Russia

The corrective actions prescribed by this Airworthiness Directive, are mandatory. No persons may operate an aircraft to which this Airworthiness Directive applies, except in accordance with the requirements of this Airworthiness Directive,

The IAC Aviation Register issued Airworthiness Directive No.2012-53-05 on November 23, 2012 because of some occurrences with the Kamov Ka-32 family helicopters relating to failures of the TV3-117VMA and TV3-117VMA Series 02 engines. That AD proposed a number of in-service corrective actions and also prescribed some tasks for developers of the helicopter and the engine to revise operational and overhaul documentation.

In accordance with this AD operators of the Ka-32A, Ka-32A11BC and Ka-32AO helicopters carrying out external load operations, performed an inspection of the engine air-gas channel, a check for lack of short circuit between the thermocouple channels and the engine mass, a check of total resistance of thermocouples at terminals of the temperature control, engine check run with registration of parameters. These works were performed according to item 1 of the AD during the nearest scheduled 25-hours maintenance form.

Based on results of the checks and inspections, no deviations from the effective operational documentation were found out.

In accordance with item 3 of the AD JSC "Klimov" issued a Temporary Revision No. 1 to the Engine Maintenance Manual for TV3-117VMA, TV3-117VMA series 02 engines (078.005800-04PЭ) and to Bulletin No. K78-029БЭ/БД (H78M-130БЭ/БД). This Temporary Revision No.1 was distributed by JSC "Kamov" among operators.

In accordance with item 4 of the AD JSC "Klimov" incorporated a corresponding limitation into the Overhaul Manual for TV3-117 engine family. This change of the Overhaul Manual was forwarded to the overhaul facilities through Bulletin K78-064БП that was put in force by "Rosaviatsia".

On August 4, 2013 the Ka-32A11BC, registration number No. C-GKHL owned by VIH Helicopters Ltd. had an accident near Bella Coola, British Columbia, Canada, caused by a failure of the TV3-117VMA engine No. 7087892900208.

This accident is currently being investigated. Preliminary results of the investigation show that:

1. Checks and inspections required by AD 2012-53-05 of November 23, 2012, (item 1) have been performed. No deviations from the effective operational documentations have been found out.
2. On April 21, 2013 when the engine had accumulated 923 hours since last overhaul, the following engine components were replaced:
 - compressor turbine 0780419000 (No. 0418 removed, No. 02207 having total time since new 956 hours and time since last overhaul 0 hours, installed);
 - fuel collector 0780335600 (No. 116-94 removed, No. 232-80 having total time since new 956 hours and time since last overhaul 0 hours, installed);
 - thermocouples T-102 (seven new T-102 thermocouples installed).
3. As of the date of the helicopter accident the TV3-117VMA engine No. 7087892900208 operating time was:
 - total time since new 5124 hours and 14 minutes;
 - time since last overhaul 1110 hours;
 - time since replacement of the “hot” section 187 hours.

Investigation is not completed yet.

Pending the investigation results, and in order to further specify corrective actions prescribed by AD No. 2012-53-05 dated November 23, 2012, and based on the “JSC “Kamov” and JSC “Klimov” Technical Decision No. Rf-32-ДЦЭ-001/13TP regarding continued airworthiness of the helicopters Ka-32A/AO, Ka-32A12, Ka-32A11BC” dated November 7, 2013, the IAC Aviation Register

PROPOSE:

1. For operators of Ka-32A/AO, Ka-32A11BC helicopters which carry out works using an external load:

- (a) when calculating engine operating time in cycles to multiply the achieved time value by 1.2 factor. Upon reaching 1,500 cycles the engine should be removed for overhaul;
- (b) upon reaching 750 hours of engine operating time to replace the following “hot” section components with new ones (total time since new 0 hours):
 - fuel manifold injectors and nozzles;
 - compressor turbine with nozzle guide vanes CA II;

Note: Replacement of the above components should be made with the engine Developer (Manufacturer) specialists involved.

- (c) to analyze the logbooks of the TV3-117VMA and TV3-117VMA series 02 engines to find out whether engine “hot” section components (fuel manifold injectors and nozzles, compressor turbine with nozzle guide vanes CA II) have been replaced with components which have some operating time. If so, to suspend operation of the engine in question and to inform JSC “Klimov”, JSC “Motor Sich” and JSC “Kamov” accordingly. To resume operation of the engine to apply to JSC “Klimov” or JSC “Motor Sich” for replacement of the hot section components with new ones (total time since new 0 hours) in accordance with item 1(b) of this Revision 1 of AD No. 2012-53-05.

2. For operators of Ka-32A/AO, Ka-32A11BC helicopters to take into account Temporary Revisions to Rotorcraft Flight Manual and Temporary Revision 1 to Engine Maintenance Manual for TV3-117VMA, TV-3-117VMA series 02 engines (078.00.5800-04PЭ) and to Bulletin No. K78-029БЭ/БД (H78M-130БЭ/БД) (with the exception of the Note on page 4 of Section 005.20.20 of the engine Maintenance Manual).

3. Any questions relating to the technical content of this AD should be addressed to JSC “Kamov”.

Attachment: 1. Technical Decision No. Ka-32-ДСЭ-001/13TP regarding continued airworthiness of the helicopters Ka-32A/AO, Ka-32A12, Ka-32A11BC dated November 7, 2013.

2. Temporary Revision 1 to Engine Maintenance Manual for TV3-117VMA, TV-3-117VMA series 02 engines (078.00.5800-04PЭ) and to Bulletin No. K78-029БЭ/БД (H78M-130БЭ.БД).

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