



**RUSSIAN FEDERATION
MINISTRY OF TRANSPORT OF THE RUSSIAN FEDERATION
FEDERAL AIR TRANSPORT AGENCY**

AIRWORTHINESS DIRECTIVE

05 November, 2024

No. 2024-AHCAT, AHCAT-CK-09

Applicability – ANSAT helicopters (ANSAT, ANSAT-GC models)
Designer's State - RUSSIAN FEDERATION

Corrective actions stated in the present Airworthiness Directive are mandatory. None of the operators is allowed to operate the aircraft covered by present Airworthiness Directive otherwise than according to the requirements of present Directive.

During the investigation of the aviation accident occurred on October 22, 2024 with the ANSAT helicopter (ANSAT-GC model) RA-20101, the destruction of the XP-23 tail gearbox and the absence of a number of elements of the tail rotor blades were detected.

In order to ensure flight safety and maintain the airworthiness of the entire fleet of civil aviation helicopters of the ANSAT type and their modifications, being in operation, in storage and in serial production cycle, and based on the Technical decision of JSC "Kazan Helicopters" No. 1/144-2024-KB3 dated 30.10.2024 (hereinafter referred to as Technical decision)

IT IS REQUIRED:

1. To perform on the ANSAT helicopters:
 - ANSAT-GC model – immediately (during the nearest line maintenance);
 - ANSAT model – within the next 25 flight hours

one-time checks in accordance with the paragraph 1 of Technical decision.

2. In case of detection of defects of XP-23 tail gearbox and tail rotor blades (warranty and non-warranty) follow the paragraphs 2, 3 and 4 of Technical decision.

3. Present Airworthiness Directive doesn't cancel the validity of previously issued Technical Decision No. 1/144-2023-KB3 dated 22.08.2023.

4. Present Airworthiness Directive comes into force from the date of its signature and remains valid until its implementation.

Appendix: Technical decision No. 1/144-2024-KB3 dated 30.10.2024, on 10 sheets;

Deputy Head of FATA

A.A. Dobryakov

APPROVED
Deputy General Director –
Head of Design
JSC “Kazan Helicopters”

A.O. Garipov

TECHNICAL DECISION No. 1/144-2024-KB3
on continued airworthiness of the ANSAT helicopters (ANSAT, ANSAT-GC models)

In connection with the aviation accident occurred on 22.10.2024 with the ANSAT helicopter (ANSAT-GC model) No. 33168 RA-20101, an inspection of the helicopter was carried out, during which the destruction of XP-23 tail gearbox and the absence of a number of elements of the tail rotor blades were detected (IAC letter No. KP-1109/3 dated 25.10.2024).

In order to ensure the airworthiness of the ANSAT helicopters (ANSAT, ANSAT-GC models) being in operation, in serial production cycle and transfer to the Operator, the following decision was made.

DECISION:

1. Perform on the ANSAT helicopters:
 - ANSAT-GC model – immediately;
 - ANSAT model – within the next 25 flight hours;

one-time inspections by joint teams of JSC “Kazan Helicopters” and the Operator in accordance with the temporary task cards 065.20.00k “Visual inspection of XP-23 tail gearbox casing and cover” and 064.10.00k “Visual inspection of tail rotor blades, checking for the absence of non-glueing” (Appendices 2, 3)* with the issue of inspection reports (according to the format provided in Appendix 1).

Tail gearboxes and tail rotor blades located in the warehouses of Operators are also subject to one-time inspections.

The completed inspection reports should be attached to the certificates of the tail gearbox and tail rotor blades.

2. In case of detection of defects of XP-23 tail gearbox casing and cover – provide inspection reports to JSC “Kazan Helicopters” to make a decision on the possibility of its further operation.

* Note – One-time inspections of tail gearboxes and tail rotor blades, being in serial production cycle and transfer to the Operator, are to be carried out by JSC “Kazan Helicopters”.

3. Tail rotors, being under warranty and out of warranty, must be removed from operation and sent to JSC “Kazan Helicopters” for investigation and repair if non-glueing and/or other defects exceeding the permissible ones according to section 064.10.00 "Troubleshooting" of the helicopter Maintenance Manual are detected on their blades during one-time inspections.

Tail rotors with blades, which are to be sent to JSC “Kazan Helicopters”, must be packed in container with the attachment of certificates and inspection reports according to paragraph 1 of this technical decision.

4. After repair of tail rotor blades at JSC “Kazan Helicopters” in accordance with paragraph 3 of this technical decision, the operation of tail rotors should be resumed in accordance with the effective operational documentation.

5. Elimination of defects of the tail rotor blades according to paragraph 3 of this technical decision is carried out at the expense of JSC “Kazan Helicopters”, with the exception of defects classified as "operational".

6. Operators shall follow the requirements of present technical decision until it is fully implemented.

7. Present technical decision doesn't cancel the validity of previously issued technical decision No. 1/144-2023-KB3 dated 22.08.2023.

APPENDIX 1

APPROVED
(CEO of the Operator)

«_____» _____ 2024

Report
of inspection of XP-23 tail gearbox casing and cover
in accordance with temporary task card 065.20.00k

In accordance with the Airworthiness Directive No. ... dated ... a joint team of JSC “Kazan Helicopters” and *(name of the Operator)* performed a visual inspection of XP-23 tail gearbox casing and cover on the ANSAT helicopter according to temporary task card 065.20.00k.

Inspection results are attached.

Helicopter No.	Tail gearbox No.	Inspection results*	Date of inspection
No. ...	No. ...	No defects / the following defects were detected ...	

AGREED

On behalf of *(name of the Operator)*:

AGREED

On behalf of JSC "Kazan Helicopters":

* Note – If there are defects, attach photos of the identified defects.

APPROVED
(CEO of the Operator)

« _____ » _____ 2024

Report
of inspection of tail rotor blades and checking for the absence of non-glueing
in accordance with temporary task card 064.10.00k

In accordance with the Airworthiness Directive No. ... dated ... a joint team of JSC “Kazan Helicopters” and *(name of the Operator)* performed a visual inspection of tail rotor blades on the ANSAT helicopter, as well as checking for the absence of non-glueing according to temporary task card 064.10.00k.

Inspection results are attached.

Helicopter No.	Tail rotor No.	Blade No.	Inspection results*	Date of inspection
No. ...	No. ...	Blade No. ...	No defects / the following defects were detected ...	
		Blade No. ...	No defects / the following defects were detected ...	

Attachment:

1. Inspection card of blade No. ... of tail rotor of the helicopter No. with photos.
2. Inspection card of blade No. ... of tail rotor of the helicopter No. with photos.

AGREED

On behalf of *(name of the Operator)*:

AGREED

On behalf of JSC "Kazan Helicopters":

* Note – If there are defects, attach a card of the tail rotor blade inspection, photo materials of the identified defects.

Temporary task card 065.20.00k		
Procedure: Visual inspection of XP-23 tail gearbox casing and cover		
Operations and technical requirements		Corrective actions
1 Remove the tail rotor (see TC No. 064.20.00c). 2 Install the tail rotor on the trestle. 3 Remove the left and right fairings of the tail gearbox. 4 Clean the tail gearbox casing. 5 Inspect the tail gearbox casing (1) joint with cover (2), as well as casing (1) joints with the tail boom (indicated by the color in figure 201). Presence of cracks, nicks and corrosion damages on the surfaces of the parts is not allowed. 6 Install the left and right fairings of the tail gearbox. 7 Install the tail rotor (see TC No. 064.20.00d).		If any defects are detected, take photographs of them and send together with the inspection report to JSC “Kazan Helicopters” to make a decision on the possibility of further operation.
Test equipment	Tools and appliances	Expendable materials
	Stepladder H=1400 mm (stepladder 333.9917.100) Flat nose pliers L=160 mm Screwdriver 1,0x6,5, 1,6x10x275 Cotter pin remover	Cotton cloth

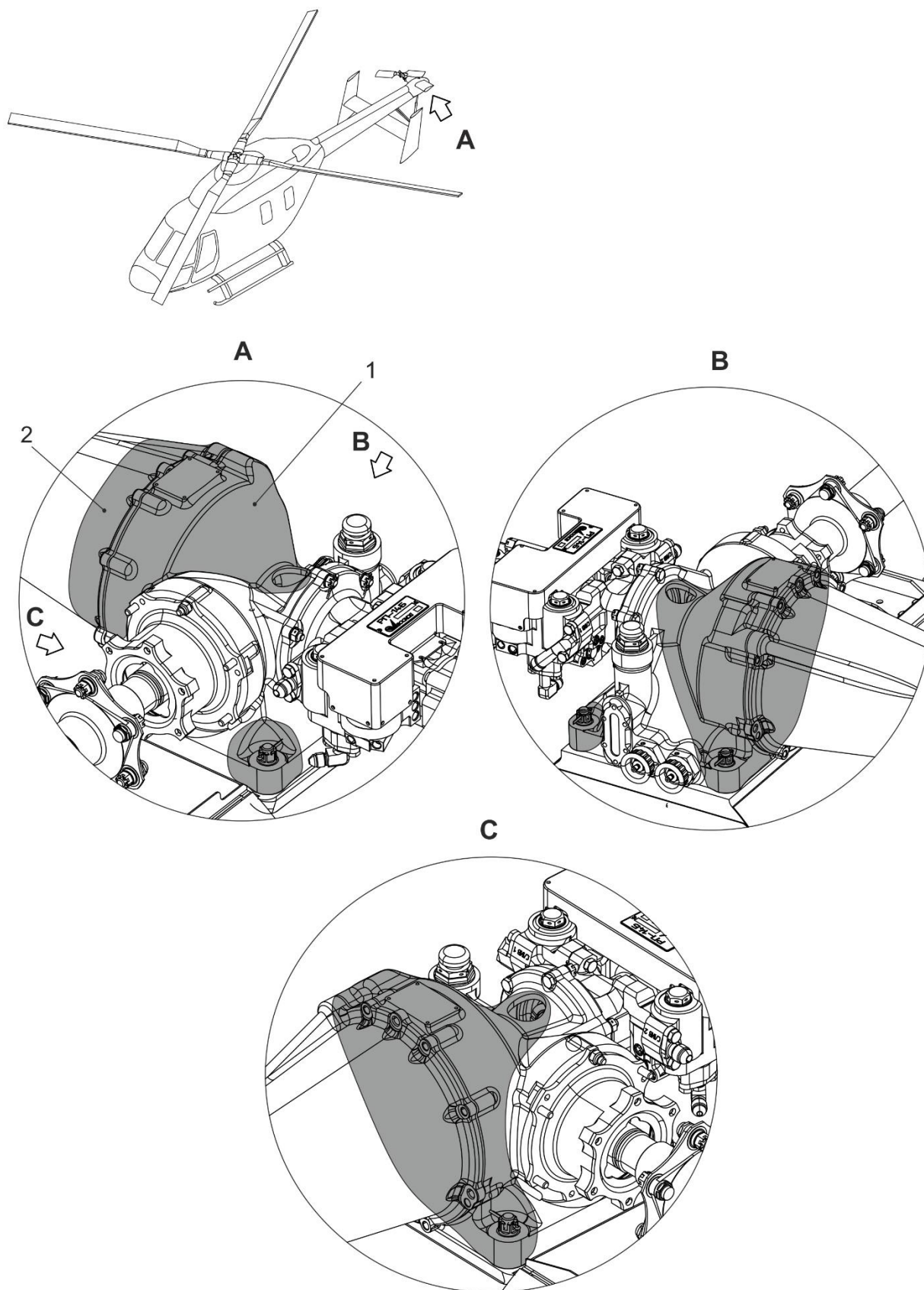


Figure 201 – Visual inspection of XP-23 tail gearbox casing and cover

Temporary task card 064.10.00k		
Procedure: Visual inspection of tail rotor blades, checking for the absence of non-glueing		
Operations and technical requirements		Corrective actions
1. Remove the tail rotor (see TC No. 064.20.00c). 2. Perform visual inspection of tail rotor blades (see TC No. 064.10.00c). 3. Perform a visual inspection of the condition of the rubber layer of strips (2) (see figure 203) of the tail rotor blades (1) for absence of damages. Crumbling of the rubber layer with a total area of no more than 10 cm² with the size of a single crumbling with an area of no more than 2.5 cm² and a width of no more than 0.5 cm is allowed. 4. Perform visual inspection of condition of tips (4) and blade edge tippings (5) of tail rotor blades (1). Pay special attention to the blade edge tipping (5) fastening screws on the blade tip (4). 5. Check the absence of non-glueing of rubber layer of the strips (2) and blade edge tippings (3), as well as glue joint of tips (4) and blade edge tippings (5) of tail rotor blades (1) by tapping with a duralumin hammer, proceeding as follows: tap the entire rubber area of the strips (2) and blade edge tippings (3), as well as tips (4) and blade edge tippings (5) with a free fall of the duralumin hammer from a height of no more than 10 ... 15 mm or with soft blows from a distance of no more than 10 mm, avoiding traces of tapping. Violation of glueing is characterized by a change in tone. The presence of non-glueing is not allowed. 6. Install the tail rotor (see TC No. 064.20.00d).		If any defects are detected during the inspection according to pp. 2 - 5, fill in the chart of tail rotor blades inspection (see figure 202), take photos of the defects. Make marks on the tail rotor blades with a soft pencil.
Test equipment	Tools and appliances	Expendable materials
	Duralumin hammer (333.9100.005)	

	Sec. 1	Sec. 2	Sec. 3	Sec. 4
«TOP»				
«BOTTOM»				

Figure 202 – Inspection card of blade No. ... of tail rotor of the helicopter No.
(to be completed in case of detection of defects)

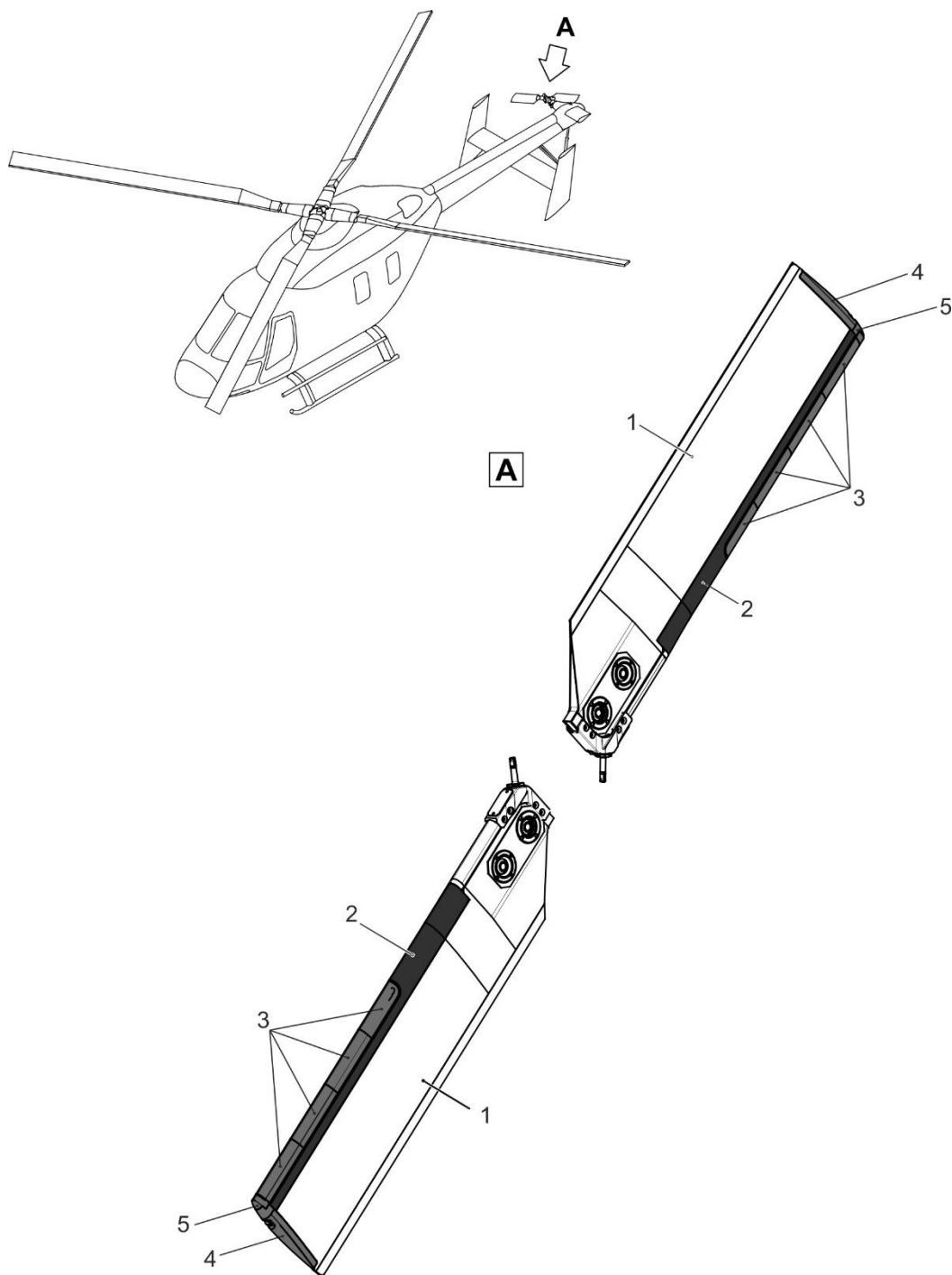


Figure 203 – Tail rotor blade

Table 1

Position	Quantity	Description	Designation
1	2	Tail rotor blade	333.3950.1000
2	2	Strip	333.3950.1200
3	8	Blade edge tipping	333.3950.1203-03(05)
4	2	Tip	333.3950.1600
5	2	Blade edge tipping	333.3950.1008