

Temporary Maintenance Instruction TMI 139-560

Sliding control assembly – Replacement (remove and install a new item)

All AW139 Helicopters

The technical content of this document is approved under the authority of DOA nr. EASA.21J.005.

The present TMI will be evaluated for its introduction in the standard set of Technical Publication.

If no further notice is received, the present document expires on: August 8st 2023.

2022-08-08

Introduction

This TMI provides the instructions and requirements to perform replacement of Sliding control assembly.

The following procedures contained in this TMI update and supersede the contents of the following Data Modules:

ANNEX	DATA MODULE CODE	DATA MODULE TITLE
Annex 1	39-A-64-31-04-00A-520A-A	Sliding control assembly - Remove procedure
Annex 2	39-A-64-31-04-00A-720A-A	Sliding control assembly - Install procedure

Sliding control assembly - Remove procedure

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Table 1 References

Data Module	Title
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-00-60-00-00A-010A-A	Critical parts - General data
39-A-64-31-01-00A-520A-A	Pitch link - Remove procedure
39-A-64-31-02-00A-520A-A	Scissors - Remove procedure
39-A-64-31-03-00A-520A-A	Cover - Remove procedure
39-A-64-31-04-00A-720A-A	Sliding control assembly - Install procedure
39-A-67-32-01-00A-520A-A	Tail rotor servoactuator - Remove procedure

Table 1 References

Data Module	Title
39-A-67-32-01-00A-720A-A	Tail rotor servoactuator - Install procedure

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A
The pitch links must be removed	39-A-64-31-01-00A-520A-A
The scissors must be removed	39-A-64-31-02-00A-520A-A
The cover must be removed	39-A-64-31-03-00A-520A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform, left	GG-01-00	1
Platform, right	GG-02-00	1
Boroscope	ZZ-00-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Cleaning solvent	C010	AR

Spares

Table 7 Spares

Nomenclature
No Spares

Safety Conditions

WARNING

The **Cleaning solvent (C010)** is a dangerous material. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for the solvent.

CAUTION

This component is a critical part. Be careful when you do work on the component after removal from the helicopter. A damage to the component can occur if you are not careful. Refer to **39-A-00-60-00-00A-010A-A**.

Procedure

- 1 Put the **Platform, right (GG-02-00)** adjacent to the right side of the tail rotor.

Note

The step that follows is applicable for the boot (9, **Figure 1**) with P/N 3G6420V00352 and 3G6420V00353.

- 2 Cut and remove the safety wire from the inboard and outboard ends of the boot (9). Discard the wire.

Note

The step that follows is applicable for the boot (9) with P/N 3G6420L00451.

- 3 Cut and remove the safety wire from inboard ends of the boot (9). Discard the wire.
- 4 Cut and remove the strap (10, **Figure 1**) that attach the boot (9) to the slider of the slider control assembly (2). Refer also to Section A-A of **Figure 1**.
- 5 Remove the old corrosion inhibitor from these parts with the **Lint-free cloth (C011)** and the **Cleaning solvent (C010)** :
 - The cotter pin (5)

- The special nut (4).

6 Remove the parts that attach the sliding control assembly (2) to the control rod (3) of the tail rotor actuator. Obey the instructions that follow:

6.1 Remove and discard the cotter pin (5).

WARNING

When you loosen the special nut (4), be careful to prevent the torsion of the control rod (3).

Note

When you remove the special nut (4), it is recommended to get a second person to help you to lock the control rod (3) to prevent it to turn.

6.2 Lock the control rod (3) to prevent it to turn when you do the [step 6.3](#). To do this, get a reaction force with an applicable socket wrench on the end (8) of the control rod (3).

6.3 Remove the parts that follow:

- The special nut (4)
- The washer or the shim (6) (if installed)
- The special washer (7).

7 Do the inspection of the back-end of the tail rotor servoactuator (11) to make sure that there is no rotation between the parts as follows:

7.1 Put the [Platform, left \(GG-01-00\)](#) adjacent to the left side of the vertical fin.

7.2 During this inspection, as alternative:

- Use the [Boroscope \(ZZ-00-00\)](#)
- If necessary, remove the access panel 360CT. Refer to [39-A-06-41-00-00A-010A-A](#).

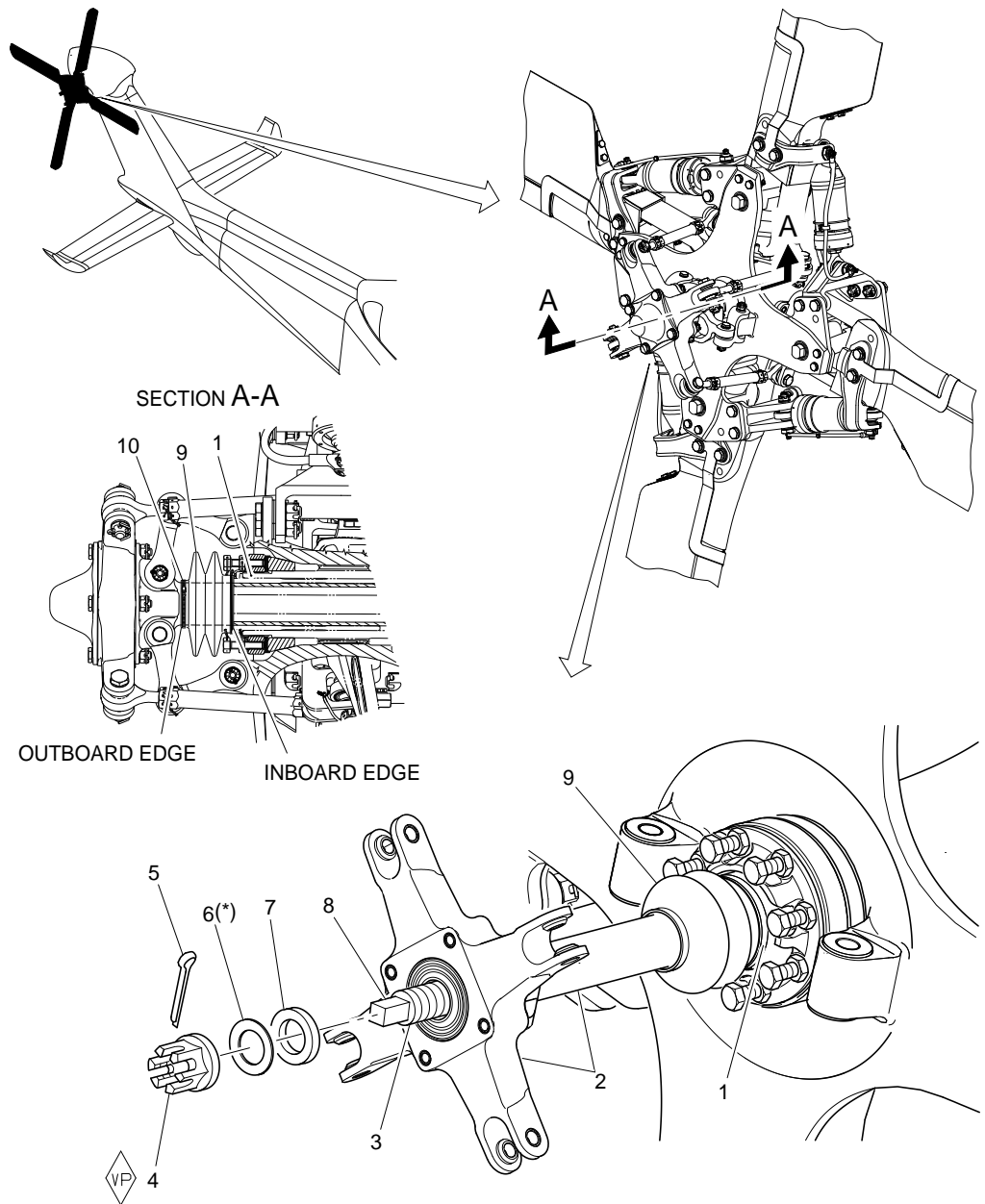
7.3 Make sure that the castellated holes of the trunnion (12) align with those of the pitch control rod (13) (Detail A of [Figure 1](#)).

7.4 Make sure that the cotter pin (14) is perfectly straight and has no signs of rotation. Differently, replace the tail rotor servoactuator (11), refer to [39-A-67-32-01-00A-520A-A](#) and [39-A-67-32-01-00A-720A-A](#).

8 Carefully remove the slider control assembly (2) from the slider bushing (1), the boot (9) and the control rod (3).

Requirements After Job Completion

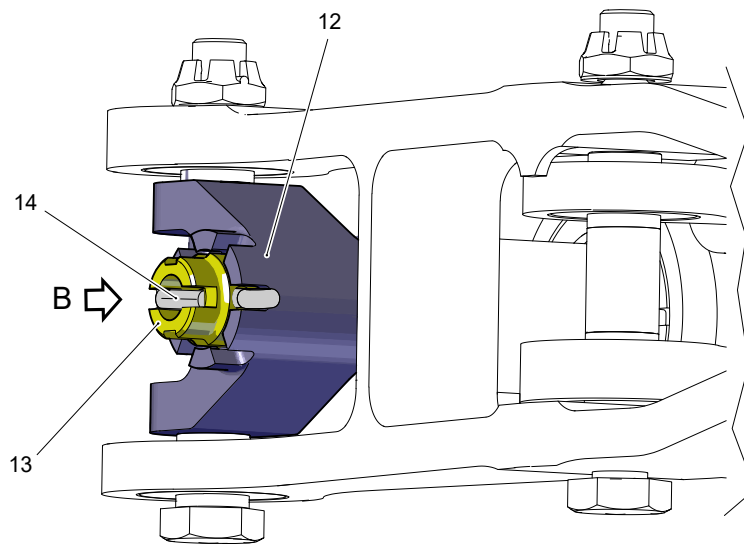
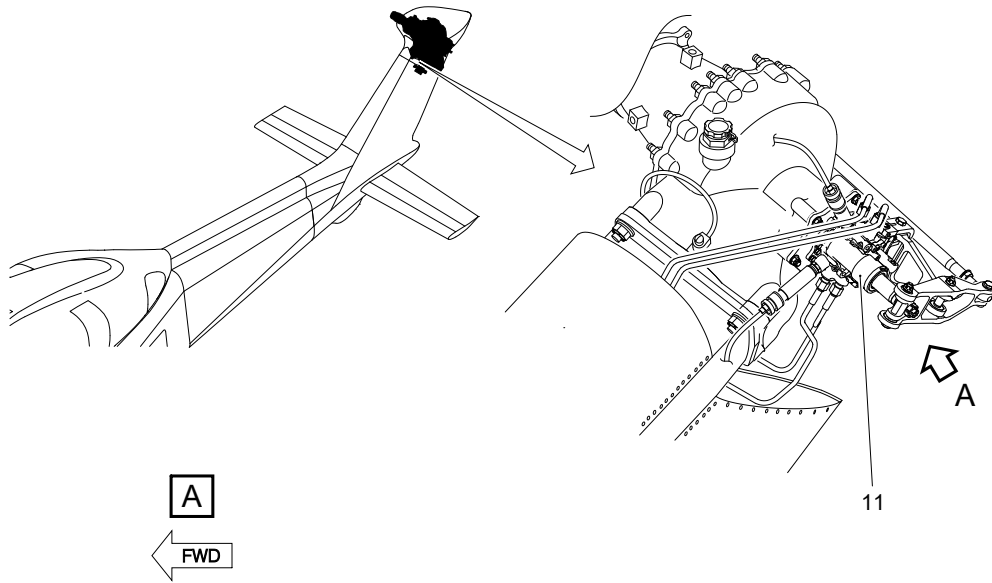
1 Install the sliding control assembly. Refer to [39-A-64-31-04-00A-720A-A](#) (SEE ANNEX 2 OF THIS TMI)



(*) This item is an alternative (it can be installed or not)

ICN-39-A-643104-G-00001-00376-A-010-01

Figure 1 (Sheet 1 of 2) Sliding control assembly - Remove procedure



ICN-39-A-643104-G-00001-38500-A-001-01

Figure 1 (Sheet 2 of 3) Sliding control assembly - Remove procedure

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Sliding control assembly - Install procedure

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References

Table 1 References

Data Module	Title
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-00-60-00-00A-010A-A	Critical parts - General data
39-A-18-10-02-00A-37CA-A	Tail rotor - Blade track and balance check
39-A-64-31-01-00A-720A-A	Pitch link - Install procedure
39-A-64-31-02-00A-720A-A	Scissors - Install procedure
39-A-64-31-03-00A-720A-A	Cover - Install procedure
39-A-67-32-01-00A-520A-A	Tail rotor servoactuator - Remove procedure

Table 1 References

Data Module	Title
39-A-67-32-01-00A-720A-A	Tail rotor servoactuator - Install procedure

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform, left	GG-01-00	1
Platform, right	GG-02-00	1
Boroscope	ZZ-00-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Corrosion inhibitor	C551	AR

Table 6 Supplies

Nomenclature	Identification No.	Qty
Safety wire	C014	AR

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
Sliding control assembly	64-31-00-01 -030	AR
Cotter pin	64-31-00-01 -010	1
Washer	64-31-00-01 -009A	1
Shim	64-31-00-01 -009A	1
Strap	64-31-00-01 -029M	1

Safety Conditions

WARNINGS

- The [Corrosion inhibitor \(C551\)](#) is a dangerous material. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for the corrosion inhibitor.
- This installation includes Vital Points (VP). During the procedure, you must obey the Local Regulations applicable to the Vital Points.

CAUTION

This component is a critical part. Examine the component for signs of structural damage before you install it on the helicopter. Refer to [39-A-00-60-00-00A-010A-A](#).

Procedure

- 1 Make sure that the [Platform, right \(GG-02-00\)](#) is adjacent to the right side of the fuselage.
- 2 Put the slider of the sliding control assembly (2, [Figure 1](#)) in its position on the control rod (3). Then, push it into the boot (9) and the slider bushing (1).

Note
Make sure that the slider of the sliding control assembly (2) is correctly engaged in the slider bushing (1).
- 3 Install the parts that attach the sliding control assembly (2) to the control rod (3) of the tail rotor actuator. Obey the instructions that follow:

Note

1. If you install the same items that you removed at the removal procedure, you get no problems to install the cotter pin (5).
2. It is permitted add the [Washer \(64-31-00-01 -009A\)](#) (6) P/N 3G6430A02751 between the special nut ([4](#)) and the special washer (7) if you get problems to install the cotter pin (5). ([VP](#))
3. If the washer (6) is not available, you can use the [Shim \(64-31-00-01 -009A\)](#) as alternative item.

3.1 Install the special washer (7) (the washer or shim (6) (if removed)) and the special nut ([4](#)). ([VP](#))

WARNING

When you torque the special nut ([4](#)), be careful to prevent the torsion of the control rod (3). ([VP](#))

Note

When you remove the special nut ([4](#)), it is recommended to get a second person to help you to lock the control rod (3) to prevent it to turn. ([VP](#))

3.2 Lock the control rod (3) to prevent it to turn when you do the [step 3.3](#). To do this, get a reaction force with an applicable socket wrench on the end (8) of the control rod (3).

3.3 Torque the special nut ([4](#)) to 45 thru 55 N m (398 thru 487 lbf in). ([VP](#))

3.4 Safety the special nut ([4](#)) with the new [Cotter pin \(64-31-00-01 -010\)](#) (5). ([VP](#))

4 Do the inspection of the back-end of the tail rotor servoactuator (11) to make sure that there is no rotation between the parts as follows:

4.1 Make sure that the [Platform, left \(GG-01-00\)](#) is adjacent to the left side of the vertical fin.

4.2 During this inspection, as alternative:

- Use the [Boroscope \(ZZ-00-00\)](#)
- If necessary, remove the access panel 360CT. Refer to [39-A-06-41-00-00A-010A-A](#).

4.3 Make sure that the castellated holes of the trunnion (12) align with those of the pitch control rod (13) (Detail A of [Figure 1](#)).

4.4 Make sure that the cotter pin (14) is perfectly straight and has no signs of rotation. Differently, replace the tail rotor servoactuator (11), refer to [39-A-67-32-01-00A-520A-A](#) and [39-A-67-32-01-00A-720A-A](#).

4.5 If removed, install the access panel 360CT. Refer to [39-A-06-41-00-00A-010A-A](#).

5 Safety the boot (9) to the slider of the sliding control assembly (2) as follows:

Note

The step that follows is applicable for the boot (9) with P/N 3G6420V00352 and 3G6420V00353

- 5.1 You must locked with lockwire to the inboard and outboard ends of the boot (9). Refer to (Section A–A, [Figure 1](#)).

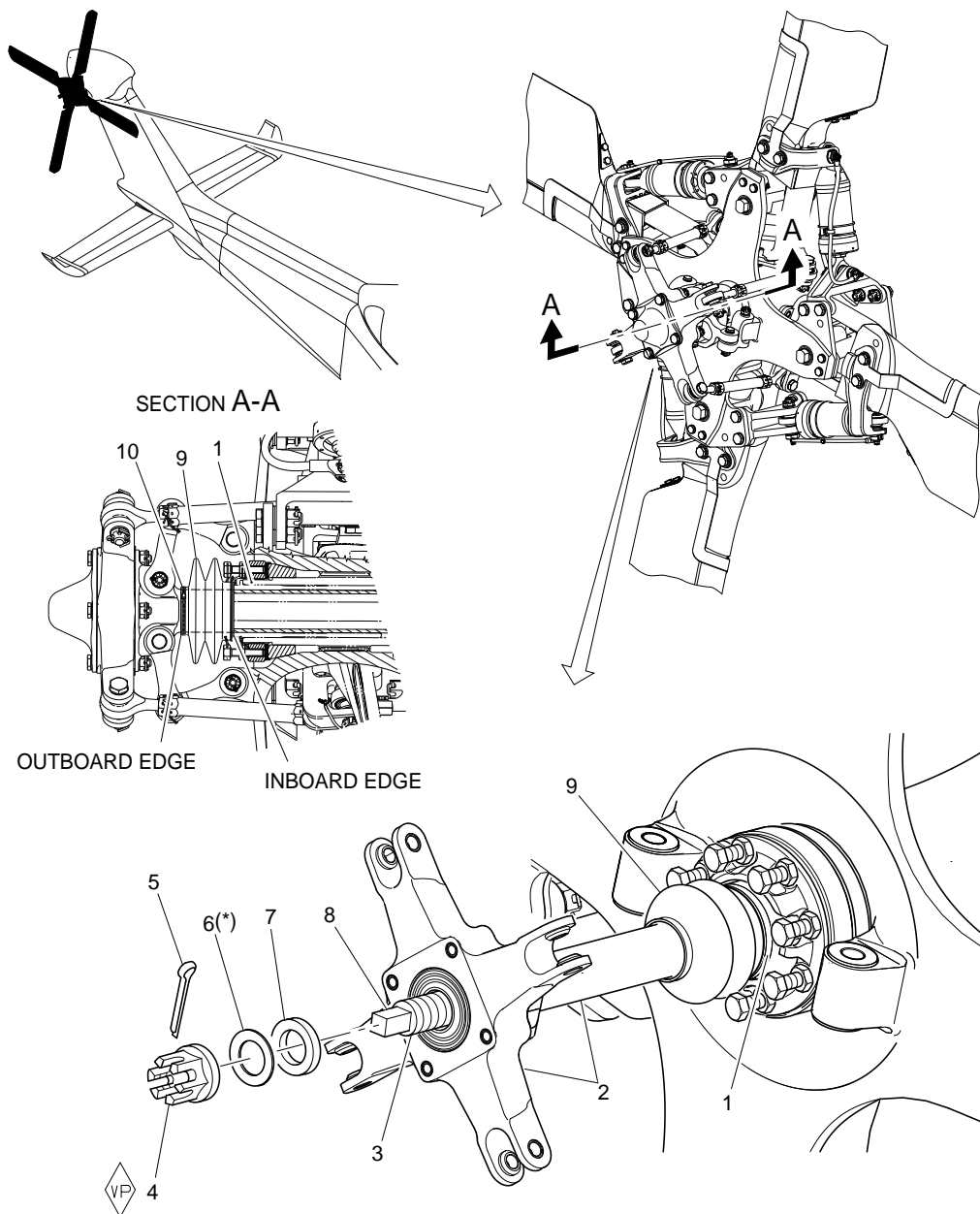
Note

The step that follows is applicable for the boot (9) with P/N 3G6420L00451.

- 5.2 You must locked with [Safety wire \(C014\)](#) to the inboard ends of the boot (9). Also, on the outboard end of the boot (9) you must install a new [Strap \(64-31-00-01 -029M\)](#) (10). Refer to (Section A–A, [Figure 1](#)).
- 6 Apply the [Corrosion inhibitor \(C551\)](#) to the cotter pin (5) and the special nut ([4](#)). ([VP](#))

Requirements After Job Completion

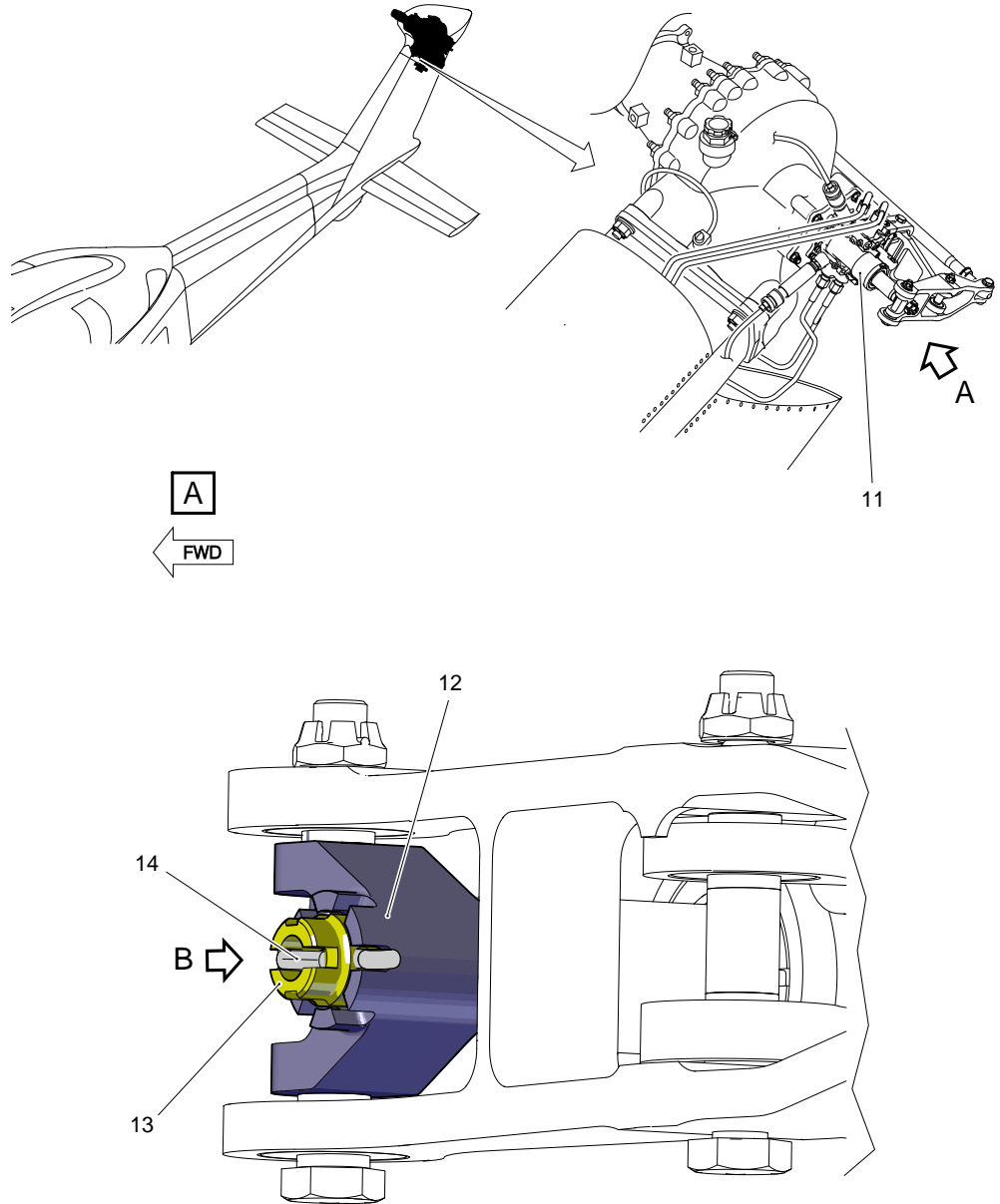
- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.
- 2 Remove the platforms from the left and the right side of the fuselage.
- 3 Install the cover. Refer to [39-A-64-31-03-00A-720A-A](#)
- 4 Install the scissors. Refer to [39-A-64-31-02-00A-720A-A](#)
- 5 Install the pitch links. Refer to [39-A-64-31-01-00A-720A-A](#)
- 6 If you installed a new sliding control assembly, do the blade track and balance check of the tail rotor. Refer to [39-A-18-10-02-00A-37CA-A](#)



(*) This item is an alternative (it can be installed or not)

ICN-39-A-643104-G-00001-00376-A-010-01

Figure 1 (Sheet 1 of 2) Sliding control assembly - Install procedure



ICN-39-A-643104-G-00001-38500-A-001-01

Figure 1 (Sheet 2 of 3) Sliding control assembly - Install procedure

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