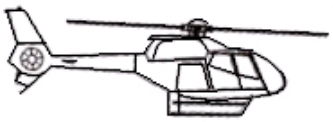


No. EC120-05-014

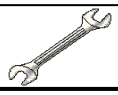
Civil version(s): B

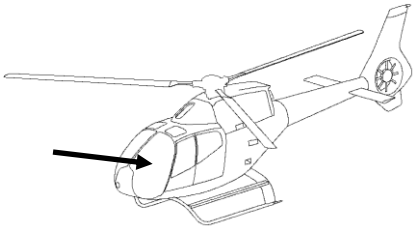
SERVICE BULLETIN

PROTECTIVE MEASURE

TIME LIMITS - MAINTENANCE CHECKS - Collective pitch control Periodic check of the drive tube/control pinion bonded connection located on the LH/RH twist grips

ATA: 76

For the attention of	
	



Revision No.	Date of issue
Revision 0	2016-02-23
Revision 1	2016-04-13
Révision 2	2021-03-26

Summary:

Periodically check the integrity of the bonding between the drive tube and the control pinion on the LH and RH twist grips.

Reason for last Revision:

The purpose of Revision 2 is to specify that helicopters which have complied with Service Bulletin No. 76-010 are not concerned by compliance with this Service Bulletin.

Compliance:

This Service Bulletin is an amendment to the instructions for continued airworthiness.

1. PLANNING INFORMATION

1.A. EFFECTIVITY

1.A.1. Helicopters/installed equipment or parts

On helicopters equipped with LH and RH twist grips, all Part Numbers, and which have not complied with Service Bulletin No. 76-010 (Replacement of the twist grip drive tube).

NOTE 1

Refer to the Aircraft Log Book to identify the current modification status of the helicopter.

1.A.2. Non-installed equipment or parts

On LH and RH twist grips, all Part Numbers.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Revision 0:

Several cases of debonding of the connection between the twist grip control pinion and drive tube have been reported.

Bonding resistance tests have been performed. The results are satisfactory. However, the alteration of the bonding strength over time cannot be precisely determined.

Consequently, and pending a modification, periodically check the bonded connection between the drive tube and the control pinion.

Revision 1:

Clarification of the drive tube replacement procedure on the LH collective lever described in paragraph 3.B.2.b.

Revision 1 does not affect compliance with Revision 0 of this Service Bulletin.

Revision 2 :

Airbus Helicopters has implemented a procedure for replacement of the twist grip drive tube through Service Bulletin No. 76-010. The periodic check of the bonded connection between the drive tube and the control pinion thus does not need to be performed.

The purpose of Revision 2 of this Service Bulletin is to inform operators that compliance with Service Bulletin No. 76-010 cancels the instructions of this Service Bulletin.

1.D. DESCRIPTION

Compliance with this Service Bulletin consists in:

- checking the integrity of the bonding between the twist grip drive tube and control pinion,
- replacing the drive tube equipped with the control pinion, if necessary.

1.E. COMPLIANCE

1.E.1. Compliance at H/C manufacturer level

Helicopters/installed equipment or parts:

Not applicable.

Non-installed equipment or parts:

Not applicable.

1.E.2. Compliance in service

Helicopters/installed equipment or parts:

- For helicopters equipped with twist grips which were manufactured more than 5 years ago or for which the date of manufacture is unknown:

NOTE 2

The date of manufacture is indicated on the identification label of the collective lever (refer to the Appendix, paragraph 4).

. comply with paragraph 3.B.1. of this Service Bulletin within 13 months following receipt of this Service Bulletin, issued on the date indicated at the bottom of the page,
then,
. comply with paragraph 3.B.1. every 26 months.

- For helicopters equipped with twist grips which were manufactured less than 5 years ago:

NOTE 3

The date of manufacture is indicated on the identification label of the collective lever (refer to the Appendix, paragraph 4).

. comply with paragraph 3.B.1. of this Service Bulletin within 26 months following receipt of this Service Bulletin, issued on the date indicated at the bottom of the page,
then,
. comply with paragraph 3.B.1. every 26 months.

Non-installed equipment or parts:

- For RH twist grips:
  . comply with paragraph 3.B.3. at the latest before installation of the collective lever on the helicopter.

- For LH twist grips:
  . comply with paragraph 3.B.1. after the installation of the collective lever on the helicopter.

NOTE 4

The check of the LH collective lever requires the presence of a RH collective lever installed on the helicopter as per AMM Task 67-10-00, 4-2.

1.F. APPROVAL

Approval of modifications:

Not applicable.

Approval of this document:

The technical information contained in this Service Bulletin Revision 0 was approved on February 22, 2016 under the authority of EASA Design Organization Approval No. 21J.056 for helicopters of civil versions subject to an Airworthiness Certificate.

The technical information contained in this Service Bulletin Revision 1 was approved on April 12, 2016 under the authority of EASA Design Organization Approval No. 21J.056 for helicopters of civil versions subject to an Airworthiness Certificate.

The technical information contained in this Service Bulletin Revision 2 was approved on February 15, 2021 under the authority of EASA Design Organization Approval No. 21J.700 for helicopters of civil versions subject to an Airworthiness Certificate.

1.G. MANPOWER

For compliance with this Service Bulletin, Airbus Helicopters recommends the following personnel qualifications:

Qualification: - 1 Mechanical Engineering Technician,
- 1 Electrical Engineering Technician.

The time for the operations is given for information purposes, for a standard configuration.

Estimated Man-hours: - approximately 15 minutes for the check,
- approximately 5 hours for the replacement of the pinion and drive tube (if necessary).

1.H. WEIGHT AND BALANCE

Not applicable.

1.I. POWER CONSUMPTION

Not applicable.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

1.K. REFERENCES

The following documents are necessary for compliance with this Service Bulletin:

- AMM 24-00-00, 3-1: General safety instructions - Electrical power supply system
- AMM 53-70-00, 4-1: Removal/Installation - Fairings under the cabin
- AMM 67-00-00, 3-1: General safety instructions - Rotor flight controls
- AMM 67-00-00, 6-1: Rotor flight controls - Check after maintenance work
- AMM 67-10-00, 4-2: Removal/Installation - Collective levers
- AMM 67-10-00, 8-2: Replacement - Control box on the collective levers
- AMM 76-12-00, 4-5: Manual control - Removal/Installation - Lock assy

- MTC 20.02.05.404: Joining - Joining by bolts and nuts
- MTC 20.02.06.402: Safetying and joining assemblies - Safetying with lockwire

- IN: 3643-I-00: Introduction of the digital Service Bulletin reporting service R-TEX
- IN: 3481-I-00: The Marketplace: an AirbusWorld eOrdering service

1.L. OTHER AFFECTED PUBLICATIONS

Not applicable.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Not applicable.

2. EQUIPMENT OR PARTS INFORMATION

2.A. EQUIPMENT OR PARTS: PRICE - AVAILABILITY - PROCUREMENT

Price

For any information concerning the components, please contact the Sales and Customer Relations Department of the Airbus Helicopters Network.

Availability

The components will be delivered on customer's order.

Procurement conditions

Order the required quantity (unless otherwise specified)

from

Airbus Helicopters
Etablissement de Marignane
Direction Ventes et Relations Client
13725 MARIGNANE CEDEX
France

NOTE

On the purchase order, please specify the mode of transport, the destination and the serial numbers of the aircraft to be modified.

2.B. LOGISTIC INFORMATION

Not applicable.

2.C. EQUIPMENT OR PARTS REQUIRED PER HELICOPTER/COMPONENT

Kits to be ordered for one helicopter or one assembly:

Designation	Qty	New P/N	Item	Former P/N →	Instruction
Drive tube, RH lever	1	C761A2012101	1	C761A2012101	Retain
Drive tube, LH lever	1	C761A2013101	2	C761A2013101	Retain

Equipment or parts to be ordered separately:

Designation	Qty	New P/N	Item	Former P/N →	Instruction
Clamp	1	ASNA0021-25G49	3	/	/
Screw	1	22125BC050014L	4	/	/
Nut	1	22431BC050L	5	/	/
Lock washer	1	23351CA050	6	/	/
Lockwire	A/R	EN3628-0.50	7		
Self-locking nut	1	ASN52320BH050N	8		

Consumables to be ordered separately:

Refer to the Work Cards and Tasks referenced in this Service Bulletin and the list below:

Designation	Qty	Consumable P/N	CM	Item
Grease	A/R	AIR 4215B	CM150	9

You can order the consumables from the AirbusWorld Marketplace through e-ordering (IN 3481-I-00).
If you can't get access to e-ordering, please contact your Logistic Focal Point.

Specific tooling:

Designation	Qty	Tool P/N or equivalent	Item
Twist grip adjustment tool	1	350A942720.00	zz
Spring scale	1		yy

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

Read the general electrical instructions as per AMM Task 24-00-00, 3-1.
Read the general instructions concerning flight controls as per AMM Task 67-00-00, 3-1.

3.B. WORK STEPS

3.B.1. Check for integrity of the bonding between the LH and RH twist grip drive tube and control pinion (Figures 1 and 2)

- Make sure that the RH and LH twist grips are in the "OFF" position.
- De-energize the helicopter electrical power systems.
- Install twist grip adjustment tool (zz) or the locally manufactured tool (see Figure 2) on the twist grip, as shown in Figure 1.

NOTE 1

Twist grip adjustment tool (zz) can be ordered from Airbus Helicopters or manufactured as per Figure 2.

- Apply a tangential load of 35N (7.87 lbf) to the collective lever twist grip in the engine fuel flow reduction direction using a spring scale (yy).

NOTE 2

A load of 35N (7.87 lbf) must be applied to the tool in accordance with arrow A. Make sure not to unfold clamp (3), Figure 2.

- If the grip does not rotate, leave as is.
- If the grip rotates, replace the drive tube and the control pinion before resuming flights, as per paragraph 3.B.2.:

. inform Airbus Helicopters:
  - contact the Technical Support Department:

Fax: +33(0)4-42-85-99-66
E-mail: support.technical-hydraulics.ah@airbus.com

- Remove twist grip adjustment tool (zz) or the locally manufactured tool.

3.B.2. Replacement of the drive tube and control pinion of the RH or LH collective lever

3.B.2.a. Preliminary steps

- Remove the center bottom fairing as per AMM Task 53-70-00, 4-1.
- Remove the collective lever as per AMM Task 67-10-00, 4-2.
- Remove the control box as per AMM Task 67-10-00, 8-2.

3.B.2.b. Replacement of the collective lever drive tube (Figure 3)

1) For the LH collective lever:

- Remove screw (b).
- Remove drive tube (e) from lever tube (d).
- Remove circlip (m) and bush (k) from drive tube (e).
- Remove bush (a).
- Apply grease (9) to the outside of bush (a), as per Figure 3.
- Position bush (a) in lever tube (d).
- Install circlip (m) and bush (k) on drive tube (2).
- Apply grease (9) to the control pinion and to the outside of bush (k) of drive tube (2) as per Figure 3.
- Position drive tube (2) in lever tube (d) and in bush (a).
- Align the locking hole in drive tube (2), the hole in bush (a), the hole in lever tube (d) and the opening in grip (c).
- Install screw (b) in order to lock drive tube (2).
- Perform a feel check or a visual check using a lamp to check for projection of screw (b) inside drive tube (2).

NOTE 3

Screw (b) must be flush with grip (c).

2) For the RH collective lever:

- Remove the lockwire from screws (t).
- Remove nut (v) and washer (w).
- Discard nut (v).
- Remove screw (s) and washer (w).
- Remove screws (t) and washers (w).
- Remove lock assembly (x).
- Remove screw (b).
- Mark a reference line on eccentric (g) and the collective lever base in order to identify the initial installation position.
- Remove the 3 screws (n) and washers (o) and (p).
- Remove drive tube (e) from lever tube (d).
- Remove bush (a).
- Remove lock washer (q) and screw (r).
- Remove cam (h) from drive tube (e).
- Remove bushes (f) and eccentric (g).
- Apply grease (9) to the control pinion and to bushes (f) of drive tube (1) as per Figure 3.
- Position bushes (f), eccentric (g) and drive tube (1) on the collective lever as previously identified.

- Position cam (h) on drive tube (1).
- Align the locking holes in cam (h) and in drive tube (1).
- Install a lock washer (6) and screw (r).
- Tighten screw (r) to standard torque as per MTC Work Card 20.02.05.404.
- Fold down the lugs of lock washer (6).
- Apply grease (9) to the outside of bush (a) as per Figure 3.
- Position bush (a) in lever tube (d).
- Position drive tube (1) in lever tube (d) and in bush (a).
- Align the locking hole in drive tube (1), the hole in bush (a), the hole in lever tube (d) and the opening in grip (c).
- Install screw (b) in order to lock drive tube (1).
- Perform a feel check or a visual check using a lamp to check for projection of screw (b) inside drive tube (1).

NOTE 4

Screw (b) must be flush with grip (c).

- Install the 3 screws (n) and washers (o) and (p).
- Tighten the 3 screws (n) to standard torque as per MTC Work Card 20.02.05.404.
- Install lock assembly (x).
- Install washers (w) and screws (t).
- Install washer (w) and screw (s).
- Install washer (w) and a nut (8).
- Tighten screws (s) and (t) to standard torque as per MTC Work Card 20.02.05.404.
- Safety screws (t) with lockwire (7) as per MTC Work Card 20.02.06.402.

3.B.2.c. Final steps

- Install the control box as per AMM Task 67-10-00, 8-2.
- Install the collective lever as per AMM Task 67-10-00, 4-2.
- Install the center bottom fairing as per AMM Task 53-70-00, 4-1.

3.B.2.d. Adjustment and check after replacement

- Adjust the lock of lock assembly (x) as per AMM Task 76-12-00, 4-5.
- Install the center bottom fairing as per AMM Task 53-70-00, 4-1.
- Check the flight controls as per AMM Task 67-00-00, 6-1.

3.B.3. Check for integrity of the bonding between the twist grip drive tube and control pinion of the RH collective lever on non-installed equipment or parts (Figures 1, 2 and 3)

- Maintain the RH collective lever using a vice fitted with soft jaws in area E as per Figure 3.
- Install twist grip adjustment tool (zz) or the locally manufactured tool (Figure 2) on the collective lever twist grip, as shown in Figure 1.

NOTE 5

Twist grip adjustment tool (zz) can be ordered from Airbus Helicopters or manufactured as per Figure 2.

- Apply a tangential load of 35N (7.87 lbf) to the collective lever twist grip in the engine fuel flow reduction direction using a spring scale (yy).

NOTE 6

A load of 35N (7.87 lbf) must be applied to the tool in accordance with arrow A. Make sure not to unfold clamp (3) Figure 2.

- If the grip does not rotate, leave as is.
- If the grip rotates, replace the drive tube and the control pinion at the latest before its installation on the helicopter, as per paragraph 3.B.2.

. Inform Airbus Helicopters:
- contact the Technical Support Department:

Fax: +33(0)4-42-85-99-66
E-mail: support.technical-hydraulics.ah@airbus.com

- Remove twist grip adjustment tool (zz) or the locally manufactured tool.
- Remove the collective lever from the vice.

3.C. RECORD OF COMPLIANCE

Compliance with this document:

Record compliance with this Service Bulletin, with the revision number, in the helicopter documents.

Record compliance with this Service Bulletin (see IN 3643-I-00 for instructions):
QR-Code or hypertext link

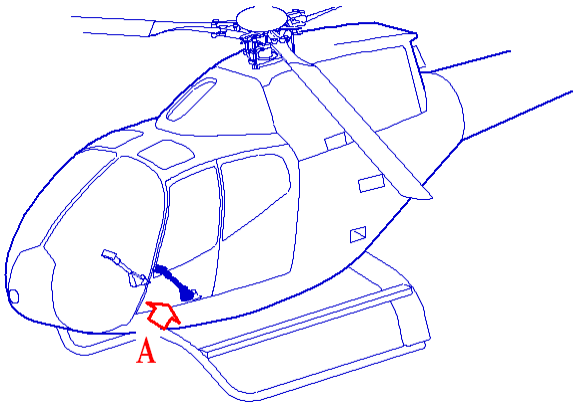
SB EC120-05-014

NOTE 7

The recording of compliance with Service Bulletins in the R-Tex tool does not replace the recording in the helicopter documents.

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Not applicable.



A

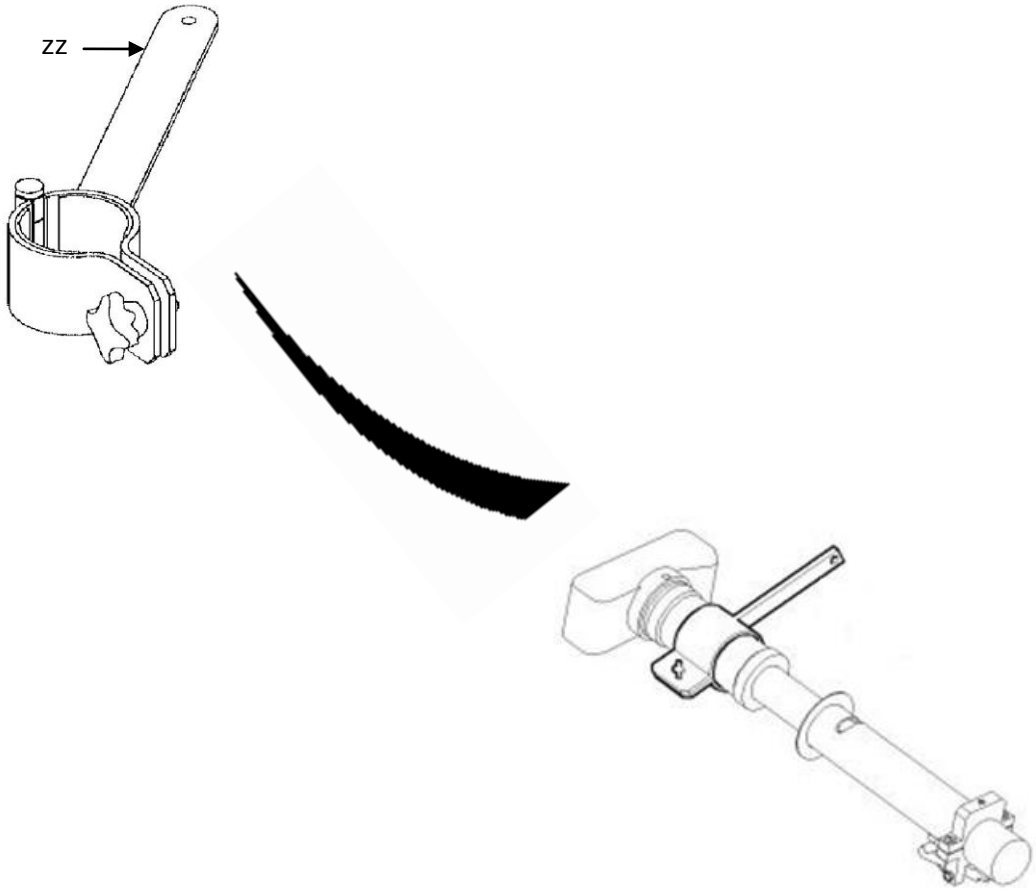
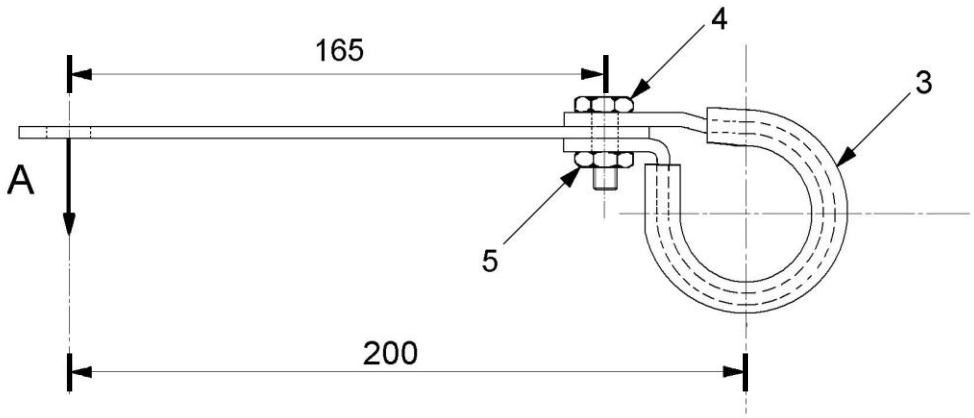


Figure 1: Collective levers



NOTE

This locally manufactured tool is composed of a clamp (3), a screw (4), a nut (5) and a metal part acting as lever arm.

Figure 2: Locally manufactured tool

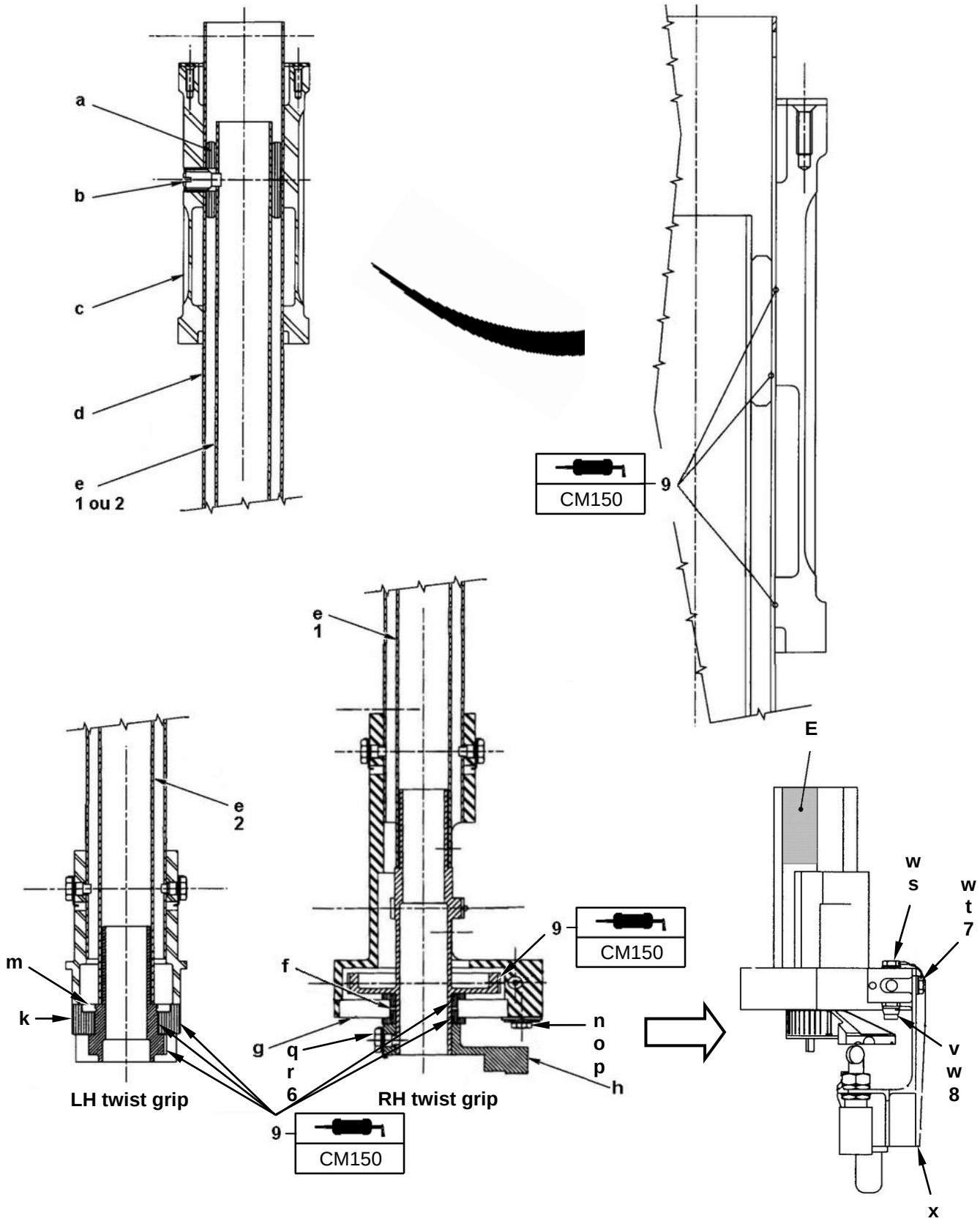
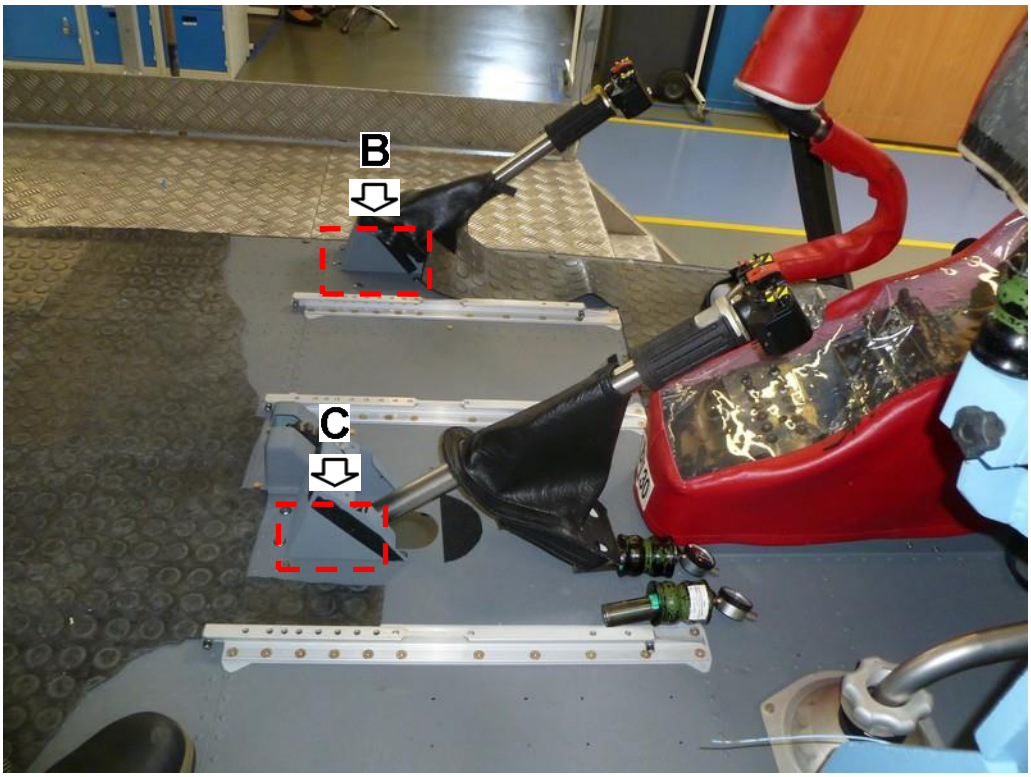


Figure 3: Replacement of the drive tube equipped with the control pinion

4. APPENDIX



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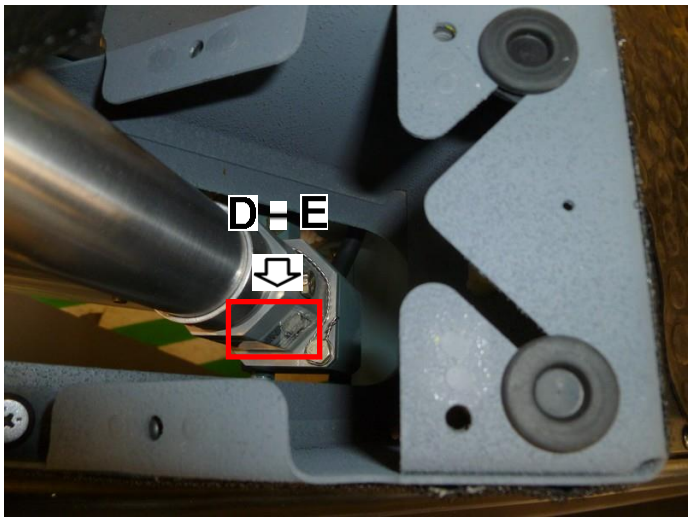
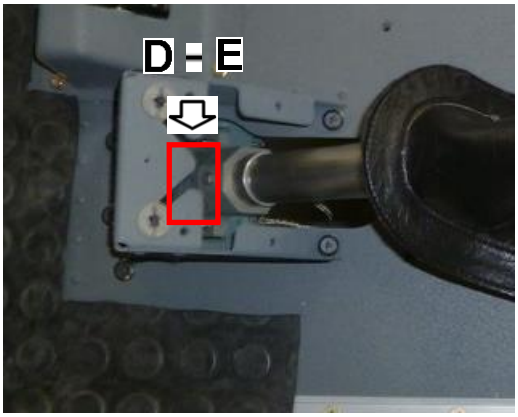


C



Location of the identification labels of the pilot and copilot collective levers

D

Date of manufacture of the lever (Supplier: NSE)

E

Date of manufacture of the lever (Supplier: SODITECH)

NOTE

The type of label and the location of the date of manufacture on the label differ depending on the supplier of the collective lever (NSE or SODITECH).