



No. EC155-63-019

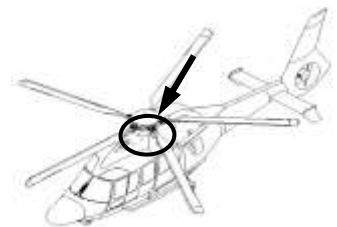
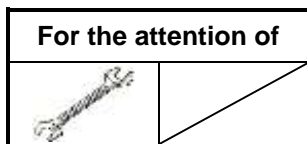
Civil version(s): B, B1

SERVICE BULLETIN

CORRECTIVE MEASURE

MAIN ROTOR DRIVE - Engine-MGB coupling Installation of block shims at the attachment points of the shaft coupling MGB/engine

Related to modification 0763C91



Revision No.	Date of issue
Revision 0	2022-11-09

Summary:

The objective of this Service Bulletin is to install block shims to replace the washers at the attachment points of the engine-MGB coupling shafts. These block shims decrease the contact pressure and balance the tightening loads of the pins and nuts on the engine-MGB coupling shafts. This prevents peening marks (caused by the tightening torque that deforms the washer) on the bearing surfaces of the coupling shafts.

Compliance:

Airbus Helicopters recommends that you comply with this Service Bulletin.

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1. PLANNING INFORMATION



CAUTION

MAKE SURE THAT THE MODIFICATIONS RELATED TO THIS SERVICE BULLETIN AGREE WITH THE HELICOPTER CONFIGURATION AT THIS TIME. IF THE MODIFICATIONS DO NOT AGREE WITH THE HELICOPTER CONFIGURATION:

- PREPARE THE NECESSARY ADAPTATION WORK.
- GET THE APPROVAL BY THE APPLICABLE LOCAL AIR TRANSPORT AUTHORITIES.
- COMPLY WITH THE AIRWORTHINESS REQUIREMENTS.

THIS SERVICE BULLETIN IS WRITTEN FOR THE INITIAL HELICOPTER CONFIGURATION SPECIFIED IN THE INDIVIDUAL INSPECTION LOG BOOK. IT INCLUDES ONLY THE POST-DELIVERY CONFIGURATION CHANGES THAT ARE KNOWN AND APPROVED BY AIRBUS HELICOPTERS.

1.A. EFFECTIVITY

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

Helicopters that are PRE MOD 0763C91.

NOTE 1

You can identify the modification status of the helicopter in the Section of applied modifications records in the Individual Inspection Log Book and/or the Aircraft Log Book.

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

- Front coupling shafts (PRE MOD 0763C91):
 - . MP/N 365A35-1064-00 or
 - . MP/N 365A35-1064-01 or
 - . MP/N 365A35-1073-00 or
 - . MP/N 365A35-1073-01.
- Rear coupling shafts (PRE MOD 0763C91):
 - . MP/N 365A35-1067-00 or
 - . MP/N 365A35-1067-01.

NOTE 2

You can identify the modification status of the equipment in the Log Cards (FM).

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1.B. ASSOCIATED REQUIREMENTS



BEFORE THE NEXT FLIGHT, MAKE SURE THAT THE AIRWORTHINESS LIMITATIONS SECTION (ALS) IS AT THE LATEST UPDATE. MAKE SURE THAT THIS UPDATED THE AIRWORTHINESS LIMITATIONS SECTION (ALS) IS APPROVED BY THE APPLICABLE AUTHORITIES OR THROUGH A DELIVERY NOTE.

1.C. REASON

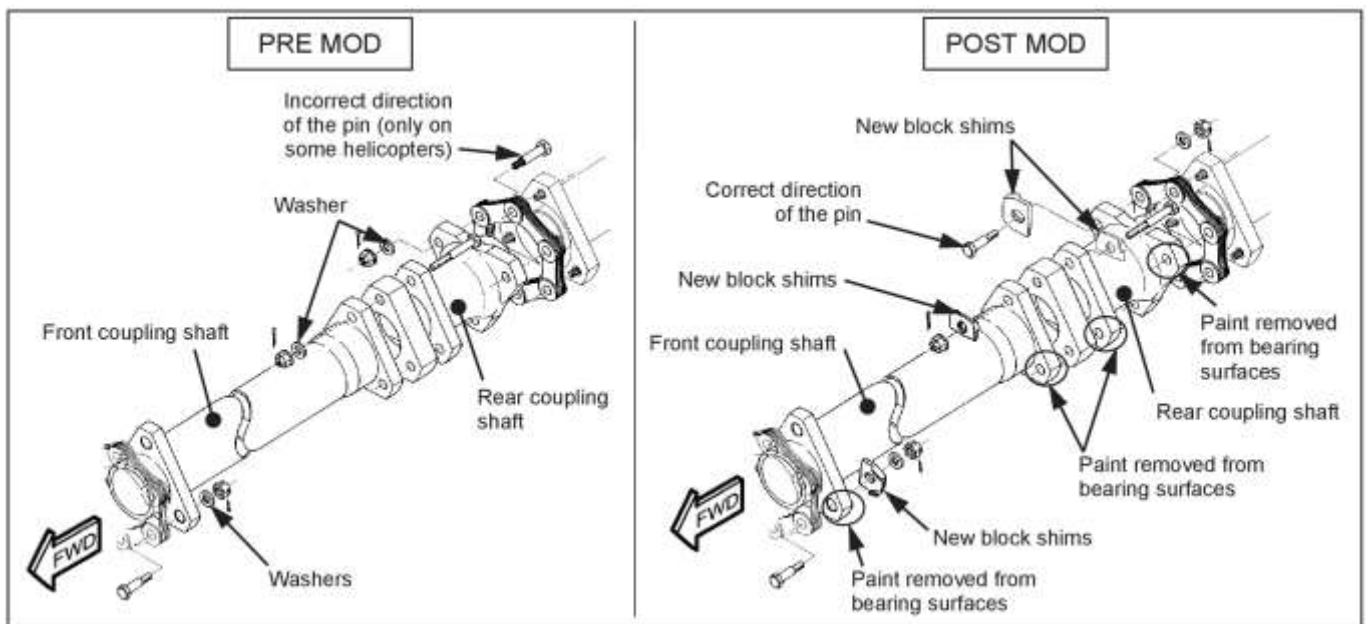
During a scheduled maintenance check, the technicians found peening marks on the surfaces of the attachment points of the coupling shafts of the engine-MGB link assembly.

Investigations showed that the tightening torque caused damage to the washers below the nuts. The deformation of the washers caused unequal loading and, as a result, peening marks on the bearing surfaces of the coupling shafts.

Airbus Helicopters introduces modification 0763C91 through this Service Bulletin to replace the washers with block shims at the attachment points of the engine-MGB coupling shafts. These block shims decrease the contact pressure and balance the tightening loads of the pins and nuts on the engine-MGB coupling shafts.

This modification also has the functions that follow:

- Correction of the direction of the pin installed at the rear coupling shaft (only on some helicopters)
- Removal of the paint from the bearing surfaces of the coupling shafts to agree with the current design standards.



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1.D. DESCRIPTION

This Service Bulletin includes the work steps that follow:

- Removal of the front and rear coupling shafts from the left and right engine-MGB link assemblies
- Removal of paint from the bearing surfaces of the coupling shafts
- Installation of the front and rear coupling shafts with new block shims.

1.E. COMPLIANCE

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

Helicopters/installed equipment or parts:

Not applicable.

Non-installed equipment or parts:

Airbus Helicopters recommends that you comply with the instructions of paragraph [3.B.5.](#) aligned with your operational and contractual constraints.

1.E.2. Compliance in service

It is the operator who does the work on the helicopter.

Helicopters/installed equipment or parts:

Airbus Helicopters recommends that you comply with the instructions of paragraph [3.](#) (but this is not applicable to paragraph [3.B.5.](#)) in relation to your operational and contractual constraints.

Non-installed equipment or parts:

Before you install the the front and rear coupling shafts identified in paragraph [1.A.2.](#), do a check of the stock and do the modification when applicable as given in paragraph [3.B.5.](#)

It is the operator who makes the decision on the level of stock related to the compliance with this Service Bulletin.

1.F. APPROVAL

Approval of modifications:

The information or instructions relate to modification 0763C91, through CRD DA07.63C91C Issue 3 which was approved on August 31, 2022 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

Approval of this document:

The technical information contained in this Service Bulletin Revision 0 was approved on November 04, 2022 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.



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1.G. MANPOWER



Airbus Helicopters recommends that the personnel who will do this Service Bulletin have these qualifications:

Qualification: 1 Mechanical Technician.

Specialists: 1 Pilot.



The man-hours are an estimate given for information only and for a standard helicopter configuration.

Estimated Man-hours: - 26.5 hours for the Mechanical Technician
- 0.5 hour for the Pilot.



The helicopter downtime is an estimate given for information only and for a standard helicopter configuration.

The estimate of the helicopter downtime is four days.

1.H. WEIGHT AND BALANCE



Weight:+ 0.172 kg

Longitudinal Moment:+ 0.786 m.kg

After you complete the work, record the new weight and moment in your applicable document.

1.I. POWER CONSUMPTION

Not changed.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

1.K. REFERENCES

These documents are necessary to comply with this Service Bulletin:

Aircraft Maintenance Manual (AMM):

AMM: 24-00-00-481: Power Supply - Electrical Power Systems

AMM: 63-10-01-061: Removal / Installation - Coupling Shaft

AMM: 80-10-01-061: Removal / Installation - Starter Generator

Standard Practices Manual (MTC):

MTC: 20-04-01-102: Use of cleaning products on individual parts and on aircraft - Cleaning

MTC: 20-04-02-401: Chemical stripping of organic surface finishes - Stripping

MTC: 20-04-04-403: Touch-up of the Alodine 1200 protection (Bonderite M-Cr 1200) - Surface treatment before painting

MTC: 20-04-05-402: Application of Primer EPOXY P05 - P20 - Paint and primer application procedure

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- MTC: 20-07-01-201: Handling of helicopters in a hangar and in a prepared area - Handling
MTC: 20-07-02-201: Helicopter parked in a repair shop - Safety instructions
MTC: 20-07-03-408: Appearance checks on an aircraft after inspection or repair - Technical instructions
MTC: 20-08-05-101: Drafting and updating the log card (FM) - General rules applicable to aircraft
MTC: 20-08-05-102: Rules in force applicable for repair and maintenance of aircraft - General rules applicable to aircraft
MTC: 20-08-05-103: Monitoring of parts in operation - marking - service life customization - General rules applicable to aircraft

Flight Manual (FLM)

Information Notice (IN):

- IN: 3481-I-00: The Marketplace: an AirbusWorld eOrdering service
IN: 3686-I-00: Publishing of complementary Instructions for Continued Airworthiness through Delivery Notes
IN: 3785-I-00: Introduction of the digital Service Bulletin reporting service SB Insight

1.L. OTHER AFFECTED PUBLICATIONS



CAUTION

TO COMPLY WITH THIS SERVICE BULLETIN, THE OPERATOR MUST MAKE SURE THAT ALL THE MAINTENANCE DOCUMENTS NECESSARY FOR THE MAINTENANCE OF THIS INSTALLATION ARE AVAILABLE. IF THEY ARE NOT AVAILABLE, THE OPERATOR MUST CONTACT AIRBUS HELICOPTERS TO GET THESE DOCUMENTS.

Publications already updated:

The manuals shown below are updated with the modification:

- Aircraft Maintenance Manual (AMM)
- Airworthiness Limitations Section (ALS)
- Master Servicing Manual (MSM).

You will receive the documents to which you subscribe.

Airbus Helicopters will update the Illustrated Parts Catalog (IPC) when the customer sends an order for it.

Publications to be updated:

The changes to Instructions for Continued Airworthiness (ICA) which are required as a result of this SB will be incorporated in the next Normal Revision. Refer to DN.105.0005.0 until the information is available in the published technical documentation.

NOTE 3

You can find more information about Delivery Notes in Information Notice IN 3686-I-00.

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1.M. PART INTERCHANGEABILITY OR MIXABILITY

Interchangeability:

The PRE MOD and the POST MOD coupling shafts are not interchangeable.

Mixability:

You must not use the PRE MOD and POST MOD coupling shafts together.

You must not use the PRE MOD and POST MOD engine-MGB link assemblies (between the left and right systems) together.

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2. EQUIPMENT OR PARTS INFORMATION

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

Price

For information about the price of the modification kits and/or components, or for aid, contact the Airbus Helicopters Network Sales and Customer Relations Department.

Availability

Contact the Sales and Customer Relations Department to know the delivery lead times.

Procurement

Send an order for the necessary quantities to the Airbus Helicopters Network Sales and Customer Relations Department:

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

In the purchase order, write the information that follows:

- The mode of transport
- The destination
- The serial numbers of the helicopters to change.

2.B. LOGISTIC INFORMATION

Not applicable.

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

Kits to be ordered for one helicopter or one assembly:

Key Word	Qty	New Reference	Item	Former Reference	→	Instruction
MGB-Engine connection block addition kit:		365A07-63C9-1071				
Pin	6	365A35-1072-22	1	365A35-1072-20 or 365A35-1072-21		See NOTE 1
Shim	12	365A35-2030-21	2			
Shim	12	365A35-2031-20	3			
Pin	12	366A35-0126-21	4	366A35-0126-20		See NOTE 1
Hex. castellated nut	18	ASNA0045BC080L	5			
Split pin	24	EN2367-18014	6			
Washer	12	NAS1149C0532R	7			

NOTE 1

To prevent the risk of installation on helicopters that complied with this Service Bulletin, we recommend that you discard the used pins (P/N: 365A35-1072-20 or 365A35-1072-21 and 366A35-0126-20).

NOTE 2

Only one kit is necessary for the upgrade of the left and right coupling shafts.

NOTE 3

The use of the 6 shims (3) is not necessary for helicopters that have the front coupling shafts P/N 365A35-1064-00 or P/N 365A35-1064-01. The use of the shims (11) is necessary.

Equipment or parts to be ordered separately:

Key Word	Qty	New Reference	Item	Old Reference	→	Instruction
Shim	6	365A35-2032-20	11			See NOTE 3

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Consumables to be ordered separately:

Refer to the Tasks and Work Cards identified in this Service Bulletin and the table below:

Key Word	Qty	Reference	CM	Item
Chemical conversion material	1 kg	Alodine 1200	CM 324	8
P05 epoxy primer	1 kg	DHS186-111.20	CM 487	9
P20 epoxy primer	100 ml	DHS186-111.40	CM 488	10

You can send an order for the consumables from the AirbusWorld Marketplace through e-ordering (IN 3481-I-00).

If you cannot get access to e-ordering, please contact your Logistic Focal Point.

Special tools:

Refer to the Tasks and Work Cards identified in this Service Bulletin.

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

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3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

- Comply with the instructions about the handling of helicopters in a hangar and in a prepared area. Refer to Work Card 20-07-01-201 (MTC).
- Comply with the safety instructions for helicopters parked in a repair shop. Refer to Work Card 20-07-02-201 (MTC).
- Comply with the rules in force applicable to the repair and maintenance of aircraft. Refer to Work Card 20-08-05-102 (MTC).

3.B. WORK STEPS



CAUTION

MAKE SURE THAT YOU PREVENT ALL POSSIBLE FOREIGN OBJECT DAMAGE (FOD).

3.B.1. Preliminary steps

- Park the helicopter in a maintenance hangar.



CAUTION

BEFORE YOU WORK ON ELECTRICAL CIRCUITS, READ TASK 24-00-00-481 (AMM).

- Disconnect all the electrical power supplies.
- Install the applicable access equipment.
- Remove and/or open all applicable cowlings, panels, doors and other items of equipment to get access to the different work areas.

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3.B.2. Procedure

Only the procedure for the left side is given. Do the same procedure for the right side, unless differently specified.

NOTE 1

The right starter generator is removed during the removal of the coupling shafts. Refer to Task 80-10-01-061 (AMM).

3.B.2.a. Removal of the engine-MGB coupling shafts ([Figure 1](#), DETAIL A - PRE MOD)

- Remove the front coupling shaft (a) and the rear coupling shaft (b). Refer to Task 63-10-01-061 (AMM).
- Discard:
 - . The washers (c)
 - . The split pins (d)
 - . The nuts (e) and (f).

NOTE 2

We recommend that you discard the pins (g) and (h) to prevent the risk of installation on helicopters that complied with this Service Bulletin.

NOTE 3

Some helicopters were delivered with the pins (h) installed in the incorrect direction (the pin heads point to the engine) as shown in the figure. The latest update of the Aircraft Maintenance Manual (AMM) shows the correct direction (the pin heads point to the Main Gear Box).

3.B.2.b. Removal of the paint from the bearing surfaces ([Figure 2](#))

- Refer to Work Card 20-04-02-401 (MTC) to remove the paint from the areas that follow of the front coupling shaft (a) and the rear coupling shaft (b):
 - . The areas (F) (SECTIONS A-A and B-B)
 - . The areas (G) (DETAILS C and D)
 - . The areas (H) (DETAIL E).
- Give a new identification to the front coupling shaft (a) and the rear coupling shaft (b). Refer to paragraph [3.C.](#)
- Refer to Work Card 20-04-04-403 (MTC) to apply the chemical conversion material (8) to the front coupling shaft (a) and the rear coupling shaft (b) at the locations that follow:
 - . The areas (F), (G) and (H) (DETAILS C, D, and E and SECTIONS A-A and B-B)
 - . The new identification on the surfaces (J) and (K) (SECTIONS A-A and B-B).
- Apply the P05 epoxy primer (9) and the P20 epoxy primer (10) to the new identification on the surfaces (J) and (K). Refer to Work Card 20-04-05-402 (MTC).

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3.B.2.c. Installation of the engine-MGB coupling shafts ([Figure 1](#) and [Figure 3](#))



CAUTION

BEFORE YOU INSTALL THE NUTS (5), FULLY REMOVE THE GREASE FROM THE THREADS OF THE PINS (1) AND (4) ([FIGURE 1](#), DETAIL A - POST MOD). REFER TO WORK CARD 20-04-01-102 (MTC).



CAUTION

DO NOT TORQUE TO MORE THAN THE MAXIMUM VALUE TO ALIGN A NUT SLOT WITH A PIN HOLE.

- Refer to Task 63-10-01-061 (AMM) to install the front coupling shaft (a) and the rear coupling shaft (b) with the components that follow:
 - . The pins (4), the shims (2), the washers (7) and the nuts (5) ([Figure 1](#), DETAIL A - POST MOD and [Figure 3](#), SECTIONS C-C and G-G)
 - . The pins (1), the shims (3) or (11) and the nuts (5) ([Figure 1](#), DETAIL A - POST MOD and [Figure 3](#), SECTION E-E)

NOTE 4

For helicopters that have the front coupling shafts P/N 365A35-1064-00 or P/N 365A35-1064-01, it is necessary to use the shims (11) only on the nut (5) side of the assembly ([Figure 1](#) and [Figure 3](#), SECTION E-E).

- . The split pins (6) ([Figure 1](#), DETAIL A - POST MOD and [Figure 3](#), SECTIONS C-C, E-E and G-G).

3.B.3. Final steps

- Clean and apply the close-up procedure to the work areas and the helicopter. Refer to Work Card 20-07-03-408 (MTC).
- Install or close all cowlings, panels, doors and items of equipment that you removed and/or opened during the preliminary steps (paragraph [3.B.1.](#) of this Service Bulletin).
- Remove the access equipment.
- Connect all the electrical power supplies again.
- Set the helicopter to flight condition.

3.B.4. Ground run-up/flight test

Following the removal of the right starter generator, do a ground run-up (Flight Manual (FLM)).

3.B.5. Work steps for non-installed equipment or parts

Stock retrofitting

Do the procedures in paragraph [3.B.2.b.](#) on the front coupling shafts and the rear coupling shafts given in paragraph [1.A.2.](#)

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3.C. RECORD OF COMPLIANCE

Compliance with this document:

- Record the full compliance with this Service Bulletin, with the revision number, in the helicopter documents.
- Record the full compliance with this Service Bulletin (refer to IN 3785-I-00 for instructions):
QR code or hypertext link



NOTE 5

The recording of compliance with Service Bulletins in the SB Insight tool does not replace the recording in the helicopter documents.

[SB EC155 63-019](#)

Tracking of modifications in the documentation:

Record the modification 0763C91 in the helicopter documents.

Record the modification 0763C91 and the Service Bulletin number on the Log Card (FM) for the front coupling shafts and the rear coupling shafts. Refer to Work Card 20-08-05-101 (MTC).

Identification of modifications on equipment or parts:

Identify the front coupling shafts and the rear coupling shafts. Refer to the table below and Work Card 20-08-05-103 (MTC).

Key Word	Former Reference	New Reference	MOD	Marking type
Front coupling shaft	365A35-1064-00	365A35-1064-02	0763C91	Hand scribe on the surface (J) (Figure 2 , SECTION A-A)
	365A35-1064-01	365A35-1064-03	0763C91	Hand scribe on the surface (J) (Figure 2 , SECTION A-A)
	365A35-1073-00	365A35-1073-02	0763C91	Hand scribe on the surface (J) (Figure 2 , SECTION A-A)
	365A35-1073-01	365A35-1073-03	0763C91	Hand scribe on the surface (J) (Figure 2 , SECTION A-A)
Rear coupling shaft	365A35-1067-00	365A35-1067-02	0763C91	Hand scribe on the surface (K) (Figure 2 , SECTION B-B)
	365A35-1067-01	365A35-1067-03	0763C91	Hand scribe on the surface (K) (Figure 2 , SECTION B-B)

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3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Operating instructions:



CAUTION

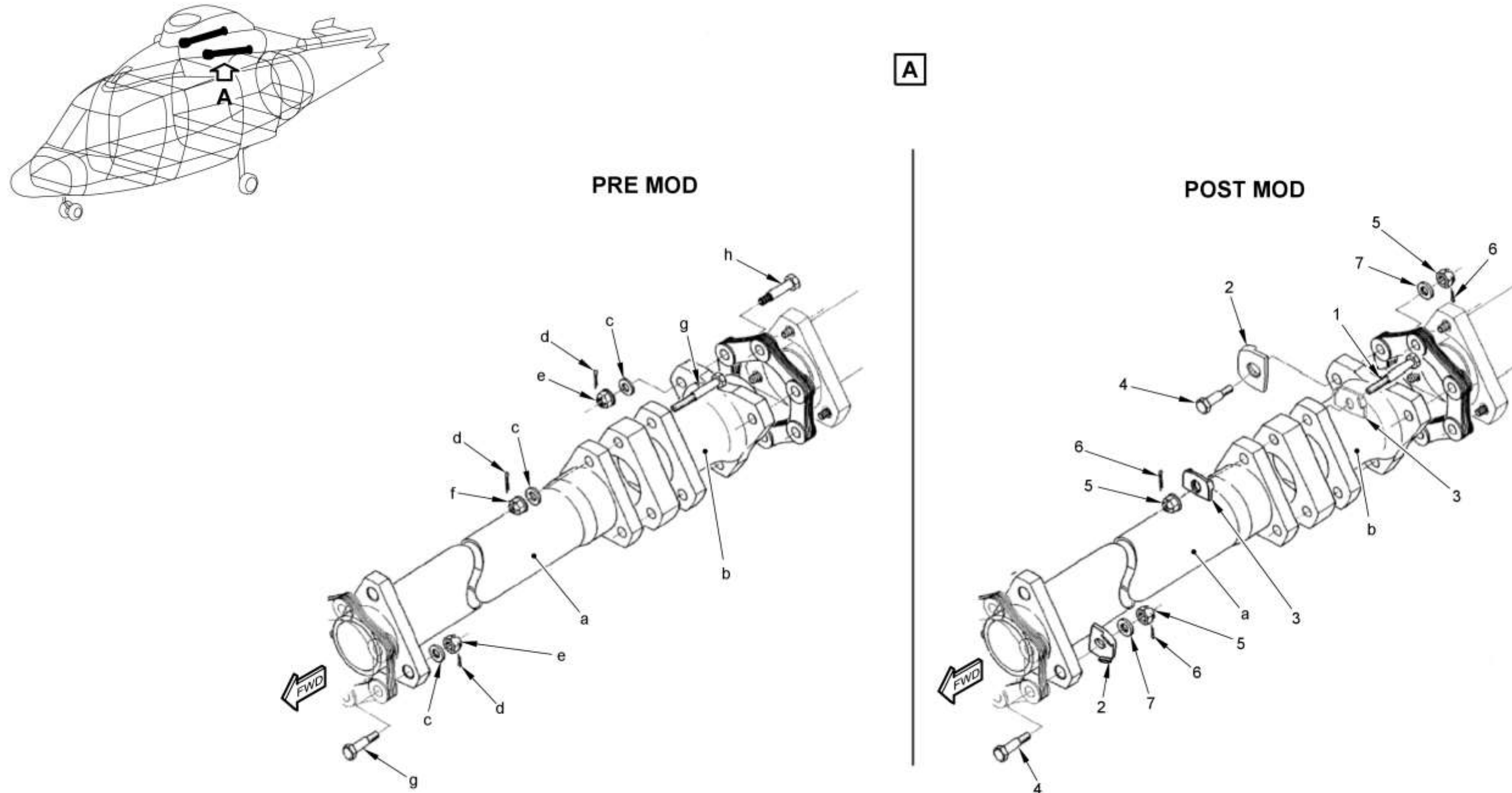
BEFORE THE NEXT FLIGHT, MAKE SURE THAT YOUR FLIGHT MANUAL (FLM) IS AT THE LATEST UPDATE APPROVED BY THE APPLICABLE AUTHORITIES.

Refer to the Flight Manual (FLM).

Maintenance instructions:

Refer to the applicable technical publication.

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Figure 1

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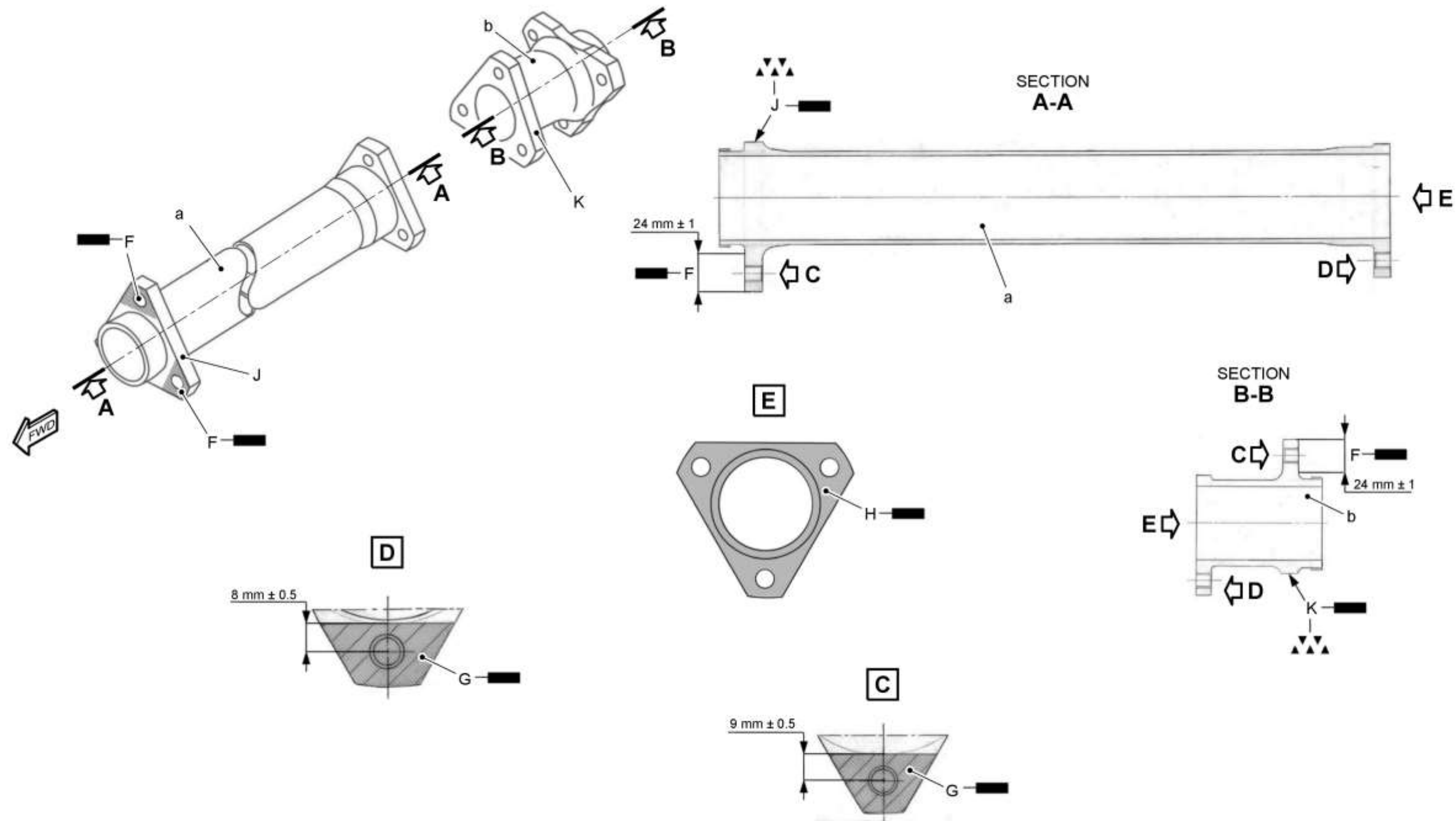
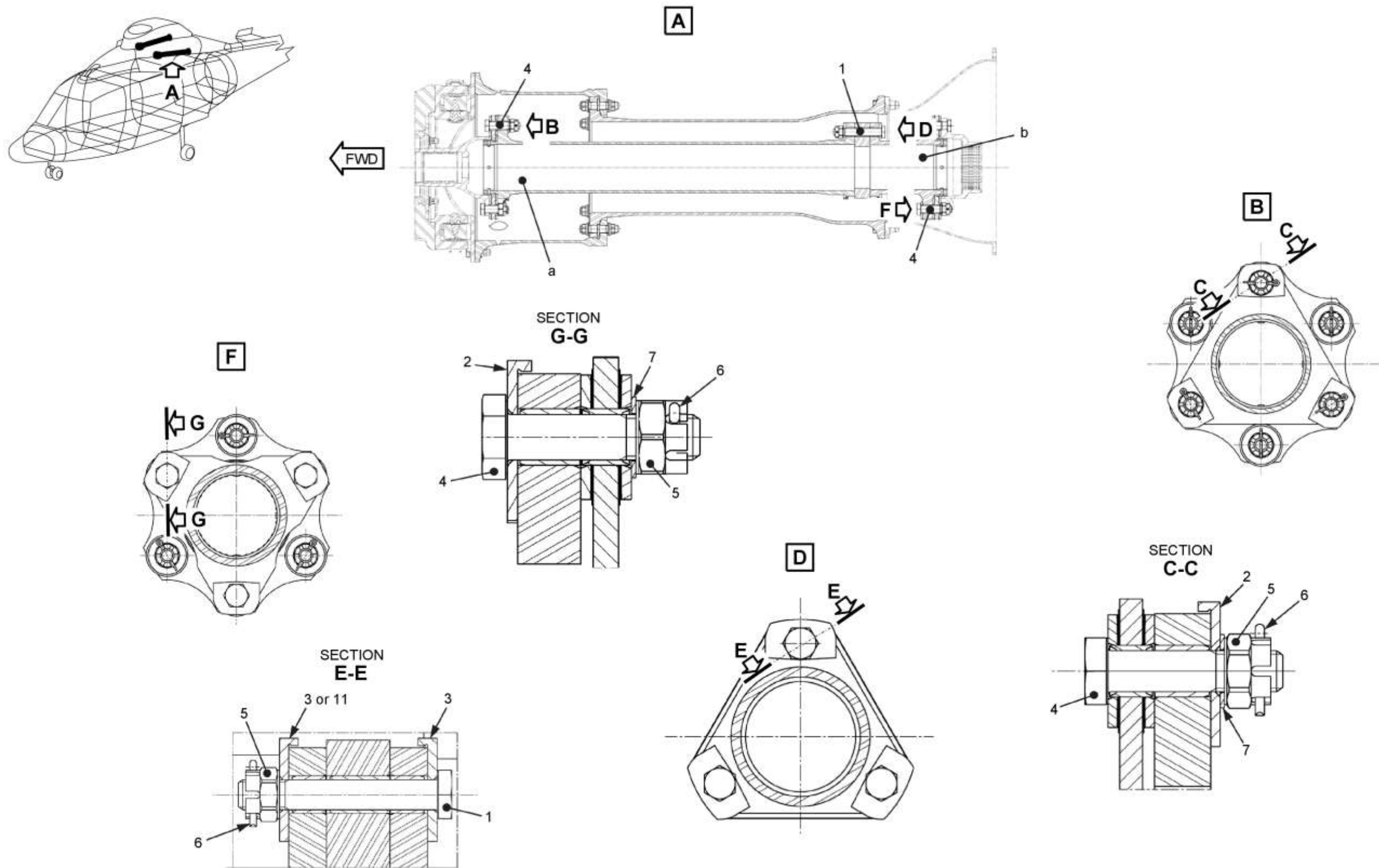


Figure 2

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Figure 3