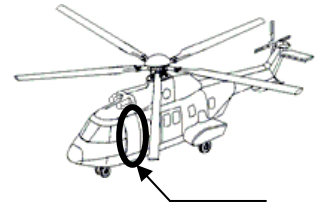
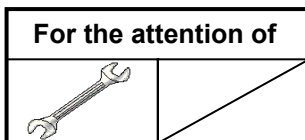


Civil version: LP

ALERT SERVICE BULLETIN

SUBJECT: MAIN ROTOR DRIVE - MGB emergency spraying system

Increase in the reliability of the EMLUB system by addition of a relay
 Corresponds to modification 0728369



Revision No.	Date of issue
Revision 0	2016-08-31
Revision 1	2016-10-07

Summary:

I This ALERT SERVICE BULLETIN consists in adding a relay to the EMLUB system in order to increase its reliability.

Reason for last Revision:

After the grounding order for EC225 LP version helicopters has been lifted by EASA, Airbus Helicopters extends the effectivity of this ALERT SERVICE BULLETIN to all EC225 LP version helicopters (subject to airworthiness directive (AD) EASA2016-0104-E or not).

Compliance:

Airbus Helicopters makes compliance with this ALERT SERVICE BULLETIN mandatory.

1. PLANNING INFORMATION

1.A. EFFECTIVITY

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

EC225 LP version helicopters that do not embody modification 0728369.

NOTE

Refer to the Aircraft Individual Inspection Record (or RIC AMS) to identify the actual modification status of the aircraft.

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

Not applicable.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Revision 0:

Airbus Helicopters has been informed of several occurrences of oil seepage on the ground from the Main GearBox (MGB), detected on the upper deck and fuselage surfaces. The subsequent investigation revealed that:

- In all cases, MGB oil seepage resulted from pressurization of the MGB by compressed air produced by the engine during start-up (on the ground), because the Emergency Lubrication System (EMLUB) "P 2.4" valve was inadvertently opened in response to a signal from the EMLUB electronic control card. The signal to open the valve was triggered by an electrical power interruption when changing from ground to aircraft power.
- Pressurization of the MGB could result in a total loss of MGB oil.

To prevent inadvertent pressurization of the MGB and loss of MGB oil, Airbus Helicopters has issued this mandatory ALERT SERVICE BULLETIN.

This ALERT SERVICE BULLETIN requires the addition of an electrical relay whose function is to confirm the presence of the EMLUB electronic control card signal which is generated by the crew by manually pressing the "SHOT" button, thus activating the EMLUB system.

In addition, in order to ensure full compliance of the fleet within a controlled calendar time, Airbus Helicopters requests compliance with paragraph 3. of this ALERT SERVICE BULLETIN not later than May 2017.

Revision 1:

After the grounding order for EC225 LP version helicopters has been lifted by EASA, Airbus Helicopters extends the effectivity of this ALERT SERVICE BULLETIN to all EC225 LP version helicopters (subject to airworthiness directive (AD) EASA2016-0104-E or not).

ALERT SERVICE BULLETIN No. 63A028 is superseded by this ALERT SERVICE BULLETIN.

Revision 1 of this ALERT SERVICE BULLETIN does not affect compliance with the previous revision.

1.D. DESCRIPTION

This ALERT SERVICE BULLETIN consists in adding a relay to the EMLUB system in order to increase its reliability.

1.E. COMPLIANCE

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

Airbus Helicopters imposes compliance with the instructions given in paragraph 3. of this Service Bulletin, before delivery.

1.E.2. Compliance in service

The works must be performed on helicopter by the Operator.

Helicopters/installed equipment or parts:

Comply with paragraph 3. within 500 flight hours following receipt of this ALERT SERVICE BULLETIN Revision 0, issued on August 31, 2016.

In addition, in order to ensure full compliance of the fleet within a controlled calendar time, Airbus Helicopters requests compliance with paragraph 3. of this ALERT SERVICE BULLETIN not later than May 31, 2017.

THEN,

Comply with Task 63-26-00-721 in APPENDIX 4 of this ALERT SERVICE BULLETIN or any subsequent revision of this Task every 600 flight hours (margin of 225 flight hours) and insert it in the Aircraft Maintenance Manual (MMA).



CAUTION

PENDING THE UPDATE OF THE MMA WORK CARDS, PAGES OF TASK 63-26-00-721 OF APPENDIX 4.A OF THIS ALERT SERVICE BULLETIN SUPERSEDE THE PAGES OF TASK 63-26-00-721 DATED DECEMBER 03, 2015.

Non-installed equipment or parts:

Not applicable.

1.F. APPROVAL

Approval of modifications:

The information or instructions relate to modification 0728369 which was approved on May 06, 2016 under the authority of EASA Design Organization Approval No. 21J.056 for helicopters of civil versions subject to an Airworthiness Certificate.

The information or instructions relate to modification 0728369 which was approved on May 06, 2016 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

**Approval of this document:**

The technical information contained in this ALERT SERVICE BULLETIN revision 0 was approved on July 27, 2016 by the Airbus Helicopter Airworthiness Department for helicopters of civil versions not subject to Airworthiness Directive EASA 2016-0104-E.

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on July 27, 2016 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on October 07, 2016 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on October 07, 2016 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

1.G. MANPOWER

For compliance with this ALERT SERVICE BULLETIN, Airbus Helicopters recommends the following personnel qualifications:

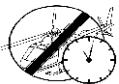


Qualification: - 1 Avionics Technician
- 1 Airframe Technician.



Time for the operations is indicated for reference, for a standard configuration.

Time for the operations: - approximately 20 hours for 1 Avionics Technician.
- approximately 2 hours for 1 Airframe Technician for the relay support installation.



The estimated helicopter downtime is approximately 4 days.

1.H. WEIGHT AND BALANCE

Weight: + 0.05 kg
Longitudinal moment: +0.09 m.kg
Lateral moment: -0.04 m.kg

On completion of the work, record weights and moments in the "Weight & Balance" sheet of the Flight Manual.

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 ALERT SERVICE BULLETIN:

Aircraft Maintenance Manual:

MMA: 24-00-00-611: Electric power - General instructions
MMA: 24-20-00-061: AC POWER SYSTEM - Removal-Installation of A/C electrical master box
MMA: 31-60-00-062: Vehicle monitoring system - Removal-installation of AMC unit (PRE MOD 0726845)
MMA: 31-60-00-063: Vehicle monitoring system - Removal-installation of AMC unit (POST MOD 0726845)
MMA: 34-70-00-062: Navigation system - Removal-installation of PU 1 and PU 4 units

Standard Practices Manual:

MTC: 20.02.01.102: General - Identification of electrical installations
MTC: 20.02.01.418: General - Protection of electrical wiring during maint. operations
MTC: 20.02.04.401: Riveting - Installation of rivets - pitch and edge distance
MTC: 20.02.04.601: Riveting - General riveting acceptance requirements
MTC: 20.02.05.401: Assembly - Joining by riveting
MTC: 20.02.07.101: Electrical bonding - General
MTC: 20.02.07.401: Electrical bonding - Bonding procedure
MTC: 20.02.07.407: Electrical bonding - Applying CHO-LUB 117 conductive paste
MTC: 20.07.02.201: Safety instructions - Helicopter parked inside a hangar
MTC: 20.07.03.408: Technical instructions - Appearance checks on an aircraft after an inspection or repair
MTC: 20.80.20.101: Standard Practices, Electricity - Contact Insertion and Extraction Method and Tools
MTC: 20.80.20.402: Standard Practices, Electricity - Removal / Installation of Cables Ties
MTC: 20.80.20.407: Standard Practices, Electricity - Tools and Processes for Stripping Cables
MTC: 20.80.20.408: Standard Practices, Electricity - Method for crimping of electrical contacts for a connector
MTC: 20.80.20.413: Standard Practices, Electricity - Installation of relays and junction modules
MTC: 20.80.20.425: Standard Practices, Electricity - Tools and Settings Associated with the Crimping of Contacts
MTC: 20.80.20.601: Standard Practices, Electricity - Rules and inspection of attachment of terminal lugs on hardware
MTC: 20.80.20.441: Standard Practices, Electricity - Installation of electrical harnesses
MTC: 20.80.20.603: Standard Practices, Electricity - Securing Rules for Electrical Harnesses
MTC: 20.80.20.604: Standard Practices, Electricity - Check of Crimping of Contacts

1.L. OTHER AFFECTED PUBLICATIONS



This ALERT SERVICE BULLETIN will give rise to amendment of the following documents by Airbus Helicopters:

- Aircraft Maintenance Manual: MMA,
- Wiring Diagram Manual: WDM,
- System Description Section: SDS.

These documents will be circulated at a later date.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Not applicable.

2. EQUIPMENT OR PARTS INFORMATION

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

Airbus Helicopters Super Puma Program Department will advise Customer of availability deadlines for kits or components.

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

NOTE 1

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

NOTE 2

*For ALERT SERVICE BULLETINS, order by:
Telex: HELICOP 410 969F
Fax: +33 (0)4.42.85.99.96.*

2.B. LOGISTIC INFORMATION

For any information concerning modification kits and/or components or for assistance, contact the Sales and Customer Relations Department.

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
Improvement of the EMLUB system reliability:					
332A0728369071					
Relay, plug-in	1	M6106/38-002	1	/	/
Base, relay	1	M12883/45-04	2	/	/
Module, shunt	1	NSA937901M22-04	3	/	/
Module, diode	1	E0566-20-01	4	/	/
Set, wires and markers	1	332A0889130097	5	/	/
Set of markers	1	332A6167460099	6	/	/
Set of markers	1	332A0889180099	7	/	/
Lug, round, pre-insulated	1	NSA936501TA2206	8	/	/
Nut, self-locking	1	52350CBD050N	9	/	/
Rivet, blind	2	NAS1399CW3A2	10	/	/
Screw	1	22208BC050012L	11	/	/
Washer, flat	1	23111AG050LE	12	/	/
Contact, swaged	7	EN3155-016M2018	13	/	/
Contact, swaged	13	EN3155-016M2222	14	/	/
Contact, swaged	5	EN3155-003F2222	15	/	/
Contact, swaged	2	EN3155-018M2020	16	/	/
Contact, swaged	2	EN3155-019F2018	17	/	/
Contact	4	M39029/101-552	18	/	Coil
Contact	4	M39029/101-553	19	/	Switch
Washer	2	23111AG040LE	21	/	/
Rivet, flat round head	4	21215DC3208J	22	/	/
Nut, hexagonal, self-locking	2	ASN52320BH040N	23	/	/
Bolt, round head	2	22272BC040010L	24	/	/
Support, individual, module	1	NSA937915-20	25	/	/
Support, individual, module	1	NSA937915-16	26	/	/
Support, relay	1	332A616460.20	27	/	/

Consumables to be ordered separately:

As per Work Cards and Tasks mentioned in this ALERT SERVICE BULLETIN:

The consumables can be ordered separately from the INTERTURBINE AVIATION LOGISTICS company.

Website: <http://www.interturbine.com>

Telephone: +49.41.91.809.300

AOG: +49.41.91.809.444

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

- Read and comply with the general electrical instructions as per MMA Task 24-00-00-611.
- Read and comply with safety instructions for aircraft parked inside a hangar as per MTC Work Card 20.07.02.201.
- Read and comply with general instructions on the identification of electrical installations as per MTC Work Card 20.02.01.102.
- Read and comply with general instructions for electrical bonding as per MTC Work Card 20.02.07.101.
- Read and comply with general instructions for protection of electrical wiring during maintenance operations as per MTC Work Card 20.02.01.418.
- Read and comply with instructions on electricity standard practices for removal/installation of cable ties as per MTC Work Card 20.80.20.402.
- Read and comply with instructions on electricity standard practices for installation of electrical harnesses as per MTC Work Card 20.80.20.441.
- Read and comply with instructions on electricity standard practices concerning tools and processes associated with cables stripping as per MTC Work Card 20.80.20.407.
- Read and comply with instructions on electricity standard practices concerning tools and settings associated with the crimping of contacts as per MTC Work Card 20.80.20.425.
- Read and comply with instructions on electricity standard practices concerning check of contact stripping as per MTC Work Card 20.80.20.604.
- Read and comply with instructions on electricity standard practices for installation of relays and junction modules as per MTC Work Card 20.80.20.413.
- Read and comply with instructions on electricity standard practices on the method and insertion and extraction tools for contacts as per MTC Work Card 20.80.20.101.
- Read and comply with instructions on electricity standard practices for securing rules of electrical harnesses as per MTC Work Card 20.80.20.603.
- Read and comply with standard practices instructions on riveting instructions - pitch and edge distance - as per MTC Work Card 20.02.04.401.
- Read and comply with the general riveting acceptance instructions as per MTC Work Card 20.02.04.601.
- Read and comply with standard practices instructions for joining by riveting as per MTC Work Card 20.02.05.401.
- Read and comply with rules and inspection on attachment of terminal lugs on hardware as per MTC Work Card 20.80.20.601.

3.B. WORK STEPS

3.B.1. Preliminary steps

- Remove and/or open all cowlings, panels, doors and all equipment as required for access to work zones.
- Remove A/C electrical master box as per MMA Task 24-20-00-061.
- Remove AMC computer as per MMA Task 31-60-00-062 or 31-60-00-063.
- Remove Processor Units 1 and 4 (PU 1 and PU 4) as per MMA Task 34-70-00-062.
- Protect electrical wiring in the work area as per MTC Work Card 20.02.01.418.

3.B.2. Procedure

3.B.2.a. Installation of relay support (27) (Figure 1)

- Obey dimensions of Figure 1:
 - . Drill and deburr holes as per detail B.
 - . Do the electrical bonding as per Detail D and as per MTC Work Card 20.02.07.401.
 - . using rivets (22), install relay support (27).
- Install module individual supports (25) and (26).
- Install relay base (2).
- Do the electrical bonding as per detail E and as per MTC Work Card 20.02.07.407.
- Using screws (24), washers (21) and nuts (23), install diode module (4).

3.B.2.b. Installation of ground point "686VN" (Figure 4)

- Install ground point "686VN" (Figure 4)
 - . Obey dimensions of Detail F, Figure 4:
 - .. Drill and deburr holes as per detail A.
 - .. Do the electrical bonding as per Detail A and as per MTC Work Card 20.02.07.401.
 - .. Install self-locking nut (9) using blind rivets (10).

3.B.2.c. Installation of set of wires (5) (Figures 1 to 4)

- Route set of wires (5) using Figures 2 and 3.
- Install identification sleeves on wires.
- Using contacts (13), (14), (15), (16), (17), (18) and (19), connect:
 - . Relay base (2).
 - . Diode module (4) identified "897VT1".
 - . PCB rack identified "16WW".
 - . Shunt module (3) identified "897VT2".
 - . Strips identified "40VCC" and "79VCD".
 - . Test electrical continuity of installed wiring.
 - . Install relay (1) identified "14QK" (Detail E, Figure 1).
- Bond marks "14QK", "897VT1" and "897VT2" from set of markers (7).
- Install identification sleeve on wire "6324-0150".
- Install pre-insulated lug (8) on marker identified "6324-0150".
- Using flat washer (12), screw (11), connect ground identified "686VN" as per Figures 3 and 4.
- Bond mark "686VN" from set of markers (6).
- Install AMC computer as per MMA Task 31-60-00-062 or 31-60-00-063.
- Install PU 1 and PU 4 units as per MMA Task 34-70-00-062.
- Install A/C electrical master box as per MMA Task 24-20-00-061.

3.B.3. Tests

- Perform a functional test of the installations which were disconnected or removed for access.
- Perform an electrical operational test of the emergency spraying system as per sub-task 63-26-00-721-004 of MMA Task 63-26-00-721 in APPENDIX 4 and repair if necessary.
- Carry out an appearance check of an aircraft after an inspection or repair as per MTC Work Card 20.07.03.408.

3.B.4. Final steps

- Install and/or close all cowlings, panels, doors and all equipment removed and/or opened during preliminary steps (paragraph 3.B.1.).

3.C. COMPLIANCE CONFIRMATION

Compliance with instructions of this document:

Record compliance with this Service Bulletin with the Revision number in the aircraft documents.

Tracking of modifications in the documentation:

Record compliance with modification 0728369 in the aircraft documents.

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Operating instructions:

Not applicable.

Maintenance instructions:

Pending updates of the work cards, at each replacement (Removal/Installation) of the emergency spraying system as mentioned in MMA Task 63-26-00-061, comply with Task 63-26-00-721 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each replacement (Removal/Installation) of the glycol reservoir as mentioned in MMA Task 63-26-00-062, comply with sub-task 63-26-00-721-002 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each replacement (Removal/Installation) of the glycol motorpump as mentioned in MMA Task 63-26-00-063, comply with sub-task 63-26-00-721-002 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for sub-task 63-26-00-721-002 of MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each replacement (Removal/Installation) of the electric actuator as mentioned in MMA Task 63-26-00-067, comply with sub-task 63-26-00-721-002 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for sub-task 63-26-00-721-002 of MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each filling of the GLYCOL reservoir as mentioned in MMA Task 63-26-00-871, comply with sub-task 63-26-00-721-002 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for sub-task 63-26-00-721-002 of MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each replacement (Removal/Installation) of the pressure sensors (AIR/GLYCOL) as mentioned in MMA Task 63-26-00-065, comply with sub-tasks 63-26-00-721-003 and 63-26-00-721-004 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for MMA Task 63-26-00-721 issued on December 03, 2015.

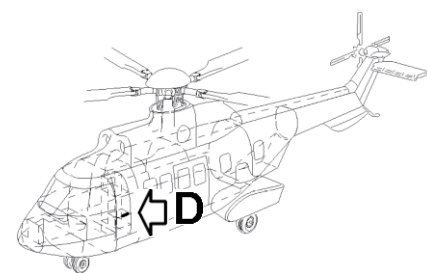
Pending updates of the work cards, at each replacement (Removal/Installation) of the electrovalve as mentioned in MMA Task 63-26-00-064, comply with sub-task 63-26-00-721-005 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for sub-task 63-26-00-721-003 of MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each replacement (Removal/Installation) of the air cooler as mentioned in MMA Task 63-26-00-066, comply with sub-task 63-26-00-721-005 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for MMA Task 63-26-00-721 issued on December 03, 2015.

Pending updates of the work cards, at each compliance with MMA Task 05-53-00-231, comply with sub-task 63-26-00-721-005 in APPENDIX 4 of this ALERT SERVICE BULLETIN as replacement for sub-task 63-26-00-721-003 of MMA Task 63-26-00-721 issued on December 03, 2015.

The Aircraft Maintenance Manual (MMA) will include these instructions in a future revision. Once these instructions are included in the MMA, refer to it.

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B
STRUCTURE REPERCUSSIONS

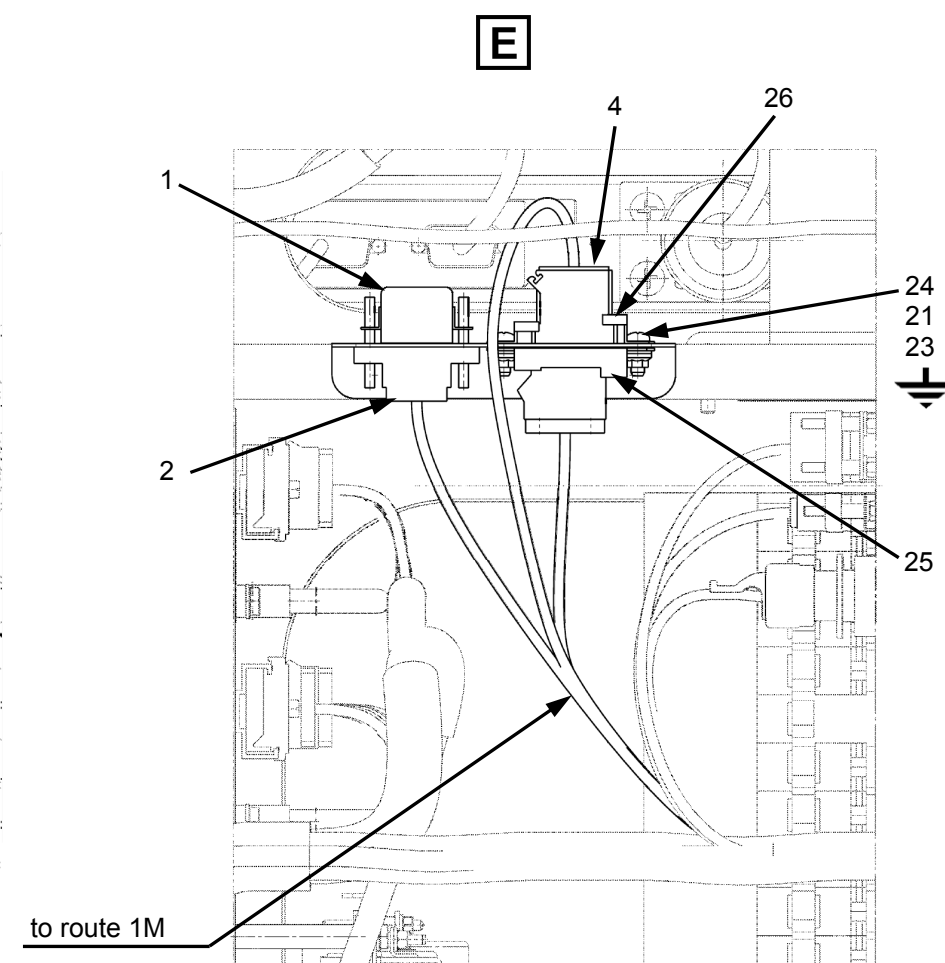
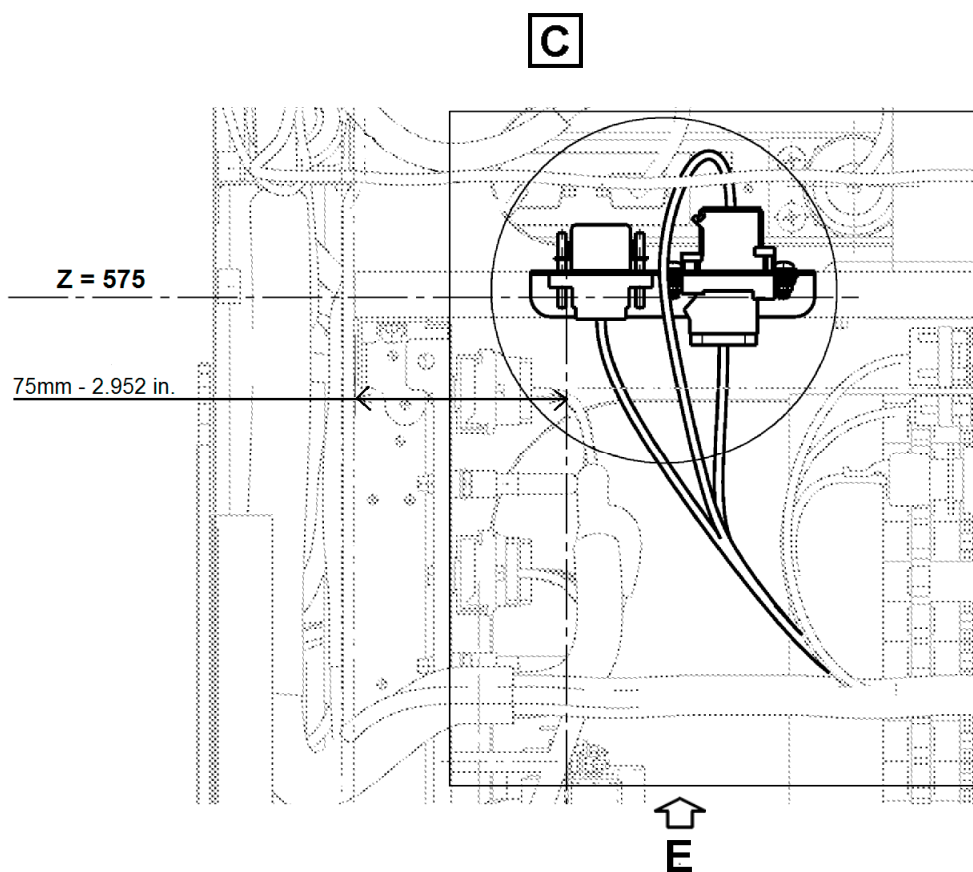
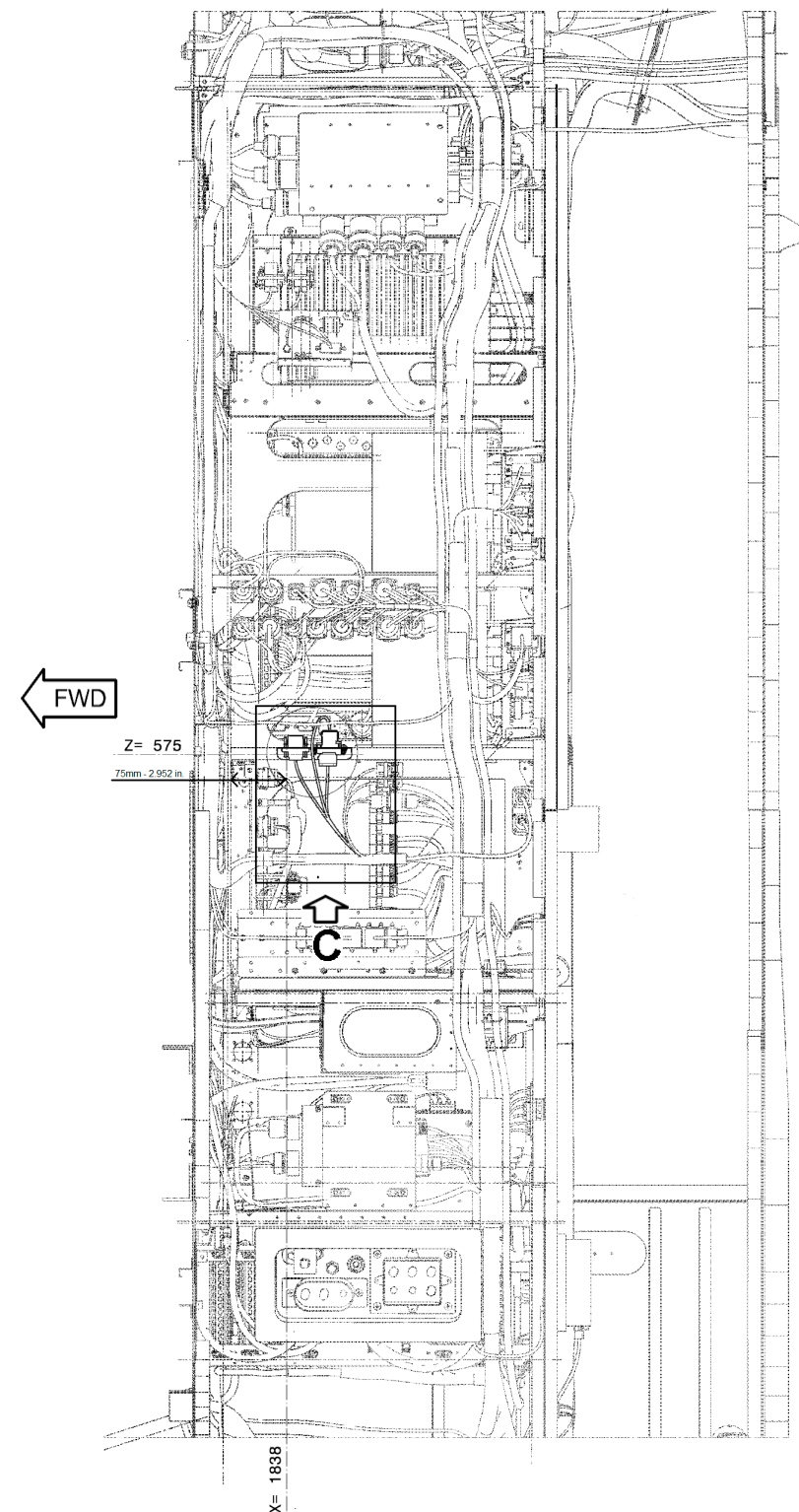
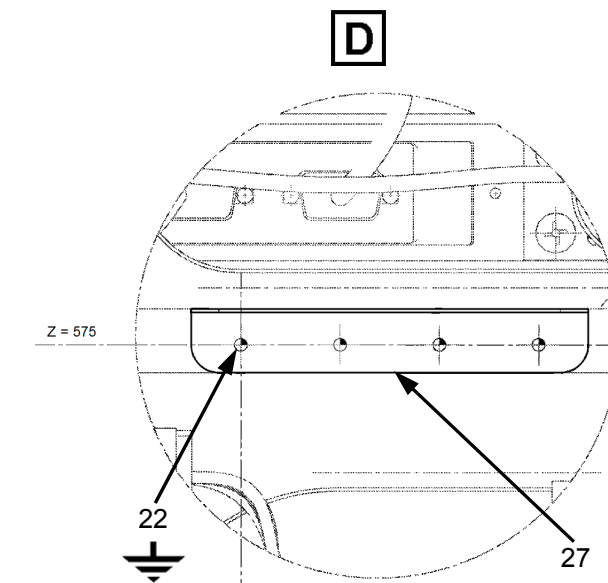
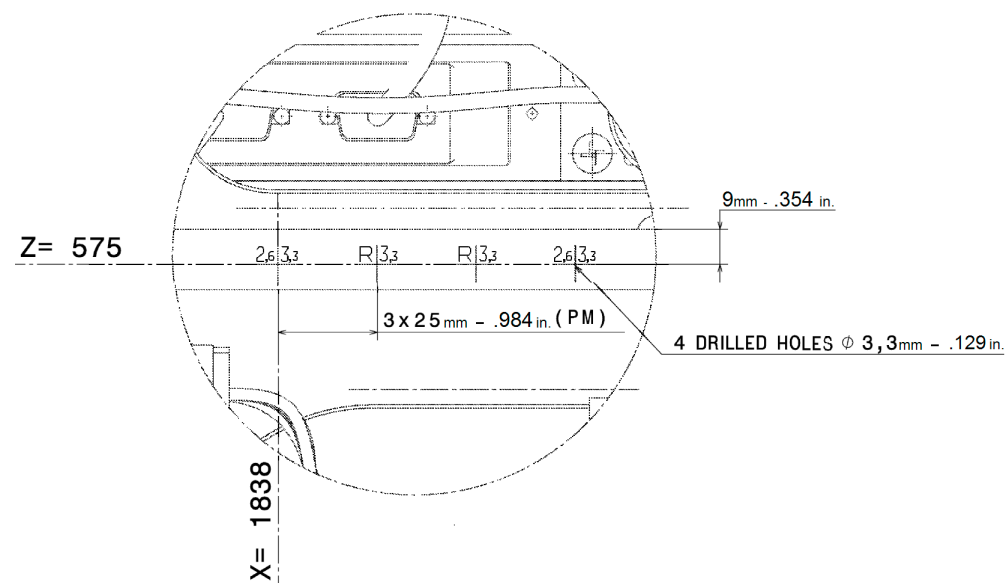


Figure 1: Support, relay

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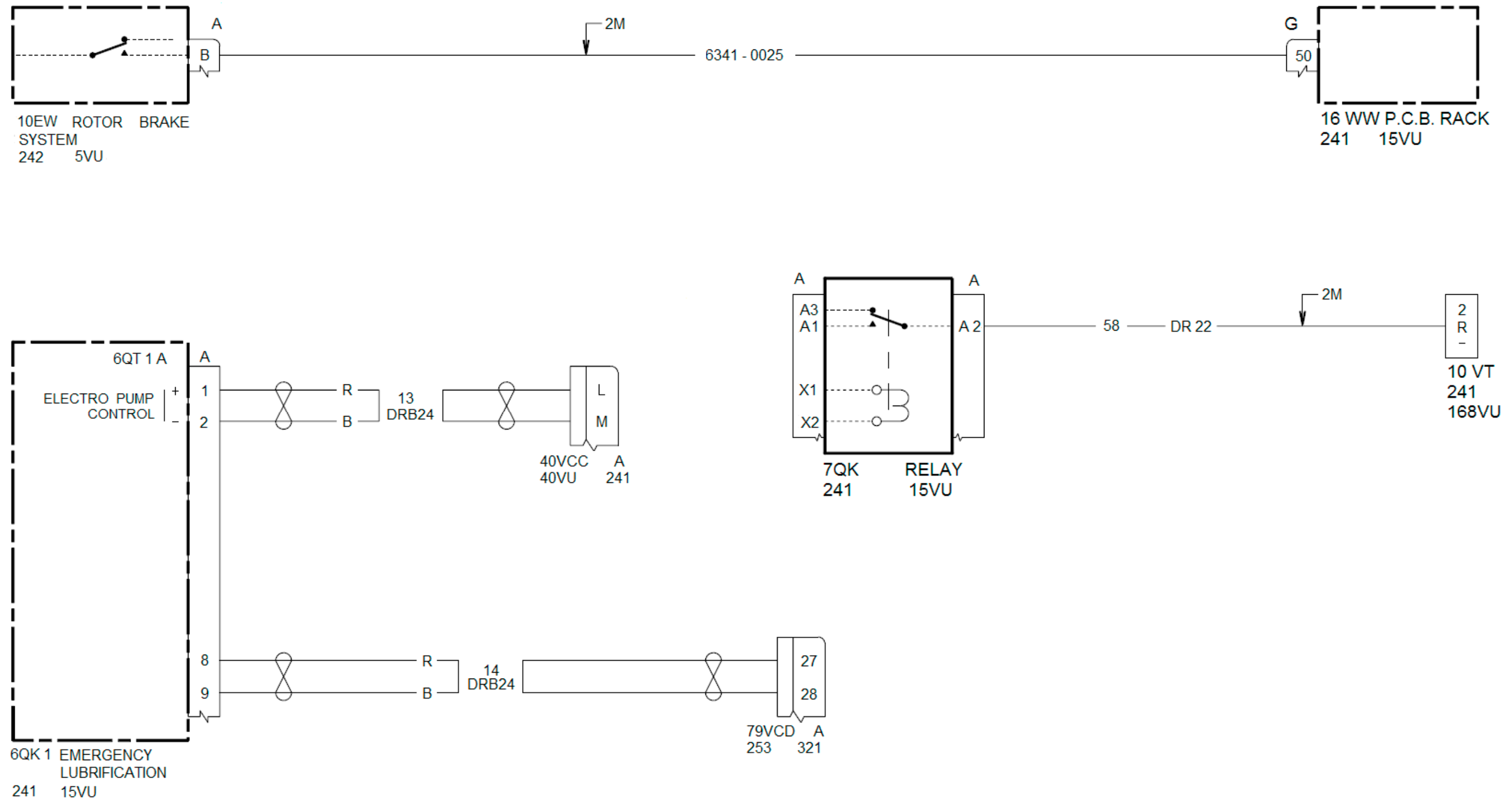
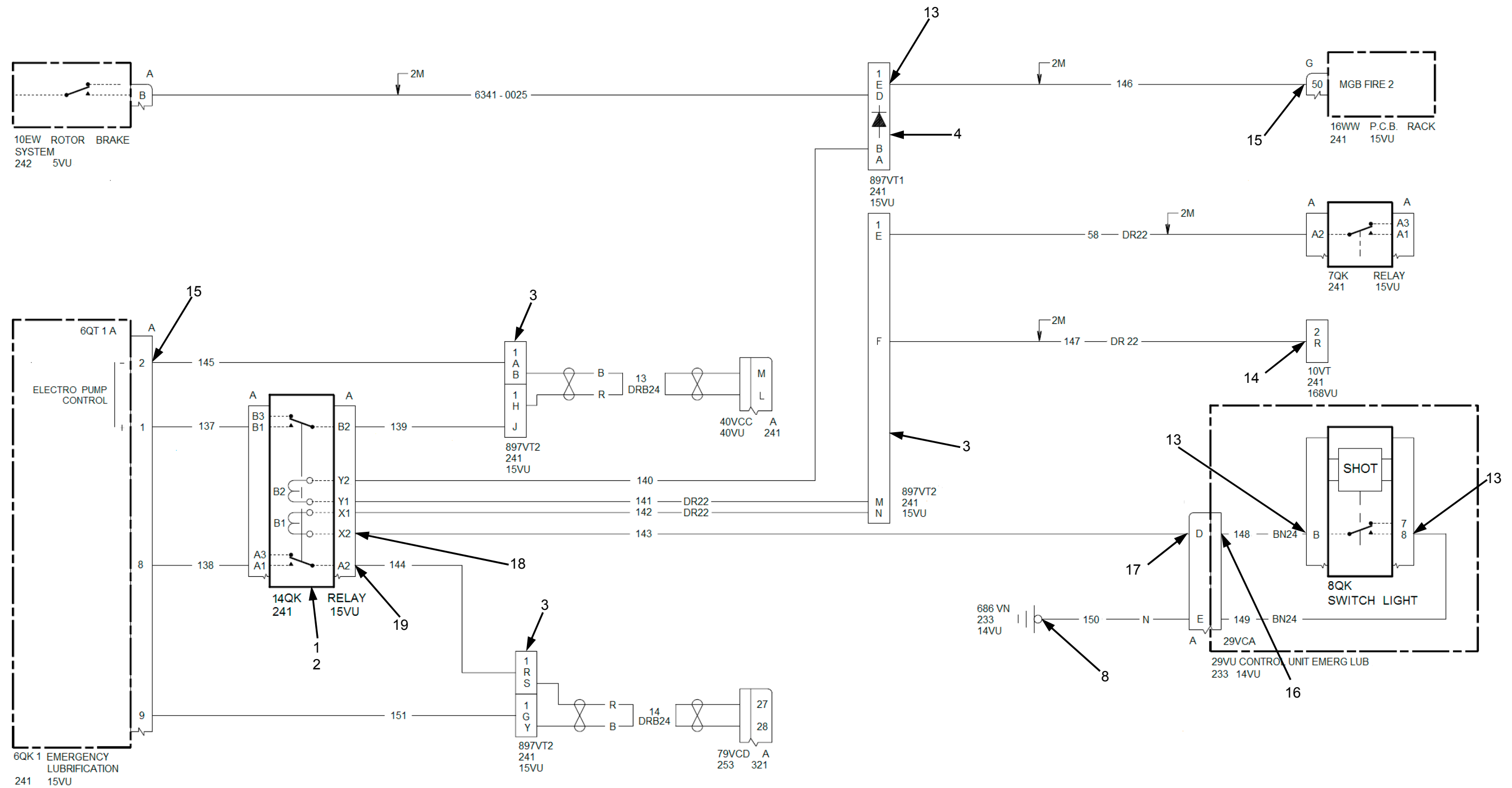


Figure 2: PRE MOD 0728369

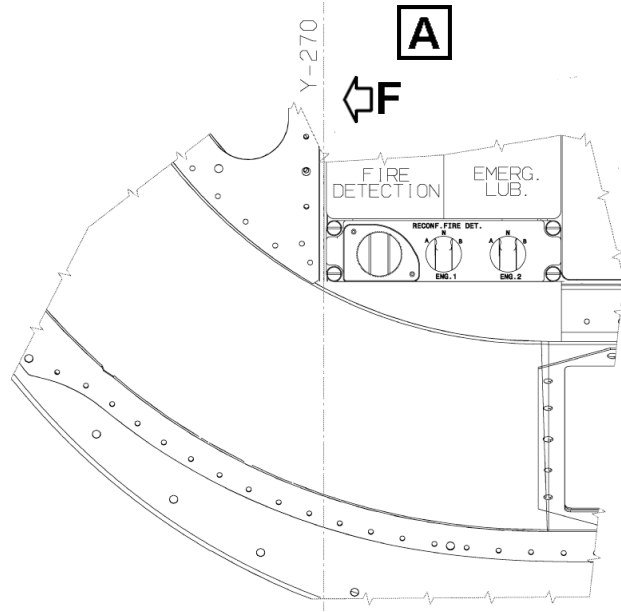
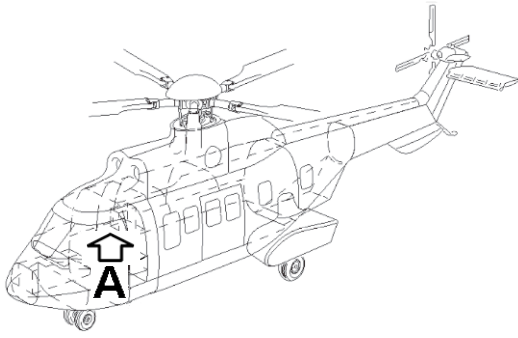
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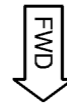
UNLESS OTHERWISE SPECIFIED:
ATA: 6324
CABLE ROUTING: 1M
CABLE GAUGE: DR24

Figure 3: POST MOD 0728369

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COVER LH SIDE
BOTTOM VIEW



F

DRILL 1 HOLE $\varnothing 5,5$ mm - .216 in.
ON THE L/H BULKHEAD Y - 270

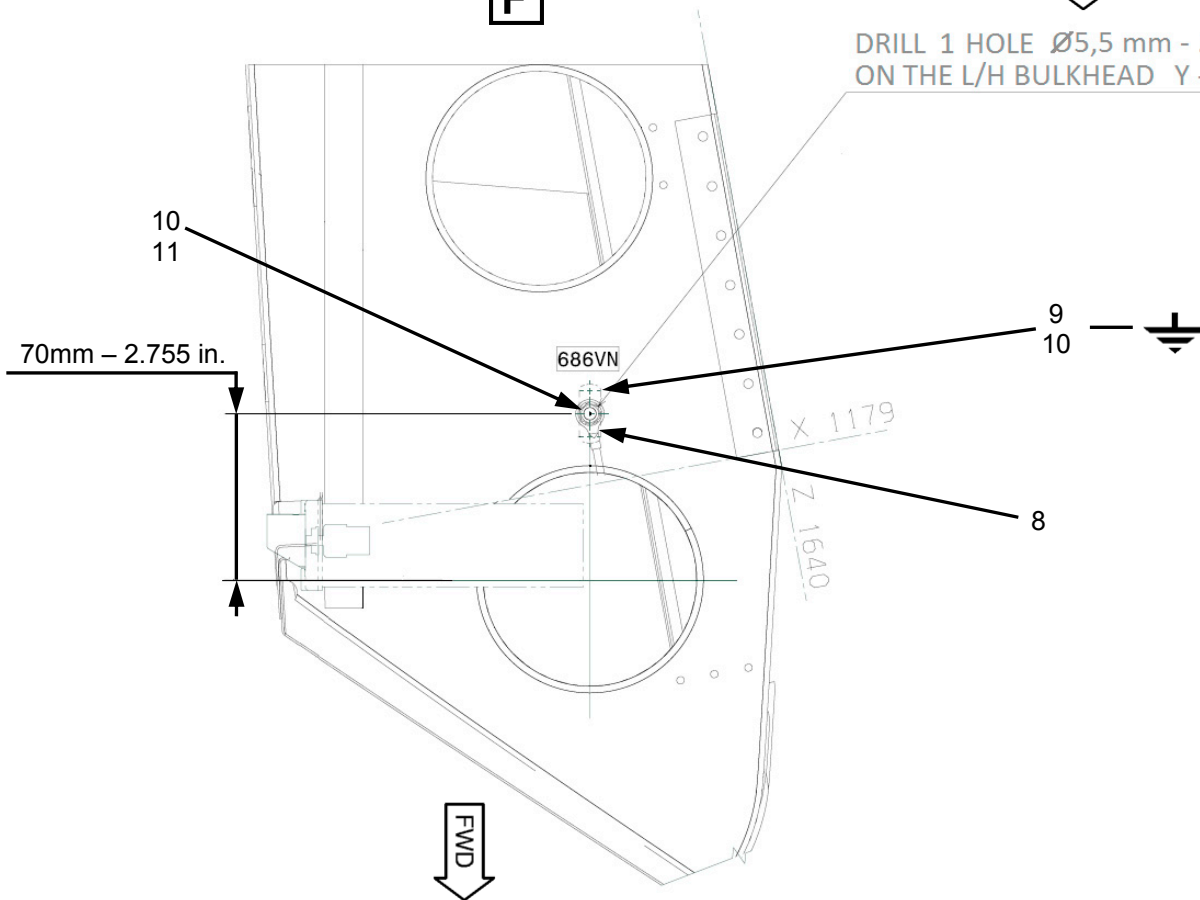


Figure 4: Ground 686VN

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4. APPENDIX


Task 63-26-00-721

EMERGENCY MGB LUBRICATION SYSTEM
Emergency lubrication functional tests
1 REQUIRED EQUIPMENT
1.1 Special Tools

Access ladder	Aircraft tool kit
Engine cowling walkways	Aircraft tool kit complement
Electrical ground power unit (or equivalent)	GB45/20V04
Test lead with lamp (28V 5W max.)	Locally made
Shunt	Locally made
"Y" type shunt	Locally made
Flight/Ground simulator	332A976102.00
DRUCK tool	DPI610E
Air & Glycol Mano Thresholds Test	332A973404.00
Mano Air electrical loom	332A973404.00
Mano Glycol electrical loom	332A973404.00
GLYCOL PUMP TEST KIT	332A979002.00
GLYCOL AIR PRESSURE SWITCH TEST KIT	332A979003.00
Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in)	Commercial
Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal))	Commercial
- [DPI610E connection 332A979003.20]	
- [GLYCOL 332A979003.21]	
- [AIR 332A979003.22]	
- Hose	Commercial
P2.4 VALVE TEST KIT	332A979000.00
- [Transmitter assembly 332A973402.00]	
- [Support assembly 332A979000.11]	
- [Air system 332A979000.10]	
- [Calibration sheet 332A979000.31]	
- [Air pressure sensor EFE - PHE 167 BAR G]	
or	
P2.4 VALVE TOOL	332A979001.00
- [KENT CHAMBER 332A979001.10]	
- [ATTACHMENT ASSEMBLY 332A979001.11]	

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 2016.03.16

- [CONNECTOR 332A979001.12]
- [USER MANUAL 332A979001.33]
- [PIPE GP 60 332A979001.61]
- [SENSOR 2600BGA4001 G3UA]

Emergency lubrication unit	332A973401.00
Chronometer	Commercial
Multimeter	Commercial
2.5 mm (.098 in) dia. round-tipped rod	Commercial

1.2 Materials

Bubble fluid	CM 7034
Lockwire	CM 776

1.3 Replacement Parts

Name	Item	Figure	Reference
O-ring	(8)	(Figure 4)	IPC 63.26.00.01
O-ring	(10)	(Figure 4)	IPC 63.26.00.01

1.4 Applicable Documents

- | | |
|--|--|
| <ul style="list-style-type: none"> - Aircraft Maintenance Manual (MMA): <ul style="list-style-type: none"> Task 07-10-00-491 Task 24-00-00-611 Task 32-30-00-481 Task 63-26-00-061 Task 63-26-00-062 Task 63-26-00-063 Task 63-26-00-064 Task 63-26-00-065 Task 63-26-00-723 Task 63-26-00-871 Task 71-00-00-051 - Flight Manual (PMV) | <ul style="list-style-type: none"> Jacking and Lowering the Aircraft General instructions Installation of Flight/Ground Simulator Removal - Installation of Spraying System Reservoir - Removal/Installation Removal - Installation of Motor Pump Removal - Installation of Emergency Lubrication Solenoid Valve Removal - Installation of Air and Glycol Pressure Sensors Electrovalve leak test Fluid Reservoir - Filling/Draining Removal-Installation |
|--|--|

1.5 General Information

- | | |
|--|---|
| <ul style="list-style-type: none"> - Standard Practices Manual (MTC): <ul style="list-style-type: none"> MTC 20.02.01.403 MTC 20.02.01.404 MTC 20.07.03.406 | <ul style="list-style-type: none"> Installation of "FLEXIRAC" flexible unions Installation of "SM HARRISON" unions Instructions applicable when working on an aircraft electrical circuit and power generating systems |
|--|---|

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2 PRELIMINARY STEPS



BEFORE PERFORMING ANY WORK ON THE ELECTRICAL SYSTEM, REFER TO THE GENERAL INSTRUCTIONS GIVEN IN TASK 24-00-00-611.



BEFORE YOU DO WORK ON THE EMERGENCY LUBRICATION SYSTEM, MAKE SURE THAT THE ENVIRONMENT IS CLEAN.

MAKE SURE THAT NO UNWANTED MATERIAL GOES INTO THE PIPES.

SEAL THE VENT PORTS.

- Install the [Access ladder Aircraft tool kit].
- Open the sliding cowling and the engine cowlings.
- Install the [Engine cowling walkways Aircraft tool kit complement].
- Make sure that the "MGB EMLUB" and "AVCS" circuit breakers are closed.
- Connect the [Electrical ground power unit (or equivalent) GB45/20V04].
- Energize the helicopter electrical power systems.

3 PROCEDURE

(Figure 1)(Figure 2)(Figure 3)(Figure 4)(Figure 5)(Figure 6)(Figure 7)(Figure 8)(Figure 9)(Figure 10)(Figure 11)(Figure 12)(Figure 13)(Figure 14)(Figure 15)(Figure 16)(Figure 17)(Figure 18)(Figure 19)(Figure 20)

Sub-task 63-26-00-721-001

3.1 Power supply test

- (PRE MOD 0726587) On the maintenance panel:
 - set the "PS PW" switch (3) (Figure 1) to "power",
 - make sure that the "PW1" (1) and "PW2" (2) lights come on,
 - set the "PS PW" switch (3) to "off",
 - make sure that the "PW1" (1) and "PW2" (2) lights go out.
- (POST MOD 0726587) On the maintenance panel:
 - set the "PS PW" switch (3) (Figure 1) to "power" and hold it,
 - make sure that the "PW1" (1) and "PW2" (2) lights come on,
 - release the "PS PW" switch (3) on the maintenance panel,
 - make sure that the "PW1" (1) and "PW2" (2) lights go out.

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Sub-task 63-26-00-721-002

3.2 Hydrosafe 620 system test

- De-energize the helicopter electrical power systems.
- Unsafey and disconnect the hydrosafe supply pipe (2) (Figure 2) from the main distributor (1).
- Connect the supply pipe (4) (Figure 3) to the [GLYCOL PUMP TEST KIT 332A979002.00] (1), make sure that the union is correctly attached and then tighten it one sixth of a turn.
- Connect the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) (3) on the [GLYCOL PUMP TEST KIT 332A979002.00] (1) with a clamp.
- Install the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) (3) in a Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal)) (2).
- (POST MOD 0728369):
 - remove the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6),
 - put the rotor brake safety control in forward "flight position".
- Energize the helicopter electrical power systems.

**MAKE SURE THAT:**

- THE GRADUATED RECIPIENT (ACCURATE TO 0.01 L (.0026 US GAL - .0022 UK GAL)) (2) IS IN A STABLE AND HORIZONTAL POSITION,
 - THE ROUTING OF THE HOSE INNER DIA. = 20 MILLIMETERS (.787 IN) AND LMAX = 1200 MILLIMETERS (47.24 IN) (3) DOES NOT INCLUDE A LOW POINT.
- (POST MOD 0728369):
 - push the EMLUB SHOT button (2).
 - Put the pump into service for 2 minutes. To do this, push the "PUMP" pushbutton (4) (Figure 1) on the maintenance panel (fill the pump) with a 2.5 mm (.098 in) dia. round-tipped rod.

NOTE:

One press of "PUMP" pushbutton is sufficient to start the test. The pump stops automatically after 2 minutes.

- Drain the Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal)) (2) (Figure 3).
- Put the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) (3) in a Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal)) (2).
- Put the pump into service for 2 minutes. To do this, push the "PUMP" pushbutton (4) (Figure 1) on the maintenance panel with a 2.5 mm (.098 in) dia. round-tipped rod.

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No.	Checks	Corrective Action	Rejection Criteria
1	Make sure that the quantity of hydrosafe collected agrees with the chart (Figure 18).	If the volume collected is less than the correct volume of hydrosafe (Figure 18): <ul style="list-style-type: none"> - replace the motor pump assembly seals as per task 63-26-00-063, - make sure that the hydrosafe system, the motor pump and the hose are in correct condition, - do a check with <i>[Bubble fluid CM 7034]</i> to make sure that there is no leak. 	If the system is in good condition: <ul style="list-style-type: none"> - replace the motor pump assembly as per task 63-26-00-063, and replace the electric actuator as per task 63-26-00-067. If the volume collected is more than the correct volume of hydrosafe (Figure 18): <ul style="list-style-type: none"> - replace the electric actuator as per task 63-26-00-067. If the motor pump does not operate (no volume collected): <ul style="list-style-type: none"> - replace the motor pump assembly as per task 63-26-00-063, and replace the electric actuator as per task 63-26-00-067.
2	Do a check of the consistency and the color of the hydrosafe.		If the hydrosafe is degraded: <ul style="list-style-type: none"> - Replace the hydrosafe as per task 63-26-00-871.

- (POST MOD 0728369):
 - put the rotor brake safety control in rearward "ground position",
 - empty the Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal)) (2) (Figure 3),
 - put the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) in a Graduated recipient (accurate to 0.01 L (.0026 US gal - .0022 UK gal)) (2),
 - push the "PUMP" push-button again and make sure that the pump is not activated:
 - ... if the pump is activated (glycol flow), contact Airbus Helicopters TECHNICAL SUPPORT.
 - Loosen the clamp of the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) (3) (Figure 3).
 - Disconnect the Hose Inner dia. = 20 millimeters (.787 in) and Lmax = 1200 millimeters (47.24 in) (3) from the *[GLYCOL PUMP TEST KIT 332A979002.00]* (1).
 - Disconnect the supply pipe (4) from the *[GLYCOL PUMP TEST KIT 332A979002.00]* (1).
 - Connect and safety the hydrosafe supply pipe (2) (Figure 2) to the main distributor (1) with *[Lockwire CM 776]*.
 - (POST MOD 0728369):
 - install the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6).
 - Add fluid to the reservoir as per sub-task 63-26-00-871-002 of task 63-26-00-871.

Sub-task 63-26-00-721-003

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3.3 Check of the calibration and correct behavior of the AIR and GLYCOL pressure sensors

- De-energize the helicopter electrical power systems.

3.3.1 AIR pressure switch

- Remove the AIR pressure switch (4) (Figure 2) as per sub-task 63-26-00-033-001 of task 63-26-00-065 and keep the O-ring (8) (Figure 4).
- Assemble the mechanical interface [AIR 332A979003.22] (7) with the O-ring (8) and the AIR pressure switch (11).
- Assemble the mechanical interface [DPI610E connection 332A979003.20] (5) and the output (6) (Figure 5) of the [DRUCK tool DPI610E] (1).
- Connect the [Mano Air electrical loom 332A973404.00] (1) (Figure 4) to the AIR pressure switch (11).
- Connect the [Mano Air electrical loom 332A973404.00] (1) to the [Air & Glycol Mano Thresholds Test 332A973404.00] (2).
- Install the Hose (6) on the mechanical interface [AIR 332A979003.22] (7) of the AIR pressure switch (11) with the clamp (13).
- Install the Hose (6) on the mechanical interface [DPI610E connection 332A979003.20] (5) with the clamp (13).
- Connect the "COMMON" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) with the "ground" terminal (3) (Detail A) at the top right of the [DRUCK tool DPI610E] (1) (Figure 5).
- Connect the "HIGH" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) (Figure 4) with the terminal (4) (Detail A) of the [DRUCK tool DPI610E] (1) (Figure 5).
- Tighten the thumbwheel (2) of the [DRUCK tool DPI610E] (1) fully.
- Set the vent screw (7) to its open position.
- Loosen the gradual pressurizing screw (5) fully.
- Start the [DRUCK tool DPI610E] (1) as per the user manual.
- Let the pressure shown on the [DRUCK tool DPI610E] (1) become stable.
- Record the "Patm" pressure shown on the [DRUCK tool DPI610E] (1).
- Set the vent screw (7) to its closed position.
- Push the F1 key (8) on the [DRUCK tool DPI610E] (1).



MAKE SURE THAT THE SELECTOR (3) OF THE HAND PUMP (4) IS IN THE "POSITIVE PRESSURE" POSITION.

- With the hand pump (4) of the [DRUCK tool DPI610E] (1), slowly and gradually pressurize the AIR pressure switch (11) (Figure 4) up to: Patm measured before + 350 mbars +/- 100 mbars (5.076 psi +/- 1.450 psi).
- Tighten the gradual pressurizing screw (5) (Figure 5) fully.

No.	Checks	Corrective Action	Rejection Criteria
1	Make sure that the AIR pressure switch (11) (Figure 4) changes from the OPEN state (Detail A) (Figure 5) to the CLOSED state (Detail B) when you increase the pressure.		If the state of the AIR pressure switch (11) (Figure 4) does not change: - replace the AIR pressure switch (11) as per task 63-26-00-065.
2	Make sure that the "CLOSED AT" closing pressure value (Detail B) (Figure 5) of the AIR pressure switch (11) (Figure 4) is between: Patm + 500 mbars (7.252 psi) and Patm + 550 mbars (7.977 psi).		If the calibration value of the AIR pressure switch (11) is different from the specified range: - replace the AIR pressure switch (11) as per task 63-26-00-065.

- Set the vent screw (7) (Figure 5) to its open position.
- Disconnect the "HIGH" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) (Figure 4).
- Let the pressure shown on the [DRUCK tool DPI610E] (1) (Figure 5) become stable.
- Set the vent screw (7) to its closed position.
- Push the F1 key (8) on the [DRUCK tool DPI610E] (1).
- Make sure that the gradual pressurizing screw (5) is tightened fully.
- With the hand pump (4) of the [DRUCK tool DPI610E] (1), slowly and gradually pressurize the AIR pressure switch (11) (Figure 4) up to: Patm measured before + 700 mbars +/- 100 mbars (10.153 psi +/- 1.450 psi).
- Connect the "LOW" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) with the terminal (4) (Detail A) of the [DRUCK tool DPI610E] (1) (Figure 5).
- Loosen the gradual pressurizing screw (5) fully.

No.	Checks	Corrective Action	Rejection Criteria
1	Make sure that the AIR pressure switch (11) (Figure 4) changes from the OPEN state (Detail A) (Figure 5) to the CLOSED state (Detail B) (Figure 5).		If the state of the AIR pressure switch (11) (Figure 4) does not change: - replace the AIR pressure switch (11) as per task 63-26-00-065.
2	Make sure that the "CLOSED AT" closing pressure value (Detail B) (Figure 5) of the AIR pressure switch (11) (Figure 4) is between: Patm + 400 mbars (5.8016 psi) and Patm + 500 mbars (7.2518 psi).		If the calibration value of the AIR pressure switch (11) is different from the specified range: - replace the AIR pressure switch (11) as per task 63-26-00-065.

- Set the vent screw (7) (Figure 5) to its open position.
- Disconnect the "LOW" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) (Figure 4).

- Disconnect the *[Mano Air electrical loom 332A973404.00]* (1) from the AIR pressure switch (11).
- Disconnect the *[Mano Air electrical loom 332A973404.00]* (1) from the *[Air & Glycol Mano Thresholds Test 332A973404.00]* (2).
- Remove the mechanical interface *[AIR 332A979003.22]* (7) and the O-ring (8) from the AIR pressure switch (11).
- Discard O-ring (8).
- Loosen the clamp (13) of the Hose (6).
- Remove the Hose (6) from the mechanical interface *[AIR 332A979003.22]* (11) and its clamp (13).
- Stop the *[DRUCK tool DPI610E]* (1) (Figure 5) as per the user manual.
- Install the AIR pressure switch (4) (Figure 2) as per sub-task 63-26-00-433-001 of task 63-26-00-065.

3.3.2 GLYCOL pressure switch

- Remove the GLYCOL pressure switch (5) (Figure 2) as per sub-task 63-26-00-033-002 of task 63-26-00-065. Keep the O ring (10) (Figure 4).
- Assemble the mechanical interface *[GLYCOL 332A979003.21]* (9), the O-ring (10) and the GLYCOL pressure switch (12).
- Connect the *[Mano Glycol electrical loom 332A973404.00]* (1) to the GLYCOL pressure switch (12).
- Connect the *[Mano Glycol electrical loom 332A973404.00]* (1) to the *[Air & Glycol Mano Thresholds Test 332A973404.00]* (2).
- Install the Hose (6) on the mechanical interface *[GLYCOL 332A979003.21]* (9) on the GLYCOL pressure switch (12) with the clamp (13).
- Install the Hose (6) on the mechanical interface *[DPI610E connection 332A979003.20]* (5) with the clamp (13).
- Make sure that the thumbwheel (2) (Figure 5) of the *[DRUCK tool DPI610E]* (1) is tightened fully.
- Make sure that the gradual pressurizing screw (5) is loosened fully.
- Connect the "HIGH" terminal of the *[Air & Glycol Mano Thresholds Test 332A973404.00]* (2) (Figure 4) with the terminal on the left of the "mA in" marking (4) (Detail A) of the *[DRUCK tool DPI610E]* (1) (Figure 5).
- Make sure that the vent screw (7) is set to its open position.
- Start the *[DRUCK tool DPI610E]* (1) as per the user manual.
- Let the pressure shown on the *[DRUCK tool DPI610E]* (1) become stable.
- Record the "Patm" pressure shown on the *[DRUCK tool DPI610E]* (1).
- Set the vent screw (7) to its closed position.
- Push the F1 key (8) on the *[DRUCK tool DPI610E]* (1).



MAKE SURE THAT THE SELECTOR (3) OF THE HAND PUMP (4) IS IN THE "POSITIVE PRESSURE" POSITION.

- With the hand pump (4) of the *[DRUCK tool DPI610E]* (1), slowly and gradually pressurize the GLYCOL pressure switch (12) (Figure 4) up to: Patm measured before + 450 mbars +/- 100 mbars (6.527 psi +/- 1.450 psi).
- Tighten the gradual pressurizing screw (5) (Figure 5) fully.

No.	Checks	Corrective Action	Rejection Criteria
1	Make sure that the GLYCOL pressure switch (12) (Figure 4) changes from the OPEN state (Detail A) (Figure 5) to the CLOSED state (Detail B) when you increase the pressure.		If the state of the GLYCOL pressure switch (12) (Figure 4) does not change: - replace the GLYCOL pressure switch (12) as per task 63-26-00-065.
2	Make sure that the "CLOSED AT" closing pressure value (Detail B) (Figure 5) of the GLYCOL pressure switch (12) (Figure 4) is between: Patm + 620 mbars (8.9924 psi) and Patm + 670 mbars (9.7175 psi).		If the calibration value of the GLYCOL pressure switch (12) is different from the specified range: - replace the GLYCOL pressure switch (12) as per task 63-26-00-065.

- Set the vent screw (7) (Figure 5) to its open position.
 - Disconnect the "HIGH" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) (Figure 4).
 - Let the pressure shown on the [DRUCK tool DPI610E] (1) (Figure 5) become stable.
 - Set the vent screw (7) to its closed position.
 - Push the F1 key (8) on the [DRUCK tool DPI610E] (1).
 - Make sure that the gradual pressurizing screw (5) is tightened fully.
 - With the hand pump (4) of the [DRUCK tool DPI610E] (1), slowly and gradually pressurize the GLYCOL pressure switch (12) (Figure 4) up to: Patm measured before + 800 mbars +/- 100 mbars (11.603 psi +/- 1.450 psi).
 - Connect the "LOW" terminal of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2) with the terminal (4) (Detail A) of the [DRUCK tool DPI610E] (1) (Figure 5).
 - Loosen the gradual pressurizing screw (5) fully.

No.	Checks	Corrective Action	Rejection Criteria
1	Make sure that the GLYCOL pressure switch (12) (Figure 4) changes from the OPEN state (Detail A) (Figure 5) to the CLOSED state (Detail B).		If the state of the GLYCOL pressure switch (12) (Figure 4) does not change: - replace the GLYCOL pressure switch (12) as per task 63-26-00-065.
2	Make sure that the "CLOSED AT" closing pressure value (Detail B) (Figure 5) of the GLYCOL pressure switch (12) (Figure 4) is between: Patm + 520 mbars (7.5420 psi) and Patm + 620 mbars (8.9923 psi).		If the calibration value of the GLYCOL pressure switch (12) is different from the specified range: - replace the GLYCOL pressure switch (12) as per task 63-26-00-065.

- Set the vent screw (7) (Figure 5) to its open position.
 - Let the pressure shown on the [DRUCK tool DPI610E] (1) become stable.
 - Stop the [DRUCK tool DPI610E] (1) as per the user manual.

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- Disconnect the [Mano Glycol electrical loom 332A973404.00] (1) (Figure 4) from the [Air & Glycol Mano Thresholds Test 332A973404.00] (2).
- Disconnect the [Mano Glycol electrical loom 332A973404.00] (1) from the GLYCOL pressure switch (12).
- Loosen the clamps (13) of the Hose (6).
- Remove the Hose (6) from the mechanical interface [DPI610E connection 332A979003.20] (5).
- Remove the Hose (6) from the mechanical interface [GLYCOL 332A979003.21] (9).
- Remove the mechanical interface [DPI610E connection 332A979003.20] (5) from the output connector (6) (Figure 5) of the [DRUCK tool DPI610E] (1).
- Remove the mechanical interface [GLYCOL 332A979003.21] (9) (Figure 4) and the O-ring (10) from the GLYCOL pressure switch (12).
- Discard O-ring (10).
- Disconnect the "COMMON" and "LOW" terminals of the [Air & Glycol Mano Thresholds Test 332A973404.00] (2).
- Disconnect the "ground" terminal (3) on the top right of the [DRUCK tool DPI610E] (1) (Figure 5).
- Disconnect the terminal on the left of the "mA in" marking (4) (Figure 4) of the [DRUCK tool DPI610E] (1) (Figure 5).
- Install the GLYCOL pressure switch (5) (Figure 2) as per sub-task 63-26-00-433-002 of task 63-26-00-065.

Sub-task 63-26-00-721-004

NOTE:

This sub-task gives two procedures for the electrical functional test:

- one procedure with the locally made tool,
- one procedure with [Emergency lubrication unit 332A973401.00].

To make sure that the system operates correctly, you only have to do one of these procedures (the operator can choose).

3.4 Electrical functional test



WHEN YOU USE THE [EMERGENCY LUBRICATION UNIT 332A973401.00], THE MGB EMLUB LIGHT (10) CANNOT COME ON IF THE TENSION SUPPLIED BY THE [ELECTRICAL GROUND POWER UNIT (OR EQUIVALENT) GB45/20V04] IS LESS THAN 27V.

- De-energize the helicopter electrical power systems.

3.4.1 Test with the locally made tool for the air and glycol pressure switches

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- Make two test leads (1) (Figure 6) with two wires and a 28V 5W max. lamp:
 - . one for the movable connector of the electric pump (1QK).
 - . one for the movable connector of the P2.4 electrovalve (2QK).
- Make two shunts that adapt to the movable connector of the glycol pressure switch (3QK) (Figure 7) and the movable connector of the air pressure switch (4QK).
- Make two "Y" type shunts that adapt to the movable connector of the glycol pressure switch (3QK) and the movable connector of the air pressure switch (4QK).
- Remove the frangible cover from the EM LUB pushbutton (8QK) (2) (Figure 6).
- Install the *[Flight/Ground simulator 332A976102.00]* as per sub-task 32-30-00-481-001 of task 32-30-00-481.

NOTE:

If the [Flight/Ground simulator 332A976102.00] is not available, you can lift the aircraft on jacks, as per sub-task 07-10-00-491-001 of task 07-10-00-491.

- Disconnect the connector from the P2.4 electrovalve (2QK).
- Connect a test lead (1) to terminals A and B of the P2.4 electrovalve (2QK) movable connector (3).
- Disconnect the power supply connector from the electric pump (1QK).
- Connect a test lead (1) to terminals A and B of the electric pump (1QK) movable connector (4).
- Disconnect the connector from the air pressure switch (4QK) as per (Figure 7) sub-task 63-26-00-033-001 of task 63-26-00-065.
- Connect a shunt (7) between terminals 3 and 1 to give the low pressure state.
- Disconnect the connector from the glycol pressure switch (3QK) as per sub-task 63-26-00-033-002 of task 63-26-00-065.
- Connect a shunt (5) between terminals 3 and 1 to give the low pressure state.
- Energize the helicopter electrical power systems.



BEFORE YOU SET THE *[FLIGHT/GROUND SIMULATOR 332A976102.00]* SWITCH TO FLIGHT, MAKE SURE THAT THE SYSTEMS RELATED TO THE FLIGHT/GROUND LOGIC HAVE PROTECTION.

ACTIONS	CHECKS
Set the switch of the <i>[Flight/Ground simulator 332A976102.00]</i> to the GROUND position or make sure that the landing gear shock absorbers are compressed.	<ul style="list-style-type: none"> - Make sure that the MGB.P light (1) (Figure 7) comes on on the CWP. - Make sure that the MP (2) and S/B.P (3) captions come on on the VMS.



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ACTIONS	CHECKS
(POST MOD 0728369), put the rotor brake safety control in forward "flight position". Set the switch of the [Flight/Ground simulator 332A976102.00] to the FLIGHT position or extend the landing gear shock absorbers as per sub-task 07-10-00-491-001 of task 07-10-00-491.	(POST MOD 0728369): - Make sure that the 28V lamp connected to the P2.4 electrovalve is off. - Make sure that the 28V lamp connected to the glycol pump power supply connector is off. - Make sure that the EMLUB SHOT light (2) (Figure 6) comes on.
Push the EM LUB SHOT pushbutton (2) until the light goes out, and start the chronometer.	- Make sure that the 28V lamp connected to the P2.4 electrovalve comes on. - Make sure that the 28V lamp connected to the glycol pump power supply connector comes on. - After 1 minute and 10 seconds (-0/+15 s) , make sure that the red MGB EMLUB warning light (10) (Figure 7) comes on on the CWP.
Disconnect the shunt (5) between terminals 3 and 1 of the glycol pressure switch (3QK). Disconnect the shunt (7) between terminals 3 and 1 of the air pressure switch (4QK). Connect a shunt (9) between terminals 3 and 2 of the air pressure switch (4QK) movable connector. Connect a shunt (4) between terminals 3 and 2 of the glycol pressure switch (3QK).	- Make sure that the MGB EMLUB light (10) goes out on the CWP.
Connect a shunt (5) between terminals 3 and 1 of the glycol pressure switch (3QK) movable connector.	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (4) between terminals 3 and 2 of the glycol pressure switch (3QK).	- Make sure that the MGB EMLUB light (10) goes out on the CWP.
Connect a shunt (6) between terminals 1, 2 and 3 of the glycol pressure switch (3QK).	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (4) between terminals 3 and 2 of the glycol pressure switch (3QK).	- Make sure that the MGB EMLUB light (10) goes out on the CWP.
Disconnect the shunt (4) from the glycol pressure switch (3QK) and let the connector stay fully free.	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (4) between terminals 3 and 2 of the glycol pressure switch (3QK).	- Make sure that the MGB EMLUB light (10) goes out on the CWP.
Connect a shunt (7) between terminals 3 and 1 of the air pressure switch (4QK).	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (9) between terminals 3 and 2 of the air pressure switch (4QK) movable connector.	- Make sure that the MGB EMLUB light (10) goes out on the CWP.

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ACTIONS	CHECKS
Connect a shunt (8) between terminals 1, 2 and 3 of the air pressure switch (4QK).	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (9) between terminals 3 and 2 of the air pressure switch (4QK) movable connector.	- Make sure that the MGB EMLUB light (10) goes out on the CWP.
Disconnect the shunt (9) from the air pressure switch (4QK) and let the connector stay fully free.	- Make sure that the MGB EMLUB light (10) comes on on the CWP.
Connect a shunt (9) between terminals 3 and 2 of the air pressure switch (4QK) movable connector.	- Make sure that the MGB EMLUB light (10) goes out on the CWP. - Make sure that the 28V lamp connected to the P2.4 electrovalve stays on. - Make sure that the 28V lamp connected to the glycol pump power supply connector stays on.
(POST MOD 0728369): - Put the rotor brake safety control in rearward "ground position".	(POST MOD 0728369): - Make sure that the 28V lamp connected to the P2.4 electrovalve is off. - Make sure that the 28V lamp connected to the glycol pump power supply connector is off.

- If the test is not correct:
 - . If applicable, set the switch of the *[Flight/Ground simulator 332A976102.00]* to the GROUND position (green light on).
 - . de-energize the helicopter electrical power systems,
 - . replace the lubrication PCB,
 - . energize the helicopter electrical power systems,
 - . do the electrical functional test again as per sub-task 63-26-00-721-004,
 - . if the test is not correct again, contact the Airbus Helicopters technical support department.

3.4.2 Final steps after the test

- If applicable, set the switch of the *[Flight/Ground simulator 332A976102.00]* to the GROUND position (green light on).
- De-energize the helicopter electrical power systems.



BEFORE YOU ENERGIZE THE AIRCRAFT ELECTRICAL POWER SYSTEMS AGAIN, WAIT 5 MINUTES FOR THE ELECTRONIC BOARD TO RESET.

- Disconnect the shunt from the connector of the glycol pressure switch (3QK).
- Connect the connector to the GLYCOL pressure switch (3QK) (5) (Figure 2) as per sub-task 63-26-00-433-002 of task 63-26-00-065.

- Disconnect the shunt from the connector of the air pressure switch (4QK).
- Connect the connector to the air pressure switch (4QK) (4) as per sub-task 63-26-00-433-001 of task 63-26-00-065.
- Disconnect the test lead (1) (Figure 6) from the power supply connector of the electric pump.
- Connect the power supply connector to the electric pump (1QK).
- Disconnect the test lead (1) from the P2.4 electrovalve connector.
- Connect the connector to the P2.4 electrovalve (2QK) as per sub-task 63-26-00-431-001 of task 63-26-00-064.
- If applicable, remove the *[Flight/Ground simulator 332A976102.00]* as per sub-task 32-30-00-481-001 of task 32-30-00-481.

NOTE:

If the aircraft is on jacks, lower the aircraft onto its wheels as per sub-task 07-10-00-091-001 of task 07-10-00-491.

- Put the frangible cover in position on the EMLUB pushbutton (8QK) (2).

3.4.3 Test with tool 332A97-3401-00 for the air and glycol pressure switches

- Remove the frangible cover from the EMLUB pushbutton (8QK) (2) (Figure 6).
- Install the *[Flight/Ground simulator 332A976102.00]* as per sub-task 32-30-00-481-001 of task 32-30-00-481.

NOTE:

*If the *[Flight/Ground simulator 332A976102.00]* is not available, you can lift the aircraft on jacks, as per sub-task 07-10-00-491-001 of task 07-10-00-491.*

- Disconnect the connector from the P2.4 electrovalve (2QK).
- Connect the *[Emergency lubrication unit 332A973401.00]* (1) (Figure 8) (Detail C) to the movable connector of the P2.4 electrovalve (2QK) (Detail A).
- Disconnect the power supply connector from the electric pump (1QK) (Detail B).
- Connect the *[Emergency lubrication unit 332A973401.00]* (1) (Detail C) to the power supply connector of the Glycol pump (1QK) (Detail B).
- Disconnect the connector from the air pressure switch (4QK) as per (Figure 7) sub-task 63-26-00-033-001 of task 63-26-00-065.
- Connect the *[Emergency lubrication unit 332A973401.00]* (1) (Figure 8) (Detail C) to the supply connector of the air pressure switch (4QK) (Figure 7).
- Disconnect the connector from the glycol pressure switch (3QK) as per sub-task 63-26-00-033-002 of task 63-26-00-065.
- Connect the *[Emergency lubrication unit 332A973401.00]* (1) (Figure 8) (Detail C) to the supply connector of the glycol pressure switch (3QK) (Figure 7).

NOTE:

*The *[Emergency lubrication unit 332A973401.00]* (1) (Figure 8) (Detail C) has a GLYCOL TANK connector. It is not necessary to connect the GLYCOL TANK connector to do this test.*

- Set the air pressure switch control to **LOW**.

- Set the glycol pressure switch control to **LOW**.
- Energize the helicopter electrical power systems.



BEFORE YOU SET THE [FLIGHT/GROUND SIMULATOR 332A976102.00] SWITCH TO FLIGHT, MAKE SURE THAT THE SYSTEMS RELATED TO THE FLIGHT/GROUND LOGIC HAVE PROTECTION.

ACTIONS	CHECKS
Set the switch of the [Flight/Ground simulator 332A976102.00] to the GROUND position or make sure that the landing gear shock absorbers are compressed.	<ul style="list-style-type: none"> - Make sure that the MGB.P light (1) (Figure 7) comes on on the CWP. - Make sure that the MP (2) and S/B.P (3) captions come on on the VMS.
(POST MOD 0728369), put the rotor brake safety control in forward "flight position". Set the switch of the [Flight/Ground simulator 332A976102.00] to the FLIGHT position or extend the landing gear shock absorbers as per sub-task 07-10-00-491-001 of task 07-10-00-491.	(POST MOD 0728369): <ul style="list-style-type: none"> - Make sure that the Control Electro-Valve light is off (Figure 8). - Make sure that the Control Electro pump light is off (Figure 8) - Make sure that the EMLUB SHOT light (2) (Figure 6) comes on.
Push the EM LUB SHOT pushbutton (2) until the light goes out, and start the chronometer.	<ul style="list-style-type: none"> - Make sure that the Control Electro-Valve light comes on (Figure 8). - Make sure that the Control Electro pump light comes on (Figure 8). - After 1 minute and 10 seconds (-0/+15 s), make sure that the red MGB EMLUB (Figure 7) warning light (10) comes on on the CWP.
Set the air pressure switch control to NO LOW (HI) . Set the glycol pressure switch control to NO LOW (HI) .	<ul style="list-style-type: none"> - Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.
Set the glycol pressure switch control to LOW (Figure 8).	<ul style="list-style-type: none"> - Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Set the glycol pressure switch control to NO LOW (HI) (Figure 8).	<ul style="list-style-type: none"> - Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.
Push and hold NO LOW (HI) & LOW pushbutton of the glycol pressure switch (Figure 8).	<ul style="list-style-type: none"> - Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Release the NO LOW (HI) & LOW pushbutton of the glycol pressure switch (Figure 8).	<ul style="list-style-type: none"> - Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.

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ACTIONS	CHECKS
Disconnect the connector of the [Emergency lubrication unit 332A973401.00] (1) (Figure 8) from the glycol pressure switch and let the connector stay fully free.	- Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Connect the connector of the [Emergency lubrication unit 332A973401.00] (1) (Figure 8) to the glycol pressure switch.	
Set the glycol pressure switch control to NO LOW (HI) .	- Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.
Make sure that the air pressure switch control is set to LOW (Figure 8).	- Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Set the air pressure switch control to NO LOW (HI) (Figure 8).	- Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.
Push and hold NO LOW (HI) & LOW pushbutton of the air pressure switch (Figure 8).	- Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Release the NO LOW (HI) & LOW pushbutton of the air pressure switch (Figure 8).	- Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP.
Disconnect the connector of the [Emergency lubrication unit 332A973401.00] (1) (Figure 8) from the air pressure switch and let the connector stay fully free.	- Make sure that the MGB EMLUB light (10) (Figure 7) comes on on the CWP.
Connect the connector of the [Emergency lubrication unit 332A973401.00] (1) (Figure 8) to the air pressure switch.	
Make sure that the air pressure switch control is set to NO LOW (HI) .	- Make sure that the MGB EMLUB light (10) (Figure 7) goes out on the CWP. - Make sure that the Control Electro-Valve light stays on (Figure 8). - Make sure that the Control Electro pump light stays on.
(POST MOD 0728369): - Put the rotor brake safety control in rearward "ground position".	(POST MOD 0728369): - Make sure that the Control Electro-Valve light is off (Figure 8). - Make sure that the Control Electro pump light is off (Figure 8).

- If the test is not correct:
 - If applicable, set the switch of the [Flight/Ground simulator 332A976102.00] to the GROUND position (green light on).
 - de-energize the helicopter electrical power systems,
 - replace the lubrication PCB,
 - energize the helicopter electrical power systems,

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- do the electrical functional test again as per sub-task 63-26-00-721-004,
- if the test is not correct again, contact the Airbus Helicopters technical support department.

3.4.4 Final steps after the test

- If applicable, set the switch of the [Flight/Ground simulator 332A976102.00] to the GROUND position (green light on).
- De-energize the helicopter electrical power systems.



BEFORE YOU ENERGIZE THE AIRCRAFT ELECTRICAL POWER SYSTEMS AGAIN, WAIT 5 MINUTES FOR THE ELECTRONIC BOARD TO RESET.

- Disconnect the tool [Emergency lubrication unit 332A973401.00] (1) (Figure 8) (Detail C) from the glycol pressure switch connector.
- Disconnect the tool [Emergency lubrication unit 332A973401.00] (1) (Detail C) from the connector of the air pressure switch.
- Connect the connector to the GLYCOL pressure switch (3QK) (5) (Figure 2) as per sub-task 63-26-00-433-002 of task 63-26-00-065.
- Connect the connector to the air pressure switch (4QK) (4) as per sub-task 63-26-00-433-001 of task 63-26-00-065.
- Disconnect the tool from the power supply connector of the electric pump (1QK) (Figure 8).
- Connect the power supply connector to the electric pump (1QK).
- Disconnect the tool from the connector of the P2.4 electrovalve (2QK).
- Remove the tool [Emergency lubrication unit 332A973401.00] (1) (Detail C).
- Connect the connector to the P2.4 electrovalve (2QK) as per sub-task 63-26-00-431-001 of task 63-26-00-064.
- If applicable, remove the [Flight/Ground simulator 332A976102.00] as per sub-task 32-30-00-481-001 of task 32-30-00-481.

NOTE:

If the aircraft is on jacks, lower the aircraft onto its wheels as per sub-task 07-10-00-091-001 of task 07-10-00-491.

- Put the frangible cover in position on the EMLUB pushbutton (8QK) (2) (Figure 6).

Sub-task 63-26-00-721-005

NOTE:

The P2.4 valve test is given with the two tools 332A979000.00 (VOLTAGE) and 332A979001.00 (CURRENT). You must do only one of the two procedures at the operator's choice.

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3.5 Test of the P2.4 system with the tool 332A979000.00 (VOLTAGE)

3.5.1 Installation of the tool P2.4 VALVE TEST KIT 332A979000.00

- De-energize the helicopter electrical power systems.
- Unlock the pipe of the air-air exchanger (3) (Figure 2) from the main distributor.
- Disconnect the pipe of the air-air exchanger (3) from the main distributor.
- Seal the opening in the main vent distributor with a plug.
- Install the [Support assembly 332A979000.11] (4) (Figure 9) with clamps (3) on the Glycol walkway.
- Install the [Air system 332A979000.10] (2) on the [Support assembly 332A979000.11] (4).
- Connect the air-air exchanger pipe (5) to the [Air system 332A979000.10] (2), make sure that the union is correctly attached.
- Tighten the air-air exchanger pipe (5) by one sixth of a turn.
- Attach the tool exhaust pipe with clamps (1) (Figure 10) so that it goes to the rear of the aircraft.



MAKE SURE THAT THERE IS NO INTERFERENCE BETWEEN THE EXHAUST PIPE ASSEMBLY AND THE AIRCRAFT DYNAMIC SYSTEMS AND THE COWLING WHEN IT IS CLOSED.

- Connect the [Air pressure sensor EFE - PHE 167 BAR G] (1) (Figure 9) to the [Air system 332A979000.10] (2).
- Put the utility connector and the [Transmitter assembly 332A973402.00] (2) (Figure 10) through the left cabin door.



MAKE SURE THAT THERE IS NO INTERFERENCE BETWEEN THE WIRING OF THE AIR PRESSURE SENSOR (1) (FIGURE 9) AND THE AIRCRAFT DYNAMIC SYSTEMS AND THE COWLINGS WHEN THEY ARE CLOSED.

- Connect the utility connector to aircraft connector 1HL.
- Connect the Multimeter to the [Transmitter assembly 332A973402.00] (2) (Figure 10).
- Close the doors and the cowlings.
- Remove the [Engine cowling walkways Aircraft tool kit complement].
- Remove the [Access ladder Aircraft tool kit].

3.5.2 Test of the P2.4 valve

- (POST MOD 0728369):
 - remove the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6).
- Energize the helicopter electrical power systems.
- Record the "Rotor not turning" Voltage value shown on the Multimeter.

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NOTE:

We recommend that you use the record and value conversion tables (Figure 16) and (Figure 17).

- Tell an approved person to start the two engines as per the flight manual procedure.
- Check that the "RB ARM" light on the 10WW warning panel is off.
- (POST MOD 0728369):
 - . push the EMLUB SHOT button (2).
- Record the values that follow:
 - . QFE (in mbars),
 - . "Rotor turning" voltage value shown on the Multimeter.

NOTE:

The recorded value can be different to zero.

- Put the aircraft in the following configuration "configuration 1":
 - . ENG 1 set to FLT,
 - . ENG 2 set to FLT,
 - . AFCS ON,
 - . NR ILS OFF,
 - . NR 104%.
- Stabilize the aircraft in this configuration for 10 minutes.
- Record the engine 1 T1 "configuration 1" value (in °C), shown on the FADEC page of the VMS.
- Record the N1 value of engine 1 "configuration 1".
- On the maintenance panel, keep the "PS PW" switch (3) (Figure 1), in the "SENSOR" position (P2.4 valve opens):
 - . 10 to 20 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, record the "Opening 1" Voltage value shown on the Multimeter, without releasing the "PS PW" switch (3),
 - . 30 to 35 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, release the "PS PW" switch (3),
 - . 30 to 35 seconds after you release the "PS PW" switch (3), record the "Closing 1" Voltage value shown on the Multimeter.
- Tell an approved person to stop engine 2 as per the flight manual procedure.
- Put the aircraft in the following configuration "configuration 2":
 - . ENG 1 set to FLT,
 - . ENG 2 OFF,
 - . AFCS ON,
 - . NR ILS OFF,
 - . NR 104%.
- Stabilize the aircraft in this configuration for 4 minutes.
- Record the engine 1 T1 "configuration 2" value (in °C), shown on the FADEC page of the VMS.
- Record the N1 "configuration 2" value.
- On the maintenance panel, keep the "PS PW" switch (3) , in the "SENSOR" position (P2.4 valve opens):

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- 10 to 20 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, record the "Opening 2" Voltage value shown on the Multimeter, without releasing the "PS PW" switch (3),
 - 30 to 35 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, release the "PS PW" switch (3),
 - 30 to 35 seconds after you release the "PS PW" switch (3), record the "Closing 2" Voltage value shown on the Multimeter.
- Tell an approved person to stop engine 1 as per the flight manual procedure.
 - (POST MOD 0728369):
 - install the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6).

3.5.3 Calculate and correct the values

3.5.3.1 Conversion of the "Rotor Not Turning" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Rotor Not Turning" Voltage into Pressure P1.

NOTE:

Pressure P1 is in bars.

3.5.3.2 Conversion of the "Rotor Turning" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Rotor Turning" Voltage into Pressure P2.

NOTE:

Pressure P2 is in bars.

3.5.3.3 Conversion of the "Closing 1" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Closing 1" Voltage into Pressure P4.

NOTE:

Pressure P4 is in bars.

3.5.3.4 Conversion of the "Closing 2" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Closing 2" Voltage into Pressure P6.

NOTE:

Pressure P6 is in bars.

3.5.3.5 Conversion of the "Opening 1" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Opening 1" Voltage into Pressure P3.

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NOTE:

Pressure P3 is in bars.

3.5.3.6 Conversion of the "Opening 2" Pressure

- With the [Calibration sheet 332A979000.31] of the [P2.4 VALVE TEST KIT 332A979000.00], change "Opening 2" Voltage into Pressure P5.

NOTE:

Pressure P5 is in bars.

3.5.3.7 Record constant K "configuration 1"

- With (Figure 11), calculate the value of K related to the engine 1 T1 "configuration 1" value that you recorded before.

NOTE:

You can use (Figure 11), to find the constant K.

3.5.3.8 Record constant K "configuration 2"

- With (Figure 11), calculate the value of K related to the engine 1 T1 "configuration 2" value that you recorded before.

NOTE:

You can use (Figure 11), to find the constant K.

3.5.3.9 Calculate the corrected rating Ng'.1

- Multiply the N1 value "Configuration 1" that you recorded before by constant K "configuration 1".

NOTE:

When you calculate this you get the corrected rating Ng'.1.

3.5.3.10 Calculate the corrected rating Ng'.2

- Multiply the N1 value "Configuration 2" that you recorded before by constant K "configuration 2".

NOTE:

When you calculate this you get the corrected rating Ng'.2.

3.5.3.11 Interpretation of the calculated and corrected values

- Plot the vertical straight line (Figure 14) related to the corrected rating Ng'.1.
- Plot the horizontal straight line related to pressure P3.

- Mark the point of intersection of the straight lines that you plotted before with a dot.
- Plot the vertical straight line related to the corrected rating Ng'.2.
- Plot the horizontal straight line related to pressure P5.
- Mark the point of intersection of the straight lines that you plotted before with a dot.
- Find the reference curve related to the measured QFE.
- If the two points related to the intersection of the straight lines are above the reference curve, example (Figure 15) (Detail A), subtract the P1 pressure value from the P6 pressure value, and refer to the table below:

Result that you calculated	Action to be Taken
P6 - P1 ≤ 0.03 bars (.435 psi): correct	Do the final steps
P6 - P1 > 0.03 bars (.435 psi): incorrect	Refer to task 63-26-00-723

NOTE:

The P1 pressure value was given by paragraph 3.5.3.1.

The P6 pressure value was given by paragraph 3.5.3.4.

- On the chart in (Figure 14), if a minimum of one of the two points related to the intersection of the straight lines is below the reference curve, examples (Figure 15) (Detail B) (Detail C): do the tests again. Refer to paragraph 3.5.2.
- If a minimum of one of the points stays below the curve after two tests with paragraph 3.5.2., contact the Airbus Helicopters technical support department.

3.5.4 Removal of the tool P2.4 VALVE TEST KIT 332A979000.00

- Install the [Access ladder Aircraft tool kit].
- Install the [Engine cowling walkways Aircraft tool kit complement].
- Open the cowlings.
- Disconnect the utility connector and the [Transmitter assembly 332A973402.00] (2) (Figure 10).
- Disconnect the [Air pressure sensor EFE - PHE 167 BAR G] (1) (Figure 9) from the [Air system 332A979000.10] (2).
- Loosen the clamps (1) (Figure 10) and remove the tool exhaust pipe.
- Disconnect the air-air exchanger pipe (5) (Figure 9) from the [Air system 332A979000.10] (2).
- Loosen the clamps (3) on the Glycol walkway and remove the [Support assembly 332A979000.11] (4).
- Remove the plug from the opening in the main vent distributor.
- Connect and safety the pipe of the air-air exchanger (3) (Figure 2) to the main distributor with [Lockwire CM 776].

3.6 Test of the P2.4 system with the tool 332A979001.00 (CURRENT)

3.6.1 Installation of the tool P2.4 VALVE TOOL 332A979001.00

- De-energize the helicopter electrical power systems.

- Unsafely and disconnect the pipe of the air-air exchanger (3) (Figure 2) from the main distributor.
- Seal the opening in the main vent distributor with a plug.
- Unsafely the attachment screws (4) (Figure 12) of the reservoir.
- Remove the attachment screws (4) and the washers (5) of the reservoir.
- Install the [KENT CHAMBER 332A979001.10] (8) on the [ATTACHMENT ASSEMBLY 332A979001.11] (7).
- Install the [ATTACHMENT ASSEMBLY 332A979001.11] (7) on the walkway with the attachment screws (4).

NOTE:

It is not necessary to safety the attachment screws (4) when you install the [ATTACHMENT ASSEMBLY 332A979001.11] (7).

- Connect the air-air exchanger pipe (3) to the [KENT CHAMBER 332A979001.10] (8), make sure that the union is correctly attached.
- Tighten the air-air exchanger pipe (3) by one sixth of a turn.
- Tighten the [PIPE GP 60 332A979001.61] (6) to the [KENT CHAMBER 332A979001.10] (8).
- Adjust the position of the [KENT CHAMBER 332A979001.10] (8) with the adjustment screws (2).

CAUTION

MAKE SURE THAT THERE IS NO INTERFERENCE BETWEEN THE [PIPE GP 60 332A979001.61] (6) AND THE AIRCRAFT DYNAMIC SYSTEMS AND THE SLIDING COWLING WHEN IT IS CLOSED.

- Attach the [PIPE GP 60 332A979001.61] (6) with clamps (1) (Figure 13) so that it goes to the rear of the aircraft.
- Connect the [SENSOR 2600BGA4001G3UA] (9) (Figure 12) to the [KENT CHAMBER 332A979001.10] (8).
- Connect the [CONNECTOR 332A979001.12] (1) to the [SENSOR 2600BGA4001G3UA] (9).

CAUTION

MAKE SURE THAT THERE IS NO INTERFERENCE BETWEEN THE [CONNECTOR 332A979001.12] (1) AND THE AIRCRAFT DYNAMIC SYSTEMS AND THE COWLINGS WHEN THEY ARE CLOSED.

- Put the utility connector and the unit (2) (Figure 13) of the [CONNECTOR 332A979001.12] (1) (Figure 12) through the left cabin door.
- Connect the utility connector to aircraft connector 1HL.
- Connect the Multimeter to the unit (2) (Figure 13).
- Close the doors and the cowlings.
- Remove the [Engine cowling walkways Aircraft tool kit complement].
- Remove the [Access ladder Aircraft tool kit].



3.6.2 Test of the P2.4 valve

- (POST MOD 0728369):
 - . remove the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6).
- Energize the helicopter electrical power systems.
- Record the "Rotor not turning" Current value shown on the Multimeter.

NOTE:

We recommend that you use the record and value conversion tables (Figure 19) and (Figure 20).

- Tell an approved person to start the two engines as per the flight manual procedure.
- Check that the "RB ARM" light on the 10WW warning panel is off.
- (POST MOD 0728369):
 - . push the EMLUB SHOT button (2).
- Record the values that follow:
 - . QFE (in mbars),
 - . "Rotor turning" Current value shown on the Multimeter.

NOTE:

The recorded value can be different to zero.

- Put the aircraft in the following configuration "configuration 1":
 - . ENG 1 set to FLT
 - . ENG 2 set to FLT
 - . AFCS ON
 - . NR ILS OFF
 - . NR 104%
- Stabilize the aircraft in this configuration for 10 minutes.
- Record the engine 1 T1 "configuration 1" value (in °C), shown on the FADEC page of the VMS.
- Record the N1 value of engine 1 "configuration 1".
- On the maintenance panel, keep the "PS PW" switch (3) (Figure 1), in the "SENSOR" position (P2.4 valve opens):
 - . 10 to 20 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, record the "Opening 1" Current value shown on the Multimeter, without releasing the "PS PW" switch (3),
 - . 30 to 35 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, release the "PS PW" switch (3),
 - . 30 to 35 seconds after you release the "PS PW" switch (3), record the "Closing 1" Current value shown on the Multimeter.
- Tell an approved person to stop engine 2 as per the flight manual procedure.
- Put the aircraft in the following configuration "configuration 2":
 - . ENG 1 set to FLT
 - . ENG 2 OFF
 - . AFCS ON
 - . NR ILS OFF
 - . NR 104%

- Stabilize the aircraft in this configuration for 4 minutes.
- Record the engine 1 T1 "configuration 2" value (in °C), shown on the FADEC page of the VMS.
- Record the N1 "configuration 2" value.
- On the maintenance panel, keep the "PS PW" switch (3) , in the "SENSOR" position (P2.4 valve opens):
 - 10 to 20 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, record the "Opening 2" Current value shown on the Multimeter, without releasing the "PS PW" switch (3),
 - 30 to 35 seconds after you set the "PS PW" switch (3) to the "SENSOR" position, release the "PS PW" switch (3),
 - 30 to 35 seconds after you release the "PS PW" switch (3), record the "Closing 2" Current value shown on the Multimeter.
- Tell an approved person to stop engine 1 as per the flight manual procedure.
- (POST MOD 0728369):
 - install the frangible cover from the EMLUB push-button (8QK) (2) (Figure 6).

3.6.3 Calculate and correct the values

3.6.3.1 Conversion of the "Rotor Not Turning" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Rotor Not Turning" Current into Pressure P1.

NOTE:

Pressure P1 is in bars.

3.6.3.2 Conversion of the "Rotor Turning" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Rotor Turning" Current into Pressure P2.

NOTE:

Pressure P2 is in bars.

3.6.3.3 Conversion of the "Closing 1" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Closing 1" Current into Pressure P4.

NOTE:

Pressure P4 is in bars.

3.6.3.4 Conversion of the "Closing 2" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Closing 2" Current into Pressure P6.



NOTE:

Pressure P6 is in bars.

3.6.3.5 Conversion of the "Opening 1" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Opening 1" Current into Pressure P3.

NOTE:

Pressure P3 is in bars.

3.6.3.6 Conversion of the "Opening 2" Pressure

- With the [USER MANUAL 332A979001.33] of the [P2.4 VALVE TOOL 332A979001.00] change "Opening 2" Current into Pressure P5.

NOTE:

Pressure P5 is in bars.

3.6.3.7 Record constant K "configuration 1"

- With (Figure 11), calculate the value of K related to the engine 1 T1 "configuration 1" value that you recorded before.

NOTE:

You can use (Figure 11), to find the constant K.

3.6.3.8 Record constant K "configuration 2"

- With (Figure 11), calculate the value of K related to the engine 1 T1 "configuration 2" value that you recorded before.

NOTE:

You can use (Figure 11), to find the constant K.

3.6.3.9 Calculate the corrected rating Ng'.1

- Multiply the N1 value "Configuration 1" that you recorded before by constant K "configuration 1".

NOTE:

When you calculate this you get the corrected rating Ng'.1.

3.6.3.10 Calculate the corrected rating Ng'.2

- Multiply the N1 value "Configuration 2" that you recorded before by constant K "configuration 2".

NOTE:

When you calculate this you get the corrected rating Ng'.2.

3.6.3.11 Interpretation of the calculated and corrected values

- Plot the vertical straight line (Figure 14) related to the corrected rating Ng'.1.
- Plot the horizontal straight line related to pressure P3.
- Mark the point of intersection of the straight lines that you plotted before with a dot.
- Plot the vertical straight line related to the corrected rating Ng'.2.
- Plot the horizontal straight line related to pressure P5.
- Mark the point of intersection of the straight lines that you plotted before with a dot.
- Find the reference curve related to the measured OFE.
- If the two points related to the intersection of the straight lines are above the reference curve, example (Figure 15) (Detail A), subtract the P1 pressure value from the P6 pressure value, and refer to the table below:

Result that you calculated	Action to be Taken
P6 - P1 ≤ 0.03 bars (.435 psi): correct	Do the final steps
P6 - P1 > 0.03 bars (.435 psi): incorrect	Refer to task 63-26-00-723

NOTE:

The P1 pressure value was given by paragraph 3.6.3.1.

The P6 pressure value was given by paragraph 3.6.3.4.

- On the chart in (Figure 14), if a minimum of one of the two points related to the intersection of the straight lines is below the reference curve, examples (Figure 15) (Detail B) (Detail C): do the tests again. Refer to paragraph 3.5.2.
- If a minimum of one of the points stays below the curve after two tests with paragraph 3.5.2., contact the Airbus Helicopters technical support department.

3.6.4 Removal of the tool P2.4 VALVE TOOL 332A979001.00

- Install the [Access ladder Aircraft tool kit].
- Install the [Engine cowling walkways Aircraft tool kit complement].
- Open the cowlings.
- Disconnect the utility connector.
- Disconnect the [CONNECTOR 332A979001.12] (1) (Figure 12) from the [SENSOR 2600BGA4001G3UA] (9).
- Disconnect the [SENSOR 2600BGA4001G3UA] (9) from the [KENT CHAMBER 332A979001.10] (8).
- Loosen the clamps (1) (Figure 13) and remove the [PIPE GP 60 332A979001.61] (6) (Figure 12).
- Disconnect the air-air exchanger pipe (3) from the [KENT CHAMBER 332A979001.10] (8).
- Remove the attachment screws (4) of the reservoir.

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- Remove the [ATTACHMENT ASSEMBLY 332A979001.11] (7).
- Install the attachment screws (4) and the washers (5) of the reservoir.
- Safety the attachment screws (4) of the reservoir with [Lockwire CM 776].
- Remove the plug from the opening in the main vent distributor.
- Connect and safety the pipe of the air-air exchanger (3) (Figure 2) to the main distributor with [Lockwire CM 776].

4 FINAL STEPS

- De-energize the helicopter electrical power systems.
- Disconnect the [Electrical ground power unit (or equivalent) GB45/20V04].
- Remove the [Engine cowling walkways Aircraft tool kit complement].
- Close the engine cowlings.
- Close the sliding cowling.
- Remove the [Access ladder Aircraft tool kit].

PRE PRINT

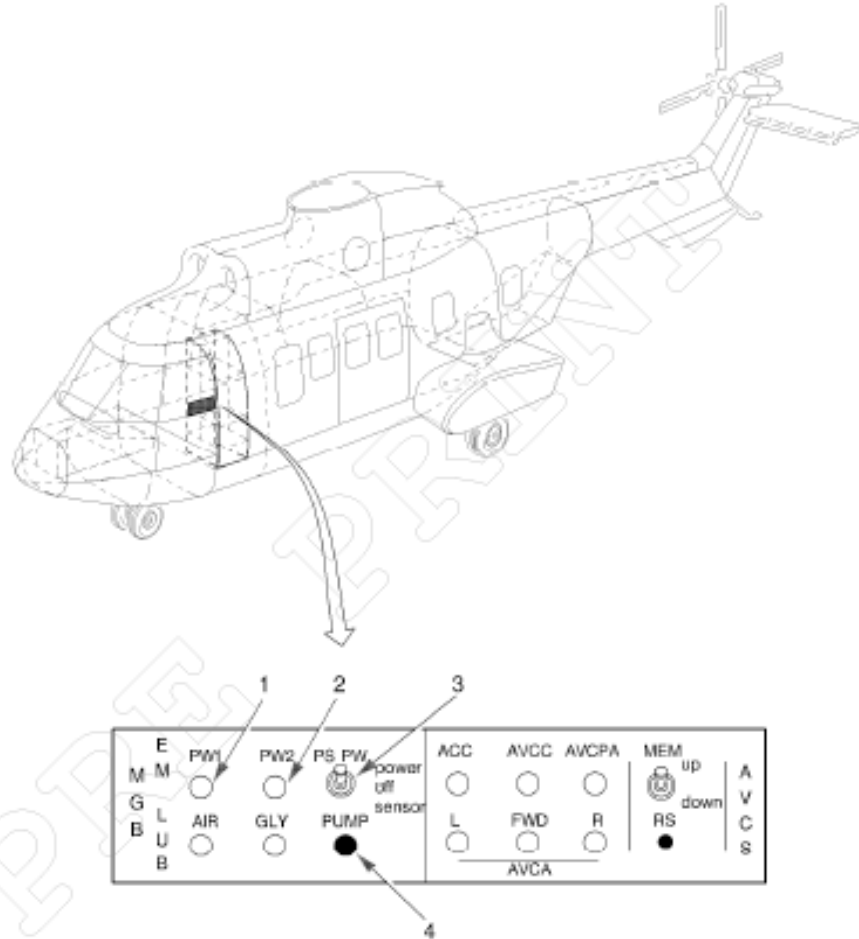


Figure 1

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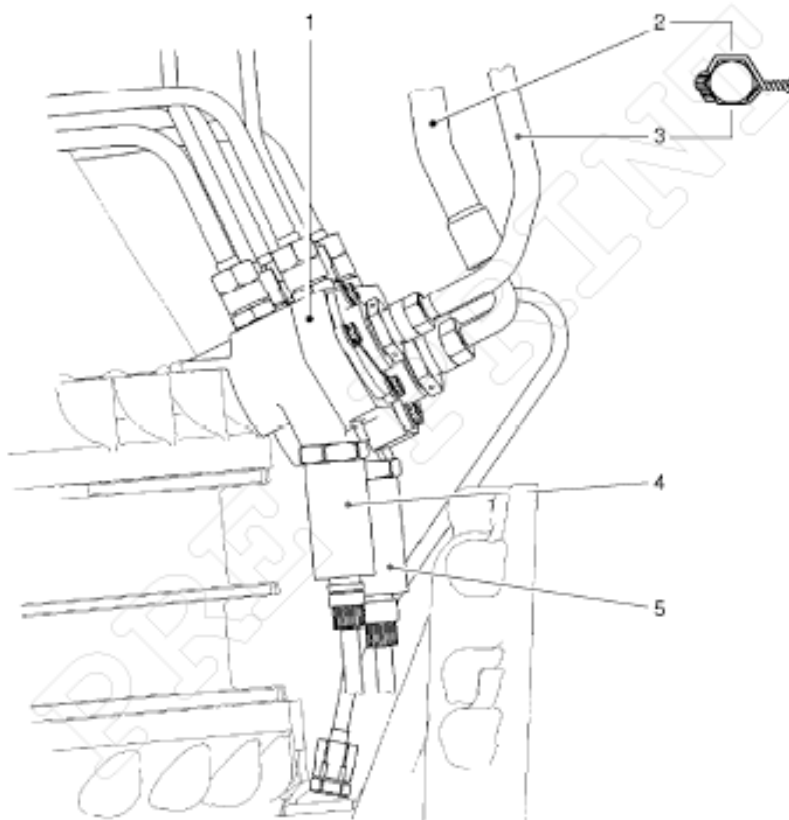


Figure 2

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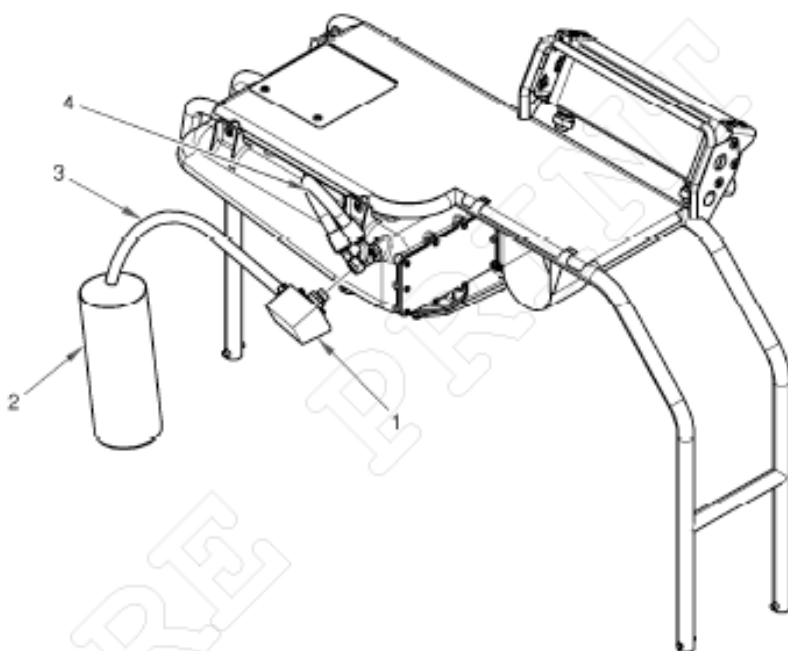


Figure 3

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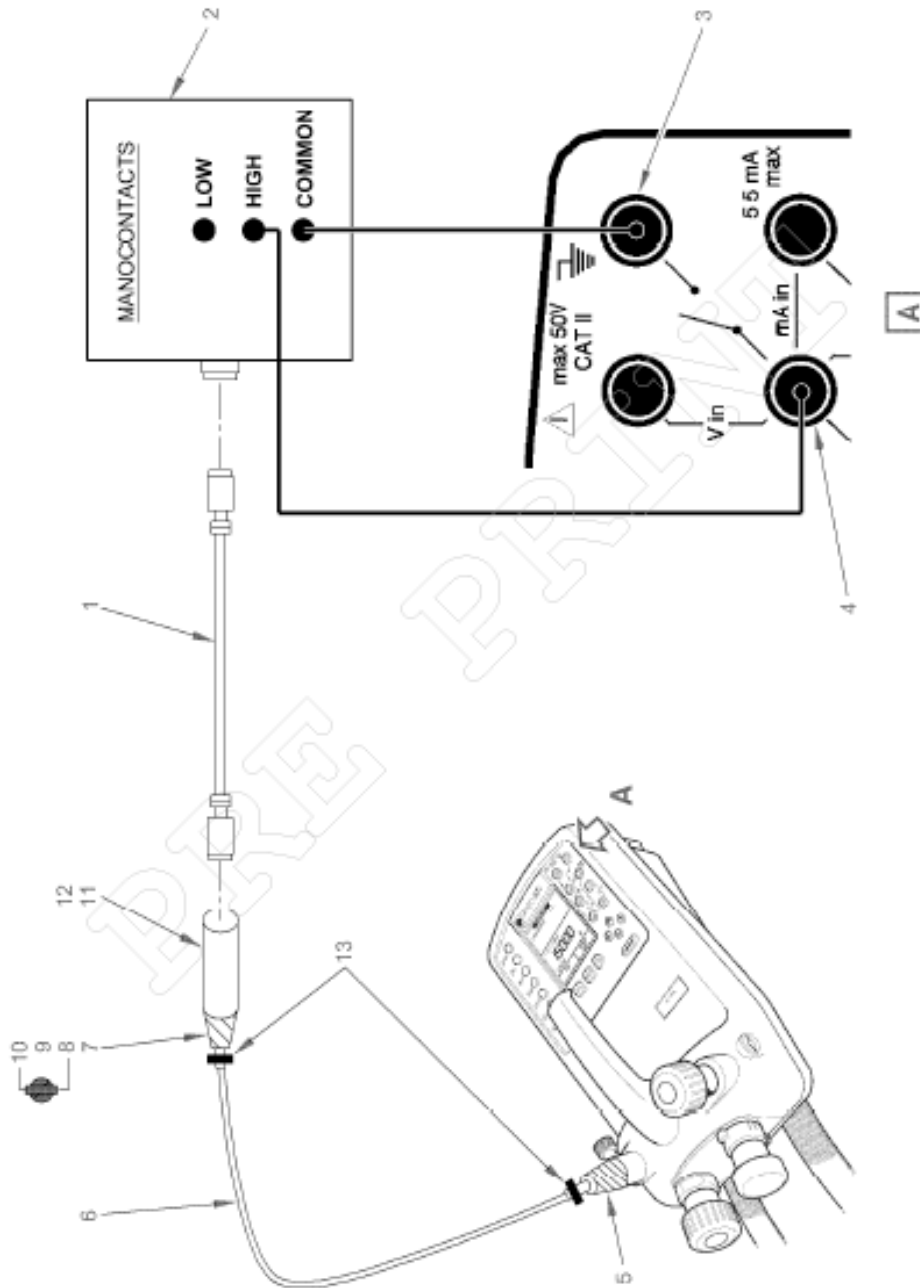


Figure 4

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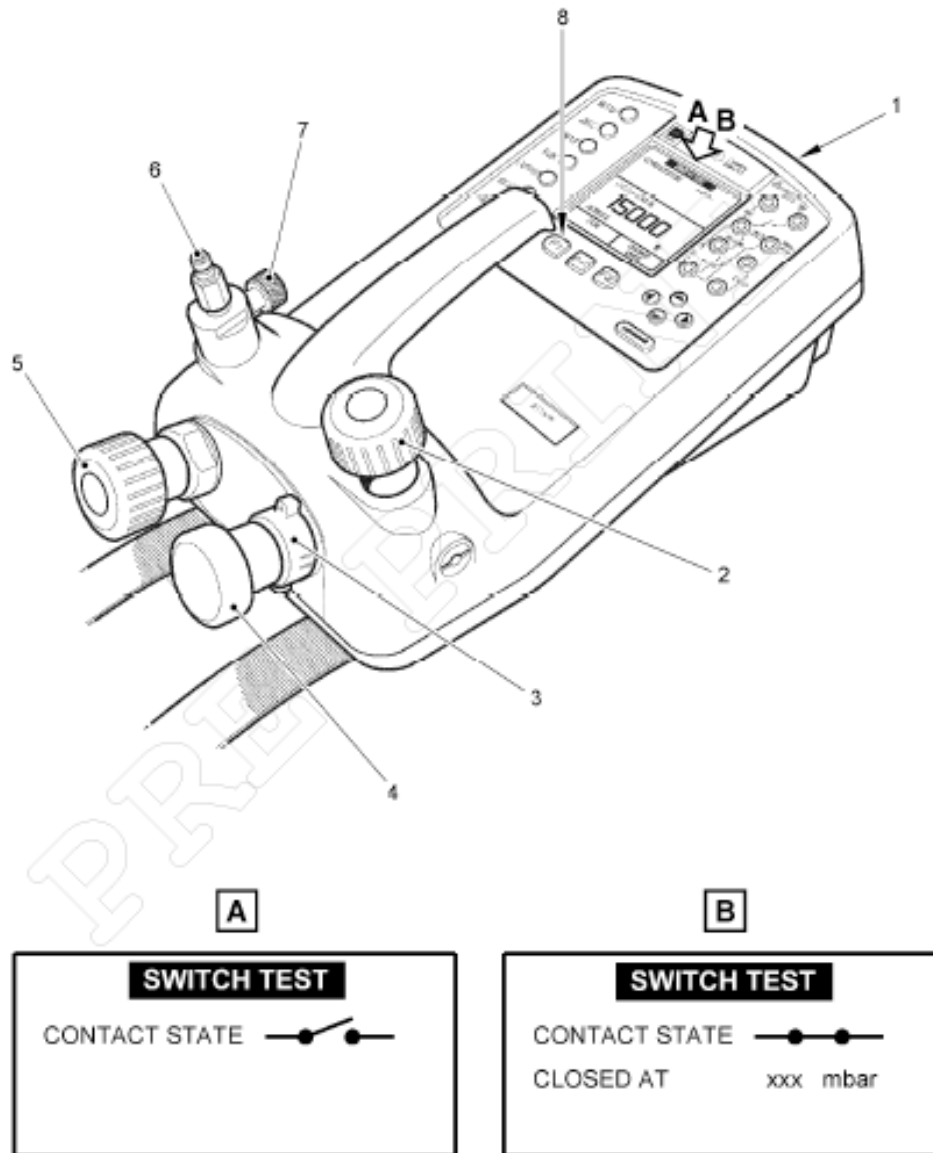


Figure 5

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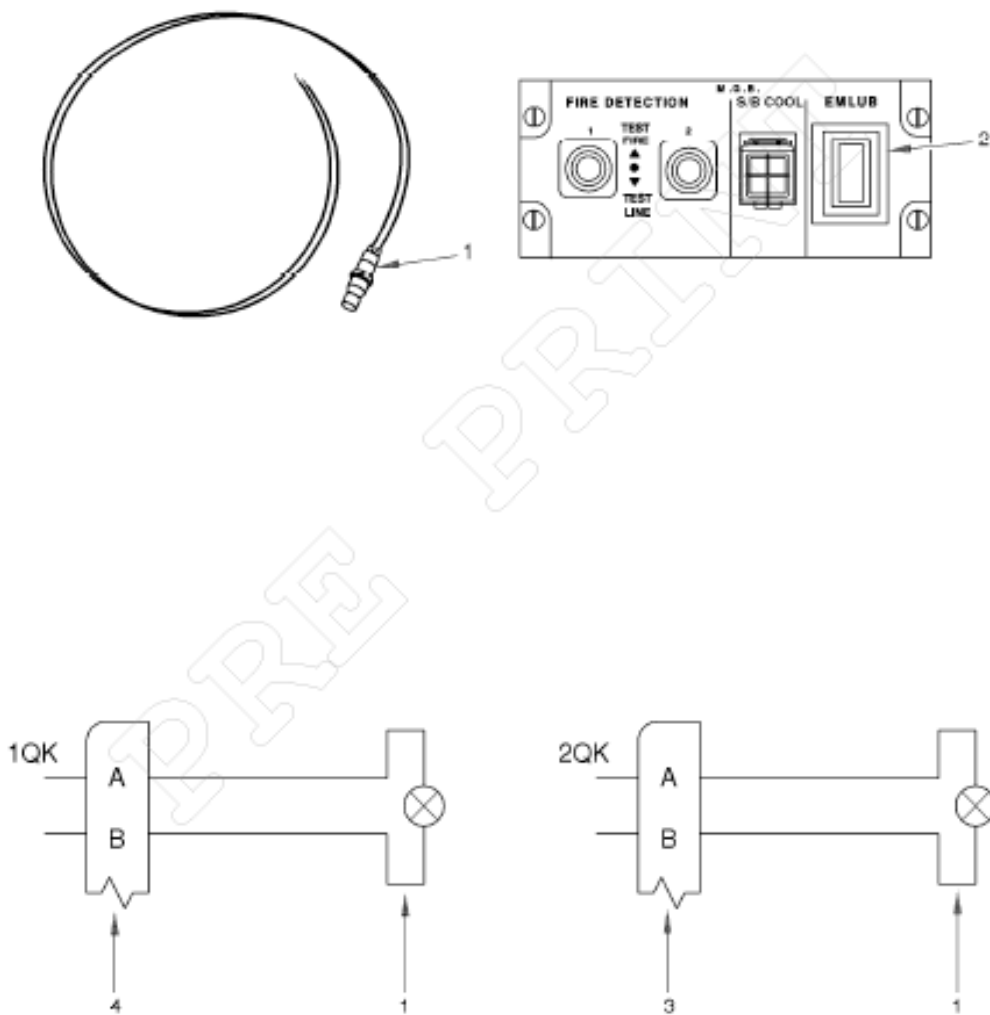


Figure 6

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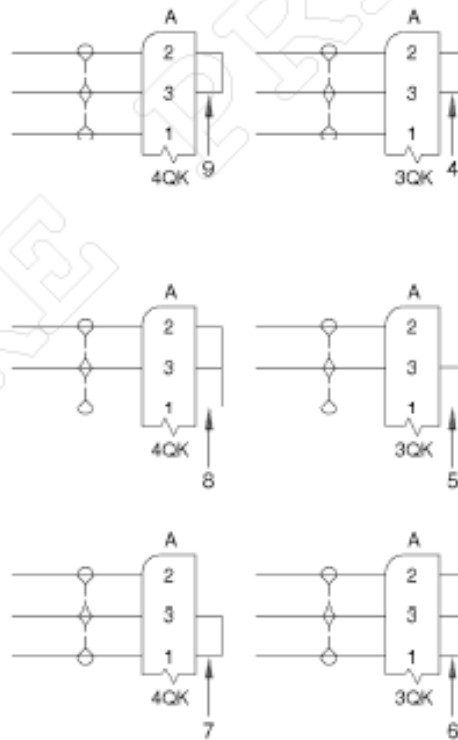
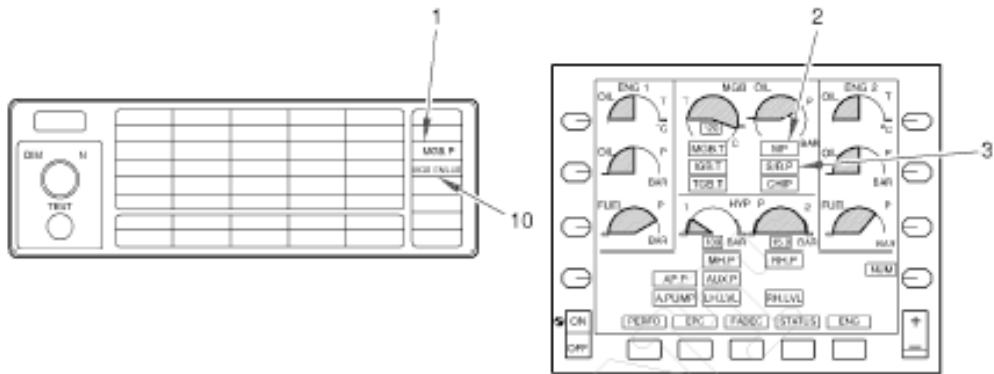


Figure 7

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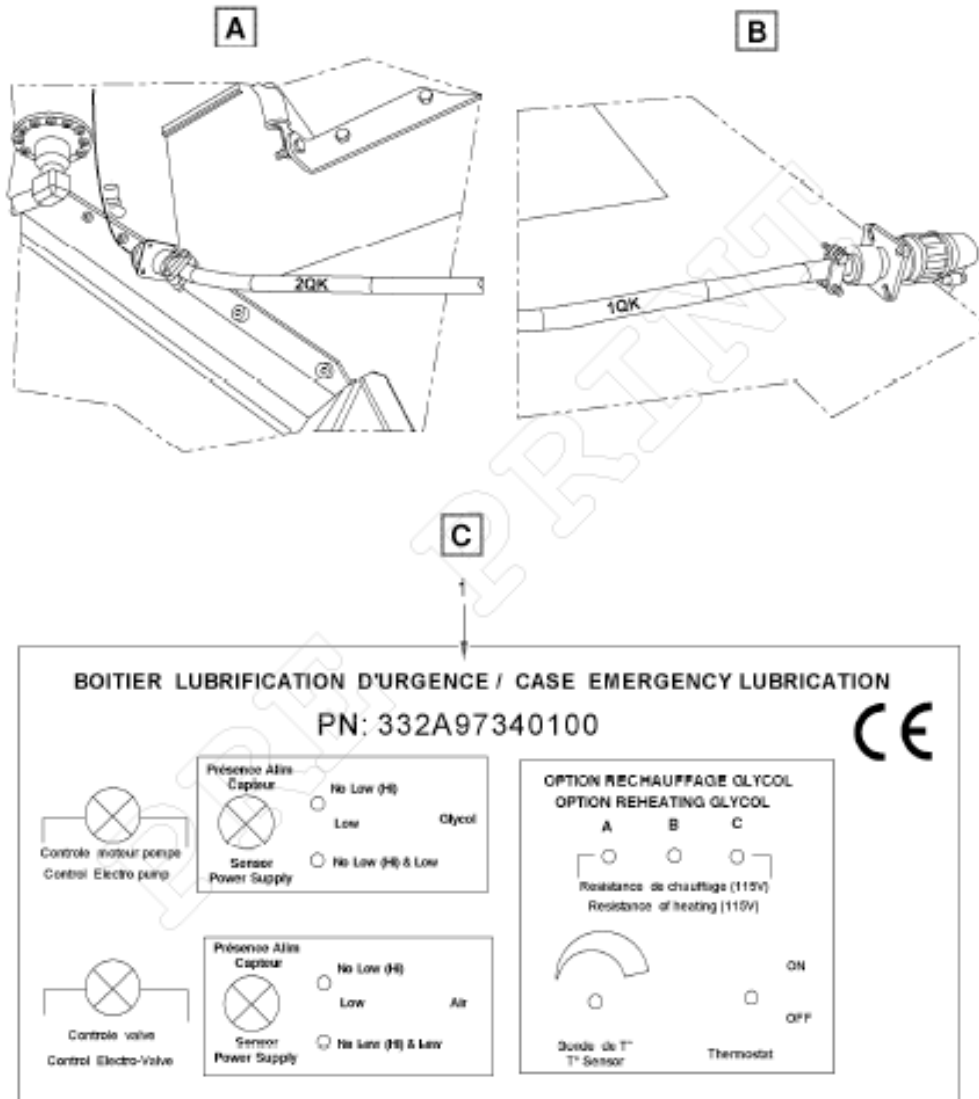


Figure 8

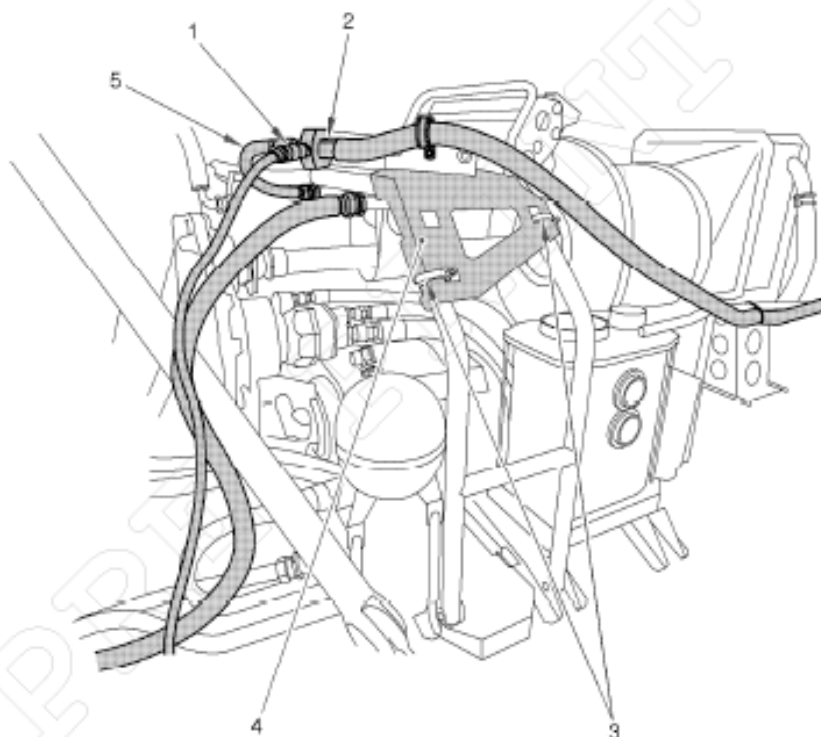


Figure 9

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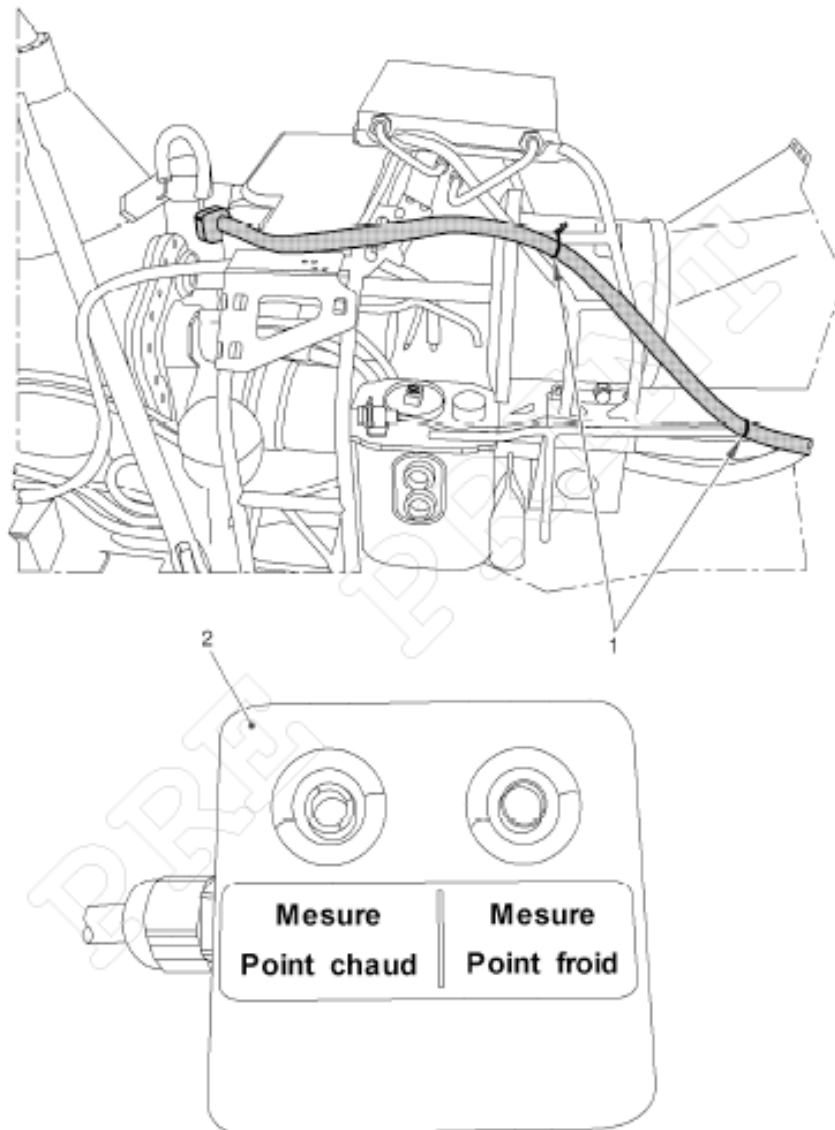


Figure 10

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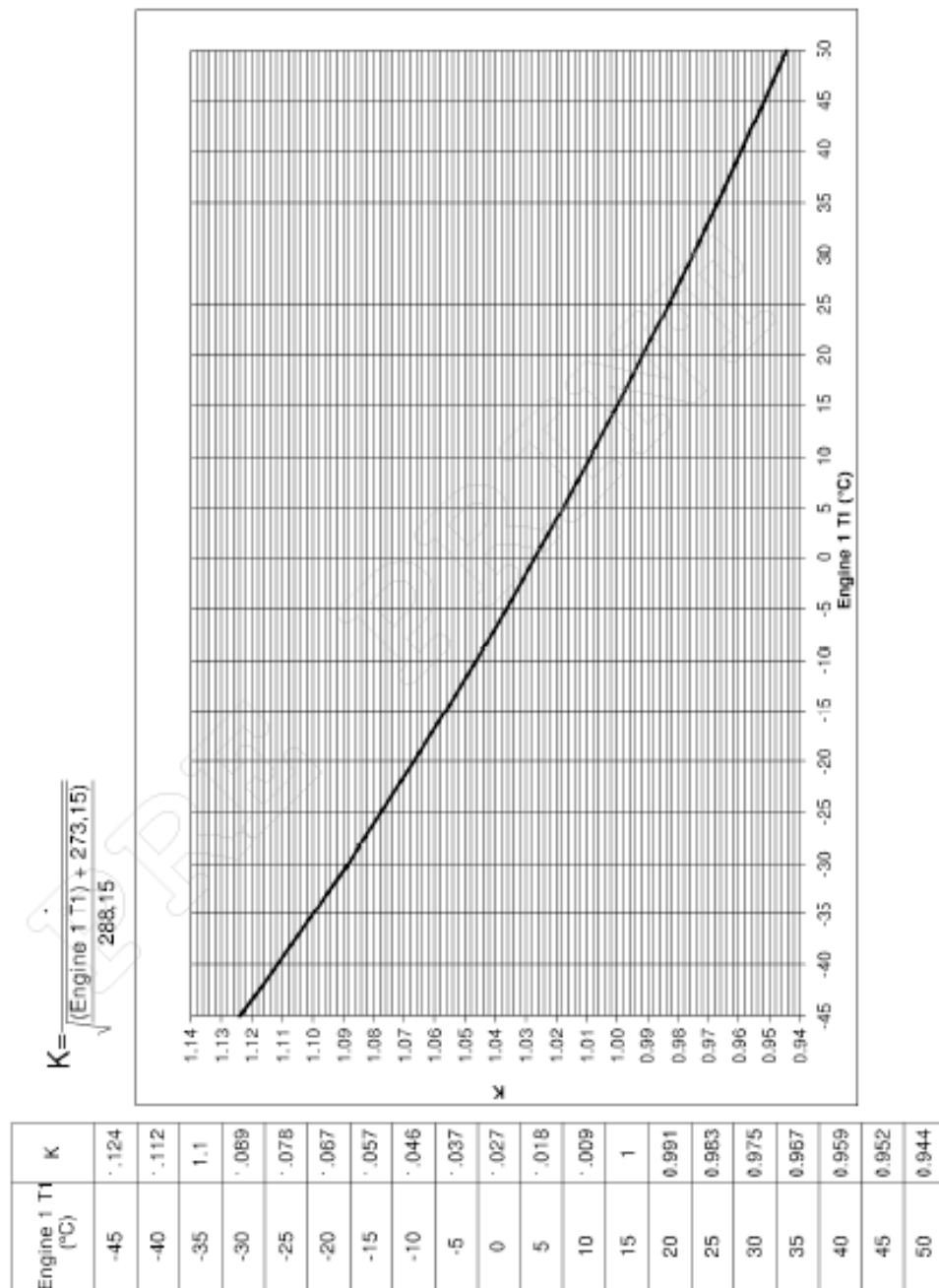


Figure 11

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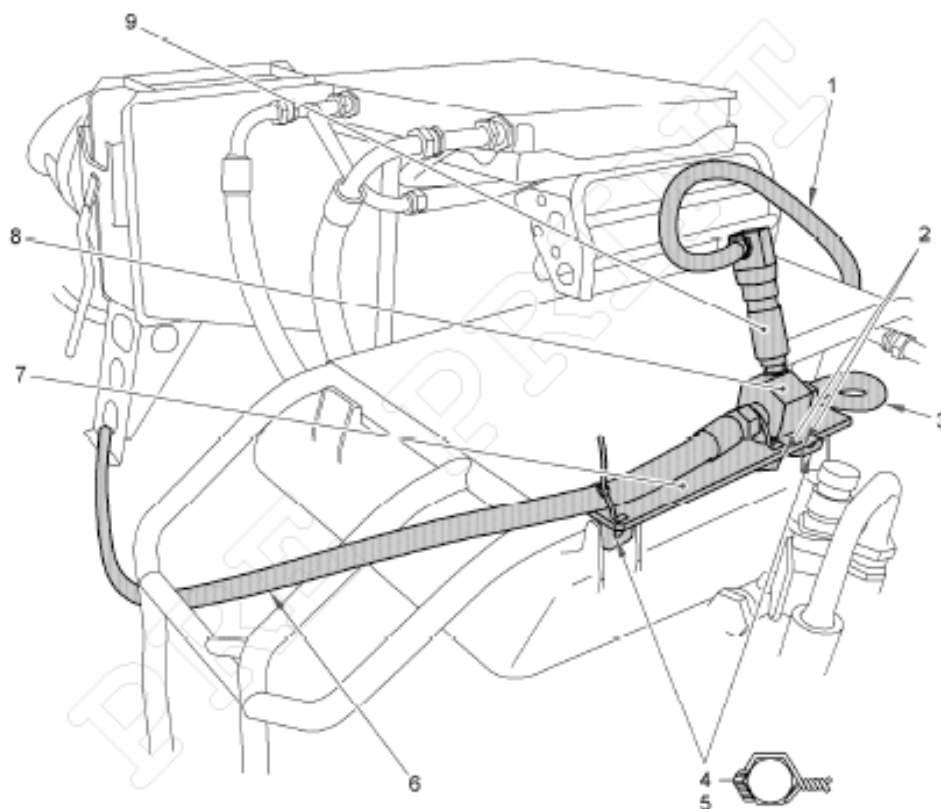


Figure 12

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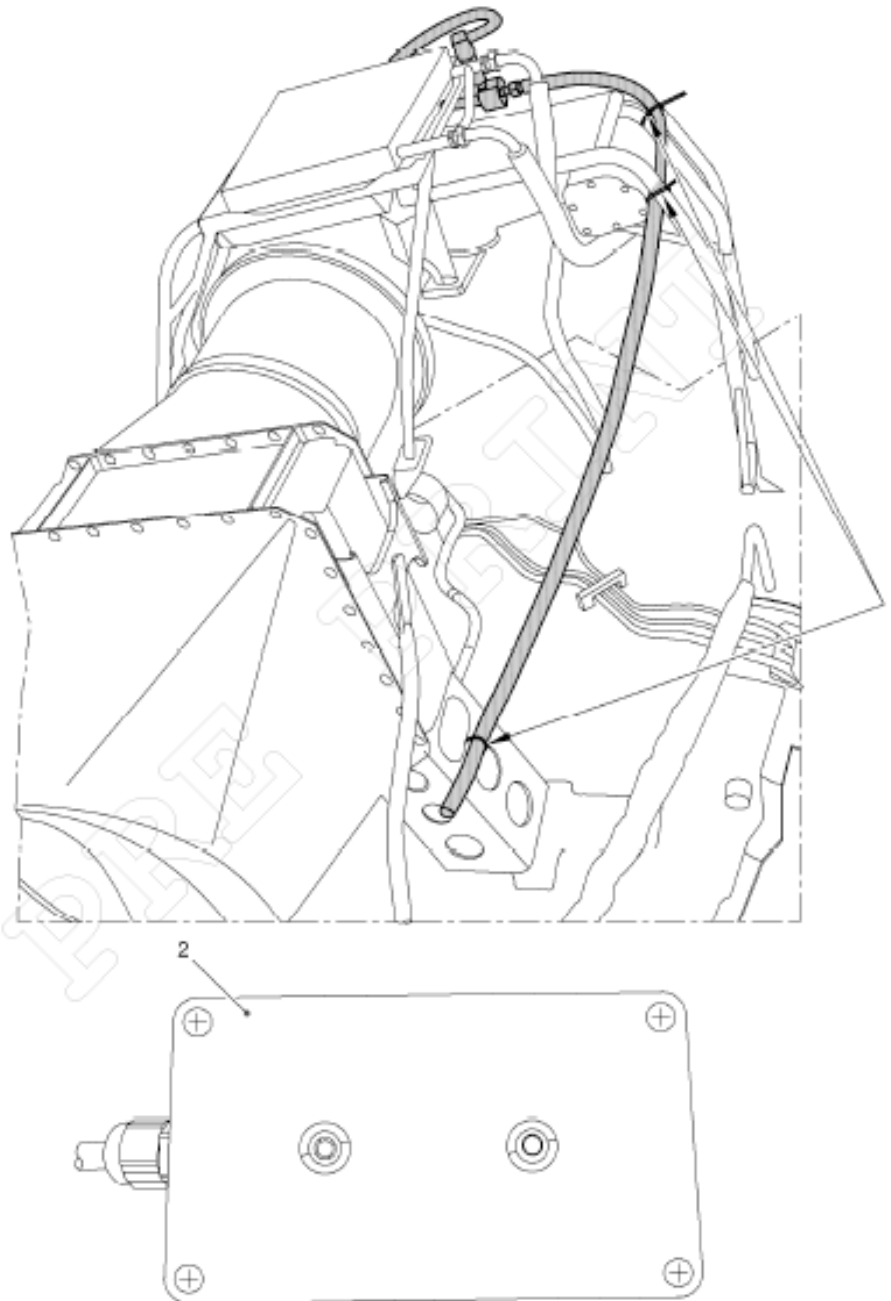


Figure 13

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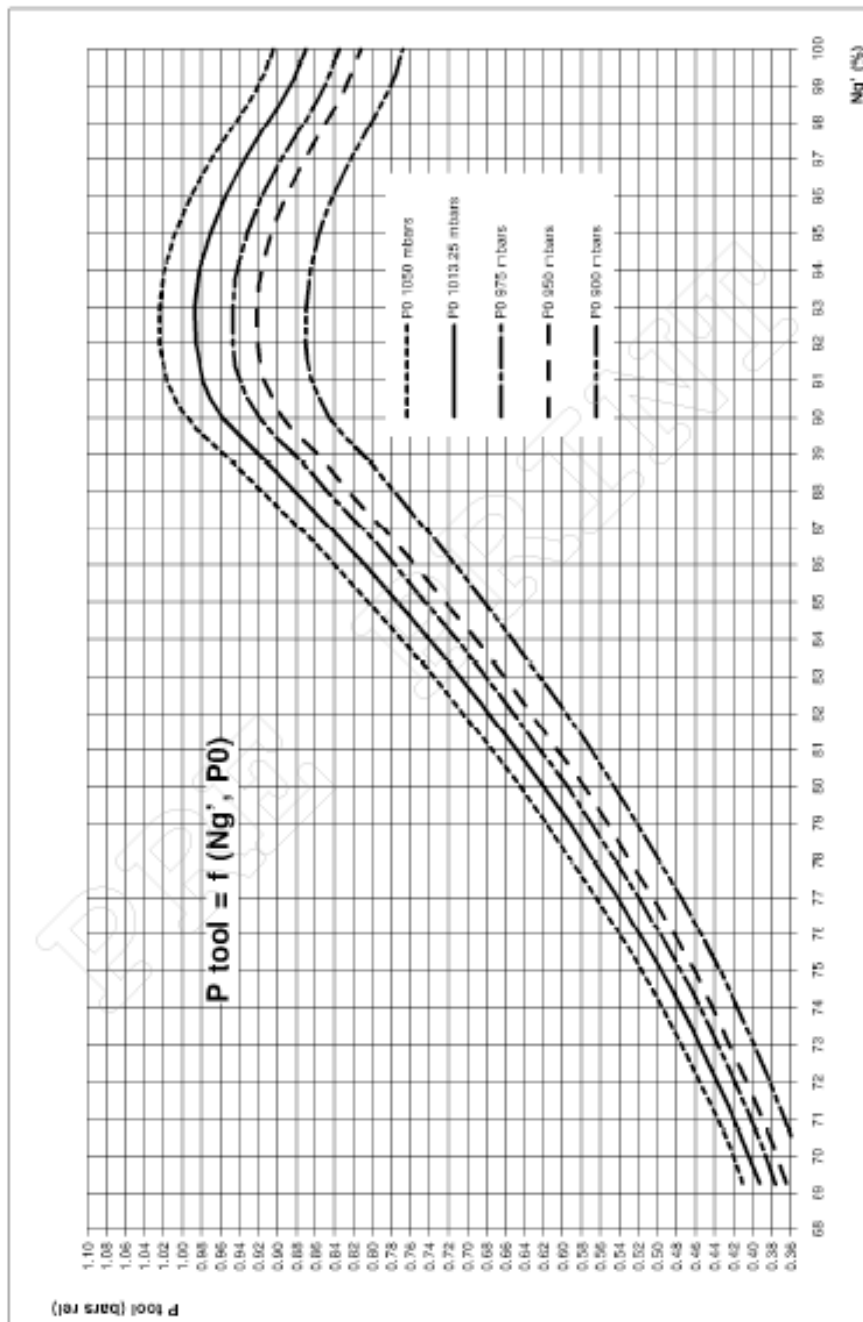
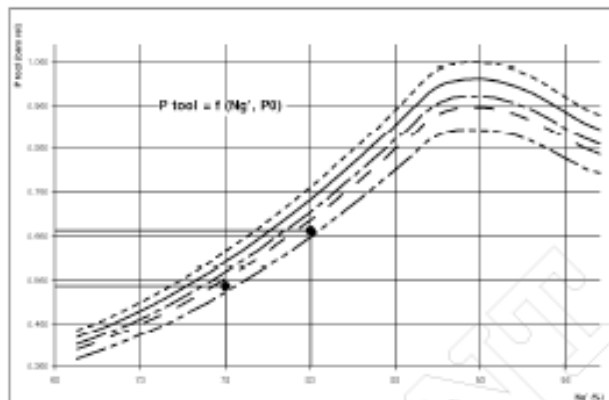
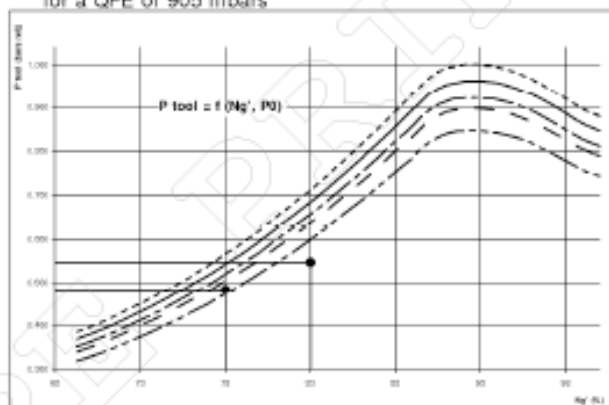


Figure 14

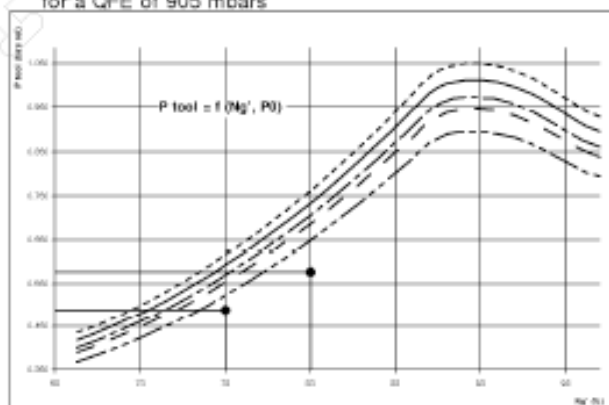
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Détail A : Example with the two points above the curve, for a QFE of 905 mbars



Détail B : Example with one point below the curve, for a QFE of 905 mbars



Détail C : Example with the two points below the curve, for a QFE of 905 mbars

Figure 15

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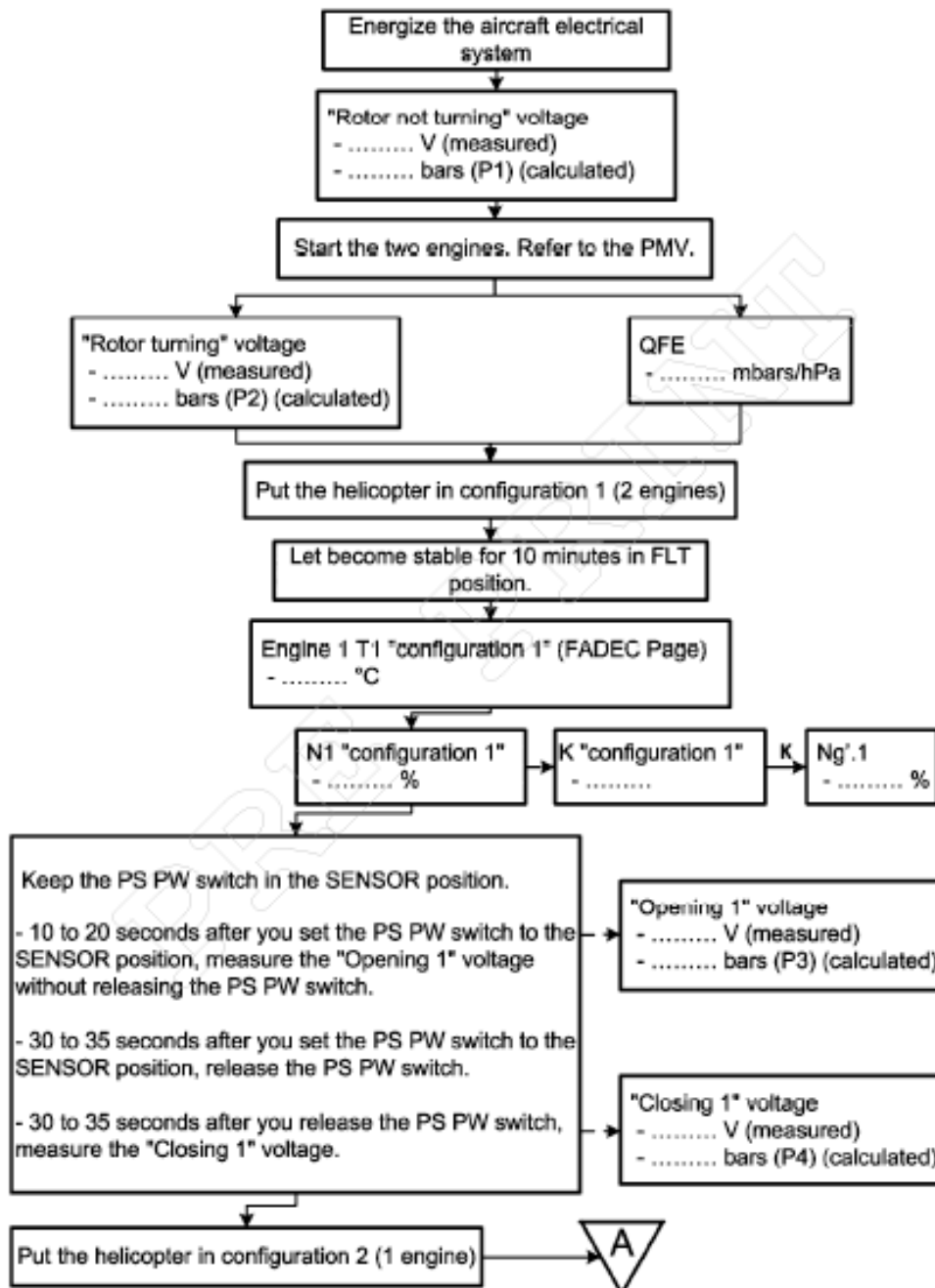


Figure 16

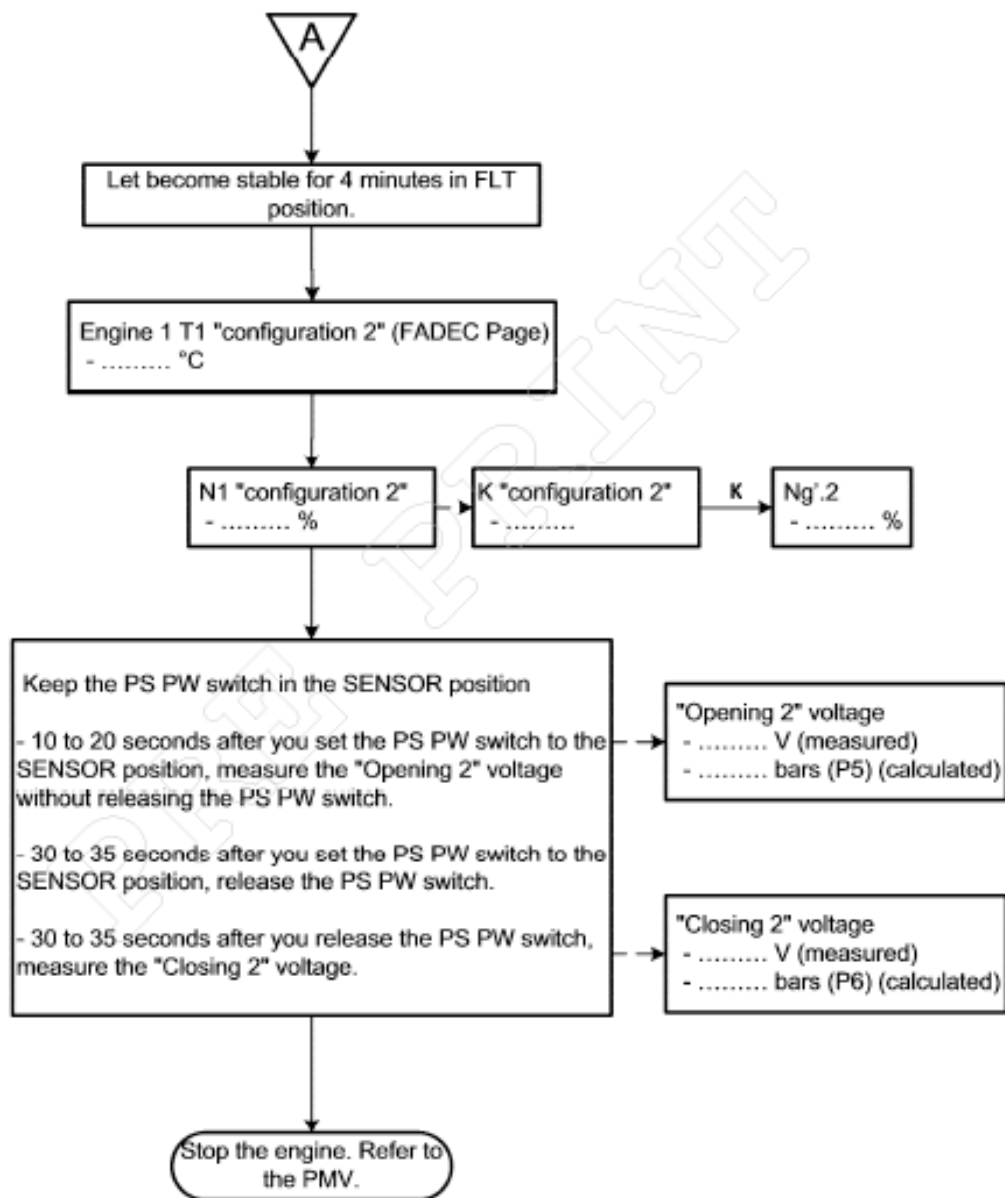


Figure 17

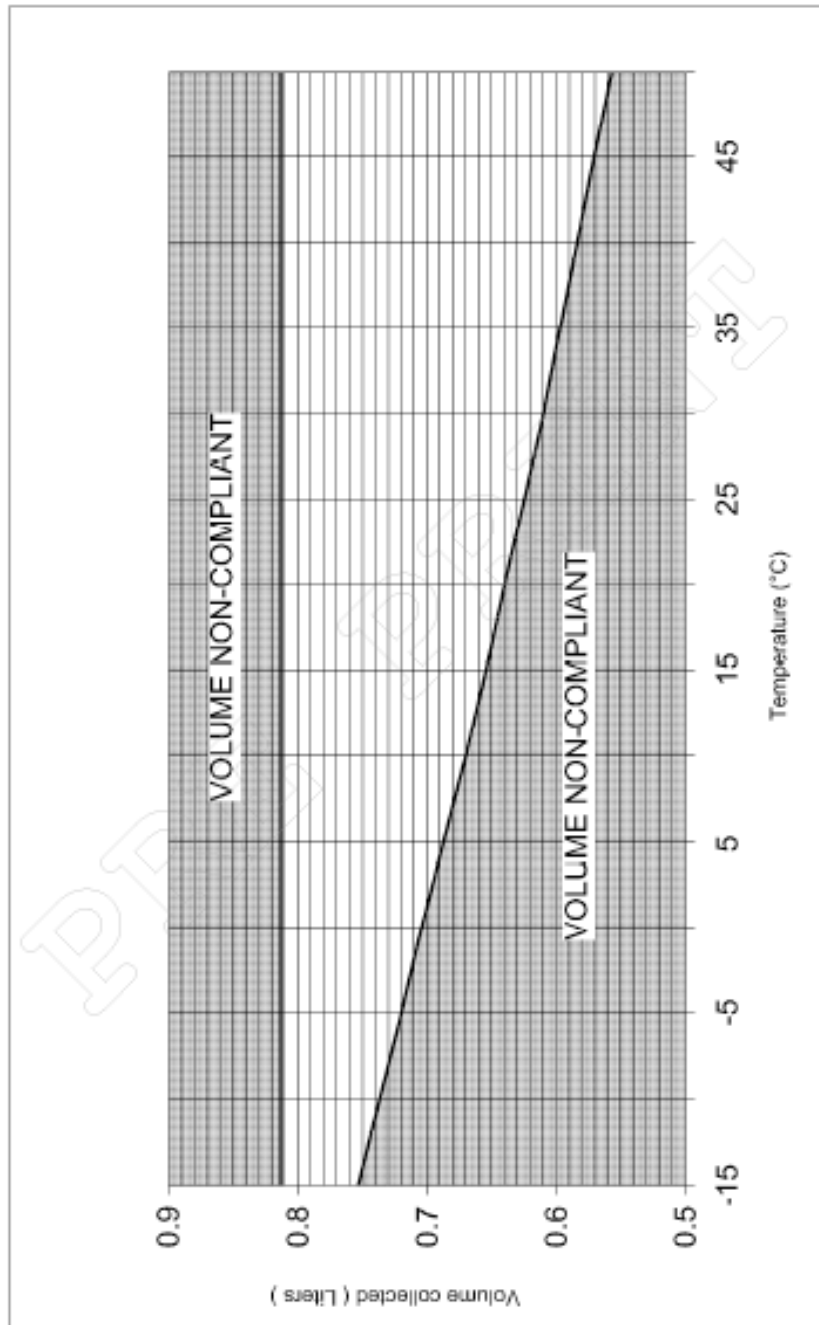


Figure 18

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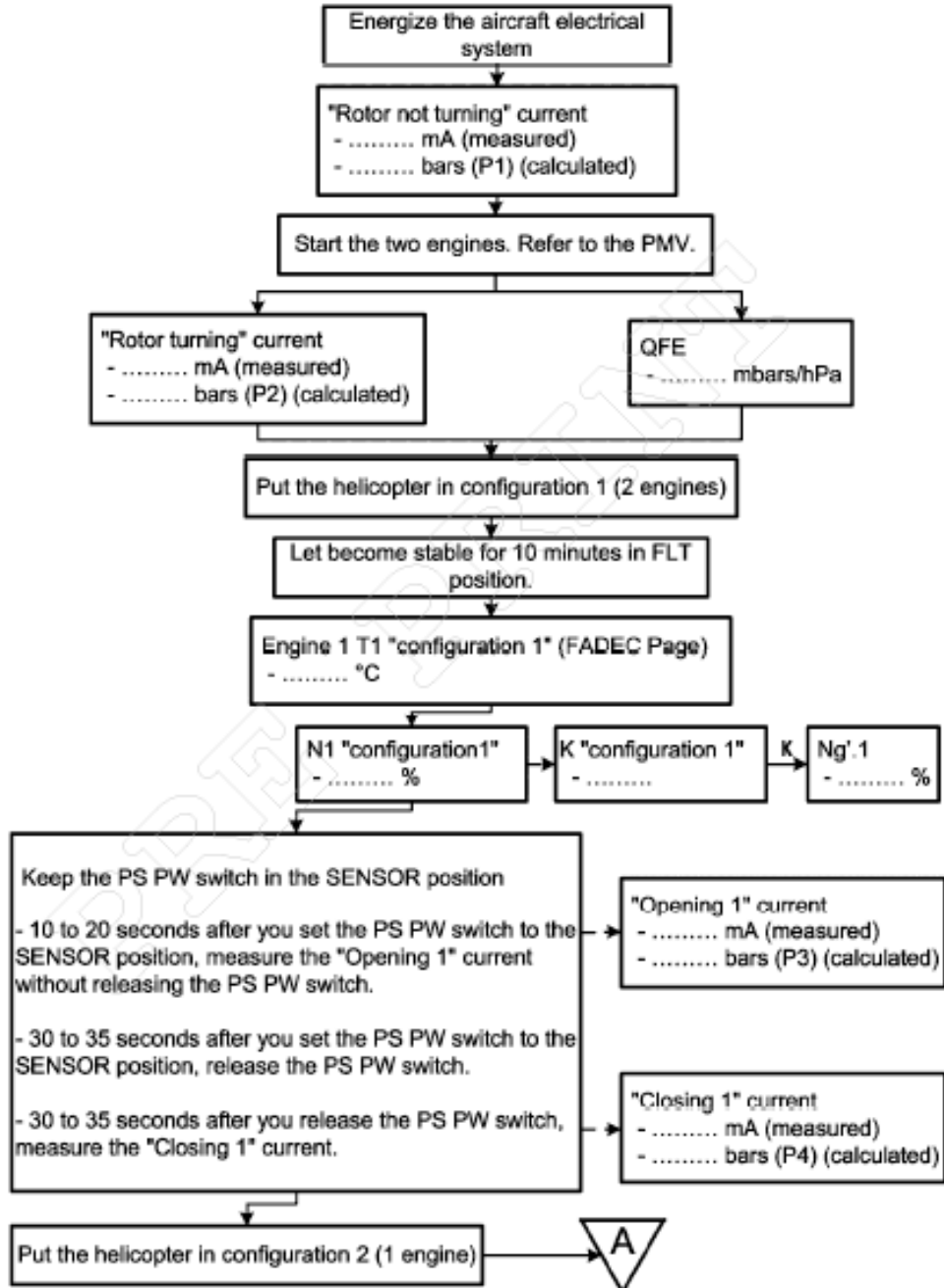


Figure 19

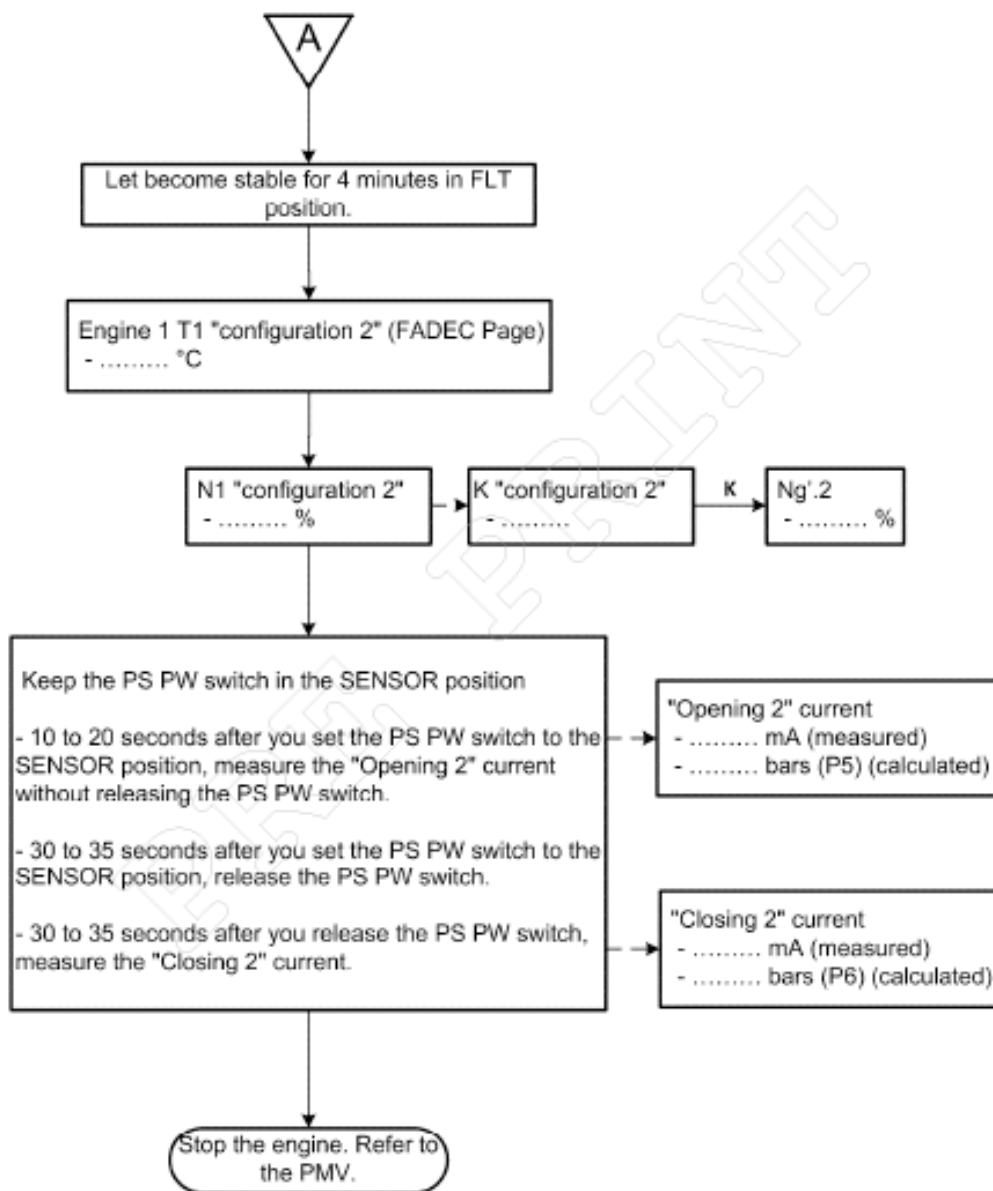


Figure 20

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END OF MODULE