

SERVICE BULLETIN

TITLE: Hydraulic power - Introduction of new hydraulic hoses with carbon PTFE core

SB Type: Product improvement

APPLICABILITY

Model:	AS350
Version:	B, B1, B2, B3, BA, BB, D, L1
Helicopters PRE MOD:	0720163
Helicopters POST MOD:	074239

Component affected

Designation	MP/N	PN
Return hose	9SN21091	(704A34412252)
Return hose	9SN35101	(704A34412255)
Return hose	9SN36106	(704A34412256)
Return hose	9SN40151	(704A34412261)
Return hose	9SN44191	(704A34412268)

COMPLIANCE: RECOMMENDED

Airbus Helicopters recommends that you comply with this Service Bulletin in relation to your operational and contractual constraints.

SUMMARY

This Service Bulletin introduces new hydraulic hoses with a carbon PolyTetraFluoroEthylene (PTFE) core for the return lines of the hydraulic systems. These new hydraulic hoses can

Export Control:

US Export Control - No US content. This Item does not contain any U.S. origin ITAR or EAR content.

FR Export Control - Not Listed. This Item is not listed against the EC regulations in the EU/FR

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prevent leakage caused by electrostaticism between the hoses and the fluid that moves through the hoses.

REASON FOR REVISION

REASON FOR ISSUE 003

Issue 003 of this Service Bulletin revises the helicopters configurations criteria to give a clearer classification for the helicopter version B3. Issue 003 also updates the Service Bulletin to the latest format.

ADDITIONAL WORK

No additional work is required for helicopters already in compliance with the former issues of this Service Bulletin.

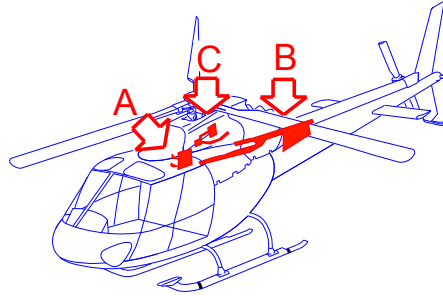
GENERAL EVALUATION

Evaluation table			
Perform once	YES	Accomplish recurring	NO

GENERAL ILLUSTRATION

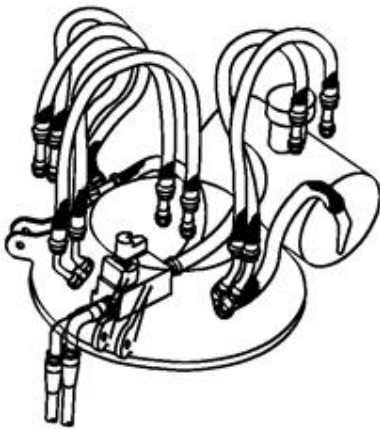
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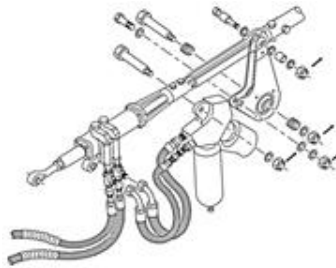


BEFORE MODIFICATION

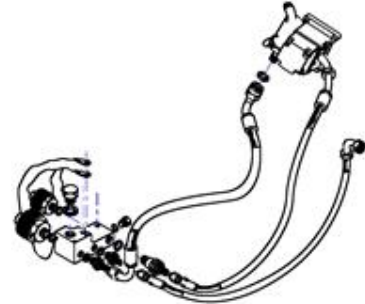
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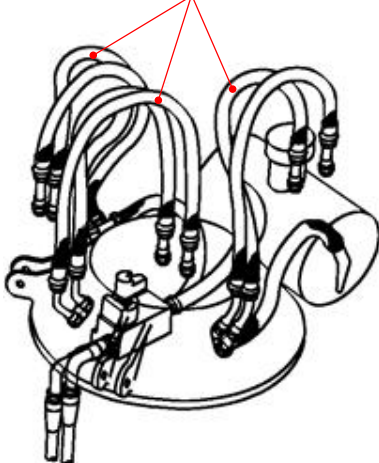
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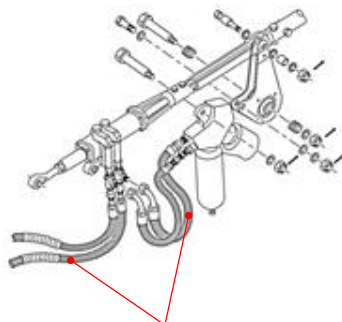
AFTER MODIFICATION

A

NEW HYDRAULIC HOSE WITH CARBON PTFE CORE



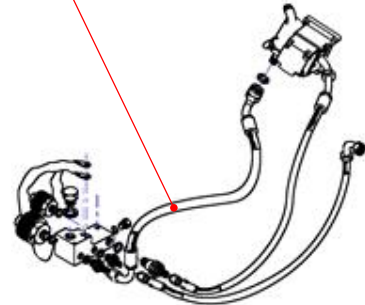
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NEW HYDRAULIC HOSE WITH CARBON PTFE CORE

C

NEW HYDRAULIC HOSE WITH CARBON PTFE CORE



PLANNING INFORMATION

1. REASON

Airbus Helicopters was informed of hydraulic leakage found from the hydraulic hoses along the return lines of hydraulic systems. The total operational time of these hydraulic return hoses were less than 350 flight hours (FH).

Investigations show that these hydraulic return hoses might be charged in electrostatics by the fluid that moves through these hoses. This causes small electrical discharges to occur that caused holes in the hoses. Thus causes hydraulic leakage from these hoses.

This Service Bulletin introduces new hydraulic return hoses with a carbon PTFE core for the return lines of the hydraulic systems. These new hydraulic return hoses can prevent leakage caused by this electrostatics effect. In addition, there is no operational time limit (OTL) on these new hydraulic return hoses.

2. DESCRIPTION

This Service Bulletin provides instructions to replace the hydraulic return hoses with the new hydraulic return hoses.

This Service Bulletin is related to modification (MOD) 0720163.

NOTE

It is the operator's decision to:

- Replace all of the hydraulic return hoses at this time, or
- Replace the hydraulic return hoses independently.

3. CONFIGURATION DEFINITION

Criteria	Configuration
Version: B, BA, BB, D Helicopters POST MOD: OP1909	CONF 1
Version: B, BA, BB, D Helicopters PRE MOD: OP1909	CONF 2
Version: B1, B2, L1 Helicopters POST MOD: OP1909	CONF 3
Version: B1, B2, L1 Helicopters PRE MOD: OP1909	CONF 4

Criteria	Configuration
Helicopters installed with the single hydraulic system Version: B3 Helicopters POST MOD: OP1909	CONF 5
Helicopters installed with the single hydraulic system Version: B3 Helicopters PRE MOD: OP1909	CONF 6
Helicopters installed with the single hydraulic system Version: B3 Helicopters POST MOD: OP1909 and 072766 Helicopters PRE MOD: 073205	CONF 7
Helicopters installed with the single hydraulic system Version: B3 Helicopters PRE MOD: OP1909 and 073205 Helicopters POST MOD: 072766	CONF 8
Helicopters installed with the dual hydraulic system Version: B3 Helicopters POST MOD: OP1909	CONF 9
Helicopters installed with the dual hydraulic system Version: B3 Helicopters PRE MOD: OP1909	CONF 10

4. CONCURRENT REQUIREMENTS

Not applicable.

5. APPROVAL

The technical content of this document is approved under the authority of the Design Organization Approval ref. EASA. 21J.700. For helicopters operated outside the terrain regulated by the EASA, the application of this document is subject to validation provided by the responsible aviation authority of the state of registry.

The technical content of this document is approved by Airbus Helicopters Airworthiness Department for export military versions.

The technical content of this document is approved under the prerogatives of the recognition of design capability ref. EMAR21J-015-DGA for French Government helicopters.

6. MANPOWER

NOTE

The purpose of Man Hours is to give Airbus Helicopters customers a guideline for maintenance scheduling. It is not a contractual information.

6.1. Manpower for procedure

Number of Persons	Qualification	Estimated Man Hours
1	Mechanical technician	2 h

NOTE

The estimated Man Hours shown in the table above is for the replacement of all the hydraulic return hoses.

6.2. Manpower for set-up and close-up

Number of Persons	Qualification	Estimated Man Hours
1	Mechanical technician	1 h

7. WEIGHT AND BALANCE

CONF 1 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,301 kg	+ 1,364 kg.m	- 0,030 kg.m

]

CONF 2 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,312 kg	+ 1,403 kg.m	- 0,026 kg.m

]

CONF 3 CONF 5 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,321 kg	+ 1,465 kg.m	- 0,033 kg.m

]

CONF 4 CONF 6 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,332 kg	+ 1,504 kg.m	- 0,028 kg.m

]

CONF 7 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,097 kg	+ 0,335 kg.m	- 0,004 kg.m

]

CONF 8 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,108 kg	+ 0,374 kg.m	0 kg.m

]

CONF 9 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,009 kg	+ 0,062 kg.m	- 0,007 kg.m

]

CONF 10 [

Weight (kg)	Longitudinal moment X (kg.m)	Lateral moment Y (kg.m)
+ 0,020 kg	+ 0,101 kg.m	- 0,003 kg.m

]

8. ELECTRICAL LOAD DATA

Not applicable.

9. DOCUMENTATION AFFECTED

Aircraft Maintenance Manual (AMM)
Illustrated Parts Catalog (IPC)
Index of Modifications (SIM)
Maintenance Manual (MET).

The changes to Instructions for Continued Airworthiness (ICA) which are required as a result of this Service Bulletin will be incorporated in the next Normal Revision. Refer to DN.008.0034 until the information is available in the published technical documentation.

NOTE

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

10. MATERIAL INFORMATION

10.1. 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.

10.2. Availability

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

10.3. Procurement

Send an order for the necessary quantities to the Airbus Helicopters Network Sales.

10.4. Mixability

It is permitted to use PRE MOD and POST MOD components together.

10.5. LIST OF NEW MATERIALS

CONF 1 CONF 7 [Send an order for kit 350A07-2016-3071.]

CONF 3 CONF 5 [Send an order for kit 350A07-2016-3171.]

CONF 4 CONF 6 [Send an order for kit 350A07-2016-3271.]

Material Kit List					
Kit Designation		Kit Reference			
Hydraulic Hoses (with carbon PTFE core) Retrofit Kit		350A07-2016-3X71			
Kit Content					
Item	Designation	Reference	MFC	QTY	See Notes
1	Return hose	9SN21092 (704A34410076)	F8694	1	(1) (2) (3)
2	Return hose	9SN35102 (704A34410077)	F8694	2	(1) (2) (3)
3	Return hose	9SN36107 (704A34410079)	F8694	1	(1) (2) (3)
4	Return hose	9SN40152 (704A34410080)	F8694	1	(2) (3)
5	Return hose	9SN44192 (704A34410082)	F8694	1	(1) (2)
NOTE(S)					
(1) Applicable to kit 350A07-2016-3071.					
(2) Applicable to kit 350A07-2016-3171.					
(3) Applicable to kit 350A07-2016-3271.					

CONF 2 CONF 8 CONF 9 CONF 10 [Send an order of the items applicable to your helicopter. Refer to paragraph 12, Appendix A of this Service Bulletin for the new references of the return hose applicable to your helicopter.]

Individual Spares List				
Item	Designation	Reference	MFC	QTY
	Return hose	F8694	9SN21092 (704A34410076)	1
	Return hose	F8694	9SN35102 (704A34410077)	2
	Return hose	F8694	9SN36107 (704A34410079)	1
	Return hose	F8694	9SN40152 (704A34410080)	1
	Return hose	F8694	9SN44192 (704A34410082)	1

Consumables, Materials and Expendables			
Designation	Reference	MFC	QTY
Binding clamp	E0043-1C0P	F5442	As required
Spacer	E0688-01	F5442	As required
Spacer	E0688-02	F5442	As required

Special Tools				
Item	Designation	Reference	MFC	QTY
None				

10.6. LIST OF EXISTING PARTS

INTERCHANGEABLE PARTS				
Old Reference	Designation	New Reference	Interchangeability	See Notes
9SN21091 (704A34412252)	Return hose	9SN21092 (704A34410076)	one way	(1)
9SN35101 (704A34412255)	Return hose	9SN35102 (704A34410077)	one way	(1)

INTERCHANGEABLE PARTS				
Old Reference	Designation	New Reference	Interchangeability	See Notes
9SN36106 (704A34412256)	Return hose	9SN36107 (704A34410079)	one way	(1)
9SN40151 (704A34412261)	Return hose	9SN40152 (704A34410080)	one way	(1)
9SN44191 (704A34412268)	Return hose	9SN44192 (704A34410082)	one way	(1)
NOTE(S)				
(1) Refer to paragraph 12., Appendix A of this Service Bulletin for the new reference applicable to your helicopter.				

11. ACCOMPLISHMENT INSTRUCTION

Comply with the accomplishment procedure [29-50-0001, 933](#) .

12. ADDITIONAL INFORMATION

APPENDIX A - TABLE OF APPLICABILITY - LIST OF NEW REFERENCES OF THE RETURN HOSES

Return hose new reference	CONF 1	CONF 2	CONF 3	CONF 4	CONF 5	CONF 6	CONF 7	CONF 8	CONF 9	CONF 10
9SN21092 (704A34410076)	X	X	X	X	X	X	X	X	-	-
9SN35102 (704A34410077)	X	X	X	X	X	X	X	X	-	-
9SN36107 (704A34410079)	X	X	X	X	X	X	X	X	-	-

Return hose new refer- ence	CONF 1	CONF 2	CONF 3	CONF 4	CONF 5	CONF 6	CONF 7	CONF 8	CONF 9	CONF 10
9SN40152 (704A344100 80)	-	-	X	X	X	X	-	-	X	X
9SN44192 (704A344100 82)	X	-	X	-	X	-	X	-	X	-

"X" : Applicable to the helicopters in the helicopter configuration.

"-" : Not applicable to the helicopters in the helicopter configuration.

End of section

ACCOMPLISHMENT PROCEDURE 29-50-0001, 933

1. APPLICABILITY

Model:	AS350
Version:	B, B1, B2, B3, BA, BB, D, L1
Helicopters PRE MOD:	0720163
Helicopters POST MOD:	074239

2. GENERAL INFORMATION

Acronym/Abbreviation List

AMM - Aircraft Maintenance Manual

FOD - Foreign Object Damage

MET - Maintenance Manual

MP/N - Manufacturing Part Number

MTC - Standard Practices Manual

PN - Part Number

3. PRELIMINARY REQUIREMENTS

3.1. Applicable Documents

- Installation of pipes - General [MTC 20-02-01-103](#)
- Handling of helicopters in a hangar and in a prepared area - Handling [MTC 20-07-01-201](#)
- Recommendations for working at height - Human factors approach - Safety instructions [MTC 20-07-02-212](#)
- Instructions applicable during maintenance operations on hydraulic systems - Technical instructions [MTC 20-07-03-404](#)
- Instructions applicable before removing an hydraulic equipment item because of a leak - Technical instructions [MTC 20-07-03-405](#)
- Appearance checks on an aircraft after inspection or repair - Technical instructions [MTC 20-07-03-408](#)
- General safety instructions - Hydraulic assemblies - General [AMM 29-00-00, 3-1](#)

- General hydraulic instructions - Hydraulic systems [MET 29-00-00-301](#)
- Removal / installation - Hoses - Main hydraulic single generation [AMM 29-10-00, 4-1](#)
- Replacement - Hoses - Main hydraulic single generation [AMM 29-10-00, 8-1](#)
- Hoses: Removal - Installation - Single-generation hydraulic system [MET 29-10-10-404](#)
- Hoses: Replacement - Single-generation hydraulic system [MET 29-10-10-406](#)
- General safety instructions - Mechanical assemblies - General instructions - Mechanical assemblies [AMM 60-00-00, 3-1](#)
- Aft servo-control hoses: Removal - Installation - Rotor actuators / load compensator [MET 67-30-00-406](#)
- Tail rotor actuator hoses: Replacement - Rotor actuators / load compensator [MET 67-30-00-408](#)
- Removal / installation - Rear servocontrol hose - Tail rotor actuator [AMM 67-33-00, 4-2](#)
- Replacement - Tail rotor actuator hose - Tail rotor actuator [AMM 67-33-00, 8-1](#)

3.2. Set up

- Handling of helicopters in a hangar and in a prepared area - Handling [MTC 20-07-01-201](#)
- Install the applicable access means.
- Remove and/or open all applicable cowlings, panels, doors and other items or equipment to get access to the different work areas.

3.3. Special Tools

None

3.4. Consumables, Materials and Expendables

Designation	Reference	MFC	QTY
Binding clamp	E0043-1C0P	F5442	As required
Spacer	E0688-01	F5442	As required
Spacer	E0688-02	F5442	As required

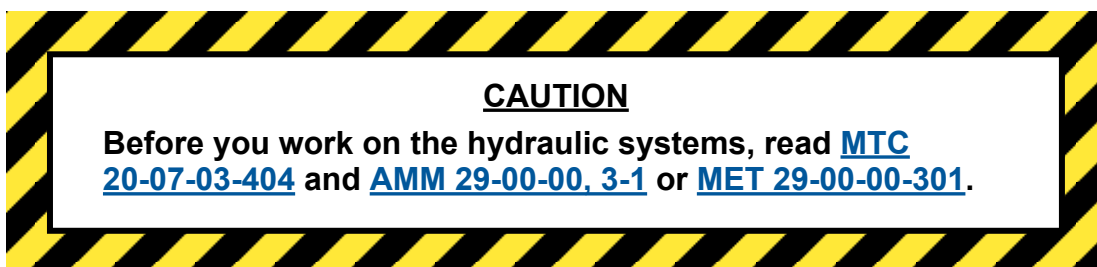
3.5. Spares

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Designation	Reference	MFC	QTY
Return hose	9SN21092 (704A34410076)	F8694	1
Return hose	9SN35102 (704A34410077)	F8694	2
Return hose	9SN36107 (704A34410079)	F8694	1
Return hose	9SN40152 (704A34410080)	F8694	1
Return hose	9SN44192 (704A34410082)	F8694	1

3.6. Safety conditions



4. PROCEDURE

4.1. Replace the hydraulic return hoses, applicable to your helicopter configuration, with the related new hydraulic return hoses that follow: [AMM 29-10-00, 4-1](#), [AMM 29-10-00, 8-1](#), [MET 29-10-10-404](#), [MET 29-10-10-406](#), [MET 67-30-00-406](#), [MET 67-30-00-408](#), [AMM 67-33-00, 4-2](#), [AMM 67-33-00, 8-1](#).

- The Return hose 9SN21092 (704A34410076) (1) (Figure 1)
- The Return hose 9SN35102 (704A34410077) (2)
- The Return hose 9SN36107 (704A34410079) (3)
- The Return hose 9SN40152 (704A34410080) (4)
- The Return hose 9SN44192 (704A34410082) (5).

NOTE

It is the operator's decision to:

- Replace all of the hydraulic return hoses at this time, or
- Replace the hydraulic return hoses independently.

NOTE

You can find the references of the applicable hydraulic return hose related to your helicopter configuration in paragraph 10.6 of this Service Bulletin.

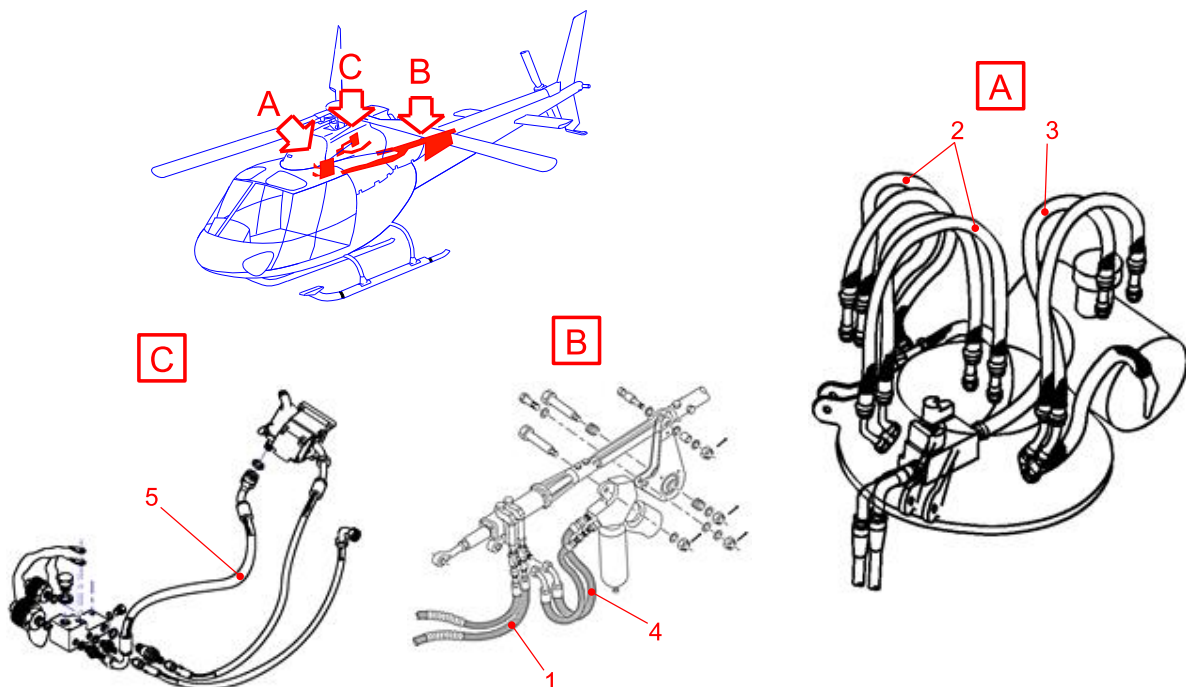


Figure 1

5. CLOSE UP

- 5.1. Remove all the tools, the materials and the equipment from your work area.
- 5.2. Install or close all applicable cowlings, panels, doors and other items or equipment that you removed and/or opened.
- 5.3. Appearance checks on an aircraft after inspection or repair - Technical instructions [MTC 20-07-03-408](#)
- 5.4. Remove all applicable access means.
- 5.5. Set the helicopter to flight condition.
- 5.6. Record the compliance with this Service Bulletin for the hydraulic return hose that was replaced in the helicopter documents.
- 5.7. After you replaced all of the hydraulic return hoses, record the new weight and moment in your applicable document.
- 5.8. After you replaced all of the hydraulic return hoses, record the full integration of modification 0720163 in the helicopter documents.
- 5.9. After you replaced all of the hydraulic return hoses, record the full compliance with this Service Bulletin in the helicopter documents.
- 5.10. After you replaced all of the hydraulic return hoses, record compliance with this Service Bulletin (see IN 3785-I-00 for instructions): QR code or hypertext link



[SB AS350-29-50-0001](#)

End of Service Bulletin