

Airworthiness Directive Schedule

Engines

Safran Helicopter Engines – Arrius 2F and 2R

26 April 2018

- Notes:**
1. This AD schedule is applicable to Safran Helicopter Engines (formerly Turbomeca) Arrius engines manufactured under the following Type Certificate Number:

Engine Model:	EASA Type Certificate Number:
Arrius 2F	E.031
Arrius 2R	E.031

2. The European Aviation Safety Agency (EASA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these engines. State of Design ADs can be obtained directly from the EASA web site at <http://ad.easa.europa.eu/>
 3. The date above indicates the amendment date of this schedule.
 4. New or amended ADs are shown with an asterisk *
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From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the NAA web site is available on the CAA web site at http://www.caa.govt.nz/airworthiness-directives/states-of-design/ If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below.			6
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DCA/TUR/18 Fuel Control Unit - Modification

- Applicability:** ARRIUS 2F engines fitted to EC 120 B helicopters and equipped with a fuel control unit (FCU) listed in Turbomeca SB A 319 73 4808.
- Requirement:** To prevent reduction in fuel flow due to a variation in the position of the max fuel flow mechanical stop, rework the max fuel flow stop per Turbomeca SB A 319 73 4808 - Issue 1.
(DGAC AD 2000-482(A) refers)
- Compliance:** By 31 March 2001.
- Effective Date:** 21 December 2000

DCA/TUR/28 High Pressure Turbine – Inspection

- Applicability:** ARRIUS 2F engines fitted to Eurocopter EC120B helicopters, with number 2 modules as listed in Turbomeca Alert Fax 057/05/DSO/TM, dated 26 April 2005.
- Requirement:** To prevent HP turbine blade separation from the HP disk, accomplish a deep turbine inspection/rework to confirm the standard of the ferrule or after replacing module 2.
(DGAC AD UF-2005-073 R1 refers)
- Compliance:** Before further flight.
- Effective Date:** 2 May 2005

DCA/TUR/29 Fuel Control Unit Fuel Filter - Inspection

- Applicability:** All ARRIUS 2F engines fitted to EC 120B aircraft.
- Requirement:** To prevent limitation of the fuel flow downstream of the FCU fuel filter, which could limit maximum available power, remove the filter holder assembly and check that the adjusted filter is in the correct position by performing a dimensional check, per paragraph 2 of Mandatory Alert SB A319 73 4823
- Note:** Repeat above mentioned requirement every time the position of the adjusted FCU fuel filter element is checked (task 73-23-06-201-801 of the ARRIUS 2F Maintenance Manual) according to the frequency defined for this task in chapter 05-20-00 of the ARRIUS 2F Maintenance Manual.
(DGAC AD F-2005-088 refers)
- Compliance:** Within next 25 hours TIS or by 29 July 2005, whichever is the later.
- Effective Date:** 30 June 2005

DCA/TUR/39 Oil Check-valve Piston O-ring – Inspection

Applicability: Arrius 2F engines which do not have Tf75 embodied, and fitted to EC 120B aircraft.

Requirement: To prevent uncommanded in-flight engine shutdown, replace the o-rings on the lubrication unit check-valve piston, per paragraph 2 of Turbomeca Mandatory Alert Service Bulletin No A319 79 4802.

(EASA AD 2006-0141 refers)

Compliance: For engines operating with STD class-oil since their introduction into service:

Within next 50 hours TIS, for engines with more than 450 hours TTIS, unless already accomplished, and thereafter at intervals not to exceed 500 hours TIS.

For engines operating with HTS-class oil and engines for which the history of the oils used is not available or engines which used to operate with HTS-class oil and which no longer do so:

Within next 50 hours TIS for engines with more than 300 hours TTIS, unless already accomplished, and thereafter at intervals not to exceed 300 hours TIS.

Note: Standard (STD) and High Thermal Stability (HTS) oils are listed in the engine maintenance manual section 71-00-03.

Effective Date: 29 June 2006

DCA/TUR/41 Fuel Control Unit Constant Delta Pressure Valve Diaphragm – Modification

Applicability: All Arrius 2F turbo-shaft engines installed on EC120B aircraft.

Requirement: To prevent an increase in fuel flow which can result in an engine overspeed condition with possible turbine blade-shedding and lead to uncommanded in-flight engine shutdown, embody modification Tf55 per paragraph 2 of Turbomeca Mandatory Service Bulletin No. 319 73 4055.

(EASA AD 2006-0237 refers)

Compliance: By 30 November 2007.

Effective Date: 30 November 2006

*** DCA/TUR/48 Cancelled – EASA AD 2007-0057R1 refers**

Effective Date: 26 April 2018

DCA/TUR/60 Lubrication Unit – Modification

- Applicability:** Model Arrius 2F turboshaft engines, all S/N not embodied with modification Tf75.
These engines are known to be installed on, but not limited to Eurocopter EC120B helicopters.
- Requirement:** To prevent engine bearing failure due to check valve blockage which could result in a lack of lubrication to the bearings and an inflight engine shutdown, replace the check valve piston and remove the preformed packing per the instructions in Turbomeca SB No 319 79 4075 or later approved revisions.
(EASA AD 2008-0170 refers)
- Compliance:** By 30 June 2009
- Effective Date:** 30 October 2008

DCA/TUR/77A P3 Air Pipe – Inspection

- Applicability:** Model Arrius 2F turbo-shaft engines, all S/N
These engines are known to be installed on, but not limited to Eurocopter EC120B helicopters.
- Note 1:** This AD revised to introduce note 5 with no change to the AD applicability or requirement. The repetitive inspections mandated by this AD remains applicable for aircraft fitted with a RH rear half-wall P/N 0319 99 82 40 and the distance between the P3 air pipe and the RH rear half-wall is found to be less than 0.5 mm.
- Requirement:** To prevent premature wear and failure of the P3 air pipe due to possible interference with the bulkhead which could result in loss of engine power, accomplish the following:
1. For engines installed on a helicopter and fitted with a RH rear half-wall P/N 0319 99 82 40, and
For engines installed on a helicopter and being fitted with a RH rear half-wall P/N 0319 99 82 40:
Inspect the P3 air pipe and the RH rear half-wall per the instructions in Turbomeca Mandatory Service Bulletin (MSB) N° 319 7 5 4810 issue B dated 25 January 2011 and later approved revisions.
If both the P3 air pipe and the RH rear half-wall are found undamaged, and the distance between the P3 air pipe and the RH rear half-wall is found to be less than 0.5 mm, repeat the inspection at intervals not to exceed 100 hours TIS.
If the RH rear half-wall is found damaged, or the P3 air pipe interferes with RH rear half-wall, install a RH rear half-wall P/N 0319 99 008 0 per the instructions in Turbomeca MSB N° 319 75 4810 before further flight.
If the P3 air pipe is found damaged, install a serviceable P3 air pipe and determine that the distance between P3 air pipe and RH rear half-wall is equal to or greater than 0.5 mm per the instructions in Turbomeca MSB N° 319 75 4810 before further flight.
 2. After an engine has been embodied with a RH rear half-wall P/N 0319 99 008 0, then a RH rear half-wall P/N 0319 99 82 40 shall not be installed on that engine.
 3. A RH rear half-wall P/N 0319 99 82 40 shall not be installed on an engine, or an engine with a RH rear half-wall P/N 0319 99 82 40 shall not be installed on a helicopter, unless in compliance with the requirements of this AD.
- Note 2:** The installation of a serviceable P3 air pipe on an engine and determination that the distance between the P3 air pipe and RH rear half-wall P/N 0319 99 82 40 is equal to or greater than 0.5 mm, is a terminating action for the repetitive inspections for that engine.

- Note 3:** The modification of an engine by installation of a RH rear half-wall P/N 0319 99 008 0 is a terminating action for the repetitive inspections for that engine.
- Note 4:** TURBOMECA Mandatory Service Bulletin N°. 319 75 4810 issue B, dated 25 January 2011 and later approved revisions are acceptable to comply with the requirements of this AD.
- Note 5:** For engines installed on an aircraft that have been inspected and corrected per the instructions in Turbomeca MSB N° 319 75 4810 issue A before 27 October 2011 (the effective date of DCA/TUR/77) are in compliance with requirement 1 of this AD provided that the engine has not been removed from that aircraft.
(EASA 2011-0182R1 refers)
- Compliance:**
1. Within the next 100 hours TIS unless previously accomplished and thereafter if both the P3 air pipe and the RH rear half-wall are found undamaged, and the distance between the P3 air pipe and the RH rear half-wall is found to be less than 0.5 mm, repeat the inspection at intervals not to exceed 100 hours TIS.
 2. From 23 February 2012.
 3. From 23 February 2012.
- Effective Date:** DCA/TUR/77 - 27 October 2011
DCA/TUR/77A - 23 February 2012

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If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below.

2015-0049 (Correction) Oil Pump Drive – Inspection

Applicability: ARRIUS 2F engines, all S/N.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC 120 B helicopters.

Effective Date: EASA AD 2015-0049 - 31 March 2015
EASA AD 2015-0049 (Correction dated 7 May 2015) - 31 March 2015

2015-0057 Oil Ejector Assembly Nozzle Bonding – Inspection

Applicability: ARRIUS 2F engines, all S/N.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC 120 B helicopters.

Effective Date: 15 April 2015

2016-0041 Fuel Control Unit Assembly – Modification

Applicability: ARRIUS 2F engines, all S/N.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC 120 B helicopters

Effective Date: 17 March 2016

2016-0138R1 Cancelled – EASA AD 2017-0070 refers

Effective Date: 9 May 2017

2017-0070 Pipe Injector Preferred Assembly – Inspection

Applicability: ARRIUS 2F engines, all serial numbers.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC120 B helicopters

Effective Date: 9 May 2017

2018-0012-E Electrical Magnetic Plug – Inspection

Applicability: ARRIUS 2F engines, all S/N.

These engines are known to be installed on, but not limited to, Airbus Helicopters (formerly Eurocopter, Eurocopter France) EC 120 B helicopters.

Effective Date: 18 January 2018

*** 2007-0057R1 Gas Generator Front Bearing - Modification**

Applicability: Arrius 2F engines, all S/N except those engines embodied with Safran modification Tf84.

Effective Date: 26 April 2018