



CIVIL AVIATION AUTHORITY CZECH REPUBLIC

TECHNICAL DIVISION

AIRWORTHINESS DIRECTIVE

Number: CAA-AD-1-001/2024

Date of issue: January 30, 2024

Design Approval Holder's Name: HPH LTD. – L40, Evektor LTD. – L60, Aircraft Industries, JSC.– Super Aero 45, Aero 145

Typ: Super Aero 45, Ae145, L60 and L40

Aircraft – Oil and Fuel Hoses Inspection

Applicability: Super Aero Ae45, Ae145, L60 and L40.

Not applicable:

- aircraft with installed low-pressure oil and fuel hose assemblies with reusable fittings manufactured according to the TC, STC or minor change holder's documentation; and
- aircraft with installed low-pressure oil and fuel hose assemblies with crimped fittings

Reason:

Within the maintenance organizations surveillance in the Czech Republic it was revealed that some organizations had been installing oil and fuel low-pressure hose assemblies with reusable fittings which don't conform to the original aircraft type designs. The beginning of this practice dates back to the time when the supplier of the approved hose fabric, Optimit Odry, had ceased to exist. The TC holders of the subject aircraft did not respond to the problem at that time, and therefore maintenance organisations were finding alternative solutions.

All not approved hose assemblies which have been found use the approved hose fabric manufactured according to the MIL-DTL-8794 standard (tm. Eaton Aeroquip or Parker Stratoflex). Due to the inch dimensions of the hose fabric, not approved hose assemblies are fitted with either:

- (a) newly manufactured unmarked fittings with two circumferential grooves; or
- (b) high-pressure fittings of CSN EN 137903 standard.

Currently, all TC holders of the above mentioned aircraft have already amended their type designs within the DOA privileges and issued the SBs in order to allow the installation of the former not approved hose assemblies.

Although no case of an unsafe condition resulting from a failure of not approved hose assembly has been reported, this AD and inspections it implements are issued to mitigate the potential risk.

Related SB:**L40:** Mandatory bulletin č. L 40-19a – Use of alternative hose fabric**L60:** Information bulletin č. L60-12b, L60S-027b, L60SF-017b

For hose replacements on Ae45 and Ae145 aircraft, please contact the TC holder Aircraft Industries, Jsc.

Effective Date: January 30, 2024**Compliance Time(s):**

Inspect the hose assemblies according to point 1) before the next flight.

Inspect the hose assemblies according to points 2) to 4) within the next annual inspection or no later than 6 months from the date of issue of the AD.

Required Action(s):

- 1) Inspect the oil and fuel low-pressure hose assemblies with reusable fittings according to the following procedure:
 - (a) visually inspect the installed hose assemblies for abrasion damage and leaks, and
 - (b) without disassembly, perform an operational pressure test of the hose assemblies for leakage.
 - Immediately replace hose assemblies damaged by abrasion or leaking with new ones - approved, according to the TC holder's documentation.
- 2) Determine if the hose assemblies are made of Eaton Aeroquip or Parker Stratoflex inch dimensions hose fabric.
 - If YES, continue with point 3).
 - If NOT, immediately replace the hose assemblies with a new ones - approved, according to the TC holder's documentation.
- 3) Perform a dimensional check of the fittings for each hose assembly (without removing the hose if possible). Measure the outer diameter of the fitting and check if it matches the value in the following table:

Hose clearance Js	Outer diameter of the fitting with two circumferential grooves (mm)	Outer diameter of the fitting in accordance with CSN EN 137903
4	15,5	17
6	18	20,5
8	20,5	24
10	23	26
13	27	34
16	32	38

- If YES, continue with point 4).
- If NOT, immediately replace the hose assemblies with a new ones - approved, according to the TC holder's documentation.

- 4) For dimensionally matching not approved hose assemblies do the following:
- Not approved hose assemblies which have passed the inspection can be left on the aircraft, but no longer than service life given by the maintenance organization or 10 years since installed on the aircraft - whichever comes first.
- 5) Record the result of the inspection in accordance with point 1) or points 2) to 4) and the execution of this AD in the aircraft logbook.

Remarks: The compliance of this AD must be recorded in Aircraft Logbook, where applicable the requirements of this AD must be integrated into Aircraft Technical Documentation. Address inquiries concerning this AD to: Civil Aviation Authority-CZ, Airworthiness Division, Ruzyne Airport, 161 00 Prague 6, Czech Republic, tel.:+ 420 233 320 922, fax: +420 220 562 270.



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