



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

Issue 2	AD summary relocated to Section 2	10/03/21	JP
Revision A	Update to contact details. Note on Cessna seat AD in section 2.5. Additional notes in section 3.4.	25/03/21	JV
Revision B	FAA SAIB on main gear leg corrosion added to section 3.3	03/06/21	JV

This TADS is intended as a summary of available information about the type and should be used during the build, operation and permit revalidation phases to help owners and inspectors. Although it is hoped that this document is as complete as possible, other sources may contain more up to date information, e.g. the manufacturer's website.

Section 1 contains general information about the type.

Section 2 contains information about the type that is **MANDATORY** and must be complied with.

Section 3 contains advisory information that owners and inspectors should review to help them maintain the aircraft in an airworthy condition. If due consideration and circumstances suggest that compliance with the requirements in this section can safely be deferred, is not required or not applicable, then this is a permitted judgement call. This section also provides a useful repository for advisory information gathered through defect reports and experience.

## **Section 1 - Introduction**

### 1.1 UK contact

There is a UK-based European Luscombe owners' club: [European Luscombes](#), which provides a lot of type information including a forum.

Tel: n/a  
Email: n/a  
Website: [www.europeanluscombes.org.uk](http://www.europeanluscombes.org.uk)

There is also an international [Luscombe Association](#) based in the USA and further information at [The Luscombe Endowment](#), a website dedicated to supporting and publicising the Luscombe name. There is also a [Luscombe Airplanes](#) Yahoo group forum and a [European Luscombes Facebook](#) page.

Parts for Luscombes can be obtained from a number of sources including [Classic Aero](#) and [Univair](#).

### 1.2 Description

The Luscombe 8 is a type certificated vintage light aircraft of US origin and was designed in 1937 by Don Luscombe. The aircraft is a high wing cabin monoplane with side by side seating for two and a conventional (tail wheel) undercarriage. The structure is all aluminium with a semi-monocoque fuselage and fabric covered wings although later production aircraft were built with all-metal wings and some aircraft later had their wings 'metalised' by installing aluminium wing skinning under a Supplemental Type Certificate (STC).

There are currently in excess of 80 Luscombes on the UK register operating on LAA administered Permits to Fly, all various models of the 8 Series. Some examples have been modified from their original standard. Descriptions of the various models can be found below.

The original wing used hand-made ribs that were later replaced with pressed aluminium examples. With the introduction of the metal wing, the majority of the ribs were replaced with top hat stiffeners riveted to the skins. The wing struts were originally a dual steel strut setup, later replaced with a single streamlined aluminium design. Tail surfaces were originally round



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

tipped but the later examples were square tipped and it is not unusual to see a mixture of both types on one airframe.

Engine types are mostly variants of Continental powerplants (exact type depending on the aircraft model) although some were produced with Lycoming engines. Propellers used are two blade metal or wood fixed pitch types supplied by a variety of manufacturers including Lodge, McCauley and Sensenich, amongst others.

The FAA TCDS ([A-694](#)) for the type also contains useful baseline data.

Note that the only propeller(s) approved for an individual aircraft are those listed on the individual aircraft's Operating Limitations document or in the PTL/1 (Propeller Type List) for the type (where applicable).

The Luscombe 8 types are all classified as SEP (Group A) aircraft.

*Model Descriptions:*

**Luscombe 8A**

The model 8A was originally a development of the Luscombe Master Model 8 with a higher power 65 hp Continental A-65 engine. It was certificated in 1939. The MTWA of the standard 8A was 1200 lbs although an increase in MTWA to 1260 lbs was possible by incorporating a number of changes specified in the Type Certificate Data Sheet.

In the UK, some of the 8A models have been converted to 8F specification by the installation of wing fuel tanks and a Continental C90-12F engine. This upgrade allows an increase in MTWA to 1400 lbs with revised Centre of Gravity limits as with the standard 8F.

The Luscombe 8A (Modified) is effectively an 8A modified to 8C status.

**Luscombe 8B**

This model used a Lycoming O-145 that was not produced in any great numbers and are rarely seen in their original form.

**Luscombe 8C**

The 8C variant was essentially identical to the 8A apart from the installation of the higher-powered Continental A-75 engine and associated propeller and fuel system. The 8C Deluxe was named the Silvaire in a contest.

The standard MTWA for the 8C was 1200 lbs although on later examples (serial number 1804 and above) this could be increased to 1310 lbs by incorporating a number of changes specified in the Type Certificate Data Sheet. These changes included ensuring that the wing fabric covering utilised Intermediate or Grade A fabric. The metalised wing option is considered to be at least the equivalent of this fabric requirement.

**Luscombe 8D**

This was the first variant to have wing tanks installed as standard.

**Luscombe 8E**

Model 8E Silvaire Deluxe was an improved Model 8C with increased gross weight and powered by an 85 hp Continental A-85 engine. The 8E was fitted with wing root mounted fuel tanks in place of the single fuselage mounted tank and was the first variant to have metal wings on all production examples.

The 8E also had an electrical system as standard and the fuselage incorporated D windows behind the cabin doors.

**Luscombe 8F**



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

The Luscombe 8F was certificated in 1948 and is basically a modified variant of the 8E with the Continental C90 engine and a different propeller. Some 8Fs were produced with flaps.

Some LAA administered Luscombe 8A aircraft have been reconfigured to 8F standard with C90 and O-200A engines.

**Section 2 – Mandatory information for owners, operators and inspectors**

At all times, responsibility for the maintenance and airworthiness of an aircraft rests with the owner. Condition No 3 of a Permit to Fly requires that: *"the aircraft shall be maintained in an airworthy condition"*.

2.1 Fast Build Kit 51% Compliance

Not applicable

2.2 Build Manual

Not applicable

2.3 Build Inspections

Build inspection schedule: not applicable

Inspector approval codes A-A, A-M and V.

2.4 Flight Manual

Flight Manuals should be available for most aircraft but should be used with caution if the aircraft has been modified in any way from original, such as with a different engine or propeller, for instance.

The [Luscombe Association](#) has a large library of manuals and technical support data available for purchase through their website. Some manuals for reference purposes are also available at [Avialogs](#).

2.5 Airworthiness Directives

Many of the Airworthiness Directives for the Luscombe were issued decades ago and concerned one-off inspections and modifications. Nevertheless, they should be taken into consideration, especially if importing an aircraft.

FAA AD	Subject	Periodicity	Applicability
<a href="#">46-30-01</a>	Control Stick Horn Adjustment Screw	One off modification	Model 8A s/n 2201-2614 inclusive, 2616-2632 inclusive, 2635, 2637, 2639, 2642 and 2645.
<a href="#">47-10-40</a>	Rudder Control Arm Reinforcement	One off inspection, repair	All Model 8 Series aircraft s/n 1934-2200 inclusive.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

<a href="#">47-22-01</a>	Bulkhead Reinforcement For Seaplanes	One off modification	All Model 8 Series aircraft equipped with Edo 60-1320 floats.
<a href="#">48-08-02</a>	Cleveland Wheels	After initial 500 hours and then each 100 hours	All Model 8 Series aircraft equipped with Cleveland 6:00 DMB wheels, assy no C-38500.
<a href="#">48-09-03</a>	Kollsman Airspeed Baffle	One off modification	All Model 8 Series aircraft below s/n 5682.
<a href="#">48-49-01</a>	Vertical Stabilizer Spar Fitting	One off fitting inspection, replacement	All Model 8 Series aircraft without 0.049 steel fitting installed.
<a href="#">49-43-02</a>	Stabilizer Spar Inspection	Stabilizer installation	All Model 8 Series aircraft.
<a href="#">50-37-01</a>	Fuel System Modifications	One off modification	All Model 8C Airplanes with a Continental A-75 carburetor engine but not equipped with either wing fuel tanks or an engine- driven fuel pump and the Chevrolet AC-R1 hand pump.
<a href="#">51-10-02</a>	Control Cable Inspection	12 months	All Model 8 Series aircraft.
<a href="#">55-24-01</a>	Corrosion Inspection	12 months	All Model 8 Series aircraft except 8F s/n S-1 and up.
<a href="#">61-03-05</a>	Fuel Line Interference	One off inspection, modification or repair.	All Model 8 Series aircraft incorporating wing fuel tanks.
<a href="#">62-24-03</a>	Cabin Heat System	One off inspection, modification	All 8E, 8F and T-8F with McKenzie Aircraft Repair Inc exhaust system.
<a href="#">94-16-02</a>	Stabilizer Forward Attach Fitting	One off modification	Model 8 Series all s/n with round tipped vertical stabilizer
<a href="#">96-09-06</a>	Air Filter Assemblies	Inspect every 100 hrs, replace with revised type within 500 hrs	All aircraft with Brackett air filter fitted incorporating neoprene gasket.
<a href="#">96-24-17 R1</a>	Wing Inspection Holes	One off modification, inspection	Models 8, 8A, 8B, 8C, 8D, 8E, 8F and T-8F all s/n.

The [FAA Airworthiness Directives](#) database should be checked for new or revised ADs and also for applicable ADs pertaining to the engine, propeller or installed equipment.

If fitted with the Cessna seats and adjustable seat rails under an FAA field approval, the inspections in AD [2011-10-09](#) apply.

## 2.6 Mandatory Permit Directives

The following MPDs are applicable to this aircraft type:

[MPD 1995-001 R5](#) Regarding ex C of A aircraft now operating on a Permit to Fly

Also check the LAA website for MPDs that are non-type specific ([TL 2.22](#)).

## 2.7 LAA Required Modifications (including LAA issued AILs, SBs, etc)

There are no LAA mandatory modifications, LAA issued AILs or SBs for these aircraft types.

Note: Manufacturer issued Service Bulletins and other continuing airworthiness data are listed in paragraph 3.3.

2.8 Additional engine operating limitations to be placarded or shown by instrument markings

Notes:

- Refer to the engine manufacturer's latest documentation for the definitive parameter values and recommended instruments.
- Where an instrument is not fitted, the limit need not be displayed.

2.9 Control surface deflections

Control	Movement	8A	8E	8F	8A (see note)
Ailerons	Up	25°	25°	25°	25°
	Down	25°	25°	25°	25°
Elevators	Up	29°	28°	28°	25°
	Down	27°	29.5°	29.5°	26°
Elevator tab	Up	14°	14°	10°	14°
	Down	28°	25°	33°	28°
Elevator tab (optional settings)	Up	n/a	10°	n/a	10°
	Down	n/a	33°	n/a	33°
Rudder	Left	32°	28°	28°	30°
	Right	32°	28°	28°	28°

Note: The normal MTWA for the 8A is 1200 lbs (545 kg) but when the flying controls are rigged as per the last column above (optional) the MTWA is 1260 lbs (572 kg). However, this must only be done with reference to LAA Engineering as the Centre of Gravity limits are also affected and this will require an amendment to the aircraft's Operating Limitations. The MTWA for 8E and 8F is 1400 lbs (635 kg).

2.10 Operating Limitations and Placards

Examples of mandatory Operating Limitations and placards for the various types are given below for reference purposes. Due to the various modifications to some aircraft, it must be noted that the wording on an individual aircraft's Operating Limitations document takes precedence, if different.

Luscombe 8A

1. Maximum number of occupants authorised to be carried: Two
2. The aircraft must be operated in compliance with the following operating limitations, which shall be displayed in the cockpit by means of placards or instrument markings:

- 2.1 Aerobatic Limitations  
Aerobatic manoeuvres are prohibited.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

Intentional spinning is prohibited.

- 2.2 Loading Limitations  
Maximum Total Weight Authorised: 1260 lbs (572 kg)  
CG Range: 13.5 inches to 18.8 inches aft of datum  
Datum Point is: Leading edge of the wing
- 2.3 Engine Limitations  
Continental A-65-8  
Maximum Engine RPM: 2350  
Continental C90-8F  
Maximum Engine RPM: 2475
- 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 145 mph
- 2.5 Other Limitations  
The aircraft shall be flown by day and under Visual Flight Rules only.  
Smoking in the aircraft is prohibited.

**Additional Placards:**

“Occupant Warning - This Aircraft has not been Certificated to an International Requirement”

A fireproof identification plate must be fitted to fuselage, engraved or stamped with aircraft’s registration letters.

**Luscombe 8A (Modified)**

1. Maximum number of occupants authorised to be carried: Two
2. The aircraft must be operated in compliance with the following operating limitations, which shall be displayed in the cockpit by means of placards or instrument markings:
  - 2.1 Aerobatic Limitations  
Aerobatic manoeuvres are prohibited.  
Intentional spinning is prohibited.
  - 2.2 Loading Limitations  
Maximum Total Weight Authorised: 1310 lbs (594 kg)  
CG Range: 13.6 inches to 18.8 inches aft of datum  
Datum Point is: Leading edge of the wing
  - 2.3 Engine Limitations  
Continental A-75-8J  
Maximum Engine RPM: 2600
  - 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 145 mph
  - 2.5 Other Limitations  
The aircraft shall be flown by day and under Visual Flight Rules only.  
Smoking in the aircraft is prohibited.

**Additional Placards:**

“Occupant Warning - This Aircraft has not been Certificated to an International Requirement”

A fireproof identification plate must be fitted to fuselage, engraved or stamped with aircraft’s registration letters.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

Luscombe 8E

1. Maximum number of occupants authorised to be carried: Two
2. The aircraft must be operated in compliance with the following operating limitations, which shall be displayed in the cockpit by means of placards or instrument markings:
  - 2.1 Aerobatic Limitations  
Aerobatic manoeuvres are prohibited.  
Intentional spinning is prohibited.
  - 2.2 Loading Limitations  
Maximum Total Weight Authorised: 1400 lbs (635 kg)  
CG Range: 13.6 inches to 16.8 inches aft of datum  
Datum Point is: Leading edge of the wing
  - 2.6 Engine Limitations  
Continental C85-12F  
Maximum Engine RPM: 2575  
  
Continental C90-14F  
Maximum Engine RPM: 2625  
Maximum Continuous RPM: 2475  
  
Continental O-200A  
Maximum Engine RPM: 2700
  - 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 145 mph
  - 2.6 Other Limitations  
The aircraft shall be flown by day and under Visual Flight Rules only.  
Smoking in the aircraft is prohibited.

Additional Placards:

“Occupant Warning - This Aircraft has not been Certificated to an International Requirement”

A fireproof identification plate must be fitted to fuselage, engraved or stamped with aircraft's registration letters.

Luscombe 8F

1. Maximum number of occupants authorised to be carried: Two
2. The aircraft must be operated in compliance with the following operating limitations, which shall be displayed in the cockpit by means of placards or instrument markings:
  - 2.1 Aerobatic Limitations  
Aerobatic manoeuvres are prohibited.  
Intentional spinning is prohibited.
  - 2.2 Loading Limitations  
Maximum Total Weight Authorised: 1400 lbs (635 kg)  
CG Range: 13.6 inches to 16.8 inches aft of datum  
Datum Point is: Leading edge of the wing
  - 2.3 Engine Limitations  
Continental C90-12F  
Maximum Engine RPM: 2475  
  
Continental C90-14F



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

Maximum Engine RPM: 2625  
Maximum Continuous RPM: 2475

Continental O-200A  
Maximum Engine RPM: 2750

2.4   Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 145 mph

2.5   Other Limitations  
The aircraft shall be flown by day and under Visual Flight Rules only.  
Smoking in the aircraft is prohibited.

Additional Placards:

“Occupant Warning - This Aircraft has not been Certificated to an International Requirement”

A fireproof identification plate must be fitted to fuselage, engraved or stamped with aircraft’s registration letters.

2.10   Maximum permitted empty weight

Not applicable

**Section 3 – Advice to owners, operators and inspectors**

3.1   Maintenance Manual

The [Luscombe Association](#) has a large library of manuals and technical support data available for purchase through their website. It should be noted that individual aircraft may have been modified from their original production state.

Some manuals for reference purposes are available at [Avialogs](#).

For engine information, consult the relevant engine manufacturer’s maintenance schedule.

3.2   Manufacturer’s/Standard Options

There are no standard options for these types.

Note: Any modifications to these types of aircraft require LAA Engineering approval for that specific modification and aircraft.

3.3   Manufacturer’s Information (including Service Bulletins, Service Letters, etc)

Various forms of continuing airworthiness data were produced by Luscombe and later companies providing type support. These include:

- SB    Service Bulletins
- SSB   Special Service Bulletin
- EB    Engineering Bulletins
- SL    Service Letters (SL)
- SIL   General service information leaflets
- SR    Service Recommendations
- SS    Service Suggestions





**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

This list may not be exhaustive and the Luscombe parts suppliers and type support groups also list continuing airworthiness data amongst their items for sale.

Ref Number	Description	Associated FAA AD
<a href="#">SB 1</a>	Lost RPM – exhaust fault	n/a
<a href="#">SB 4</a>	Rear fuselage bulkhead	n/a
<a href="#">SB 5</a>	Tail tray reinforcement	n/a
<a href="#">SB 6</a>	Elevator cables, Models 8 and 8A	n/a
<a href="#">SB 7</a>	Front fin attachment fitting	n/a
<a href="#">SB 8</a>	Rudder bottom	n/a
<a href="#">SB 1-46</a>	Engine cooling	23/04/46
<a href="#">SB 2-46</a>	Landing gear alignment	01/06/46
<a href="#">SB 3-46</a>	Installation of rudder return springs	18/06/46
<a href="#">SB 4-46</a>	Inspection of rudder pedal horn	11/02/47
<a href="#">SB 5-46</a>	Installation of battery cable clip	03/12/46
<a href="#">SB 6-46</a>	Hot weather operation	23/04/47
<a href="#">SB 2-47</a>	Propeller spinner installation	25/09/47
<a href="#">SB 3-47</a>	Inspection of fin, rear spar attachment fitting	26/11/47
<a href="#">SB 1-48</a>	Decker 501A tail installation on Model 8 Silvaire	01/03/48
<a href="#">SB 2-48</a>	Carburetor heat placard	07/07/48
<a href="#">SB 3-48</a>	Rework of rear spar hinge bracket	06/08/48
<a href="#">SB 4-48</a>	Electrical system 8E and 8F Master Models	11/08/48
<a href="#">SB 1-51</a>	Fatigue of control cables	22/01/51
<a href="#">SB 7-1</a>	Inspection of fuselage fuel tank installation	09/06/47
<a href="#">SSB</a>	Interchangeability of new type (square tip) stabilizer with old elevators	23/05/47
<a href="#">Silvaire SB 1</a>	Control system clevis pins	11/08/59
<a href="#">Silvaire SB 2</a>	Landing gear jack strut rod end fitting failure	n/a
<a href="#">Silvaire SB 3</a>	Aileron cable rubbing on fuel lines	n/a
<a href="#">Silvaire SB 4</a>	Exhaust system failure	13/11/59
<a href="#">EB 3</a>	Rudder hinge	01/01/39
<a href="#">EB 9</a>	Cockpit heater	n/a
<a href="#">EB 10</a>	Crankcase breather	n/a
<a href="#">EB 11</a>	Winter cooling blank	11/01/40
<a href="#">EB 12</a>	Fuel vent	13/05/40
<a href="#">EB 13</a>	Airplanes equipped with Continental injector type engines – A-65-J	n/a
<a href="#">EB 14</a>	Fuel line change	n/a
<a href="#">EB 15</a>	Recommended repair for fuselage skin cracks at rear wing spar	n/a
<a href="#">EB 16</a>	Recommended repair for cracks in rear fin spar at upper hinge bracket	n/a
<a href="#">EB 17</a>	Installation of E.D.L. muffler extensions	n/a
<a href="#">EB 18</a>	Recommended repair and alteration for fraying rudder cables	n/a
<a href="#">EB 19</a>	Inspection and recommended repair to aileron hinge bracket	n/a



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 849**  
**LUSCOMBE 8A, 8A (MOD), 8E, 8 (MOD), 8F, 8F (MOD)**

<a href="#">EB 20</a>	Inspection front stabilizer fittings	n/a
<a href="#">EB 21</a>	Reinforcement of rudder horn on Luscombe Model 8 Series airplane	29/08/44
<a href="#">EB 22</a>	Inspection and repair of Lycoming engine mounts	26/10/44
<a href="#">EB 23</a>	Inspection/alteration of tail bulkhead /fin spar for elevator horn clearance	06/11/44
<a href="#">SL 1</a>	Jury strut fitting crack	04/10/38
<a href="#">SL 2</a>	Fairlead installation	03/11/38
<a href="#">SIL</a>	Carburettor and cabin heat and fuel valve	06/11/50
<a href="#">SIL</a>	Method of effecting engine change for increased horsepower	04/08/47
<a href="#">SIL</a>	Rigging instructions – Model 8 Silvaire with metal wings	16/06/47
<a href="#">SIL</a>	Rudder horn – eyebolt attachment hole wear	12/05/48
<a href="#">SIL</a>	Inspection of front fin attachment fitting	27/08/48
<a href="#">SIL</a>	Silflex undercarriage installation modification	06/11/48
<a href="#">SIL</a>	Pliocel repair procedure	11/03/59
<a href="#">SR 1</a>	Round tipped vertical stabilizer front fittings	28/11/93
<a href="#">SR 2</a>	Wing spar inspection for corrosion	15/12/93
<a href="#">SR 4</a>	Landing gear inspection	22/01/96
<a href="#">SR 5</a>	General landing gear repairs and alignment	15/11/95
<a href="#">SR 6</a>	Wing inspection procedures	15/11/97
<a href="#">SR 7</a>	Wing inspection panels	23/10/97
<a href="#">SR 10</a>	Dis-similar metal corrosion	22/08/98
<a href="#">SS 1</a>	Tailspring bearing blocks	22/08/96
<a href="#">SS 2</a>	Recommended replacement of landing gear shackle	n/a

In the absence of any over-riding LAA classification, inspections and modifications published by the manufacturer should be satisfied according to the recommendation of the manufacturer. It is the owner's responsibility to be aware of and supply such information to their Inspector.

FAA SAIB [CE-17-14](#) recommends adding drain holes and corrosion protection to the main landing gear lower legs.

### 3.4 Special Inspection Points

Note: Refer to tables above for hyperlinks to associated documents.

#### 1. 48-08-02 Cleveland wheels

This AD applies to aircraft equipped with Cleveland Model 6:00 DMB Wheels, assembly number C-38500. The AD requires repetitive inspection every 100 hours, but for LAA aircraft the inspection may be deferred to the following Permit revalidation inspection or up to 150 hours, whichever occurs first.

#### 2. 48-49-01 Vertical Stabilizer Spar Fitting

If compliance with this AD requires welding, a CAA approved welder should be employed to accomplish the work.

3. 61-03-05 Fuel Line Interference

Although the AD calls up a one-time inspection, good practice would suggest that an inspection in this area at regular intervals would be a sensible approach.

4. 96-24-17 R1 Wing Inspection Holes

The Luscombe's metal structure is known to suffer from corrosion issues (not surprising considering the aircraft are 70 plus years old) and although there was an FAA Airworthiness Directive requiring inspection holes and an inspection of the wings, this was considered a one-off inspection.

The CAA did issue an AD on the same subject but mandated a 12 month repetitive inspection, which, although the AD was cancelled with the arrival of EASA, it makes sense to continue to inspect the structure at regular intervals.

For fabric covered wings, inspection can be accomplished through the 18 existing wing inspection holes but for the metal covered wings, in order to permit the inspection, the wings had to be modified by the installation of two additional wing inspection holes (left wing and right wing) and modification of the wing tip fairings using the Don Luscombe Aviation History Foundation (DLAHF) Kit #8007, Wing Access and Inspection Kit, in accordance with the Compliance Procedures contained in [Service Recommendation 2](#).

It is not just the wings that require regular inspections. One LAA administered Luscombe 8A on which both front elevator spars were found to be severely corroded following removal of the elevators to permit hinge replacement. The most severe corrosion appeared at the attachment point for the steel interconnect tube, an area which is difficult to inspect with the elevators installed.

5. Rudder cable tension

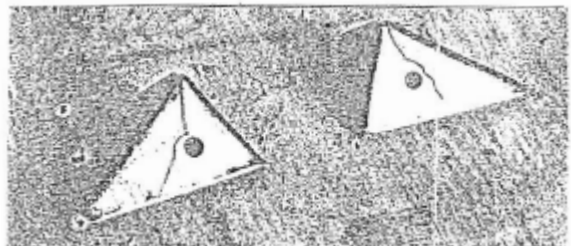
A leaflet called [Rudder Cable Tension Leaflet](#) has been produced by The Luscombe Foundation.

6. Undercarriage Damage

Damage to a UK based Luscombe occurred when, following a loss of control on landing, a rut collapsed the starboard undercarriage. Subsequent examination of the failed area revealed evidence of internal corrosion and a pre-existing crack in the area above the leg/axle weld.

7. Cracked Forward Tailplane Fittings

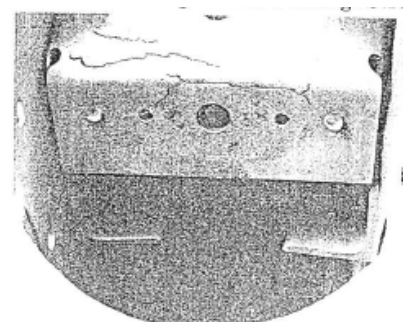
Previously, there was a report of severely cracked forward LH and RH tailplane attachment fittings, part number 18128. These were discovered during the restoration of a Luscombe 8A aircraft, which has a total airframe time of 4642 hours. The cracks originated from the sharp edges of the relief holes at the corner of each sheet metal fitting and extend to the ¼" diameter hole for a forward tailplane attachment bolt. As can be seen in the picture, the cracks have branched around the bolt holes and



have progressed almost to the opposite edge of each fitting. These cracks would normally only be discovered with the aircraft disassembled. Inspectors should be aware of this potential problem and are requested that LAA Engineering is advised of any similar discoveries.

8. General Cracking of Rear Fuselage Structure

LAA Engineering did receive a report of quite 'extensive' cracking of parts of fuselage structure on a Luscombe. Frame 8, the rearmost bulkhead (fin post) was badly cracked as was the 'tail tray reinforcement' bracket shown in the picture opposite, Pt No 18110. Such defects would be very difficult to detect without



major disassembly but inspectors should ensure to inspect these structures as thoroughly as possible.

#### 9. Bogus parts

Care must be taken when acquiring parts from sources that aren't known: parts can superficially look suitable but watch out for signs that the parts aren't up to scratch. Welds may not have full penetration, alignment may be slightly off, incorrect heat treatment applied, etc. If possible, compare parts side-by-side with known originals or compare with drawings.

#### 10. Gear legs

The 'standard' lower and upper legs are heat treated and cannot be welded without subsequent heat treatment to re-establish full strength. Similarly for the 'Silflex' legs.

### 3.5 Operational Issues

The following *Safety Spot* articles are relevant to Luscombe aircraft:

*Light Aviation* [April 2019](#) & [Feb 2019](#)      *Luscombe Taiplanes- Corrosion*  
Corrosion within a Luscombe tail plane required a full tail plane restoration and rebuild. The article discusses reasons for corrosion and ways of mitigating the issue.

*Light Aviation* [April 2015](#)      *Luscombe 8E – ASI Failure on Take-Off*  
ASI bug flap failed to retract open on take off.

*Light Aviation* [April 2014](#)      *Luscombe 8E – Prop Swinging Accident*  
A failed prop swing led to an incident where a Luscombe had runaway and collided with an aircraft hangar causing significant damage. The article investigates the cause.

*Light Aviation* [Jan 2014](#)      *Luscombe 8A – Failed Stub Axle*  
A failed take off and damaged aircraft were the result of a failed stub axle. The article talks briefly about inspection and an aircraft tailored maintenance schedule.

*Light Aviation* [May 2013](#)      *Luscombe 8E – Post Ground Loop Inspections*  
Following a recent ground loop, a Luscombe owner inspected his aircraft for any damage. Having removed the floor carpets in the cockpit, it was discovered that the aluminium sheet around the U/c mounts had buckled and rivets had popped free.

*Light Aviation* [Nov 2011](#)      *Luscombe 8E – Luscombe Fuel Selector Valve Leak*  
Univair fuel valve leak. Article discusses a Luscombe fitted with an early fuel that developed a leak.

*Light Aviation* [Mar 2011](#)      *Luscombe Carburettor Replacement Issues*  
A Luscombe owner suspicious of a high fuel burn rate investigated and his inspector discovered that the wrong jet was being used on the carburettor.

*Light Aviation* [April 2008](#)      *Luscombe 8E Tail plane Attachment*  
A routine inspection on a Luscombe aircraft discovered a small crack on the tail plane. A small crack and delamination of tail plane spar were noticed and the article traced the incident to Luscombe earlier years.

----- END -----

Please report any errors or omissions to LAA Engineering: [engineering@laa.uk.com](mailto:engineering@laa.uk.com)