



**LAA TYPE ACCEPTANCE DATA SHEET  
TADS 247 & 247A  
EUROPA, EUROPA XS & EUROPA NG**

Issue 20	MOD/247/012 added to section 2.6 and Standard Mod 15833 to section 3.7	Dated 04/11/21	AD
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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

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Website: [www.europa-aircraft.com](http://www.europa-aircraft.com)

An active owners' club is also available with support and advice: [www.theeuropaclub.org](http://www.theeuropaclub.org)

### 1.2 Description

The Europa is a small, two-seat, low-wing aeroplane of all composite construction, manufactured and supplied in kit form by Europa Aircraft, originally in North Yorkshire and subsequently in Norfolk. The original version is often referred to as the 'Europa Classic'. This had wet lay-up flying and control surfaces fabricated by the builder using cloth and resin-over-foam cores.

The Europa XS is a later variant of the original design incorporating greater wing span and wash-out, pre-moulded composite sandwich skins and ribs for both wing and fin surfaces and ribs, an increase in maximum weight authorised, an increase in Vne, a different engine installation, an option to use the Rotax 914-UL engine, and a number of other changes.

Some elements of the XS standard could be incorporated into a Classic and vice versa. Generally, an aircraft is considered to be a 'Classic' if the wings are of the Classic design and an 'XS' if the wings are of the XS design.

The Europa NG is a development of the Europa XS. The Europa NG differs from the XS by the introduction of pre-moulded flaps, ailerons, rudder and tailplanes and tabs.

The NG tailplanes, tabs and rudder could be incorporated into a Classic and all NG pre-moulded parts could be incorporated into an XS and vice-versa.



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All variants may be built either with a retractable monowheel or fixed tricycle undercarriage, or the monowheel version can be retrospectively converted to the tricycle undercarriage configuration.

The standard engine installation on the Europa is the Rotax 912-UL (although the Rotax 912-ULS and the turbo-charged Rotax 914-UL engine may be fitted provided that the Europa XS firewall forward kit is used). The Rotax 912-UL engine may also be fitted using the XS firewall forward kit.

On the Europa XS and NG, the Rotax 912-UL, 912-ULS and 914-UL are all standard installations.

The Jabiru 3300A engine installation is also an accepted alternative option on all variants.

Accepted propellers with the Rotax 912-UL, 912-ULS and 914-UL engines are the ground adjustable Warp Drive RPM three bladed or the electrically operated constant speed Airmaster AP332, although the Arplast PV50 in-flight adjustable propeller and constant speed Woodcomp SR2000 and SR3000 propellers are also approved. The NSI – CAP 140 in-flight adjustable propeller is also approved for use with the Rotax engines. Blade retention cuff version and engine type will determine cuff life. An AD issued by the manufacturer (AD030605-01) refers.

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.

All variants of the Europa are SEP Aeroplanes (colloquially known as 'group A category') with a maximum gross weight of 1300 lbs (Europa) or 1370 lbs (Europa with MOD52, Europa XS & NG). It is not eligible as a microlight in the UK.

**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**

Europa: Not applicable – the Europa Classic was only available as a standard build kit.

Europa XS & NG: The LAA technical leaflet TL1.11 shows the contents of the accepted fast build kit.

**2.2 Build Manual**

Europa: The design standard was originally defined by the comprehensive Europa construction manual which contained the following sections:

CH 1	Introduction	CH 24	Bond fuselage top
CH 2	Fin	CH 25	Engine cowls
CH 3	Rudder	CH 26	Instrument panel
CH 4	Tailplane	CH 27	Electrical system
CH 5	Anti-servo/trim tab	CH 28	Fin and rudder attachment



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CH 6	Tailplane assembly	CH 29	Wing & flap pin installation
CH 7	Wings	CH 30	Lift pin socket/root fairings/spar pin latch
CH 8	Ailerons	CH 31	Flap control system
CH 9	Flaps	CH 32	Main landing gear
CH 10	Fuselage intro	CH 33	Firewall
CH 11	Prepare mouldings	CH 34	Fuel system
CH 12	Brake master cylinder mono	CH 35	Door latches
CH 13	Flying controls	CH 36	Fitting doors
CH 14	Quick connect aileron	CH 37	Harness
CH 15	Pitch torque tube	CH 38	Finishing
CH 16	Fuel tank	Annex A	Templates
CH 17	Bond cockpit module	Annex B	Safety data – Redux 420
CH 18	Tailplane torque	Annex C	VHF Com antenna
CH 19	Pitch trim system	Annex D	Basic electrical systems
CH 20	Tailwheel (mono)/rudder bellcrank (trigear)	Annex E	Final inspection checklist
CH 21	Mass balance	912	Rotax 912 installation
CH 22	Landing gear mounting frame	912 XS	Rotax 912 XS installation
CH 23	Rudder system	914 XS	Rotax 914 XS installation

However, these are no longer available and have not been updated to accommodate later design changes. The Europa Club has produced documentation that modifies the Europa XS construction manual with the necessary differences for the 'classic' Europa, and these have been endorsed by Europa:

<a href="#">CBMInt</a>	Classic Build Manual Introduction
<a href="#">CBMW</a>	Classic Wing
<a href="#">CBME</a>	Classic Engine
<a href="#">CBMF</a>	Classic Fuselage & Firewall Forward

Europa XS & NG: The design standard is defined by the comprehensive Europa XS construction manual which contains the following sections:

CBM 1	Introduction	CBM 23T	Bond Fuselage Top Tri Gear
CBM 2	Rudder	CBM 24	Instrument Panel
CBM 3	Tailplane	CBM 25	Electrical System
CBM 4	Anti Servo Trim Tab	CBM 26	Wing & Flap Pin Installation
CBM 5	Tailplane Assembly	CBM 27	Wing to Fuselage Assembly
CBM 6	Flaps	CBM 28M	Flap control System Mono
CBM 7	Ailerons	CBM 28T	Flap Control System Tri Gear
CBM 8	Wings	CBM 29M	Landing Gear Mono
CBM 9M	Fit Aileron & Flap Mono	CBM 29T	Landing Gear Tri Gear
CBM 9T	Fit Aileron & Flap Tri Gear	CBM 30	Fuel System
CBM 10M	Fuselage Intro Mono	CBM 31	Firewall
CBM 10T	Fuselage Intro Tri Gear	CBM 32M	Sternpost Rudder & Tailwheel
CBM 11	Prepare Mouldings	CBM 32T	Sternpost Rudder & Tri Gear
CBM 12M	Brake Master Cylinder Mono	CBM 33T	Brake System Tri Gear
CBM 13	Flying Controls	CBM 34	Door Latches
CBM 14	Quick Connect Aileron	CBM 35	Fitting Doors
CBM 15	Pitch Torque Tube	CBM 36	Harness
CBM 16	Fuel Tank	CBM 37	Finishing
CBM 17	Bond Cockpit Module	CBM A	Annex A – templates
CBM 18	Tailplane Torque	CBM B	Annex B – Araldite data
CBM 19	Pitch Trim System	CBM C	Annex C – VHF antenna



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CBM 20	Mass Balance	CBM D	Annex D – electrical systems
CBM 21M	Landing Gear Mounting Frame	CBM E(M)	Annex E (M) – checklist
CBM 21T	Nose Gear Mounting Frame	CBM E(T)	Annex E (T) – checklist
CBM 22	Rudder System	912 XS	Rotax 912 Installation
CBM 23M	Bond Fuselage Top Mono	914 XS	Rotax 914 Installation
		CBM-NG supplement (for NG variants only)	

**2.3 Build Inspections**

Build inspection schedule 20 (Europa aircraft).  
Inspector approval codes A-A or AC-2. Inspector signing off final inspection also requires 'first flight' endorsement.

**2.4 Flight Manual**

Europa Owner's Manual/Europa XS/NG Owner's Manual.

**2.5 Mandatory Permit Directives**

Applicable specifically to this aircraft type:

- [2000-008](#) Nose gear leg to housing reinforcement (Europa mod 57 issue 3)
- [2005-004](#) Tailplane mass balance arm replacement (Europa mod 70)
- [2007-004-R1](#) Landing Gear Frame Reinforcement (Europa mod 72)
- [2007-005-R2](#) Mandating FSB LAA 247-006-Iss 4 (tailplane flutter and retention)
- [2007-006](#) Mandating FSB LAA 247-007 (wing attachment) (Europa Classic only)

Also check the LAA website for MPDs that are non-type specific ([TL2.22](#)).

**2.6 LAA Required Modifications (including LAA issued AILs, SBs, etc)**

The following Europa modifications are LAA mandatory (note that all mods prior to MOD 57 are not applicable to the Europa XS/NG unless the kits were supplied prior to 10/2/98):

<i>Mod no.</i>	<i>Issue</i>	<i>Description</i>	<i>Applicability</i>
MOD 1		Rudder tip shape	S/n 1-10
MOD 2		Flap root core hot wire cut omitted	Wing kits delivered prior to 24.11.93
MOD 3		Aileron push-rod channel misalignment in wing	S/n 1, 3, 11-13, 15-17, 22, 27, 33, 34
MOD 4		Aileron bellcrank stop bolt position in brackets	Wing kits delivered prior to 30.08.94
MOD 5		Tailplane drive arm centre pin	S/n 1-150
MOD 6		Tailplane rib/t.e. close-out bracket	All aircraft except NG
MOD 7		Outrigger retraction push-rod shape change	Wing kits delivered prior to 12.10.94
MOD 11		Aileron bellcrank W16 push rod hole moved	Wing kits delivered prior to 24.03.95
MOD 12		Rudder pedal stiffening	All aircraft
MOD 13		Bungee attachment (Mono)	LG02 items delivered prior to 12.10.95
MOD 14		Fuel tank spacers	All aircraft



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MOD 15		Forward lift pin/fuselage stiffening	All aircraft
MOD 16		Shock absorber block shape modification	(Mono) Kits with LG06 without "V" shaping
MOD 17		Rudder cable guides	All aircraft
MOD 18		Pitot positioning	All aircraft
MOD 19		Rear lift pin top-hat stiffener	All Europa Classic aircraft
MOD 20		Throttle closed stop	All Rotax Engine aircraft
MOD 21		Replacement of outrigger parts (Mono)	All aircraft
MOD 22		Drilling of tailwheel rubber blocks (Mono)	Classic-type tailwheel rubbers del. Prior to 01.11.95
MOD 23		Rudder pedal floor stiffening	All aircraft
MOD 25		Rudder pedal crank positioning	Fuselage kits del. Prior to 18.01.96
MOD 27		PRO 805 Fuel filter	All Rotax Engine aircraft
MOD 28		Landing gear mount stiffening struts (Mono)	Fuselage kits del. Prior to 22.03.96
MOD 30		Outrigger leg length increase	All monowheel aircraft
MOD 31		Fuel sight gauge	All aircraft
<a href="#">MOD 32</a>	1	Engine bay fuel line insulation	All Rotax Engine aircraft
MOD 35		Door handle guard	All aircraft
MOD 37		Modification to undercarriage system (Mono)	All monowheel aircraft
MOD 39		Modification to door latches	All aircraft
<a href="#">MOD 40</a>		Modification to Rotax fuel system	All Rotax 912 engined aircraft
MOD 41		Reinforcement of nose gear leg	Trigear nose gears del. prior to 30.04.97
MOD 44		Tri-gear nosewheel mounting	Trigear fuselage kits del. prior to end Sept 97
MOD 45		Nose gear bungee mounting	Trigear fuselage kits del. prior to end Sept 97
MOD 46		Pitch torque tube end-cap replacement	Fuselage kits del. Prior to 10.02.98
<a href="#">MOD 57</a>	3	Nosegear leg to housing reinforcement	Trigear nose legs del. Prior to 01.09.2000
<a href="#">MOD 58</a>	2	Anti-servo/trim tab drive pin replacement	Stage 1 kits del. Prior to Dec 2000
<a href="#">MOD 61A</a>	3	Stall warner (or equivalent stall warner or stall strips)	All aircraft
<a href="#">MOD 61B</a>	4		
<a href="#">MOD 70</a>	2	Mass balance arm modification	All Fuselage kits del. Before February 2005
<a href="#">MOD 72</a>	2	Undercarriage mounting frame reinforcement	All Europas with some exceptions as stated in mod bulletin
<a href="#">MOD 73</a>	2	Tailplane retention	All aircraft
<a href="#">MOD 74</a>	4	Wing rear attachment reinforcement	All Europa Classic aircraft

The inspections called for by the following LAA Flight Safety Bulletins are also mandatory:

LAA Flight Safety Bulletin [FSB001](#) described problems with tailplane attachments: need to check for signs of looseness indicating dis-bonding of TP6 bush.

LAA Flight Safety Bulletin [FSB002](#) described problems with vertical play in tailplane mass balance arm, fuel smell in cockpit, wear in pivot bolt holes in outriggers, wear in bolt holes at



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attachment of undercarriage/flap retraction lever, wear in rudder cables at rudder cable fairleads in wheel well, looseness developing in front mounting bolt of tailwheel spring attachment to fuselage.

LAA Flight Safety Bulletin [FSB003](#) referred to problems with the NSI engine installation – not applicable to Rotax or Jabiru powered Europas.

LAA Flight Safety Bulletin [FSB004](#) described mandatory annual check items on retractable monowheel models, including need for retraction checks and specific check requirements relating to the main undercarriage, tailwheel and outriggers.

LAA Flight Safety Bulletin [FSB005](#) calls for mandatory inspections for wear in the rudder cables in the forward fuselage following a rudder cable failure on G-EESA. Required within 5 flying hours of receipt of bulletin issued 21/2/07, and at subsequent annual checks.

LAA Flight Safety Bulletin [FSB006](#) calls for mandatory inspection of the tailplane balancing, tailplane slop and tailplane retention following in-flight break up possibly caused by tailplane flutter on G-HOFC.

LAA Flight Safety Bulletin [FSB007](#) calls for mandatory check of correct positioning of rear wing pin attachments in wing root rib hard point, to check that pins are on centreline of hard point (Europa Classic aircraft only).

LAA [MOD/247/008](#) Mandatory inspection of spar wing sockets for security before next flight and at each re-rig.

LAA [MOD/247/009](#) Mandatory inspection of flap drive pin (see also [AWA/16/09](#) and [letter to owners](#)).

LAA [MOD/247/010](#) issue 2 Mandatory fuel system inspection (see also [AWA/17/05](#)).

LAA [MOD/247/011](#) Mandatory fuel filler pipe inspection (see also [AWA/17/10](#)).

LAA [MOD/247/012](#) Door latch shoot-bolt stops installation (see also [AWA/21/08](#)).

LAA [MOD/ENG/NSI-001](#) Alternator inspection calls for mandatory repetitive inspections of the alternator on NSI engines for signs of incipient failure, following an engine failure caused by a seized alternator.

## 2.7 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.

With Rotax 912-UL engine: Maximum CHT: 150°C  
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)  
Oil Temp Limits: 50°C to 140°C (Normal 90-110°C)  
Oil Pressure 2-5 Bar  
Minimum Fuel Pressure: 0.15 bar

With Rotax 912-ULS engine: Maximum CHT: 135°C  
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)



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Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)  
Oil Pressure 2-5 Bar  
Minimum Fuel Pressure: 0.15 bar

With Rotax 914-UL engine: Maximum Manifold Pressure: 1300 hPa (38.4 inHg)  
(max continuous, 1150 hPa (34 inHg))  
Maximum EGT: 950°C  
Maximum CHT: 135°C  
Max Coolant Temp: 120°C (with 50/50 Glycol/water coolant)  
Oil Temp Limits: 50°C to 130°C (Normal 90-110°C)  
Oil Pressure 1.5-7 Bar (1.5-5 bar normal)

With Jabiru 3300 engine: Maximum CHT: 175°C (continuous 150°C)  
Maximum continuous CHT 150°C  
Oil Temp Limits: 15-118°C  
Oil Pressure 220-525 kPa (32-66 psi/2.2-5.25 bar)  
Minimum Fuel Pressure: 0.15 bar

2.8 Control surface deflections

Ailerons	Up	23.5°	+2/-1
	Down	20°	+2/-1
Elevator	Up	12°	+1/-0
	Down	4°	+1/-0
Rudder	Left	30°	+2/-0
	Right	30°	+2/-0
Flaps	Down	25°	+2/-0
Elevator tabs	Up and down	6°	+2/-0

2.9 Operating Limitations and Placards

(Note that the wording on an individual aircraft's Operating Limitations document takes precedence, if different.)

Maximum number of occupants authorised to be carried: Two  
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:

**Aerobatic Limitations**

- Aerobatics prohibited.
- Intentional spinning is prohibited.

**Loading Limitations**

- Maximum Total Weight Authorised: 1300 lbs (1370 lbs with MOD 52, XS & NG)
- CG Range: 58.0 to 62.5 inches aft of datum point.
- Datum Point is: A point 29.25 inches forward of the cowling joggle in the fuselage mouldings.

**Engine Limitations (Rotax 912-UL, 912-ULS and 914-UL engines)**

- Maximum Engine RPM: 5800
- Maximum continuous engine RPM: 5500
- (Rotax 912-UL engines with ground adjustable/fixed pitch propellers: propeller pitch to be such to ensure a maximum static RPM of not less than 5200)



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Engine Limitations (Jabiru 3300A engine)

Maximum Engine RPM: 3300

Maximum continuous engine RPM: 3100

Airspeed Limitations

Maximum Indicated Airspeed: 150 kts (165 kts with MOD 52, XS & NG)

Maximum Indicated Airspeed with flaps extended: 83kts

Maximum Indicated Airspeed with undercarriage extended (Monowheel only): 83 kts

Other Limitations

The aircraft shall be flown by day and under Visual Flight Rules only.

Smoking in the aircraft is prohibited.

Additional Placard

“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.

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

#### **3.1 Maintenance Manual**

Refer to Europa Owner’s Manual/Europa XS/NG Owner’s Manual for Maintenance Schedule. Europa Aircraft produce an Owner’s Manual providing essential information for operation of Europa aircraft and all Europa owners should ensure they acquire a copy, making it available to their LAA inspector. The manual includes a Service and Maintenance section outlining 25 and 50 hour and annual inspection items. At Permit renewal this should be used in conjunction with the usual inspection checklist in the LAA Permit renewal application form.

For engine, consult engine manufacturer’s schedule.

#### **3.2 Manufacturer’s/Standard Options**

The listing below shows the options that have been accepted by the LAA

<i>Mod no.</i>	<i>Issue</i>	<i>Description</i>
MOD 24		Seat width increase (Europa Classic)
MOD 29		Undercarriage damper (Europa Classic)
<a href="#">MOD 33</a>	8	Installation of water drain valves (mandatory for Mogas use in LAA Europa aircraft)
MOD 34		Fuel tank vent extension tube (Europa Classic)
MOD 38		Fuel tank and sight gauge vents (Europa Classic)
<a href="#">MOD 42</a>	3	Cold air inlet and plenum chamber (Europa Classic)
<a href="#">MOD 43</a>	7	Modification to tailwheel (Europa Classic)
<a href="#">MOD 47</a>	3	Extended baggage bay (Europa Classic)
<a href="#">MOD 49</a>	1	Second fuel filter
<a href="#">MOD 50</a>	1	Installation of underwing pitot/static
<a href="#">MOD 51</a>	2	Prevents wear in the fasteners connecting the landing gear retraction lever to the landing gear mechanism.
<a href="#">MOD 52</a>	6	Gross weight increase to 1370 Lb (Europa Classic)
<a href="#">MOD 54</a>	1	Cranked control column
<a href="#">MOD 55</a>	1	Monowheel speed kit





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<a href="#">MOD 56</a>	2	Tri-gear speed kit
<a href="#">MOD 59</a>	1	Nose gear shimmy damper
<a href="#">MOD 60</a>	1	Fuel contents gauge
<a href="#">MOD 61(A)</a>	3	Stall warner
<a href="#">MOD 61(B)</a>	4	Stall warner retrofit
<a href="#">MOD 62</a>	1	Replacement of tailplane torque tube drive pins
<a href="#">MOD 63</a>	1	Instrument panel fascias
<a href="#">MOD 64</a>	3	Hi-top fuselage
<a href="#">MOD 65</a>	1	Finger brake system
<a href="#">MOD 66</a>	1	Gas strut repositioning
<a href="#">MOD 67</a>	1	Cockpit width increase
<a href="#">MOD 68</a>	1	Electric flap drive for conventional taildragger Europa
<a href="#">MOD 69</a>	2	Wing tie down (applicable only to XS wings which have not yet been closed).
<a href="#">MOD 71</a>	1	Trigear nose gear retention springs to replace bungee
<a href="#">MOD 75</a>	3	Installation of autopilot (roll) systems
<a href="#">MOD 76</a>	3	Installation of autopilot (pitch) systems
<a href="#">MOD 77</a>	2	Revised tailwheel and rudder drive
<a href="#">MOD 79</a>	3	Alternative fuel filler system (not pre-MOD 47)
<a href="#">MOD 80</a>	3	Alternative fuel filler system (pre-MOD 47)

TRI-GEAR CONVERSION. A complete set of components to convert a monowheel aircraft to a tri-gear version.

**NOTE** MOD 53 Long range fuel tank is **NOT APPROVED BY LAA.**

Several additional optional modifications, mostly drawn up by the Europa Owner's Club, have been cleared as Standard LAA modifications by LAA Engineering, as listed on the [LAA website](#).

ALTERNATIVE ROTAX 912/912-S ENGINE INSTALLATION developed by Neville Eyre comprising a single piece engine mounting frame (which precludes the Europa XS mount/Rotax ring mount combination), cowlings with Lo-Presti style air inlets and baffles for more effective engine cooling, with a weight saving of over one kilogram.

SILICONE COOLING SYSTEM HOSES manufactured by Stefan Ingemarsson are acceptable alternatives to the standard hoses on Rotax 912-UL, 912-ULS and 914-UL installations.

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

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.

<i>Ref</i>	<i>Date</i>	<i>Description</i>	<i>Factory compliance status</i>	<i>Applicability</i>
<a href="#">SB 1</a>	June 1996	Fuel vapour locking	Mandatory	All 912 Europa
<a href="#">SB 2</a>	July 1997	Fuel filler hose	Mandatory	Classic Europa
<a href="#">SB 3</a>	Sept 1998	Rotax 912 exhaust system	Mandatory	Classic 912 Europa
<a href="#">SB 4</a>	Nov 1999	Facet electric fuel pumps	Mandatory	All 912 Europa
<a href="#">SB 5</a>	May 2000	Cold air plenum installation	Mandatory	All 912 Classic Europa
<a href="#">SB 6</a>	Aug 2001	Classic exhaust system port rear down pipe	Recommended	912 Classic Europa
<a href="#">SB 7</a>	Sept 2001	Throttle cable checking	Mandatory	All Europa



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<a href="#">SB 8</a>	Sept 2001	XS port wing closing panel stiffener	Mandatory	XS Europa
<a href="#">SB 9</a>	Nov 2001	Main gear leg socket	Mandatory	Tri-gear Europa (Dec 00–May 01)
<a href="#">SB 10</a>	Apr 2002	Aileron close-out	Mandatory	XS wings (Jan 02–Mar 02) mis-positioning (XS wings)
<a href="#">SB 11</a>	Jul 2002	XS Rotax 912/912S exhaust baffle failure	Mandatory	XS Rotax 912/912s exhaust silencer systems
<a href="#">SB 12</a>	Mar 2004	XS Rotax 912/912S exhaust	Mandatory	XS Rotax 912/912s Exhaust silencer - baffle security systems (May 00–end May 03)
<a href="#">SB 13</a>	July 2004	Replacement outrigger	Mandatory	Monowheel Europa with OR5 retraction operating link OR5 supplied between May 01 & Feb 02
<a href="#">SB 14</a>	Sept 2005	XS 912/XS912S exhaust silencer	Mandatory	XS exhaust silencers supplied Heat shield strap security between Sept 04 & Aug 05
<a href="#">SB 15</a>	Nov 2007	Removal of play in the Tailplane drive train	Mandatory	All Europa variants
<a href="#">SB 16</a>	June 2008	Check flap drive pin engagement	Mandatory	All Europa variants

For Rotax 912 and 914 series engines, there are many Rotax service bulletins dealing with a variety of important safety topics. Copies of the bulletins applicable to individual engines by engine serial can be downloaded directly from the Rotax website at [www.rotax-aircraft-engines.com](http://www.rotax-aircraft-engines.com).

### 3.4 Special Inspection Points

As at November 2019, over 240 Europas have been completed, with a further 120 in build. Technical guidance is available from the Europa factory and owners/operators should make use of this whenever necessary.

A thermometer and hygrometer located near to the working area to monitor conditions is necessary. During the manufacture of composite parts, the workshop temperature should be no less than 20°C and, ideally, around 25°C. Humidity levels are also important; the relative humidity should be maintained below 70% maximum and below 60% for best results.

Europa provides special checklists including final inspection points for the airframe and engine installation, each item of which must be checked and initialled by the inspector on completion of the aircraft and submitted with the initial Permit application. These comprise final inspection checklists for Europa Monowheel, Europa Trigear, Rotax 912-UL/912-ULS engine installation and Rotax 914 engine installation.

With Rotax 912-UL/912-ULS and 914-UL engine installations:



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- The throttle lever friction must be adjusted so that the springs on the carburettor throttle levers are not able to pull open the throttles when the throttle lever is released, or require a strong pull on the throttle lever to keep it in the closed position.
- If Rotax 912-UL or -ULS engine fitted, LAA-IC-ENG-ROTAX912-UL(S) engine installation checklist to be completed as part of final inspections prior to applying for Permit to Fly.

If the engine/propeller combination is upgraded from the Rotax 912 or 912-S with the Warp Drive ground adjustable propeller, or the Jabiru 2200A engine, it is essential that inspectors review Mandatory Mod 72, Undercarriage Mounting Frame Reinforcement, to verify compliance.

The foam core of one tailplane of a Europa was discovered to have deteriorated such that it had become easy to crush with finger pressure. Further investigation revealed that the foam had lost significant structural integrity. It also gave off a smell similar to the antiseptic TCP. The affected aircraft's other tailplane and the wings were found to be unaffected. While no reason could be established to explain the damage to this tailplane's foam core, it must be noted that the blue Styrofoam used in the pre-NG flying control surfaces and the Classic wings and fin is vulnerable to attack from many different chemicals, including petrol and common household solvents. Excessive heat is also damaging. All components with a Styrofoam core must be kept well clear from all chemicals, even in vapour form, and always in a ventilated environment. Components that have a Styrofoam core should feel solid when applying moderate pressure on the glassfibre skin. Excessive deflection could indicate foam core deterioration and would need immediate further investigation.

Europa Aircraft produce an Owners' Manual providing essential information for operation of Europa aircraft and all Europa owners should ensure they acquire a copy, making it available to their LAA inspector. The manual includes a Service and Maintenance section outlining 25 and 50 hour and annual inspection items. At Permit renewal this should be used in conjunction with the usual inspection checklist in the LAA Permit renewal application form.

Owners should also obtain the appropriate engine maintenance manuals, service bulletins and other service data from the factory and make this available to their inspector.

Points specific to the Europa Classic:

Monowheel tyres – Dico / Carlisle 800 x 6 (replacing Goodyear 800 x 6), fouls original design landing gear swinging arm with straight forks. Suggested alternative is McCreary Air Trac 700 x 6 tyre.

Pitch trim switch sticking as a result of hole in panel too tight fitting causing the switch case to distort and interfere with the switch rocker.

MW4C-3 plastic lined rod ends used in control system too stiff. Substitution with MW4 standard rod-ends recommended.

Fuel hose with braided fabric or steel outer sheath subject to cracking. Last supplied in 2000. Recommended to replace with Europa supply of improved quality hose.

### 3.6 Operational Issues

The following Safety Spot articles are relevant to Europa aircraft:

*Light Aviation* issue [September 2008](#)

*Outrigger gear collapse*

Outrigger uncommanded retraction on a Monowheel resulting in damage to prop and wing. Suspected that lack of lubrication and the gentle operation of the gear deploy lever did not give enough inertia to engage outrigger down-latch.

*Light Aviation* issue [October 2008](#)

*Door failure*

Europa gull wing door not secured before flight and detached from airframe. Care must be taken to ensure both front and rear shoot-bolts are engaged.

*Light Aviation* issue [March 2010](#)

*Fuel system problems*

Extended article on the fuel system of Europa aircraft. Purolator filter blockages after dislodging fuel tank sediment from heavy landings and the impossible turn from an EFATO

*Light Aviation* issue [May 2010](#)

*Fuel system problems*

Another Europa with clogged fuel filters. Understanding that changing to 'reserve' on a Europa is like changing to another tank would have prevented precautionary landing.

*Light Aviation* issue [June 2010](#)

*Fuel pump power loss EFATO*

Failure to lock fuel pump wiring connector following disconnection to allow removal of instrument module to install a new Txpdr. Both electrical fuel pumps powered through same connector.

*Light Aviation* issue [February 2011](#)

*Unapproved fuel system mod*

Complex and numerous failures lead to the forced landing and destruction of a Europa. Including unauthorised fuel system mod, carburettor icing conditions and fuel sight gauge misreading.

*Light Aviation* issue [May 2012](#)

*Seized alternator*

Seized alternator bearing caused Subaru engine stoppage as drive belt stalled engine.

*Light Aviation* issue [October 2012](#)

*Main undercarriage crack (Trigear)*

Cracks found in the structure of a new main undercarriage leg. Suggested that it was formed during the manufacturing process.

*Light Aviation* issue [October 2012](#)

*Tailplane torque tube clamps*

Tailplane torque tube clamps (owner mod) failing from sharp corners as a stress concentrator on design.

*Light Aviation* issue [March 2013](#)

*Door failure*

Europa gull wing door not secured before flight and detached from airframe. Care must be taken to ensure both front and rear shoot-bolts are engaged.

*Light Aviation* issue [January 2014](#)

*Tailwheel attachment bolt failure*

Early design Europa tailwheel attachment bolt failed due to corrosion; early Europa's only had one drain hole. Corrosion risk greater.

Light Aviation issue [August 2014](#) Tailwheel attachment bolt failure  
Crack in exhaust header blowing hot air on carburettor causing rough running and low totalizer reading as fuel was effectively being 'boiled off'.

Light Aviation issue [September 2014](#) Door failure  
Europa gull wing door not secured before flight and detached from airframe. Care must be taken to ensure both front and rear shoot-bolts are engaged. In this incident the detached door impacted the tailplane.

Light Aviation issue [August 2015](#) Rudder cable corrosion  
Galvanised cable used instead of stainless steel corroded badly from combination of damp, fungus cover and bleach to remove fungus.

Light Aviation issue [February 2016](#) Trim runaway – runway excursion  
Trim runaway likely caused by a fault in the aircraft's wiring. Pilots should rehearse actions on trim runaway.

Light Aviation issue [December 2016](#) Flap connection pin failure  
Flap drive pin not bonded in during build resulted in flap deployment failure. Subsequent outrigger down latch not engaged caused pilot to fail to control the aircraft directionally during landing.

Light Aviation issue [February 2017](#) Engine mounting bolt failure  
Rotax rough running on start-up may have caused damage to engine mounting bolts and engine mounting frame.

Light Aviation issue [August 2017](#) Fuel return line worries  
Risks and limitations of using Mogas in aircraft engines and of the requirement of a fuel vapour return line and the risks if it is installed incorrectly

Light Aviation issue [Dec 2017 & Jan 2018](#) Fuel filler pipe inspection  
Fuel filler pipe rubber degrading and blocking fuel system. Caused engine stoppage. Fuel pipe was of type no longer approved

Light Aviation issue [January 2019](#) Tailplane foam degrading  
Tailplane structure that 'didn't feel right' during inspection of 25 year old aircraft was found to have degraded foam core. Foam core is vital to structural strength and highlights importance of good thorough inspection.

Note that the Europa fuel tank has a habit of shedding small plastic particles into the fuel system during the first few hours of use, especially after the first full tank fill which may wash off particles from the top of the tank. This is thought to be the result of dust-like plastic swarf which has adhered electrostatically to the inside of the tank. The filter element is constructed in a woven form which has the tendency to retain particles rather than them drop away when fuel flow has stopped. If not dealt with, fuel starvation may cause engine failures in the first few hours of running. It is therefore essential to check the filters frequently for any signs of contamination during the flight test phase and thereafter, and if in any doubt, replace them. A fuel pressure gauge is useful in showing up any signs of a blockage developing. When twin filters are fitted in parallel in the main and reserve feed lines, 'changing tanks' at the first sign of fuel starvation allows a second, clean filter to be brought into action. It is recommended to keep a spare filter handy, complete with the element retaining spring installed, to enable a quick swap and so minimise fuel spillage in the process.

- Engine cooling issues, especially with Jabiru powered version.
- Caution - with Rotax 914 engine, read Rotax manual on operation of this engine carefully before running it, misuse of the engine controls (particularly turbo control isolation switch) can wreck engine in seconds through over-boosting.
- PRO 805 fuel filters may become blocked very quickly during the first few hours of operation and they should be visually checked before each flight. Replace filter elements rather than attempting to clean them.
- Check visually that door rear shoot bolt is engaged as well as the front one. Several instances of door loss due to incorrect latching have occurred.

LAA [MOD/ENG/NSI-002](#) warns pilots about the steep angle of glide obtained with a windmilling propeller on an NSI engine, and the possibility that due to the windmilling propeller, an engine failure may not be immediately recognised when operating at low power settings.

### 3.7 Standard Modifications

The following Standard Modifications have been approved on the type. The Standard Modification leaflet associated with each modification (published on the website) must be followed and an [LAA/MOD1](#) form completed and return to LAA Engineering in each case (see also [TL 3.06](#)).

<i>Standard Mod no.</i>	<i>Issue</i>	<i>Description</i>
<a href="#">10297</a>	1	Door locks
<a href="#">10401</a>	2	Strobe unit installation
<a href="#">10402</a>	1	Modified instrument panel with removable panel
<a href="#">10403</a>	1	Seat locker doors installation
<a href="#">10404</a>	5	Over-voltage crowbar unit installation
<a href="#">10405</a>	1	Quick release engine cowl fastener
<a href="#">10447</a>	2	Capacitance fuel gauging system installation
<a href="#">10661</a>	3	Outrigger pivot bearing
<a href="#">10672</a>	1	Improved TP5 and TP6 sleeve retention
<a href="#">10713</a>	1	Wing conduit installation
<a href="#">11321</a>	1	Shock mounted instrument panel
<a href="#">11324</a>	1	Direct vision panel
<a href="#">11362</a>	1	Tropical chin intake
<a href="#">11414</a>	1	Pushrod rudder drive
<a href="#">11906</a>	1	Tailplane torque tube clamps
<a href="#">12209</a>	2	Installation of FloScan or FT-60 fuel flow transducers
<a href="#">13070</a>	1	Classic fuel filler hose replacement
<a href="#">13342</a>	1	Fuel valve replacement
<a href="#">14809</a>	2	Fuel filler elbow replacement
<a href="#">15833</a>	1	Door latch shoot-bolts installation

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