



**LAA TYPE ACCEPTANCE DATA SHEET
TADS 318 TECNAM P92-EM ECHO
TADS 318A TECNAM P92-EA ECHO SUPER**

Issue 1	Initial issue	Dated 29/03/19	JP
Revision A	Addition of Safety Spot articles	Dated 27/04/20	MR

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

At the present time, there is no factory appointed UK Tecnam dealer. For technical information and parts, contact the Tecnam factory direct.

The manufacturer may be contacted using the following details:

Costruzioni Aeronautiche TECNAM S.p.A.
Via Maiorise
81043
Capua (CE)
Italy

Tel: +39 0823 622297

Fax: +39 0823 622899

Email sales: info@tecnam.com

Email tech support: technical.support@tecnam.com

Website: www.tecnam.com

1.2 Description

The Italian Tecnam P92 is a strut-braced, high-wing design of mixed welded steel tube and sheet aluminium construction with composite fairings. It is fitted with a nose wheel undercarriage and two seats in a side-by-side configuration in an enclosed cockpit.

There have been a variety of P92 models sharing the same basic airframe, produced by Tecnam for different markets and categories around the world. Tecnam produce a number of aircraft models some non-certified and some certified. The Tecnam P92s supplied to the UK were done so in kit form for amateur building. Tecnam no longer produce the kits. There are nearly twenty P92s of various types in the LAA administered fleet.

The wings, tailplane, fin and all control surfaces are of conventional riveted aluminium alloy construction. The forward fuselage structure consists of a welded steel tube truss,



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aluminium clad, while the rear fuselage is a riveted aluminium alloy sheet monocoque. A moulded fibreglass or carbon fibre fairing forms the rear turtledeck.

The wings are of single spar construction, entirely aluminium alloy covered and braced by a single extruded aluminium strut either side. The ailerons and flaps are of riveted aluminium alloy construction, fabric covered. The ailerons and flaps are fitted with set-back piano-type top hinges giving substantial aerodynamic balance. The wings, flaps and ailerons are of a type essentially the same as those fitted to the aluminium-winged variant of the Italian Sky Arrow 650T aircraft. The ailerons and flaps are of THE slotted type.

The flaps are operated using an electric ram, the position being indicated by a cable-operated mechanical gauge. The ailerons, all-flying horizontal stabiliser and rudder are operated by a conventional system of cables, pulleys, bellcranks and pushrods. The all-flying horizontal stabilizer is fitted with an anti-balance tab which also functions as a pitch trim tab, operated via a MAC electric servo controlled via a cockpit rocker switch. Trim position is indicated by an electric indicator.

A tricycle undercarriage is fitted to the aircraft, the main legs being of cantilever spring type and the steerable nose leg being a trailing link sprung by rubber bushes in compression.

A conventional gascolator is fitted to the lower portion of the firewall. A two-piece engine cowling of mixed aluminium alloy and composite construction is fitted. The propeller is a fixed pitch wooden propeller type developed specially for this airframe/engine combination by GT Tonini.

P92 Model Variations

P92-EM Echo

The P92-J Echo is a factory-built JAR-VLA type-certified model with a maximum gross weight of 535 kg. The P92-S Echo is a non-certified, factory built variant, which has been made in considerable numbers for the European 450 kg 'ultralight' market. The P92-EM Echo variant was supplied in kit form to the UK for assembly as an amateur-built project.

The airframe of the P92-EM model is identical to that of the P92-J, the only significant differences being the use of a non-certified variant of the Rotax 912 engine, GRP main undercarriage legs rather than steel, omission of fuel tank finger strainers and substitution of commercial hardware instead of aircraft specification hardware in various non-critical locations. Many of these modifications were carried out to reduce the aircraft's basic weight.

The inboard leading edge sections of the wings are formed by twin glass-fibre fuel tanks, each of 35 litre capacity. The fuel contents are visible directly through a clear area in the tank 'root rib', suitably calibrated and easily visible to the pilot.

In order to reduce the empty weight of the P92-E model sufficiently to comply with BCAR Section S23, S25, S29 within a maximum gross weight of 450 kg, the following measures have been taken, in this form the aircraft is designated Tecnam P92-EM Echo:

1. The standard water-cooled Rotax 912-UL engine has been replaced by a Jabiru 2200A 80 BHP four cylinder, four stroke engine. The engine is air-cooled using standard Jabiru cylinder cooling air ducts and is mounted using a conventional welded steel tube truss type mount using the standard Jabiru rubber vibration absorbers. It is fitted with a standard Jabiru engine-driven mechanical fuel pump, electric starter and internal alternator.
2. Glass fibre main undercarriage legs are fitted rather than normal steel. This is a standard option on 450 kg ultralight versions of the P92, P92-S and P92-E.



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3. Ailerons and flaps are fabric covered rather than aluminium clad. This is a standard option on 450 kg ultralight versions of the P92, P92-S and P92-E and standard on the certificated P92-J.
4. An aluminium alloy wing leading edge option is used rather than the heavier moulded composite leading edge. This is a standard option on the 450 kg ultralight versions of the P92, P92-S and P92-E.
5. There is an option of a lightweight type 'short' GRP rear fuselage cockpit fairing. The extended fairing of the P92-S, which blends into the fin fillet, may only be used if the lightweight carbon fibre option is selected, the weight of the GRP 'long' fairing being excessive.
6. The cockpit interior trim panel, wheel spats, landing lamp and electric fuel boost pump have been omitted.

P92-EM Echo (Modified)

A few of the LAA administered P92s have been modified by replacing the UK standard fit Jabiru engine.

The alternative engine modification is to fit the Rotax 912-ULS (100 bhp) engine. In this form the aircraft has too high an empty weight to qualify as a microlight, and becomes an SEP (Group A) aircraft. The appropriate maximum gross weight in this configuration is 535 kg which equates to that for the factory-built JAR-VLA type certified model, which this aircraft now closely replicates.

Various other modifications need to be carried out when replacing the Jabiru with the Rotax 912-ULS, apart from the engine and its ancillaries. These include a stainless-steel firewall, a new engine mount and cowlings. In addition, the steel main undercarriage legs replace the fibreglass ones and a rudder mass balance has also been retro-fitted to the top of the rudder.

P92-EA Echo

The P92-EA Echo version is an SEP (Group A) kit model, the only significant difference being that the -EM has a composite main undercarriage substituted to save weight.

One LAA administered P92-EA Echo has been subsequently modified from standard with a UL Power 260i engine. The engine is air-cooled using standard cylinder cooling air ducts and is installed using the standard Jabiru engine mount. The standard propeller as in the Jabiru engine installation is used, a fixed pitch wooden propeller type developed specially for this airframe/engine combination by GT Tonini. The engine is fitted with a standard UL power engine-driven mechanical fuel pump, electric starter and internal alternator, and a single battery installation.

A conventional fuel header tank has been fitted to facilitate the addition of a vapour return line which is essential to the injected UL Power 260i engine and an electric fuel boost pump is fitted. A rudder mass balance has also been retro-fitted to the top of the fin, as is standard for the Rotax 912 ULS powered version.

P92-EA Super Echo

The P92-EA Echo Super is a version of the certified P92-JS Echo, supplied in kit form for amateur build, non-certified status.

The wing roots contain twin fuel tanks each of 35 litre capacity. The fuel contents are monitored using float type senders connected to gauges situated on the instrument panel.



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The engine fitted to the P92-EA Echo-Super is the Rotax 912-ULS 100 bhp, four cylinder, four stroke, water-cooled unit. The engine is mounted using a conventional welded steel tube truss type mount. The engine is fitted with a standard Rotax engine-driven mechanical fuel pump, electric starter and internal alternator. A conventional gascolator is fitted to the lower portion of the firewall. An electric fuel boost pump is also fitted. A two-piece engine cowling consists of a mixed aluminium alloy and composite construction. The propeller is a fixed pitch wooden propeller type developed specially for this airframe/engine combination by GT Tonini. In addition, when fitted with the Rotax 912-ULS engine PFA requires fitment of the Tecnam retro-fit rudder mass-balance and steel main undercarriage.

The P92-EM Echo with the Jabiru engine is classed as a microlight with a MTWA of 450 kg. When the aircraft has been modified with either the Rotax 912-ULS the aircraft becomes an SEP (Group A) aeroplane with an increase in MTWA to 535 kg. The P92-EA Echo are SEP (Group A) aeroplanes with a MTWA of 535 kg whereas the Super Echo is an SEP (Group A) with a 550 kg MTWA.

Propellers in use on the LAA administered P92 fleet are manufactured by either Hercules or GT Tonini. 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.

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. A condition stated on a Permit to Fly requires that: "the aircraft shall be maintained in an airworthy condition".

2.1 Fast Build Kit 51% Compliance

The P92 kit was assessed by the LAA as meeting the 51% rule.

2.2 Build Manual

A build manual was supplied by Tecnam with the kit.

2.3 Build Inspections

Build inspection schedule 2 (metal aircraft).

Inspector approval codes A-A, A-M or M (Renegade Spirit only). Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

Tecnam provided a [P92 Jabiru Aircraft Flight Manual](#) with the aircraft kit. Obviously, there will be differences in the AFM for aircraft that have been subsequently modified with different engines etc.

LAA Engineering holds some other P92 variant Aircraft Flight Manuals on file for reference purposes.



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2.5 Mandatory Permit Directives

None applicable specifically to this aircraft type.

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)

To meet LAA requirements, the following modifications were specified and agreed by Tecnam for both the -EA and -EM models:

<i>Reference</i>	<i>Subject</i>	<i>Classification</i>	<i>Applicability</i>
MOD-318-001	Addition of seat stop bolts through seat slides.	A	-EM, -EA & -EA Echo Super
MOD-318-002	Revised centre lap strap attachment to achieve satisfactory lap strap geometry.	A*	-EM, -EA & -EA Echo Super
MOD-318-003	Cabin door latch - cable between latch mechanism and internal handle replaced by a piano wire pushrod to prevent internal handle closing unless latch bolt is fully extended. Pushrod supported at intervals by aluminium alloy 'p' clips. Alignment marks added to inside of cockpit door to show angle of handle when door catch fully home.	A	-EM, -EA & -EA Echo Super
MOD-318-004	Warning placards added adjacent to cowling latches to alert owners to correct fastening procedure, 'Ensure Lever Is Engaged Under Flange Before Securing Camloc'.	A	-EM, -EA & -EA Echo Super
MOD-318-005	Aileron control link pushrod tube at base of control column assembly reinforced by the addition of welded 4130N finger straps over bushes at each end to avoid reliance on weld in tension for integrity of control circuit.	A*	-EM, -EA & -EA Echo Super
MOD-318-006	Finger strainers added at fuel tank outlets (standard parts from P92-J model to be used in future).	A*	-EM, -EA & -EA Echo Super
MOD-318-007	Commercial marine turnbuckles in rudder cables substituted by suitable MS21251 aircraft turnbuckles (standard parts from P92-J model).	A*	-EM, -EA & -EA Echo Super



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MOD-318-008	Holes in firewall for engine mount pads opened out and penny washers inserted, to allow mount pads to be torqued up squarely onto front fuselage frame rather than bolting through compliant firewall material, due to bolt fatigue considerations.	A	-EM, -EA & -EA Echo Super
MOD-318-009	Addition of large diameter safety washers adjacent to control system rod-end bearings (except those trapped within a fork fitting) to prevent rod coming adrift if spherical bearing slips out of socket when worn.	A	-EM, -EA & -EA Echo Super
MOD-318-010	Addition of Lexan shields to control pulleys Addition of Lexan protective shields over aileron cable pulleys in cockpit floor area to prevent jam risk from loose articles alongside seats	A	-EM, -EA & -EA Echo Super
MOD-318-011	Addition of starter engaged warning light (wired in parallel with starter motor) and suitable cockpit placard adjacent to warning light on instrument panel 'starter engaged warning light'.	A	-EM, -EA & -EA Echo Super
MOD-318-012	Seat harnesses changed to improved 3-point aircraft type harness. Harness supplied with kit shared a common strap for lap strap and shoulder harness, contrary to standard aircraft practise.	A*	-EM, -EA & -EA Echo Super
MOD-318-013	Addition of suitable water drain holes to all fabric-covered surfaces as required.	A	-EA Echo Super
MOD-318-014	Flap hinges, addition of washers under nuts	A	-EA Echo Super
MOD-318-015	Anti-vibration mount for electric fuel pump	A	-EA Echo Super

*Asterisked modifications were incorporated in the UK standard kit as supplied to the builder.

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

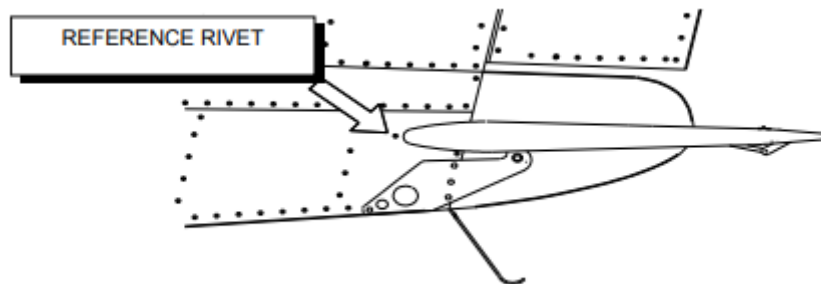
Notes:

- 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.

2.8 Control surface deflections

P92 Echo Super		
Ailerons (starting from tip line up)	Up	20° +/-2°
	Down	15° +/-2°
Stabilator	Leading edge up	2° +/-1°
	Leading edge down	12° +/-1°
Stabilator tab (stab set to 0°, see figure below)	Up	20°
	Down	15°
Rudder	Left	25°
	Right	25°
Flaps (maximum travel)	Up	0° +/-2°
	Down	38° +/-2°

Stabilator neutral setting:



2.9 Operating Limitations and Placards

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

Due to the many variations of category, engines and propellers the following are examples for information purposes only.

Tecnam P92-EM Echo (Jabiru 2200A)

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

The aeroplane is permitted to fly only for non-aerobatic operation. In this context non-aerobatic operation includes:

- i) Any manoeuvre necessary for normal flying
- ii) Intentional stalls from level flight
- iii) Steep turns in which the angle of bank doesn't exceed 60°.



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- Intentional spinning is prohibited.
- Aerobatic manoeuvres are prohibited.
Intentional spinning is prohibited.
- 2.2 Loading Limitations
Maximum Total Weight Authorised: 450 kg (992 lbs)
CG Range: 322 mm to 364 mm (12.7" to 14.3") aft of datum
Datum Point is: The leading edge of the wing
- 2.3 Engine Limitations: Jabiru 2200A
Maximum engine RPM: 3300
Maximum continuous engine RPM: 3150
- 2.4 Airspeed Limitations
Maximum Indicated Airspeed (Vne): 113 kts (130 mph)
Maximum indicated airspeed, flaps extended: 60 kts (69 mph)
Maximum indicated airspeed, rough air (Vno): 95 kts (110 mph)
- 2.5 Other Limitations
The aircraft shall be flown by day and under Visual Flight Rules only.
Smoking in the aircraft is prohibited.
Maximum baggage weight: 20 kg (44 lbs)

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.

Tecnam P92-EM Echo (Modified) (Rotax 912-ULS)

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: 535 kg (1180 lbs)
CG Range: 322 mm to 364 mm (12.7" to 14.3") aft of datum
Datum Point is: The leading edge of the wing
 - 2.3 Engine Limitations: Rotax 912 ULS
Maximum engine RPM: 5800
Maximum continuous engine RPM: 5500
 - 2.4 Airspeed Limitations
Maximum Indicated Airspeed (Vne): 113 kts (130 mph)
Maximum indicated airspeed, flaps extended: 60 kts (69 mph)
Maximum indicated airspeed, rough air (Vno): 95 kts (110 mph)
 - 2.5 Other Limitations
The aircraft shall be flown by day and under Visual Flight Rules only.
Smoking in the aircraft is prohibited.



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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.

P92-EA Echo (Jabiru 2200A)

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: 500 kg (1102 lbs)
CG Range: 322 mm to 364 mm (12.7” to 14.3”) aft of datum
Datum Point is: The leading edge of the wing
 - 2.3 **Engine Limitations: Jabiru 2200A**
Maximum Engine RPM: 3300
Maximum Continuous RPM: 3150
 - 2.4 **Airspeed Limitations**
Maximum Indicated Airspeed (Vne): 113 kts (130 mph)
Maximum indicated airspeed, flaps extended: 60 kts (69 mph)
Maximum indicated airspeed, rough air (Vno): 95 kts (110 mph)
 - 2.5 **Other Limitations**
The aircraft shall be flown by day and under Visual Flight Rules only.
Smoking in the aircraft is prohibited.
Maximum baggage weight: 20 kg (44 lbs)

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.

P92-EA Echo (UL Power 260i)

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**



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Maximum Total Weight Authorised: 535 kg (1180 lbs)
CG Range: 322 mm to 364 mm (12.7" to 14.3") aft of datum
Datum Point is: The leading edge of the wing

- 2.3 Engine Limitations: UL Power 260i
Maximum Engine RPM: 3300
Maximum Oil Temperature: 120°C
Maximum CHT: 180°C
Maximum Continuous CHT: 160°C
- 2.4 Airspeed Limitations
Maximum Indicated Airspeed (Vne): 113 kts (130 mph)
Maximum indicated airspeed, flaps extended: 60 kts (69 mph)
Maximum indicated airspeed, rough air (Vno): 95 kts (110 mph)
- 2.5 Other Limitations
The aircraft shall be flown by day and under Visual Flight Rules only.
Smoking in the aircraft is prohibited.
Maximum baggage weight: 20 kg (44 lbs)

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.

Tecnam P92-EA Echo Super (Rotax 912-ULS)

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: 550 kg (1212 lbs)
CG Range: 323 mm to 365 mm (12.7" to 14.4") aft of datum
Datum Point is: The leading edge of the wing
 - 2.3 Engine Limitations: Rotax 912 ULS
Maximum engine RPM: 5800
Maximum continuous engine RPM: 5500
 - 2.4 Airspeed Limitations
Maximum Indicated Airspeed (Vne): 121 kts (139 mph)
Maximum indicated airspeed, flaps extended: 68 kts (78 mph)
Maximum indicated airspeed, rough air (Vno): 106 kts (122 mph)
 - 2.5 Other Limitations
The aircraft shall be flown by day and under Visual Flight Rules only.

Smoking in the aircraft is prohibited.
Maximum baggage weight: 20 kg (44 lbs)



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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

A ‘maximum permitted empty weight’ is applicable to Tecnam P92 aircraft that are classed as microlights.

Further information on maximum permitted empty weights can be found in the following Technical Leaflets:

1. [TL 2.11: Placards, Labels and Registration Marks](#)
2. [TL 3.16: Guidance on Weight and Balance](#)

Section 3 – Advice to owners, operators and inspectors

3.1 Maintenance Manual

Tecnam provided a [P92 Jabiru Maintenance Manual](#) with the aircraft kit. The airframe maintenance information should be broadly the same for examples that have been subsequently modified.

3.2 Standard Options

There are no standard options.

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

Tecnam provide free access for owners to their [Service Bulletins](#) in the [Customer Support](#) section of their website. There is no requirement to register or log in to access the Service Bulletins.

Note: Tecnam produce P92s for a number of different markets around the world and in various categories. Service Bulletins should be checked to see if they apply to that particular P92 variant. The UK Jabiru-powered variant may not appear to be specifically identified but the airframes are broadly the same so all P92 SBs should be checked.

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.

The following Service Bulletins were originally produced by the then UK Tecnam agent:

<i>Document Ref</i>	<i>Subject</i>
UK SB 001	Notes to assist constructors
UK SB 002	Cabin door latch

UK SB 003	Safety washers added to rod ends
UK SB 004	Addition of seat stop bolts
UK SB 005	Engine mount attachment
UK SB 006	Clearing threads in nuts and bolts
UK SB 007	Addition of Lexan sheilds
UK SB 008	Warning placards at cowl latches
UK SB 009	Addition of starter warning light
UK SB 010	Paints and materials
UK SB 011	Brake fluid type
UK SB 012	Exhaust outlet pipes
UK SB 013	Rudder circuit
UK SB 014	Nose gear pintle and throttle cable
UK SB 015	Fitting the leading edge D box
UK SB 016	Fabric covering the stabilators
UK SB 017	Initial setting of trim tab
UK SB 018	Positioning fuel tanks in wing
UK SB 019	Fabric covering
UK SB 020	Log book entries
UK SB 021	Finishing the aircraft
UK SB 022	Test flying
UK SB 023	Batteries and ignition switches
UK SB 024	Elevator control linkage checks
UK SB 025	C of G in Jabiru powered P92
UK SB 026	Use of Mogas in Jabiru engines
UK SB 027	Leather shims on main gears and spark plugs in Jabiru engines
UK SB 028	Jabiru 2200 engines – Distributor rotor arms

3.4 Special Inspection Points

1. Pay particular attention to the setting of the aileron and flaps and elevator trim travel, in accordance with the build manual and Tecnam-UK information.
2. In the absence of a cable tensiometer, check cable tensions using the spring balance method in accordance with the instructions contained in the weight and balance section of the build manual.
3. Engine tick-over should be set at 800-900 rpm for Jabiru engines, using the set-screw on the butterfly-actuating lever. For Rotax 912ULS engines set idle to 1200 rpm.
4. The tachometer (for Jabiru engines) must be carefully adjusted in accordance with the manufacturer's leaflet including the section dealing with percentage adjustment of the upper and lower range. An optical digital counter (e.g. as available from RS components) should be used to check the readings. For Rotax engines no adjustment is needed but it is well to check readings.

5. The main gear legs should be checked for tightness in their outer clamps. If the upper and lower clamp halves are fully butted, then it may be necessary to add more shimming to ensure effective clamping. Rocking the aircraft fore and aft with the parking brake on will reveal any excessive twist movement that must be eliminated.
6. The fibreglass main undercarriage legs are no longer available from Tecnam. If fibreglass main undercarriage legs require replacement then the steel legs are the only option. Obviously, this will have a weight penalty and allowances made accordingly.
7. Top cowling must be under tension when clamped shut. If it is not, then a seal strip can be added to the upper lip of the lower half to ensure a rattle free tight fit.
8. Lock nuts on rod ends in nosewheel steering linkage, aileron circuit, elevator system, and flap actuating system should be checked for tightness and presence of witness marks. Do not forget the bellcranks appearing at wing inspection access panels.
9. Stabilator attachment bushes and retaining nuts and bolts must be checked for tightness and be witness marked.
10. The oil pressure sensor wire should be connected to the terminal marked 'G' on the sensor near the oil filter. The terminal marked 'WK' is not used.
11. Use the inspection checklist appearing at the end of the build manual in full, including the torque settings referred to.
12. As with most microlight aircraft, empty weight is critical, therefore on microlight versions weight growth through modifications and optional extras must be avoided at all costs. Maximum permitted empty weight for the -EM model is 268 kg.

3.5 Operational Issues

The following *Safety Spot* articles are relevant to Tecnam P92 aircraft:

Light Aviation [October 2011](#)

Echo Fuel Leak

Article discusses a MOD for a new aluminium fuel tank following fuel leaks from the original composite wing tanks.

3.6 Standard Modifications

None

----- END -----

Please report any errors or omissions to LAA Engineering: engineering@laa.uk.com