



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

Issue 2	TADS format update & safety spot addition	Dated 05/10/20	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 and operate the aircraft in an airworthy and safe 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 USA contact

Glaser Aviation 18701 58th Avenue, NE, Arlington, WA 98223.

Tel: +1 360 435 8533

Website: <https://glasairaviation.com/>

### 1.2 Description

The Glasair is an all-composite, two-seat, low-wing monoplane which originated from the USA and was available in kit form for amateur construction. The type has been developed from the Glasair 1 design to several variants currently accepted by LAA engineering. All Glasair variants are of conventional layout featuring a one-piece all-composite wing with integral fuel tanks. Seating two in a side-by-side configuration with dual controls under a large Perspex canopy. Either a fixed or retractable undercarriage are available depending on the variant with the FT being a fixed tricycle gear and the TD being traditional fixed gear (taildragger). The airframe is built almost entirely from pre-moulded composite sandwich components which are subsequently bonded together by the builder. UK example Glasairs are fitted with Lycoming O-320 or IO-360 engines. The Glasair is operated as an SEP aircraft within the UK and is considered a complicated aircraft with its retractable undercarriage and variable pitch propeller. The Glasair is capable of speeds up to 260mph. The differences in variants are as follows:

Glasair II-S      Differs from the standard with a stretched fuselage (6") and larger tail plane giving further CG freedom.

Glasair  
Super II FT      A Tricycle gear version of the standard Glasair airframe.

Glasair  
Super II RG      A retractable tricycle gear version of the standard Glasair airframe

Glasair  
Super II TD      A conventional tailwheel gear version of the standard Glasair airframe



**LAA TYPE ACCEPTANCE DATA SHEET  
TADS 149  
STODDARD HAMILTON GLASAIR, RG, IIS RG,  
SH-TD, II-S FT**

The Glasair aircraft in all its variants is no longer offered by Glasair aviation.

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 of a Permit to Fly requires that: *"the aircraft shall be maintained in an airworthy condition"*.

2.1 Fast Build Kit 51% Compliance

Glasair kits were supplied as slow-build kits.

2.2 Build Manual

Glasair Aviation produced a detailed construction manual with each kit.

2.3 Build Inspections

Inspector approval codes A-A or AC1 or AC2. Inspector signing off final inspection also requires 'first flight' endorsement.

2.4 Flight Manual

Glasair Aviation provided a pilot's handbook for operating the aircraft.

2.5 Mandatory Permit Directives

None specifically applicable 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)

None.

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.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

2.8 Control surface deflections

Ailerons	Up: 10.5° - 12.5° Down: 10.5° - 12.5°
Elevators	Up: 27° - 32° Down: 25° - 30°
Elevator tab	Up: 30° Down: 30°
Rudder	Left: 20° - 22° Right: 20° - 22°
Flap	Down: 23° - 24°

2.9 Operating Limitations and Placards

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

Glasair RG:

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: 817 kg  
CG Range: 82.2 inches to 86.88 inches aft of datum.  
Datum Point is: 76.2 inches forward of the leading edge of the wing at the root
  - 2.3 Engine Limitations  
Maximum Engine RPM: 2700
  - 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 260 mph  
Max Indicated Airspeed Flaps Extended: 140 mph (first stage)  
110 mph (second stage)
  - 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"



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

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

Glasair IIS RG:

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: 909 kg  
CG Range: 83.71 inches to 91.72 inches aft of datum.  
Datum Point is: 60.0 inches forward of the front face of the firewall.
  - 2.4 Engine Limitations  
Maximum Engine RPM: 2700
  - 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 260 mph  
Max Indicated Airspeed Flaps Extended: 140 mph  
Max Indicated Airspeed Undercarriage Extended: 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.

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.

Glasair Super IIS RG

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.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

- 2.2 Loading Limitations  
Maximum Total Weight Authorised: 998 kg  
CG Range: 89.91 inches to 97.65 inches aft of datum.  
Datum Point is: 60.0 inches forward of the front face of the firewall.
- 2.5 Engine Limitations  
Maximum Engine RPM: 2700  
Do not operate above 22" manifold pressure below 2350RPM.  
Operation above 2600RPM is limited to take off, as soon as practical  
after take off the rpm should be reduced to 2600 or less
- 2.4 Airspeed Limitations  
Maximum Indicated Airspeed ( $V_{NE}$ ): 260 mph  
Max Indicated Airspeed Flaps Extended: 140 mph  
Max Indicated Airspeed Undercarriage Extended: 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.

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

Glasair provided a copy of 'Glasair Maintenance Manual' with each kit.

3.2 Standard Options

None.

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.



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

<i>Ref</i>	<i>Description</i>
<a href="#">SB1</a>	Nose gear scissors
<a href="#">SB2</a>	Side brace and trunnion
<a href="#">SB3</a>	Emergency gear extension spring tabs
<a href="#">SB4</a>	Leaking gear oleo struts
<a href="#">SB5</a>	Control stick sleeve, elevator horn
<a href="#">SB6</a>	Landing gear oleo strut
<a href="#">SB7</a>	FT inboard rib attach brackets
<a href="#">SB8</a>	Defective fuel fitting
<a href="#">SB9</a>	Nose gear shimmy
<a href="#">SB10</a>	Battery/alternator master switch
<a href="#">SB11</a>	Aileron actuating pushrod
<a href="#">SB12</a>	Rod end bearings, F3416M
<a href="#">SB13</a>	Extra diodes on PC board
<a href="#">SB14</a>	Fixed-pitch spinner backplate
<a href="#">SB15</a>	Hydraulic pump fittings
<a href="#">SB16</a>	Gas cap seals (new style)
<a href="#">SB17</a>	Derakane vinyl ester resin
<a href="#">SB18</a>	Fuel contamination
<a href="#">SB19</a>	Engines, Propellers & Propeller
<a href="#">SB20</a>	Electrical system, 28v option
<a href="#">SB21</a>	Fuselage panel modifications
<a href="#">SB22</a>	Fitting of engine mount
<a href="#">SB23</a>	Gap between nose wheel well box
<a href="#">SB24</a>	Horizontal stabilizer stiffening
<a href="#">SB25</a>	Spar cap upper contour
<a href="#">SB26</a>	Nose gear drag brace reinforcement
<a href="#">SB27</a>	Instrument panel template 3G1501
<a href="#">SB28</a>	Fitting Glasair 1 parts to Glasair 11
<a href="#">SB29</a>	Landing gear box fit-up
<a href="#">SB30</a>	Landing gear box forward partial
<a href="#">SB31</a>	Firewall rib location
<a href="#">SB32</a>	Engine mount and firewall template
<a href="#">SB33</a>	Engine mount and firewall template
<a href="#">SB34</a>	Flap ratchet plate
<a href="#">SB35</a>	Control stick sleeve
<a href="#">SB36</a>	Fuel leakage around main spar attach bolts
<a href="#">SB37</a>	Wheel well scribe lines
<a href="#">SB38</a>	Flap control assembly
<a href="#">SB39</a>	Taildragger main landing gear upper a bolts
<a href="#">SB40</a>	Hydraulic pressure gauge
<a href="#">SB41</a>	Oildyne hydraulic pump pressure
<a href="#">SB42</a>	FT nose wheel pivot range
<a href="#">SB43</a>	Cable Thimbles
<a href="#">SB44</a>	FT nose gear modification
<a href="#">SB45</a>	Rudder pedal centre support bracket



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

<a href="#">SB46</a>	Nose wheel axle roll pin holes
<a href="#">SB47</a>	Hydraulic actuator piston retaining
<a href="#">SB48</a>	Canopy frame modification
<a href="#">SB49</a>	Firewall flange template
<a href="#">SB50</a>	Canopy frame trim lines
<a href="#">SB51</a>	Canopy frame trim lines
<a href="#">SB52</a>	Main gear hydraulic actuator rod
<a href="#">SB53</a>	Interference between rudder and elevator arms
<a href="#">SB54</a>	Elevator counterweight arm modification
<a href="#">SB55</a>	Play between fixed-pitch prop extension
<a href="#">SB56</a>	Nose gear down lock spring
<a href="#">SB57</a>	Side brace bell crank and upper
<a href="#">SB58</a>	Rudder pedal assemblies
<a href="#">SB59</a>	Trim Control wheel shaft modification
<a href="#">SB60</a>	Hydraulic system tubing
<a href="#">SB61</a>	Fuel leaks through spar caps
<a href="#">SB62</a>	Wing leading edge interference with nose gear box
<a href="#">SB63</a>	Gear retraction PC board
<a href="#">SB64</a>	Landing gear forward side brace brackets
<a href="#">SB65</a>	Facet electric fuel boost pump
<a href="#">SB66</a>	Lord engine suspension assemblies
<a href="#">SB67</a>	Interference between trim cable drum
<a href="#">SB68</a>	Cabin heat box gasket
<a href="#">SB69</a>	Elevator counterweight reinforcement
<a href="#">SB70</a>	Induction system fatigue improvements
<a href="#">SB71</a>	Engine mount inspection
<a href="#">SB72</a>	Hydraulic snubber
<a href="#">SB73</a>	Engine mount nuts
<a href="#">SB74</a>	Oil cooler location
<a href="#">SB75</a>	RG nose gear fork attach bolts
<a href="#">SB76</a>	Landing gear toe-in alignment
<a href="#">SB77</a>	main gear hydraulic actuator rod end reinforcement
<a href="#">SB78</a>	Nose gear installation problems
<a href="#">SB79</a>	Nose gear emergency extension gas spring
<a href="#">SB80</a>	nose gear shimmy damper compression spacer
<a href="#">SB81</a>	Spinner backplates for fixed-pitch
<a href="#">SB82</a>	90° induction elbow and support arm



**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

<a href="#">SB83</a>	Cosmetic paint cracks at base of windshield
<a href="#">SB84</a>	Main tank fuel gauge components
<a href="#">SB85</a>	Nose gear wheel well fire barrier
<a href="#">SB86</a>	Lycoming AD #90-04-06
<a href="#">SB87</a>	Seat belt attach angle
<a href="#">SB88</a>	Main gear side brace assemblies
<a href="#">SB89</a>	Nose gear strut reinforcement
<a href="#">SB90</a>	Rudder actuator linkage
<a href="#">SB91</a>	Alternate air door spring
<a href="#">SB92</a>	Nose gear emergency extension
<a href="#">SB93</a>	Revised gross weight and main
<a href="#">SB94</a>	Elevator hinge bracket
<a href="#">SB95</a>	Landing gear oleo struts
<a href="#">SB96</a>	Elevator trim box main gear
<a href="#">SB97</a>	Pedal placement on new-style
<a href="#">SB98</a>	Slotted flap hinge points
<a href="#">SB99</a>	Landing gear electrical system IIIs shi prior to wiring
<a href="#">SB100</a>	Nose gear drag brace
<a href="#">SB101</a>	Fuel filter assembly
<a href="#">SB102</a>	Forward fuselage belly section
<a href="#">SB103</a>	Nose gear over-centre springs
<a href="#">SB104</a>	Aluminium brake line tubing
<a href="#">SB105</a>	Landing gear oleo strut
<a href="#">SB106</a>	Elevator hinge bracket bolts
<a href="#">SB107</a>	Barry Controls engine vibration
<a href="#">SB108</a>	III cowl flap rod end bearings
<a href="#">SB109</a>	Nose gear hydraulic actuator rod
<a href="#">SB110</a>	Main gear strut attach bracket
<a href="#">SB111</a>	Flap plunger bolt
<a href="#">SB112</a>	CG location & longitudinal stability
<a href="#">SB113</a>	CG location & longitudinal stability
<a href="#">SB114</a>	CG location & longitudinal stability
<a href="#">SB115</a>	Fuel selector valve
<a href="#">SB116</a>	Large rudder requirement with wingtip extension
<a href="#">SB117</a>	Alternate air door
<a href="#">SB118</a>	Main landing gear position
<a href="#">SB119</a>	Backup drag brace microswitch
<a href="#">SB120</a>	Shoulder harness attachment
<a href="#">SB121</a>	Intermittent-duty solenoids
<a href="#">SB122</a>	NAV antenna
<a href="#">SB123</a>	Outboard rib attach landing gear brackets
<a href="#">SB124</a>	Main gear side brace bell crank
<a href="#">SB125</a>	Cast landing gear scissors
<a href="#">SB126</a>	Main landing gear upgrade
<a href="#">SB127</a>	Hydraulic pump upgrade





**LAA TYPE ACCEPTANCE DATA SHEET**  
**TADS 149**  
**STODDARD HAMILTON GLASAIR, RG, IIS RG,**  
**SH-TD, II-S FT**

<a href="#">SB128</a>	Hydraulic pump upgrade
<a href="#">SB129</a>	Drag brace weld clearance
<a href="#">SB130</a>	Fuel filter bowl securing bolt
<a href="#">SB131</a>	Fuel venting overboard
<a href="#">SB132</a>	Rudder pedal control weldments
<a href="#">SB133</a>	Revised gross weight & main
<a href="#">SB134</a>	Directional control on takeoff
<a href="#">SB135</a>	Outboard rib attach landing gear
<a href="#">SB136</a>	Hydraulic actuator seal
<a href="#">SB137</a>	Main landing gear side brace stud replacement
<a href="#">SB138</a>	Electric trim turnbuckle
<a href="#">SB139</a>	Pc boards with "Option 1" diodes
<a href="#">SB140</a>	Elevator torque tube assembly
<a href="#">SB141</a>	Landing gear scissors bolt bushing
<a href="#">SB142</a>	AN470A4-& soft rivets
<a href="#">SB143</a>	Nose gear drag link studs
<a href="#">SB144</a>	Tubing flaring tool P/N 810-0190-001
<a href="#">SB145</a>	III cowl flap rod end bearing
<a href="#">SB146</a>	Nose gear trunnion attach plate fasteners
<a href="#">SB147</a>	Main gear half fork attach bolts
<a href="#">SB148</a>	Mislabelled conap and dma prompter
<a href="#">SB149</a>	Main landing gear trunnion tubes
<a href="#">SB150</a>	Fram fuel filter assembly
<a href="#">SB151</a>	An470a4-9 soft rivets
<a href="#">SB152</a>	Nicopress sleeves p/n's 450-0002-003
<a href="#">SB153</a>	Aileron counterweight assemblies
<a href="#">SB154</a>	Gear warning buzzer p/n 210-0677-001
<a href="#">SB155</a>	Airborne 211cc and 215cc vacuum
<a href="#">SB156</a>	Resin coating of Glasair III fuel bays
<a href="#">SL01</a>	Vinyl Ester resin change
<a href="#">SL02</a>	All fuel injected engines as installed in all models
<a href="#">SL03</a>	Landing gear scissors which use pressed-in bushings
<a href="#">SL04</a>	Exhaust system cracking
<a href="#">SL05</a>	Glasair gross weight
<a href="#">SL06</a>	Cabin fresh air vent installation
<a href="#">SL07</a>	Factory moulded landing gear boxes

### 3.4 Special Inspection Points

Bolts provided are not corrosion proofed using conventional plating, and must be corrosion proofed on assembly using suitable grease. UK Build manual supplement refers.



**LAA TYPE ACCEPTANCE DATA SHEET  
TADS 149  
STODDARD HAMILTON GLASAIR, RG, IIS RG,  
SH-TD, II-S FT**

### 3.5 Operational Issues

#### 1. *Safety Spot* references

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

*Light Aviation* [Aug 2012](#) *Glasair IIS RG: Fuel Pipe Failure*

*Fuel transfer pipe connecting tip tanks to main fuel cell had failed under age and exposure to aircraft fuels. Article discusses inspection regimes and TMS.*

*Light Aviation* [Jun 2012](#) *Glasair Super IIS RG: Throttle Linkage Failure*

*Stripped bolt on fuel injector arm caused engine difficulties, a subsequent emergency landing was made and the aircraft and pilot unharmed.*

*Light Aviation* [Dec 2009](#) *Glasair 1RG – Undercarriage failure*

*Following a failed undercarriage system. A Glasair made an emergency landing suffering damage to the aircraft. Article discusses retract system and the reasoning for the failure.*

### 3.6 Standard Modifications

There are no standard options approved for the type.

----- END -----

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