



# FLIGHT TEST CHECKS

## AUTO-PILOT WING LEVELLER INSTALLATIONS

LAA/FT-APWL  
Issue 3

A/C Type:

Reg:

Date:

Wing Leveller Make/Model:

Note: **Valid PFRC issued by LAA Engineering required prior to flight.**

1. Check the operation of the break-out system and both of the wing-leveller disengage switches required.

SAT	UNSAT	Comments:
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2. Check correct system loop gain is set by ensuring that the system operates at a suitable rate but does not jitter.

SAT	UNSAT	Comments:
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3. Check that the system, when engaged, does not induce airframe vibrations or flutter at airspeeds up to 1.1 x maximum level cruise speed, but not exceeding  $V_{NE}$ .

SAT	UNSAT	Comments:
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4. Check that the system is able to maintain a wings-level or uniform rate turn condition in normal use through light to moderate turbulence and, where coupled to a navigational system, to intercept and maintain a track, VOR, heading etc. State maximum interception angle achieved.

SAT	UNSAT	Comments: Max interception angle achieved:
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5. Check that with the servo at maximum deflection obtainable, by use of the auto-pilot roll control, either in normal use or in the event of a malfunction (simulated servo runaway) the roll response is not excessive and does not cause extreme deviations in the flight path assuming that corrective action begins within a reasonable time. From level flight, if corrective action is taken four seconds after initiation of the simulated runaway, roll angle should not at any time exceed 60 degrees. To be checked at a representative range of different airspeeds / power settings and in left and right hand roll direction.

SAT	UNSAT	
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6. Check that radio transmissions from installed avionics do not affect servo operation.

SAT	UNSAT	
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7. The aircraft is to be flown at normal approach speed, power off with full flaps, auto-pilot off. Medium rudder sideslips are to be carried out to port and starboard. The aileron control is then to be released and the ability for the down wing to rise is to be checked.

	Port Sideslip (port wing low)	Stbd Sideslip (stbd wing low)	COMMENTS
Ailerons released	SAT / UNSAT	SAT / UNSAT	

8. I certify that I have flown the above aircraft and that the above checks have been carried out to my satisfaction.

Name:	Signed:	Date:	Licence No.:
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Once completed, send this form to LAA Engineering.

**Important note:** Following conclusion of satisfactory flight test, the modified aircraft must not be flown until issue of modification final approval.