



INSPECTION CHECKS

AUTO-PILOT WING LEVELLER INSTALLATIONS (JAR 23.1329 + 23.779 and AC 23-17A, 23.1329 refer)

LAA/IC-APWL
Issue 1

A/C Type:

Reg:

LAA Mod No.

Date:

Wing Leveller Make/Model:

1. Check the break-out force required at the stick grip for the pilot to overcome the roll servo. It must be possible to quickly and positively overcome the servo. Break-out force must be adjusted to the minimum value possible to prevent servo clutch-slip when the auto-pilot maximum roll rate command is activated.
2. Check that each manual control and switch for the wing leveller is easily accessible to the pilot in flight. Check that each control operates in the natural sense and that each control is marked as to function and sense.
3. A switch must be provided to quickly disengage the autopilot in flight e.g. in the event of a malfunction. In the case of a dual control aeroplane, a disable switch must be easily accessible to both pilots in flight.
4. If the break-out force required to overpower the servo is greater than that which can comfortably be applied one-handed, the disengage switch(es) for the wing leveller must be mounted on the stick grip(s).
5. An alternative control to that specified in 3. and 4. above must be provided, e.g. a clearly marked and easily accessible circuit breaker.
6. Check that the maximum servo travel either in normal use or following a malfunction (servo runaway) cannot cause undue loads or travel in the control system or the control stops or cause over-centre geometric lock which could jam the system.
7. There must be a clear indication (e.g. a warning light) showing when the auto-pilot is activated. Selector switch position is not by itself adequate. In the case of a dual control aeroplane, the indication must be clearly visible to both pilot(s).
8. Check that each part of the linkage connecting the servo permanently to the flight control system complies with normal requirements for flying control systems with regard to integrity, locking of bolts, strength, freedom from possibility of jamming etc.
9. Check the ailerons move in the correct sense and with the correct range of movement stop to stop.
10. Check the possibility of the servo being coupled up the wrong way round during maintenance is remote (e.g. it should not be possible to install the servo arm at 180 degrees to its normal position and electrical plugs and sockets should be suitably polarised to ensure correct orientation).
11. Placard to be fitted clearly in view of the pilot, stating **'ENGAGEMENT OF WING LEVELLER BELOW 1000 FT AGL PROHIBITED'**.

I certify that the above checks have been carried out to my satisfaction.

Name:	Signed:	Insp. No.:	Date:
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