GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTRE, OPP SAFDURJUNG AIRPORT, NEW DELHI

CIVIL AVIATION REQUIREMENTS
SECTION 2 - AIRWORTHINESS
SERIES 'F' PART XI
20TH MARCH, 1992 **EFFECTIVE: FORTHWITH**

Subject : Control System - Duplicate Inspection Of.

1. APPLICABILITY :

This Part of Civil Airworthiness Requirements specifies the procedure for the duplicate inspection of flying controls, engine controls and associated control systems, the failure of which could jeopardize safety of the aircraft.

2. DEFINITIONS :

2.1 Approved means approved by the Director General of Civil Aviation.

2.2 Authorised means authorised by the Director General of Civil Aviation.

2.3 Flying controls.

The flying controls include the primary flight controls, tabs, tab flaps and air-brakes etc., and the mechanism used by the pilot to operate them. In the case of helicopters, they include the mechanism used by the pilot to operate the collective pitch, cyclic pitch, yawing and throttle controls.

2.4 Engine Controls :

The engine controls include the primary engine controls, system controls and ancillary controls (throttle controls, fuel cock controls, propeller controls, etc.) and the mechanisms used by the pilot and/or the flight engineer to operate them.

2.5 Associated Control Systems.

The associated controls systems are such which are inter-linked with the main flying control/engine control systems and can adversely affect the correct operation of the main system, if improperly rigged or connected.

2.6 Duplicate Inspection.

Duplication inspection is an inspection which is first made and certified by one approved/authorised/ licensed person and is then repeated, before the aircraft is flown, by

another approved/authorised/ licensed person and again certified by him.

3. PROCEDURE :

3.1 Duplicate Inspection of flight controls/main controls and associated control systems after rigging or alternation or adjustment must be done as indicated hereunder or as per the procedure outlined in the operator's approved Maintenance System Manual and suitable entry made in the appropriate log book.

3.2 Duplicate Inspection of all control systems shall be made;

(1) before the first flight of all aircraft after initial assembly.
(2) before the first flight after the overhaul, replacement, repair, adjustment or modification of the control systems.

3.3 For the purpose of complying with the procedure of carrying out duplicate inspection on the control systems, the first inspection shall be carried out by an appropriately licensed engineer (AMEs licensed in Cat. 'A'/ Cat. 'B' on the type of aircraft for flying controls and AMEs licensed in Cat. 'C' on the type of engine for engine controls) or a person approved for the purpose in an approved organization. The repeat inspection (2nd inspection) shall be carried out by persons and under the circumstances mentioned below:-

3.3.1 When the aircraft is at the base :

1. Aircraft Maintenance engineers appropriately licensed.
2. Persons approved for the purpose in an approved organisation.
3. Persons specially authorised by the Director General of Civil Aviation.

3.3.2 When the aircraft is away from the base :

The second check shall be carried out by any of the persons mentioned in para 3.3.1 above or by a Flight engineer whose licence is endorsed for the type of aircraft or by a pilot who holds atleast a CPL endorsed for the type of aircraft. On arrival of the aircraft at its base station, inspection and certification shall be carried out as per para 3.3.1 above, in case the second check is carried out by a Flight Engineer or a pilot not authorised as per item 3 of the preceding paragraph.

Note :- For the purpose of para 3.3.1 item 3, persons having atleast 3 years general maintenance experience and 3 months maintenance experience on the type of aircraft involved, or having valid commercial pilots licence

endorsed for the type of aircraft may be authorised by the Regional Airworthiness Office to certify the second check provided such persons pass an oral test conducted by the Regional Airworthiness Office on the control system involved, i.e. of its lay out, method of attachment, adjustment, security and correct operation, before the issue of the authorization.

3.4 The first and the second checks shall be the final operations to establish the integrity and correct functioning of the control system when all work has been completed.

3.5 In some aircraft and systems it may not be possible after complete assembly to inspect all the parts because sections may have been progressively sealed off. In all such cases the condition, security and correct functioning of the covered up portion of the system shall be established by the persons mentioned in para 3.3 above, before a section is sealed off.

3.6 If after the second check the control systems are disturbed in any way and any time before the first flight, that part of the system which has been disturbed shall be checked in duplicate by persons mentioned in para 3.3 above before the aircraft flies.

3.7 The duplication check or the checks prescribed in the preceding paragraphs shall include verification that full, free and correct movement of the controls is obtained throughout the system relative to the movement of the controls from within the aircraft and that the control systems are correctly secured.

Sd/-
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for Director General of Civil Aviation