February, 19

From: CENTRAL DEFECT AUTHORITY
Ministry of Technology, St. Giles Court, St. Giles High Street, W.C.2.
Tel. No. 01-636-3644, Ext.474

Class D

(A) Servicing Instruction/Hunter/100
Main Undercarriage Wheel Doors: Possibility of Jamming

(B) Hunter Mk.4, 6, 7, 7a, 8, 9, 10, 11, & 12 Aircraft.

(C) Reluctance of the main undercarriage to lower, on the first selection, (particularly after low level, high speed flight) has been experienced on a number of aircraft. The application of negative 'g' has, in most cases, enabled the undercarriage to be lowered satisfactorily. Provided the undercarriage hydraulic components are serviceable (covered under separate S.I. action), it is considered that the cause is attributable to either excessive backlash in the wheel door operating linkage or unsatisfactory adjustment or distortion of the wheel doors, causing a jamming effect on the wheel fairing door, particularly under the application of positive 'g'.

(D)1 Within 3 Months of receipt of this Instruction and thereafter at each subsequent Minor Servicing (and whenever an undercarriage leg or door has been disturbed) proceed as follows:-

Backlash in Door Operating Mechanism

(a) Jack the aircraft and connect external electrical supply.

(b) Refer to AP.4347 relevant to Mark, Vol.1, Sect.3, Chap.5, Para.33, sub.para.(i).

(c) Connect the hydraulic ground rig and, with main and nose undercarriage groundlocks fitted, select undercarriage "UP". Operate the sequence valve in the undercarriage bay to allow the wheel door to close.

(d) Refer to Vol.1, Sect.3, Chap.5, Fig.9 and using a "push/pull" spring balance attached to the rear lock lever, apply a tensile load of 20-25lb. and note the position of the lock lever.

NOTE: To assess this position accurately, a small plate should be manufactured and attached to the lock bracket in a manner similar to that for the checking gauge (See the above quoted Fig.9, Detail A). The position of the lever can then be marked on the plate.

(e) Compress the spring balance with a load of 20-25 lb. on the same lock lever and check the distance the lever has moved from the original position marked in Para. (D)1 (d) Note above, (See Fig.7 for location of where backlash is to be measured).

NOTE: Where a "push/pull" type spring balance is not available, the latter check is to be carried out with application of a firm finger load on to the lever. The tension load (Para. (D)1 (d)), however, must be applied by spring balance.

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(f) Where the backlash exceeds 0.15 inches the cross shaft is to be removed by dismantling the universal joints (rear joint first), leaving the outer-most fork ends of the universal joint on the stub-shafts and the operating levers in "situ" (see sketch attached illustrating the backlash in the door operating linkage). Also check for slackness the nuts on the existing taper pins attaching the operating levers and where found to be slack tighten the nut and repair the taper pin. Fit a new cross shaft complete with new forbends and new universal joint components. This reduces the backlash in the linkage to within acceptable limits.

NOTE: The following components are required.

Cross-shaft F.188254 (26FX/38C)	1 off	
Fork End. F.188178 - 2off	Removed from sub assemblies	
Ball F.193360 - 2 off	A.213788 Port (26FX/7977)	1 off
Cross Pin F.214056 - 2 off	A.213799 Port (26FX/7979)	1 off
Bush F.213790 - 4 off	A.213789 Stbd (26FX/7978)	1 off
Bolt A25-8-B - 2 off	A.213800 Stbd (26FX/7980)	1 off
Nut A54B - 2 off		

The above components are from the assemblies of the universal joints. The new Shafts A.213791-2 and A.213855 are to be discarded but not scrapped.

Screwed Taper Pin F.212427 - 4 off (26FX/7983)
Washer SP.15-C - 4 off
Nut A.27-C.T - 4 off

The above components assemble the fork ends to the new cross shaft.

Drill Fork Ends Morse 20 from Cross-shaft and clean out with a taper reamer as necessary to ensure that the threaded and undercut portion of screwed taper pin protrudes. The threaded portion of the taper pin is to be peened on assembly to ensure that the nuts cannot slacken off.

Wheel Door Adjustment

(g) Refer to sketch attached, illustrating wheel door adjustments.

(h) Ensure that the wheel door jack is adjusted correctly, as specified in Vol.1, Sect.3, Chap.5, Para 33, sub.paras. 3(a) or 3(b) and ensure that the wheel door and leg wheel fairing are flush (shim door spigots as necessary to achieve this state).

(NOTE: After wheel door jack has been adjusted it is essential to readjust the leg sequence valve in accordance with AP4347F, Vol.1, Section 3, Chapter 5, Para 32 to AL209).

(j) Using Plasticine placed along the upper face of the packings on the wheel door lands, determine that with both wheel door and leg retracted, the packings on the wheel door lands contact (or nearly contact) the lands on the leg wheel fairing in at least three reasonably spaced positions along the edge of the wheel door. A maximum gap of 0.030 inch is permissible at these points (see attached sketch).

(k) Where the gap exceeds 0.03 inches, the packings on the wheel door lands are to be shimmed using a locally manufactured shim of L.72 of a suitable gauge or replaced by new items. Where the gap is caused by distortion of the wheel door, the door is to be replaced by a new item.

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(l) Determine, by use of Plasticine, that a maximum gap of 0.10 inches exists between the moving surfaces of the wheel door and the wheel fairing as shown in the attached sketch. Rectify as necessary.

(m) Effect a full retraction test, disconnect the hydraulic rig, and remove the jacks.

Estimated Man Hours: 6 (Examination - 3)

(E) Record on appropriate aircraft forms and enter into the Supplementary Servicing Record Sheet of the Servicing Schedule.

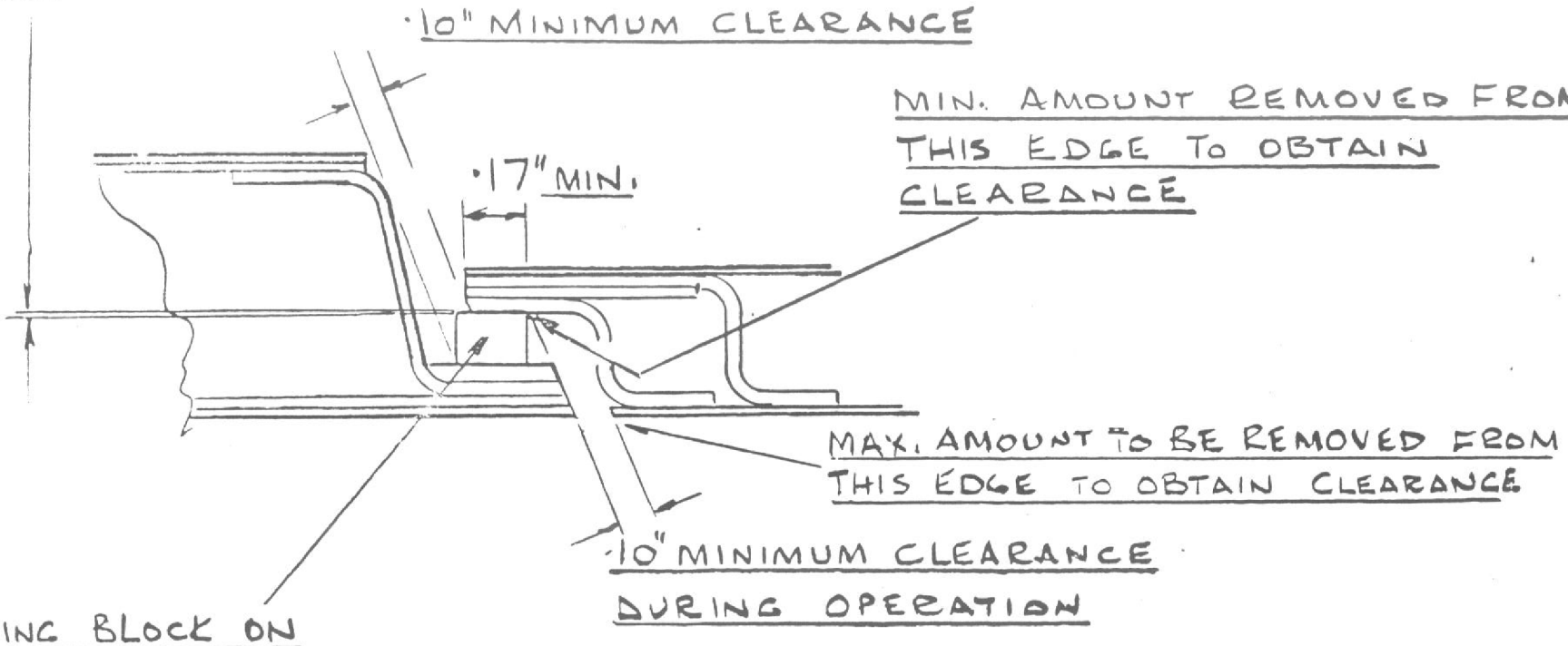
(F) Report by F.1022 action, where cross-shaft or door packings, have been replaced.

(G) Nil.

(H) This Instruction does not affect the operation or handling of the aircraft or equipment.

T.S. LAW
Central Defect Authority

GAP 'X'



SECTION THROUGH WHEEL DOOR & WHEEL FAIRING DOOR.

S.I / HUNTER / 100

WHEEL DOOR ADJUSTMENTS.