VERTOL

58–20–4 Vertol Applies to All Models 42 Series and 44 Series Helicopters.

Compliance required as soon as possible but not later than December 1, 1958.

Fatigue failures of the 22D1073–4 jaw clutch driven and 22D1137–4 jaw clutch driver coupling have been found on both military and commercial Models 42 and 44 Series helicopters. Failure of the teeth of these couplings can preclude successful reengagement of the clutch, thereby disconnecting the rotor drive system from the engine. To prevent failures of this nature, both the aforementioned driver and driven couplings must be replaced by the new 42D1142–1 and 42D1143–1 driver and driven couplings respectively.

The replacement couplings are of a new twelve-tooth design and as such, require the replacement of the following additional parts and rework to account for differences in jaw teeth height and travel:

	Parts to be replaced	*New replacement part*
Spring	22D1170–1	63D2363–1
Cam	3D3143	04D1043–1

Ream two existing holes 0.3750/0.3755-inch diameter thru 42D1046–1 yoke and 42D1048–1 follower. Install 42D1008–2 pin and AN 381–3–10 cotter pin.

Drill and ream 0.3750/0.3755-inch diameter, two additional places, on 1.5 centerline thru 42D1046–1 yoke and 42D1048–1 follower. Install 42D1008–2 pins when yoke diameter is 1.00 inch. Install AN 381–3–10 cotter pins.

All couplings removed should be destroyed or permanently marked in a manner that will assure retirement from service.

(Vertol's S.D.T.M.–1866 covers this same subject.)

This supersedes AD 58–10–4.

59–9–4 Vertol Applies to All Models 44A, B, and C Helicopters.

Compliance required as indicated, but no later than May 15, 1959.

(1) A failure of the low velocity fan disc assembly, P/N 42P6422, has recently been experienced in a Vertol 44 helicopter. The failure originated as a crack at the blade retaining bolt hole in the disc flange forward face, progressing radially into the flange and disc radius and continuing circumferentially in the radius area for 14 to 16 inches. This portion of the fan disc, containing six fan blades, then separated from the fan and was thrown through the left-hand side of the fuselage.

(2) To preclude recurrence of said failures, fan disc assemblies, P/N 42P6422, must be retired at 400 hours' time.

(3) It is permissible to operate the fan to 500 hours, providing the following requirements are complied with at, or before, 400 hours' time:

a. Remove spinner, P/N 42P6420.

b. Visually inspect the disc flange in the blade retaining bolt hole area for evidence of cracks.

c. Reassemble, adding AN 960–416 washers under the 32 nuts in place of removed spinner. (The spinner must not be reinstalled, to facilitate future inspections.)

d. Inspect the above-mentioned areas for evidence of cracks every four (4) flight-hours.

e. Any evidence of cracks will be cause for immediate retirement of the fan disc assembly. Fans removed from service because of cracks will be destroyed or mutilated so as to preclude the possibility of their being returned to service.

(Vertol Service Department Technical Memorandum No. 1901 covers this same subject.)

59–19–2 Vertol Applies to All Models 44A, B, and C Helicopters.

Compliance required prior to next flight.

Failures of the engine cooling fan discs, blades, and adapter rings have been experienced in Vertol 44 helicopters. The disc failures originated as a crack at the fan blade mounting hole on the forward face of the disc rim and then progressed to the point where a circumferential portion of the disc separated and penetrated the fuselage and helicopter buoyant float. The blade failures originated in the root radius on the convex camber and progressed through the blade section until

the airfoil separated from the base. The adapter rings cracked through the holes to either the outer, inner, or both diameters.

(a) To preclude recurrence of failures, the fan assembly, P/N 42P6410, must be retired and replaced with hub and fan assembly, P/N 42P6459–4.

The new fan assembly includes a "Z" ring stiffener (P/N 04P9392–1) for the fan disc, thickened forged blades (P/N 42P6421–3) in place of the existing cast blades, and a steel adapter (P/N 04P6458–1) in place of the existing aluminum adapter, resulting in an infinite fatigue life for the assembly.

(b) Fan disc assemblies, P/N 42P6422, which have been retired may be incorporated in the replacement 42P6410–8 fan assembly, provided no cracks are revealed by a Zyglo or dye-check inspection. Fan disc assemblies having cracks must be destroyed or multilated so as to preclude the possibility of their being returned to service. All cast blades P/N 42P6421–2 and aluminum adapter rings P/N 42P6458–1, must be destroyed or mutilated to preclude their further use.

(Vertol SDTM–1931 covers this same subject.)

59–20–1 Vertol Applies to All Model 44 Series Helicopters.

Compliance required as indicated.

Due to a recent failure of a strap, unless already accomplished, all straps P/N 42R-1011–1 of spar weight assembly P/N 42R-1009–1 in all metal forward rotor blades are to be inspected within the next twenty hours of flight in accordance with Vertol Engineering Order No. 7A (Drawing No. 42R1011). Straps found satisfactory under these inspections are acceptable for 600 hours' retirement life. Straps found with crack indications are to be replaced immediately.

When replacement straps P/N 107R1211 are incorporated, the provisions of this directive no longer apply.

This supersedes AD 59–11–2.

60–10–10 Vertol Amdt. 140 Part 507 Federal Register May 4, 1960. Applies to All 44 Series Helicopters.

Compliance required as indicated.

All forward rotor blades P/N 42R1002–9, –13, –15, –19, -90, –130, –131, –132, –150, and –152 must be retired at 800 hours of service time. All forward rotor blades P/N 42R1002–137 and –139 and all aft rotor blades P/N 42R1002–2, –4, –20, and –40 must be retired at 1,350 hours of service time.

When the above blades are modified to 42R1002–42, –133, or –135 the provisions of this airworthiness directive no longer apply.

This supersedes AD 59–25–2.

60–23–5 Vertol Amdt. 218 Part 507 Federal Register November 8, 1960. Applies to All 42 and 44 Series Helicopters.

Compliance required as indicated.

As a result of a recent fatigue failure of the lower directional bellcrank assembly, P/N 22C1611–13, all Vertol parts P/N 22C1611–13 must be retired upon the accumulation of 2,500 hours of time in service.

This directive effective November 8, 1960.

62–17–7 Vertol Amdt. 472 Part 507 Federal Register August 3, 1962. Applies to All Model 107–II Helicopters, Serial Numbers 2 and Up.

Compliance required as indicated.

As a result of fatigue cracks which have occurred in service on the aft rotor vertical drive shaft and a fatigue failure of the mixing gearbox collector gear during bench testing, accomplish the following:

(a) Replace, prior to further flight, all forward rotor transmission shafts and carrier assemblies P/N's 107D1259–1, –3 or –5 and the aft rotor drive shafts extensions P/N's 107D3147–1 or –3 which have accumulated 150 or more hours' time in service as of the effective date of this AD. Thereafter, all shafts shall be retired from service prior to the accumulation of 150 hours' time in service. (These components are subunits of the 107D1210 and 107D3011 shaft assemblies respectively.) (Effective December 19, 1962.)

(b) At not more than 150 hours total time in service or 8 hours of gearbox cumulative single engine time, whichever occurs first, retire from service collector gear P/N 107D2066-4 (shot peened). If replacement gear is same part number, same retirement time applies. If improved design gear P/N 107D2066-10 is installed, the above retirement time does not

apply. If P/N 107D2066-10 gear is installed change mixing gearbox to P/N 107D2003-10. Recording of accumulated single engine time is to be continued.

(Vertol Service Bulletins Nos. 107-3 Revision A and 107-2 cover these subjects.) (Effective December 19, 1962.)

This directive effective upon publication in the Federal Register for all persons except those to whom it was made effective immediately by telegram dated July 20, 1962.

62-20-3 Vertol Amdt. 483 Part 507 Federal Register September 13, 1962. Applies to All Model 107-II Helicopters.

Compliance required as indicated.

As a result of a fatigue failure in service of the rotor pitch housing accomplish the following:

(a) Unless already accomplished within the last 30 hours' time in service, prior to further flight inspect all blade socket P/N's 42R1043-7 and -8 in the eight lug areas and rotor pitch housing P/N's 107R2553-1, -2, -3, -4, -5 and -6, in the four lug areas which have accumulated 260 or more hours' time in service using magnetic particle inspection method or FAA approved equivalent. To accomplish the inspection, remove rotor blades and rotor hub pitch bearing assemblies. This inspection shall be repeated at intervals not to exceed 30 hours' time in service since the last inspection.

(b) Parts which have accumulated less than 260 hours' time in service shall be inspected in accordance with (a) upon the accumulation of 260 hours' time in service.

(c) A daily visual inspection for cracks in the lug areas shall be conducted. This may be accomplished without disassembly from the helicopter.

(d) If any cracks are found, the parts must be replaced prior to further flight.

(e) Parts which have accumulated 350 or more hours' time in service must be retired from service.

This directive effective upon publication in the Federal Register for all persons except those to whom it was made effective immediately by telegram dated August 24, 1962.

VICKERS-ARMSTRONGS

55–22–4 Vickers-Armstrongs Applies to All Viscount Model 745D Aircraft.

Compliance required as indicated.

Cracks have been found in the tailplane center section main spar extending along the lines of rivets attaching the web plate.

Accordingly, Vickers-Armstrongs (Aircraft) Ltd. issued Preliminary Technical Leaflet No. 52 dated August 19, 1955, covering this subject. The British Air Registration Board considers Modification D.1384, the initial and repetitive inspections recommended therein mandatory in which the FAA concurs.

Aircraft complying with the limitations specified in PTL No. 52 will be considered serviceable.

56–26–4 Vickers-Armstrongs Applies to All Viscount Model 745D Aircraft.

Compliance required as indicated.

Service experience has indicated that cracks may develop in certain pre-Modification D.1031 engine nacelle attachment brackets. Accordingly, Vickers-Armstrongs (Aircraft) Ltd. issued Preliminary Technical Leaflet No. 111, Issue 1, dated October 19, 1956, covering this subject. The British Air Registration Board considers the inspections recommended therein mandatory, in which the FAA concurs. When brackets to Mod. D.1031 are installed, the special inspections detailed in PTL No. 111 do not apply.

This supersedes AD 55–22–5.

57–7–3 Vickers

Superseded by AD 62–22–3.

57–8–6 Vickers Applies to Viscount 744 and 745 Type Aircraft.

Compliance required as indicated.

In view of a recent horizontal stabilizer buckling incident compliance with the following is required:

1. Effective immediately the following placard must be installed in full view of the pilot: "Turbulent Air Penetration–165–Knots—Flaps Up—Landing Gear Up." (This placard required regardless of compliance with item 2.)

2. Compliance required by August 31, 1957, with Vickers Modification D.1906. This modification introduces new horizontal stabilizer skin panels of 18 gage, Specification L.73 material between Stations 34.36 and 99.13 in lieu of the 20-gage panels of Specification L.72.

57–14–3 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

Investigation of a recent case resulting in asymmetric flaps occurring just prior to touchdown shows excessive end float of the flap torque shaft can occur between the flap gearbox and No. 1 flap unit port and starboard. Following action considered essential by Vickers with which the FAA concurs and considers mandatory.

1. At next daily inspection unscrew flap universal joint cap port and tarboard and check engagement of trunnion blocks within universal joint body of the torque tube. With trunnion block journals facing fore and aft ensure maximum outboard float of torque shaft is obtained by gentle tapping if necessary. Where trunnion blocks do not protrude from body more than 0.4 of an inch, aircraft may continue to fly but corrective action (item 3.) must be taken within 300 hours flying.

2. If trunnion blocks protrude more than 0.4 of an inch, corrective action (item 3.) must be taken within 25 hours flying time, or if trunnion blocks protrude 0.52 of an inch or more, corrective action must be taken prior to further flight.

3. Set torque shaft with trunnion blocks flush with end of universal body and prepare and fit tubular fiber or fluon (teflon equivalent) distance piece to suit dimension between inboard vertical face of No. 1 flap unit chain box and adjacent end of torque tube. Internal diameter of distance piece 1.52 inches with suitable recess to clear greaser on chain box if necessary. Before removal, splined shaft must be marked to ensure correct reassembly. On completion of inspection torque tubes should be moved toward gearbox as far as end float permits.

57–20–4 Vickers Applies to All Viscount 700 Series Aircraft Equipped With 14-Inch Stroke Oleos.

Compliance required as indicated.

As a result of investigations and tests by Vickers it has been found necessary to limit the life of the trunnion pins and bearing bolts of the main landing gear retraction jack (cylinder) assembly, right and left, Drawing No. 77450 sheet 7. Accordingly, Vickers-Armstrongs insured the following corrective measures with concurrence of the British Air Registration Board. The FAA concurs with this action and considers compliance therewith mandatory:

1. At the ram end of the retraction jack, attached to the landing gear actuating lever assembly, replace the trunnion fork end P/N 74450–99 and pin P/N 7450–101, at 2,500 flights; and bearing bolt P/N 74450–103 at 5,000 flights. On aircraft that have exceeded 2,500 flights a precautionary visual inspection for cracks on the trunnion P/N 74450–99 is required at the next daily inspection with particular attention being paid to the flat surfaces. If cracks are found the trunnion and pin and bearing bolt must be replaced before further flight. If no cracks are found, aircraft may continue flying provided the trunnion is visually inspected for cracks at every daily check until replaced.

2. At the retraction jack cylinder end, attached to structure joint assembly, replace the trunnion block P/N 74450–79, pin P/N 74450–81 and bearing bolt P/N 74450–341 or 74450–83 at 7,000 flights.

57–26–2 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required not later than July 1, 1958.

To preclude the possibility of the flap idler sprocket retaining nut, P/N 60903–39 and 60903–1151 from becoming unscrewed, the improved locking means for the sprocket shaft nuts at Nos. 1, 2, and 3 flap units should be incorporated. This consists of the installation of a screwed collar P/N 70103–4227 and a split pin, P/N SP9E10. Vickers PTL No. 174 and Modification Bulletin No. 2439 cover the same subject. Modification No. 2439 has been classified as essential by the British Air Registration Board. The FAA concurs and considers compliance mandatory.

58–5–2 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

In accordance with British Air Registration Board's list of "Essential Modifications and Inspections" compliance with the following Vickers-Armstrongs corrective measures is considered mandatory. The FAA concurs and considers compliance therewith mandatory. Compliance provisions are detailed in the Vickers publications referenced in each item.

A. *Inspection and Modification of Engine Nacelle Attachment Fittings at Wing Station 257.75.*

Inspections for cracks in ribs and fittings as detailed in PTL No. 34, Issue 2 are required every 300 hours until the incorporation of modified nacelle attachment fittings, per Part (b) of Mod. D.1208, Issue 3.

B. *Inspection and Modification of Top Rear Inboard Nacelle Struts.*

Inspections for cracks of top rear inboard and outboard nacelle struts and inboard and outboard accessory gearbox stay tubes on Nos. 2 and 3 engine nacelles as detailed in PTL No. 87, issue 2 are required until the incorporation of Mod. D.1742.

C. Superseded by AD 61–20–4. (Effective October 24, 1961.)

D. *Life Limitation of Flap Gear Universal Joint Trunnions P/N's 60903–1655 and 70184–403.*

Flap gear universal joint trunnion P/N 60903–1655 is limited to a life of 1,500 flights due to the possibility of fatigue cracks developing. Trunnions P/N 60903–1655 exceeding this life should be replaced within the next 50 flights with replacement parts to Mod. D.2188 standard, or removed and inspected for cracks in accordance with PTL 153, issue 3, and if found serviceable may be replaced provided they are inspected at intervals not exceeding 200 flights. When a universal joint trunnion to Mod. D.2188 standard is used as a replacement, it is essential to use a universal joint block to the same modi-

fication standard. The safe life of the revised universal joint trunnion P/N 70184–403 to Mod. D.2188 standard is now limited to 3,000 flights.

(Vickers-Armstrongs PTL 153, issue 3, and Mod. D.2188 cover this subject.)

E. Superseded by AD 61-20-4. (Effective October 24, 1961.)

58–5–3 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

In accordance with the British Air Registration Board's list of "Essential Modifications and Inspections", compliance with the following Vickers-Armstrongs corrective measures is considered mandatory. The FAA concurs and considers compliance therewith mandatory. Compliance provisions are detailed in the Vickers publications referenced in each item.

A. *Modification Elevator and Rudder Control Locks.*

To insure freedom of movement over the complete range of travel of the gust lock lever, install special shoulder greaser bolts in accordance with Mod. D.1421 to prevent overtightening of the nut securing the lock lever. Also, on elevator gust lock unit P/N A.1949–1 chamfer the sides of the slotted recess in accordance with TNS No. 64, issue 2. Compliance required by April 15, 1958.

B. *Connection of A.C. Phase Transformer.*

Mod. D.1677 revises the electrical circuit, placing transformers on the input side of the circuit breakers to prevent feed back through the primary of A.C. phase transformers. (This is further to Mod. D.1513.) Compliance required by April 15, 1958.

C. *Redistribution of Bus-bar Supplies to Pitot Head Heaters.*

By supplying the heaters from different bus-bars, complete loss of pitot-head deicing due to failure of one bus-bar is prevented. Mod. D.2019 covers this subject. Compliance required by September 15, 1958.

D. *Inspection and Modification of Elevator Anti-balance Tab Mechanism.*

To prevent over-center jaming of the elevator anti-balance tab mechanism, PTL No. 160 prescribes precautionary checks of the tab mechanism maximum travel as well as modifying the link. (PTL No. 160 and Mod. D.2239 cover the subject.) Compliance required by April 15, 1958.

E. *Improve the Locking of the Forward Elevator and Aileron Lever Group at Cockpit Station 53 and Aileron Lever Group at Fuselage Station 462.68.*

To prevent lost movement in the aileron control system and possible loosening of the aileron bellcrank level, Mod. D.2091 introduces new fittings and attachment means. Compliance with PTL No. 141 or Mod. D.2091 required by April 15, 1958.

F. *Increase Cut-out in Pilots Floor for Elevator Control Cearance.*

Mod. D.2120 increases size of cutaway in pilots floor area to eliminate fouling of elevator rod attachment bolt when incorrectly assembled. Compliance with PTL No. 140 or Mod. D.2120 required by July 15, 1958.

G. *Fairleads for Elevator Trim Tab Chain at Frame Station 783.*

In order to preclude jamming of the elevator trim tab chain where it passes through the frame Station 783, a fairlead Vickers drawing No. 70152, P/N's 1205, 1207, and 1209, should be installed at the cutaway in the frame in accordance with Vickers Mod. D.1602. Compliance required by April 15, 1958.

H. *Inspection of Type S.1, S.2 and S.4 Relays.*

To prevent shorting of relays due to loosening of the securing screws on the armature springs PTL No. 147 specifies inspection for security and locking of the shakeproof lock washers and to further lock by the application of either Glyptal Varnish CS.184 or Bakelite Varnish V.130. Compliance required by April 15, 1959.

58–7–3 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required before accumulation of 6,000 flight hours.

Investigations have proved it is necessary to replace the ½-inch diameter bolts securing the top inboard attachment fittings of the inner

nacelles to the leading edge member at Station 96 at 6,000 hours.

The P/N's of the bolts, which are to be replaced at 6,000 hours are as follows:

70103–4405 (Mod. D.1031 embodies); 80203–2405 (Mod. D.1327 or D.2025 embodied).

Vickers Mod. D.2581 introduces redesigned nuts and bolts as direct replacement for the above bolts. This design ensures that any bending moments present will be taken by the full shank diameter of the bolts. The modified bolt assemblies are split pinned.

Vickers-Armstrongs has issued PTL 179, Issue 2, and Modification D.2581 covering this same subject. The British Air Registration Board considers this mandatory. The FAA concurs with this action and considers compliance therewith mandatory.

58–7–6 Vickers Applies to All Viscount 700 Series Aircraft Fitted With Heavy-Duty Wing Root Terminals and Aluminum Cables, Incorporating Modification D.1255.

Compliance required as indicated.

Cases have occurred of heavy-duty wing root terminals with their associated aluminum cables overheating as a result of poor electrical contact between the aluminum cable lug and the wing root terminal assembly. The poor electrical contact is attributed to the relaxation of the connection and the spreading and indentation of the aluminum cable lug by repetitive torque loading.

To prevent the possibility of damage to the cable lug, a special washer, 80236 Part 3043, has been introduced by Mod. D.2628 to replace the existing washer 72436 Part 2069. The new washer is of increased thickness with an electro-tinned finish and has an outside diameter equal to the width of the cable lug.

Vickers-Armstrongs has issued the following corrective measures which the British Air Registration Board considers mandatory. The FAA concurs and considers compliance therewith mandatory.

Inspect all wing root connections for signs of loosenesss and overheated condition within the next 135 flying hours and take the following action:

1. Where signs of overheat are apparent the wing root terminal and cable lug assembly should be dismantled, and the overheated cable and components renewed.

2. Where loose connections are found these should be retightened after first inspecting the cable lug to ensure that the faces of the lug are clean, flat and free from signs of burning.

3. If signs of burning or damage are found on either face of the lug when complying with the recommendations in paragraphs 1 and 2, the lug and its associated cable should be replaced.

4. Where no signs of overheated or loose connections are found, existing terminal connections may be considered serviceable. All wing root connections should, however, be further inspected within every subsequent 135 flying hours until the new washer 80236 Part 3043 is fitted in place of washer 72436 Part 2069.

5. All wing root connections must have washer 80236 Part 3043 installed within 800 flying hours.

(Vickers-Armstrongs PTL No. 186, Issue 1, dated February 11, 1958, and Modification Bulletin No. D.2628 cover the same subject.)

58–8–6 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

As a result of further cracks found in main chassis ram foot fittings, Vickers-Armstrongs (Aircraft) Limited has recommended revised inspections which the British Air Registration Board considers mandatory.

When each main chassis ram foot fitting has completed 1,500 landings, it should be inspected as follows:

1. A visual inspection is to be made within every 135 flying hours for the possible presence of cracks in the external surface of each ram foot fitting, particularly in the area of the base and sides of the ram socket for a distance of approximately 2 inches vertically from the base;

2. Inspect within the next 600 flying hours and thereafter within each subsequent 3,000 flying hours as follows: Remove the ram foot from each main undercarriage assembly and inspect for the possible presence of cracks, both inside and outside of the ram socket bore. The examination should be carried out

using an approved method of crack detection and particular attention should be given to the radius at the bottom of the ram socket bore joining the bottom flange and the wall of the bore;

3. Any fittings found cracked should be replaced by new parts;

4. After compliance with Vickers-Armstrongs Modification D.2695, the inspection outlined above may be discontinued. After January 31, 1959, all ram foot fittings exceeding 1,500 landings must incorporate Modification D.2695 or be replaced.

The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs PTL No. 175, Issue 2, and Modification D.2695, cover this subject.)

This supersedes AD 57-26-1.

58-9-3 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required not later than December 31, 1958.

In order to give the flight crew immediate warning of an unacceptable drop in oil pressure on any engine, installation is required of an oil pressure warning means for each engine or a master warning means for all engines with provision for isolating the individual warning means from the master warning means, as provided for in Civil Air Regulations, Part 4b, paragraph 4b.604(1). Vickers Modification Bulletin No. D.2270 covers this subject and is considered to describe an acceptable method of compliance. Capital Airlines Modification No. ME-A-58-84 is also considered to describe an acceptable method of compliance. Modifications made in any other way should be submitted to the FAA for engineering evaluation and approval.

58-10-6 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as soon as possible but not later than July 31, 1958.

A case has occurred during production on the Viscount 700 Series aircraft, of the fracturing of the cranked operating lever (P/N N.69195) of the flap selector switch, Type D.7406. Investigation has established that the fracture is the result of excessive case-hardening of the mild steel lever (P/N N.69195) such that the lever became brittle. The hardened mild steel lever (P/N N.69195) must be replaced by a mild steel lever (P/N N.69195/1) which is identified by a blue spot on the outside face of the lever crank which is visible when positioned in the throttle pedestal.

Vickers-Armstrongs Aircraft Ltd. PTL No. 188 and Modification Bulletin No. D.2673 cover the same subject. This modification is considered mandatory by the British Air Registration Board. The FAA concurs and considers compliance mandatory.

58-10-7 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

Cases have been reported of a variation in the clearances between the aileron lock arms and their associated locking levers on different aircraft when the control locks are disengaged. Vickers-Armstrongs has issued the following corrective measures which the British Air Registration Board considers mandatory:

1. As soon as possible, but not later than August 1, 1958, all aircraft should be inspected to determine that a nominal clearance of 0.15 inch is provided at the inboard and outboard aileron control lock assemblies.

2. If the clearances are less than 0.10 inch, the locking levers can be filed to a maximum of 0.10 inch to obtain the required clearance of not less than 0.15 inch.

3. If the clearances are between 0.10 and 0.15 inch, the filing of the locking levers to obtain the required clearance of not less than 0.15 inch, can be deferred until the next major check or next removal of the ailerons, whichever occurs sooner.

The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs PTL No. 173 and Modification No. D.2491 cover this subject.)

58-10-8 Vickers Applies to All Viscount 700 Series Aircraft Equipped With 14-Inch Stroke Landing Gear Oleos.

Compliance required by July 31, 1958.

Failures have occurred in the main chassis retraction jack bolts, Vickers P/N 74450-341, which are located in the inner nacelle, port and starboard, due to overtightening of the nut, Vickers P/N 74450-85.

In order to preclude these failures, a nut of improved design, Vickers P/N 74450–423 must be installed to replace the old nut, Vickers P/N 74450–85. The British Air Registration Board considers this mandatory.

The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs Modification No. D.2278 covers this subject.)

58–10–9 Vickers Applies to All Viscount 700 Series Aircraft Equipped With 14-Inch Stroke Landing Gear Oleos.

Compliance required as indicated.

On aircraft equipped with 14-inch stroke oleos, cases of circumferential cracks have occurred in the main oleo cylinder, P/N 74450–3. The cracks were at the radius, where the cylinder intersects with the 30-degree taper and 2⅜ inches above the torsion link lugs, either side of the fore and aft center line. Vickers-Armstrongs has issued the following corrective measures which the British Air Registration Board considers mandatory:

1. On aircraft which have reached a total of 1,000 flying hours and each subsequent 200 landings, the oleos should be visually inspected for cracks around the cylinder circumference. If cracks are suspected, the area should be checked with dye penetrant or approved equivalent.

2. Where cracks are confirmed, the part is considered serviceable subject to a daily visual inspection, providing the combined total length of cracks does not exceed 3 inches and individual cracks do not exceed 1½ inches each in length.

3. Where combined total length of cracks exceeds 3 inches but is not greater than 5 inches, and length of individual cracks not greater than 2½ inches, cracks must be blended out before next flight and area reprotected with seaplane varnish or approved equivalent. Maximum depth of blending or crack must not exceed 0.050 inch. The part is then considered serviceable subject to a check by dye penetrant or approved equivalent every 135 hours.

4. If the length or depth of the cracks exceed the limits quoted in item 3, the part is no longer considered serviceable and must be replaced with new cylinder, in accordance with Vickers Mod. No. D.2694.

5. After embodiment of the new cylinders to either Part (a) or (c) of Mod. D.2694, the above inspections may be discontinued.

6. If no cracks are found during the initial inspection and the cylinder is shotpeened in accordance with PTL 191, Issue 3, the cylinder may be reinspected using dye penetrant or approved equivalent every 1,000 landings.

7. Cylinders having a total length of cracks exceeding 3 inches but not greater than 5 inches, with the length of individual cracks not greater than 2½ inches and the depth of cracks not exceeding 0.050 inch, which have been reworked as follows may be reinspected using dye penetrant or FAA approved equivalent every 500 landings. Rework consists of:

(a) Blend out the crack using a radius of blending not less than 0.5 inch with the maximum depth of blending not to exceed 0.050 inch.

(b) Shotpeen the cylinder in accordance with PTL 191, Issue 3.

(c) Reprotect the reworked area with seaplane varnish or FAA approved equivalent.

The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs PTL No. 191, Issues 2 and 3, and Modification D.2694 cover this subject.)

This supersedes AD 58–7–5.

58–18–3 Vickers Applies to All Viscount 700 Series Aircraft.

Compliance required by November 1, 1958.

Following a recent case of damage to Nos. 1 and 2 flaps, beams and telescopic rods caused by a flap chain tensioner barrel becoming completely unscrewed on No. 1 flap chain, Vickers-Armstrongs recommends the wirelocking of flap chain tensioners on Nos. 1, 2 and 3 flaps.

The British Air Registration Board considers this mandatory. The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs Modification D.2554 covers this subject.)

58–24–4 Vickers Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required by May 15, 1959.

1. In order to provide a means of checking

the electrical continuity of the stall warning system, install a switch in the cockpit and associated wiring for the nose gear oleo switch and Safe Flight wing detector vane. Revisions to the airplane flight manuals for Models 745D and 810 include instructions to the pilot for making the necessary checks. (Vickers Modification Bulletin No. D.2858 for 745D and FG 1487 for 810 cover the same subject.)

2. Periodic checking to assure proper calibration of the detector vane and correct functioning of the deicing heater are also required.

(Technical News Sheet No. 212 for 745D and 69 for 810 cover the same subject.)

59–5–7 Vickers Applies to All Viscount Model 745D Which Have PB.10 Automatic Pilot Installed.

Compliance required as soon as possible but not later than December 1, 1959.

In order to permit the pilots to positively disengage the trim servo clutch either by the emergency cutoff buttons on the pilots control wheel, or by the mechanical disconnect lever, a control relay (Plessey P/N 7LZ.107352 or P/N 7CZ.97508/1) should be installed in the A.C. junction box.

The British Air Registration Board considers this mandatory. The FAA concurs with this action and considers compliance therewith mandatory.

(Vickers-Armstrongs Modification Bulletin No. 2703 and associated Modification Leaflet cover this subject.)

59–6–6 Vickers Applies to All Viscount 810 Series Aircraft.

Compliance required as indicated.

In order to rectify a manufacturing error on bearing channel 81003–1063, Vickers-Armstrongs recommends the following corrective action: Inspect for signs of distortion or cracks on vertical bearing channel 81003–1061 on upper side of chassis pivot support block at wheel bay side of outer rib of inboard nacelles. The inspection must be made within 135 flying hours and every subsequent 135 flying hours until the outer rib reinforcement is incorporated. The outer rib reinforcement must be incorporated by July 1, 1959. The British Air Registration Board considers this mandatory. The FAA concurs with this action ond considers compliance therewith mandatory.

(Vickers-Armstrongs Modification Bulletin G.1656 covers this subject.)

59–6–7 Vickers Applies to All Viscount Model 745D Aircraft.

Compliance required by April 1, 1960.

In order to preclude the possibility of foreign objects jamming primary flight controls in the cockpit floor, cover plates must be installed over all openings, in accordance with Vickers-Armstrongs Modification Bulletin NR.D.2146 Parts (B), (C), (D), (E), (F), and (P) , or equivalent. Modifications D.1185 and D.2272 also cover sealing openings in the cockpit floor area.

59–10–10 Vickers Applies to All Viscount Model 745D Aircraft.

Compliance required as soon as possible but not later than July 1, 1959.

A case has occurred of the failure of flap telescopic tie rod end, Vickers P/N 70103–3139. The investigation revealed that the depth of the drilling for the internal thread had been extended beyond the normal drawing dimension of 0.95 inch which resulted in a reduction in wall thickness and strength across the shoulder.

Inspect flap telescopic tie rod ends, Vickers P/N 70103–3139, assembled on No. 3 and 4 flap telescopic tie rods. If the depth of the internal threads exceeds 0.95 inch measured from the end face of the tie rod end, the part must be replaced. The above inspection must also be made on all stocks of parts prior to installation on an aircraft.

(Vickers-Armstrongs PTL 207 covers this subject.)

59–11–4 Vickers Applies to All Viscount 745D Aircraft Which Do Not Embody Modification D.2783.

Compliance required as indicated.

Service experience has shown that a gap of less than 0.25 inch between the end of No. 3 flap and the aileron may, under certain flight conditions, produce a condition where the flap could foul or contact the inboard end of the aileron (port and starboard wings). As soon as possible but not later than June 15, 1959, inspect for adequate clearance between the outboard end of the No. 3 flap at the No. 4 flap beam unit and the inboard end of the aileron

on both the right and left sides. Where the gap is found to be less than 0.25 inch, the outboard end of the No. 3 flap must be modified to provide proper clearance. The British Air Registration Board considers this mandatory.

(Vickers-Armstrongs PTL No. 208 and Modification Bulletin No. D.2783 cover the same subject.)

59–12–3 Vickers Applies to All Viscount 745D and 810 Series Aircraft.

Compliance required by October 31, 1959.

Two cases have occurred of the Graviner fire extinguisher cartridge types A216 and A217 failing to operate at altitudes exceeding 20,000 feet. The failures were due to a combination of altitude and temperature affecting the gunpowder charge. To preclude such failures the Graviner Manufacturing Company has issued Modification AU 393 introducing improved firing units type A716 (replacing type A216) and type A717 (replacing type A217). The new units have a modified bridge wire arrangement and may be identified by a blue plastic band around the neck of the cartridge. The British Air Registration Board considers the embodiment of this modification mandatory.

(Graviner Manufacturing Company Modification No. AU 393 and Vickers-Armstrongs PTL 205 and Modification D.2926 (700 Series) and PTL 73 and Modification FG.1695 (800/810 Series) cover this subject.)

59–22–2 Vickers Applies to All Viscount 810 Series Aircraft Which Do Not Embody Modification FG.1447.

Compliance required as indicated.

Service experience has shown that a gap of less than 0.25 inch between the end of No. 3 flap and the aileron may, under certain flight conditions, produce a condition where the flap could foul or contact the inboard end of the aileron (port and starboard wings). Within the next 500 flight-hours but not later than December 15, 1959, inspect for adequate clearance between the outboard end of the No. 3 flap at the No. 4 flap beam unit and the inboard end of the aileron on both the right and left sides. This inspection must also be carried out whenever a flap or an aileron is installed. Where the gap is found to be less than 0.25 inch the outboard end of the No. 3 flap must be modified to provide proper clearance.

(Vickers-Armstrongs PTL No. 80 (800/810 Series) and Modification FG.1447 cover the same subject.)

59–24–1 Vickers Applies to all Viscount Model 810 Series Aircraft.

Compliance required by December 31, 1959.

In order to preclude the possibility of excessive glare affecting the pilots, the following modifications are required.

(a) The propeller below low stop warning lamps which are located on the fire control panels should be covered by filtered lamp cowls Vickers P/N 81536.287.

(b) Replace the existing lamp cowl Vickers P/N 74536–745, which is installed at the propeller low stop removed warning lights, with an improved lamp cowl Vickers P/N 75436–265.

The British Air Registration Board considers this mandatory.

(Vickers-Armstrongs Modification Bulletins Nos. FG–1559 and G–1668 cover this subject.)

59–26–3 Vickers Applies to All Viscount 745D and 810 Series Aircraft.

Compliance required as indicated.

Flap Motors P/N C.9601 and C.9601/1. Excessive wear has occurred on the flap motor clutch drive shaft splines P/N N117500, at the point of engagement with the clutch shaft, P/N N98825, which was revealed by failure of the flaps to operate electrically. In addition, failures have occurred in the internal clutch drive shaft, P/N N117500, at a point adjacent to the splines at the clutch shaft end, P/N N98825. This type of failure does not affect the normal operation of the flap gearbox assembly and is revealed only during overhaul. In the event of failure of the clutch drive shaft, flap "blow back" can occur under flap selection conditions creating a flight hazard.

(a) Inspections. Flap Motor assemblies must be inspected in accordance with the "inspection procedure" detailed in PTL 183 (700 Series) and PTL 61 (800/810 Series) as follows:

(1) Flap Motors, P/N C.9601 (i.e. those embodying clutch drive shaft P/N N117500),

at periods not exceeding 1,000 hours' time in service.

(2) Flap Motors, P/N C.9601/1 (i.e. those embodying clutch drive shaft, P/N N145421), at periods not exceeding 4,000 flights.

(b) Approved Life. The clutch drive shafts are now subject to the following maximum lives:

(1) Clutch drive shaft, P/N N117500—4,000 hours' time in service.

(2) Clutch drive shaft, P/N N145421—4,000 flights. These shafts are to be replaced within the above periods of approved life, irrespective of the results of the dimensional wear test given under the "inspection procedure" in the respective PTL's mentioned above.

It will be necessary for those operators who do not now do so to maintain records from which the number of flights (ground to air to ground cycles) can be ascertained for compliance with items (a) (2) and (b) (2).

(Vickers-Armstrongs PTL 183, issue 5, Modification D.2766 (700 Series), PTL 61, Issue 5, Modification FG.1294 (800/810 Series) and Rotax Modification No. 3017C cover this subject.)

This supersedes AD 59–12–10.

Revised January 23, 1962.

60–3–9 Vickers Amdt. 97 Part 507 Federal Register February 3, 1960, revised by Amdt. 178 Federal Register July 9, 1960. Applies to All Viscount 745D and 810 Aircraft.

Compliance required as indicated.

Failures of the main landing gear uplock lever, which prevent extension of the landing gear with the landing gear retracted, have resulted in wheels up landings. Investigation of these incidents disclosed that failures were caused by overloading of the uplock mechanism due to incorrect rigging. To preclude further failures of the uplock lever, the following must be accomplished.

(a) Within the next 50 flights[1] and every 50 flights thereafter, conduct visual "in situ" inspection of all unmodified main landing gear uplock levers for cracks and loose or failed rivets in accordance with ACTION paragraph 1, PTL 213, Issue 3 (for 745D) or ACTION paragraph 1, PTL 79, Issue 2 (for 810). Levers with cracks or loose rivets must be replaced or repaired in accordance with the manufacturer's instructions.

(b) Within next 500 flights determine that adjustment of the uplock mechanism is such that compression spring does not bottom at any time during operating cycle, in accordance with numbered paragraphs 5, TNS 223, Issue 2 (for 745D), or numbered paragraph 5, TNS 82, Issue 2 (for 810).

(c) Remove and inspect uplock levers for cracks, loose rivets, distortion or misalinement in accordance with ACTION paragraphs 2 through 5 of PTL 213, Issue 3. Any lever with loose or failed rivets, cracks, or misalinement in excess of 0.03 inch must be replaced or repaired in accordance with manufacturer's instructions. This inspection shall be accomplished when the levers have reached the following lives and every 500 flights thereafter.

(1) New levers, unreinforced (P/N 74450, sheet 15, 70150 sheet 53 or 59, and 70152–1491); 2,500 flights.

(2) Levers which were free of cracks and reinforced, after a period in service, in accordance with either Fig. 1 or 2, PTL 213, Issue 3 (for 745D); or Fig. 1 or 2, PTL 79, Issue 2 (for 810); or Capital Airline drawing V.20132, revisions B or C, or scheme contained in Vickers cable S.S. 4939 dated April 10, 1959: 2,000 flights after reinforcement.

(3) New levers reinforced before initial installation in accordance with any plan in preceding paragraph: 4,500 flights.

(d) Prior to August 1, 1961, incorporate the following parts or equivalent in the main landing gear uplock mechanism in accordance with Vickers Modification Bulletin D.2954 and FG. 1745, Issue 2:

(1) Strengthened steel uplock lever.

(2) Spring loaded actuating rod.

(3) Hydraulic release for uplock.

The inspections required by (a), (b), and (c) are no longer required after accomplishing this modification. (Vickers-Armstrongs Co. PTL 213, Issue 3 (for 745D); PTL 79, Issue 2 (for 810); TNS 223, Issue 2 (for 745D) and TNS 82, Issue 2 (for 810) cover the same subject.)

[1] This will require operators to maintain a record of flights to ascertain compliance with this AD. If past records are unavailable, the number of flights prior to this AD may be estimated.

60–7–7 Vickers Amdt. 116 Part 507 Federal Register March 23, 1960. Applies to Viscount Model 745D Serial Numbers 103 to 107 Inclusive, 109 to 134 Inclusive, 136 to 139 Inclusive, 183, 184, 185, 191, 198 to 217 Inclusive, 231, 232, 233, 234, 285, 334.

Compliance required as indicated.

As a result of instances of corrosion which have been found to occur in the skin to wing spar boom attachment holes, it is necessary that aircraft built to Modification D.953 standard have oversized skin to spar attachment bolts installed in the inner and outer top booms (unbushed) in accordance with part (e) of Vickers Modification Bulletin No. D.2081. The oversize bolts are of S.80 material cadmium plated either $\frac{1}{32}$-inch or $\frac{1}{16}$-inch oversize as required, depending upon the state of the holes; this is determined by the inspections detailed in the modification leaflet. Thickol is used as sealant when the oversize bolts are fitted.

Compliance: (a) Bolt installation in accordance with Mod. D.2081, part (e), is required within 10,000 hours' time in service or five calendar years from the date of aircraft manufacture, whichever occurs first, unless a satisfactory sampling inspection as covered in (b) is accomplished.

(b) Bolt installation in accordance with Mod. D.2081, part (e), may be accomplished by an operator within 13,000 hours' time in service provided a satisfactory sampling inspection for corrosion is conducted on five complete aircraft sets of top skin to spar attachment bolts. This sampling inspection must be conducted on the operator's aircraft which have between 9,000 and 10,000 hours' time in service. Corresponding spar bolt holes also must be inspected for corrosion when the bolts are removed. If any corrosion is found on the bolts or in the spar bolt holes, Mod. D.2081, part (e) must be accomplished within 10,000 hours' time in service or five calendar years from the date of aircraft manufacture, whichever occurs first.

(Modification Bulletin D.2081 covers this subject.)

This supersedes AD 60–1–8.

60–9–4 Vickers Amdt. 135 Part 507 Federal Register April 26, 1960. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated.

Due to cracks found in the flanges of the main undercarriage cross shaft bearing channels on the inboard and outboard sides of the rib at Station 131 on both wings, the following shall be accomplished:

(a) Aircraft which have accumulated 4,000 flights, or more, must be visually inspected, at intervals not to exceed 160 hours' time in service beginning with the effective date of this AD, for cracks in the bearing channels (P/N 70103–1515ND and –1516ND for 700 Series aircraft; P/N 81003–1061ND and –1062ND for 810 Series aircraft) on the inboard side of the rib in the wheel bay area. Cracked bearing channels must be either repaired and reinforced in accordance with Vickers Mod. D. 2866, Parts (A) and (C) for Model 745D's, FG.1513 Part (A) and (C) for Model 810's or replaced and reinforced in accordance with Mod. D.2866 Part (A) and FG.1513 Part (A). Details of crack limits on repairable channels are specified in the respective Modification Leaflets.

(b) If wheel bay channels are found cracked, the corresponding channels on the outboard side of the rib in the tank bay area must be either repaired and reinforced or replaced and reinforced at the same time as the inboard components.

(c) Not later than April 1, 1961, aircraft which have accumulated 4,000 flights or more must incorporate reinforced inboard and outboard bearing channels at rib Station 131 on both right and left wings in accordance with Vickers Mod. Bulletin D.2866 Part (A) for Model 745D or FG.1513 Part (A) for Model 810 Series, except that aircraft may remain in service on or after April 1, 1961, without the incorporation of the reinforcements provided the following is accomplished in addition to the provisions of (a). (Effective February 28, 1961.)

(1) Aircraft must be inspected within the next 1,500 flights after April 1, 1961, and every 1,000 flights thereafter, for cracks in the bearing channels (P/N 70103–1515ND and –1516ND for 700 Series aircraft; P/N 81003–1061ND and –1062ND for 810 Series aircraft) on the outboard side of the rib in the tank bay

area. Cracked bearing channels must be repaired and reinforced per (a). (Effective February 28, 1961.)

(2) If tank bay channels are found cracked, the corresponding channels on the inboard side of the rib in the wheel bay area must be either repaired and reinforced or replaced and reinforced at the same time as the outboard components. (Effective February 28, 1961.)

(d) The inspections in (a) and (c)(1) are not required after incorporation of the reinforcements. (Effective February 28, 1961.)

(Vickers-Armstrongs PTL 211 and Mod. D. 2866 for 700 Series aircraft and PTL 77 and Mod. FG.1513 for 800/810 Series aircraft cover this subject.)

60–11–10 Vickers Amdt. 148 Part 507 Federal Register May 10, 1960. Applies to All Viscount Model 745D Aircraft (Pre-modification D.2013 Parts (C), (J), (D), and (K) Standard) and All Viscount 810 Series Aircraft (Pre-modification FG.237 Parts (D) and (K) Standard).

Compliance required at next removal of rudder trim tab and/or elevator spring tab, but not later than June 1, 1961.

To preclude the possibility of inadvertent interchange of Pre-mod. D.2013 and FG.237 rudder trim tab and elevator spring tab torque tube assemblies, Vickers Modification D.2918 (700 Series) and FG.1671 (800/810 Series) must be incorporated. This modification insures that the upper rudder trim tab torque tube assembly cannot be connected to the elevator spring tab and the elevator spring tab torque assembly cannot be connected to the rudder tab in the upper position. Incorporation of this modification on 700 Series aircraft is accomplished by installation of a nuisance bracket, P/N 70123–359 or equivalent, fitted to the tabs at the point of attachment of the relevant short (Pre-mod. D.2013) skewbars.

On Model 810 Series aircraft, the long skewbar introduced by Mod. FG.237 is incorporated in the basic design of the right elevator trim tab. The left elevator anti-balance tab and the spring tab are operated by an external rod system to which Mod. FG.237 is not applicable. Since the rudder tab has a short skewbar, of Pre-mod. FG.237 standard, fitted at the upper position, it is required that installation of the nuisance bracket of Mod. FG.1671 or equivalent be made as a positive safeguard against incorrect assembly. (Vickers-Armstrongs Modification Bulletins D.2918 (700 Series) and FG.1671 (800/810 Series) cover this subject.)

60–11–11 Vickers Amdt. 156.

Superseded by AD 62–14–6.

60–18–1 Vickers Amdt. 196 Part 507 Federal Register August 23, 1960, Revised By Amdt. 219 Federal Register November 8, 1960. Applies To All Viscount 745D and 810 Series Aircraft.

Compliance required as indicated. (It will be necessary for operators to maintain a record of flights to ascertain compliance with this AD. If past records are unavailable, the number of flights prior to this AD may be estimated.)

As a result of failures of the trunnion attaching the nose gear retraction jack to the oleo leg, it is necessary to limit the time in service of the various parts forming the attachments of the retraction jack. The following parts must be replaced upon accumulating the specified total time in service:

Part	*Retirement time*	
	745D aircraft Flights	*810 Series aircraft Flights*
Trunnion P/N 60925–525	300	[1]
Trunnion P/N 70126–97	20,000	20,000
Trunnion P/N 70126–651	15,000	15,000
Trunnion P/N 70126–661	20,000	20,000
Trunnion P/N 74426–25	300	300
Pin P/N 60926–529	4,000	4,000
Pin P/N 70026–25	20,000	20,000
Pin P/N 70126–659	20,000	20,000
Attachment Bolt P/N 70126–137	1,000	[1]
Attachment Bolt P/N 70126–187	20,000	20,000
Attachment Bolt P/N 74426–23	20,000	20,000
Cylinder P/N 70026–1	30,000	[1]
Cylinder P/N 70726–41	30,000	30,000
Ram P/N 70026–5	30,000	30,000
Fork End P/N 70026–7	20,000	20,000
End Nut P/N 70026–9	20,000	20,000

[1] Not applicable.

(Vickers-Armstrongs Co. PTL 161 Issues 5 and 6 (for 700 Series) and PTL 22 Issues

5 and 6 (for 800/810 Series) cover this subject.)

This supersedes AD 58–9–4.

This amendment shall become effective 30 days after date of its publication in the Federal Register.

60–18–2 Vickers Amdt. 197 Part 507 Federal Register August 24, 1960. Applies To All 745D and 810 Series Aircraft.

Compliance required as indicated.

Conduct inspections of the brake accumulator systems as specified in Vickers Preliminary Technical Leaflet (PTL) 222 (700 Series) and PTL 87 (800/810 Series) within the next 300 hours' time in service and at subsequent periodic intervals of 800 hours' time in service. These inspections are not mandatory when filters, Dunlop ACM 18308 or equivalent, are installed in accordance with Vickers Modification Bulletins D.2994 (700 Series) and FG. 1796 (800/810 Series).

This amendment shall become effective 30 days after date of its publication in the Federal Register.

61–3–6 Vickers Amdt. 246 Part 507 Federal Reegister February 2, 1961. Applies to All Viscount Model 745D Aircraft With Dunlop "Inorganic" AH.50961/2 Main Wheel Brake Units.

Compliancee required as indicated, unless already accomplished.

Due to failure of the main landing gear ram foot fitting brake attachment flange Pre-mod D.2781 standard, the following must be accomplished.

(a) All brake, units P/N AH.50961/2 in service must be inspected at the next main wheel removal to ensure that shoulders of dowels (P/N AHO.36232) do not protrude above the surface of the torque plate, P/N AH.41181/2. Spare brake units must be inspected prior to installation.[1] Brake units on which the shoulders of the dowels are found to protrude above the surface of the torque plate are considered unairworthy until reworked in accordance with Vickers PTL No. 225 or FAA approved equivalent.

(b) When conducting the above inspection also inspect the ram foot fitting for cracks on the inside surface of the top portion of the brake attachment flange, with special attention to the blend radius at the base of the flange, using dye penetrant or FAA approved equivalent. If cracks are found in an area of the flange between the brake attachment holes and the blend radius itself, the ram foot fitting must be replaced or repaired prior to further flight. The defective part may be repaired in accordance with Vickers Mod. D.3000 or FAA approved equivalent provided only one flange is cracked. The ram foot fitting must be replaced if both flanges are cracked.

(Vickers Preliminary Technical Leaflet No. 225 and Modification D.3000 cover this subject.)

This directive effective March 3, 1961.

61–8–3 Vickers Amdt. 274 Part 507 Federal Register April 8, 1961. Applies to All Viscount 745D Series Aircraft.

Compliance required as indicated. (It will be necessary to maintain a record of flights to ascertain compliance with this AD.)

As a result of reported failures of the bolt, P/N 80216–627, forming the forward attachment of the outboard diagonal strut on the inboard engine nacelle structure the following must be accomplished on the structure of both inboard engine nacelles.

(a) Bolts P/N 80216–627 or bolts P/N 70116–9,[1] as applicable, having 4,000 or more hours' time in service must be removed not later than the next 600 flights and inspected for cracks by magnetic particle inspection or FAA approved equivalent method. Particular attention should be given to the area at the junction of the head and shank and also to the thread undercut.

(b) Bolts found cracked must be replaced prior to further flight.

(c) Compliance with "The Action" paragraphs of Vickers-Armstrongs Preliminary Technical Leaflet (PTL 228) (700 Series) is required when accomplishing the inspection of paragraph (a).

(Vickers-Armstrongs PTL No. 228 (700 Series) covers this subject.)

This directive effective May 9, 1961.

[1] Whenever a brake unit is reassembled or initially installed on the ram foot, precautionary measures as detailed in Vickers PTL No. 225 should be observed.

[1] Bolts P/N 80216–627 were incorporated by Mod. 1306 and on later production aircraft. Pre-mod. standard bolts P/N 70116–9 are identical except 1/32-inch less in diameter.

61-20-4 Vickers Amdt. 340 Part 507 Federal Register September 22, 1961. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated, unless already accomplished.

Vickers-Armstrongs has issued PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), to make available in single document the respective approved life of Viscount fuselage components and the inspections and modifications necessary on the fuselage to attain the approved life. Compliance with all provisions of PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (for Model 745D), and PTL 94 Issue 3 and Corrigendum issued February 28, 1962, (for Model 810), including the fuselage life limitations is required.

This AD consolidates information previously contained in AD's 57-16-5, 57-18-2, 58-1-8, 58-5-2(c), 58-5-2(e), 58-7-4, and 58-10-5. In addition, certain new fuselage areas, paragraphs (a)(1), (d)(1), (e)(2) through (6), (f)(1) and (2), and (g) are subject to inspection and possible modification in accordance with the noted sections of the applicable PTL's.

(a) *Cockpit Pressure Floor—Section 2.*

(1) Floor Beam at Sation 47—Incorporation of Mod. D.2733 (745D aircraft) or Mod. FG.1231 (810 aircraft) required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), respectively.

(2) Catenary Floor—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued Febuary 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD.

(3) Stiffener Attachment—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD.

(4) Flooring Forward of Station 20—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 3,000 or more flights.

(b) *Pressure Bulkheads—Section 3.*

(1) Front Bulkhead, Station 24—Compliance required as indicated in PTL's 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 8,000 or more flights.

(2) Rear Bulkhead, Station 761—Compliance required as indicated in PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series).

(c) *Entrance Door—Section 4 (745D aircraft).*

(1) Front and Rear, Inner Angle—Compliance required as indicated in PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series), with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 2,000 or more flights.

(2) Shear Cleat Attachment to Fuselage Skin, Station 132—Same as (c)(1).

(3) Front and Rear, Main Surround Members—Compliance required as indicated in PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series), except that for Inspection B the repetitive interval is increased to 1,000 flights, and it is acceptable to inspect the area of the door locking bolt holes with a mirror and flashlight without having to remove the bolt striker plates.

(d) *Freight Doors—Section 5 (745D) or Section 4 (810).*

(1) Surround Structure—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigen-

dum issued February 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 9,000 or more flights.

(e) *Frames—Section 6 (745D) or Section 5 (810).*

(1) Fuselage Spar Frame, Station 414—Compliance required as indicated in PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series), with initial inspection required no later than 30 days after the effective date of this AD. Incorporation of Modifications D.1947(a) and D.2103 required no later than 90 days after the effective date of this AD for aircraft having accumulated 2,000 or more flights.

(2) Trailing Edge Frame, Station 455—Compliance required as indicated in PTL 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series), with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 9,000 or more flights.

(3) Fuselage Spar Frame, Station 460—Compliance required as indicated in PTL 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), with initial inspection required no later than 30 days after the effective date of this AD. Incorporation of Modifications F.178 and F.366 required no later than 90 days after the effective date of this AD for aircraft having accumulated 2,000 or more flights.

(4) Trailing Edge Frame, Station 501–234—Compliance required as indicated in PTL 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 3,000 or more flights.

(5) Underfloor Freight Hold, Port Side Frames—Compliance required as indicated in PTL 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 2,000 or more flights.

(6) Sledge Type Cleat Fitted Frames—Incorporation of Modification FG.869 required as indicated in PTL 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series).

(f) *Skin-Section 7 (745D) or Section 6 (810).*

(1) Fuselage Skin Seam Joints—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with incorporation of Modification D.2597(a), (b), and (c) (745 aircraft) or Modifications FG.1005 and FG.1454 (810 aircraft) required no later than 30 days after the effective date of this AD for aircraft having accumulated 12,500 or more flights at 6.5 p.s.i. or 19,000 or more flights at 5.5 p.s.i. or 35,000 or more flights at 4.5 p.s.i.

(2) Fuselage Skin Overlap Joints—Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with incorporation of Modification D.2990(a) or (b) (745D aircraft) or Modification FG.1783 (810 aircraft) required no later than 30 days after the effective date of this AD for aircraft having accumulated 11,000 or more flights at 6.5 p.s.i. or 16,800 or more flights at 5.5 p.s.i., or 30,000 or more flights at 4.5 p.s.i. (Effective November 2, 1961.)

(g) *Miscellaneous Skin Cutouts—Section 8 (745D) or Section 7 (810).*

Compliance required as indicated in PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series), as applicable, with initial inspection required no later than 30 days after the effective date of this AD for aircraft having accumulated 9,000 or more flights.

(Vickers-Armstrongs PTL's No. 221 Issue 3 and Corrigendum issued February 12, 1962, (700 Series) and No. 94 Issue 3 and Corrigendum issued February 28, 1962, (800/810 Series) cover ahis subject.)

This supersedes AD's 57–16–5, 57–18–2, 58–1–8, 58–5–2 C., 58–5–2 E., 58–7–4, and 58–10–5.

This directive effective October 24, 1961.

Revised November 6, 1962.

61–23–5 Vickers Amdt. 357 Part 507 Federal Register November 1, 1961. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated.

As a result of reported cracks in the inner and outer wing spar attachment joint lugs, inspections were made and a number of aircraft were found to have cracks in the spar boom joint lugs. These cracks may occur on any one of the fingers of the joint lugs and appear to originate in the taper holes and then generally progress in a direction parallel to the joint lug. Accordingly, the following must be accomplished:

(a) Unless already accomplished per AD 61–7–2, within the next 20 hours' time in service after the effective date of this AD, inspect for cracks using ultarsonic methods, or FAA approved equivalent, all the inner wing to outer wing spar boom attachment joint lugs, top and bottom, right and left and the center section to inner wing spar boom attachment joint lugs, top and bottom, right and left, in the region of the taper bolt holes.

(1) If cracks are found in any of the lower spar boom joints, replacement with new spar booms is required prior to further flight.

(2) If there are no cracks in any of the lower spar boom joints, aircraft having cracks in the top spar boom joints, within the limits specified in (a)(2)(i), may be continued in service provided the inspection of (a) is repeated on the affected top spar boom joints at the intervals specified in (b)(4).

(i) One crack is permitted in any of the four top joints, i.e., a total of four cracks per aircraft. Permissible cracks are those extending completely between two adjacent holes in one lug only; extending between the bolt hole nearest the end of one lug and the end of that lug; or between the bolt hole nearest the boom body and a line one inch from this hole towards the body of the boom, in one lug only.

(3) If cracks beyond the limits specified in (a)(2)(i) are found in any of the top spar boom joints, replacement with a new top spar boom is required prior to further flight; except that, if there are no cracks in any of the lower spar boom joints and the extent of the cracking in the top spar boom joints has been reported to Vickers-Armstrongs for evaluation and the operator has obtained and presented to the FAA approval for flight from Vickers-Armstrongs based upon such evaluation, the aircraft may be flown in accordance with CAR's 1.76 and 1.77 to a base where replacement with a new top spar boom can be accomplished.

(b) Subsequent to the initial inspection of (a), the following repetitive inspections must be accomplished:

(1) Inspect all bottom spar boom joints for cracks using ultrasonic methods, or FAA approved equivalent, at intervals not exceeding two years, commencing from date of last ultrasonic or FAA approved equivalent inspection. If cracks are found in any of the bottom spar boom joints, replacement with new spar booms is required prior to further flight.

(2) Inspect all top spar boom joints, in which the taper bolts have not been retensioned to the revised instructions detailed in the applicable PTL referenced below, for cracks using ultrasonic methods, or FAA approved equivalent, at intervals not exceeding six months, commencing from the date of the last ultrasonic or FAA approved equivalent inspection. Aircraft found to have cracks in the top spar boom joints which are within the limits specified in (a)(2)(i) may be continued in service and must be reinspected in accordance with paragraph (b)(4). When cracks are found which exceed the limits of paragraph (a)(2)(i), the spar boom must be replaced prior to further flight in accordance with paragraph (a)(3).

(3) Inspect top spar boom joints, in which the taper bolts have been retensioned to the revised instructions detailed in the applicable PTL referenced below, for cracks using ultrasonic methods, or FAA approved equivalent, at intervals not exceeding twelve months, commencing from the date of the last bolt retensioning. Aircraft found to have cracks in the top spar boom joints which are within the limits specified in (a)(2)(i) may be continued in service and must be reinspected in accordance with paragraph (b)(4). When cracks are found which exceed the limits of paragraph (a)(2)(i), the spar boom must be replaced prior to further flight in accordance with paragraph (a)(3).

(4) On aircraft having cracks in the top spar boom joint which are within the limits of paragraph (a)(2)(i), inspect the affected joint using ultrasonic methods, or FAA approved equivalent, at intervals not exceeding three

months, commencing from the date of the last ultrasonic inspection. When cracks exceed limits of (a)(2)(i), spar boom must be replaced prior to further flight per paragraph (a)(3).

(c) Reprotection of wing spar joints at controlled intervals is required and must be accomplished in accordance with the procedure detailed in the applicable PTL referenced herein. This procedure necessitates the removal of all bolts in each joint thus enabling a thorough visual inspection for corrosion and cleanliness, or both bolts and holes. After inspection per the provisions of this AD and repair in accordance with the applicable PTL, the bolts and joints are to be reprotected and assembled in accordance with the applicable PTL referenced below. Refittment of the bolts must be followed by an inspection of the joint for cracks using ultrasonic methods, or FAA approved equivalent, prior to further flight. Reprotection of all top and bottom spar boom joints must be carried out on all aircraft when they achieve five years of age, dating from the time of manufacture. If this age is achieved before June 30, 1962, compliance is required by this date. Subsequently, repeat the reprotection at intervals of six years. If the spar taper bolts were retensioned prior to receipt of Vickers-Armstrongs cable SS.6952, reprotection of all spar joints must be accomplished within six years from the date of the initial retensioning and at subsequent intervals of six years.

(d) Following the installation of new or replated bolts, unless already accomplished, conduct a visual inspection of the bolts for security at a suitable inspection period, not less than 100 hours' and not more than 600 hours' time in service from the time of bolt installation. Any new or replated bolts with 550 or more hours' time in service that have not been inspected for security on the effective date of this AD, must be inspected within the next 50 hours' time in service. Within six months of refitting, a check must be carried out to ensure that the torque values of the bolts are within the figures given in the PTL. Where any of the bolts in a joint have a torque value less than that quoted in the applicable PTL, the procedure detailed in the applicable PTL must be carried out on that joint.

(Vickers-Armstrongs Preliminary Technical Leaflet (PTL) No. 230 Issue 4, as amended (700 Series) and PTL No. 97 Issue 3 as amended (800/810 Series) cover this subject.)

This supersedes AD 61-7-2.

This directive effective December 1, 1961.

62-9-5 Vickers Amdt. 416 Part 507 Federal Register April 10, 1962. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated.

As a result of landing gear cross tube end fitting failures, the following is required:

(a)(1) End fittings which have accumulated 11,000 or more landings as of the effective date of this AD, shall be inspected in accordance with (b) within the next 500 landings, and thereafter within each 3,000 landings.

(2) End fittings which have accumulated between 10,000 and 11,000 landings as of the effective date of this AD shall be inspected in accordance with (b) within the next 1,000 landings, or upon the accumulation of 11,500 landings, whichever occurs first, and thereafter within each 3,000 landings.

(3) End fittings which have accumulated less than 10,000 landings as of the effective date of this AD shall be inspected in accordance with (b) upon the accumulation of 11,500 landings and within each 3,000 landings thereafter.

NOTE: It will be necessary for operators to maintain a record of landings in order to ascertain compliance with this AD. If past records are unavailable, the number of landings prior to this AD may be estimated.

(b) Inspect the fittings listed below for cracks in accordance with PTL 234 (for Model 745D) or PTL 100 (for Model 810) of FAA approved equivalent.

Model	Fitting	P/N
745D	End fitting for single piece tube, Station 96.	72450-35
745D	End fitting for single piece tube, Station 131.	72450-37 or 72450-175
810	End fitting for single piece tube, Station 96.	72450-35
810	End fitting for single piece tube, Station 131.	81050-35

(c) Fittings with cracks in the ¼-inch radius between the bearing journal and the tapered portion shall be replaced prior to further flight, except that those at Station 131 may be reused if they meet the limitations of the applicable PTL, Issue 2 dated November 13, 1961, and are reworked as specified in the applicable PTL. (Fittings at Station 96 are of different design and cannot be reused should similar defects be found.)

(d) Rework fittings having minor surface cracks in the attachment flanges and in the bearing journals in accordance with the provisions of the PTL's.

(e) Mark all reworked fittings with the letter "R" on the flange circumference.

(f) Upon request of the operator, an FAA maintenance inspector, subject to prior approval of the Chief, Engineering and Manufacturing Branch, International Division, Washington 25, D.C., may adjust the repetitive inspection intervals specified in this AD to permit compliance at an established inspection period of the operator if the request contains substantiating data to justify the increase for such operator.

(Vickers Armstrongs Preliminary Technical Leaflets Nos. 100 and 234, both are Issue 2 dated November 13, 1961, cover the same subject.)

This directive effective May 10, 1962.

62-12-6 Vickers Amdt. 445 Part 507 Federal Register May 29, 1962. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated.

Failure of a main landing gear uplock mechanism resulted in inability to extend the gear. Inspection revealed that a cotter pin, which secures the connecting links to the center spindle, was missing. This permitted the clevis pin to drop into an inspection hole, and prevented the mechanism from moving to the unlock position. To prevent further cases of this malfunction, the following are required:

(a) Within the next 150 hours' time in service after the effective date of this AD, unless already accomplished within the past 100 hours' time in service and at periods thereafter not exceeding 250 hours' time in service from the last inspection, visually inspect the main landing gear uplock mechanisms to ensure that the clevis pin is in the correct position and secured with a cotter pin that is not worn or damaged. Prior to further flight, properly reinstall clevis pins that have worked loose or shifted and replace worn or damaged cotter pins.

(b) The inspections required by this airworthiness directive may be discontinued after replacement of the perspex covers with metal plates installed in accordance with Vickers Preliminary Technical Leaflet No. 236 Issue 3, Modification D.3049 (for 700 Series aircraft), or PTL No. 102 Issue 3 Mod. FG. 1873 (for the 800 Series aircraft), or an FAA approved equivalent modification.

(c) Upon request of the operator, an FAA maintenance inspector, subject to prior approval of the Chief, Engineering and Manufacturing Branch, International Division, may adjust the repetitive inspection intervals specified in this AD to permit compliance at an established inspection period of the operator if the request contains substantiating data to justify the increase for such operator.

This directive effective June 29, 1962.

62-14-6 Vickers Amdt. 457 Part 507 Federal Register June 23, 1962. Applies to All Viscount Models 745D and 810 Series Aircraft.

Compliance required as indicated.

Because of failures of the main landing gear retraction jack fork ends, the following is required.

(a) *Fork ends Part Numbers 74450-95 and 74450-411.*

(1) Fork ends which have not been reworked in accordance with (e) and have accumulated 3,500 or more landings as of the effective date of this AD shall be inspected in accordance with (d):

(i) Within the next 50 landings if no inspection has been conducted subsequent to the accumulation of 3,500 landings and thereafter within each 800 landings.

(ii) Within the next 50 landings if 750 or more landings have been made since the last inspection conducted subsequent to the accumulation of 3,500 landings and thereafter within each 800 landings.

(iii) Prior to the accumulation of 800 landings if less than 750 landings have been made since the last inspection conducted subsequent to the accumulation of 3,500 landings and thereafter within each 800 landings.

(2) Fork ends which have not been reworked in accordance with (e) and have accumulated between 3,450 and 3,500 landings as of the effective date of this AD shall be inspected in accordance with (d) within the next 50 landings and thereafter within each 800 landings.

(3) Fork ends which have not been reworked in accordance with (e) and have accumulated less than 3,450 landings as of the effective date of this AD shall be inspected in accordance with (d) prior to the accumulation of 3,500 landings and thereafter within each 800 landings.

(b) *Fork ends Part Number 74450–499.*

(1) Fork ends which have not been reworked in accordance with (e) and have accumulated 5,750 or more landings as of the effective date of this AD shall be inspected in accordance with (d) within the next 50 landings and thereafter within each 800 landings.

(2) Fork ends which have not been reworked in accordance with (e) and have accumulated less than 5,750 landings as of the effective date of this AD shall be inspected in accordance with (d) prior to the accumulation of 5,800 landings and thereafter within each 800 landings.

(3) If two successive 800 landing inspections are accomplished without evidence of cracks, subsequent inspections may be made at intervals not exceeding 1,600 landings.

(c) All fork ends which have been reworked in accordance with (e) shall be inspected in accordance with (d) within each 800 landings after rework, except that reworked fork ends which have accumulated more than 750 landings, as of the effective date of this AD shall be inspected in accordance with (d) within the next 50 landings and each 800 landings thereafter. If two successive 800 landing inspections are accomplished without evidence of cracks, subsequent inspections may be made at intervals not exceeding 1,600 landings.

NOTE: It will be necessary for operators to maintain a record of landings in order to ascertain compliance with this AD. If past records are unavailable, the number of landings prior to this AD may be estimated.

(d) Remove and inspect using magnetic particle inspection or FAA approved equivalent in accordance with Vickers-Armstrongs PTL 171 Issue 6 (for 745D) or PTL 31 Issue 6 (for 810) for Viscount aircraft. Parts showing evidence of cracks shall be replaced or reworked in accordance with (e) prior to further flight.

(e) Parts showing evidence of cracks may be reworked once in accordance with Vickers-Armstrongs PTL 171 Issue 6 (for 745D) or PTL 31 Issue 6 (for 810) for Viscount aircraft. Any parts showing evidence of cracks after reworking must be rejected.

Upon request of the operator, an FAA maintenance inspector, subject to prior approval of the Chief, Engineering and Manufacturing Branch, FAA International Division, Washington, D.C., may adjust the repetitive inspection intervals specified in this AD to permit compliance at an established inspection period of the operator if the request contains substantiating data to justify the increase for such operator.

(Vickers-Armstrongs Preliminary Technical Leaflets (PTL's) No. 171 (700 Series), and No. 31 (800/810 Series) cover this subject.)

This supersedes AD 60–11–11.

This directive effective July 24, 1962.

62–22–3 Vickers Amdt. 491 Part 507 Federal Register October 5, 1962. Applies to All Viscount 700 Series Aircraft.

Compliance required as indicated.

As a result of wing flap attachment difficulties the following is required for both flap assemblies:

(a)(1) Replace bolts P/N's 72403–2445, 70103–2645, and 70103–2639, at flap support bracket units Nos. 2 and 3 respectively, right and left side with new bolts every 1,500 landings.

(2) Replace bolts P/N's 70003–2359 and 70107–467, at flap support bracket units Nos. 1 and 4 respectively, right and left side with new bolts every 2,500 landings.

(3) When Modification D.2175 is incorporated and provided the bolts referred to in paragraphs (a)(1) and (a)(2) are replaced

with new bolts at the same time, the life of these new bolts is extended as specified in the overhaul schedule listed below:

Part number:	*Retirement time*
72403–2445	4,500 landings
70103–2645	4,500 landings
70103–2639	4,500 landings
70003–2359	7,500 landings
70107–467	7,500 landings

(b) Flap beam (supporting bracket) attachment fitting at wing trailing edge false spar member inspection.

(1) Within the next 135 hours' time in service after the effective date of this AD and each 135 hours' time in service thereafter, visually inspect for cracks all four lower flap support attachment fittings aft of the wing trailing edge member (false spar) on the right and left sides. The initial inspection is not required if these fittings were thoroughly examined at the time of bolt replacement of paragraph (a).

(2) Within the next 385 hours' time in service after the effective date of this AD and each 1,080 hours' time in service thereafter, visually inspect for cracks all the flap support attachment fittings forward of the trailing edge member (false spar), top and bottom, right and left sides at flap positions 2 and 3.

(3) Within the next 385 hours' time in service after the effective date of this AD and each 385 hours' time in service thereafter, visually inspect for cracks all top beam attachment fittings aft of the trailing edge member (false spar) on the right and left sides.

(c) Replace cracked fittings.

(d) Incorporate Vickers Modification D.2175 within the next 400 hours' time in service after the effective date of this AD on aircraft exceeding 3,000 landings, or within 400 hours' time in service upon the accumulation of 3,000 landings on aircraft not exceeding 3,000 landings on the effective date of this AD. Upon incorporation of this modification, the inspections called for in (b) (1), (b) (2), and (b) (3) may be discontinued.

(Vickers Viscount 700 Series PTL No. 151, Issue 4 covers this subject.)

This supersedes AD 57–7–3.

This directive effective November 6, 1962.