

Figure 1. Layout of flap system on right wing

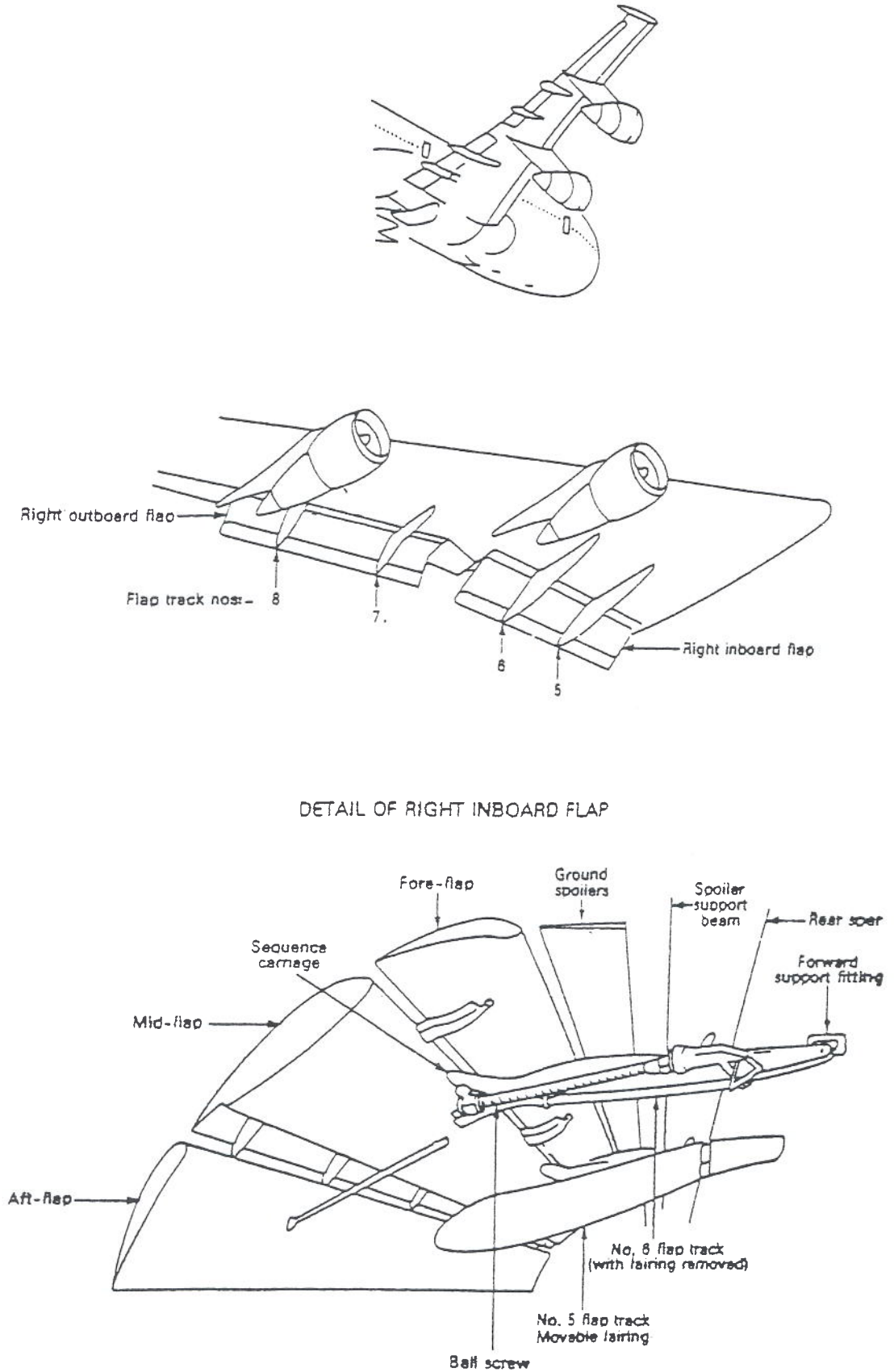
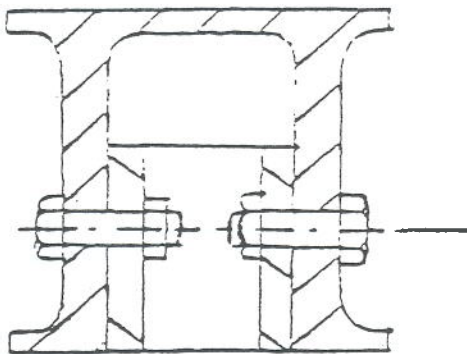
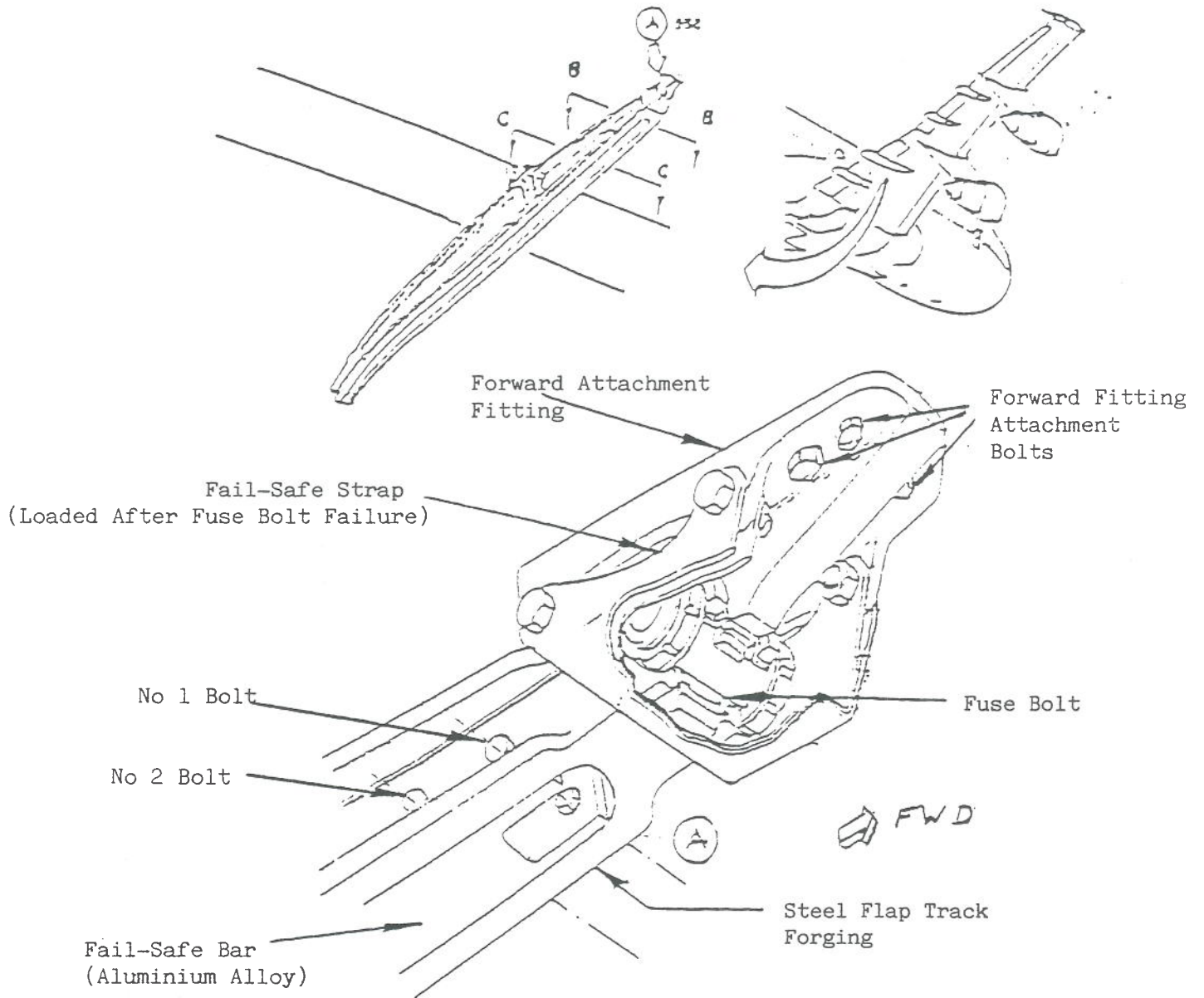
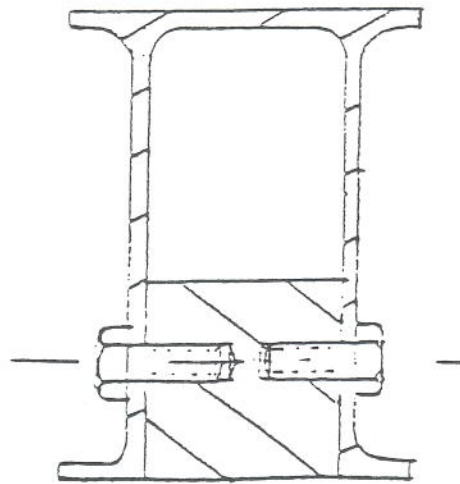


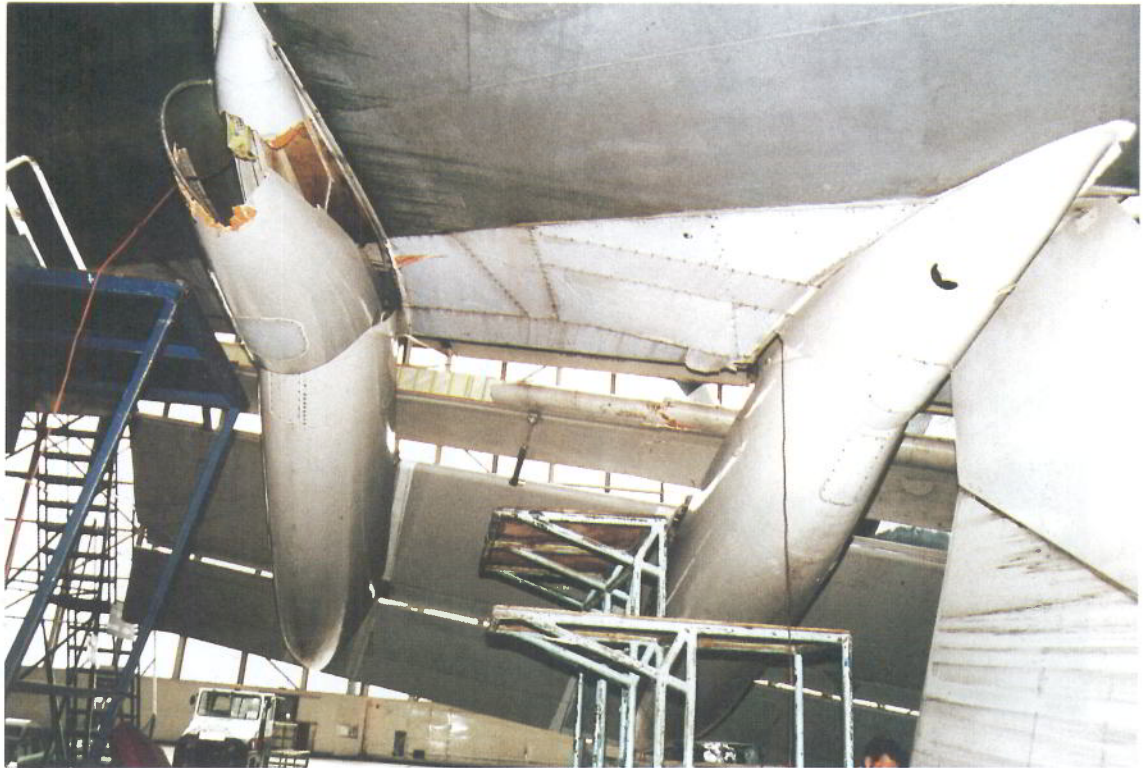
Figure 2 Detail of No 6 Flap Track Forward End



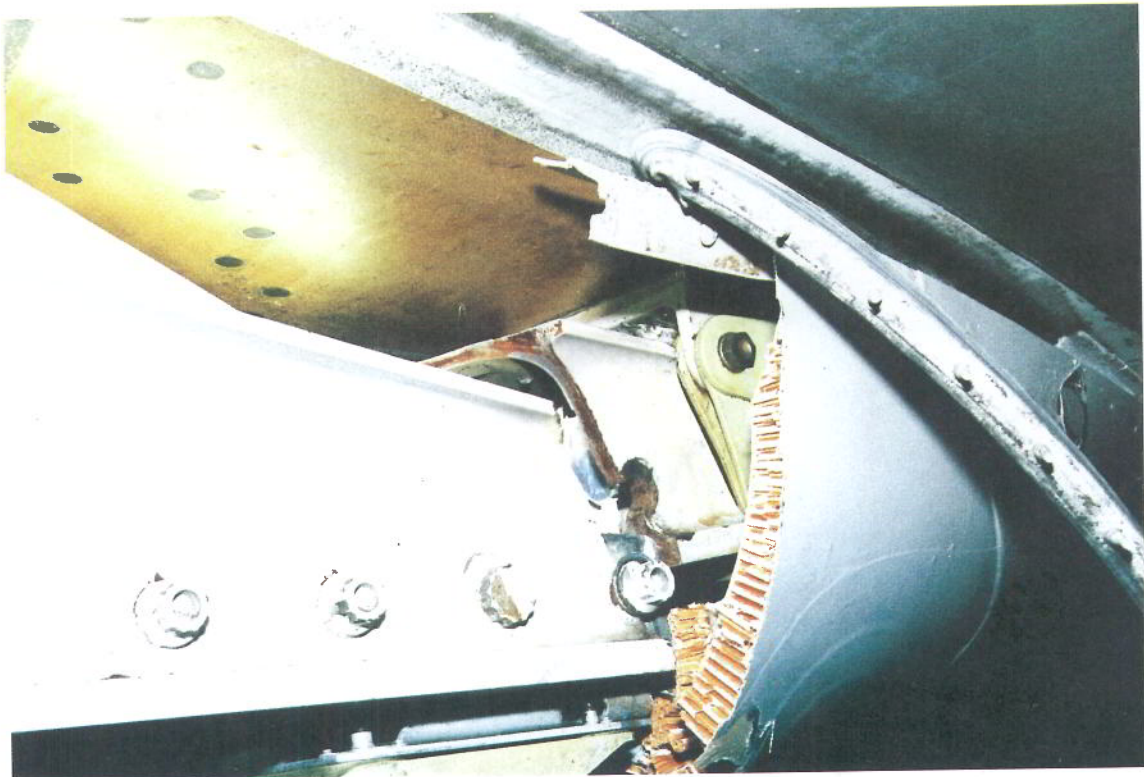
B. B.



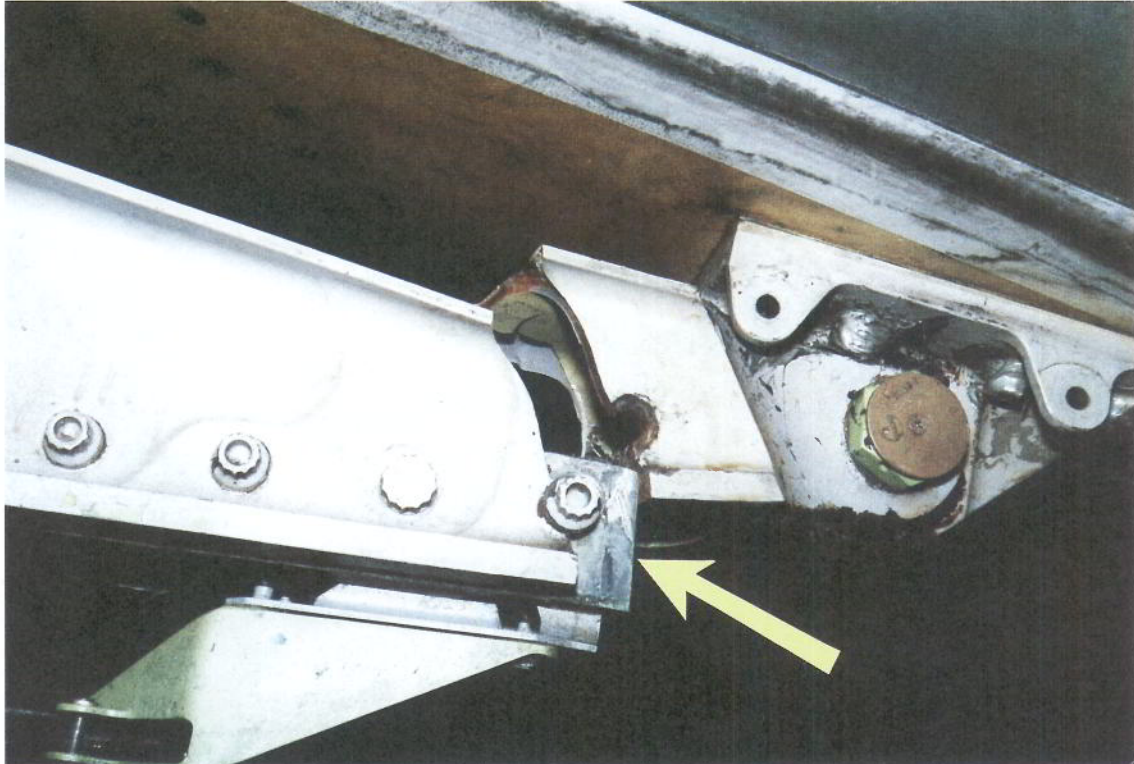
C. C.



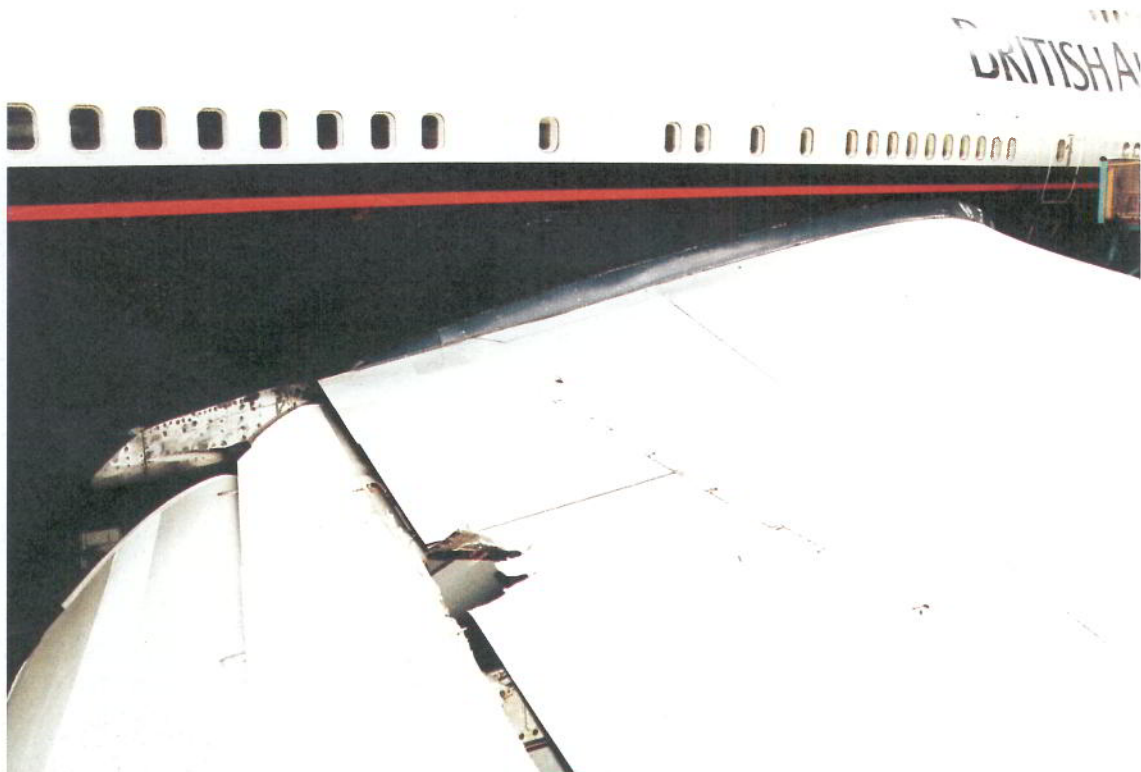
3. View of general damage to no. 6 flap track fairing.



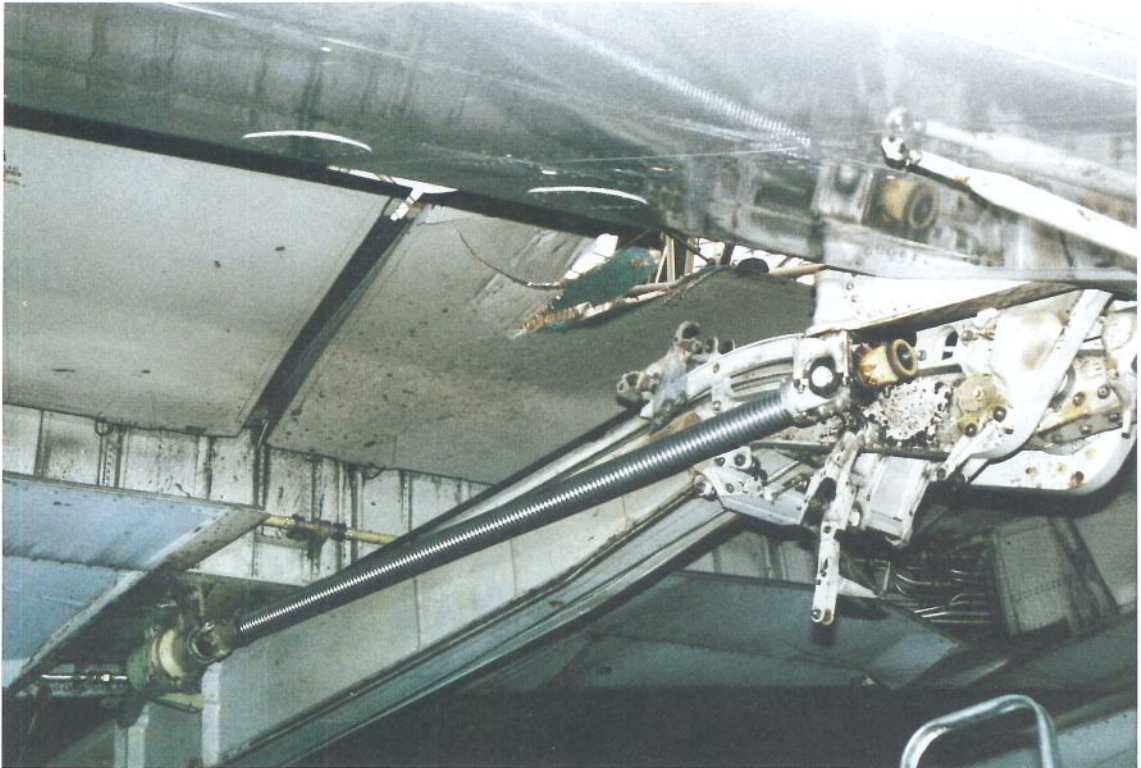
4. Showing fracture of no. 6 flap track at no. 1 bolt hole position.



5. Showing fracture of No. 6 flap track at forward end of Fail-Safe Bar (arrowed)



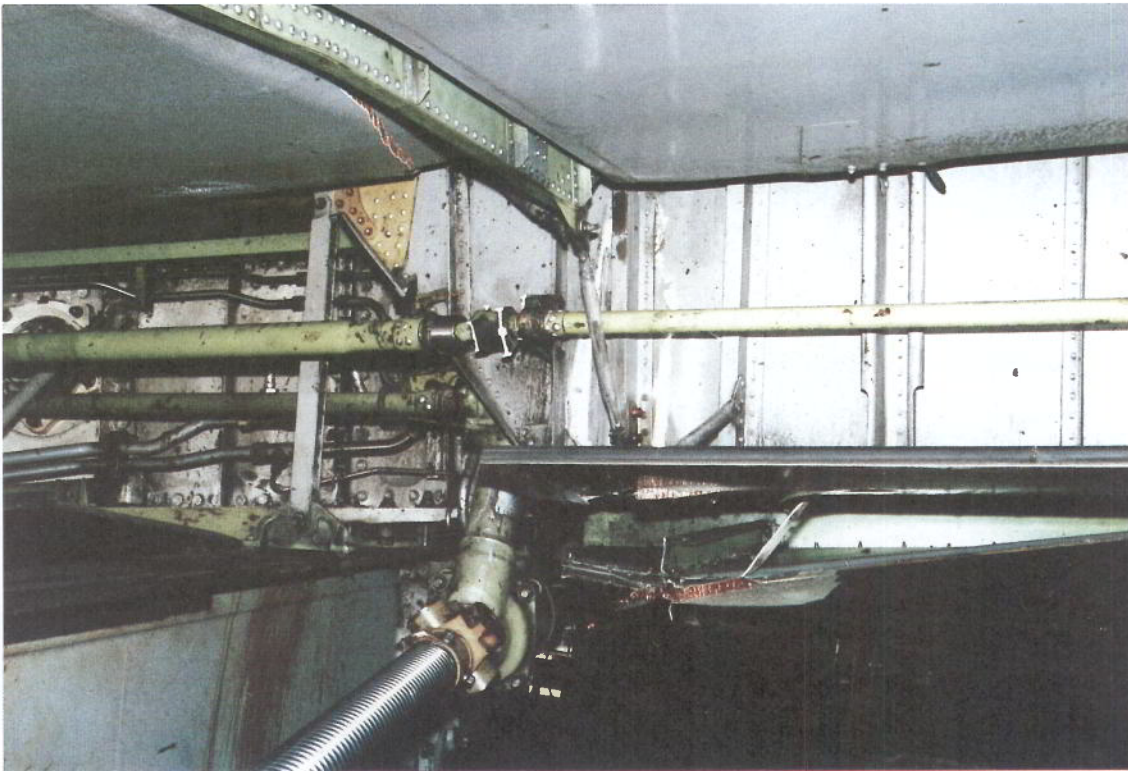
6. Showing secondary damage to spoiler caused by upwards displacement of No. 6 flap track and sequence carriage



7. View of lower side of damaged spoiler



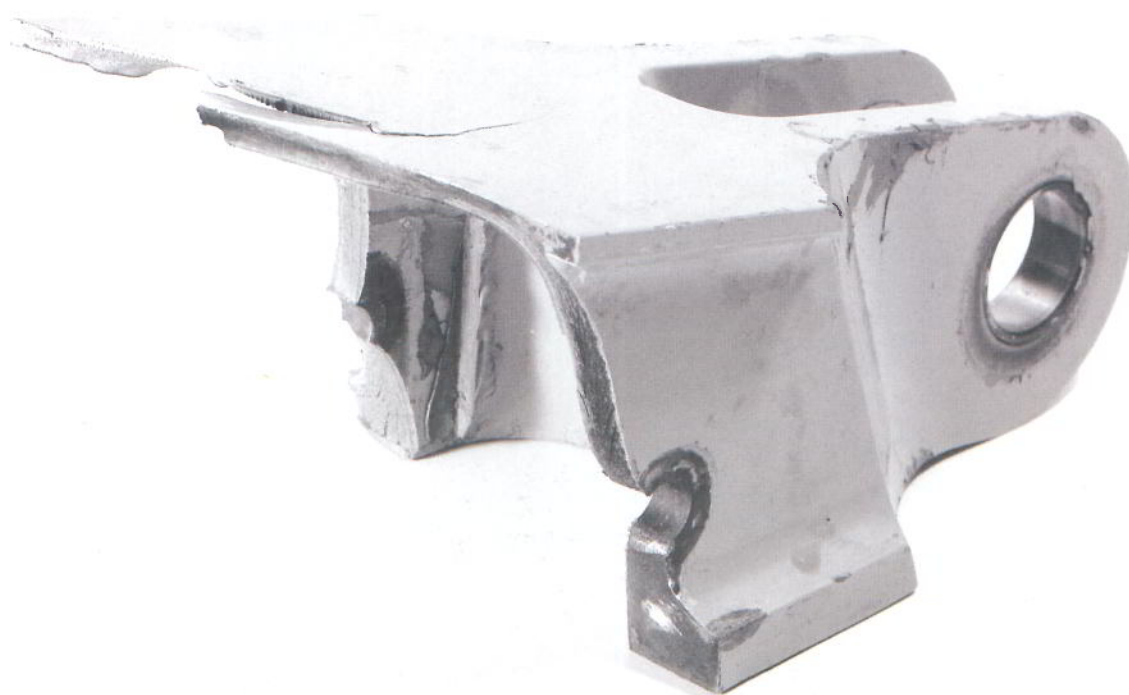
8. Showing damage to lower wing structure below spoiler support beam, adjacent no. 5 flap track



9. Close up view of fractured bearing support of outboard flap driveshaft, above no. 5 flap track ballscrew



10. View of distorted wing panels outboard of no. 6 flap fairing



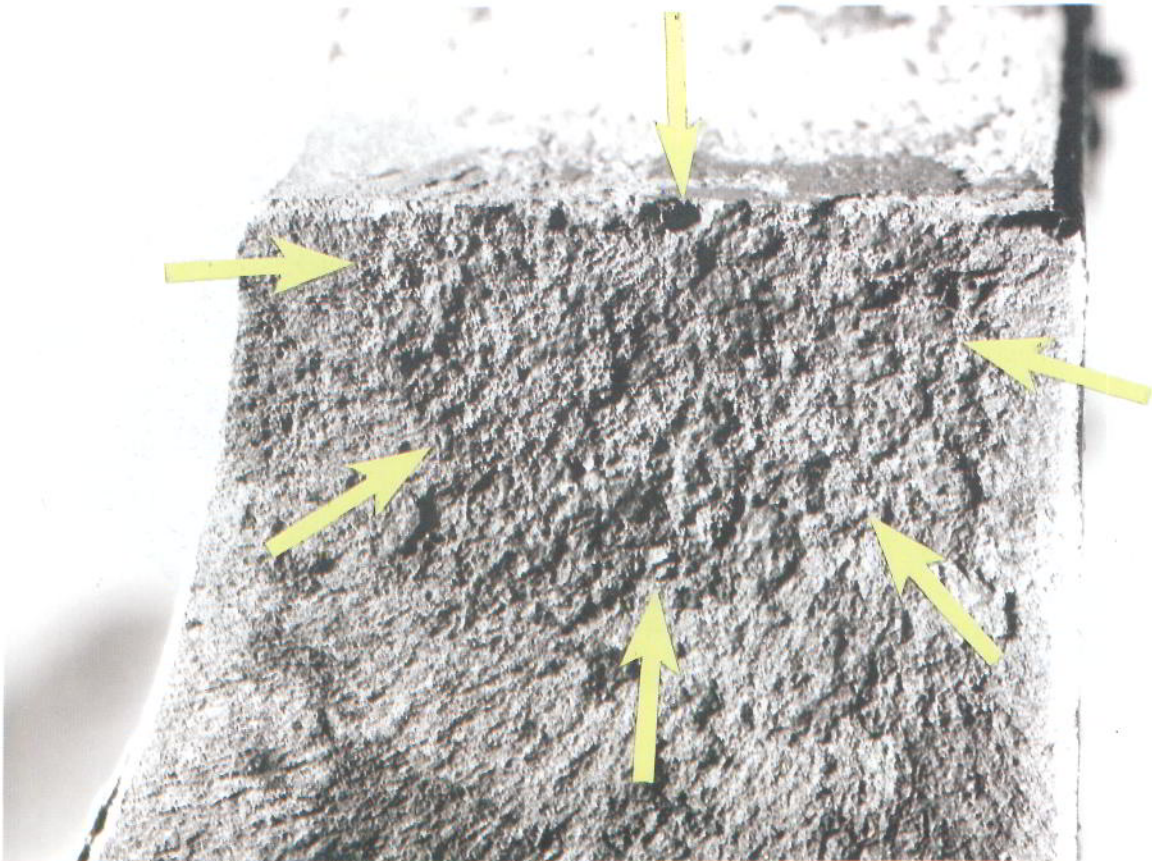
11. Separated forward end of flap track.



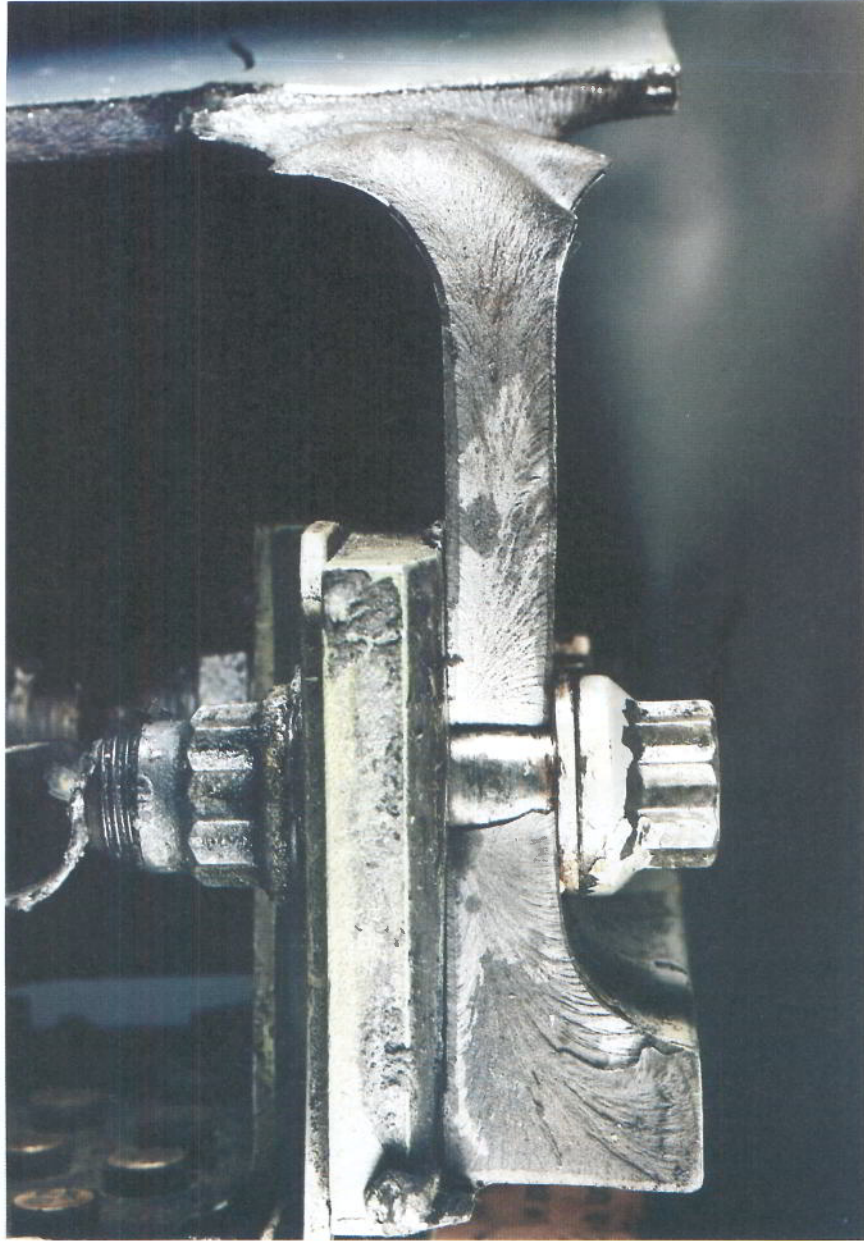
12. Showing corrosion on outboard web fracture, crack extension back along upper section and staining around crack at No.4 bolt hole.



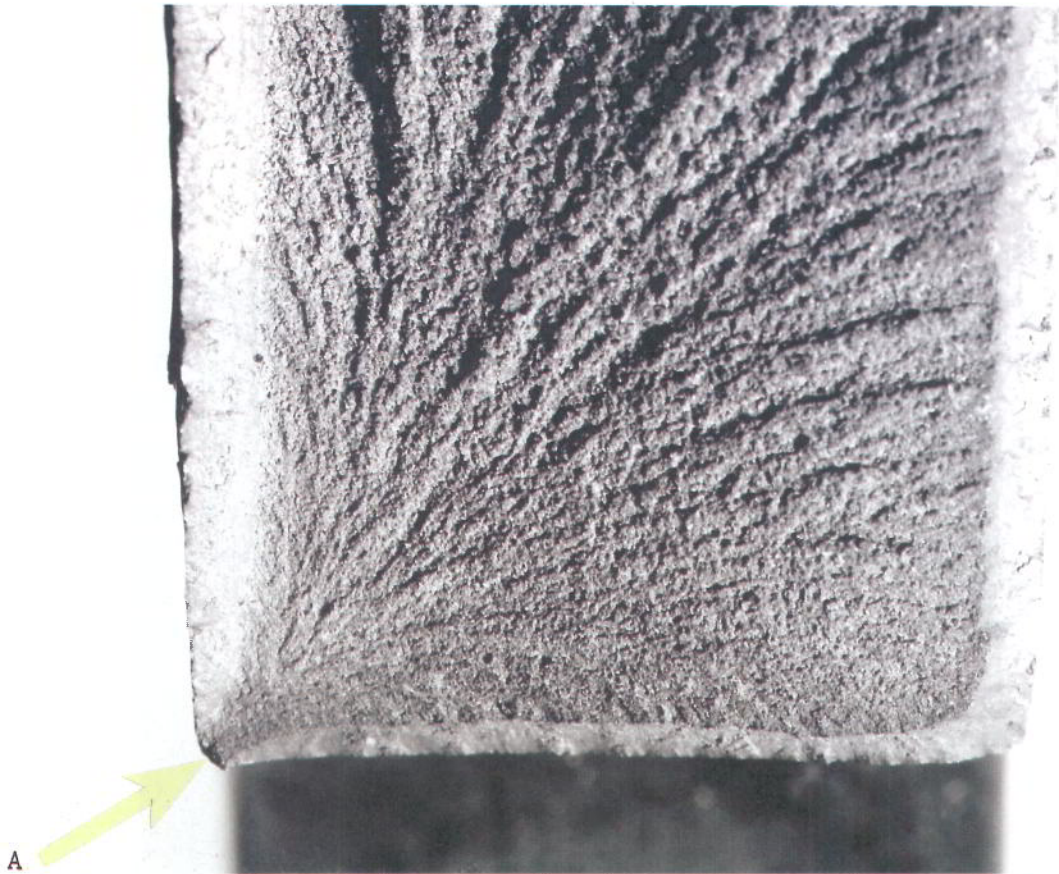
13. Showing fracture surface above outboard bolt hole, with origin arrowed.



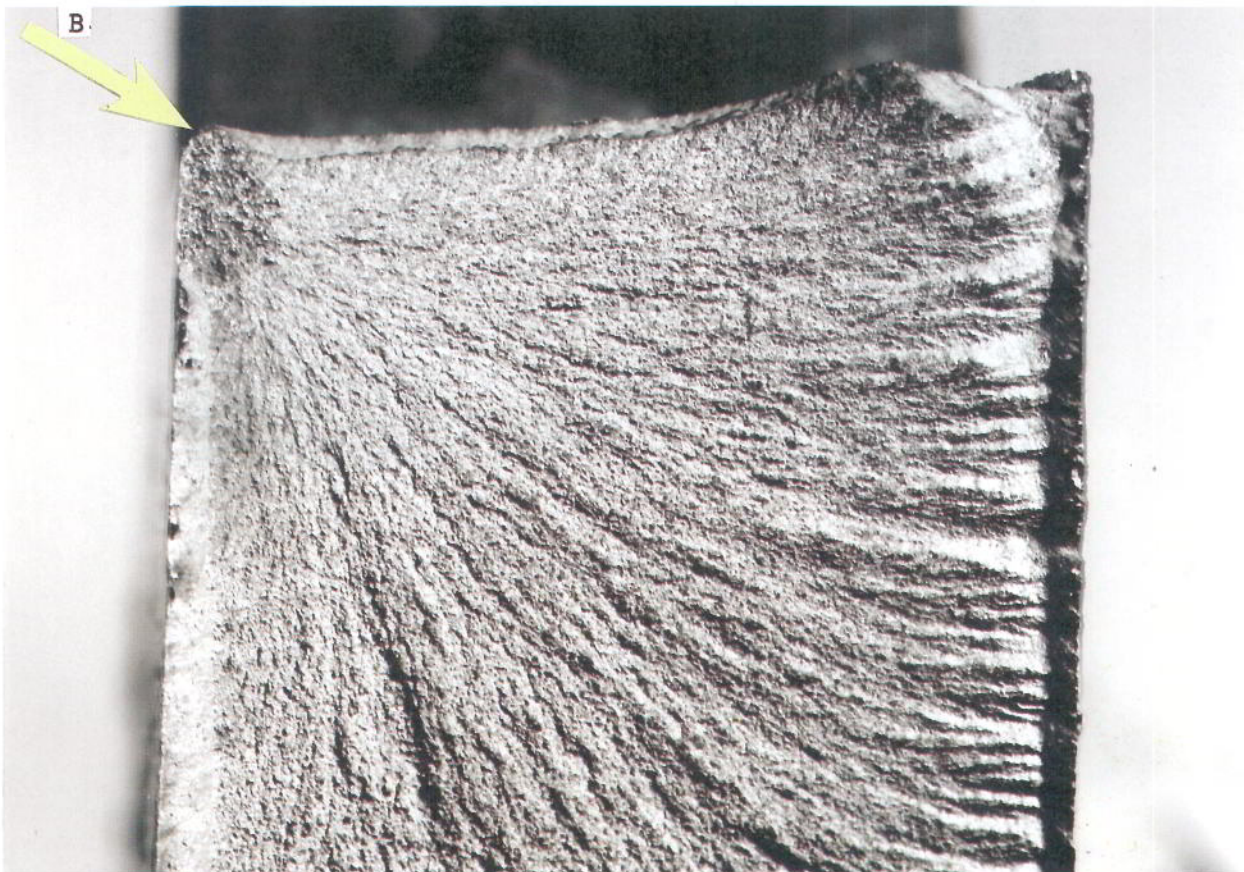
14. Showing fracture surface below outboard bolt hole, with corrosion pit and extent of intergranular crack arrowed.



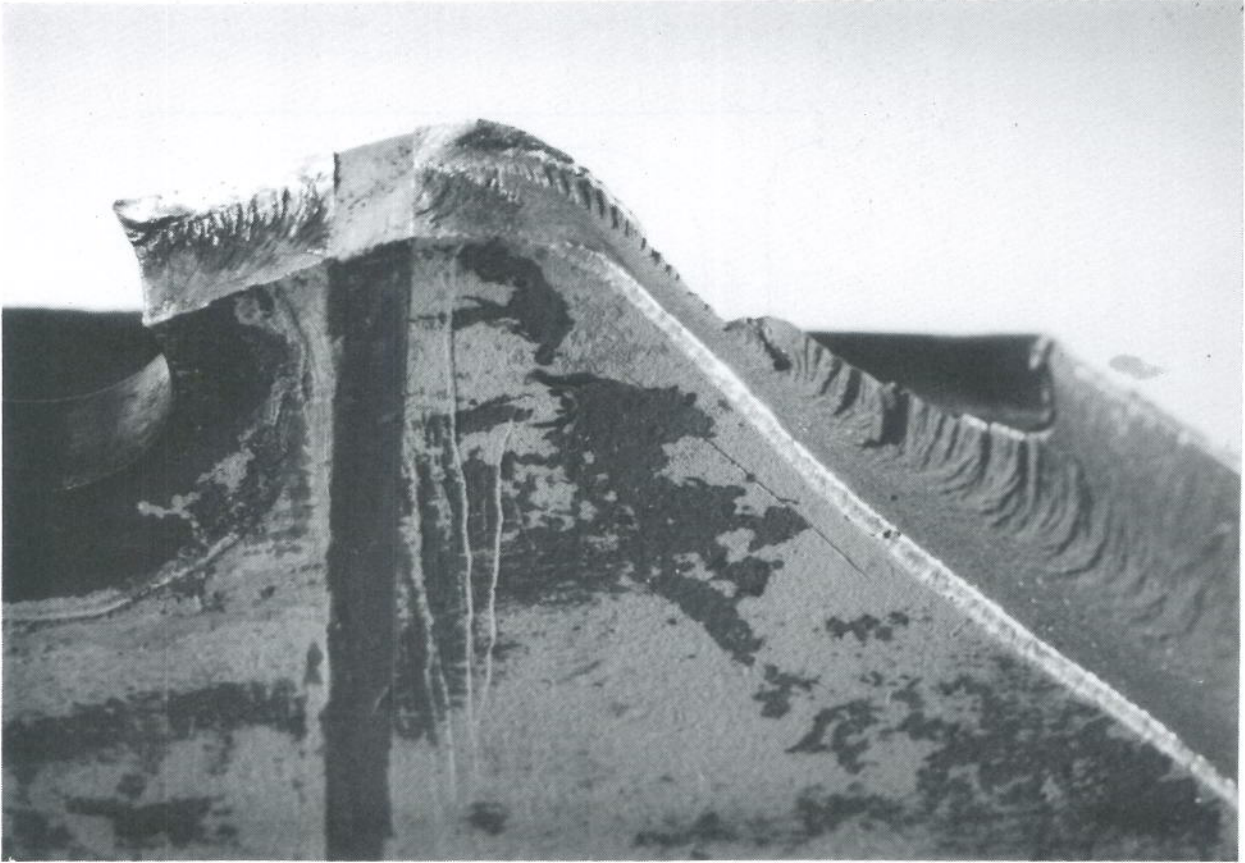
15. Showing fracture face on inboard web.



16. Showing fracture surface above inboard bolt hole with origin arrowed A.

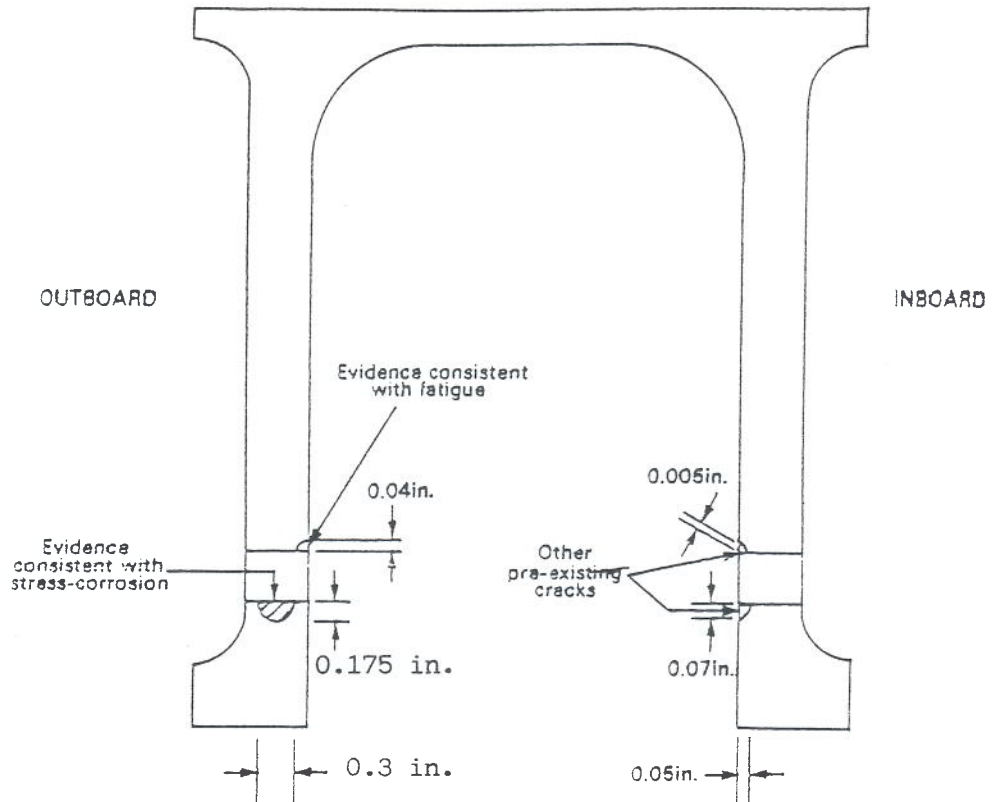


17. Showing fracture surface below inboard bolt hole with crack origin arrowed B.



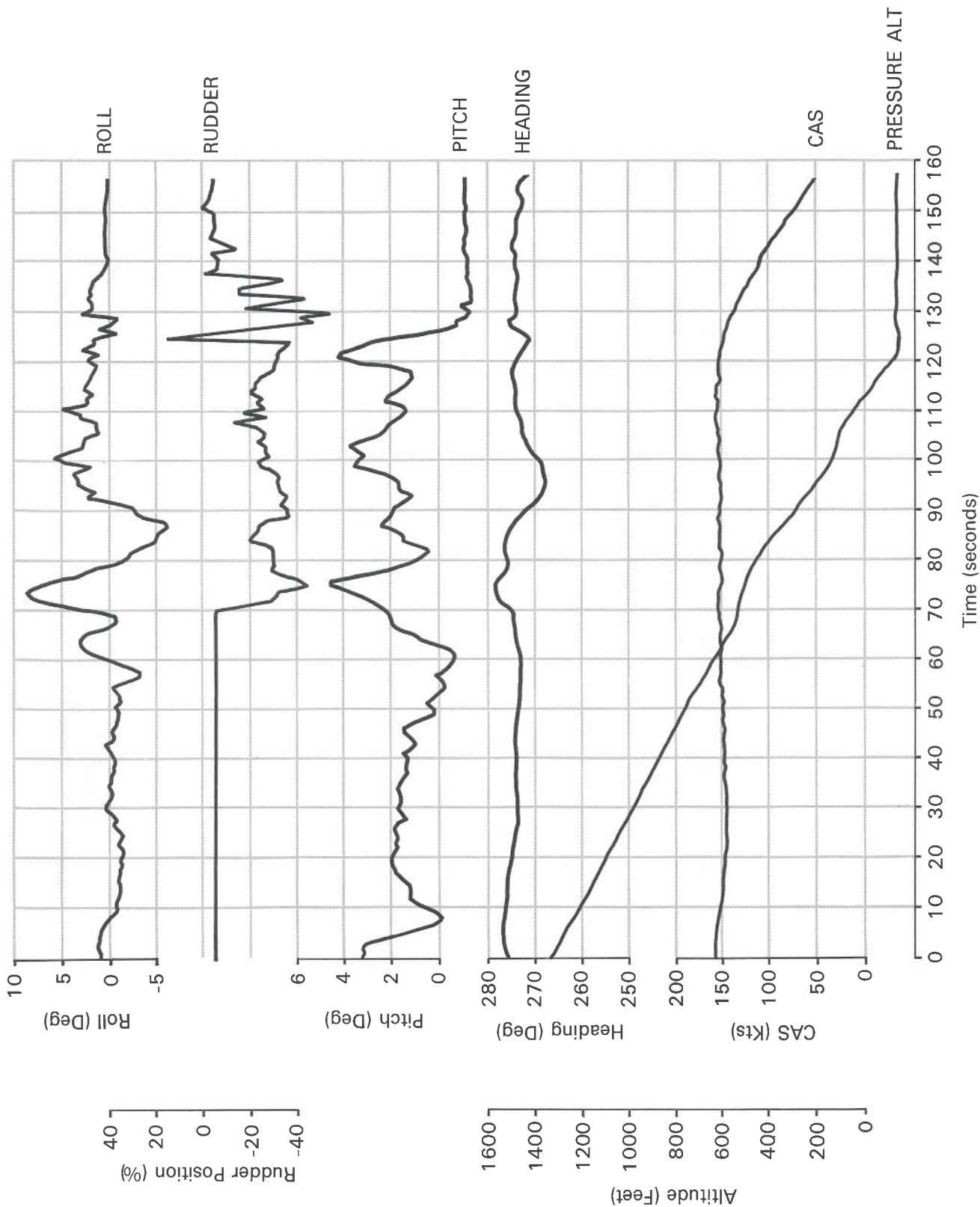
18. Showing fracture path of crack which had extended forward from No 2 inboard bolt hole

FIGURE 19 SECTION THROUGH FAILED FLAP TRACK AT
No. 1 BOLT HOLE POSITION



INCIDENT TO B747 G-AWNM ON 11 SEPT 1988

FLIGHT RECORDER ANALYSIS



BOEING

SERVICE BULLETIN

747

Appendix 3a

REVISION TRANSMITTAL SHEET

BOEING COMMERCIAL AIRPLANES POST OFFICE BOX 3707 SEATTLE, WASHINGTON 98124-2207

Boeing Service Bulletin 747-57A2229

This sheet transmits REVISION 6 dated August 25, 1988 of Service Bulletin 747-57A2229, "Wings - Trailing Edge Flaps - Reworked and Interim Production Flap Track Forward End Crack Inspection".

NOTE: This revision constitutes a complete reissue.

SUMMARY

This revision is issued to formalize previous alert telegraphic Revision 5 of this bulletin. In addition, Table I of Figure 1 is updated to show the latest production part numbers and installation kits.

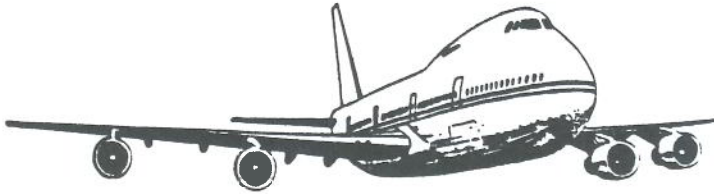
Airplane effectivity is updated to reflect current airplane ownership.

Airplanes modified per the previous releases of this service bulletin do not require additional work. Airplanes inspected per previous releases of this bulletin should continue the repeat inspection program until terminating action is accomplished.

A revision bar in the left margin along with this revision number and date indicates a change. Absence of a revision bar on a page bearing a 'revised' notice means only that existing copy has been moved or that a minor typographical error has been corrected.

REVISION HISTORY

Original Issue:	August 8, 1984
Revision 1:	January 10, 1985
Revision 2:	June 6, 1986
Revision 3:	December 17, 1986 (TWX M7201-7352E)
Revision 4:	June 25, 1987
Revision 5:	June 2, 1988 (TWX M7201-8743E)
Revision 6:	August 25, 1988



BOEING 747

SERVICE BULLETIN

SUMMARY

BOEING COMMERCIAL AIRPLANE COMPANY P.O. BOX 3707 SEATTLE, WASHINGTON 98124

ALERT

SUBJECT: WINGS - TRAILING EDGE FLAPS -
REWORKED AND INTERIM PRODUCTION
FLAP TRACK FORWARD END CRACK
INSPECTION

ATA: 5752 **NO:** 747-57A2229
2751 **DATE:** August 8, 1984
REVISION 6: August 25, 1988

BACKGROUND

This inspection is to detect cracks prior to track fracture near the forward end of all reworked and interim production flap tracks, and thereby avoid possible track breakage, resulting in trailing edge damage and possible flap loss.

One operator reported a broken reworked flap track No. 3 during final approach on one airplane with 45,436 flight-hours and 12,106 flight-cycles. In addition, this operator reported substantial damage sustained on the inboard spoiler beam, spoiler No. 5, midflap, fore flap, canoe fairing 3, flap drive torque tube, upper and lower fixed trailing edge panels, side-of-body fairing, and hydraulic system 4, during approach and upon flap retraction after landing.

The track broke five inches aft of the forward fuse pin, at the first outboard and the second inboard failsafe bar holes. The cracking was initiated by corrosion, and propagated by fatigue.

Subsequent to the release of Revision 2 of this bulletin, one operator reported an inflight breakage of flap track number 1. The track had accumulated 124 flight-cycles since the last visual inspection and 5,330 total flight-cycles. The track broke at the number one outboard web fastener hole. The cracking is believed to have been initiated by a machining discontinuity on the chamfer edge and propagated by fatigue.

Subsequent to the release of Revision 4 of this service bulletin, one operator reported an inflight breakage of flap track number 3. This track had accumulated 145 flight-cycles since the last visual inspection and 16,381 total flight-cycles. The track broke at the forward end at the first fastener hole common to fail-safe bar. The cracking has been attributed to stress corrosion pitting in and around the first fastener hole.

This service bulletin is the subject of Federal Aviation Administration (FAA) Airworthiness Directive 84-19-02, effective date of September 27, 1984.

ACTION

At all reworked and interim production flap tracks, accomplish the track inspection hole installation in the fixed fairings, and perform the initial visual flap track forward end inspection for cracks within 300 flight-cycles after receipt of Revision 5 of this bulletin. Accomplish an initial ultrasonic inspection of flap track numbers 1 and 8 within 100 flight-cycles and flap track numbers 2 and 7 within 300 flight-cycles after receipt of Revision 3 of this bulletin.

In addition, accomplish an initial ultrasonic inspection of flap track numbers 3, 4, 5, and 6 within 100 flight-cycles after receipt of Revision 5 of this bulletin.

BOEING SERVICE BULLETIN 747-57A2229

If no cracks are found, repeat visual and ultrasonic inspection of flap track numbers 1, 2, 3, 4, 5, 6, 7 and 8 at 300 flight-cycle intervals.

If any cracks are found, replace the cracked track with a new track before further flight.

As an alternative to flap track repeat inspections and individual cracked track replacements, the terminating action consisting of replacing the affected tracks with more durable later production tracks may be accomplished.

EFFECTIVITY

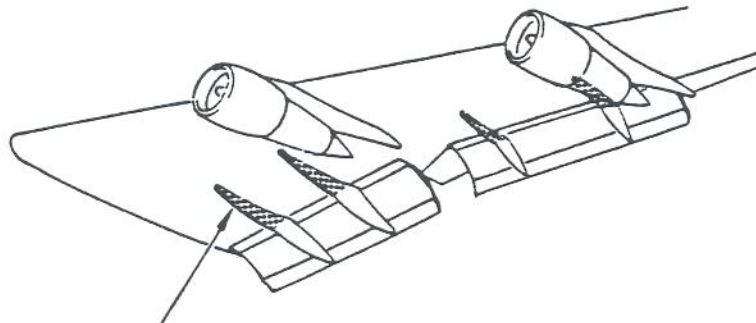
Line numbers 001 thru 220, 222 thru 228, 232, 233, 235, 236, 274 and 283

MANPOWER

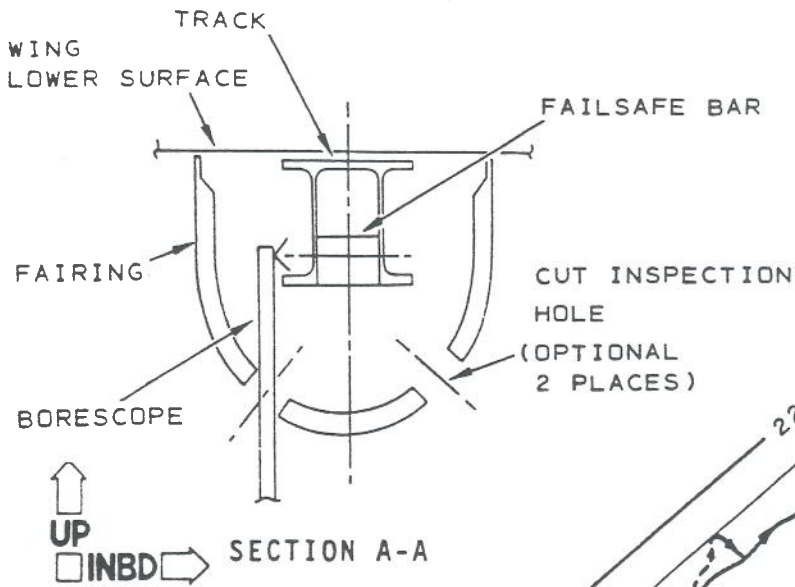
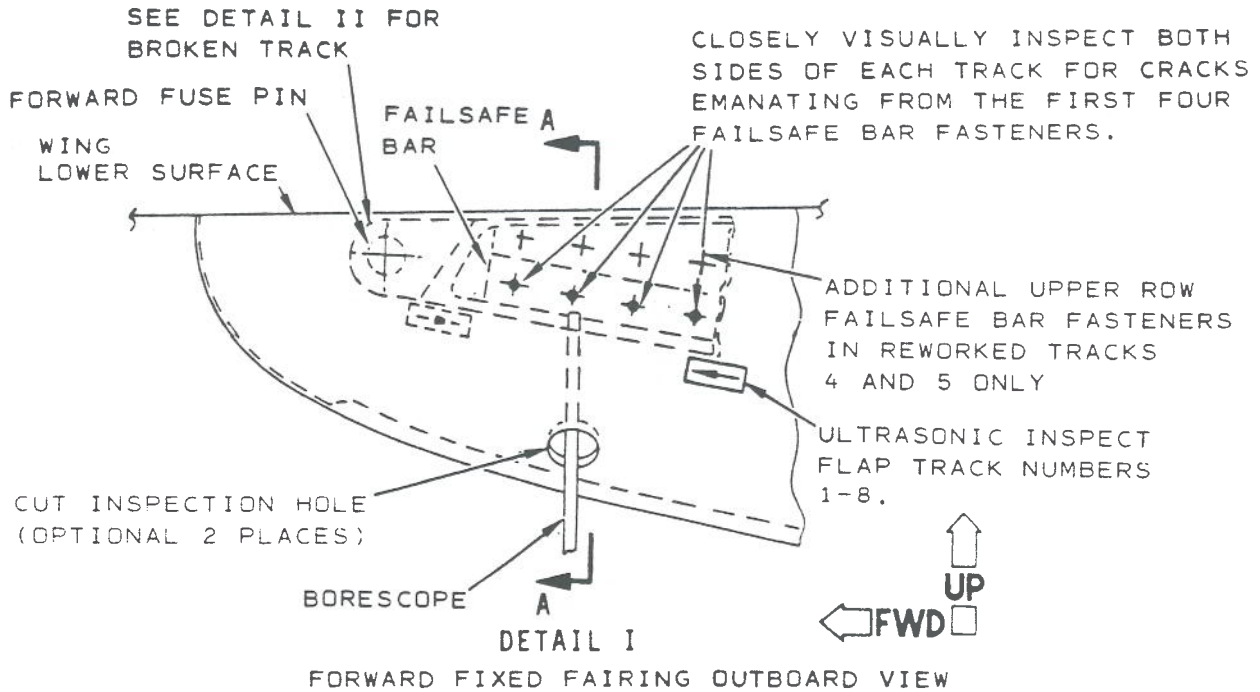
	<u>Total Man-Hours</u>	<u>Elapsed Time (Hours)</u>
Rework and Initial Inspection	48	12
Repeat Inspection	24	6

MATERIAL INFORMATION

Operator-furnished materials only

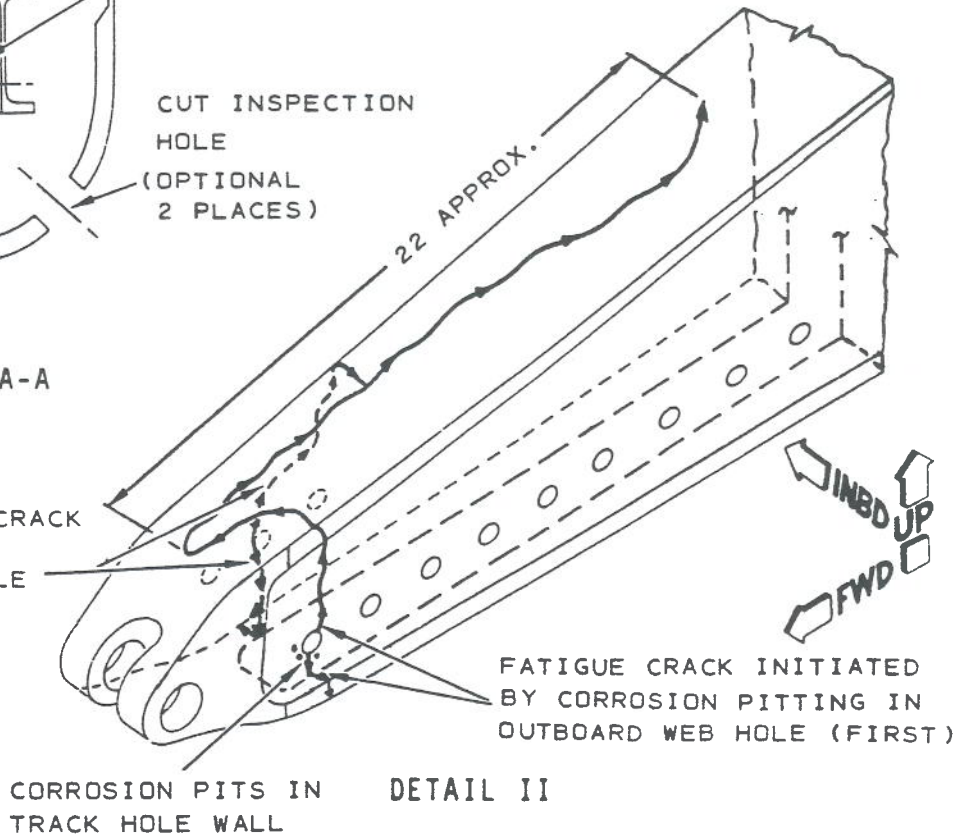


SEE DETAIL I,
TYPICAL AT ALL
TRACK POSITIONS
1 THRU 8.



STRESS CORROSION CRACK INITIATED AT INBOARD WEB HOLE (SECOND)

REPORTED BROKEN REWORKED TRACK 3 AT 45,436 FLIGHT-HOURS AND 12,106 FLIGHT-CYCLES



ALERT

SERVICE BULLETIN

ATA
SYSTEM: 5752
2751



NO: 747-57A2229
DATE: August 8, 1984
REVISION 6: August 25, 1988

SUBJECT: WINGS - TRAILING EDGE FLAPS - REWORKED AND INTERIM PRODUCTION
FLAP TRACK FORWARD END CRACK INSPECTION

NOTE: THIS SERVICE BULLETIN IS BEING SENT TO AFFECTED OPERATORS. IF THE OPERATOR HAS LEASED AIRPLANES, THIS SERVICE BULLETIN SHOULD BE FORWARDED TO THE LESSEE. IF THE OPERATOR HAS SOLD AIRPLANES WITHIN THE LAST SIX MONTHS, THIS SERVICE BULLETIN SHOULD BE FORWARDED TO THE NEW OWNER, UNLESS CONFIRMATION HAS BEEN RECEIVED THAT BOEING HAS INCLUDED THE NEW OPERATOR ON THE DISTRIBUTION LIST.

I. PLANNING INFORMATION

A. Effectivity

1. Airplanes Affected

See Service Bulletin Index Part 3 for cross reference of Variable Number to Airplane Serial Number.

This change is applicable only to airplanes listed below.

LISTING BY CUSTOMER CODE AND VARIABLE NUMBER

ACN RA743-RA745

AFA RA251-RA259 RA261-RA264

AIN RA722-RA724

ARL RA203 RA501-RA502

BOEING SERVICE BULLETIN 747-57A2229

LISTING BY CUSTOMER CODE AND VARIABLE NUMBER (CONTINUED)

| AVI RB041
 BAB RA301-RA308 RA310 RA312-RA315 RA702
 BCA RA217
 CLX RA023 RA025
 ELA RA781-RA783 RB007 RB043
 | EVR RA113 RA115 RJ131
 FTL RA026 RA029 RA033 RA632 RA634-RA635
 RA741 RA916
 HLC RA003-RA004 RA024
 IBE RA585
 IRN RA101-RA103 RA112 RA161-RA163
 JAL RA521-RA527 RA532-RA535 RA537-RA541
 KAL RA216 RA245 RD071-RD072 RJ132 RR201
 KLM RA671-RA675 RA677
 | MNR RA701
 NAS RA908
 NWA RA351-RA360 RA369-RA373 RA601-RA602
 OLY RD022
 ORI RA901-RA902 RA911-RA913 RA915
 | PAA RA002 RA005-RA007 RA009 RA011-RA020 RA022
 RA027-RA028 RA030-RA032 RA034 RA401-RA405 RA631
 RA633 RA910 RA914 RD041-RD042 RD045
 PEX RA551-RA552 RA559 RA561 RB003-RB006
 PIA RD101-RD102
 | QAN RA909 RB001-RB002
 SAA RB071-RB075

BOEING SERVICE BULLETIN 747-57A2229

LISTING BY CUSTOMER CODE AND VARIABLE NUMBER (CONTINUED)

SAB RB101-RB102

TBC RA001

TOW RA201 RA761 RB042

TWA RA104-RA110 RA114 RA164 RA309 RA311
RA581-RA582 RA651-RA652 RD001-RD002 RD021

UAL RA406-RA418 RA903-RA907

U01 RB013-RB015

VAA RA560 RD121

WDA RA742 RA762 RB044

LISTING BY VARIABLE NUMBER

RA001-RA034 RA101-RA115 RA161-RA164 RA201-RA203 RA216-RA217
RA245-RA246 RA251-RA264 RA301-RA315 RA351-RA360 RA369-RA373
RA401-RA418 RA501-RA502 RA521-RA527 RA532-RA541 RA551-RA552
RA559-RA561 RA581-RA582 RA585 RA601-RA602 RA631-RA635
RA651-RA652 RA671-RA677 RA701-RA702 RA721-RA724 RA741-RA745
RA761-RA762 RA781-RA783 RA901-RA916 RB001-RB007 RB013-RB015
RB041-RB044 RB071-RB075 RB101-RB102 RD001-RD002 RD021-RD022
RD041-RD042 RD045 RD071-RD072 RD101-RD102 RD121
RJ131-RJ132 RR201

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2. Spares Affected

The following is a composite list of spares affected by this change. Review spares and procurement systems to determine existence of any listed parts.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Recommended Disposition</u>
65B07783-17	Flap Track Assy.	*
65B07783-18	Flap Track Assy.	*
65B07783-19	Flap Track Assy.	*
65B07783-20	Flap Track Assy.	*
65B07789-17	Flap Track Assy.	*
65B07789-18	Flap Track Assy.	*
65B07789-19	Flap Track Assy.	*
65B07789-20	Flap Track Assy.	*
65B07789-23	Flap Track Assy.	*
65B07789-24	Flap Track Assy.	*
65B07789-25	Flap Track Assy.	*
65B07789-26	Flap Track Assy.	*
65B07789-27	Flap Track Assy.	*
65B07789-28	Flap Track Assy.	*
65B07789-29	Flap Track Assy.	*
65B07789-30	Flap Track Assy.	*
65B08005-5	Flap Track Assy.	*
65B08005-6	Flap Track Assy.	*
65B08005-9	Flap Track Assy.	*
65B08005-10	Flap Track Assy.	*
65B08011-7	Flap Track Assy.	*
65B08011-8	Flap Track Assy.	*
65B08011-13	Flap Track Assy.	*
65B08011-14	Flap Track Assy.	*
65B16624-1	Flap Track Assy.	*
65B16624-2	Flap Track Assy.	*
65B16624-3	Flap Track Assy.	*
65B16624-4	Flap Track Assy.	*
65B16624-5	Flap Track Assy.	*
65B16624-6	Flap Track Assy.	*
65B16624-11	Flap Track Assy.	*
65B16624-12	Flap Track Assy.	*
65B16624-13	Flap Track Assy.	*
65B16624-14	Flap Track Assy.	*
65B16624-15	Flap Track Assy.	*
65B16624-16	Flap Track Assy.	*

* After track installation, inspect these tracks per this bulletin.

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B. Reason

This inspection is to detect cracks prior to track fracture near the forward end of all reworked and interim production flap tracks, and thereby avoid possible track breakage, resulting in trailing edge damage and possible flap loss.

One operator reported a broken reworked flap track No. 3, upon reaching flaps 30 degrees during final approach, on one airplane with 45,436 flight-hours and 12,106 flight-cycles. In addition, this operator reported substantial damage sustained on the inboard spoiler beam, spoiler No. 5, midflap, fore flap, canoe fairing 3, flap drive torque tube, upper and lower fixed trailing edge panels, side-of-body fairing, and hydraulic system 4, during approach and upon flap retraction after landing.

The track broke five inches aft of the forward fuse pin. A crack initiated by corrosion pitting on the wall of the forward outboard failsafe bar hole, and propagated by fatigue. Later, another crack was initiated by stress corrosion on the faying surface near the second inboard failsafe bar hole, and also propagated by fatigue. The two cracks intersected in the inboard upper flange, upon rapid final track fracture.

The track had been inspected per Service Bulletin 747-57-2146 (AD 76-03-06) 1377 flights prior to the track breaking. In addition, the track was inspected during forward fuse bolt replacement per Service Bulletin 747-57-2206 at 655 flights prior to track breakage, and no cracks were reported on either occasion.

Subsequent to the release of Revision 2 of this bulletin, one operator reported an inflight breakage of flap track number 1. The track had accumulated 124 flight-cycles since the last visual inspection and 5,330 total flight-cycles. The track broke at the number one outboard web fastener hole. The cracking is believed to have been initiated by a machining discontinuity on the chamfer edge and propagated by fatigue.

Subsequent to the release of Revision 4 of this service bulletin, one operator reported an inflight breakage of flap track number 3. This track had accumulated 145 flight-cycles since the last visual inspection and 16,381 total flight-cycles. The track broke at the forward end at the first fastener hole common to fail-safe bar. The cracking has been attributed to stress corrosion pitting in and around the first fastener hole.

Revision 1 adds an existing configuration of inboard interim production flap tracks to Table I, and revises the related notes to clarify track identification. Additional interim production and reworked tracks are included in the Spares Affected list, and the reported broken track is identified as a reworked configuration. In addition, the flap track installation kit drawing is supplied with this revision, and the airplane effectivity is updated to reflect current airplane ownership.

BOEING SERVICE BULLETIN 747-57A2229

B. (Continued)

Revision 2 is issued to expand the area of inspection from the first three failsafe bar fasteners to the first four failsafe bar fasteners. Subsequent to the previous releases of this service bulletin, cracks were found on flap tracks at the fourth failsafe bar fastener from the forward end prior to the 1000 flight-cycle inspection time covered by Boeing Service Bulletin 747-57-2146 "Wing Trailing Edge Reworked and Interim Production Flap Track Inspection and Replacement."

Revision 3 adds an ultrasonic inspection of flap track numbers 1, 2, 7 and 8 lower chords in addition to the visual inspections.

Revision 4 formalizes previous alert telegraphic Revision 3 of this bulletin. In addition, Table I is updated to show latest production part numbers and the airplane effectivity is updated to reflect current ownership.

Revision 5 adds an ultrasonic inspection of flap track numbers 3, 4, 5, and 6 lower chords in addition to the visual inspections.

Revision 6 formalizes previous alert telegraphic Revision 5 of this bulletin. In addition, Table I is updated to show the latest production part numbers and installation kits.

C. Description

At all reworked and interim production flap tracks, accomplish the track inspection hole installation in the fixed fairings, and perform the initial visual flap track forward end inspection for cracks within 300 flight-cycles after receipt of Revision 5 of this bulletin.

Perform an ultrasonic inspection along the lower chord flanges directly below the vertical web and adjacent to bolts 1 through 4 at flap track numbers 1 and 8 within 100 flight-cycles, and at flap track numbers 2 and 7 within 300 flight-cycles after receipt of Revision 3.

In addition, perform an ultrasonic inspection of flap track numbers 3, 4, 5, and 6 within 100 flight-cycles after receipt of Revision 5 of this bulletin.

If no cracks are found, repeat ultrasonic and visual inspection of flap track numbers 1, 2, 3, 4, 5, 6, 7, and 8 at 300 flight-cycle intervals.

If any cracks are found, the cracked track should be replaced with a new track before further flight.

As an alternative to flap track repeat inspections and individual cracked track replacements, the terminating action consisting of replacing the affected tracks with more durable later production tracks may be accomplished.

BOEING SERVICE BULLETIN 747-57A2229

C. (Continued)

Revision 2 - Airplanes inspected prior to Revision 2 do not require additional work. However, at the next scheduled inspection period, the inspection area should be expanded to include the first four failsafe bar fasteners. Airplanes modified by performing terminating action per the previous releases of this service bulletin do not require additional work.

Revision 3 - Airplanes inspected prior to Revision 3 of this service bulletin require additional work. Ultrasonic inspect the lower chords of flap track numbers 1 and 8 within 100 flight-cycles and flap track numbers 2 and 7 within 300 flight-cycles after receipt of Revision 3 of this bulletin. Repeat ultrasonic inspection concurrent with visual inspections at 300 flight-cycle intervals. Airplanes modified by performing terminating action per previous releases of this bulletin do not require additional work.

NOTE: At operator's option, these initial ultrasonic inspections may be accomplished concurrently with any flap track forward end inspection occurring within the above flight-cycle periods.

Revision 4 - Airplanes modified by performing terminating action per the previous releases of this service bulletin do not require additional work. Airplanes inspected per previous releases of this service bulletin should continue the repeat inspection program until terminating action is accomplished.

Revision 5 - Airplanes inspected prior to Revision 5 of this service bulletin require additional work. Ultrasonic inspect the lower chords of flap track numbers 3, 4, 5, and 6 within 100 flight-cycles after receipt of Revision 5 of this bulletin. Repeat ultrasonic inspection concurrent with the visual inspections at 300 flight-cycle intervals. Airplanes modified by performing terminating action per previous releases of this bulletin do not require additional work.

Revision 6 - Airplanes modified by performing terminating action per the previous releases of this service bulletin do not require additional work. Airplanes inspected per the previous releases of this service bulletin should continue the repeat inspection program until terminating action is accomplished.

This service bulletin is the subject of Federal Aviation Administration (FAA) Airworthiness Directive 84-19-02, effective date of September 27, 1984.

BOEING SERVICE BULLETIN 747-57A2229

D. Approval

This service bulletin has been reviewed by the Federal Aviation Administration (FAA) and the repairs and modifications herein comply with the applicable Federal Aviation Regulations (FAR's) and are FAA approved.

E. Manpower

Approximately 44 man-hours are required to accomplish the rework and initial inspection per airplane.

The following breakdown of manpower requirements is suggested as a guide to assist operators in planning and accomplishing this modification. This estimate is for direct labor performed by an experienced crew. It does not include setup, planning, familiarization, cure time, tool acquisition, or lost time. Factor this estimate as necessary based on your own experience.

Operation	PER TRACK BASIS		
	Crew Size	Man-Hours	Elapsed Time (Hours)
Fairing Rework	1	3	3
Visual Inspection	1	2	2
Ultrasonic Inspection	1	1	1
TOTAL PER TRACK		6	6
Repeat Inspection Only, Per Track		3	3
TOTAL PER AIRPLANE (One Side at a Time)		48	12
Repeat Inspection Only, Per Airplane (One Side at a Time)		24	6

F. Material - Price and Availability

The current replacement flap tracks identified in Paragraph III, Table I, are available in limited quantities to support A.O.G. requirements, and may be procured through normal spares channels. The non-AOG order lead time for these tracks is 52 weeks.

The flap track inspection materials identified in Paragraph II.A. may be furnished or fabricated from operator's existing stock or purchased directly from industry sources. Accordingly, price and delivery data are not included in support of this bulletin.

BOEING SERVICE BULLETIN 747-57A2229

G. Tooling - Price and Availability

None

H. Weight and Balance

No Change

I. References

1. Existing Data:

- a. 747 Maintenance Manual Subjects 20-30-01, 20-30-03, 20-30-04, 27-51-00, 27-51-22, 27-51-25, 27-51-26, 27-51-27, and 27-51-31
- b. 747 Structural Repair Manual Subject 51-40-09
- c. Boeing Standard Overhaul Practices Manual Subjects 20-60-01, and 20-60-04
- d. Boeing Service Bulletin 747-27-2060 (MC 40828K) "Aft Trailing Edge Flap And Track Fairing Actuation System Conversion"; 747-57-2146 "Wing Trailing Edge Flap Track Inspection And Replacement"; and 747-57-2206 "Trailing Edge Flap Track Number 1, 2, 3, 6, 7 and 8, Fuse Bolt Inspection And Replacement"
- e. Boeing Service Letters 747-SL-57-36-A and 747-SL-57-51
- f. FAA Airworthiness Directive 84-19-02, effective September 27, 1984
- g. 747 Nondestructive Test Manual, D6-7170, Part 4, Subject 57-40-02 and D6-7170, Part 4, Subject 57-40-04, TR 04-16

2. Data supplied in support of this service bulletin:

<u>Drawing No.</u>	<u>Sheet</u>	<u>DCN</u>	<u>ADCN</u>	<u>Title</u>
63B10354	1	A*	-	Kit - T.E. Flap Track
63B10354	2	B*	-	Kit - T.E. Flap Track
63B10354	3	A	1,2	Kit - T.E. Flap Track
63B10354	4	-	-	Kit - T.E. Flap Track

* These drawings and revisions are included with Revision 6 of this bulletin.

J. Publications Affected

None

II. MATERIAL INFORMATION

A. Parts Required Per Airplane

1. Flap track replacement is required only if a cracked flap track is found. A reworked, interim or new production flap track may be installed. See Figure 1 Table I "Flap Track Part Numbers", in Part III "Accomplishment Instructions", for applicable flap track replacement part number.
2. The following materials are to be furnished by the operator.

<u>Quantity</u>	<u>Part Number or Specification</u>	<u>Nomenclature</u>
2 Gallons	BMS 3-2 Type 1 (a)	Cleaning Solvent
2 Quarts	BMS 5-28 Type 3 (a) (or Equivalent)	Potting Compound
85 Inches	Y435 (a) (Vendor Code 76381)	Hi-Speed Aluminum Foil Adhesive Tape, 6 Inches Wide

- (a) See 747 Maintenance Manual Section 20-30, Boeing Standard Overhaul Practices Manual Section 20-60, or Qualified Products List (QPL) at end of Boeing Material Specifications (BMS) for procurement sources.

B. Parts Required to Modify Spares

None

C. Special Tools and Equipment Required

See the list of equipment in 747 Nondestructive Test Manual, D6-7170, Part 4, Subject 57-40-02 and D6-7170, Part 4, Subject 57-40-04, TR 04-16.

D. Existing Parts Accountability

See Figure 1 Table I "Flap Track Part Numbers", in Paragraph III "Accomplishment Instructions", for flap track part number accountability.

III. ACCOMPLISHMENT INSTRUCTIONS

- NOTES: 1. The following paragraphs outline the general accomplishment instructions. The suggested sequence of operations and detailed accomplishment instructions are indicated by circle notes on the figures.
2. On the figures, unless otherwise specified:
- All linear dimensions are in inches
 - Tolerance on linear dimensions is plus or minus 0.03, except as noted
3. The visual inspection of the trailing edge flap tracks described herein, is to be initiated within 300 flight-cycles after the date of this bulletin, and is to be repeated at 300 flight intervals for all interim production and reworked flap tracks.
4. The ultrasonic inspection is to be initiated at flap track numbers 1 and 8 within 100 flight-cycles, and at flap track numbers 2 and 7 within 300 flight-cycles, after receipt of Revision 3 of this service bulletin. Repeat ultrasonic inspections of flap track numbers 1, 2, 7, and 8 and visual inspections of flap track numbers 1, 2, 3, 4, 5, 6, 7, and 8 every 300 flight-cycles.
5. The ultrasonic inspection is to be initiated at flap track numbers 3, 4, 5, and 6 within 100 flight-cycles after receipt of Revision 5 of this service bulletin. Repeat ultrasonic inspections and visual inspections of flap track numbers 3, 4, 5, and 6 every 300 flight-cycles.
- A. Extend the inboard and outboard trailing edge flaps, per 747 Maintenance Manual Subject 27-51-00 or operator's comparable procedure, to provide optional track inspection access through the back of the fixed fairings and to improve drainage and ventilation of track cleaning solvent from the fairings.

WARNING: DEACTIVATE AND SUITABLY PLACARD THE FLAP CONTROLS WITH DO-NOT-OPERATE IDENTIFIERS, PER 747 MAINTENANCE MANUAL SUBJECT 27-51-00, TO PRECLUDE POSSIBLE INADVERTENT FLAP OPERATION AND RESULTANT PERSONNEL INJURY OR EQUIPMENT DAMAGE.

- B. Use any suitable access to the inspection areas near the forward end of each flap track. Methods 1 and 4 are suggested for access for visual inspection. Methods 2, 3, and 4 are suggested for access for ultrasonic inspection.

NOTES: 1. Remove sealant beads along the lower chord flange as required. Use plastic scraper to remove sealant. Do not damage cadmium plate.

2. Clean area thoroughly before accomplishing inspections.

The following methods of track inspection access are suggested:

1. Install flap track inspection holes in each forward fixed fairing, per Figure 1 for "A" flap equipped airplanes, or per Figure 2 for "B" flap equipped airplanes.

NOTE: Airplanes equipped with "A" flaps are line numbers 2 thru 91, which have not incorporated Service Bulletin 747-27-2060 (MC 40828K). All the remaining affected airplanes are equipped with "B" flaps.

2. On "B" flap equipped airplanes, remove the lower access panel from each forward fixed fairing 1, 8, 2, 7, 4, and 5. Removal of the lower access panel on fairings 3 and 6 is not suitable for track access.
3. Remove each forward fixed fairing per Maintenance Manual Subjects 27-51-26 at inboard flap tracks, and per 27-51-31 at outboard flap tracks.
4. If the canoe fairings have been removed for some other reason, gain access through the back of fixed fairings 1, 8, 2, 7, 4 and 5, with the flaps extended and DEACTIVATED.

- C. Closely visually inspect each flap track numbers 1, 2, 3, 4, 5, 6, 7, and 8 forward end for cracks per Figure 3. Perform ultrasonic inspection of flap track numbers 1, 2, 7, and 8 per 747 Nondestructive Test Manual, D6-7170, Part 4, Subject 57-40-02. Perform ultrasonic inspection of flap track numbers 3, 4, 5, and 6 per 747 Nondestructive Test Manual D6-7170 Part 4, Subject 57-40-04, TR 04-16. See Table I flag notes for identification of affected reworked and interim production tracks.

- D. If no cracks are found, repeat ultrasonic and visual inspections of flap track numbers 1, 2, 3, 4, 5, 6, 7 and 8 at 300 flight intervals, until the tracks are replaced with subsequent production tracks. See Table I notes for identification of current production replacement tracks.

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- E. If any cracks are found, replace the cracked track with a new track before further flight:
1. Replace any track No. 1, 2, 7, or 8 for the outboard flaps per 747 Maintenance Manual Subject 27-51-27, or operator's comparable procedure.
 2. Replace any inboard flap outboard track No. 3 or 6 per 747 Maintenance Manual Subject 27-51-25, or operator's comparable procedure.
 3. Replace any inboard flap inboard track No. 4 or 5 per 747 Maintenance Manual Subject 27-51-22, or operator's comparable procedure.
- F. As an alternative to the flap track repeat inspections and individual cracked track replacements, the terminating action consisting of replacing the affected tracks with more durable later production tracks may be accomplished. See Table I for track part numbers.
- G. Restore airplane to normal configuration.

NOTE: Touch-up areas where sealant was removed in Step B with BMS 10-11, Type I primer and BMS 10-60 enamel.

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TABLE I - Flap Track Part Numbers

TRACK POSITION	EXISTING TRACKS (a)		CURRENT PRODUCTION TRACKS		
	REWORKED (b)	INTERIM PRODUCTION(c)	TRACKS (d)	INSTALLATION KITS (f)	
				"A" FLAPS (e)	"B" FLAPS (e)
No. 1 & No. 8	65B08011-7 65B08011-13	65B08011-8 65B08011-14	65B17061-4(g) 65B17061-7 65B17061-9	63B10354-20	63B10354-23
No. 2 & No. 7	65B08005-5 65B08005-9	65B08005-6 65B08005-10	65B17062-3(g) 65B17062-5 65B17062-7	63B10354-21	63B10354-24
No. 3	65B07789-17 65B07789-23 65B07789-27	65B07789-19 65B07789-25 65B07789-29	65B17063-9(g) 65B17063-15 65B17063-19	63B10354-22	63B10354-25
No. 6	65B07789-18 65B07789-24 65B07789-28	65B07789-20 65B07789-26 65B07789-30	65B17063-10(g) 65B17063-16 65B17063-20	63B10354-22	63B10354-25
No. 4	65B16624-1 65B16624-3 65B16624-5 65B16624-11 65B16624-13 65B16624-15	65B07783-17 65B07783-19	65B17064-27(g) 65B17064-43 65B17064-51	63B10354-4	63B10354-8
No. 5	65B16624-2 65B16624-4 65B16624-6 65B16624-12 65B16624-14 65B16624-16	65B07783-18 65B07783-20	65B17064-28(g) 65B17064-44 65B17064-52	63B10354-4	63B10354-8

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- (a) Any of the above listed reworked or interim production tracks which have been installed on any 747 airplanes other than those listed herein, subsequent to airplane delivery, are also subject to the initial and repeat track inspections described herein.
- (b) Reworked tracks are the original lighter weight tracks, which had the titanium alloy failsafe channel replaced with a solid aluminum alloy failsafe bar, at Boeing after airplane delivery. On tracks 1, 8, 2, 7, 3 and 6, both webs are not externally padded up in the lower failsafe bar area forward of the rear spar. Tracks 4 and 5 are equipped with only a single row of failsafe bar fasteners in each web, in the aft downturn area.
- (c) Interim production tracks are similar to the reworked tracks, except that the aluminum alloy failsafe bar was installed in the lighter weight tracks during in sequence production. On tracks 1, 8, 2, 7, 3 and 6, both webs are also not externally padded up in the lower failsafe bar area forward of the rear spar. Similarly, tracks 4 and 5 are equipped with only a single row of failsafe bar fasteners in each web, in the aft downturn area.
- (d) Current production tracks are stronger heavier tracks, which incorporate thicker webs in addition to the aluminum alloy failsafe bar. On all eight tracks, both webs are externally padded up in the lower failsafe bar area forward of the rear spar or the wing landing gear beam. Tracks 4 and 5 are equipped with two rows of failsafe bar fasteners in each web, in the aft downturn area.
- (e) Airplanes equipped with "A" flaps are line numbers 2 thru 91, which have not incorporated Service Bulletin 747-27-2060 (MC 40828K). All the remaining affected airplanes are equipped with "B" flaps.
- (f) Use applicable installation kit to install new flap track on airplane. Kits may contain excess parts. Discard excess parts or return to operator's stores for spares consideration.
- (g) No longer available for procurement.

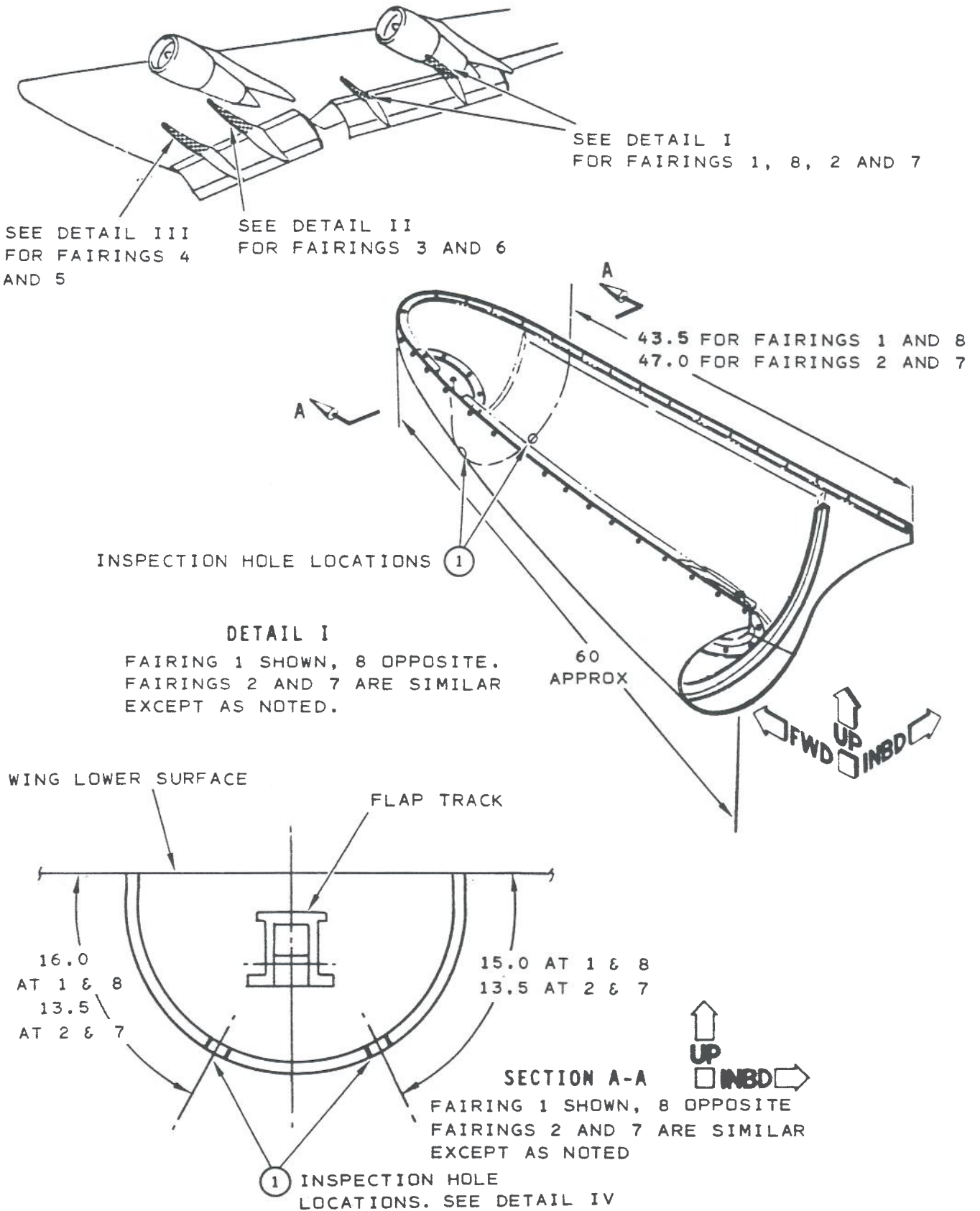


FIGURE 1. TYPE "A" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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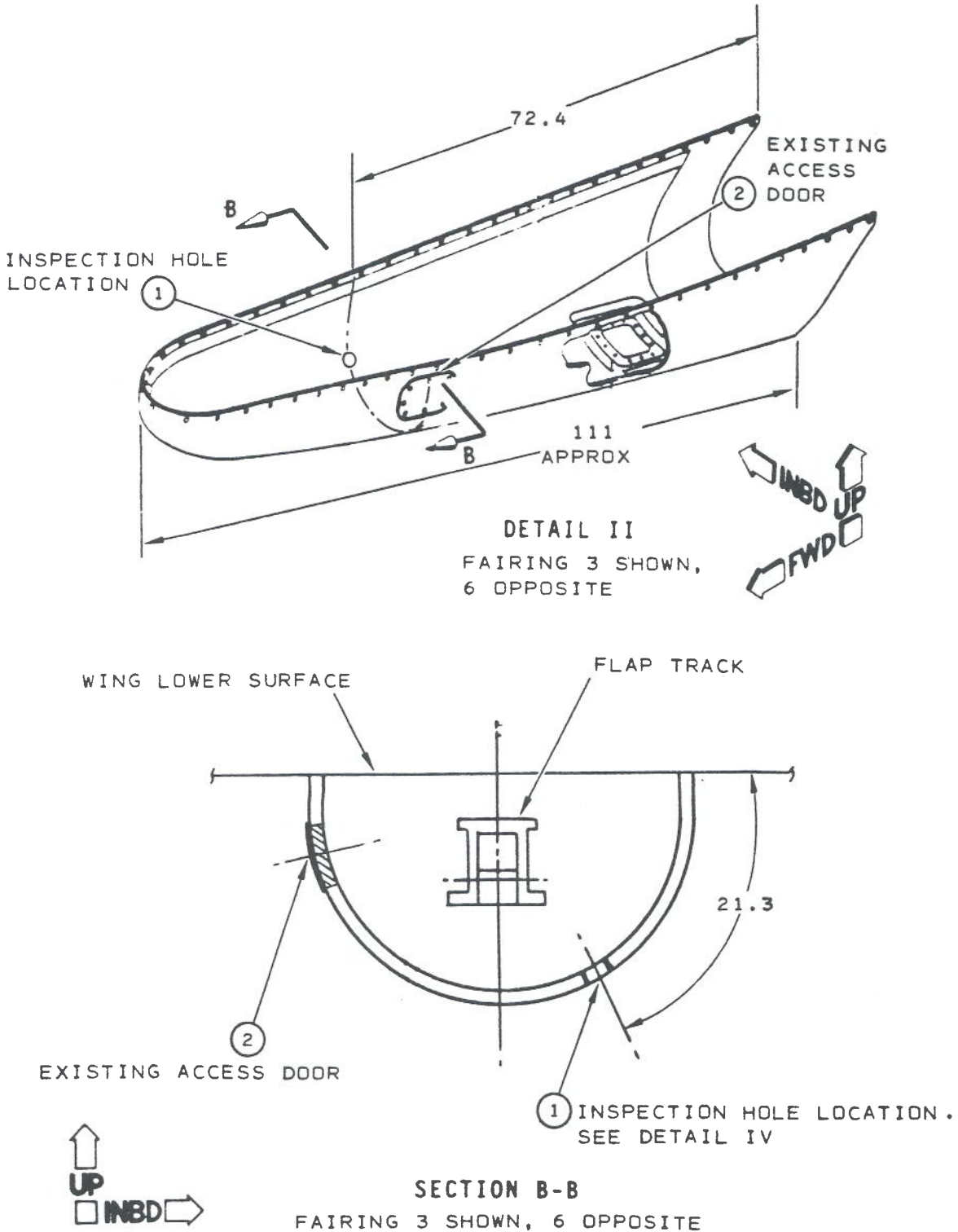


FIGURE 1. TYPE "A" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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747-57A2229
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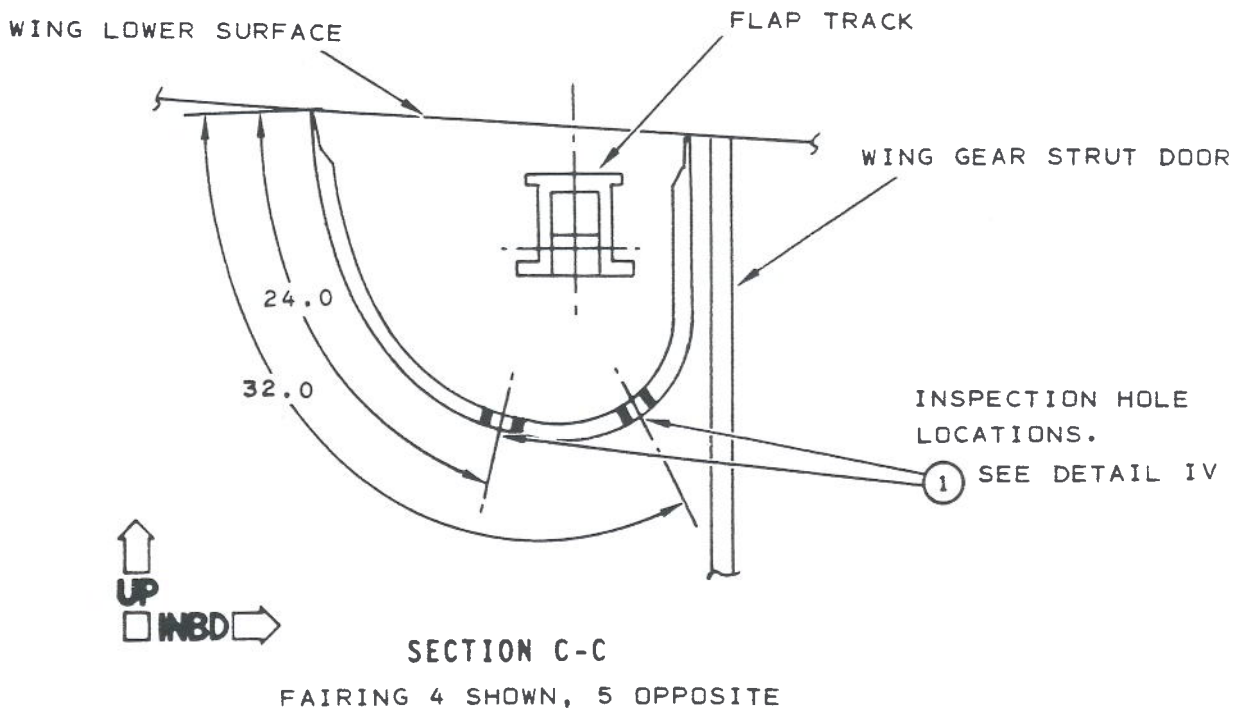
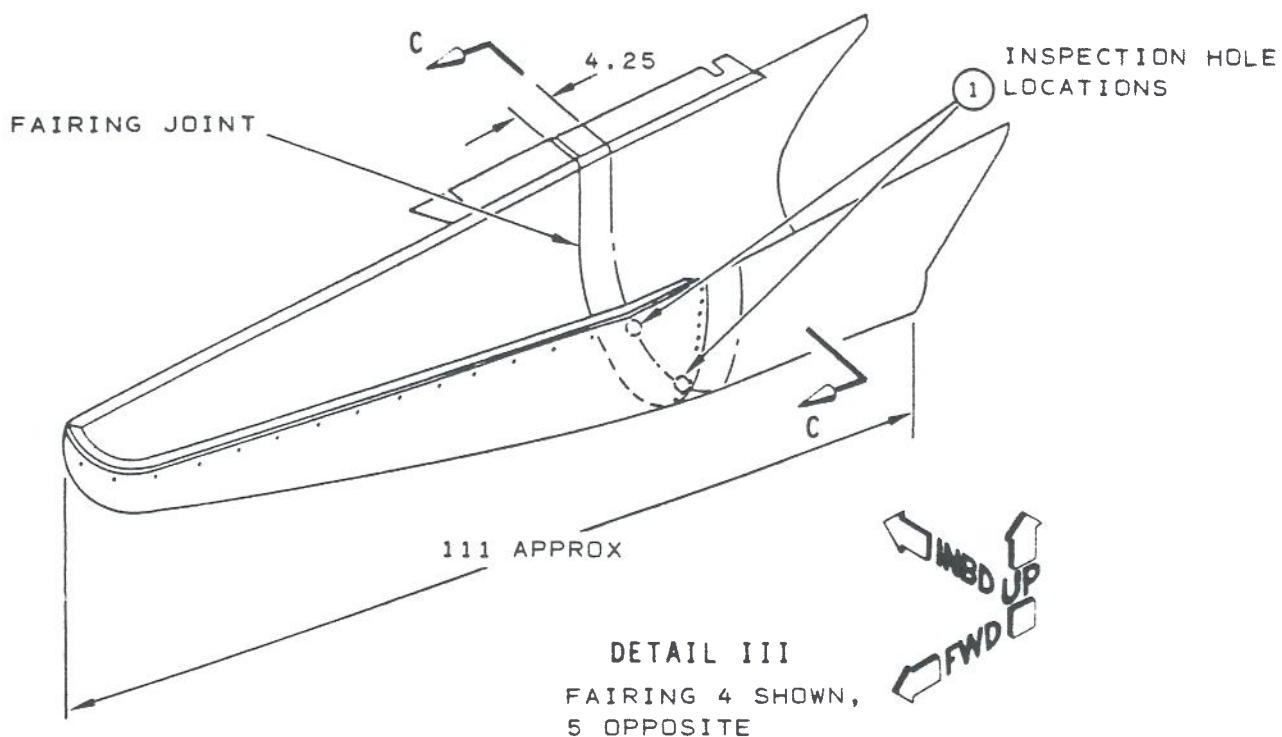
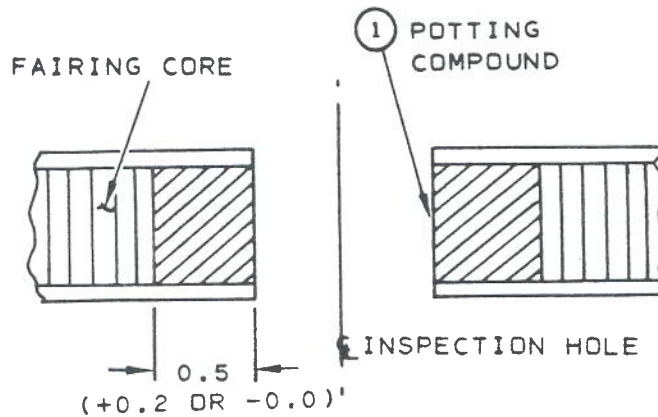


FIGURE 1. TYPE "A" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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DETAIL IV
TYPICAL, ALL PLACES
INSPECTION HOLE POTTING IN FAIRINGS

- ① Locate and install 1.00 to 1.50 inch diameter track inspection holes in each forward fixed fairing as shown:
 - a. All hole location dimensions are taken along fairing contours.
 - b. A piloted hole saw may be used for cutting the holes.
 - c. Scrape out core 0.50 to 0.70 inch deep radially beyond hole edge.
 - d. Pot each hole edge recess with BMS 5-28 Type 3 or equivalent Potting Compound, per Structural Repair Manual Subject 51-40-09, or operator's comparable procedure.

Use a smooth plug to set potting compound, and heat to 140 to 150°F for reducing cure time.
- ② On fairings 3 and 6, use the existing outboard side access panel, instead of cutting an outboard inspection hole.

FIGURE 1. TYPE "A" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

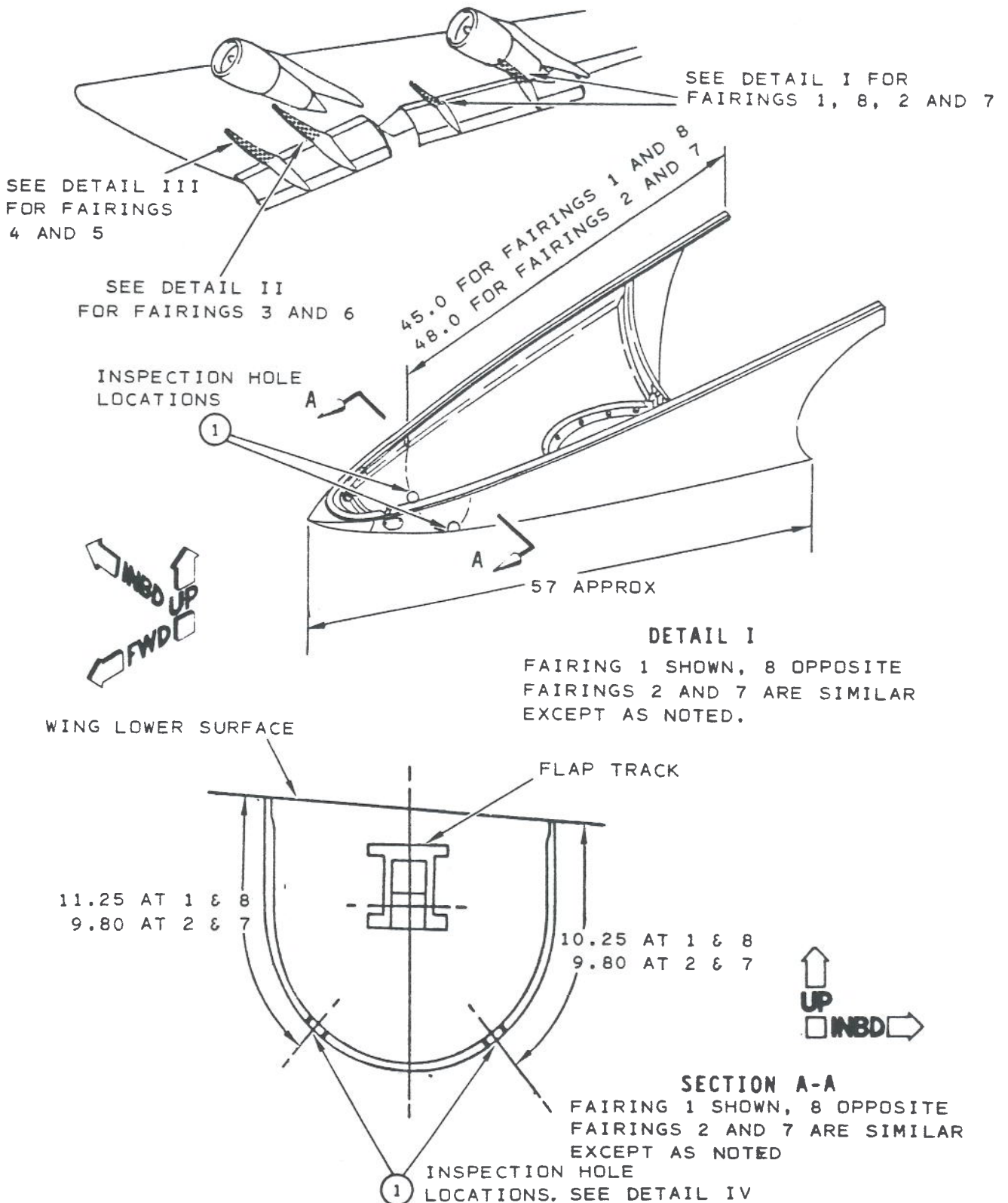


FIGURE 2. TYPE "B" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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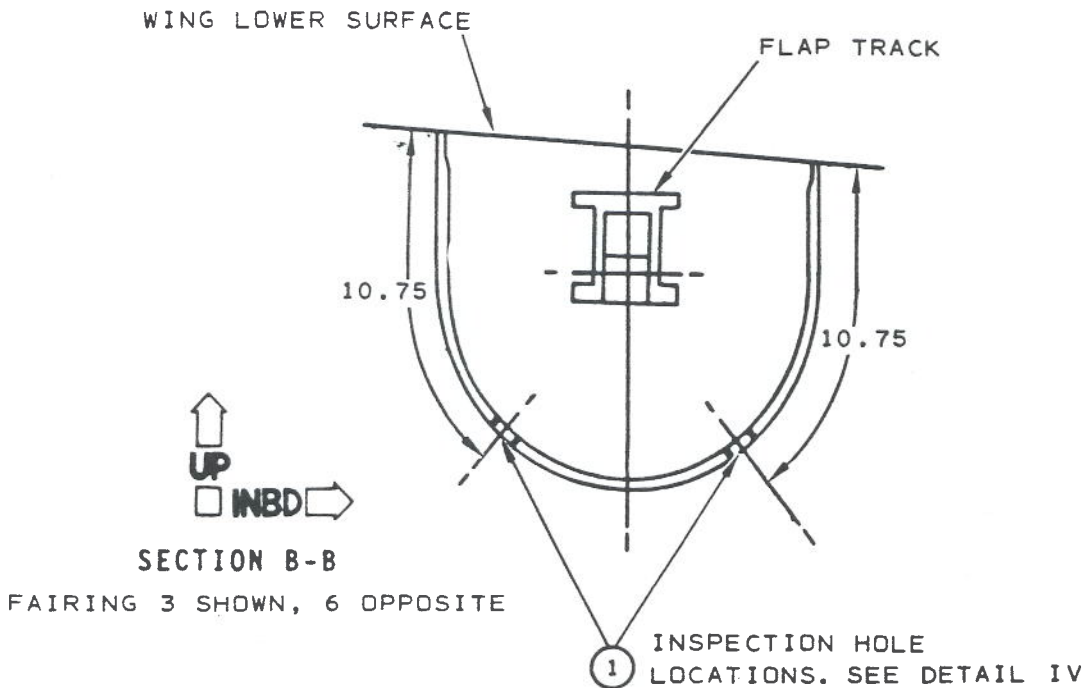
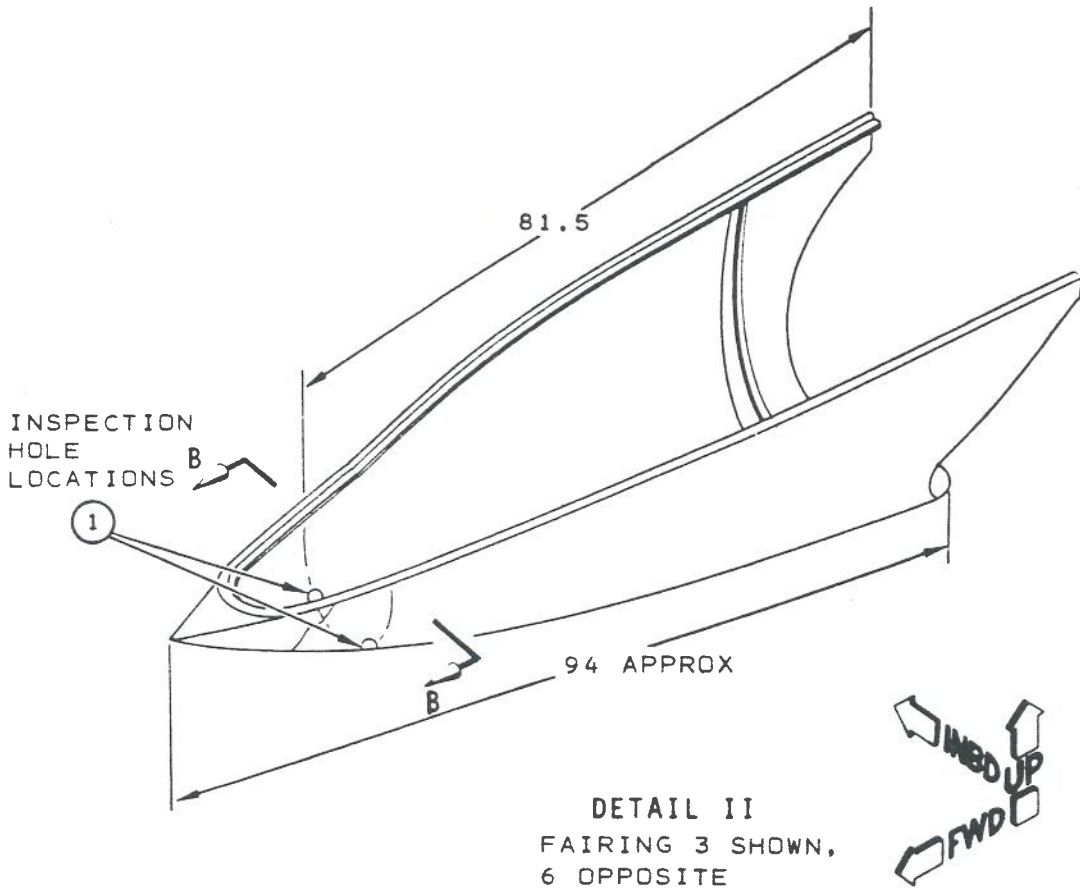


FIGURE 2. TYPE "B" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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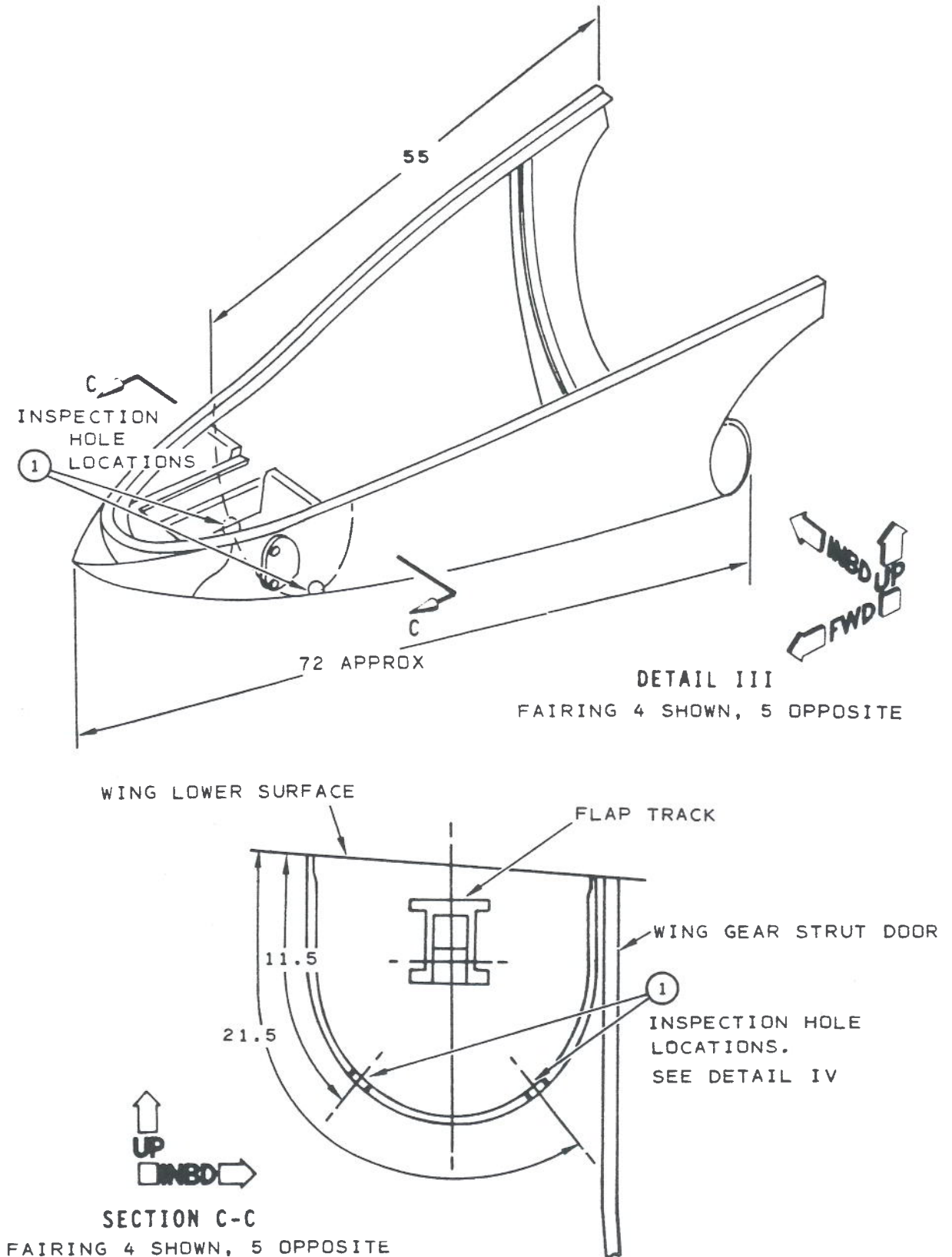
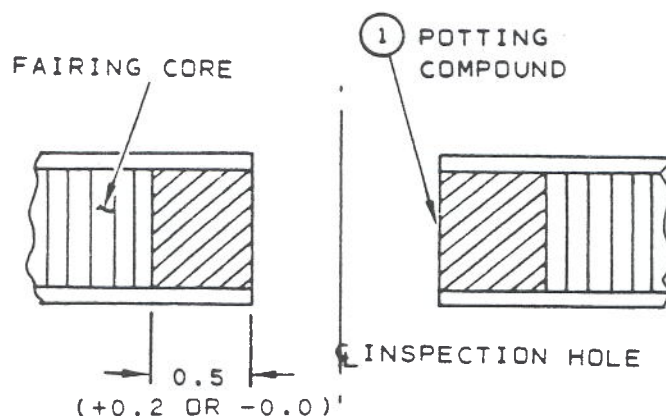


FIGURE 2. TYPE "B" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

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DETAIL IV
TYPICAL, ALL PLACES
INSPECTION HOLE POTTING IN FAIRINGS

- ① Locate and install 1.00 to 1.50 inch diameter track inspection holes in each forward fixed fairing as shown:
 - a. All hole location dimensions are taken along fairing contours.
 - b. A piloted hole saw may be used for cutting the holes.
 - c. Scrape out core 0.50 to 0.70 inch deep radially beyond hole edge.
 - d. Pot each hole edge recess with BMS 5-28 Type 3 or equivalent Potting Compound, per Structural Repair Manual Subject 51-40-09, or operator's comparable procedure.

Use a smooth plug to set potting compound, and heat to 140 to 150°F for reducing cure time.

FIGURE 2. TYPE "B" TRAILING EDGE FLAP TRACK INSPECTION HOLE INSTALLATION IN FORWARD FIXED FAIRINGS

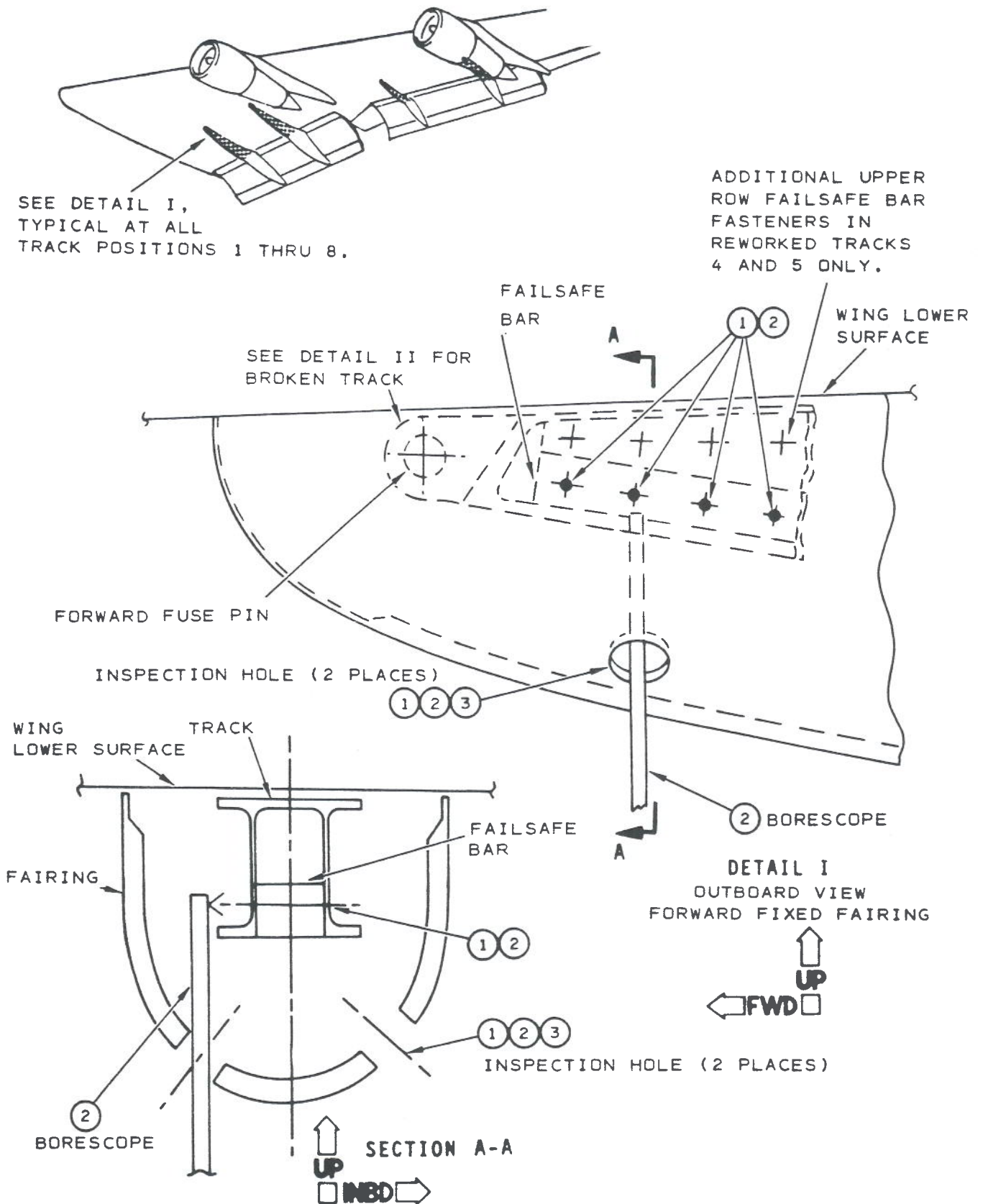
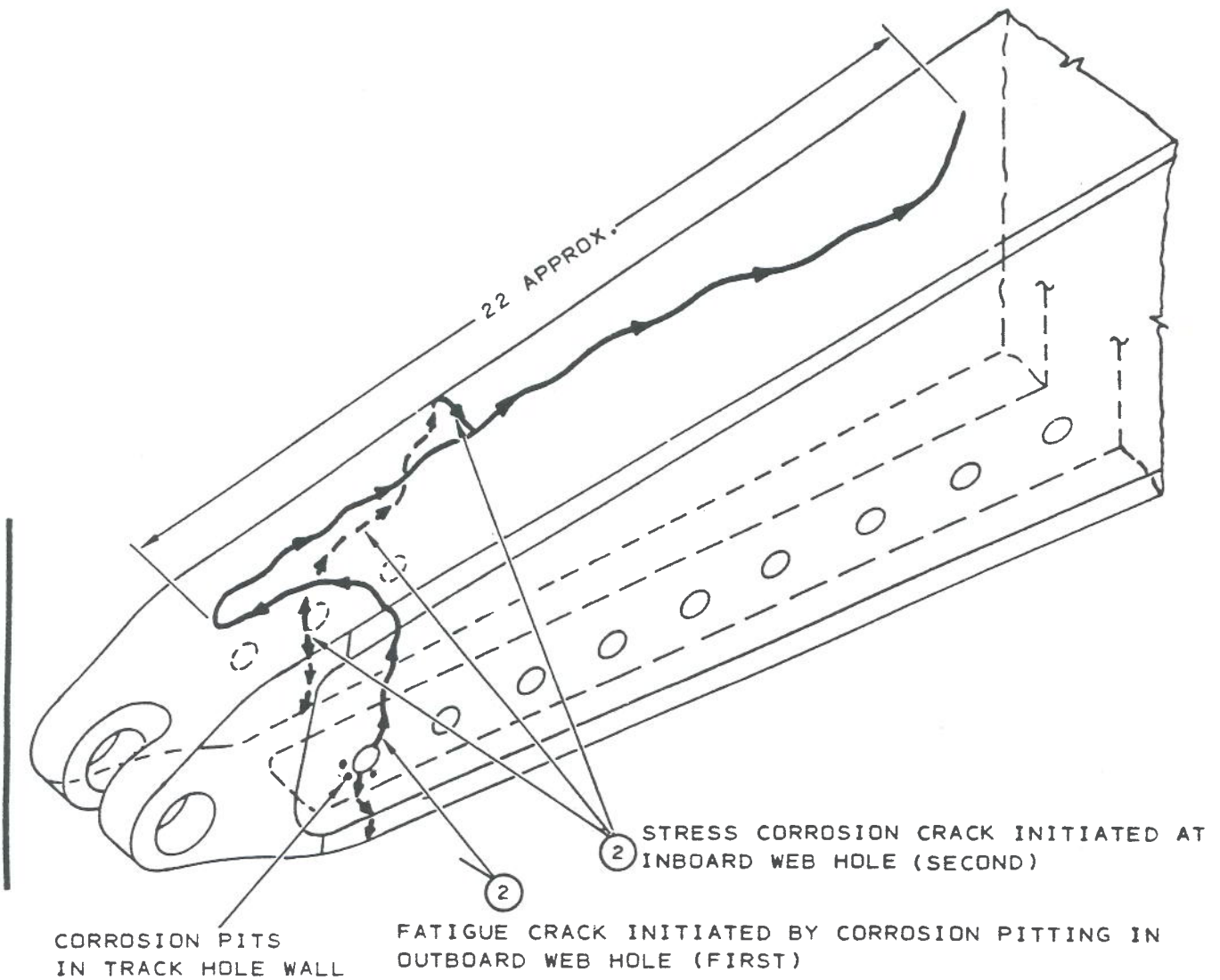


FIGURE 3. TRAILING EDGE FLAP TRACK FORWARD END CRACK INSPECTION

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DETAIL II
REPORTED BROKEN REWORKED TRACK 3
AT 45,436 FLIGHT-HOURS AND 12,106 FLIGHT-CYCLES



FIGURE 3. TRAILING EDGE FLAP TRACK FORWARD END CRACK INSPECTION

- ① Thoroughly clean both sides and the lower flanges surrounding the first four failsafe bar fasteners in each track, if and as required, using BMS 3-2 Type 1 Cleaning Solvent applied through the track access provided.

CAUTION: Provide protective covers over the wing gears, to avoid any contamination from cleaning solvent running out of inboard fixed track fairings 4 and 5.

- ② Accomplish a close visual inspection of each side near the lower flanges of each track, for cracks emanating from the first four failsafe bar fasteners.
- ③ Solvent clean each new inspection hole area externally, and cover hole with a circular piece of Y435 or equivalent Hi-Speed Tape, 5.0 inches in diameter, and centered over the hole within 0.30 inch.

FIGURE 3. TRAILING EDGE FLAP TRACK FORWARD END CRACK INSPECTION

BOEING

SERVICE BULLETIN

EVALUATION FORM

THIS EVALUATION FORM IS PROVIDED FOR THE PURPOSE OF COMMUNICATING INFORMATION TO THE BOEING ORGANIZATION RESPONSIBLE FOR SERVICE BULLETINS AND THEIR CONTENT. THE DATA YOU PROVIDE WILL BE USED TO IMPROVE THE BOEING SERVICE BULLETIN PROGRAM.

NOTE: THIS FORM IS NOT INTENDED TO BE USED FOR REQUESTING SERVICE BULLETIN INCORPORATION INTO BOEING TECHNICAL MANUALS.

S/B NO.: 747-57A2229 R6 S/B DATED: August 25, 1988

TITLE: WINGS - TRAILING EDGE FLAPS - REWORKED AND INTERIM PRODUCTION
FLAP TRACK FORWARD END CRACK INSPECTION

OPERATOR: _____ AIRPLANES AFFECTED per S/B effectivity list
 (check one): per corrected list below:

PREPARED BY: _____ TITLE: _____ DATE: _____

ORGANIZATION: _____ TELEX CODE: _____

EVALUATION:

check ONE of the following
five circles

AND

check ONE of the following
seven circles.

<input type="radio"/> - Will accomplish <input type="radio"/> - Being accomplished <input type="radio"/> - Have accomplished	-----	<input type="radio"/> - Inspection <input type="radio"/> - Partial incorporation <input type="radio"/> - Complete incorporation <input type="radio"/> - Service bulletin intent
<input type="radio"/> - Will not accomplish <input type="radio"/> - Decision deferred (explain)	-----	<input type="radio"/> - Uneconomical <input type="radio"/> - Service experience does not justify <input type="radio"/> - Other (explain below)

COMMENTS: Bulletin Quality, Suggested Improvements, Other.

FOR ADDITIONAL COMMENTS USE REVERSE SIDE

Please forward this form to your Boeing Field Service Representative or mail directly to:

Boeing Commercial
Airplane Company
P.O. Box 3707
Seattle, WA 98124

Attention: R. G. Kelsey
Manager,
Service Bulletin Engineering
Mail Stop 02-49

Nr.	<h1>British Airways</h1> <h2>Special check*</h2> <p>Additional work requirement*</p> <p>CAA Mandatory*</p> <p>Controlled by — Technical records*</p> <p>— Maintrol*</p>	Appendix 3b
Issue		
A/c type (s) <u>B747</u>		
AD Nr.		
Unit <u>FLAP TRACK</u>		
Pt. Nr.		

Title NDT ULTRASONIC INSPECTION OF FWD END OF FLAP TRACKS 1 THRU 8

Compliance (never exceed) WITHIN 15 LOGS FROM 2400 HRS ON 11/9/88

Originators ref. _____ Source doc. _____ MR Nr. _____

Aircraft/equipment applicability G-AWNA THRU G-AWNO, G-BJXN, G-VIRG, G-VGIN

Feedback reqd. <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Spares affected <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Warranty affected <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Special eqpt. reqd. <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*
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Originator <u>J. BRAITHWAITE</u>	Approved <u>M. S. Morris</u>
Title <u>STRUCTURES DEVELOPEMENT ENG</u>	Title <u>PDI AIRFRAME</u>
Location <u>L306 TBA</u>	Date <u>11/9/88</u>
Extn. <u>22130</u> Date _____	

Production planning use

Start date	Immediate	Date	To be advised
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To be achieved by	Outstations	LHR/LGW	SSU	Minors	Majors	Workshops	
On	Major check	Transit	Nightstop	Night base input	Service check	Inter check	Other

Manhour estimates	A/E	E/I	Supervisory	Other	Elapsed time	Hours

Materials/tools/test equipment required	Availability promise	Location

Nr.	British Airways CAA APPROVAL DAI/8566/78 Special check* Additional work requirement* CAA Mandatory* Controlled by — Technical records* — Maintrol*	A/c regn.
Iss		Document control nr.
A/c types B747		Date
AD Nr.		Station
Unit FLAP TRACKS		Shop
Pt. nr.		Feedback reqd. (yes/no)
Page 1 of 7		

Reason **FRACTURED TRACK NO 6 ON G-AWNM**

Compliance (never exceed)

Technical services contact **JONATHAN BRAITHWAITE / M.J. MORRIS 22130** Extn.

Production planning contact Extn.

Description of task	Extn.		
	Delgn cat	Item comp	Cert cirnce
<p>LOWER MAIN T/E FLAPS AND REMOVE EACH OF THE FORWARD FIXED FAIRINGS FROM PRE-MOD STANDARD FLAP TRACKS 1 THRU 8 AS PER MM27-51-26. A SUMMARY OF PRE-MOD STANDARD FLAP TRACK IDENTIFICATION IS GIVEN ON PAGE 4.</p> <p>1. CLEAN EXPOSED FORWARD END OF THE TRACK PAYING PARTICULAR ATTENTION TO THE FIRST FOUR BOLT HOLES (INBD AND OUTBD).</p> <p>2. INSPECT INDICATED BOLT INSTALLATIONS FOR ANY OBVIOUS SIGNS OF ROTATION/FRETTING, SEALANT OR PAINT FINISH DETERIORATION OR ANY OTHER SIGNS OF DISTRESS AROUND BOLT HEADS AND NUTS. REPORT ANY FINDINGS TO STRUCTURES DEVELOPEMENT BEFORE FURTHER FLIGHT.</p>			

Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

Signature: Stamp No: Date:

Nr.	British Airways CAA APPROVAL DAI/8566/78 Special check* Additional work requirement* CAA Mandatory* Controlled by — Technical records* — Maintrol*	A/c regn.		
I:		Document control nr.		
AD nr.		Date		
Page 2 of 7		Station		
Details of task		Shop		
		Deign cat	Item comp	Cert cirnce

Details of task

3. CARRY OUT NOT ULTRASONIC TECHNIQUES
 J-54-U-100, J-57-U-117, AND J-57-U-119

NOTE: ANY ULTRASONIC INDICATION MUST BE RESOLVED AS EITHER SPURIOUS OR A DEFINITE CRACK. INFORM STRUCTURES DEVELOPEMENT ENGINEERING. IF A CRACK IS SUSPECTED, ATTEMPT TO RESOLVE BY LOCAL PAINT* REMOVAL AND DYE PENETRANT/ POSSIBLE MAGNETIC PARTICAL INSPECTION. SURFACE EDDY CURRENT SHOULD NOT BE ATTEMPTED. (CADMIUM PLATED STEEL).

* CAUTION; REF SPM 20-22-15 (STRIPPER TURCO 5351)

IF THE ABOVE DOES NOT RESOLVE THE INDICATION, ONLY THEN SHOULD THE BOLT BE REMOVED FROM THE TRACK FOR BORE HOLE INSPECTION.

IF BOLT IS REMOVED;

a) CLEAN UP HOLE USING SCOTCH-BRITE CN MANDREL OR 120/240 GRIT ABRASIVE PAPER AS NECESSARY.

DO NOT USE ANY FORM OF GRINDING WHEEL

Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

Signature Stamp No. Date

Nr.	British Airways CAA APPROVAL DAI/8566/78 Special check* Additional work requirement* CAA Mandatory* Controlled by — Technical records* — Maintrol*	A/c regn.		
Iss.		Document control nr.		
AD nr.		Date		
Page 3 of 7		Station		
		Shop		
		Deign cat	Item comp	Cert cirnce

Details of task

- b) CARRY OUT VISUAL/NDT EDDY CURRENT TO CONFIRM CRACK OR CORROSION DAMAGE. ANY CONFIRMED DEFECT REQUIRES TRACK CHANGE PRIOR TO FURTHER FLIGHT.
- c) IF ANOMALY/SPURIOUS INDICATION IS REMOVED, PRIMER PAINT HOLE AND INSTALL BOLT WET USING PRI422 OR EQUIVALENT. ENSURE BOTH HEAD AND NUT ARE FILLET SEALED FOLLOWING INSTALLATION
- D) RECORD ACTION ON SHEETS 6 AND 7
- 4. SPRAY FORWARD EXTERIOR END OF BEAMS WITH 'ASTROLAN' OR EQUIVALENT.
- 5. SPRAY FORWARD INTERIOR END OF BEAMS WITH 'ASTROLAN' OR EQUIVALENT.
- 6. RE-INSTALL FORWARD FIXED FAIRINGS.

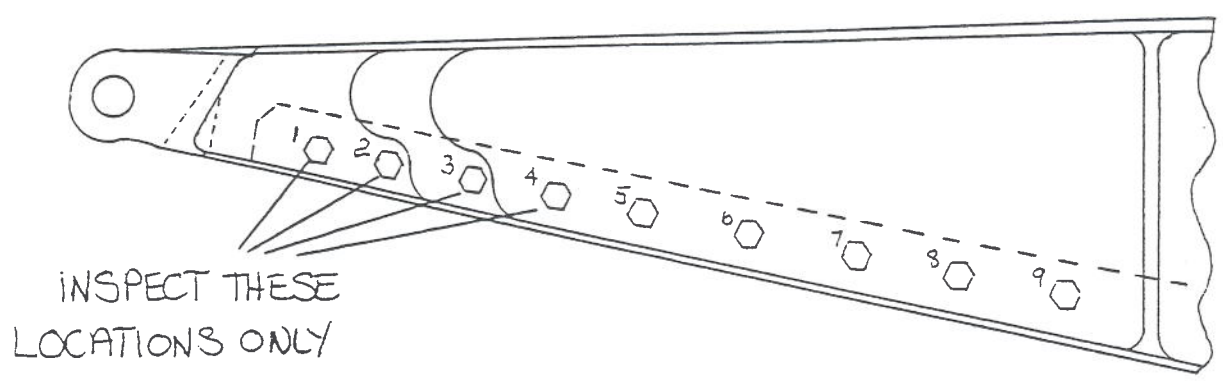
Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

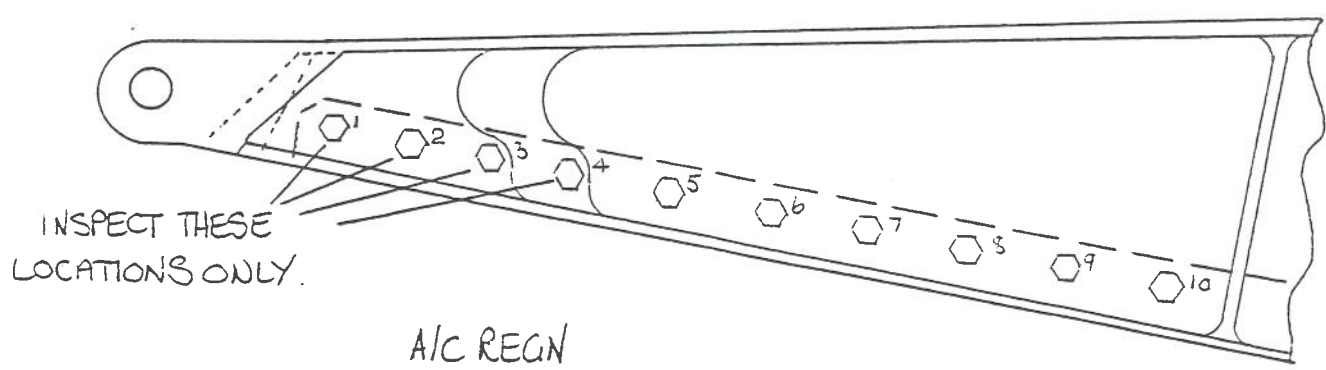
Signature Stamp No. Date

ATTACHMENT TO SPECIAL CHECK 747/57/ 1x

FLAP TRACK N^os 1 AND 8



FLAP TRACKS N^os 2 AND 7

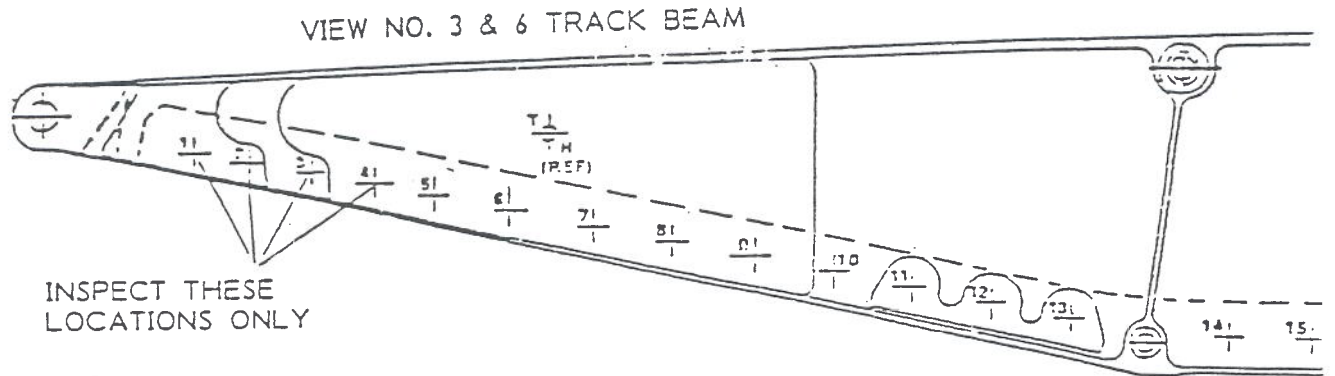


A/C REGN _____

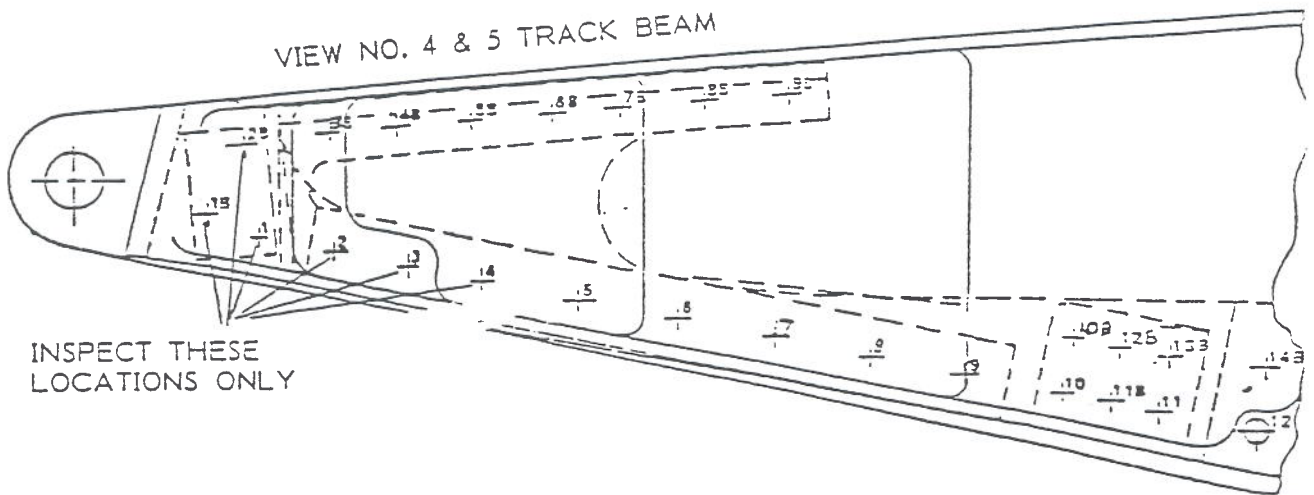
RECORD CRACK LOCATION / ACTION

TRACK N ^o				
HOLE N ^o				
INBD / OUTBD				
CRACK / ACTION				

ATTACHMENT TO SPECIAL CHECK 747/57/ / X



FWD.



A/C REGN _____

RECORD CRACK LOCATION/ACTION

TRACK NUMBER				
HOLE NUMBER				
INBD/OUTBD				
CRACK/ACTION				

Nr 747/57/1551/Y
 Issue A
 A/c type (s) B 747
 AD Nr. 011-09-88
 Unit FLAP TRACKS
 Pt. Nr.

British Airways

Special check*

~~Additional work requirement*~~

CAA Mandatory*

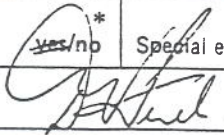
Controlled by — Technical records*
 — Maintrol*

Title BOLT REMOVAL, HOLE BORE INSPECTION, CORROSION CLEAN UP OF TRACKS 1 TO 8.

Compliance (never exceed) NOT LATER THAN 31 ST OCTOBER 1988

Originators ref. EAS A 1021 JB. Source doc. MR Nr.

Aircraft/equipment applicability 9-AWNA to 9-AWNO Inclusive, 9-BJXN,
 9-VIRG, 9-VGIN

Feedback reqd. <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Spares affected <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Warranty affected <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*	Special eqpt. reqd. <input checked="" type="checkbox"/> yes/ <input type="checkbox"/> no*
Originator T. BRAITHWAITE		Approved 	
Title DEV. ENG. STRUCTURES		Title H. A. S. E	
Location ROOM 306 TBA 5405		Date 16. 9. 88	
Extn. 22130 Date 16. 9. 88		Date 16. 9. 88	

Production planning use

Start date	Immediate	Date	To be advised
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To be achieved by	Outstations	LHR/LGW	SSU	Minors	Majors	Workshops
On	Transit	Nightstop	Night base input	Service check	Inter check	Other

Manhour estimates	A/E	E/I	Supervisory	Other	Elapsed time	Hours
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Materials/tools/test equipment required	Availability promise	Location
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No. 747/57/1381/X	British Airways CAA APPROVAL DAI/8566/78 Special check* Additional work requirement* CAA Mandatory* Controlled by — Technical records* — Maintrol*	A/c regn. See Applicability
Issue A		Document control nr.
A/c types B 747		Date
AD Nr. 011-09-88		Station
Unit FLAP TRACKS		Shop
Pt. nr.		Feedback reqd. (yes/no)
Page 1 of 8		

Reason To comply with CAA AD Nr. 011-09-88

Compliance (never exceed) Not later than 31st. October 1988

Technical services contact JON BRAITHWAITE / M.J. MORRIS Extn. 22130

Production planning contact Extn.

Description of task	Delgn cat	Item comp	Cert clnce
1. Lower main T/E flaps and remove each of the forward fixed fairings from the pre-mod standard flap tracks 1. through 8. (Ref. page 3. and MIT 27-51-26)			
2. Clean forward end of tracks in region of 1st 4. lower bolts. (plus bolts 1B and 2B on tracks 4 and 5.)			
3. Remove designated bolts from inboard and outboard sides of the tracks. On tracks 4 and 5. remove bolts 1, 3 and 2B inboard and outboard and carry out instructions 4. through 14. Then remove bolts 1, 2, 4 and 1B inboard and outboard and carry out instructions 4. through 14			
4. Clean up holes from which bolts have been removed using scotch-brite on mandrel or 120/240 grit abrasive paper as necessary			

Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

Signature Stamp No. Date

Nr. 747/57/1381/X
 Issue A
 ID nr. 011-09-88
 Page 2 of 8.

British Airways

CAA APPROVAL DAI/8566/78

Special check*

~~Additional work requirement*~~

CAA Mandatory*

Controlled by — Technical records*
 — Maintrol*

A/c regn.
 See Appendix 1
 Document control nr.
 Date
 Station
 Shop

Delgn cat	Item comp	Cert cirnce
-----------	-----------	-------------

Details of task

5. Inspect the bores of the holes for cracks and corrosion pitting using magnetic particle detection technique. J-57-MP - _____ and a magnifying boroscope.
6. If no defects are found inspect the bores of the holes for cracks using h.f.e.c. technique J-57-E - _____.
7. If defects are found local repair may be carried out by suitably experienced mech. workshop personnel only, as follows:
 - a) Surface corrosion.
Remove using a rotary drill and surface maps.
 - b) Cracks or pitting corrosion
Blend up to 0.010 inch deep and up to 10% of surface area of the steel track using an air grinder and suitable stones.

Note - Blending in excess of above limits may only be carried out under instruction from Structures / Processes and Standards Engineering. (Ref. Appendix 1.)

Restore surface finish using a rotary drill and surface maps.

Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

Signature Stamp No. Date

Nr. 747/57/1581/X	British Airways CAA APPROVAL DAI/8566/78 Special check* Additional work requirement* CAA Mandatory* Controlled by — Technical records* — Maintrol*	Air regn. See Applicability.
Issue A		Document control nr.
D nr. 011 - 09 - 88		Date
Page 3 of 8.		Station
		Shop
		Deign cat
		Item comp
		Cert crnce

Details of task

8. Carry out Ammonium Per sulphate surface temper check by suitably experienced plating shop personnel using swab application only.
9. Re-inspect hole bores using magnetic particle detection technique J-57-MP-_____. and a magnifying boroscope.
10. Repeat instructions 7-9 as required to remove cracks and corrosion fitting.

Note - All local blending shall be covered by DDA issued by Structures Engineering.

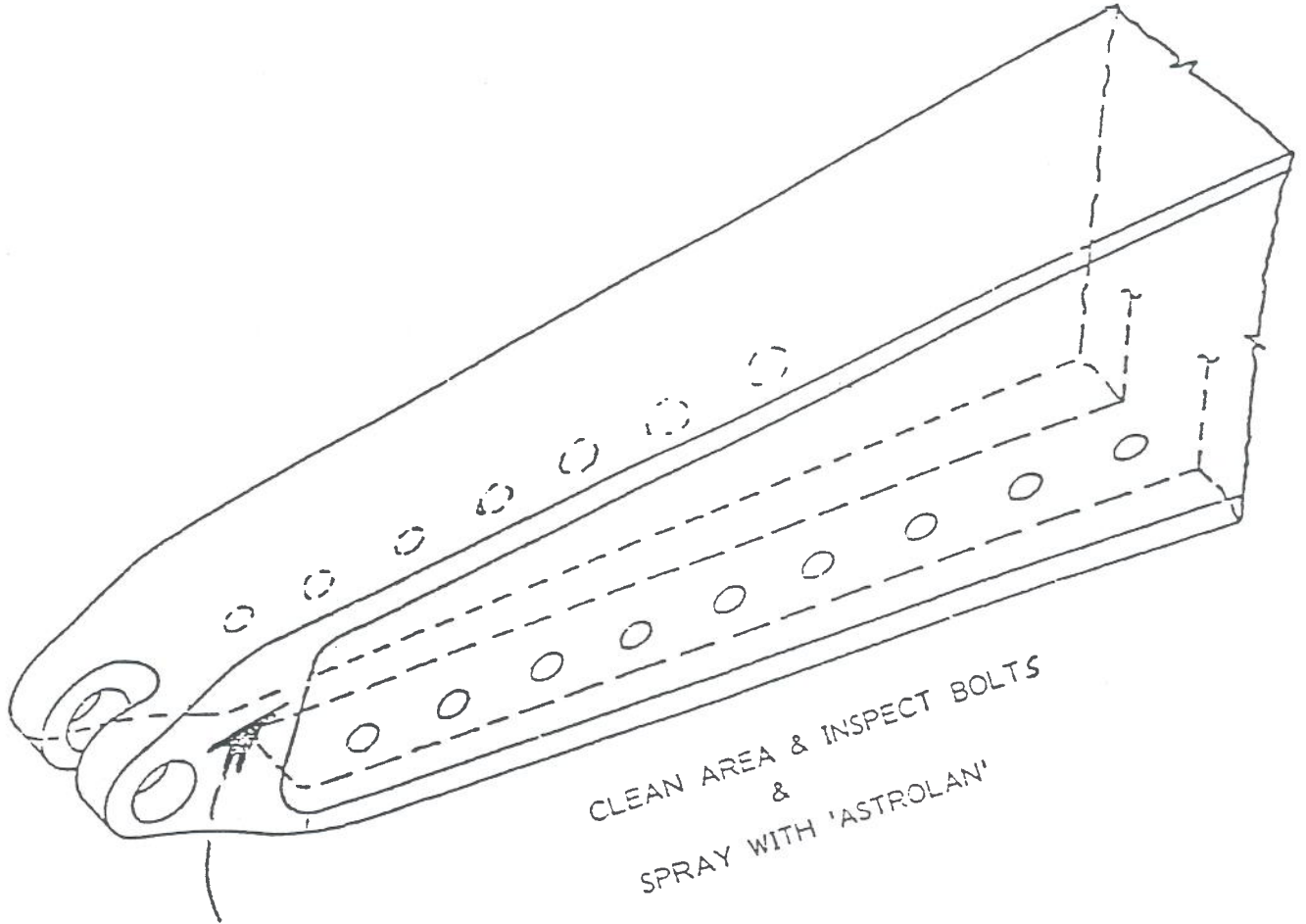
11. Desmut all holes with Ardox 3961.
12. Clean the bores of all holes with Trichloroethylene.
13. Inspect bolts for corrosion and general condition. If necessary replace by new bolts (Ref Appendix 2.)
14. Assemble bolts with PR 1436 GA 1-2 polysulphide sealant. Ensure that all blended voids are filled with sealant.
15. Record Action in pages 7 and 8.

Full findings to be recorded above, on a continuation sheet or in the technical log.

Certificate of Release to Service:- The work recorded above has been carried out in accordance with the requirements of the Air Navigation Order for the time being in force and in that respect the aircraft/equipment is considered fit for release to service.

Signature Stamp No. Date

ATTACHMENT TO SPECIAL CHECK 747/57/1330/X

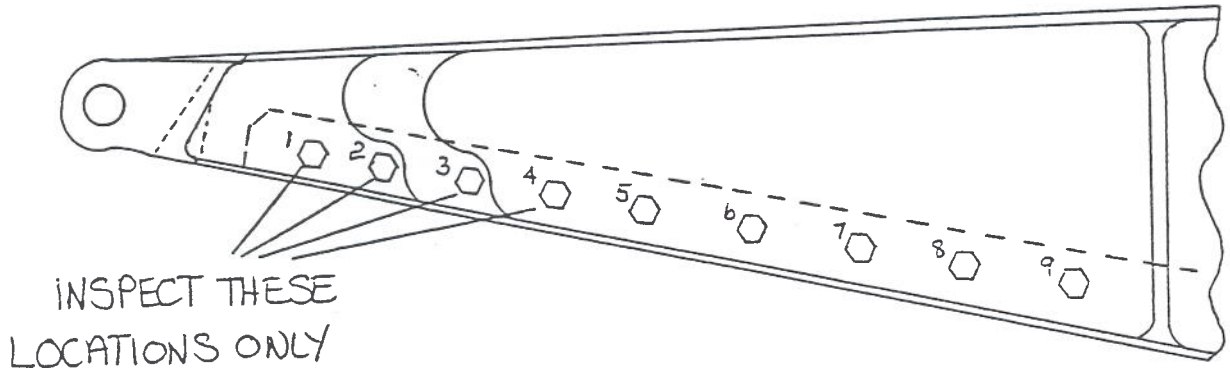


CLEAN AREA & INSPECT BOLTS
&
SPRAY WITH 'ASTROLAN'

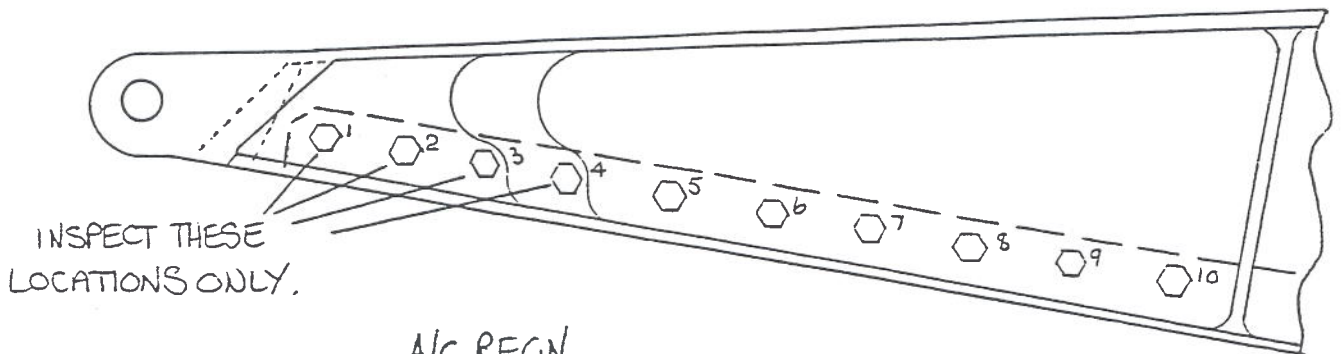
SPRAY INSIDE TRACK
USING 'ASTROLAN' OR EQUIVALENT (LPS3) ABOVE FAIL SAFE CHORD.
ENSURE THOROUGH COVERAGE

ATTACHMENT TO SPECIAL CHECK 747/57/1330 /X

FLAP TRACK N^os 1 AND 8



FLAP TRACKS N^os 2 AND 7



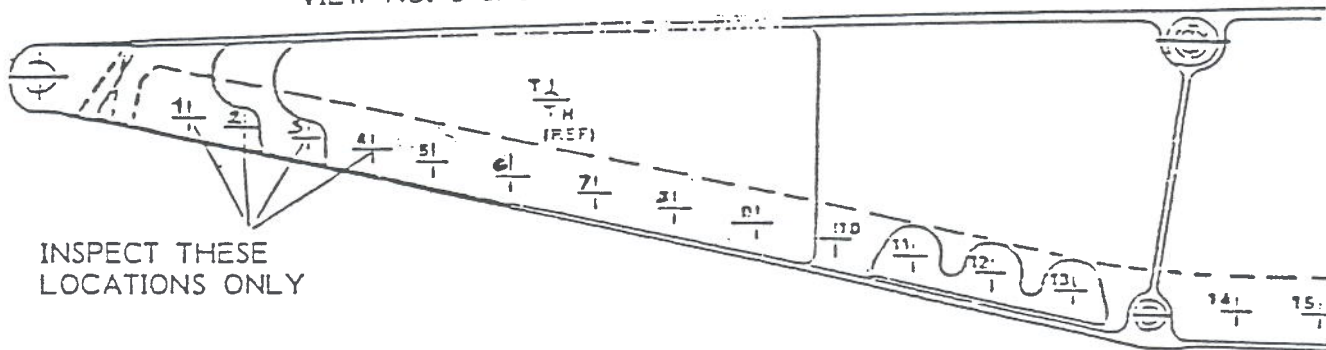
A/C REGN _____

RECORD CRACK LOCATION / ACTION

TRACK N ^o				
HOLE N ^o				
INBD / OUTBD				
CRACK / ACTION				

ATTACHMENT TO SPECIAL CHECK 747/57/1380/ X

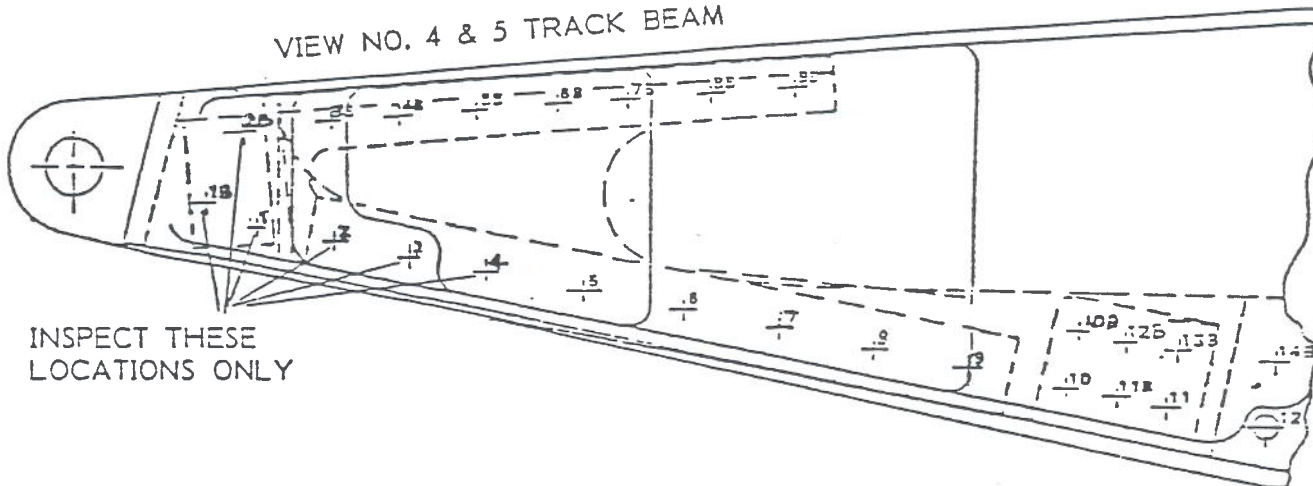
VIEW NO. 3 & 6 TRACK BEAM



INSPECT THESE LOCATIONS ONLY

FWD.

VIEW NO. 4 & 5 TRACK BEAM



INSPECT THESE LOCATIONS ONLY

A/C REGN _____

RECORD CRACK LOCATION/ACTION

TRACK NUMBER				
HOLE NUMBER				
INBD/OUTBD				
TRACK/ACTION				

Civil Aviation Authority
 Safety Regulation Group
 Aviation House
 South Area
 Gatwick Airport
 Gatwick
 West Sussex RH6 0YR
 Tel: Switchboard 0293 567171
 Direct Dial 0293 57 3149
 Telex: 878753 Fax: 0293 573999



Maintenance Standards Department
 9/97/CtAw/42

19 September 1988

CAA EMERGENCY AIRWORTHINESS DIRECTIVE 011-09-88 REVISION 1
 BOEING 747 SERIES AIRCRAFT
 INSPECTION OF FLAP TRACKS FOR CRACKS AND CORROSION

APPLICABILITY

Applicable to Boeing 747 flap tracks as listed in Boeing Service Bulletin 747-57-A2229.

COMPLIANCE

Part A - Within 15 landings of receipt of the original Directive (or 35 landings since last inspect) and subsequently at 35 landing intervals.

Part B - Complete by 31 October 1988.

Part C - Immediately and until compliance with Part B has been achieved.

REQUIREMENT

For all affected tracks for the 4 most forward lower boom bolt holes each side:-

Part A - Inspect for cracks (bolt in situ) using ultrasonic technique in BSB 747-57-A2229 below holes and BA technique U119 (or equivalent) above holes.

Part B - Inspect for corrosion visually with bolts removed, clean and rework using approved procedures. Caution: Material is susceptible to machining abuse.

Part C - 1. All operations shall be planned and conducted on the basis of using flaps 25 for landing. Flaps 30 shall not be used unless an emergency arises that necessitates the use of this configuration.

2. Carriage of a 5th engine is not permitted.


 R J TEW

Maintenance Approvals Section

Civil Aviation Authority
 Safety Regulation Group
 Aviation House
 South Area
 Gatwick Airport
 Gatwick
 West Sussex RH6 0YR
 Tel: Switchboard 0293 567171
 Direct Dial 0293 57 3149
 Telex: 878753 Fax: 0293 573999



Maintenance Standards Department

9/97/CtAw/42

19 December 1988

CAA EMERGENCY AIRWORTHINESS DIRECTIVE 011-09-88 REVISION 2
 BOEING 747 SERIES AIRCRAFT
 INSPECTION OF FLAP TRACKS FOR CRACKS AND CORROSION

APPLICABILITY

Applicable to Boeing 747 flap tracks as listed in Boeing Service Bulletin 747-57-A2229.

COMPLIANCE

- | Part A - Within 15 landings of receipt of the original Directive (or 35 landings since last inspect) and subsequently at 35 landing intervals for tracks 1,2,3,6,7 & 8, and 300 landings for tracks 4 & 5, until Part B compliance including hole oversize modification e.g. BSB 747-57-A2229 rev 7 fig 7.
- | Part B - Complete by 31 October 1988 for tracks 1,2,3,6,7,8 and 4 & 5 (interim) and 30 April 1990 for tracks 4 & 5 (rework).
- | Part C - Immediately and until compliance with Part B has been achieved.
- | Part D - Interval not exceeding 30 months.
- | Part E - By 30 April 1992
- | Part F - Interval not exceeding 1000 landings

REQUIREMENT

- | For all affected tracks for the 4 most forward lower boom holes each side plus holes 1B & 2B for track 4 & 5 (rework):
- | Part A - Inspect for cracks (bolt in situ) using ultrasonic technique in BSB 747-57-A2229 below holes and BA technique U119 (or equivalent) above holes.
- | Part B - Inspect for corrosion visually with bolts removed, clean and rework using approved procedures. Caution: Material is susceptible to machining abuse.

- Part C - 1. All operations shall be planned and conducted on the basis of using flaps 25 for landing. Flaps 30 shall not be used unless an emergency arises that necessitates the use of this configuration.
2. Carriage of a 5th engine is not permitted.

| Part D - Re-inspect with bolts/sleeves removed in accordance with BSB 747-57-A2229 rev 7 fig 8 or equivalent.

| Part E - Replace tracks

| For all affected tracks at all fastener holes:

| Part F Visually inspect in accordance with BSB 747-57-2146.

| This Directive supersedes the requirements of FAA ADs 88-16-03 and T88-21-51.



R J TEW

Maintenance Approvals Section

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