



RUSSIAN FEDERATION  
MINISTRY OF TRANSPORT OF THE RUSSIAN FEDERATION  
FEDERAL AIR TRANSPORT AGENCY

## AIRWORTHINESS DIRECTIVE

April 8, 2019

No. 2019-322-02

Effectivity – RRJ-95 aircraft

Developer State - Russian Federation

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The corrective actions set forth in this Airworthiness Directive are mandatory. No operator shall operate an aircraft covered by this Airworthiness Directive, except as required by this Directive.

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Due to detection of crack on outer-wing lower panel of aircraft RRJ-95 resource test bench around the cut-out for access panel 574AB and 674AB and consideration of necessity to amend Chapter 04 “Airworthiness Limitation Section” of RRJ-95 Aircraft Maintenance Manual with regard to monitoring the condition of Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB

### WE HEREBY PROPOSE:

1. In accordance with technical decision No. RRJ0000-OR-470-3080 dated 28.02.2019 (Decision), for aircraft RRJ-95 with more than 3500 FC, at next periodic maintenance of minimum frequency of 750 FH, 100 days and a multiple thereof (whichever is earlier), AMM task 57-21-00-250-811 “Special Detailed Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel” shall be performed one time only.

2. Results of the performed activities as per paragraph 1 of the Decision shall be sent to SCAC's Operational Situation Center through [customer@scac.ru](mailto:customer@scac.ru).

3. In case damages on the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB are detected, the aircraft operation is allowed only after implementation of recommendations provided by aircraft Manufacturer upon consideration of results of activities performed as per paragraph 1 of the Decision.

**Attachment:** Decision dated 28.02.2019 No. RRJ0000-OR-470-3080 on 11 sheets in one copy.

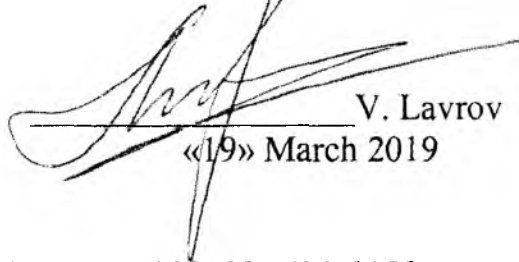
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Deputy Head of the  
Federal Air Transport Agency

A.A. Novgorodov

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**“APPROVED BY”**  
Chief Designer of program SSJ  
SCAC



V. Lavrov  
«19» March 2019

**TECHNICAL DECISION RRJ0000-OR-470-3080**

on aircraft RRJ-95 fleet-wide continued airworthiness due to detection of damages of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB during performance of tests on resource test bench

due to detection of crack on outer-wing lower panel of aircraft RRJ-95 resource test bench around the cut-out for the access panel 574AB and 674AB and in order to take a decision on the necessity to amend the Chapter 04 “Airworthiness Limitation Section” of RRJ-95 Aircraft Maintenance Manual with regard to monitoring of condition of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB the following decision is taken

**DECISION:**

1. For aircraft RRJ-95 with more than 3500 FC at next periodic maintenance 750 FH, 100 days interval or equal to them (whichever is earlier) the AMM task 57-21-00-250-811 “Special Detailed Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel” shall be performed for one time only.
2. Results of the performed activities as per Clause 1 hereto shall be sent to SCAC’s Operation and Situational Center through [customer-care@scac.ru](mailto:customer-care@scac.ru).
3. In case damages detected on the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB have been detected aircraft operation is allowed only after implementation of recommendations provided by aircraft Manufacturer upon consideration of results of activities performed as per Clause 1.

- Attachment:
- 1) AMM task 57-21-00-250-811 “Special Detailed Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel”;
  - 2) NDT 57-21-09-007 “Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel ”.

**RRJ-95 AIRCRAFT MAINTENANCE MANUAL**
**MAIN STRUCTURE — INSPECTION/CHECK**
**TASK 57-21-00-250-811**
**Special Detailed Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel**

 1. Reason for the Job

TBD.

 2. Logistics

## A. References

<u>Task</u>	<u>Title</u>
<b>57-00-00-920-801</b>	Wings Maintenance and Safety Precautions
<b>NDT 57-21-09-007</b>	
<b>SRM</b>	Structure Repair Manual

## B. Tools and Ground Support Equipment

<u>Designation</u>	<u>Description</u>	<u>Quantity</u>
No specific	Flashlight	1
<b>GE-06-002</b>	Wing and Fuselage Platform	1
<b>KI-20-001</b>	Standard Aircraft Line Maintenance Tool Set (Technician Set)	1
<b>KI-20-004</b>	Electronics Set	1

## C. Ingredients and Consumable Products

<u>Designation</u>	<u>Description</u>	<u>Quantity</u>
<b>NP-008</b>	Cleaning rags	
<b>ST-004</b>	Petroleum solvent	

## D. Access

**574AB, 674AB**

 3. Job Set-Up

## A. Safety Precautions

 (1) Obey the wings maintenance and safety precautions (*Ref. Task 57-00-00-920-801*).

## B. Aircraft Maintenance Configuration before the Task Performance

(1) Attach the warning tag to the FLAPS lever to tell the persons not to change its position.

(2) Attach the warning tag to the SPEED BRAKE lever to tell the persons not to change its position.

## C. Access

(1) Put the access platform

(2) Remove (open) these access panels (access doors):

**574AB, 674AB.**

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## RRJ-95 AIRCRAFT MAINTENANCE MANUAL

### 4. Procedure

#### A. Preparation for Inspection

**WARNING: USE SOLVENTS, DETERGENTS, SEALANTS AND OTHER SPECIAL MATERIALS IN A WELL-VENTILATED AMBIENT ONLY. OBEY THE MANUFACTURER INSTRUCTIONS THE SPECIFIED MATERIALS ARE TOXIC, FLAMMABLE AND IRRITATE SKIN. IN CASE OF SKIN OR EYES IRRITATION CONSULT A DOCTOR.**

- (1) Clean , if necessary, the inspected surface with the NP-008 cleaning rags wetted with the ST-004 solvent.

#### B. Special Detailed Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel 574AB and 674AB

- (1) Do the special detailed inspection of the lower panel around the cut-out for the access panel 574AB and 674AB (*Ref. NDT 57-21-09-007*).

**NOTE:** If any defects are detected, eliminate them in accordance with SRM.

### 5. Job Close-Up

#### A. Reset of the aircraft to the initial configuration

- (1) Remove the warning tag from the SPEED BRAKE lever.
- (2) Remove the warning tag from the FLAPS lever.

#### B. Close Access

- (1) Clean up the job area and make sure that there are no foreign objects in the area.
- (2) Install (close) these access panels (access doors):

**574AB, 674AB.**

- (3) Remove the access platform.

## RRJ-95 NON-DESTRUCTIVE TESTING MANUAL

**TASK 57-21-09-007****Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel**1. Inspection Purpose

The present inspection procedure is intended for detection of fatigue cracks on the outer-wing lower panel in the area of the cut-outs for the access panels 574AB and 674AB (Ref. *Fig. 501, Sheet 1, Fig. 501, Sheet 2*).

NOTE: Inspection procedure covers all RRJ-95 models.

2. Recommended Inspection Procedure

A. Eddy current inspection (*Ref. NDT 51-60-00*).

3. Alternative Inspection Procedure

A. None.

4. Inspection Area

A. Eddy current inspection of the bracket lugs surface shall be done in the following areas (Ref. *Fig. 501, Sheet 1, Fig. 501, Sheet 2*):

- lower panel edge area (areas 1, 5);
- edge area of the openings (areas 2, 6);
- edge area of the fillet (areas 3, 7);

5. Material

- A. Lower panel material — 1163T 18 TY 1-92-161-90 (cyrillic).
- B. Coating — Primer ЭП-0215 (cyrillic). Paint-coating thickness – 0.15-0.2 mm.

6. Description of Detectable Flaws

A. Fatigue surface cracks with the length of more than 5 mm (0.2 in).

7. References

- A. Flaw detector Operating Manual.
- B. Eddy current inspection. Introduction (*Ref. NDT 51-60-00*)
- C. Eddy current inspection. Key operational characteristics of flaw detectors (*Ref. NDT 51-61-01*)
- D. Eddy current inspection. Eddy current transducers (ECT) (*Ref. NDT 51-62-00*)
- E. Eddy current inspection. Reference standards (*Ref. NDT 51-63-00*)
- F. Eddy current inspection. Evaluation of flaw length (*Ref. NDT 51-66-02*).

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- G. Eddy current inspection. Sensitivity adjustment (*Ref. NDT 51-66-03*).
- H. Edge zone eddy current inspection (*Ref. NDT 51-66-05*).
- J. Eddy current inspection. Detection of surface flaws under paint coating (*Ref. NDT 51-66-06*).

### 8. Equipment and Materials

- A. During the inspection, it is recommended to use the equipment in accordance with NDT (*Ref. NDT 51-61-00*), (*Ref. NDT 51-61-01*), (*Ref. NDT 51-62-00*).

**NOTE:** It is allowed to use other types of certified eddy current flaw detectors and ECT provided that the procedure of their application during the inspection has been agreed upon with the developer.

- B. The pen-type and L-type transducers from the flaw detector delivery set are recommended for the eddy current inspection (*Ref. NDT 51-60-00*):
- C. Adjustment of the inspection sensitivity shall be made on reference standard 1 with a paint coating simulator if the surfaces of the bracket lugs covered with enamel are to be inspected (*Ref. NDT 51-63-01*).
- D. During the adjustment of the inspection sensitivity and inspection of the lugs edge areas it is recommended to use supports, prisms and other devices which ensure a fixed ECT position on the edge surface of the part.

### 9. Preparation for Inspection

- A. Check the inspection area and mark areas of surface discontinuities if they are detected in the course of visual inspection.
- B. Mark off the inspection areas on the surfaces of lugs; Mark the points of the ECT location for adjustment in the inspection areas (*Ref. Fig. 501, Sheet 1, Fig. 501, Sheet 2*).

### 10. Adjustment of Equipment

- A. Adjust the flaw detector according to NDT (*Ref. NDT 51-66-03*), (*Ref. NDT 51-66-05*).

Reference standard 1 without the paint coating simulator shall be used for adjustment. The reference standard shall conform to the requirements of (*Ref. NDT 51-63-01*).

- B. Install the ECT on the edge of reference standard 1 with the coating simulator and make corrections in gain of the flaw detector in accordance with NDT (*Ref. NDT 51-66-06*).
- C. Check the flaw detector adjustment on the artificial flaw with the depth of 0.50 mm (0.02 in) in the reference standard 1 edge area with the paint coating simulator (*Ref. NDT 51-66-06*).

Make sure that the point of the maximum ECT signal value on a flaw simulator is above the AFI zone of the flaw detector, and that the flaw indicators actuate.

### 11. Inspection Procedure

- A. Inspection of area 1
  - (1) Adjust the flaw detector according to Paras 10.A-C.

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- (2) Install the ECT on the coating in inspection area 1 within 3 mm (0,12 in) from the edge of the panel (Ref. **Fig. 501, Sheet 1**).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (Ref. **NDT 51-66-06**).

- (3) Do the scanning of area 1.

Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (Ref. **NDT 51-66-02**).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).
- (8) Repeat the operations specified in Paras 11.A (1-7) for the second cut-out in the area 1 (Ref. **Fig. 501, Sheet 1**).

### B. Inspection of area 2

- (1) Adjust the flaw detector according to Paras 10.A-C.

- (2) Install the ECT on the coating in inspection area 2 within 3 mm (0,12 in) from the edge of the openings (Ref. **Fig. 501, Sheet 1**).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (Ref. **NDT 51-66-06**).

- (3) Do the scanning of area 2.

Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (Ref. **NDT 51-66-02**).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).
- (8) Repeat the operations specified in Paras 11.B (1-7) for the second cut-out in the area 2 (Ref. **Fig. 501, Sheet 1**).

### C. Inspection of area 3

- (1) Adjust the flaw detector according to Paras 10.A-C.

- (2) Install the ECT on the coating in inspection area 3 within 3 mm (0,12 in) from the edge of the fillet (Ref. **Fig. 501, Sheet 1**).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (Ref. **NDT 51-66-06**).

- (3) Do the scanning of area 3.

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Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (*Ref. NDT 51-66-02*).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).
- (8) Repeat the operations specified in Paras 11.C (1-7) for the second cut-out in the area 3 (*Ref. Fig. 501, Sheet 1*).

### D. Inspection of area 5

- (1) Adjust the flaw detector according to Paras 10.A-C.
- (2) Install the ECT on the coating in inspection area 5 within 3 mm (0,12 in) from the edge of the panel (*Ref. Fig. 501, Sheet 2*).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (*Ref. NDT 51-66-06*).

- (3) Do the scanning of area 5.

Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (*Ref. NDT 51-66-02*).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).

### E. Inspection of area 6

- (1) Adjust the flaw detector according to Paras 10.A-C.
- (2) Install the ECT on the coating in inspection area 6 within 3 mm (0,12 in) from the edge of the openings (*Ref. Fig. 501, Sheet 2*).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (*Ref. NDT 51-66-06*).

- (3) Do the scanning of area 6.

Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (*Ref. NDT 51-66-02*).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).

### F. Inspection of area 7

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- (1) Adjust the flaw detector according to Paras 10.A-C.
- (2) Install the ECT on the coating in inspection area 7 within 3 mm (0,12 in) from the edge of the fillet (Ref. *Fig. 501, Sheet 2*).

Balance the flaw detector (adjust to the bracket material).

Check the absence of the flaw detector AFI actuation at other two points while moving the ECT for  $\pm(5-10)$  mm along the scan path (Ref. *NDT 51-66-06*).

- (3) Do the scanning of area 7.

Do the inspection by moving the ECT 2-3 times along the scan path.

- (4) If the ECT signal exceeds the set AFI level (rejection level) and the AFI actuate, it shall be identified as a crack.
- (5) Evaluate the conditional length of detected cracks (Ref. *NDT 51-66-02*).
- (6) Mark the detected cracks.
- (7) Upon completion of the inspection, check the flaw detector adjustment (para. 10.C).

- G. Repeat the operations specified in Paras 11.A (1) — 11.F (7) for the second outer-wing.

**NOTE:** If there is a suspicion of a crack, repeat the inspection of the indicated areas from the inside of the panel. If it is necessary to access the inner side of the bottom panel, dismantle the harnesses in the inspection area according to the WDM (Ref. *WDM 20-40-60*).

### 12. Rejection Criteria

- A. Cracks are not acceptable.

### 13. Job Close-Up

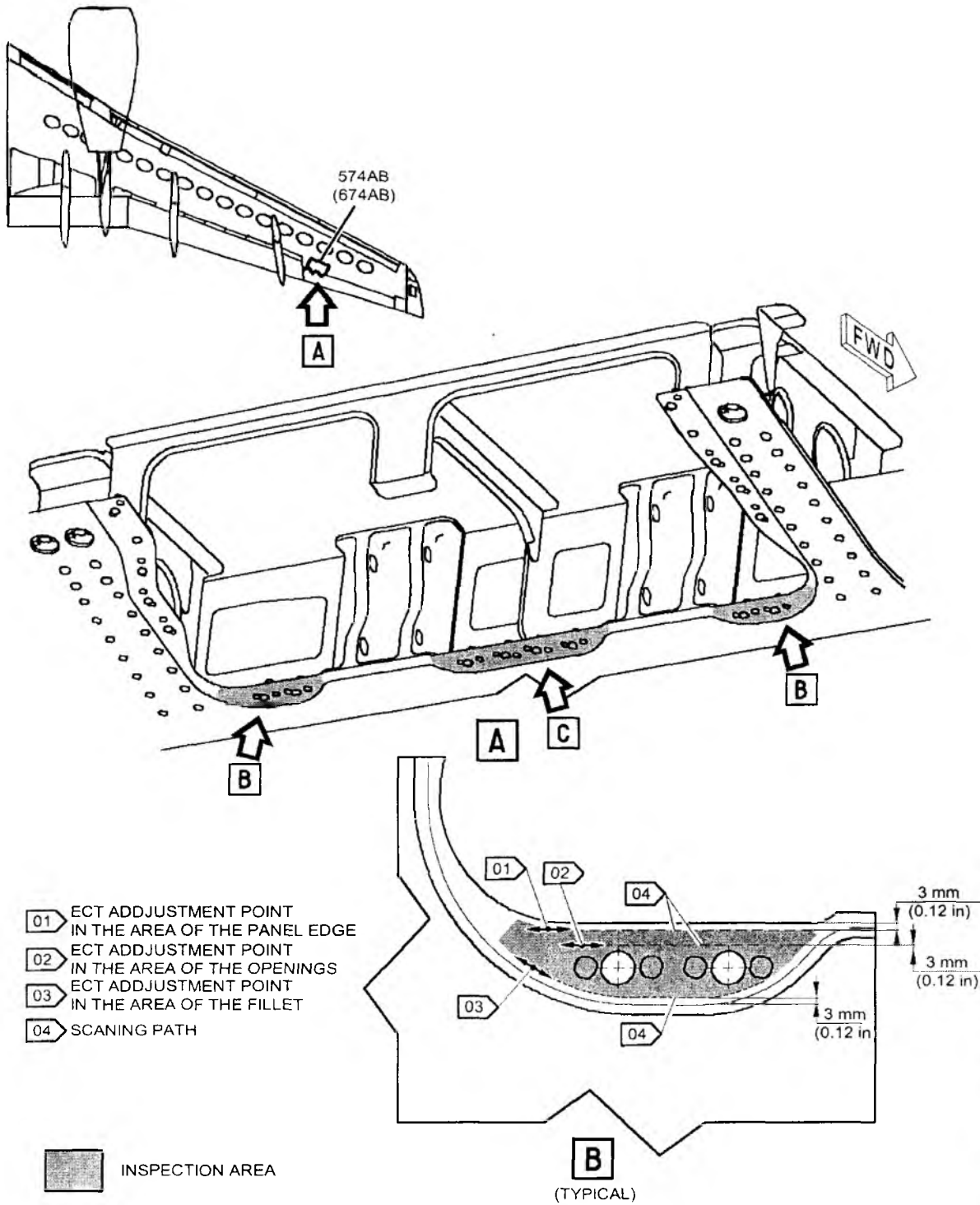
- A. None.

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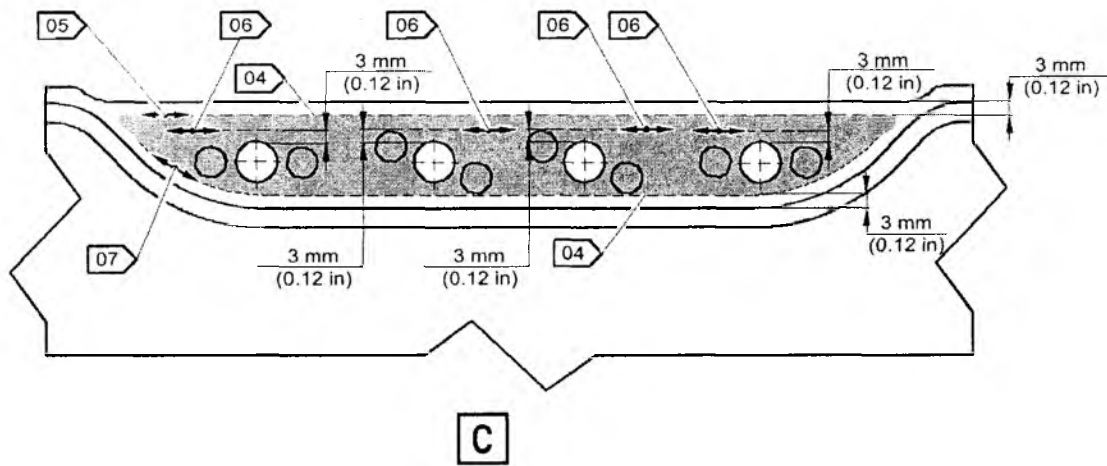
Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel  
Figure 501 (Sheet 1 of 2)

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- 05 ECT ADJUSTMENT POINT IN THE AREA OF THE PANEL EDGE
- 06 ECT ADJUSTMENT POINT IN THE AREA OF THE OPENINGS
- 07 ECT ADJUSTMENT POINT IN THE AREA OF THE FILLET
- 04 SCANNING PATH

 INSPECTION AREA

Inspection of the Outer-Wing Lower Panel Around the Cut-Out for the Access Panel  
Figure 501 (Sheet 2 of 2)

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