Lufthansa CityLine

Engineering / Modification Order

Doc.-Number: IS67034440079 **Rev. No.:** C **Issue:** 0 EO-Date: 07.06.11

Title: Radio Altimeter Antennas Alternate Conductive Gasket

Doc.-Date: 02.12.2010 **ATA Chapter:** 34

AD: ☐ **DTI:** ☐ **(may require change to the MS)**

Type: ☐ Technical Order ☒ Modification ☒ Evaluation ☐ Repair ☐ Design Change

Reason for Alteration: ☐ Revision ☐ Issue

Description:

Effectivity:

Manufacturer	SN
Manufacturer Aircraft Effectivity Range	10003 – 10999 15001 - 15990
Manufacturer Component Effectivity Range	
Affected Component Part Numbers	

CLH	SN	Registration
Aircraft to be performed		D-ACPA – D-ACPT D-ACKA – D-ACKL
Component to be performed		

Planning Data:

To be accomplished until: Date: FH FC ☐ On Attrition

To be acc. next C-Check: ☐ Other MX-Event:

To be acc. next A-Check ☐ Qualification:

Estimated Aircraft Downtime: 4 Labor-Hours: 4

Implementation:

☒ Maintenance ☐ Shop Visit

Material Provisioning: ☐ NO ☒ YES **Consumables req.:** ☐ NO ☒ YES

Warranty affected: ☒ NO ☐ YES **Special Tools req.:** ☐ NO ☒ YES

Attached Documents:

Type	Number	Rev	Date	Type	Number	Rev	Date

Revision of Existing Documents:

☐ Maintenance Manual ☐ Illustrated Parts Catalogue ☐ Aircraft Operational Manual

☐ Wiring Diagram ☐ Structural Repair Manual ☐ Weight and Balance Manual

☐ Maintenance Schedule ☐ Others:

Change of Weight: ☐ NO ☐ YES

Interchangeability affected: ☐ NO ☐ YES

Distributed to: ☐ HAM TT/L-W ☐ LH-AERO ☐ FC/F ☐ FO/O ☐ Aircraft

☐ CLH TO/E-MP ☐ Others: Doc. as appendix to:

Costs per Unit / Aircraft: 350,- € **Total Costs:**

prepared by:	**directed by:**	**verified by:**	**granted BT/GF:**
Name / Signature	Name / Signature	Name / Signature	Name / Signature
I. Steven	Franz-Ulrich Stang	M. Krause	BT/GF
Date: 07.06.2011	Date:	Date:	Date:

1. Background

The AV-DEC Antenna gaskets should offer improved protection against corrosion, thus reducing the overall replacement time, maintenance activities and related costs.

2. Action

TK orders 10 ea of Antenna Gaskets P/N: AG723000-03.

This IS Mod-Sum is advised on Aircraft with Radio Altimeter complaints as an evaluation, first.

If the evaluation shows that the Antenna Gasket improves the reliability of the Radio Altimeter System, this IS Mod-Sum will be advised on all Aircraft.

3. Damage Tolerance Information

According to the FAR PART 26 requirements Service Bulletins, STC's affecting Fatigue Critical Structure must have been evaluated by the provider in regards to Damage Tolerance. For those affecting FCS inspection requirements must be issued by the operator, and those are to be included into the maintenance program.
FAR PART 26, CFR 26.43, 26.45, EASA PART 21, 21A.61, 21A.120, 21A.433, EASA CS-25 CS25.571, CS25.1529, EASA PART M, Subpart C, M.A. 301 & 302.

Document Number	DTI	MODSUM Affected	Threshold(*)	Repeat (*)	Reference (*)	TASK Number(*)

(*) This is for known items.

4. Compliance

Optional.

5. Material Information

Material-Kit(s):

Item	Part Number	Description	QTY / AC	QTY Total
1	AG723000-03	Gasket – Radio Altimeter Antenna	4	

Consumables:

Item	Part Number	Specification	Description	QTY / AC
1	900254	Per AMM 51-31 (11-004)	Isopropyl alcohol	As Req'd
2	HT3326-5-50		Self-Leveling Green sealant 50cc	1
3	PR1436GB1-2	Per AMM 51-31 (09-009)	Sealing compound, temperature resistant, high adhesion	As Req'd
4	AD89503-01-36		Hi-Tak Polyurethane StretchSeal 36 inch long	As Req'd
5	MS3367 type	Per AMM 51-31 (05-057)	Cable tie	8
6	PR1422B1-2	Per AMM 51-31 (09-001)	Sealing compound, wet install sealing	As Req'd

Tooling:

Item	Part Number	Description
1	None specified	Spatula, plastic
2	UG981108-01	50cc SLG application dispenser

6. Costs/Warranty Information

Labor-Hours:						
Item	Description	Required Pers.	Manhrs total	Cost per single item (CLH)	Provider	Total
1	Installation of Gaskets	1	4	50,- €	CLH	200,-

Total-Costs:		
Material	150	EUR
Labor-Hours	200	EUR
Number of Aircraft to be performed	TBD	QTY
Overall sum of costs	TBD	EUR

The overall sum of costs is in conjunction to the number of Aircraft which will be performed.

7. Accomplishment Instructions

1. Job set-up information

NOTE: *This procedure is applicable to RAD ALT #1 and/or RAD ALT #2 antennas.*

1.1 Remove the Radio Altimeter antennas per AMM TASK 34-44-07-000-801

1.2 Remove and discard antenna gasket from the antenna.

1.3 Prepare the antenna installation surface as follows:

(a) Use a plastic spatula to remove the remaining sealant from the antenna base and the aircraft skin in the mounting area.

(b) Remove all of the sealant from the antenna cutout on the fuselage and then from the screw holes.

CAUTION: DO NOT MAKE DENTS OR CAUSE OTHER DAMAGE TO THE ANTENNA FAYING SURFACES. THE DAMAGE CAN CAUSE THE SIGNAL STRENGTH AND QUALITY TO DECREASE.

CAUTION: DO NOT REMOVE THE CONDUCTIVE FINISH OF THE ANTENNA BASEPLATE. THIS CAN CAUSE THE SIGNAL STRENGTH AND QUALITY TO DECREASE.

(c) Clean the antenna base and fuselage faying surfaces per AMM TASK 51-80-00-140-801.

(d) Examine the condition of the antenna as follows:

i. Make sure that the paint finish is intact with no chips or scratches. Any minor paint scratches may be repaired with polyurethane paint.

ii. If the paint has eroded, but the primer is intact, the antenna is serviceable.

iii. If the paint and primer have eroded enough to expose the composite material, the antenna must be replaced as soon as possible.

iv. If the paint, primer and composite material have eroded, the antenna must be replaced immediately.

2. Gasket installation:

NOTE: *Prior to install the antenna gasket, it is important to read AV-DEC Aircraft Antenna Installation Instruction Sheet IS-AG-010 which is attached to this EO.*

2.1 Remove gasket P/N: AG723000-03 from the protective packaging, taking care not to fold or bend it.

NOTE: *AV-DEC HI-TAK Polyrethane Gasket is supplied with protective release film on both sides of the gasket. Leave release film in place until ready to install gasket.*

2.2 Verify that fastener holes and connector cutouts in the gasket will align the antenna when positioned for installation.

2.3 Remove “antenna side” release film from the gasket and position gasket over the antenna.

2.4 Beginning at one side or corner of the antenna, place gasket into position, carefully align gasket fastener holes with antenna fastener holes. “Aircraft side” release film should remain until antenna installation.

Antenna sealing

NOTE: Prior to start antenna sealing, it is important to read AV-DEC application instruction sheet that comes with each Self-Leveling Green package.

2.5 Apply a layer of Self-Leveling Green sealant P/N: HT3326-5-50 between gasket and antenna connector using special tool SLG application dispenser P/N: UG981108-01, as shown on figure 1.

2.6 Wait at least 30 minutes before installing the antenna to let enough time for the Self-Leveling Green sealant to gel.

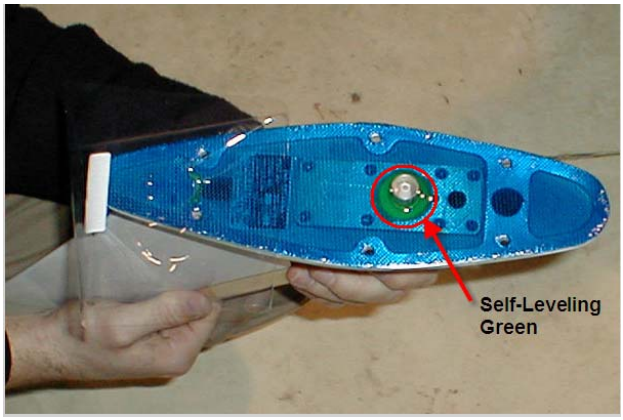

Figure 1: General Antenna Installation

3. Antenna installation

3.1 Remove “Aircraft side” release film from the gasket.

NOTE: Application of aerodynamic sealant around the Rad Alt Antenna Baseplate needs to be applied within the next 500 FH.

3.2 Install Radio Altimeter antennas per AMM TASK 34-44-07-400-801.

3.3 It is acceptable to defer the application of the aerodynamic sealant around the Rad Alt antenna base for 500 FH past the antenna gasket installation.

4. Antenna Connector Sealing

4.1 Remove the StretchSeal Tape P/N: AD89503-01-36 from the package and unroll a small length of tape. Pull back a small amount of the release film, making sure that the tape remains free of dirt or other contaminants.

4.2 From the inside of the aircraft, wrap the sticky side of the sealing tape around the mated connector with a 50% overlap while stretching it to ensure a tight wrap. Remove release film as required.

A tight wrap is necessary to ensure a proper seal.

Coverage shall be at least ½” beyond coaxial cable insulation jacket to the base of the antenna.

When wrapping the sealing tape around the cable, leave the coaxial cable unconnected until the locking part of the connector is reached, and then connect the coaxial cable to the antenna.

Finish wrapping the sealing tape up to the base of the antenna.

The sealing tape will be easier to install this way. (Refer to Figure 2)

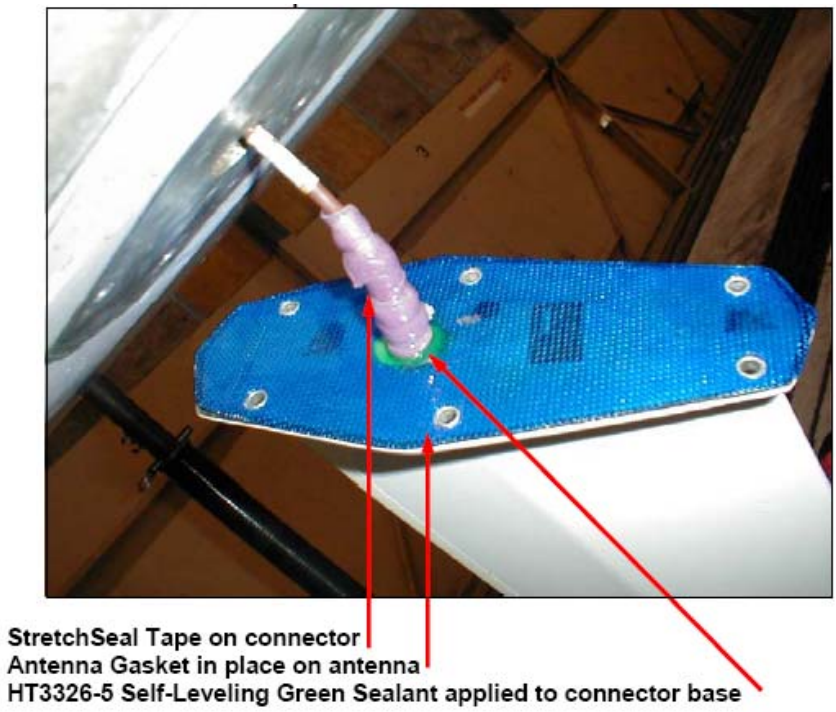

Figure 2: General Antenna installation

4.3 Apply cable ties (MS 3367 type) at each end of tape. Use minimum tension on cable tie installation tool (Ref. to Figure 2).

5. Job close-out

5.1 Remove all tools, equipment and unwanted materials from the work area.

Additional Information for future

6. Antenna removal

6.1 Cut the cable ties from the connector wrap (if present) and remove & discard wrap.

6.2 Disconnect antenna connectors.

6.3 Remove antenna fasteners

6.4 Use a plastic spatula, phenolic or wooden tool as a wedge between the antenna and aircraft surface to separate antenna from the aircraft.

6.5 Peel & discard antenna gasket from aircraft or antenna

6.6 Remove & discard Self-Leveling Green sealant from the antenna.

6.7 Use isopropyl alcohol or other approved cleaning solvent as per AMM 51-31 to remove any remaining residue from the antenna and A/C structure.

8. Weight & Balance

SI	Weight	SI	Arm	SI	Moment
kg		m		kg*m	
lb		inch		lb*inch	

NOTE: FOR CUSTOMER FLEET SUBMIT CHANGE OF WEIGHT DIRECTLY TO CUSTOMER AFTER ACCOMPLISHMENT OF ENGINEERING/MODIFICATION ORDER.

Customer	W&B affected
Arik Air	☐
Augsburg Airways	☐
Libyan Airlines	☐
Rwandair	☐

9. Interchangeability

After incorporation of this IS Mod-Sum IS67034440079, it is only allowed to install the Gasket P/N: AG723000-03.

The old Gasket P/N: BBDREF001922003 shouldn't be installed after incorporation of this IS Mod-Sum IS67034440079.