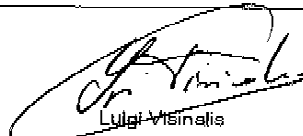


**Volare**Airlines

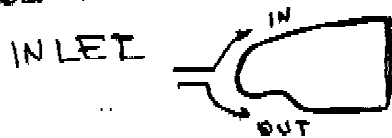
<b>ENGINEERING SCRIPT</b>	<b>Date 04/09/2004</b>	
	<b>Page 1 of 7</b>	
	<b>Ref:</b> ES-N0661	
	<b>Ext:</b> 51-EE0318	

**FROM:** Luigi Visinalls                      **Dept:** NBF Engineering                      **TEL:** +39 045 8605 557  
**ESS-A manager**                      **E-MAIL:** Visinalls.luigi@volare-group.it                      **Mob:** +39 335 7834 680  
**TO:** Airtac (Airbus)                      **FAX:** +39 0445 800 077  
**CC:**                      **FAX:** +33 561 933 500

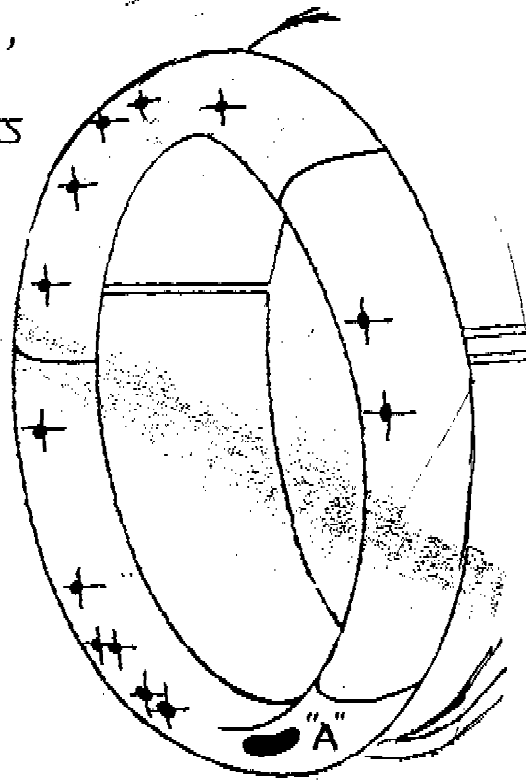
<b>SUBJECT:</b>	A320 MSN 446 I-PEKR: Hail Strike Damage Report
<b>A</b>	<b>Effectivity:</b> MSN 446
<b>B</b>	<p><b>Reference:</b> Air Europe Damage Report dated 04/09/2004 Pictures</p> <p><b>Background:</b> On date 03/09/2004, during Flight VLC-MXP a heavy Hail Strike has been reported by a/c A320 MSN 446 I-PEKR. The following damages have been reported:</p> <ul style="list-style-type: none"> <li>- Radome completely damaged (Ref to picture attached)</li> <li>- Weather Antenna damaged</li> <li>- LH &amp; RH Windshields outer panes broken</li> <li>- Several Dents reported on the Nose Skin Panels SRM 53-11-11 Figure 1 Items 1, 5, 15, 20, 25; Figure 5 Item 1</li> <li>- All Slats from 1 to 5 LH &amp; RH are affected from dents (Ref to Damage Report attached)</li> <li>- Engine #1 Air Intake has reported one important dents (Ref. "A" in Damage Report page 1 attached) and some minor dents (Ref to Damage Report attached)</li> <li>- Engine #2 Air Intake has reported some minor dents (Ref to Damage Report attached)</li> <li>- Horizontal Stabilizers LH &amp; RH Leading Edge heavy roughness maximum depth 4.0 mm (Ref to Damage Report Attached)</li> <li>- Horizontal Stabilizer Tips LH &amp; RH heavily damaged</li> </ul> <p><b>Action:</b> Inspection after Hail Strike has been performed as per AMM 05-51-15.</p> <p>Volare asks Airbus a RAS issue in order to perform a Non Revenue Flight from MXP to a Maintenance Agency (SRT ZRH, FLS DUB, Airbus TLS ...) in order to perform the final repair provided the following actions are performed before the flight:</p> <ul style="list-style-type: none"> <li>- Radome is replaced</li> <li>- Weather Antenna is replaced</li> <li>- LH &amp; RH Windshields are replaced</li> <li>- Horizontal Stabilizer Tips LH &amp; RH are replaced</li> <li>- Horizontal Stabilizer Leading Edge Panels SRM 55-12-11 Figure 1 Items 5 &amp; 10 LH &amp; RH are replaced</li> </ul> <p>In addition Airbus suggestion about Permanent Repair to be carried out would be very appreciated. Please inform also if Airbus TLS has Hangar Slot and Manpower to perform the repair. Due to AOG conditions a reply within 06/09/2004 at 12:00 would be very appreciated.</p> <p>Many thanks for your kind support, Best regards,</p>
<b>C</b>	<p><b>Complied:</b>  Luigi Visinalls</p> <p><b>Title:</b> NBF - Engineering Structures Service Manager</p> <p><b>Date:</b> 04/09/2004</p>

NOSE COWL N° 1

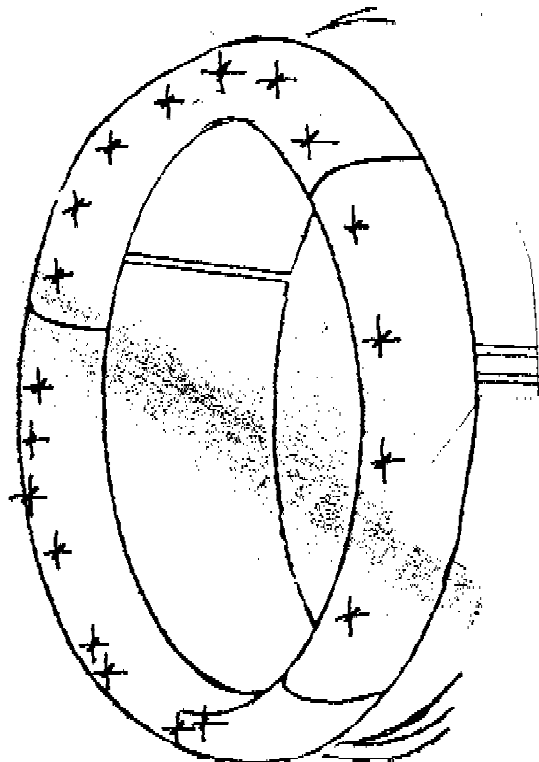
"A" = ONE ELLIPTICAL SHAPED DENT, 75 MILLIMETRES LENGTH, 6 MILLIMETRES DEEP, LOCATED AT 5 O'CLOCK, 150 MILLIMETRES BELOW LIP SEGMENT END. DENT LOCATED "OUTSIDE"



OTHER DENTS IDENTIFIED AS +, ALL LOCATED ON LEADING EDGE, WITH AN AVERAGE DEPTH OF 2 MILLIMETRES, ELLIPTICAL SHAPED, WITH A LENGTH OF 25 MILLIMETRES (LONGER AXIS).

NOSE COWL N° 2 :

20 DENTS EQUALLY SPACED, AND LOCATED ON LEADING EDGE LINE ELLIPTICALLY SHAPED, WITH THEIR MAJOR AXIS OF 25 MM AND A DEPTH OF 1,0 MM

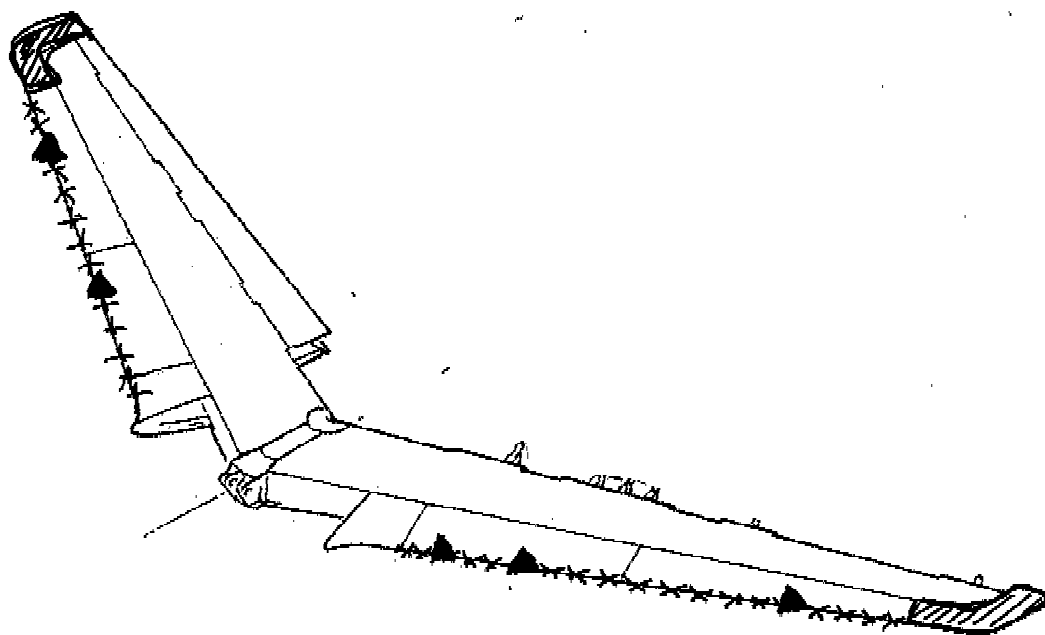


NOTE : ON BOTH INLET COWLS NO CRACKS OBSERVED AS A RESULT OF A CLOSE VISUAL INSPECTION OF ALL DENTS.

Msp Ellm  
 Hugo Schmetkamp  
 Airframe: AEL  
 11.09.04

HORIZONTAL STABILIZER :

②



▲ PRE-EXISTING RECORDED DAMAGES  
WITHIN LIMITS OF SRM SS-12-00.

▨ BOTH STABILIZER TIP FAIRINGS CRUSHED

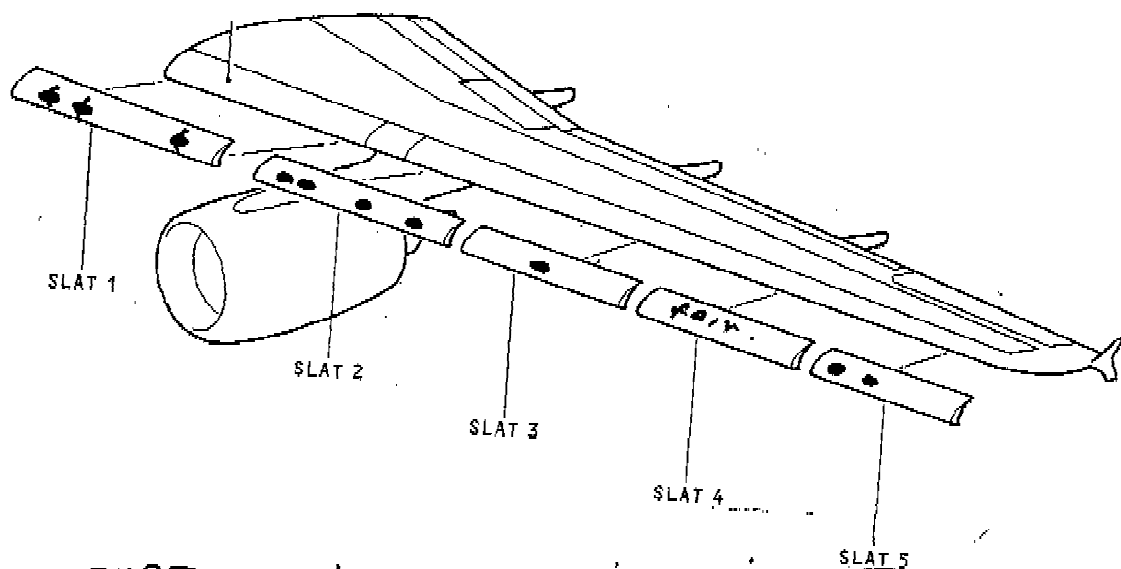
~~XXXX~~ STABILIZER LEADING EDGES DENTED.  
AFFECTING 100 % OF STABILIZER SPAN.  
DAMAGE EVIDENCED AS A "ROUGHNESS"  
MAXIMUM DEPTH OF DAMAGE NOT DEEPER  
THAN 4 MILLIMETRES.

NO DAMAGES OBSERVED ON STABILIZER BOX, NOR  
ELEVATOR SURFACES.

04 set 04  
Hugo Schmetkamp  
Airframe-AEL.

SLAT DAMAGES LH WING.

③



- SLAT 1 : THREE MAIN DENTS IDENTIFIED AS 4  
DENTS ELLIPTICAL. APPROX LENGTH 75 MM  
AND 5 MM DEPTH. OUTBD DENT WAS A  
PREEXISTING BIRD STRIKE WITHIN LIMITS, BUT  
SCHEDULED FOR A DEFINITIVE REPAIR WITHIN 9500  
FLT. CYCLES. MANY OTHER MINOR DENTS COVERING  
80% OF THE BULLNOSE SURFACE.
- SLAT 2 : 4 DENTS ELLIPTICAL 75MM DEPTH - 5MM.
- SLAT 3 : 1 DENT SAME AS SLAT 2.
- SLAT 4 : FAIR, ONLY SLIGHT DAMAGE.
- SLAT 5 : TWO DENTS 75 MM, 4 MILLIMETRES DEPTH.

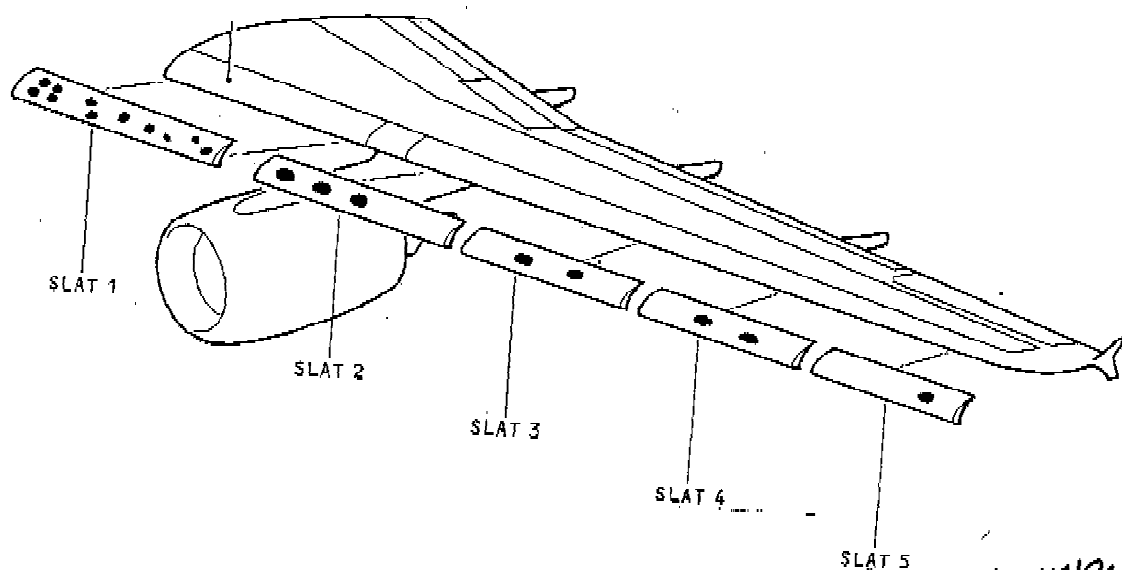
NOTE: ALL DENTS ON AREA ③  
AS DEPICTED ON SRM  
57-40-00, FIGURE 107.

04set04  
MPO Elmer  
hugoschmetkamp  
Airframe DEL

SLAT DAMAGES RH WING

④

(LH wing shown)



SLAT 1: 80% OF THE SURFACE DENTED. TYPICAL DENT 25 MM IN DIAMETER BY 2 MM DEPTH. DENTS ON AREA ② & ③ AS SRM 57-40-00 FIG 107.

SLATS 2, 3, 4 & 5: DENTS AS SHOWN, APPROXIMATE 2,5 MM LENGTH & 5 MM DEPTH.

ALL SLATS WITH OVERALL DAMAGE, NOT DEEP (< 1 MM).

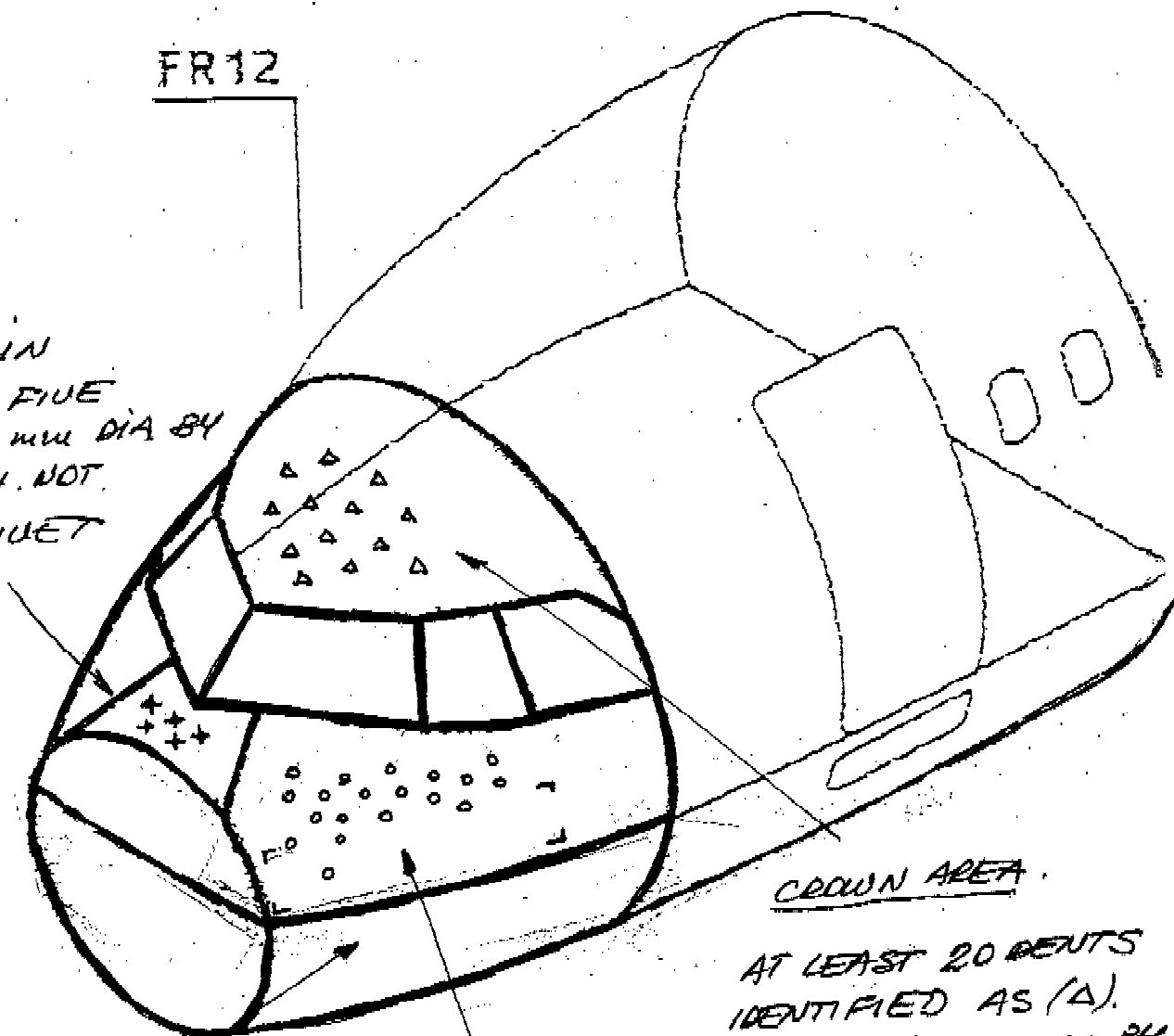
Vigo Allert  
 hugo schneider  
 AEL Airgramme  
 august 04

FRONT FUSELAGE SKINS



FR12

FRONT SKIN  
AT LEAST FIVE  
DENTS (Δ) 25 MM DIA BY  
1 MM DEPTH. NOT  
CROSSING RIVET  
LINES



CROWN AREA

AT LEAST 20 DENTS  
IDENTIFIED AS (Δ).  
APPROX. DIA 25 MM BY  
1 MM. DEPTH. NOT  
CROSSING RIVET  
LINES.

LOWER PANELS ON  
SIDE FUSELAGE:

FR1

10 DENTS ONLY ON THE  
RIGHT SIDE, 25 MM DIA  
BY 1 MM DEPTH.

SIDES OF FUSELAGE

- ON THE LEFT SIDE, 21 DENTS (○)  
NOT AFFECTING RIVET LINES, AND  
WITH AN AVG. DIAMETER OF 25 MM  
AND 1 MM DEPTH. SOME DENTS  
ENTERING RUSM MARKS, AND  
ONE ON STATIC FIELD.
- SAME ON THE RIGHT SIDE,

Wp OUMW  
04 set 04



NOSE RADOME

- NOSE RADOME FOUND TO BE COMPLETELY DAMAGED & PERFORATED. HAIL ALSO DAMAGED WEATHER RADAR ANTENNA.
- BOTH N°1 & N°2 WINDSHIELD OUTER PANES BROKEN.

WV0 cllm  
04/09/04