

**DOCKET No.: SA-521**


**EXHIBIT No. 7F**

**NATIONAL TRANSPORTATION SAFETY BOARD**


**WASHINGTON, D.C.**

**AIRWORTHINESS GROUP CHAIRMAN'S FACTUAL REPORT**


**ATTACHMENT V: Service Difficulty Reports (SDR)**

Return To Main Menu		Return To Adhoc Query									
<b>1. Submitter Information</b>				<i>Service Difficulty Report</i> <b>SDR</b>				 U.S. Department of Transportation <b>Federal Aviation Administration</b>			
(a) Unique Control #	ARWA990108			<b>For Air Carrier and General Aviation Operational and Structural Difficulty Reporting</b>							
(b) Difficulty Date	01/16/1999										
(c) Registration Number	661AV										
(d) Submitter Type	Carrier PART 121 (A)										
<b>2. Codes</b>				<b>3. Major Equipment Identity</b>							
(a) JASC Code	2731			(a) Operator Designator	ARWA	Operator Type	Air Carrier (A)				
(b) When Discovered	INSP/MAINT (IN)	(c) How		(b) Aircraft	Manufacturer	Model	Serial Number	Total Time	Total Cycles		
(d) Nature of Condition	OTHER (O)				DOUG	DC863F	45969				
(e) Action Taken	NONE (K)			(c) Engine							
(f) FAA Region	SO	(g) Dist.Off.	19	(d) Propeller							
<b>4. Problem Description</b>											
MIA - FLT 617 - PERFORMED ELEVATOR CHECK, FELT NO RESISTANCE ON YOKE. EPI DOES NOT MOVE. TROUBLE SHOT FOUND LEFT ELEVATOR GEAR TAB CRANK ARM ASSEMBLY INBOARD AND OUTBOARD BROKEN. REMOVED AND REPLACED BOTH INBOARD AND OUTBOARD ARM ASSEMBLIES. OPS NORMAL IAW MM 27-30-1. (M)											
<b>5. Specific Part Or Structure Causing Difficulty</b>											
(a) Part Name	(b) Manufacturer	(c) Part Number			(d) Serial Number						
ARM											
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles	(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection						
BROKEN	ELEVATOR										
<b>6. Component / Assembly That Includes Defective Part</b>											
(a) Component Name	(b) Manufacturer	(c) Part Number	(d) Serial Number	(e) Model Number							
(f) Location	(g) Total Time	(h) Total Cycles	(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection							
<b>7. Structure Causing Difficulty</b>											
(a) Body or Fuselage Station			Waterline			(b) Crack Length (inches)			Number Of Cracks		
From /At:		To:	From /At:		To:						
From /At Stringer		Left Right	To Stringer		Left Right	From /At ButtLine		Left Right	To ButtLine		
		<input type="checkbox"/> <input type="checkbox"/>			<input type="checkbox"/> <input type="checkbox"/>			<input type="checkbox"/> <input type="checkbox"/>			
From /At WingStation		Left Right	To WingStation		Left Right	Structural Other			(c) Corrosion Level		
		<input type="checkbox"/> <input type="checkbox"/>			<input type="checkbox"/> <input type="checkbox"/>				2 3		
		<input type="checkbox"/> <input type="checkbox"/>			<input type="checkbox"/> <input type="checkbox"/>				<input type="checkbox"/> <input type="checkbox"/>		


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Return To Main Menu		Return To Adhoc Query					
<b>1. Submitter Information</b>		<b>Service Difficulty Report</b> <b>SDR</b> <b>For Air Carrier and General Aviation</b> <b>Operational and Structural Difficulty</b> <b>Reporting</b>					
(a) Unique Control #	TC8A96008						
(b) Difficulty Date	03/20/1996						
(c) Registration Number	805CK						
(d) Submitter Type	Carrier PART 121 (A)		 U.S. Department of Transportation <b>Federal Aviation Administration</b>				
<b>2. Codes</b>		<b>3. Major Equipment Identity</b>					
(a) JASC Code	2730	(a) Operator Designator	TC8A	Operator Type	Air Carrier (A)		
(b) When Discovered	INSP/MAINT (IN)	(c) How		Serial Number	Total Time	Total Cycles	
(d) Nature of Condition	OTHER (O)		(b) Aircraft	Manufacturer	Model		
(e) Action Taken	NONE (K)		(c) Engine	DOUG	DC851	45649	
(f) FAA Region	GL	(g) Dist.Off.	23	(d) Propeller			
<b>4. Problem Description</b>							
STAB TRIM, OR PROBLEM WITH LOAD CAUSING FULL DOWN ELEVATOR. ON POST FLIGHT INSPECTION FOUND RIGHT ELEVATOR GEAR TAB CRANK ARMS BROKEN. REPLACED INBOARD AND OUTBOARD CRANK ARMS AND INBOARD LINK. CHECKED ELEVATOR RIGGING, FOUND GOOD PER REF 27-15-0. (M)							
<b>5. Specific Part Or Structure Causing Difficulty</b>							
(a) Part Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
ARM ASSEMBLY		4710542					
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles	(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection		
BROKEN	RT ELEVATOR						
<b>6. Component / Assembly That Includes Defective Part</b>							
(a) Component Name	(b) Manufacturer	(c) Part Number	(d) Serial Number	(e) Model Number			
(f) Location	(g) Total Time	(h) Total Cycles	(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection			
<b>7. Structure Causing Difficulty</b>							
(a) Body or Fuselage Station		Waterline		(b) Crack Length (inches)		Number Of Cracks	
From /At:	To:	From /At:	To:				
From /At Stringer	Left Right	To Stringer	Left Right	From /At ButtLine	Left Right	To ButtLine	Left Right
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>
From /At WingStation	Left Right	To WingStation	Left Right	Structural Other		(c) Corrosion Level	2 3
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>				<input type="checkbox"/> <input type="checkbox"/>


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Return to Main Menu		Return to Admin Query					
<b>1. Submitter Information</b>		<i>Service Difficulty Report</i> <b>SDR</b> For Air Carrier and General Aviation Operational and Structural Difficulty Reporting					
(a) Unique Control #	DHL2001803140	 U.S. Department of Transportation Federal Aviation Administration					
(b) Difficulty Date	12/27/2000						
(c) Registration Number	803DH						
(d) Submitter Type	Carrier PART 121 (A)						
<b>2. Codes</b>		<b>3. Major Equipment Identity</b>					
(a) JASC Code	2730	(a) Operator Designator	DHLA				
(b) When Discovered	TAKEOFF (TO) (c) How Other (O)	Operator Type	Air Carrier (A)				
(d) Nature of Condition	OTHER (O)	Manufacturer	Model				
(e) Action Taken	ABORTED TAKEOFF (C)	(b) Aircraft	Serial Number				
(f) FAA Region	SO (g) Dist.Off. 01	(c) Engine	Total Time				
		(d) Propeller	Total Cycles				
<b>4. Problem Description</b>							
NO NOSE DOWN PITCH AT 80 KNOT ELEVATOR CHECK. FOUND ELEVATOR TABS OUT OF RIG. ADJUSTED ELEVATOR CONTROL TABS PER M/M 27-30-0. PRFORMED ACCEPTANCE FLT.							
<b>5. Specific Part Or Structure Causing Difficulty</b>							
(a) Part Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
TAB							
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles				
OUT OF RIG	ELEVATOR						
		(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection				
<b>6. Component / Assembly That Includes Defective Part</b>							
(a) Component Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
(f) Location	(g) Total Time	(h) Total Cycles	(i) Time Since				
			<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection				
<b>7. Structure Causing Difficulty</b>							
(a) Body or Fuselage Station		Waterline		(b) Crack Length (inches)		Number Of Cracks	
From /At:	To:	From /At:	To:				
From /At Stringer	Left Right	To Stringer	Left Right	From /At ButtLine	Left Right	To ButtLine	Left Right
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>
From /At WingStation	Left Right	To WingStation	Left Right	Structural Other		(c) Corrosion Level	2 3
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>				<input type="checkbox"/> <input type="checkbox"/>


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Return To Main Menu		Return To Adhoc Query									
<b>1. Submitter Information</b>		<b>Service Difficulty Report</b> <b>SDR</b> <b>For Air Carrier and General Aviation</b> <b>Operational and Structural Difficulty Reporting</b>		 U.S. Department of Transportation <b>Federal Aviation Administration</b>							
(a) Unique Control #	RRXA001064										
(b) Difficulty Date	10/10/2000										
(c) Registration Number	811AL										
(d) Submitter Type	Carrier PART 121 (A)										
<b>2. Codes</b>		<b>3. Major Equipment Identity</b>									
(a) JASC Code	2730		(a) Operator Designator	RRXA	Operator Type	Air Carrier (A)					
(b) When Discovered	TAKEOFF (TO) (c) How Other (O)		(b) Aircraft	Manufacturer	Model	Serial Number	Total Time	Total Cycles			
(d) Nature of Condition	FLT CONT AFFECTED (F)			DOUG	DC871	46099	52262	21418			
(e) Action Taken	ABORTED TAKEOFF (C)		(c) Engine								
(f) FAA Region	WP	(g) Dist.Off. 15	(d) Propeller								
<b>4. Problem Description</b>											
REJECTED T/O DUE TO NO ELEVATOR CHECK, ASKED FOR FREIGHT REWEIGH (120 KNOTS). PERFORMED REJECTED T/O INSPECTION IAW EWA WORK CARD SP001. NO DEFECTS NOTED. INSPECTED ELEVATOR IAW MM 27-30-1. NO DEFECTS NOTED.											
<b>5. Specific Part Or Structure Causing Difficulty</b>											
(a) Part Name	(b) Manufacturer	(c) Part Number		(d) Serial Number							
WARNING SYSTEM											
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles	(i) Time Since	<input checked="" type="radio"/> Overhaul <input type="radio"/> Repair <input type="radio"/> Inspection						
MALFUNCTIONED ELEVATOR											
<b>6. Component / Assembly That Includes Defective Part</b>											
(a) Component Name	(b) Manufacturer	(c) Part Number		(d) Serial Number	(e) Model Number						
(f) Location	(g) Total Time	(h) Total Cycles	(i) Time Since		<input checked="" type="radio"/> Overhaul <input type="radio"/> Repair <input type="radio"/> Inspection						
<b>7. Structure Causing Difficulty</b>											
(a) Body or Fuselage Station		Waterline				(b) Crack Length (inches)			Number Of Cracks		
From /At: To:		From /At: To:		From /At ButtLine Left Right			To ButtLine Left Right				
From /At Stringer Left Right		To Stringer Left Right									
From /At WingStation Left Right		To WingStation Left Right		Structural Other			(c) Corrosion Level 2 3				

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Return To Main Menu		Return To Adhoc Query					
<b>1. Submitter Information</b>		<b>Service Difficulty Report</b> <b>SDR</b> <b>For Air Carrier and General Aviation</b> <b>Operational and Structural Difficulty Reporting</b>					
(a) Unique Control #	IXXA9700030	 U.S. Department of Transportation Federal Aviation Administration					
(b) Difficulty Date	03/13/1997						
(c) Registration Number	830BX						
(d) Submitter Type	Carrier PART 121 (A)						
<b>2. Codes</b>		<b>3. Major Equipment Identity</b>					
(a) JASC Code	2730	(a) Operator Designator	IXXA				
(b) When Discovered	TAKEOFF (TO) (c) How	Operator Type	Air Carrier (A)				
(d) Nature of Condition	FLT CONT AFFECTED (F) (W)	Manufacturer	Serial Number				
(e) Action Taken	ABORTED TAKEOFF (C) (D)	(b) Aircraft	Total Time				
(f) FAA Region	GL (g) Dist.Off. 23	(c) Engine	Total Cycles				
		(d) Propeller					
<b>4. Problem Description</b>							
<p>DURING TAXI CHECK OF THE ELEVATORS AND POSITION INDICATION SYSTEM, ALL INDICATIONS WERE NORMAL. DURING TAKEOFF ROLL AT 80 KNOTS, THE ELEVATOR CHECK WAS ABNORMAL AND ELEVATOR JAMMED. THE TAKEOFF WAS REJECTED AND THE AIRCRAFT RETURNED TO THE BLOCKS. THE LOCAL NTSB AND FAA WERE NOTIFIED. MAINTENANCE INSPECTED THE CONTROL SYSTEMS OF THE ELEVATOR FOR DEFECTS. DURING THE INSPECTION OF THE RIGHT ELEVATOR TAB DRIVE TUBE ASSEMBLY, WASHERS WERE FOUND INSTALLED BENEATH THE ATTACHING BOLT HEADS. THE INSTALLATION WAS CORRECTED USING THE DOUGLAS ILLUSTRATED PARTS CATALOG, 27-30-0 FIGURE 53. THE AIRCRAFT THEN COMPLETED A HIGH SPEED TAXI CHECK AND TEST FLIGHT TO VERIFY NORMAL ELEVATOR CONDITIONS.</p>							
<b>5. Specific Part Or Structure Causing Difficulty</b>							
(a) Part Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
ELEVATOR							
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles				
JAMMED	ELEVATOR CONTROL	1098	1098				
			(i) Time Since				
			<input checked="" type="radio"/> Overhaul <input type="radio"/> Repair <input type="radio"/> Inspection				
<b>6. Component / Assembly That Includes Defective Part</b>							
(a) Component Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
			(e) Model Number				
(f) Location	(g) Total Time	(h) Total Cycles	(i) Time Since				
			<input checked="" type="radio"/> Overhaul <input type="radio"/> Repair <input type="radio"/> Inspection				
<b>7. Structure Causing Difficulty</b>							
(a) Body or Fuselage Station		Waterline		(b) Crack Length (inches)		Number Of Cracks	
From /At:	To:	From /At:	To:				
From /At Stringer	Left Right	To Stringer	Left Right	From /At ButtLine	Left Right	To ButtLine	Left Right
	<input type="radio"/> <input type="radio"/>		<input type="radio"/> <input type="radio"/>		<input type="radio"/> <input type="radio"/>		<input type="radio"/> <input type="radio"/>
From /At WingStation	Left Right	To WingStation	Left Right	Structural Other		(c) Corrosion Level	2 3
	<input type="radio"/> <input type="radio"/>		<input type="radio"/> <input type="radio"/>				<input type="radio"/> <input type="radio"/>

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Return To Main Menu		Return To Adhoc Query					
<b>1. Submitter Information</b>		<i>Service Difficulty Report</i> <b>SDR</b> For Air Carrier and General Aviation Operational and Structural Difficulty Reporting					
(a) Unique Control #	IXXA9607	 U.S. Department of Transportation Federal Aviation Administration					
(b) Difficulty Date	01/31/1996						
(c) Registration Number	821BX						
(d) Submitter Type	Carrier PART 121 (A)						
<b>2. Codes</b>		<b>3. Major Equipment Identity</b>					
(a) JASC Code	2730	(a) Operator Designator	IXXA				
(b) When Discovered	TAKEOFF (TO) (c) How	Operator Type	Air Carrier (A)				
(d) Nature of Condition	OTHER (O)	Manufacturer	Model				
(e) Action Taken	ABORTED TAKEOFF (C) (D)	Serial Number	Total Time				
(f) FAA Region	GL (g) Dist.Off. 23	(b) Aircraft	Total Cycles				
		DOUG	DC871F				
		(c) Engine	45811				
		(d) Propeller					
<b>4. Problem Description</b>							
TAKEOFF OUT OF OAK WAS ABORTED AT 80 KT DUE TO AN ABNORMAL ELEVATOR EFFECTIVENESS CHECK. (M)							
<b>5. Specific Part Or Structure Causing Difficulty</b>							
(a) Part Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
CONTROL							
(e) Part Condition	(f) Part /Defect Location	(g) Total Time	(h) Total Cycles				
NOT EFFECTIVE	ELEVATOR						
		(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection				
<b>6. Component / Assembly That Includes Defective Part</b>							
(a) Component Name	(b) Manufacturer	(c) Part Number	(d) Serial Number				
(e) Model Number	(f) Location	(g) Total Time	(h) Total Cycles				
		(i) Time Since	<input type="checkbox"/> Overhaul <input type="checkbox"/> Repair <input type="checkbox"/> Inspection				
<b>7. Structure Causing Difficulty</b>							
(a) Body or Fuselage Station		Waterline		(b) Crack Length (inches)		Number Of Cracks	
From /At:	To:	From /At:	To:				
From /At Stringer	Left Right	To Stringer	Left Right	From /At ButtLine	Left Right	To ButtLine	Left Right
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>
From /At WingStation	Left Right	To WingStation	Left Right	Structural Other		(c) Corrosion Level	
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>			2	3
	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/> <input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

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