

**NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.**

DCA19FA089

AIRPORT SPECIALIST'S FACTUAL REPORT

ATTACHMENT 6

FLIGHT INSPECTION REPORTS

6 Pages

# FLIGHT INSPECTION REPORT

## ILS

### 1. FLIGHT INSPECTION REPORT HEADER

IDENT	STATE	CTRY	INSPECTION DATE(S)
PQI	ME	US	03/7/2019
LOCATION		RUNWAY	CATEGORY
PRESQUE ISLE		01	I
			INSP TYPE
			A

### 2. CREW INFORMATION

PIC	SIC	MS	A/C NO
VN053	VN422	VN433	N67
ACM			FIFO
			ACY

### 3. FACILITY INFORMATION

LOCALIZER	Inspected	DME	PQI	VDME	Inspected/Sat
OFFSET		COMPASS LOCATOR			Inspected/Sat
GLIDE SLOPE	Inspected	LIGHTING SYSTEM			Inspected/Sat
LDA		75 mHz MARKERS			Inspected/Unsat*
SDF		SIAP(s) VERIFIED			Sat
TLS		PUBLICATIONS			Sat
OTHER*		COMD WIDTH		4.74	
		COMD ANGLE		3.00	
		GLIDE SLOPE TYPE		CE - Capture Effect	

<b>FACILITY STATUS</b>	
F/C	Unusable*
G/S	Unrestricted
<b>B/C</b>	
ILS CLASS. SYS.	<input type="checkbox"/> <input type="checkbox"/>
<b>INSP. CRITERIA</b>	
<b>ROLLOUT</b>	

### 4. NOTAMs

NOTAM; Presque Isle, Maine: Rwy 01, autopilot couple approach NA below 890 ft MSL will be issued through the OKC Service Center.

### 5. REMARKS

1. Special Number: Y-03-042-19 for the localizer, Y-03-043-19 for the glide slope, and Y-03-057-19 for the outer marker. Request for after accident flight inspection.
2. The following conditions were found during the after accident inspection:
  - \*PQI ILS/L, Y-03-042-19: Localizer alignment out of tolerance. See block 6A on page 2.
  - PQI ILS/G, Y-03-043-19: Glide Slope reversal at 890FT. See block 8A on page 2.
  - \*PQI ILS/MO, Y-03-057-19: Outer Marker narrow, out of tolerance
3. Maintenance was notified of after accident results.
4. ILS Classification not reported due to the magnitude of the localizer misalignment.

**\* Remarks are required for fields marked with an asterisk**

**6. INSTRUMENT LANDING SYSTEM DATA - AZIMUTH (PART I)**

**A. FRONT COURSE**

**B. BACK COURSE**

ILS-1 ALTITUDE

ILS-1 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width			5.21			
Symmetry			47.5			
Modulation			41.0			
Clearance 150			205/34.9			
Clearance 90			257/32.1			
Structure-Z 1			4/5.83			
Structure-Z 2			1/0.59			
Structure-Z 3			3/0.18			
Structure-Z 4			2/0.49			
Structure-Z 5			2/0.53			
Vert. Polar.			S			
Alignment	X		87R			
Identification			S			
Power Ratio						
Loc Only Structure						

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width						
Symmetry						
Modulation						
Clearance 150						
Clearance 90						
Structure-Z 1						
Structure-Z 2						
Structure-Z 3						
Vert. Polar.						
Alignment						
Identification						

**7. INSTRUMENT LANDING SYSTEM DATA - GLIDE SLOPE (PART I)**

ILS-2 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Angle			3.10			
Modulation			79.6			
Width			0.78			
Structure Below Path			2.10			
Symmetry			51.4			
Structure-Z 1			5/4.08			
Structure-Z 2			20/0.58			
Structure-Z 3			7/0.28			
Angle Alignment "B-C"			+20/0.28			
Angle Alignment "C-T"			-134/0.02			
Angle Alignment "T"			-125			

**8. INSTRUMENT LANDING SYSTEM DATA - MARKER WIDTH(S)**

- A. OM
- B. MM
- C. IM

*\* Remarks are required for fields marked with an asterisk*

# FLIGHT INSPECTION REPORT

## AFTER ACCIDENT CONTINUATION SHEET

### 1. GENERAL

<b>A. Location</b>	PRESQUE ISLE, Maine
<b>B. Ident</b>	PQI
<b>C. Facility Type</b>	ILS
<b>D. Date(s) of Inspection</b>	03/07/2019
<b>E. Date &amp; Time of Accident</b>	03/04/2019, 1630Z
<b>F. Aircraft Type &amp; Number</b>	ERJ-145XR, N14171

### 2. OTHER INFORMATION

<b>A. Procedures In Use at Time of Accident</b>	Northern Maine Rgnl Arpt at Presque Isle, Presque Isle, ME, ILS RWY 1, Amdt 6.
<b>B. Equipment In Use at Time of Accident</b>	PQI localizer TX1, PQI glide slope TX 1, DME from PQI VDME - single transmitter, NDB from PQ locator outer marker - single transmitter, outer marker - single TX, and runway 01 approach and runway lighting systems.
<b>C. Date &amp; Time of After Accident Inspection</b>	03/07/2019, 1630Z
<b>D. Weather Conditions at Time of Inspection</b>	Winds 270 degrees, 11 knots, Visibility 10 statute miles, Skies 4700 feet broken, Temperature minus 12 degrees Celsius, Dew Point minus 25 degrees Celsius, Barometric altimeter 3001 inches.
<b>E. Procedures Inspected and Extent of Inspection</b>	Same as Block A, evaluated the final approach segment.
<b>F. SIAP</b>	SAT
<b>G. Name &amp; Routing Symbol of Accident Coordinator/Investigator</b>	Eric West, AVP-100

### 3. REMARKS

Localizer alignment and outer marker width found out of tolerance.

Glide slope reversal NOTAM issued.

Maintenance was notified of after accident results.

# FLIGHT INSPECTION REPORT ILS

## 1. FLIGHT INSPECTION REPORT HEADER

IDENT	STATE	CTRY	INSPECTION DATE(S)
PQI	ME	US	03/13/2019
LOCATION		RUNWAY	CATEGORY
PRESQUE ISLE		01	I
			INSP TYPE
			S

## 2. CREW INFORMATION

PIC	SIC	MS	A/C NO
VN053	VN423	VN237	N67
ACM			FIFO
			ACY

## 3. FACILITY INFORMATION

<b>LOCALIZER</b>	Inspected	<b>DME</b>	PQI	VDME	Inspected/Sat	<b>FACILITY STATUS</b>	
<b>OFFSET</b>		<b>COMPASS LOCATOR</b>			Inspected/Sat		<b>F/C</b> Unrestricted
<b>GLIDE SLOPE</b>	Inspected	<b>LIGHTING SYSTEM</b>			Inspected/Sat		<b>G/S</b> Unrestricted
<b>LDA</b>		<b>75 mHz MARKERS</b>			Inspected/Sat		<b>B/C</b>
<b>SDF</b>		<b>SIAP(s) VERIFIED</b>			Sat		<b>ILS CLASS. SYS.</b> <input type="checkbox"/> I <input type="checkbox"/> E
<b>TLS</b>		<b>PUBLICATIONS</b>			Sat		<b>INSP. CRITERIA</b>
<b>OTHER*</b>		<b>COMD WIDTH</b>		4.74			<b>ROLLOUT</b>
		<b>COMD ANGLE</b>		3.00			
		<b>GLIDE SLOPE TYPE</b>		CE - Capture Effect			

## 4. NOTAMs

Cancelled 03/099 NAV ILS RWY 01 LOC/GP OUT OF SERVICE.  
Cancelled 03/098 NAV ILS RWY 01 OM OUT OF SERVICE.

## 5. REMARKS

Special Numbers: Y-03-065-19 for the localizer, Y-03-066-19 for the glide slope, and Y-03-067-19 for the outer marker after snow was removed from the critical area.

ILS Periodic with monitors completed sat.

Middle antenna advance and retard initially completed with 19° dephase. Maintenance elected to continue to use 15° dephase as reported in the final column.

Approach light RAILS remain out of service. See Lighting report same date.

**\* Remarks are required for fields marked with an asterisk**

**6. INSTRUMENT LANDING SYSTEM DATA - AZIMUTH (PART I)**

**A. FRONT COURSE**

**B. BACK COURSE**

ILS-1 ALTITUDE

ILS-1 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width			4.74			4.73
Symmetry			49.5			49.3
Modulation			40.4			40.4
Clearance 150			205/33.4			202/34.0
Clearance 90			263/32.1			256/32.1
Structure-Z 1			2/6.35			3/7.08
Structure-Z 2			1/0.58			1/0.66
Structure-Z 3			2/0.00			2/0.03
Structure-Z 4			3/0.49			2/0.48
Structure-Z 5			1/0.50			1/0.52
Vert. Polar.			Sat			
Alignment			2R			2R
Identification			Sat			Sat
Power Ratio						
Loc Only Structure						

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Course Width						
Symmetry						
Modulation						
Clearance 150						
Clearance 90						
Structure-Z 1						
Structure-Z 2						
Structure-Z 3						
Vert. Polar.						
Alignment						
Identification						

**7. INSTRUMENT LANDING SYSTEM DATA - GLIDE SLOPE (PART I)**

ILS-2 ALTITUDE

	TX 1			TX 2		
	CD	INITIAL	FINAL	CD	INITIAL	FINAL
Angle			3.09			3.08
Modulation			79.5			79.5
Width			0.72			0.70
Structure Below Path			2.19			2.19
Symmetry			52.5			52.5
Structure-Z 1			4/5.62			5/7.78
Structure-Z 2			9/0.59			5/0.58
Structure-Z 3			5/0.20			3/0.19
Angle Alignment "B-C"			+47/0.16			+23/0.57
Angle Alignment "C-T"			+131/0.00			+102/0.00
Angle Alignment "T"			+131			+102

**8. INSTRUMENT LANDING SYSTEM DATA - MARKER WIDTH(S)**

- A. OM
- B. MM
- C. IM

*\* Remarks are required for fields marked with an asterisk*

**9. INSTRUMENT LANDING SYSTEM DATA - AZIMUTH (PART II)**

A. FRONT COURSE MONITOR	TX1 CD	TX 1 INITIAL	TX 1 FINAL	TX 2 CD	TX 2 INITIAL	TX 2 FINAL	B. BACK COURSE MONITOR	TX1 CD	TX 1 INITIAL	TX 1 FINAL	TX 2 CD	TX 2 INITIAL	TX 2 FINAL
Usable Dis./Pwr Setting							Usable Dis./Pwr Setting						
Course Width (Wide)			5.10				Course Width (Wide)						
Clearance 150			194/33.3				Clearance 150						
Clearance 90			222/32.1				Clearance 90						
Course Width (Narrow)							Course Width (Narrow)						
Clearance 150							Clearance 150						
Clearance 90							Clearance 90						
Alignment R													
Alignment L													

**10. INSTRUMENT LANDING SYSTEM DATA - GLIDE SLOPE (PART II)**

		TX 1	TX 2	PATH ANGLE				PATH WIDTH				STRUCTURE BELOW PATH			
				TX 1 INITIAL	TX 1 FINAL	TX 2 INITIAL	TX 2 FINAL	TX1 INITIAL	TX1 FINAL	TX2 INITIAL	TX2 FINAL	TX1 INITIAL	TX1 FINAL	TX2 INITIAL	TX2 FINAL
A. ANTENNA DEPHASE	ADVANCE	15°		3.06	3.06			0.74	0.72			1.67	1.79		
	RETARD	15°		3.13	3.13			0.74	0.81			1.83	1.64		
B. MAIN SIDEBAND DEPHASE	ADVANCE														
	RETARD														
C. PATH ANGLE LOWERED TO LIMIT															
D. PATH ANGLE RAISED TO LIMIT															
E. PATH WIDTH NARROWED TO LIMIT															
F. PATH WIDTH WIDENED TO LIMIT					3.09				0.85				2.02		
G. ATTEN. MIDDLE ANT TO LIMIT															
H. ATTEN. UPPER ANT TO LIMIT		1.2dB			3.01				0.73				2.13		
		TX 1		TX 2		N. MEAN WIDTH/SYMMETRY									
I. USABLE DISTANCE / PWR SET.								TX		ANGLE ABOVE					
J. CLEARANCE BELOW PATH										ANGLE BELOW					
K. MODULATION EQUALITY										WIDTH					
L. PHASING										SYMMETRY					
M. Front Course Area Where Phasing Was Conducted						O. TILT									
NM		MSL				TX		150 Hz		90 Hz					
P. BEST FIT STRAIGHT LINE					R. TRANSVERSE STRUCTURE			TX1 uA	TX1 Hz	TX2 uA	TX2 Hz				
ARDH	GPI/TH DIS.	RDH	AIM PT ELEV	OFFSET	RADIUS	ALT	LEFT OF CL								
							RIGHT OF CL								
Q. GLIDE SLOPE AIMING POINT					S. RADIO ALTIMETER										
LATITUDE			LONGITUDE												

\* Remarks are required for fields marked with an asterisk