NATIONAL TRANSPORTATION SAFETY BOARD
NTSB Form 6120.1
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

The pilot/operator aircraft accident/incident report may be filed by mailing in this form, per instructions on the last page. Copies of this form may be obtained from the NTSB Web site <http://www.ntsb.gov>, the National Transportation Safety Board Regional Offices, and the Federal Aviation Administration Flight Standards District Offices.

Rules pertaining to aircraft accidents/incidents, overdue aircraft, and safety issues are contained in Part 830 of the National Transportation Safety Board's Regulations, 49CFR. These rules state the authority of the Board, define accidents, incidents, injuries, and other terms, and provide procedures for initial and immediate notification by aircraft pilots/operators.

A. APPLICABILITY

The pilot/operator of an aircraft shall file a report with the Regional Office of the National Transportation Safety Board nearest the accident or incident for which immediate notification is required by section 830.5(a). **The report shall be filed within ten (10) days after an accident for which notification is required by Section 830.5 or when, after seven (7) days, an overdue aircraft is still missing.** An aircraft accident, as defined in 49CFR 830.2, is determined as an occurrence that involves a fatality, serious injury, or substantial damage. For occurrences that do not involve a fatality, the determination that the occurrence is an accident can be appealed by writing to the Director, Office of Aviation Safety, National Transportation Safety Board, 490 L'Enfant Plaza, S.W., Washington, D.C. 20594.

The Pilot/Operator Aircraft Accident/Incident Report Form is used in determining the facts, conditions, and circumstances for aircraft accident prevention activities and for statistical purposes. It is necessary that **ALL** questions be answered completely and accurately to serve the above purposes.

B. DEFINITIONS

1. "Aircraft Accident" means an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death, or serious injury, or in which the aircraft receives substantial damage. For purposes of this form, the definition of “aircraft accident” includes “unmanned aircraft accident,” as defined at 49 C.F.R. 830.2.

2. "Substantial Damage" means damage or failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. NOTE: Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairing or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered "substantial damage" for purposes of this report.

3. "Operator" means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

4. "Fatal Injury" means any injury that results in death within thirty (30) days of the accident.

5. "Serious Injury" means any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fracture of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM
It is necessary that ALL questions on this report be answered completely and accurately.
If more space is needed, continue on a blank sheet.

Nearest City/Place: Use the name of the nearest community that has a Post Office in the state where the accident/incident occurred.

Date & Time: Indicate the date and local time of the event. Be sure to indicate the time zone.

Phase of Operation: Indicate the phase of operation during which the accident/incident occurred.

Aircraft Information: Enter aircraft make and model information as indicated on the aircraft registration certificate, including series. If the involved aircraft is certified as "amateur-built," include the name of manufacturer of the kit or plans when appropriate.

Max Gross Weight: Enter the certificated max gross weight for the aircraft involved in the occurrence. This should be the same as the maximum gross weight indicated on the aircraft weight and balance documents.

Airworthiness Certificate: For light sport aircraft, if aircraft certificated as "Light Sport - Experimental", check both the "Light Sport" and "Experimental" check boxes.

Type of Fire Extinguishing System: If a fire extinguishing system was used to fight an aircraft fire, specify the type(s) of extinguishing system(s) used. Examples include handheld extinguisher, engine fire bottle, cargo/baggage compartment fire suppression system, or airport emergency ground equipment.

Engine: Enter engine make and model information as indicated on the engine data plate.

Owner/Operator Information: Enter the owner information as shown on the registration certificate. Commercial operators, enter the operator information, including "Doing Business as" when applicable, as shown on the operator certificate.

Revenue Sightseeing Flight: Indicate whether the accident aircraft was conducting **revenue** sightseeing operations under FAR Part 91 at the time of the accident.

Public Use: Federal, state or local government flight operations such as official travel, law-enforcement, low-level observation, aerial application, firefighting, search and rescue, biological or geological resource management, or aeronautical research. Military operations should not be included under public use. If public use, also indicate whether the flight was conducted by Federal, State, or Local government.

Air Medical Flight: Indicate whether accident flight was being conducted for the purpose of carrying medical personnel, patient(s), or organs.

Purpose of Flight (FAR 91, 103, 133, 137): Indicate the type of operation that was being conducted at the time of the occurrence using the following definitions:

PERSONAL—Flying for personal reasons (excludes business transportation) including pleasure or personal transportation. This also includes practice or proficiency flights performed under flight instructor supervision and not part of an approved flight training program.

BUSINESS—Includes all personal flying **without** a paid, professional crew for reasons associated with furthering a business, including transportation to and from business meetings or work. This does not include corporate/executive operations, air taxi, or commuter operations.

EXECUTIVE/CORPORATE—Company flying **with** a paid, professional crew.

OTHER WORK USE—Miscellaneous flight operations conducted for compensation or hire such as construction work (not FAR Part 135 operation), parachuting, aerial advertising, towing gliders, etc.

INSTRUCTIONAL—Flying while under the supervision of a flight instructor or receiving air carrier training. Personal proficiency flight operations and personal flight reviews, as required by federal air regulations, are excluded.

FERRY—Non-revenue flight under a special flight or "ferry" permit. Refer to 14 CFR 21.197 for details of special flight permit issuance.

POSITIONING—Non-revenue flight conducted for the primary purpose of moving the aircraft to a maintenance facility or to load passengers or cargo, etc.

AERIAL APPLICATION—Operations using an aircraft to perform aerial application or dispersion of any substance. Examples include agricultural, health, forestry, cloud seeding, firefighting, insect control, etc.

AERIAL OBSERVATION—Aerial mapping/photography, patrol, search and rescue, hunting, highway traffic advisory, ranching, surveillance, oil and mineral exploration, criminal pursuit, fish spotting, etc.

AIR DROP—Aerial operations, other than aerial application, that are intended to release items in flight.

AIR RACE/SHOW—Includes any flight operations conducted as part of an organized air race or public demonstration.

FLIGHT TEST—Flight for the purpose of investigating the flight characteristics of an aircraft/aircraft component, or evaluating an applicant for a pilot certificate or rating.

PUBLIC USE—See definition above.

UNKNOWN—Use only if the primary purpose of flight is not known.

Other Aircraft – Collision: For all accidents involving a collision with another aircraft, including parked aircraft, check "Collision with other aircraft" under Basic Information and complete this section indicating details about the OTHER aircraft involved in the collision.

Airport Information: Complete this section if the accident/incident occurred on approach, takeoff, or within 3 miles of an airport. Please refer to the FAA Airport/Facility Directory or other official source for airport information.

Airport Identification: Provide the official 3 or 4 character airport identifier.

Runway: Indicate the number of the runway used, including L, R, or C if applicable.

Runway/Landing Surface: Indicate the type of intended runway/landing surface (do not indicate surface conditions). If the surface type was mixed, check all that apply.

Condition of Runway/Landing Surface: Indicate the condition of the intended runway/landing surface. If multiple conditions existed at the time of the accident, check all that apply.

Weather Information at the Accident/Incident Site: Indicate the weather conditions reported at the accident/incident site at the time of occurrence. If no weather reporting was available for the accident/incident site, indicate the reported conditions at the nearest reporting site. Specify the weather reporting site identifier, the observation time, and distance from the accident/incident site.

Sky/Lowest Cloud Condition: Indicate the height above ground level of the lowest cloud condition present at the time of the accident and whether coverage was reported as few, scattered, broken or overcast. Also indicate the height above ground level and coverage of the lowest cloud ceiling present at the time of the accident (reported as broken or overcast).

NOTAMs ((D), (L) and FDC), AIRMETs, SIGMETs, PIREPs: Describe all NOTAMs, AIRMETs, SIGMETs, PIREPs in effect near the accident/incident. For NOTAMs, state if they were distant (D), local (L), or Flight Data Center (FDC), if known.

Pilot Information: Indicate the category that best describes the capacity served by this flight crewmember at the time of the accident. The designators "Pilot A" and "Pilot B" do not refer to a specific pilot position or responsibility. If more than one pilot is aboard, they may be entered in any order and their capacity entered as appropriate.

Degree of Injury: See Definitions on the top half of Page 1 of the Instructions. Minor injury is not defined. If an injury does not meet the criteria for another injury category, select Minor.

Date of Last Flight Review or Equivalent: Enter the date of the most recent flight review, or equivalent, completed by this pilot. Refer to 14 CFR 61.56 for accepted equivalents.

Type Ratings: List all type ratings on the pilot certificate. If the pilot holds no type ratings indicate "none". If the pilot holds a pilot certificate other than student, and was flying an aircraft requiring an endorsement enter the type and date of any logbook endorsement(s) for that aircraft. See 14 CFR 61 for examples of required endorsements.

Student Endorsements: If the pilot holds a student pilot certificate, enter all solo endorsements and dates on the student pilot certificate.

Flight Time: Complete the flight time matrix. Solo flight time should be included as "Pilot-in-Command (PIC)" and all dual flight instruction given should be included as "Time as Instructor".

Additional Flight Crew Members: Complete this section if there were more than two required flight crew members on the aircraft. This also includes a check airman performing official duties, but does not include cabin crew. State the capacity served by each included crewmember at the time of the accident.

Passenger(s)/Other Personnel: Please enter identification and injury severity information for all passengers and other personnel involved in the accident. See page 1 of the instructions for the official definition of injury levels. Occupants are considered "Revenue" passengers if they were being carried for compensation or hire. The option "FAA" refers to any FAA personnel performing a flight related function, including flight check, airman practical test, etc.

Several questions throughout the form allow for multiple responses; when appropriate choose all responses that apply.

These instructions only pertain to major issue areas covered by the NTSB Form 6120.1 *Pilot/Operator Aircraft Accident/Incident Report*. For additional definitions of questions and responses, please refer to <http://www.ntsb.gov>.

NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT
This form to be used for reporting civil and public use aircraft accidents and incidents

BASIC INFORMATION

Accident/Incident Location
Nearest City/Place: Memphis State: TN
ZIP: 38116 Country: United States of America
Latitude: 35.02.32.7 (dd:mm:ss N/S) Longitude: 089.58.36.00 (ddd:mm:ss E/W)

Date/Time
Date: 02/05/2014 *mm/dd/yyyy* Local Time: 00:22
Time Zone: CST

Phase of Operation
☐ Standing ☐ Takeoff (incl. initial climb) ☐ Cruise ☐ Hover
☐ Taxi ☐ Climb ☐ Maneuvering ☐ Other
☐ Descent ☑ Landing ☐ Approach ☐ Unknown

Collision with Other Aircraft
☐ Midair
☐ On-ground
☑ None

Altitude of In-Flight Occurrence
361 ft MSL

AIRCRAFT INFORMATION

Manufacturer: Embraer
Model: EMB-145EP
Serial Number: 145066
Registration Number: N802HK **Amateur-built:** ☐ Yes ☑ No

Max Gross Weight: 43,935 lbs
Weight at Time of Accident/Incident: 41,100 lbs
Location of Center of Gravity at Time of Accident/Incident:
_____ inches from ☐ nose or ☐ datum
-or- 25.0 Percent Mean Aerodynamic Cord (% MAC)

Category of Aircraft
☑ Airplane
☐ Balloon
☐ Blimp/Dirigible
☐ Glider
☐ Gyrocraft
☐ Helicopter
☐ Powered lift
☐ Ultralight
☐ Unknown

Type of Airworthiness Certificate
(Check all that apply)
Standard
☐ Normal
☐ Utility
☐ Acrobatic
☑ Transport
Special
☐ Restricted
☐ Limited
☐ Provisional
☐ Experimental
☐ Special Flight
☐ Light Sport

Number of Seats: 54
If Large Aircraft, how many seats for:
Flight Crew: 3
Cabin Crew: 1
Passengers: 50

Landing Gear ☑ Retractable
Check any additional landing gear configuration that applies:
☐ Tricycle ☐ Tailwheel
☐ Amphibian ☐ High Skid
☐ Emergency Float ☐ Skid
☐ Float ☐ Ski
☐ Hull ☐ Ski/Wheel
☐ Unknown

Type of Maintenance Program
☐ Annual
☐ Conditional (Amateur-built only)
☐ Manufacturer's Inspection Program
☐ Other Approved Inspection Program (AAIP)
☑ Continuous Airworthiness
☐ Other, specify: _____

Last Inspection Type
☐ 100 Hour ☑ Continuous Airworthiness
☐ AAIP ☐ Conditional Inspection
☐ Annual ☐ Unknown

Date Last Inspection: 02/03/2014 *mm/dd/yyyy*

Airframe Total Time: 34,069 hrs
hours measured at *(check one)*
☑ Last Inspection ☐ Time of Accident/Incident

IFR Equipped
☑ Yes ☐ No ☐ Unknown

Stall Warning System Installed
☑ Yes ☐ No ☐ Unknown

Type of Fire Extinguishing System
☐ None
☑ Specify Halon-based Extinguishing System in engines, lavatory,

ELT Installed
☑ Yes ☐ No

ELT Activated
☐ Yes ☑ No

ELT Aided in Locating Accident/Incident
☐ Yes ☑ No

ELT Manufacturer: Artex
Model/Series: ELT 110-4
Serial Number: 60152
Battery Type: Nickel Cadium **Battery Exp. Date:** Nov 2014

Engine Type
☐ Reciprocating ☐ Turbo Jet
☐ Turbo Shaft ☑ Turbo Fan
☐ Turbo Prop ☐ Unknown

Reciprocating Fuel System Type
☐ Carburetor
☐ Fuel Injected

Propeller
☐ Fixed Pitch
☐ Controllable Pitch
Manufacturer: N/A
Model: N/A

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. *mm/dd/yyyy*	Engine Rated Power Measured as *(check one)* ☐ Horsepower or ☑ lbs of Thrust	Total Time (hours)	Time Since Inspection (hours)	Time Since Overhaul (hours)
Eng. 1	Rolls-Royce	AE3007A1	311590	10/09/2000	7426	27,422	3,755	
Eng. 2	Rolls-Royce	AE3007A1	312594	05/27/2004	7426	20,181	1,543	
Eng. 3								
Eng. 4								

OWNER/OPERATOR INFORMATION

Registered Aircraft Owner

Name: CIT Leasing Corp

Fractional Ownership Aircraft: ☐ Yes ☑ No

Owner Address

City: New York
State: New York ZIP: 10036-8002
Country: UNITED STATES OF AMERICA

Operator of Aircraft ☑ Same As Registered Owner

Name: Trans States Airlines, LLC
Doing Business As: Trans States Airlines, LLC
Air Carrier/Operator Designator (4 Character Code): LOF

Operator Address ☐ Same As Registered Owner

City: Bridgeton
State: MO ZIP: 63044
Country: UNITED STATES OF AMERICA

Regulation Flight Conducted Under

☐ FAR 91 ☐ FAR 129 ☐ FAR 91 Special Flight ☐ Public Use (select type)
☐ FAR 103 ☐ FAR 133 ☐ Non-US, Commercial ☐ *Federal* ☐ *State* ☐ *Local*
☑ FAR 121 ☐ FAR 135 ☐ Non-US, Non-commercial ☐ Unknown
☐ FAR 125 ☐ FAR 137 ☐ Armed Forces

Revenue Sightseeing Flight

☐ Yes ☑ No

Air Medical Flight

☐ Yes ☑ No

Purpose of Flight
for FAR 91, 103, 133, 137 *(Select one)*

☐ Personal
☐ Business
☐ Executive/Corporate
☐ Other Work Use
☐ Instructional
☐ Ferry
☐ Positioning
☐ Aerial Application
☐ Aerial Observation
☐ Air Drop
☐ Air Race / Show
☐ Flight Test
☐ Public Use
☐ Unknown

Revenue Operation
for FAR 121, 125, 129, 135 *(Select one)*

☑ Scheduled or Commuter
☐ Non-Scheduled or Air Taxi

Domestic or International

☑ Domestic ☐ International

Cargo Operation

☑ Passenger/Cargo
☐ Passenger 41 How many?
☐ Cargo 0 lbs
☐ Mail

Type of Commercial Operating Certificate Held
(Check all that apply)

☐ None
☑ Flag Carrier Operating Certificate (121)
☐ Supplemental
☐ Air Cargo
☐ Foreign Air Carriers (129)
☐ Commuter Air Carrier (135)
☐ On-Demand Air Taxi (135)
☐ Large Helicopter (127)
☐ Rotorcraft External Load (133)
- or -
☐ Agricultural Aircraft (137)
☐ Other Operator of Large Aircraft

OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for *other* aircraft)

Aircraft Registration Number

N/A

Manufacturer: N/A
Model: N/A

Damage to Other Aircraft

☐ Destroyed ☐ Minor
☐ Substantial ☐ None

Registered Owner of Other Aircraft

First Name: N/A
Middle Initial: _____
Last Name: _____

City: _____
State: _____ ZIP: _____
Country: _____

Pilot of Other Aircraft

First Name: N/A
Middle Initial: _____
Last Name: _____

City: _____
State: _____ ZIP: _____
Country: _____

MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on separate sheet)

Was there Mechanical Malfunction/Failure? ☐ Yes ☐ No ☑ Unknown

(If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)

It appears that the ice detection system failed to operate for unknown reasons. As the ice detection system did not activate, the automatic function of the ice protection system did not operate, allowing ice to accumulate on both wings, both engine inlets, and the horizontal stabilizer. Specific parts that may be involved with this failure are unknown at this time.

Total Time/Cycles On Part

_____ Hours
_____ Cycles

Time Since This Part Inspected/Overhauled

_____ Hours

DAMAGE TO AIRCRAFT AND OTHER PROPERTY

Aircraft Damage

☐ None ☑ Substantial
☐ Minor ☐ Destroyed

Aircraft Fire

☑ None ☐ Both Ground and In-Flight
☐ In-Flight ☐ Unknown Origin
☐ On-Ground

Aircraft Explosion

☑ None ☐ Both Ground and In-Flight
☐ In-Flight ☐ Unknown Origin
☐ On-Ground

Description of Damage to Aircraft and Other Property *(use additional sheet if necessary)*

Aircraft sustained damage to the outboard right wing tip, right aileron, right position lights, and right aft wing spar when the right wing made contact with the ground during landing.

AIRPORT INFORMATION (If the accident/incident occurred on approach, takeoff or within 3 miles of an airport, complete this section)

Airport Identifier: KMEM
Airport Name: Memphis International Airport
Proximity to Airport ☐ Off Airport/Airstrip ☑ On Airport ☐ On Airstrip

Distance From Airport Center: 1 SM
Direction From Airport: 189 degrees MAG
Airport Elevation: 341 ft. MSL

Approach Segment *(Select one)*

☐ On Instrument Approach ☐ Landing ☐ Base leg ☑ Final ☐ Go Around
☐ Crosswind ☐ Downwind ☐ Low Approach ☐ Aborted Landing (after touchdown)

IFR Approach *(Check all that apply)*

☐ None ☐ PAR ☐ MLS ☐ Practice
☐ ADF/NDB ☐ Sidestep ☐ LDA ☐ GPS
☐ SDF ☑ ILS ☐ ASR ☐ Loran
☐ VOR/TVOR ☐ Localizer Only ☐ Visual ☐ Unknown
☐ VOR/DME ☐ LOC-back course ☐ Contact
☐ TACAN ☐ RNAV ☐ Circling

VFR Approach *(Check all that apply)*

☑ None ☐ Stop and Go
☐ Traffic Pattern ☐ Touch and Go
☐ Straight-In ☐ Simulated Forced Landing
☐ Valley/Terrain Following ☐ Forced Landing
☐ Go Around ☐ Precautionary Landing
☐ Full Stop ☐ Unknown

Runway Information

Runway ID: 36R (L/R/C) Length: 9,000 ft Width: 150 ft

Runway/Landing Surface *(Check all that apply)*

☐ Asphalt ☐ Grass/Turf ☐ Macadam ☐ Water
☑ Concrete ☐ Gravel ☐ Metal/Wood ☐ Unknown
☐ Dirt ☐ Ice ☐ Snow

Condition of Runway/Landing Surface *(Check all that apply)*

☐ Dry ☐ Snow-Compacted ☐ Water-Calm
☐ Holes ☐ Snow-Crusted ☐ Water-Choppy
☐ Ice Covered ☐ Snow-Dry ☐ Water-Glassy
☐ Rough ☐ Snow-Wet ☐ Wet
☐ Rubber Deposits ☐ Soft ☐ Unknown
☐ Slush Covered ☐ Vegetation

FLIGHT ITINERARY INFORMATION

Last Departure Point

Airport ID: KIAH
City: Houston
State: Texas
Country: United States of America

Time of Departure

Time: 2022
Time Zone: CST

Destination

Airport ID: MEM
City: Memphis
State: Tennessee
Country: United States of America

Type Flight Plan Filed

☐ None ☐ VFR/IFR
☐ Company VFR ☑ IFR
☐ Military VFR ☐ Unknown
☐ VFR
Activated? ☑ Yes ☐ No

Type of ATC Clearance/Service *(Check all that apply)*

☐ None ☐ Special VFR ☐ Special IFR ☐ VFR Flight Following ☐ Cruise
☐ VFR ☑ IFR ☐ VFR On Top ☐ Traffic Advisory ☐ Unknown / NA

Airspace where the accident/incident occurred *(Check all that apply)*

☐ Class A ☐ Class E ☐ Prohibited Area ☐ Jet Training Area ☐ Special
☐ Class B ☐ Class G ☐ Restricted Area ☐ TRSA ☐ Air Traffic Control Area
☐ Class C ☐ Demo Area ☐ Military Operations Area (MOA) ☐ FAR 93 ☐ Unknown
☑ Class D ☐ Warning Area ☐ Airport Advisory Area

Aircraft Load Description *(Check all that apply)*

☐ None ☐ Towing Glider ☐ Parachutists ☐ Livestock
☑ Passengers ☐ Towing Banner ☐ Water ☐ Unknown
☐ Cargo ☐ Other External ☐ Chemical/Fertilizer/Seeds

FUEL & SERVICES INFORMATION

Fuel on Board at Last Takeoff *(convert from pounds, as necessary)*

1,105 Gallons

Fuel Type

☐ 80/87 ☐ 115/145 ☐ JP3 ☐ Other, specify
☐ 100 Low Lead ☑ Jet A ☐ JP4
☐ 100/130 ☐ Automotive ☐ JP5

Other Services, if Any, Prior to Departure

7500 LBS fuel on board at takeoff

EVACUATION OF AIRCRAFT

Was an emergency evacuation of the aircraft performed? ☐ Yes ☑ No

Method of Exit – Describe how the occupants exited and how many occupants evacuated each location

N/A

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Weather Observation Facility

Facility ID: KMEM

Observation Time: 11:54 PM

Time Zone: CST

Distance from Accident Site: 1 NM

Direction from Accident Site: 189 degrees MAG

Source of Weather Information *(Check all that apply)*

☑ National Weather Service
☐ Flight Service Station
☐ TV/Radio
☐ Automated Report
☐ Commercial Weather Service (DUATS)
☐ Company
☐ Military
☐ Internet
☐ Unknown

Method of Briefing *(Check all that apply)*

☐ In Person
☐ Teletype
☐ Telephone/Computer
☑ Aircraft Radio
☐ TV/Radio
☐ Unknown

Briefing Type/Completeness

☐ Full
☐ Partial / Limited By Pilot
☑ Partial / Limited By Briefer
☐ Abbreviated
☐ Unknown
☐ Not Pertinent

Light Condition

☐ Dawn
☐ Day
☐ Dusk
☑ Night
☐ Dark Night
☐ Bright Night
☐ Not Reported

Visibility

1 miles

Sky/Lowest Cloud Condition

☐ Clear
☐ Few
☐ Partial Obscuration
☐ Scattered
☐ Thin Broken
☐ Thin Overcast
☐ Unknown

Ceiling

☐ None (clear)
☐ Broken
☑ Overcast
☐ Obscured
☐ Indefinite
☐ Unknown

Restriction to Visibility *(Check all that apply)*

☐ None
☐ Blowing Dust
☐ Blowing Sand
☐ Blowing Snow
☐ Blowing Spray
☐ Dust
☐ Fog
☐ Ground Fog
☐ Haze
☐ Ice Fog
☐ Smoke
☐ Unknown

Lowest Cloud Condition Height

400 ft AGL

Ceiling Height

400 ft AGL

Wind Direction

☑ Indicated: 290 degrees MAG

☐ Variable

Wind Speed

Velocity: 7 KTS

-or-

☐ Calm
☐ Light and Variable

Wind Gusts

Velocity: _____ KTS

☐ Gusting
☐ Not Gusting

Type of Turbulence *(Check all that apply)*

☑ None
☐ Clear Air
☐ In Clouds
☐ Vicinity of Thunderstorm

Severity of Turbulence

☐ Extreme
☐ Severe
☐ Moderate
☐ Moderate Chop
☐ Light

NOTAMs (D, L and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident

ATIS:
MEM ATIS INFO E 0354Z 29008KT 1/2SM BR OVC004 01/M01 A2992 RMK AO2 SFC VIS 6 SLP 140.
ILS APCH IN USE RWY 36L, 36C, 36R, SIMUL APCHS IN USE. SIMUL DEPS IN USE RWY 36L 36C 36R.

NOTAMS:
MEM ASDE OTS. SPOT 6 CLSD. RWY 36C FAR FIELD MONITOR OTS. BIRD ACTIVITY RPTD IN THE VC OF THE AIRPORT. HAZD WX INFO FOR MEM AREA AVBL FM FLT WATCH OR FSS. READBACK ALL RWY HOLD SHORT INSTRUCTIONS. ALL DEPG ACFT PDC CTC CD ON 125.2 RECAT WAKE TURBULENCE SEPERATION STANDARDS IN EFFECT. TWY A EAST OF TWY A2 NON MOVEMENT AREA FOR DE-ICING.

TERMINAL AREA FORECAST:
COR KMEM 050301Z 0503/0524 30006KT 6 SM BR BKN004 OVC020 TEMPO 0505 / 0509 3SM -DZ FM050900 30008KT 5 SM BR VCSH BKN006 OVC020 TEMPO 0509/0513 3SM -FZDZ BR BKN004 FM 051400 34014G20KT P6SM BKN018 OVC025.

Temperature: 01 (C) or _____ (F)

Altimeter Setting: 29.92 in. HG or _____ MB

Density Altitude: _____ ft

Dew Point: -01 (C) or _____ (F)

Icing Forecast

Amount		Type
☑ None	☐ Moderate	☐ Rime
☐ Trace	☐ Severe	☐ Clear
☐ Light		☐ Mixed

Icing Actual

Amount		Type
☐ None	☐ Moderate	☐ Rime
☐ Trace	☐ Severe	☐ Clear
☐ Light		☑ Mixed

Type of Precipitation *(Check all that apply)*

☐ None
☐ Rain
☐ Snow
☐ Hail
☐ Rain Showers
☐ Freezing Rain
☐ Snow Shower
☐ Drizzle
☐ Ice Pellets
☐ Snow Pellets
☐ Snow Grains
☐ Ice Crystals
☐ Ice Pellets Shower
☐ Freezing Drizzle

Intensity of Precipitation

☐ Light ☐ Moderate ☐ Heavy

PILOT "A" INFORMATION

Pilot "A" Responsibilities at the Time of Accident/Incident

☑ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

Pilot "A" Identification

First Name: James
Middle Initial: C
Last Name: Roberts

City: [redacted]
State: _____ ZIP: [redacted]
Country: _____

Age at time of Accident/Incident: 38 Date of Birth: [redacted] *mm/dd/yyyy*

Certificate Number: [redacted]

Degree of Injury	Seat Occupied	Seat Belt	Shoulder Harness
☑ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	☑ Left ☑ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ Single	Used ☑ Yes ☐ No Available ☑ Yes ☐ No	Used ☑ Yes ☐ No Available ☑ Yes ☐ No

Pilot Certificate(s) *(Check all that apply)*

☐ None ☐ Student ☐ Recreational ☐ Commercial ☐ Flight Engineer ☐ Foreign
☐ Private ☐ Flight Instructor ☐ Sport ☑ Airline Transport ☐ U.S. Military

Principal Occupation	Medical Certificate	Medical Certificate Validity	Date of Last Medical
☑ Pilot ☐ Other ☐ Unknown	☐ None ☐ Class 3 ☑ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown	☐ Without limitations/waivers ☑ With limitations/waivers ☐ Unknown	04/17/2013 *mm/dd/yyyy*

Medical Certificate Limitations

Must wear corrective lenses for near and distant vision.

Medical Certificate Waivers

None

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 12/15/2013 *mm/dd/yyyy*

Flight Review Aircraft

Make: Embraer
Model: EMB-145

Airplane Rating(s) *(Check all that apply)*	Other Aircraft Rating(s) *(Check all that apply)*	Instrument Rating(s) *(Check all that apply)*	Instructor Rating(s) *(Check all that apply)*
☐ None ☑ Single-Engine Land ☐ Single-Engine Sea ☑ Multiengine Land ☐ Multiengine Sea	☑ None ☐ Airship ☐ Free Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	☐ None ☑ Airplane ☐ Helicopter ☐ Powered Lift	☐ None ☑ Airplane Single-Engine ☑ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☑ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport

Type Ratings

EMB-145

Student Endorsements *(Include dates)*

N/A

Flight Time *(enter appropriate number of hours in each box)*	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	6,409	5,641	698	5,711	800	400	110	0	0	0
Pilot in Command (PIC)	1,797	1,091	640	1,137	320	150	90	0	0	0
Time as Instructor	432	0	432	0	30	17	5	0	0	0
This Make/Model					310	380	45			
Last 90 Days	176	176	0	176	24	16	0	0	0	0
Last 30 Days	49	49	0	49	10	4	0	0	0	0
Last 24 Hours	3	3	0	3	2	1	0	0	0	0

PILOT "B" INFORMATION

Pilot "B" Responsibilities at the Time of Accident/Incident

☐ Pilot ☑ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

Pilot "B" Identification

First Name: Elyse
Middle Initial: M
Last Name: Swedberg

City: [redacted]
State: _____ ZIP: [redacted]
Country: _____

Age at time of Accident/Incident: 29 Date of Birth: [redacted] *mm/dd/yyyy*

Certificate Number: [redacted]

Degree of Injury	Seat Occupied	Seat Belt	Shoulder Harness
☑ None ☐ Fatal	☐ Left ☑ Front ☐ Unknown	Used ☑ Yes ☐ No	Used ☑ Yes ☐ No
☐ Minor ☐ Unknown	☑ Right ☐ Rear	Available ☑ Yes ☐ No	Available ☑ Yes ☐ No
☐ Serious	☐ Center ☐ Single		

Pilot Certificate(s) *(Check all that apply)*

☐ None ☐ Student ☐ Recreational ☐ Commercial ☐ Flight Engineer ☐ Foreign
☐ Private ☑ Flight Instructor ☐ Sport ☑ Airline Transport ☐ U.S. Military

Principal Occupation	Medical Certificate	Medical Certificate Validity	Date of Last Medical
☑ Pilot	☐ None ☐ Class 3	☑ Without limitations/waivers	04/03/2013
☐ Other	☑ Class 1 ☐ Driver's License (Sport Pilot only)	☐ With limitations/waivers	*mm/dd/yyyy*
☐ Unknown	☐ Class 2 ☐ Unknown	☐ Unknown	

Medical Certificate Limitations

None

Medical Certificate Waivers

None

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 07/15/2013 *mm/dd/yyyy*

Flight Review Aircraft

Make: Embraer
Model: EMB-145

Airplane Rating(s) *(Check all that apply)*

☐ None ☑ Single-Engine Land ☐ Single-Engine Sea ☑ Multiengine Land ☐ Multiengine Sea

Other Aircraft Rating(s) *(Check all that apply)*

☑ None ☐ Airship ☐ Free Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift

Instrument Rating(s) *(Check all that apply)*

☐ None ☑ Airplane ☐ Helicopter ☐ Powered Lift

Instructor Rating(s) *(Check all that apply)*

☐ None ☑ Airplane Single-Engine ☑ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift
☑ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport

Type Ratings

EMB-145

Student Endorsements *(Include dates)*

N/A

Flight Time *(enter appropriate number of hours in each box)*	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	2,075	925	1,040	1,035	295	195	93	0	0	0
Pilot in Command (PIC)	1,080	0	1,000	64	50	18	87	0	0	0
Time as Instructor	822	0	781	41	49	18	0	0	0	0
This Make/Model					240	172	48			
Last 90 Days	160	160	0	160	57	22	0	0	0	0
Last 30 Days	55	55	0	55	18	11	0	0	0	0
Last 24 Hours	7	7	0	7	5	3	0	0	0	0

ADDITIONAL FLIGHT CREW MEMBERS (Exclusive of cabin attendants, complete the following information)

Pilot Name and Address

First Name: N/A
Middle Initial: ______
Last Name: ______

City: ______
State: ______ ZIP: ______
Country: ______

Degree of Injury
☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown

Pilot Certificate(s) *(Check all that apply)*
☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ U.S. Military ☐ Foreign

Seat Occupied
☐ Left ☐ Right ☐ Center ☐ Front ☐ Rear ☐ Single ☐ Unknown

Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No

Total Flight Time at the Time of this Accident/Incident: ______hrs

Pilot Name and Address

First Name: N/A
Middle Initial: ______
Last Name: ______

City: ______
State: ______ ZIP: ______
Country: ______

Degree of Injury
☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown

Pilot Certificate(s) *(Check all that apply)*
☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ U.S. Military ☐ Foreign

Seat Occupied
☐ Left ☐ Right ☐ Center ☐ Front ☐ Rear ☐ Single ☐ Unknown

Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No

Total Flight Time at the Time of this Accident/Incident: ______hrs

Pilot Name and Address

First Name: N/A
Middle Initial: ______
Last Name: ______

City: ______
State: ______ ZIP: ______
Country: ______

Degree of Injury
☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown

Pilot Certificate(s) *(Check all that apply)*
☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ U.S. Military ☐ Foreign

Seat Occupied
☐ Left ☐ Right ☐ Center ☐ Front ☐ Rear ☐ Single ☐ Unknown

Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No

Total Flight Time at the Time of this Accident/Incident: ______hrs

PASSENGER(S) / OTHER PERSONNEL (Include flight attendants; continue on separate sheet if necessary)

Name and Address		Seat	Crew	Non-Revenue	Revenue	Non-Occupant	FAA	Fatal	Serious Injury	Minor Injury	No Injury	Unknown
First Name: Carol Middle Initial: M. Last Name: Pearson	City: [redacted] State: ______ ZIP: [redacted] Country: ______	JS	☑	☐	☐	☐	☐	☐	☐	☐	☑	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
First Name: ______ Middle Initial: ______ Last Name: ______	City: ______ State: ______ ZIP: ______ Country: ______	______	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

NARRATIVE HISTORY OF FLIGHT (Please type or print in ink)

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State time and point of departure, intended destination, and services obtained.

Flight 3395 departed Houston's George Bush Intercontinental Airport (KIAH) on the evening of February 04, 2014 to Memphis International Airport (KMEM) with a scheduled flight time of 57 minutes en route. The flight departed in night visual conditions, and flew uneventfully to Memphis. At Memphis, the flight encountered instrument meteorological conditions on approach. Flight 3395 was cleared for an ILS approach to Runway 36C, but elected a missed approach near the final approach fix do to problems receiving the localizer. Memphis Air Traffic Control vectored the flight to the ILS Runway 36R. The approach appeared normal. The autopilot was disconnected approximately 300 ft AGL. Approximately 20-40 feet above the ground, the crew reported the aircraft banked sharply to the right, and the right wing tip contacted the ground. The crew recovered the aircraft, landed, and taxied to the gate under their own power. At the gate, the crew noted damage to the right wing. The crew also noted that both wings and engine inlets were coated with ice. The crew reported that they had not received an ice detection activation message on the EICAS, and that the aircraft's ice protection system did not activate. A photograph of the iced up wing taken by the Captain is attached.

Captains Initial Statement:

The flight was from IAH to MEM on the 4th of February. Aircraft was 802HK. PF was the FO and PM was the CA. WX was winds 290/8 kts vis was half mile and ceiling was 400ovc. On landing in MEM we were about 20 to 30 feet above the ground and the aircraft entered a hard bank to the right. We both tried to control the aircraft and I pushed hard on the left rudder and rudder system 1and 2 turned off. We landed hard and were unstable but were able to keep the aircraft on the runway. We taxied off the runway and didn't notice anything from keeping us from taxiing on to the gate. After doing our walk around we noticed the right wing was damaged during the hard landing.

First Officers Initial Statement:

On our second approach into mem, crossed faf turned off autopilot at 300ft... "Auto pilot" warning kept repeating regardless of how many times button was pushed. Ca called speed I called correcting and continued. Over the threshold the between 30- 40 feet airplane had a hard bank to the right... Both the ca and I did what we could do to get the plane landed, the landing was hard and we were still able to taxi. After we got the plane stopped we saw that rudder system 1/2 inop. After passengers were deplaned the ca and I walked around and saw considerable ice build up on all leading edges and wing damage.

RECOMMENDATION (How could this accident/incident have been prevented?)

Operator/Owner Safety Recommendation

ADDITIONAL INFORMATION *(Please type or print in ink)*

Use this space if additional space is needed for any answers.

On February 07, 2014, the attached URGENT Bulletin was issued by the Director of Safety in conjunction with the Director of Flight Operations:

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Date of this Report	**Signature and Name of Pilot/Operator**
02/18/2014 *mm/dd/yyyy*	Signature: [redacted] Type or Print Name:

Signature and Name of Person Filing Report if Other than Pilot/Operator

Signature:

Type or Print Name:

Title:

FOR NTSB USE ONLY

NTSB Accident/Incident No.	**Reviewed by NTSB Regional Office**	**Name of Investigator**	**Date Report Received**
DCA14FA058	Washington DC	J. Lovell	4/19/2016

Urgent Safety Bulletin

To: The Professional Pilots of Trans States Airlines

From: Matt Conrad, Director of Safety

Date: February 7, 2014

Re: Automatic Anti-Ice Crew Monitoring

Recently, a Trans States Airlines EMB-145 landed with ice on the leading edges of the wings, empennage and engine inlets. The company is investigating the incident to determine why this happened, with no apparent caution or warning messages to the crew. We will convey our findings and if necessary Flight Operations will publish any procedural changes upon the conclusion of our investigation. In the meantime, all Flight Crewmembers are urged to be vigilant about monitoring deicing/anti-icing equipment when operating in icing conditions. Icing conditions may exist in flight when Total Air Temperature (TAT) is 10 degrees C (50 degrees F) or below and visible moisture in any form is presented (such as clouds, fog and visibility of one mile or less, rain, snow, sleet and ice crystals).

When the deice/anti-icing equipment is active, the two (2) Engine Air Inlet Push Buttons, the Wing Push Button, and the Stab Push Button will display cycling blue "Open" messages.

If you are operating in icing conditions as described above and do not witness the blue "Open" indications on the Push Buttons, crews are strongly encouraged to follow the alternate MEL procedure 30-80-00 for ice detectors inop. (A copy of the procedure is included below for reference purposes) Notify Maintenance and your Chief Pilot immediately if you exercise this option.

MEL 30-80-00 Ice Detectors Inop

Set the Ice Detection Override Knob to **ALL** position at the first visible or anticipated icing condition.

Note 1: Icing conditions may exist in flight when Total Air Temperature (TAT) is 10 degrees C (50 degrees F) or below and visible moisture in any form is presented (such as clouds, fog and visibility of one mile or less, rain, snow, sleet and ice crystals).