

ALERT BULLETIN

AB 2005:30/3-19
3/24/05
644442,643689,575645

TO: Embraer-Empresa Brasileira Aeronautica S/A, Rolls-Royce North American, Inc.

INFO: FAA (ASY-300, MKC-AEG, AFS-200, AFS-300, AFS-900, AAI-200, ANM-100, AEU-100, ANE-140), AASC, ASAP, AMFA, ALPA, APA, AIA, ATA, CAAC, GAMA, IAM, IATA, ICAO, ICASS, IFALPA, NBAA, NTSB, PAMA, RAA, TWU

FROM: Linda J. Connell, Director
NASA Aviation Safety Reporting System

SUBJ: EMB145 FUMES AND SMOKE IN THE COCKPIT AND CABIN ON TAKEOFF

We recently received an ASRS report describing a safety concern which may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the following:

ASRS received a report from the captain of an EMB-145 who stated that an unusual odor and light smoke were noted in the cockpit after takeoff and that a "Lav Smoke" EICAS message was also displayed. An emergency was declared and the aircraft returned to land. The captain claims that a flight attendant advised the flight crew of smoke in the cabin, but indicated there was no evidence of smoke in the lavatory or in the cargo compartment. The reporter alleges that the problem was caused by a faulty engine labyrinth seal which allowed oil to leak into the pneumatic bleed system from which it was discharged into the aircraft via the air conditioning system. The reporter claims that five similar incidents, involving two recently delivered aircraft, had occurred in the week prior to this event. Attached are two reports that describe incidents in which the EMB145 baggage compartment viewing port was reportedly covered up. In this incident a blocked viewing port could have been critical to flight safety.

(Keywords: Cockpit Fumes/Smoke)

To properly assess the usefulness of our FYI service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Harvey Hartmann or Don Purdy at (650) 969-3969 or email at hhartmann@mail.arc.nasa.gov, dpurdy@mail.arc.nasa.gov.



Aviation Safety Reporting System
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ACN: 644442

Time

Date : 200501

Day : Fri

Local Time Of Day : 0601 To 1200

Place

Locale Reference.Airport : ZZZ.Airport

State Reference : US

Altitude.AGL.Single Value : 1000

Environment

Flight Conditions : VMC

Aircraft / 1

Controlling Facilities.TRACON : ZZZ.TRACON

Make Model : EMB ERA 145 ER&LR

Person / 1

Function.Oversight : PIC

Function.Flight Crew : Captain

ASRS Report : 644442

Person / 2

Function.Flight Crew : First Officer

Person / 4

Function.Controller : Departure

Events

Anomaly.Aircraft Equipment Problem : Critical

Independent Detector.Other.Flight CrewA : 1

Independent Detector.Other.Flight CrewB : 2

Resolutive Action.Flight Crew : Declared Emergency

Resolutive Action.Flight Crew : Overcame Equipment Problem

Resolutive Action.Controller : Provided Flight Assist

Consequence.Other : Company Review

Consequence.Other : Maintenance Action

Narrative

JUST AFTER TKOF AT ROUGHLY 1000 FT AGL, WE NOTED AN UNUSUAL ODOR ON THE FLT DECK. I TURNED ON MY READING LIGHT AND IMMEDIATELY NOTED A LIGHT SMOKE VISIBLE. IMMEDIATELY THEREAFTER WE RECEIVED AN EICAS MESSAGE FOR 'LAV SMOKE.' WE COMPLETED THE APPROPRIATE PROCS AND CHKLISTS AND THE SMOKE SUBSIDED. IN THE MEANTIME WE DECLARED AN EMER AND BEGAN RETURNING TO THE ARPT. THE FLT ATTENDANT ADVISED US THAT THERE WAS SMOKE IN THE CABIN, BUT IT WAS SUBSIDING AND THERE WAS NO INDICATION OR VISIBLE EVIDENCE OF SMOKE IN THE LAV OR THE CARGO COMPARTMENT (THERE IS A PEEP HOLE IN THE LAV ENABLING ONE TO SEE INTO THE CARGO BIN). BECAUSE THE CONDITIONS WERE IMPROVING, WE LANDED, BUT DID NOT EVACUATE THE CABIN. WE HAD CRASH/FIRE/RESCUE EXAMINE OUR EXTERIOR FOR ABNORMAL SMOKE/FIRE INDICATION OF WHICH THEY FOUND NONE. WE RETURNED TO THE GATE AND DEPLANED NORMALLY. THIS IS A NOTABLE EVENT TO ME BECAUSE THERE WERE 5 SUCH INCIDENTS IN THE PAST WEEK INVOLVING 2 PARTICULAR REGISTRATION NUMBERS IN OUR FLEET. BOTH ACFT WERE VERY NEW AND HAD SIMILAR FLT TIME LOGGED ON THEIR RESPECTIVE ENGINES. THE PROB WAS APPARENTLY CAUSED BY ENG OIL FROM SOME SORT OF FAULTY LABYRINTH SEAL FINALLY ENDING UP IN OUR BLEED LINE, WHICH IS THE SOURCE OF OUR AIR CONDITIONING. THIS ILLUSTRATES TO ME THE NEED FOR BETTER QUALITY CTL METHODS AT THE ENG ASSEMBLY LINE. (ALLISON ROLLS-ROYCE.) THE ENGINES HAD ROUGHLY 500 HOURS ON THEM WHICH IS BASICALLY BRAND NEW. SMOKE IN THE CABIN CAN BE CATASTROPHIC, AND I DO NOT BELIEVE THIS IS A MATTER THAT SHOULD BE OVERLOOKED AS JUST BAD LUCK. CALLBACK CONVERSATION WITH RPTR REVEALED THE FOLLOWING INFO: THE RPTR STATED THIS PROB HAS BEEN ISOLATED TO THE LAST TWO AIRPLANES DELIVERED AND HAS CAUSED 5 INCIDENTS OF SMOKE AND ODOR AND ALWAYS ON THE FIRST FLT OF THE DAY. MAINT BELIEVES THE PROB IS CAUSED BY THE AIRPLANES BEING COLD SOAKED OVERNIGHT ALLOWING A FAULTY LABYRINTH SEAL TO LEAK OIL INTERNALLY TO WHERE IT IS PICKED UP IN THE PNEUMATIC SYSTEM AND DISTRIBUTED IN THE AIR CONDITIONING SYSTEM. THESE ENGINES MADE BY ALLISON HAVE 500 HOURS OR LESS TOTAL TIME.

Synopsis

AN EMB145 ON TKOF CLB AT 1000 FT DECLARED AN EMER AND RETURNED DUE TO ODOR AND LIGHT SMOKE IN COCKPIT AND CABIN. HAD EICAS 'LAV SMOKE' WARNING.

ACN: 643689

Time

Date : 200501

Day : Wed

Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : SJT.Airport

State Reference : TX

Altitude.AGL.Single Value : 0

Aircraft / 1

Make Model : Embraer Undifferentiated or Other Model

Person / 1

Function.Oversight : PIC

Function.Flight Crew : Captain

ASRS Report : 643689

Person / 2

Function.Flight Attendant : On Duty

Events

Anomaly.Cabin Event.Other : Peep Hole Blocked

Anomaly.Non Adherence : Company Policies

Anomaly.Non Adherence : FAR

Independent Detector.Other.Flight CrewA : 2

Resolatory Action.Other : Removed Tape, Rpted

Consequence.Other : Company Review

Narrative

DURING KICK-OFF FLT PREFLT, FLT ATTENDANT NOTIFIED ME THAT THE LAV CARGO PEEP HOLE WAS BLOCKED. I LEFT THE COCKPIT TO INVESTIGATE AND FOUND THAT IT HAD BEEN NEATLY TAPED OVER WITH A RECTANGULAR PIECE OF CHECKED LUGGAGE TAG ADHESIVE PAPER. I NOTIFIED THE SJT STATION MGR, BUT REGARDLESS, I DISCUSSED THE SAFETY AND SECURITY HAZARDS ASSOCIATED WITH EMPLOYEE PURPOSELY TAPING OVER THE PEEP HOLE. THIS PROB HAS CROPPED UP SEVERAL TIMES IN THE PAST AND NEEDS TO BE READDRESSSED AGAIN. I RESPECTFULLY RECOMMEND THAT FLT ATTENDANTS BE REMINDED TO PREFLT THE PEEP HOLE EVERY FLT AND THAT RAMPERS/AGENTS BE ADVISED OF THE SAFETY AND SECURITY HAZARDS ASSOCIATED WITH BLOCKING THIS VITAL PIECE OF EQUIPMENT.

Synopsis

CAPT OF EMJ REPORTS THAT TAPE HAD BEEN PUT OVER THE BAGGAGE COMPARTMENT VIEWING PORT.

ACN: 575645

Time

Date : 200302

Day : Thu

Local Time Of Day : 1201 To 1800

Place

Locale Reference.Airport : PIT.Airport

State Reference : PA

Altitude.AGL.Single Value : 0

Aircraft / 1

Make Model : EMB ERA 145 ER&LR

Person / 1

Function.Oversight : PIC

Function.Flight Crew : Captain

ASRS Report : 575645

Person / 2

Function.Other Personnel.Other : Ramp Supervisor

Events

Anomaly.Aircraft Equipment Problem : Less Severe

Anomaly.Non Adherence : FAR

Independent Detector.Other.Flight CrewA : 1

Resolatory Action.Other : Talked To Ramp Supervisor

Narrative

DURING PREFLT INSPECTION, I NOTICED THAT THE PEEPHOLE IN THE BAGGAGE COMPARTMENT HAD BEEN TAPED OVER. THIS PEEPHOLE IS USED BY THE CREW IN EMER SITS TO DETERMINE IF THERE IS A FIRE IN THE BAGGAGE COMPARTMENT. I HAVE OBSERVED THIS SIT AT LEAST A DOZEN TIMES IN THE PAST AND RPTED IT TO COMPANY OFFICIALS, BUT NO ONE SEEMS TO TAKE THE MATTER SERIOUSLY. A RAMP SUPVR TOLD ME THAT RAMP WORKERS THINK THE PEEPHOLE IS A CAMERA, AND THAT THEY DON'T WANT TO BE RECORDED. WHAT IF RAMP WORKERS THINK A STATIC PORT IS A MIKE AND TAPE IT OVER AS WELL?

Synopsis

CAPT OF EMB145 REPORTS THAT TAPE HAD BEEN PUT OVER THE BAGGAGE COMPARTMENT VIEWING PORT.