Dear Operator,

The *Embraer Air Safety Reports Summary to Operators* is a compilation of selected events reported to the Embraer Air Safety Department and involving Embraer aircraft. It is issued regularly within the framework of the Product Safety Monitoring Program, with the sole objective of enhancing safety awareness at Embraer aircraft operators. Each report contains relevant technical and operational information of the event, whereas the details that might identify the concerned operator are purposely suppressed. This compilation aims to communicate and raise awareness to the Flight Safety Officers, in addition to the Embraer Release of Field Reports and the Safety Reviews presented at the Annual Flight Safety Officers meetings.

Embraer encourages the dissemination of this Summary to key individuals within your organization who you feel can use it for its intended objective. Disclosure beyond this limit, either of the whole document or parts of it, is not allowed unless duly authorized in writing by Embraer.

Also, Embraer calls attention to the substantial contribution to flight safety provided by the communication of Air Safety and Service Difficulty Reports. Once received at Embraer, these reports are processed by our Air Safety Department to monitor trends and evaluate the need for actions. If your organization does not regularly forward to Embraer reports of this type, we kindly ask you to consider the adoption of this practice, as instructed by SNL 170-00-0022 and 190-00-0018. Should any other clarification be necessary, please contact us at airsafety@embraer.com.br.

Thank you.

Embraer Air Safety Department
Aircraft: EMBRAER-170 / 175

Fleet Size / Number of In-Service Aircraft: 346 / 293

Fleet Total Flight Hours (Up to Dec/2012): 4,554,216 FH.

Fleet Monthly Flight Hours (Dec/2012): 59,376 FH.

Reports ordered by reference number

Reference Number: 22258
Date: 25.Nov.2012
Subject: Report of air return due to engine 2 uncommanded IFSD following an abnormal noise during climb
Description: The flight crew reported an abnormal noise while climbing through approximately 15,000 feet followed by an uncommanded shutdown of the engine 2. They then declared emergency, returned to the departure airport and performed an overweight landing. Maintenance personnel inspected the engine 2 and failure of the low pressure turbine stage 4 was found. The engine was removed and replaced.

Reference Number: 22266
Date: 23.Nov.2012
Subject: Report of aileron control stiffness on ground
Description: The flight crew reported that the aileron control was stiff and the control wheel did not return to neutral position on ground during full deflection checks. Maintenance personnel did not find any faults. They removed and replaced the aileron feel unit as a precautionary action due to some wear signs.

Reference Number: 22304
Date: 20.Nov.2012
Subject: Report of spurious TCAS resolution advisory after takeoff
Description: The flight crew reported a TCAS traffic advisory and a resolution advisory to descent just after takeoff at approximately 50 feet AGL. They then recognized it as a malfunction and continued the climb without further incident. At approximately 200 feet AGL the resolution advisory reportedly stopped and the traffic disappeared from the MFD.
Reference Number: 22315  
Subject: Report of aileron control difficulties during flight  
Description: The flight crew reported that the auto-pilot disengaged several times and that the yaw trim was showing about 1/2 way left during flight. They also reported difficulties to roll the yoke to the left. All systems went back to normal after the first officer was able to turn the yoke to the left. Maintenance personnel inspected the aileron system and yoke, but no faults were found.

Reference Number: 22331  
Date: 22.Dec.2012  
Subject: Report of air return due to smoke in the cockpit after takeoff  
Description: The flight crew reported smoke in the cockpit after takeoff. They also reported receiving a "LAV SMOKE" warning message. After that, they returned to the departure airport, landing without further incident. Upon arrival, smoke dissipated. Maintenance personnel declared that the aircraft engines had undergone a compressor wash the night before.

Reference Number: 22386  
Date: 10.Jan.2013  
Subject: Report of diversion due to vibration during climb  
Description: The flight crew reported vibration after flap and landing gear retraction. They then elected to divert to the nearest suitable airport. Maintenance personnel inspected and placed pack 1 on MEL.

Reference Number: 22441  
Date: 26.Jan.2013  
Subject: Report of aileron control stiffness  
Description: The flight crew reported that aileron control was stiff during flight.

Reference Number: 22457  
Date: 29.Jan.2013  
Subject: Report of nose landing gear exiting the paved surface during runway turn off.  
Description: After landing, the aircraft went off the runway near the runway end while attempting to turn off onto the taxiway and came to a stop with the nose gear on soft ground about 10 meters off paved surface.
Aircraft: EMBRAER-190 / 195

Fleet Size / Number of Aircraft in Service: 562 / 514

Fleet Total Flight Hours (Up to Dec 2012): 4,702,073 FH

Fleet Monthly Flight Hours (Dec 2012): 106,470 FH

Reports ordered by reference number

Reference Number: 22272
Date: 30.Nov.2012
Subject: Report of horizontal stabilizer issues during cruise
Description: The flight crew reported that the Horizontal Stabilizer Trim Actuator (HSTA) was jammed during cruise. Maintenance personnel found the HSTA with lack of lubrication.

Reference Number: 22273
Date: 01.Dec.2012
Subject: Report of precautionary IFSD of engine 2 due to low oil pressure indication during cruise
Description: The flight crew reported engine 2 intermittent low oil pressure indications during cruise. All the other engine indications were reportedly normal. They also reported that, before descent, they received an "ENG 2 OIL LO PRESS" message on EICAS. They, subsequently, shut the engine down and proceeded to an uneventful landing. Maintenance personnel found the oil pressure transmitter housing to be sheared. They then removed and replaced the oil pressure transmitter housing.

Reference Number: 22281
Date: 23.Nov.2012
Subject: Report of return to gate due to smoke coming from the oven in the aft galley
Description: The flight crew reported smoke from oven in the aft galley. They then elected to return to gate. Maintenance personnel removed and replaced the oven.
<table>
<thead>
<tr>
<th>Reference Number: 22292</th>
<th>Date: 11.Dec.2012</th>
<th>Subject: Report of air return due to engine 2 total loss of power during climb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: The flight crew reported a total loss of power on engine 2 while climbing through 16,000 feet. Reportedly, the engine then automatically relighted itself and returned to its normal operation. They subsequently declared emergency and elected to return to the departure airport. They also reported &quot;ELEV THR COMP FAIL&quot; and &quot;ENG 2 REV TLA FAIL&quot; caution messages on EICAS during flight as well as electrical burning odor in the cabin from 1,500 feet until landing. After landing, at approximately 60 knots, engine 2 uncommandedly shut down.</td>
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<thead>
<tr>
<th>Reference Number: 22300</th>
<th>Date: 11.Nov.2012</th>
<th>Subject: Report of air return due to electrical odor in cockpit during climb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: The flight crew reported that MFD 1 failed followed by an electrical odor in cockpit during climb. They then donned the oxygen masks and returned to the departure airport. Maintenance personnel removed and replaced the MFD 1. Subsequent operational check was satisfactory.</td>
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<thead>
<tr>
<th>Reference Number: 22303</th>
<th>Date: 15.Dec.2012</th>
<th>Subject: Report of emergency evacuation due to electrical odor and smoke in cockpit during final approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: The flight crew reported an electrical odor and smoke in cockpit during final approach. After landing, passengers used the emergency evacuation slides to exit the aircraft and no occupant was reported injured. Maintenance personnel performed the smoke/odor in cabin inspection IAW FIM 21-20-00-810-801-A. They removed and replaced the No.1 PFD, which was inoperative. They also removed and replaced the No.1 MFD, the emergency evacuation slides, the No.1 DVDR and the IESS (Integrated Electronic Standby System). The aircraft was then ferried to operator's maintenance base to address structural damages in the over wing emergency exit.</td>
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<tbody>
<tr>
<td>Description: The flight crew reported that, during approach, engine 1 rolled back and became unresponsive to thrust lever. They also reported &quot;ELEV THR COMP FAIL&quot; caution message on EICAS during flight. They subsequently attempted, first automatically and then manually, to relight engine 1, but unsuccessfully. They declared emergency and landed without further incident. Maintenance personnel removed and replaced the engine 1 FADEC. Following operational checks were satisfactory.</td>
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<tr>
<td>Description: The flight crew reported an engine 2 compressor stall during the takeoff roll. They then rejected the takeoff.</td>
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<table>
<thead>
<tr>
<th>Reference Number: 22323</th>
<th>Date: 22.Dec.2012</th>
<th>Subject: Report of emergency declared and air return due to smoke in the cabin and cockpit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: The flight crew reported electrical smell and smoke in the cabin and cockpit. They then declared emergency and returned to the departure airport. Maintenance personnel inspected the aircraft and placed pack 1 on MEL.</td>
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</tbody>
</table>

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<tbody>
<tr>
<td>22356</td>
<td>29 Dec. 2012</td>
<td>Report of tire burst during landing</td>
<td>The flight crew reported that left outboard and both right main landing gear wheel tires burst during landing. They also reported that used the auto brake system. Maintenance personnel found the right main landing gear hydraulic pipes to be leaking and the downlock proximity sensor to be bent.</td>
</tr>
<tr>
<td>22383</td>
<td>21 Dec. 2012</td>
<td>Report of aileron stiffness during approach</td>
<td>The flight crew reported aileron control stiffness during approach. Maintenance personnel found the water drain line from the forward toilet to be damaged and an ice block in the area of flight control cables of the ailerons.</td>
</tr>
<tr>
<td>22384</td>
<td>09 Jan. 2013</td>
<td>Report of air return due to &quot;BLEED 2 FAIL&quot; caution message with bleed 1 on MEL during climb</td>
<td>The flight crew reported receiving a &quot;BLEED 2 FAIL&quot; caution message on EICAS, with bleed 1 on MEL during climb. They then returned to the departure airport. Maintenance personnel removed and replaced engine 1 HPSOV (high pressure shutoff valve) and engine 2 NaPRSOV (nacelle pressure shutoff valve) and fan air valve.</td>
</tr>
<tr>
<td>22401</td>
<td>12 Jan. 2013</td>
<td>Report of air return due to &quot;BLEED 1 OVERPRESS&quot; and a &quot;BLEED 2 OVERPRESS&quot; caution messages during climb</td>
<td>The flight crew reported receiving a &quot;BLEED 1 OVERPRESS&quot; and a &quot;BLEED 2 OVERPRESS&quot; caution messages on EICAS. They followed the QRH procedures and the messages went out. As the &quot;BLEED 1 FAIL&quot; caution message appeared, they elected to return to the departure airport. Maintenance personnel removed and replaced both NaPRSOV (nacelle pressure shutoff valve).</td>
</tr>
<tr>
<td>22434</td>
<td>19 Jan. 2013</td>
<td>Report of diversion due to amber engine vibration indication during approach</td>
<td>The flight crew reported that vibration indication of both engines became amber during approach. They then declared emergency and elected to perform a diversion. They also reported that while accomplishing QRH procedures for &quot;engine abnormal vibration&quot; the engine vibration indications returned to green values. Maintenance personnel found abradable material to be missing on the fan stator containment case, but within limits in accordance with task 72-00-01-220-009.</td>
</tr>
<tr>
<td>22435</td>
<td>22 Jan. 2013</td>
<td>Report of diversion due to bleed 1 fluctuation with pack 2 on MEL</td>
<td>The flight crew reported a bleed 1 fluctuation from 4 to 101 PSI with pack 2 on MEL. They then diverted to nearest suitable airport. Maintenance personnel removed and replaced engine 1 NaPRSOV (nacelle pressure shutoff valve).</td>
</tr>
<tr>
<td>22439</td>
<td>17 Jan. 2013</td>
<td>Report of emergency declared due to &quot;BLEED 1 FAIL&quot; and &quot;BLEED 2 FAIL&quot; caution messages during cruise</td>
<td>The flight crew reported receiving &quot;BLEED 1 FAIL&quot; and &quot;BLEED 2 FAIL&quot; caution messages on EICAS. They declared emergency and performed an uneventful landing. Maintenance personnel removed and replaced both fan air valve.</td>
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</tbody>
</table>