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OPERATIONAL FACTORS GROUP CHAIRMAN'S FACTUAL REPORT ATTACHMENT 38: AA DC-9 OPERATING MANUAL GUIDANCE FOR LANDINGS ON WET/SLIPPERY RUNWAYS

American Airlines flight 1420
Little Rock, Arkansas
June 1, 1999

DCA99MA060

Attachment 38

to Operational Factors Group Chairman's Factual Report

DCA99MA060

AA Operating Manual Guidance for Landings on Wet/Slippery Runways

Takeoff

- Takeoff performance is degraded with slush or snow accumulations requiring adjustments per Performance Manual. Takeoff is prohibited with:
  - Accumulations of more than 3" (76 mm) of fresh, dry snow,
  - Pools of standing water, wet snow or slush accumulations of more than 1/2" (13 mm), or
  - Chunks of hardened snow or ice.
- Align airplane with runway before applying takeoff thrust. Holding yoke forward improves nosewheel steering until rudder control becomes effective.
- Asymmetric thrust can adversely affect directional control on slippery runways.
- It is important to crosscheck all engine instruments for reasonableness during takeoff in icing conditions.
- Avoid early or abrupt rotation. Rotation rate should be slow and smooth.

Climb, Enroute, Holding and Approach

Stall speeds may vary due to ice accumulations on the airplane, especially on the wings.

Landing

- Flaps 40 is recommended for landing on slippery runways.
- Falling or blowing snow can create optical illusions or depth perception problems during landing and taxi-in.
- Check ATIS for latest runway braking action report. Obtain current runway condition reports for both destination and alternate. Request runway surface friction information from Approach Control or Tower (refer to Flight Manual Part I and II).
- If landing on a slippery runway, the recommended technique is:
  - Land on speed.
  - Touchdown at planned point. A firm landing is better than a "grease job."
  - Keep nose wheel firmly on runway with elevator.

CAUTION

An excessive amount of down elevator will download the main gear and reduce braking efficiency.

  - Use aggressive manual braking or maximum auto brakes and auto spoilers.
  - Apply reverse thrust as soon as possible after nosewheel touchdown. Do not exceed 1.3 EPR reverse thrust on the slippery portions of the runway, except in an emergency.
  - When reversing, be alert for yaw from asymmetric thrust. If directional control is lost, bring engines out of reverse until control is regained.
  - Do not come out of reverse at a high RPM. Sudden transition of reversers before engines spool down will cause a forward acceleration.

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