



CL-350

Bombardier
CHALLENGER 350



CL-350 SUPPLEMENTAL MANUAL

CONTAMINATED RUNWAY

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CONTAMINATED RUNWAY OPERATIONS

A. INTRODUCTION

Landing on a slippery surface requires careful consideration of many factors, such as type of runway surface, approach hazards, temperature, ice, water, snow, and other crosswind scenarios. Normally, thrust reverser operation helps achieve the computed stopping distance with a greater margin of safety. Wet and contaminated runway data is published in the AFM and AFM Supplements.

B. HYDROPLANING

If there is a possibility of hydroplaning, use aerodynamic braking to slow below hydroplaning speed.

Hydroplaning Speed Calculations:

- Accelerating aircraft: $9 \times \sqrt{\text{tire pressure}} \approx 112 \text{ kt}$ (main gear at 167-175 psi)
- Decelerating aircraft: $8 \times \sqrt{\text{tire pressure}} \approx 100 \text{ kt}$

CAUTION: If brakes are applied while the tires are hydroplaning, the hydroplaning can continue to a much lower speed.

C. ONE ENGINE INOPERATIVE (OEI) LANDING ON SLIPPERY RUNWAYS

With one engine inoperative, thrust reversers may not be as effective on a contaminated runway as on a dry runway:

- Full single-engine reverse is acceptable on a dry runway from a directional control standpoint
- Do not attempt high power single-engine reverse on slippery runways
- Differential reversing on a slippery runway may not yield satisfactory performance
- Be prepared to stow thrust reversers immediately if the airplane begins to slide sideways

IMPORTANT: The effects of single-engine reverse may be substantially different in crosswind scenarios depending if the acting thrust reverser is upwind or downwind.

D. LANDING TECHNIQUE ON SLIPPERY SURFACES

- Firm touchdown to ensure positive wheel spin-up
- Lower nosewheel promptly
- Verify spoilers deploy automatically
- Deploy thrust reversers smoothly
- Use aerodynamic braking before applying wheel brakes
- Apply brakes smoothly and progressively
- Be prepared for reduced braking effectiveness

E. CROSSWIND CONSIDERATIONS

Crosswind landings on slippery runways require additional consideration. Maintain a positive de-crab just prior to touchdown and be prepared for the aircraft to weathervane into the wind after touchdown. Keep the upwind wing slightly low through the rollout to counteract the weathervaning tendency.

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