

The main hazards of a sandy or dusty environment are erosion (especially of engine fan blades), accumulation of sand or dust on critical surfaces, and blockage. The effects of sand ingestion occur predominantly during takeoff, landing and taxi operations. The adverse effects, however, can occur if the airplane's flight path was through a cloud of visible sand or dust, or the airplane was parked during a sand or dust storm. Premature engine deterioration can result from sand or dust ingestion, causing increased fuel burn and reduced EGT margins.

**CAUTION:** After a sandstorm, if all taxiways and runways are not carefully inspected and swept for debris before flight ops are conducted, the risk of engine damage and wear is increased.

### Exterior Inspection

Although removal of sand and dust contaminants is primarily maintenance function, during the exterior inspection, the captain or first officer should carefully inspect areas where accumulation of sand or dust could change or affect normal system operations.

Do the normal Exterior Inspection with the following additional steps:

Windshield ..... Check

Verify that the windshield has been cleaned.

**Note:** Do not use windshield wipers for sand or dust removal.

Surfaces ..... Check

Verify that the upper surfaces of the wings and other control surfaces are free of sand.

**CAUTION:** Particular care should be taken to ensure that the fuselage and all surfaces are clean after a sand storm that occurs with a rain storm.

Probes, sensors, ports, vents,  
and drains (as applicable) ..... Check

Verify that all are free of sand and dust.

Pack inlets ..... Check

Verify that the pack inlets are free of sand and dust.

Outflow valves ..... Check

Verify that the outflow valves are free of sand and dust.

Positive and negative pressure relief doors ..... Check

Verify that all doors are free of sand and dust.

Leading edge flaps ..... Check

Verify that all leading edges are undamaged

Engine inlets ..... Check

Verify that the inlet cowlings are free of sand and dust.

Verify that the fan is free to rotate and fan blades are undamaged.

Fuel tank vents ..... Check

Verify that all vents are free of sand and dust.

Landing gear ..... Check

Verify that gear struts and doors are free of sand and dust build-up.

Vertical and horizontal stabilizers ..... Check

Verify that all leading edges are undamaged.

APU air inlet ..... Check

Ensure that the APU inlet door is free of sand and dust before APU start