



Airborne Mineral Dust, Aerosols and Gases

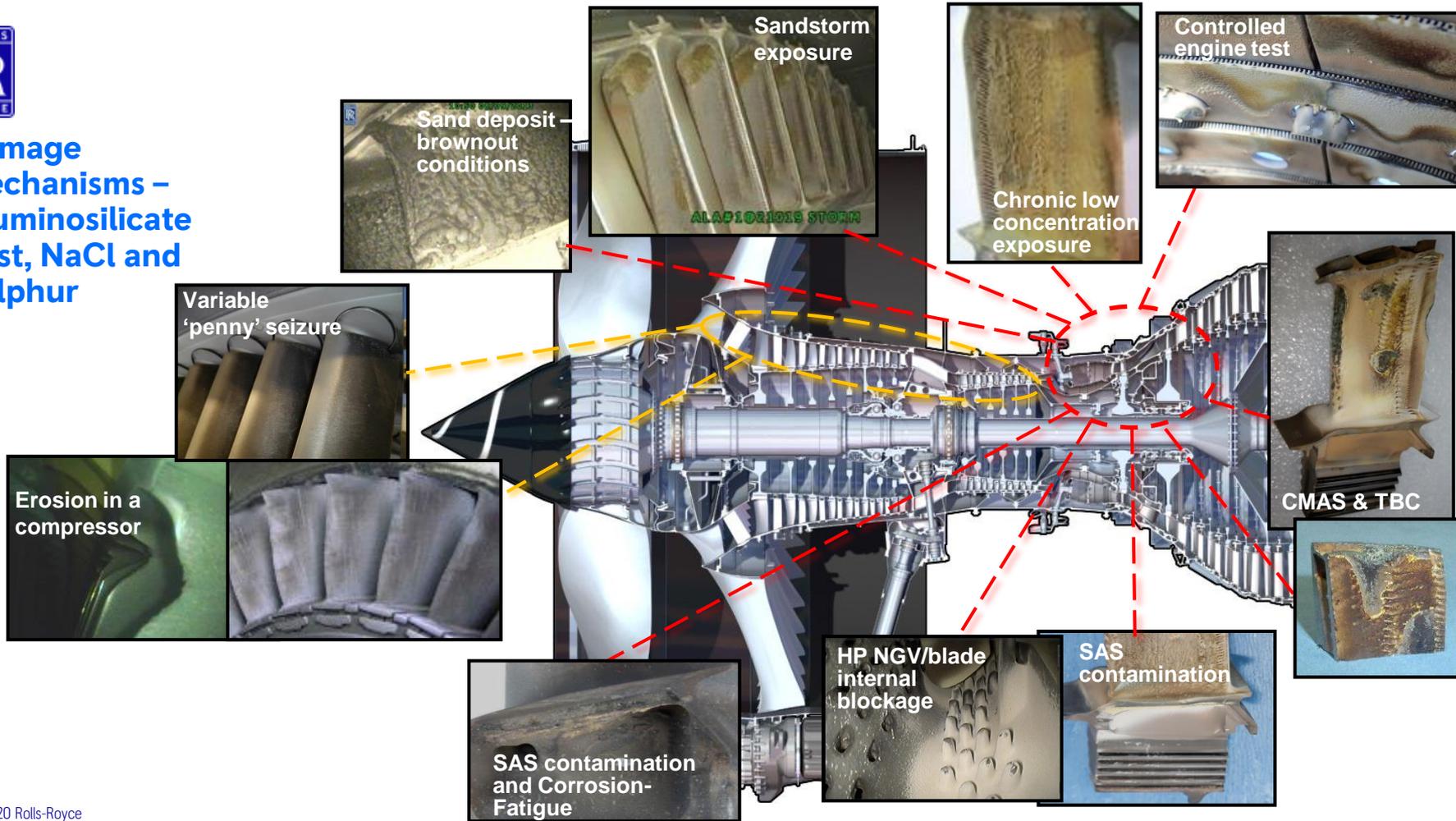
InDust Workshop

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Engine Environmental Protection

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Damage Mechanisms – Aluminosilicate dust, NaCl and Sulphur





Power-by-the-Hour Service Contracts

Engine OEM Business Model

- Like the other engine OEMs >50% Rolls-Royce's income comes from power-by-the-hour service contracts

TotalCare[®] LessorCare[®] CorporateCare[®] MissionCare[®]

TotalCare summary

Fixes engine maintenance cost

Aligns business structures

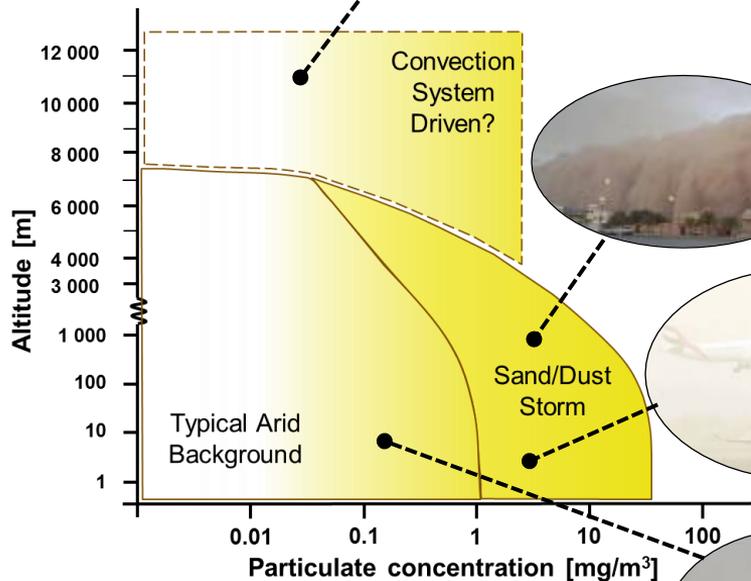
Increases aircraft availability

Allows airlines to focus on core business

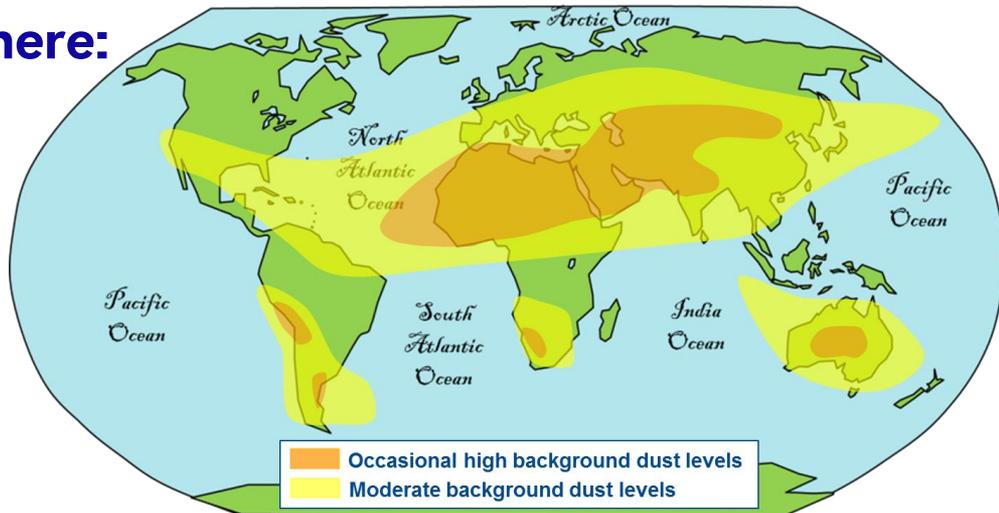
Fully transfers financial risk

- Care contract does, or doesn't, cover exposure to 'abnormally erosive or corrosive' environments

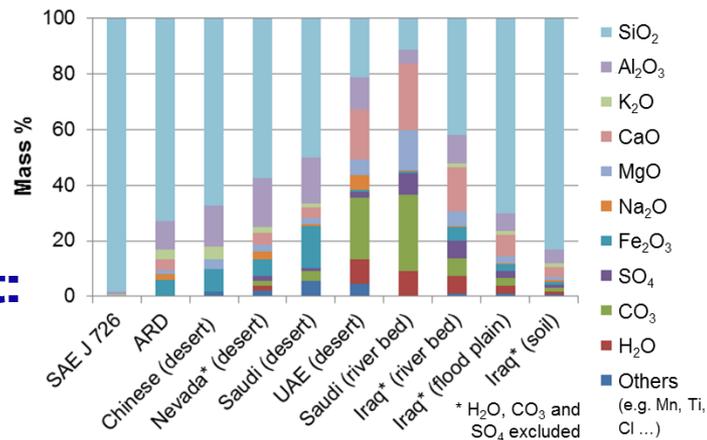
Dust: Region, Composition, Flight Phase



Where:



What:

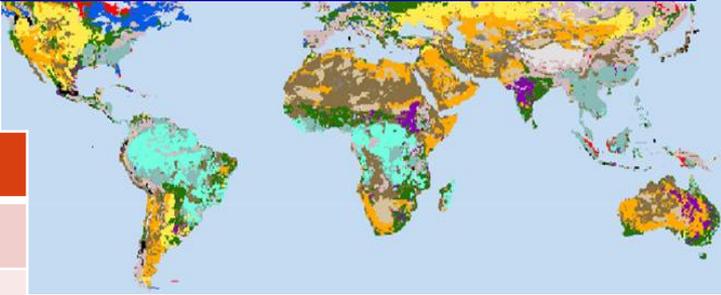


How Much:

Composition varies with location

Dust: Composition Matters

Different combinations and proportions of sand/dust at the earth's surface



Mineral	Composition
Quartz	Framework silicate
Feldspars	Framework silicate (Al, Ca, Na, K)
Micas	Layer silicate (Al, K, Mg, Fe, OH)
Clays	Layer silicate (Al, Mg, Fe, K, OH)
Glauconite	Layer silicate (Fe rich)
Calcite	Ca CO_3
Dolomite	$\text{Ca Mg (CO}_3)_2$
Gypsum	$\text{Ca SO}_4 \cdot 2(\text{H}_2\text{O})$
Anhydrite	Ca SO_4
Halite	NaCl

