

Viking Air Limited

TYPE CERTIFICATE HOLDER RESPONSIBILITY

CONTINUING AIRWORTHINESS

DELEGATES CONFERENCE OTTAWA 14-NOV-2018

Presented by Sue-M Matthews – CAW Manager

**CAR 521 Division VIII
Type Certificate Holder
Continuing Airworthiness
Responsibility**

**David Preshaw
V.P. Engineering**

Our PEOPLE

521.352 – Technical Capability:

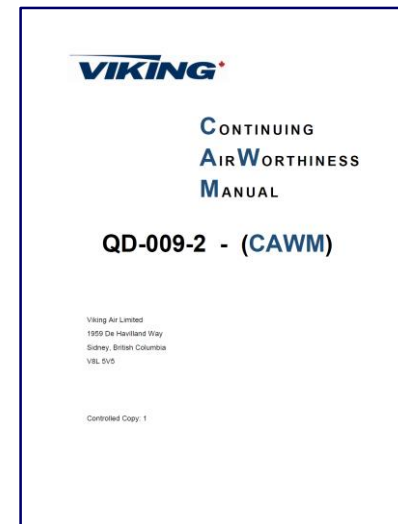
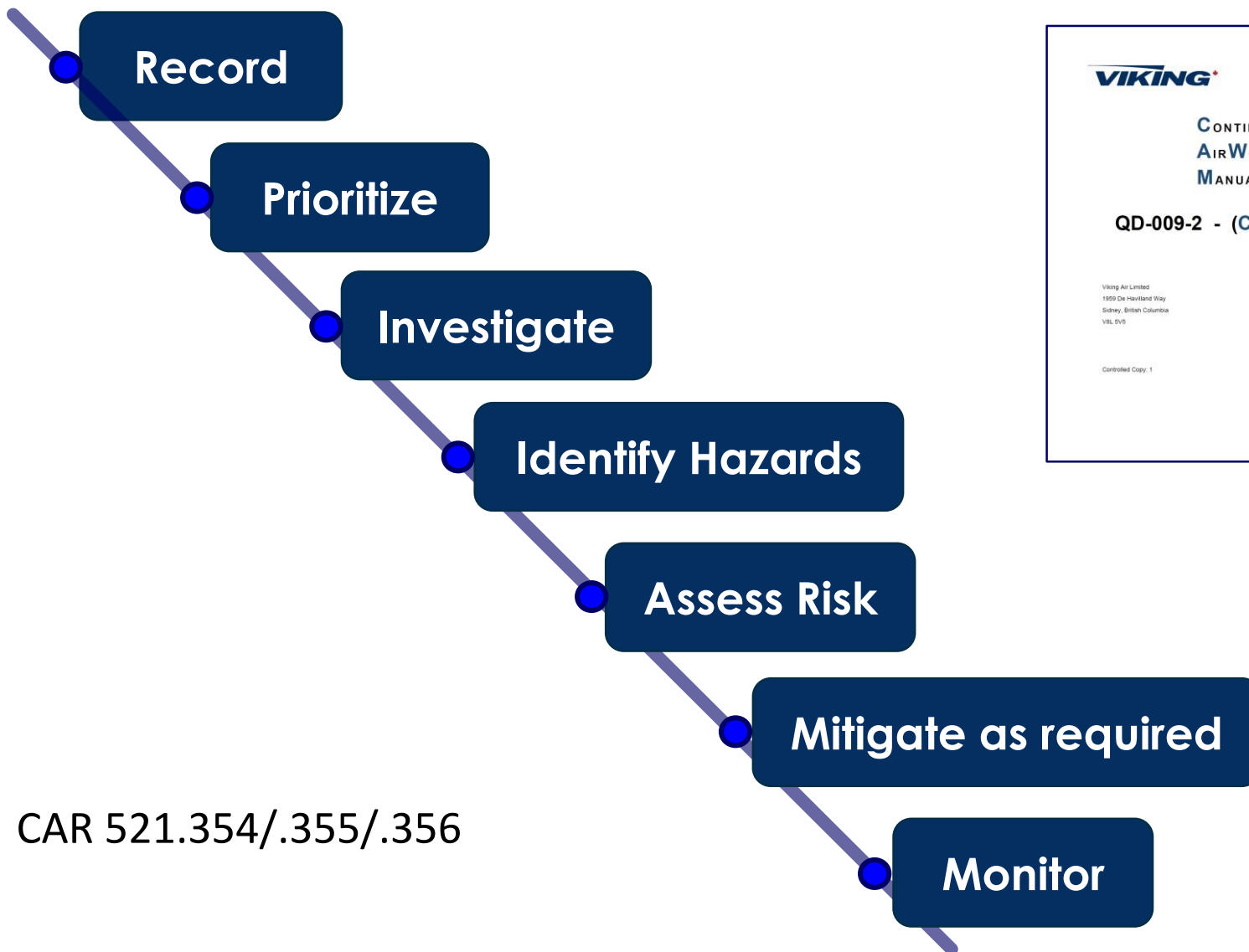
- Senior DAO Members (CACCC) with the contribution of all engineering members.
- Maintenance Type Board (MTB)
Aircraft Maintenance Engineers (AME)
- Senior Pilots
- PhDs, NDT Level III, as well as Multiple Labs
- Other Subject Matter Experts (SMEs)

Our TYPE CERTIFICATES

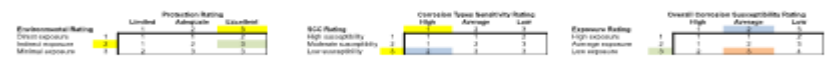




Our PROCESS



CAR 521.354/.355/.356



Level	Aspects											
	Difficult/Highly/Ext. NSE				Standard Maintenance				Easy to work around			
Critical	1	2	3	4	1	2	3	4	1	2	3	4
Major	1	2	3	4	1	2	3	4	1	2	3	4
Minor	1	2	3	4	1	2	3	4	1	2	3	4

RISK ASSESSMENT

HAZARD SEVERITY	CATASTROPHIC Level - 1	CRITICAL Level - 2	SIGNIFICANT Level - 3	NEGLIGIBLE Level - 4
FREQUENT Level - A	1A = EXTREMELY HIGH	2A = EXTREMELY HIGH	3A = HIGH	4A = MEDIUM
PROBABLE Level - B	1B = EXTREMELY HIGH	2B = HIGH	3B = MEDIUM	4B = LOW
OCCASIONAL Level - C	1C = HIGH	2C = HIGH	3C = MEDIUM	4C = LOW
REMOTE/SELDOM Level - D	1D = MEDIUM	2D = MEDIUM	3D = MEDIUM	4D = LOW
IMPROBABLE/UNLIK ELY Level - E	1E = LOW	2E = LOW	3E = LOW	4E = LOW

TYPICAL RESULTS

- Aging Product
- Maintenance
- Possible Human Factors concerns

MITIGATING ACTIONS

- We consider the Safety Precedence Sequence:
1. Correct the hazard by design change
 2. Control with barriers
 3. Provide warning devices
 4. Incorporate procedures and training
 5. Accept remaining residual hazards

EXAMPLES

EXAMPLE – AGING PRODUCT

- DHC-2 SDRs provided indications of aging product.
- The inconsistencies within this series of SDRs required a comprehensive process.

	Access								
	Difficult/Hidden (incl. NDI)			Standard Maintenance			Easy (e.g. walk around)		
Critical	High CS	Med CS	Low CS	High CS	Med CS	Low CS	High CS	Med CS	Low CS
Moderate	High CS	Med CS	Low CS	High CS	Med CS	Low CS	High CS	Med CS	Low CS
Low	High CS	Med CS	Low CS	High CS	Med CS	Low CS	High CS	Med CS	Low CS

Overall Risk: Red = High Orange = Medium Blue = Low

PSM 1-2-5

**DHC-2 BEAVER
SUPPLEMENTAL
INSPECTION AND
CORROSION CONTROL
MANUAL**

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EXAMPLE – INCIDENT INVESTIGATION

CL-415 MLG collapse.

Conducted by the Bureau enquêtes accidents defense - air (BEAD-air) – Found no root cause.

The BEAD found multiple contributing factors.

At the scene of the occurrence:

- *Excessive taxiing speed while turning and the pilot's perception of the urgency for the mission.*
- *The non-conforming slope at the taxiway/runway junction (point of turn).*

At the maintenance facility:

- *The BEAD made a number of findings – not listed here.*
- *A translation error that reversed the instructions of the alignment for the main landing gear folding strut.*

OEM Instructions:

- *Alignment instructions were correct.*
- *Considered difficult for translation.*

CHALLENGES

- Operators feedback about the success of their maintenance program is important.
The SDR bank (AC 521-009) helps.
- Global change requirements
Example: such as hardware like MS21042 nuts.

Thank you