



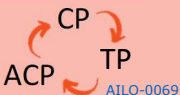
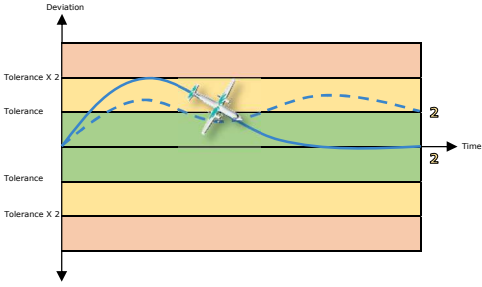
Flight AIE 850
CYHZ – CYUL

CM1 _____
CM2 _____
Date _____


FLIGHT INFORMATION				
AIRPORT SETTING		AIRCRAFT SETTING	DH8-100	DH8-300
Airport	CYHZ	Aircraft OEW	23640 LBS	27485 LBS
Runway	23	Pax Weight (total)	3840 LBS (20)	5760 LBS (30)
Gate	24	Bag & Cargo Weight	1260 LBS	1440 LBS
Takeoff Alt	N/A	Fuel MIN DIV	5600 LBS 858 LBS	5600 LBS 977 LBS
Emergency Return	CYSJ	Aircraft TOW	34140 LBS	40085 LBS
		Center of Gravity	MAC 30%	MAC 30%
RUNWAY SETTING		MEL	N/A	
		CDL	N/A	
RWY Condition	WET	Dangerous Goods		
RCC	5/5/5	Fluids	N/A	
Brake Action	Medium	Doors Open	PAX BAGGAGE	
RWY Lighting	5	Initial Position	GATE 24	
WEATHER SETTING		CLEARANCE		
Time of Day	DAWN	ATC CLEAR AIE 850 TO THE CYUL AIRPORT VIA THE CYHZ4 DEPARTURE, FLP ROUTE, DEPART RWY 23, SQUAWK 4213, CONTACT DEPARTURE 119,2 AIRBORNE		
Altimeter	29.72	TAXI CLEARANCE		
Wind	150/15	TAXI G, F AND L, HOLD SHORT RWY 23 AND CONTACT TOWER 118,4		
Temperature	13°C			
Visibility	1/2SM -RN			
Ceiling	OVC002			

FLIGHT SUMMARY	
CM2	CM1
<ul style="list-style-type: none"> • PRE-FLIGHT • ABNORMAL STARTS • PILOT INCAPACITATION → RTO RVR600 • SID DEPARTURE RVR 600 • STICK PUSHER SHUT OFF • ENGINE FAILURE IN FLIGHT • HOLD • ILS 23 LANDING ONE ENGINE • SID DEPARTURE V₁ CUT • ILS 23 GO AROUND WITH ENGINE FAILURE • LANDING 	<ul style="list-style-type: none"> • PRE-FLIGHT • ABNORMAL STARTS • INSTRUMENT FAIL → RTO (IF REQUIRED) • SID DEPARTURE RVR 600 • PITOT HEAT • ENGINE FAILURE IN FLIGHT • HOLD • PILOT INCAPACITATION • LNAV Z RWY 23 LANDING ONE ENGINE • SID DEPARTURE V₁ CUT • LNAV Z RWY 23 GO AROUND WITH ENGINE FAILURE • LANDING • RIGHT SEAT CONVERSION (IF REQUIRED)

4-Point Marking Scale (Grading Matrix)

		4-Point Marking Scale (Grading Matrix)				Page 1 of 2
		4	3	2	1	
Technical Proficiencies	Technical Skills and Knowledge	<ul style="list-style-type: none"> Practical knowledge was effective. Following of SOPs, rules and regulations was effective. <p>Slight Error</p> <ul style="list-style-type: none"> Flight crew actions resulted in an aircraft position, speed, attitude and configuration that maintained effective safety margins. 	<ul style="list-style-type: none"> Practical knowledge was acceptable. Following of SOPs, rules or regulations was acceptable <p>Minor Error</p> <ul style="list-style-type: none"> Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained acceptable safety margins. 	<ul style="list-style-type: none"> Practical knowledge was poor. Following of SOPs, rules or regulations was poor <p>Major Error</p> <ul style="list-style-type: none"> Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained poor (i.e., reduced) safety margins 	<ul style="list-style-type: none"> Practical knowledge was unacceptable. Following of SOPs, rules or regulations was unacceptable. <p>Critical Error / UAS</p> <ul style="list-style-type: none"> Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained unacceptable (i.e., clearly reduced) safety margins. 	
	Automation	<ul style="list-style-type: none"> Subject to marking under Knowledge and Technical Skills. This element may also be discussed during a debrief. <ul style="list-style-type: none"> Did crew use automation to avoid errors? Was the use of automation a factor affecting SA? Was automation dependency a factor? 				
	Aircraft Handling (PF)	<ul style="list-style-type: none"> Effective compliance with regulations and aircraft limitations. <p>Slight Deviation</p> <ul style="list-style-type: none"> Effective quality and accuracy Safety of flight assured A variation in precision that was less than or equal to a flight test exercise tolerance and quality of aircraft handling was effective. 	<ul style="list-style-type: none"> Acceptable compliance with regulations and aircraft limitations. <p>Minor Deviation</p> <ul style="list-style-type: none"> Acceptable quality and accuracy Safety of flight maintained A variation in precision that was less than or equal to a flight test exercise tolerance or quality of aircraft handling was acceptable. 	<ul style="list-style-type: none"> Poor compliance with regulations and/or aircraft limitations. <p>Major Deviation</p> <ul style="list-style-type: none"> Poor quality and accuracy Safety of flight reduced A variation in precision that exceeded but was not more than double a flight test exercise tolerance or quality of aircraft handling was poor. 	<ul style="list-style-type: none"> Unacceptable compliance with regulations and/or aircraft limitations. <p>Critical Deviation</p> <ul style="list-style-type: none"> Unacceptable quality and accuracy Safety of flight compromised A variation in precision that exceeded but was not more than double a flight test exercise tolerance or quality of aircraft handling was unacceptable. <p style="text-align: center;">- OR -</p> <ul style="list-style-type: none"> A variation in precision that was more than double a flight test exercise tolerance. 	
Illustration of Aircraft Handling (Deviation) Assessments	<p>Aircraft Handling is initially assessed based on assigned parameters (e.g., maintain 12,000 feet) versus tolerances (e.g., ± 100 feet) and quality of handling (e.g., smoothness, coordination and appropriateness of control inputs throughout all levels of automation).</p> <p>Illustrated here are two possible deviations where an ACP might determine an initial grade of two (2).</p> <p>Any initial technical assessment grade could be subject to further ACP discretion based on environmental conditions and/or demonstrations of TEM.</p>					

4-Point Marking Scale (Grading Matrix)

		4-Point Marking Scale (Grading Matrix)				Page 2 of 2
		4	3	2	1	
Non-Technical Skills Elements	Situational Awareness	<ul style="list-style-type: none"> Effective system awareness Effective environmental awareness Effective awareness of time Effective anticipation of future events 	<ul style="list-style-type: none"> Acceptable system awareness Acceptable environmental awareness Acceptable awareness of time Acceptable anticipation of future events 	<ul style="list-style-type: none"> Poor system awareness Poor environmental awareness Poor awareness of time Poor anticipation of future events 	<ul style="list-style-type: none"> Unacceptable system awareness Unacceptable environmental awareness Unacceptable awareness of time Unacceptable anticipation of future events 	
	Cooperation	<ul style="list-style-type: none"> Effective team building and maintaining Effective consideration of others Effective support of others Effective resolving conflicts 	<ul style="list-style-type: none"> Acceptable team building and maintaining Acceptable consideration of others Acceptable support of others Acceptable resolving conflicts 	<ul style="list-style-type: none"> Poor team building and maintaining Poor consideration of others Poor support of others Poor resolving conflicts 	<ul style="list-style-type: none"> Unacceptable team building and maintaining Unacceptable consideration of others Unacceptable support of others Unacceptable resolving conflicts 	
	Decision Making	<ul style="list-style-type: none"> Effective problem definition / diagnosis Effective option generation Effective risk assessment & option selection Effective outcome review 	<ul style="list-style-type: none"> Acceptable problem definition / diagnosis Acceptable option generation Acceptable risk assessment & option selection Acceptable outcome review 	<ul style="list-style-type: none"> Poor problem definition / diagnosis Poor option generation Poor risk assessment & option selection Poor outcome review 	<ul style="list-style-type: none"> Unacceptable problem definition / diagnosis Unacceptable option generation Unacceptable risk assessment & option selection Unacceptable outcome review 	
	Leadership and Managerial Skills	<ul style="list-style-type: none"> Effective use of authority and assertiveness Effective providing and maintaining standards Effective planning and coordination Effective workload management 	<ul style="list-style-type: none"> Acceptable use of authority and assertiveness Acceptable providing and maintaining standards Acceptable planning and coordination Acceptable workload management 	<ul style="list-style-type: none"> Poor use of authority and assertiveness Poor providing and maintaining standards Poor planning and coordination Poor workload management 	<ul style="list-style-type: none"> Unacceptable use of authority and assertiveness Unacceptable providing and maintaining standards Unacceptable planning and coordination Unacceptable workload management 	
	Pressure and Stress	<ul style="list-style-type: none"> Not subject to marking. This non-technical element may be discussed during a debrief. <ul style="list-style-type: none"> Did the candidate identify or manage any known pressure and stress? Did they maintain crew effectiveness? 				
	Fatigue	<ul style="list-style-type: none"> Not subject to marking. This non-technical element may be discussed during a debrief. <ul style="list-style-type: none"> Did the candidate identify or manage their fatigue? 	Risk factors / indicators of fatigue include: <ul style="list-style-type: none"> Time of Day Length of duty day Schedule, consecutive duty days Poor communication Performance Variability and unpredictability Impaired judgment and decision making Limited situational awareness Undiagnosed or untreated medical condition that affect fatigue Differences in ability to sleep and respond to conditions 			
	Communication	<ul style="list-style-type: none"> Not subject to marking. This non-technical element may be discussed during a debrief. <ul style="list-style-type: none"> Did the candidate maintain proper communication skills? 	Includes: <ul style="list-style-type: none"> Use of Standard Calls Speaking skills Listening skills Appropriate assertiveness Conflict resolution techniques Conflict resolution Self critique 			
	Workload Management	<ul style="list-style-type: none"> Subject to marking under Leadership and Managerial Skills (above). This element may also be discussed during a debrief. <ul style="list-style-type: none"> Did the candidate anticipate contingencies? Did the candidate avoid work overload in self and others? Did the candidate prioritize tasks during high workloads and prevent nonessential factors from distracting attention from adherence to SOP particularly in the case of critical tasks? 				
	TEM	<ul style="list-style-type: none"> Not subject to marking as a standalone item – TEM performance may also be discussed during a debrief. <ul style="list-style-type: none"> See Threat and Error Management summary table 				

Threat and Error Management

Threats <i>Events or errors that occur beyond the influence of the line personnel, increase operational complexity, and which must be managed to maintain the margins of safety.</i>	Anticipated – Foreseen <ul style="list-style-type: none"> Weather Airport Congestion Crosswinds Runway Conditions 	Unanticipated – Unforeseen <ul style="list-style-type: none"> In-flight Malfunction Automation Anomalies Unforecasted Weather TCAS TA/RA Non-Standard Phraseology 	Latent – Unseen <ul style="list-style-type: none"> Incorrect Documentation Equipment Design Issues Organizational / Cultural Changes Complacency Fatigue/Stress Illusions 			
Errors <i>Actions or inactions by the line personnel that lead to deviations from organisational or operational intentions or expectations.</i>	Aircraft Handling <ul style="list-style-type: none"> Vertical, lateral or speed deviations Incorrect FGC inputs Incorrect altimeter Taxiing too fast 	Procedural <ul style="list-style-type: none"> Wrong APS entered on Load and Trim Checklists from memory or performed late Omitted briefing or missed items Incorrect logbook entries 	Communications <ul style="list-style-type: none"> Missed calls Incorrect phraseology Transmitting while another transmission is in progress Incorrect read back Miscommunication or misinterpretation between crew members 			
Error Types	Slips <ul style="list-style-type: none"> Actions that do not go as planned 	Lapses <ul style="list-style-type: none"> Memory failures 	Mistakes <ul style="list-style-type: none"> Failure in the plan of action 	Violations <ul style="list-style-type: none"> Routine or exceptional acts of sabotage 		
Undesired Aircraft States (UAS) <i>Operational conditions where an unintended situation results in a reduction in margins of safety.</i>	Aircraft Handling Issues <ul style="list-style-type: none"> Aircraft control Unnecessary weather penetration Operation outside aircraft limitations Unstable approach Continued landing after unstable approach 	Navigation <ul style="list-style-type: none"> Misalignment on runway Proceeding to the wrong taxiway or runway Proceeding to the wrong destination 	Incorrect Aircraft Config <ul style="list-style-type: none"> Systems Flight Controls Automation Engine Weight and Balance 			
UAS Outcomes	Return to Safe Operations	An Additional Error	Occurrence – Incident/Accident			
TEM Countermeasures	Planning	SOP Briefing The required briefing was interactive and operationally thorough <ul style="list-style-type: none"> Concise, not rushed, and met SOP requirements Bottom lines were established 	<ul style="list-style-type: none"> Shared understanding about plans “Everybody on the same page” 			
		Plans Stated Operational plans and decisions were communicated and acknowledged <ul style="list-style-type: none"> Workload assignments were communicated and acknowledged 	<ul style="list-style-type: none"> Threats and their consequences were anticipated Used all available resources to manage threats 			
		Workload Assignment Roles and responsibilities were defined for normal and non normal situations <ul style="list-style-type: none"> Aircraft position, settings, and crew actions were verified 	<ul style="list-style-type: none"> Avoided task fixation Did not allow work overload 			
		Contingency Management Crew members developed effective strategies to manage threats to safety <ul style="list-style-type: none"> Automation setup was briefed to other members Effective recovery techniques from automation anomalies 	<ul style="list-style-type: none"> Crew decisions and actions were openly analyzed to make sure the existing plan was the best plan Crew members not afraid to express a lack of knowledge “Nothing taken for granted” attitude 			
	Execution	Monitor / Cross-check Crew members actively monitored and cross checked systems and other crew members <ul style="list-style-type: none"> Crew members spoke up without hesitation 	<ul style="list-style-type: none"> Crew members stated critical information and/or solutions with appropriate persistence 			
		Workload Assignment Operational tasks were prioritized and properly managed to handle primary flight duties <ul style="list-style-type: none"> Crew members asked questions to investigate and/or clarify current plans of action 	<ul style="list-style-type: none"> Crew members spoke up without hesitation 			
		Automation Management Automation was properly managed to balance situational and/or workload requirements <ul style="list-style-type: none"> Crew members spoke up without hesitation 	<ul style="list-style-type: none"> Crew members spoke up without hesitation 			
	Review	Evaluation / Modification of Plans Existing plans were reviewed and modified when necessary <ul style="list-style-type: none"> Crew members spoke up without hesitation 	<ul style="list-style-type: none"> Crew members spoke up without hesitation 			
		Inquiry Crew members asked questions to investigate and/or clarify current plans of action <ul style="list-style-type: none"> Crew members spoke up without hesitation 	<ul style="list-style-type: none"> Crew members spoke up without hesitation 			
		Assertiveness Crew members stated critical information and/or solutions with appropriate persistence <ul style="list-style-type: none"> Crew members spoke up without hesitation 	<ul style="list-style-type: none"> Crew members spoke up without hesitation 			
		TEM / Cognitive Ease		Bias		
		When the Pilot has experience, is in a good mood, is familiar with situation and surroundings, there is an increased risk of incidents occurring – Pilot may let their guard down.		Expectation Bias		
		Plan Continuation Bias				
		Confirmation Bias				
		Recency Effect Bias				
Dirty Dozen						
1. Lack of Communication	2. Complacency	3. Lack of Knowledge	4. Distraction	5. Lack of Teamwork	6. Fatigue	
7. Lack of Resources	8. Pressure	9. Lack of Assertiveness	10. Stress	11. Lack of Awareness	12. Norms	