



Flight AIE 850 CYHZ-CYUL


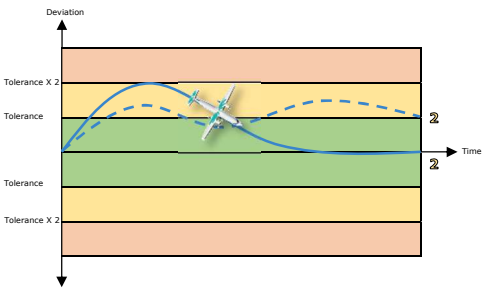
CM1 _____
CM2 _____


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
RUNWAY SETTING		Center of Gravity	MAC 30%	MAC 30%
		MEL/ CDL	N/A	
RWY Condition	5/5/5 WET	Dangerous Goods		
Braking Action	MEDIUM	De-Icing Fluids	N/A	
RWY Lighting	5	Doors Open	PAX BAGGAGE	
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			
Wind	150/15	TAXI CLEARANCE		
Temperature	13°C	TAXI G, F AND L, HOLD SHORT RWY 23 AND CONTACT TOWER 118,4		
Visibility	1/2SM -RN			
Ceiling	OVC002			

FLIGHT SUMMARY	
CM2	CM1
<ul style="list-style-type: none"> • PRE-FLIGHT • ABNORMAL STARTS • SID DEPARTURE • AIRWORK • AC VAR GEN FAIL • TCAS RA • ENGINE FAILURE IN FLIGHT • PRECISION APPROACH • GO AROUND • HOLD • NON-PRECISION APPROACH • SID DEPARTURE V₁ CUT 	<ul style="list-style-type: none"> • PRE-FLIGHT • SID DEPARTURE • EMERGENCY DESCENT • ELEVATOR HORN HEAT • TCAS RA • NON-PRECISION APPROACH • GO AROUND • HOLD • PRECISION APPROACH (PMA) • SID DEPARTURE V₁ CUT • RTO RWY 23 • EVACUATON

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 <u>and</u> 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>- 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)				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

<p>Threats</p> <p><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></p>	<p>Anticipated – Foreseen </p> <ul style="list-style-type: none"> Weather Airport Congestion Crosswinds Runway Conditions 		<p>Unanticipated – Unforeseen </p> <ul style="list-style-type: none"> In-flight Malfunction Automation Anomalies Unforecasted Weather TCAS TA/RA Non-Standard Phraseology 		<p>Latent – Unseen </p> <ul style="list-style-type: none"> Incorrect Documentation Equipment Design Issues Organizational / Cultural Changes Complacency Fatigue/Stress Illusions 				
	<p>Errors</p> <p><i>Actions or inactions by the line personnel that lead to deviations from organisational or operational intentions or expectations.</i></p>	<p>Aircraft Handling </p> <ul style="list-style-type: none"> Vertical, lateral or speed deviations Incorrect FGC inputs Incorrect altimeter Taxiing too fast 		<p>Procedural </p> <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 		<p>Communications </p> <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 			
<p>Error Types</p>		<p>Slips </p> <ul style="list-style-type: none"> Actions that do not go as planned 		<p>Lapses </p> <ul style="list-style-type: none"> Memory failures 		<p>Mistakes </p> <ul style="list-style-type: none"> Failure in the plan of action 			
	<p>Violations </p> <ul style="list-style-type: none"> Routine or exceptional acts of sabotage 								
<p>Undesired Aircraft States (UAS)</p> <p><i>Operational conditions where an unintended situation results in a reduction in margins of safety.</i></p>	<p>Aircraft Handling Issues </p> <ul style="list-style-type: none"> Aircraft control Unnecessary weather penetration Operation outside aircraft limitations Unstable approach Continued landing after unstable approach 		<p>Navigation </p> <ul style="list-style-type: none"> Misalignment on runway Proceeding to the wrong taxiway or runway Proceeding to the wrong destination 		<p>Incorrect Aircraft Config </p> <ul style="list-style-type: none"> Systems Flight Controls Automation Engine Weight and Balance 				
	<p>UAS Outcomes</p>		<p>Return to Safe Operations</p>		<p>An Additional Error</p>				
<p>Occurrence – Incident/Accident</p>									
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">TEM Countermeasures</p>	<p>Planning </p>		<p>SOP Briefing</p> <p>The required briefing was interactive and operationally thorough</p>		<ul style="list-style-type: none"> Concise, not rushed, and met SOP requirements Bottom lines were established 				
			<p>Plans Stated</p> <p>Operational plans and decisions were communicated and acknowledged</p>		<ul style="list-style-type: none"> Shared understanding about plans “Everybody on the same page” 				
			<p>Workload Assignment</p> <p>Roles and responsibilities were defined for normal and non normal situations</p>		<ul style="list-style-type: none"> Workload assignments were communicated and acknowledged 				
			<p>Contingency Management</p> <p>Crew members developed effective strategies to manage threats to safety</p>		<ul style="list-style-type: none"> Threats and their consequences were anticipated Used all available resources to manage threats 				
	<p>Execution </p>		<p>Monitor / Cross-check</p> <p>Crew members actively monitored and cross checked systems and other crew members</p>		<ul style="list-style-type: none"> Aircraft position, settings, and crew actions were verified 				
			<p>Workload Assignment</p> <p>Operational tasks were prioritized and properly managed to handle primary flight duties</p>		<ul style="list-style-type: none"> Avoided task fixation Did not allow work overload 				
			<p>Automation Management</p> <p>Automation was properly managed to balance situational and/or workload requirements</p>		<ul style="list-style-type: none"> Automation setup was briefed to other members Effective recovery techniques from automation anomalies 				
	<p>Review </p>		<p>Evaluation / Modification of Plans</p> <p>Existing plans were reviewed and modified when necessary</p>		<ul style="list-style-type: none"> Crew decisions and actions were openly analyzed to make sure the existing plan was the best plan 				
			<p>Inquiry</p> <p>Crew members asked questions to investigate and/or clarify current plans of action</p>		<ul style="list-style-type: none"> Crew members not afraid to express a lack of knowledge “Nothing taken for granted” attitude 				
			<p>Assertiveness</p> <p>Crew members stated critical information and/or solutions with appropriate persistence</p>		<ul style="list-style-type: none"> Crew members spoke up without hesitation 				
	<p>The diagram shows a funnel with four levels: THREATS (Threat Management), ERRORS (Error Management), UNDESIRE STATES (Undesired State Management), and END STATE. Red arrows labeled 'Resist', 'Repair', and 'Recover' point from the top level down to the bottom level.</p>			<p>TEM / Cognitive Ease</p> <p>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.</p>			<p>Bias</p> <ul style="list-style-type: none"> Expectation Bias Plan Continuation Bias Confirmation Bias Recency Effect Bias 		
	<p>Dirty Dozen</p>								
<p>1. Lack of Communication</p>		<p>2. Complacency</p>		<p>3. Lack of Knowledge</p>					
<p>7. Lack of Resources</p>		<p>8. Pressure</p>		<p>10. Stress</p>					
<p>4. Distraction</p>		<p>5. Lack of Teamwork</p>		<p>6. Fatigue</p>					
<p>9. Lack of Assertiveness</p>		<p>11. Lack of Awareness</p>		<p>12. Norms</p>					