



# Flight AIE 880 CYGL – CYVP

CM1 \_\_\_\_\_

CM2 \_\_\_\_\_

Date \_\_\_\_\_

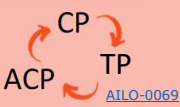
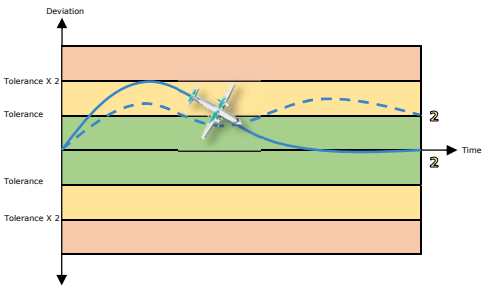
## FLIGHT INFORMATION

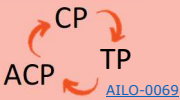
| AIRPORT SETTING  |                | AIRCRAFT SETTING   | DH8-100           | DH8-300            |
|------------------|----------------|--|-------------------|--------------------|
| Airport          | <b>CYGL</b>    | Aircraft OEW   | 23640 LBS         | 25537 LBS          |
| Runway           | <b>13</b>      | Pax Weight (total)   | 0 LBS (0)         | 0 LBS (0 PAX)      |
| Gate             | <b>CARGO</b>   | Bag & Cargo Weight   | 5460 LBS          | 12061 LBS          |
| Takeoff Alt      | <b>NONE</b>    | Fuel   MIN DIV   | 5600 LBS 1672 LBS | 5600 LBS  1889 LBS |
| Emergency Return | <b>NONE</b>    | Aircraft TOW   | 34500 LBS         | 42998 LBS          |
| RUNWAY SETTING   |                | Center of Gravity  | MAC 30 %          | MAC 31 %           |
|                  |                | MEL / CDL  | UN3090            |                    |
| RWY Condition    | <b>5/5/5</b>   | Dangerous Goods  | N/A               |                    |
| Braking Action   | <b>GOOD</b>    | De-Icing Fluids  | N/A               |                    |
| RWY Lighting     |                | Doors Open   | PAX   BAGGAGE     |                    |
| WEATHER SETTING  |                | CLEARANCE  |                   |                    |
| Time of Day      | <b>NIGHT</b>   | ATC CLEAR AIE 880 TO CYVP AIRPORT VIA CYGL DTC CLIMB 25 000FT SQUAWK 4252 CONTACT MONTREAL 132,1 |                   |                    |
| Altimeter        | <b>29.82</b>   |  |                   |                    |
|                  |                | TAXI CLEARANCE   |                   |                    |
| Wind             | <b>03015KT</b> |  |                   |                    |
| Temperature      | <b>1</b>       | TAXI B   |                   |                    |
| Visibility       | <b>7SM</b>     |  |                   |                    |
| Ceiling          | <b>OVC010</b>  |  |                   |                    |

## FLIGHT SUMMARY

| LOFT   | TIME        |
|--|-------------|
| <b>CYGL TO CYVP</b>  | <b>1:30</b> |
| <b>CYVP WEATHER</b> 05015KT 2SM OVC010 -1/-3 A29.84 RMK MODERATE CLEAR ICE IN THE AREA |             |

### 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"> <li>Practical knowledge was effective.</li> <li>Following of SOPs, rules and regulations was effective.</li> </ul> <p><b>Slight Error</b></p> <ul style="list-style-type: none"> <li>Flight crew actions resulted in an aircraft position, speed, attitude and configuration that maintained effective safety margins.</li> </ul>  | <ul style="list-style-type: none"> <li>Practical knowledge was acceptable.</li> <li>Following of SOPs, rules or regulations was acceptable</li> </ul> <p><b>Minor Error</b></p> <ul style="list-style-type: none"> <li>Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained acceptable safety margins.</li> </ul>  | <ul style="list-style-type: none"> <li>Practical knowledge was poor.</li> <li>Following of SOPs, rules or regulations was poor</li> </ul> <p><b>Major Error</b></p> <ul style="list-style-type: none"> <li>Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained poor (i.e., reduced) safety margins</li> </ul>                                       | <ul style="list-style-type: none"> <li>Practical knowledge was unacceptable.</li> <li>Following of SOPs, rules or regulations was unacceptable.</li> </ul> <p><b>Critical Error / UAS</b></p> <ul style="list-style-type: none"> <li>Flight crew actions or inactions resulted in an aircraft position, speed, attitude or configuration that maintained unacceptable (i.e., clearly reduced) safety margins.</li> </ul>  |             |
|   | Automation   | <ul style="list-style-type: none"> <li><b>Subject to marking under Knowledge and Technical Skills.</b></li> <li>This element may also be discussed during a debrief.                             <ul style="list-style-type: none"> <li>Did crew use automation to avoid errors?</li> <li>Was the use of automation a factor affecting SA?</li> <li>Was automation dependency a factor?</li> </ul> </li> </ul>        |   |   |   |             |
|   | Aircraft Handling (PF)   | <ul style="list-style-type: none"> <li>Effective compliance with regulations and aircraft limitations.</li> </ul> <p><b>Slight Deviation</b></p> <ul style="list-style-type: none"> <li>Effective quality and accuracy</li> <li>Safety of flight assured</li> <li>A variation in precision that was less than or equal to a flight test exercise tolerance and quality of aircraft handling was effective.</li> </ul> | <ul style="list-style-type: none"> <li>Acceptable compliance with regulations and aircraft limitations.</li> </ul> <p><b>Minor Deviation</b></p> <ul style="list-style-type: none"> <li>Acceptable quality and accuracy</li> <li>Safety of flight maintained</li> <li>A variation in precision that was less than or equal to a flight test exercise tolerance or quality of aircraft handling was acceptable.</li> </ul> | <ul style="list-style-type: none"> <li>Poor compliance with regulations and/or aircraft limitations.</li> </ul> <p><b>Major Deviation</b></p> <ul style="list-style-type: none"> <li>Poor quality and accuracy</li> <li>Safety of flight reduced</li> <li>A variation in precision that exceeded but was not more than double a flight test exercise tolerance or quality of aircraft handling was poor.</li> </ul> | <ul style="list-style-type: none"> <li>Unacceptable compliance with regulations and/or aircraft limitations.</li> </ul> <p><b>Critical Deviation</b></p> <ul style="list-style-type: none"> <li>Unacceptable quality and accuracy</li> <li>Safety of flight compromised</li> <li>A variation in precision that exceeded but was not more than double a flight test exercise tolerance or quality of aircraft handling was unacceptable.</li> </ul> <p>- OR -</p> <ul style="list-style-type: none"> <li>A variation in precision that was more than double a flight test exercise tolerance.</li> </ul> |             |
| Illustration of Aircraft Handling (Deviation) Assessments                         | <p>Aircraft Handling is initially assessed based on <b>assigned parameters</b> (e.g., maintain 12,000 feet) versus <b>tolerances</b> (e.g., <math>\pm 100</math> feet) and <b>quality of handling</b> (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"> <li>Effective system awareness</li> <li>Effective environmental awareness</li> <li>Effective awareness of time</li> <li>Effective anticipation of future events</li> </ul>  | <ul style="list-style-type: none"> <li>Acceptable system awareness</li> <li>Acceptable environmental awareness</li> <li>Acceptable awareness of time</li> <li>Acceptable anticipation of future events</li> </ul>  | <ul style="list-style-type: none"> <li>Poor system awareness</li> <li>Poor environmental awareness</li> <li>Poor awareness of time</li> <li>Poor anticipation of future events</li> </ul>                             | <ul style="list-style-type: none"> <li>Unacceptable system awareness</li> <li>Unacceptable environmental awareness</li> <li>Unacceptable awareness of time</li> <li>Unacceptable anticipation of future events</li> </ul>                             |             |
|   | Cooperation                      | <ul style="list-style-type: none"> <li>Effective team building and maintaining</li> <li>Effective consideration of others</li> <li>Effective support of others</li> <li>Effective resolving conflicts</li> </ul>   | <ul style="list-style-type: none"> <li>Acceptable team building and maintaining</li> <li>Acceptable consideration of others</li> <li>Acceptable support of others</li> <li>Acceptable resolving conflicts</li> </ul>   | <ul style="list-style-type: none"> <li>Poor team building and maintaining</li> <li>Poor consideration of others</li> <li>Poor support of others</li> <li>Poor resolving conflicts</li> </ul>                          | <ul style="list-style-type: none"> <li>Unacceptable team building and maintaining</li> <li>Unacceptable consideration of others</li> <li>Unacceptable support of others</li> <li>Unacceptable resolving conflicts</li> </ul>                          |             |
|   | Decision Making                  | <ul style="list-style-type: none"> <li>Effective problem definition / diagnosis</li> <li>Effective option generation</li> <li>Effective risk assessment &amp; option selection</li> <li>Effective outcome review</li> </ul>  | <ul style="list-style-type: none"> <li>Acceptable problem definition / diagnosis</li> <li>Acceptable option generation</li> <li>Acceptable risk assessment &amp; option selection</li> <li>Acceptable outcome review</li> </ul>  | <ul style="list-style-type: none"> <li>Poor problem definition / diagnosis</li> <li>Poor option generation</li> <li>Poor risk assessment &amp; option selection</li> <li>Poor outcome review</li> </ul>               | <ul style="list-style-type: none"> <li>Unacceptable problem definition / diagnosis</li> <li>Unacceptable option generation</li> <li>Unacceptable risk assessment &amp; option selection</li> <li>Unacceptable outcome review</li> </ul>               |             |
|   | Leadership and Managerial Skills | <ul style="list-style-type: none"> <li>Effective use of authority and assertiveness</li> <li>Effective providing and maintaining standards</li> <li>Effective planning and coordination</li> <li>Effective workload management</li> </ul>  | <ul style="list-style-type: none"> <li>Acceptable use of authority and assertiveness</li> <li>Acceptable providing and maintaining standards</li> <li>Acceptable planning and coordination</li> <li>Acceptable workload management</li> </ul>  | <ul style="list-style-type: none"> <li>Poor use of authority and assertiveness</li> <li>Poor providing and maintaining standards</li> <li>Poor planning and coordination</li> <li>Poor workload management</li> </ul> | <ul style="list-style-type: none"> <li>Unacceptable use of authority and assertiveness</li> <li>Unacceptable providing and maintaining standards</li> <li>Unacceptable planning and coordination</li> <li>Unacceptable workload management</li> </ul> |             |
|   | Pressure and Stress              | <ul style="list-style-type: none"> <li><b>Not subject to marking.</b> This non-technical element may be discussed during a debrief.                             <ul style="list-style-type: none"> <li>Did the candidate identify or manage any known pressure and stress?</li> <li>Did they maintain crew effectiveness?</li> </ul> </li> </ul>   |  |   |   |             |
|   | Fatigue                          | <ul style="list-style-type: none"> <li><b>Not subject to marking.</b> This non-technical element may be discussed during a debrief.                             <ul style="list-style-type: none"> <li>Did the candidate identify or manage their fatigue?</li> </ul> </li> </ul>  | Risk factors / indicators of fatigue include: <ul style="list-style-type: none"> <li>Time of Day</li> <li>Length of duty day</li> <li>Schedule, consecutive duty days</li> <li>Poor communication</li> <li>Performance</li> <li>Variability and unpredictability</li> <li>Impaired judgment and decision making</li> <li>Limited situational awareness</li> <li>Undiagnosed or untreated medical condition that affect fatigue</li> <li>Differences in ability to sleep and respond to conditions</li> </ul> |   |   |             |
|   | Communication                    | <ul style="list-style-type: none"> <li><b>Not subject to marking.</b> This non-technical element may be discussed during a debrief.                             <ul style="list-style-type: none"> <li>Did the candidate maintain proper communication skills?</li> </ul> </li> </ul>  | Includes: <ul style="list-style-type: none"> <li>Use of Standard Calls</li> <li>Speaking skills</li> <li>Listening skills</li> <li>Appropriate assertiveness</li> <li>Conflict resolution techniques</li> <li>Conflict resolution</li> <li>Self critique</li> </ul>  |   |   |             |
|   | Workload Management              | <ul style="list-style-type: none"> <li><b>Subject to marking under Leadership and Managerial Skills (above).</b> This element may also be discussed during a debrief.                             <ul style="list-style-type: none"> <li>Did the candidate anticipate contingencies?</li> <li>Did the candidate avoid work overload in self and others?</li> <li>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?</li> </ul> </li> </ul> |  |   |   |             |
|   | TEM                              | <ul style="list-style-type: none"> <li><b>Not subject to marking as a standalone item</b> – TEM performance may also be discussed during a debrief.                             <ul style="list-style-type: none"> <li>See Threat and Error Management summary table</li> </ul> </li> </ul>  |  |   |   |             |

### Threat and Error Management

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