**LESSON PLAN**

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| **Lesson** | Launch Failures | **Instructor** |  | **Class/Group** |  |
| **Location** | Maps & Simulation Room | **Date / Time** | / | **Equipment** | Flight Sim |

**INTRODUCTION**

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| **Interest** | To develop your piloting skills in preparation for a Gliding Scholarship in the Viking | |
| **Need** | To learn how to learn what to do in the event of a launch failure. | |
| **Title** | Launch Failures  **REF – ACP122 (P48 - 51)** | |
| **Revision** | * Attitudes * Transition * Lookout * Approach | * FRC’s * Co-ordinated Controls * Medium Turns |
| **Objectives** | * By the end of this lesson you will be able to:   + To land safely following a launch failure. | |
| **Scope** | This lesson will last 2 hours | |
| **Handouts** |  | |

**DEVELOPMENT**

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| **Content** | **Notes** |
| Flight Simulator Scenario: The simulator should be launched using the Grob G103a Twin ӀӀ  (Viking) at an appropriate airfield in a parking spot. | |
| Each exercise should be followed by the cadet(s) practicing that exercise. | |
| **1. Airmanship.** | 5 min. Launch failures can be caused by breaks in the cable, the hook mechanism might fail or the winch could lose power.  **Priority is to fly the aircraft.** |
| **2. Immediate Actions. (IA)** | 5 min. In the event of a failure the IA should be to prevent stalling and regain safe flying speed (55kts) Lower nose to approach attitude. Pull cable release twice. |
| **3. Low Launch Failures.** | REF Fig. 16 |
| **3.a.** | 2 min. Carry out IA’s. |
| **3.b.** | 5 min. Confirm that it is possible to land ahead. |
| **3.c.** | 1 min. Check approach speed. |
| **3.d.** | 2 min. Use airbrakes where necessary. |
| **3.e.** | 1 min. Approach and land as normal. |
| **3.f.** | 2 min. Made radio call if time permitted. |
| **3.g.** | 2 min. Use toe breaks to stop before the end of the airfield. |
| **4. High Launch Failures.** | REF Fig. 17 |
| **4.a.** | 2 min. Carry out IA’s. |
| **4.b.** | 1 min. Confirm that it is not possible to land ahead. |
| **4.c.** | 1 min. select approach speed. (55kts) |
| **4.d.** | 2 min. Turn 180°. |
| **4.e.** | 5 min. If below 250ft line up with suitable landing area. If above 250ft continue downwind and make final turn at 250 for downwind boundary. |
| **4.f.** | 1 min. Complete final turn towards DLA. |
| **4.g.** | 2 min. Approach and Land normally. |
| **5. Very Low Launch Failure.** | 10 min. In the event of a failure where you cannot select the approach attitude, select the best possible attitude, release cable if there is time, and land ahead. |
| **7. Winch Failure.** |  |
| **7.a. Symptoms.** | 2 min. Deceleration and speed reduces towards 50kts. |
| **7.b. Immediate Actions. (IA)** | 5 min. Select level attitude to accelerate. If speed does not increase, treat as launch failure. |
| **8. Summary.** | REF Fig.18 |

**CONSOLIDATION**

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| **Summary**  The cadet(s) have now learnt how to land safely following a launch failure. |
| **Test Learning**  Ask a cadet to fly a normal circuit. Induce a launch failure. |
| **Restate Objectives**  By the end of this lesson you will be able to:   * + To land safely following a launch failure. |
| **Student Questions** |
| **Review and Look Forward**  Next lesson: Pre Solo Check & First Solo  AIM To fly a normal circuit and landing. |