UNIT 1.14 - IN FLIGHT ADJUSTABLE PROPELLER ENDORSEMENT SYLLABUS

ELEMENT: 1. THEORETICAL UNDERSTANDING

Flying Standard	Before Solo	Pilot Certificate	Inst Rating
1.1 Theoretical Understanding			
• Propeller pitch changes in flight	3	2	1
• The effect of changes in propeller pitch on an aeroplane in flight	3	2	1
• The effect of changes of propeller pitch on engine performance and limitations	3	2	1
• Different types of in-flight adjustable propellers	3	2	1
• Advantages and disadvantages of fixed pitch and adjustable pitch propellers	3	2	1

ELEMENT: 2. NORMAL OPERATIONS

Flying Standard	Before Solo	Pilot Certificate	Inst Rating
2.1 Pre-flight Inspection			
• Pre-flight inspection carried out with considerations to the specifics of the in-flight adjustable propeller fitted	3	2	1
• Pre-start checks as required per propeller and aeroplane Flight Manual	3	2	1
2.2 Fine pitch and climb performance			
• Pre-take-off checks completed	3	2	1
• Propeller pitch governor/actuator checked as per aeroplane Flight Manual	3	2	1
• Pitch selected full fine for take-off	3	2	1
• Maximum rate and maximum angle take-off and climb demonstrated	3	2	1
• Demonstration of technique (fine pitch to coarser pitch) for transition from cruise to climb	3	2	1
• Transition from coarse pitch cruise to fine pitch for maximum performance climb	3	2	1
2.3 Coarse pitch and cruise performance			
• Transition from climb with full power and fine pitch to coarse pitch cruise	3	2	1
• Transition from cruise climb with full power and coarse pitch to normal cruise	3	2	1

2.4 Landing and circuit operation			
• Demonstrate appropriate pre-landing checks with regard to pitch check on final approach	3	2	1
• Understand the requirements, and demonstrate appropriate technique, for reduction of pitch on final to full fine	3	2	1
• Demonstrate pitch increase on transition to cruise	3	2	1
2.5 Engine instrumentation and limitations			
• Demonstrate practical interpretation of instrument indications relating to the operation of in-flight adjustable propeller	3	2	1
• Demonstrate sound engine handling and care with regard to manifold pressure and rpm	3	2	1

ELEMENT: 3. EMERGENCY OPERATIONS

Flying Standard	Before Solo	Pilot Certificate	Inst Rating
3.1 Engine Failure			
• Theoretical aspects of propeller pitch alteration on glide performance understood	3	2	1
• Recognition of engine failure (simulated as required) and adjustment of propeller pitch to improve glide performance	3	2	1
• Correct pitch settings used for attempted engine restart	3	2	1
3.2 Engine Failure Simulation			
• Instructor simulates engine failure with due regard to change of propeller pitch	-	-	1
• Instructor understands emergency restart procedures in case of genuine engine failure during simulation with regard to propeller pitch	-	-	1
3.3 Fully Feathered Operations			
• Theoretical aspects of use of full feather (if applicable)	3	2	1
• Use of the full feather option (if applicable to type) and sound ability to activate and deactivate full feather option	3	2	1
• Engine restart from full feather engine inoperative flight (only with CFI)	3	2	1
3.4 Pitch System Malfunction			
• Pitch system malfunction identified and aeroplane is operated safely with regard to Aviate, Navigate, Communicate (ANC) principles	3	2	1
• Appropriate actions as per aeroplane Flight Manual	3	2	1
• Checklist actions carried out before returning to land in the event of propeller malfunction	3	2	1

-End of In Flight Adjustable Propeller Endorsement Syllabus-