



EESTI LENNUAKADEEMIA

## Õppematerjalide ajakohasuse protokoll 2023/2024 õppeaasta

Õppematerjal on vastavuses Eesti Lennuakadeemia õppeprogrammile (MTOE 4.2.0, 4.2.1, 4.2.2, 4.2.3), Euroopa Komisjoni regulatsiooni Osa-66 liitega I.

**Mooduli nr:** Moodul 16

**Õppematerjali nimetus:** AIRCRAFT TECHNICAL BOOK (ATB) MODULE 16 - PISTON ENGINE FOR B1 CERTIFICATION

**Lisainfo:** Aircraft Technical Book (ATB) paberkandjal ja e-raamatuna (B1 kategooria)

**Õppematerjali pealkiri:** AIRCRAFT TECHNICAL BOOK (ATB) MODULE 16 - PISTON ENGINE FOR B1 CERTIFICATION

**Revisjoni number:** 1

**Kasutusperiood:** september 2023 – september 2024

Heaks kiidetud veebikeskkond distantsoõppe läbiviimiseks

Zoom (<https://zoom.us/>)

Google Classroom ([classroom.google.com](https://classroom.google.com))

Protokolli koostamise kuupäev: 02.08.2023

MTO koolitusjuht: Madis Parv  
(allkirjastatud digitaalselt)

## ÕPPEMATERJALI VASTAVUSHINDAMISE KONTROLL-LEHT

Mooduli nr. ja nimetus: <b>Module 16 Piston Engine</b>	Tase		Õppematerjali vastavus Osa-66 Lisa III mooduli programmile
	A	B1	
<b>16.1 Fundamentals</b>  <i>Mechanical, thermal and volumetric efficiencies;            Operating principles — 2 stroke, 4 stroke, Otto and Diesel;            Piston displacement and compression ratio;            Engine configuration and firing order.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.2 Engine Performance</b>  <i>Power calculation and measurement;            Factors affecting engine power;            Mixtures/leaning, pre-ignition.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.3 Engine Construction</b>  <i>Crank case, crank shaft, cam shafts, sumps;            Accessory gearbox;            Cylinder and piston assemblies;            Connecting rods, inlet and exhaust manifolds;            Valve mechanisms;            Propeller reduction gearboxes.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.4 Engine Fuel Systems</b>  <b>16.4.1 Carburettors</b>  <i>Types, construction and principles of operation;            Icing and heating.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.4.2 Fuel injection systems</b>  <i>Types, construction and principles of operati</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.4.3 Electronic engine control</b>  <i>Operation of engine control and fuel metering systems including electronic engine control (FADEC);            Systems lay-out and components.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.5 Starting and Ignition Systems</b>  <i>Starting systems, pre-heat systems;            Magneto types, construction and principles of operation;            Ignition harnesses, spark plugs;            Low and high tension systems.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.6 Induction, Exhaust and Cooling Systems</b>  <i>Construction and operation of: induction systems including alternate air systems;            Exhaust systems, engine cooling systems — air and liquid.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.7 Supercharging/Turbocharging</b>  <i>Principles and purpose of supercharging and its effects on engine parameters;            Construction and operation of supercharging/turbocharging systems;            System terminology;            Control systems;            System protection.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta

<b>16.8 Lubricants and Fuels</b>  <i>Properties and specifications;  Fuel additives;  Safety precautions.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.9 Lubrication Systems</b>  <i>System operation/lay-out and components.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.10 Engine Indication Systems</b>  <i>Engine speed;  Cylinder head temperature;  Coolant temperature;  Oil pressure and temperature;  Exhaust Gas Temperature;  Fuel pressure and flow;  Manifold pressure.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.11 Powerplant Installation</b>  <i>Configuration of firewalls, cowlings, acoustic panels, engine mounts, anti-vibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains.</i>	1	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.12 Engine Monitoring and Ground Operation</b>  <i>Procedures for starting and ground run-up;  Interpretation of engine power output and parameters;  Inspection of engine and components: criteria, tolerances, and data specified by engine manufacturer.</i>	1	3	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>16.13 Engine Storage and Preservation</b>  <i>Preservation and depreservation for the engine and accessories/systems.</i>	-	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta

**OTSUS:**

Õppematerjal **vastab** kehtiva määruse Osa-66 Lisa III I liite mooduli programmile.

Õppematerjali vastavuse kontrollis ja kinnitas:

MTO koolitusjuht: Madis Parv  
/allkirjastatud digitaalselt/

Kuupäev: 02.08.2023