



Flight Performance & Planning

Pooleys EASA PPL Ground School – To accompany the Air Pilot's Manual, Vol. 4



POOLEYS

Flight Performance & Planning Pooleys EASA PPL Ground School

– To accompany the Air Pilot's Manuals –



Pooleys Flight Equipment Ltd | Elstree Aerodrome | Hertfordshire | WD6 3AW
 Tel: **+44(0)20 8953 4870** | Fax: **+44(0)20 8953 2512**
 Email: **sales@pooleys.com** | Website: **www.pooleys.com**

Nothing procedures and any in this manual supersedes any EU legislation, rules or EASA regulations or operational documents issued by The Stationery Office, the Civil Aviation Authority, National Aviation Authorities, the manufacturers of aircraft, engines and systems, or by the operators of aircraft throughout the world. Note that as maps and charts are changed regularly, those extracts reproduced in this presentation must not be used for flight planning or flight operations.



Flight Performance & Planning

Pooleys EASA PPL Ground School – To accompany the Air Pilot's Manual, Vol. 4



Nothing in this manual supersedes any legislation, rules, regulations or procedures contained in any operational document issued by Her Majesty's Stationery Office, the Civil Aviation Authority, the European Union, the European Commission, EASA, ICAO, the manufacturers of aircraft, engines and systems, or by the operators of aircraft throughout the world.

Pooleys Air Presentations, Flight Performance & Planning, Pilot's Work Book.

Copyright 2016 © Pooleys Flight Equipment Ltd

ISBN: 978-1-84336-228-9

First Edition June 2016

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some of the use of this publication (without the written permissions of the copyright owner) except in accordance with the provisions of the Copyright, Designs and Patent Act 1988 or under the terms of a licence issued by the Copyright Licensing Agency Limited, 90 Tottenham Court Road, London, England W1P 0LP. Applications for the copyright owner's written permission to reproduce any part of this publication should be addressed to the publisher.

Warning: The doing of an unauthorised act in relation to a copyright work may result in both a civil claim for damages and criminal prosecution.

Pooleys Flight Equipment Ltd
Elstree Aerodrome
Hertfordshire
WD6 3AW
England, UK

Tel: **0208 953 4870**

Fax: **0208 953 2512**

Email: **sales@pooleys.com**

Website: **www.pooleys.com**



Index

1. Airworthiness
2. Type Certificate
3. Aircraft Registrations
4. Certificate of Airworthiness (CofA)
5. The Flight Manual (or Pilot's Operating Handbook)
6. Certificate of Release to Service
7. The Daily Pre-Flight Inspection or Check A
8. Airframe Limitations
9. MTOM, MLM and MZFM
10. Speed Limitations (1)
11. Speed Limitations (2)
12. The Atmosphere
13. Factors affecting Air Density
14. The International Standard Atmosphere (ISA)
15. Pressure Altitude (1)
16. Pressure Altitude (2)
17. Pressure Altitude (3)
18. Temperature
19. Density Altitude
20. Fahrenheit & Celsius Conversions
21. Take Off & Landing Performance
22. Performance Figures
23. Using Performance Data
24. Take Off Distance
25. Take Off Flap Setting
26. Factors affecting Take Off Performances
27. Humidity
28. Headwinds and Tailwinds
29. Runway Surface
30. Runway Slope
31. Recommended Safety Factor for
Take Off / Runway Characteristics
32. Clearway
33. Landing Distance Available (LDA)
34. Landing Performance
35. Factors affecting Landing Performance
36. Density Altitude
37. Headwinds and Tailwinds
38. Runway Surface
39. Runway Slope / Flap Settings
40. Recommended Safety Factor for Landing
41. Enroute Performance
42. Range and Endurance
43. Mass Definitions
44. Mass and Balance
45. Gross Mass (GM)
46. Mass and Balance
47. Why Aeroplane Mass is Restricted
48. Aeroplane Loading / The Mass of Fuel
49. Aeroplane Balance (1)
50. Aeroplane Balance (2)
51. Aeroplane Balance (3)
52. Movement of the CG Position
53. Mathematical Approach to Mass & Balance
54. Graphical Approach to Mass & Balance
55. Load Sheet Method
56. Load Data Sheet
57. Baggage and Cargo Restraint
58. Wake Turbulence
59. Avoiding Wake Turbulence-on Take Off
60. Awareness of Wake Turbulence
61. Wake Turbulence - In the Circuit
62. Wake Turbulence - On Approach to Land
63. Jet Blast
64. Helicopter Rotor Tip Vortices
65. Ground Effect (1)
66. Ground Effect (2)
67. Windshear
68. A Typical Windshear Situation (1)
69. A Typical Windshear Situation (2)
70. Overshoot, Undershoot and Windshear
Reversal Effect.
71. Six Common Windshear Situations
72. Windshear Reversal Effect / Crosswind Effect
73. The Causes of Windshear