

Index

Purpose of Mass and Balance Considerations	1
Mass Limitations	1
Center of Gravity (CG) Limitations	3
Loading	9
Terminology	9
Mass Limits	11
Mass Calculations	14
Fundamentals of CG Calculations	16
Definition of Center of Gravity	16
Conditions of Equilibrium	17
Calculation of Center of Gravity	20
Mass and Balance Details of Aircraft	22
Contents of Mass and Balance Documentation	22
Determination of Aircraft Empty Mass and CG Position by Weighing	25
Determination of CG Position	29
Methods	29
Load and Trim Sheet	31
General Performance Theory	33
Stages of Flight	33
Effect of Aircraft Mass, Wind, Altitude, Runway Slope and Condition	43
Gradients	52
Single Engine Aeroplanes	56
Definitions of Terms and Speeds	56
Climb and Descent Performance	58
Climb and Cruise Performance	65
Flight Planning for VFR Flights	72
VFR Navigation Plan	72
Fuel Planning	113
General	113
Calculation of the Required Fuel Before the Flight	114
Pre-flight Preparation	122
AIP and NOTAM Briefing	122
Meteorological Briefing	125
ICAO Flight Plan (ATS Flight Plan)	135
Individual Flight Plan	135
Submission of an ATS Flight Plan (FPL)	145
Flight Monitoring and In-flight Replanning	147
Flight Monitoring	147
In-flight Re-planning in Case of Deviation from Planned Data	155
Keyword Index	159