

RESTRICTED

A.P. 129—FLYING

VOLUME 1

PART 1 : AIRCRAFT AND ENGINES

SECTION 6 : AIRCRAFT SYSTEMS

CHAPTER 1 : ELECTRICAL SYSTEMS

	<i>Paras.</i>
General	1
Generator Control	2-6
Batteries Control	7-10
Circuit Protection	11
Operating Notes on the Use of Electrical Systems	12-19

CHAPTER 2 : FUEL SYSTEMS AND THEIR MANAGEMENT

Introduction	1
Requirements of a Fuel System	2-3
Fuel Tanks	4-7
Venting	8-9
Fuel Contents Gauges	10-15
Errors of Fuel Contents Gauges	16-18
Volumetric Contents Gauges	19-20
Mass Unit Gauges	21-23
Summary of Errors in Fuel Gauges... ..	24
Recommendations when Using Fuel Gauge Indications	25
Flowmeters	26-30
Fuel Cocks	31-32
Booster Pumps, Transfer Pumps, and Transfer Systems	33-39
Water and Fuel Drains	40
Filters	41
Fuel Flow under Negative <i>g</i> Conditions	42-47
Fuel Pressure Warning and Fuel Transfer Indicators	48-49
Fuel Tank Pressurizing	50-51
Use of Booster Pumps at High Altitude	52
Fuel Auto-Balance Systems	53-55
Fuel Jettisoning	56-61
Use of Nitrogen	62
Pressure Refuelling and Defuelling	63-67
Flight Refuelling—Probe and Drogue System	68-71

RESTRICTED

GENERAL RECOMMENDATIONS FOR THE MANAGEMENT OF FUEL SYSTEMS

	<i>Paras.</i>
Piston-Engined Aircraft	72-74
Use of Centre Cross-Feed Cocks	75-78
Gas-Turbine Aircraft	79-80

CHAPTER 3 : HYDRAULIC AND PNEUMATIC SYSTEMS

Introduction	1
Operating Principles of Hydraulic and Pneumatic Systems	2-9
Electrical Control of Pneumatic and Hydraulic Systems	10

HYDRAULIC SYSTEMS

Types of Systems	11
Description of Components	12-18
Emergency Operation of the Services	19
Servicing After Emergency Operation	20
Locking Devices	21
Prevention of Inadvertent Retraction on the Ground	22
Warning of Hydraulic Pressure Failure	23
Operation of a Typical Hydraulic System	24
Fire Risk from Hydraulic Fluid	25-30

PNEUMATIC SYSTEMS

Introduction	31
Simplified Pneumatic System	32-33
Locking Devices	34
Emergency Operation of the Services	35

CHAPTER 4 : AUTOPILOTS AND AUTOSTABILIZERS

Purpose of an Automatic Pilot	1-2
Stabilized Flight Control	3-5
Flight Manœuvres	6-9
Principles of Operation	10-16

MARK 10 AUTOPILOT

Controls	17
Control Unit	18-20
Description	21-23
Use in Flight	24-27
Automatically Controlled Manœuvres	28-30

RESTRICTED

MARK 11 AUTOPILOT

	<i>Paras.</i>
Basic Operation	31-38
Pilot's Controller	39-44
Trim Indicator	45
Warning Indicator	46
Disengagement	47
Safety Features	48-49

AUTOSTABILIZER, MARK 1

Introduction	50-53
Principles of Operation	54
Installation	55-56
Operation in Flight	57

CHAPTER 5 : CABIN PRESSURIZATION AND TEMPERATURE CONTROL SYSTEMS

Introduction	1-2
Physiological Aspects... ..	3
Selection of Cabin Pressure	4-5
British Military Aircraft	6
Structural Reinforcement	7
Sealing Problems	8-13
Pressurizing—Air Supply and Control	14-16
Cabin Pressure Indicators	17
Cabin Ventilation	18
Pressurized Air—Temperature Control	19
Refrigeration Units	20-26
Typical Cockpit Pressurization and Temperature Control System	27-35
Typical System—Controls	36
Typical System—Operation	37-39
Formation of White Mist	40
Use of Leak Stoppers... ..	41
Use of Fire Extinguishers	42
Canopy Misting	43-45
Dry Air Sandwich-Type Canopies	46
Jettisoning of Damaged Canopies	47

This file was downloaded
from the RTFM Library.

Link: www.scottbouch.com/rtfm

Please see site for usage terms,
and more aircraft documents.

