

180° POWER-OFF APPROACH 8-23
 360° POWER-OFF APPROACH 8-24
 90° POWER-OFF APPROACH 8-21

A

ABSOLUTE CEILING 12-8
 ACCELERATED STALL 4-9
 ACCELERATE-GO DISTANCE 12-8
 ACCELERATE-STOP DISTANCE 12-8
 ACCURACY APPROACH 8-21

- 180° power-off 8-23
- 360° power-off 8-24
- 90° power-off 8-21

 ADVERSE YAW 3-8
 AFTER LANDING 2-11

- crosswind tailwheel 13-5
- roll 8-7
- tailwheel 13-4

 AIMING POINT 8-8
 AIRCRAFT LOGBOOKS 2-1
 AIRFOIL TYPES 11-1
 AIRMANSHIP 1-1

- skills 1-1

 AIRPLANE EQUIPMENT, Night 10-3
 AIRPLANE FEEL 3-2
 AIRPLANE LIGHTING, Night 10-3
 AIRPORT LIGHTING 10-4
 AIRPORT TRAFFIC PATTERN 7-1

- base leg 7-3
- crosswind leg 7-4
- departure leg 7-4
- downwind leg 7-3
- entry leg 7-3
- final approach leg 7-3
- upwind leg 7-3

 AIRWORTHINESS DIRECTIVES 2-1
 ALTERNATOR/GENERATOR 12-7
 ALTITUDE TURBOCHARGING 11-7
 ANTI-ICING 12-7
 APPROACH AND LANDING 8-1

- after-landing roll 8-7
- base leg 8-1
- crosswind 8-15
- emergency 8-25
- estimating height and movement 8-4
- faulty 8-27
- final approach 8-2

go-around 8-11
 multiengine 12-14
 night 10-6
 normal 8-1
 roundout (flare) 8-5
 short-field 8-17
 soft-field 8-19
 stabilized approach 8-7
 touchdown 8-6
 turbulent air 8-17

- use of flaps 8-3

 ATTITUDE FLYING 3-2
 AUTOPILOT 12-6
 AXIAL FLOW 14-5

B

BACK SIDE OF THE POWER CURVE 8-19
 BALLOONING 8-3, 8-30
 BANK ATTITUDE 3-2
 BASE LEG 7-3, 8-1
 BEFORE TAKEOFF CHECK 2-11
 BEST ANGLE OF CLIMB (V_X) 3-13, 12-1

- one engine inoperative (V_{XSE}) 12-1

 BEST GLIDE SPEED 3-16
 BEST RATE OF CLIMB 3-13, 12-1

- one engine inoperative (V_{YSE}) 12-1

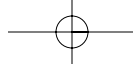
 BETA RANGE 14-7
 BLACK HOLE APPROACH 10-2
 BOUNCING 8-30
 BUS BAR 14-8
 BUS TIE 14-9
 BYPASS AIR 15-2
 BYPASS RATIO 15-2

C

CASCADE REVERSER 15-14
 CENTRIFUGAL COMPRESSOR

- STAGE 14-5

 CHANDELLE 9-4
 CHECKLISTS, Use of, 1-6
 CIRCUIT BREAKER 14-9
 CLEAR OF RUNWAY 2-11
 CLIMB GRADIENT 12-8



CLIMBS 3-13
 maximum performance 5-8
 night 10-5
 COCKPIT MANAGEMENT 2-7
 COLLISION AVOIDANCE 1-4
 COMBUSTION CHAMBER 14-1
 COMBUSTION HEATER 12-6
 COMPLEX AIRPLANE 11-1
 COMPRESSION RATIO 15-1
 COMPRESSOR 14-1
 CONDITION LEVER 14-4
 CONES 10-1
 CONFINED AREA 16-4
 CONSTANT-SPEED PROPELLER 11-4
 blade angle control 11-5
 governing range 11-5
 operation 11-5
 CONTROLLABLE-PITCH PROPELLER 11-3
 CONVENTIONAL GEAR AIRPLANE 13-1
 CORE AIRFLOW 15-2
 CRAZING 2-2
 CRITICAL ALTITUDE 11-7
 CRITICAL MACH 15-7
 CROSS-CONTROL STALL 4-10
 CROSSWIND APPROACH
 AND LANDING 8-13
 CROSSWIND COMPONENT 5-6
 CROSSWIND LEG 7-4
 CROSSWIND TAKEOFF 5-5
 CURRENT LIMITER 14-9

D

DEICING 12-7
 DEPARTURE LEG 7-4
 DESCENTS 3-15
 minimum safe airspeed 3-16
 partial power 3-16
 DITCHING 16-1
 DOWNWASH 8-3
 DOWNWIND LEG 7-3
 DRAG DEVICES 15-13
 DRIFT 6-2
 DUCTED FAN 15-2

E

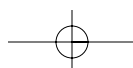
EGT 11-8
 EIGHTS ACROSS A ROAD 6-11
 EIGHTS ALONG A ROAD 6-9
 EIGHTS AROUND PYLONS 6-11
 EIGHTS-ON-PYLONS 6-12
 ELEMENTARY EIGHTS 6-9
 ELEVATOR TRIM STALL 4-11
 ELT 2-1
I-2

EMERGENCIES

 abnormal instrument indications 16-11
 door open in flight 16-12
 electrical system 16-10
 engine failure 16-5
 fires 16-7
 flap failure 16-8
 landing gear malfunction 16-9
 loss of elevator control 16-9
 night 10-8
 pitot-static system 16-11
 VFR flight into IMC 16-12
 EMERGENCY APPROACH
 AND LANDING 8-25
 EMERGENCY DESCENTS 16-6
 EMERGENCY GEAR
 EXTENSION SYSTEM 11-10
 EMERGENCY LANDINGS 16-1
 airplane configuration 16-3
 psychological hazards 16-1
 safety concepts 16-2
 terrain selection 16-3
 terrain types 16-4
 EMERGENCY LOCATOR
 TRANSMITTER 2-1
 ENGINE FAILURE AFTER TAKEOFF 16-5
 ENGINE FAILURE, MULTIENGINE
 approach and landing 12-22
 during flight 12-21
 flight principles 12-23
 takeoff 12-18
 ENGINE SHUTDOWN 2-12
 ENGINE STARTING 2-7
 ENTRY LEG 7-3
 EXHAUST GAS TEMPERATURE 11-8
 EXHAUST MANIFOLD 11-7
 EXHAUST SECTION 14-1

F

FALSE START 14-10
 FAULTY APPROACHES 8-27
 ballooning 8-30
 floating 8-29
 high final 8-27
 high roundout 8-28
 low final 8-27
 slow final 8-28
 FEATHERING 12-3
 FEDERAL AVIATION ADMINISTRATION (FAA) 1-1
 FEEL OF THE AIRPLANE 3-2
 FINAL APPROACH 8-2
 FINAL APPROACH LEG 7-3
 FIRES
 cabin 16-8
 electrical 16-7
 engine 16-7



FIXED SHAFT ENGINE 14-3
 FLAP EXTENSION SPEED (VFE) 12-15
 FLAPS 11-1
 effectiveness 11-2
 function 11-1
 operational procedures 11-2
 use of 8-3
 FLARE 8-5
 FLIGHT CONTROLS 3-1
 FLIGHT DIRECTOR 12-6
 FLIGHT IDLE 14-7
 FLIGHT INSTRUCTOR, ROLE OF 1-3
 FLIGHT SAFETY 1-4
 FLIGHT STANDARDS DISTRICT
 OFFICE (FSDO) 1-2
 FLIGHT TRAINING SCHOOLS 1-3
 FLOATING 8-29
 FORCED LANDING 16-1
 FORWARD SLIP 8-10
 FOUR FUNDAMENTALS 3-1
 FREE TURBINE ENGINE 14-5
 FUEL CONTROL UNIT 14-6
 FUEL CONTROLLER 14-1
 FUEL CROSSFEED 12-5
 FUEL HEATER 15-3

G

GAS GENERATOR 15-2
 GAS TURBINE ENGINE 14-1
 GLIDE 3-16
 GLIDE RATIO 3-16
 GO-AROUND (REJECTED LANDING) 8-11, 12-17
 GOVERNING RANGE 11-5
 GROUND BOOSTING 11-7
 GROUND EFFECT 5-7, 8-13
 GROUND INSPECTION 2-1
 GROUND LOOP 8-33, 13-6
 GROUND OPERATIONS 2-7
 GROUND REFERENCE MANEUVERS 6-1
 drift and ground track control 6-2
 eights across a road 6-11
 eights along a road 6-9
 eights around pylons 6-11
 eights-on-pylons (pylon eights) 6-12
 rectangular course 6-4
 s-turns across a road 6-6
 turns around a point 6-7
 GROUND ROLL 5-1
 GROUND TRACK CONTROL 6-2
 GROUNDSPEED 6-3
 HAND PROPPING 2-8
 HAND SIGNALS 2-7
 HIGH PERFORMANCE AIRPLANE 11-1
 HOT START 14-10

HUNG START 14-10
 HYDROPLANING 8-34

I

ILLUSIONS 10-2
 INITIAL CLIMB 5-1
 INTAKE MANIFOLD 11-7
 INTEGRATED FLIGHT INSTRUCTION 3-3
 INTENTIONAL SPIN 4-15
 INVERTER 14-8
 JET AIRPLANE 15-1
 approach and landing 15-19
 low speed flight 15-10
 pilot sensations 15-15
 rotation and lift-off 15-18
 stalls 15-10
 takeoff and climb 15-16
 touchdown and rollout 15-24

J

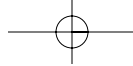
JET ENGINE 15-1
 efficiency 15-5
 fuel heater 15-3
 ignition 15-3
 operating 15-2

K

KINESTHESIA 3-2

L

L/D_{MAX} 3-16
 LANDING GEAR
 controls 11-10
 electrical 11-9
 electrohydraulic 11-9
 emergency extension 11-10
 hydraulic 11-9
 malfunction 16-9
 operational procedures 11-12
 position indicators 11-10
 retractable 11-9
 safety devices 11-10
 tailwheel 13-1
 LATERAL AXIS 3-2
 LAZY EIGHT 9-6
 LEVEL FLIGHT 3-4
 LIFT-OFF 5-1
 LIFT-OFF SPEED (V_{LOF}) 12-1



LONGITUDINAL AXIS 3-2
LOSS OF DIRECTIONAL
CONTROL DEMONSTRATION 12-27

M

MACH 15-7
MACH BUFFET BOUNDARIES 15-8
MACH TUCK 15-7
MANEUVERING SPEED 9-1
MAXIMUM OPERATING SPEED 15-6
MAXIMUM PERFORMANCE
CLIMB 5-8
MAXIMUM SAFE
CROSSWIND VELOCITIES 8-16
MINIMUM CONTROL SPEED (V_{MC}) 12-2
MINIMUM CONTROLLABLE
AIRSPEED 4-1
MINIMUM DRAG SPEED 4-2
MULTIENGINE AIRPLANE 12-1
approach and landing 12-14
crosswind approach and landing 12-16
engine failure during flight 12-21
engine failure on takeoff 12-18
fuel crossfeed 12-5
go-around 12-17
ground operation 12-12
level off and cruise 12-14
one engine inoperative approach and
landing 12-22
propeller 12-3
propeller synchronization 12-5
rejected takeoff 12-18
short-field operations 12-16
slow flight 12-25
stalls 12-25
takeoff and climb 12-12
weight and balance 12-10
MUSHING 3-2

N

NIGHT OPERATIONS
airplane equipment 10-3
airplane lighting 10-3
airport and navigation lighting aids 10-4
approach and landing 10-6
emergencies 10-8
illusions 10-2
orientation and navigation 10-6
pilot equipment 10-3
preparation and preflight 10-4
start, taxi, and runup 10-5
takeoff and climb 10-5

I-4

NIGHT VISION 10-1
NOISE ABATEMENT 5-11
NORMAL TAKEOFF 5-2
NOSE BAGGAGE COMPARTMENT 12-7

O

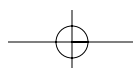
ONE-ENGINE-INOPERATIVE SPEED (V_{SSE}) 12-1
OVERBANKING TENDENCY 3-9
OVERBOOST CONDITION 11-9
OVERSPEED 15-8

P

PARALLAX ERROR 3-11
PARKING 2-11
PILOT EQUIPMENT, Night 10-3
PILOT EXAMINER, Role of 1-2
PITCH AND POWER 3-19
PITCH ATTITUDE 3-2
PIVOTAL ALTITUDE 6-14
PORPOISING 8-31
POSITION LIGHTS 10-3
POSITIVE TRANSFER OF CONTROLS 1-6
POSTFLIGHT 2-12
POWER CURVE 8-19
POWER LEVER 14-4
PRACTICAL SLIP LIMIT 8-11
PRACTICAL TEST STANDARDS (PTS) 1-4
PRECAUTIONARY LANDING 16-1
PREFLIGHT INSPECTION 2-2
PRESSURE CONTROLLER 11-7
PROPELLER 11-3, 12-3
PROPELLER BLADE ANGLE 11-4
control 11-5
PROPELLER CONTROL 11-4
PROPELLER SYNCHRONIZATION 12-5
PSYCHOLOGICAL HAZARDS 16-1
PYLON EIGHTS 6-12

R

RADIUS OF TURN 3-10
RECTANGULAR COURSE 6-4
REGION OF REVERSE COMMAND 8-19
REJECTED LANDING 8-11
REJECTED TAKEOFF 5-11, 12-18
RETRACTABLE LANDING GEAR 11-9
approach and landing 11-13
controls 11-10
electrical 11-9
electrohydraulic 11-9
emergency extension 11-10
hydraulic 11-9



- operational procedures 11-12
- position indicators 11-10
- safety devices 11-10
- takeoff and climb 11-13
- transition training 11-14
- REVERSE THRUST 14-7
- RODS 10-1
- ROTATING BEACON 10-4
- ROTATION 5-1
- ROTATION SPEED (V_R) 12-1
- ROUGH-FIELD TAKEOFF 5-10
- ROUNDOUT 8-5
 - ballooning 8-3
 - floating 8-29
 - high 8-28
 - late or rapid 8-29
- RUNWAY INCURSION 1-5
- RUNWAY LIGHTS 10-4

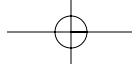
S

- SAFETY CONCEPTS 16-2
- SECONDARY STALL 4-9
- SECURING 2-12
- SEGMENTED CIRCLE 7-3
- SERVICE CEILING 12-8
- SERVICING 2-12
- SHORT-FIELD
 - approach and landing 8-17
 - tailwheel 13-3
 - takeoff 5-8
- SIDESLIP 5-6, 8-10
- SINK RATE 16-3
- SKID 3-8
- SLIP 3-8, 8-10
- SLOW FLIGHT 4-1, 12-25
- SOFT FIELD
 - approach and landing 8-19
 - tailwheel 13-4
 - takeoff 5-10
- SPEED BRAKE 15-13
- SPEED INSTABILITY 4-2
- SPIN AWARENESS 12-26
- SPINS 4-12
 - developed phase 4-14
 - entry phase 4-13
 - incipient phase 4-13
 - intentional 4-15
 - procedures 4-13
 - recovery phase 4-14
 - weight and balance requirements 4-16
- SPLIT SHAFT ENGINE 14-5
- SPOILERS 15-13
- SQUAT SWITCH 11-10
- STABILIZED APPROACH 8-7, 15-21
- STALL AWARENESS 1-6

- STALLS 4-3
 - accelerated 4-9
 - characteristics 4-6
 - cross-control 4-10
 - elevator trim 4-11
 - imminent 4-6
 - jet airplane 15-10
 - multiengine 12-25
 - power-off 4-7
 - power-on 4-8
 - recognition 4-3
 - recovery 4-4
 - secondary 4-9
 - use of ailerons/rudders 4-5
- STEEP SPIRAL 9-3
- STEEP TURNS 9-1
- STRAIGHT FLIGHT 3-5
- STRAIGHT-AND-LEVEL FLIGHT 3-4
- S-TURNS ACROSS A ROAD 6-6

T

- TAILWHEEL AIRPLANES 13-1
 - crosswind landing 13-5
 - crosswind takeoff 13-3
 - short-field landing 13-6
 - short-field takeoff 13-3
 - soft-field landing 13-6
 - soft-field takeoff 13-4
 - takeoff 13-3
 - takeoff roll 13-2
 - taxiing 13-1
 - touchdown 13-4
 - wheel landing 13-6
- TAKEOFF
 - crosswind 5-5
 - ground effect 5-7
 - multiengine 12-2
 - night 10-5
 - normal 5-2
 - rejected 5-11
 - roll 5-1
 - short field 5-8
 - soft/rough field 5-10
 - tailwheel 13-3
 - tailwheel crosswind 13-3
 - tailwheel short-field 13-3
 - tailwheel soft-field 13-4
- TARGET REVERSER 15-14
- TAXIING 2-9
 - tailwheel 13-1
- THRUST LEVER 15-4
- THRUST REVERSERS 15-14
- TOUCHDOWN 8-6
 - bounce 8-30
 - crab 8-32
 - drift 8-32



ground loop 8-33
 hard landing 8-32
 porpoise 8-31
 tailwheel 13-4
 wheelbarrowing 8-32
 wing rise 8-33
TRACK 6-2
TRAFFIC PATTERN INDICATOR 7-3
TRANSITION TRAINING
 complex airplane 11-14
 high performance airplane 11-14
 jet powered airplanes 15-1
 multiengine airplane 12-31
 tailwheel airplanes 13-1
 turbopropeller powered airplanes 14-12
TRANSONIC FLOW 15-7
TRIM CONTROL 3-6
TURBINE INLET TEMPERATURE 11-8
TURBINE SECTION 14-1
TURBOCHARGER 11-7
 failure 11-9
 heat management 11-8
 operating characteristics 11-8
TURBOFAN ENGINE 15-2
TURBOPROP AIRPLANE 14-1
 electrical system 14-8
 operational considerations 14-10
TURBOPROP ENGINES 14-2
**TURBULENT AIR APPROACH
 AND LANDING** 8-17
TURNS 3-7
 climbing 3-15
 coordinated 3-9
 gliding 3-18
 level 3-7
 medium 3-7

 shallow 3-7
 steep 3-8
TURNS AROUND A POINT 6-7

U

UPWIND LEG 7-3

V

**VFR FLIGHT INTO
 IMC CONDITIONS** 16-12
VISUAL GROUND INSPECTION 2-1
V-SPEEDS 12-1, 15-16, 15-19

W

WASTE GATE 11-7
WEATHERVANE 5-5
WEIGHT AND BALANCE 12-10
WHEEL LANDING 13-6
WHEELBARROWING 5-9, 8-17, 8-32
WINDSOCK 7-3
WINGTIP WASHOUT 4-5

Y

YAW 3-2
YAW DAMPER 12-6

