

## INDEX

100-hour inspections, 62–63, 110  
octane ratings, 129–130  
OEM replacement parts, 68–72, **69**  
oil (*see* lubricating systems)  
oil canning in exterior skin, 5  
oil consumption, 108, 112  
oil pressure gauges, 102–103, 105, 118, 121  
oil temperature, 5, 96, 101  
Otto, August, engine development, 77  
outflow valve, pressurization systems, 252  
overboosting the engine, 101–102, 146, 150  
overflow drains, 134–135  
overhaul (*see* engines)  
overrunning clutch for starter motor, 183–184  
overvoltage protection, 174  
  
p-leads, magnetos, 89, 106  
paint blisters, peeling, 5  
parallel circuits, 152  
parts manufacturer approval (*see* PMA replacement parts)  
Pascal, Blaise, 269  
pelorus, magnetic compass, 56  
performance number system, fuels, 130  
pistons, 79, 80, 111, 144–145  
pitch control, propellers, 203  
pitch distribution, propellers, 202–203  
pitot tube, 35–37, **37**  
pitot-static system, 27–30  
    airspeed indicators, 27–30, **29, 30**  
    altimeters, 30–34, **32, 33**  
    blocked pitot tube, 36  
    blocked pitot tube, airspeed indicator, 28  
    blocked static port, airspeed indicators, 28–29  
    head pressure, 36–37  
    icing, blocked pitot tube, 28, 36  
    pitot tube, 35–37, **37**  
    preflight inspection, 38  
    ram vs. ambient (static) air pressure, 36–37  
    static port, 37–38  
    vertical velocity indicator (VVI), 35, **35, 36, 39**  
PMA replacement parts, 68–72  
pneumatic de-icing systems, 262–266, **263, 264**  
pneumatic systems, 281–288  
    dry-pump systems, 283

pneumatic systems (*Cont.*):  
    failure of pneumatic system, 288  
    filters, 285, 286–287, 288  
    gyroscopic instruments, 285, 286  
    preflight inspections, 286  
    pressure-pump pneumatic systems, 284–285  
    preventive maintenance, 286–287  
    pump failure, 288  
    standby vacuum system (SVS), 288  
    troubleshooting, 287–288  
    vacuum-driven pressure systems, 283–284, **283, 284**  
    venturis, 281  
    wet-pump systems, 281–283  
position lights, **8, 9**  
power stroke, 80, 87, 144  
powerplants (*see* engines)  
precession  
    gyroscopic instruments, 44, 45, **48, 288**  
    heading indicators, 41, 50  
preflight inspections  
    air conditioning, 246  
    airframe inspection, 1–8  
    airspeed indicators, 38  
    altimeters, 38  
    antennas, 23–26  
    attitude indicators, 39–41, **40, 45, 47**  
    cooling systems, 106  
    de-icing systems, 261, 263–264  
    emergency locator transmitter (ELT), 20–23  
    engines, 105–108  
    gyroscopic instruments, 45–49  
    heading indicators, 47, 49  
    heaters, 242  
    hydraulic systems, 276–277  
    interior of aircraft, 13–14  
    magnetos, 106–108  
    pitot-static systems, 38  
    pneumatic systems, 286  
    pressurization systems, 254–255  
    propellers, 211–212, 216–217  
    tires, 228–229  
    transparencies (windows), 14–20  
    turn indicators, 49  
preignition problems, 85–87, 90–91, 109  
pressure (fluid) cooling, 83, **84**  
pressure control valves, hydraulic systems, 273  
pressure-feed fuel systems, 132–133, **132**  
pressure-pump pneumatic systems, 284–285