

INDEX

- engines (*Cont.*):
 preflight inspections, 105–108
 preignition problems, 85–87, 90–91, 109
 preventive maintenance, 110–113
 propellers, 80, 101
 rebuilt engines, 65
 replacement parts, 64
 rich-lean setting, 79, 81–82, 108, 130, 139, 143, 144–145, 147, 148
 Rolls Royce Griffon engine, **78**
 RPM settings, 81
 sealing/cushioning properties of oil, 116
 smoke from exhaust, 139
 spark plugs, 80, 87, 90–94, **91, 92, 94**, 110, 122
 staking a rocker valve, 111
 stoichiometric combustion, 97
 superchargers, 101, 141–142, **142**
 tachometers, 101, 103, 108
 takeoff settings, 81
 time between overhaul (TBO), 63–64, 145
 timing, 79, 80, 89
 top dead center (TDC), 80, 87
 troubleshooting, 108–110
 turbochargers (*see* turbocharger systems)
 valves, 111
 vapor lock, 87, 108, 131, 139
 vibration and noise, 112
 warranty work, 65–66
 wastegate controller, turbocharger systems, 145–147
 Wright 760 radial engine, **78**
equivalent airspeed (EAS), 29–30
exchange engines, 67
exhaust gas temperature (EGT) gauges, 82, 84, 96–98, **97**, 147–148
exhaust manifold, 80
exhaust stroke, 80, 87, 144
exhaust system
 airframe inspection, 5
 corrosion, 7, 8
exhaust-manifold heaters, 239, 240–241, **240**
explosion of batteries, 158

50-hour inspections, 111
feathering, propellers, 208–210, 211
field windings in coil, 181
filters
 life expectancy, 61

filters (*Cont.*):
 fuel filters, 134
 oil filter, 118, **120**, 122–123
 pneumatic systems, 285, 286–287, 288
fixed isobaric systems, pressurization systems, 248
fixed-pitch propellers, 203–204, 210
flash point of oil, 116
flight levels, altimeter readings, 34
fluid control valves, hydraulic systems, 273–274
flux lines of Earth's magnetic field, 52
foreign object damage (FOD), 2
fractional distillation process for gasoline, 128, **129**
friction and safety when fueling, 137–138
friction and wear, airframe inspection, 4
friction error, in altimeters, 33
fuel flowmeter, 104–105, **105**
fuel injectors, 82, 108
fuel lines, 135
fuel pressure gauge, 137
fuel pumps, 61, 136–137, 136
fuel quality, 108
fuel quantity indicator, 104, 106, 138
fuel systems, 127–139
 aviation gasoline (avgas), 129
 Beech Baron B55 fuel system, **133**
 cap, **135**
 carburetor heat, 82
 carburetors, 82, 97, 137, 138–139
 contaminants in fuel, 135–136
 detonation problems, 130
 dumping of fuel, 128
 filters, 134
 flowmeter, 104–105, **105**
 fractional distillation process for gasoline, 128, **129**
 friction and safety when fueling, 137–138
 fuel injectors, 82, 108
 fuel pressure gauge, 137
 fuel pump, 61, 136–137
 fuel-air mixture, 79, 81–82, 97–98, 108, 130, 139, 143, 144–145, 147, 148
 gravity-feed fuel systems, 130–131, **131**
 grounding and safety when fueling, 138
 hydrocarbons in gasoline, 130
 knocking of engine, 130
 lead, no-lead gasolines, 130
 lines, 135