Compressor pressure ratio. See compression ratio (turbine engine).

Compressor stall. A condition in a turbine engine axial-flow compressor in which the angle of attack of one or more blades is excessive and the smooth airflow through the compressor is disrupted.

Compressor surge. A stall that affects the entire compressor and seriously restricts the airflow through the engine.

Con-di ducts. The British name for a convergent-divergent duct. See convergent-divergent duct.

Condenser. See capacitor.

"Contact." The term used between a person hand-propping an aircraft engine and the person in the flightdeck. When the person is ready to spin the propeller, he calls "contact". The person in the flightdeck turns on the fuel, slightly opens the throttle, applies the brakes, and replies "contact", and then turns the ignition switch to BOTH. The propeller is then pulled through to start the engine.

Constant-displacement pump. A fluid pump that moves a specific volume of fluid each time it rotates.

Constant-pressure cycle of energy release. The cycle of energy transformation of a gas turbine engine. See Brayton cycle.

Constant-volume cycle of energy release. The cycle of energy transformation of a reciprocating engine. See Otto cycle.

Continuous magnetic particle inspection. A method of magnetic particle inspection in which the part is inspected by flowing a fluid containing particles of iron oxide over the part while the magnetizing current is flowing.

Contrarotating. Rotating in opposite directions. Turbine rotors are contrarotating when the different stages have a common center, but turn in opposite directions.

Convergent-divergent duct. A duct that has a decreasing cross section in the direction of flow (convergent) until a minimum area is reached. After this point, the cross section increases (divergent). Convergent-divergent ducts are called CD ducts or con-di ducts.

Convergent duct. A duct that has a decreasing cross section in the direction of flow.

Core engine. The gas generator portion of a turboshaft, turboprop, or turbofan engine. The core engine consists of the portion of the compressor used to supply air for the engine operation, diffuser, combustors, and turbine(s) used to drive the compressor. The core engine provides the high-velocity gas to drive the fan and/or any free turbines that provide power for propellers, rotors, pumps, or generators.

Cowling. The removable cover that encloses an aircraft engine.

Crankcase. The housing that encloses the crankshaft, camshaft, and many of the accessory drive gears of a reciprocating engine. The cylinders are mounted on the crankcase, and the engine attaches to the airframe by the crankcase.

Crankshaft. The central component of a reciprocating engine. This high-strength alloy steel shaft has hardened and polished bearing surfaces that ride in bearings in the crankcase. Offset throws, formed on the crankshaft, have ground and polished surfaces on which the connecting rods ride. The connecting rods change the in-and-out motion of the pistons into rotation of the crankshaft.

Creep. The deformation of a metal part that is continually exposed to high centrifugal loads and temperatures.

Critical altitude. The altitude above which a reciprocating engine will no longer produce its rated horsepower with its throttle wide open.

Critical engine. The engine of a twin-engine airplane whose loss would cause the greatest yawing effect.

Critical Match number. The flight match number at which there is the first indication of air flowing over any part of the structure at a speed of Mach one, the local speed of sound.

CRT. Cathode ray tube. An electronic display tube in which a stream of electrons is attracted to the charged inner surface of the tube face. Acceleration grids and inner surface of the tube face. Acceleration grids and focusing grids speed the movement of the electrons and shape the beam to a pin-point size. Electrostatic or electromagnetic forces caused by deflection plates or coils move the beam over the face of the tube. The inside of the tube face is treated with a phosphor material that emits light when the electrons strike it.

Cryogenic fluid. A liquid which boils at a temperature lower than about 110 ºK (-163 ºC) under normal atmospheric pressure.