

Ignition systems and electrical theory: aircraft powerplants

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The DCinput turbine engine ignition exciter provides a high-intensity spark for ignition of the fuel and air combination at some point in engine start.

Exciter refers to the generation of high voltage to produce a spark to ignite gases in gas turbine engines. Aircraft engines rely on an electrical ignition structure to generate a spark, which ultimately starts the engines ignition process.

I least understood the ignition systems for gas turbine engines for the reason that the spark discharge of a turbine ignition system is superior and potent than the spark in an automobile engine (Tooley and Wyatt, 2009).

In addition, at times, the engine needs to be relit at some stage in an in-flight shutdown, and I found it difficult to understand exactly when the ignition systems job is complete. This part of the electric theory of operation requires mastery to ensure fluency of operations. The operation is also necessary when the next operational sequence of the aircraft's auxiliary power unit (APU) or turbine main engines start once more.