



## Support Level: FAQ

DESCRIPTION: Dual Ignition Redundancy

DESCRIPTION: Hand propping

ENGINE TYPE: Different for R2800 / R3600

### R2800:

Has one electronic (Hall effect) ignition system and one magneto ignition for redundancy on two circuits delivering ignition to separate spark plugs through two separate distributors one for each of the circuits. On a running engine if one ignition system fails the other will take over.

If the Hall effect circuit quits its difficult, if not impossible, to start a cold R2800 by hand propping as hand propping does not generate enough speed to produce a hot spark. That said, AT ALL TIMES, with ignition on, extreme care needs to be taken when hand propping. On a hot or warm engine hand propping will never make a spark at the mag coil; but, the reason one should take care is that a hot engine can kick-back due to pre-ignition (much like a Diesel engine)

It should also be noted, despite a flat battery, if the electronic ignition circuit is viable then hand propping can start the engine.

Hand propping an engine with a flat battery will start a R2800 providing ignition is switched on to a viable electronic (Hall effect) circuit.

### R3600:

Because of timing issues it was not possible to employ a magneto on the R3600. Ignition redundancy was achieved by the use of a dual electronic circuits. The entire ignition system is duplicated on two separate electrical harnesses including 2 distributors, 2 coils, separate spark plugs for each of the circuits ...

On a running engine if a battery fails both the ignition systems stay functional in much the same way as in a car with the alternator feeding and keeping the circuits functional. In effect the battery is only used to start the engine - once started the engine will keep running without the need for a battery.

On a running engine if a battery fails and one ignition system fails then the second ignition will remain functional a keep the engine running.

On a running engine if the battery and one of the electronic ignitions systems fail the engine will remain operational through the second of the two electronic (Hall effect) ignition systems..

On an engine with a battery failure it is possible to hand prop the R3600 and start the engine. Only one ignition system needs to be fully functional. TAKE GREAT CARE IN HAND PROPPING ON A LIVE CIRCUIT.

Dual batteries are not required. A single battery can be used to feed both ignition circuits. However if there are no weight considerations a second battery can be employed for additional redundancy.