

Starter Adapter

The RCV engine may be started from behind the propeller using a hand held electric starter inserted directly into a socket located on the end of a crankshaft. To take advantage of this you need an RCV starter adapter. This consists of a 5mm hex head key and a machined body which fits onto your existing starter motor.

Fitting the Adapter

Take off the rubber cup and unbolt the cup on the starter, revealing a shaft. File a small flat on the shaft at the point where the adapter grub screw will grip to the shaft. Fit the RCV adapter onto the shaft and tighten the grub screw.

Tips and hints for the behind the prop starting procedure:-

Starting via the starter screw is very straightforward, and once you get used to it, makes conventional starting from in front of the whirling prop seem rather dangerous. However like any procedure it needs a little practice to perfect it. For safe and reliable starting always follow the guidelines below.

1. Always work from behind the engine. Have your starting equipment, tools and yourself all behind the prop line. If you are starting the engine on a plane the best arrangement is to have the starter box behind one wing, and yourself kneeling behind the other wing. You can then easily reach over to insert the starter adapter into the starter screw.
2. If starting the engine from cold it is a good idea to reduce the load on the starter. This can be done as follows. Firstly WITH THE GLOW OFF choke the engine and turn the prop over a few times by hand to get fresh fuel and lubricant into the engine. Secondly immediately before trying to start the engine WITH THE GLOW OFF turn the prop until the engine is just past compression This allows the starter to get the engine spinning before it hits the next compression stroke.
3. At all times ensure that the engine is on a low throttle setting when you start it (1/8-1/4). High throttle will make the engine difficult to turn over, and when it starts it may occasionally cause the starter screw to slip out of the starter socket.
4. When you have set up the starting arrangement as described above you can now start the engine. Turn the glow on. Ensure fuel is getting through to the carb and that the needle is open the correct amount. Carefully insert the starter adapter into the starter screw, angling it backwards slightly to ensure you are well clear of the prop. Hold the starter very firmly but without pressing down. Press the starter button. The engine should immediately turn over rapidly and fire within 5 seconds.
5. If the starter will not turn the engine over remove the starter, turn the glow off, turn the prop back to top dead centre, close the throttle slightly to reduce the compression load on the starter, turn the glow on and try again.
6. From the earliest prototypes the RCV engine has always been an excellent starter. If the engine will not start there is always a logical reason for it. In particular check that the glow is adequate, and that fuel is getting through.
7. When starting the engine in a new plane for the first time it is best to carry out the first few starts without the cowl fitted in order to get used to it. If you are starting through a hole in a cowling it is a good idea to fasten a metal reinforcing ring (washer or similar) around the inside of the starting hole. Then on the rare occasions the starter adapter does slip out of the starter screw it will not damage the cowl.

NB. The crankshaft must be rotated clockwise (i.e.) the opposite direction to normal propeller rotation. This will require the starter connections to be the opposite way round to normal.