

## Title: Service Bulletin For 6 Cylinder SDS Equipped Engines

**Engines Affected:** H6 engines with SDS units NOT equipped with zener diodes.

**Summary Statement:** Some SDS ECUs may have not have been sent back to Racetech Inc. for an upgrade to the coil driver circuits. This can result in one or two pairs of coils not firing on start up.

**Problem Discovery:** Neil Unger (Parkes, Australia) was in the early stages of flying his newly built Glstar Sportsman. His engine appeared to be running smoothly but was giving very lack-luster performance. He was barely able to clear obstacles on his first flight. After much investigation he decided to pull the spark plug leads while the engine was running. He discovered that the rear two cylinders were not firing. He had been flying on only 4 cylinders. A call to Ross Farnham (Racetech Inc.) shed some light on the problem. Neal's ECU had not been upgraded with the protective zener diode circuitry.

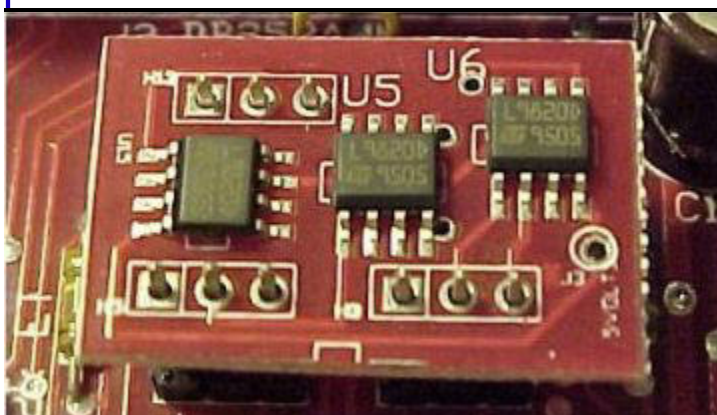
**Discussion:** Records indicate that there may have been two of these unmodified ECUs and at least one has been identified now (Neil Unger) and is being sent back to Racetech for modification. These units were purchased by Jan Eggenfellner in August 2008. Units purchased in Dec. 2008 by Jan already have this modification. There is no way for Racetech to trace serial numbers to users unfortunately.

Units not affected are those with external black plastic driver boxes (part of the wiring harness) as supplied by Robert Paisley many months earlier than this.

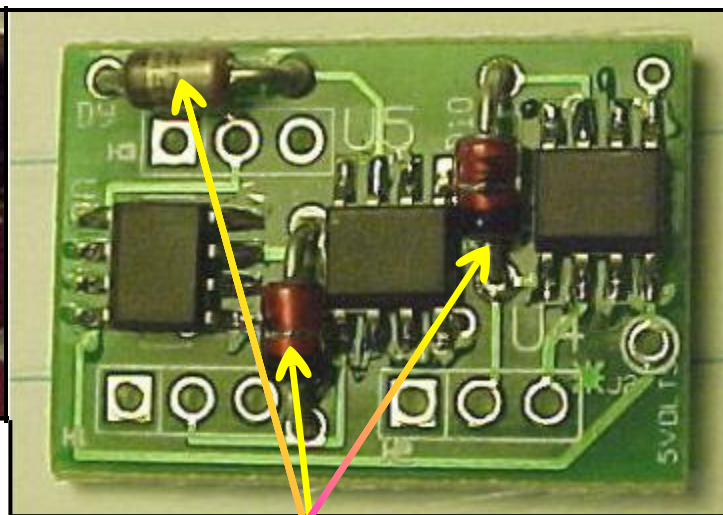
While the problem has only been noticed to occur in some units when the engine is cranked on the starter, people should not take any chances and we request that this be checked before the next flight.

**Corrective Action:** All H6 owners should with SDS equipped ECUs should remove the lid from the ECU and look at the sub board shown in the photo. If your board does not have the 3 zener diodes (shown in right photo) soldered to the board, please return your ECU to us for the mod. We'll pay shipping both ways and do the mod at no charge. Send to:

Racetech Inc.  
#4- 535 Hurricane Drive  
Calgary, Alberta, Canada  
T3Z 3S8  
ph. 403-671-4015



If your SDS board looks like the above then it will need 3 zener diodes added to it. Most



have been upgraded but everyone should check their SDS ECU. Zener diodes are shown on the upgraded board to the right so you know what they look like. It seems that perhaps inductive spikes from the engine starter motor may be damaging some of the driver chips.

**Submitted by: Ross Farnham**