

ADDENDUM TO BULLETIN 4/82

Accident to Rockwell Commander 112TC G-RMKM on 31.10.81

Following information received from an operator of a similar type of aircraft, the investigation into the above accident was re-opened. The operator reported that, following a long-standing intermittent loss-of-power fault on their aircraft, the cause had finally been traced to a worn and broken mixture control valve retaining screw on the carburettor. This retaining screw allows rotary movement of the valve in response to mixture settings by the pilot but prevents axial movement. Wear on the screw would allow axial end-float causing the fuel/air mixture to weaken beyond the desired setting whilst actual breakage could allow the whole assembly to withdraw. In practice, the valve does not completely withdraw due to the control cable attachments, but intermittent mixture weakening appears to occur without much external indication of the cause.

The carburettor from G-RMKM was re-examined and it was found that the retaining screw was badly worn and had suffered a fatigue fracture similar to that experienced by the above-mentioned operator. The problem had evidently been known since 1978, when the carburettor manufacture issued a Service Bulletin describing a modification to fit a spring retaining clip designed to reduce vibration stresses on the retaining screw. The Service Bulletin had, however, only been issued to "all registered manual holders" and does not appear to have been widely promulgated. G-RMKM had not been fitted with this modification.

Details of these findings have been passed to the Civil Aviation Authority for their action.