



SkyStar Aircraft Corporation

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December 7, 1992

SERVICE LETTER #23

SUBJECT: DUAL BRAKE BRAKING PROBLEMS

TO: KITFOX OWNERS WITH THE DUAL BRAKE OPTION

FROM: SKYSTAR AIRCRAFT CORPORATION

SkyStar pilots have discovered a potential problem with the standard dual brake set up. Under a certain set of conditions, the brakes of the aircraft can lock-up and do not release with out bleeding pressure from the brake line to the caliper. This phenomenon occurs when the co-pilot's brakes are applied, then the pilot's brakes are applied (while the co-pilot is still applying pressure on his brakes), and then the co-pilot releases his brakes with the pilot's brakes still applied. With this condition, the master cylinder and "slave" cylinder configuration of Matco brakes, traps the pressure and does not allow the pressure to be released. The brakes remain locked.

When the "slave" cylinder is depressed first (co-pilot's side), pressure is created by the piston moving down the cylinder to the caliper. If the master cylinder is depressed after the slave, it's piston moves just a fraction of the distance, because the slave has already extended the calipers. Now when the slave is released, the master's piston force increases against the master's shaft, with very little shaft upward movement to allow a decrease in the pressure pushing against the master's piston. When the master's piston reaches its "stop", the fluid pressure against this piston is greater than the spring retaining the "stop". Therefore, the "stop" can not allow the shaft to open the bleed hole in the piston to release the pressure: thus, brake lock occurs.

RECOMMENDATION

SkyStar engineering representatives are currently in contact with the brakes manufacturer, and are trying to resolve this problem. This Service Letter will be followed up with a Bulletin on specific instruction. Until such time, it is recommended that one person only, exercise braking control of the aircraft.

Please call SkyStar's Technical Department if you have questions regarding the installation of dual brakes. Ph: 208-466-1711 or Fax: 208-466-7194.