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SERVICE LETTER #52

DATE: November 23, 1998

SUBJECT: Pulsar weight and balance

APPLICABILITY: Pulsar II and III aircraft

COMPLIANCE: informational

FROM: SkyStar Aircraft Product Development

Our factory prototype Pulsar III aircraft is equipped with a Rotax 914 engine and Hoffmann hydraulic constant-speed propeller. For a variety of reasons including prototype construction techniques, heavy bodywork and paint, and an elevator bob-weight, our aircraft is slightly tail heavy. The builder's manual directs lighter and more efficient construction methods and proper elevator balancing, and encourages attention to minimum bodywork and paint weight on the tail surfaces. We therefore felt that in terms of balance, our aircraft was not representative of the machines our customers would be building.

During the course of completing the engine installation section of the builder's manual preliminary weight and balance calculations were run, and it appears that with the lighter engines and propellers, such as the Rotax 912 or 912S with a fixed-pitch or electric adjustable-pitch propeller, Pulsars may be balancing out with an aft CG. We therefore recommend that during the course of construction that the battery, master solenoid, strobe power supply, ELT, and any other moveable component be placed as far forward in the aircraft as possible. Just behind the firewall is probably the farthest forward these items can be realistically moved. The engine installation section of the builder's manual will soon be revised to reflect these changes.

Further, we would like to re-emphasize the importance of keeping the tail of the ship as light as possible. These measures should preserve the baggage compartment capacity and help avoid the installation of ballast.