

SERVICE

Service Letter No. 474



LETTER

April 21, 1966

TO: Distributors, Dealers and Owners

SUBJECT: Increase in Flap Extension Speeds - (Kit 757 000) and technique for using flaps for longitudinal trim

MODELS AFFECTED: PA-23-235 Apaches, Serial Nos. 27-505 to 27-618 incl.
PA-23-250, PA-E23-250 Aztecs, Serial Nos. 27-2505 to 27-3153 incl.

Aztecs and Apaches, within the serial numbers listed above, may have flap indicators installed that are marked at the 1/4 and 1/2 extension points and revised Flight Manuals to permit using 1/4 flap at 160 MPH, 1/2 flap at 140 MPH and full flap at 125 MPH. Kit 757 000 contains the necessary material to accomplish this modification.

The installation of Kit 757 000 will permit the use of partial flaps at higher than previously approved speeds to assist in slowing the airplane down and will permit the use of flaps to trim the aircraft longitudinally if desired.

In connection with the use of flaps to trim the Aztec longitudinally, it has come to our attention that many operators do not take advantage of the possibility of using small amounts of flap to trim the aircraft. Proper use of the flaps makes it almost entirely unnecessary to use the stabilator trim for landings, simplifying operation and making a very desirable asset of the pitch-up that occurs when flaps are lowered.

The normal procedure during the approach is to reduce power, lower the gear, and as the aircraft becomes nose heavy, to apply several turns of nose-up trim. Then when flaps are lowered, a rapid pitch-up occurs and the trim must be moved back approximately to its original position.

The following procedure has been found to be much more satisfactory. As the aircraft becomes nose heavy in the approach pattern, use small amounts of flap travel to trim to a hands-off condition. When in final approach, use of full flap will generally keep the aircraft in almost perfect trim. In this way, the plane is never appreciably out of trim and no use of the longitudinal trim control is required.

Another good procedure in short VFR approaches is simply to allow the plane to get nose heavy as speed and power are reduced and the gear lowered. Then when turning into the base leg, as the nose gets heavier yet in the turn, apply full flap to retrim the aircraft to a hands-off condition at 90-100 MPH.

Using these techniques or variations of them, the pitch-up characteristic will be found to be a distinct advantage in the Aztec compared to aircraft in which changes in the longitudinal trim are required for every landing and take-off.

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