

SERVICE



LETTER

Service Letter No. 300B

March 30, 1959

TO: All Distributors, Dealers, Owners and Operators

SUBJECT: Propeller Feathering, Apache

In single engine operation of the Apache over the course of the past few years, there have been several accidents or near accidents caused by improper pilot technique following the feathering of one engine. In most cases the pilot has been unable to unfeather the engine, and because he used poor technique in landing on one engine, or because conditions of altitude, temperature and load were such that he could not maintain altitude and reach an airport, an accident has resulted.

This Service Letter is intended to point out some of the problems involved in single engine operation and to issue instructions which will caution the pilot against getting into a situation on one engine which may lead to an accident.

Earlier Service Letters (Nos. 300 and 300A) have stated that "(1) the propeller feathering system should be operated only in an emergency, except for pilot rating flights, (2) if the engine is feathered, the pilot must "assure adequate altitude and proximity to a safe landing area in the event the feathered engine cannot be recovered", (3) for simulated single engine operation, zero thrust should be used, on the right engine only."

These instructions have been found to be unsatisfactory for the following reasons:

1. Practice single engine flight work, in instructional flying leading up to a Twin Engine Rating, can only be accomplished satisfactorily by feathering an engine, preferably the left engine on the Apache, so that the hand hydraulic pump must be used in practice to lower the gear and flaps. "Simulated" single engine flight does not prepare the pilot either for the flight check or for actual emergencies which may later arise.
2. Demonstration flights are not satisfactory without actual proof, by feathering of an engine, that the aircraft will operate on one engine. "Simulated" single engine operation is not convincing.

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3. The earlier Service Letters, along with similar information in the Aircraft Flight Manual, have been unfairly interpreted to mean that the Apache will not operate satisfactorily on one engine. This is misleading and is definitely not the case.

The Standard 150 HP Apache, operating at gross weight under optimum condition of turbulence and pilot technique, and under standard conditions of temperature and altitude, has a single engine absolute ceiling of 6750 feet at 3500 lbs. gross weight and maximum obtainable power. The 160 HP Apache has an absolute ceiling of 5500 feet under the same conditions at 3800 lbs.

Under ideal conditions, these models of the Apache can be expected to maintain approximately the stated maximum altitudes. When adverse conditions of turbulence, temperature, altitude, pilot technique, or aircraft condition or equipment are encountered, the absolute ceiling altitude will be reduced. These factors must be taken into consideration in the single engine operation of any twin engine aircraft.


Pilots of this airplane should remain reasonably proficient in single engine flight. In many cases, "simulated" single engine operation (zero thrust condition, approximately 12" MP and 2300 RPM) will be preferable, but actual single engine operation should be practiced occasionally. The following precautions should be exercised in actual single engine flight:

1. Do not feather a propeller if you have reason to suspect that the starting characteristics of the engine are not normal and that restarting in the air may be difficult or impossible.
2. Do not feather a propeller in conditions of temperature, altitude, weight or turbulence which may prevent single engine flight at altitudes well above the local ground elevation.
3. Do not feather a propeller at any time when conditions of terrain or other conditions may prevent the aircraft from reaching an airport easily, in case the dead engine cannot be restarted.
4. Single engine operation must be practiced only with a well qualified twin engine rated pilot, familiar with Apache characteristics and procedures, in one of the pilots seats.

The information contained in this Service Letter shall be made a part of the Owner's Handbook.

Very truly yours,

PIPER AIRCRAFT CORPORATION


Rolland Boardman
Service Manager