TWIN COMANCHE
OWNER'S HANDBOOK

Landing check list:

1. Mixtures - rich.
2. Electric fuel pumps - on.
3. Fuel selectors on proper tanks.
4. Propellers at high cruising rpm.
5. Landing gear - down (under 150 mph) - check green.
6. Flaps (under 125 mph) - set.
7. Safety belts - fastened.

POST LANDING

Check list:

1. Flaps - retract
2. Cowl flaps - open
3. Electric fuel pump - off
4. Prop controls - forward

When completely stopped in a parking spot, check the following items for shut down:

1. Radio & elec. equip. - off
2. Heater (if used) fan - off
3. Mixtures - idle cut-off
4. Magneto switches - off
5. Master switch - off
6. Parking brake - on
7. Generators - on

If control locks are not available and the airplane is to be left for more than a few minutes, secure the control wheel with the safety belt strap. Chock the wheels and secure tie downs at appropriate places.

EMERGENCY PROCEDURES

1. Engine Failure:

(a) During Take-off Or After Lift-off:

If an engine failure occurs during take-off run prior to lift-off with adequate stopping distance remaining, reduce the power on both engines and stop the airplane straight ahead.

If an engine failure occurs after lift-off with adequate landing distance ahead, immediately reduce the power on both engines and effect a landing.

If engine failure occurs during climb out after take-off, maintain directional control with rudder and ailerons, and establish the best single engine rate of climb airspeed (105 mph at sea level). Speeds below or above the best rate of climb speed will result in lower than optimum rate of climb. Check that mixture, propeller and throttle controls are full forward and landing gear and wing flaps are up. If enough altitude has been reached before the failure occurred, or if performance is satisfactory for reaching the airport with landing gear extended, leave the landing gear in the down position.

Make positive identification of inoperative engine by gently throttling back on suspected engine. If no effective power is being delivered by that engine, feather the propeller, and trim directionally with rudder trim.

Climb straight ahead to traffic pattern altitude and return to airport for landing.

Do not try to turn or climb too sharply. Turns, however, can be made toward the inoperative engine if necessary.

NOTE

A climbing turn toward an inoperative engine is more critical than a gliding turn toward an inoperative engine because there is more asymmetric thrust with the power setting used for climb. Trim directionally with rudder trim.

(b) During Cruise Flight:

If engine failure occurs during cruise flight, maintain airspeed and directional control of airplane; immediately advance mixture, propeller and throttle controls. The airplane will yaw in the direction of the inoperative engine. It will rarely be possible to immediately locate the inoperative engine by viewing the manifold pressure gauge. This yaw in the direction of the inoperative engine can be corrected with rudder and rudder trim.

Carefully retard the throttle control of the suspected inoperative engine in order to identify the malfunctioning engine and verify that it is not producing power. Turn on fuel pumps, check ignition switches, fuel gauges and fuel cell selectors and try to determine cause of the engine failure. If power cannot be regained, the propeller on the inoperative engine should be feathered by retarding the throttle to the idle position and moving the propeller pitch control into the feather position. The mixture should then be moved to idle cut-off and ignition turned off.

Reduce power on the operating engine if altitude and loading are such that adequate performance can be maintained on one engine and then reduce the electrical load.

Best single engine performance will be obtained with the wing on the side having the inoperative engine held about three to five degrees higher than level to help counteract the tendency to turn in that direction. Rudder trim may be used to correct for additional control pressure needed in single engine flight.

(c) Single Engine Approach:

As the airport is approached for landing, reduce power on the operative engine and gradually retrim the rudder. When it is obvious that the airport can be reached, lower the landing gear and check the indicators to make sure landing gear is down and locked.

During a single engine approach the landing gear should not be lowered until landing is assured. It is important, however, to extend the landing gear soon enough that there will be time to lower it manually in the event of a landing gear malfunction, and also so there will be no great change in airplane configuration just prior to landing.

Maintain additional altitude and speed during approach, keeping in mind that landing should be made right the first time and that a go-around may require the use of full power on the operating engine, making control more difficult.

A final approach speed of 105 miles per hour and the use of half rather than full wing flaps will place the airplane in the best configuration for a go-around should this be necessary, but it should be avoided if at all possible. It is essential to land

the airplane the first time on a single engine approach in order to avoid the need for a go-around. Under some conditions of loading or density altitude a go-around may be impossible, and in any event the sudden application of power during single engine operation may cause control difficulties.

If single engine go-around cannot be avoided, the landing gear and wing flaps should be retracted as soon as possible after application of full power, since under most conditions, climb, or even level flight, is impossible during single engine operation with landing gear and wing flaps extended.

CAUTION

If rudder trim has been used to ease single engine control pressures, the trim should be adjusted as the throttle control is retarded for final approach and landing.

RECOMMENDED PRACTICE

When operating single engine maintain speed above 97 mph. This speed, 97 mph, will not provide optimum single engine climb performance. Optimum single engine climb is obtained at the best single engine rate of climb speed, 105 mph, with the operating engine at full throttle, 2700 rpm and the inoperative engine propeller feathered and cowl flap closed. The gear and flaps must be retracted.