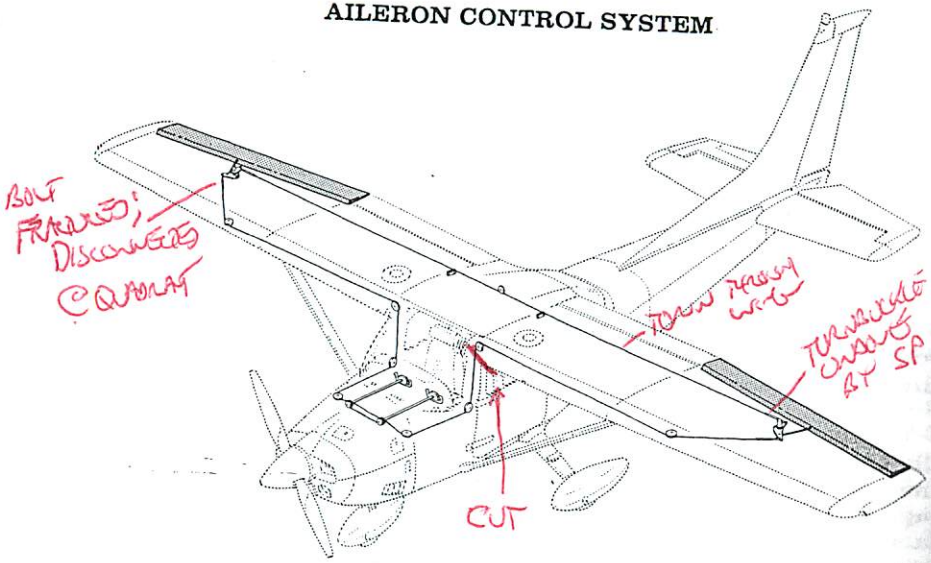
AILERON CONTROL SYSTEM



RUDDER AND RUDDER TRIM CONTROL SYSTEMS

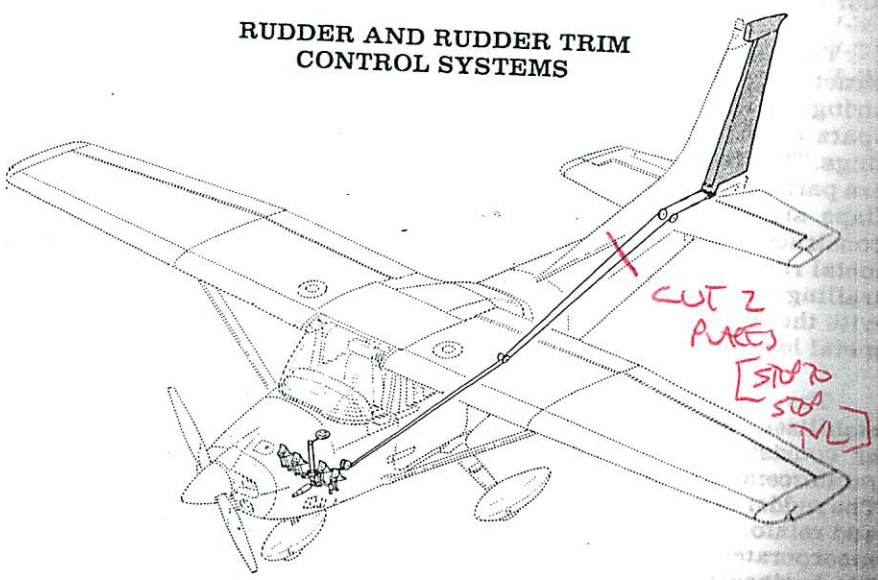
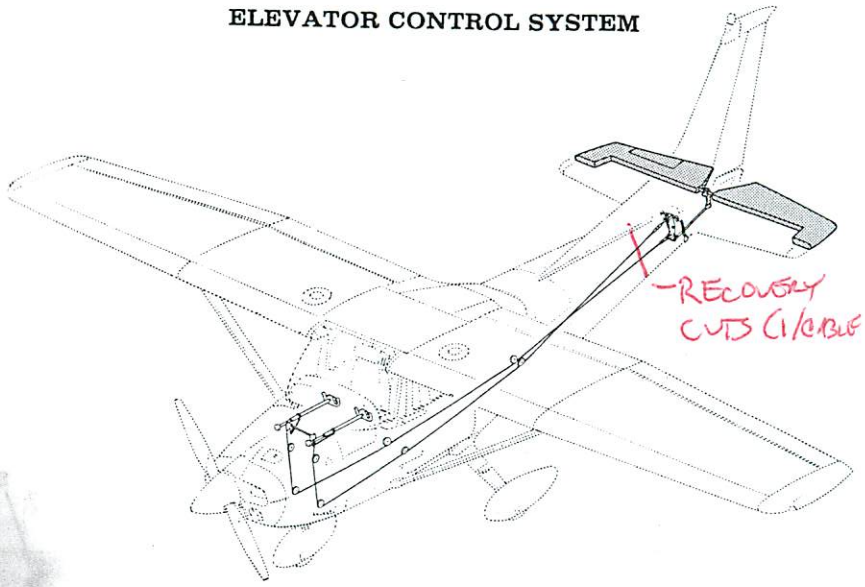


Figure 7-1. Flight Control and Trim Systems (Sheet 1 of 2)

ELEVATOR CONTROL SYSTEM



ELEVATOR TRIM CONTROL SYSTEM

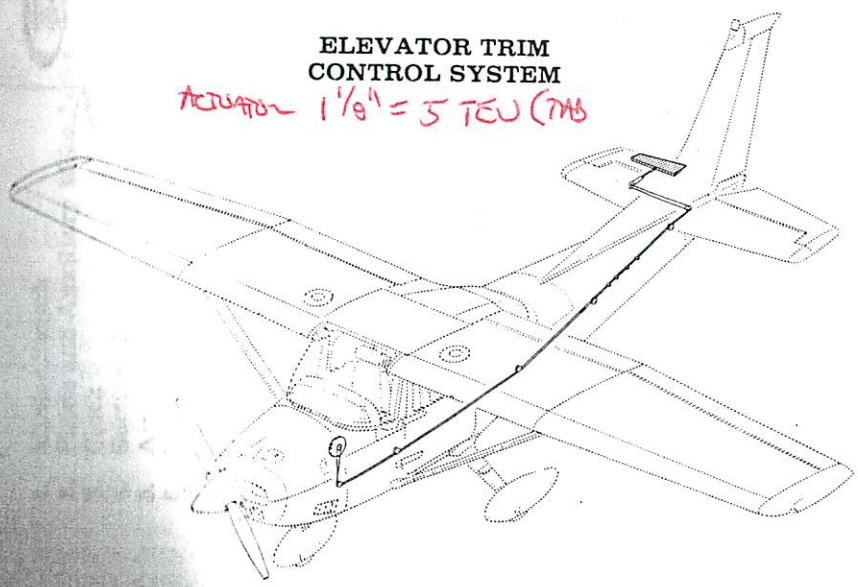


Figure 7-1. Flight Control and Trim Systems (Sheet 2 of 2)

AMPLIFIED PROCEDURES

ENGINE FAILURE

If an engine failure occurs during the takeoff run, the most important thing to do is stop the airplane on the remaining runway. Those extra items on the checklist will provide added safety after a failure of this type.

Prompt lowering of the nose to maintain airspeed and establish a glide attitude is the first response to an engine failure after takeoff. In most cases, the landing should be planned straight ahead with only small changes in direction to avoid obstructions. Altitude and airspeed are seldom sufficient to execute a 180° gliding turn necessary to return to the runway. The checklist procedures assume that adequate time exists to secure the fuel and ignition systems prior to touchdown.

After an engine failure in flight, the best glide speed as shown in figure 3-1 should be established as quickly as possible. While gliding toward a suitable landing area, an effort should be made to identify the cause of the failure. If time permits, an engine restart should be attempted as shown in the checklist. If the engine cannot be restarted, a forced landing without power must be completed.

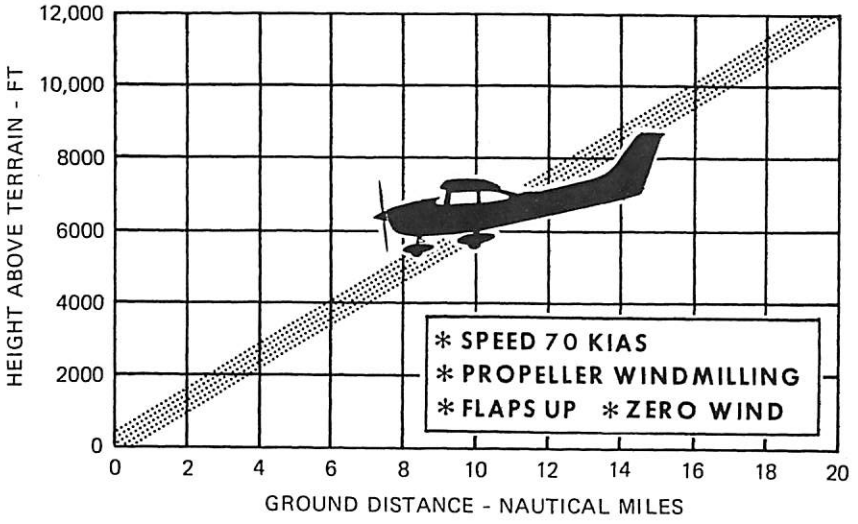


Figure 3-1. Maximum Glide

INTRODUCTION

Section 4 provides checklist and amplified procedures for the conduct of normal operation. Normal procedures associated with optional systems can be found in Section 9.

SPEEDS FOR NORMAL OPERATION

Unless otherwise noted, the following speeds are based on a maximum weight of 2950 pounds and may be used for any lesser weight. However, to achieve the performance specified in Section 5 for takeoff distance, the speed appropriate to the particular weight must be used.

Takeoff:	
Normal Climb Out	70-80 KIAS
Short Field Takeoff, Flaps 20°, Speed at 50 Feet	57 KIAS
Enroute Climb, Flaps Up:	
Normal	85-95 KIAS
Best Rate of Climb, Sea Level	78 KIAS
Best Rate of Climb, 10,000 Feet	72 KIAS
Best Angle of Climb, Sea Level	54 KIAS
Best Angle of Climb, 10,000 Feet	62 KIAS
Landing Approach:	
Normal Approach, Flaps Up	70-80 KIAS
Normal Approach, Flaps 40°	60-70 KIAS
Short Field Approach, Flaps 40°	60 KIAS
Balked Landing:	
Maximum Power, Flaps 20°	55 KIAS
Maximum Recommended Turbulent Air Penetration Speed:	
2950 Lbs	111 KIAS
2450 Lbs	100 KIAS
1950 Lbs	89 KIAS
Maximum Demonstrated Crosswind Velocity:	
Takeoff	20 KNOTS
Landing	15 KNOTS

STALL SPEEDS

CONDITIONS:
Power Off

NOTES:
1. Maximum altitude loss during a stall recovery may be as much as 160 feet.
2. KIAS values are approximate.

MOST REARWARD CENTER OF GRAVITY

WEIGHT LBS	FLAP DEFLECTION	ANGLE OF BANK							
		0°		30°		45°		60°	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
2950	UP	41	56	44	60	49	67	58	79
	20°	38	51	41	55	45	61	54	72
	40°	38	50	41	54	45	59	54	71

MOST FORWARD CENTER OF GRAVITY

WEIGHT LBS	FLAP DEFLECTION	ANGLE OF BANK							
		0°		30°		45°		60°	
		KIAS	KCAS	KIAS	KCAS	KIAS	KCAS	KIAS	KCAS
2950	UP	48	59	52	63	57	70	68	83
	20°	47	55	51	59	56	65	66	78
	40°	45	54	48	58	54	64	64	76

Figure 5-3. Stall Speeds