



Cheyenne 400 LS Emergency Procedures

General

This section provides the recommended procedures for coping with various emergencies: critical! All of the emergency procedures required by the FAA, as well as those necessary for operation of the aircraft, as determined by the operating and design features of the airplane, are presented

Pilots must familiarize themselves with the procedures given in this section and must be prepared to take the appropriate action should an emergency situation arise. The procedures are offered as a course of action for coping with the particular situation or condition described. They are not a substitute for sound judgment, common sense, and training.

Basic emergency procedures are a normal part of pilot training. The information presented in this section is not intended to replace this training. This information is intended to provide a source of reference for the procedures that are applicable to this airplane. The pilot should review standard emergency procedures periodically to remain proficient in them.



**Cheyenne 400 LS
Emergency Procedures**

Airspeeds For Safe Operation

Air minimum control speed (VMCA).....	99 KIAS
One engine inoperative best rate of climb speed.....	125 KIAS
Rotation speed for takeoff.....	104 KIAS

Emergency Procedures Checklists

Engine Inoperative Procedures

ENGINE SECURING PROCEDURE (FEATHERING)

Caution
Do not depress the engine stop button following a feathered engine shutdown, as the discharge of the engine purge kit into a hot engine may result in an engine fire.

Power Levers.....	FWD OF FLIGHT IDLE
RPM Levers.....	FEATHER
Fuel Control.....	FUEL SHUTOFF
Firewall Shutoff Valves.....	OFF
Fuel Pumps.....	OFF
Un-feather safeties.....	OFF
Generators.....	OFF
Electrical Load.....	REDUCE as required
Crossfeed.....	CONSIDER
Bleed Air Switches.....	OFF - ENGINE FAILURE DURING TAKEOFF, BEFORE ROTATION (104 KIAS)

WARNING
Do not attempt to continue the takeoff if an engine failure occurs before rotation.

Directional Control.....	MAINTAIN
Power Levers (in Flight).....	IDLE
Brakes.....	AS REQUIRED
Power Levers.....	GROUND IDLE



**Cheyenne 400 LS
Emergency Procedures**

Stop Straight Ahead. If insufficient runway remains for a safe stop:

Maneuver to avoid obstacles while maintaining directional control.

- RPM Levers..... FEATHER
- Fuel Control..... FUEL SHUTOFF
- Firewall Shutoff Valves..... OFF
- Battery Master Switches..... OFF

ENGINE FAILURE DURING TAKEOFF, AFTER WARNING ROTATION

In order to obtain the performance, the inoperative engine propeller must be feathered, the landing gear retracted, and the wing flaps retracted.

If a suitable landing areas exists and the decision is made to abort the takeoff.

WARNING

It is imperative that pitch attitude be reduced immediately to maintain airspeed and to achieve an attitude suitable for landing. Sufficient power on the operating engine must be maintained to control the rate of descent. At heavy weights, it may be necessary to maintain relatively high power on the operating engine to provide rates of descent that arc arrestable by the landing flare.

- Airspeed..... 116 KIAS
- Directional Control..... MAINTAIN
- Power Levers..... AS REQUIRED
- Land Straight Ahead

- Braking..... AS REQUIRED
- Power Lever (Operating Engine)..... GROUND IDLE, then REVERSE AS REQUIRED

If insufficient runway remains for a safe stop, maneuver to avoid obstacles while maintaining directional control.

- RPM Levers..... FEATHER
- Fuel Control..... FUEL SHUTOFF
- Firewall Shutoff Valves..... OFF
- Battery Master Switches..... OFF



**Cheyenne 400 LS
Emergency Procedures**

If insufficient runway remains or if decision is made to continue takeoff:

WARNING
Certain conditions of aircraft! Weight, configuration, and ambient conditions will result in negative climb performance. (Refer to specific chart in performance section.) The decision to continue a single engine takeoff is, therefore primarily predicated upon, but not necessarily limited to, the aircraft's ability to climb on a single engine with the gear retracted and flaps in the takeoff position. Prior to flight, review airfield requirements and determine that adequate single engine climb performance exists, considering aircraft weight, ambient conditions, and pilot proficiency to safely complete the takeoff should an engine fail at or shortly after rotation.

WARNING
Do not exceed one ball width sideslip during stabilized one engine inoperative operation. Operation beyond one ball width sideslip will result in increased unusable fuel (above 40 pounds) which will result in fuel starvation to the operating engine.

Power Levers..... TAKEOFF POWER
Pitch Attitude..... 10° NOSE UP
Directional Control..... MAINTAIN

Bank 50 toward operative engine using rudder as required for heading control.

Airspeed..... 116 KIAS until clear of obstacles
Landing Gear..... RETRACT
Inoperative Engine..... IDENTIFY and VERIFY
RPM Lever (Inoperative Engine)..... FUEL SHUTOFF AND FEATHER
Fuel Control..... FUEL SHUTOFF
Climb..... V_{YSE}, 125 KIAS

Complete Engine Securing Procedure. Land at nearest suitable airport.

ENGINE FAILURE DURING FLIGHT (ABOVE OR BELOW V_{MCA})

WARNING
Do not exceed one ball width sideslip during stabilized one engine inoperative operation. Operation beyond one ball width sideslip will result in increased unusable fuel (above 40 pounds) which will result in fuel starvation to the operating engine.



**Cheyenne 400 LS
Emergency Procedures**

ENGINE FAILURE DURING FLIGHT (ABOVE OR BELOW V_{MCA})

- Directional Control..... MAINTAIN (Retard power on operative engine if necessary to maintain control)
- Airspeed..... 125 KIAS MINIMUM with flaps retracted
- Inoperative Engine..... IDENTIFY AND VERIFY
- Air Start..... ATTEMPT

If air start is unsuccessful: follow the Engine Securing and land at nearest suitable airport.

PRECAUTIONARY IN FLIGHT ENGINE SHUTDOWN

- Landing Gear..... UP
- Flaps..... UP
- Airspeed..... AT OR ABOVE 125 KIAS (V_{YSE})
- Power Lever..... FLIGHT IDLE
- Generator..... OFF
- Fuel/Ignition Switches..... OFF
- Fuel Control..... FUEL SHUTOFF
- RPM Lever (After 30 seconds or 30% RPM)..... FEATHER

Land at nearest suitable airport.

FUEL CROSSFEED PROCEDURE

CAUTION
Do not takeoff or land with crossfeed ON.

- Fuel Pump (Inoperative Engine)..... ON
- Crossfeed..... ON
- Fuel Pump (Operative Engine)..... OFF



**Cheyenne 400 LS
Emergency Procedures**

ENGINE FAILURE (SECOND ENGINE)

If sufficient altitude remains to attempt air starts:

- Power Lever..... FLIGHT IDLE
- RPM Lever..... DO NOT FEATHER
- Airspeed..... PER BEST GLIDE
SPEED CHART
- Air Start Procedure..... ATTEMPT

If insufficient altitude remains to attempt air starts or if air start procedure is ineffective:

- Power Lever..... FLIGHT IDLE
- RPM Lever..... FEATHER
- Fuel Control..... FUEL SHUTOFF
- Engine Firewall Fuel Shutoff Valves..... OFF
- Power Off Glide..... ACCOMPLISH
- Landing Without Engine Power procedure..... ACCOMPLISH

GLIDE SPEED CHART	
WEIGHT LBS	KIAS
12,050	136
11,000	130
10,000	124
9,000	117
8,000	111

EMERGENCY DESCENT

- Power Lever..... FLIGHT IDLE
- RPM Lever..... HIGH
- Aircraft Attitude..... 10° NOSE DOWN
initially
- Airspeed..... V_{MO} MAXIMUM
- Seat Belts and No Smoking Signs..... ON – CHECK GREEN



**Cheyenne 400 LS
Emergency Procedures**

NO FLAP APPROACH AND LANDING

CAUTION
During the landing approach, rates of descent in excess of 1,200 fpm may result in higher than normal touchdown sink rates.

Prior to final approach:

- Gear..... DOWN
- Airspeed..... 120 KIAS
- Power..... AS REQUIRED
- Before Landing Checklist..... COMPLETE (above items are exceptions)

During landing flare:

- Power..... REDUCE TO FLIGHT IDLE

CAUTION
When landing at light weights, use caution when applying brakes. Excessive pedal pressure can result in skidding the tires resulting in a loss of braking effectiveness and directional control.

After touchdown:

- Brakes..... AS REQUIRED
- Power Levers (after nose wheel touchdown)..... GROUND IDLE and then REVERSE as required



**Cheyenne 400 LS
Emergency Procedures**

LANDING WITH PRIMARY LONGITUDINAL CONTROL FAILED

Select longest runway in area suitable for a long low angle descent When ready for approach:

- Trim..... Level flight-130 KIAS
- Gear..... EXTEND
- Airspeed..... MAINTAIN 130 KIAS
- Power..... AS REQUIRED

When positioned over the runway, flare airplane with elevator trim tab alone and slowly reduce power.

- Power Levers (after nose wheel touchdown)..... GROUND IDLE and then REVERSE as required

LANDING WITHOUT ENGINE POWER

- Aircraft Configured..... PER POWER OFF
GLIDE
- Passenger Briefing..... COMPLETE

When landing site assured:

- Flaps..... APPROACH
- RPM Levers..... FEATHER
- Fuel condition levers..... FUEL SHUTOFF
- Firewall Shutoff Valves..... OFF
- Fuel Pumps..... OFF
- Fuel ignition switches..... OFF
- Generators..... OFF
- Flaps..... FULL DOWN
- Approach Speed (final approach)..... 120 KIAS

WARNING
Total drag of airplane will be reduced with propellers feathered.
Plan for increased landing distances.

Touchdown In a nose high attitude:

- Brakes..... AS REQUIRED
- Battery Master Switches (night after touchdown)..... OFF

Maneuver to avoid obstacles.

Note: The cabin must be depressurized for landing.



Cheyenne 400 LS Emergency Procedures

ONE ENGINE INOPERATIVE GO AROUND

To execute a single engine go around, apply TAKEOFF POWER to the —operating engine and MAINTAIN directional control. Maintain a 5° bank with a 1/4 ball slip into the operating engine while maintaining straight ahead flight. Retract the flaps to the APPROACH position if they are full down. As airspeed increases, RETRACT the landing gear after positive climb has been established. Retract the flaps full up, and continue to maintain airspeed AT or ABOVE 125 KIAS and trim as required.

NOTE: If flaps have been extended to full down, executing a one engine inoperative go around may result in the aircraft touching down under certain conditions of weight, speed, temperature, and altitude.

NOTE: Do not retract landing gear until a positive rate of climb has been established.

AIR STARTING RECCOMENDATIONS

Abort the start by placing the RPM lever to FUEL SHUTOFF and FEATHER if:

1. Propeller fails to rotate.
2. EGT does not rise at or before 25% rpm.
3. Oil pressure is not rising prior to stabilized rpm.
4. EGT rapidly approaching 770°C or VRL as appropriate.

NOTE: Air starts may be attempted above 20,000 feet, provided that the EGT limit is not exceeded.