

Cessna Citation Mustang CE-510

Note Taking Guide

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You are not ready for the evaluation until you can fill in the blank PRACTICE pages from memory without any errors.

The systems schematics are to be used for taking notes in class.

Memory Items

Engine Failure or Fire or Master Warning or Any Other Non-Normal Event During Takeoff

Speed below V_1 – takeoff should be aborted.

1. Brakes - MAXIMUM PILOT EFFORT.
2. Throttles - IDLE.
3. Speed Brakes - EXTEND.
4. Throttles - CUTOFF (if runway departure is imminent).

Engine Failure or Fire or Master Warning or Any Other Non-Normal Event During Takeoff

Speed above V_1 – takeoff should be continued.

1. Maintain directional control.
2. Accelerate to V_R .
3. ROTATE at V_R to $+10^\circ$ initial pitch attitude (use flight director TO mode).
4. LANDING GEAR - UP (after positive rate-of-climb).
5. Airspeed - V_2 (single-engine) or AS REQUIRED (multi-engine).
6. At 1500 feet AGL (minimum) and clear of obstacles - Retract flaps at $V_2 + 10$ and accelerate to V_{ENR} .

Engine Failure During Approach (Possible ENGINE FAIL L-R CAS Message)

1. Throttle (operating engine) - INCREASE as required.
2. Airspeed - V_{APP} .
3. FLAP Handle - TO/APR.

Engine FIRE L or R (ENGINE FIRE Light Illuminated)

1. Throttle (affected engine) - IDLE.
- **IF LIGHT REMAINS ON (15 SECONDS)**
2. Illuminated ENGINE FIRE Switch - LIFT COVER and PUSH.

Emergency Restart – Two Engines Starter Assist 20,000' or lower

1. BATT Switch - BATT.
2. Throttles - CUTOFF.
3. Firewall Shutoff - CHECK BOTH OPEN.
4. Either Engine START button - PRESS momentarily.
5. Throttle (selected engine) - IDLE.

Engine Surges or Unstable Operation

1. Throttle (affected engine) - IDLE

● **IF ENGINE CONTINUES TO SURGE AND / OR ITT EXCEEDS LIMIT**

2. Throttle (affected engine) - CUTOFF

Electrical Fire or Smoke

UNKNOWN SOURCE

1. Oxygen Masks - DON and EMER.
2. L and R MIC Switches - OXYGEN MASK.
3. Smoke Goggles - DON (if required).
4. OXYGEN CONTROL VALVE - AS APPROPRIATE.

NOTE

Selection of the passenger oxygen system (DROP MASK) may be appropriate in situations where the flight crew determines it is safe to do so and where supplemental oxygen may assist the passengers' breathing in a smoke filled cabin.

5. Passenger Oxygen - ENSURE PASSENGERS ARE RECEIVING OXYGEN (if selected).
6. AP/TRIM DISC Button - PRESS.
7. L and R GEN Switches - OFF.
8. BATT Switch - RAPIDLY SELECT EMER.

Electrical Fire or Smoke

KNOWN SOURCE

1. Oxygen Masks - DON and EMER.
2. L and R MIC Switches - OXYGEN MASK.

Smoke Removal, Environmental System Smoke or Odor

1. Oxygen Masks - DON and EMER.
2. L and R MIC Switches - OXYGEN MASK.

Loss of Cabin Pressure (Red CABIN ALT CAS Message)

1. Oxygen Masks - DON and 100% OXYGEN.
2. L and R MIC Switches - OXYGEN MASK.
3. Emergency Descent - AS REQUIRED.

Emergency Descent

1. AP / TRIM DISC Button - PRESS.
2. Throttles - IDLE.
3. Speed Brakes - EXTEND.
4. LANDING GEAR Handle - DOWN.
5. Initial Pitch Attitude - INITIALLY TARGET 20° NOSE DOWN.

Battery Over temperature (Red BATTERY O'TEMP CAS Message)

1. BATTERY VOLTS/AMPS - NOTE.
2. BATT Switch - EMER.
3. BATTERY VOLTS/AMPS - NOTE DECREASE.

Dual Generator Failure (Red GEN OFF L-R CAS Message)

1. L and R GEN Switches -RESET THEN OFF.
2. Generator Voltages - CHECK.

NOTE

If generator voltage is significantly below or above 28 volts, the Generator Control Unit (GCU) will not allow that generator to remain on line.

3. L and R GEN Switches - ON.

● IF NEITHER GENERATOR COMES ON LINE

4. AP/TRIM DISC Button - PRESS.
5. BATT Switch - RAPIDLY SELECT EMER.

Hydraulic Wheel Brake Failure

1. Brake Pedals - REMOVE FEET FROM BRAKE PEDALS.
2. EMERGENCY BRAKE Handle - SMOOTH PULL AS REQUIRED and HOLD until stopped.

Autopilot Malfunction

1. AP / TRIM DISC Button - PRESS.

Aileron Trim Runaway

1. Control Wheel - GRIP FIRMLY.
2. AP/TRIM DISC Button - PRESS and HOLD (high aileron control forces possible).
3. Airspeed - REDUCE (as required to minimize control forces).

Rudder Trim Runaway

1. RUDDER PEDALS - HOLD FIRMLY.
2. AP / TRIM DISC Button - PRESS AND HOLD (high rudder control forces possible).

Pitch Trim Runaway

1. CONTROL WHEEL - GRIP FIRMLY
2. AP / TRIM DISC Button - PRESS AND HOLD (high elevator control forces possible).

Inadvertent Stall (Buffet, and/or Roll-Off)

1. Autopilot - DISCONNECT.
2. Pitch attitude - REDUCE
3. Roll attitude - LEVEL.
4. THROTTLES - TO Detent (Thrust Mode Indicator - Green T/O).

Emergency Evacuation

1. PARK BRAKE Handle (if gear down) - SET.
2. Throttles - CUTOFF.
3. L and R ENGINE FIRE Switches (if fire suspected) - PRESS.
4. L or R BOTTLE ARMED Switches (if fire suspected) - PRESS.

NOTE

If fire location is not known, the R BOTTLE ARMED switch should be pressed due to the close proximity of the right engine to the overwing emergency exit.

5. PAX SAFETY Switch - PAX SAFETY.
6. BATT Switch - OFF.
7. Airplane and Immediate Area - CHECK FOR BEST ESCAPE ROUTE and DIRECT EVACUATION.

Takeoff Briefing

Memorize this briefing:

V1 is ____, V2 is ____, V_{ENR} is ____, we need ____ feet of dry/wet RWY

If you see a need to abort prior to V1, say "ABORT" and we'll stop straight ahead.

After V1, say "CONTINUE" and tell me what you see. We'll (remain VFR and land, continue the SID and hold, etc)

Calls will be "Power's set, airspeed alive, cross-checked at 60, V1-Rotate, Positive Rate – I'll command GEAR UP, V2+10, I'll command FLAPS UP, YAW DAMPER ON, and we'll delay the after takeoff checks until we're talking to departure.

Stall / Missed Approach

Say the following words out loud and do each step in order for a single engine missed approach, a normal missed approach, or to recover from any stall.

Memorize the following:

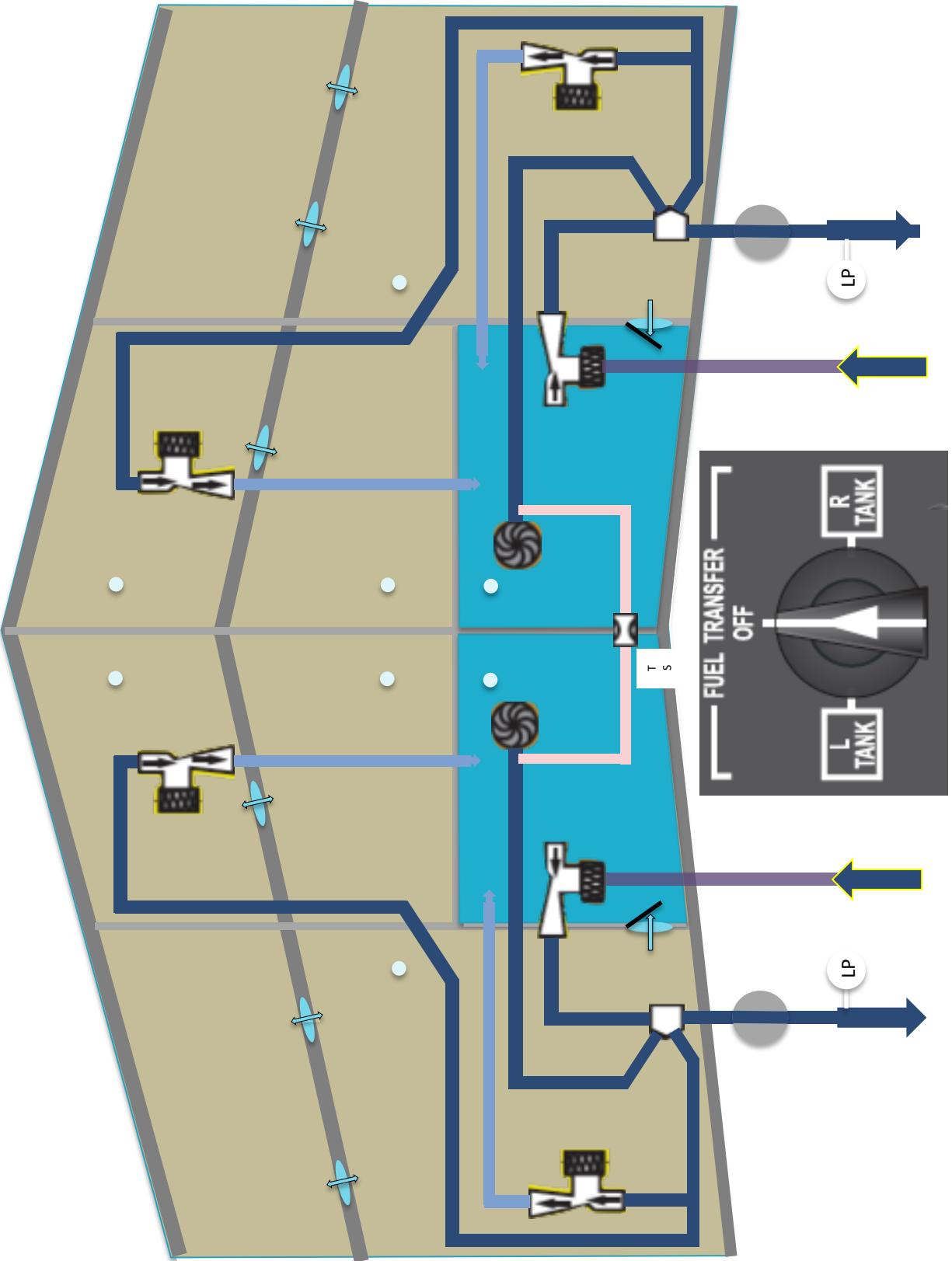
MAX POWER, Flaps – APPROACH

Positive Rate – GEAR UP

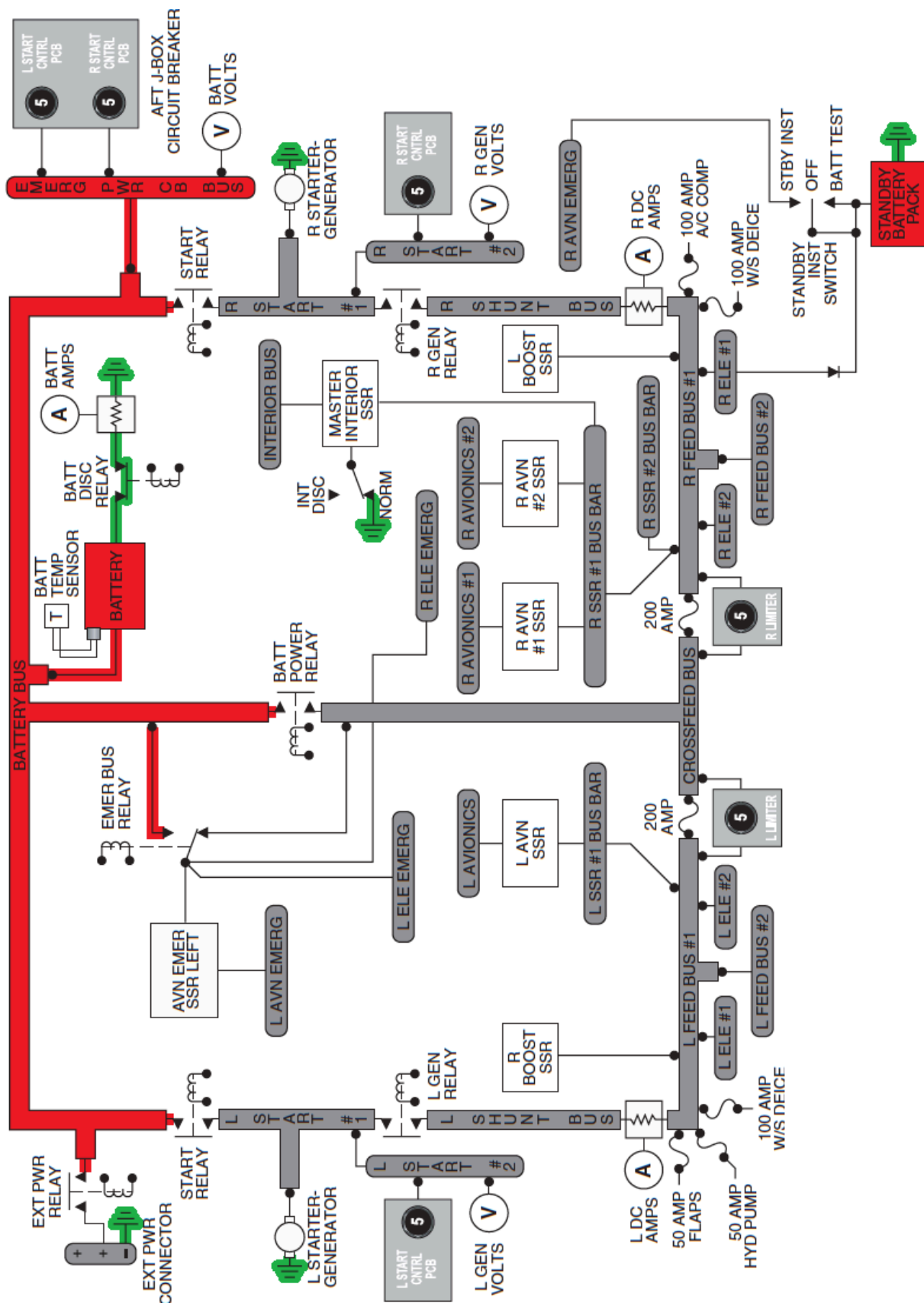
Climb at V2

V2 plus 10 – FLAPS UP

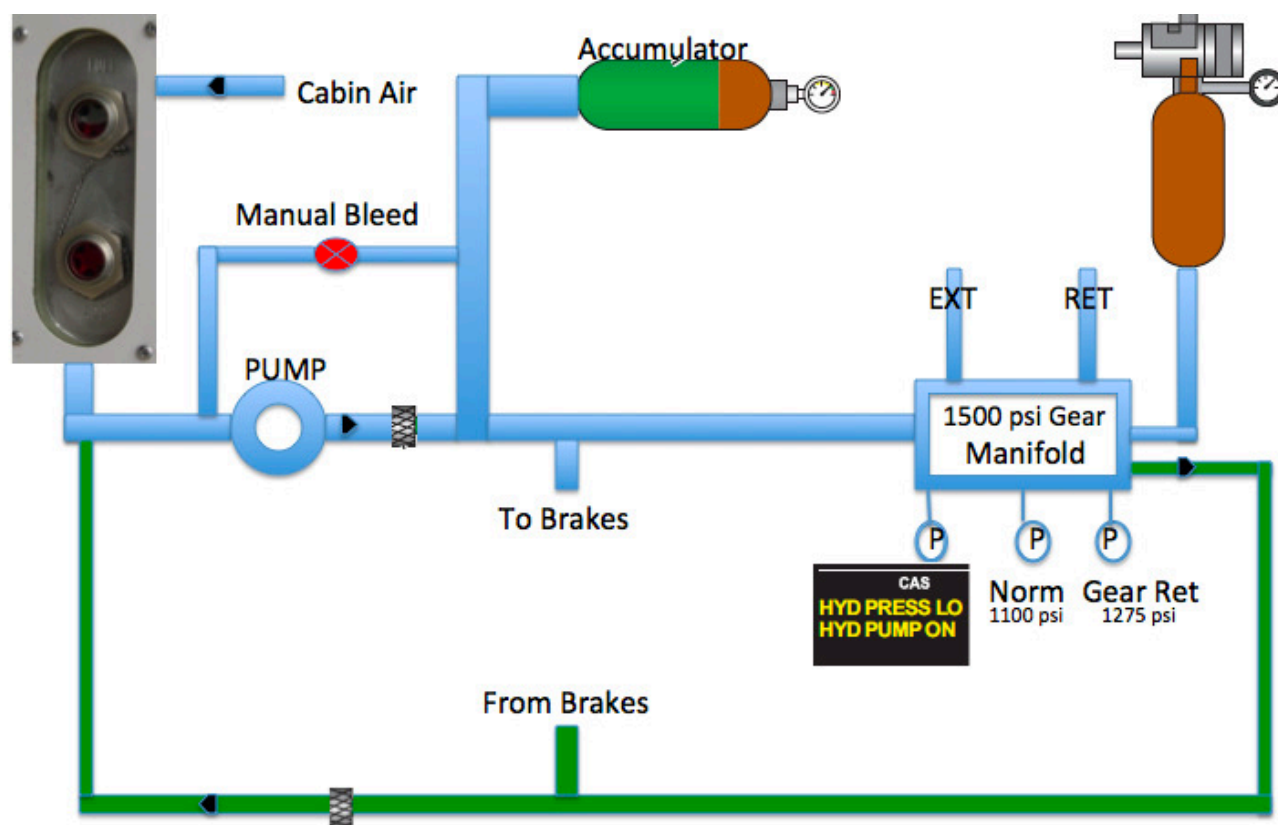
Fuel



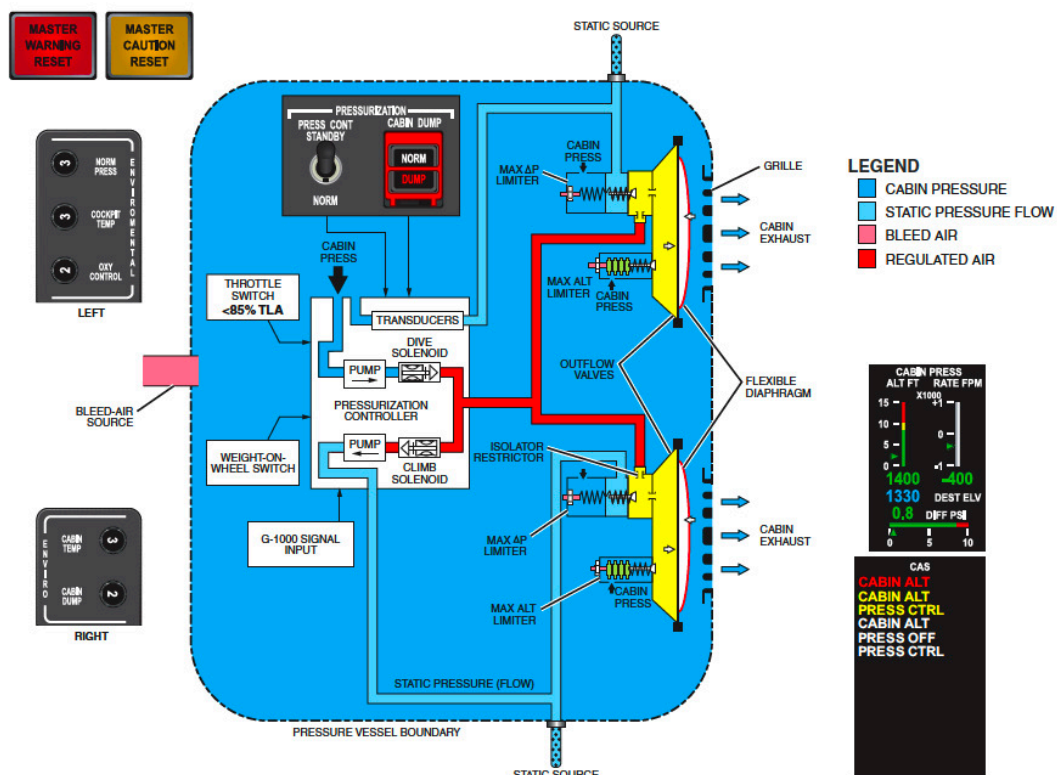
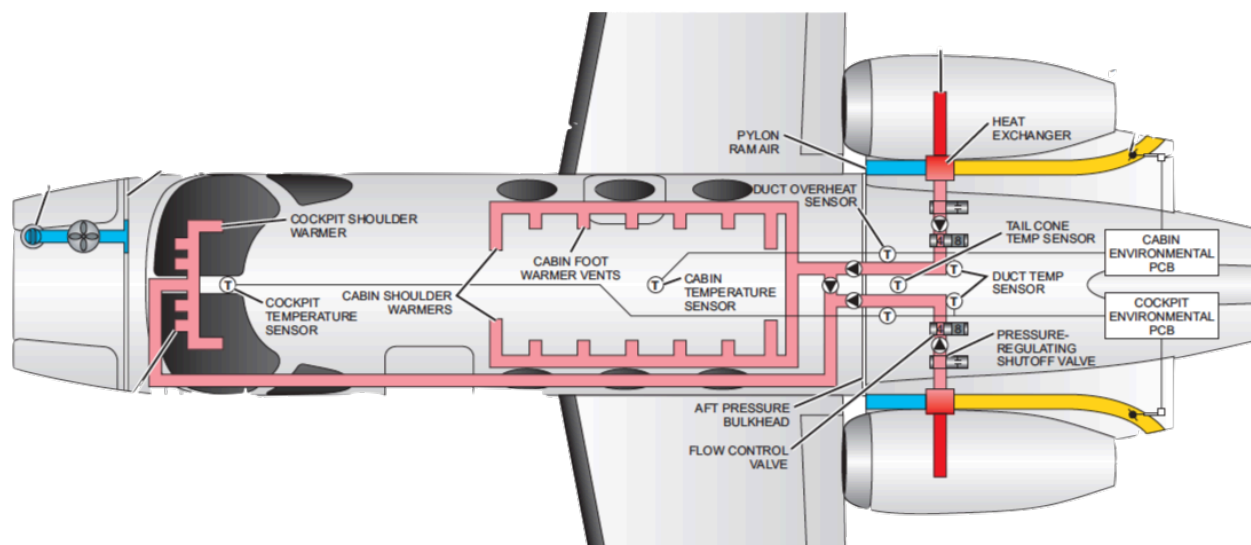
Electrical



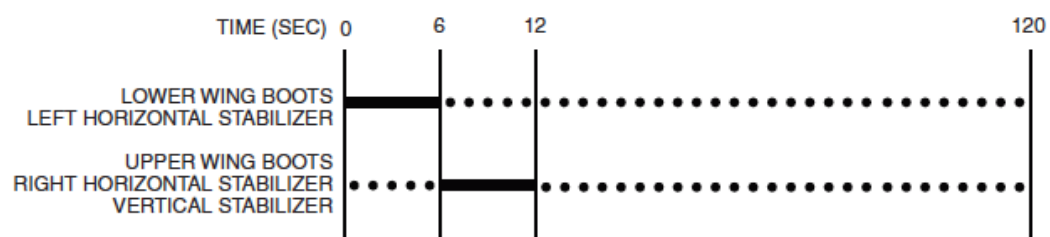
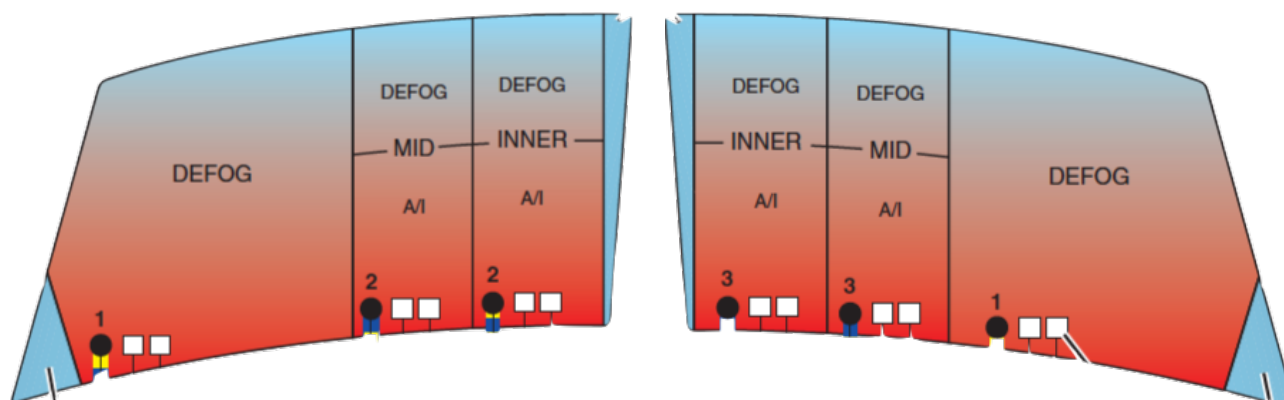
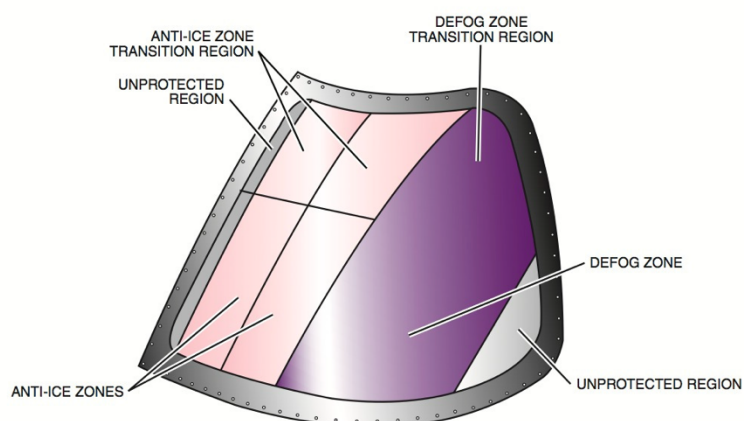
Hydraulics



Environmental



Ice Protection



Practice Memory Items

Engine Failure or Fire or Master Warning or Any Other Non-Normal Event During Takeoff

Speed below V1 – takeoff should be aborted.

- 1
- 2
- 3
- 4

Engine Failure or Fire or Master Warning or Any Other Non-Normal Event During Takeoff

Speed above V1 – takeoff should be continued.

- 1
- 2
- 3
- 4
- 5
- 6

Engine Failure During Approach (Possible ENGINE FAIL L-R CAS Message)

- 1
- 2
- 3

Engine FIRE L or R (ENGINE FIRE Light Illuminated)

- 1
If light remains on 15 seconds
- 2

Emergency Restart – Two Engines Starter Assist 20,000' or lower

- 1
- 2
- 3
- 4
- 5

Engine Surges or Unstable Operation

1

If engine continues to surge and / or ITT exceeds limits

2

Electrical Fire or Smoke*UNKNOWN SOURCE*

1

2

3

4

5

6

7

8

Electrical Fire or Smoke*KNOWN SOURCE*

1

2

Smoke Removal, Environmental System Smoke or Odor

1

2

Loss of Cabin Pressure (Red CABIN ALT CAS Message)

1

2

3

Emergency Descent

1
2
3
4
5

Battery Over temperature (Red BATTERY O'TEMP CAS Message)

1
2
3

Dual Generator Failure (Red GEN OFF L-R CAS Message)

1
2
3
4
5

If neither generator comes on line

Hydraulic Wheel Brake Failure

1
2

Autopilot Malfunction

1

Aileron Trim Runaway

1
2
3

Rudder Trim Runaway

1
2

Pitch Trim Runaway

1
2

Inadvertent Stall (Buffet, and/or Roll-Off)

1
2
3
4

Emergency Evacuation

1
2
3
4
5
6
7

Practice Takeoff Briefing

Practice Stall / Missed Approach

CE-510 Mustang

Weights – in pounds

Ramp	8,730
Takeoff	8,645
Landing	8,000
Zero Fuel	6,750
Opt. ZFW	6,300
Baggage, Nose	320
Baggage, Tail	300
BEW, Typical	5,350

Speeds – in knots

VMO SL to 27,120	250
MMO	0.63
VA 6000# @ SL	135
8645# @ FL410	170
Turbulent Air	160
Flaps 15 (TO & APR)	185
Flaps 30 (Land)	150
Gear VLO EXT & VLE	250
Gear VLO RET	185
VMCG	73
VMCA Flaps 0	92
VMCA Flaps 15	81
VMCA Flaps 30	74
Tire Ground (Mains)	160
Autopilot	VMO/MMO

Takeoff, Landing, Ground

Max Altitude	14,000
Water or Slush	0.75"
Max Temp ISA	+50°C
Min Temp	-40°C
Max Tailwind	10 kts
Starter 3 Starts in 30 min	
Generator Lo Idle	150 amps
Generator Hi Idle	300 amps
Battery-NICAD	3 starts/hr
Tire pressure Nose	125+/-5
Mains	88+/-5
P/S heat on ground	2 min

Limitations

Starting

Minimum Battery Voltage	
NiCad	22
Lead Acid	24
Max Start Alt Batt	10,000'
Max Start Alt GPU	14,000'
GPU Max	29V & 1,100 amps

Enroute

Max Altitude	FL 410
Max Temp	+50°C @ SL
Max Generator Load	
Up to FL300	300 amps
Above FL300	280 amps
Min Autopilot on GS	200' AGL

Powerplant PW615F

N1 & N2	100 %
ITT (Normal Start)	500°C
ITT Take-Off (5 min)	830°C
ITT Climb & Cruise	830°C
Thrust ISA, TO, 5 min	1460#
Bypass Ratio	2.8 to 1
Oil Use	1 qt / 13.5 hrs

Fuel

Quantity	2580#
FUEL LEVEL LO	170#
FUEL PRESS LO	5 psi
Imbalance Normal	200#
Imbalance Demonstrated	600#
Min fuel for Takeoff	400#

Environmental

Max Design Cabin Alt.	8000'
CABIN ALT amber CAS	8,500'
CABIN ALT red CAS	10,000'
Altitude Limiters	14,300'
Masks Auto-Drop	14,800'
Max Cabin Differential	8.6

