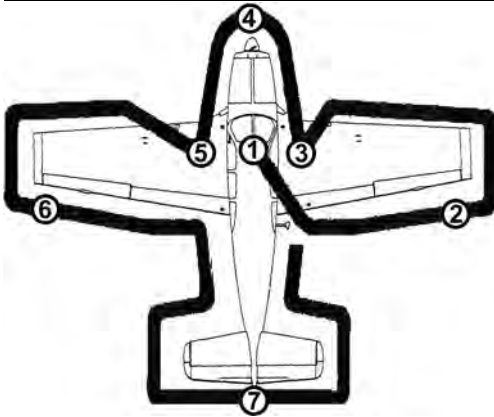




F33A / V35B Preflight Inspection



4 Nose

- Oil Qty/Filler Cap CHK/Closed
8,5 - 10,5 Qts
use W100 (>0°C) or W80 (> -12°C < 30°C)
- Engine Condition CHK
- Brake Fluid CHK
- Prop Cover Remove
- Air Intake Clear
- Landing & Taxi Light CHK
- Exhaust Pipe/Cowl Flaps CHK Both
- Engine Cowling Both closed
- Landing Gear, Chocks CHK, Remove
Door, Wheel, Strut, Wheel Well

5 Left Wing Front

see 3 Right Wing Front

- Selector Valve Sump Drain, Secured
located under access cover on fuselage
- Stall Warning CHK
- Pitot Tube Cover Remove
- Pitot Tube Clean

6 Left Wing Aft

see 2 Right Wing Aft

7 Tail Section/Empenage

- Rotating Beacon CHK
- Baggage door Closed/Locked
- Static Port Clean
- ELT ARMED
- Control Surfaces/Trim tab/Pos. Light CHK
- Tail Tie-down Remove
- Cabin Exhaust / Cabin Air Intake CHK
- Static Port Clean
- Antennas CHK

1 Cabin

- Required Papers Check
A/C Logbook, POH, Checklist, Weight & Balance
- Hobbs Hour Note
- Gear Crank Secured
- Control Lock Remove
- Emergency Static OFF, Vertical
- Mags/All Switches OFF
- Parking Brake as required
- Cowl Flaps Check free movement, OPEN
- Alternate Air Check free movement
- Landing Gear DOWN
- Circuit breakers CHK
- ELT ARMED
- Battery ON
- Gear 3 Green
- Flaps DOWN
- Warn Lights TEST, BRT
- Fuel Quantity CHK
no takeoff with Fuel QTY < 13 USG or in yellow arc

• if flight takes place at night

Exterior & Interior Lights CHK

Flashlight CHK

- Battery OFF
- Live Jackets, Fire Extinguisher, Oil CHK

2 Right Wing Aft

- Flaps/Aileron CHK
- Wing Tip and Lights CHK
- Wing Tie-down Remove

3 Left Wing Front

- Fuel Qty, Vents, Wing Tank CHK, Closed
- Cabin Air Intake Clear
- Landing Gear, Chocks CHK/Remove
Door, Wheel, Strut, Brake Line, Wheel Well
- Fuel Sump (2/1) Drain, CHK
check closed/no drops

Stall Speed

	F33A	V35B
V _{S0} Clean	70 kts	64 kts
V _{S1} Flaps 30°	65 kts	52 kts

Takeoff & Climb Speeds

V _Y (Best Rate)	96 kts	96 kts
V _X (Best Angle)	77 kts	77 kts
V _R	65-70 kts	71 kts
Enroute	75-85 kts	107 kts

Maneuvering Speed

V _A	134 kts	134 kts
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Operating Speeds

V _{NE}	196 kts	196 kts
V _{NO}	167 kts	167 kts
V _{FE} (Flaps 10°)	154 kts	123 kts
V _{FE} (Flaps 30°)	123 kts	123 kts
V _{LE/LO/LR}	154 kts	154 kts

Descent

V _{GLIDE} (Flaps Up)	105 kts	105 kts
-------------------------------------	---------	---------

Max. CWC (demonstrated) ..

	17 kts	17 kts
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Fuel Capacity

Both Tanks	50,0 USG	80,0 USG
Unusable (per Tank) ..	3,0 USG	3,0 USG
Usable fuel (Total)	44,0 USG	74,0 USG



STARTING ENGINE Checklist

Preflight-Inspection Complete
 Hobbs Hours..... Note
 Seat/Seat Belts Adjust, **LOCKED**
 Brakes Set
 Battery ON
 Alternator Out Light..... ON
 Fuel Selector..... Fullest Tank
 Beacon ON
 Cowl Flap Pull, **FULL OPEN**
 Gear DOWN, 3 Green
 Avionics OFF
 Door Unlatched

AFTER START Checklist

Avionics **ON**, set
 Transponder **SBY / GND**
 VFR US: 1200, Europe: 7000
 Altimeters (2) **QNH**____, ____ ft
 Autopilot/Elec. Trim **TEST**
 Flaps **UP / 10°**
 Circuit Breaker..... **CHK**
 Fuel Selector..... **Other Tank**

ENGINE START

- *if Start with External Power*
 - Alternator OFF
 - Ext. Power..... Connect, then ON
 - 14V-Unit: 13,5 - 24,25V 28V-Unit: 27 - 28,5V
 - Prop Full **FORWARD**
 - Throttle..... Full **OPEN**
- *if Hot Start and OAT > 32°C / 90°F*
 - Mixture **CUTOFF**
 - Aux Fuel Pump..... ON 30-60 sec
 - Mixture **FULL RICH**
 - Auxiliary Pump..... ON, Peak, OFF
 - Throttle..... **CLOSE**,
then **OPEN 1/4 inch**
 - Prop. Area Clear
 - Mag/Start Switch **START**
max. 30 sec within 4 min.
- *if Overprime Condition (Flooded)*
 - Aux Fuel Pump OFF
 - Mixture **CUTOFF**
 - Throttle Full **OPEN**
 - Mag/Start Switch..... **START**
 - Mixture Advance
 - Throttle..... **1000-1200 RPM**
 - Oil Pressure..... **CHK**
in green range within 30 sec (cold day 60 sec)
- *if Hot Start*
 - Aux Fuel Pump.... momentarily **ON**
- *if Start with External Power*
 - Throttle..... lowest possible RPM
 - Ext. Power..... OFF, then Disconnect
 - Alternator **ON**
 - Ammeter..... **CHK**
max. 25% of full charge within 2 min.
 - Mixture **Set**

TAXI Checklist

Brakes Checked
 Flight Controls..... Checked
 Flight-Instruments..... Checked
 Dep., Emer. Briefing.....Completed

ENGINE RUN-UP

Brakes Set
 Fuel Selector..... Fullest Tank
 Engine Instruments..... **CHK**
 if Oil Temp < 24°C: max 1200 RPM
 Mixture..... Full **RICH**
 Throttle **1700 RPM**
 Ignition **CHK, BOTH**
 RPM drop ≤ 150, diff. ≤ 50
 Prop Governor **CHK**
 300-400 RPM drop (1st flight check twice)

- *Standby Power Test (optional)*
 - Avionics OFF
 - Battery & Alternator..... OFF
 - Standby Pwr..... **TEST**, then OFF
check BAT-GEN lights illuminate
 - Battery & Alternator..... ON
 - Avionics..... **ON**, set
 - Throttle **IDLE**
 - RPM & Oil Pressure **CHK**
650 RPM +/- 150 RPM, Oil Press ≥ 10 PSI
 - Throttle **1.000 RPM**
 - Instrument Air..... **CHK**
 - 2 Vac.-Gyros: ≥ 700-800 RPM..... ≥ 3: 1200 RPM
 - Prop De-Ice **CHK**
30 - 34 Amps
 - Ammeter..... **CHK**
max. 25% of full charge

**BEFORE TAKEOFF Checklist**

Cabin Ready
 Doors & Windows Closed
 Fuel Selector..... Fullest Tank
 HDG/Radios **CHK, Set**
 Flaps **UP / 10°**
 Trims (2) **___, NEUTRAL**

Elevator/Aileron

1/2 pax: 3 UP, 3/4 pax: 0; Obstacle: +2 units UP

Mixture **Set**

Density Altitude ≥ 3,000 ft: Lean as required

Prop **Full FORWARD**

Engine Instruments.....**CHK**

Transponder **GND / ALT**

Tracking/Timing **START**

Air Condition **OFF**

----- immediately prior line up -----

Pitot Heat **as required**

Landing & Strobe Lights **ON**

V_R **F: 73 | V: 71 kts**

At ½ Rwy-length ≥ 70% of T/O-Speed (50 kts)

• Short Field: Flaps 10° **F:67 | V:65 kts**

-1 kts/100 lbs below MTOW

Flaps	V_{REF}	
UP	90 kts	-1 kts per 100 lbs below 3400 lbs
10°	80 kts	
20°	75 kts	
DN	70 kts	

LANDING Checklist

Air Condition..... **OFF**

Mixture..... **Full RICH**

Prop **Full FORWARD**

Flaps **___°**

Gear (V_{LO} 154 kts)..... **DOWN, 3 Green**

Go-Around

Throttle *Full OPEN*

Flaps..... **20°**

continue with Climb Checklist

AFTER LANDING Checklist

Pitot Heat..... **OFF**

Lights..... **As required**

Trims (2) **NEUTRAL**

Cowl Flaps **as required**

Flaps **UP**

Mixture..... **Set**

Flightplan **Close**

CLIMB Checklist

Gear (V_{LO} 154 kts) **UP**

Speed (V_Y) **96 kts**

*Obstacle (V_X): **F: 85 | V: 77 kts***

(-1 kts/100 lbs below MTOW)

• when clear of obstacles

Flaps **UP**

Climb Pwr..... **Max or 25"/2500 RMP**

Cowl Flaps **OPEN as required**

Engine Instruments **CHK**

Lights **as required**

----- when passing Transition Altitude -----

Altimeters (2) **Standard, ___ ft**

ENGINE SHUTDOWN

Parking Brake **as required**

Avionic Master..... **OFF**

Throttle..... **CLOSE**

Mixture..... **CUTOFF**

Mag/Start Switch **OFF, Keys out**

All Light and Heat Switches **OFF**

Battery & Alternator **OFF**

APPROACH Checklist

Mixture **Enriched**

increase by 3 GPH prior descent

(2500 RPM; 15" at TPA) try to maintain > 20" MP

Cowl Flaps **CLOSE as required**

maintain CHT > 116°C

Altimeters (2) **QNH ___ , ___ ft**

Landing Light **ON**

Fuel Selector..... **Fullest Tank**

Approach Briefing **Completed**

Cabin **Ready**

PARKING Checklist

Control Lock **Install**

Tracking/Timing..... **Stop**

Hobbs Hour **Note**

Windows (Storm/Rear)..... **Close**

• if Hot and Parking < 2 hours

Parking Position **into the wind**

Cowl Flap/Cowlings **OPEN**

Cowl Flap/Cowlings **CLOSE**

Personal Items..... **Remove**

Headset, Ext. GPS, Charts, Tablet, Camera(s)

Pitot Tube Cover..... **Install**

Aircraft..... **Secure, Tie Down, Chock**



ENG Fire during Engine Start

Ignition Continue START

- if engine starts:
 - Throttle 1700 RPM
- if engine does not start:
 - Throttle Full OPEN
 - Firewall Air Control Pull CLOSE
 - Mixture CUTOFF
 - Fuel Selector OFF

Battery, Alternator OFF
 Ignition OFF
 Fire Extinguisher Take along

Evacuate Aircraft

ENG Failure in Flight

Speed 105 kts
 • at low altitude 83 kts
 Landing site Select

Range appr. 1,7 NM / 1000 ft

♦ if Altitude for Restart sufficient:

Gear UP
 Flaps UP
 Fuel Selector Other Tank
 Aux Fuel Pump ON
 Throttle Retard
 Mixture RICH
 Ignition L, R, BOTH, START

• if engine does not start:

Aux Fuel Pump OFF
leave ON if Engine Driven Fuel Pump Inop
 Throttle As required
 Mixture As required

• if engine does not start:

Forced Landing Apply

ENG Fire in Flight

CHT max. 238°C | norm. 93-238°C

Speed 105 kts
 • at low altitude 85 kts
 Landing site Select

Range appr. 1,7 NM / 1000 ft

Firewall Air Control Pull CLOSE
 Mixture CUTOFF
 Fuel Selector OFF

Battery, Alternator OFF
 Ignition OFF

Forced Landing Apply

ENG Propeller Overspeed

Throttle RETARD
 Prop PULL, LOW RPM
 Speed REDUCE

reduce RPM below red line (2700 RPM)

Throttle as required

Spd < best glide may be required for level flight

Oil Pressure & Temperature CHK

• if Loss of Oil cause of Overspeed

Prepare for engine failure

ENG Failure during Take-Off

Throttle IDLE

♦ Aircraft on the ground:

Brakes Apply
 Fuel Selector OFF
 Mixture CUTOFF
 Battery, Alternator OFF
 Ignition OFF

♦ Aircraft in flight:

Prop Pull/LOW RPM
 Speed 83 kts
 Landing site Select
 Mixture CUTOFF
 Fuel Selector OFF
 Ignition OFF
 Gear DOWN, 3 Green
 Flaps As required
 Battery, Alternator OFF
 Door Unlock
 Seatbelts Tighten

Spin Recovery

Aileron Neutral
 Throttle IDLE
 Rudder Apply and hold full

opposite direction of rotation

use turn coordinator if disorientation precludes determination of direction of rotation.

Elevator Move briskly forward

move elevator briskly forward to break the stall

Rudder, Elevator Hold
 until rotation stops

premature relaxation may extend recovery

• when rotation stops:

Rudder Neutralize
 Flightpath Recover smoothly

**Smoke / Fire****Land as soon as possible**

Determine source of fire

◆ **if Fire in Engine Compartment:**

Cabin Air Intakes..... CLOSE

Forced Landing consider◆ **if Wing/External Fire:**

External Lights & Pitot Heat.... OFF

SideslipPerform

◆ **if Fire in Cabin or Electrical Fire:**

Battery & Alternator OFF

Electrical EquipmentAll OFF

Leave Mags On

Vents, Defrost CLOSE

Cabin Heaters OFF

Fire extinguisher Use as req.

◆ **if Smoke/Fire confirmed out:**

Battery ON

◆ **if Smoke/Fire continues:**

Battery OFF

Firewall Valve CLOSE as req.

• **if Smoke/Fire confirmed out:**

Cabin Air Intakes..... OPEN

Storm Window as required

• **if electric power required:**

Battery & Alternator ON

Circuit breakersCHK

do NOT reset

Essential Elec. Equipm. ON

*One at a time; turn off all radios prior**turning on Avionics Master*

Defective Equipm. Isolate

Forced Landing

Prop Pull/LOW RPM

Speed..... 105 kts

• at low altitude 83 kts

Landing siteSelect

*Range appr. 1,7 NM / 1000 ft**Normal Checklist included*

Aux Fuel Pump OFF

Mixture..... CUTOFF

Fuel Selector OFF

Ignition OFF

Firewall Air Control Pull CLOSE

Radio/Transponder Mayday/7700

Gearas required

Flapsas required

DOWN recommended

Battery & Alternator OFF

Seats Upright, locked

Seatbelts Tighten

ELT..... ON

• when landing is assured:

Door Unlock

ENG Rough

Fuel Selector Fullest Tank

Ignition CHK on L, R, BOTH

Mixture.....Reset

Full RICH, then LEAN as required• **if Engine remains Rough:**

Magnetos BOTH

Alternate Air..... Pull, Release

Land at nearest suitable airfield**Prepare for ENG failure****ENG Oil-Pressure low***Oil Press min. 30 psi | max. 100 psi**norm. 30 - 60 psi*◆ **Oil-Temperature normal:****Land at nearest suitable airfield**◆ **Oil-Temperature high:****ENG Oil-Temperature high... Apply****ENG Oil -Temperature high***Oil Temp min. 38°C | max. 116°C*

Throttle.....Reduce power

Land as soon as possible**Prepare for ENG failure****ENG Starter Energized**• **if in Flight after ENG Restart:**

Battery & Alternator OFF

Elec. Load Reduce to Minimum

GEAR Manual Extension Apply**Land at nearest suitable airfield****ENG Fuel Pressure Low***Fuel Press min 1,5 psi | 17,5 psi*

Aux Fuel Pump ON

Fuel Selector..... FULLEST TANK



ELEC Alternator Failure

ALTERNATOR OUT Light
or Ammeter (Amps) Discharge

- Prop De-Ice OFF
 Alternator Switch CHK ON
 Alt Field CBCHK
 Ammeter.....CHK
- if Ammeter does not show discharge:
 Alternator Leave ON (END)
 - if Ammeter shows discharge:
 Avionics Master OFF
 AlternatorOFF momentarily, then ON
this resets overvoltage relay
 - if Alternator Out Light ON:
 Alternator OFF
Caution: Electric Directional Gyro INOP
 Non essential equipment OFF
 NAVCOM XFER as required
Select NAVCOM 1 or NAVCOM 2
 Electrical Load..... Monitor
 - if Battery is empty:
ELEC Total Failure Apply
Land as soon as possible

ELEC Over-Voltage

Ammeter ind. rapid fluctuation or excess charge

- Prop De-Ice OFF
 Avionics Master..... OFF
 Elec. Load Reduce to Minimum
 Battery & Alternator OFF, then ON
this resets overvoltage relay
- if Ammeter Charge normal:
 Avionics Master ON
 Electrical Load..... Restore as req.
 - if Overvoltage continues /
 Ammeter Charge not normal:
 Alternator OFF
 Elec. Load Reduce to Minimum
Land as soon as possible
Prepare for ELEC Total Failure

ELEC Total Failure

- Throttle/Prop ≥ 2300 RPM
 Battery & Alternator OFF
 Standby Power ON
 NAVCOM XFER.....as required
select NAVCOM 1 or NAVCOM 2
Operative Systems: Engine Instruments
Fuel Gages - Transponder - Turn Coordinator
Audio Amplifier - NAVCOM 1 or 2 as selected
- if Standby Generator Inop (BAT - GEN lights both on)
all above mentioned systems are Inop
 Standby Power OFF
 Elec. Load Reduce to Minimum
 Battery (if available) ON

GEAR Manual Extension Apply

ELEC Inop Systems

Avionics Master CB pulled/off:

Elec. Turn Coordinator | Clock | Eng Instruments
Audio Amplifier | NAVCOM 1 or 2 | Transponder
Bus Voltmeter | Fuel Gages | Gear Position Lts
1 Glareshield Flood Lt | Low Bus Volts Annunc.

Autopilot

- DISC Switch (Control Wheel)Push
 Auopilot (AP) OFF
 Auto Pilot CBPull

Trim Run-Away

- Altitude Maintain
use Elevator
- **F33: Manual Trim**..... **APPLY**
Opposite elec. trim to activate protection switch
 - **V35: Trim Thumb Switch** **APPLY**
Opposite elec. trim to activate protection switch
- Trim Thumb Switch Apply
opposite to elec trim to activate protection switch
 Trim CB Pull
 Manual Trim As required

Emergency Descent

- Throttle CLOSE
 Prop Full FORWARD
 Speed 154 kts
 Gear DOWN, 3 Green

**Carbon monoxide high***CO-Sticker has black spots*

DefrostPush, OFF
 Cabin Heat (2)Push, OFF
 Cabin Air Intakes OPEN
 Storm Window as required
 Land at nearest suitable airfield

Door open

Speed 75 kts
 Door Close
push door outward, then close door

GEAR Fails to Retract*Gear Green Light(s) remain ON and/or Gear Red Light ON*

- if **3 Green remain On**:
 Gear Lever (V_{Lo} 154 kts) **CHK UP**
 Ldg Gear CBs **CHK all**
LDG GEAR | LDG GR & THROTTLE
LDG GR POS | LDG GR SAFTEY SW
 Hand Crank **CHK STOWED**
 Throttle ≥ 17 inch
- if Gear remains extended
 Gear Lever (V_{Lo} 154 kts) **DOWN**
 Indicator Lights **CHK/3 GREEN,**
Red Light OFF
- if 1 or 2 Green remain On
GEAR Fails to ExtendApply

GEAR Fails to Extend*Gear Green 1, 2 or All Lights OFF and/or Gear Red Light ON*

- Gear Lever (V_{Lo} 154 kts) **DOWN**
 Gear Indication **CHK Bulbs**
 Battery & Alternator **CHK ON**
 Ldg Gear CBs **CHK all**
LDG GEAR | LDG GR & THROTTLE
LDG GR POS | LDG GR SAFTEY SW
 Gear (V_{Lo} 154 kts) **Recycle**
- if Gear Indication shows **3 Green** and **Red Light OFF**:
 Speed (V_{Lo}) ≤ 154 kts (END)
 - if Gear Indication does **not** show 3 Green or Red Light **ON**:
 Rudder **YAW ABRUPTLY**
GEAR Manual ExtensionApply

GEAR Manual Extension

Speed **100-120 kts**
 Autopilot **Consider use**
 Ldg Gear CB **Pull**
 Gear Lever (V_{Lo} 154 kts) **DOWN**
 Hand Crank Cover **Remove**
 Hand Crank **Turn CCW**
AS FAR AS POSSIBLE (appr. 50 turns)
after each 10-15 turns add 1" MAP
and scan for traffic
 Gear Indication **3 Green**
Inop without Electrical power
 Hand Crank **Remove/Stow**

- if Gear Retraction required
 Ldg Gear CB **In**
 Gear Lever (V_{Lo} 154 kts) **UP**
Caution: Gear might not Retract if MAP < 17"

GEAR Retract after Man. Extension

Hand Crank **Stow**
 Ldg Gear CB **In**
 Gear Lever (V_{Lo} 154 kts) **UP**
Caution: Gear might not Retract if MAP < 17"

GEAR Partial/Up Landing*Normal Checklist Integrated*

- GEAR Manual Extension** **Apply**
- **Descent/Approach**
 Cowl Flaps **CLOSE**
 Mixture **Enrich**
if leaned add 3 GPH;
 ≥ 3.000 ft set 15 GPH (2500 RPM; 15" at TPA)
 Altimeters (2) **QNH** __, __ ft
 Landing Light **ON**
 Fuel Selector **Fullest Tank**
 Approach Briefing **Comple**
 Cabin **Ready**
 Flaps (V_{FE} 123 kts) **as required**
DOWN recommended
 - if landing is assured:
 Door **UNLOCK**
 Avionics Master Switch **OFF**
 Aux Fuel Pump **OFF**
 Battery & Alternator **OFF**
 Prop **Pull, Low RPM**
 Throttle **CLOSE**
 Mixture **CUTOFF**
 Mags/Ignition **OFF**
 Fuel Selector **OFF**



INST Static Source Blocked

Alternate Static.....ON/EMERGENCY
move to Horizontal Position

Storm Window CLOSE

Cabin Vents CLOSE

Defrost & Cabin Heaters..... Pull ON

Altimeter error will be less than 50 ft

INST Air Low

Suction gauge below 4,5"

Attitude Indicator and HSI (Compass card) may be unreliable

Magnetic Compass Use

Turn Coordinator..... Use

• if in IMC:

Throttle..... ≥ 2500 RPM

Descent Consider

descent if required to keep suction in green arc

Approach Preparation

- Select an Approach
 Press PROC key on Home page
 Press Approach, then
 - Airport to select airport
 - Approach to select desired approach
 - Transition, then key for the desired transition
 Press Load Approach
This places approach at end of active flight plan (FPL will be displayed)
- **ILS**: tune ILS and identify
- when receiving Vectors to IAF & cleared for approach: Activate Approach
 Press **PROC** key on Home page
 Press **Approach**
 Press **Activate Approach**
 Direct-To the IAF or (vectored) fly heading onto final approach course
- Set Inbound CRS on the HSI
- 2 NM prior FAF: check **APR** on GPS Annunciator and

ILS

set/chk **VLOC**



GPS

set/check **GPS**



if **LOI** is displayed
 discontinue approach

- In case of a Go Around
 Press **Activate GPS Missed Approach**
 on GNS or press the OBS/SUSP button

Icing

Flight into icing conditions prohibited

Pitot Heat..... ON

Prop De-Ice ON

Turn back or change altitude

leave icing conditions ASAP

Defrost..... Pull, ON

Cabin Heat (2) Pull, ON

Land at nearest suitable airfield

Ldg with Flaps Up recommended

Prop Deice

♦ **0 Amps:**

Prop Deice Switch..... OFF

• after 30 sec cooldown

Prop Deice CB Reset

♦ **≥ 0 to ≤ 30 Amps:**

Prop imbalance possible

♦ **≥ 34 Amps:**

Operate Prop Deice only if urgently required



V35B T/O Distance

EXAMPLE

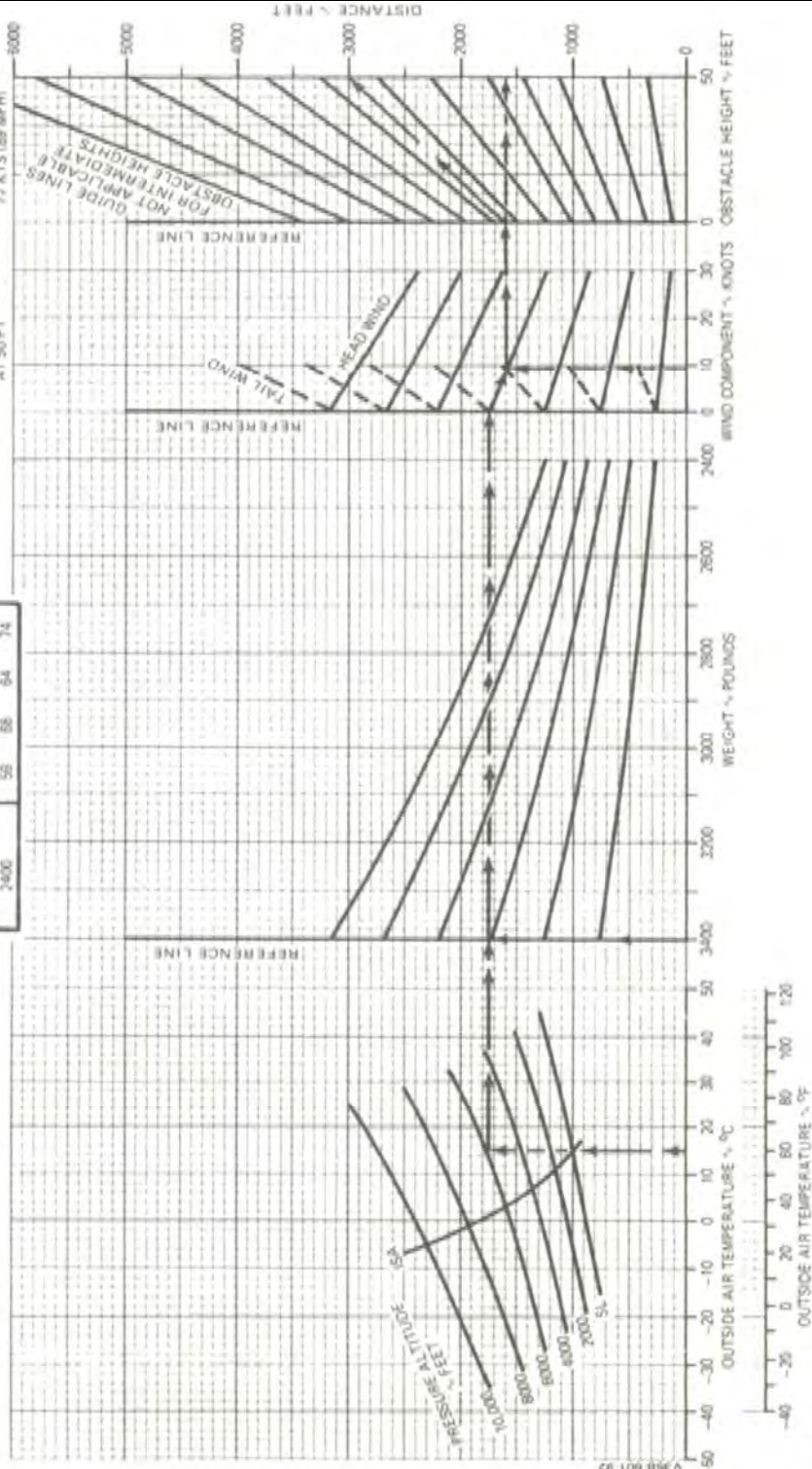
15°C (59°F)
 5650 FT
 3400 LBS
 8.5 KTS

OAT
 PRESSURE ALTITUDE
 TAKE OFF WEIGHT
 HEAD WIND COMPONENT
 GROUND ROLL
 TOTAL DISTANCE OVER A 50 FT OBSTACLE
 TAKE OFF SPEED AT LIFT OFF
 AT 50 FT

WEIGHT ~ LBS	TAKE OFF SPEED	
	LIFT OFF	50 FT
	KTS	MPH
3400	71	82
3200	69	79
3000	66	75
2800	64	73
2600	61	70
2400	58	66

ASSOCIATED CONDITIONS:

POWER FULL THROTTLE AT 2700 RPM
 MIXTURE LEAN TO APPROPRIATE FUEL FLOW
 FLAPS UP
 LANDING GEAR RETRACT AFTER POSITIVE CLIMB ESTABLISHED
 DOWN FLAPS OPEN



Takeoff Performance

2 kts TWC: +10% | 9 kts HWC: -10% | Slope 1% down: -7% | 1% up: +22%

F33A - Climb Power

Press. Alt.	ISA °C	Full Throttle/2700 RPM			25"/2500 RPM			
		kts	GPH	fpm*	kts	GPH	min	Øfpm
0	15	100		1220	105	19,0		
2000	11			1090				
4000	7			970				
6000	3			850				
8000	-1			730				
10000	-3			600				
12000	-9			480				
14000	-13			380				
16000	-17			250				

±50 fpm / ISA ± 10°C | +40 fpm / MTOW -100 lbs

V35B - Climb Power

Press. Alt.	ISA °C	Full Throttle/2700 RPM			2500 RPM			
		kts	GPH	fpm*	kts	GPH	min	Øfpm
0	15	96	24,2	1160	107	18,8		
2000	11		22,5	1040		19,2	:03	
4000	7		20,9	910		19,4	:05	800
6000	3		19,7	790		18,7	:09	670
8000	-1		18,6	660		17,6	:12	650
10000	-3		17,5	560		16,5	:16	600
12000	-9		16,4	430		15,6	:22	550
14000	-13		15,4	320		14,7	:32	430
16000	-17		14,6	200		13,7	:44	350

±50 fpm / ISA ± 10°C | +40 fpm / MTOW -100 lbs

V35B - 75% Power - 2500 RPM

Press. Alt.	ISA °C	ISA - 20°			ISA			ISA + 20°				
		inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS		
0	15	23,9	15,2	159	24,6	15,2	163	25,1	15,2	166		
1000	13	23,6		161	24,3		164	24,8		168		
2000	11	23,4		162	24,1		166	24,6		169		
3000	9	23,1		164	23,8		167	24,3		171		
4000	7	22,8		165	23,5		169	24,0		172		
5000	5	22,5		167	23,2		170	23,7		173		
6000	3	22,2		168	23,0		172	23,5		174		
7000	1	22,0		169	22,6		15,0	172	22,6	14,5	172	
8000	-1	21,7		14,9	169		21,7	14,4	170	21,7	13,9	171
9000	-3	20,8		14,4	168		20,8	14,0	169	20,8	13,5	170
10000	-5	20,0	14,0	167	20,0	13,5	168	20,0	13,1	166		
11000	-7	19,2	13,5	166	19,2	13,1	167	19,2	12,6	167		
12000	-9	18,3	13,0	166	18,3	12,6	165	18,3	12,2	165		
13000	-11	17,6	12,5	163	17,6	12,2	164	17,6	11,8	163		
14000	-13	16,8	12,2	162	16,8	11,8	162	16,8	11,4	162		
15000	-15	16,1	11,7	160	16,1	11,4	160	16,1	11,0	159		
16000	-17	15,4	11,4	158	15,4	11,0	158	15,4	10,6	156		

V35B - 65% Power - 2300 RPM

Press. Alt.	ISA °C	ISA - 20°			ISA			ISA + 20°		
		inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS
0	15	23,3	13,3	150	23,9	13,3	154	24,5	13,3	156
1000	13	23,1		152	23,6		155	24,2		158
2000	11	22,8		153	23,4		156	24,0		159
3000	9	22,5		154	23,1		157	23,7		160
4000	7	22,3		155	22,9		159	23,5		161
5000	5	22,0		157	22,6		160	23,2		163
6000	3	21,8		158	22,4		161	23,0		164
7000	1	21,5		159	22,1		162	22,6	13,2	164
8000	-1	21,3		160	21,7		163	21,7	12,7	163
9000	-3	20,9		13,0	160		20,9	12,7	161	20,9
10000	-5	20,0	12,7	159	20,0	12,3	160	20,0	11,9	159
11000	-7	19,2	12,3	158	19,2	11,9	158	19,2	11,5	158
12000	-9	18,4	11,9	157	18,4	11,5	157	18,4	11,1	156
13000	-11	17,6	11,5	155	17,6	11,1	156	17,6	10,8	153
14000	-13	16,9	11,1	153	16,9	10,7	152	16,9	10,4	151
15000	-15	16,1	10,7	151	16,1	10,4	150	16,1	10,0	147
16000	-17	15,6	10,3	148	15,5	10,0	147			

V35B - 55% Power - 2100 RPM

Press. Alt.	ISA °C	ISA - 20°			ISA			ISA + 20°			
		inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS	
0	15	23,0	11,5	140	23,6	11,5	143	24,2	11,5	145	
1000	13	22,8		141	23,3		144	24,0		146	
2000	11	22,5		142	23,1		145	23,7		147	
3000	9	22,3		143	22,9		146	23,5		148	
4000	7	22,1		144	22,6		147	23,2		149	
5000	5	21,8		145	22,4		148	23,0		150	
6000	3	21,6		146	22,1		148	22,7		150	
7000	1	21,3		147	21,9		149	22,5		151	
8000	-1	21,1		148	21,6		150	21,9		11,3	151
9000	-3	20,9		11,4	149		21,0	11,2		149	21,0
10000	-5	20,1	11,3	149	20,2	11,0	148	20,1	10,6	147	
11000	-7	19,3	11,0	147	19,3	10,7	147	19,3	10,3	145	
12000	-9	18,5	10,7	146	18,5	10,4	146	18,5	10,0	142	
13000	-11	17,7	10,3	144	17,7	10,0	142	17,7	9,7	139	
14000	-13	16,9	10,0	141	16,8	9,7	139				
15000	-15	16,2	9,6	138							
16000	-17	15,6	9,3	135							

V35B - 45% Power - 2100 RPM

Press. Alt.	ISA °C	ISA - 20°			ISA			ISA + 20°		
		inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS
0	15	20,4	9,6	127	20,8	9,6	130	21,2	9,6	132
1000	13	20,1		128	20,5		131	20,9		133
2000	11	19,8		129	20,2		131	20,6		133
3000	9	19,4		130	19,9		132	20,3		134
4000	7	19,1		131	19,6		133	20,0		135
5000	5	18,8		132	19,3		134	19,7		136
6000	3	18,5		133	19,0		135	19,4		136
7000	1	18,2		134	18,7		135	19,1		137
8000	-1	17,9		134	18,4		136	18,8		137
9000	-3	17,6		135	18,1		137	18,5		138
10000	-5	17,3	136	17,6	137	18,2	138			
11000	-7	17,0	136	17,5	138	17,9	138			
12000	-9	16,7	137	17,1	138	17,6	138			
13000	-11	16,4	137	16,8	138					
14000	-13	16,0	138	16,5	136					
15000	-15	15,7	138							
16000	-17	15,4	9,3	135						

V35B - Cruise Power (by Altitude)

P.A. ISA	Power		ISA - 20°			ISA			ISA + 20°		
	RPM	%	inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS
0 15°C	2500	75	23,9	15,2	159	24,6	15,2	163	25,1	15,2	166
	2300	65	23,1	13,3	150	23,9	13,3	154	24,5	13,3	151
	2100	55	23,0	11,5	140	23,6	11,5	143	24,2	11,5	145
	2100	45	20,4	9,6	127	20,8	9,6	130	21,2	9,6	132
1000 13°C	2500	75	23,6	15,2	161	24,3	15,2	164	24,8	15,2	168
	2300	65	22,8	13,3	152	23,6	13,3	155	24,2	13,3	150
	2100	55	22,8	11,5	141	23,3	11,5	144	24,0	11,5	146
	2100	45	20,1	9,6	128	20,5	9,6	131	20,9	9,6	133
2000 11°C	2500	75	23,4	15,2	162	24,1	15,2	166	24,6	15,2	169
	2300	65	22,8	13,3	153	23,4	13,3	156	24,0	13,3	149
	2100	55	22,5	11,5	142	23,1	11,5	145	23,7	11,5	147
	2100	45	19,8	9,6	129	20,2	9,6	131	20,6	9,6	133
3000 9°C	2500	75	23,1	15,2	164	23,8	15,2	167	24,3	15,2	171
	2300	65	22,5	13,3	154	23,1	13,3	157	23,7	13,3	148
	2100	55	22,3	11,5	143	22,9	11,5	146	23,5	11,5	148
	2100	45	19,4	9,6	130	19,9	9,6	132	20,3	9,6	134
4000 7°C	2500	75	22,8	15,2	165	23,5	15,2	169	24,0	15,2	172
	2300	65	22,3	13,3	155	22,9	13,3	159	23,5	13,3	147
	2100	55	22,1	11,5	144	22,6	11,5	147	23,2	11,5	149
	2100	45	19,1	9,6	131	19,6	9,6	133	20,0	9,6	135
5000 5°C	2500	75	22,5	15,2	167	23,2	15,2	170	23,7	15,2	173
	2300	65	22,0	13,3	157	22,6	13,3	160	23,2	13,3	146
	2100	55	21,8	11,5	145	22,4	11,5	148	23,0	11,5	150
	2100	45	18,8	9,6	132	19,3	9,6	134	19,7	9,6	136
6000 3°C	2500	75	22,2	15,2	168	23,0	15,2	172	23,5	15,0	174
	2300	65	21,8	13,3	158	22,4	13,3	161	23,0	13,3	145
	2100	55	21,6	11,5	146	22,1	11,5	148	22,7	11,5	150
	2100	45	18,5	9,6	133	19,0	9,6	135	19,4	9,6	136
7000 1°C	2500	75	22,0	15,2	169	22,6	15,0	172	22,6	14,5	172
	2300	65	21,5	13,3	159	22,1	13,3	162	22,6	13,2	143
	2100	55	21,3	11,5	147	21,9	11,5	149	22,5	11,5	151
	2100	45	18,2	9,6	134	18,7	9,6	135	19,1	9,6	137
8000 -1°C	2500	75	21,7	14,9	169	21,7	14,4	170	21,7	13,9	171
	2300	65	21,3	13,3	160	21,7	13,3	163	21,7	12,7	139
	2100	55	22,1	11,5	148	21,6	11,5	150	21,9	11,3	151
	2100	45	17,9	9,6	134	18,4	9,6	136	18,8	9,6	137

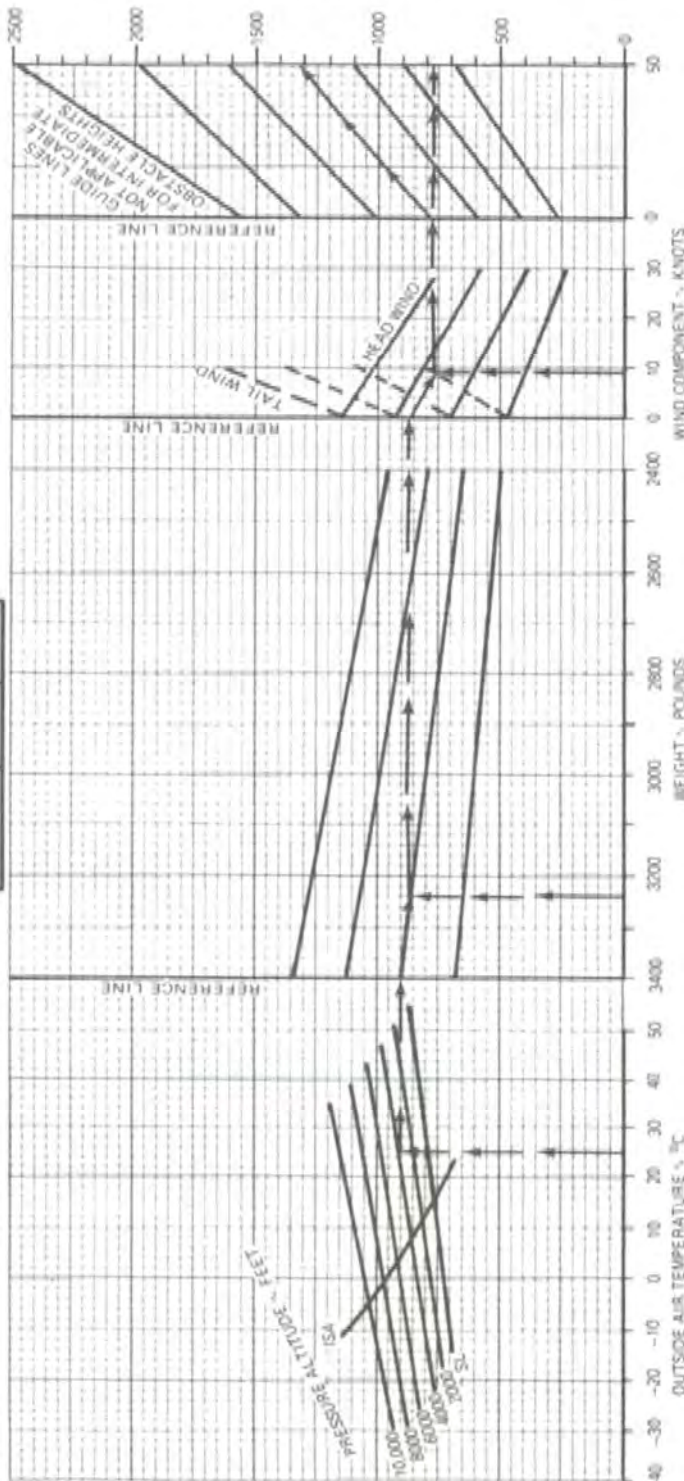
V35B - Cruise Power (by Altitude)

P.A. ISA	Power		ISA - 20°			ISA			ISA + 20°		
	RPM	%	inch	GPH	TAS	inch	GPH	TAS	inch	GPH	TAS
9000 -3°C	2500	75	20,8	14,4	168	20,8	14,0	169	20,8	13,5	170
	2300	65	20,9	13,0	160	20,9	12,7	161	20,9	12,3	161
	2100	55	20,9	11,4	149	21,0	11,2	149	21,0	10,9	149
	2100	45	17,6	9,6	135	18,1	9,6	137	18,5	9,6	138
10000 -5°C	2500	75	20,0	14,0	167	20,0	13,5	168	20,0	13,1	166
	2300	65	20,0	12,7	159	20,0	12,3	160	20,0	11,9	159
	2100	55	20,1	11,3	149	20,2	11,0	148	20,1	10,6	147
	2100	45	17,3	9,6	136	17,6	9,6	137	18,2	9,6	138
11000 -7°C	2500	75	19,2	13,5	166	19,2	13,1	167	19,2	12,6	167
	2300	65	19,2	12,3	158	19,2	11,9	158	19,2	11,5	158
	2100	55	19,3	11,0	147	19,3	10,7	147	19,3	10,3	145
	2100	45	17,0	9,6	136	17,5	9,6	138	17,9	9,6	138
12000 -9°C	2500	75	18,3	13,0	166	18,3	12,6	165	18,3	12,2	165
	2300	65	18,4	11,9	157	18,4	11,5	157	18,4	11,1	156
	2100	55	18,5	10,7	146	18,5	10,4	146	18,5	10,0	142
	2100	45	16,7	9,6	137	17,1	9,6	138	17,6	9,6	138
13000 -11°C	2500	75	17,6	12,5	163	17,6	12,2	164	17,6	11,8	163
	2300	65	17,6	11,1	153	17,6	11,1	156	17,6	10,8	153
	2100	55	17,7	10,3	144	17,7	10,0	142	17,7	9,7	139
	2100	45	16,4	9,6	137	16,8	9,6	138			
14000 -13°C	2500	75	16,8	12,2	162	16,8	11,8	162	16,8	11,4	162
	2300	65	16,9	11,1	153	16,9	10,7	152	16,9	10,4	151
	2100	55	16,9	10,0	141	16,8	9,7	139			
	2100	45	16,0	9,6	138	16,5	9,6	136			
15000 -15°C	2500	75	16,1	11,7	160	16,1	11,4	160	16,1	11,0	159
	2300	65	16,1	10,7	151	16,1	10,4	150	16,1	10,0	147
	2100	55	16,2	9,6	138						
	2100	45	15,7	9,6	138						
16000 -17°C	2500	75	15,4	11,4	158	15,4	11,0	158	15,4	10,6	156
	2300	65	15,6	10,3	148	15,5	10,0	147			
	2100	55	15,6	9,3	135						
	2100	45	15,4	9,3	135						



V35B Landing Distance

DISTANCE - FEET



WIND COMPONENT - KNOTS

WEIGHT - POUNDS

OUTSIDE AIR TEMPERATURE - °C

OUTSIDE AIR TEMPERATURE - °F

EXAMPLE

QAT 25°C (77°F)
 PRESSURE ALTITUDE 3865 FT
 WEIGHT 3242 LBS
 HEADWIND COMPONENT 9 KTS
 GROUND ROLL 763 FT
 TOTAL OVER 50 FT OBSTACLE 1324 FT
 APPROACH SPEED 69 KTS (80 MPH)

WEIGHT - LBS	SPEED AT 50 FT	
	KTS	MPH
3400	70	81
3200	68	79
3000	66	76
2800	63	73
2600	61	71
2400	59	68

ASSOCIATED CONDITIONS

POWER RETAINED TO MAINTAIN 900 FT/MIN ON FINAL APPROACH
 FLAPS DOWN
 LANDING GEAR DOWN
 RUNWAY PAVED, LEVEL, DRY SURFACE
 APPROACH SPEED IAS AS TABULATED
 BRAKING MAXIMUM

GUIDE LINES FOR INTERMEDIATE OBSTACLE HEIGHTS

REFERENCE LINE

REFERENCE LINE

PRESSURE ALTITUDE - FEET

10,000
8000
6000
4000
2000
ISA

HEAD WIND

TAIL WIND

REFERENCE LINE

2500

2000

1500

1000

500

0

50

0

30

2400

2500

2800

3000

3400

50

-40

0

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

2600

2800

3000

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50

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10

20

2400

2500

2600

2800

3000

-40

50

0

10

20

2400

2500

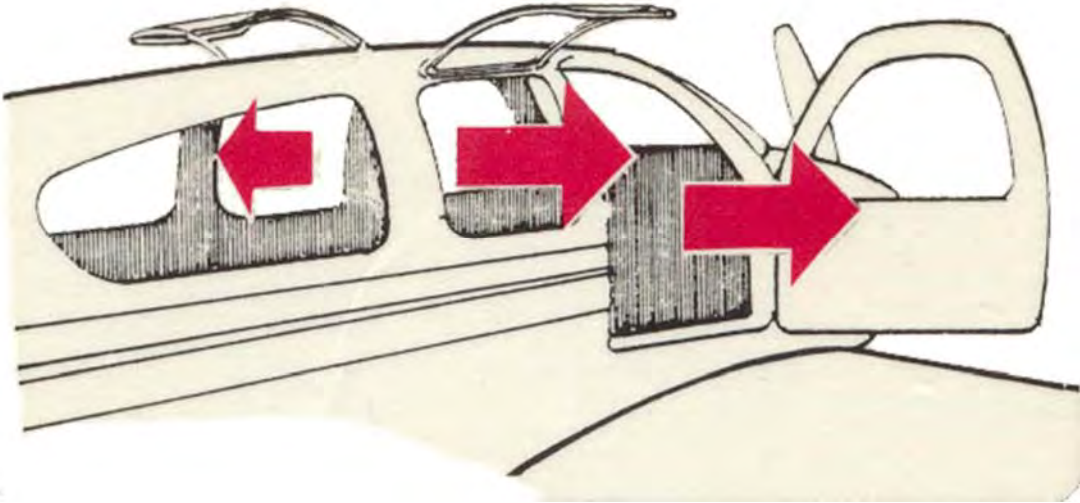
2600

2800

3000

-40

Emergency Exits



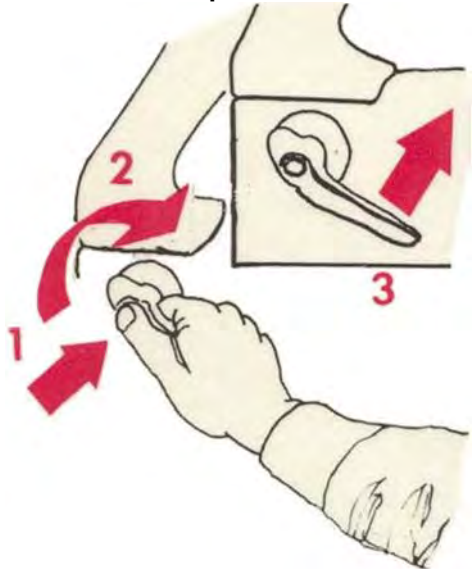
Window Exit

1. Lift Latch
2. Pull Pin
3. Push Window out

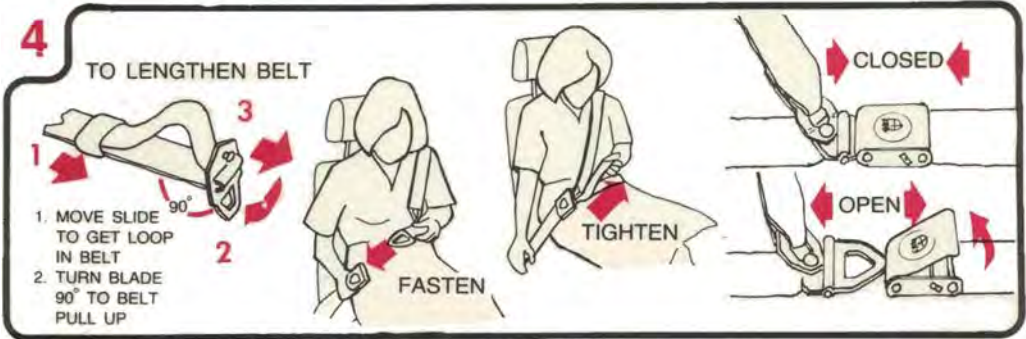


Door

1. Depress Lock Button and hold
2. Rotate Handle Clockwise
3. Push Door Open



Before Takeoff and Landing



Brace/Safety Position

with Shoulder Harness

- Headrest fully extended
- Seat upright
- Chin on chest
- Hands clasped together across middle



without Shoulder Harness

- Upper Body leaning forward
- Hands covering Face

